

Welcome to the TFL 44 Management Plan #3

Making the Most of a Renewable Resource

- Timber Supply Analysis
- SMOOP
- MP #3 - Text
- Public Review
- Correspondence
- Policies
- AAC Determination
- Twenty Year Plan
- Maps
- Area & Volume Summaries
- Mills & Employment
- History
- Schedule A Properties

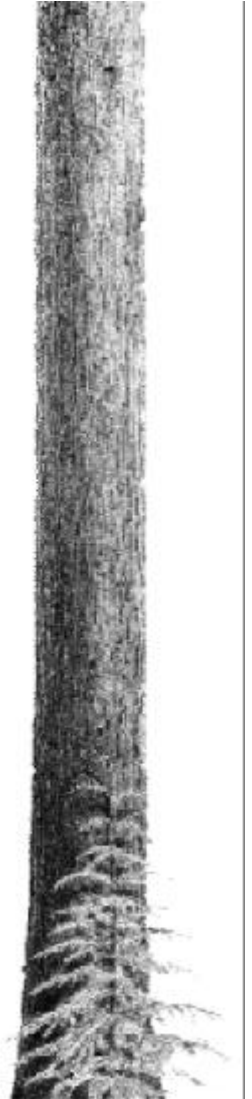


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APPENDIX III

Timber Supply Analysis

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July 1997**

Table of Contents

1.0	INTRODUCTION	1
2.0	ISSUES	1
3.0	GENERAL BASIS FOR THE ANALYSIS.....	3
3.1	WORKING CIRCLES.....	4
3.2	DETERMINATION OF THE WORKING LANDBASE	4
3.3	SILVICULTURAL ASSUMPTIONS AND YIELD PROJECTION	6
3.4	HARVESTING ASSUMPTIONS	
3.5	INTEGRATED RESOURCE MANAGEMENT	8
4.0	DISCUSSION OF ISSUES.....	9
4.1	INTEGRATED RESOURCE MANAGEMENT	11
4.11	<i>Costs of Biodiversity Constraints.....</i>	<i>14</i>
4.12	<i>Costs of Visual Landscape Constraints.....</i>	<i>17</i>
4.13	<i>Cultural Heritage Resources.....</i>	<i>22</i>
4.2	THE NET HARVESTING LANDBASE	23
4.21	<i>Sensitivity to Changes in the Operable Landbase</i>	<i>23</i>
4.22	<i>Current Harvesting Economics.....</i>	<i>24</i>
4.3	SECOND GROWTH HARVEST STRATEGY	25
4.4	HARVEST FLOW RULES.....	28
4.5	SILVICULTURAL PRACTICES	30
4.6	ESTIMATES OF SITE PRODUCTIVITY	31
4.	UTILIZATION LEVELS	33
4.8	MATURE VOLUME ESTIMATES	34
4.9	YIELD ASSUMPTIONS FOR SECOND AND THIRD FORESTS	36
5.0	CONCLUSIONS	38
6.0	RECOMMENDED HARVEST	40

List of Tables

TABLE 2.1.	Summary of Option 2 (Base) Assumptions.....	2
TABLE 2.2.	Description of How Options Differs From Option 2 (Base)	3
TABLE 3.4.1.	Harvest Levels (000 m ³ /year)	
TABLE 4.0.1.	Option 2: Area and Volume Statistics by Working Circle.....	10
TABLE 4.0.2.	Mature Inventory and Harvest by Operability Class (Percentages).....	11
TABLE 4.1.1.	Comparison of Options 1 and 2 Net Landbases, Mature Volumes, and LRSYs by Working Circle	12
TABLE 4.1.2.	50 Year Economic Impact of IRM Constraints, Option 2 Compared to Option 1	13
TABLE 4.1.3.	Economic Costs Of Integrated Resource Management Regulations: Option 2 Compared to Option 1.....	13
TABLE 4.11.1.	50 Year Economic Impact of Biodiversity Constraints, Options 2 and 4 Compared to Option 3.....	16
TABLE 4.12.1.	Description of Visual Landscape Cover Class Constraints.....	18
TABLE 4.12.2.	Percentage of Option 2 Net Area and Mature Volume by VQO Class.....	18
TABLE 4.12.3.	Alberni West: Partial Retention Cover Class Constraints by Option	19
TABLE 4.12.4.	50 Year Economic Impact of Visual Quality Constraints, Options 2 and Compared to Option 8.....	21
TABLE 4.21.1.	Option 3 Compared to Option 2: Net Landbases and Mature Volumes.....	23
TABLE 4.4.1.	First Period (199 to 2001) Harvest Levels (000 m ³).....	28
TABLE 4.6.1.	Option 1 compared to Option 2: Site Indexes and LRSYs by Working Circle	32
TABLE 4. .1.	Second growth Utili ation Levels	33

List of Figures

FIGURE 3.2.1.	Broad Land Class by Working Circle and TFL	5
FIGURE 3.2.2.	Comparison of Net Landbase Between this Analysis and the 1993 Analysis.....	6
FIGURE 4.0.1.	Harvest Schedule Option 2: TFL 44 (excluding Clayoquot)	10
FIGURE 4.1.1.	Impact of Non Timber Resource Values	12
FIGURE 4.11.1.	Biodiversity Options	15
FIGURE 4.12.1.	Visual Quality Options.....	20
FIGURE 4.21.1.	Variation in Net Landbase	24
FIGURE 4.3.1.	Second Growth Harvest Strategy	26
FIGURE 4.4.1.	Harvest Flow Rates.....	29
FIGURE 4.5.1.	Silviculture Options	31
FIGURE 4.6.1.	Site Index Options.....	33
FIGURE 4. .1.	Utili ation Levels	34
FIGURE 4.8.1.	Variation in Mature Volumes	36
FIGURE 4.9.1.	Impacts of a Variation in Second growth Yields.....	3

List of Attachments

ATTACHMENT 1.	Harvest Schedules	42
ATTACHMENT 2.	Figures of Option 2 Harvest Schedules.....	51
ATTACHMENT 3.	Comparison of Harvest Schedules: Options 2 and 2A.....	56

1.0 INTRODUCTION

The TFL 44 Timber Supply Analysis (TSA) is presented as four complementary documents.

- ❑ This document, the TSA Report, provides a summary of the analysis and discusses the results for TFL 44 excluding that portion in Clayoquot Sound.
- ❑ The Information Package documents the assumptions and describes the modeling procedures used in the analysis.
- ❑ Timber Supply Analysis of the Clayoquot Working Circle. The Chief Forester of the Province has defined an Annual Allowable Cut (AAC) calculation procedure for Clayoquot Sound. This report summarizes the procedure and results for the Clayoquot portion of TFL 44.
- ❑ The TFL 44 Socio Economic Analysis provides a basis for comparing the economic impacts of management choices.

The TSA Report begins with a description of issues and of the options used to analyze these issues.

The basis for the analysis is briefly described. This includes separation of TFL 44 into four working circles, derivation of the net landbase, yield projection, harvesting assumptions and integrated resource management considerations. Please refer to the Information Package for details on these aspects.

The focus of this report is on presenting and discussing the main results of the analysis. This is organized by issue. Conclusions are provided at the end of the report.

2.0 ISSUES

There are several major issues. Interpretations of these have significant impacts on either the estimate of long run sustainable yield (LRSY) from the TFL, or on the harvest schedule alternatives that project harvest levels from today to the attainment of that LRSY condition:

- ❑ Integrated resource management.
 - Visual landscape.
 - Biodiversity.
 - Community watersheds.
 - Riparian areas.
 - ❑ Operable landbase:
 - Sensitivity to changes in the operable landbase.
 - Current harvesting economics.
-

- ❑ Second growth harvest strategy.
- ❑ Silvicultural practices that may lead to enhanced harvest opportunities.
- ❑ Estimates of site productivity.
- ❑ Estimates of mature forest volumes.
- ❑ Estimates of future yields from the second and third forests.

Table 2.1 summarizes the assumptions for Option 2, the base option for the analysis. Table 2.2 briefly describes how other options vary from the base option, providing a basis for analysis of the issues described above.

TABLE 2.1. Summary of Option 2 (Base) Assumptions

Subject	Description
Operability	Netdowns for current uneconomic and physically inoperable areas.
Netdowns for Sensitive Sites	Sensitive soils and riparian areas.
Netdowns for Non Timber Resources	Deer and Elk, Marbled Murrelets, Recreation, Water Supply.
Biodiversity Netdowns	Forest Ecosystem Networks, old growth representation and 2 for wildlife tree patches.
Cover class constraints	
• Visual Landscapes (VQOs)	Visually Effective Greenup (VEG) at 5 m, estimated maximum percent alteration.
• Recreation C1 b areas (outside VQOs)	Maximum of 20 of total forest area less than 20 years of age.
• Avalanche run out zones	Maximum of 20 of total forest area less than 30 years of age.
• Community Watersheds	Maximum of 5 of total forest area less than 5 years of age for each community watershed.
Nahmint Watershed	Nahmint old growth reserve, specific riparian reserves and greenup at 5 m for adjacency.
Silviculture	Approximation of recent practices.
Mature volumes	From inventory.
Projected yields	Y XENO yield model projections. Douglas fir yields adjusted as agreed with MoF.
Site Index	MB biophysical decision tree estimates for old and very young stands.
Minimum harvest Ages	Within 0.2 m ³ /ha/year of culmination with minimum average dbh of 25 cm.
Utilization Level for Second Growth	1 .5 cm dbh, 30 cm stump and 10 cm top dib.

TABLE 2.2. Description of How Options Differs From Option 2 (Base)

Option No.	Description
1	Timber is viewed as the dominant use, area netdowns to safeguard soil and water resources. No cover class constraints.
2	The Base Option: Current procedures.
3	No allowances for FEN links or wildlife tree patches.
4	Includes early and mid plus mature seral stages.
5	Stand ages for achieving Visually Effective Greenup reduced by 4 years.
6	Stand ages for achieving Visually Effective Greenup increased by 4 years.
	Visual landscapes maximum percent alteration decreased by 5 .
8	Visual landscapes maximum percent alteration increased by 5 .
9	Some partial harvesting in visual landscapes.
10	Net landbase reduced by 5 .
11	More intensive Silviculture resulting in no regeneration delay plus some fertilization of Douglas fir stands and conversion of deciduous stands.
12	Mature volumes increased by 10 .
13	Mature volumes decreased by 10 .
14	Y XENO yields applied unadjusted.
15	Yield projections increased by 10 .
16	Yield projections decreased by 10 .
17	Inventory Site Indexes.
18	Minimum harvest ages reduced by 10 years.
19	Minimum harvest ages increased by 10 years.
20	Second growth harvest strategy.
21	Higher level of utilization in second growth stands.
22	Harvest reduced by 10 per decade from the initial harvest rate.
23	Harvest reduced by 15 per decade from the initial harvest rate.

3.0 GENERAL BASIS FOR THE ANALYSIS

The detailed basis for the analysis is shown in the Information Package. Some key points are summarized below.

3.1 Working Circles

TFL 44 is divided into four working circles. Each is analyzed separately. The working circles are:

Working Circle	Description
Alberni East	Blocks 1 and 2.
Alberni West	Block 3 (except Compartment 10E) and Block 4.
Clayoquot	As defined by the Clayoquot planning process Blocks 6, and 8, a major portion of Block 5 and Compartment 10E (Upper Kennedy River) of Block 3.
Ucluelet	Remainder of Block 5.

3.2 Determination of the Working Landbase

The analysis excludes those areas within the TFL on which timber harvesting is not expected to occur. This includes:

- ❑ Non forest. Includes areas of alpine, rock, water, swamp and roads.
- ❑ Nonproductive forest. These are mainly areas of scrub having an inventory volume of less than 212 m³/ha.
- ❑ Physically inoperable areas. These are areas on which timber harvesting is not physically or safely possible.

Other areas have been identified and mapped as sensitive sites (soils and riparian areas) or as important for non timber resources. Varying portions of these areas are removed from the timber harvesting landbase. Mapped land categories include:

- ❑ Sensitive soils (unstable soils).
- ❑ Avalanche areas.
- ❑ Riparian areas.
- ❑ Wildlife areas for deer and elk and Marbled Murrelet reserves.
- ❑ Difficult regeneration areas.
- ❑ Community watersheds.
- ❑ Recreation.

The base option net timber harvesting landbase has been further reduced for Forest Ecosystem Networks, old growth representation requirements (biodiversity), deciduous forest areas and for areas classified as currently uneconomic.

Figure 3.2.1 shows for the Alberni East, Alberni West and Ucluelet Working Circles, the area categorized by non forest, nonproductive forest, unavailable forest (includes inoperable areas and reserves for sensitive sites and non timber values) and forest available for timber management. For the TFL (excluding Clayoquot), 43% of the total area or 35% of the forested area is not available for timber management. The percentages are higher in Alberni West and lower in Alberni East. Options 1, 3 and 10 include variations of this available landbase. These are described in Section 4.

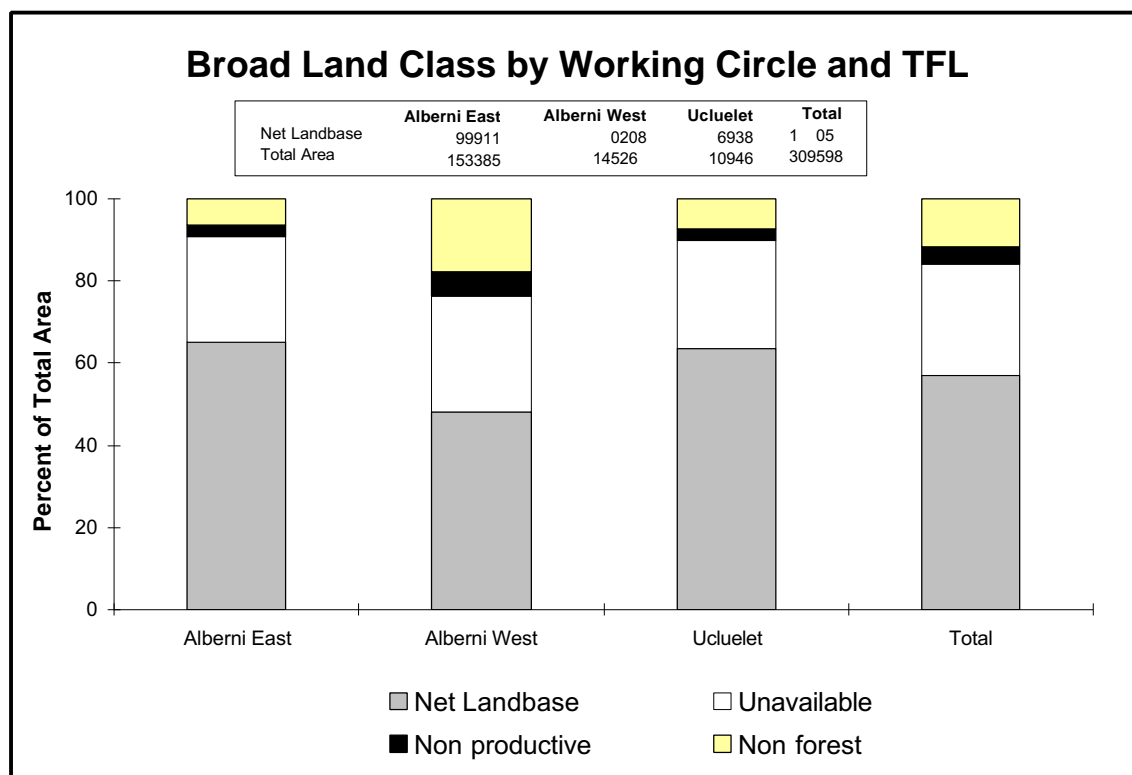


FIGURE 3.2.1. Broad Land Class by Working Circle and TFL

Figure 3.2.2 illustrates changes in the landbase since the last analysis completed in 1993. The total productive forest area has declined by 9 000 ha, mainly because of the designation of new protected areas, and partly because of new road developments. The net landbase has declined by 54 000 ha. Major contributors to this change have been additional reserves to protect sensitive soils and riparian areas, FENs, protected areas (as mentioned above) and additional reserves for Marbled Murrelets and recreation.

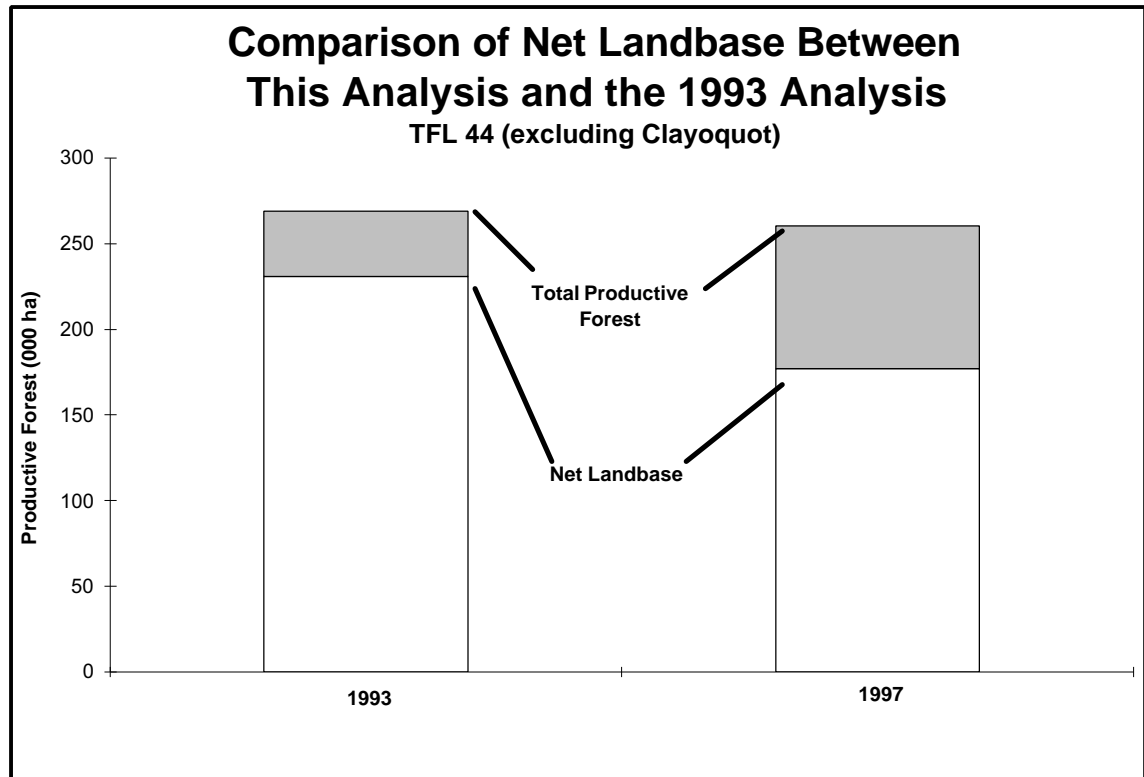


FIGURE 3.2.2. Comparison of Net Landbase Between this Analysis and the 1993 Analysis

3.3 Silvicultural Assumptions and Yield Projection

The current silviculture scenario is used in most options. It portrays recent practices, including stocking densities at establishment. An additional scenario titled more intensive silviculture (Option 11) has been run to examine the possible impacts of additional silviculture investment.

Timber volumes in mature (greater than 150 years of age) forest areas are based on measurement (timber cruise). Options 12 and 13 provide a sensitivity analysis around these estimates. Regeneration models and yield tables are used to estimate future volumes of timber in younger stands and in future forest stands. Regeneration models, based on the knowledge and experience of local foresters, describe the likely conditions after harvest, the natural stocking condition, and the presence of slash and/or brush conditions. This defines the framework for examining forest management scenarios and for defining yield tables to be used in the analysis.

Within this framework the yield model Y XENO, developed by MB, is used to predict the future volumes of timber in different areas. These volumes are adjusted to reflect operational factors including small unproductive areas, pest and disease losses and impacts of brush competition. Further adjustments are made to ensure yields similar to those used by the MoF. In Section 4.9, Option 14 shows the impact of this last adjustment and Options 15 and 16 show

the sensitivity of timber supply to projected yields that are 10% higher and 10% lower, respectively, than assumed for Option 2.

3.4 Harvesting Assumptions

First period (1991 to 2001) harvest levels were defined to provide a basis for initiating the analysis. It is the results of the analysis (Section 4), however, that contribute to the harvest rate recommendation in Section 6.

The first period harvest levels described in Table 3.4.1., reflect results of preliminary analysis and a continuation of the strategy outlined in MP #2 that is, to gradually adjust harvest levels towards our best estimate of the long run sustainable yield (LRSY) of the forest. Such gradual change in harvest levels over time encourages stability in communities dependent on forest management in TFL 44.

The initial harvest level is 1 60 000 m³/year or 46 000 m³/year less than the AAC of 1 806 000 m³/year currently allocated to the three working circles (excluding Clayoquot).

There has been some reallocation of harvest from Alberni West to Alberni East compared to MP #2. This reflects the larger netdowns that have occurred to the Alberni West net landbase and the greater occurrence of spatial constraints (e.g., visual landscapes) in this working circle.

TABLE 3.4.1. Harvest Levels (000 m³/year)

Working Circle	MP #2			First Period Harvest Levels MP #3 TSA
	Economic	Marginally Economic ¹	Total	
Alberni East	1 168	11	1 179	1 203
Alberni West	5 1	19	590	521
Ucluelet	34	3	37	36
Total	1 203	33	1 806	1 760

¹ Assumed contribution to TFL 44 AAC of 50 000 m³/year allocated to marginally economic timber types.

In the TSA, second growth (new forest) is not considered for harvest until it has attained minimum merchantability standards. The procedure used in recent analyses (e.g., the July 1993 analysis for TFL 44 and the MP #2, July 1994 analysis for TFL 39) was applied to the Base Option. The intent is to provide some planning flexibility by defining minimum harvest ages that are a little younger than the age at which maximum average annual volume growth occurs. The minimum harvest ages for some low site areas are extended to ensure achievement of a minimum average tree size and volume/hectare. In the analysis, areas are often harvested well beyond these minimum harvest ages depending on the availability of merchantable timber and the occurrence of constraints for reducing the rate of harvest in areas managed for non timber values.

Options 18 and 19 show the sensitivity of timber supply to minimum harvest ages that are 10 years lower and 10 years higher, respectively, than assumed in Option 2.

Option 20 provides a simplified portrayal of the second growth harvest strategy proposed in this Management Plan. To effectively include spatial constraints (e.g., adjacency, visual landscapes) in the planning process, it is necessary to plan for first pass harvest opportunities earlier than previously considered.

There are many possible harvest schedules for any forest. The general procedure used in this analysis is to gradually change the harvest level from the initial harvest rate (period 199 to 2001) until LRSY is reached by the period 2102 to 2106 at the latest. LRSY is the rate of harvest that is equivalent to forest growth (measured in stands of 14 m height and greater) over the 100 year period from 2102 to 2201.

Further, for the three working circles in total, harvest schedules are constrained to ensure that harvest reductions of more than 10 %/decade are avoided (unless such reductions are necessitated by timberland allocation to higher land use).

3.5 Integrated Resource Management

This TSA explicitly recognizes a wide range of sensitive sites and non timber resource concerns. Many of them are listed in Section 3.2 above. Visual Quality Objective (VQO) classes have been identified and mapped on more than 30 % of the forested area of 2 3 000 ha. Areas occupying over 8 000 ha have been identified as having sensitive soil concerns. Riparian, recreation and wildlife values affecting forest management have been mapped on 44 000 ha, 28 000 ha and 12 000 ha of forest area, respectively.

Management implications of these concerns are modeled in the analysis as either a reduction in the landbase available for timber management or as a forest cover requirement.

Reductions to the timber management landbase area are applied to sensitive soil, riparian, recreation, biodiversity, wildlife, avalanche, community watershed, difficult regeneration, and other special reserve areas. They total more than 66 000 ha of productive forest land that is physically operable for timber management.

A major application of forest cover requirement constraints is for visual landscape management. Areas in the TFL have been mapped for visual sensitivity by VQO classes from retention as the most sensitive (and, hence more restrictive on timber management) class through partial retention to the less sensitive modification class. They occupy 1 %, 13 % and 1 %, respectively, of the net timber management landbase. The rate of harvest (cover class constraint) is restricted on these areas to a maximum percentage that may be below greenup (defined at 5 m in height for most options) at any given time. The percentage is least for the most restrictive retention areas and is higher for the less sensitive modification area. The impact of these forest cover constraints on timber harvest over time is shown by variations in the constraints in Options 5 to 9.

The 14 community watersheds include 15% of the net timber harvesting landbase. A cover class constraint of a maximum of 5% of the total forest area less than Age 5 is applied to each of the community watersheds.

Smaller areas in avalanche run out zones and in some areas classified for recreation values (outside of visual landscapes) are also subject to forest cover requirements.

A cover class constraint of no more than 25% of the available area to be less than 10 years of age at any time is imposed for cutblock adjacency in areas not covered by more restrictive VQO classes.

4.0 DISCUSSION OF ISSUES

Option 2 is used as a base for comparing options for the various issues discussed in the remaining sections.

All harvest schedules, including those for Option 2, are tabulated by working circle and for the total, in Attachment 1.

The Option 2 harvest schedule for TFL 44 (excluding Clayoquot), showing the transition from predominately old growth harvest to second growth harvest is displayed in Figure 4.0.1. Refer to Attachment 2 for a similar figure for each working circle.

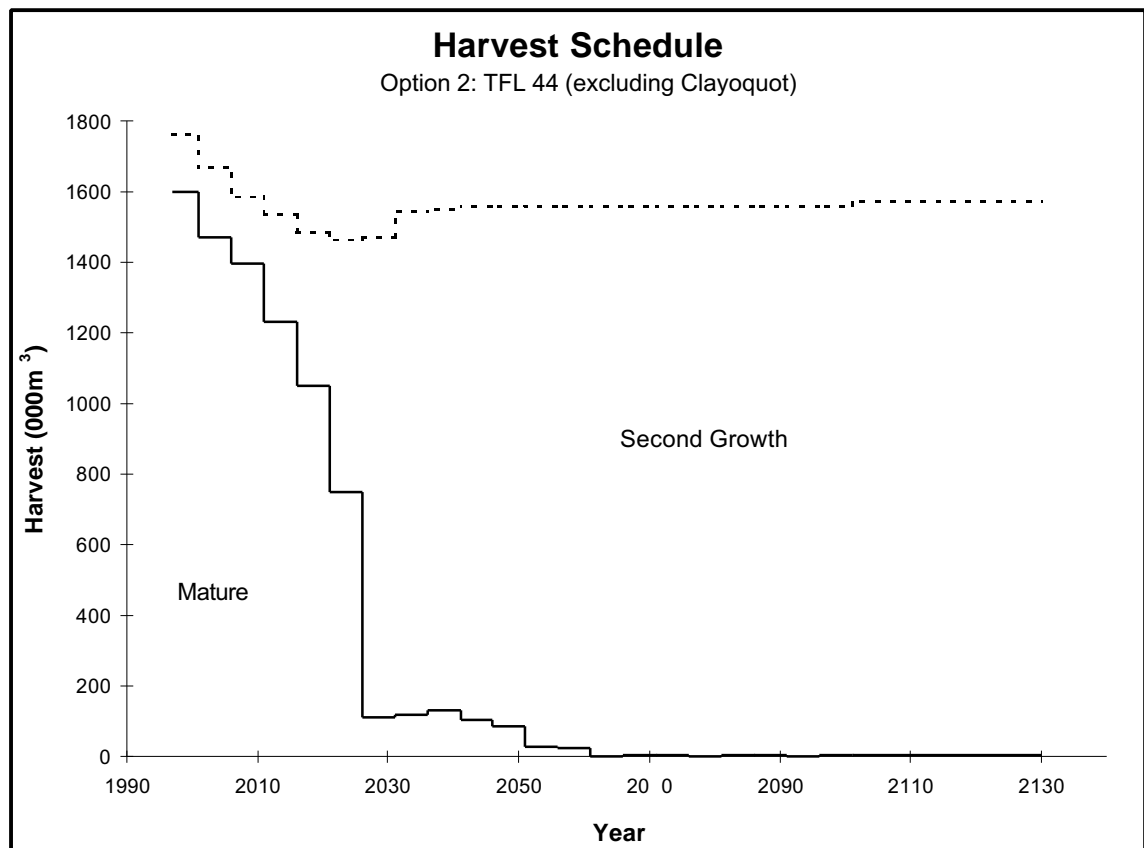


FIGURE 4.0.1. Harvest Schedule Option 2: TFL 44 (excluding Clayoquot)

The TFL 44 (excluding Clayoquot) harvest schedule starts at 1 60 000 m³, declines by 1 over 25 years to a low of 1 464 000 m³ in 25 years and then increases to a LRSY of 1 5 1 000 m³/year (11 below the initial harvest level). This forest wide result includes different results for the Alberni East working circle compared to the Alberni West and Ucluelet working circles.

Refer to the working circle summary in Table 4.0.1. Compared to Alberni East, the Alberni West and Ucluelet working circles have a smaller proportion of available mature volume relative to potential forest growth (LRSY) and a higher percentage of the net timber harvesting landbase is constrained by visual landscape and other spatial constraints. The harvest schedules for Alberni West and Ucluelet, start below LRSY, decrease by approximately 20 over the first decade, stay at this low level for 15 to 20 years, and then increase over 15 to 20 years to a harvest level close to LRSY.

TABLE 4.0.1. Option 2: Area and Volume Statistics by Working Circle

	Alberni East	Alberni West	Ucluelet	Total
Net Landbase				
hectares	99 911	0 208	6 938	1 05
percent	56.4	39.	3.9	100.0
Net Mature Volume				
000 m ³	29 19	12 996	1 109	43 824
percent	6 .8	29.	2.5	100.0
Harvest (199 2001)				
000 m ³ /year	1 203	521	36	1 60
percent	68.4	29.6	2.0	100.0
LRSY				
000 m ³ /year	9 0	546	55	1 5 1
percent	61.	34.8	3.5	100.0
Percent of net Area in retention and partial retention VQOs	5.8	22.	34.0	13.6

Compared to the other two areas, Alberni East contains more mature forest that is available for harvest and has a larger area of older (60 plus) age classes of second growth. Further, spatial constraints such as for visual landscapes are less significant. The initial harvest level of 1 203 000 m³/year declines gradually over 30 years to a harvest level of 953 000 m³/year. The long term harvest level (beyond the Year 2100) is 9 0 000 m³/year, 19 less than the initial harvest level.

The Option 2 harvest schedules were directed to distribute mature harvest volumes proportionally across the inventory operability classes of conventional economic, nonconventional economic and marginal. Table 4.0.2 shows that the results compare closely with the distributions of operability classes in the starting mature inventory and to results achieved in the 20 Year Plan for the Alberni East and Alberni West Working Circles.

**TABLE 4.0.2. Mature Inventory and Harvest by Operability Class
(Percentages)**

Operability Class	Net Inventory at end of 1995⁽¹⁾	Option 2⁽¹⁾	20-Year Plan⁽²⁾
Conventional Economic	9.2	80.6	81.1
Nonconventional Economic	16.2	15.2	14.6
Marginal	4.6	4.2	4.3 ⁽³⁾
Total	100.0	100.0	100.0

⁽¹⁾ Includes Working Circles, Alberni East, Alberni West, and Ucluelet.

⁽²⁾ Includes Working Circles, Alberni East and Alberni West.

⁽³⁾ Includes some uneconomic and nonproductive timber types.

Operational results are expected to be similar over an extended time period. They will, however, vary from year to year according to spatial constraints, development sequence and current economics.

Timber harvest from TFL 44 is important to the economic well being of the Alberni Clayoquot Regional District. It also contributes to economic activity in the communities of Chemainus and Nanaimo on the eastern side of Vancouver Island as well as the lower Mainland.

4.1 Integrated Resource Management

MB recognizes that non timber values are important. Mapping of environmentally sensitive sites and areas with non timber values has occurred throughout TFL 44 (see the Information Package for details). Option 2, used as a base for comparing options in this analysis, includes allowances for these values through explicit reductions to the landbase and through imposing cover class constraints.

A comparison of Options 1 and 2 provides an estimate of the total costs of reservations and constraints for non timber resources in terms of foregone timber values.

Option 1 portrays a view of timber as the dominant forest use. Area netdowns are made to safeguard sensitive soils and riparian values. Unlike Option 2, netdowns are not made for other non timber values (ESAs) and cover class constraints are not imposed for visual landscape or other reasons. Option 1 (but not Option 2) also includes mature timber classified as currently "uneconomic" and assumes that it is harvested over one hundred years (refer to the discussion in Section 4.22).

Table 4.1.1 compares the net timber harvesting landbase and mature volumes for Options 1 and 2.

TABLE 4.1.1. Comparison of Options 1 and 2 Net Landbases, Mature Volumes, and LRSYs by Working Circle

	Alberni East	Alberni West	Ucluelet	Total
Net Landbase (ha)				
Option 1	119 320	92 562	8 691	220 5 3
Option 2	99 911	0 208	6 938	1 05
(1 as of 2)	(119)	(132)	(125)	(125)
Net Mature Volume (000 m ³)				
Option 1	38 958	22 322	1 668	62 948
Option 2	29 19	12 996	1 109	43 824
(1 as of 2)	(131)	(1 2)	(151)	(144)
LRSY (000 m ³ /year)				
Option 1	1 184	35	4	1 993
Option 2	9 0	546	55	1 5 1
(1 as of 2)	(122)	(135)	(135)	(12)

Figure 4.1.1 shows the difference in harvest schedules between these two scenarios reflecting the costs of reductions to the working landbase and cover class constraints for non timber values.

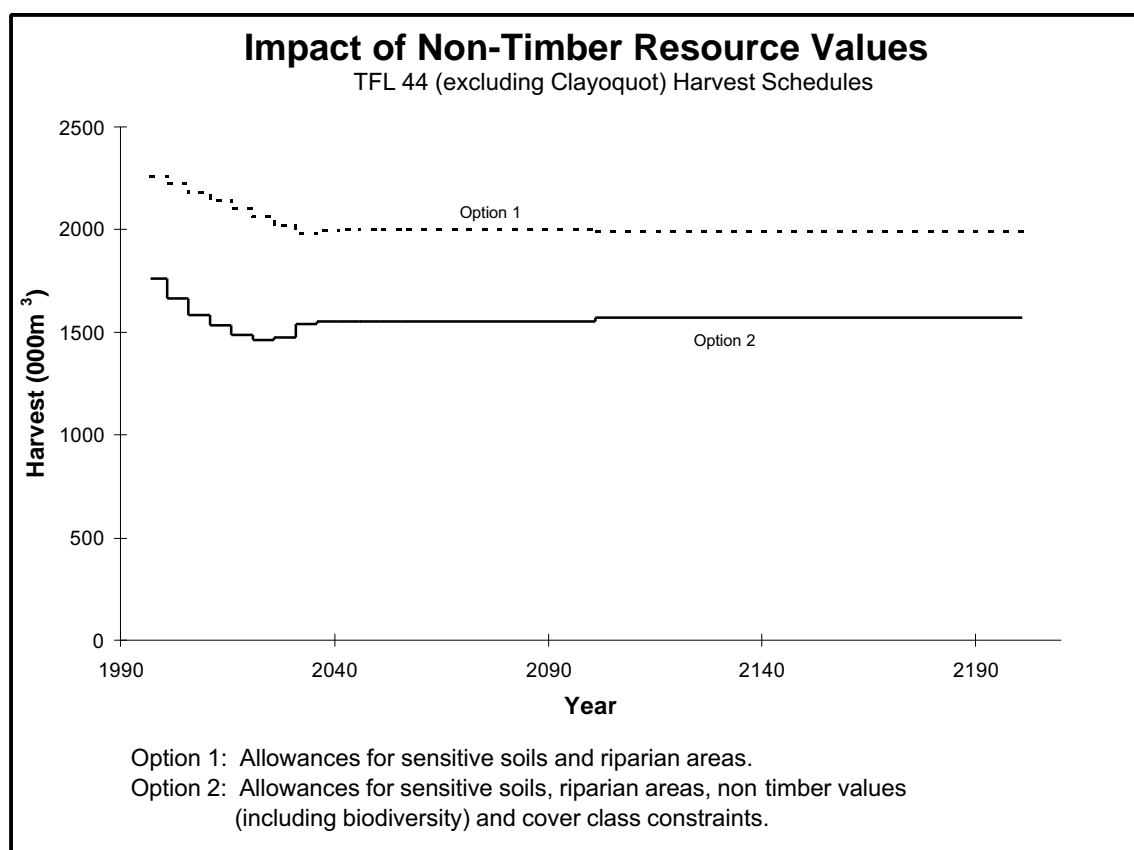


FIGURE 4.1.1. Impact of Non-Timber Resource Values

Differences in harvest levels are an average of 535 000 m³/year over the first 50 years and 422 000 m³/year in LRSY. To focus on the impacts of constraints

for non timber values, these average harvest volumes are reduced by 11 000 m³/year for the first 50 years and 22 000 m³/year in LRSY. This accounts for the estimated additional harvest volume available if the currently uneconomic"mature stands were added to the Option 2 harvest schedule.

The economic activity foregone because of these regulations is estimated in the TFL 44 Socio Economic Analysis Report. Economic impact analysis is used to assess the impact of alternative harvest schedules on macro level economic and social indicators such as employment, wages, government revenues and sales (Table 4.1.2). Harvesting activity in TFL 44 (excluding Clayoquot) could support an additional 964 direct obs if these regulations, aside from those to safeguard sensitive soils and riparian values, were not imposed. In addition, these regulations cost all levels of government at least 29 million each year.

TABLE 4.1.2. 50-Year Economic Impact of IRM Constraints, Option 2 Compared to Option 1

	Average Annual Impacts during 1997 to 2046
Harvest Reduction (m ³ /year)	524 000
Direct Jobs	964
Indirect Jobs	1 928
Total	2 892
Direct Wages Benefits	5 850
Indirect Wages Benefits	59 8
Total (000/year)	11 628
Stumpage Royalty (000/year)	12 052
Other indirect Government Revenues (000/year)	1 83
Total (000/year)	29 889
Sales Value (\$000/year)	169 692

The economic costs reported in Table 4.1.3 are foregone net timber values for use in a benefit cost analysis framework. The total discounted costs of these regulations is 0.62 billion. On an annuali ed basis, using a 4 discount rate, the costs equate to 31 million/year.

TABLE 4.1.3. Economic Costs Of Integrated Resource Management Regulations: Option 2 Compared to Option 1

	Costs (\$000/Year)	N.P.V. (\$000)
Foregone Rents	9 803	269 291
Increase in Harvesting Costs	10 041	259 010
Increase in Fixed Costs	11 035	93 330
Total	30 879	621 631

MB accepts that some of this cost may be ustified, but is concerned that management for the various forest values is done ob ectively and that both costs and benefits are considered in a benefit cost analysis framework.

4.11 *Costs of Biodiversity Constraints*

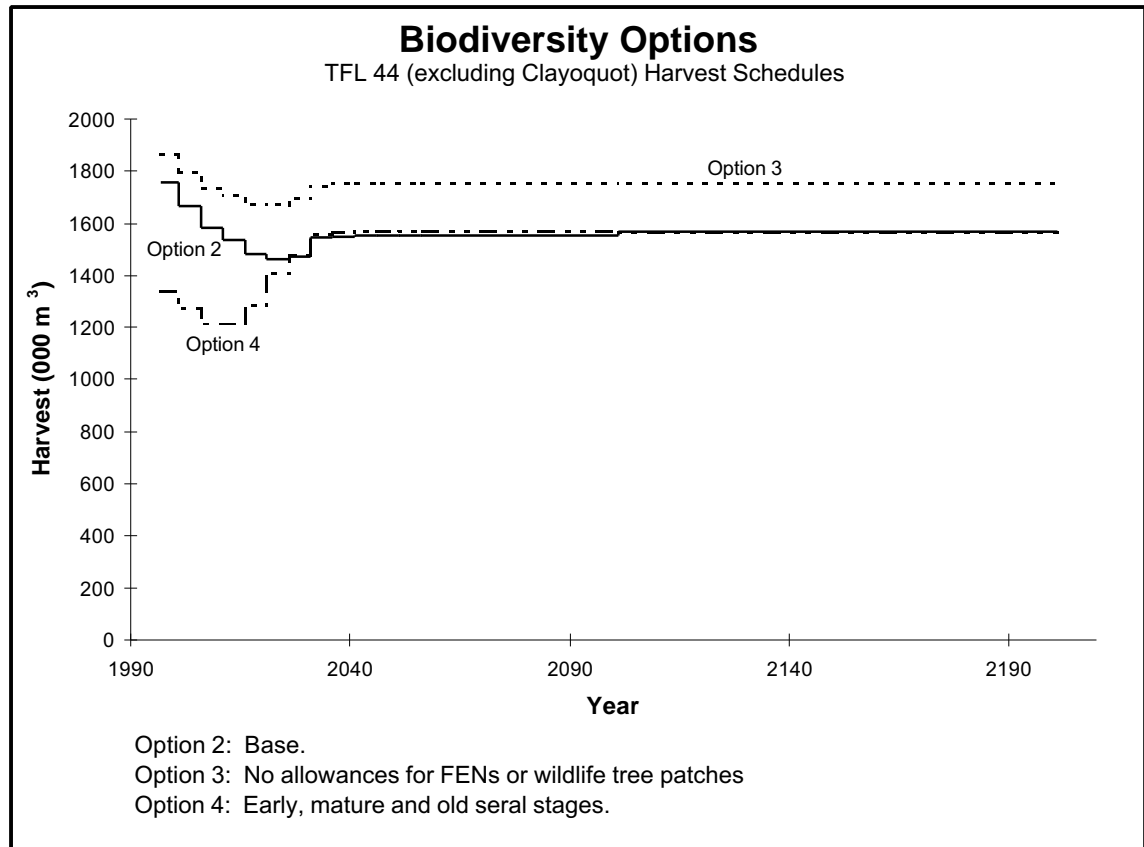
The process for designing biodiversity landscape units and their emphases is expected to be completed during the next two years. There is uncertainty regarding the requirements or constraints that will be applied for biodiversity. The potential impacts on timber supply and the regional economy are large.

Draft Forest Ecosystem Networks (FENs) have been mapped in TFL 44. In Option 2, FENs are excluded from the net timber harvesting landbase and a further allowance has been made for old growth representation. (The biodiversity guidebook requirements for old growth were applied to draft landscape units, assuming that they are all low biodiversity emphasis except for a high biodiversity emphasis assignment to the Nahmint Watershed.) The result is a 20 800 ha and 10 000 000 m³ reduction to the net timber harvesting landbase and available mature volume, respectively. This is in addition to 45 000 ha and 1 500 000 m³ of mature volume already removed from the net landbase for sensitive sites and non timber values such as wildlife and recreation.

Option 3 makes no reduction to the net landbase for FENs or for the additional allowances made in Option 2 for old growth reserves. Also, there is no allowance for wildlife tree patches (a 2 allowance is made in Option 2). In essence, Option 3 assumes that the landbase requirements for biodiversity are satisfied by the 5 000 ha (much of it old growth) of forest reserved because of non timber value, sensitive sites and inoperable areas. In addition, substantial areas are reserved in nearby parks.

There is uncertainty regarding application of early and (mature plus old) seral stage requirements. They are described in the Biodiversity Guidebook, but were not included in the Timber Supply Analysis of impacts of the Forest Practices Code, released by the Government in February of 199 . Option 4 includes early and (mature plus old) seral stage constraints as well as the old growth reserves and wildlife tree patches applied in Option 2. The seral stage requirements are based on the Biodiversity Guidebook and a recent draft of biodiversity landscape units and emphases. The seral stages are modeled on the forest area in each landscape unit.

The potential costs of the biodiversity reserves and constraints are illustrated here by comparing harvest schedules for Options 4 and 2 to the harvest schedule for Option 3. The TFL (excluding Clayoquot) harvest schedules for the three options are shown in Figure 4.11.1.

**FIGURE 4.11.1. Biodiversity Options**

The TFL (excluding Clayoquot) harvest schedule for Option 3 commences at 1 863 000 m³/year (103 000 m³/year or 6 higher than Option 2), gradually declines by 10 over 25 years and then increases to reach a LRSY of 1 54 000 m³/year (12 higher than Option 2) during the period 2042 to 2046. The Option 3 net landbase and mature volumes are 14 and 26 , respectively, higher than for Option 2.

The impact of FENs and wildlife tree patches is greatest in Alberni West, where the Option 3 landbase and mature volumes exceed those for Option 2 by 1 and 40 , respectively.

The seral stage constraints of Option 4, particularly the early seral stage requirements result in a substantial reduction in harvest during the first 30 years. Most of this impact occurs in Alberni East. Compared to the other two working circles, Alberni East has a higher proportion of the productive forest in the net landbase and is less constrained by spatial constraints such as those in visual landscapes. Further, over 60 of the Alberni East mature volume is classified in the relatively restrictive combination of an intermediate biodiversity emphasis and a natural disturbance type 1 (refer to the Biodiversity Guidebook). For Alberni East, the Option 4 harvest is 800 000 m³/year for the first 20 years before increasing to LRSY. This compares with an Option 2 harvest schedule that commences at 1 203 000 m³/year and reduces to 1 095 000 m³/year during the same 20 year period. An alternative harvest flow for Option 4 could have

started at a higher level, but would have correspondingly dropped below 800 000 m³/year for a time during the first 20 years. Long term harvest levels for Option 4 are similar to those for Option 2.

For TFL 44 (excluding Clayoquot), in the medium term (next 50 years), the FENs, additional old growth reserves and wildlife tree patches in Option 2 result on average in:

- ❑ 1 6 000 m³/year less in timber harvest. Results of a sensitivity analysis of the 20 Year Plan in which harvest could occur in FENs, indicate a similar impact on timber harvest.
- ❑ Forgone regional economic opportunities including 510 direct and indirect obs.
- ❑ Forgone provincial economic opportunities, including 9 2 direct and indirect obs and 40 million in wages and benefits (these include regional impacts).
- ❑ Forgone Government revenues of 10 million per year.
- ❑ Economic costs of 10 million per year.

A transition strategy that would allow the biodiversity old growth requirements to be achieved over three rotations could increase (Option 2) harvest levels and reduce these short to medium term costs. The long term impacts would remain.

The medium term impacts are almost doubled when early and mature seral stage constraints are applied (Option 4 compared to Option 3).

Average economic impacts are shown in Table 4.11.1

TABLE 4.11.1. 50-Year Economic Impact of Biodiversity Constraints, Options 2 and 4 Compared to Option 3

	Average Annual Impacts (reductions) 1997 to 2046	
	Option 2	Option 4
Harvest (000 m ³ /year)	1 6	348
Jobs ⁽¹⁾	9 2	1 921
Wages and Benefits ⁽¹⁾ (000/year)	39 508	8 119
Government Revenues ⁽¹⁾ (000/year)	10 039	19 850
Sales Value (000/year)	56 996	112 696
	Average Economic Costs (\$000/Year) Compared to Option 3	
	Option 2	Option 4
	10 436	18 041

(1) These include both direct and indirect impacts.

These costs of additional reserves and harvesting constraints for biodiversity are high. It is important to consider what additional benefits they provide, particularly when:

- ❑ There is more than 180 000 ha of forest in protected areas and parks that are adjacent to TFL 44. This includes 38 000 ha of forest that was previously in TFL 44 and have been proclaimed as protected areas during the last 10 years. It also includes areas in the Pacific Rim and Strathcona Parks.
- ❑ 89 000 ha of forest land in TFL 44 is in Clayoquot Sound where the management emphasis is on biodiversity and other non timber values. Additional areas of the Arrowsmith TSA and TFL 54 are also in Clayoquot Sound and managed with this same emphasis.
- ❑ In the three TFL 44 working circles outside of Clayoquot Sound, 5 000 ha of forest land, much of it old growth, is reserved because of inoperability, to protect sensitive soils and streams and for wildlife, recreation and other non timber values.
- ❑ The remaining 198 000 ha of forest land in TFL 44 includes substantial areas that will be managed for visual landscapes, recreation and other concerns on rotations of at least 90 years. Note that the 198 000 ha includes the additional 20 800 ha that are removed in Option 2 for FENs and additional old growth representation.
- ❑ Forest Practices Code guidelines for greenup and rate of cut requirements disperse harvest operations.

4.12 Costs of Visual Landscape Constraints

Mapping of visual landscapes by Visual Quality Objective (VQO) class has occurred in visually sensitive areas (e.g., main travel corridors) in TFL 44.

Options 2, 5, 6, 7, and 8 impose different cover class constraints (reduced rates of harvest) on these areas. In Option 2, the constraints are based on procedures currently recommended by the Vancouver Forest Region, MoF.

Options 5 to 8 are sensitivity analyses of varying the visual landscape constraints modeled in Option 2. Option 5 shows the impacts of reducing the average age to achieve Visually Effective Greenup (VEG) by 4 years (relative to assumptions for Option 2). Operations are placing more emphasis on prompt re establishment and on management practices (e.g., larger seedlings and fertilization at time of planting) to increase early height growth. Option 6 shows the impacts of increasing the average age for VEG by 4 years.

Option 7 portrays a 5% decrease in the maximum percent alteration for partial retention and modification VQO areas (retention VQO areas were not affected as the maximum percent alteration for Option 2 is only 1% or 2%). A 5% increase in maximum percent alteration for visual landscapes is modeled as Option 8.

Differences in cover class constraints between Options 2, 5, 6, 7, and 8 are summarized in Table 4.12.1.

TABLE 4.12.1. Description of Visual Landscape Cover Class Constraints

	Option 2	Option 5	Option 6	Option 7	Option 8
VEG (m)	5	5	5	5	5
Average age (years)	13 16 ⁽¹⁾	9 12	1 20	13 16	13 16
Percent Visual Alteration ⁽²⁾					
Retention	1 2	1 2	1 2	1 2	6
Partial Retention	8	8	8	2 3	12 13
Modification	20 22	20 22	20 22	15 1	25 2

(1) Constraints vary by working circle.

(2) In all Options, the percent visual alteration relates to an area halfway between the net available area and the total green area (i.e., semi dispersed available and unavailable areas. Refer to Section 8.3 in the Information Package).

Visual landscape cover class constraints can have a significant impact on timber harvest schedules, particularly when they are imposed as new additional management constraints without a transition period. Two indicators of relative impact of these cover class constraints are the proportion of land available for timber harvest that is within the more restrictive VQO classes and the length of time it takes to harvest all the timber harvesting area in a VQO class within a forest unit, i.e., the harvest cycle.”

Table 4.12.2 shows the percentage of net landbase and available mature volume by VQO class for each working circle. The category recreation”is included in the table as it represents areas mapped for recreation values that are outside of visual landscapes and have been modeled in the analysis with a cover class constraint intermediate between partial retention and modification. The constraints on these recreation”areas were not varied in the sensitivity analyses.

TABLE 4.12.2. Percentage of Option 2 Net Area and Mature Volume by VQO Class

	Alberni East	Alberni West	Ucluelet	Total
Net Landbase				
Retention	0.6	0.6	9.1	1.0
Partial Retention	5.2	22.1	24.9	12.6
Modification	16.4	14.3	5 .9	1 .2
Recreation C1 B	3.3	12.3	4.3	6.9
Total	25.5	49.3	96.2	37.7
Net Mature Volume				
Retention	0.6	1.6	15.9	1.3
Partial Retention	6.1	2 .9	2 .3	13.1
Modification	15.	1 .9	53.8	1 .3
Recreation C1 B	3.5	16.3	0.2	.2
Total	25.9	63.7	97.2	38.9

The retention and partial retention VQO classes cover 23 and 34 , respectively, of the net landbase in the Alberni West and Ucluelet working circles (refer to Table 4.12.2). The proportion of available mature volume in these restrictive areas is even greater at 30 and 43 , respectively, for these two working circles.

The harvest cycle is the minimum period of time that it would take to complete one harvest of the available land within a VQO class. The longer the harvest cycle the more restrictive is the cover class constraint. Consider Alberni West as an example. Table 4.12.3 compares Options 2, 7, and 8 for the partial retention VQO class.

TABLE 4.12.3. Alberni West: Partial Retention Cover Class Constraints by Option

	Option 2	Option 7	Option 8
Harvest cycle (years)	148	396	91
Maximum percentage of forested viewscape harvested during a 10 year period	4.0	1.5	6.5
Percentage change in maximum harvest rate relative to Option 2	0	(62)	63

The partial retention VQO class covers 22% of the available area (for these options) in Alberni West. With Option 8 constraints, compared to Option 2, the harvest rate for this 22% of the timber management area is increased by 63% while the proportion of forested viewscape that has not reached VEG does not go above 6.5% in 10 years. Conversely, the additional constraints in Option 7 reduce the harvest rate by 62% compared to Option 2.

The timber supply impacts of varying the visual landscape constraints are indicated by the comparison of harvest schedules in Figure 4.12.1.

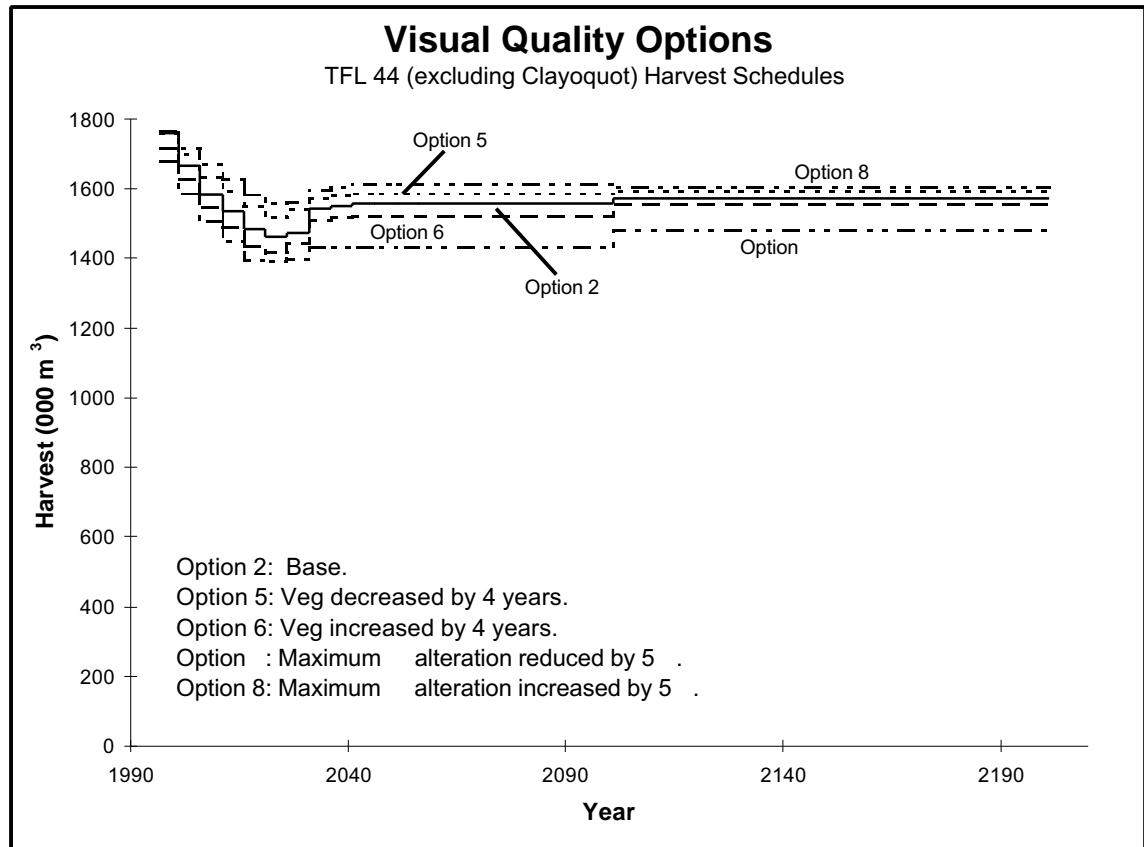


FIGURE 4.12.1. Visual Quality Options

Consider Options and 8, as they differ the most from the base, Option 2.

Option models the impacts of a 5 reduction in the maximum percentage alteration in visual landscape areas. The Option initial harvest rate for the TFL (excluding Clayoquot) is 1 6 000 m³/year, 83 000 m³/year less than for Option 2. This difference in harvest continues for the first 35 years and then expands to 126 000 m³/year from 2042 to 2101. In the long term the Option harvest is 1 482 000 m³/year, 89 000 m³/year less than for Option 2. The impact of changing the constraints is proportionally much higher in Alberni West and Ucluelet than in Alberni East.

Option 8 models the impacts of a 5 increase in the maximum percentage alteration. The harvest flow strategy to fill in the Alberni West and Ucluelet timber supply holes during the period 200 to 2021 is successful. The result is that the TFL (less Clayoquot) harvest decreases to only 40 000 m³/year to 50 000 m³/year below LRSY for just 10 years. In the long term the Option 8 harvest rate is 32 000 m³/year higher than Option 2. An alternative harvest flow strategy would have been to increase the initial harvest level above that for Option 2 and to accept a greater decrease in mid term harvest levels.

The average economic impacts of the changes in harvest levels over the first fifty years are shown in Table 4.12.4.

TABLE 4.12.4. 50-Year Economic Impact of Visual Quality Constraints, Options 2 and 7 Compared to Option 8

	Average Annual Impacts (Reductions) 1997 to 2046	
	Option 2	Option 7
Harvest (000 m ³ /year)	6	160
Jobs ⁽¹⁾	3 0	883
Wages and Benefits ⁽¹⁾ (000/year)	15 040	35 91
Government Revenue ⁽¹⁾ (000/year)	3 822	9 126
Sales Value (000/year)	21 69	51 814
	Average Economic Costs (\$000/Year) Compared to Option 8	
	Option 2	Option 7
	91	9 681

(1) These include both direct and indirect impacts.

These results show that the impacts and costs of visual landscape constraints are high, particularly in the medium term. For example, consider the costs of Option 2 (base case) compared to the less restrictive Option 8. Average annual costs over the first 50 years include:

- ❑ A reduction in harvest by 6 000 m³.
- ❑ Forgone economic opportunities in the Alberni Clayoquot Region including 193 direct and indirect obs.
- ❑ Forgone provincial economic opportunities (these include Regional impacts) including:
 - 3 0 direct and indirect obs.
 - 15 million/year in wages and benefits.
 - Almost 4 million/year in Government revenue.
- ❑ Economic costs of 8 million per year.

These costs would be reduced substantially if a period of transition was allowed between the present forest structure (created without the recently implemented visual landscape constraints) and the desirable forest viewscales.

Option 9, the inclusion of partial harvesting in retention and partial retention VQO areas has not been completed. The purpose of this option was to indicate the potential timber supply impacts assuming that 20% of the forest in these restrictive areas could be partially harvested.

Some indications can be gained by considering the inventory and assumptions. The mature timber areas were assumed to be harvested in two passes, removing 60% of the volume in the first pass and the remaining 40%, 20 years later in a second pass. It was further assumed that at the completion of the second harvest pass, advanced regeneration would provide a 5 year start towards achieving visually effective greenup.

Applying these assumptions to the 1995 inventory and assuming that each harvest pass would occur over a 20 year period, results in potentially an

additional 38 000 m³/ha of mature timber harvest over the first 20 years. During Years 21 to 40 the harvest increase would be 25 000 m³/year (40% of the standing timber is removed in the second pass). Sixty percent of this additional medium term harvest volume would occur in the Alberni West Working Circle. It is assumed that all clearcut opportunities in these visual landscape areas are being utilized.

Further harvest volumes might be available from thinning in second growth areas. There are approximately 6 800 ha of second growth available for timber management in retention and partial retention areas that are older than 30 years. Again, most of this is in the Alberni West Working Circle. If 20% of this area was available for harvest over the next 20 years and thinnings volume averaged 200 m³/ha, then an additional 14 000 m³/year could be harvested.

In total this, what if? option suggests an additional 52 000 m³/year in timber harvest could be achieved during the next 20 years. The challenge remains to identify how much of this volume can be safely and economically accessed through partial harvests. Substantial additional costs would be included in such partial harvests and there is also the cost of reduced timber supplies in the longer term.

Other initiatives are underway. These includes prompt planting and fertilization of some sites at time of establishment to achieve VEG in a shorter time.

Classification of visual landscapes is a concern. Since the last analysis in 1993, a substantial area of visual landscapes have been reclassified to a more constraining category. This is in contrast to the Government analysis of FPC impacts (February 1996) that described a decreased impact of visual landscape constraints. There are some opportunities to reconsider classifications, particularly in areas that are not frequently visited.

4.13 Cultural Heritage Resources

The inventory of cultural heritage resources is incomplete. In addition, the mapping of the results of current management practices is beginning to occur.

Better information will be available for the MP 4 analysis. Refer to Section 5.82 of this Management Plan.

Preliminary information indicates that the timber supply impacts of cultural heritage resources will be within the 5% landbase sensitivity presented in Section 4.21 of this Appendix. Actual impacts will depend on the overlap between cultural heritage resources and reserves or constraints for other resources such as riparian areas, wildlife tree patches, recreation and visual landscapes.

4.2 The Net Harvesting Landbase

4.21 Sensitivity to Changes in the Operable Landbase

The results for Options 3 and 10 are useful for showing the sensitivity of harvest schedules to changes in the net timber harvesting landbase. Refer to a comparison of harvest schedules in Figure 4.21.1

Option 3 makes no reduction to the net land base for FENs or for the additional allowances made in Option 2 for old growth reserves. Also, there is no allowance for wildlife tree patches (a 2 allowance is made in Option 2). On average the net landbase is increased by 14 and the available mature volume is increased by 26 . As shown in Table 4.21.1, this increase in net area varies considerably from 12 for Alberni East to 1 for Alberni West.

TABLE 4.21.1. Option 3 Compared to Option 2: Net Landbases and Mature Volumes

Option 3 as a Percentage of Option 2.

	Alberni East	Alberni West	Ucluelet	Total
Net Landbase	112	11	116	114
Mature Volume	119	140	135	126

The Option 3 harvest schedules are described in Section 4.11. The TFL (excluding Clayoquot) harvest schedule starts at 1 863 000 m³/year, 6 higher than Option 2, decreases by 10 over 25 years, and then increases, reaching a LRSY of 1 54 000 m³/year (12 or 183 000 m³/year higher than the base Option 2) in the period 2042-2046.

Option 10 reduces the net landbase by 5 . The TFL (excluding Clayoquot) harvest schedule for Option 10 starts at 35 000 m³/year below that for Option 2 and after 25 years is close to 5 lower. The LRSY is 1 495 000 m³/year, or 6 000 m³/year lower than for Option 2.

For the Alberni West and Ucluelet working circles, Option 10 harvest levels are close to 5 less than those for Option 2 throughout the schedule. There is little flexibility in the short term because of the historical pattern of harvest, the large netdowns overall, and the substantial proportion of mature timber that is in restrictive visual landscapes. As in some other options, the initial harvest level for Alberni East is reduced slightly to ensure that the change in harvest from the three working circles does not exceed 10 per decade during the first 20 years. The Alberni East Option 10 harvest decreases a little more steeply than in Option 2 for 25 years and thereafter it is 5 to 6 below that for Option 2.

Estimates of the operable (net) landbase will change with economic circumstances, changes in regulations, and as planning requirements are more clearly defined and understood. There are both positive and negative factors.

For example, MB believes that over the longer term the area classified as currently uneconomic”and excluded from the net landbase in this analysis will be economically attractive to harvest. Refer to the discussion in Section 4.22.

As another example, allowances for archaeological sites were not explicitly made in this analysis. Archaeological Impact Analyses are being conducted to assist operational planning. Small areas have been reserved, primarily around culturally modified trees. During MP 3, comparisons of mapped data, with other inventories, will provide information on landbase impacts.

As a final example, landscape biodiversity requirements are yet to be determined. At this stage, it is uncertain whether these determinations will decrease or increase the interim allowance modeled in this analysis.

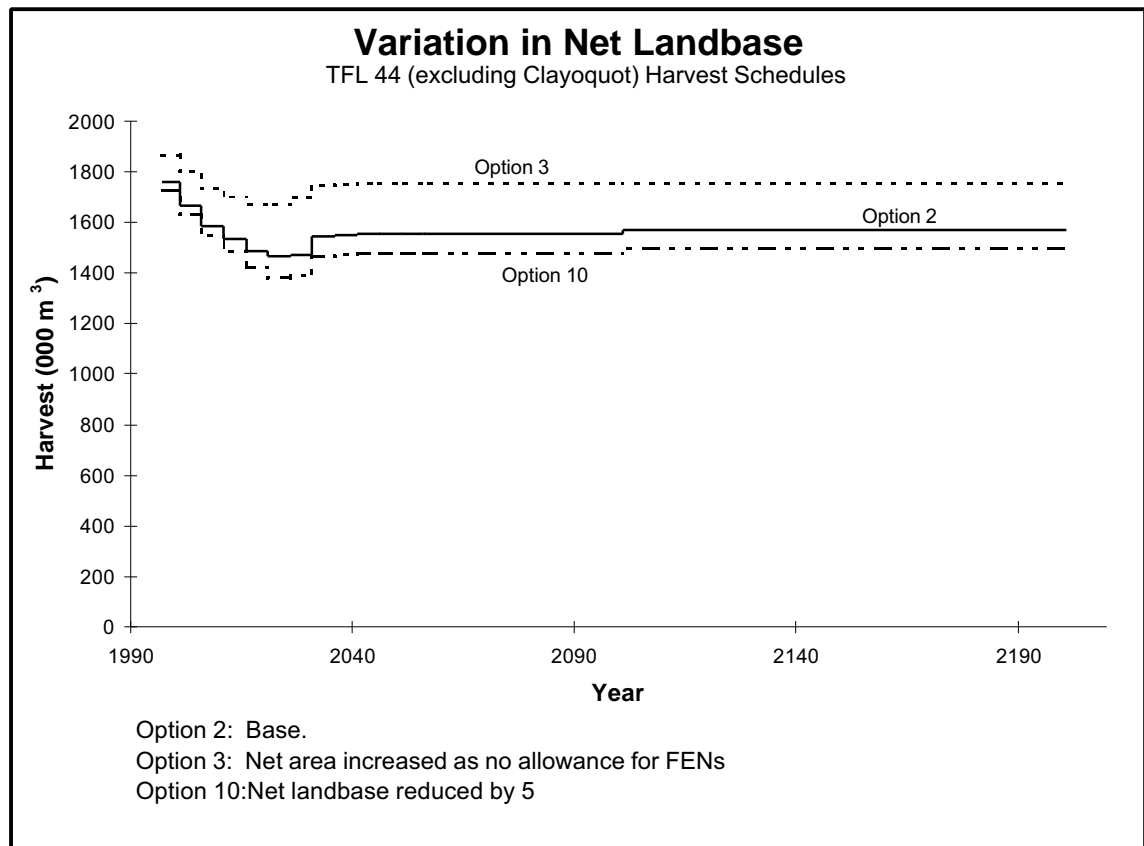


FIGURE 4.21.1. Variation in Net Landbase

4.22 Current Harvesting Economics

There is 3 83 ha and 1 144 000 m³ of mature volume that is classified as currently uneconomic”and is not already deducted from the net landbase for other reasons.

Since the analysis is for a 200 year period, it follows that all stands available for harvesting during that period should be included in the analysis. The BC coast has a history of an ever widening extensive forest margin. The ingenuity of the

logging sector renders more and more of the forest economically accessible. There is no reason to suspect that this trend will be arrested.

MB believes that over the next 100 years, all of the mature timber, physically safe to fell and extract without unacceptable environmental damage, will be economically available for harvest. The preparation of a 20 year operating plan at five year intervals will confirm the continuing validity of the assumption.

The MoF takes the position that only stands economically accessible during the last price cycle should be part of the landbase for which LRSY is calculated.

Consider if harvest of these currently uneconomic"stands is spread out over 100 years to simulate the long term opportunity for utilizing this timber according to market cycles and developments in technology over time. The result would be to add 11 000 m³/year to the harvest during this period.

As by definition a timber supply analysis examines long term timber supply, it should incorporate assumptions that are consistent with this long term view. In this context it is appropriate to add 11 000 m³/year of harvest for areas classified as currently uneconomic".

4.3 Second-growth Harvest Strategy

Second growth harvest strategy can significantly affect short to mid term harvests. This includes harvest volumes and planning flexibility.

Minimum harvest age rules applied in recent analyses and in Option 2 and other Options of this analysis were intended to allow for some planning flexibility in strategic analyses without recognizing specific operational planning circumstances. Minimum harvest ages were defined as the age at which the stand mean annual increment (mai) was first within 0.2 m³/ha of culmination mai, with a minimum stand average dbh of 25 cm and a minimum stand volume of 250 m³/ha.

The resulting minimum harvest ages vary according to species, site index and stand density. They range from 35 years to well in excess of 200 years (refer to the yield tables in Attachment 2 of the Information Package). The average (area weighted) minimum harvest ages by working circle for Option 2 are:

Working Circle	Average Minimum Harvest Age (years)
Alberni East	4
Alberni West	83
Ucluelet	84
Three Working Circles	78

The Protected Area Strategy and the Forest Practices Code have significantly reduced the timber harvesting landbase, particularly in mature forest areas. Further the FPC has imposed spatial harvesting constraints, which are quite different from the past harvest pattern. The result is reduced planning flexibility and reduced harvest opportunities in the remaining mature timber.

There are harvest opportunities in second growth stands in TFL 44. However, the spatial constraints of maximum block size, adjacency and rate of cut restrictions mean that areas of similar aged second growth will not be harvested over a short period (as they were in the previous harvest), rather they will be harvested over a

number of passes. In many areas, patches of similar aged second growth will be harvested over four or more passes, over 30 or more years.

A second growth harvest strategy can assist in reducing the transition costs of moving to the forest spatial pattern demanded by the new regulations. To this end, the strategy proposed for MP 3 is to plan for first harvest pass opportunities at an earlier age than previously considered. Initially, minimum harvest ages based on calculations of financial rotations in recent stand level analysis will be used. For simplicity these are grouped as follows:

Species Association	Site Index Range (m)	"Minimum Harvest Age" (years)
Douglas fir	2	0
Douglas fir	2	50
Western Hemlock	2	60
Western Hemlock	2	40

These minimum harvest ages may be changed according to operational experience. They will assist in providing an initial focus for harvest planning. Collection of more detailed information from inventories and site visits will then indicate priority areas for harvest (e.g., forest health) and areas that must be deferred because of non timber resource issues (e.g., rate of cut and adjacency) and because of harvest economics. This approach will encourage a better connection between strategic and operational planning.

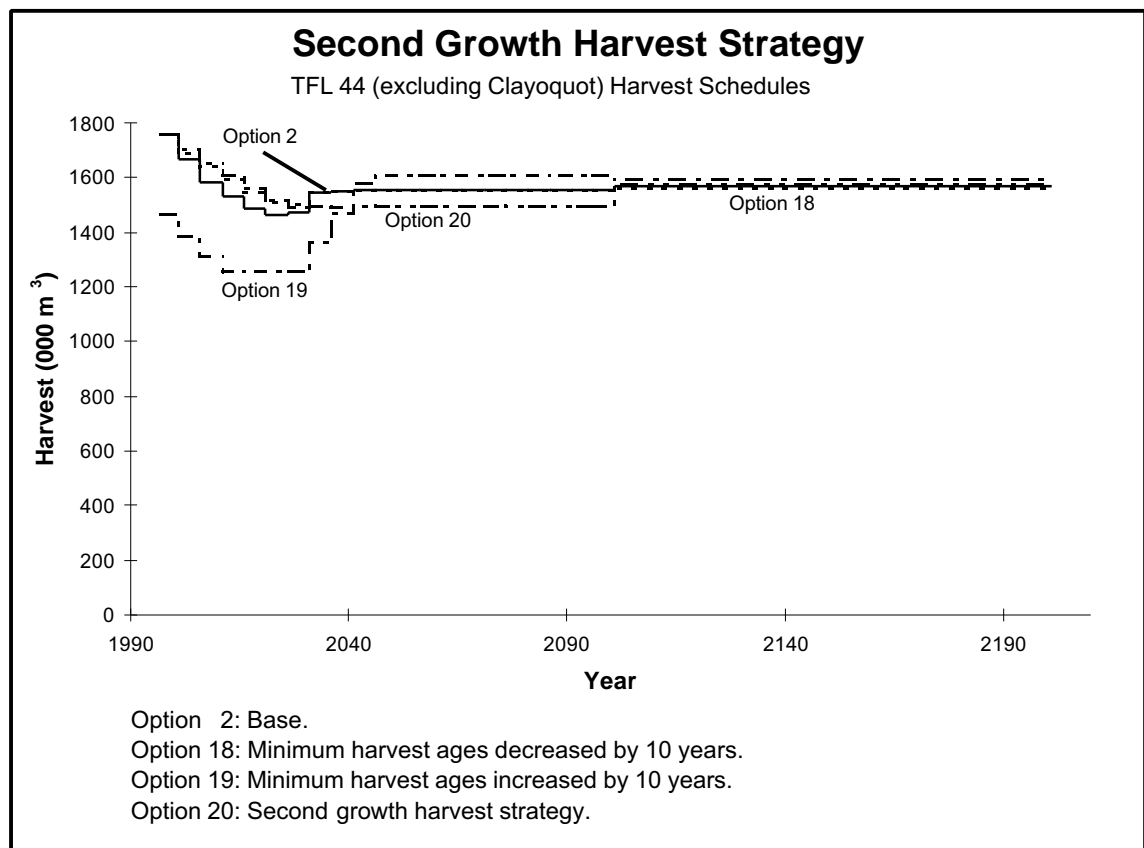


FIGURE 4.3.1. Second-Growth Harvest Strategy

Option 20 provides a simplified portrayal of this second growth harvest strategy. The above minimum harvest ages were assigned to 25% of the area currently in second growth, and above Site Index 18. The harvest flow strategy was to retain the same initial harvest levels as Option 2, and access some of the additional second growth available for harvest during the medium term to partially fill in the low harvest levels for the Alberni West and Ucluelet working circles during the period 2000 to 2026 and to reduce the rate of change in Alberni East harvest levels. Refer to the comparison of harvest schedules in Figure 4.3.1. The strategy is successful in providing a more gradual transition towards longer term harvest levels. Possibly more important, it provides opportunities for more planning flexibility and improved harvest economics during this difficult period. These gains are offset by lower harvest levels during the Period 2032 to 2101. Overall, some of the 40 to 80 year age class is brought forward in time for harvest, at a small cost in reduced longer term timber supply.

The potential impact is indicated by considering the age class distribution for the net landbase of the three working circles combined. There is slightly less than 2 000 ha of Age 80 and greater, almost 8 000 ha between 61 and 80 years of age and over 29 000 ha between 41 and 60 years of age.

Options 18 and 19 provide a sensitivity analysis of the minimum harvest ages used in Option 2. In Option 18 the minimum harvest ages are reduced by 10 years and in Option 19 they are increased by 10 years. Refer to Figure 4.3.1 for a comparison of harvest schedules.

The harvest flow strategy in Option 18 (minimum harvest ages reduced by 10 years) was similar to that for Option 20. The additional second growth volumes available in the medium term enables a more gradual transition to lower harvest levels. The cost in reduced longer term harvests is less as unlike in Option 20, the priority is to harvest stands older than the Option 2 minimum harvest age before harvesting younger stands i.e., the loss in growth is reduced.

In Option 19 (minimum harvest ages increased by 10 years), the initial harvest rate for the three working circles is reduced by 1% to 1 462 000 m³/year to limit the change in harvest during the first decade to 10%. The harvest declines to a low of 1 255 000 m³/year during the period 2012 to 2031 (14% below that for Option 2) and then increases to a level 49 000 m³/year higher than Option 2 from 2040 to 2101 and a LRSY that is higher by 1.5%.

To date, there has been little second growth harvest in TFL 44. This is changing as large area netdowns, particularly in mature forest and spatial harvesting constraints are dispersing the harvest over a larger geographic area. For example, 15% of the Twenty Year Plan harvest for the Alberni East and Alberni West Working Circles is from second growth areas.

The MP 3 second growth harvest strategy will more objectively examine harvest opportunities and plan for spatial constraints by taking advantage of the substantial variability in the 40 year and older stands.

Broad based second growth harvest operations are occurring on southeastern Vancouver Island in MF 19 and other tenures. These include thinnings that are

occurring below the minimum size and volume limits used in this analysis. Some of the ages for clearcut are well below the minimum harvest ages used in Option 2.

4.4 Harvest Flow Rules

First period (1997 to 2001) harvest levels for Option 2 were based on some preliminary analysis and are consistent with the approach of planning a gradual adjustment to our best estimate of LRSY.

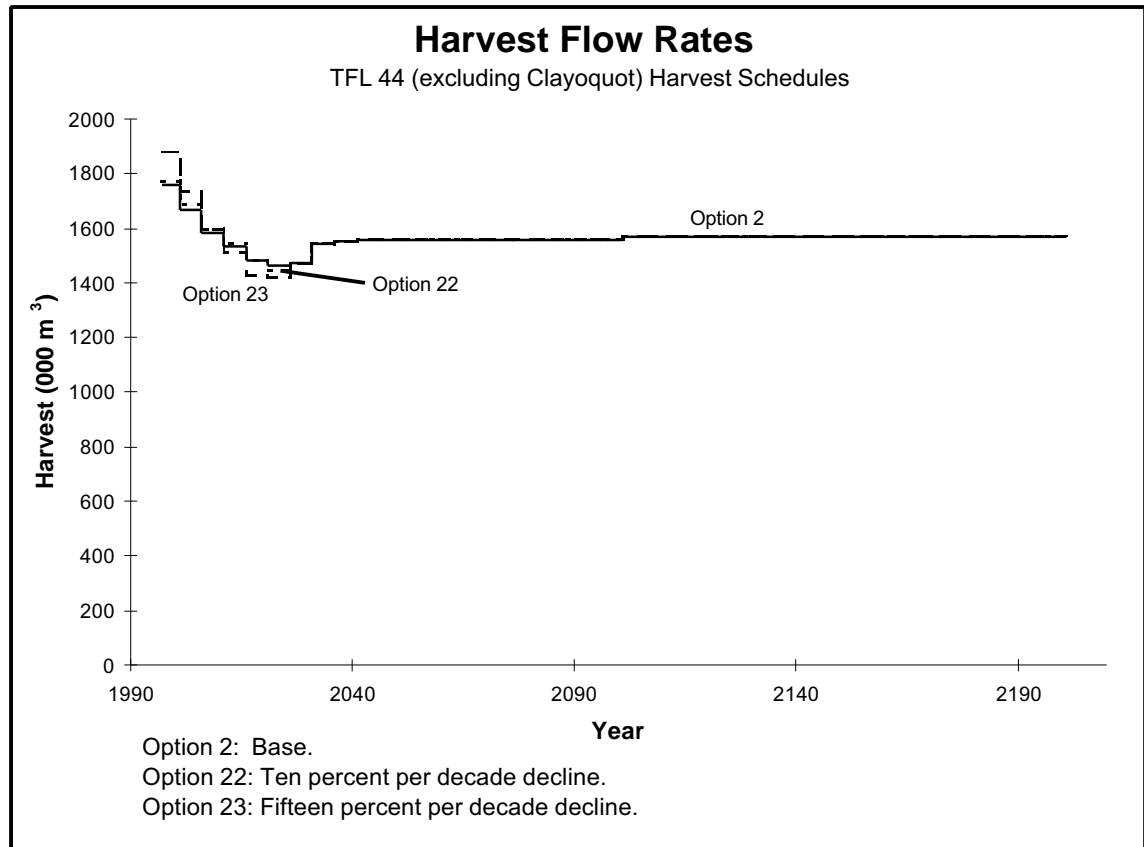
Any harvest reductions from the combined harvest schedule for the three working circles of Alberni East, Alberni West and Ucluelet was limited to a maximum of 10% per decade.

Options 22 and 23 provide a sensitivity analysis on these harvest flow rules. Option 22 allows a maximum of 10% decrease in harvest per decade by working circle. Option 23 relaxes the same restriction to 15% per decade.

The harvest schedules are compared in Figure 4.4.1. Table 4.4.1 summarizes the resulting first period harvest levels.

TABLE 4.4.1. First Period (1997 to 2001) Harvest Levels (000 m³)

Working Circle	Option 2	Option 22	Option 23
Alberni East	1 203	1 26	1 34
Alberni West	521	4 5	495
Ucluelet	36	33	35
Total	1 760	1 775	1 877

**FIGURE 4.4.1. Harvest Flow Rates**

The Option 2 harvests for Alberni West and Ucluelet decline by more than 15 during the first decade. Hence the first period harvests for Options 22 and 23 are lower and harvests are slightly higher during the tight timber supply period of 200 to 2026. This comparison understates the potential impacts of different harvest flow rules because of the harvest strategy applied in all three options, that is to reduce the harvest during the first decade to a low harvest level that could be achieved during the following fifteen to twenty years. An alternative approach that allowed the harvest rate to decline for more than ten years to a lower level for five or ten years would have supported a higher first period harvest level with a given rule on rate of change in harvest.

Alberni East does not have the same medium term harvest restrictions as Alberni West and Ucluelet. Applying the 10 and 15 rules allowed the initial Alberni East harvest to increase by 5 and 12 , respectively.

Overall the total harvest for the three working circles increases by 1 and , respectively, for Options 22 and 23.

These results provide support for initial harvest levels similar to those used in Option 2. They show that there is some flexibility to vary initial harvest rates to offset additional negative impacts on timber supply (for example as portrayed in some of the other options).

4.5 Silvicultural Practices

Option 2, portrays current silviculture (recent practices). Option 11 has been included to:

- ❑ Show the potential harvest volume gains from some changes in silvicultural investment.
- ❑ To provide a sensitivity on silvicultural assumptions.

Option 11 includes:

- ❑ Activities that result in more prompt re establishment and increase the rate of growth in young trees. Stands are being re established more promptly in TFL 44 operations. Fertilizer is also been applied at planting in some areas. These effects are modeled by reducing regeneration delays from 2 to 0 years.
- ❑ Conversion of deciduous stands to conifer. It is assumed that 5% of the net deciduous area in Alberni East and Alberni West working circles are converted to coniferous stands over the 20 year period from 1998 to 2018. The areas involved are 863 ha in Alberni East and 319 ha in Alberni West.
- ❑ It is assumed that medium site (Site Index 24 to 33) second growth Douglas fir stands are fertilized within 10 years of harvest. The impact is modeled as a 2% increase in volume harvested from these stands, beginning with harvest in the Year 2008.

The TFL (excluding Clayoquot) harvest schedules for the two options are shown in Figure 4.5.1.

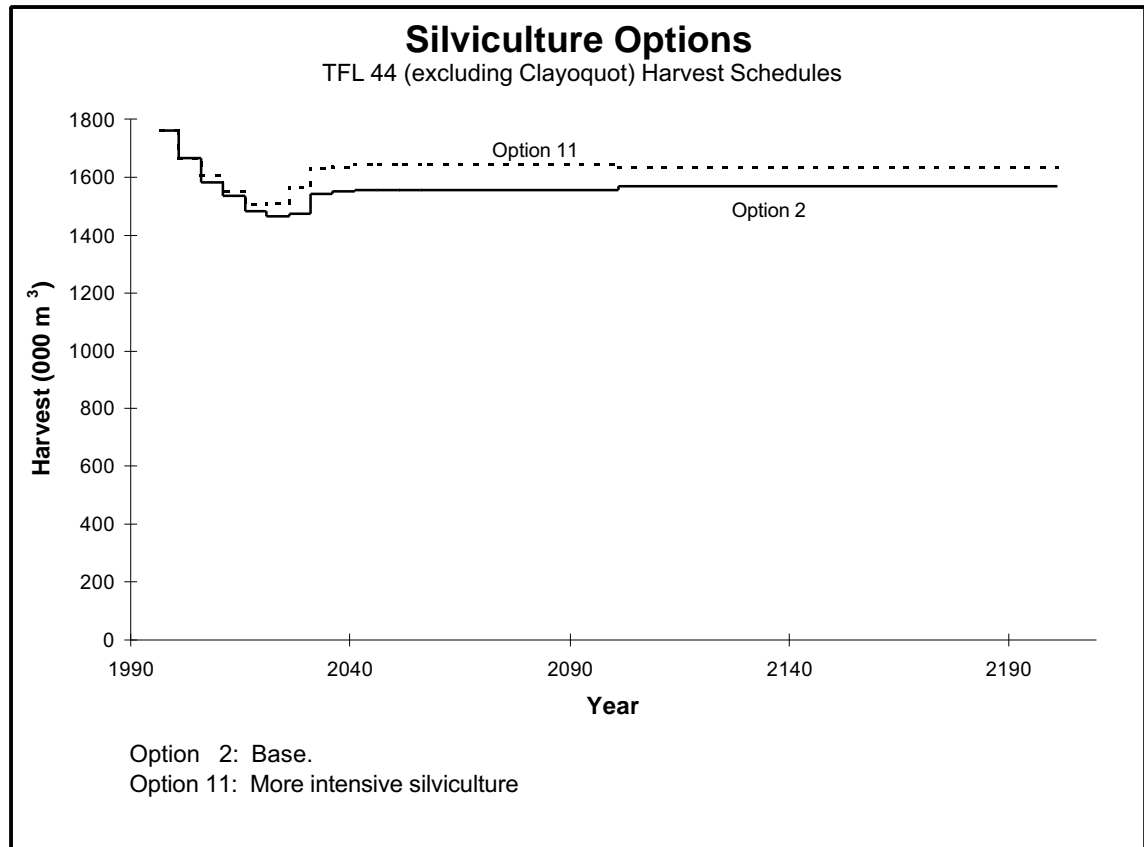


FIGURE 4.5.1. Silviculture Options

Medium term and long term impacts are more significant than short term effects. During the first 30 years, Option 11 harvest levels gradually increase relative to those for Option 2. The additional silvicultural activity does increase the low in the Alberni West harvest schedule, during the period 200 to 2021 by 18 000 m³/year to 428 000 m³/year. Option 11 has a TFL (excluding Clayoquot) LRSY of 1 634 000 m³/year, 63 000 m³/year (4 %) higher than that for Option 2.

The stand establishment activities contribute to some medium term gains, by reducing the time to meet VEG. Fertilization of Douglas fir stands also provides some small increases in the medium term harvest level. It is estimated that the reduction in regeneration delay by two years yields 10 % of the 63 000 m³/year increase in LRSY and that the remaining 30 % is approximately split between the conversion of deciduous to conifer and the fertilization of Douglas fir stands.

4.6 Estimates of Site Productivity

MB's biophysical decision tree approach for estimating site index has been accepted for this analysis. This approach was developed to improve site index estimates for strategic (forest level) analysis. Problems with the traditional use of site index curves include:

- ❑ Site index curves developed for coastal species do not work in old stands (perhaps from age 120 years up). In these stands, many of the

dominant trees have been suppressed for parts of their lives and ages are difficult to measure. When existing site index curves are used, the growth potential of the area is underestimated.

- In young stands (generally, less than 20 years of age), the relationship between age and height is often unstable as the trees compete for light, water and nutrients. In very young stands, the trees may not have reached a sufficient height to register on the site index curve.

The biophysical decision tree relates a known series of second growth site indices to biophysical site attributes, such as geographic location and elevation. Once the relationship is established, site index may be estimated for all stands in the forest, based on specific biophysical site factors.

MB has a large database of second growth permanent sample plots and cruise plots as well as research plots established for this purpose. These have permitted the development, calibration and validation of the decision tree.

Previous analyses have used inventory site indexes, derived from site index curves. This approach is applied in Option 1. The timber supply impacts of the change in site index estimates are provided by comparing the results for Options 2 and 1 – these are summarized in Table 4.6.1.

TABLE 4.6.1. Option 17 compared to Option 2: Site Indexes and LRSYs by Working Circle

	Alberni East	Alberni West	Ucluelet	Total
Average Site Index				
Option 2	28.9	27.1	27.2	28.1
Option 1	25.3	24.1	22.2	24.9
Difference (2 - 1)	3.6	2.4	5.0	3.2
LRSYs (000 m ³ /year)				
Option 2	90	546	55	151
Option 1	6	455	36	1258
Difference				
(1 - lower than 2)	(21)	(1)	(35)	(20)

The Option 1 site indices (inventory site index curve estimates) are significantly lower on average than those for Option 2 (biophysical decision tree). For the TFL, the average decrease in site index is 3.2 m with a range from 2.4 for Alberni West to 5.0 for Ucluelet.

The lower site indices in Option 1 compared to Option 2 have three main impacts. The first is to decrease volume estimates at a given age. The second is to increase minimum harvest ages and the third is to increase the time to achieve VEG in visual landscapes.

The harvest schedules for Option 1 are significantly different from those for Option 2, particularly in the longer term. Refer to the TFL (excluding Clayoquot) comparison in Figure 4.6.1.

The initial harvest level for the three working circle total is reduced by 6 000 m³/year to limit the decrease in harvest levels to a maximum of 10 per decade during the first 20 years. This is largely achieved by reducing the initial

harvest level for Alberni East. Overall, the Option 1 harvest schedule declines more steeply than for Option 2 and for a longer period, reaching a low of 1 188 000 m³/year during the Period 203 to 2041. Harvest levels then increase gradually towards the LRSY of 1 258 000 m³/year, 20 lower than for Option 2. The greatest relative impact is in the Ucluelet working circle. Alberni West is affected the least, with little impact (relative to Option 2) before 202 and a reduction in LRSY of 1 .

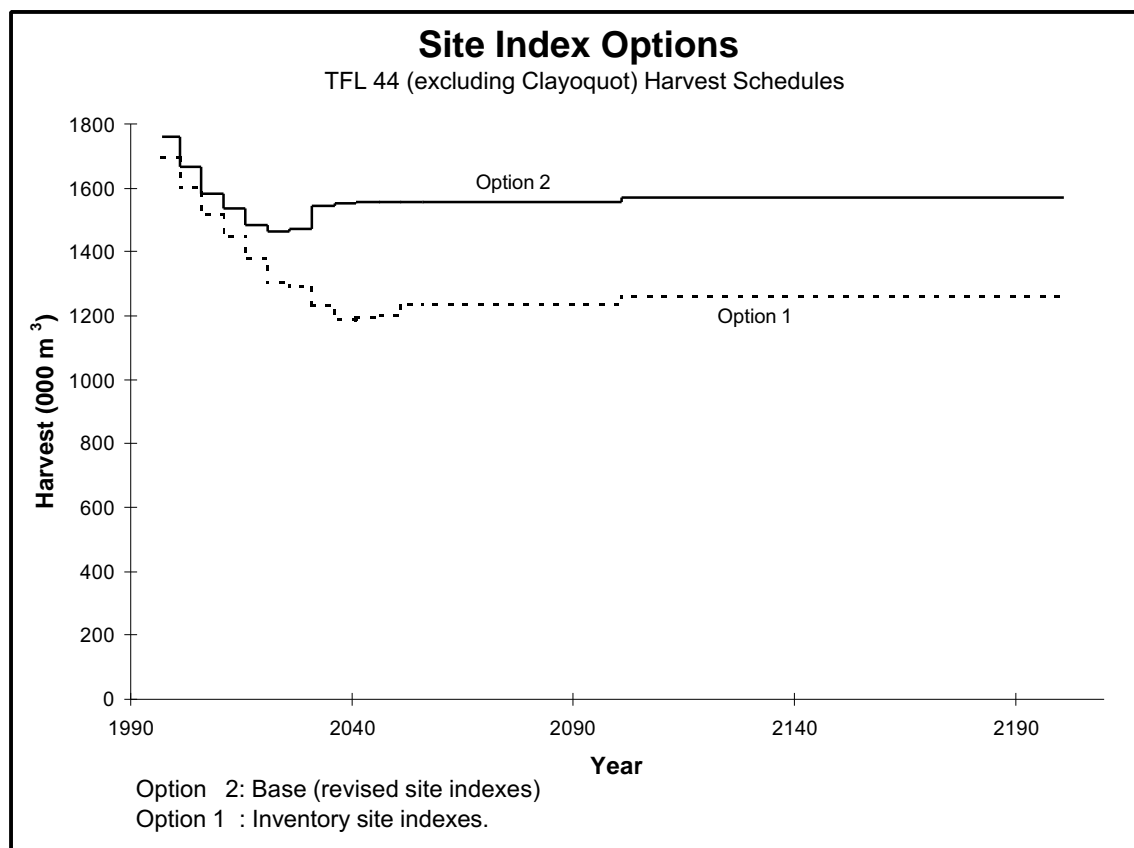


FIGURE 4.6.1. Site Index Options

4.7 Utilization Levels

Higher utilization levels for second growth were modeled in Option 21. Refer to Table 4.7.1 for a comparison of second growth utilization levels between Options 2 and 21.

TABLE 4.7.1. Second-growth Utilization Levels

Option	Option 2	Option 21
Minimum dbh (cm)	12.5	10.0
Stump Height (cm)	30.0	15.0
Top dib (cm)	10.0	5.0

The higher utilization level results in higher harvest volumes, particularly at younger ages when stands include a substantial number of trees of less than

1 .5 cm dbh. At older ages the trees are larger than 1 .5 cm dbh and the volume difference drops to 2 or less as it depends solely on the additional stump and top portions of trees. At the higher utilization level, stand growth (mean annual increment (mai) reaches a maximum at a younger age. The result is slightly lower minimum harvest ages for medium and high sites.

The harvest flow strategy for Option 21 was to retain the Option 2 initial harvest levels and to fill in medium term lows in harvest schedules as much as possible. The success of this strategy was most noticeable for Alberni West, where the Option 2 low harvest of 410 000 m³/year for the period 200 to 2021 was increased to 460 000 m³/year. Overall the TFL (excluding Clayoquot) harvest declined more gradually than for Option 2 to a level 40 000 m³/year higher than Option 2 during the period from 2032 to 2101. The long term (beyond the year 2101) harvest level was increased by 2.2 to 1 605 000 m³/year. Refer to Figure 4. .1.

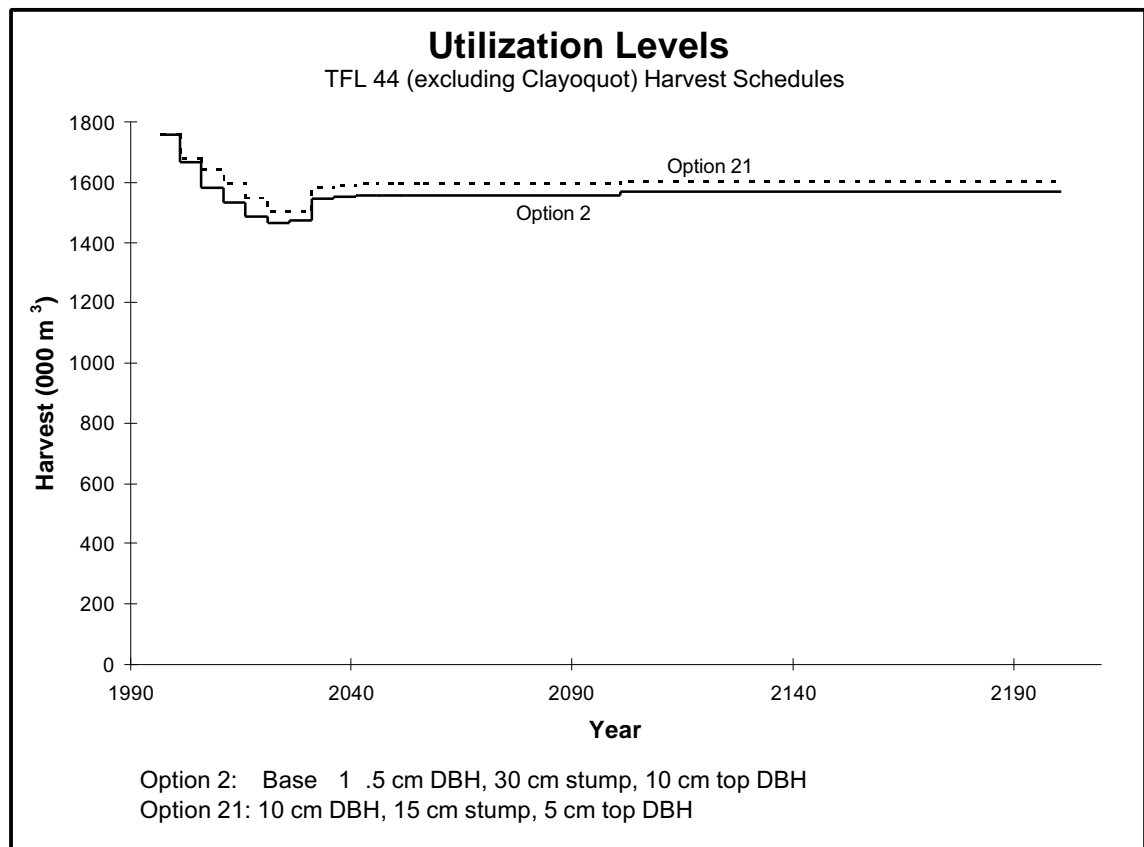


FIGURE 4.7.1. Utilization Levels

4.8 Mature Volume Estimates

Options 12 and 13 provide a sensitivity analysis on the impacts of a change in mature volume estimates. Mature volumes are increased by 10 in Option 12 and decreased by 10 in Option 13.

TFL (excluding Clayoquot) harvest schedules are compared with that for Option 2 in Figure 4.8.1. The harvest schedule impacts of variations in mature volume estimates, are mainly short to medium term (first 50 years), although the specific impacts will vary according to the harvest flow strategy that is followed.

For Option 12, the harvest flow strategy was to harvest the increased mature volumes over the first 40 to 50 years. This result was to partially fill in the timber supply holes for Alberni West and Ucluelet working circles during the period 200 to 2026 and to increase the initial harvest level for Alberni East by 4 000 m³/year. Overall (for the three working circles) harvest levels were increased by an average of 8 000 m³/year during the first 50 years. The harvest level declines by a maximum of in any single decade, indicating that slightly higher initial harvest levels could be achieved (in Alberni East) without exceeding a 10 per decade decrease overall. As expected, the long run harvest rate was unchanged from that for Option 2.

For Option 13, the harvest flow strategy was to limit decreases in harvest to a maximum of 10 per decade (for the three working circle total harvest) and to allow for most of the decrease in harvest to occur during the first 50 years. Total harvest from the three working circles was reduced by 000 m³/year (compared to Option 2) in the initial period and then declined by 10 per decade for 20 years, reaching a low of 1 3 000 m³/year in the period 201 to 2021. The harvest then increased gradually towards the LRSY unchanged from that for Option 2. The impact of lower mature volumes was particularly noticeable in the Alberni West and Ucluelet working circles, where initial harvest levels were reduced slightly and low harvest levels during the period 200 to 2026 were reduced by approximately 10 . The Alberni East initial harvest level was reduced by 40 000 m³/year to ensure that the decrease in harvest from the three working circles combined was limited to 10 per decade during the first two decades.

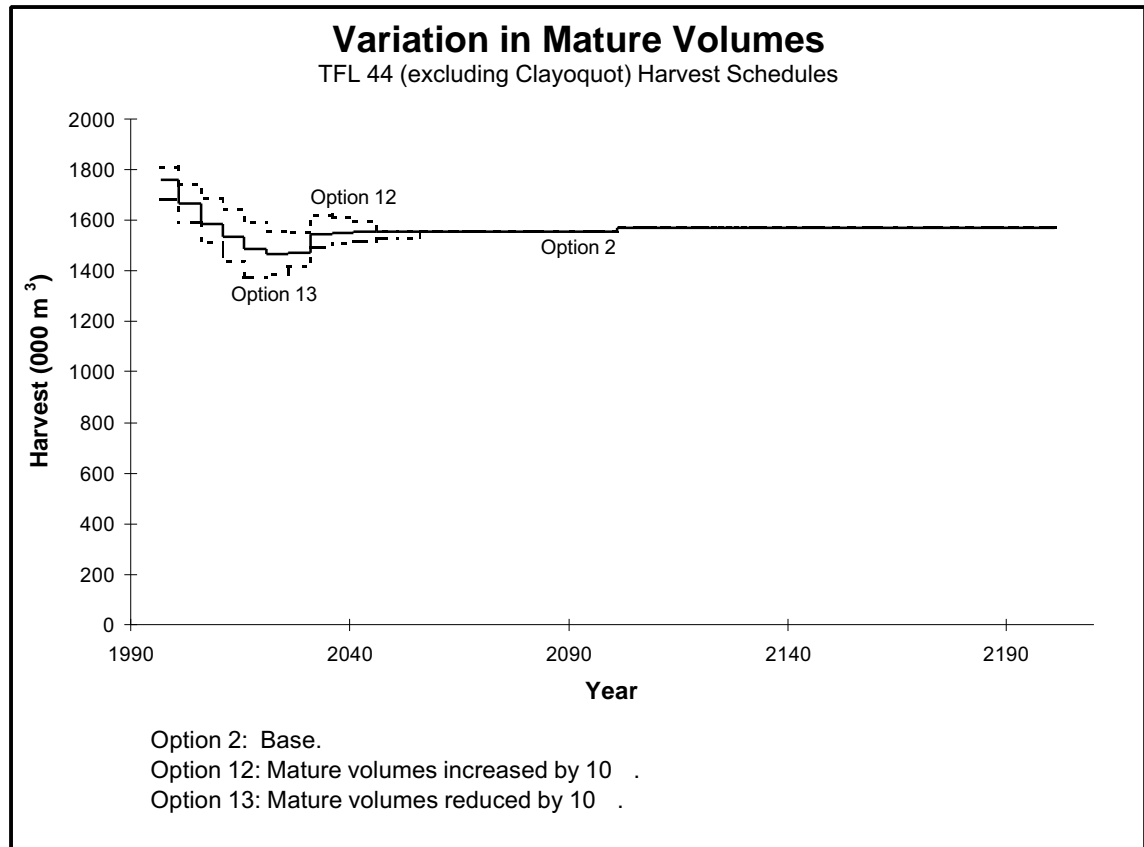


FIGURE 4.8.1. Variation in Mature Volumes

Results to date of accuracy checks of the mature volume and inclusion of more intensively sampled operational cruise information for 30% of the volume, provide support for current estimates of mature volume. Further accuracy checks are planned to occur during MP 3 and additional unlogged operational cruises will be incorporated into the inventory in the next year.

4.9 Yield Assumptions for Second and Third Forests

Timber supply impacts of changes in second growth yields are mainly long term with minimal impacts in the first 20 years.

Options 15 and 16 provide a sensitivity analysis on the impacts of a change in second growth volume projections. Second growth volumes are increased by 10% in Option 12 and decreased by 10% in Option 13.

Option 14 (Y XENO yields) projects second growth volumes without the adjustments made (in Option 2) to more closely approximate MoF yield estimates for Douglas fir stands. These adjustments were to reduce yields of Douglas fir stands projected from cruise information by 10% and to reduce yields for other stand types dominated by Douglas fir by a percentage increasing from 10% for stands of 34 m height or less to 1% for stands of 50 m or more in height. Refer to Section 6.6 of the Information Package for more details.

TFL 44 (excluding Clayoquot) harvest schedules for Options 2, 14, 15 and 16 are compared in Figure 4.9.1.

The TFL 44 (excluding Clayoquot) harvest schedule for Option 14 (unadjusted Douglas fir yields) is very similar to that for Option 2 up until 2026. Thereafter the Option 14 harvest level is higher by approximately 58 000 m³/year or 3.6 %, the difference in LRSYs. This result reflects the pattern in the two larger working circles. Alberni West has a higher proportion of Douglas fir dominant stand types than Alberni East. Consequently the increase in Option 14 LRSY from that for Option 2 is higher at 5 % for Alberni West compared to 2.5 % for Alberni East.

Much of the older second growth in the Ucluelet working circle is good site Douglas fir. The minimum harvest ages for these situations in Option 14 are generally slightly later than for Option 2. The result is a small decline in the Option 14 harvest schedule compared to that for Option 2, during the period from 2000 to 2031. Thereafter the Option 14 harvest rate is higher by 4 000 m³/year.

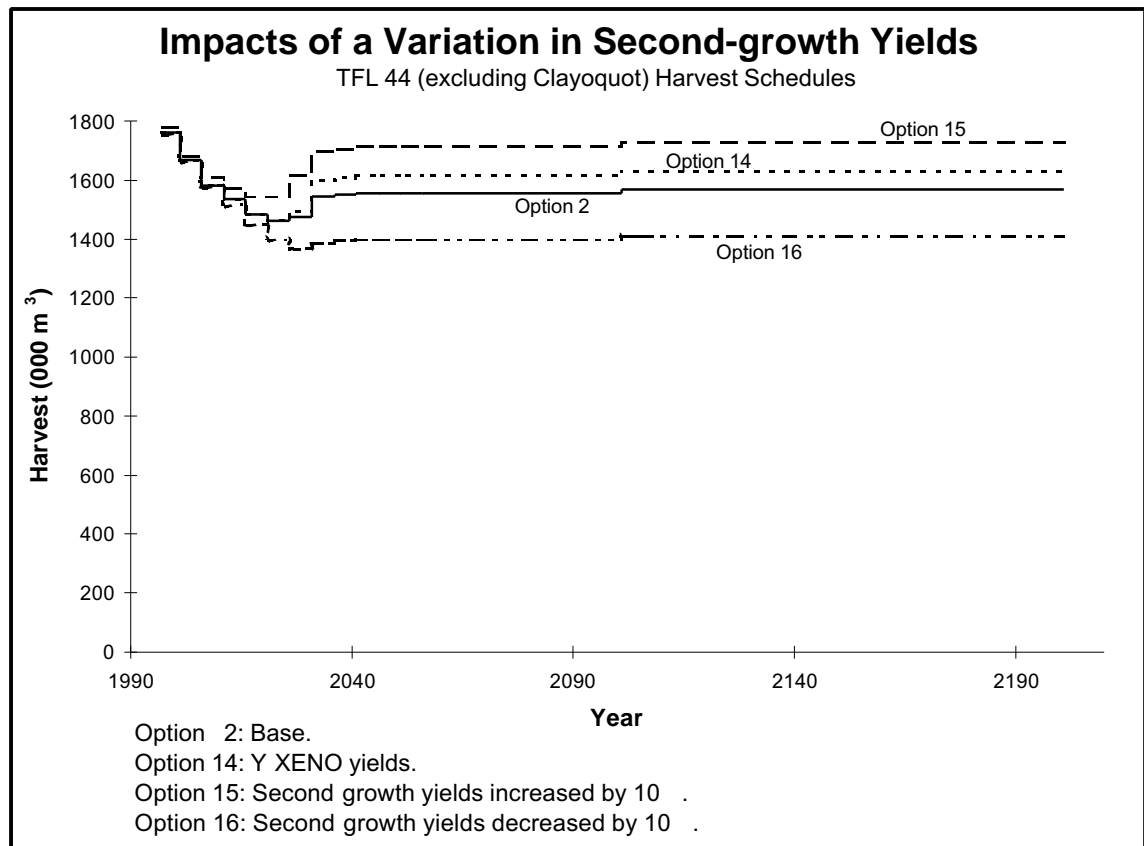


FIGURE 4.9.1. Impacts of a Variation in Second-growth Yields

The higher second growth volumes of Option 15 had a negligible impact on the low harvests during the period 2000 to 2026 in the Ucluelet working circle and provided only a 15 000 m³/year increase in harvest during a similar period in the Alberni West working circle. A small increase (1 000 m³/year) in the Alberni

East initial harvest rate was achieved while maintaining a maximum 10% decrease in harvest during the first decade, from the three working circles. By 2020, Option 15 harvest levels are close to 10% higher than for the base, Option 2.

Harvest schedules for Option 16 (reduced second growth volumes) vary little from those for Option 2 during the first 25 years. Thereafter harvest levels soon adjust to a level that is approximately 10% less than those for Option 2.

Late in the analysis it was discovered that stands with primary species western redcedar were not allocated to regeneration models as described in Section 6 and Attachment 1 of the Information Package.

The redcedar stands were inadvertently assigned to regeneration models as part of the western hemlock species association (note that the stand site index based on the primary species in the stand was still used in the yield projections).

The impact of the error on timber supply is determined by comparing results of Option 2 (has the error) with Option 2A (with the error corrected). Refer to Attachment 3 for the harvest schedules by working circle and option.

These results show that the impact is small. Harvest levels for the first 30 years are unaffected. The greatest difference occurs in 45 to 55 years when the total TFL (excluding Clayoquot) harvest for Option 2A is 9 000 m³/year (0.6%) less than for Option 2. Most of this difference occurs in the Alberni East working circle. The long term impact is only 2 000 m³/year.

5.0 CONCLUSIONS

Comparison of the harvest schedule options and their economic implications leads us to the following conclusions:

- Integrated resource management constraints result in some 524 000 m³/year of harvest foregone over the next 50 years. These constraints are in addition to those applied to retain the integrity and protect the productive potential of sensitive soils and riparian areas.
 - The annual cost of this foregone harvest is:
 - 2 892 jobs.
 - 118 million in wages.
 - 30 million in government revenue.
 - 1 0 million in annual sales.
 - A major portion of this cost involves reserves and constraints for biodiversity. These requirements are additional to the:
 - More than 180 000 ha of forest reserves in parks adjacent to TFL 44.
 - Management of Clayoquot Sound, which includes the Clayoquot Working Circle of TFL 44, with emphasis on biodiversity and non timber values.

- 5 000 ha of forest land in the rest of TFL 44 reserved for other reasons.
- Management of other areas on long rotations.

The average annual impacts of the draft FENs and the 2 allowance for wildlife tree patches over the next 50 years is:

- 1 6 000 m³ in forgone harvest (a 10 reduction).
- 9 2 lost obs.
- 40 million in forgone wages and benefits.
- 10 million in forgone government revenues.
- 5 million in lost economic activity.

A transition strategy for achieving old growth requirements could reduce these medium term costs.

The above costs would be doubled if, in addition, the early and mature seral stage constraints were applied.

- Constraints for maintaining visual landscape quality, much of it in the Alberni West and Ucluelet Working Circles also impose substantial costs. The magnitude of the impact is sensitive to relatively small changes in interpretation of the visual quality standards. In comparison to the less restrictive interpretation of visual quality standards (portrayed in Option 8), the average annual impacts of the Base Option (2) over the next 50 years are:
 - 6 000 m³ in forgone harvest.
 - 3 0 lost obs.
 - 15 million in forgone wages and benefits.
 - 4 million in forgone government revenues.
 - 22 million in lost economic activity.
- Any further reductions in old growth availability for harvesting (e.g., to meet demands for non timber resource outputs) cost society in proportion to the volume reserved:
 - Lost Government revenue of 62/m³ not harvested.
 - Forgone economic activity of 352/m³ not harvested.
 - Six obs for every 1 000 m³ not harvested.
- MB believes that all physically and administratively available areas of old growth timber will be commercially accessible over 100 years. In view of the 200 year horizon for the TSA, all areas accessible over that period including areas classified as currently uneconomic should be included in the analysis.
- The second growth harvest strategy for MP 3 will better recognize the impacts of spatial constraints on harvest planning. First pass harvest opportunities will be examined at an earlier stand age than previously

considered. The result will be more planning flexibility and harvest opportunities in the short term, at a small cost in reduced long term timber supply (at a time when harvest opportunities are greater).

- ❑ The harvest flow rules (used in this analysis) of a maximum of 10 per decade decline, for the three working circles combined, is conservative relative to that applied to some other forest units.
- ❑ Silvicultural practices are changing towards more prompt reforestation and activities to encourage faster growth of young trees. The result is achievement of greenup at an earlier date and hence more harvest opportunities commencing in ten years time. Thinning in stands on long rotations, and fertilization of Douglas fir stands are other opportunities for some short to medium term harvest gains. The timber supply impacts of most other silvicultural investments are longer term and often their costs exceed the value of any growth gains.
- ❑ Corrections to site productivity estimates, applied in this analysis, result in a long term harvest level that is only 13 below the current harvest level. This reduction is largely because of recent netdowns for biodiversity.
- ❑ Variations in mature volume estimates impact short term harvest levels. MB is part way through a program for checking these estimates. Results to date, validate current estimates of mature volumes.
- ❑ Variation in estimates of second growth yields has little impact on timber supply in the first twenty years.

6.0 RECOMMENDED HARVEST

Analysis of the issues affecting harvest scheduling shows potential differences in the pattern of harvest. LRSYs vary across the wide range of assumptions that has been considered. An initial harvest level of 1.6 million m³/year for the three working circles Alberni East, Alberni West and Ucluelet is well supported:

- ❑ Many of the options have a similar initial harvest level.
 - ❑ Support is provided by the 20 Year Plan results.
 - ❑ Results to date of check cruises validate current estimates of mature timber.
 - ❑ The MP 3 harvest strategy for second growth will provide more harvest flexibility in the short term.
 - ❑ There are opportunities to manage visual landscapes to reduce the impact on harvest levels while maintaining important visual values.
 - ❑ Development of the strategy for landscape biodiversity is not yet complete. Indications are that the very restrictive (for the short to medium term) early and mature seral stage constraints will not be required. Adoption of a transition strategy would provide some relief from pressures on medium term harvest rates.
-

- A harvest of 1.6 million m³/year continues the strategy of gradually adjusting the harvest towards our best estimate of long term harvest levels.

TFL 44 is important to the economic well being of the Alberni – Clayoquot region, and it makes a significant contribution to the provincial economy. Further, it is this region that has suffered most from the economic loss of reduced timber harvests in Clayoquot Sound. There is opportunity to further review constraints to the TFL 44 landbase and enhance harvest opportunities however.

We recommend an AAC of 1.6 million m³ for the Alberni East, Alberni West and Ucluelet Working Circles based on our understanding of current objectives.

Attachment 1

Harvest Schedules

Alberni East	Options 1 to 13	42
Alberni East	Options 14 to 23	43
Alberni West	Options 1 to 13	44
Alberni West	Options 14 to 23	45
Ucluelet	Options 1 to 13	46
Ucluelet	Options 14 to 23	4
Total	Options 1 to 13	48
Total	Options 14 to 23	49

Alberni East Harvest Schedules
(000 m³/year)

Period	By Option											
	Base (2)	1	3	4	5	6	7	8	10	11	12	13
199 to 2001	1203	14 0	1263	800	1203	1185	11 5	1203	1190	1203	1250	1163
2002 to 2006	11 4	1430	1231	800	11 8	1159	1149	11 8	1161	11 4	1224	1138
200 to 2011	1145	1390	1199	800	1153	1133	1123	1153	1132	1145	1195	1113
2012 to 2016	1095	1350	116	800	1110	10 8	1068	1110	106	1095	1148	1040
201 to 2021	1045	1310	1135	8 0	106	1023	1013	106	1002	1045	1101	980
2022 to 2026	995	12 0	1103	940	1024	9 3	958	1024	93	100	1054	940
202 to 2031	953	1230	10 2	958	981	938	914	9 8	89	100	1010	911
2032 to 2036	953	1190	10 0	958	962	938	914	9 8	89	100	1010	911
203 to 2041	953	118	10 0	958	962	938	914	9 8	89	100	1010	911
2042 to 2046	953	118	10 0	958	962	938	914	9 8	89	100	990	911
204 to 2051	953	118	10 0	958	962	938	914	9 8	89	100	954	921
2052 to 2056	953	118	10 0	958	962	938	914	9 8	89	100	954	921
205 to 2101	953	118	10 0	958	962	938	914	9 8	89	100	954	954
2102 to 2201	9 0	1184	1069	964	9	965	945	982	923	1008	9 0	9 0

Option No.	Description
1	Timber as the dominant forest use. Protection of soils and water.
2	Base option.
3	No allowances for Forest Ecosystem Networks or Wildlife tree patches.
4	Early and mature (plus old) seral stages.
5	Visually effective greenup decreased by 4 years in visual landscapes.
6	Visually effective greenup increased by 4 years in visual landscapes.
8	Maximum percent alteration decreased by 5 in visual landscapes.
10	Maximum percent alteration increased by 5 in visual landscapes.
11	Net area reduced by 5 .
12	More intensive silviculture option.
13	Mature volumes increased by 10 .
	Mature volumes decreased by 10 .

**Alberni East Harvest Schedules
(000 m³/year)**

	By Option										
Period	Base (2)	14	15	16	17	18	19	20	21	22	23
199 to 2001	1203	1203	1220	1203	1140	1203	1000	1203	1203	126	1348
2002 to 2006	11 4	11 4	118	11 4	1115	11 4	9 5	1180	11	1204	124
200 to 2011	1145	1145	1154	1145	1090	1145	950	115	1151	1140	1146
2012 to 2016	1095	1095	1121	1080	1020	1099	89	1112	1105	1084	1060
201 to 2021	1045	1045	1088	1015	950	1053	89	106	1059	1026	9 4
2022 to 2026	995	995	1055	950	880	100	89	1022	1013	9 5	953
202 to 2031	953	9 9	1050	885	820	962	89	9	981	952	953
2032 to 2036	953	9 9	1050	853	60	962	89	933	981	952	953
203 to 2041	953	9 9	1050	853	18	962	89	920	981	952	953
2042 to 2046	953	9 9	1050	853	18	962	950	920	981	952	953
204 to 2051	953	9 9	1050	853	18	962	9 8	920	981	952	953
2052 to 2056	953	9 9	1050	853	53	962	9 8	920	981	952	953
205 to 2101	953	9 9	1050	853	53	962	9 8	920	981	952	953
2102 to 2201	9 0	995	106	8 3	6	968	98	9 5	992	9 0	9 0

Option No. Description

- 2 Base Option.
- 14 Unadjusted (Y XENO) second growth yields.
- 15 Second growth yields increased by 10 %.
- 16 Second growth yields decreased by 10 %.
- 1 Inventory site indexes.
- 18 Minimum harvest ages decreased by 10 years.
- 19 Minimum harvest ages decreased by 10 years.
- 20 Second growth harvest strategy.
- 21 Higher utilization level (10 cm dbh, 15 cm stump and 5 cm top dib).
- 22 Ten percent per decade harvest decline.
- 23 Fifteen percent per decade harvest decline.

Alberni West Harvest Schedules
(000 m³/year)

Period	By Option											
	Base (2)	1	3	4	5	6	7	8	10	11	12	13
199 to 2001	521	34	560	500	521	498	4 0	521	500	521	521	485
2002 to 2006	460	34	530	440	485	438	410	500	440	460	480	420
200 to 2011	410	34	500	385	450	38	358	480	390	428	460	3 2
2012 to 2016	410	34	500	385	450	38	358	480	390	428	460	3 2
201 to 2021	410	34	500	385	450	38	358	480	390	428	460	3 2
2022 to 2026	440	34	530	440	460	41	410	495	420	4 0	4 0	420
202 to 2031	485	34	580	485	520	4 0	450	540	460	520	505	4 0
2032 to 2036	546	34	623	554	565	529	4 0	5 1	524	5 5	566	535
203 to 2041	546	34	623	554	565	529	4 0	5 1	524	5 5	546	546
2042 to 2046	546	34	623	554	565	529	4 0	5 1	524	5 5	546	546
204 to 2051	546	34	623	554	565	529	4 0	5 1	524	5 5	546	546
2052 to 2056	546	34	623	554	565	529	4 0	5 1	524	5 5	546	546
205 to 2101	546	34	623	554	565	529	4 0	5 1	524	5 5	546	546
2102 to 2201	546	35	624	545	559	534	491	562	519	569	546	546

Option No. Description

- 1 Timber as the dominant forest use. Protection of soils and water.
- 2 Base option.
- 3 No allowances for Forest Ecosystem Networks or Wildlife tree patches.
- 4 Early and mature (plus old) seral stages.
- 5 Visually effective greenup decreased by 4 years in visual landscapes.
- 6 Visually effective greenup increased by 4 years in visual landscapes.
- 8 Maximum percent alteration decreased by 5 in visual landscapes.
- 8 Maximum percent alteration increased by 5 in visual landscapes.
- 10 Net area reduced by 5 .
- 11 More intensive silviculture option.
- 12 Mature volumes increased by 10 .
- 13 Mature volumes decreased by 10 .

Alberni West Harvest Schedule
(000 m³/year)

Period	By Option										
	Base (2)	14	15	16	17	18	19	20	21	22	23
199 to 2001	521	521	521	516	521	521	432	521	521	4 5	495
2002 to 2006	460	460	460	455	460	480	383	490	4 0	451	458
200 to 2011	410	410	425	405	405	460	338	460	460	42	422
2012 to 2016	410	410	425	405	405	460	335	460	460	42	422
201 to 2021	410	410	425	405	405	460	335	460	460	42	422
2022 to 2026	440	440	460	420	405	4 0	335	460	460	440	440
202 to 2031	485	485	530	455	448	500	335	480	485	485	485
2032 to 2036	546	5	600	494	448	53	440	520	556	546	546
203 to 2041	546	5	600	494	448	53	530	520	556	546	546
2042 to 2046	546	5	600	494	448	53	5 0	520	556	546	546
204 to 2051	546	5	600	494	448	53	5 0	520	556	546	546
2052 to 2056	546	5	600	494	448	53	5 0	520	556	546	546
205 to 2101	546	5	600	494	448	53	5 0	520	556	546	546
2102 to 2201	546	5 3	599	490	455	538	552	545	55	546	546

Option No.	Description
2	Base Option.
14	Unadjusted (Y XENO) second growth yields.
15	Second growth yields increased by 10 %.
16	Second growth yields decreased by 10 %.
1	Inventory site indexes.
18	Minimum harvest ages decreased by 10 years.
19	Minimum harvest ages decreased by 10 years.
20	Second growth harvest strategy.
21	Higher utilization level (10 cm dbh, 15 cm stump and 5 cm top dib).
22	Ten percent per decade harvest decline.
23	Fifteen percent per decade harvest decline.

Ucluelet Harvest Schedules
(000 m³/year)

Period	By Option											
	Base (2)	1	3	4	5	6	7	8	10	11	12	13
199 to 2001	36	58	40	36	36	34	32	38	35	36	3	35
2002 to 2006	33	58	38	33	34	30	28	3	32	33	35	31
200 to 2011	29	58	36	29	32	25	24	3	28	29	32	26
2012 to 2016	29	58	36	29	32	25	24	3	28	29	32	26
201 to 2021	29	58	36	29	32	25	24	3	2	29	32	25
2022 to 2026	29	58	36	29	32	25	24	3	2	29	32	25
202 to 2031	35	58	42	35	38	35	34	43	33	3	3	33
2032 to 2036	45	58	52	45	45	45	45	48	43	4	4	43
203 to 2041	52	5	58	52	52	50	46	56	50	54	56	50
2042 to 2046	5	80	61	5	60	55	46	62	55	61	58	58
204 to 2051	5	80	61	5	60	55	46	62	55	61	58	58
2052 to 2056	5	80	61	5	60	55	46	62	55	61	5	58
205 to 2101	5	80	61	5	60	55	46	62	55	61	5	58
2102 to 2201	55	4	61	55	5	53	46	59	53	5	55	55

Option No. Description

- 1 Timber as the dominant forest use. Protection of soils and water.
- 2 Base option.
- 3 No allowances for Forest Ecosystem Networks or Wildlife tree patches.
- 4 Early and mature (plus old) seral stages.
- 5 Visually effective greenup decreased by 4 years in visual landscapes.
- 6 Visually effective greenup increased by 4 years in visual landscapes.
- Maximum percent alteration decreased by 5 in visual landscapes.
- 8 Maximum percent alteration increased by 5 in visual landscapes.
- 10 Net area reduced by 5 .
- 11 More intensive silviculture option.
- 12 Mature volumes increased by 10 .
- 13 Mature volumes decreased by 10 .

**Ucluelet Harvest Schedules
(000 m³/year)**

Period	By Option										
	Base (2)	14	15	16	17	18	19	20	21	22	23
199 to 2001	36	36	36	36	32	36	30	36	36	33	35
2002 to 2006	33	32	33	33	29	34	26	34	33	31	31
200 to 2011	29	28	29	28	22	34	23	34	30	30	30
2012 to 2016	29	28	29	28	22	34	23	34	30	30	30
201 to 2021	29	28	29	28	21	34	23	34	30	30	30
2022 to 2026	29	2	29	28	21	34	23	34	30	30	30
202 to 2031	35	28	38	30	21	3	23	35	36	35	35
2032 to 2036	45	45	49	40	22	45	25	45	46	45	45
203 to 2041	52	52	5	4	22	52	40	52	53	52	52
2042 to 2046	5	61	63	52	30	56	5	54	58	5	5
204 to 2051	5	61	63	52	35	56	5	54	58	5	5
2052 to 2056	5	61	63	52	35	56	5	54	58	5	5
205 to 2101	5	61	63	52	36	56	5	54	58	5	5
2102 to 2201	55	59	60	49	36	55	55	55	56	55	55

Option No. Description

- 2 Base Option.
- 14 Unadusted (Y XENO) second growth yields.
- 15 Second growth yields increased by 10 .
- 16 Second growth yields decreased by 10 .
- 1 Inventory site indexes.
- 18 Minimum harvest ages decreased by 10 years.
- 19 Minimum harvest ages decreased by 10 years.
- 20 Second growth harvest strategy.
- 21 Higher utilization level (10 cm dbh, 15 cm stump and 5 cm top dib).
- 22 Ten percent per decade harvest decline.
- 23 Fifteen percent per decade harvest decline.

Total Harvest Schedules (000 m³/year)
TFL 44 Excluding Clayoquot

Period	By Option											
	Base (2)	1	3	4	5	6	7	8	10	11	12	13
199 to 2001	1 60	2262	1863	1336	1 60	1 1	16	1 62	1 25	1 60	1808	1683
2002 to 2006	166	2222	1 99	12 3	169	162	158	1 15	1633	166	1 39	1589
200 to 2011	1584	2182	1 35	1214	1635	1545	1505	16 0	1550	1602	168	1511
2012 to 2016	1534	2142	1 03	1214	1592	1490	1450	162	1485	1552	1640	1438
201 to 2021	1484	2102	16 1	1284	1549	1435	1395	1584	1419	1502	1593	13
2022 to 2026	1464	2062	1669	1409	1516	1415	1392	1556	1384	1506	1556	1385
202 to 2031	14 3	2022	1694	14 8	1539	1443	1398	1561	1390	1564	1552	1414
2032 to 2036	1544	1982	1 45	155	15 2	1512	1429	159	1464	1629	1623	1489
203 to 2041	1551	1996	1 51	1564	15 9	151	1430	1605	14 1	1636	1612	150
2042 to 2046	1556	2001	1 54	1569	158	1522	1430	1611	14 6	1643	1594	1515
204 to 2051	1556	2001	1 54	1569	158	1522	1430	1611	14 6	1643	1558	1525
2052 to 2056	1556	2001	1 54	1569	158	1522	1430	1611	14 6	1643	155	1525
205 to 2101	1556	2001	1 54	1569	158	1522	1430	1611	14 6	1643	155	1558
2102 to 2201	15 1	1993	1 54	1564	1593	1552	1482	1603	1495	1634	15 1	15 1

Option No. Description

- 1 Timber as the dominant forest use. Protection of soils and water.
- 2 Base option.
- 3 No allowances for Forest Ecosystem Networks or Wildlife tree patches.
- 4 Early and mature (plus old) seral stages.
- 5 Visually effective greenup decreased by 4 years in visual landscapes.
- 6 Visually effective greenup increased by 4 years in visual landscapes.
- 8 Maximum percent alteration decreased by 5 in visual landscapes.
- 10 Maximum percent alteration increased by 5 in visual landscapes.
- 11 Net area reduced by 5 .
- 12 More intensive silviculture option.
- 13 Mature volume increased by 10 .
- 13 Mature volume decreased by 10 .

Total Harvest Schedules (000 m³/year)
TFL 44 Excluding Clayoquot

	By Option										
Period	Base (2)	14	15	16	17	18	19	20	21	22	23
199 to 2001	1 60	1 60	1	1 55	1693	1 60	1462	1 60	1 60	1 5	18 8
2002 to 2006	166	1666	1680	1662	1604	1688	1384	1 04	1680	1686	1 36
200 to 2011	1584	1583	1608	15 8	151	1639	1311	1651	1641	159	1598
2012 to 2016	1534	1533	15 5	1513	144	1593	1255	1606	1595	1541	1512
201 to 2021	1484	1483	1542	1448	13 6	154	1255	1561	1549	1483	1426
2022 to 2026	1464	1462	1544	1398	1306	1511	1255	1516	1503	1445	1423
202 to 2031	14 3	1492	1618	13 0	1289	1499	1255	1492	1502	14 2	14 3
2032 to 2036	1544	1601	1699	138	1230	1544	1362	149	1583	1543	1544
203 to 2041	1551	1608	1 0	1394	1188	1551	146	1492	1590	1550	1551
2042 to 2046	1556	161	1 13	1399	1186	1555	15	1494	1595	1555	1556
204 to 2051	1556	161	1 13	1399	1201	1555	1605	1494	1595	1555	1556
2052 to 2056	1556	161	1 13	1399	1236	1555	1605	1494	1595	1555	1556
205 to 2101	1556	161	1 13	1399	123	1555	1605	1494	1595	1555	1556
2102 to 2201	15 1	162	1 26	1412	1258	1561	1594	15 5	1605	15 1	15 1

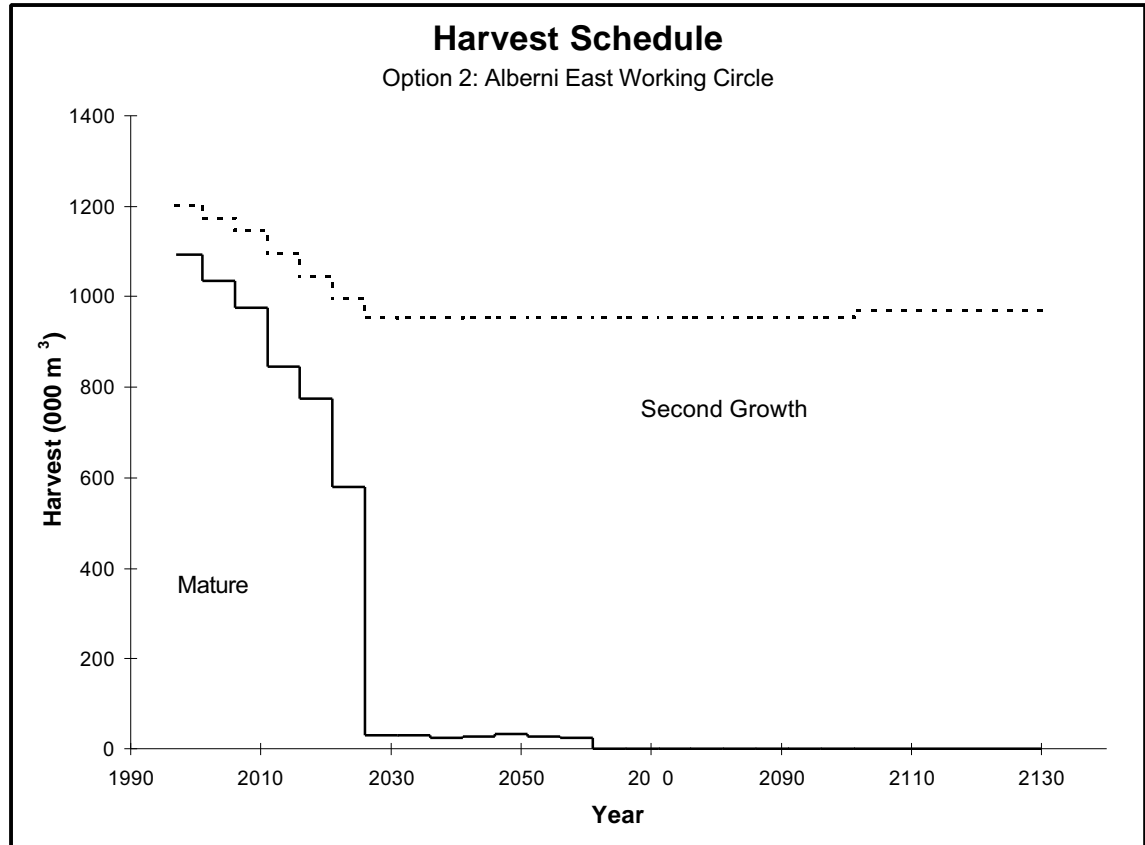
Option No. Description

- 2 Base Option.
- 14 Unadjusted (Y XENO) second growth yields.
- 15 Second growth yields increased by 10 %.
- 16 Second growth yields decreased by 10 %.
- 1 Inventory site indexes.
- 18 Minimum harvest ages decreased by 10 years.
- 19 Minimum harvest ages decreased by 10 years.
- 20 Second growth harvest strategy.
- 21 Higher utilization level (10 cm dbh, 15 cm stump and 5 cm top dib).
- 22 Ten percent per decade harvest decline.
- 23 Fifteen percent per decade harvest decline.

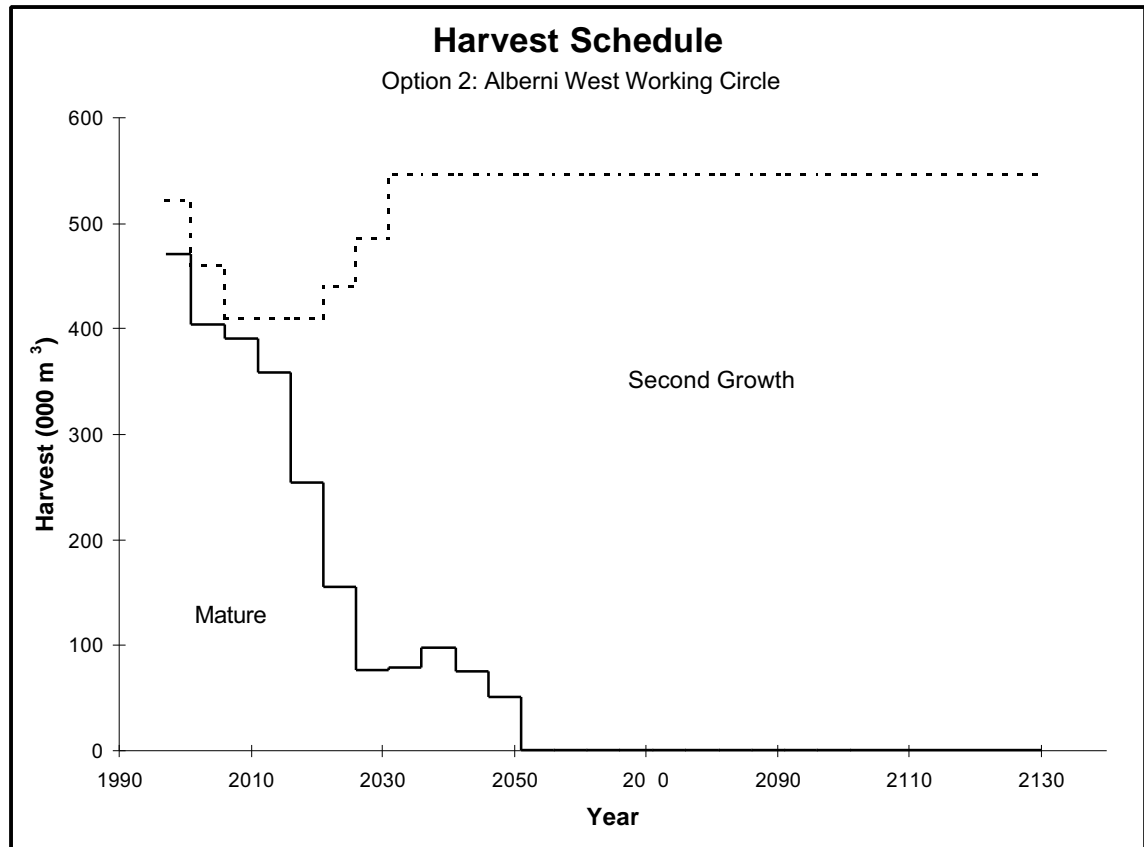
Attachment 2

Figures of Option 2 Harvest Schedules

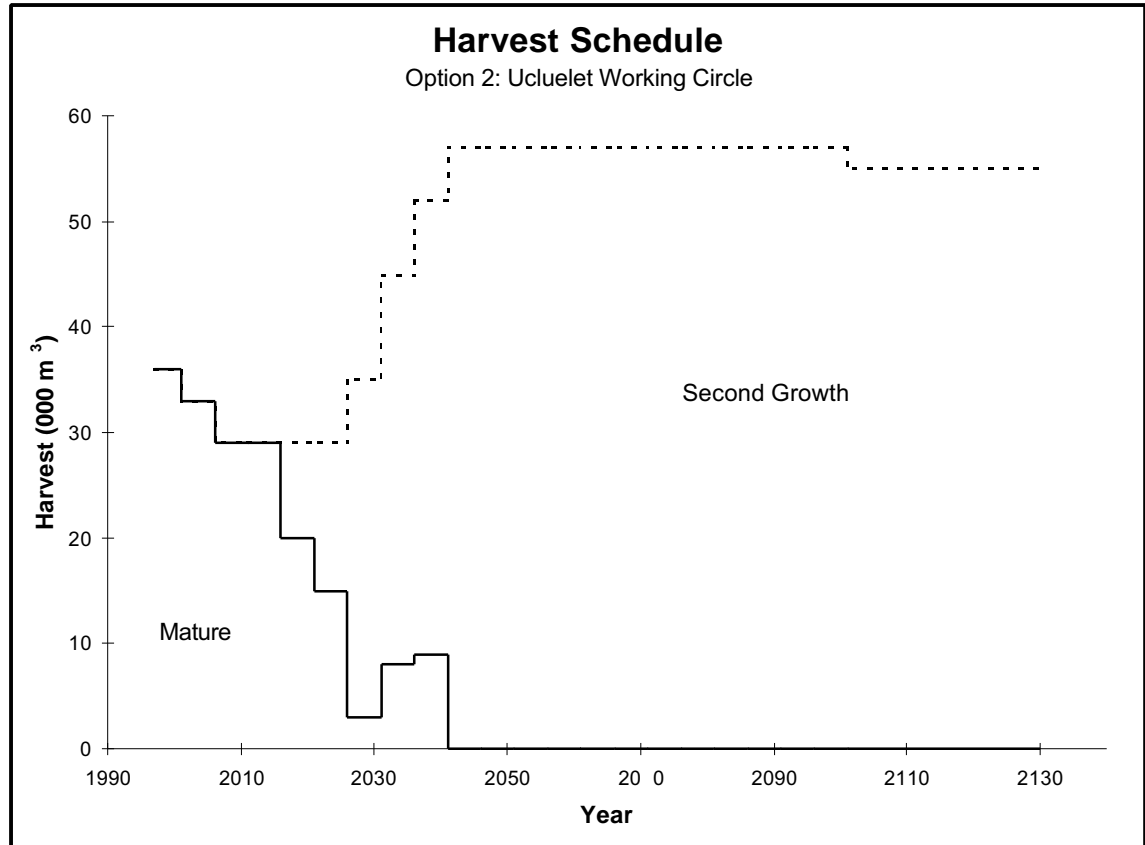
Alberni East	51
Alberni West	52
Ucluelet	53
Total	54



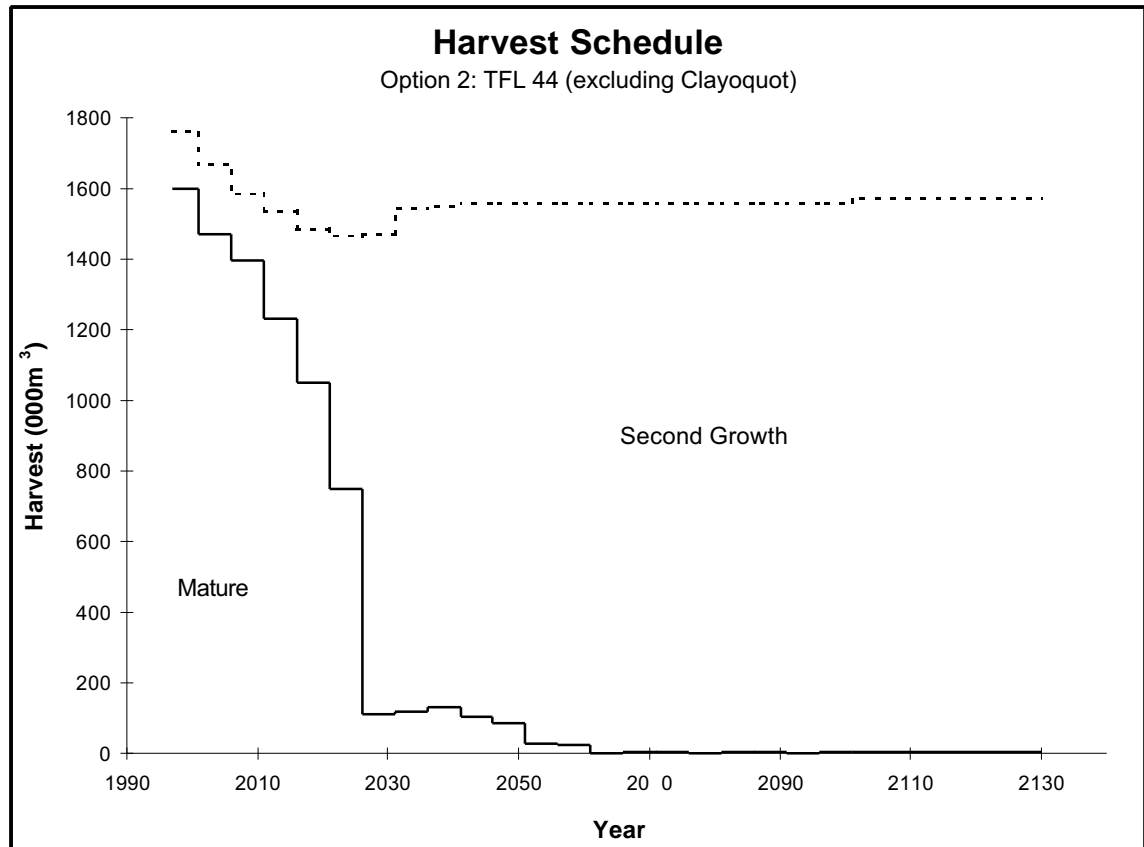
Alberni East



Alberni West



Ucluelet Working Circle



Total

Attachment 3

Comparison of Harvest Schedules: Options 2 and 2A

Late in the analysis it was determined that stands with primary species western redcedar were not allocated regeneration models as described in Section 6 and Attachment 1 of the Information Package.

The following comparison shows the harvest schedule impact of correcting this error.

Harvest Schedules (000 m³/year)
Working Circle and Option

Period	Alberni East		Alberni West		Ucluelet		TOTAL	
	2	2A	2	2A	2	2A	2	2A
199 2001	1203	1203	521	521	36	36	1 60	1 60
2002 2006	11 4	11 4	460	460	33	33	166	166
200 2011	1145	1145	410	410	29	29	1584	1584
2012 2016	1095	1095	410	410	29	29	1534	1534
201 2021	1045	1045	410	410	29	29	1484	1484
2022 2026	995	995	440	440	29	29	1464	1464
202 2031	953	945	485	485	35	35	14 3	1465
2032 2036	953	945	546	546	45	45	1544	1536
203 2041	953	945	546	546	52	52	1551	1543
2042 2046	953	945	546	546	5	56	1556	154
204 2051	953	945	546	546	5	56	1556	154
2052 2101	953	945	546	546	5	5	1556	1548
2102 2201	9 0	969	546	545	55	55	15 1	1569

<u>Option #</u>	<u>Description</u>
2	Base Option
2A	Correction made for allocating regeneration models to redcedar stands.



APPENDIX II

Statement of Management Objectives, Options, and Procedures (SMOOP)

**Statement of Management Objectives,
Options, and Procedures
(SMOOP)**

for

Tree Farm License Number 44

*Embracing lands tributary to the communities of Port Alberni, Tofino, Ucluelet,
Ahousat, Port Albion, Sarita, Nitinat, Bamfield, and Pachena*

Prepared by P.J. Kofoed, RPF.

MacMillan Bloedel Limited

Woodlands

February 1997

Revised July 1997

Table of Contents

1.0 INTRODUCTION.....	1
2.0 GOALS AND MANAGEMENT OBJECTIVES.....	2
2.1 CORPORATE GOAL AND OBJECTIVES	2
2.2 FOREST MANAGEMENT OBJECTIVES	2
2.21 Forest Resource Stewardship.....	2
2.22 Landscape and Recreational Resource Objectives.....	2
2.23 Harvesting the Allowable Annual Cut (AAC).....	3
2.24 Silvicultural System and Management.....	3
2.3 PUBLIC INFORMATION AND INVOLVEMENT OBJECTIVES	3
2.31 General.....	3
2.32 First Nations.....	4
3.0 MANAGEMENT ISSUES AND PROPOSALS.....	4
3.1 PLANNING AND CONSERVATION FOR ALL RESOURCES.....	4
3.2 LEGAL AND SOCIAL ISSUES AND PROPOSALS.....	5
3.21 Cooperation with First Nations People	5
3.22 Interim Measures Agreement and Cooperative Ventures.....	5
3.23 Archaeological and Heritage Sites	6
3.24 Community Issues.....	6
3.241 Community Stability.....	6
3.242 Community Water Supply	6
3.243 Recreation and Tourism.....	6
3.244 Social and Economic Impacts	7
3.25 Specific Integrated Resource Management Issues.....	7
3.251 Clayoquot Sound.....	7
3.252 Vancouver Island Land Use Plan.....	8
3.26 Small Business Forest Enterprise Program.....	9
3.3 MANAGEMENT ISSUES AND PROPOSALS	9
3.31 Fish and Wildlife Habitat Conservation.....	9
3.32 Forest Health.....	9
3.321 Forest Insects.....	9
3.322 Forest Diseases.....	10
3.323 Protection from Fire.....	10
3.324 Windthrow	11
3.33 Hydrology.....	11
3.34 Maintaining Site Productivity.....	12
3.35 Biodiversity.....	12
3.36 Landscape Aesthetics.....	12
3.37 Silviculture.....	13
3.371 Choice of Silvicultural System	13
3.372 Forest Renewal and Maintenance.....	13
3.38 Harvesting the Allowable Annual Cut.....	14
3.381 Working Circles.....	14
3.382 Harvesting the Profile	14
3.4 RESOURCE INVENTORIES: PRESENT STATUS AND PROPOSALS	15
3.41 Clayoquot Working Circle.....	15
3.42 Timber Inventory.....	16
3.43 Timber Operability.....	17
3.44 Recreation and Landscape (Visual) Inventories	17
3.45 Environmentally Sensitive Areas.....	17
3.46 Wildlife	18
3.47 Ecosystem Mapping.....	18

3.48 Forest Ecosystem Networks.....	19
4.0 INTEGRATED RESOURCE MANAGEMENT PLANNING PROCEDURES.....	19
4.1 TIMBER SUPPLY ANALYSIS	19
4.11 Base Option	20
4.12 Management of Non-Timber Resources.....	20
4.13 The Operable Landbase	21
4.14 Silviculture.....	21
4.15 Timber Yields.....	21
4.16 Site Productivity	22
4.17 Second-Growth Utilization Standards.....	22
4.18 Minimum Harvest Ages	22
4.2 TWENTY YEAR PLANS.....	23
4.3 ECONOMIC ANALYSIS OF SOME TIMBER SUPPLY ISSUES IN TFL 44	23
4.4 TIMBER SUPPLY ANALYSIS OF THE CLAYOQUOT WORKING CIRCLE	24
4.5 PLANNING IN CLAYOQUOT SOUND.....	24
5.0 PUBLIC INVOLVEMENT PROCEDURES.....	24
5.1 STAGE 1 INITIAL COMMENT	25
5.2 STAGE 2 SOLICITATION OF INPUT FOR DEVELOPMENT OF THE SMOOP	25
5.3 STAGE 3 REVIEW OF THE SMOOP	2
5.4 STAGE 4 REVIEW OF THE DRAFT MANAGEMENT PLAN.....	28
6.0 MANAGEMENT PLAN SCHEDULE.....	29

LIST OF ATTACHMENTS

ATTACHMENT 1	30
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1.0 INTRODUCTION

The forests of this area have been providing resources for people for many years. First Nations people harvested various resources for everyday living. In particular, western redcedar was used extensively. European use started with the harvesting of spars to refit sailing ships in the 18th Century CE. Commercial harvesting started in the 1860s, when Captain Stamp established a sawmill at Port Alberni, and has continued ever since. Licensed management started in 1955 when TFLs 20 and 21 were granted to MacMillan Bloedel Ltd. (MB). The location and extent of the current License (TFL 44) are shown on the map on the title page. A significant portion of the total area of 410 000 ha in TFL 44 is private land (18 %) and Timber Licenses (15 %). The rest is Crown land.

Purposeful forest renewal started when trees were planted on the shores of Great Central Lake in 1938. At the same time, company foresters introduced patch logging and retained seed trees to ensure natural regeneration in the Ash River Valley. MacMillan Bloedel has maintained this commitment to management and innovation. An example is its early commitment to try to implement the proposals of the Clayoquot Scientific Panel.

MB has operated a major integrated forest products facility in Port Alberni for more than 40 years. Logging and forestry operations, throughout TFL 44, supply timber to the Port Alberni paper mill and sawmills. In recent years, MB has continued its commitment to the Alberni Region by investing more than 200 million dollars to upgrade the paper mill to produce higher value products.

This Statement of Management Objectives, Options, and Procedures (SMOOP) is submitted to demonstrate MB's continuing commitment to manage these forests in accordance with current expectations of the people of British Columbia. It provides a vision of the challenges and issues of the day and our response in the form of proposed actions.

There have been major changes during the present Management Plan. In particular, the Forest Practices Code, Vancouver Island Land Use Plan, the Clayoquot Sound Decision, Interim Measures Agreement and Scientific Panel Recommendations have added to the management issues and challenges.

MB is committed to meet the laws which govern forest management and the conservation of all resources of the forest lands within the TFL.

MB also realizes the importance of working with local people as they play a significant role as contributors and critics in the Management Plan and other planning procedures, while also sharing in the benefits the harvest of timber and other resources offer. Public involvement is an important part of the Management Plan process.

2.0 GOALS AND MANAGEMENT OBJECTIVES

2.1 Corporate Goal and Objectives

The corporate goal is to remain a globally competitive company.

Within this context the corporate objectives are to:

- ❑ Manage the resources of the TFL for the benefit of both present and future generations.
- ❑ Manage the forests to provide a continuous, economical supply of timber and other values.
- ❑ Utilize the timber from the Crown forest in B.C. mills to maximum economic advantage.

2.2 Forest Management Objectives

The following management objectives for the TFL are grouped under various headings for ease of review. It is important to recognize that these objectives do not stand alone, rather they are integral to all planned actions. The relative importance of each objective will vary according to the particular circumstances.

2.21 *Forest Resource Stewardship*

Within the overall context of and compliance with the Forest Practices Code Act and Regulations, the objectives are to:

- ❑ Husband all resources in the TFL guided by the current state of knowledge, ecological sustainability and economic reality.
- ❑ Balance the legitimate, often conflicting demands or expectations of the various segments of society.
- ❑ Collect and maintain appropriate inventories of the various resources and use these data when considering options and preparing plans.
- ❑ Monitor silvicultural, engineering and other forest practices.
- ❑ Identify and take essential restorative actions.
- ❑ Adjust practices to improve our stewardship based on knowledge gained from research and experience.

2.22 *Landscape and Recreational Resource Objectives*

The objectives are to:

- ❑ Identify and integrate recreational resources into operational plans.
 - ❑ Develop and/or manage these recreational opportunities in partnership with government and local citizens according to demand (shown by recreation analysis) and availability of funds.
-

- ❑ Manage the various landscapes in accordance with their assigned value and the associated guidelines.
- ❑ Periodically revise value ratings or conduct new inventories to incorporate changes in value perceptions or management guidelines.

2.23 *Harvesting the Allowable Annual Cut (AAC)*

Harvest the approved AAC, balancing the annual and periodic cut as required by the Forest Act.

2.24 *Silvicultural System and Management*

The silvicultural objectives are to:

- ❑ Implement the silvicultural system best suited to achieve objectives for each harvest area according to regulations, land use designation, resource values, silvicultural needs and economic feasibility.
- ❑ Regenerate all harvested land promptly with appropriate species considering both silvical characteristics and economic values. Set stocking targets to provide a high, sustainable yield of timber.
- ❑ Treat the newly regenerated forest as needed to control or encourage understory vegetation or to reduce tree density to meet special habitat goals.
- ❑ Prune, fertilize, or thin the new forests when these treatments are economically advantageous or when warranted to achieve non timber values.
- ❑ Harvest hardwood stands in response to market demand.
- ❑ Vary the scale and intensity of silviculture treatments considering:
 - likelihood and magnitude of growth or value response,
 - magnitude of impact on and importance of other values present, and
 - availability of funding.

2.3 *Public Information and Involvement Objectives*

2.31 *General*

In keeping with the expressed interest of the public in all aspects of resource inventory, management and use, our objectives are to:

- ❑ Provide information on forest management and local issues through the MB Alberni Forest Information Centre.
 - ❑ Identify and advise local and other involved public interest groups, local governments, First Nations and interested individuals of opportunities for input to the various planning processes and solicit their feedback.
-

- ❑ Advertise and hold public information meetings to enable any member of the public to view and respond to MB's Management Plan proposals and current performance.

2.32 First Nations

First Nations groups, living in communities adjacent to MB operations or having traditional territorial claims on areas of MB operations, will be provided opportunities for forest management involvement and economic benefits through:

- ❑ Consultation 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 Small Business Forest Enterprise proposals. MB will assist with planning and training.

3.0 MANAGEMENT ISSUES AND PROPOSALS

In this chapter we highlight the legal, social, biological and technical challenges faced in the process of managing the License and propose how we will try to meet them.

Since the award of the predecessor Licenses, the complexity of management has increased significantly, especially in the past five years. The company must comply with the Forest Act, the Forest Practices Code (FPC) Act and other Federal and Provincial Acts, liaise with First Nations, implement the recommendations of Clayoquot Scientific Panel, and also consult with the citizens of B.C.

MB is committed to meeting the Operational Planning requirements of the FPC. This includes completing required field work, assessments and mapping in a timely fashion. It also includes working with the Ministry of Forests (MoF) to streamline the processing of Operational Plans.

3.1 Planning and Conservation for All Resources

Issue

Meet the overall societal goals of maintaining a sustainable environment while harvesting the approved AAC.

Proposal

Demonstrate our commitment to these goals through 20 Year and 5 Year Plans and the conduct of logging and other activities in accordance with approved plans and prescriptions.

3.2 Legal and Social Issues and Proposals

3.21 *Cooperation with First Nations People*

Issue

First Nations groups have expressed concerns about protection of traditional values. They have also expressed interest in increasing their economic involvement in the management of local resources.

Initiatives that occurred during MP 2 include training members of some bands for silvicultural work and involving them in the silvicultural program. Some of this has involved cooperative efforts to secure Forest Renewal B.C. (FRBC) funding for silvicultural projects in TFL 44.

Assistance has been provided in support of First Nations' interests in salmon enhancement projects. Three have been initiated: in the Pachena Watershed, the Henderson Lake area and at Ahousat.

MB has encouraged review of operational plans. In some operations, band members are employed and trained to assist with this process. The intent is to improve communications and understanding by all involved and hence identify and solve concerns well in advance of planned operations.

Proposal

Cultural heritage resources will be managed according to the Forest Practices Code of British Columbia Act and the Heritage Conservation Act.

Continue an active consultation process with First Nations groups, on planning issues that relate to their traditional territories.

Continue to provide training and forestry work opportunities to First Nations groups, utilizing FRBC funding where practical.

3.22 *Interim Measures Agreement and Cooperative Ventures*

Issue

The Province of B.C. and the Central Region Chiefs of the Nuu Chah Nulth tribal council signed an Interim Measures Agreement on March 19, 1994. An extension to this agreement was signed in 1996. The agreement sets out conditions for resource management in Clayoquot Sound prior to completing treaty negotiations. As part of the agreement, a Central Region Board of First Nations and Provincial representatives has been formed to oversee activities in Clayoquot Sound. The agreement also provides direction for developing economic opportunities and for resource planning requirements.

Proposal

To continue to investigate opportunities in Clayoquot Sound with the Central Region Chiefs of the Nuu Chah Nulth Tribal Council.

To implement cooperative management in Clayoquot Sound, once procedures have been established.

3.23 *Archaeological and Heritage Sites*

Issue

Identify these sites in advance of development, resolve their status and gain approval for appropriate management.

Proposal

Through consultation with local people, identify areas of potential interest. Also, train operational personnel in field identification of heritage features. As needed, hire specialists to ground truth sites, assess their importance, and recommend action. Seek approval of proposals and implement.

3.24 *Community Issues*

3.241 Community Stability

Issue

A number of communities, including the nine listed on the title page, are within or are adjacent to the License. Many of the residents are, directly or indirectly, economically dependent on the forest. MB prefers to employ trained, local people and to purchase goods and supplies locally.

Proposal

Continue to support local communities. Maintain local employment subject to weather and market constraints. Where appropriate, seek FRBC funding to train local people for new work and undertake restorative and other projects which meet funding criteria.

3.242 Community Water Supply

Issue

Most of the listed communities obtain some or all their water from streams or lakes within the License. Our challenge is to maintain both the quality and quantity of supply. As part of this commitment, terrain stability and surface erosion potential inventories have been completed for most of these community watersheds and watershed assessment procedures have been initiated.

Proposal

Work closely with regional and community water boards to confirm appropriateness or reach consensus on new measures. Continue with planning initiatives and ensure that operations meet defined standards.

3.243 Recreation and Tourism

Issue

Residents and visitors make use of License roads and lands for recreation. Information on local recreation is provided by the MB Alberni Forest Information

Centre and through provision of free maps. The Ministry of Forests (MoF) and MB have established a number of recreation sites. Facilities need to be maintained and there are opportunities to enhance recreation values.

Proposal

Continue the present practice of providing free maps showing recreation areas, roads, and rules of access. Improve signage and cooperate with tour operators where access to view operations is required. Develop and maintain recreation sites in concert with the MoF and subject to funding. Consider further recreation opportunities on private land.

3.244 Social and Economic Impacts

Issue

BC's forests, including TFL 44, are managed to meet a wide range of goals including those that are economic, community based and environmental. The challenge facing forest managers is to meet such goals that are often conflicting and continue to evolve.

Specific harvest rules and landbase deletions can have significant impacts on levels of timber harvest and hence on local economies and communities. By identifying such constraints that have large economic consequences, efforts can be focused on ways to minimize costs while achieving the various intended objectives.

Proposal

Examine the social and economic impacts of various options analyzed in the Timber Supply Analysis. While the emphasis will be on regional (Alberni Clayoquot Regional District) impacts, provincial effects will also be reported.

Consider broadening these results by sensitivity analysis of the 20 year plan to examine the impacts of spatial harvest constraints. Such sensitivity analysis would not occur for the whole forest, but would apply to defined subunits.

Work with government and communities to develop efficient planning procedures in order to achieve a competitive forest industry operation and a sustainable environment.

3.25 *Specific Integrated Resource Management Issues*

3.251 Clayoquot Sound

Issue

Management in Clayoquot Sound

The 1993 Clayoquot Land Use Decision established 33 000 ha of new protected areas in TFL 44 and identified a substantial forest area in special management areas for scenic corridors, wildlife and recreation.

The Clayoquot Working Circle contains the portion of TFL 44 that is within Clayoquot Sound and hence affected by the decision.

The Interim Measures Agreement (1994) sets out conditions for resource management in Clayoquot Sound prior to completing treaty negotiations. As part of the agreement, a Central Region Board of First Nations and Provincial representatives has been formed to oversee activities in Clayoquot Sound.

Government ratified the recommendations of the Clayoquot Sound Scientific Panel Report soon after it was released in April of 1995. MB has endorsed these recommendations in good faith. The challenges are technical, social, and economic. There are gaps in inventory, experience with alternative silvicultural systems in old growth forests on steep terrain and in integrating the various planning requirements and committees.

Government, in consultation with First Nations, is continuing to put in place the framework for managing Clayoquot Sound.

Proposal

Continue to work cooperatively with the Central Region Board, government agencies and communities on implementing forest management practices consistent with the Clayoquot Sound Decision and the Scientific Panel recommendations.

MB is currently restructuring its Clayoquot operations, in response both to the large decrease in harvest levels that has occurred and as preparation for possible cooperative ventures with the First Nations and others.

Emphasis in the short term is also on planning, to fill inventory gaps and develop proposals. This preparation is part of the approval process required before commencing operations consistent with the Scientific Panel recommendations.

3.252 Vancouver Island Land Use Plan

Issue

Through the Vancouver Island Land Use Plan, the Government has reserved approximately 9 000 ha of TFL 44 outside Clayoquot Sound in protected areas. It has also established Low Intensity Areas (LIA) and is investigating a comprehensive system of resource zoning.

LIAs wholly or partly within TFL 44 include the Strathcona Taylor, Nahmint, Alberni Canal, Barkley Sound and the Walbran Periphery LIAs. General objectives have been defined for the LIAs.

A Local Resource Use Plan (LRUP) was established in the Nahmint Watershed in 1975 and reviewed in 1991. As a result of the LRUP process, objectives were defined and planning requirements including visual landscape management, river and lake buffers, forest ecosystem networks, recreation reserves and greenup conditions have been implemented in the Nahmint Watershed.

Proposal

Assist in defining resource targets for the LIAs. Comprehensive plans will then be developed for the LIAs.

In the meantime, development plans, logging plans and silvicultural prescriptions will continue to highlight the particular values that are present and prescribe the actions and precautions to protect them.

3.26 *Small Business Forest Enterprise Program*

Issue

The AAC for TFL 44 includes 89 844 m³ that is allocated to the Small Business Forest Enterprise Program (SBFEP). It is intended that the SBFEP harvest volume reflect the range of harvesting situations in the TFL.

Proposal

Review options for management of the SBFEP, including dedicating defined areas for the SBFEP by removing them from TFL 44.

Continue the review process with the Small Business Foresters of the MoF to select areas for the SBFEP that approximate the forest profile.

3.3 Management Issues and Proposals

3.31 *Fish and Wildlife Habitat Conservation*

Issue

There is concern that habitat is maintained for fish and wildlife. Licensees are responsible for referring their planned activities to the Federal Department of Fisheries and Oceans and the Provincial Ministry of Environment for review of habitat issues.

Substantial areas, distributed throughout the forest landscape, are managed for habitat. This includes reserves (i.e., inoperable and sensitive soil areas as well as deer winter ranges, reserves for marbled murrelets and Forest Ecosystem Networks), riparian areas and wildlife tree patches.

Proposal

Review all Development and Logging Plans and Silviculture Prescriptions in early stages with officials and reach agreement on any special actions beyond those prescribed by Regulation. This process includes ongoing habitat assessments and detailed assessments of streams. Continue to support Salmon Enhancement initiatives with First Nations and other groups.

3.32 *Forest Health*

3.321 Forest Insects

Issue

Endemic insect populations periodically become epidemic and destroy or severely damage large areas of forests. Damage is usually worse when trees are over mature, e.g., hemlock looper killed large volumes of old growth in the

Klanawa and Sarita watersheds in 1945-46. The Canadian Forest Service has recently canceled the annual forest insect and disease survey (FIDs). The purpose of this survey was to identify potential problems through observations of defoliated areas.

Recent observations have identified that the Balsam Woolly Adelgid (BWA) may be more widespread than previously thought and that mortality is occurring in some infested stands in TFL 44.

The Sitka spruce weevil damages the terminal bud of spruce trees resulting in deformation.

Proposal

Continue to utilize the many forest assessments, both on the ground and from the air to identify potential problems. Examine any suspect areas by helicopter or ground survey. Consult with federal and provincial experts on the need for preventative measures, and salvage losses where they occur.

In response to the Balsam Woolly Adelgid observations, MB has written guidelines for management of *Abies* species. The purpose is to minimize future losses, avoid difficult reforestation problems if stands become infested in the next 10 to 20 years, and correct areas stocked with off site *Abies* species.

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. MB is involved in trials with seedlings from weevil resistant provenances.

3.322 Forest Diseases

Issue

Forest diseases are endemic in over mature forests and are primary or secondary causes in the death of large numbers of over mature trees annually. Some of these diseases are recognized as potential threats to the new forests, *Phellinus weirii*, especially is a cause of mortality in maturing stands.

Proposal

Prior to harvest, carry out disease surveys in suspect areas to confirm presence and extent. Where infestation is significant, manage in the most effective, economical way.

3.323 Protection from Fire

Issue

Natural and human caused fires are an ever present threat during the dry summer months. Damage to established stands has averaged less than 40 ha per year during the last 25 years. This is due to aggressive policies in fire prevention and initial attack.

Proposal

Continue historic fire prevention and attack policies including ha ard induced logging closures, aerial and ground patrols, and quick initial action using water bombers, helicopters and ground crews.

3.324 Windthrow**Issue**

Small cutblock si es and reserves within cutblocks (e.g., wildlife tree patches and riparian management areas) expose more timber edge to potential damage from strong wind events.

Proposal

Minimi e losses due to windthrow through cutblock design, the management (including feathering of edges, and topping and pruning of trees as appropriate) of riparian management areas and wildlife tree patches and recovery of damaged timber.

3.33 Hydrology**Issue**

Forest management activities can affect the flow of sediment into streams and peak flow levels in streams. Of concern is the resulting impacts on watershed values, particularly downstream fish habitat and community water supply.

The Forest Practices Code includes procedures for watershed assessment, defining riparian buffers, gully management, road standards and management activities on sensitive soils.

Proposal

Continue to refine current practices for minimi ing impacts on streams. This includes:

- ❑ Work with agencies to improve and apply the Coastal Watershed Assessment Procedures.
 - ❑ Identify potential erosion concerns during operational planning. This is largely dependent on terrain stability mapping. For problem areas, prescribe management according to advice from soil specialists.
 - ❑ Ensure that road construction is to a high standard. Aerial and skyline yarding systems are being increasingly used in sensitive areas to minimi e road density.
 - ❑ Develop and implement road deactivation plans, and further reduce erosion through dry seeding, or hydroseeding and planting. Utili e FRBC funding for watershed restoration work.
 - ❑ Identify, report and take remedial action, as necessary, to stabili e failure events.
-

3.34 *Maintaining Site Productivity*

Issue

Inappropriate road building and maintenance, engineering layout, logging methods, equipment use and fires may damage the soil and lower site productivity.

More specifically, recent concerns include soil disturbance and damage to regeneration in helicopter drop zones, loss of productive area due to roadside accumulations and site disturbance from backspur trail construction.

Proposal

Maintain high standards of planning, engineering, implementation and monitoring of all activities to ensure impacts are below current standards. Mitigate impacts, where necessary, and maintain a substantial program of road debuilding.

Continue with strategies that reduce the impacts of helicopter drop zones, roadside accumulations and backspur trails. This includes clearly defining the size of helicopter drop zones and piling or piling and burning accumulations both at drop zones and at roadside. Operational guidelines direct construction and rehabilitation of backspur trails.

3.35 *Biodiversity*

Issue

Concern for sustainability of ecosystem has led to increasing demand for landscape level planning to ensure ecosystems plant and animal habitats are conserved or protected. Substantial areas, largely old growth, have been reserved throughout TFL 44, on inoperable or sensitive soil sites, as riparian, wildlife or recreation reserves and as interim Forest Ecosystem Networks (in draft form). Stand level biodiversity guidelines are in place and biodiversity landscape units and objectives will be defined and implemented during the next few years.

Proposal

Meet Forest Practices Code standards. Cooperate with appropriate specialists to devise strategies to protect ecosystem and species diversity in an efficient manner. Encourage development and use of performance based procedures. This includes continuing to develop and apply a spatial habitat supply model to explore the impacts of different harvest rules on habitat supply.

3.36 *Landscape Aesthetics*

Issue

Concerns for forest landscape aesthetics has resulted in management constraints that have a major impact on timber harvesting operations. The challenge is to minimize the harvest impacts (volume and cost) of maintaining scenic values.

Proposal

Work with Ministry of Forests'specialists to manage visual landscapes more efficiently. Opportunities include:

- ❑ Recognizing demand as well as supply when assessing appropriate standards for managing visual landscapes.
- ❑ Reducing the time to achieve visually effective greenup. Strategies vary according to site, but may include site preparation, prompt reforestation, selection of large, fast growing planting stock, increased stocking density and fertilization.
- ❑ Improvement in planning including placing of blocks and visual landscape design.
- ❑ Use of alternative silvicultural systems in some situations.

Continue a policy of minimizing road impacts on visual landscapes through sound engineering, construction and deactivation practices.

3.37 Silviculture

3.371 Choice of Silvicultural System

Issue

The public has demanded a reduction in use of the Clearcutting System for perceived ecological and aesthetic reasons. This is particularly so within the Clayoquot Sound Area. Current practices often result in what is termed a "clearcut with reserves", that is the harvest block includes patches of residual trees, left as riparian buffers, to protect sensitive soils or as wildlife habitats. Silvicultural systems that leave more residual trees, particularly if they are evenly distributed pose problems in safety, disease control (especially hemlock mistletoe), damage and loss of value to remaining trees, and economics. The problems increase with tree size, slope steepness, and roughness of terrain.

Proposal

Use alternatives to clearcutting with reserves to meet clearly defined objectives and where it is practicable and appropriate to do so. Examples of such situations include areas of high visual sensitivity or of low terrain stability where it is physically possible to apply the alternative system in a safe and financially attractive manner. The most feasible options include: seed tree retention, shelterwood, group selection, and variable retention.

3.372 Forest Renewal and Maintenance

Issue

Establish new forests on all harvested, productive land.

Promptness of reforestation and rate of tree growth in young stands can affect the timing of harvests in adjacent areas and in special management areas such as visual landscapes.

Protect newly established seedlings from competition from other plants and unacceptable levels of animal damage.

Increase quality and value of the new crop.

Proposal

Complete reforestation within the prescribed timeframes at or above acceptable levels of stocking considering the tree species, site quality, and ground conditions. Use improved seed as available.

Endeavour to partially offset the impacts of spatial constraints on reducing medium term (5 to 30 years) harvest levels through prompt reforestation and practices such as using large, fast growing planting stock and fertilization at planting in appropriate areas. Seek FRBC funding for those practices that are incremental to basic reforestation and favourably affect medium term harvest levels.

Where weeds threaten the successful implementation of the new crop, evaluate the options of manual, chemical, or no treatment to provide target stocking levels and a free growing stand. Select the optimal weed control prescription with due consideration to environment and yield factors.

Optional treatments such as pruning, fertilization and thinning, singly or in combination, will be modeled. Implement a reassessment of opportunities for fertilization, both at time of planting and prior to harvest. If economic analysis justifies, seek FRBC funds for fertilization and pruning. Thin if analysis is positive in terms of forest timber supply and value.

3.38 *Harvesting the Allowable Annual Cut*

3.381 Working Circles

Issue

The current AAC for TFL 44 is allocated between four working circles (Alberni East, Alberni West, Clayoquot and Ucluelet) ensuring that the harvest is dispersed throughout the TFL.

Proposal

Continue to allocate and report harvest by working circle.

Review the status of the small Ucluelet working circle, given the current restructuring of operations.

3.382 Harvesting the Profile

Issue

The TFL 44 AAC is currently partitioned by geographic area (working circles), and by operability and economic class.

Historically the economically accessible portion of the forest has continued to expand as technical developments have occurred and old growth prices have

increased over the long term. Portions of the forest that contributed to the determination of harvest rates in earlier years did not become accessible until later.

Today's approach is focused on current conditions, and on harvesting the profile (range of conditions) in the forest. To a considerable extent this is happening as spatial harvesting constraints and netdowns to the timber harvesting landbase are dispersing operations throughout the forest and across the profile. In TFL 44, harvesting with non conventional systems, particularly long line and helicopter systems, has increased considerably in recent years, and will increase more in the coming years.

The profile of timber available for harvest is dynamic, changing with regulations, technical developments, market conditions, maturing of second growth and the local impacts of development sequence and spatial harvesting constraints.

Proposal

Report available timber and harvest projections by operability and broad harvest method classes for the 20 Year Plan, and the base option of the Timber Supply Analysis.

Continue to harvest across the timber profile according to the approved operability classification. Monitor the results.

MB is committed to the amended Mediation Plan for Franklin Forest Products, dated April 29, 1994. This includes allowing Franklin Forest Products to harvest up to 30 000 cubic metres of marginally economic timber annually for the five years until April 1999. This timber is harvested under cutting permits issued to MB pursuant to TFL 44. The marginally economic timber is as defined in MB's inventory for MP 2.

3.4 Resource Inventories: Present Status and Proposals

Before a Management Plan can be prepared, resource inventories are required to be completed and used in the various phases of planning, particularly in the Timber Supply Analysis and 20 Year Plan. Further, these resource inventories must be updated on a regular basis. A schedule will be developed in consultation with the MoF and will be reported in the Management Plan.

The following sections highlight the present status of the various inventories and proposals for improvements.

3.41 Clayoquot Working Circle

Present Status

MB's inventories in the Clayoquot Working Circle are of a similar standard to those elsewhere in the TFL.

A Community Planning Team is being created to direct planning including inventory work in Clayoquot Sound. In the meantime, an inventory working group headed by the Ministry of Forests has been working to consolidate

existing inventory information onto one mapbase and has begun collecting additional data. The collection of data will take several years.

Proposal

Cooperatively participate in the process to consolidate existing data.

In the short term, MB will use the best available inventory data for developing interim watershed plans in accordance with the Scientific Panel's principles.

3.42 Timber Inventory

Present Status

TFL 44 was re inventoried between 1983 and 1985.

Improvements have since been made to the inventory:

- ❑ The inventory has been updated each year to reflect areas and volumes logged.
- ❑ In 1989, operational cruising on 63 500 ha was combined with the 1983 inventory to improve the less intensive original inventory on those areas. In the remaining area (not included in the operational cruise), the inventory was recompiled to exclude samples in areas logged in 1983 or earlier.
- ❑ Since 1985, 15 000 ha of second growth has also been cruised, as part of the 31 re inventory program for stands which reach pole size, normally between 30 and 40 years of age. Cruise data for these stands has been entered into the inventory database.

Results of checks on the accuracy of the inventory show that overall, volume estimates are reasonable:

- ❑ Inventory to production comparisons for the period of 1991 to 1995 show production to be 9% higher than inventory estimates.
- ❑ The 1983 inventory of Block 2 (part of Franklin Woodlands) was subjected to an accuracy test during 1995. The results show that the 1983 inventory of Block 2 is not significantly different from the test.

Proposal

Continue with inventory improvements and checks:

- ❑ Approval has been given by the MoF to recompile the inventory. This will occur during MP 3 and includes using more refined taper equations (procedures for calculating log volumes) and incorporating further unlogged operational cruises into the inventory.
 - ❑ Continue to make standard inventory to production comparisons after each year's official scale is released.
 - ❑ During MP 3, complete accuracy tests of the remainder of the 1983 old growth inventory, i.e., Blocks 1, 3 and 4. Work has already started on the Block 3 test.
-

3.43 *Timber Operability*

Present Status

Operability mapping was completed in 1993 and has been approved for use in the timber supply and 20 year plan analyses for MP 3.

Proposal

Make minor checks and revisions as needed during MP 3.

3.44 *Recreation and Landscape (Visual) Inventories*

Present Status

These inventories were field checked and revised in 1995 and approved in 1996. The TFL 44 Recreation Inventory Report (1995) identifies significant recreation areas and existing recreation sites.

Recent work has included revision to some VQO designations and completion of visual landscape inventories in the McClure Lake and Walbran areas and in the upper portion of the Nahmint watershed.

Proposal

Review and revise the visual landscape inventory by December 31, 1998 and the recreation inventory by December 31, 2000. This will be done in consultation with District staff. Visual quality objectives will be reviewed in the context of MoF forecasts for reduced timber supply impacts of visual management constraints.

Complete a recreation analysis in cooperation with staff from the MoF region and district offices.

3.45 *Environmentally Sensitive Areas*

Present Status

Inventories of terrain stability have been completed for most of TFL 44. Procedures for using this information in the MP 3 analyses were approved in May of 1996.

More detailed mapping of terrain stability and surface erosion potential has recently been completed for most of the community watersheds in the TFL.

MB's GIS database includes streams, lakes and wetlands mapped to a 1:20 000 scale. It also includes information on hydrologic stream order, fish streams and community watersheds. This information has been used to determine riparian netdowns for MP 3 analyses.

More detailed stream information is collected at the 1:5 000 map scale for operational planning.

Proposal

Complete terrain stability mapping. Also complete terrain stability and surface erosion potential mapping in community watersheds.

Examine possibilities for improving the 1:20 000 scale inventory of fish, stream, lake and wetlands information from 1:5 000 operational plans. This includes using operational data to check riparian assumptions used in the Timber Supply Analysis and 20 Year Plans, and transferring some of the operational data into the Geographic Information System (GIS) as it is collected.

3.46 *Wildlife*

Present Status

Inventories of deer winter ranges and marbled murrelet reserves have been revised and were approved for MP 3 analyses. Bald eagle nesting sites have also been identified and mapped.

Proposal

Continue to evaluate the appropriateness of these reserve areas, and to refine them accordingly.

3.47 *Ecosystem Mapping*

Present Status

Ecosystem mapping exists for only part of TFL 44.

Ecosystem mapping provides:

- ❑ Essential information on the location and extent of forest ecosystems for landscape level planning, including the representation of biological diversity and protection of critical wildlife habitat.
- ❑ The ability to use GIS based computer models to assess the impacts of forest practices on wildlife habitat and populations.
- ❑ A tool for site productivity estimation for old growth stands.
- ❑ An aid for Silvicultural Prescription (SP) mapping (e.g., initial stratification) and extrapolation from similar ecosystems.
- ❑ A framework for predicting silvicultural treatment benefits on a forest wide basis for economic models and cut level determination.

Proposal

MB's goal is to map ecosystems to the site series level at the 1:20 000 scale for all of its management tenures by the Year 2000 following the Resources Inventory Committee (RIC) standards. Work in TFL 44 is being funded by FRBC.

By the end of the 1996/97 year, 111 000 ha of ecosystem mapping will have been completed in TFL 44. Mapping in the Clayoquot Working Circle is administered separately, through the MoF.

3.48 Forest Ecosystem Networks

Present Status

Forest Ecosystem Networks (FENs) protect representative old growth in each landscape unit and provide connectivity to larger protected areas. Draft FENs were mapped in TFL 44 during 1994, according to the guidelines of the day. This inventory was reviewed by personnel from the Ministry of Forests and Ministry of Environment, Lands and Parks.

Under the Forest Practices Code, biodiversity guidelines have changed and landscape biodiversity will be implemented gradually over the next few years.

Proposal

Reassess FENs when biodiversity landscape units and their biodiversity emphases have been defined.

In the meantime, respect current FENs in operational and strategic planning and apply appropriate stand level biodiversity requirements.

4.0 INTEGRATED RESOURCE MANAGEMENT PLANNING PROCEDURES

Different approaches to strategic planning are being applied in the Clayoquot Working Circle compared to the rest of the TFL the Alberni East, Alberni West and Ucluelet Working Circles. Subsections 4.1, 4.2 and 4.3 describe the Timber Supply Analysis, 20 Year Plans and Economic Impact Analysis applied to areas outside Clayoquot Sound. The remaining subsections refer to planning processes in the Clayoquot Working Circle.

The purpose of the Timber Supply Analysis, the 20 Year Plan, and Economic Impact Analysis is to provide estimates of current and future harvest levels and their contributions to the regional and provincial economics. The allowable annual cut recommended for MP 3 to the Chief Forester of the Province will be developed from the results of these analyses.

4.1 Timber Supply Analysis

A Timber Supply Analysis (TSA) will be completed to provide estimates of future harvest levels and to show how harvest levels may be impacted by issues described earlier in this report.

An inventory projection simulation model, (Forest Estate Model FEM) will be used in this analysis. FEM has been approved by the MoF and has been used by MB in recent analyses of TFLs 39 and 44.

A draft Information Package, a detailed report on assumptions and procedures to be used in the TSA, has been submitted to the MoF. Changes will be made depending upon public feedback from the SMOOP and input from the MoF and other Government agencies. Approval of this Information Package is required before doing the TSA. The Information Package includes detail on:

- ❑ Options.
- ❑ Aggregation of inventory data into analysis units.
- ❑ Description of the landbase including adjustments to determine the net landbase available for timber management.
- ❑ Integrated resource management assumptions.
- ❑ Silvicultural and yield projection assumptions.

The following subsections provide a brief description of the proposed options.

4.11 *Base Option*

The base option represents the current situation. This includes a current understanding of impacts of the Forest Practices Code, approved procedures for projecting timber volumes and recent silvicultural practices. Recently approved protected areas are withdrawn from the landbase.

The base option provides a bench mark for comparison with other management scenarios. Timber supply impacts may be estimated by comparing results of options for the various issues, with results for the base options.

4.12 *Management of Non-Timber Resources*

Purpose

Substantial netdowns have been made to the net timber harvesting landbase for wildlife, biodiversity and recreation. Constraints on timber harvesting have also been applied for managing visual landscapes and biodiversity.

The sensitivity of timber harvests and related socio economic impacts to variation of these netdowns and constraints is part of an evaluation of such choices.

Procedure

Options to include:

- ❑ Protection of soils and water. This option portrays a view of timber as the dominant forest use with area netdowns and commitments to safeguard the basic resources of soil and water.
 - ❑ Biodiversity. Examine an option that does not reduce the timber management landbase for Forest Ecosystem Network (FEN) links (operable productive forest not reserved for other reasons) and makes no volume reductions for wildlife tree patches.
 - ❑ Variation of visual landscape constraints. This includes a total of five options. Two options will examine the effect of a four year decrease and a four year increase in years to achieve Visually Effective Greenup (VEG). Two more options will examine the sensitivity of timber supply to a 5% decrease and a 5% increase in allowed percentage visual alteration. A fifth option will examine the potential impacts of some partial harvest in visually sensitive areas.
-

4.13 *The Operable Landbase*

Purpose

The base option excludes mature timber that is classified as currently uneconomic to log. What would be the timber supply impacts if this timber was accessed during the high portions of price cycles

Procedure

Examine an option that harvests timber classified in the inventory as currently uneconomic, over 100 years. The extended harvest period of 100 years corresponds to a strategy of taking advantage of periodic good market conditions to gradually harvest this timber.

4.14 *Silviculture*

Purpose

What is the timber supply impact of some intensive silvicultural opportunities that have been identified

Procedure

Examine an option that includes fertilization of Douglas fir stands 10 years before harvest, conversion of a small area of deciduous forest to coniferous plantations and increased emphasis on immediate reforestation after harvest and efforts (e.g., type of planting stock and fertilization) to increase the growth of young trees.

4.15 *Timber Yields*

Purpose

What impact would different timber volume estimates have on timber supply predictions

Procedure

Increase and decrease yield estimates through a series of four options:

Mature Volumes	Second-Growth Volumes
1. Increase by 10	As in Base Option
2. Decrease by 10	As in Base Option
3. As in Base Option	Increase by 10
4. As in Base Option	Decrease by 10

Mature refers to forest areas established prior to 18 4. These volumes are calculated from timber cruises.

Second growth refers to areas established after 18 3. These volumes are estimated by projections from assigned yield tables.

These options examine the impact of variations in volume estimates on future timber supply. They do not examine the implied impact on tree sizes and stand volume. MB believes that trends in technology will diminish the value premium for larger tree sizes.

4.16 Site Productivity

Purpose

Revised site index estimates have been approved for use in this analysis. What timber supply impact do these site index estimates have relative to using previous estimates (referred to as inventory site indices)

Procedure

Examine an option that uses the previous (inventory) estimates of site index.

4.17 Second-Growth Utilization Standards

Purpose

Second growth utilization standards modeled in this analysis are:

- ❑ Minimum tree dbh (diameter at breast height) 1 .5 cm
- ❑ Minimum top dib (diameter inside bark) 10 cm
- ❑ Minimum stump height..... 30 cm

Only small volumes of second growth have been logged to date in TFL 44.

Practices elsewhere and trends indicate that actual utilization standards will likely be closer.

Procedure

Examine the sensitivity of timber supply to utilization standards with an option that assumes closer utilization standards for second growth:

- ❑ Minimum tree dbh 10 cm
- ❑ Minimum top dib 5 cm
- ❑ Minimum stump height..... 15 cm

4.18 Minimum Harvest Ages

Purpose

Assumptions are made in the Timber Supply Analysis on when second growth stands are first available for harvest. Market and technological trends and regulations will affect future harvest economics and hence merchantability of stands of different situations and ages. Of interest is the sensitivity of short term and long term harvest levels to a variation in minimum harvest ages.

Procedure

Examine two options, one with second growth minimum harvest ages 10 years less than in the base option and the second with minimum harvest ages 10 years greater than in the base option.

4.2 Twenty-Year Plans

Twenty Year Plans will be completed for the Alberni East and Alberni West Working Circles. The Clayoquot Working Circle is excluded as it is included in a different planning process. The Ucluelet Working Circle is excluded because of its small size and connectivity with Clayoquot.

The purpose of the 20 Year Plan is two fold:

- ❑ To test the feasibility of a harvest schedule.
- ❑ To enable the public and agencies to identify concerns that they may have regarding development well in advance of planned operations.

The 20 Year Plan is a mid level planning document, fitting between the Timber Supply Analysis and the Development Plan.

The Timber Supply Analysis uses non spatial approximations to reflect forestry constraints and guidelines. Specific forest types are scheduled for harvest, but precise locations are not identified. As the locations are not explicitly identified, the impacts of harvest block size and adjacency guidelines are only approximately reflected. Such simplifications allow the exploration of the impacts of silvicultural activities and harvest levels over the next 200 years.

The 20 Year Plan identifies potential harvest blocks over the first 20 years of the Timber Supply Analysis. These blocks are tested against constraints and guidelines, demonstrating the feasibility of the Timber Supply Analysis harvest levels.

The 20 Year Plan, however, does not represent a development plan. Information gathered in future site visits will alter cutblock boundaries and perhaps the timing of harvest. The next level of planning, the Development Plan, will involve the detailed site visits. The 20 Year Plan is also useful in identifying areas of contention that can be subsequently dealt with in preparation of a Development Plan.

Landbase assumptions and timber volume estimates will be consistent with those used in the Timber Supply Analysis. Terms of Reference for the 20 Year Plan has been submitted to the Ministry of Forests.

4.3 Economic Analysis of Some Timber Supply Issues in TFL 44

The objective of this section is to assess the economic costs and impacts of some key issues governing the timber supply in TFL 44. Economic impact and benefit cost techniques are used to accomplish this objective. While other decision making tools are available, these two combined are believed to produce sufficient information to help identify areas for cooperative efforts to develop more beneficial outcomes.

The importance of TFL 44 to the regional (Alberni Clayoquot Regional District) and provincial economies will be described. This will provide a benchmark against which the various economic impact scenarios can be compared.

Of interest are the economic impacts of forgone timber harvest resulting from various landbase reduction and harvest constraint scenarios. Such impacts will

be determined by multiplying changes in harvest levels between appropriate options (from the Timber Supply Analysis) by current estimates of average economic activity generated per cubic meter of harvest. Measures will include total sales value, government revenues and employment and salaries and wages generated at both the regional and provincial levels.

4.4 Timber Supply Analysis of the Clayoquot Working Circle

MB will complete a Timber Supply Analysis of the Clayoquot Working Circle. The procedure has been agreed to by the Chief Forester and the Clayoquot Sound Central Regional Board. Current MB inventory information will be used and major recommendations of the Scientific Panel (rate of cut and old growth reserves) will be modeled.

4.5 Planning in Clayoquot Sound

The Scientific Panel recommendations are the basis for forest planning in Clayoquot Sound.

The Clayoquot Sound Central Regional Board oversees resource management and land use planning in Clayoquot Sound. The Board reviews and makes recommendations on both strategic and operational resource management plans.

Government in consultation with First Nations is developing the framework for forest planning in Clayoquot Sound.

An interim inventory working group, headed by the Ministry of Forests, is consolidating existing inventory information onto one mapbase and has begun collecting additional data.

During this period, prior to formation of the planning framework for Clayoquot Sound, MB will use the best available inventory data to develop interim watershed plans in accordance with the Scientific Panel's principles.

5.0 PUBLIC INVOLVEMENT PROCEDURES

MB recognizes that public involvement is an important part of developing a Management Plan. A strategy has been developed to provide the public with opportunities to review current plans and to have input into the Management Plan process.

This public review strategy has been approved, subject to conditions, by the Regional Manager.

This public review involvement plan for MP 3 involves four stages:

- ❑ **Stage 1** Initial comment for MP 3.
 - ❑ **Stage 2** Initial solicitation of input for development of the SMOOP.
 - ❑ **Stage 3** Review of the SMOOP.
 - ❑ **Stage 4** Review of the draft Management Plan.
-

The first two stages have been completed.

5.1 Stage 1— Initial Comment

In the first stage, prominent advertisements were placed in the following regional and local newspapers seeking public input and informing the public of the MP 3 process and of locations where the current MP 2 could be reviewed.

- ❑ Victoria Times Colonist
- ❑ Vancouver Sun
- ❑ Vancouver Province
- ❑ Port Alberni Times
- ❑ Tofino/Ucluelet Westerly

This occurred at the end of August and during the first part of September of 1994. Six written responses were received.

5.2 Stage 2— Solicitation of Input for Development of the SMOOP

Stage 2, the solicitation of input for developing the SMOOP, involved public open houses. These were held at Ucluelet, Tofino, Port Alberni, Victoria, and Vancouver during February of 1995. Prior to the open houses, locations, dates and times for these events were featured in prominent advertisements in the same regional and local newspapers used in Stage 1.

Information on TFL 44, the public review process and important issues in the TFL was described on display boards and in a brochure (in newsletter format) made available to all attendees. MB Woodlands staff were available at the open houses to answer questions, discuss issues and provide technical information.

Flip charts were used to record public input. In this way, the input was available for other participants to see and for later summarization. A questionnaire was offered to all attendees. A guest register was maintained, so that those who wished could record their attendance and be added to the mailing list for future events (e.g., open houses for viewing the draft of MP 3).

In total, 30 people attended the open houses and 2 questionnaires were returned. A summary of the input and a copy of the completed questionnaires have been submitted to the Regional Manager.

The results of the information gathered are not scientific, nor can they be taken as a public opinion survey. They do, however, provide a sense of the concerns that are being expressed by members of the public. We have collated the results and provide the following summary of the comments received.

What People Told Us:

Most important value of the forest

Tofino

- ❑ Multiuse with a strong inclination to preservation for biodiversity and recreation.
- ❑ Reforestation, trees are most important.
- ❑ Income for families and our communities.
- ❑ Housing needs, obs provided, economic value.

Port Alberni

- ❑ The many forest resources provide an economic base for Island communities.
- ❑ That there is enough left in its natural state for wildlife habitats.
- ❑ Supply of raw material to Port Alberni mills.

Victoria

- ❑ Maintenance of biodiversity within that, not opposed to multiple use including logging.
- ❑ The structural and functional complexity of natural forest ecosystems. Whole complex of non timber values.
- ❑ The rare and extreme value of a 1000 year ecosystem that can never be replaced.
- ❑ That it is maintained in an integrated continuous form.
- ❑ Public asset must be used and made available to all users.

Vancouver

- ❑ The ancient forests are an irreplaceable asset with many values i.e. heritage, wildlife, etc.
- ❑ The forest itself has intrinsic value the diversity of species and rarity of old growth ecosystem. Also has great cultural value.
- ❑ Long term ecological stability and local economic activity.
- ❑ A balance of environmental and economic values.
- ❑ A harvestable crop and a recreational area wildlife habitat.

Concerns about logging on TFL #44

Tofino

- ❑ Intensity and rate of cut behind West Coast Trail unit of Pacific Rim National Park.
- ❑ All the TFL. Clearcutting destroys salmon spawning streams, degradation of our society due to layoffs, etc.

Port Alberni

- ❑ I question if it is sustainable at the present cut levels in TFL 44.
 - ❑ Sustainability of forest resources via current logging methods and AAC potentials over time.
-

Victoria

- ❑ My concern is that clearcutting will be the primary silvicultural system. Would like to see more attempts to use retention systems.
- ❑ Practice of clearcutting.
- ❑ Smaller clearcuts more selective logging.

Vancouver

- ❑ Clearcutting in Clayoquot Sound. Keep intact watersheds. Use selective logging.
- ❑ Destruction of pristine watersheds by building roads in Clayoquot Sound logging of old growth trees, older than our grandparents grandparents.
- ❑ Logging is increasingly fragmenting ecosystem. Loss of habitat for animal and plant species. Elimination of old growth ecosystem.
- ❑ That conditions imposed through this process may result in unreasonable AAC reductions and my taxes will go up.

What else would you like to know about TFL 44?

Tofino

- ❑ Rehabilitation plans. Potential recreation/biodiversity reserves.

Victoria

- ❑ Economic considerations: does it make good economic sense to use high quality old growth wood for 2x4s. Wildlife habitat considerations, other than deer winter range.
- ❑ How many obs would be sustained in balance with the volume of wood cut
- ❑ Future of Nitinat Lake regarding camping for windsurfing.
- ❑ Maps explaining when different areas are going to be cut and in combination with other logging companies, how this will leave Vancouver Island looking in the long term.

Vancouver

- ❑ What kind of cutting is planned Road building in sensitive areas. What research into species of wildlife and flora
- ❑ I would like to know where you are logging and how much you remove everyday.
- ❑ How economically sustainable are harvesting practices

5.3 Stage 3— Review of the SMOOP

The draft SMOOP will be submitted to the Ministry of Forests, Ministry of Environment, Lands and Parks and Department of Fisheries and Oceans for review. Public review and input will be sought through the following activities:

Copies of the SMOOP will be available for public review at the following locations:

- ❑ Tofino: Municipal Office
- ❑ Ucluelet: Ucluelet District Office
- ❑ Port Alberni: MB Alberni Forest Information Centre
MoF, Port Alberni District Office
- ❑ Nanaimo: MB, Regional Office
MoF, Vancouver Region Office
- ❑ Victoria: MoF, Resource, Tenures and Engineering Branch

Prominent advertisements placed in the following local and regional newspapers will invite the public to review the SMOOP during the specified review period, at these defined locations.

- ❑ Victoria Times Colonist
- ❑ Vancouver Sun
- ❑ Vancouver Province
- ❑ Port Alberni Times
- ❑ Tofino/Ucluelet Westerly News
- ❑ Nuw Chah Nulth Newsletter

A copy of the SMOOP will be sent to the mailing list of identified stakeholder groups, communities, First Nations and members of the public who requested follow up material from the Stage 2 open houses. An invitation to provide a written response will be included in the mailout.

Offers will be made to First Nations groups to meet with them for discussion of issues of special concern to them.

Sixty days will be provided from the date of mail out for receiving input on the SMOOP.

A written report of Stage 3 will be submitted to the Regional Manager of the Vancouver Region, MoF. This report will describe the process, present the feedback received and describe any resulting actions.

5.4 Stage 4— Review of the Draft Management Plan

Submission of the draft Management Plan for MP 3 is scheduled for June 30, 199 . Open houses will be held to encourage public review of the plan and to seek public input. These open houses will be one day events from 3.00 pm to 9.00 pm and will be held at the communities of Tofino, Ucluelet, Port Alberni, Duncan, and Victoria before August 31, 199 .

As with Stage 2, the pre SMOOP open houses, MB Woodlands staff will be available to answer questions and discuss planning issues. Copies of the draft Management Plan will be available for review and display boards and newsletters will be used to assist in distributing information.

MB will advertise the Open Houses in appropriate local and regional newspapers, on at least two occasions (one week and two weeks) in advance of holding the open houses. Notices will also be placed on public bulletin boards and in public areas of Ministry of Forests Offices in Nanaimo and Port Alberni and in MB Woodlands offices.

A background information package and a written invitation to attend the open houses will be sent to those on the mailing list developed from the earlier

stages. The information package will include a brochure describing the draft MP in newsletter format.

Special invitations to attend the open houses will be sent to First Nations groups.

A written report of Stage 4 will be submitted to the Regional Manager of the Vancouver Region, MoF. This report will describe the process, present the feedback received and describe any resulting changes to the Management Plan.

6.0 MANAGEMENT PLAN SCHEDULE

The following schedule is proposed to complete the balance of the Management Plan.

<input type="checkbox"/> Submit SMOOP	March 4, 199
<input type="checkbox"/> Public Review of SMOOP	March, April 199
<input type="checkbox"/> Submit Timber Supply Analysis	May 31, 199
<input type="checkbox"/> Submit Twenty Year Plan	May 31, 199
<input type="checkbox"/> Submit Draft Management Plan	June 30, 199
<input type="checkbox"/> Public Open Houses	July, August 199
<input type="checkbox"/> Approval of Management Plan by MoF Chief Forester	December 31, 199

ATTACHMENT 1

LETTERS



Management Plan #3 Tree Farm License #44 1998 to 2002

*Embracing lands tributary to the communities of Port Alberni, Tofino, Ucluelet, Ahousat, Port Albion, Sarita,
Nitinat, Bamfield and Pachena*

Peter J. Kofoed, Supervising Forester

Signed and Sealed on December 3, 1997

P.J. Kofoed, RPF



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Solid Wood
65 Front Street, Nanaimo, B.C. V9R 5H9

The Management Plan consists of two parts:

- Part 1 Text with supporting appendices
- Part II Atlas

SUMMARY

Management Plan (MP) 3 for Tree Farm License 44 (TFL 44) conforms to the requirements of the Ministry of Forests under the terms of the License Agreement. It acknowledges the overarching authority of the Forest Practices Code, the applicable Provincial Acts and Regulations and the implicit necessity for balanced management of the various forest values to achieve the goals of society.

The plan also recognizes the economic needs of government and other stakeholders including the public and the company. These considerations are embodied in Section 2.0 dealing with corporate and resource management objectives.

Section 3.0 summarizes the timber supply analysis presented in Appendix III. An Allowable Annual Cut (AAC) of 1 60 000 m³ is proposed for the portion of TFL 44 outside Clayoquot Sound. This represents a 2.5% reduction from the current AAC allocation to this area. The proposed AAC includes 30 000 m³ specifically allocated to areas classified as marginally economic. The proportion of the AAC to be harvested by contractors is 28%. (This is 50% of the crown portion (Schedule B) of the AAC.)

A timber supply analysis is also presented for the Clayoquot Working Circle, calculated according to the procedure defined by the Chief Forester.

The SBFEP portion of the AAC for TFL 44 is 89 800 m³.

Section 4.0 explains the administration of the License and describes the planning processes and procedures to be followed. A 20 year plan, included as Appendix IV, shows the harvest schedule can be maintained while conforming to our interpretation of the applicable constraints.

Section 5.0 highlights our commitments to the conservation and protection of multiple resource values. This includes the updating of recreation and visual landscape inventories and participation in a recreation analysis.

Timber resource management is presented in Section 6.0. Clearcutting with its variations of individual tree and group retention will continue to be the primary silvicultural system, but application of both Shelterwood and Selection Systems on a limited scale is proposed in special circumstances. Recommendations of the Scientific Panel will be followed in Clayoquot Sound.

MacMillan Bloedel Limited's (MB's) forest establishment and management targets emphasize high volume and high wood quality of naturally regenerated and planted forests of mixed species. Planting and other treatments will be aggressively carried out, where necessary, to fulfill commitments and meet stocking targets and wood quality objectives.

The primary goals of the forest protection program are to prevent fire, but in the event of fire to attack with appropriate resources. Ambrosia beetles are a

continuing threat to product quality. MB will maintain efforts to reduce the volume of susceptible wood, to contain populations through good housekeeping and to trap female beetles using pheromone baits. In the event of a serious insect epidemic, we will be guided by specialist advice from the Canadian Forestry Service (CFS) or Ministry of Forests (MoF).

The appendices are integral components of the plan. Reference has already been made to the timber supply analysis and the 20 year plan. Appendix I MB Policies and Procedures, Appendix VII Use of the License Timber and Dependent Employment, and Appendix VIII History and Management Achievements, provide interesting insights to past achievements, corporate philosophy and changing patterns in wood use and end product manufacture. Appendices V and VI provide statistics and details on the privately held land and timber rights and area and volume statistics for the License.

ACKNOWLEDGMENTS

The following persons contributed to this Management Plan:

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 - ❑ R.J. Bartram, Divisional Engineer, Alberni West Division
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DISTRIBUTION LIST
MANAGEMENT PLAN NO. 3 FOR TREE FARM LICENSE NO. 44

MINISTRY OF FORESTS	PART 1–TEXT	PART II–ATLAS
Director, Timber Harvesting Branch	1	Complete
Regional Manager, Vancouver Forest Region	1	Complete
District Manager, South Island District	2	Complete
B.C. ASSESSMENT AUTHORITY		
Manager, Forest and Farm Section	1	None
MINISTRY OF ENVIRONMENT		
District Habitat Officer, Port Alberni District	1	Complete
DEPARTMENT OF FISHERIES & OCEANS		
South Coast Division	1	Complete
FIRST NATIONS		
Nuu chah nulth Tribal Council	1	Complete
CENTRAL REGION BOARD		
Central Region Board	1	Clayoquot Ucluelet
MacMILLAN BLOEDEL LIMITED		
Senior Vice President, Law Corporate Affairs	1	None
Vice President Chief Forester	1	Complete
Director, Timberlands Properties Division	1	None
CORPORATE FORESTRY		
Manager, Sustainable Forestry	1	Complete
Manager, Forest Data and Analysis	1	None
Library	1	None
SOLID WOOD GROUP		
Vice President	1	None
Planning Forester	2	Complete
Operations Forester	1	None
Alberni Forest Information Centre	1	Complete
WEST ISLAND WOODLANDS		
Manager	1	None
Franklin Operations	1	Alberni East West
Sproat Lake Operations	1	Complete
Estevan Operations	1	None
Clayoquot	1	Clayoquot Ucluelet

Table of Contents

Part I: Text

SUMMARY.....	..ii
ACKNOWLEDGMENTS.....	..iii
PART I: TEXT	
PART II: ATLAS	
1.0 INTRODUCTION.....	1
2.0 GOALS AND MANAGEMENT OBJECTIVES.....	3
2.1 CORPORATE GOAL AND OBJECTIVES.....	3
2.2 FOREST MANAGEMENT OBJECTIVES	3
2.21 Forest Resource Stewardship	3
2.22 Landscape and Recreational Resource Objectives	4
2.23 Harvesting the Allowable Annual Cut (AAC)	4
2.24 Silvicultural System and Management	4
2.25 Forest Protection and Health.....	5
2.3 PUBLIC INFORMATION AND INVOLVEMENT OBJECTIVES	5
2.31 General.....	5
2.32 First Nations.....	5
3.0 TIMBER SUPPLY ANALYSIS AND ALLOWABLE CUT.....	5
3.1 TIMBER SUPPLY ANALYSIS SUMMARY	5
3.11 Forest Management Issues.....	6
3.12 Timber Supply Options	6
3.13 Forest Estate Model and Analysis Variables	9
3.14 Netdowns to the Forest Landbase.....	10
3.15 Yield Tables, Assumptions and Adjustments	10
3.16 Harvesting Constraints	11
3.17 Discussion of Timber Supply Analysis Results	11
3.18 TIMBER SUPPLY ANALYSIS OF THE CLAYOQUOT WORKING CIRCLE.....	13
3.2 RECOMMENDED ALLOWABLE ANNUAL CUT (EXCLUDING CLAYOQUOT)	14
3.3 SMALL BUSINESS PORTION OF AAC	15
3.4 CONTRACTOR PORTION OF THE AAC	15
4.0 TFL ADMINISTRATION AND PLANNING	16
4.1 FOREST ADMINISTRATION	16
4.2 TFL MANAGEMENT PLANNING RESOURCES	1
4.3 FOREST PLANNING.....	1
4.31 The Vancouver Island Land Use Plan.....	17
4.311 Low Intensity Areas	1
4.32 Twenty-Year Plan.....	18
4.34 Forest Development Plans (FDPs)	19
4.35 Silviculture Prescriptions (SPs)	19
4.36 Cutting Permits.....	20
4.4 PLANNING AND ADMINISTRATION IN CLAYOQUOT SOUND.....	20
4.5 SMALL BUSINESS FOREST ENTERPRISE PROGRAM (SBFEP).....	21
4.6 FRANKLIN FOREST PRODUCTS LIMITED.....	22
4. SYSTEMS AND COMPLIANCE AUDITS	22
4.8 COOPERATION WITH FIRST NATIONS	22
4.9 OTHER RESOURCE USERS	23

5.0	TOTAL RESOURCE MANAGEMENT STRATEGIES.....	23
5.1	SOIL CONSERVATION STRATEGY.....	23
5.11	Soil Management Issues	23
5.12	Soils Strategy.....	24
5.2	WATER CONSERVATION AND STRATEGY.....	25
5.21	Water Conservation Issues.....	25
5.22	Water Conservation Strategy.....	25
5.3	FISH PROTECTION ISSUES AND STRATEGY.....	26
5.31	Fishery Resource Issues	26
5.32	Fishery Resource Strategy.....	26
5.4	WILDLIFE ISSUES AND STRATEGY.....	2
5.41	Wildlife Issues	27
5.42	Wildlife Protection Strategy.....	27
5.5	BIODIVERSITY ISSUES AND STRATEGY	28
5.51	Biodiversity Issues.....	28
5.52	Biodiversity Strategy.....	28
5.6	FOREST RECREATION ISSUES AND STRATEGY	28
5.61	Forest Recreation Issues.....	28
5.62	Forest Recreation Strategy.....	29
5.	VISUAL LANDSCAPE MANAGEMENT ISSUES AND STRATEGY.....	29
5.71	Visual Landscape Management Issues.....	29
5.72	Visual Landscape Management Strategy.....	30
5.8	CULTURAL HERITAGE RESOURCE PROTECTION ISSUES AND STRATEGY	30
5.81	Cultural Heritage Resource Protection Issues.....	30
5.82	Cultural Heritage Resource Protection Strategy.....	30
6.0	TIMBER RESOURCE MANAGEMENT PLAN.....	31
6.1	TIMBER INVENTORY AND GROWTH	31
6.11	Mature Forest Inventory Improvement Plan.....	31
6.12	New Forest Inventory Improvement Plan.....	32
6.13	Forest Inventory Maintenance Plan	32
6.14	Conversion to Trim Mapbase.....	32
6.15	Cutting Permit Cruising Plan	32
6.16	Post Harvest, Residue Survey Plan.....	32
6.17	Forest Growth and Yield Plan.....	33
6.18	Protection of Growth and Yield and Other Installations	33
6.2	SILVICULTURAL SYSTEMS.....	33
6.21	Clearcut System.....	35
6.22	Shelterwood System	35
6.23	Selection System	35
6.3	HARVESTING SYSTEMS AND PROCEDURES.....	36
6.31	Conventional Harvesting Methods	37
6.32	Nonconventional Harvesting Methods.....	37
6.33	Greenup.....	37
6.34	Recovery Standards.....	37
6.4	INFRASTRUCTURE AND ACCESS DEVELOPMENT	38
6.41	Dryland Sorts and Log Dumps.....	38
6.42	Road Building and Maintenance	38
6.43	Site Restoration.....	39
6.44	Commercial and Public Use of Roads and Facilities	39
6.5	ESTABLISHING AND MANAGING THE NEW FOREST.....	40
6.51	Silvicultural Surveys and Stocking Targets	41
6.511	Regeneration Period.....	42
6.512	Species Selection.....	42
6.513	Stocking Targets	43

6.52	<i>Site Preparation</i>	43
6.53	<i>Forest Regeneration</i>	43
6.531	<i>Forest Tree Seed</i>	43
6.532	<i>Regeneration Methods</i>	43
6.533	<i>Brushing and Weeding</i>	44
6.54	<i>Juvenile Spacing or Pre Commercial Thinning</i>	44
6.55	<i>Forest Fertilization</i>	45
6.56	<i>Pruning</i>	45
6.57	<i>Second-Growth Harvest Strategy</i>	45
6.58	<i>Conversion of Alder Stands</i>	47
6.59	<i>Planned Silvicultural Treatments</i>	47
6.6	FOREST PROTECTION AND FOREST HEALTH	48
6.61	<i>FIRE PREVENTION AND SUPPRESSION</i>	48
6.62	<i>Forest Waste Disposal</i>	49
6.63	<i>Forest Insect Control</i>	49
6.631	<i>Forest Defoliators</i>	49
6.632	<i>Balsam Woolly Adelgid</i>	49
6.633	<i>Ambrosia Beetles</i>	50
6.634	<i>Other Insects</i>	50
6.64	<i>Forest Disease Control</i>	50
6.65	<i>Windthrow</i>	51
6.	FOREST RESEARCH	51
6.71	<i>Forest Ecology</i>	52
6.72	<i>Forest Renewal</i>	52
6.73	<i>Forest Tree Nutrition</i>	52
6.74	<i>Alternative Silvicultural Systems</i>	53
7.0	MANAGED FOREST NO. 74	53
8.0	MANAGEMENT PLAN ADMINISTRATION	54
8.1	REVISION TO MP 3.....	54
8.2	TFL ANNUAL REPORT	54
9.0	REVIEW STRATEGY	54

List of Tables

TABLE 3.12.1	Summary of Option 2 (Base) Assumptions	8
TABLE 3.12.2	Description of How Options Differs from Option 2 (Base)	8
TABLE 3.14.	Area Netdowns to Derive The Net Landbase (for Option 2) (excluding Clayoquot) (ha)	10
TABLE 3.18.	Harvest Rates (000 m ³ /year)	14
TABLE 6.5.	Industry Outstanding Silviculture Projects	41
TABLE 6.59	Silvicultural Treatments Plan (hectares)	4

List of Appendices

Appendix I	MB Philosophy, Woodlands Objectives, Policies and Procedures
Appendix II	Statement of Management Objectives, Options and Procedures (SMOOP)
Appendix III	Timber Supply Analysis
Appendix IV	Twenty Year Plan
Appendix V	Schedule A Properties
Appendix VI	Area and Volume Summaries
Appendix VII	Use of License Timber and Dependent Employment
Appendix VIII	History and Management Achievements
Appendix IX	Maps of Tenure by Working Circle

Part II: Atlas

The maps for each Working Circle are:

1:125 000 Overview Maps

1. Block Boundaries and Tenure
2. Broad Forest Cover at 1993. For the Alberni East and Alberni West Working Circles includes the Twenty Year Plan.
3. Broad Forest Cover at 2016. For the Alberni East and Alberni West Working Circles of the end of the Twenty Year Plan.
4. Physical Features
5. Mineral Claims, Guiding and Trapping Licenses
6. Landscape and Recreation
 - . Soils and Snow Avalanche
8. Community Watershed and Stream "S" Class
9. Wildlife and Forest Ecosystem Networks
10. Broad Forest Cover and Operability
11. Ministry of Forests Biogeoclimatic Zone Map (1:250 000 scale)

1:20 000 Maps

1. Non Timber Resources. Heavy and light netdowns. For the Alberni East and Alberni West Working Circles includes the Twenty Year Plan.
 2. Forest Cover and Physical and Economic Operability. For the Alberni East and Alberni West Working Circles includes the Twenty Year Plan.
-

1.0 INTRODUCTION

TFL 44 is located in west central Vancouver Island in the vicinity of the communities of Port Alberni, Tofino, Ucluelet and Bamfield. It extends from Strathcona Park in the north to Walbran Creek in the south, including land from the Pacific Ocean to the Beaufort Range and Mount Arrowsmith.

The TFL is held by MacMillan Bloedel Ltd and is administered from the South Island Forest District as part of the Vancouver Forest Region. Logging and forestry operations currently employ more than 3,000, making a significant contribution to the Alberni Region.

This Management Plan is the continuation of a 42 year record of practical forest management. To a considerable extent it is based on the achievements over these years, the experience gained and new knowledge in fish and wildlife management, forest ecology, forest hydrology, soil and soil stability, biodiversity, growth and yield, silviculture and timber harvesting.

It also embodies the evolution of public policy, especially with respect to recognition and conservation of the many values associated with the forest such as recreation, aesthetics, heritage and cultural sites and biodiversity.

There have been major changes during the current Management Plan that have added to the management issues and challenges. The Forest Practices Code and Vancouver Island Land Use Plan have withdrawn areas from the TFL as Protected Areas, resulted in additional netdowns for sensitive sites and non timber values and applied additional management constraints. The timber harvesting landbase for the TFL outside of Clayoquot Sound has been reduced by more than 50 000 ha.

The Clayoquot Sound Decision, Interim Measures Agreement and Scientific Panel Recommendations have resulted in management of the Clayoquot Working Circle of TFL 44 with an emphasis on biodiversity and other non timber resource values.

This said, it must also be recognized that the plan must contend with continuing change. The need for and appropriateness of alternative silvicultural systems is but one example. There is only a very small experience base for application of different systems to old growth coastal forests and the evidence supporting the ecological necessity is still far from conclusive. Nevertheless, the Plan provides for the increasing introduction of alternative silvicultural systems in special circumstances where traditional clearcuts may not be acceptable for ecological or social reasons.

In the first 42 years of management, 115 000 ha have been logged, almost 2 000 ha have been denuded from other events, primarily fire and 21 000 ha were classified as unstocked prior to the award of the TFL. Most of this area has been restocked. Less than 4 000 ha await reforestation and close to

10 000 ha are classified as nonproductive roads, swamps, or islands of rock within the larger forest. Forty percent of the reforested area has restocked naturally to form mixed, young forests of hemlock, cedar, cypress, amabilis fir, Douglas fir and Sitka spruce depending on the seed source from the old growth forest. These trees preserve the original gene pool.

The other 60 have been planted or seeded successfully, primarily with hemlock, cedar, Douglas fir, Sitka spruce, cypress and amabilis fir. Follow up surveys show that the vast majority of the plantations are now also mixed species forests because other species have seeded in.

In tending these young forests, 26 100 ha have been weeded, 12 500 ha have been spaced to reduce the number of competing trees and almost 800 ha have been fertilized.

The conservation of non timber resources has become increasingly important over the years. Concern for fish, deer, and elk habitat first became a critical issue in the late 1960s. This was followed by concern for soil stability on steep slopes, the need for landscape management to preserve aesthetics, and increasing recognition of the importance of forest based recreation. Most recent has been the call to preserve biodiversity and retain old growth stands and stand characteristics, and conserve marbled murrelet nesting areas.

MB has a record of cooperative development of guidelines governing conservation of fish and wildlife habitat. To provide guidance in this area, specialists were first added to the management team in 1974. Pioneering was done in ecosystem classification in the early 1970s and soil stability surveys and assessment in the 1980s. More recently a capability for modeling habitat supply has been developed to allow performance based assessment of biodiversity impacts from forest harvest schedules.

Improvements in the planning and implementation of resource conservation actions have been steady and continuous in response to new knowledge and the availability of successive improvements to the various guidelines.

As of 1997 the following reservations are presently in effect in TFL 44 (excluding Clayoquot) to protect other resources:

- ☐ 14 000 ha of productive, operable forest are currently reserved from cutting because of soil sensitivity.
- ☐ 1 000 ha are in riparian reserves.
- ☐ 9 000 ha are reserved to protect wildlife.
- ☐ 12 000 ha are removed as recreation reserves.
- ☐ Other areas are set aside to protect heritage and cultural values.

In addition, harvest constraints are applied on 55 000 ha (31 %) of the timber harvesting landbase for visual landscape management.

Examples of other conservation work include:

- ☐ Assessments of marbled murrelet use in various areas including designated potential nesting areas.
 - ☐ Surveys of bald eagle nests and development of guidelines for their protection.
 - ☐ An analysis of differences in bird species composition in different ages of regenerating forests compared with old growth forests in various areas.
 - ☐ Support for salmon enhancement initiatives.
-

MB is cooperating with other researchers in testing different silvicultural systems on privately owned land (MF 19) at Menies Bay. The results of this project will be useful in determining the economic and ecological practicability of extending these systems to the License area to achieve specified objectives.

Advances have also been made in how the timber has been utilized. More than 40% of the sawn lumber is now re-manufactured into higher value products. Similarly in pulp and paper more product is going into value added specialty papers and high quality coated papers.

2.0 GOALS AND MANAGEMENT OBJECTIVES

The following goals and objectives are from the Statement of Management Objectives, Options and Procedures (SMOOP, Appendix II).

2.1 Corporate Goal and Objectives

The corporate goal is to remain a globally competitive company.

Within this context the corporate objectives are to:

- ❑ Manage the resources of the TFL for the benefit of both present and future generations.
- ❑ Manage the forests to provide a continuous, economical supply of timber and other values.
- ❑ Utilize the timber from the crown forest in B.C. mills to maximum economic advantage.

2.2 Forest Management Objectives

The following management objectives for the TFL are grouped under various headings for ease of review. It is important to recognize that these objectives do not stand alone, rather they are integral to all planned actions. The relative importance of each objective will vary according to the particular circumstances.

2.21 Forest Resource Stewardship

Within the overall context of and compliance with the Forest Practices Code Act and Regulations, the objectives are to:

- ❑ Husband all resources in the TFL guided by the knowledge available on ecological sustainability and economic reality.
 - ❑ Balance the legitimate, often conflicting demands or expectations of the various segments of society.
 - ❑ Collect and maintain appropriate forest inventories of the various resources and use these data when considering options and preparing plans.
 - ❑ Monitor silvicultural, engineering and other forest practices.
-

- ❑ Identify and take essential restorative actions.
- ❑ Adjust practices to improve our stewardship based on knowledge gained from research and experience.

2.22 Landscape and Recreational Resource Objectives

The objectives are to:

- ❑ Identify and integrate, recreational resources into operational plans.
- ❑ Develop and/or manage these recreational opportunities in partnership with government and local citizens according to demand (shown by recreation analysis) and availability of funds.
- ❑ Manage the various landscapes in accordance with their assigned value and the associated guidelines.
- ❑ Periodically revise value ratings or conduct new inventories to incorporate changes in value perceptions or management guidelines.

2.23 Harvesting the Allowable Annual Cut (AAC)

Harvest the approved AAC, balancing the annual and periodic cut as required by the Forest Act.

2.24 Silvicultural System and Management

The silvicultural objectives are to:

- ❑ Implement the silvicultural system best suited to achieve objectives for each harvest area according to regulations, land use designation, resource values, silvicultural needs and economic feasibility.
 - ❑ Regenerate all harvested land promptly with appropriate species considering both silvicultural characteristics and economic values. Set stocking targets to provide a high, sustainable yield of timber.
 - ❑ Treat the newly regenerated forest as needed to control or encourage understory vegetation or to reduce tree density to meet special habitat goals.
 - ❑ Prune, fertilize, or thin the new forests when these treatments are economically advantageous or when warranted to achieve non timber values.
 - ❑ Harvest hardwood stands in response to market demand.
 - ❑ Vary the scale and intensity of silviculture treatments considering:
 - likelihood and magnitude of growth or value response,
 - magnitude of impact on and importance of other values present, and
 - availability of funding.
-

2.25 Forest Protection and Health

The objectives are to:

- ❑ Limit the losses from fire through a rigorous programme of fire prevention and suppression.
- ❑ Minimise losses to insect and disease low through a vigilant program of detection and appropriate control measures.

2.3 Public Information and Involvement Objectives

2.31 General

In keeping with the expressed interest of the public in all aspects of resource inventory, management and use, our objectives are to:

- ❑ Provide information on forest management and local issues through the MB Alberni Forest Information Centre.
- ❑ Identify and advise local and other involved public interest groups, local governments, First Nations and interested individuals of opportunities for input to the various planning processes and solicit their feedback.
- ❑ Advertise and hold public information meetings to enable any member of the public to view and respond to MB's Management Plan proposals and current performance.

2.32 First Nations

First Nation groups, living in communities adjacent to MB operations or having traditional territorial claims on areas of MB operations, will be provided opportunities for forest management involvement and economic benefits through:

- ❑ Consultation 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 Small Business Forest Enterprise proposals. MB will assist with planning and training.

3.0 TIMBER SUPPLY ANALYSIS AND ALLOWABLE CUT

3.1 Timber Supply Analysis Summary

The procedure for determination of the AAC has developed from a simple arithmetic calculation requiring only a few hours to a process lasting up to two years for assembly of data, programming and loading of computers, months of analysis of options and testing of results, and reviews with MoF staff.

The following Sections 3.11 to 3.1 , present and briefly explain the process applied to the working circles, Alberni East, Alberni West and Ucluelet. The Chief Forester of the Province has defined an AAC calculation procedure for Clayoquot Sound. Section 3.18 summarizes this procedure and the results for the Clayoquot Working Circle. Details of the timber supply analysis (TSA) are given in Appendix III.

3.11 Forest Management Issues

The TSA examines harvest schedules over 200 years through computer simulation of timber harvest, regeneration, tending and maturation of the new forests.

There are several main timber supply issues. Interpretations of these issues can have significant impacts on the long run sustained yield (LRSY) from the TFL and/or on the possible harvest schedules from today to the attainment of LRSY.

The issues include:

- ❑ Integrated resource management.
 - Biodiversity
 - Visual landscape
 - Community watersheds
 - Riparian areas
- ❑ Net timber harvesting landbase.
 - Set asides for alternative uses
 - Economic operability in the long term
- ❑ Second growth harvest strategy.
- ❑ Silvicultural practices that may lead to enhanced harvest opportunities.
- ❑ Inventory and growth rate assumptions.

3.12 Timber Supply Options

Twenty two options were examined to provide a basis for analysis of some of the issues described above.

Current Procedures: Option 2

This option is based on the full landbase and forest inventory with currently applied reductions and/or constraints as specified by the MoF. It allows for integrated resource management, exclusion of currently uneconomic timber in accordance with MoF policy, current levels of silviculture and adjustments to MB yield forecasts to conform to those of the MoF. The assumptions are summarized in Table 3.12.1.

The resulting timber supply schedule is the base against which the timber supply schedules of the other options are compared to

understand the impacts of the constraints, strategies or technical issues on timber management.

TABLE 3.12.1. Summary of Option 2 (Base) Assumptions

Subject	Description
Operability	Netdowns for current uneconomic and physically inoperable areas.
Netdowns for Sensitive Sites	Sensitive soils and riparian areas.
Netdowns for Non Timber Resources	Deer and Elk, Marbled Murrelets, Recreation, Water Supply.
Biodiversity Netdowns	Forest Ecosystem Networks, old growth representation and 2 for wildlife tree patches.
Cover class constraints	
• Visual Landscapes (VQOs)	Visually Effective Greenup (VEG) at 5 m, estimated maximum percent alteration.
• Recreation C1 b areas (outside VQOs)	Maximum of 20 of total forest area less than 20 years of age.
• Avalanche run out ones	Maximum of 20 of total forest area less than 30 years of age.
• Community Watersheds	Maximum of 5 of total forest area less than 5 years of age for each community watershed.
Nahmint Watershed	Nahmint old growth reserve, specific riparian reserves and greenup at 5 m for ad agency.
Silviculture	Approximation of recent practices.
Mature volumes	From inventory.
Projected yields	Y XENO yield model projections. Douglas fir yields adjusted as agreed with MoF.
Site Index	MB biophysical decision tree estimates for old and very young stands.
Minimum harvest Ages	Within 0.2 m ³ /ha/year of culmination mai with minimum average dbh of 25 cm.
Utilization Level for Second Growth	1 .5 cm dbh, 30 cm stump and 10 cm top dib.

Table 3.12.2 provides a brief description of how the other options vary from the base option. The options are grouped by issue.

TABLE 3.12.2. Description of How Options Differs From Option 2 (Base)

Issue	Option No.	Description
Integrated Resource Management	1	Timber is viewed as the dominant use, area netdowns to safeguard soil and water resources. No cover class constraints.
Biodiversity	3	No allowances for FEN links or wildlife tree patches.
	4	Includes early and mid plus mature seral stages.
Visual Landscape	5	Stand ages for achieving Visually Effective Greenup reduced by 4 years.
	6	Stand ages for achieving Visually Effective Greenup increased by 4 years.
		Visual landscapes maximum percent alteration decreased by 5 .
	8	Visual landscapes maximum percent alteration increased by 5 .
Net Landscape	10	Net landbase reduced by 5 .
Silviculture	11	More intensive Silviculture resulting in no regeneration delay plus some fertilization of Douglas fir stands and conversion of almost 1200 ha of deciduous stands to conifer.
Inventory and Growth Rate Assumptions	12	Mature volumes increased by 10 .
	13	Mature volumes decreased by 10 .
	14	Y XENO yields applied unadjusted.
	15	Second growth yield projections increased by 10 .
	16	Second growth yield projections decreased by 10 .
	1	Inventory Site Indexes.
Harvest Strategy	18	Minimum harvest ages reduced by 10 years.
	19	Minimum harvest ages increased by 10 years.
	20	Second growth harvest strategy.
	22	Harvest reduced by 10 per decade from the initial harvest rate.
	23	Harvest reduced by 15 per decade from the initial harvest rate.
Utilization	21	Closer level of utilization in second growth stands.

NOTES:

Integrated Resource Management: From **Option 1** one can infer the impact on potential timber supply schedules as a result of applying integrated resource management measures.

Biodiversity: Options 3 and 4 provide comparisons of with and without draft Forest Ecosystem Networks, wildlife tree patches and seral stage requirements.

Visual Landscape: In Options 5, 6, 7, and 8 variations occur in the age at which visual recovery occurs and in the proportion of the viewscape that may appear altered at any point in time.

Net Landbase: In Option 10 the timber harvesting landbase is reduced by a further 5 %.

Silviculture: Option 11 portrays the impacts of some more intensive silvicultural activities.

Inventory and Growth Rate Assumptions: Options 12, 13, 14, 15, 16 and 17 provide variations in estimates of mature and second growth volumes and in site indices.

Harvest Strategy: Options 18, 19, 20, 22 and 23 portray the impacts of variations in minimum harvest ages for second growth and different rules for rate of change in harvest.

Utilization: Option 21 assumes a closer utilization level for second growth.

3.13 Forest Estate Model and Analysis Variables

The model used to determine timber supply schedules for these different options was developed by MB. The Forest Estate Model (FEM) is an inventory projection simulation. It has been extensively tested and was first approved for use in the Timber Supply Analysis for TFL 44 in 1991.

The input variables start with the volume estimates and new forest descriptions, aggregated for each of the three working circles: Alberni East, Alberni West and Ucluelet.

Management zones are superimposed to account for visual landscapes, community watersheds, biodiversity landscape units and avalanche run out zones.

The individual forest stands are aggregated into 11 site index classes, 2 species associations, 20 to 30 five year age classes for the new forest and 26 regeneration models (11 for Douglas fir types and 15 for western hemlock types).

These regeneration model assignments depend on experience based assumptions about whether the area will be planted or regenerate naturally, how many and how well distributed the new trees will be, and the likely impacts of brush. Each of these factors impacts the volume available for harvest and when it will be available. Growth on existing stands over 30 years of age are projected on the basic stand descriptions.

3.14 *Netdowns to the Forest Landbase*

The total area encompassed by the TFL boundaries is reduced to account for non forest areas and areas unsuitable for, or reserved from, timber management. Full details are contained in Appendix III. The following table shows the netdowns rounded to the nearest 000s hectares.

TABLE 3.14. Area Netdowns to Derive The Net Landbase (for Option 2)
TFL 44 (excluding Clayoquot)
 (hectares)

Gross Area	310 000
Netdowns	
Non Forest	3 000
Non Productive Forest	13 000
Physically Inoperable by Current Standards	9 000
Sensitive Soils and Ends of Avalanche Runs	14 000
Riparian reserves	1 000
Reserves for Wildlife	9 000
Reserves for Recreation	12 000
Miscellaneous	2 000
Deciduous Forest	2 000
Currently uneconomic	6 000
Biodiversity including Forest Ecosystem Networks	21 000
Remaining Coniferous Forest Landbase	177 000

Note: Figures do not add due to overlap of some constraints and rounding.

3.15 *Yield Tables, Assumptions and Adjustments*

The primary yield tables used in the analysis are those developed by MB for Douglas fir and western hemlock. They are based on more than 2,000 permanent sample plots on MB's own tenures.

Because of insufficient plots of species other than Douglas fir and western hemlock, the growth of plots in which Sitka spruce, amabilis fir and cedar dominated were compared with Douglas fir and hemlock yield tables. In each case, growth was more similar to hemlock and thus yields of these species are forecast as hemlock. Pine and cypress stands were arbitrarily assigned to the lower yielding Douglas fir tables.

Numerous adjustments are made in application of the tables to account for variables which impact theoretically attainable yields. Adjustments are made for:

- ☐ Merchantability based on Close Utilization Standards.
- ☐ Delays in regeneration following logging.
- ☐ Growth loss due to competition from weeds.
- ☐ Growth gain from use of genetically improved seedlings.
- ☐ Harvesting losses due to decay, waste and breakage.
- ☐ Reduced yields for operational adjustment factors (gaps in stocking, disease losses, small unmapped areas of nonproductive land, etc.).

3.16 *Harvesting Constraints*

A variety of constraints are applied which may impact the timber supply schedule and the long run sustainable yield (LRSY). They are:

- ❑ Harvest level may not fall more than 10 % per decade, for the combined harvest from the three working circles.
- ❑ Definition of maturity, i.e., when a stand may first be cut and minimum volume that is harvestable in the new forests.
- ❑ Harvest priority amongst new forest stands ready for harvest.
- ❑ Compliance with the commitment to protect other resources and values. This is modeled as rate of harvest constraints (cover class constraints) in areas such as visual landscapes, some recreation areas, avalanche areas and community watershed.

3.17 *Discussion of Timber Supply Analysis Results*

Twenty two harvest simulations were run to test the impact of different management options, constraints, and technical issues as described in Section 3.12.

- ❑ Base Option (Option 2)

The base, Option 2, harvest schedule for TFL 44 (excluding Clayoquot) starts at 1 60 000 m³/year, declines gradually by 1 % over 25 years to a low of 1 464 000 m³/year. The harvest level then increases, reaching a volume close to the Long Run Sustained Yield (LRSY) of 1 510 000 m³/year (11 % below the initial harvest level) by the Year 2032.

- ❑ Integrated Resource Management

The integrated resource management options show that reductions to the net landbase and spatial constraints (e.g., restrictions on rate of harvest) have a large impact on levels of timber harvest and hence on economic activity in the Alberni Clayoquot Region and the province. Of concern is not that some of this cost is justified but how much. Management for the various forest values needs to be done objectively, comparing both costs and benefits.

- Biodiversity

For example, a comparison of Options 3 and 2 show that the average annual impacts of the draft FENs, the old growth seral stage requirement and a 2 % allowance for wildlife tree patches over the next 50 years are:

- 1 600 m³ per year in forgone harvest. This is a 10 % reduction.
 - 9 2 lost obs 510 of these in the Alberni Clayoquot Region.
 - 40 million per year in forgone wages and benefits.
 - 10 million per year in forgone government revenues.
 - 5 million per year in lost economic activity.
-

Of interest are the value of the biodiversity benefits additional to those provided by the large areas of forest reserved in nearby parks, and as reserves (inoperable areas, sensitive sites and for other non timber values) throughout the TFL and the management emphasis on biodiversity and other non timber values in Clayoquot Sound.

A transition strategy for achieving old growth requirements could reduce these medium term costs.

The above costs would be doubled if, in addition, the early and mature seral stage constraints of Option 4 were applied.

The letter from the Deputy Minister of Forests and the Deputy Minister of Environment, Lands and Parks, dated August 25, 199 , provides further direction on government's objectives regarding balancing biodiversity objectives with impacts on timber supply.

The letter reinforces the importance placed on wildlife tree patches and on representation in old seral forests. It states that, requirements for connectivity and early and mature seral stages are not to be achieved at the expense of timber supply. There are also provisions for a three rotation transition period to achieve old seral objectives in low biodiversity landscape units.

Consequently, Option 4 with its reduced short term and medium term timber supply due to early and mature seral constraints is unlikely. Further, the letter indicates opportunities for reducing the timber supply impacts of old seral and connectivity requirements (Option 2 compared to Option 3). This might be achieved through reducing the FEN links (connectivity) and planning a more gradual transition to old seral requirements in low biodiversity landscape units.

- Visual Landscape

Current constraints for maintaining visual quality, much of it in the Alberni West and Ucluelet Working Circles also impose substantial costs. MB is implementing visual landscape design procedures in some areas in an effort to reduce such impacts. Other strategies include silvicultural efforts to achieve visual recovery sooner and recognizing demand as well as supply when assessing appropriate standards for managing visual landscapes.

- Operable Landbase

MB believes that all physically and administratively available areas of mature timber will be commercially accessible over 100 plus years. This includes areas mapped as currently uneconomic, which would add an average of 11 000 m³/year to the Option 2 harvest schedule.

- Second Growth Harvest Strategy

Options 18 and 19 show that short term and medium term harvest levels are sensitive to changes in the minimum harvest ages for second growth. Experiences in second growth harvest operations, on

southeastern Vancouver Island provide support for minimum harvest ages similar to or younger than those used in Option 2.

The second growth harvest strategy for MP 3 will plan for spatial constraints by considering first pass harvest opportunities earlier than previously considered. As Option 20 indicates, this will result in more planning flexibility and harvest opportunities in the short term (compared to Option 2) at a small cost in reduced longer term timber supply (at a time when harvest opportunities are greater).

□ Silviculture

Silvicultural practices such as prompt reforestation and activities to encourage faster growth of young trees (e.g., fertilization of some sites at establishment) are occurring and will result in an earlier achievement of greenup and hence more harvest opportunities commencing in ten years time. These are portrayed in Option 11. Other opportunities to enhance medium term harvest levels are through fertilization of Douglas fir stands and thinning of stands on long rotations.

□ Inventory and Growth Rate Assumptions

Corrections to site productivity estimates, applied in this analysis (Option 2), result in a long term harvest level that is only 11% below the initial harvest level.

Although adjustments to the lower portion of the western hemlock site index curves were accepted for use in this analysis, there was insufficient time to include them. The adjustments reduce the estimated time for most hemlock sites to achieve greenup for adjacency and visual recovery by 1 or 2 years (relative to Option 2). The result is that spatial constraints such as those for adjacency or for visual landscapes are slightly less restrictive.

Variations in mature volume estimates (Options 12 and 13) impact short term harvest levels. MB is part way through a program for checking these estimates. Results to date validate current estimates of mature volumes.

Variations in estimates of second growth yields (Options 14, 15 and 16) have little impact on timber supply in the first twenty years.

3.18 Timber Supply Analysis of the Clayoquot Working Circle

The Chief Forester has defined a procedure for assessing the timber supply in Clayoquot Sound for the determination of Allowable Annual Cuts (AACs). The rationale and procedure are documented in the AAC Rationale Reports for TFL 54 and the Arrowsmith TSA (Ministry of Forests, 1996). Refer to the "Timber Supply Analysis: Clayoquot Working Circle" in Appendix III for details of the calculations. Table 3.18 presents two sets of results, each for three landbase definitions. The first set was calculated according to interpretation of the procedures referred to above. The second set of results (Procedure 2) are included as they are more consistent with the Scientific Panel's recommendations on watershed rate of cut. In deriving these results the

harvest rate was not penalized by harvests over the previous 10 years that are below the maximum rate of cut of 10 in 10 years. The harvest rates include a small allowance for second growth harvests.

TABLE 3.18. Harvest Rates (000 m³/year)

Landbase	Procedure 1	Procedure 2
Total Area	453	622
Productive Forest	330	46
Net Landbase	130	12

The Crown portion (Schedule B areas) of the net Clayoquot Working Circle landbase is 84.9 .

3.2 Recommended Allowable Annual Cut (excluding Clayoquot)

The base (Option 2) harvest schedule begins at 1 60 000 m³/year and gradually declines during the first 25 years before increasing towards the long term harvest level.

The harvest level of 1.6 million m³/year for the next five years continues the strategy of gradually adjusting the harvest towards our best estimate of long term harvest levels. It is supported by results of the twenty year plan for the Alberni East and Alberni West working circles (refer to Appendix 4).

Results for some of the issues analyzed (harvest and silvicultural strategies in particular) indicate additional harvest opportunities and/or planning flexibility compared to Option 2. These include:

- ❑ The MP 3 second growth harvest strategy will provide more harvest flexibility in the short term.
- ❑ Current practices of prompt establishment after harvest and fertilization at time of planting on specific sites will reduce times for achieving greenup and visual recovery on some sites. Improvements to western hemlock site index curves will also reduce estimates of time for visual recovery on hemlock sites.

The results show that integrated resource management requirements can have a large impact on timber harvests. These requirements are still uncertain. There are possible pluses and minuses relative to the Option 2 results. Development of the strategy for landscape biodiversity is not yet complete. The recent letter (August 25, 199) from MoF and MoELP indicates possibilities for reducing the timber supply impacts of landscape biodiversity constraints modeled in the Base Option (Option 2). Specifically, there are opportunities to reduce the area reserved as FEN links and to plan a more gradual transition to old seral requirements in low biodiversity landscape units. There are also opportunities to manage visual landscapes to reduce the impact on harvest levels while maintaining visual values.

Sensitivities on inventory and growth rate estimates are generally neutral with regard to Option 2 initial harvest levels.

- ❑ Results to date of check cruises validate current estimates of mature timber.
- ❑ Variation in estimates of second growth yields have little impact on timber supply in the first twenty years.
- ❑ A higher utilization of second growth timber also has little impact in the early periods.
- ❑ The difference in harvest schedules between Option 2 (using the biophysical decision tree site indices) and Option 1 (using inventory site indices) indicates the impact of the more accurate estimates of site index. The impacts are greatest in the long term. Refinements that will occur as more information is collected are expected to be small.

TFL 44 is important to the economy of the Alberni Clayoquot region and it makes a significant contribution to the Province. Harvest levels have fallen substantially in recent years, mainly because of reduced access to timber in Clayoquot Sound.

The recommended AAC is 1 60 000 m³ for the combined working circles of Alberni East, Alberni West and Ucluelet. This recommendation is consistent with results from the analysis.

The recommended AAC includes 30 000 m³ for timber to be harvested from marginally economic stands as explained in Section 4.6

Both private (Schedule A) and crown (Schedule B) forest areas contribute to the AAC. The Crown portion of the net landbase for these three working circles is 58.9 %. Using this as the basis, the contribution from Crown lands to the recommended AAC is 1 036 640 m³.

3.3 Small Business Portion of AAC

The SBFEP share of the AAC is fixed at 89 8 3 m³ in the License Agreement. An agreement previously reached with the South Island Forest District estimated that the Clayoquot Working Circle contributes 29 893 m³ and the remainder is from the other three working circles. This agreement is subject to change.

3.4 Contractor Portion of the AAC

The TFL contract requires that 50 % of the Crown contribution to the AAC must be harvested by independent contractors. Because of different planning procedures, the contractor portion is calculated separately for the Clayoquot Working Circle and for the other three working circles. Note that the SBFEP allowance is first subtracted from the total AAC numbers.

Alberni East, Alberni West and Ucluelet Working Circles (excludes Clayoquot).

$$\left(\frac{(0.589 \times \text{AAC}^{(1)}) - \text{SBFEP}^{(1)} \text{ Volume}}{\text{AAC}^{(1)} - \text{SBFEP}^{(1)} \text{ Volume}} \right) \times 0.5$$

(1) AAC and SBFEP volume are those for TFL excluding Clayoquot.

Clayoquot Working Circle

$$\left(\frac{(0.849 \times \text{Clayoquot AAC}) - \text{SBFEP}^{(2)} \text{ Volume}}{\text{Clayoquot AAC} - \text{SBFEP}^{(2)} \text{ Volume}} \right) \times 0.5$$

(2) SBFEP volume is that allocated to the Clayoquot Working Circle.

- ❑ MB will ensure this proportion of the cut is harvested using both full and phase contractors.
- ❑ As required by regulation, all work, greater than six months duration, is done under written contract.

4.0 TFL ADMINISTRATION AND PLANNING

4.1 Forest Administration

The TFL has been divided into three divisions for administrative purposes, as follows:

- ❑ Franklin Woodlands Blocks 1 – 2
- ❑ Alberni West Block 3, Block 4 and Part of Block 5
- Clayoquot Most of Block 5 and Blocks 6, 7 and 8

A reorganization of operations at the beginning of 1993 resulted in the formation of the Alberni West and Clayoquot Divisions, in areas previously managed as the Sproat Lake and Kennedy Estevan operations.

Each division is fully responsible and accountable for all planning and management activities within their boundary. They are guided by the MB Policies and Procedures included as Appendix I and the Forest Practices Code of British Columbia, Regulations and Guidebooks and other official manuals and guidebooks.

The TFL has also been divided into four working circles for timber supply planning.

- ❑ Alberni East Franklin Woodlands
- ❑ Alberni West Alberni West Division excluding the area adjacent to Ucluelet and the Upper Kennedy R. portion of Block 3.
- ❑ Ucluelet Portion of Block 5 close to Ucluelet
- ❑ Clayoquot Area within Clayoquot Sound

The TFL and Working Circle boundaries are identified on the key maps in Appendix IX and in the Atlas.

4.2 TFL Management Planning Resources

Each division has access to many planning resources including:

- ❑ Inventories of forest cover, wildlife habitat, soils, fisheries and other sensitive sites (ESA) as well as recreation and visual landscape inventories.
- ❑ Digital forest cover and topographic maps.
- ❑ Aerial photography and satellite imagery.
- ❑ 3 dimensional perspective views for visual impact assessment.
- ❑ Models to examine growth and yield implications of silvicultural options.
- ❑ At Woodlands Services in Nanaimo, a Geographic Information System (GIS) for data reporting, analysis and map production.

MB Divisions manage according to the Regulations and Guidelines issued under the Forest Practice Code legislation, and other applicable legislation

Special technical advice and assistance is available from MB specialists at Nanaimo who are qualified in forest hydrology, soils and terrain stability, fish biology, wildlife biology, forest ecology, forest protection, soil and foliar analyses, forest growth and yield and economic modeling and analysis.

4.3 Forest Planning

Forest planning is carried out for long (20 year) and short (5 year) periods. These plans are prepared to be in harmony with any higher level plans, such as the Vancouver Island Land Use Plan, which may impact on the TFL.

4.31 *The Vancouver Island Land Use Plan*

The Vancouver Island Land Use Plan has had a considerable impact on the License. More than 9 000 ha have been removed as Protected Areas. This includes areas in the Upper Carmanah and Walbran Watersheds, now part of the Carmanah Walbran Park and the addition of the McBride Watershed to Strathcona Park. In addition, under the Regionally Significant Land Category, Low Intensity Areas (LIAs) have been established on approximately 41 000 ha of the License, in the Walbran and Nahmint Watersheds, in the Strathcona Taylor area and adjacent to Barkley Sound and the Alberni Inlet.

4.311 Low Intensity Areas

The management emphases (objectives) have been defined for each LIA:

- ❑ **Nahmint LIA:** Biodiversity values and the maintenance of recreational values associated with the Nahmint River and Lake.
 - ❑ **Strathcona–Taylor LIA:** Biodiversity (including connectivity to Strathcona Park) and wildlife and fish habitats and populations.
 - ❑ **Alberni Canal LIA:** Maintenance of visual quality as seen from marine areas.
 - ❑ **Barkley Sound LIA:** Marine/coastal recreation opportunities and habitats.
-

- ❑ **Walbran Periphery LIA:** Visual landscape management and biodiversity.

Previous planning processes are contributing to the development of management strategies in the LIAs.

- ❑ A Local Resource Use Plan (LRUP) was established in the Nahmint Watershed in 1975 and reviewed in 1991. As a result of this process, objectives were defined and planning requirements including visual landscape management, river and lake buffers, forest ecosystem networks and greenup conditions have been implemented in the Nahmint Watershed. In the current initiative on landscape unit planning, the Nahmint Landscape Unit is rated as high priority by the MoF and MoELP. MB will cooperate in developing the plan. In the interim, harvest levels in Forest Development Plans will be guided by the schedule described by the District Manager in his letter of March 2, 1991.
- ❑ Current inventories show a much greater occurrence of visual landscape management areas in LIAs compared to the surrounding management areas. Netdowns for non timber resources are also higher in the LIAs than elsewhere.

The special requirements for LIAs are being built into Forest Development Plans (FDPs) as information becomes available and decisions are reached by the agencies involved.

MB is committed to developing with the MoF and Ministry of Environment, Lands and Parks (MoELP) longer term plans for the LIAs. Some of the components are still being developed. For example, definitions of biodiversity landscape units and their emphases are not yet available. Visual landscape, recreation, wildlife and other inventories will be reviewed and updated during MP 3 and hence will assist in refining management strategies. For example, visual landscape inventories have recently been completed for the Walbran and Upper Nahmint areas. Other commitments include:

- ❑ Continue to assist MoELP and MoF biologists in the review of the old growth reserve in the Nahmint Watershed.
- ❑ The LIAs will be amongst the priority areas with alternative silvicultural systems, including trials.

4.32 Twenty-Year Plan

A proposed 20 Year Plan for Alberni East and Alberni West Working Circles is included as Appendix IV. Maps showing location of proposed harvest areas by 5 year periods in relation to forest cover, operability, ESAs and VQOs are included in Part II Atlas. A 20 Year Plan was not completed for the Clayoquot Working Circle because of different planning processes in Clayoquot Sound. The Ucluelet Working Circle was excluded because of its small size.

The plan shows that the proposed harvest schedule can be achieved in conformance to the Vancouver Island Land Use Plan and the legislated operating constraints, such as adjacency, protection of sensitive soils and

riparian areas, and management for biodiversity including wildlife habitat, and visual and other recreation features.

4.34 Forest Development Plans (FDPs)

Forest Development Plans are not part of the MP, but are governed by it and any higher level plans. These detailed plans cover a nominal five year period and are updated annually. The plans explain and show in text, tables and maps the resource values present in the plan area, how particular values will be protected or maintained, where roads will be built and what areas are proposed for harvest. These plans in particular are the key to fulfilling obligations imposed by LIAs or similar special requirements. MB is committed to cooperate with public agencies in reaching decisions on such key issues as special reserves, demarcation of FENs, and the need for, and completion of, special assessments and inventories.

Each year the newly revised plans are advertised and presented for public review and comment before they are presented to the MoF for approval.

4.35 Silviculture Prescriptions (SPs)

A SP is completed for each area in accordance with the FPC Act and Regulations. Direction is obtained from the Guidebook for Silviculture Prescriptions and from the Establishment to Free Growing Guidebook for the Vancouver Forest Region for stocking standards, targets, etc. A SP may incorporate extra features or targets in conformance with the MB Objectives and Procedures. The SP describes management objectives, critical factors, and identifies special values to be preserved or protected. It also specifies the Silvicultural System, the harvesting and regeneration method and timing and the desired species and stocking levels to meet the objectives. Stocking targets and minimum levels will be specified which conform to MoF standards and procedures for measurement of stocking for audit purposes. However, where planting is required, MB will often plant to higher actual densities to meet MB management goals for timber yields.

On harsh sites, where stocking of the existing forest prior to logging is lower than normal for reasons specific to the site, exemption from the normal restocking targets and free growing times will be sought if it is believed minimum stocking, as defined by regulation, is unrealistic or is inappropriate.

For example, concerns regarding reforestation of colluvial sites resulted in the draft report, *The Reforestation of Colluvial Sites: An Historic Perspective on TFL 44* (Wickman, 1996). Recommendations of this report including those on identifying unplantable areas, lower stocking standards and alternative silvicultural systems on some sites are utilized in developing SPs for these sites.

Stocking standards will also vary in areas of partial retention (mature or larger trees are retained within the stand). For example, feathered edges will generally be given greater opportunity to stock naturally, with a lower target and minimum stocking requirement. Discussions with the MoF will be conducted at the SP approval stage to determine an acceptable stocking standard. It is

anticipated that the stocking standard will be dependent on the level of harvest scheduled for removal.

The SP also prescribes other silvicultural treatments which are believed necessary to meet free growing guidelines.

4.36 Cutting Permits

Logging plans are prepared for each opening according to the FPC Act and Regulations, with direction provided by the Logging Plan Guidebook. The logging plans with the associated applications for cutting permits are submitted biennially for areas previously approved in the Forest Development Plan. The Logging Plan shows, with text and maps, how and where harvesting will be carried out in accordance with both the FDP and the SP.

Cutting Permits (CPs) are prepared for cutblocks or groups of cutblocks. The legal authority to harvest timber and the setting of the stumpage or royalty rate is granted through the issuance of a CP.

Based on experience, we anticipate it will be necessary to submit amendments or new permit applications to salvage timber blown down around the opening perimeter, despite attempts to locate cutting boundaries to minimize this hazard. If the incidence of windthrow is frequent, MB will work with the Ministry of Forests to simplify and accelerate the application and approval process. This is critical when Ambrosia beetle attack might seriously devalue the timber if it is not harvested before beetle flight.

4.4 Planning and Administration in Clayoquot Sound

The 1993 Clayoquot Land Use Decision established 33 000 ha of new protected areas in TFL 44 and identified a substantial forest area in special management areas for scenic corridors, wildlife and recreation.

The Clayoquot Working Circle contains the portion of TFL 44 that is within Clayoquot Sound and hence affected by the decision.

The Province of BC and the Central Region Chiefs of the Nuuchahnulth Tribal Council signed an Interim Measures Agreement on March 19, 1994. An extension to this agreement was signed in 1996. The agreement sets out conditions for resource management in Clayoquot Sound prior to completing treaty negotiations. As part of the agreement, a Central Region Board of First Nations and Provincial representatives has been formed to oversee activities in Clayoquot Sound. The agreement also provides direction for developing economic opportunities and resource planning requirements.

Government ratified the recommendations of the Clayoquot Sound Scientific Panel Report soon after it was released in April of 1995. MB has endorsed the recommendations in good faith. The challenges are technical, social and economic. There are gaps in inventory and lack of experience with alternative silvicultural systems in old growth forests on steep terrain and in integrating the various planning requirements and committees.

Government in consultation with First Nations is developing the framework for forest planning in Clayoquot Sound. An interim inventory working group, headed by the Ministry of Forests, is consolidating existing inventory information into one mapbase and has begun to collect additional data.

The Chief Forester of the Province has defined a procedure for assessing the timber supply in Clayoquot Sound for the determination of AACs. The intent of the procedure is to recognize some of the major recommendations of the Scientific Panel. The calculations for the Clayoquot Working Circle of TFL 44 are described in Appendix III.

In April of 1997, MB and the local Nuu-chah-nulth First Nations signed a Joint Venture Agreement for the northern portion of the Clayoquot Working Circle, the portion formerly managed by Estevan Division. Given the little time since the agreement was signed, it is not feasible to present detailed plans for this part of the TFL. In the context of the agreement, planning and operations will conform to the requirements of the Code in addition a First Nations priority is to change forest management and planning processes to provide more protection for environment and cultural values associated with the forest of Clayoquot Sound.

Furthermore, Operation of the joint venture company will begin...with an initial focus on planning and training consistent with the special requirements of the Clayoquot Sound Scientific Panel as established by the Clayoquot Sound Central Region Board.

Until the operational planning framework is approved and the existing inventory database is consolidated, MB, cooperating with the majority shareholder, will develop interim watershed plans as a precursor to applying for authority to harvest commencing in late 1998 or 1999. Once the planning framework is approved, it will be reviewed with the Ministry of Forests and if agreed necessary, an amendment to the MP will be submitted for approval.

It is anticipated that the southern portion of MB's tenure in Clayoquot Sound will be managed in a similar way to the northern portion.

The Clayoquot Working Circle includes approximately 3 600 ha on Meares Island. This area is subject to a moratorium on timber harvesting, until First Nations land claims issues are resolved.

The Clayoquot Sound area has been designated as the Long Beach Model Forest by Forestry Canada in cooperation with the province. MB participates in the Model Forest process.

4.5 Small Business Forest Enterprise Program (SBFEP)

In 1987, the BC government assigned 5% of the Crown AAC on all major licenses to the SBFEP. For TFL 44, this amounts to 89 833 m³ annually. MB originally chose the option of making this volume available from cutblocks on Crown lands within the approved forest development plan. Options for managing the SBFEP will be reviewed during MP 3. This includes considering an area deletion (from the TFL) equivalent to the SBFEP portion of the AAC. In the meantime the strategy is to continue to review candidate cutblocks with the

Small Business Foresters of the MoF with the objective of selecting areas for the SBFEP that approximate the forest profile.

4.6 Franklin Forest Products Limited

MB is committed to the amended Mediation Plan for Franklin Forest Products, dated April 29, 1994. This includes allowing Franklin Forest Products to harvest up to 30 000 cubic metres of marginally economic timber annually for the five years until April 1999. This timber is harvested under cutting permits issued to MB Ltd. pursuant to TFL 44. The marginally economic timber is as defined in Appendix III, Section 5.38 of the Information Package, and as described in MB's inventory.

4.7 Systems and Compliance Audits

Audits are conducted by trained staff and consultants to evaluate the effectiveness of environmental management systems and to determine compliance with the Forest Practice Code as well as MB criteria and operating procedures. Audits are generally conducted at least biennially for harvesting operations and annually for silviculture and fire preparedness.

Audit results are reviewed with the relevant woodlands division. An action plan to address any deficiencies requiring remediation is then prepared and bound into the report. The final report on remedial action is submitted to senior management.

4.8 Cooperation with First Nations

First Nations groups have expressed concerns about cultural heritage values. They have also expressed interest in increasing their economic involvement in local resources.

MB is committed to continuing development of an active consultation process with First Nations groups, on planning issues that relate to their traditional territories. This includes encouraging the First Nations groups to review operational plans and management plans. It also includes cooperative involvement with First Nations and the MoF in a process to change plans where required, to accommodate traditional use, cultural features, etc. In some operations, band members are employed and trained to assist with this process. The intent is to improve communications and understanding by all involved and hence identify and solve concerns well in advance of planned operations.

MB will continue to support economic initiatives that involve First Nations. During MP 2 these have included providing training in silvicultural work and participation in silvicultural programs. Some of this has involved cooperative efforts to secure FRBC funding for silvicultural projects in TFL 44. Other opportunities for FRBC funding include work in forest inventories and watershed restoration.

Assistance has also been provided in support of First Nations' interests in salmon enhancement projects. Three have been initiated in the Pachena Watershed, Henderson Lake area, and Ahousat.

4.9 Other Resource Users

Other resource users can include trappers, guides, tour operators and plant and mushroom gatherers. Forest Development Plans are advertised in local papers and made available for public review. Those identified by the MoF as being involved with a specific guiding/recreation issue are contacted during development of the FDP. The MoF is informed of any input received and any resulting changes to the plans.

5.0 TOTAL RESOURCE MANAGEMENT STRATEGIES

The overall strategy is to meld the varied legislated requirements for administrative ease, to identify and record the resource values in advance of development planning, and to review with the appropriate authorities areas of apparent conflict or to reach agreement on those which require reservation or simply protection within the scope of the FDP.

Past achievements in conserving or protecting other resources and values are summarized in Appendix VIII Section 8.0

5.1 Soil Conservation Strategy

5.11 Soil Management Issues

TFL 44 experiences some of the highest rainfall events in North America. Where these high rainfall events occur on steep terrain, there is potential for landsliding and surface soil erosion. Inventories of terrain stability have been completed for most of the License area. Procedures for using this information in the Timber Supply Analysis for MP 3 were approved in May 1996. Terrain stability mapping and evaluations of surface erosion potential have been recently completed for most of the community watersheds in the TFL. The issues are:

- ❑ **Potentially Unstable Terrain** Landsliding is a natural and inevitable phenomenon that contributes to the evolution of the landscape. Landslides occur in both logged and unlogged terrain however, logging and road building can increase their frequency. Impacts of landslides include acceleration of sediment delivery to streams, possible damage to fish and invertebrate habitats and productivities, loss of productive forest site, unsightly scars and damage to roads, culverts and bridges.
 - ❑ **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 results from human activities, in excess of geologic erosion. Accelerated erosion causes on site impacts (soil loss, nutrient loss, lower productivity) and off site impacts (water quality, sedimentation, habitat impacts).
 - ❑ **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
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drainage, puddling, and soil displacement can result in loss of productive forest sites.

5.12 Soils Strategy

MB's strategy to conserve soil is:

- ❑ Plans are under way to map areas where terrain mapping does not exist. For example the Haddon watershed will be completed in 199 . Terrain and surface erosion mapping in the Upper Taylor River, within the Sproat Lake community watershed will also be completed in 199 .
 - ❑ Assess all Classes 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.
 - ❑ Inspect drainage ditches and culverts regularly and take preventative measures to minimize the potential for debris flow initiation and for soil erosion.
 - ❑ Deactivate roads that are no longer needed for management access or for protection purposes.
 - ❑ Identify sensitive sites (potentially unstable sites).
 - ❑ Where ground based harvesting is proposed, carry out site sensitivity assessments for soil compaction, soil displacement, surface soil erosion and forest floor displacement.
 - ❑ Where it is practical and economic, minimize the amount of permanent site degradation.
 - ❑ Rehabilitate areas in cutblocks, that are not important for the road network and where the maximum allowable level of site degradation has been exceeded.
 - ❑ Carry out internal and external audits to evaluate road building practices and stream management.
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5.2 Water Conservation and Strategy

5.21 Water Conservation Issues

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 1 community watersheds within the License 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). These include the Sarita and Caycuse Basin 2 watersheds in Alberni East and the Macktush, Taylor (Sproat Basin 8)¹ and the Cous Watershed in Alberni West, all classified as high priority by the MoELP. The Mercantile, a community watershed in the Ucluelet Working Circle has also been completed. The issues are:

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

5.22 Water Conservation Strategy

MB's strategy to maintain water quality is:

- ❑ 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 fish values are paramount.
- ❑ Carry out CWAPs on watersheds not previously examined and where development is proposed. Prioritize this work in consultation with personnel from Government agencies. Currently, work is in progress on the Rogers (Somass Basin 1), Cold (Somass Basin 2), Cousteau, Little Qualicum (Cameron), Malachan (Caycuse Basin 8), McFarland (China Creek Basin 5) and the Sugsaw, all community watersheds in Alberni East. Work is also occurring in the Klanawa watershed.

In Alberni West, work is almost complete on the Sproat community watershed and work is proceeding on the Nahmint watershed.

Assessment is occurring in the Itatsoo community watershed in the Ucluelet Working Circle.

¹ First name is the MoELP watershed name the name in the bracket is the MB watershed or basin name.

- ❑ Locate, design, construct, and maintain roads, bridges and culverts to preserve natural drainage patterns, and minimize impacts on water quality and quantity.
- ❑ Develop and implement road deactivation plans to minimize impacts on streams. Where necessary dry seed, hydroseed and/or plant to reduce erosion and the sedimentation hazard.

5.3 Fish Protection Issues and Strategy

The fishery resource value is generally high and protection of fish habitat and water quality ranks as a significant priority.

5.31 Fishery Resource Issues

The issues facing managers today are both biological and regulatory. Biological issues predominate in the sense of conserving fish stocks and habitat. At the same time though, the manager is concerned with also meeting the letter of the law. The issues are:

- ❑ To update classification of waters within the License. This includes:
 - Detailed site specific information is required for operational planning.
 - A broader, but accurate portrayal of the impacts of riparian management is needed for strategic analysis.
- ❑ Application of the requirements of the Code and concern for penalties around issues of interpretation.
- ❑ Mitigation, enhancement and habitat restoration.
- ❑ Cooperation with First Nations and other stakeholder groups.
- ❑ To determine measures for protecting endangered populations.
- ❑ Management of riparian areas.

5.32 Fishery Resource Strategy

The corporate strategy for responding to these issues is to:

- ❑ Continue to undertake detailed stream inventories for operational plans.
 - ❑ Review (with agency staff) and update stream and fisheries inventory information for strategic planning including timber supply analyses by December 31, 2000. Examine opportunities for utilizing the detailed information collected for FDPs.
 - ❑ Continue to identify and implement enhancement, mitigation and rehabilitation opportunities with funding from FRBC.
 - ❑ Cooperate with other stakeholders to increase Kennedy Lake fish stocks, subject to meeting concerns about maintaining genetic diversity.
 - ❑ Encourage continuation of the Carnation Creek study and continue our supportive and active roles.
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- ❑ Achieve full compliance in meeting the requirements of the FPC.
- ❑ 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 the guidelines more user friendly”.

5.4 Wildlife Issues and Strategy

5.41 *Wildlife Issues*

The issues in wildlife are twofold in scope: habitat protection for large mammals and threatened or endangered birds, and 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. One contentious issue is the nesting areas set aside for marbled murrelets in the last decade. Recent surveys indicate many of the set asides may not be used, or are little used. Contrarily, some of the best nesting areas, e.g., Snag Lake, were not recognized at the time.

The dominant current issues are:

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

5.42 *Wildlife Protection Strategy*

The wildlife protection strategy is to:

- ❑ Comply with the Forest Practices Code.
 - ❑ Provide operations and agency personnel feedback on guidelines as part of an ongoing process of improving conservation.
 - ❑ Liaise with MoELP wildlife and habitat protection staff on FDP issues, especially to identify and protect critical habitat.
 - ❑ Continue assessments of ranges, habitat diversity, wildlife trees, etc., and protect significant values.
 - ❑ Continue surveys to identify and preserve key, marbled murrelet nesting sites and obtain release of sites already protected but apparently of little or no value.
 - ❑ Manage riparian zones in accordance with the FPC Act and Regulations and as directed by the Riparian Management Area Guidebook.
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5.5 Biodiversity Issues and Strategy

Biodiversity has become a critical and significant issue in forest management in recent years. One of the most difficult issues is the lack of experience and research based knowledge as sources of guidance in decision making.

5.51 Biodiversity Issues

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.

5.52 Biodiversity Strategy

The strategy for biodiversity conservation is:

1. Landscape level ecological planning.
 - ❑ Plan forest management activities based on landscape units zoned for low, medium or high biodiversity emphasis.
 - ❑ Work with MoF and MoELP specialists to develop landscape units, objectives and strategies.
2. Ecologically based stand level practices.
 - ❑ Choose species mixtures for reforestation based on ecological site adaptation.
 - ❑ Retain leave tree reserves or wildlife tree patches, where appropriate, to enhance structural diversity of harvested areas.
3. Improved knowledge through inventory and research.
 - ❑ Complete 1:20 000 scale ecosystem (site series) mapping by 2001 for use in landscape level planning.
 - ❑ Cooperate with other agencies in research and inventory projects on species of concern.
 - ❑ Continue to develop and apply spatial habitat supply modeling to explore conservation strategies, beyond current harvest rules.

5.6 Forest Recreation Issues and Strategy

5.61 Forest Recreation Issues

- ❑ Recreation Sites and Trails
 - Maintenance of existing sites and trails in cooperation with MoF.
 - The identification and need for new sites and trails.
 - ❑ Access and Use
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- Maintenance of public access to important sites and features.
- ❑ Significant Areas
 - Identification and protection of key recreation features.

5.62 Forest Recreation Strategy

In accord with MoF Recreation Management Guidelines and Standards, the MB strategy is to:

- ❑ Work with MoF to maintain established recreational areas including existing sites and trails.
- ❑ Identify new, significant, recreational attractions in the course of inventory or developmental work and protect them.
- ❑ In conjunction with the MoF develop recreational sites, over time, to meet demand and as funding is provided through the MoF District recreation budget.
- ❑ Cooperate with the MoF and authorized caving organizations, to protect cave entrances, underground cave features and to assist in the management of public access.
- ❑ Complete a recreation analysis by December 31, 2000. MB 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. Recreation Opportunity Spectrum classes have been delineated based on the updated recreation resource inventories. This information will form the basis of a recreation analysis to be completed in cooperation with the MoF region and district offices.
- ❑ Account for recreation ESAs (Er1 and Er2) in operational harvest plans and timber supply analyses. The recreation ESAs are based on the updated recreation resource inventories.
- ❑ Revise and update the recreation inventory by December 31, 2000.
- ❑ In conjunction with the MoF:
 - Set recreation management objectives for established recreation sites and trails.
 - Prepare a recreation plan for TFL 44.
 - Collect and collate recreation use information to MoF standards.

5.7 Visual Landscape Management Issues and Strategy

5.71 Visual Landscape Management Issues

- ❑ The major visual landscape management issues are associated with the public travel corridors, settlements, parks and recreation use areas.
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- ❑ Participation in the Clayoquot planning process.
- ❑ Addressing anomalies in the existing visual landscape database.

5.72 Visual Landscape Management Strategy

Forest harvesting and other operations will be managed to achieve the visual objectives where these have been established.

During this Management Plan, MB will:

- ❑ Review and update visual landscape inventories and recommendations on Visual Quality Objectives (VQO) by December 31, 1998.

This will be done in consultation with the appropriate Ministry of Forests' staff in the Region and District offices. Recent work has included revision to some VQO designations and completion of visual landscape inventories in the McClure Lake and Walbran areas and in the upper portion of the Nahmint Watershed.

- ❑ 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 silvicultural strategies to reduce the time to achieve visually effective greenup.
- ❑ Forest development in the Clayoquot management area will conform to the recommendations of the scientific panel and the scenic corridors planning process.

5.8 Cultural Heritage Resource Protection Issues and Strategy

5.81 Cultural Heritage Resource Protection Issues

- ❑ Identification of cultural heritage resources in advance of development, resolution of their status and gaining approval for appropriate management.
- ❑ Accounting for cultural heritage sites in strategic timber supply analysis.

5.82 Cultural Heritage Resource Protection Strategy

The strategy is to:

- ❑ Comply with the Forest Practices Code and the Heritage Conservation Act.
 - ❑ Identify sites of potential interest by continuing to review operational plans with First Nations Groups and retaining field staff that are trained
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to recognize cultural heritage sites. Where necessary, hire specialists to ground truth sites.

- ❑ As needed, develop prescriptions in conjunction with specialists and MoF staff.
- ❑ Account for cultural heritage sites in the analysis for MP 4. This will include comparing mapped data of areas reserved as cultural heritage resources with other inventories to determine landbase impacts. The mapped data will include prescriptions resulting from Archaeological Impact Assessments (required under the FPC), generally small areas reserved around culturally modified trees and other information regarding management of cultural heritage resources.

6.0 TIMBER RESOURCE MANAGEMENT PLAN

6.1 Timber Inventory and Growth

6.11 *Mature Forest Inventory Improvement Plan*

Since the original cruise in 1956, the inventory for TFL 44 has been continuously upgraded and updated. Significant initiatives during the last twenty five years include:

- ❑ Between 1973 and 1975, the TFL was re-inventoried.
- ❑ In 1989, operational cruising on 63 500 ha was combined with the inventory (updated to 1985) to improve the less intensive inventory completed in the 1970s. At the same time, the 1970s inventory was recompiled to exclude logged samples and samples covered by operational cruise areas.
- ❑ Permission has been received from the MoF to recompile the inventory. During this recompilation, unlogged areas of operational cruising completed since 1985 will be combined with the inventory. As in the 1989 recompilation, the original (1970s) inventory will be recompiled to exclude logged samples and samples covered by the operational cruise areas. The recompilation will use the latest Kozak 4.0 taper equations and is expected to be complete by the end of 1995.
- ❑ In 1995, a program to test (or audit) the accuracy of the TFL 44 mature inventory was started. Tests have been carried out, under MoF supervision, on Block 2 (Nitinat), Block 3 (Sproat Lake) and Block 4 (Henderson Lake). The results of these tests showed no significant difference between the test plot volumes and the inventory.

To date, 68% of the mature inventory has been operationally cruised or tested and found to be accurate. Block 1 (Cameron River) remains to be tested. Once this Block is done, 94% of the mature inventory will have been operationally cruised or tested. The remaining blocks are part of

the Clayoquot process and will not be addressed under this test program.

6.12 *New Forest Inventory Improvement Plan*

Since 1980, 15 000 ha of second growth has been cruised as part of the 31 " second growth re inventory program for stands that reach pole size. This program confirms or revises after Age 31, species composition, age, site index and stand boundaries as recorded at free growing, and measures volume and basal area for use in the timber supply analysis. Cruise data for these stands has been entered into the inventory database. This program will continue during Management Plan 3.

6.13 *Forest Inventory Maintenance Plan*

Planimetric and forest cover maps will be updated and revised annually in the Geographic Information System to reflect changes due to harvesting, silvicultural activities, property additions or deletions and changes in property tenures. The updated database will provide the basis for annually distributing revised forest cover maps to the Woodlands Divisions.

6.14 *Conversion to Trim Mapbase*

A two year project is currently under way to move the forest inventory and non timber resource inventories from the current MB mapbase (NAD 2 datum) to the BC Government TRIM mapbase (NAD 83 datum). This project is expected to be completed by 1998.

6.15 *Cutting Permit Cruising Plan*

All areas identified for Cutting Permit applications are cruised according to the MoF manual, Operational Cruising Requirements in the Vancouver Forest Region".

6.16 *Post Harvest, Residue Survey Plan*

Residue will be measured each year by independent contractors in accordance with the Provincial Logging Residue and Waste Measurement Procedures Manual.

Residue is unrecovered sound wood originating from all trees in the Close Utilization forest inventory, plus wood not included in the inventory, but included in the residue for billing purposes according to MoF scaling rules.

The measurement of residue volume is used for:

- ☐ Compiling the total harvest volume for cut control purposes.
 - ☐ Testing the accuracy of the forest inventory.
 - ☐ Determining the proportion of recoverable wood in the total inventory.
 - ☐ Monitoring logging operations for level of utilization.
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- ❑ Providing a basis for MoF stumpage and royalty billing for avoidable waste.

6.17 Forest Growth and Yield Plan

Growth and yield work, as per the original License Agreement, will continue subject to FRBC funding. Project proposals for funding will be submitted.

Plans for the period, assuming FRBC funding, are to:

- ❑ Analyse data as is appropriate to assist in forest management.
- ❑ Examine effects of alternative silvicultural treatments on yields using available information from other sources. Establish a framework of plots to provide data for monitoring and future analysis.
- ❑ Continue to refine the Biophysical Decision Tree for assigning site index to young and old stands where direct measurement is not possible.
- ❑ Measure approximately 120 PSPs annually in TFL 44.
- ❑ Develop a better understanding of non recoverable losses from windthrow, fire and non endemic occurrences of insects and disease.

6.18 Protection of Growth and Yield and Other Installations

All growth and yield plots and other installations are marked on the Forest Cover maps. Procedures require that the staff responsible for the installation are contacted by the Woodlands Division staff at the planning stage if disruption due to road building or logging would damage or destroy the installation.

6.2 Silvicultural Systems

The clearcut silvicultural system has been the common system used in the harvest of old growth coastal forests. It has, through decades of experience, proven to be an effective system for safe and economic harvesting of large old growth timber on rough, coastal terrain and for facilitating subsequent reforestation. Improvements in implementing the clearcutting system have been made over the years to improve efficiency and to accommodate and protect other resource values. These include improvements in opening location and scheduling, retention of wildlife trees, and new methods and preventive or remedial actions which eliminate or reduce erosion.

There are advantages and disadvantages to all silvicultural systems. It will be necessary to identify the cost and relative merits of each system by completing operational trials under a variety of conditions before large scale introduction of alternative silvicultural systems can be rationally undertaken. Costs, windthrow and regeneration performance will be monitored.

Harvest strategies will include an increased focus on investigating alternative harvest systems. Priority areas include visually sensitive landscapes (including urban interface areas), sensitive soils, and as landscape unit planning proceeds, meeting biodiversity requirements in specific landscape units.

Current initiatives include an opening in the Walbran Periphery LIA, that is being designed as a shelterwood, to be harvested by a conventional cable system. Plans for 1998 also include seed tree areas in some helicopter and second growth operations. Alternative strategies are being developed for harvesting second growth areas in visual landscapes adjacent to Great Central Lake.

The disadvantages of the Clearcutting System include:

- ❑ Negative visual impact.
- ❑ Increased microclimatic extremes.
- ❑ Elimination of certain wildlife habitat (e.g., snags).
- ❑ Increased erosion potential on steep slopes.
- ❑ Reduced seed source for natural regeneration.

The advantages of Clearcutting (vs. other systems) include:

- ❑ Lower costs for planning, layout, falling and yarding.
- ❑ Control of disease.
- ❑ Facilitation of site preparation.
- ❑ Generally, faster tree growth (site and species specific).

Some examples of the practical disadvantages of Shelterwood or Selection Systems (vs. Clearcutting) are:

- ❑ Perpetuation of diseases such as dwarf mistletoe where hemlock is the preferred species.
- ❑ Damage to the stems and roots of the remaining trees.
- ❑ Higher costs for planning, layout, falling and yarding.
- ❑ Increased windthrow (Shelterwood only), which may cause stream sedimentation and timber breakage, and pose significant danger to fallers.
- ❑ Greater access requirements, and more frequent stand disturbance.

The advantages of Shelterwood or Selection Systems, depending on site specific conditions or requirements, include:

- ❑ Improved natural regeneration (for some species and site conditions).
- ❑ Forest cover maintenance to reduce erosion and delay snowmelt for water quality and quantity.
- ❑ Meeting wildlife and biodiversity requirements of specific landscape units.
- ❑ Meeting visual quality objectives.

In Clayoquot Sound, the non traditional variable retention system is recommended and described by the Clayoquot Scientific Panel. This approach retains variable amounts of trees to meet objectives other than regeneration. The traditional concepts of Shelterwood and Selection Systems may be used in conjunction with variable retention to define reforestation objectives.

6.21 Clearcut System

The Clearcut System will continue to be the predominant silvicultural system. However, we propose a major increase in use of the many variations to this system, such as retaining individual trees, or patches (with snags) where these would serve to enhance or protect non timber values. Tree and snag retention will be implemented with consideration of worker safety as the paramount concern.

Clearcut site will be consistent with operational planning regulations. Opening locations, shape, adjacency, and scheduling will also be planned to accommodate the sometimes contradictory requirements for:

- ❑ Visual quality.
- ❑ Fish and wildlife habitat.
- ❑ Heritage sites.
- ❑ Recreational use.
- ❑ Efficient use of roads and associated environmental impacts.
- ❑ Windfall considerations (wind speed and direction, tree rooting depths).
- ❑ Soil types, erodability and terrain stability.
- ❑ Fire hazard and risk.
- ❑ Silvicultural requirements of preferred replacement species.
- ❑ Biodiversity.
- ❑ Equipment limitations.
- ❑ Seasonal considerations (winter wood/summer wood).
- ❑ Recreation.
- ❑ Economical harvesting.

6.22 Shelterwood System

The Shelterwood System embraces a wide range of overstory removal and time intervals between one or more intermediate cuts and final removal. It is also possible to leave some trees (green tree retention) for at least the next rotation. MB will make use of one or more variations of the Shelterwood System where it is necessary to protect other values or where amelioration of visual disturbance is required. The shelterwood system has been applied in a trial on a visible landscape adjacent to Great Central Lake. Visible areas near Sproat Lake, the Alberni Canal and Nahmint Lake are likely candidates for this system.

As experience is gained and if the theoretical benefit of the shelterwood system is demonstrated, MB will extend its use more widely where other resource values or constraints justify this use.

6.23 Selection System

The Selection System is most applicable with tree species that are adapted to regenerating and growing in shade. Species poorly suited to the Selection System include Douglas fir and pines. Moderately suited species are grand fir and Sitka spruce. Well suited species are the hemlocks, amabilis fir, cedar and cypress these latter predominate on the TFL, but they are thin barked species and have high root density in the humus layers thus, stems and roots of leave trees are easily damaged during harvest. In the case of hemlock, control of dwarf mistletoe is an important consideration in Selection System planning and

implementation. A very significant concern, especially on steep slopes and stands with frequent snags, is that of worker safety.

MB is planning to undertake limited trials with the Selection System in locations where stand conditions, species, safety considerations, logging chance, probability of silvicultural success and economics permit. Areas within Clayoquot Sound where 0 retention is prescribed are potential candidates.

6.3 Harvesting Systems and Procedures

There are essentially three approaches to harvesting: use of wheeled or tracked ground based machines, ground based cable yarding using spars or cranes and aerial cable yarding using helicopters or balloons. Harvest costs per cubic metre of wood generally tend to increase from ground based machines, to cable yarders, to aerial systems. Conversely, the possibility for damage to the soil decreases with the same progression of systems.

The choice of harvesting system is dictated by soil, slope, season, importance of other resources, accessibility and road costs, future management considerations and the necessity to keep production costs within economic limits. The actual methods to be used for each opening is prescribed in the Silviculture Prescription and Logging Plans.

In recent years, the harvest systems have been classed as either conventional" or nonconventional". Conventional systems comprise all systems except the true aerial and longline yarding systems. The old growth forest inventory has been classified as to appropriate logging method as well as to economic operability class (uneconomic, marginally economic or economic). Refinements to these operability"inventories have been made during MP 2. A further review will be completed by December 31, 2000.

In a letter dated December 31, 1993, the Chief Forester partitioned the TFL 44 harvest by working circle and operability class. The intent of the operability partition was to ensure that timber is harvested across the operability classes. There was no specific cut control requirements by operability class. The record for the three years, 1994 to 1996, shows that the partitioned harvest targets for nonconventional and marginally economic have on average been achieved or exceeded. Refer to Section 4.12 of Appendix VIII.

The Twenty year Plan (refer to Appendix IV) shows old growth (mature) harvest levels by operability class that are close to the proportions of these classes in the old growth inventory.

MB will attempt to harvest the remaining old growth forest in proportion to the profile of the component parts in the inventory, i.e., conventional and nonconventional harvest methods and marginally economic timber. Progress will be reported and analysed in the annual reports. However, meeting the profile of the forest harvest will be secondary to meeting other harvest constraints. As well, nonconventional harvesting will be scheduled in relation to the schedule for rational road development and not before. It is expected that in all operations a satisfactory trend towards harvesting to match the forest profile will be continued. Both helicopter and longline systems are in use on the License area and will continue to be used subject to current market economics.

6.31 *Conventional Harvesting Methods*

Most settings will be logged using the conventional methods because they are safe, economic and efficient and also meet constraints to protect other resources on the majority of sites.

Low ground pressure, tracked machines, configured as hoe chuckers or feller bunchers, will be used on suitable ground wherever possible. They are an environmentally and economically valid choice. These machines are proving to be quite adaptable to the variations of the Clearcutting System where a portion of the original stand is retained (e.g., green tree retention), or in the Seed Tree, or Shelterwood Systems. They offer greater worker safety as well as causing less breakage. Operators of these machines, in comparison to cable systems, are better able to identify nonmerchantable pieces and to leave these throughout the setting (a biodiversity advantage) and avoid concentrating them at roadside (a silvicultural disadvantage) than are cable machine operators. When used on suitable sites, considering steepness and soil bearing capacity, any resulting site disturbance can normally be mitigated immediately and satisfactorily.

Guidelines addressing site disturbance and environmental protection measures are included in the Logging Plans.

6.32 *Nonconventional Harvesting Methods*

In keeping with new and improving knowledge about soil stability and constraints to building roads and logging from them in special situations, an increasing portion of the current inventory and stands previously excluded from the inventory as inoperable will be logged using the nonconventional methods and/or alternate silvicultural systems.

6.33 *Greenup*

Expansion of openings will be done within the cutblock limits of the FPC. Unless it is essential to salvage timber or to maintain employment in the woods or mills, permission to enlarge an opening will not be requested until the new forest has achieved the appropriate free growing or alternative height requirement status for aesthetic, hydrologic, wildlife or other reasons, for the particular area.

The time required to reach a given height as specified for the site specific management purpose will vary according to species, site productivity and other factors that vary from site to site. For example, if brush species (especially salal on low productivity sites) are absent or sparse, more rapid early height growth will occur. To illustrate, Table 5.6 in Appendix 1 shows the age at which 5 m height is achieved according to MB data. Considerable variation may be expected from site to site.

6.34 *Recovery Standards*

Log recovery standards will be to the utilization specifications stated in cutting permit documents. Actual recovery of wood will vary according to costs and

markets. Timber not utilized is better left distributed throughout the setting rather than at roadside.

6.4 Infrastructure and Access Development

Locations of new log handling facilities, roads, bridges and major culverts are shown in the operational plans at the appropriate planning stage for the detail required, i.e., the 20 Year Plan, Forest Development Plan, Logging Plan or annual Road Building Plan.

6.41 *Dryland Sorts and Log Dumps*

Present installations will be maintained and will conform to environmental protection regulations. No new dryland sorts or log dumps will be built until an environmental and heritage site assessment has been made and the appropriate approvals, including any proposed ameliorative actions, received.

Franklin Woodlands currently utilizes three permanent dryland sorts. The China Creek Sort is used for the Cameron area. Wood hauled out of the Sarita/Klarawa area is sorted at Sarita and then towed to the Port Alberni mills. The Caycuse sort services the southern portion of the division including the Haddon and Rosander areas. In addition, wood from the Coleman area is sorted at a temporary sort at Franklin Camp B, re-hauled to Coleman dump and then towed to Port Alberni.

There are plans to create a single dryland sort at China Creek. Logs would be dumped at Coleman and Sarita and towed to China Creek, where they would be de-watered, sorted and put back in the water to be towed to the mills. Installation of a stiff leg derrick for de-watering logs would be a major capital expenditure.

In Alberni West operations there are four permanent dryland sorts. Wood brought to the sort near the Division office is sorted and then dumped in the Alberni Inlet at nearby Shoemaker Bay. There is a dryland sort on the north side of Uchucklesit Inlet and a second on the south side of the inlet, referred to as the Silverside dump. There are a series of log dumps along Great Central Lake from which logs are towed down the lake to Browns Bay, sorted and scaled, and then hauled to Shoemaker Bay and dumped into the Alberni Canal.

6.42 *Road Building and Maintenance*

The annual road building and maintenance plan will be reviewed with the 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 will be reviewed with and approved by fisheries officials as required by the District Manager.

Where existing non-permitted roads are required for harvesting they will be permitted and brought up to standard. Other, non-permitted roads, not required for harvesting will be brought up to standard on a priority basis based on discussions with local MoF and MoELP staff and according to the availability of FRBC funding.

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

Logging plans and SPs describe roads in individual cutblocks, whether they will be permanent or temporary and plans for road rebuilding or deactivation.

6.43 Site Restoration

Roads and landings will be maintained or deactivated according to the conditions of the Logging Plan or Road Building Permit unless needed for other purposes. Deactivation plans are included with the Forest Development Plan or with the Logging Plans. Backspar trails, abandoned roads, and, as necessary and appropriate, exhausted or unused gravel pits and log landings will be 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 as is appropriate to each site and in accordance with government standards.

Non permitted roads which predate the Code will be rated for urgency of restoration based on an evaluation of environmental risk, a schedule will be prepared and work done as funding is granted from FRBC.

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 and Logging or Road Plans. Where logs have to be landed in restocked areas, the area damaged will be kept as low as practicable considering the reality presented by each site, e.g., width of road surface, traffic pattern on the road, etc. Restoration will be such that a free growing stand can be re established on the site that is not part of the road surface or other NP land, e.g., gravel pit or viewpoint.

6.44 Commercial and Public Use of Roads and Facilities

When volume or other operating constraints permit, MB will enter into an agreement, including clearly stated charges and responsibilities, with other companies wishing to haul over MB roads or dump or sort logs using MB log dumps and sorting facilities.

When requested by the District Manager, MB will provide road use fees (/m³/km) based on current year maintenance costs for purposes of administering the SBFEP programme and will permit access for SBFEP operators sub ect to a non exclusive road permit.

The general public has free right of access and use of the MB roads on the TFL sub ect to local rules made originally under the authority of the Industrial Transportation Act (1960). These primarily restrict access to the general public of designated roads during operating hours or periods of high fire ha ard. MB will improve signing of roads to assist public and official access.

6.5 Establishing and Managing the New Forest

MB accepts the responsibility for establishing and managing the new forest as set down in law and in conformance with the TFL Agreement and the approved objectives of management contained in the SMOOP and this MP. MB will use FRBC or other public funds for qualified, silvicultural treatments. On request, MB will identify stands justifying treatment and ranked according to silvicultural and economic priorities.

The primary criterion for the future crop is merchantable volume yield per hectare. In general, higher volume is obtained with more complete stocking. This objective is based on recent analysis of permanent sample plot data and an in depth review of trends in markets and technology. This led to the conclusion that it is unrealistic to target specific log or tree sizes, rather it is better to allow tree size to be dictated by management or natural constraints with the expectation that technology will exist to make best use of whatever is grown. The 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 the other forest based resources.

Although the focus is on volume production, variations in site conditions and requirements for different forest resources will also 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 include variations in site productivity and ecological type. They also include specific management requirements for different forest values for example, longer rotations and/or partial harvests in visual landscapes, recreation, sensitive soil and riparian areas, and to fulfill biodiversity and wildlife habitat requirements.

The emphasis on volume per hectare is synonymous with wood quality the wood characteristics most associated with higher price are narrow and even ring widths, none or small knots, and a small proportion of juvenile wood. All of these are a function of higher stocking. Logging costs are not as dependent on piece size as previously thought, especially on machine accessible sites, so there is less advantage to larger logs.

In keeping with the silvicultural management objectives and the product objectives above, MB plans to regenerate the forest at densities that ensure full site coverage and high yields of quality timber. MB will bear the silviculture costs for basic silviculture in compliance with the Forest Act. Other treatments on Crown land will only be undertaken if FRBC funding is available. MB expects to receive a share proportionate to its contribution to the FRBC fund.

Current silvicultural plans (refer to Table 6.59) reflect expected establishment activities and government funding priorities for forest management, e.g., for spacing and pruning. MB is supportive of initiatives for funding forest management. Further, MB will encourage a more flexible approach to funding to better achieve forest and social objectives. For example, recent work shows that juvenile spacing will decrease stand volumes without improvements in stand values. Under a flexible approach for allocating forest management funding, MB would emphasize higher stocking at time of establishment for some sites, rehabilitation of poorly performing stands and strategies to reduce the medium term impacts of spatial constraints on harvesting. Small areas would

be spaced and/or pruned, but these would be done where non timber benefits of treatment are high and not for timber values.

Prior to October 1, 198 , all stand establishment to the free to grow stage”on Crown lands was funded by the MoF. Subsequently, with a change to the Forest Act, stand establishment (basic silviculture) became the financial responsibility of the Licensee. All basic silviculture on Crown lands harvested prior to 198 remains the funding responsibility of the MoF and is provided for in the annual silviculture budgets of the various Forest Districts. Such areas of pre 198 harvesting where the MoF retain funding responsibility for basic silviculture are generally termed industry outstanding”areas. MB will continue to monitor these areas and seek funding for necessary silvicultural treatments. Estimates are provided below.

The area of industry outstanding and not yet free growing on the TFL as at December 31, 1996 was 12 308 ha.

TABLE 6.5. Industry Outstanding Silviculture Projects
(Area in hectares, costs in 000)

	1998		1999		2000		2001		2002		TOTAL	
	Area	Cost	Area	Cost	Area	Cost	Area	Cost	Area	Cost	Area	Cost
Surveys	2150	46.5	2150	46.5	1950	42.	1 50	39.1	1350	31.5	9350	206.3
Planting	140	133.0	10	9.5	0	0	0	0	0	0	150	142.5
Brushing Weeding	4 0	26	330	1 9	510	264	140	4	30	18	1480	802

6.51 Silvicultural Surveys and Stocking Targets

The MB system will be used to assess stocking. External reporting and auditing will be done to the MoF standards listed in the SP.

The MB stocking system is designed to meet corporate objectives and the needs of the inventory system, yield models and timber supply analysis as well as ensuring all harvested lands are assessed, treated and stocked in a timely manner. The system involves sampling openings intensively using many small plots, to provide an estimate of the proportion of nonproductive (NP) area due to rock or swamp which are too small to map. It also provides estimates of stocking, number of total and crop trees per hectare, and a basis to develop planting prescriptions if needed.

MB utilizes a 2.4 m radius plot for assessing stands during regeneration surveys. Plots that are totally NP are not used to determine stocking. The percent productive is recorded in the inventory for each stand. Levels of stocking or well spaced trees per hectare are determined based only on the productive part of the stand.

During MP 3, areas will be classified as stocked or Satisfactory Restocked (SR) and as having met the regeneration delay based on achieving the minimum stocking standards in the SP/PHSP and the correct species.

For areas harvested prior to October 1, 198 , 600 well spaced stems per hectare and 80 distribution, will be required to achieve SR. Percent distribution is determined by dividing the number of plots with at least one well spaced tree by the total number of productive plots and multiplying by 100.

MB's regeneration surveys record crop trees per hectare based on an inter tree distance of 2.0 m. The number of crop trees counted in each plot is not restricted according to the target stocking. When determining if minimum stocking has been achieved, however, MB will limit the number of well spaced trees in each plot to reflect the target stocking in the SP/PHSP. This is to make our system consistent with MoF standards. For example, a target stocking standard of 1000 equates to 1000 times 1/550 (plot size of 1/550 ha) which is a maximum of 1.82 well spaced trees counted per productive plot.

The normal assessment regime for each site prior to claiming free growing status is described below:

1. A post harvest survey confirms whether or not the treatments in the SP regarding slashloading and disposal, site preparation, regeneration method and timing still apply. If necessary a SP amendment is made or further treatments scheduled.
2. A stocking survey is made at least two years prior to the end of the regeneration delay period where natural regeneration is prescribed. If it appears the target will not be met, alternate actions, which may include one or more of mechanical site preparation, weed control or planting will be undertaken. If necessary, a SP amendment is made.
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. A final free growing survey is carried out.

At each survey a stand formula is completed or revised for inclusion in the forest inventory records. The MB procedures for the conduct of these surveys and the compilation methods are in Appendix I, Section 5.3.

6.511 Regeneration Period

The Establishment to Free Growing Guidebook for the Vancouver Forest Region will be used as a guide to assign regeneration periods.

6.512 Species Selection

MB 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. For details

see Appendix I, Section 5.14. Species selection will be consistent with the Establishment to Free Growing Guidebook for the Vancouver Forest Region. Exceptions to the guidebook are permitted on a site specific basis where an acceptable rationale is provided. For example, MB has received MoF approval to plant cypress on sites to which it is ecologically suited but not included in the MoF listing of preferred or acceptable species for these particular site series.

6.513 Stocking Targets

MB will use the Establishment to Free Growing Guidebook for the Vancouver Forest Region to assign stocking standards in SPs.

On difficult sites, for example colluvial sites, the target and minimum stocking may be reduced. However, the minimum stocking will not be less than the number of merchantable stems per hectare existing prior to harvest.

For internal purposes and using the MB survey system, regeneration and planting objectives will be based on the standards in the MB procedures, described in Section 5.15 of Appendix I.

6.52 Site Preparation

Anticipated site preparation necessary to renew the forest is prescribed in the SP and confirmed in the post logging survey. Site preparation methods which may be prescribed include mechanical piling or dispersal of slash, broadcast or accumulation burns, and mechanical or chemical control of brush or unwanted seed trees.

Each method is considered in terms of economics, environment and government regulation e.g., for smoke control, use of herbicides, or protection of fish habitat before the optimal solution is prescribed.

Estimates of areas to be treated are shown in Table 6.59 below.

6.53 Forest Regeneration

6.531 Forest Tree Seed

MB attempts to maintain a 5 year supply of seed for the range of species and seed ones. The priority will be for seed from MB seed orchards or the orchards of other Coastal Tree Improvement Cooperative members. Where seed orchard seed may be unavailable in sufficient quantity or there are no seed orchards, wild seed will be collected under supervision to ensure best quality.

In addition cuttings are being produced from yellow cypress hedges representing superior tested phenotypes.

6.532 Regeneration Methods

Most sites are planted, even if natural regeneration is feasible, to attain early green up for adjacency or other reasons and so free areas for harvest.

Immediate planting is normally prescribed on all 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 may also be prescribed where natural regeneration has reached the minimum acceptable level, to achieve the yield gains from higher stocking levels as specified in MB stocking targets. Planting will also become increasingly prevalent in advanced growth amabilis stands within the balsam woolly adelgid infestation zone.

MB will plant only seedlings that are physiologically and morphologically suited to the intended planting sites. Where stock grown for a specific site fails to meet stock specifications and as a result is not suitable for the intended site it will be rejected. Where alternative suitable stock is not available an amended SP will be submitted to the District Manager for approval in order to provide time for growing of replacement stock that meets specifications.

Natural regeneration and planting goals are shown in Table 6.59

6.533 Brushing and Weeding

Brushing and weeding will be carried out wherever the new tree crop is endangered or an acceptable level of stocking will not achieve free growing status.

The method of brush control prescribed will depend on such variables as brush species growth habit, suitability and cost of mechanical or manual means, availability of a suitable herbicide, and ecological considerations including the provisions of the Riparian Management Area Guidebook.

Brush control by non herbicide methods will be favoured where results and costs are comparable.

Estimates of area to be treated annually are shown in Table 6.59.

6.54 Juvenile Spacing or Pre Commercial Thinning

Recent analysis of MB's 2500 permanent sample plots has led to new conclusions about the silvicultural benefits of spacing coastal western hemlock and Douglas fir on lands managed by MB. The results show that conventional spacing strategies reduce merchantable stand volumes without improvements in stand value (across a wide range of price assumptions). MB will discuss the results and implications of this analysis with the MoF.

MB will continue to carry out spacing operations using available public funding and will cooperate with provincial initiatives to provide opportunities for spacing investments directed towards non timber resources and social objectives.

The prescribed stocking target will vary according to the objective. For example, a lower stocking level may be designated for a forage production area. Emphasis will be placed on retaining the dominant (largest) trees, not on uniform distribution.

6.55 Forest Fertilization

MB recognizes that there are opportunities for gains from fertilization in two areas: early fertilization (pre free to grow) and fertilization of Douglas fir stands prior to either thinning or clearcutting.

Starting in 1994, MB has been fertilizing substantial areas in TFL 44 at time of planting. The objectives are to provide young trees with a boost on poor and brush prone sites and to increase medium term (next 10 to 20 years) harvest opportunities by reducing the time to achieve free growing status and visual recovery. Research efforts such as the Salal Cedar Hemlock Integrated Research program (SCHIRP) have shown significant response to fertilizer on salal sites.

MB will continue to fertilize selected sites at time of planting. MB will apply for FRBC funding for this treatment. Most of the benefits are derived from the spatial constraints introduced through recent regulations.

Research results have shown yield gains from fertilizing Douglas fir stands with nitrogen. Recommendations are to fertilize medium site (Site Index 24 to 35) Douglas fir stands, approximately 10 years before harvest, to capture yield gains and financial benefits. Fertilized areas must be economically attractive and administratively available for harvest. FRBC funding will be sought for proposals to fertilize Crown areas.

Current plans (Table 6.59) do not include fertilization of Douglas fir stands prior to harvest. These plans will be reviewed as part of the development of a second growth harvest strategy (refer to Section 6.5). Changes will be described in TFL annual reports.

6.56 Pruning

Pruning increases the volume of clear wood, can reduce the amount of juvenile wood and hence may increase log value. The economic return from pruning is uncertain considering the high costs of pruning, the long investment period and the reliance on a high premium for clearwood. The general practice is to reduce stocking to relatively low levels (i.e., less than 1 000 sph) to reduce costs and avoid competition from unpruned stems. The result is a reduction in yield.

Notwithstanding this uncertainty, MB will participate in FRBC funded pruning programmes for trial purposes. Preference will be given to areas where pruning will also enhance non timber value. Examples include wildlife forage areas, and some recreation and visual landscape areas.

6.57 Second-Growth Harvest Strategy

Changes are made to the second growth harvest strategy for MP 3. These reflect the reduced harvest opportunities in mature timber, the spatial constraints in second growth areas and a goal of reducing the costs of transition to the spatial forest pattern implied by the new regulations.

To date there has been little harvest in second growth stands in TFL 44. The mature inventory and planning requirements were such that the harvest could

be obtained from mature forest areas. Minimum harvest rules for second growth areas were designed to allow for some planning flexibility in strategic analyses without recognizing specific operational planning circumstances. Recent planning processes and regulations have affected harvest strategies:

- ❑ The protected Area Strategy and the Forest Practices Code have significantly reduced planning flexibility and harvest opportunities in mature timber. The net timber harvesting landbase has been reduced substantially (particularly mature forest areas) and spatial harvesting constraints, quite different from historical harvesting patterns, have been imposed.
- ❑ The spatial constraints also affect the pattern of second growth harvest. These constraints, including maximum cutblock size, adjacency and rate of cut restrictions mean that areas of similar aged second growth will not be harvested over a short period as they were in the previous harvest. Instead they will be harvested over a number of passes, often four or more over a period of 30 or more years.

The second growth harvest strategy for MP 3 includes planning for first harvest pass opportunities at an earlier age than previously considered. Initially, minimum harvest ages based on calculations of financial rotations in recent stand level analyses will be used. For simplicity these are grouped as follows:

Species Association	Site Index Range (m)	Minimum Harvest Age (years)
Douglas fir	2	0
Douglas fir	2	50
Western Hemlock	2	60
Western Hemlock	2	40

These minimum harvest ages may be changed according to operational experience. They will assist in providing an initial focus for harvest planning. Collection of more detailed information from inventories and site visits will then indicate priority areas for harvest (e.g., forest health) and areas that must be deferred because of non timber resource issues (e.g., rate of cut and adjacency) or because of harvest economics. This approach will encourage a better connection between strategic and operational planning.

The age class distribution for TFL 44 (excluding Clayoquot) includes a substantial area that may include candidate first harvest pass areas. In the timber harvesting landbase there are almost 10 000 ha of age 61 years and older and over 29 000 ha between 41 and 60 years of age. The second growth harvest strategy will assist in smoothing the forest age class distinction as well as spatially dispersing the harvest.

The strategy will include an increased emphasis on alternative harvest systems in constrained areas. Such areas include visually sensitive landscapes, recreation areas and riparian management zones. Refer to the following discussion on commercial thinning.

Forest health is an important component of the harvest strategy. For example, older second growth Douglas fir stands are surveyed for infections by the root rot fungus *Phellinus weirii*. To reduce losses, priority is given to harvesting severely infected areas.

Commercial thinning is part of this second growth harvest strategy. Although thinning is not expected to increase yield, thinning may contribute towards achievement of non timber management objectives and may provide medium term harvest opportunities in deferred areas.

The conclusion from a recent analysis of growth and yield data is that no realisable yield gain is likely from commercial thinning in coastal conditions.

MB, however, recognises that there are situations in which commercial thinning will contribute towards achievement of management objectives. The thinnings should be financially attractive. The situations include:

- ❑ Thinning before financial rotation where removing less than 25% of the stand volume from below (the smallest trees) is practical.
- ❑ Thinning if final harvest is delayed beyond financial rotation. For example, visual landscape and recreation areas that have a restrictive rate of cut constraint. The thinning should remove the maximum value contingent on meeting cover requirements, windfirmness, etc.
- ❑ Thinning to meet a non timber management objective such as the creation or enhancement of wildlife habitat.

Plans for commercial thinning will be made as work proceeds on developing the operational plans for the second growth harvest strategy. Such thinning plans and completed operations will be reported in the Annual Report.

Research has shown that volume gains from fertilising Douglas fir can be greater in thinned compared to unthinned stands. It is recommended that fertilisation occurs approximately 10 years before harvest to capture yield gains and financial benefits. Fertilisation of thinned Douglas fir stands will be incorporated, where a response is expected, there is harvest flexibility to capture the benefits and funding is available.

6.58 Conversion of Alder Stands

The primary species in most of these stands is red alder. The total area is relatively small and the stands are scattered, often occurring in riparian areas.

Poor market conditions have limited management of these areas in the past. In particular, management for alder wood products has not been attractive because of stand conditions in some areas, limited area, location relative to markets and poor markets.

The current submission for FRBC/Forestry Enhancement funding includes proposals for converting some of these stands to coniferous species and removing competing alder trees from roadside areas of some conifer stands.

6.59 Planned Silvicultural Treatments

The following table shows the anticipated level of silvicultural treatments for MP 3.

TABLE 6.59 Silvicultural Treatments Plan
(hectares)

	1998	1999	2000	2001	2002	TOTAL
Mech Site Preparation	125	125	130	120	120	620
Broadcast burning	100	100	100	100	100	500
Roadside Burning	45	45	45	45	45	225
Natural Regeneration	100	80	80	80	80	420
Planting	2120	2000	2000	2000	2000	10120
Weeding Mechanical	00	4 5	350	400	400	2325
Weeding Chemical	145	145	120	140	120	6 0
Spacing	460	245	185	185	185	1260
Pruning	140	135	135	135	135	680
Fertili ing at Planting	320	320	320	320	320	1600

6.6 Forest Protection and Forest Health

Since 1955 when the original Licenses were awarded, neither fire nor forest health problems have been significant. The largest fire, the Tay fire in 196 , started from blasting on the highway when the industry was already shut down because of the fire ha ard. The fire burned 2 625 ha (including mature and second growth areas) and killed 1 500 000 cubic metres of timber. A black headed budworm outbreak in 19 0 was closely watched for two years before the population collapsed and preparation for control abandoned.

Complete details on fire and forest health history are found in Appendix VIII.

6.61 Fire Prevention and Suppression

MB s primary ob ective is to prevent fires through good housekeeping, diligent equipment maintenance and strict control of operations as fire danger rises. Our goal is to contain all fires within 24 hours of detection.

Fire prevention and control are governed by operating plans, and procedures:

- ❑ Fuel management plans are prepared for MoF approval and components of the plan are built into the development plans.
- ❑ Divisional presuppression plans are prepared and submitted to the Coast Fire Centre and to the District Office before April 1st.
- ❑ Divisional and Regional plans exist for fires not controlled within 24 hours.
- ❑ Ground and aerial patrols are made as required by regulation.
- ❑ Each division maintains and uses its own fire suppression equipment. If needed, further equipment can be obtained from a central cache at the Forest Industries Flying Tankers (FIFT) base at Sproat Lake and, in event of a catastrophic fire, from other divisions or the MoF. All divisions may call out FIFT for water bombing, patrols, recce, bird dog work, and crew transport.
- ❑ Each division is connected to the MoF Fire Weather Information Network. In addition, MB sets up 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 ha ard rating, risk and fire danger rating.

6.62 Forest Waste Disposal

When necessary to meet the fuel management or regeneration goals, slash is dispersed or burned in accordance with prevailing regulations and the terms of the burning permit.

Debris from dryland sorts is not currently being burned. If burning does become necessary, it will be done according to the conditions of the permit.

6.63 Forest Insect Control

6.631 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. MB's past experience has been that defoliation is normally reported by staff who are flying over the inaccessible old forest where such attacks normally start. Evidence of other problems, e.g., Rhinina 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.

Should defoliation be seen and reported it will be inspected more carefully, boundaries roughly mapped, and recorded in the annual report. If the area attacked increases and/or the extent of defoliation increases significantly, assistance will be sought from Ministry or CFS specialists and plans made for salvage or, if warranted, an aerial attack plan prepared in conjunction with the pertinent Federal and Provincial Agencies.

6.632 Balsam Woolly Adelgid

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

MB has issued revised and more stringent guidelines with the objective of ensuring future yield losses are minimized by:

- ❑ Further restricting planting of Abies spp.
 - ❑ Requiring at least 600 sph of alternate, acceptable species in natural and planted stands which 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.
- ❑ Favouring other acceptable species when spacing in the quarantine one and a transition one bordering the quarantine one.

6.633 Ambrosia Beetles

MB 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.

6.634 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. MB is involved in trials on other tenures, with seedlings from weevil resistant provenances.

No other insects, e.g., bark beetles or the plantation weevil have reached epidemic levels.

6.64 Forest Disease Control

Wood volumes lost to disease in the old growth forest have been estimated as highly significant by the CFS. It has been affirmed, based on measurements of a limited number of MB permanent sample plots for nearly 30 years that growth is balancing mortality.

In the new forests a number of parasitic fungi can kill trees or degrade log quality and value. Most significant of these are hemlock mistletoe, laminated root rot, Annosus root rot, and Armillaria root disease. Widespread incidence of mistletoe in old growth hemlock and many of the 40 year plus new forest stands presents a significant risk to the new trees if any form of partial cutting is used. Though Annosus is known to be widespread no action is presently undertaken though various measures were used when spacing or thinning in the 60s and 70s (high stumps and borax). Though Armillaria is endemic, assessments in Douglas fir stands growing in the CWHxm and mm1 made by MB research staff in the 1950s only found evidence of scattered mortality, rarely exceeding .02 ha. Mortality appeared to decline or cease after canopy was formed. It was concluded this pathogen was not presently a cause for concern.

Active preventive measures at present are limited to mistletoe and laminated root rot, these include:

- ❑ Felling residual hemlock saplings after harvest to reduce mistletoe in the new crop if partial felling, is prescribed, we will identify and cut all or the most severely infected overstory trees as well as any understory over 2 m tall.
-

- ❑ Strategies for addressing infections of *Phellinus weirii* include:
 - ❑ Surveys to map infected areas.
 - ❑ Stumping in limited situations. We are not yet satisfied that the advantages of stumping outweigh the costs, nor are we sure that stumping will prove effective over a rotation.
 - ❑ Planting of Western redcedar on some sites. Consideration will also be given to establishment of hardwood species.
 - ❑ Continuing to monitor the results of earlier initiatives and other research to determine appropriate treatments.

We will survey any second growth Douglas fir stands planned for logging for presence of the rot. Where incidence is intensive we will treat as seems most likely to prove economical and offer the best chance of success for the individual site.

6.65 Windthrow

Small cutblock sites and reserves within cutblocks (e.g., wildlife tree patches and riparian management areas) expose more timber edge to potential damage from strong wind events.

The strategy to minimize losses due to windthrow includes:

- ❑ Assessment of susceptibility to windthrow. This includes an overview evaluation of historic patterns in the watershed and is the basis for developing an appropriate windthrow management strategy.
- ❑ Cutblock design (e.g., cutblock site, location and orientation), at the FDP and SP stages, based on knowledge of historic wind patterns and assessments.
- ❑ Management practices including feathering of edges and pruning of trees will be applied according to the assessed risk of windthrow.
- ❑ Monitoring of windthrow and recovery of windthrow where practical.
- ❑ Training of field personnel to recognize the potential for windthrow.

6.7 Forest Research

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

The strategy is to:

- ❑ Identify and recommend basic and applied research needs to the organizations which have the specific mandate to undertake the work.
 - ❑ Prepare and submit research proposals for FRBC funding for projects of particular or strategic concern to the 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 MB management goals and responsibilities.

6.71 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:

- ❑ **Landslide Rehabilitation:** Study sites in the Queen Charlotte Islands and on western Vancouver Island examine various techniques and species for revegetation of landslides. Trials include hydroseeding grasses and legumes, and planted conifers, hardwoods and native shrubs. Soil disturbance and erosion are also monitored.
- ❑ **Vegetation Dynamics of Montane Forests:** This project is studying natural regeneration and vegetation succession under alternative silvicultural systems in montane forests at the cooperative Montane Alternative Silvicultural Systems (MASS) study area in Menies Bay Division.

6.72 Forest Renewal

The forest renewal research program focuses on providing seedling and planting solutions to the new silvicultural challenges our foresters face in the 1990s. The research program will continue to place priority on cost efficiency and forest renewal solutions which address high cost problems.

Continuing studies include:

- ❑ **MASS Regeneration:** This 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.
- ❑ **Cw/Cy Comparison:** Plantation performance of western redcedar and yellow cypress are being compared among a common set of seedlots over a range of sites from 50 m to 50 m elevation.
- ❑ **Cy Seedling/Steckling Comparison:** Seedling and cuttings from similar source populations are being compared on a high and low elevation planting site.

6.73 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.

Projects in which MB 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 silvicultural 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 silvicultural systems in montane forests. It is led by UBC researchers at the MASS study area.
- ❑ A study of soil nutrient leaching under alternative silvicultural systems in montane forests. It is led by UBC researchers at the MASS study area.

6.74 *Alternative Silvicultural Systems*

Concerns over high elevation regeneration performance, visual aesthetics, biological diversity and wildlife habitat prompted MB to consider new approaches for managing coastal montane forests. The forest industry needs to know where alternatives to clearcutting are feasible, economical and ecologically sound.

A cooperative research initiative called the Montane Alternative Silvicultural Systems (MASS) project is underway with the Canadian Forest Service, FRBC, the Forest Engineering Research Institute of Canada (FERIC), Industry Canada, the University of British Columbia and the University of Victoria. The objective of this project is to study the biological and economic consequences of various silvicultural systems in higher elevation forests. It examines clearcutting, green tree retention (25 sph), shelterwood (30% retention) and patch cutting (1.5 ha) systems in old growth western hemlock-amabilis fir forests at the Oyster River operation of Menies Bay Division.

Harvesting was completed in 1993. MB and other agency studies include: feasibility and economics, soil disturbance, natural and planted regeneration, seedling physiology and response to competition and nutrition, growth and yield, microclimate, vegetation succession, canopy insects, and forest bird diversity, seedling physiology, decomposition and soil nutrition, disease and decay. Numerous tours, talks and articles have communicated the project goals and initial findings to a wide audience. Cost and productivity data were summarized by FERIC.

7.0 MANAGED FOREST NO. 74

MF 4, which comprises the land privately owned by MB included in the TFL, is managed as an integral part of the License and to the same standards. All properties included in the MF are shown in the key maps (Appendix IX), coloured dark green, and are listed in Appendix VI.

8.0 MANAGEMENT PLAN ADMINISTRATION

8.1 Revision to MP #3

The MP will be revised or updated to conform to any legal changes, or a notice received from the Chief Forester. In the event of changes in company objectives or management plans necessitated by the business climate or other factors identified by the company, MB will consult with the Chief Forester about revising the MP.

8.2 TFL Annual Report

An annual report will be submitted by April 1st each year in compliance with the License Agreement. It will record progress in the routine management as well as the progress towards meeting the commitments made or implied in the MP. One or more copies will be made available for public review.

Specific commitments which will be reported upon include:

1. Progress in harvest of the timber profile. The proportion of the area harvested annually from areas classified as loggable by conventional and nonconventional and from the three economic operability classifications (economic, marginally economic and uneconomic) will be compared to the equivalent proportion of these in the available inventory.
2. Progress in reviewing and updating resource inventories including the visual landscape inventory, the recreational inventory and analysis, ESA mapping and landscape biodiversity requirements.
3. Progress in verifying or modifying the old growth forest inventory.

9.0 REVIEW STRATEGY

The review strategy for preparation of Management Plan 4, will be submitted to the Regional Manager, no later than August 31, 2000. This is in accordance with Section 2.05(b) of the TFL 44 License Agreement.

PUBLIC REVIEW STRATEGY - TFL #44

TABLE OF CONTENTS

Interim Report on Public Review Strategy

STAGE 1	Appendix I.....Advertisements [Initial public comment/open houses for development of SMOOP]
STAGE 2	Appendix II.....Pre-SMOOP Newsletter [Spring 1995] Appendix III.....Consultation Survey - Pre-SMOOP 1997 Appendix IV.....Public Response - Pre-SMOOP 1997 Appendix V.....Additional Responses - Pre-SMOOP 1997 Appendix VI.....Venue Comments - Pre-SMOOP 1997
STAGE 3	Appendix VII.....Mailing List - March 1997 Appendix VIII.....Report on SMOOP 1997
STAGE 4	Appendix IX.....Advertisements [re Open Houses August-October, 1997] Appendix X.....Stage 4 Newsletter - August 1997 Appendix XI.....Consultation Meeting Survey Appendix XII.....Public Response - August 1997 Appendix XIII.....Additional Responses
STAGE 4	Appendix XIV.....Venue Comments Appendix XV.....Mailing List - August 1997

Final Report on Public Review Strategy

INTERIM REPORT
PUBLIC REVIEW STRATEGY
MANAGEMENT PLAN NO. 3
TFL NO. 44

I. INTRODUCTION

The strategy to be employed for providing opportunities for public review and for obtaining public input for the preparation of Management Plan No. 3 was set out in a letter of September 20, 1994 from G. Sartisohn to K. Collingwood. The letter outlined four stages:

- Stage 1 Initial comment on Management Plan No. 2.
- Stage 2 Initial solicitation of input for Development of SMOOP.
- Stage 3 Public review of SMOOP.
- Stage 4 Review of draft Management Plan.

The strategy was approved, subject to conditions in a response by K. Collingwood of November 18, 1994.

The purpose of this report is to describe and document the public review process completed to date and to present a plan and schedule for completion of the remainder of the public review strategy.

II. PUBLIC REVIEW ACTIONS/RESULTS TO DATE

Stages One and Two have been completed.

A. STAGE 1 - Initial Comment

Prominent advertisements were placed in Regional and local newspapers in order to:

- notify the general public that the next management plan for the TFL was being prepared,
- request written submissions from the public on the current Management Plan and on the Licensee's performance, and
- to advise the general public of locations where the current Management Plan could be reviewed.

A copy of one of these advertisements is illustrated in Appendix 1. The advertisements were placed as follows:

Victoria Times Colonist	August 31, September 2 and 10, 1995
Vancouver Sun	August 31, September 2 and 10, 1995
Vancouver Province	August 31, September 2 and 11, 1995
Port Alberni Times	August 31, September 2 and 9, 1995
Tofino/Ucluelet Westerly	August 3, September 2, 1995

Copies of Management Plan No. 2 were made available for viewing by the general public between September 17, 1994 and October 7, 1994 at the following locations:

- MB Forestry Visitor Centres at:
 - Port Alberni

- Tofino
- Ministry of Forests Offices at:
 - Port Alberni, Alberni District Office
 - Victoria, Timber Harvesting Branch
 - Nanaimo, Vancouver Region Office

B. STAGE 2 - Solicitation of Input for Development of SMOOP

1. Advertisements

Prominent advertisements were placed in regional and local newspapers to notify the general public of the scheduled locations, dates, and times of Open Houses to be held for the purpose of listening to input from the public. A copy of one of these advertisements is illustrated in Appendix 1. The advertisements were placed as follows:

- Port Alberni Times, January 25 and February 1, 1995.
- Tofino Ucluelet Westerly News, January 25 and February 1, 1995.
- Victoria Times Colonist, January 28 and February 4, 1995.
- Vancouver Sun, January 28 and February 4, 1995.
- The Province, January 29 and February 5, 1995.

2. Open Houses

Open Houses were held at the following locations:

- Ucluelet/Tofino February 6, 1995, Long Beach Golf Course
 Pacific Rim Highway
- Port Alberni February 7, 1995, Friendship Centre
 3555 Fourth Avenue
- Victoria February 8, 1995, Executive House Hotel
 777 Douglas Street
- Vancouver February 9, 1995, Hyatt Regency Hotel
 655 Burrard Street

3. Procedures at the Open Houses

a) Displays

Display Boards were exhibited which provided:

- General definition of a TFL
- Description of the elements of a SMOOP and a Management Plan
- Maps of TFL 44 and Operating Divisions
- Map showing locations of sensitive areas
- Photographs depicting forestry activities on the TFL.

a) Hand Outs

Background: A brochure, in newsletter format, was offered to all attendees. The brochure described the TFL, the public review process, as well as some of the important issues related to the TFL. A copy of the newsletter is shown in Appendix 3.

c) Consultation Survey (Questionnaire)

A questionnaire was offered to all attendees. A copy of the questionnaire is attached as Appendix 3.

d) Recording of Public Comments

MB Woodlands staff were available at the Open Houses to answer questions, discuss issues, and provide technical information. Flip charts were used to transcribe the comments and input given by public attendees to MB Woodlands staff. In this way, the comments/input were readily visible for all attendees to see and for later summarization.

e) Guest Register

A guest register was maintained at each Open House. Those who so wished could record their attendance and be added to a mailing list for future events of a related nature (e.g., Open Houses for viewing the draft of MP #3).

C. RESULTS

1. Stage 1

Only six written responses were received:

- A student requested a copy of the Management Plan.
- A student from the West Coast Youth Alliance advocated environmental impact assessments, moratorium on clearcutting, log second growth, no old growth logging in Clayoquot, reduce AAC to 1.5 million m³, judicial inquiry to determine if the Licence was granted fraudulently, veto power for local communities, public, and First Nations.
- Eliminators 4X4 Club - maintain access for 4-wheel drive vehicles.
- Two students from Malaspina College, Resource Management Program wanted more information and better presentation to enable them to better understand.
- A graduate student requested a copy of the Management Plan.

2. Stage 2

a) Consultation Survey Questionnaires

A total of 72 questionnaires were returned. Responses for each returned questionnaire are listed in Appendix 4.

In some cases, lengthy comments were attached to the questionnaire responses. These are listed in Appendix 5.

b) Open House

A total of 370 people attended the Open Houses.

Public comments or input transcribed at the Open Houses are listed in Appendix 6.

c) Summary of Input and Concern Expressed at Open Houses

- *Most Important Value of the Forest*

Tofino/Ucluelet

- Multi-use with a strong inclination to preservations for biodiversity and recreation.
- Reforestation, trees are most important.
- Income for families and our communities.
- Housing needs, jobs provided, economic value.

Port Alberni

- The many forest resources provide an economic base for Island communities.
- That there is enough left in its natural state for wildlife habitats.
- Supply of raw material to Port Alberni mills.

Victoria

- Maintenance of biodiversity - within that, not opposed to multiple use including logging.
- The structural and functional complexity of natural forest ecosystems. Whole complex of non-timber values.
- The rare and extreme value of a 1000-year eco-system that can never be replaced.
- That it is maintained in an integrated continuous form.
- Public asset - must be used and made available to all users.

Vancouver

- The ancient forests are an irreplaceable asset with many values - i.e., heritage, wildlife, etc.
- The forest itself has intrinsic value - the diversity of species and rarity of old-growth eco-system. Also has great cultural value.
- Long-term ecological stability and local economic activity.
- A balance of environmental and economic values.
- A harvestable crop and a recreational area and wildlife habitat.

- *Concerns about logging on TFL #44*

Tofino/Ucluelet

- Intensity and rate-of-cut behind West Coast Trail unit of Pacific Rim National Park.
- All the TFL. Clearcutting destroys salmon spawning streams, degradation of our society due to lay-offs, etc.

Port Alberni

- I question if it is sustainable at the present cut levels in TFL #44. Sustainability of forest resources via current logging methods and AAC potentials over time.

Victoria

- My concern is that clearcutting will be the primary silvicultural system. Would like to see more attempts to use retention systems.
- Practice of clearcutting.
- Smaller clearcuts - more selective logging.

Vancouver

- Clearcutting in Clayoquot Sound. Keep intact watersheds. Use selective logging.
- Destruction of pristine watershed by building roads in Clayoquot Sound - logging of old-growth trees, older than our grandparents' grandparents.
- Logging is increasingly fragmenting eco-system. Loss of habitat for animal and plant species. Elimination of old-growth eco-system.
- That conditions imposed through this process may result in unreasonable AAC reductions and my taxes will go up.

- *What else would you like to know about TFL #44?*

Tofino/Ucluelet

- Rehabilitation plans. Potential recreation/biodiversity reserves.

Victoria

- Economic considerations: does it make good economic sense to use high quality old-growth wood for 2X4s. Wildlife and habitat considerations, other than deer winter range.
- How many jobs would be sustained in balance with the volume of wood cut?
- Future of Nitinat Lake regarding camping for windsurfing.
- Maps explaining when different areas are going to be cut; and in combination with other logging companies, how this will leave Vancouver Island looking in the long term.

Vancouver

- What kind of cutting is planned? Road building in sensitive areas. What research into species of wildlife and flora?
- I would like to know where you are logging and how much you remove every day.
- How economically sustainable are harvesting practices?

d) Mailing List

A mailing list was compiled from persons who responded to the questionnaire, or who left their names and addresses at the Open Houses in expectation of receiving future mail outs. This list was augmented by names and addresses of others who have indicated their interest in receiving future mail outs of information or opportunities for public input to TFL #44. The latest updated mailing list is attached as Appendix 7.

Most of the concerns about input that was received reflects issues that are current or have been dealt with or are still ongoing. For example, the Forest Practices Code has been enacted, the Vancouver Island Land Use Plan is being implemented, and decisions on Clayoquot Sound have been made.

No items of public input were identified that required specific action in the Management Plan planning process that is not already accounted for as a result of other planning processes and issues.

III. PUBLIC INVOLVEMENT PLANNED FOR THE BALANCE OF MP #3 PLANNING PROCESS

A. STAGE 3 - PUBLIC REVIEW OF SMOOP

On submission of SMOOP, scheduled for February 28, 1997, opportunities will be provided and input sought from the following:

- identified stakeholder groups, communities and First Nations.
- members of the general public who requested follow-up material from Stage 2 Open Houses.

Specific activities to accomplish the above will be:

- Mail the following material to all of the above with a request for written response.
 - ◇ TFL 44 backgrounder and Public Consultation Newsletter
 - describes the TFL planning process, and what the public told us in Stages 1 and 2.
 - ◇ SMOOP Backgrounder newsletter format describes:
 - what a SMOOP IS
 - Management options stated in SMOOP
 - other specifics stated in the SMOOP.

The mailing list will be as shown in Appendix 7.

- offers will be made to First Nations groups to meet with them for discussion of issues of special concern to them.
- Six weeks will be provided from the date of mail out for receiving input on the SMOOP.
- A written report to the Manager, Vancouver Region will be provided within one week following expiry of the time allotted for public response.

STAGE 3 - Schedule Summary

Submit SMOOP	February 28, 1997
Mail outs to Stakeholders, etc.	March 7, 1997
Deadline for response	April 11, 1997
Stage 3 - Public Input Report	April 18, 1997

B. STAGE 4 - REVIEW OF DRAFT MANAGEMENT PLAN

On submission of the draft Management Plan No. 3, scheduled for June 30, 1997, a series of four Open Houses will be completed by August 31, 1997. The locations will be:

- Tofino/Ucluelet
- Port Alberni
- Vancouver
- Victoria

Advertising of the Open Houses will occur at least twice (one week and two weeks in advance) prior to the Open House in appropriate local and regional newspapers. Notices will also be placed on public bulletin Boards and in public areas of Ministry of Forests Offices in Nanaimo and Port Alberni and in MB Woodlands offices.

A draft of the advertisement will be provided to MoF, Vancouver Region, for advance review and comment.

The mailing list in Appendix 7, augmented by Stage 3 responses, will be used to distribute the following material, in addition to an invitation to attend the Open Houses:

- TFL 44 Backgrounder brochure.
- SMOOP Backgrounder brochure.
- draft MP 3 brochure, a newsletter format description of the draft MP.

Special invitations to attend the Open Houses will be sent to First Nations groups.

Open Houses will be one-day events from 3:00 p.m. to 9:00 p.m.

STAGE 4 Schedule Summary

Submit draft MP No. 3	June 30, 1997
Prepare draft advertisement for review by MoF	June 30, 1997
Prepare material for inclusion in mailout	July 15, 1997
Finalize all advertisements for running one and two weeks in advance of Open Houses	July 15, 1997
Complete Open Houses in all four locations no later than	August 31, 1997
Submit summary report of Public Involvement feed back	October 22, 1997

Prepared and submitted by
W.J. Pearson, RPF

February 4, 1997

TFL #44

PUBLIC CONSULTATION PROCESS

REPORT - 1995

APPENDIX VI

- Summary of comments/input made to MB host attendees by public attendees at Pre-SMOOP Open Houses

STAGE 2

**Points We've Heard Today
February 6, 1995
Tofino, BC**

Questionnaires —1-15, 22-31, Attendees —20

Mike Bragg, John Mather, Gabe Sarisohn, Mike Cooper

- ➡ Better explanation of how today fits in the bigger picture of plans, (strategic vs operational, long term vs short term)
- ➡ This (MP) is a strategic plan, explain this, therefore the type of input is pertinent and useful at this open house.
- ➡ What will be done to deal with regeneration problems on Mnt. Ozzard area, in the higher elevations.
- ➡ When will the "clean-up" start at the old "dump site" in Ucluelet Harbour?
- ➡ Will the creek along the dump site at Ucluelet be re-habilitated for chums & coho?
- ➡ Is there any debris currently blocking the Nahmint River, what is being done to prevent debris in all rivers.

**Points We've Heard Today
February 7, 1995
Port Alberni, BC**

Questions—16-22, 32-48, Attendees—50

Dave Trim, Rick Player, Dave Bishop, John Mather, Gabe Saritsohn, Mike Hooper

- ➡ Can some of the forest land along the foreshore be re-allocated for residential/recreational use.
- ➡ Foreshore areas along Alberni Inlet for boater use— Harbour Commission wants sites to provide for day or overnight use along inlet. (San Mateo Bay, Uchucklesit, Rainy Bay, Sunshine Bay).
- ➡ How is the public approval process currently applied to watershed restoration, i.e., Road Debuilding.
- ➡ Concern was expressed by recreation groups regarding access.

**Points We've Heard Today
February 8, 1995
Victoria, BC**

Questionnaires—100, Attendees—100

***Don McDonald, Glen Dunsborough, Dave Bishop, John Mather, Gabe Saritsohn,
Mike Hooper***

- ➡ In exchange for MB's demonstration of public responsibility in complying with the preceding recommendations and considering MB's years of dedication to its employees, an application should be made to the Federal Ministry of Defense to transfer a portion of the Military Budget to assist those displaced in job conversion.
- ➡ In addition, it should be pointed out that MB is also in violation of the climate change conventions which requires the protection, enhancement, and conservation of carbon sinks (forest/bogs). Canada signed (June 1992) and ratified (December 1992) the bio-conventions and the cc convention in consultation with the BC Government and with the endorsement of cabinet.
- ➡ Have not enforced the sections of the Forest Act which would have enabled the District supervisor to suspend licenses in situations where there was misrepresentations (59) or damage to the natural environment as a result of not enforcing the Forest Act. Serious environmental degradation has occurred, and thus, MB should be required to pay compensation. Therefore, no compensation shall be required to be paid to MB for the lands taken out of the TFL.
- ➡ There should be a public committee more involved in logging decision making (made up of citizens from all walks of life.)
- ➡ Environmental Impact Assessment Review Principle (required under the Biodiversity Convention)— E1A is required for activities that could contribute to reduction or loss of biodiversity.
- ➡ MB has a poor record of compliance with existing "regulations" in the past, I have little faith that MB will comply with the regulations in the FPC when it is implemented. The FPC is a step in the right direction, but lacks "teeth" and enforceability. It appears to be quite "industry-friendly".
- ➡ I am outraged at the attitude that humans can create forests better than nature. I do not want MB to decide what my forests will look like in the future. Virtual monocultures are commercially productive, but nature is not a factory strictly for human consumption. MB's consideration of "other values" appears to be lip service.

- ➡➡ MB's funding of share groups and industry-front groups to fight your battles for you is sickening! Ron Arnold's advice to MB to give pro-industry community groups "the money...because industries don't have credibility and community groups do" is transparent. These tactics resemble war strategy. MB appears to seek cooperation on the surface, but in the back rooms that the public doesn't see, it is a very different story. This will become public knowledge despite your ill-directed silencing of the press. A good corporate citizen is **HONEST** and above-board, and pay their taxes.
- ➡➡ I would prefer to see increased community control of forest lands (and all other resources), a large increase of the Small Business Forest Enterprise Program. Multinationals only have large profits in mind. Tenure Reform is required **NOW** before we have a province of virtual monocultures and NSR lands. I'm sick of MB paying lip service to "doing a good job". Get out of my forests! You are abusing your lease agreement. I wish the BC Government would use the aspect of the Forest Act that gives them the power to revoke licenses for breaching this contract in terms of decreasing jobs due to intense mechanization.
- ➡➡ MB's forest practices are in violation of specific principles within the Biodiversity Convention. Such as:
 - ➡➡ *the Precautionary principle which, if invoked, would justify the banning of clearcut logging and other ecologically unsound practices.*
 - ➡➡ *identification of Biodiversity principle through logging in sensitive intact ecosystems rich in biodiversity MB is eliminating biodiversity before it has been sufficiently identified, and thus creating a situation that would make it impossible for Canada to discharge its obligations under the Biodiversity Convention and abusing the resources. Clearing the forests to plant genetically altered tree farms is a short-run profiteering scheme. The reduced quality of second-growth wood will provide pulp farms, not quality wood.*
- ➡➡ I favor the practices of Natural Selection Forestry and other ecoforestry-approved practices. I have much more I could rant on about, but I will save it for the conservation Survey?
- ➡➡ There is a drastic need for more **ACCOUNTABILITY** in the forest sector– and that doesn't simply mean accounting for past disasters with apologetic excuses...– that means being **ACCOUNTABLE** for the future of BC forests and communities that you hold such a precious lease on.
- ➡➡ I want to see a huge increase in community-based forestry to the eventual exclusion of multi-Nationals, like yourselves. I would like to see an expansion of the Woodlot program, and a move towards more holistic forestry techniques (by holistic I don't mean more lip service to IRM and "ecosystem management", but a move towards a greater respect for the environment that sustains us. I call for an **end** to clearcutting practices in all forms– including "patch" cutting, seed cuts, and other synonyms for the all-pervasive clearcut. I

would like to see a return to selective logging (not highgrading!) techniques, and management for more species other than humans and deer!

- ➡➡ As far as accountability goes, I'd like to see **complete adherence** to FPC guidelines– no more “Whoops” mapping error– sorry about that extra 250 ha. That's **not good enough**. We need **RADICAL FORESTRY REFORM** in this province– the forest Practices Code represents just a nibble into the big mess that BC forest practices have become.
- ➡➡ Talking to people with technical expertise has been helpful, **but** where are the Senior MB people (president, vice president, board members, etc.)???
- ➡➡ Where are the people who make the **BIG** decisions...– the decisions based on nothing but Corporate profit for shareholders? Are they all hiding? Are they too scared to face the public where they may have to (God forbid) be accountable? [I think I already know the answer to the above question]. Anyway, back to forestry issues... enough clearcutting already! when is MB going to adopt “forest Harvesting” techniques approved by the Ecoforestry Institute? I want to see the adoption of truly “Sustainable” **Selective** ecoforestry!!! On a small scale, it is time to say good-bye to multinational/corporate control of BC's public forests.
- ➡➡ Enlarge recreation/camping facilities at Nitnat Lake, but, maintain original nature, rustic condition. More outhouses.
- ➡➡ Define simple kinds of products (maps) which people can relate to in terms of how plan is developed (common scales)
- ➡➡ Large scale portrayal of landscape changes over the life of the plan.
- ➡➡ Broad planning overview.
- ➡➡ Increase actual public control through the use of stronger local community partnerships with industry and government (e.g., New Directions Program →Public Health Boards, Capital Health Board →General public Memberships).
- ➡➡ Boards operate public consultation process.
- ➡➡ Increase stream buffers beyond FPC requirements for all streams.
- ➡➡ Grow hemp on clearcuts to increase pulp production–more efficient and avoid using old growth.
- ➡➡ Meaningful activity on MB's part– canopy, ground and aquatic biodiversity studies (i.e., baseline data by which to evaluate impact of “management”.
- ➡➡ Meaningful activity on MB's part to promote transition from volume-based (high consumption, waste-oriented products) to value-based (high value, labour intensive, conservation-oriented) products and social values.

- ➡ Who on earth puts up drivel such as this? Has the author ventured into the bush?– Robin Fells
- ➡ Don't log through streams.
- ➡ What we are doing in streams in Upper Carmanah is criminal, and must stop.
- ➡ How many botanists and biologists have been hired?
- ➡ Where are the environment impact studies?
- ➡ Don't log in the Clayoquot.
- ➡ Like the AAC revised, down to basically what is truly sustainable.
- ➡ Revision of licensing structure.
- ➡ Government provide incentives to abandon or modify field labour practices now monopolized by machinery (i.e., grapple loader, feller buncher)
- ➡ Explain the “jargon” and terms you use. Also provide a Glossary of Terms.
- ➡ I would like an investigation into the circumstances of Forest Minister Summers' conviction for accepting bribes in the granting of TFL 44 in the 50s. The judge in that case recommended an investigation as to who proffered the bribe money, an investigation that was never held. If MB is found to have obtained the TFL by bribe, I believe the grounds for granting will have been invalidated, and that the TFL should be revoked.
- ➡ I agree with an earlier comment that clearcutting in old growth is an explicit violation of International Law (See *1992 Convention on Biodiversity*). I suggest a move to selection cutting in 2nd growth. The AAC should also be reduced. I support the preservation of **entire** watersheds, particularly those in Clayoquot, and an environmental impact assessment before any new cut blocks are cut in old growth.
- ➡ I object to the use of harvesting in forestry jargon. Harvesting implies:
 - a) *that you have planted what you are cutting, which is not true in old growth, and*
 - b) *that the cutting and regrowth is a cyclical process, which to say the least has not yet been proven. No harvested stands have yet regenerated to the level of biodiversity of an old growth forest.*
- ➡ We want MacBlo to pay **TAXES!!** MoF costs taxpayers \$1 billion per year to run, while MB had \$252 million in deferred taxes still owing from 1992. How much have you owed from all your years of business in BC?

Nitnat Recreation Area

- ➡➡ *Enlarge recreation area along the beach towards mouth of Cayause.*
- ➡➡ ***Not** hot showers or deluxe campsites.*
- ➡➡ *Garbage collection and water access.*
- ➡➡ *Willing to provide payment (nominal).*
- ➡➡ *More toilets (outhouse style).*
- ➡➡ *Maintain natural, rustic beach integrity.*
- ➡➡ *Invite Windsurf Club to provide ideas. Work through them.*
- ➡➡ *Continuous beach access without buffering.*

ACTIONS

- ➡➡ MB shall cease all logging in sensitive "old-growth intact" watersheds in TFL 44.
- ➡➡ Adopt eco-forestry principles in all other crown lands and on all private lands.
- ➡➡ Given that MB has been in violation of Section 59 and 60 of the Forest Act and given that sympathetic government administration, MB shall no longer convert privately owned forest land into potential or actual urban development.

PointW e've H eard Today
Febru ary 8, 1995
Vancou ver , BC

Q u e s t i o n n a i r e s — 1 - 1 5 , 2 2 - 3 1 , A t t e n d e e s — 2 0 0

*Gabe S a r t i s o h n , M i k e H o o p e r , J o h n M a t h e r , D o n M c D o n a l d , G l e n D u r s s o r t h ,
D e n n i s F i z t g e r a l d*

- ➡ More MASS (Alternative Harvest System) work. Good project, need more.
- ➡ **Stop clearcutting today!!!**
- ➡ **Selective cutting = Forests Forever**, ask Irene Abbey!
- ➡ **Keep Clayoquot Wild! Stop clearcutting today!**
- ➡ I said the United Church Canadian Girls in Training purpose as a teenager. I've lived it all my life (now 82). I'm nonviolent and polite by I **must** speak out for **Truth**. Ask me.- Irene Abbey
- ➡ **Log second growth only!**
- ➡ **Forest is more than a CROP!**
- ➡ Need a friendlier process, not 23rd floor. Try a community hall.
- ➡ Complete preservation of Clayoquot Sound is necessary if we are going to continue surviving. Too much has been cut already.
- ➡ Review tenure system.
- ➡ Let the current TFL Agreement run out– no replacement.
- ➡ Use Forest Board model with Regional Conferences linking.
- ➡ Low-impact logging ceremonial local use. Mature/immature maps showing before and after 20-year plan are good. Need these for Clayoquot.
- ➡ Land tenure **must** be transferred to community control
- ➡ Complete ban on devastation logging (AKA– clearcutting).
- ➡ Sustainable logging **only** in second-growth forests.
- ➡ Increase jobs per metre³ of timber 300% by value-added industry.

- ➡➡ It will be a sorry day when a few big companies control all the forests and best growing sites– R.H. MacMillan 1945.
- ➡➡ Just say “no” to clearcutting– Scott Alexander.
- ➡➡ Forget about the Montane Alternative Silviculture Systems research project–ecoforestry principles have been in existence for years and are applicable **everywhere**.
- ➡➡ Compost Corporate tenures!!
- ➡➡ Need more documentation on how the plan is constructed.
- ➡➡ Synthesize previous Management Plan to less than 10 pages and provide as handout.
- ➡➡ Ecoforestry Institute, Local Ecoforesters– use the resources in management plan.
- ➡➡ Range of harvesting systems options given certain situations (e.g., slope, deflection, species/silvicultures).
- ➡➡ Show riparian zones.
- ➡➡ Stop harvesting on all old growth.

Have open access for all four-wheel drive clubs and associations to explore the area. It would be nice to obtain a key to gates (that will be returned to you) so we can have a good camping weekend.

TFL #44

PUBLIC CONSULTATION PROCESS

REPORT - FEBRUARY 1995

APPENDIX IV

- Listing of all Consultation Meeting Survey responses from Pre-SMOOP Open Houses

STAGE 2

Public Response - Spring 1995

Response #: 15

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL 44?

Involved with previous Management Plan inputs, member of Meares Island J.R.M.P., Clayoquot Sound Task Force Clayoquot Sound Steering Committee.

2. Please state and explain what you consider to be the most important value of the forest?

Multi use but with strong inclination to preservation for bio diversity and recreation and future options.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Intensity and rate of cut behind West Coast Trail unit of Pacific Rim National Park and in Clayoquot Sound. Terrain failures and stream damage Kennedy Lake

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Some of my recreation concerns specific areas e.g. Klitsa Plateau site location of cut blocks.

5. What, if anything, did you learn from this open house?

Potential cut plans/leave strips/bio diversity and Marbled Murrelet reserves in certain specific areas.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes People should have the opportunity to know about proposed plans on public lands be able to recommend changes to plans.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

Rehabilitation plans. Potential recreation/bio diversity reserves.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 9
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 8
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Rehabilitation of previous damage, update on success/failure of silviculture: plans to correct these problems.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Tofino
- 12 **In which sector are you employed?** Conservation
- 13 **Age:** 41 55
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 16

- 1a. Did you know anything about TFL 44 before this meeting? No
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL # 44?
2. Please state and explain what you consider to be the most important value of the forest?

Reforestation trees are most important.

- 3a. Do you have any concerns about logging on TFL 44? No
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.
- 3c. If "No", would you please explain why you have no concerns.
- If the forest is managed properly, it is a "go".
4. What concerns, if any, do you feel were addressed in this open house?
5. What, if anything, did you learn from this open house?
6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes

- a Are there any aspects about TFL 44 you would like to know more about? No
- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a Forests are precious ecosystems. 10

8b Forests are critical economic contributors to British Columbia. 10

- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 9
- 8e **All old-growth forests should be preserved.** 3
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 6
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Labour
- 11 **Which city or town do you live in or live close to?** Port Alberni
- 12 **In which sector are you employed?** Retired
- 13 **Age:** Over 55
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 17

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

That you have control of the community's forests, and we want control.

2. Please state and explain what you consider to be the most important value of the forest?

Income for the families of our communities.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

All the TFL. Clearcutting destroys salmon spawning streams, degradation of our society due to layoffs, etc.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

I have seen nothing that does this.

5. What, if anything, did you learn from this open house?

Uncertain.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes We want TFL 44. You can stay with your plan we want forest homesteads, selective sustainable forestry practices.

- a. Are there any aspects about TFL 44 you would like to know more about? Yes

- b. If "Yes", what would you like to know more about?

A copy of your Management Plan for this time period

Thinking about forest harvesting and management, please indicate, on a scale of 1 to

10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.** 10

8c **Forests provide jobs.**

8d **Some old-growth forests should be preserved.** 10

8e **All old-growth forests should be preserved.** 5

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

I've given Mike Hooper a copy of our proposals. Nanaimo office.
To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Social Advocate

11 **Which city or town do you live in or live close to?** Port Alberni

12 **In which sector are you employed?** Pres. of several non profit

13 **Age:** 41 44

14 **Sex:** Male

Public Response - Spring 1995

Response #: 20

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL 44?

Area involved.

2. Please state and explain what you consider to be the most important value of the forest?

Housing needs obs provided economic value.

- 3a. Do you have any concerns about logging on TFL 44? No
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

I believe MB have learned care/outcome of good logging practices.

- 3c. If "No", would you please explain why you have no concerns.

I believe MB has learned care/outcome of good logging practices

4. What concerns, if any, do you feel were addressed in this open house?

Not sure.

5. What, if anything, did you learn from this open house?

The huge areas on Vancouver Island not touched by logging

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Public needs to be included in logging decisions. MB needs more open PR.

- a. Are there any aspects about TFL 44 you would like to know more about?no response

- b. If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 8
- 8b **Forests are critical economic contributors to British Columbia.** 9
- 8c **Forests provide jobs.** 9
- 8d **Some old-growth forests should be preserved.**
- 8e **All old-growth forests should be preserved.** 3
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 9
- 9a **Is there anything else you would like us to address in this Management Plan development process?** No
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Port Alberni
- 12 **In which sector are you employed?** Volunteer
- 13 **Age:** Over 55
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 22

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL# 44?

Deforestation, failure to use land to its potential, disrespect for Nature.

2. Please state and explain what you consider to be the most important value of the forest?

Spiritual responsibility. Subsistence.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Deforestation is a bad idea. Clearcutting is deforestation.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

5. What, if anything, did you learn from this open house?

The Company cares too much about money and far too little about Mother Earth.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

no response This is far too little.

- a Are there any aspects about TFL 44 you would like to know more about?no response

- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 9
- 8c **Forests provide jobs.**
- 8d **Some old-growth forests should be preserved.**
- 8e **All old-growth forests should be preserved.**
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.**
- 9a **Is there anything else you would like us to address in this Management Plan development process?** no response
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Port Alberni
- 12 **In which sector are you employed?** Agriculture
- 13 **Age:** 41 55
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 33

- 1a. Did you know anything about TFL 44 before this meeting? No
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?
2. Please state and explain what you consider to be the most important value of the forest?

All aspects of life.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.
- Sight wildlife runs from the noise.
- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Concern for the forests, water, wildlife, people.

5. What, if anything, did you learn from this open house?

That people are looking for a better way of going about forestation concerned people.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes More input someone may say something that would be of help.

- a Are there any aspects about TFL 44 you would like to know more about?no response

- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.**

8b **Forests are critical economic contributors to British Columbia.**

8c **Forests provide jobs.** 5

8d **Some old-growth forests should be preserved.** 5

8e **All old-growth forests should be preserved.** 5

8f **The public should be involved in forest planning, such as in the Management Plans of a company.**

9a **Is there anything else you would like us to address in this Management Plan development process?** no response

9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Labour

11 **Which city or town do you live in or live close to?** Port Alberni

12 **In which sector are you employed?** Forestry

13 **Age:** 19 25

14 **Sex:** Male

Public Response - Spring 1995

Response #: 35

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

I work on a forestry crew in TFL 44.

2. Please state and explain what you consider to be the most important value of the forest?

The many forest resources provide an economic base for Island communities.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

I question if it is sustainable at the present cut levels in TFL 44.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

General concerns.

5. What, if anything, did you learn from this open house?

More about the plan development process.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes The public are stakeholders where crown land is involved.

- a Are there any aspects about TFL 44 you would like to know more about? Yes

- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.**
- 8d **Some old-growth forests should be preserved.** 4
- 8e **All old-growth forests should be preserved.** 1
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 6
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Workforce stability in the logging sector.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Forestry
- 11 **Which city or town do you live in or live close to?** Port Alberni
- 12 **In which sector are you employed?** Forestry
- 13 **Age:** 41 55
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 45

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

I spend every weekend in some part of it.

2. Please state and explain what you consider to be the most important value of the forest?

That there is enough left in its natural state for wildlife habitats. Old growth forest is a place I love to explore and be in.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Deer winter ranges are not large enough rate of cut is too high. Beaufort Range, Katlama Creek, Corrigan Creek, Museum Creek, China Creek, Camron Valley, Goose Creek.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

There were a lot of concerns addressed but not voluntarily by the Company the Company would not be doing any of them if not forced to.

5. What, if anything, did you learn from this open house?

Where future logging will take place and what will hopefully be left not much from what I can see .

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes How else can you hear people's concerns, and also it gives the public a chance to talk to the people managing our forests.

a Are there any aspects about TFL 44 you would like to know more about?no response

b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 5
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** no response
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Self employed
- 11 **Which city or town do you live in or live close to?** Port Alberni
- 12 **In which sector are you employed?** Self employed
- 13 **Age:** 26 40
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 46

1a. **Did you know anything about TFL 44 before this meeting?** Yes

1b. **If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?**

Have followed it for years have traversed it from Port to Carmanah, Bamfield, Kennedy River Gretchen.

2. **Please state and explain what you consider to be the most important value of the forest?**

Supply of raw material to Port Alberni mills.

3a. **Do you have any concerns about logging on TFL 44?** Yes

3b. **If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.**

I have some concerns but they are minor and generally relate to previous logging practices.

3c. **If "No", would you please explain why you have no concerns.**

4. **What concerns, if any, do you feel were addressed in this open house?**

None I thought the Open House poorly organized lots of room space but not utilized. More tables required to accommodate the various folio sections. There appeared to be a shortage of identifiable MB forestry personnel to answer questions.

5. **What, if anything, did you learn from this open house?**

Nothing.

6. **Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.**

most Yes A better informed public will be more understanding of the process of the "eco freaks" are wallowing in ignorance.

a **Are there any aspects about TFL 44 you would like to know more about?**no response

b **If "Yes", what would you like to know more about?**

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 8
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 1
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Better utilization of space.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Technical P P
- 11 **Which city or town do you live in or live close to?** Port Alberni
- 12 **In which sector are you employed?** Retired Pulp Paper
- 13 **Age:** Over 55
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 100

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

This Plan is a take off on the plans H.R. MacMillan and my brother Angus MacBean originated long before there was a TFL 44

2. Please state and explain what you consider to be the most important value of the forest?

To be utilized by wood processing corporations for a wide range of products.

- 3a. Do you have any concerns about logging on TFL 44? No
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.
- 3c. If "No", would you please explain why you have no concerns.

Not as carried out by MB Limited.

What concerns, if any, do you feel were addressed in this open house?

4. No comments
5. What, if anything, did you learn from this open house?
6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes
practices

Yes, if you can endure the foolish thinking of those opposed to forest
as carried out by MB.

- a Are there any aspects about TFL 44 you would like to know more about? No

- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** Yes
- 8e **All old-growth forests should be preserved.** 1
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 5
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Attack your opponents who remind me of the student Christian movement U. of B. dirty stinkers.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work**

11 **Which city or town do you live in or live close to?** Victoria

12 **In which sector are you employed?** Retired

13 **Age:** Over 55

14 **Sex:** Male

Public Response - Spring 1995

Response #: 108

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL # 44?
2. Please state and explain what you consider to be the most important value of the forest?
- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.
- See Appendix V additional responses.
- 3c. If "No", would you please explain why you have no concerns.
4. What concerns, if any, do you feel were addressed in this open house?
5. What, if anything, did you learn from this open house?
6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.
- no response
- a Are there any aspects about TFL 44 you would like to know more about?no response
- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a Forests are precious ecosystems. 10

8b Forests are critical economic contributors to British Columbia.

8c Forests provide jobs. 10

8d **Some old-growth forests should be preserved.**

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as** 10
in the Management Plans of a company.

9a **Is there anything else you would like us to address in this**
Management Plan development process? no response

9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Professional

11 **Which city or town do you live in or live close to?** Victoria

12 **In which sector are you employed?** Retired

13 **Age:**

14 **Sex:**

Public Response - Spring 1995

Response #: 109

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL # 44?

Location generally: Clayoquot Sound "issue": MB impact on Vancouver Island economy, etc.

2. Please state and explain what you consider to be the most important value of the forest?

There is more than one important value: a composite of your "goals" P. 3 of newsletter.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Sustainability of forest resources via current logging methods AAC potentials over time.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Of necessity, my attendance was brief hence no comment.

5. What, if anything, did you learn from this open house?

I was very interested in your colour visual of MB interests via TFL 44 TFL 39. I have requested a copy.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes The "manner" is quite inert: rather exclusive in location: but yes, it is N.B. to include the public in some manner.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

Make available coloured visual of TFL 44 with related areas: past production: specific

objectives in production renewal. I am requesting a copy of visual on display re TFL 44 and TFL 39.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.** 10

8c **Forests provide jobs.** 10

8d **Some old-growth forests should be preserved.** 5

8e **All old-growth forests should be preserved.** 5

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Your newsletter is "biblical": what specific info is there on current forest management practices, etc. Cite specifics current and future
To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Professional

11 **Which city or town do you live in or live close to?** Victoria

12 **In which sector are you employed?** Education retired

13 **Age:** Over 55

14 **Sex:** Male

Public Response - Spring 1995

Response #: 111

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

It is one of the more spectacular regions of the globe that requires sensitive land use planning

2. Please state and explain what you consider to be the most important value of the forest?

Maintenance of bio diversity within that, not opposed to multiple use including logging

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Too much lumber removed too rapidly. Mechanization has outstripped political control.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

I have suspicions of whitewash...

5. What, if anything, did you learn from this open house?

Pleasant, eager, pleasing staff.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes The public feels too many decisions affecting large numbers of people are made in the Boardroom where only immediate profit is considered.

- a. Are there any aspects about TFL 44 you would like to know more about? No

- b. If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 6
- 8c **Forests provide jobs.** 4
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 6
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

More emphasis on preservation of biodiversity leave snags, swamps, streams. Currently you homogenize the landscape.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Victoria
- 12 **In which sector are you employed?** Education retired
- 13 **Age:** Over 55
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 125

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL # 44?

Geographic location licence holder, Clayoquot Land Use decision various processes e.g. Scientific Panel, Interim Agreement, etc. History of conflict re Clayoquot area.

2. Please state and explain what you consider to be the most important value of the forest?

The structural and functional complexity of natural forest ecosystems. Whole complex of non timber values.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

My concern is that clearcutting will be the primary silvicultural system. Would like to see more attempts to use retention systems.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

A sincere effort was made to answer my concerns about the relationship between planning by licensee processes such as Scientific Panel Central Region Board.

5. What, if anything, did you learn from this open house?

A sincere effort was made to answer my concerns about the relationship between planning by licensee processes such as Scientific Panel Central Region Board. Apart from that, very little.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Public should be included, but presentation ought to be improved. An oral or video presentation of Plan, after which one could ask questions. There is not time or opportunity to read detailed written presentation.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

Economic considerations: does it make good economic sense to use high quality old growth wood for 2x4s. Wildlife habitat considerations, other than deer winter range.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 4
- 8c **Forests provide jobs.** 8
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Examination of alternative silvicultural systems with analysis of both short term and long term economic and ecological impacts. e.g. Jobs from more labour intensive methods.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Victoria
- 12 **In which sector are you employed?** not employed
- 13 **Age:** 41 55
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 127

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

The boundaries of the proposed cut area, the plans to log it.

2. Please state and explain what you consider to be the most important value of the forest?

The rare and extreme value of a 1,000 year ecosystem that can never be replaced.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Because of the sensitivity and beauty of the area, logging should be halted immediately in the entire area.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

One point of view was expressed concerning this Co.'s plans for the absolute destruction of our land.

5. What, if anything, did you learn from this open house?

That it would be the biggest disaster since Chernobyl to take away the most precious part of our country.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes To show MB that there are many people in this province who care about preserving our national heritage for generations to come.

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

How many jobs would be sustained in balance with the volume of wood cut

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 1
- 8c **Forests provide jobs.** 1
- 8d **Some old-growth forests should be preserved.** 1
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

The number of jobs lost to technology, and how much of our old growth is exported and made into newspapers.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Student
- 11 **Which city or town do you live in or live close to?** Victoria
- 12 **In which sector are you employed?**
- 13 **Age:** 14 18
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 128

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

The boundaries and many of the cutblocks.

2. Please state and explain what you consider to be the most important value of the forest?

Its incredible wealth as a standing, living forest not a butchered mess

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Destruction of salmon streams, heavy erosion and watershed slaughtering.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

It reiterated the large scale massacre that will happen if the area is logged.

5. What, if anything, did you learn from this open house?

That TFL 44 is so wrong greed is foul.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes However, you must be prepared to listen. Over 1000 arrests doesn't tell you anything

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

How many obs will be lost because of clearcutting instead of saved by selective logging

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 6
- 8d **Some old-growth forests should be preserved.** 5
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Clearcuts are costing obs. Create more obs by selective logging and log less trees.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Student
- 11 **Which city or town do you live in or live close to?** Victoria
- 12 **In which sector are you employed?**
- 13 **Age:** 14 18
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 129

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

I work in a forestry related area I know the basic ways a TFL contract works.

2. Please state and explain what you consider to be the most important value of the forest?

That it is maintained in an integrated continuous form.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Practice of clearcutting.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Clayoquot decision was well covered.

5. What, if anything, did you learn from this open house?

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes But it should occur much earlier in the process as well, viable options should be listened to.

- a. Are there any aspects about TFL 44 you would like to know more about? Yes

- b. If "Yes", what would you like to know more about?

Why isn't eco forestry or labour intensive selective harvesting being considered. Why are you only planning 20 years ahead rather than 200 years

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.** 10

8c **Forests provide jobs.** 10

8d **Some old-growth forests should be preserved.** 1

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Eco forestry practices.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Student

11 **Which city or town do you live in or live close to?** Victoria

12 **In which sector are you employed?**

13 **Age:** 19 25

14 **Sex:** irrelevant

Public Response - Spring 1995

Response #: 130

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

TFL 44 includes Carmanah, Walbran and Clayoquot Sound.

2. Please state and explain what you consider to be the most important value of the forest?

The forest is an important ecosystem providing oxygen and life for birds, animals and plant species

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

I want to see the temperate rain forest of Clayoquot Sound protected.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

I was pleased to see the comments on sheets of paper on the wall.

5. What, if anything, did you learn from this open house?

I learned about the different types of logging proposed for certain areas.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Most of the forests of B.C. are on Crown land, supposedly owned by the people, so people should have a say.

a Are there any aspects about TFL 44 you would like to know more about? No

b If "Yes", what would you like to know more about?

I want to see more temperate rain forests protected. Many plants contain important medicinal properties which should be used. Many are natural antibiotics.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 5
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

More temperate rainforests should be protected for recreational use.
To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Housewife
- 11 **Which city or town do you live in or live close to?** Victoria
- 12 **In which sector are you employed?**
- 13 **Age:** Over 55
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 132

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Clayoquot Sound issues.

2. Please state and explain what you consider to be the most important value of the forest?

Public asset must be used and made available to all users.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Clayoquot Sound. Windsurfing Nitinat Lake.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

5. What, if anything, did you learn from this open house?

Something about the process, little about results.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Only meaningful if public interest not government has a stake.

- a. Are there any aspects about TFL 44 you would like to know more about? Yes

- b. If "Yes", what would you like to know more about?

Future of Nitinat Lake regarding camping for windsurfing.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 8
- 8b **Forests are critical economic contributors to British Columbia.** 8
- 8c **Forests provide jobs.** 5
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 8
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Field site visits with stakeholders Nitinat Lake.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Victoria
- 12 **In which sector are you employed?** Consulting Business
- 13 **Age:** 41 55
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 133

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

That it covered a huge area of land on Vancouver Island. Too many large clearcuts damage to streams

2. Please state and explain what you consider to be the most important value of the forest?

Health of the planet therefore sustainability is essential what is left of old growth should be untouched because not enough research has taken place in these areas. Tourism.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Logging old growth trees sensitive trees which are especially badly damaged by logging.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

That the logging companies are not responsibly looking after our forests. Companies are not responding.

5. What, if anything, did you learn from this open house?

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes I think there needs to be more community involvement because Crown land theoretically belongs to the people.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

Maps explaining when different areas are going to be cut and in combination with other logging companies, how this will leave Vancouver Island looking in the long term.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.** 5

8c **Forests provide jobs.**

8d **Some old-growth forests should be preserved.** 1

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Protection for recreation areas, salmon streams.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Housewife

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?**

13 **Age:** 26 40

14 **Sex:** Female

Public Response - Spring 1995

Response #: 134

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

It's a tree farm licence huge given to a company to cut timber on Crown land.

2. Please state and explain what you consider to be the most important value of the forest?

Keeping us alive i.e. climate, water cycles, bio diversity, cleaning the air.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Old growth coastal rain forest any areas damaged e.g. streams.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Many concerns were stated, essentially logging companies don't manage for other forest values.

5. What, if anything, did you learn from this open house?

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Crown land does belong to the people, so it is appropriate to have public input.

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

The ecology flora/fauna, etc. of the forest ecosystem.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.**

8c **Forests provide jobs.**

8d **Some old-growth forests should be preserved.** 10

8e **All old-growth forests should be preserved.** 9

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

The assumption that the forest is there to provide products for us only, and the assumption that humans can create forests better than nature.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Clerical

11 **Which city or town do you live in or live close to?** Victoria

12 **In which sector are you employed?** Education

13 **Age:** 26 40

14 **Sex:** Female

Public Response - Spring 1995

Response #: 138

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

This area contains some of the last best temperate old growth forests in the world.

2. Please state and explain what you consider to be the most important value of the forest?

Sustainability of one of the world's endangered ecosystems.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Primitive clearcutting techniques that destroy the delicate ecosystem.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

MB is at least willing to consider alternative methods of logging other than clearcutting.

5. What, if anything, did you learn from this open house?

MB is no longer able to "cut and run" in former clandestine fashion.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes TFLs belong to the BC public therefore our opinions must be taken into account.

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

Why didn't any of the staff present know anything about the well publicized slides in the Bulmer Creek area

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.**
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

A credible thorough commitment to the integration of economic and ecological principles.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Victoria
- 12 **In which sector are you employed?** Public Service
- 13 **Age:** 41 55
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 139

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

That the Carmanah, Walbran and Clayoquot areas are within its boundaries

2. Please state and explain what you consider to be the most important value of the forest?

Saving what is left of the old growth forest as well as preserving what wildlife is left

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

That the boundary areas to designated parks be left nearly intact otherwise blowdown of park trees.

3c. If "No", would you please explain why you have no concerns.

Impossible not to have some concerns. Hopefully Clayoquot will be handled with care.

4. What concerns, if any, do you feel were addressed in this open house?

Putting concerns on paper on the wall. Good.

5. What, if anything, did you learn from this open house?

That Clayoquot is an area of special concern

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Greater public input in public Crown lands allows for opinions to be expressed/heard open dialogue less likely to have angry demonstrators.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

Why MB has so much power/weight involved in decision making of such an incredible area of forested land.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.**

8c **Forests provide jobs.** 6

8d **Some old-growth forests should be preserved.**

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Tourism if areas are preserved. Modern techniques of forestry put workers out of ob
To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Self employed writer

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?** Performing Arts

13 **Age:** 41 55

14 **Sex:** Male

Public Response - Spring 1995

Response #: 144

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

I know that this area contains the largest contiguous section of coastal temperate rain forest left in our hemisphere.

2. Please state and explain what you consider to be the most important value of the forest?

Ecosystem integrity and natural heritage.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

I believe all contiguous areas of old growth in Clayoquot Sound e.g. Clayoquot Valley, Ursus, Bulson should be preserved.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

5. What, if anything, did you learn from this open house?

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

No I would like to see some form of public veto power arising out of our input.

- a Are there any aspects about TFL 44 you would like to know more about? Yes

- b If "Yes", what would you like to know more about?

I am interested in your claims that clearcutting mimics natural processes.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.**

8b **Forests are critical economic contributors to British Columbia.** 5

8c **Forests provide jobs.** 5

8d **Some old-growth forests should be preserved.** 10

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Canada's compliance or non compliance with the Biodiversity Convention on clearcutting.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Student

11 **Which city or town do you live in or live close to?** Victoria

12 **In which sector are you employed?** Arts

13 **Age:** 19 25

14 **Sex:** Male

Public Response - Spring 1995

Response #: 145

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

I know the approximate area that Clayoquot was in it. I am a fisherman so I've seen the clearcuts.

2. Please state and explain what you consider to be the most important value of the forest?

Sustainability

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Yes, salmon habitat. The large clearcuts I see from the ocean.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

It looks like MB is trying to plan out the future better but more has to be done.

5. What, if anything, did you learn from this open house?

MB has control over a lot of land.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes I think control of the public resources should not be in the hands of a few people.

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

What, if anything, is being done to restore fish habitat

Thinking about forest harvesting and management, please indicate, on a scale of 1 to

10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 1
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

I am concerned that the figures for sustainable yield could be wrong.
To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Commercial fisherman
- 11 **Which city or town do you live in or live close to?** Victoria
- 12 **In which sector are you employed?** Fishing
- 13 **Age:** 41 55
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 147

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?
- General history.
2. Please state and explain what you consider to be the most important value of the forest?
- Combo of values.
- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.
- Logging through streambeds. Clearcuts too large.
- 3c. If "No", would you please explain why you have no concerns.
4. What concerns, if any, do you feel were addressed in this open house?
- None apparent on surface, just platitudes plaques.
5. What, if anything, did you learn from this open house?
- MB is in it mainly for money.
6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.
- Yes A ray of hope.
- a. Are there any aspects about TFL 44 you would like to know more about? Yes
- b. If "Yes", what would you like to know more about?
- Logging styles/eco values.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 8
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Real involvement not just a few lower officials.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work**

11 **Which city or town do you live in or live close to?** Victoria

12 **In which sector are you employed?** Media

13 **Age:** 41 55

14 **Sex:** Male

Public Response - Spring 1995

Response #: 152

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Familiar with Nitinat Lake Rec. Site 88 18 , Great Central Lake area, aware of large size of TFL 44.

2. Please state and explain what you consider to be the most important value of the forest?

Natural ecosystem. Sustainable natural resource.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Keep the logged patches small enough to avoid erosion.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Windsurfers concerns for continued open access to Rec. Site 88 18 area potential additional access via DL150.

5. What, if anything, did you learn from this open house?

There may be a possibility of additional Nitinat access if joint planning effort is made involving organized windsurfing group, MB MoF.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes
public Recreational users of land in TFLs are not clear about how the forest companies Provincial Government interact re recreational users. The values an opportunity to make their values/suggestions known.

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

Possibility/procedure of getting additional Nitinat access via DL150 next to Rec. Site 88 18.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.**

8b **Forests are critical economic contributors to British Columbia.** 10

8c **Forests provide jobs.** 10

8d **Some old-growth forests should be preserved.** 9

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** no response

9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Technical

11 **Which city or town do you live in or live close to?** Victoria

12 **In which sector are you employed?** Research

13 **Age:** 41 55

14 **Sex:** Male

Public Response - Spring 1995

Response #: 153

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Approx. boundaries, basic purpose rights of the holder of the licence.

2. Please state and explain what you consider to be the most important value of the forest?

Extremely important part of life chain, integral part of habitat for all life forms.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Lack of trust in the management responsibility for forestry methods, particularly clearcutting.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

None, but the Open House provided me with much more info about TFL 44.

5. What, if anything, did you learn from this open house?

True size of TFL 44, inclusion of highly sensitive areas within TFL 44 e.g. Clayoquot Sound

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Provides forum for discussion and opinions on forestry practices, rational or otherwise.

- a. Are there any aspects about TFL 44 you would like to know more about? Yes

- b. If "Yes", what would you like to know more about?

Recreational opportunities access within, particularly plans for Nitinat campsite being a windsurfer .

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.**

8c **Forests provide jobs.**

8d **Some old-growth forests should be preserved.** 10

8e **All old-growth forests should be preserved.** 4

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 8

9a **Is there anything else you would like us to address in this Management Plan development process?** No

9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Technical

11 **Which city or town do you live in or live close to?** Victoria

12 **In which sector are you employed?** Engineering

13 **Age:** 26 40

14 **Sex:** Male

Public Response - Spring 1995

Response #: 157

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Area based tenure on Crown land stretching from Walbran to Clayoquot Sound

2. Please state and explain what you consider to be the most important value of the forest?

Bio diversity and old growth.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Clearcutting poor harvest practices. Clayoquot Clayoquot River, Ursus, Flores Isl., Meares Isl., Sydney, Upper Bulson, Walbran, Klanawa, Nahmint, Taylor, Barclay Sound.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

5. What, if anything, did you learn from this open house?

New computer graphics, your better maps forest cover/cutblocks need to be made available to the public.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes I desire a more complete explanation all the maps and proposed cutting plans displayed on the walls would be better.

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

High volume old growth stands, forest cover maps showing volume

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 9
- 8c **Forests provide jobs.** 8
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Better maps of cutblock plans sites, year where real alternative logging will take place.
MB's commitment to maintain employment.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Victoria
- 12 **In which sector are you employed?** Public interest group
- 13 **Age:** 41 55
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 163

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Tenure controlled by MB encompassing Clayoquot Sound south to the Walbran area.

2. Please state and explain what you consider to be the most important value of the forest?

Bio diversity and the complex structure of an old growth ecosystem.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Extremely poor logging practices by MB even your new "alternative" plots of patch retention, etc., leave much to be desired. Clearcutting is not an acceptable forest practice. Walbran, Clayoquot, Nahmint, Meares Island.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

5. What, if anything, did you learn from this open house?

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Crown land is public land and the public has a duty and right to ensure these lands are properly managed.

- a. Are there any aspects about TFL 44 you would like to know more about? Yes

- b. If "Yes", what would you like to know more about?

I would like the maps to be more easily displayed.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 9
- 8c **Forests provide jobs.** 8
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.**
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?**
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Victoria
- 12 **In which sector are you employed?** Social Services
- 13 **Age:** 19 25
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 177

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

It contains some of the most incredible temperate rain forest remaining on Vancouver Island.

2. Please state and explain what you consider to be the most important value of the forest?

Biological diversity, wildlife habitat, salmon habitat, water quality, social economic values that respect the above. i.e. Not clearcutting.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

AAC levels, continued clearcutting, helicopter highgrading, old growth liquidation.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Virtually none not to the fault of personnel.

5. What, if anything, did you learn from this open house?

That despite Government forest industry propaganda, it's business as usual in the woods.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes But I do not feel the public's input is addressed or incorporated or even welcomed. But it's good PR.

- a. Are there any aspects about TFL 44 you would like to know more about? Yes

- b. If "Yes", what would you like to know more about?

Any plans to incorporate sustainable, selective logging the incorporation of forest integrity.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 8
- 8c **Forests provide jobs.** 1
- 8d **Some old-growth forests should be preserved.**
- 8e **All old-growth forests should be preserved.** 9
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Additional compliance, the CORE Act, Land Use charter and the UN Biodiversity Convention.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Victoria
- 12 **In which sector are you employed?** Forestry
- 13 **Age:** 26 40
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 201

- 1a. Did you know anything about TFL 44 before this meeting? No
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?
2. Please state and explain what you consider to be the most important value of the forest?

Intrinsic value, bio diversity, etc.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Will re growth be monitored as effectively as past efforts

- 3c. If "No", would you please explain why you have no concerns.
4. What concerns, if any, do you feel were addressed in this open house?
5. What, if anything, did you learn from this open house?

Basic issues involved, geography

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes They have to live with the consequences of deforestation.

- a Are there any aspects about TFL 44 you would like to know more about? Yes
- b If "Yes", what would you like to know more about?

Future plans.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 5
- 8c **Forests provide jobs.** 3
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 6
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**
- Environmental impacts need to be addressed in greater detail.
To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:
- 10 **Your work** Graduate
- 11 **Which city or town do you live in or live close to?** Richmond
- 12 **In which sector are you employed?** Environmental Management
- 13 **Age:** 19 25
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 210

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?
- History of licence and poor forest management.
2. Please state and explain what you consider to be the most important value of the forest?
- Its role in ecosystem.
- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.
- Concerned over any and all clearcutting.
- 3c. If "No", would you please explain why you have no concerns.
4. What concerns, if any, do you feel were addressed in this open house?
- None.
5. What, if anything, did you learn from this open house?
- That MB has no real commitment to public consultation.
6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.
- No Because this is just an exercise in public relations there is no intention of listening to the public.
- a Are there any aspects about TFL 44 you would like to know more about?no response
- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 3
- 8c **Forests provide jobs.** 2
- 8d **Some old-growth forests should be preserved.**
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** no response
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** West Vancouver
- 12 **In which sector are you employed?** Media
- 13 **Age:** 41 55
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 216

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

I have been going to Clayoquot Sound for recreation for 25 years.

2. Please state and explain what you consider to be the most important value of the forest?

The ancient forests are an irreplaceable asset with many values i.e. heritage, wildlife, etc.

3a. Do you have any concerns about logging on TFL 44? Yes

3b If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

I am concerned about the failure to leave large unfragmented watersheds. Upper Bulson Ursus watershed should be left untouched, as well as Carmanah and Walbran

3c If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

None.

5. What, if anything, did you learn from this open house?

I learned you are liquidating all valley bottom old growth.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes The public should have the right to study your plans before any approval.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

I would like to buy copies of your forest cover maps.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 5
- 8c **Forests provide jobs.** 6
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Detailed wildlife studies full ecological assessment.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** West Vancouver
- 12 **In which sector are you employed?** Lawyer
- 13 **Age:** 26 40
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 224

- 1a. Did you know anything about TFL 44 before this meeting? No
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?
2. Please state and explain what you consider to be the most important value of the forest?

Forests contribute to the health of the planet very important.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

I would like to see still more areas protected.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

5. What, if anything, did you learn from this open house?

That MB says it has a sustainable Management Plan for TFL 44.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes

- a. Are there any aspects about TFL 44 you would like to know more about? Yes

- b. If "Yes", what would you like to know more about?

There was not enough written material available.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a Forests are precious ecosystems.

8b Forests are critical economic contributors to British Columbia.

8c Forests provide jobs.

8d Some old-growth forests should be preserved.

8e All old-growth forests should be preserved.

8f The public should be involved in forest planning, such as
in the Management Plans of a company.

9a Is there anything else you would like us to address in this
Management Plan development process? no response

9b If "Yes", please tell us what topics or points you would like us to address.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 Your work

11 Which city or town do you live in or live close to? Vancouver

12 In which sector are you employed?

13 Age:

14 Sex:

Public Response - Spring 1995

Response #: 226

1a. **Did you know anything about TFL 44 before this meeting?** Yes

1b. **If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?**

Vancouver Island, including Clayoquot Sound 25 year licence to log given to MB.

2. **Please state and explain what you consider to be the most important value of the forest?**

Living ecosystem interrelated life animals, plants, water, air, soil human inspiration, health perspective.

3a. **Do you have any concerns about logging on TFL 44?** Yes

3b. **If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.**

Clearcutting in Clayoquot Sound. Keep intact watersheds. Use selective logging.

3c. **If "No", would you please explain why you have no concerns.**

4. **What concerns, if any, do you feel were addressed in this open house?**

This place doesn't feel accessible to public. How about public libraries

5. **What, if anything, did you learn from this open house?**

MB has nice PR people. 25 year licence has 5 year plans.

6. **Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.**

Yes Include the public but not just PR type. Public needs more information to be able to say "preserve wilderness and sustain the forest".

a **Are there any aspects about TFL 44 you would like to know more about?** Yes

b **If "Yes", what would you like to know more about?**

What kind of cutting is planned Road building in sensitive areas. What research into species of wildlife and flora

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.**

8c **Forests provide jobs.**

8d **Some old-growth forests should be preserved.** 8

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Employment retraining, Company responsibility for creating new jobs through new activities

i.e. recycling plants

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Professional

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?** Clergy

13 **Age:** 41 55

14 **Sex:** Female

Public Response - Spring 1995

Response #: 227

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

It covers Clayoquot Sound, Bamfield, Port Alberni, Kennedy Lake. It's up for renewal.

2. Please state and explain what you consider to be the most important value of the forest?

Itself. It is a living ecosystem that supports vast amounts of life, including ours.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Clearcut logging will kill every species in the clearcut the mammals will leave, the canopy ecosystem is destroyed and the 1000 year forests will never exist again because you will kill them again.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

None. I feel you have made a facade of addressing concerns because you continue to log Clayoquot Sound unsustainably in spite of obvious public disapproval.

5. What, if anything, did you learn from this open house?

I learned that you are willing to do anything to protect your public image and that you have no idea what a living forest is.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes I feel it is useful and I pray that you actually do implement some of my suggestions, but I am not holding my breath. You are profit oriented only.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

I want to know when you will stop killing it over and over again

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.**

8c **Forests provide jobs.**

8d **Some old-growth forests should be preserved.**

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

I want you to try and envision a forest that is alive and supports the life of the planet rather than a crop for profit.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Student

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?** Education

13 **Age:**

14 **Sex:** Male

Public Response - Spring 1995

Response #: 230

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

I have some understanding of the method of tree farm licencing and I know the area.

2. Please state and explain what you consider to be the most important value of the forest?

The forest itself has intrinsic value the diversity of species rarity of old growth ecosystem. Also has great cultural value.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Because clearcutting has proven to be massively destructive to the environment economically unsustainable the native people and public have not been sufficiently consulted.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

The information here was much of what I have already heard. A great deal of rhetoric and not a lot of effort to address larger issues.

5. What, if anything, did you learn from this open house?

That there may in fact be a desire for public consultation but it is not publicized or made accessible enough to be useful. What happens as a result of our opinions Does anything change

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Yes, but I do not feel public consultation is being done on nearly the scale necessary. Very few people knew this Open House was happening. This is public land

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

When will a REAL public consultation negotiation process begin When will logging on public lands be in the hands of the community instead of corporations.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.** 3

8c **Forests provide jobs.** 2

8d **Some old-growth forests should be preserved.**

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

What actions will be taken as a result of this process Who is it including as the public when it seems so few people are told.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Student

11 **Which city or town do you live in or live close to?** West Vancouver

12 **In which sector are you employed?**

13 **Age:** 19 25

14 **Sex:** Female

Public Response - Spring 1995

Response #: 231

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

I've hiked, camped, done research and lived in the Vancouver Island forests

2. Please state and explain what you consider to be the most important value of the forest?

It exists for its own sake, independent of any benefit to humans. Evolution must continue along its natural path: bio diversity

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Get the hell out of the forest, you greedy, selfish, scumsucking trash

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

You are fooling no one, this means war

5. What, if anything, did you learn from this open house?

I learned what propaganda you are spewing to the public.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

No It's all lies and public relations BS.

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

Where you are logging specifically.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a Forests are precious ecosystems. 10

8b Forests are critical economic contributors to British Columbia.

8c Forests provide jobs.

8d Some old-growth forests should be preserved.

8e All old-growth forests should be preserved. 10

8f The public should be involved in forest planning, such as
in the Management Plans of a company.

9a Is there anything else you would like us to address in this
Management Plan development process? Yes

9b If "Yes", please tell us what topics or points you would like us to address.

When are you going to get out of the forests

To give us a better idea of the background of people answering this questionnaire, we would
appreciate if you would answer the following questions:

10 Your work Biologist

11 Which city or town do you live in or live close to? Tofino

12 In which sector are you employed? Education

13 Age: 19 25

14 Sex:

Public Response - Spring 1995

Response #: 233

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

TFL 44 owned by MB threatens a delicate, pristine ecosystem threatens old growth forests in Clayoquot Sound.

2. Please state and explain what you consider to be the most important value of the forest?

All living creatures have their own interest value animals, plants, insects, molds, fungi, birds, reptiles, etc.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Destruction of pristine watersheds by building roads in Clayoquot Sound logging of old growth trees, older than our grandparents grandparents.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

You looked at what humans can gain from the areas in question but humans are only one of 30 million species.

5. What, if anything, did you learn from this open house?

That MB has very little regard for the inherent value of every living thing.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes You are logging OUR Earth, too. Once the current executives of MB are gone, we will have to deal with the barren Earth they have left behind.

a Are there any aspects about TFL 44 you would like to know more about? No

b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 1
- 8c **Forests provide jobs.** 1
- 8d **Some old-growth forests should be preserved.**
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

The complete end to old growth logging and road building
To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Student
- 11 **Which city or town do you live in or live close to?** Vancouver
- 12 **In which sector are you employed?**
- 13 **Age:** 19 25
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 236

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Acquired through corruption. Disappearing fast.

2. Please state and explain what you consider to be the most important value of the forest?

It exists. Intrinsic worth.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Loss of bio diversity habitat. Replacement of old growth with cash crop.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

No real ones.

5. What, if anything, did you learn from this open house?

Multinationals are scummier than the shit I stepped on yesterday.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

No By this point it s too late. Input is disregarded.

- a Are there any aspects about TFL 44 you would like to know more about?no response

- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 2
- 8c **Forests provide jobs.** 2
- 8d **Some old-growth forests should be preserved.** 1
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Clearcutting more than ever, less employment than ever
To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Vancouver
- 12 **In which sector are you employed?** Forestry
- 13 **Age:** 26 40
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 237

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

That it's a licence for tree farming on Vancouver Island.

2. Please state and explain what you consider to be the most important value of the forest?

To be a forest. It's intrinsic worth is more important than economic value.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

The continued rape of ecosystems everywhere.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

5. What, if anything, did you learn from this open house?

You've decided to cover your ass by giving "Open Houses" to feed propaganda to Joe Public.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Hopefully, by including the public, we can reduce some damage.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

How we, the public, can stop the granting of public land to corporate bastards like yourselves.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 2
- 8c **Forests provide jobs.** 3
- 8d **Some old-growth forests should be preserved.** 6
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

When you start putting the well being of society as a whole over your bottom line
To give us a better idea of the background of people answering this questionnaire, we would
appreciate if you would answer the following questions:

- 10 **Your work** Student
- 11 **Which city or town do you live in or live close to?** Vancouver
- 12 **In which sector are you employed?** Education
- 13 **Age:** 19 25
- 14 **Sex:**

Public Response - Spring 1995

Response #: 238

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Controversy concerning clear cut methods.

2. Please state and explain what you consider to be the most important value of the forest?

Oxygen production, safety and preservation of entire ecosystem, tourism/tours.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Clayoquot Sound

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

5. What, if anything, did you learn from this open house?

That logging this area is an atrocity

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

No There should be no "Management Plan". The area should be preserved as a wildlife reserve.

- a. Are there any aspects about TFL 44 you would like to know more about? no response

- b. If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.** 10

8c **Forests provide jobs.** 10

8d **Some old-growth forests should be preserved.** 1

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as in the Management Plans of a company.**

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Is taxpayers money going into this project
To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Student

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?**

13 **Age:** 26 40

14 **Sex:** Female

Public Response - Spring 1995

Response #: 241

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Up for renewal most of it already logged Clayoquot included

2. Please state and explain what you consider to be the most important value of the forest?

Long term ecological stability and local economic activity.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Continued clearcutting of temperate rain forest.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

None

5. What, if anything, did you learn from this open house?

The extent of "holdings" MB has in the form of licences

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes

- a. Are there any aspects about TFL 44 you would like to know more about? no response

- b. If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** no response
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Management
- 11 **Which city or town do you live in or live close to?** Vancouver
- 12 **In which sector are you employed?** Tourism
- 13 **Age:** 26 40
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 242

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Too much to really mention here.

2. Please state and explain what you consider to be the most important value of the forest?

Itself and its ability to act as a complex, interdependent eco system.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

We need to conserve large areas of original low elevation coastal forest. TFL 44 is one of these.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Human concerns exclusively. Short term concerns.

5. What, if anything, did you learn from this open house?

MB is good at PR. MB frames the issue in terms of obs and re growable artificial forests

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

No Resource management planning should be done as a co operative, hands on process by the community near the forest government, environmental advocates and logging operators.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

Complete species survey, including interdependencies and level of extirpation risk. Locally

controlled selection cutting systems that maintain structure function of forest.
Considered
as options in plan.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.** 4

8c **Forests provide jobs.** 3

8d **Some old-growth forests should be preserved.**

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Preserving structures function of ecosystem in operating areas. Much less damaging methods with economic analysis. Species local risk research. First Nations planning input.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Professional

11 **Which city or town do you live in or live close to?** Burnaby

12 **In which sector are you employed?** Computing

13 **Age:** 26 40

14 **Sex:** Male

Public Response - Spring 1995

Response #: 244

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

West Coast TFL with a high profile because of Clayoquot Sound.

2. Please state and explain what you consider to be the most important value of the forest?

Multiple use.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Employment will continue to drop due to excess government controls.

3c. If "No", would you please explain why you have no concerns.

Govt. has implemented so many controls that if training is done correctly, enviro damage should be less.

4. What concerns, if any, do you feel were addressed in this open house?

Glad to see MB still in business.

5. What, if anything, did you learn from this open house?

Few public attending mostly self interest groups.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

No You have heard all the self interest group B.S. before no logging anywhere.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

Your tenure map should show the working forest remaining.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.**

8b **Forests are critical economic contributors to British Columbia.** 9

8c **Forests provide jobs.** 10

8d **Some old-growth forests should be preserved.** 10

8e **All old-growth forests should be preserved.** 1

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 1

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Provide logging tours instead of Open Houses. City people need to meet woods workers.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Professional

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?** Forestry

13 **Age:** 41 55

14 **Sex:** Male

Public Response - Spring 1995

Response #: 249

- 1a. Did you know anything about TFL 44 before this meeting? no response
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?
2. Please state and explain what you consider to be the most important value of the forest?
- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.
- Stop clearcutting
- 3c. If "No", would you please explain why you have no concerns.
4. What concerns, if any, do you feel were addressed in this open house?
- None
5. What, if anything, did you learn from this open house?
6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.
- no response
- a Are there any aspects about TFL 44 you would like to know more about?no response
- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a Forests are precious ecosystems.

8b Forests are critical economic contributors to British Columbia.

8c **Forests provide jobs.**

8d **Some old-growth forests should be preserved.**

8e **All old-growth forests should be preserved.**

8f **The public should be involved in forest planning, such as in the Management Plans of a company.**

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Get rid of TFLs.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work**

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?**

13 **Age:**

14 **Sex:**

Public Response - Spring 1995

Response #: 250

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Tree farm licence for total destruction of Clayoquot Sound by MB.

2. Please state and explain what you consider to be the most important value of the forest?

Bio diversity of a complete untouched ecosystem that Mother Nature intended it to be.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Clearcut logging is completely destructive for the sole purpose of greed by multinationals.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

The immensity of TFL 44 is my biggest concern, and my concerns for First Nations people

5. What, if anything, did you learn from this open house?

I learned that MB has little concern for anything but its profit and public image.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes It can be useful if MB listens to and acts on public concerns and does not jeopardize the future of the Earth for money.

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

I would like to know where you are logging and how much you remove everyday.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 3
- 8c **Forests provide jobs.** 3
- 8d **Some old-growth forests should be preserved.**
- 8e **All old-growth forests should be preserved.** 8
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Please use selective logging practices. This will provide more jobs for thousands of years

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Student
- 11 **Which city or town do you live in or live close to?** Vancouver
- 12 **In which sector are you employed?**
- 13 **Age:** 19 25
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 252

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Area of highly valued old growth. Some of last remaining lowland temperate rain forest left in the world. Very rare ecosystem.

2. Please state and explain what you consider to be the most important value of the forest?

Bio diversity genetic diversity ecological values.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Logging is increasingly fragmenting ecosystem. Loss of habitat for animal plant species. Elimination of old growth ecosystem.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

None. TFL 44 should be revoked large areas of TFL 44 preserved the rest handed over to communities tenures, eco forestry.

5. What, if anything, did you learn from this open house?

No real commitment to biological conservation. Alternative silviculture systems ust tokenism.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes If only to give opinions, ideas but the whole process, I believe, is a sham. There is no stopping the corporate agenda. Log till it s gone. Profits first.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

Are you willing to let go of your tenure licence

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 1
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** no response
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Vancouver
- 12 **In which sector are you employed?** Social Services
- 13 **Age:** 26 40
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 254

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

TFL lies within Nu Chah Nath territory. The federal govt. has a fiduciary obligation to protect these lands.

2. Please state and explain what you consider to be the most important value of the forest?

The most important value suggests hierarchy. Many values rank first. The fact that large tracts in that forest remain in their glory is the most important value. Save Clayoquot from clearcutting.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Patchwork logging has not been sustainable in steep terrain, coastal rain forest.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

5. What, if anything, did you learn from this open house?

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

no response

- a. Are there any aspects about TFL 44 you would like to know more about? no response

- b. If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.**

8b **Forests are critical economic contributors to British Columbia.**

8c **Forests provide jobs.**

8d **Some old-growth forests should be preserved.**

8e **All old-growth forests should be preserved.**

8f **The public should be involved in forest planning, such as
in the Management Plans of a company.**

9a **Is there anything else you would like us to address in this
Management Plan development process?** no response

9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work**

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?**

13 **Age:**

14 **Sex:**

Public Response - Spring 1995

Response #: 255

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

It is vital to the economy of Port Alberni and Vancouver.

2. Please state and explain what you consider to be the most important value of the forest?

A balance of environmental and economic values.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

That conditions imposed through this process may result in unreasonable AAC reductions and my taxes will go up.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

That the forest is in good hands with the sincere people who are managing MB s holdings.

5. What, if anything, did you learn from this open house?

That there are people trying to do a good ob.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes It gives many people the opportunity to gain understanding of forest management.

a Are there any aspects about TFL 44 you would like to know more about? No

b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.**

8b **Forests are critical economic contributors to British Columbia.** 9

8c **Forests provide jobs.** 9

8d **Some old-growth forests should be preserved.** 10

8e **All old-growth forests should be preserved.** 1

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 8

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Botanical forest modules, signage for FM activities in TFL

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Professional

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?** Forestry

13 **Age:** 41 55

14 **Sex:** Male

Public Response - Spring 1995

Response #: 256

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

It is a large tract of forested NATIVE land in Clayoquot Sound which has been renewed by MB for 25 years.

2. Please state and explain what you consider to be the most important value of the forest?

The forest is a vital component of a healthy ecosystem.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

The forested land is not being fairly/ustly looked at in terms of native urisdiction

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

None

5. What, if anything, did you learn from this open house?

Nothing

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes The public has the right to express concerns over PUBLIC lands as you call it it is Native land as far as I am concerned.

a Are there any aspects about TFL 44 you would like to know more about? No

b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 5
- 8c **Forests provide jobs.** 5
- 8d **Some old-growth forests should be preserved.** 3
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** No
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** North Vancouver
- 12 **In which sector are you employed?** Self employed
- 13 **Age:** 26 40
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 257

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

TFL 44 is on First Nations Land

2. Please state and explain what you consider to be the most important value of the forest?

Maintaining bio diversity and large intact eco systems old growth forests . No clearcutting in TFL 44.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Clearcut logging, patch clearcut logging, logging on steep terrain.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

None

5. What, if anything, did you learn from this open house?

That it's not really an open house in terms of listening to and acting on real public input. It's a corporate sham

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes But the public needs to be included in a real and democratic way, like access to negotiations and public input on TFL renewals, instead of some feeble input after they are signed.

a Are there any aspects about TFL 44 you would like to know more about?no response

b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.**

8c **Forests provide jobs.**

8d **Some old-growth forests should be preserved.**

8e **All old-growth forests should be preserved.**

8f **The public should be involved in forest planning, such as in the Management Plans of a company.**

9a **Is there anything else you would like us to address in this Management Plan development process?** No

9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work**

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?**

13 **Age:**

14 **Sex:**

Public Response - Spring 1995

Response #: 261

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Much of the area being logged in Clayoquot Sound is within TFL 44.

2. Please state and explain what you consider to be the most important value of the forest?

As a "carbon sink" thus clearcutting is one of the greatest contributors to global warming.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

All of Clayoquot Sound this is "specific" because it constitutes a biosphere.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Very little it appears as token public input.

5. What, if anything, did you learn from this open house?

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes The state of the forests affect everyone loggers, fishermen, others the public MUST be included.

- a Are there any aspects about TFL 44 you would like to know more about? No

- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 6
- 8c **Forests provide jobs.** 6
- 8d **Some old-growth forests should be preserved.** 1
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

More important than old growth issues is the honest adoption of eco forestry principles.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Technical
- 11 **Which city or town do you live in or live close to?** Vancouver
- 12 **In which sector are you employed?** Computer consultant
- 13 **Age:** 26 40
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 267

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

It is an agreement between govt. forestry companies which outlines areas to be harvested and conditions of their harvesting.

2. Please state and explain what you consider to be the most important value of the forest?

Its function in retaining and supporting geological, geographical, climatic conditions, and as a wildlife refuge also plant life.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Will the public be made aware of the final result and specific goals of this "public input process"

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Good information and maps provided, a better understanding of the issues involved in TFL 44.

5. What, if anything, did you learn from this open house?

I learned that this type of public involvement is a slow very expensive process.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes But it seems limited in the number of people reached, whereas some of your excellent commercials i.e. the container box TV commercial seen recently was short, effective and reached more people.

a Are there any aspects about TFL 44 you would like to know more about? Yes

b If "Yes", what would you like to know more about?

I d like to know when all this consultation with the public will be finished, when it will be acted upon, will the public be informed about the final version of the plan or agreement.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.** 8

8c **Forests provide jobs.** 8

8d **Some old-growth forests should be preserved.** 8

8e **All old-growth forests should be preserved.** 1

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 4

9a **Is there anything else you would like us to address in this Management Plan development process?** No

9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Professional

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?** Retired

13 **Age:** Over 55

14 **Sex:** Female

Public Response - Spring 1995

Response #: 268

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

TFL 44 is a licence given to a multinational company to destroy EARTH'S last temperate rain forest.

2. Please state and explain what you consider to be the most important value of the forest?

Forests should remain intact for the preservation of wildlife the preservation of this earth.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Clearcutting is the most destructive form of forestry practice.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Clearcutting is the most destructive form of forestry practice.

5. What, if anything, did you learn from this open house?

Yes, your spokespersons lie for you. Clearcutting is the most destructive form of forestry practice.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes
clearcutting I feel that MB has deceived the public in convincing the public that
is OK, because it is not OK.

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

How long are you going to clearcut Until there are no forests left.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.**

8c **Forests provide jobs.**

8d **Some old-growth forests should be preserved.**

8e **All old-growth forests should be preserved.** 10

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Stop clearcutting Clayoquot Sound.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Professional protector of the last temperate rain forest

11 **Which city or town do you live in or live close to?**

12 **In which sector are you employed?** Education Educating the public about destr

13 **Age:** 26 40

14 **Sex:** Female

Public Response - Spring 1995

Response #: 269

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?
- It provided raw material for Port Alberni's sawmills pulp/paper mill.
2. Please state and explain what you consider to be the most important value of the forest?
- A harvestable crop and a recreational area wildlife habitat.
- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.
- I want continued well planned logging to take place.
- 3c. If "No", would you please explain why you have no concerns.
4. What concerns, if any, do you feel were addressed in this open house?
- All possible concerns were addressed and answered.
5. What, if anything, did you learn from this open house?
- That Port Alberni operations may run out of fibre if an adequate AAC is not maintained.
6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.
- No It is a waste of MB money and talent. The demonstrators outside the hotel were not interested in answers.
- a Are there any aspects about TFL 44 you would like to know more about? Yes
- b If "Yes", what would you like to know more about?
- At the end of all this, will the AAC maintain operations at an adequate level for profitable operation

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.**

8b **Forests are critical economic contributors to British Columbia.** 10

8c **Forests provide jobs.** 8

8d **Some old-growth forests should be preserved.** 8

8e **All old-growth forests should be preserved.** 1

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 1

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Less "public" involvement but more effort through the media.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Management

11 **Which city or town do you live in or live close to?** North Vancouver

12 **In which sector are you employed?** Retired Pulp Paper

13 **Age:** Over 55

14 **Sex:** Male

Public Response - Spring 1995

Response #: 271

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

I received literature on it from MB.

2. Please state and explain what you consider to be the most important value of the forest?

For it to be fully utilized

- 3a. Do you have any concerns about logging on TFL 44? No
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.
- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Keeping the public informed

5. What, if anything, did you learn from this open house?

That MB is doing a good job of keeping the public informed.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes So that the public gets the correct answers.

- a Are there any aspects about TFL 44 you would like to know more about? No

- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 1
- 8e **All old-growth forests should be preserved.** 1
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 3
- 9a **Is there anything else you would like us to address in this Management Plan development process?** No
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Burnaby
- 12 **In which sector are you employed?** Forestry
- 13 **Age:** Over 55
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 272

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Forest lands on Vancouver Island

2. Please state and explain what you consider to be the most important value of the forest?

Green land cover

- 3a. Do you have any concerns about logging on TFL 44? No
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.
- 3c. If "No", would you please explain why you have no concerns.

MB is in business and I believe are trying to act responsibly

4. What concerns, if any, do you feel were addressed in this open house?

Your messages were quite general

5. What, if anything, did you learn from this open house?

Not a great deal

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Positive public response is vital

- a Are there any aspects about TFL 44 you would like to know more about? No

- b If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 8
- 8e **All old-growth forests should be preserved.** 1
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 1
- 9a **Is there anything else you would like us to address in this Management Plan development process?** No
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Clerical
- 11 **Which city or town do you live in or live close to?** Vancouver
- 12 **In which sector are you employed?** Retired For
- 13 **Age:** Over 55
- 14 **Sex:** Female

Public Response - Spring 1995

Response #: 273

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

A tree farm licence that is up for renewal by MB that contains significant old growth forest

2. Please state and explain what you consider to be the most important value of the forest?

Preservation of sufficient ecosystem space that forest ecosystem specifically old growth is able to survive.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Concerned that once old growth forest ecosystem is cut, it won't return for thousands of years if at all. Concerned about poor logging practices.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

5. What, if anything, did you learn from this open house?

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes It is important to accurately gauge public reaction to an issue with more than economic impacts environmental/social.

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

How economically sustainable are harvesting practices

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 8
- 8c **Forests provide jobs.** 8
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 8
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Economic feasibility study of the option of leaving old growth forest section intact i.e. financial cost.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Student
- 11 **Which city or town do you live in or live close to?** Vancouver
- 12 **In which sector are you employed?**
- 13 **Age:** 26 40
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 275

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

Concerns logging on Vancouver Island with much attention of environmental groups.

2. Please state and explain what you consider to be the most important value of the forest?

The most important value of the forest is that it is a sustainable natural resource.

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

The forest must be logged in a way that ensures that it is sustained.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

There was evidence that some desire no logging at all on the Island

5. What, if anything, did you learn from this open house?

Silviculture systems.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes The forest belongs to all people in B.C., so they have a right and an obligation to be informed.

- a. Are there any aspects about TFL 44 you would like to know more about? No

- b. If "Yes", what would you like to know more about?

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 1
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** No
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Technical
- 11 **Which city or town do you live in or live close to?** New Westminster
- 12 **In which sector are you employed?** Retired Manufacturing
- 13 **Age:** Over 55
- 14 **Sex:** Male

Public Response - Spring 1995

Response #: 276

- 1a. Did you know anything about TFL 44 before this meeting? Yes
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?

I've done videos on bio diversity at Clayoquot

2. Please state and explain what you consider to be the most important value of the forest?

Lots

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Clearcutting generally re planting species that thrive in new climate/high UV radiation

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Staff were helpful and informative.

5. What, if anything, did you learn from this open house?

Climate change/exotic species info.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Lots of factors are involved in reforestation.

- a. Are there any aspects about TFL 44 you would like to know more about? Yes

- b. If "Yes", what would you like to know more about?

Success of exotic species.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a **Forests are precious ecosystems.** 10

8b **Forests are critical economic contributors to British Columbia.** 10

8c **Forests provide jobs.** 10

8d **Some old-growth forests should be preserved.** 10

8e **All old-growth forests should be preserved.**

8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Plant exotics to see what thrives in new climate.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work** Professional

11 **Which city or town do you live in or live close to?** Victoria

12 **In which sector are you employed?** Law/Government

13 **Age:** 41 55

14 **Sex:** Male

Public Response - Spring 1995

Response #: 278

1a. Did you know anything about TFL 44 before this meeting? Yes

1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL#44?

Contains the best last remaining example of coastal temperate rain forest.

2. Please state and explain what you consider to be the most important value of the forest?

That it exists Intrinsic value to the Earth. As much primary forest as possible must be maintained for the health of all of us beings.

3a. Do you have any concerns about logging on TFL 44? Yes

3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Clayoquot Sound has the most biomass of any forest and must not be cut anymore. 22 is too much.

3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

Basic management issues, assuming further clearcutting.

5. What, if anything, did you learn from this open house?

About new potential guidelines arising from the Coastal Watershed Assessment.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes Absolutely essential, since it's our land Or more realistically, First Nations land

a. Are there any aspects about TFL 44 you would like to know more about? Yes

b. If "Yes", what would you like to know more about?

TFL When clearcutting will end in the TFL, when no more old growth will be cut, and when the will be transferred to the people out of MB's corporate control

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.**
- 8e **All old-growth forests should be preserved.** 9
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10
- 9a **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b **If "Yes", please tell us what topics or points you would like us to address.**

Aboriginal concerns and input.

To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

10 **Your work**

11 **Which city or town do you live in or live close to?** Vancouver

12 **In which sector are you employed?** Education

13 **Age:** 26 40

14 **Sex:** Male

Public Response - Spring 1995

Response #: 280

- 1a. Did you know anything about TFL 44 before this meeting? No
- 1b. If you answered "Yes" to question 1a., would you briefly describe what you know about TFL #44?
2. Please state and explain what you consider to be the most important value of the forest?

Eco system/wildlife habitat

- 3a. Do you have any concerns about logging on TFL 44? Yes
- 3b. If "Yes", what concerns do you have? Please mention any specific geographic areas if applicable.

Clearcutting irreversible damage and change to the environment.

- 3c. If "No", would you please explain why you have no concerns.

4. What concerns, if any, do you feel were addressed in this open house?

5. What, if anything, did you learn from this open house?

Geographic boundaries of tree licence.

6. Do you feel it is useful to include the public in this manner during the development of the Management Plan? Please explain your answer.

Yes It is good to know the public's concerns before a project goes ahead.

- a. Are there any aspects about TFL 44 you would like to know more about? Yes

- b. If "Yes", what would you like to know more about?

When exactly certain blocks will be harvested and if they are to be clearcut.

Thinking about forest harvesting and management, please indicate, on a scale of 1 to 10, whether you agree or disagree with the following statements.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a **Forests are precious ecosystems.** 10
- 8b **Forests are critical economic contributors to British Columbia.** 10
- 8c **Forests provide jobs.** 10
- 8d **Some old-growth forests should be preserved.** 10
- 8e **All old-growth forests should be preserved.** 10
- 8f **The public should be involved in forest planning, such as in the Management Plans of a company.** 10

9a **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b **If "Yes", please tell us what topics or points you would like us to address.**

Forestry practices methods of logging proposals for value added logging.
To give us a better idea of the background of people answering this questionnaire, we would appreciate if you would answer the following questions:

- 10 **Your work** Professional
- 11 **Which city or town do you live in or live close to?** Vancouver
- 12 **In which sector are you employed?** Urban Land Economics
- 13 **Age:** 26 40
- 14 **Sex:** Female

TFL #44

PUBLIC CONSULTATION PROCESS

REPORT - 1995

APPENDIX V

- Additional responses in comment form from the Consultation Meeting Survey distributed at the Pre-SMOOP Open Houses

STAGE 2

Consultation Survey February 1995

TFL #44 Management Plan
Public Consultation

Additional responses included with the survey conducted in February 1995

Response #46

Re better utilization of space.

On several tables were sets of maps.

One set had sections: Biodiversity Study
 Heavy and Light Netdown maps
 20 Year Plan Maps

The whole set was tied up by a group looking at one map Sproat Lake Area , possibly discussing hunting areas to which I don't object, but it tied up the rest of the folio.

With the space available in the room there should have been more tables so the folio could be split up certainly not a page per table but a folio of the site under discussion should have been split into 4 or 5 sections. There also appeared to be a shortage of identifiable MB forestry personnel to answer questions.

Response #108

Tree farm licences and the export of B.C. raw logs must be banned by our provincial government

Control of our old growth forests must be taken from a handful of multinationals concerned solely with profit and vested in the hands of responsible B.C. citizens for the sole benefit of B.C. to provide remanufacturing jobs here and for preservation for the benefit of present and future generations

Logging must be completely banned in crown jewels" quote former M.P. Jim Fulton like Clayoquot Sound We simply can't afford to lose such irreplaceable 1,000 year old plus legacies.

Wildlife habitat must be protected by law We can't afford to lose any more of our endangered species and life forms not yet discovered, to the ravages of clearcut logging.

Response #125

I find this form quite unsatisfactory.

On Page 1, there is not sufficient space to properly answer questions.

On page 2, **Question 8** rating scale there should be an opportunity to justify or rationalize one's rating. For example:

d] some old growth forests should be preserved

e] all old growth forests should be preserved.

Ideally, I would like to see all remaining old growth forests left unlogged. However, since this will not happen, I would like to see logging techniques which retain the structural components of old growth while accommodating some resource extraction. Some old growth should be fully protected in core reserves.

The questions seem geared to contrast jobs versus preservation. There are jobs which derive from preservation. Also protected areas are not merely constraints on timber extraction, but are also essential living laboratories to further scientific understanding of natural forests. Protected reserves are the control against which to measure success of efforts to maintain biodiversity, wildlife populations, etc., in managed forests."

Note: Having attended several MacMillan Bloedel Open Houses, I would like to comment that some staff are extremely helpful, while others seem to regard questions and the public as a nuisance. Mike Hooper, I think is exceptionally good. He is very helpful and one can have a good discussion of values and issues with him.

Response #128

To Whom it May Concern at MacMillan Bloedel

I am a concerned student and Canadian citizen who is horrified by the large scale destruction I have seen by your clearcuts. How do you justify RAPING a forest of everything for personal, short term profit. A forest that has stood for thousands of years deserves more respect than to be slaughtered, never to grow again. When you re-forest your clearcuts, you are creating a tree farm, not another forest. This is cultivation, not rejuvenation. And how do you justify the destruction of many salmon streams, due to erosion because of your logging. Your thoughtless butchering of the forest is not only an environmental hazard, but also a social one. Clearcuts cost jobs. 2,000 jobs in forestry were lost between 1981 and 1991 in B.C. a statistical fact yet clearcutting continues.

Please consider the alternatives

Bronwyn Preice, Victoria

Response #130

Why can't we enjoy the beauty and benefits of the rain forest and why aren't people who make a living through tourism just as important as loggers and millworkers. We have far too many mills in B.C.

I feel that the temperate rain forest of B.C. should not be logged anymore. The temperate rain forest is essential for the health of the planet and is an essential habitat for many species of birds, animals, plants and other species. No environmental studies are done before an area is logged. I really wonder why we have registered professional foresters as they seem to encourage the liquidation of the rain forest and don't appear to do anything to protect plant, animal or bird species. In other words, they don't protect biodiversity diversity. Weather changes are happening and salmon are disappearing. We must protect our rain forest before it's too late. Stop raw log exports. Make more effort to do more with second growth trees as they do in Washington and Oregon.

TFL #44

PUBLIC CONSULTATION PROCESS

AUGUST-OCTOBER 1997

APPENDIX IX

Advertisements for :

- Open Houses to review the Draft Management Plan No. 3

STAGE 4

TFL #44

PUBLIC CONSULTATION PROCESS

REPORT - AUGUST 1997

APPENDIX XIV

- Summary of comments/input made to MB host attendees by public attendees at Open Houses to Review Draft Management Plan No. 3 Plan

STAGE 4

<p>Points We've Heard Today August 25, 1997 Tofino, BC</p>

Questionnaires—101-2, 104-5, 107, 109 Attendees—16

Paul Chapman, Peter Kofed, Neil Malbon, John Mather, Mike Hooper

- ➡➡ Should hold some open houses in malls [where available].
- ➡➡ What happens to timber cut from TFL44? i.e. % exported vs. % manufactured in B.C.?
- ➡➡ With reference to "manufactured in B.C.", how "value-added" is it?
- ➡➡ Any estimate on how current logging practices impact on other sectors of our economy? i.e. tourism, fisheries. Has anyone put a dollar value on this impact?
- ➡➡ Will the creek along the dump site at Ucluelet be re-habilitated for chums & coho?
- ➡➡ Don't harvest any more old growth.
- ➡➡ Protect the soil from erosion and nutrient depletion.
- ➡➡ Increase public education

Points We've Heard Today
August 26, 1997
Port Alberni, BC

Questionnaires—200, 202-3 Attendees—20

Peter Klofed, Neil Malbon, John Mather, Rick Player, Mike Hooper

- ➡ Employment, jobs - where, when?
- ➡ Simplify the management process so all people can easily understand it.
- ➡ More signs - i.e. Stand ages and harvesting.
- ➡ Need to ensure there are reasonable economic benefits [jobs].
- ➡ MB should promote more of the positive projects they are currently involved with.

Points We've Heard Today
August 27, 1997
Victoria, BC

Questionnaires—309, 311, 314, 319 Attendees—50

**Ray Bartam, Mike Davis, Glen Dursworth, Dennis Fitzgerald, Peter Klofed,
John Mather, Mike Hooper**

- ➡➡ Has the AAC in Klanawa and other divisions outside Clayoquot been increased to compensate for Clayoquot?
- ➡➡ Have we considered endangered species?
 - ω Marbled Murrelet - yes, reserves in place.
 - ω Northern Goshawk - no, surveys underway
- ➡➡ Keep Nahmint old growth reserve as a reserve.
- ➡➡ Eco-forestry techniques must be applied to all significant fragments of old growth outside of reserves. Maintain structure, function and composition.
- ➡➡ What about murrelets?
- ➡➡ What will variable retention look like? Will the retained trees be retained in perpetuity?
 - ➡➡ Natural re-seeding - is this practiced today? . .
 - ➡➡ Why prohibit access to waste resources? *The reduced quality of second-growth wood will provide pulp farms, not quality wood.*
 - ➡➡ Why are millions of cubic meters of yellow cedar stands destroyed or given to staff for firewood?
 - ➡➡ The aerial view of Clayoquot Sound is much different from simulation
 - ➡➡ Why not account for past abuses such as the infamous black hole?

Robin Fells

Points We've Heard Today
August 28, 1997
Duncan, BC

Questionnaires—0 Attendees—60

*Janis Chung, Raelynn Crossley, Peter Koford, John Mather, Shawn McLennan,
Tom Whitfield, Mike Hooper*

- ➡ Do not harvest in Clayoquot Sound.
- ➡ Ensure Alfas are planted
- ➡ Ensure fish habitat is protected.!
- ➡ Does MB plant hardwoods? Yes.
- ➡ The TFL should be turned over to tourism.

More value-added products should be completed. i.e. Parallam™ - more employment.

- ➡ Should review the possibility of transporting logs via train.

<p>Points We've Heard Today October 2, 1997 Bamfield, BC</p>

Questionnaires—4 Attendees—70

Wayne French, Peter Kofied, Mike Hooper

- ➡ Need to maintain old growth and biodiversity.
- ➡ Decrease proposed cutblocks in old growth.
- ➡ Protect small streams - S5 and S6.
- ➡ Increase buffer zones along streams →S1→6.
- ➡ Establish reserve buffer zones along large S1 rivers.
- ➡ Initiate further community involvement. Promote community participation in stream assessment and forest assessment.
- ➡ Make GIS information publicly available.
- ➡ Investigate alternative harvesting strategies, perhaps create more jobs.
- ➡ Value added.

Consider open log markets for local buyers.

TFL #44

PUBLIC CONSULTATION PROCESS

REPORT - AUGUST 1997

APPENDIX XII

- Listing of all Consultation Meeting Survey responses from Open Houses to Review Draft Management Plan No. 3

STAGE 4

Public Response Summer 199

Response : 101

Meeting Date: August 25, 199

Location: Tofino, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** No
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

N/A

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

No response

- 4a. **Do you have any concerns about logging in TFL #44?** No
- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

N/A

- 4c. **If "No", would you please explain why you have no concerns.**

No response

5. **What concerns, if any, do you feel were addressed in this meeting?**

No response

6. **What, if anything, did you learn from the meeting?**

No response

- . **Are there any aspects about TFL #44 you would like to know more about?**No

b. **If "Yes", what would you like to know more about?**

N/A

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

	(1) DISAGREE COMPLETELY	(10) AGREE COMPLETELY
8a. Forests are precious ecosystems		10
8b. Forests are critical economic contributors to B.C.		10
8c. Forests provide jobs.	10	
8d. Some old growth forests should be preserved.		1
8e. All old growth forests should be preserved.		10
8f. The public should be involved in forest planning such as the Management Plans of a forest company.		5
9a. Is there anything else you would like us to address in this Management Plan development process?		No response
9b. If "Yes", please tell us what topics or points you would like us to address.		

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

10a. Your work	Student
10b. Which is the closest major city or town to where you live?	Vancouver, B.C.
10c. In which sector are you employed?	Power Engineering
10d. Age	19 25
10e. Sex	Male

Public Response Summer 199

Response : 102

Meeting Date: August 25, 199

Location: Tofino, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** No
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

N/A

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

No response

- 4a. **Do you have any concerns about logging in TFL #44?** No

- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

N/A

- 4c. **If "No", would you please explain why you have no concerns.**

I don't live here

5. **What concerns, if any, do you feel were addressed in this meeting?**

I don't have any concerns.

6. **What, if anything, did you learn from the meeting?**

Logging, if done correctly, is good.

- . **Are there any aspects about TFL #44 you would like to know more about?**No

- b. **If "Yes", what would you like to know more about?**

N/A

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|---|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | 10 |
| 8c. Forests provide jobs. | 10 | |
| 8d. Some old growth forests should be preserved. | | 10 |
| 8e. All old growth forests should be preserved. | | 1 |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 5 |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | No |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |

N/A

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

- | | |
|--|-------------|
| 10a. Your work | Student |
| 10b. Which is the closest major city or town to where you live? | Trail, B.C. |
| 10c. In which sector are you employed? | |
| 10d. Age | 14 18 |
| 10e. Sex | Male |

Public Response Summer 199

Response : 104

Meeting Date: August 25, 199

Location: Tofino, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** Yes
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

That it's a tenure system granting MB rights to timber on public lands in TFL 44.

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

In TFL, there is old growth temperate rainforest which is a globally rare ecosystem should not be logged.

- 4a. **Do you have any concerns about logging in TFL #44?** Yes

- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

Pristine valleys of Clayoquot Sound Sydney/Clayoquot/Bulson/Ursus are among few remaining large undisturbed old growth ecosystems on Vancouver Island. There is no way to replace these ecosystems once gone therefore logging here is not "sustainable". Old growth is not a renewable resource.

- 4c. **If "No", would you please explain why you have no concerns.**

N/A

5. **What concerns, if any, do you feel were addressed in this meeting?**

Pretty general my concerns are more specific. What does MB plan to cut in next 5 years should bring all your FDPs for the TFL.

6. **What, if anything, did you learn from the meeting?**

Computers make things look pretty Learned difference between TFL and TL.

- . **Are there any aspects about TFL #44 you would like to know more about?** Yes

- b. **If "Yes", what would you like to know more about?**

What efforts are being made to stop relying on old growth and start relying on sustainable turnover on tree farms Secondary manufacturing Where does the timber for TFL 44 go Exports

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

- 8a. **Forests are precious ecosystems** 10
- 8b. **Forests are critical economic contributors to B.C.** 5
- 8c. **Forests provide jobs.** 5
- 8d. **Some old growth forests should be preserved.**
- 8e. **All old growth forests should be preserved.** 10
- 8f. **The public should be involved in forest planning such as the Management Plans of a forest company.** 10
- 9a. **Is there anything else you would like us to address in this Management Plan development process?** Yes
- 9b. **If "Yes", please tell us what topics or points you would like us to address.**

Details of new joint venture. Corporation plans for Northern/Southern Clayoquot Sound.

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

- 10a. **Your work** Varied
- 10b. **Which is the closest major city or town to where you live?** Tofino, B.C.
- 10c. **In which sector are you employed?** Environmental Protection
- 10d. **Age** 26 40
- 10e. **Sex**

Public Response Summer 199

Response : 105

Meeting Date: August 25, 199

Location: Tofino, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** Yes
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

Granted to MB in 1955. Covers close to 1/2 million hectares. 25 year lease/recently renewed.

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

Its intrinsic value as a functioning ecosystem with all its biodiversity. I say this because if its basic functioning is altered, such as conversion to tree farms, all values that can be listed will be affected.

- 4a. **Do you have any concerns about logging in TFL #44?** Yes
- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

Clearcutting or clearcutting with some patches of retention is still being practiced. The current logging method doesn't leave the basic elements of a natural forest intact. It seeks to replace the natural forest with tree plantations.

- 4c. **If "No", would you please explain why you have no concerns.**

N/A

5. **What concerns, if any, do you feel were addressed in this meeting?**

Too general a meeting to get into specific concerns.

6. **What, if anything, did you learn from the meeting?**

Not much. I spend a lot of time on this stuff already and again, the meeting was general.

- . **Are there any aspects about TFL #44 you would like to know more about?** No response

b. If "Yes", what would you like to know more about?

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|--|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | 6 |
| 8c. Forests provide jobs. | 10 | |
| 8d. Some old growth forests should be preserved. | | |
| 8e. All old growth forests should be preserved. | | |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 10 |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | Yes |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |
| The impact on biodiversity, on health of streams and water quality. The economic impact on other economic sectors such as tourism and fisheries. | | |
| To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions: | | |
| 10a. Your work | Technical | |
| 10b. Which is the closest major city or town to where you live? | | Port Alberni, B.C. |
| 10c. In which sector are you employed? | Environmental | |
| 10d. Age | 26 40 | |
| 10e. Sex | | |

Public Response Summer 199

Response : 10

Meeting Date: August 25, 199

Location: Tofino, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** No
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

Ownership, general location, some history.

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

Renewable source of commodities.

- 4a. **Do you have any concerns about logging in TFL #44?** Yes

- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

Logging should be done so as to minimize impacts.

- 4c. **If "No", would you please explain why you have no concerns.**

N/A

5. **What concerns, if any, do you feel were addressed in this meeting?**

I was impressed by the interest level of MB personnel.

6. **What, if anything, did you learn from the meeting?**

The packaging and delivery of the MP was very professional.

- . **Are there any aspects about TFL #44 you would like to know more about?** No response

- b. **If "Yes", what would you like to know more about?**

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|---|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | 10 |
| 8c. Forests provide jobs. | 10 | |
| 8d. Some old growth forests should be preserved. | | 10 |
| 8e. All old growth forests should be preserved. | | 1 |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 9 |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | No |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |
| | N/A | |

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

- | | |
|--|--------------|
| 10a. Your work | Management |
| 10b. Which is the closest major city or town to where you live? | Tofino, B.C. |
| 10c. In which sector are you employed? | Forestry |
| 10d. Age | 41 55 |
| 10e. Sex | Male |

Public Response Summer 199

Response : 109

Meeting Date: August 25, 199

Location: Tofino, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** Yes
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

N/A

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

Animal protection, environmental concern o one .

- 4a. **Do you have any concerns about logging in TFL #44?** Yes

- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

Clearcutting selective logging should be used instead of cutting old growth.

- 4c. **If "No", would you please explain why you have no concerns.**

N/A

5. **What concerns, if any, do you feel were addressed in this meeting?**

No response

6. **What, if anything, did you learn from the meeting?**

No response

- . **Are there any aspects about TFL #44 you would like to know more about?**No response

- b. **If "Yes", what would you like to know more about?**

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|---|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | 6 |
| 8c. Forests provide jobs. | 5 | |
| 8d. Some old growth forests should be preserved. | | 10 |
| 8e. All old growth forests should be preserved. | | 10 |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 10 |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | No response |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

- | | |
|--|----------------|
| 10a. Your work | Student |
| 10b. Which is the closest major city or town to where you live? | Kamloops, B.C. |
| 10c. In which sector are you employed? | |
| 10d. Age | 19 25 |
| 10e. Sex | Male |

Public Response Summer 199

Response : 200

Meeting Date: August 26, 199

Location: Port Alberni, B.C

- 2a. **Did you know anything about TFL #44 before this meeting?** No
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

N/A

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

in comparison to Education, Employment, Development and competition to unemployed.

- 4a. **Do you have any concerns about logging in TFL #44?** No
- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

Don't know enough.

- 4c. **If "No", would you please explain why you have no concerns.**

I don't know enough.

5. **What concerns, if any, do you feel were addressed in this meeting?**

Too many moneymakers, not enough workers, not enough progress, very little knowledge.

6. **What, if anything, did you learn from the meeting?**

The competition of forest industry, environment issues, competition of employment, financing of Govt. to welfare.

- . **Are there any aspects about TFL #44 you would like to know more about?** No response

b. If "Yes", what would you like to know more about?

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

(1) DISAGREE COMPLETELY

(10) AGREE COMPLETELY

8a. **Forests are precious ecosystems**

8b. **Forests are critical economic contributors to B.C.**

8c. **Forests provide jobs.** 8

8d. **Some old growth forests should be preserved.** 2

8e. **All old growth forests should be preserved.** 2

8f. **The public should be involved in forest planning such as the Management Plans of a forest company.** 10

9a. **Is there anything else you would like us to address in this Management Plan development process?** Yes

9b. **If "Yes", please tell us what topics or points you would like us to address.**

Compare health, business, fashion, education and low money making ideas to reduce outpay for the needless, specific restrictions to free money.

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

10a. **Your work** Welfare recipient with 3 kids.

10b. **Which is the closest major city or town to where you live?** Port Alberni, B.C.

10c. **In which sector are you employed?** Welfare recipient

10d. **Age** 26 40

10e. **Sex** Female

Public Response Summer 199

Response : 202

Meeting Date: August 26, 199

Location: Port Alberni, B.C

- 2a. **Did you know anything about TFL #44 before this meeting?** No
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

N/A

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

Having reps. present overviews of their plan/goals.

- 4a. **Do you have any concerns about logging in TFL #44?** No

- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

N/A

- 4c. **If "No", would you please explain why you have no concerns.**

I think that the TFL people show concern for what they are doing and making public aware of what's going on.

5. **What concerns, if any, do you feel were addressed in this meeting?**

No response

6. **What, if anything, did you learn from the meeting?**

I learned that the forest industry workers are taking a look around them.

- . **Are there any aspects about TFL #44 you would like to know more about?** Yes

- b. **If "Yes", what would you like to know more about?**

Training/ job creation for young adults/info who to see and apply for jobs/training in the forest industry.

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|---|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | 10 |
| 8c. Forests provide jobs. | 10 | |
| 8d. Some old growth forests should be preserved. | | 10 |
| 8e. All old growth forests should be preserved. | | |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 10 |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | Yes |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |
| Forest talks communication on where our industry stands today. | | |

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

- | | | |
|--|-------------|--------------------|
| 10a. Your work | Janitor | |
| 10b. Which is the closest major city or town to where you live? | | Port Alberni, B.C. |
| 10c. In which sector are you employed? | No response | |
| 10d. Age | 26 40 | |
| 10e. Sex | Male | |

Public Response Summer 199

Response : 203

Meeting Date: August 26, 199

Location: Port Alberni, B.C

2a. **Did you know anything about TFL #44 before this meeting?** Yes

2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

No response

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

A home for wildlife because logging has left very little good habitat.

4a. **Do you have any concerns about logging in TFL #44?** Yes

4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

Rate of cut is too high.

4c. **If "No", would you please explain why you have no concerns.**

N/A

5. **What concerns, if any, do you feel were addressed in this meeting?**

I heard the rate of cut will come down slightly but not enough to address wildlife habitat concerns.

6. **What, if anything, did you learn from the meeting?**

No response

. **Are there any aspects about TFL #44 you would like to know more about?** No response

b. **If "Yes", what would you like to know more about?**

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|--|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | 5 |
| 8c. Forests provide jobs. | 5 | |
| 8d. Some old growth forests should be preserved. | | 10 |
| 8e. All old growth forests should be preserved. | | 5 |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 10 |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | Yes |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |
| I would like to see roads in specific areas made impassable to vehicle traffic to protect wildlife made vulnerable by clearcuts due to loss of visual cover. | | |
| To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions: | | |
| 10a. Your work | No response | |
| 10b. Which is the closest major city or town to where you live? | No response | |
| 10c. In which sector are you employed? | No response | |
| 10d. Age | 26 40 | |
| 10e. Sex | Male | |

Public Response Summer 199

Response : 309

Meeting Date: August 2 , 199

Location: Victoria, B.C.

2a. **Did you know anything about TFL #44 before this meeting?** Yes

2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

I have attended previous public open houses re: TFL 44 and have read SMOOP February 199 .

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

Ecological values, including fish, wildlife habitat, biodiversity. Sustaining human use, including timber extraction, is dependent on sustaining the structural and functional complexity of forest ecosystem. i.e. Sustaining the forests not just trees.

4a. **Do you have any concerns about logging in TFL #44?** Yes

4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

Continued reliance on conventional clearcutting as primary silvicultural system. Focus on short term economic impacts and relative neglect of long term consequences.

4c. **If "No", would you please explain why you have no concerns.**

N/A

5. **What concerns, if any, do you feel were addressed in this meeting?**

No response

6. **What, if anything, did you learn from the meeting?**

Learned more about Clayoquot Symposium on alternative silvicultural systems which was most useful and interesting.

. **Are there any aspects about TFL #44 you would like to know more about?** Yes

b. If "Yes", what would you like to know more about?

Protection of wildlife habitat and stream classification and protection. Value added opportunities and initiatives currently being pursued and promoted in the region.

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

	(1) DISAGREE COMPLETELY	(10) AGREE COMPLETELY
8a. Forests are precious ecosystems		10
8b. Forests are critical economic contributors to B.C.		4
8c. Forests provide jobs.	6	
8d. Some old growth forests should be preserved.		10
8e. All old growth forests should be preserved.		10
8f. The public should be involved in forest planning such as the Management Plans of a forest company.		10
9a. Is there anything else you would like us to address in this Management Plan development process?		No response
9b. If "Yes", please tell us what topics or points you would like us to address.		

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

10a. Your work	Homemaker
10b. Which is the closest major city or town to where you live?	Victoria, B.C.
10c. In which sector are you employed?	
10d. Age	41 55
10e. Sex	Female

Public Response Summer 199

Response : 311

Meeting Date: August 2 , 199

Location: Victoria, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** Yes
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

Considerable public interest in the management and logging practices.

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

Industrial application and aesthetic appeal, we need forest products and recreation.

- 4a. **Do you have any concerns about logging in TFL #44?** Yes

- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

Less waste and environmental damage.

- 4c. **If "No", would you please explain why you have no concerns.**

N/A

5. **What concerns, if any, do you feel were addressed in this meeting?**

Environmental damage.

6. **What, if anything, did you learn from the meeting?**

Extensive planning is required.

- . **Are there any aspects about TFL #44 you would like to know more about?**No

- b. **If "Yes", what would you like to know more about?**

N/A

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|---|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | 8 |
| 8c. Forests provide jobs. | 10 | |
| 8d. Some old growth forests should be preserved. | | 10 |
| 8e. All old growth forests should be preserved. | | 4 |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 10 |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | No |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |

N/A

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

- | | |
|--|--------------------|
| 10a. Your work | Technical |
| 10b. Which is the closest major city or town to where you live? | Victoria, B.C. |
| 10c. In which sector are you employed? | Resource inventory |
| 10d. Age | 41 55 |
| 10e. Sex | Male |

Public Response Summer 199

Response : 314

Meeting Date: August 2 , 199

Location: Victoria, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** No response
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

No response

- 4a. **Do you have any concerns about logging in TFL #44?** Yes

- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

LIAs/lack of alternatives/rate of cut/no intention to phase out clearcutting.

- 4c. **If "No", would you please explain why you have no concerns.**

N/A

5. **What concerns, if any, do you feel were addressed in this meeting?**

No response

6. **What, if anything, did you learn from the meeting?**

No response

- . **Are there any aspects about TFL #44 you would like to know more about?**Yes

- b. **If "Yes", what would you like to know more about?**

Outlined on back of questionnaire.

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|---|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | 5 |
| 8c. Forests provide jobs. | | |
| 8d. Some old growth forests should be preserved. | | 10 |
| 8e. All old growth forests should be preserved. | | |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 10 |

9a. **Is there anything else you would like us to address in this Management Plan development process?**

9b. **If "Yes", please tell us what topics or points you would like us to address.**

What is the of area in Nahmint LIA being clearcut vs. partial cut No. of blocks in each Method of logging in partial cut The of wood from TFL 44 going to pulpwood

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

10a. **Your work**

10b. **Which is the closest major city or town to where you live?** Victoria, B.C.

10c. **In which sector are you employed?** No response

10d. **Age** No response

10e. **Sex** Male

Public Response Summer 199

Response : 319

Meeting Date: August 2 , 199

Location: Victoria, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** Yes
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

Only the general area of TFL 44.

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

To sustain man through making oxygen, wood, obs.

- 4a. **Do you have any concerns about logging in TFL #44?** No

- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

N/A

- 4c. **If "No", would you please explain why you have no concerns.**

I feel B.C. s Forest Practices Code is enough to negate any concerns.

5. **What concerns, if any, do you feel were addressed in this meeting?**

Did not attend meeting.

6. **What, if anything, did you learn from the meeting?**

No response

- . **Are there any aspects about TFL #44 you would like to know more about?**No

- b. **If "Yes", what would you like to know more about?**

N/A

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|---|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 6 |
| 8b. Forests are critical economic contributors to B.C. | | 10 |
| 8c. Forests provide jobs. | 8 | |
| 8d. Some old growth forests should be preserved. | | 10 |
| 8e. All old growth forests should be preserved. | | 1 |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 9 |
| | | |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | Yes |
| | | |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |
| <p>Consider returning to some extent to railway logging. A more ecologically friendly way of moving timber and products from re loads to mills, the smaller and permanent roadbed would lessen erosion and stream problems and get log trucks off our highways.</p> | | |
| <p>To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:</p> | | |
| 10a. Your work | Labour | |
| 10b. Which is the closest major city or town to where you live? | Chemainus, B.C. | |
| 10c. In which sector are you employed? | Tourism | |
| 10d. Age | 26 40 | |
| 10e. Sex | Male | |

Public Response Summer 199

Response : 326

Meeting Date: October 2, 199

Location: Bamfield, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** Yes
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

Area/MB has license/road building

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

Life sustaining for humans and forest inhabitants. Oxygen contribution/en oyment.

- 4a. **Do you have any concerns about logging in TFL #44?** Yes

- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

Large areas on mountain side cleared. Landslides. River/stream habitat for fish.

- 4c. **If "No", would you please explain why you have no concerns.**

5. **What concerns, if any, do you feel were addressed in this meeting?**

Willingness to communicate.

6. **What, if anything, did you learn from the meeting?**

No response

- . **Are there any aspects about TFL #44 you would like to know more about?**No response

- b. **If "Yes", what would you like to know more about?**

N/A

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|---|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | 5 |
| 8c. Forests provide jobs. | 5 | |
| 8d. Some old growth forests should be preserved. | | 10 |
| 8e. All old growth forests should be preserved. | | 10 |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 10 |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | Yes |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |
| Restoration/increased local employment/alternate pulp source annual plant. | | |

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

- | | |
|--|--------------------|
| 10a. Your work | Professional |
| 10b. Which is the closest major city or town to where you live? | Port Alberni, B.C. |
| 10c. In which sector are you employed? | Education |
| 10d. Age | 41 55 |
| 10e. Sex | Female |

Public Response Summer 199

Response : 328

Meeting Date: October 2, 199

Location: Bamfield, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** Yes
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

Know physical area, attended forests presentation on TFL 44 earlier in year.

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

Oxygen contribution to planet, removing toxins from atmosphere, soil retention.

- 4a. **Do you have any concerns about logging in TFL #44?** Yes

- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

Cutblocks 1423 and 1434 concerned about fish habitat, our water supply and visuals.

- 4c. **If "No", would you please explain why you have no concerns.**

N/A

5. **What concerns, if any, do you feel were addressed in this meeting?**

Communication, willingness of MB, understanding of overall planning process.

6. **What, if anything, did you learn from the meeting?**

Understanding of overall planning process.

- . **Are there any aspects about TFL #44 you would like to know more about?** Yes

- b. **If "Yes", what would you like to know more about?**

Would like to know when actual cut plans for blocks 1423 and 1434 are established.

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|---|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | |
| 8c. Forests provide jobs. | 10 | |
| 8d. Some old growth forests should be preserved. | | 5 |
| 8e. All old growth forests should be preserved. | | 10 |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 10 |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | No |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |
| N/A | | |

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

- | | |
|--|--------------------|
| 10a. Your work | Professional |
| 10b. Which is the closest major city or town to where you live? | Port Alberni, B.C. |
| 10c. In which sector are you employed? | Finance |
| 10d. Age | 41 55 |
| 10e. Sex | Male |

Public Response Summer 199

Response : 329

Meeting Date: October 2, 199

Location: Bamfield, B.C.

2a. **Did you know anything about TFL #44 before this meeting?** Yes

2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

I knew briefly about the areas that were included.

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

A forest is a non replaceable ecosystem. If cut/burnt/trimmed, etc., it can never be completely the same. Forests are a great treasure and should not be taken advantage of at all.

4a. **Do you have any concerns about logging in TFL #44?** Yes

4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

Personally, I don't want Bamfield to be touched at all. It has already lost too many trees.

4c. **If "No", would you please explain why you have no concerns.**

N/A

5. **What concerns, if any, do you feel were addressed in this meeting?**

None, I didn't have time to talk to any of the representatives.

6. **What, if anything, did you learn from the meeting?**

Not much, there was no clear explanation about Bamfield in specific. It basically outlined the areas that is all.

. **Are there any aspects about TFL #44 you would like to know more about?** Yes

b. **If "Yes", what would you like to know more about?**

What is the exact plan for Bamfield area.

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|---|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | |
| 8c. Forests provide jobs. | 9 | |
| 8d. Some old growth forests should be preserved. | | 10 |
| 8e. All old growth forests should be preserved. | | 10 |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 10 |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | Yes |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |

Describe all areas in detail so we have an idea

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

- | | |
|--|--------------------|
| 10a. Your work | Student |
| 10b. Which is the closest major city or town to where you live? | Port Alberni, B.C. |
| 10c. In which sector are you employed? | |
| 10d. Age | 14 18 |
| 10e. Sex | Female |

Public Response Summer 199

Response : 330

Meeting Date: October 2, 199

Location: Bamfield, B.C.

- 2a. **Did you know anything about TFL #44 before this meeting?** No
- 2b. **If you answered "Yes" to Question #2a, would you briefly describe what you knew about TFL #44.**

N/A

3. **Please state what you consider to be the most important value of the forest. Why do you say that?**

It is a living eco system. When you destroy a forest you destroy a whole complex evolving ecosystem, and there is no way to replace exactly what was there.

- 4a. **Do you have any concerns about logging in TFL #44?** Yes
- 4b. **If "Yes", what concerns do you have? Please mention any specific areas, if applicable.**

I am concerned about the trees, the eco system, the animals, the birds, the streams, the ocean, the sea creatures, us, we are all affected by clear cut logging.

- 4c. **If "No", would you please explain why you have no concerns.**

N/A

5. **What concerns, if any, do you feel were addressed in this meeting?**

None which really needed to be addressed.

6. **What, if anything, did you learn from the meeting?**

I learned that the more that I learn about logging practices and their effects on everything that surrounds and co exists with them, the more I dislike what's going on.

- . **Are there any aspects about TFL #44 you would like to know more about?** Yes

b. **If "Yes", what would you like to know more about?**

Plans to stop clear cut logging and start selective logging in small areas away from watersheds, etc.

Thinking now of forest harvesting and management, please say whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you disagree completely and "10" means you agree completely.

- | | (1) DISAGREE COMPLETELY | (10) AGREE COMPLETELY |
|---|-------------------------|-----------------------|
| 8a. Forests are precious ecosystems | | 10 |
| 8b. Forests are critical economic contributors to B.C. | | 1 |
| 8c. Forests provide jobs. | 10 | |
| 8d. Some old growth forests should be preserved. | | 1 |
| 8e. All old growth forests should be preserved. | | 10 |
| 8f. The public should be involved in forest planning such as the Management Plans of a forest company. | | 10 |
| 9a. Is there anything else you would like us to address in this Management Plan development process? | | Yes |
| 9b. If "Yes", please tell us what topics or points you would like us to address. | | |

Logging in watershed areas clear cut logging done away with and selective logging introduced.

To give us a better idea of the background of people answering this questionnaire, we would appreciate it if you would answer the following questions:

- | | |
|--|--------------------|
| 10a. Your work | Clerical |
| 10b. Which is the closest major city or town to where you live? | Port Alberni, B.C. |
| 10c. In which sector are you employed? | Retail sales |
| 10d. Age | 19 25 |
| 10e. Sex | Female |

TFL #44

PUBLIC CONSULTATION PROCESS

REPORT - AUGUST 1997

APPENDIX XIII

- Additional Responses in comment form from the Consultation Meeting Survey distributed at Open Houses to Review Draft Management Plan No. 3

STAGE 4

Consultation Meeting Survey August 199

TFL #44 Management Plan Public Consultation

Additional responses included with the survey conducted in August 1997

Response #104

Page 2, question 8

- Forests are critical economic contributors to B.C. *sure, but we have to diversify.*
- Forests provide obs *they used to provide more jobs with lower AAC.*
- All old growth forests should be preserved *especially undisturbed watersheds.*

Response #105

Page 2, question 8

- Forests are precious ecosystems - *I assume you mean natural forests here, not tree farms*
- Forests provide obs *of course they do, but what kind and at what cost?*
- Some old growth forests should be preserved.
- All old growth forests should be preserved. *It isn't this simple. How we treat areas that are not preserved is of key importance. You've being too vague.*

Response #200

Page 2, question 8

- Forests are precious ecosystems *unless you repair.*
- Forests are critical economic contributors to B.C. *compared to money.*
- Forests provide obs *Be rid of welfare! But how?*
- The public should be involved in forest planning such as the Management Plans of a forest company *make welfare and unemployed give input to future.*

Response #203

Page 2, question 8

- Forests are critical economic contributors to B.C. *and could contribute more under different management.*
- Forests provide obs *and could provide more.*
- All old growth forests should be preserved - *in critical areas with little left.*

I would like you to seriously consider my concerns about wildlife being negatively impacted by human disturbance. I would like to see certain roads made impassable to vehicle traffic. I am only referring to roads in areas where deer, Elk, bear come to feed in nearby new clearcuts with no visual cover and with high human use on these roads. There is no need for these measures in remote areas away from large urban areas. I am only talking about

new roads which dead end and possibly one mile or less in length. Not main roads or through roads. I like to have access as much as the next person but in areas where animals get disturbed on a regular basis I am willing to sacrifice my convenience.

To prove my concern is valid, I can tell you of studies done in Washington and Oregon of the effect of animals feeding in clearcuts and constantly running off at the approach of a vehicle. They used up a lot more energy and consequently had poorer reproduction and health than animals in undisturbed areas. In the past, a lot of areas were gated and provided undisturbed areas now most gates have been removed soon after logging and therefore it is more of a problem now.

Mike Stini, Port Alberni

Response #309

Page 1, **question 4b.**

- Quality of second growth wood, especially if more rapid growth is the objective of silvicultural treatments. How will this affect our markets for high quality solid wood products

Response #314

Page 2, **question 8**

- *Standing* forests are critical economic contributors to B.C.
- Forests provide obs.
- Some old growth forests should be preserved. *Standing or logged?*
- All old growth forests should be *managed to protect integrity of ecosystem.*

Merran Smith, Victoria

Response #329

Page 2, **question 8**

- Some old growth forests should be preserved - *all should.*
- The public should be involved in forest planning such as the Management Plans of a forest company - *always.*

Response #330

Page 2, **question 8**

- Forests are critical economic contributors to B.C. - *If hemp fields were used instead of forests they would be a critical economic contributor.*
- Forests provide obs *I agree, but if you find alternatives to logging trees you'll find alternative jobs.*

October 15, 199

Letter received from the Nuu-Chah-Nulth Uchucklesaht Band Council

The Uchucklesaht Tribe wishes to make the following comments about Management Plan 3 for TFL 44:

1. The Tribe is opposed to any logging within the Tiltskin Paawats on the west side of Henderson Lake. This is an area of significant spiritual/cultural importance to the Tribe.
2. The Tribe believes that leave strips along streams need to be expanded beyond those recommended by the Forest Practices Code and/or any used by MB in Uchucklesaht territory within TFL 44 this expansion needs to take place for all classifications of streams in order to assist in maintaining lower water temperatures for fisheries resources.
3. The Tribe believes MB and the provincial government have failed to recognize the need for discussions with the Uchucklesaht to identify lands which might be designated for economic development purposes under the Treaty discussions.
4. The Tribe gets the impression that MB believes silviculture activities have social rather than economic benefits accordingly the Tribe wishes to meet with MB and MoF to discuss this issue as a significant investment has been/is being made by the First Nation in developing a silvicultural capacity.
5. The Tribe would like MB to commit to an annual meeting with the Uchucklesaht community to discuss the management plan, proposed harvest activity and forest industry issues.

Thank you for this opportunity comment on your plan.

Charlie Cootes - Chief Councilor
September 25, 199

TFL #44

PUBLIC CONSULTATION PROCESS

REPORT - AUGUST 1997

APPENDIX VIII

- Report on Public Review of Statement of Management Objectives, Options and Procedures [SMOOP

STAGE 3

MacMillan Bloedel Limited



65 Front Street
Nanaimo, B.C. Canada V9R 5H9
Telephone: (250) 55 3500
Facsimile : (250) 55 3550

August 5, 199

Woodlands

K. Collingwood, RPF
Regional Manager
Vancouver Forest Region
Ministry of Forests
2100 Labieux Road
Nanaimo, B.C.
V9T 6E9

Dear Sir:

**Re: Tree Farm License [TFL] 44 Management Plan [MP] #3
Report on Public Review of the Statement of Management Objectives,
Options and Procedures [SMOOP].**

The report is enclosed. It includes a copy of correspondence and of the newspaper advertisement.

If you or you staff have any questions please contact me at 250 55 3450. Prior to August the 18th I will be on vacation a message may be left with Greta Simmons at 250 55 3416 during this period.

Yours truly,

MacMILLAN BLOEDEL LIMITED
SOLID WOOD GROUP

P.J. Kofoed, RPF
Planning Forester

PJK/gas

Encl. 6

Report on Public Review of the SMOOP
Stage 3 of the Public Review Strategy for TFL 44 MP 3

1.0 The Process

Copies of the Statement of Management Objectives, Options and Procedures SMOOP were made available for public review at the following locations:

Tofino:	Municipal Office
Ucluelet	District Office
Port Alberni:	MB, Alberni Forest Information Centre MoF, Port Alberni District Office
Nanaimo:	MB, Corporate Forestry Nanaimo MoF, Vancouver Region Office
Victoria:	MoF, Resource, Tenures and Engineering Branch

Prominent advertisements were placed in regional and local newspapers to notify the public of the scheduled locations and times for reviewing the SMOOP. A copy of one of these advertisements is attached. The advertisements were placed as follows :

- Port Alberni Valley Times, March 5 and 14, 199
- Tofino/Ucluelet Westerly News, March 5 and 12, 199
- Ha Shilth Sa Nuuchah nulth Newsletter , March 10, 199
- Victoria Times Colonist, March 5 and 15, 199
- Vancouver Sun, March 5 and 15, 199
- Vancouver Province, March 5 and 16, 199

A copy of the SMOOP and an invitation to provide a written response were sent to a mailing list of 389 that includes communities, First Nations and members of the public who had requested follow up materials from the Stage 2 open houses. A copy of the invitation letter is attached.

Offers were made to eleven First Nations groups to meet with them to discuss issues of special concern to them.

2.0 Results

Two written responses were received:

- The Clayoquot Sound Central Regional board referred to planning processes specific to Clayoquot Sound. There is agreement that there will be an amendment to the TFL 44 Licens documents to deal with the unique planning circumstances in Clayoquot sound. This complete process should be resolved in 199 .

- A Forester with the Pacific Rim National Park Reserve discussed a number of issues including management adjacent to protected areas, fish and wildlife habitat conservation, hydrology, biodiversity and landscape aesthetics.

Meetings were held with two First Nations groups:

The Management Plan process was described. Discussion was then focused on economic opportunities and protection of cultural and heritage sites. Topics included silvicultural work, Forest Renewal BC FRBC funding, the Small Business Forest Enterprise Program and procedures for identifying and protecting heritage sites during operational planning. A Ministry of Forests representative was present at both meetings.

A meeting was held with the Alberni Clayoquot Regional District

The Management Plan process was described. Various planning issues were discussed and the Company was urged to take a more proactive stance with regards to FRBC funded projects.

MacMillan Bloedel Limited

65 Front Street
Nanaimo, B.C. Canada V9R 5H9
Telephone: (250) 55 3500
Facsimile : (250) 55 3550



March 4, 199

Woodlands

Dear Sir or Madame:

The next Management Plan for Tree Farm Licence 44 is in the process of being prepared. The third step in preparing this Management Plan is to request input from the public on the Statement of Management, Objectives, Options and Procedures (SMOOP).

A mailing list has been compiled from people who, through previously held open houses and other events, have shown interest in forest management in TFL 44. Copies of the SMOOP have been distributed to those on the mailing lists and to the locations listed below.

Please review this copy of the SMOOP and send any comments or concerns by May 20, 199 to :

MacMillan Bloedel Limited
65 Front Street
Nanaimo, B.C. V9R 5H9

Attention: P.J. Kofoed

Further copies of the SMOOP can be obtained at the following locations from March to May 13, 199 :

9:00 a.m. to 5:00 p.m., Monday to Friday

- ⇒ MB, Alberni Information Center, Port Alberni, 5440 Argyle Street (Harbour Quay)
- ⇒ Ucluelet District Office, 200 Main Street
- ⇒ Tofino Municipal Office, 121 3rd Street
- ⇒ MacMillan Bloedel Regional Office, 65 Front Street, Nanaimo

Ministry of Forests Offices, 8:30 a.m. to 4:30 p.m., Monday to Friday

- ⇒ Port Alberni Forest District, 422 6th Avenue, Port Alberni
- ⇒ Vancouver Region, 2100 Labieux Road, Nanaimo
- ⇒ Resource, Tenures and Engineering Branch, 1450 Government Street, Victoria

I would appreciate your input on the important matter of land management within Tree Farm Licence 44.

Yours truly,

MacMILLAN BLOEDEL LIMITED
SOLID WOOD GROUP

P.J. Kofoed, RPF
TFL 44 Forester
PJK/var
encl.
Copies to:

Chief Sidney Sam
Ahousaht First Nation
General Delivery
Ahousaht, B.C. V0R 1A0

Chief Jack Thompson
Ditidaht First Nation
P.O. Box 340
Port Alberni, B.C. V9Y M8

Chief Steve Charleson
Hesquiaht First Nation
P.O. Box 2000
Tofino, B.C. V0R 2Z0

Chief Robert Dennis
Huu ay aht First Nation
P.O. Box 0
Bamfield, B.C. V0R 1B0

Chief Judith Sayers
Opetchesaht First Nation
P.O. Box 211
Port Alberni, B.C. V9Y M

Chief Marvin McClurg
Pacheenaht First Nation
1 Pachidah
Port Renfrew, B.C. V0S 1K0

Chief Francis Frank
Tia o qui aht First Nation
P.O. Box 18
Tofino, B.C. V0R 2Z0

Chief Bert Mack
Toquaht First Nation
P.O. Box 59
Ucluelet, B.C. V0R 3A0

Chief George Watts

Tseshah First Nation
P.O. Box 1218
Port Alberni, B.C. V9Y M1

Chief Charlie Cootes, Sr.
Uchucklesaht First Nation
P.O. Box 1118
Port Alberni, B.C. V9Y M

Chief Larry Baird, Sr.
Ucluelet First Nation
P.O. Box 699
Ucluelet, B.C. V0R 3A0

MacMillan Bloedel Limited

65 Front Street
Nanaimo, B.C. Canada V9R 5H9
Telephone: (250) 55 3500
Facsimile : (250) 55 3550



March 18, 199

Woodlands

Chief Sidney Sam
Ahousaht First Nation
General Delivery
Ahousaht, B.C. V0R 1A0

Fax Transmittal: (250) 6 0 9696

Dear Chief Sidney Sam:

As part of the process for preparing the next Management Plan (MP 3) for TFL 44, a Statement of Management Objectives, Options and Procedures (SMOOP) has been submitted to the Regional Manager, Vancouver Region, Ministry of Forests. The SMOOP describes the basis for the Management Plan that will be prepared and submitted later in 199 .

The review process includes public input on the SMOOP during the next eight weeks. Copies of the SMOOP have been sent to those on an extensive mailing list and made available at advertised locations.

We have sent you a copy of the SMOOP and we would like to have the opportunity to discuss the SMOOP and to receive your input by May 6, 199 . If you are interested in such a meeting please contact me at

Telephone: (250) 55 3450
Facsimile: (250) 55 3540

Yours truly,

MacMILLAN BLOEDEL LIMITED
SOLID WOOD GROUP

P.J. Kofoed, RPF
TFL 44 Forester
PJK/gs

TFL #44

PUBLIC CONSULTATION PROCESS

1997

**Final Report on Public Review Strategy
Management Plan No. 3
TFL No. 44**

MacMillan Bloedel Limited



65 Front Street
Nanaimo, B.C. Canada V9R 5H9
Telephone: (250) 55 3500
Facsimile : (250) 55 3550

October 29, 199

Woodlands

K. Collingwood, RPF
Regional Manager
Vancouver Forest Region
Ministry of Forests
2100 Labieux Road
Nanaimo, B.C.
V9T 6E9

Dear Sir:

This letter and the accompanying book constitutes our report to you on the Public involvement Programme for Management Plan No. 3, TFL No. 44.

The strategy employed for providing opportunities for public review and for obtaining public input for the preparation of Management Plan No. 3 was set out in a letter of September 20, 1994 from G. Sartisohn to K. Collingwood. The letter outlined four states:

Stage 1	Initial comment on Management Plan No. 2.
Stage 2	Initial solicitation of input for Development of SMOOP.
Stage 3	Public review of SMOOP.
Stage 4	Review of draft Management Plan.

The strategy was approved, subject to conditions in a response by K. Collingwood of November 18, 1994.

The purpose of this report is to describe and document the public review process completed and to present a summary of the public response.

As a result of the Open Houses there was no input of a nature that warranted a revision to the draft of Management Plan No. 3.

MacMillan Bloedel would be pleased to participate in discussions with the Ministry of Forests and others with a view to developing more effective public involvement procedures for TFL and other tenure management and operational plans.

Yours truly,

MacMILLAN BLOEDEL LIMITED
SOLID WOOD GROUP

P.J. Kofoed, RPF
Planning Forester

cc: District Manager, Port Alberni Forest District

MB Woodlands Managers:
Franklin Division
Alberni West Division
Clayoquot Division

W.N. Cafferata
J.F. Connor
S.J. Coleman
T.R. Holmes
T.T. Komoto
M.K. Hooper

FINAL REPORT
PUBLIC REVIEW PROCESS
MANAGEMENT PLAN NO. 3
TFL NO. 44

I. PUBLIC REVIEW ACTIONS

A. STAGE 1 - Initial Comment

Prominent advertisements were placed in Regional and local newspapers in order to:

- notify the general public that the next management plan for the TFL was being prepared,
- request written submissions from the public on the current Management Plan and on the Licensee's performance, and
- to advise the general public of locations where the current Management Plan could be reviewed.

A copy of one of these advertisements is illustrated in Appendix 1. The advertisements were placed as follows:

Victoria Times Colonist	August 31, September 2 and 10, 1994
Vancouver Sun	August 31, September 2 and 10, 1994
Vancouver Province	August 31, September 2 and 11, 1994
Port Alberni Times	August 31, September 2 and 9, 1994
Tofino/Ucluelet Westerly	August 3, September 2, 1994

Copies of Management Plan No. 2 were made available for viewing by the general public between September 17, 1994 and October 7, 1994 at the following locations:

- MB Forestry Visitor Centres at:
 - Port Alberni
 - Tofino
- Ministry of Forests Offices at:
 - Port Alberni, Alberni District Office
 - Victoria, Timber Harvesting Branch
 - Nanaimo, Vancouver Region Office

B. STAGE 2 - Solicitation of Input for Development of SMOOP

1. Advertisements

Prominent advertisements were placed in regional and local newspapers to notify the general public of the scheduled locations, dates, and times of Open Houses to be held for the purpose of listening to input from the public. A copy of one of these advertisements is illustrated in Appendix 1. The advertisements were placed as follows:

- Port Alberni Times, January 25 and February 1, 1995.
- Tofino Ucluelet Westerly News, January 25 and February 1, 1995.
- Victoria Times Colonist, January 28 and February 4, 1995.
- Vancouver Sun, January 28 and February 4, 1995.
- The Province, January 29 and February 5, 1995.

2. Open Houses

Open Houses were held at the following locations:

- Ucluelet/Tofino February 6, 1995, Long Beach Golf Course
Pacific Rim Highway
- Port Alberni February 7, 1995, Friendship Centre
3555 Fourth Avenue
- Victoria February 8, 1995, Executive House Hotel
777 Douglas Street
- Vancouver February 9, 1995, Hyatt Regency Hotel
655 Burrard Street

3. Procedures at the Open Houses

a) Displays

Display Boards were exhibited which provided:

- General definition of a TFL
- Description of the elements of a SMOOP and a Management Plan
- Maps of TFL 44 and Operating Divisions
- Map showing locations of sensitive areas
- Photographs depicting forestry activities on the TFL.

b) Hand Outs

Background: A brochure, in newsletter format, was offered to all attendees. The brochure described the TFL, the public review process, as well as some of the important issues related to the TFL. A copy of the newsletter is shown in Appendix II.

c) Consultation Survey (Questionnaire)

A questionnaire was offered to all attendees. A copy of the questionnaire is attached as Appendix III.

d) Recording of Public Comments

MB Woodlands staff were available at the Open Houses to answer questions, discuss issues, and provide technical information. Flip charts were used to transcribe the comments and input given by public attendees to MB Woodlands staff. In this way, the comments/input were readily visible for all attendees to see and for later summarization.

e) Guest Register

A guest register was maintained at each Open House. Those who so wished could record their attendance and be added to a mailing list for future events of a related nature (e.g., Open Houses for viewing the draft of MP #3).

C. STAGE 3 – Public review of SMOOP

Prominent advertisements were placed in Regional and local newspapers in order to:

- notify the general public that the SMOOP for TFL #44 was available for review,
- request written submissions from the public on comments or concerns with the Statement of Management, Objectives, Options and Procedures, and
- to advise the general public of locations where the SMOOP could be obtained.

A copy of one of these advertisements is illustrated in Appendix VIII. The advertisements were placed as follows:

Victoria Times Colonist	March 5, March 15, 1997.
Nuu-Chah-Nulth Newsletter	March 6, 1997.
Vancouver Province	March 5, March 16, 1997.
Vancouver Sun	March 5, March 16, 1997.
Port Alberni Times	March 5, March 14, 1997.
Tofino/Ucluelet Westerly	March 5, March 12, 1997.

Copies of the SMOOP were made available to the general public between March 7 and May 13, 1997 at the following locations:

- MB Forestry Visitor Centre at Port Alberni
- Woodlands Services, 65 Front Street
- Tofino Municipal Office
- Ucluelet District Municipal Office
- Ministry of Forests Offices at:
 - Port Alberni, Alberni District Office
 - Victoria, Timber Harvesting Branch
 - Nanaimo, Vancouver Region Office

A copy of the SMOOP and an invitation to provide a written response were sent to a mailing list of 389, (Appendix VII). This list includes communities, First Nations and members of the public who had requested follow-up materials from the Stage 2 openhouses.

D. STAGE 4 – Review of draft Management Plan

1. Advertisements

Prominent advertisements were placed in regional and local newspapers to notify the general public of the scheduled locations, dates, and times of Open Houses to be held for the purpose of listening to input from the public. A copy of one of these advertisements is illustrated in Appendix IX. The advertisements were placed as follows:

- Port Alberni Times, July 30 and August 6, 1997.
- Tofino Ucluelet Westerly News, July 30 and August 6, 1997.
- Victoria Times Colonist, July 30 and August 6, 1997.
- Nuw-Chah-Nulth Newsletter, August 7, 1997.
- Cowichan News Leader, July 30 and August 6, 1997

2. Open Houses

Open Houses were held at the following locations:

- Ucluelet/Tofino August 25, 1997, Long Beach Golf Course
Pacific Rim Highway
- Port Alberni August 26, 1997, Friendship Centre
3555 Fourth Avenue
- Victoria August 27, 1997, Executive House Hotel
777 Douglas Street
- Vancouver August 28, 1997, B.C. Forest Museum
2892 Drinkwater Road

An additional open house was held at the Bamfield Community School, Nuthatch Road, Bamfield. This was initiated through a request received from the Alberni-Clayoquot Regional District.

3. Procedures at the Open Houses

a) Displays

Display Boards were exhibited which provided:

- General definition of a TFL
- Description of the elements of a SMOOP and a Management Plan
- Maps of TFL 44 and Operating Divisions
- Map showing locations of sensitive areas
- Photographs depicting forestry activities on the TFL.

b) Hand Outs

Background: A brochure, in newsletter format, was offered to all attendees. The brochure described the TFL, the public review process, as well as some of the important issues related to the TFL. A copy of the newsletter is shown in Appendix X.

c) Consultation Survey (Questionnaire)

A questionnaire was offered to all attendees. A copy of the questionnaire is attached as Appendix XI.

d) Recording of Public Comments

MB Woodlands staff were available at the Open Houses to answer questions, discuss issues, and provide technical information. Flip charts were used to transcribe the comments and input given by public attendees to MB Woodlands staff. In this way, the comments/input were readily visible for all attendees to see and for later summarization. (Appendix XIV)

e) Guest Register

A guest register was maintained at each Open House. Those who so wished could record their attendance and be added to a mailing list for future events of a related nature.

II. PUBLIC REVIEW RESULTS

STAGE 1

Only six written responses were received:

- A student requested a copy of the Management Plan.
- A student from the West Coast Youth Alliance advocated environmental impact assessments, moratorium on clearcutting, log second growth, no old growth logging in Clayoquot, reduce AAC to 1.5 million m³, judicial inquiry to determine if the Licence was granted fraudulently, veto power for local communities, public, and First Nations.
- Eliminators 4X4 Club - maintain access for 4-wheel drive vehicles.
- Two students from Malaspina College, Resource Management Program wanted more information and better presentation to enable them to better understand.
- A graduate student requested a copy of the Management Plan.

STAGE 2

a) Consultation Survey Questionnaires

A total of 72 questionnaires were returned. Responses for each returned questionnaire are listed in Appendix IV.

In some cases, lengthy comments were attached to the questionnaire responses. These are listed in Appendix V.

b) Open House

A total of 370 people attended the Open Houses.

Public comments or input transcribed at the Open Houses are listed in Appendix VI.

c) Summary of Input and Concern Expressed at Open Houses

Please refer to [Attachment 1](#) for more detail.

- *Most Important Value of the Forest*

Tofino/Ucluelet

- Multi-use with a strong inclination to preservations for biodiversity and recreation.
- Reforestation, trees are most important.
- Income for families and our communities.
- Housing needs, jobs provided, economic value.

Port Alberni

- The many forest resources provide an economic base for Island communities.
- That there is enough left in its natural state for wildlife habitats.
- Supply of raw material to Port Alberni mills.

Victoria

- Maintenance of biodiversity - within that, not opposed to multiple use including logging.
- The structural and functional complexity of natural forest ecosystems. Whole complex of non-timber values.
- The rare and extreme value of a 1000-year eco-system that can never be replaced.
- That it is maintained in an integrated continuous form.
- Public asset - must be used and made available to all users.

Vancouver

- The ancient forests are an irreplaceable asset with many values - i.e., heritage, wildlife, etc.
- The forest itself has intrinsic value - the diversity of species and rarity of old-growth eco-system. Also has great cultural value.
- Long-term ecological stability and local economic activity.
- A balance of environmental and economic values.
- A harvestable crop and a recreational area and wildlife habitat.

- *Concerns about logging on TFL #44*

Tofino/Ucluelet

- Intensity and rate-of-cut behind West Coast Trail unit of Pacific Rim National Park.
- All the TFL. Clearcutting destroys salmon spawning streams, degradation of our society due to lay-offs, etc.

Port Alberni

- I question if it is sustainable at the present cut levels in TFL #44. Sustainability of forest resources via current logging methods and AAC potentials over time.

Victoria

- My concern is that clearcutting will be the primary silvicultural system. Would like to see more attempts to use retention systems.
- Practice of clearcutting.
- Smaller clearcuts - more selective logging.

Vancouver

- Clearcutting in Clayoquot Sound. Keep intact watersheds. Use selective logging.
- Destruction of pristine watershed by building roads in Clayoquot Sound - logging of old-growth trees, older than our grandparents' grandparents.
- Logging is increasingly fragmenting eco-system. Loss of habitat for animal and plant species. Elimination of old-growth eco-system.
- That conditions imposed through this process may result in unreasonable AAC reductions and my taxes will go up.

- *What else would you like to know about TFL #44?*

Tofino/Ucluelet

- Rehabilitation plans. Potential recreation/biodiversity reserves.

Victoria

- Economic considerations: does it make good economic sense to use high quality old-growth wood for 2X4s. Wildlife and habitat considerations, other than deer winter range.
- How many jobs would be sustained in balance with the volume of wood cut?
- Future of Nitinat Lake regarding camping for windsurfing.
- Maps explaining when different areas are going to be cut; and in combination with other logging companies, how this will leave Vancouver Island looking in the long term.

Vancouver

- What kind of cutting is planned? Road building in sensitive areas. What research into species of wildlife and flora?
- I would like to know where you are logging and how much you remove every day.
- How economically sustainable are harvesting practices?

d) Mailing List

A mailing list was compiled from persons who responded to the questionnaire, or who left their names and addresses at the Open Houses in expectation of receiving future mail outs.

This list was augmented by names and addresses of others who have indicated their interest in receiving future mail outs of information or opportunities for public input to TFL #44. The latest updated mailing list is attached as Appendix VII.

Most of the concerns about input that was received reflects issues that are current or have been dealt with or are still ongoing. For example, the Forest Practices Code has been enacted, the Vancouver Island Land Use Plan is being implemented, and decisions on Clayoquot Sound have been made.

No items of public input were identified that required specific action in the Management Plan planning process that is not already accounted for as a result of other planning processes and issues.

STAGE 3

Only two written responses were received:

- The Clayoquot Sound Central Region Board referred to planning processes specific to Clayoquot Sound. There is agreement that there will be an amendment to the TFL 44 License documents to deal with the unique planning circumstances in Clayoquot Sound. This complex process should be resolved in 1997.
- A Forester with the Pacific Rim National Park Reserve discussed a number of issues including management adjacent to protected areas, fish and wildlife habitat conservation, hydrology, biodiversity and landscape aesthetics.

Meetings were held with two First Nation groups and the Alberni-Clayoquot Regional District.

No items of public input were identified that required specific action in the Management Plan planning process that is not already accounted for as a result of other planning processes and issues.

STAGE 4

a) Consultation Survey Questionnaires

A total of 16 questionnaires were returned. Responses for each returned questionnaire are listed in Appendix XII.

In some cases, lengthy comments were attached to the questionnaire responses. These are listed in Appendix XIII.

b) Open House

A total of 216 people attended the Open Houses.

Public comments or input transcribed at the Open Houses are listed in Appendix XIV.

c) Summary of Input and Concern Expressed at Open Houses

Please refer to [Attachment 2](#) for more detail.

- *Most Important Value of the Forest*

Tofino/Ucluelet

- Old growth temperate rainforest is a globally rare ecosystem.
- Its intrinsic value as a functioning ecosystem with all its biodiversity.
- Renewable source of commodities.
- Animal protection, environmental concern [ozone].

Port Alberni

- \$ in comparison to education, employment, development and competition to unemployed.
- Having representatives present overviews of their plan/goals.
- Home for wildlife .

Victoria

- Ecological values: fish/ wildlife habitat - biodiversity.
- Sustaining human use.
- Industrial application and aesthetic appeal.
- To sustain man through making oxygen, wood, jobs .

Bamfield

- Oxygen contribution to planet, removing toxins from atmosphere,
- soil retention.
- Non-replaceable ecosystem. Forests are a great treasure.
- Living ecosystem.

- *Concerns about logging on TFL #44*

Tofino

- Old growth is not a renewable resource.
- Clearcutting or clearcutting with some patches of retention is still practiced.

Current logging method does not leave basic elements of a natural forest intact. It seeks to replace the natural forest with tree plantations.

- Logging should be done so as to minimize impacts.
- Clearcutting - selective logging should be used instead of cutting old growth.

Port Alberni

- Rate of cut is too high.

Victoria

- Continued reliance on conventional clearcutting as primary silvicultural system.

Focus on short-term economic impacts and relative neglect of long-term consequences.

- Quality of second-growth wood, especially if more rapid growth is the objective of silvicultural treatments. How will this affect our markets for high quality solid wood products?

- Less waste and environmental damage
- LIAs/lack of alternatives of cut/no intention to phase-out clearcutting.
- I feel BC's Forest Practices Code is enough to negate any concerns.

Bamfield

- Cutblocks 1423 and 1434 - concerned about fish habitat, our water supply and visuals.
- Too many trees lost already.
- Concerned about trees, ecosystem, animals, birds, streams, ocean, sea creatures and us. All are affected by clear-cut logging.
- Large areas on mountain side cleared.
- Landslides, river/stream habitat for fish.

- *What else would you like to know about TFL #44?*

Tofino

- What efforts are being made to stop relying on old growth and start relying on sustainable turnover on tree farms?
- Secondary manufacturing?
- Where does the timber from TFL 44 go? % exports?

Port Alberni

- Training/job creation for young adults/info who to see and apply for jobs/training in the forest industry.

Victoria

- Protection of wildlife habitat and stream classification and protection.
- Value-added opportunities and initiatives currently being pursued and promoted in the region.
- What is the % of area in Nahmint LIA being clearcut vs. partial cut?
- Number of blocks in each?
- Method of logging in partial cut?
- The % of wood from TFL 44 going to pulpwood.

Bamfield

- Would like to know when actual cut plans are established for Blocks 1423 and 1434.
- What is the exact plan for Bamfield area?
- Plans to stop clear-cut logging and start selective logging in small areas away from watersheds, etc.

Note: No responses were received from the venue held in Duncan at the B.C. Forest Museum.

d) Mailing List

A mailing list was compiled from persons who responded to the questionnaire, or who left their names and addresses at the Open Houses in expectation of receiving future mail outs. This list was augmented by names and addresses of others who have indicated their interest in receiving future mail outs of information or opportunities for public input to TFL #44. The latest updated mailing list is attached as Appendix XV.

Most of the concerns about input that was received reflects issues that are current or have been dealt with or are still ongoing. For example, the Forest Practices Code has been enacted, the Vancouver Island Land Use Plan is being implemented, and decisions on Clayoquot Sound have been made.

Prepared and submitted by
P.J. Kofoed, RPF

October 29, 1997

[Attachment 1](#)

CONSULTATION SURVEY - Spring 1995

TFL #44 Management Plan

Documented responses to **Questions:**

#2

#3b - 3c

#4

#5

#6

#7b

#9b

[Please refer to **Appendix IV** - Public Response]

Question: 2 *Please state and explain what you consider to be the most important value of the forest.*

Response No.	Response
15	Multi use but with strong inclination to preservation for bio diversity and recreation and future options.
16	Reforestation trees are most important.
1	Income for the families of our communities.
20	Housing needs jobs provided economic value.
22	Spiritual responsibility. Subsistence.
33	All aspects of life.
35	The many forest resources provide an economic base for Island communities.
45	That there is enough left in its natural state for wildlife habitats. Old growth forest is a place I love to explore and be in.
46	Supply of raw material to Port Alberni mills.
100	To be utilized by wood processing corporations for a wide range of products.

108

109 There is more than one important value: a composite of your "goals" P. 3 of newsletter
.

111 Maintenance of bio diversity within that, not opposed to multiple use including logging

125 The structural and functional complexity of natural forest ecosystems. Whole complex of
non timber values.

12 The rare and extreme value of a 1,000 year ecosystem that can never be replaced.

128 Its incredible wealth as a standing, living forest not a butchered mess

129 That it is maintained in an integrated continuous form.

130 The forest is an important ecosystem providing oxygen and life for birds, animals and plant species

Question: 2 *Please state and explain what you consider to be the most important value of the forest.*

Response No.

Response

- | | |
|-----|--|
| 132 | Public asset must be used and made available to all users. |
| | |
| 133 | Health of the planet therefore sustainability is essential what is left of old growth should be untouched because not enough research has taken place in these areas. Touris |
| | |
| 134 | Keeping us alive i.e. climate, water cycles, bio diversity, cleaning the air. |
| | |
| 138 | Sustainability of one of the world s endangered ecosystems. |
| | |
| 139 | Saving what is left of the old growth forest as well as preserving what wildlife is left |
| | |
| 144 | Ecosystem integrity and natural heritage. |
| | |
| 145 | Sustainability |
| | |
| 14 | Combo of values. |
| | |
| 152 | Natural ecosystem. Sustainable natural resource. |
| | |
| 153 | Extremely important part of life chain, integral part of habitat for all life forms. |

- 15 Bio diversity and old growth.
- 163 Bio diversity and the complex structure of an old growth ecosystem.
- 1 Biological diversity, wildlife habitat, salmon habitat, water quality, social economic values that respect the above. i.e. Not clearcutting.
- 201 Intrinsic value, bio diversity, etc.
- 210 Its role in ecosystem.
- 216 The ancient forests are an irreplaceable asset with many values i.e. heritage, wildlife, etc.
- 224 Forests contribute to the health of the planet very important.
- 226 Living ecosystem interrelated life animals, plants, water, air, soil human inspiration, health perspective.

Question: 2 *Please state and explain what you consider to be the most important value of the forest.*

Response No.	Response
22	Itself. It is a living ecosystem that supports vast amounts of life, including ours.
230	The forest itself has intrinsic value the diversity of species rarity of old growth ecosystem. Also has great cultural value.
231	It exists for its own sake, independent of any benefit to humans. Evolution must continue along its natural path: bio diversity
233	All living creatures have their own interest value animals, plants, insects, molds, fungi, birds, reptiles, etc.
236	It exists. Intrinsic worth.
23	To be a forest. Its intrinsic worth is more important than economic value.
238	Oxygen production, safety and preservation of entire ecosystem, tourism/tours.
241	Long term ecological stability and local economic activity.
242	Itself and its ability to act as a complex, interdependent ecosystem.
244	Multiple use.
249	

- 250 Bio diversity of a complete untouched ecosystem that Mother Nature intended it to be.
- 252 Bio diversity genetic diversity ecological values.
- 254 The most important value suggests hierarchy. Many values rank first. The fact that large tracts in that forest remain in their glory is the most important value. Save Clayo
- 255 A balance of environmental and economic values.
- 256 The forest is a vital component of a healthy ecosystem.
- 25 Maintaining bio diversity and large intact eco systems old growth forests . No clearcutting in TFL 44.
- 261 As a "carbon sink" thus clearcutting is one of the greatest contributors to global warming.

Question: 2 *Please state and explain what you consider to be the most important value of the forest.*

Response No.	Response
26	Its function in retaining and supporting geological, geographical, climatic conditions, and as a wildlife refuge also plant life.
268	Forests should remain intact for the preservation of wildlife the preservation of this earth.
269	A harvestable crop and a recreational area wildlife habitat.
2 1	For it to be fully utilized
2 2	Green land cover
2 3	Preservation of sufficient ecosystem space that forest ecosystem specifically old growth is able to survive.
2 5	The most important value of the forest is that it is a sustainable natural resource.
2 6	Lots
2 8	That it exists Intrinsic value to the Earth. As much primary forest as possible must be maintained for the health of all of us beings.
280	Eco system/wildlife habitat

Question: 3b *Do you have any concerns about logging on TFL 44 ? If "Yes", what concerns do you have?*

Response No.

Response

- | | |
|-----|--|
| 15 | Intensity and rate of cut behind West Coast Trail unit of Pacific Rim National Park and in Clayoquot Sound. Terrain failures and stream damage Kennedy Lake |
| | |
| 1 | All the TFL. Clearcutting destroys salmon spawning streams, degradation of our society due to lay offs, etc. |
| | |
| 22 | Deforestation is a bad idea. Clearcutting is deforestation. |
| | |
| 33 | Sight wildlife runs from the noise. |
| | |
| 35 | I question if it is sustainable at the present cut levels in TFL 44. |
| | |
| 45 | Deer winter ranges are not large enough rate of cut is too high. Beaufort Range, Katlama Creek, Corrigan Creek, Museum Creek, China Creek, Camron Valley, Goose Creek. |
| | |
| 46 | I have some concerns but they are minor and generally relate to previous logging practices. |
| | |
| 108 | See Appendix V additional responses. |
| | |
| 109 | Sustainability of forest resources via current logging methods AAC potentials over time. |
| | |
| 111 | Too much lumber removed too rapidly. Mechanization has outstripped political control. |

- 125 My concern is that clearcutting will be the primary silvicultural system. Would like to see more attempts to use retention systems.
- 12 Because of the sensitivity and beauty of the area, logging should be halted immediately in the entire area.
- 128 Destruction of salmon streams, heavy erosion and watershed slaughtering.
- 129 Practice of clearcutting.
- 130 I want to see the temperate rain forest of Clayoquot Sound protected.
- 132 Clayoquot Sound. Windsurfing Nitinat Lake.

Question: 3b *Do you have any concerns about logging on TFL 44 ? If "Yes", what concerns do you have?*

Response No.

Response

- | | |
|-----|--|
| 133 | Logging old growth trees sensitive trees which are especially badly damaged by logging. |
| 134 | Old growth coastal rain forest any areas damaged e.g. streams. |
| 138 | Primitive clearcutting techniques that destroy the delicate ecosystem. |
| 139 | That the boundary areas to designated parks be left nearly intact otherwise blowdown of park trees. |
| 144 | I believe all contiguous areas of old growth in Clayoquot Sound e.g. Clayoquot Valley, Ursus Bulson should be preserved. |
| 145 | Yes, salmon habitat. The large clearcuts I see from the ocean. |
| 14 | Logging through streambeds. Clearcuts too large. |
| 152 | Keep the logged patches small enough to avoid erosion. |
| 153 | Lack of trust in the management responsibility for forestry methods, particularly clearcutting . |
| 15 | Clearcutting poor harvest practices. Clayoquot Clayoquot River, Ursus, Flores Isl., Meares Isl., Sydney, Upper Bulson, Walbran, Klanawa, Nahmint, Taylor, Barclay Sound. |

- 163 Extremely poor logging practices by MB even your new "alternative" plots of patch retention, etc., leave much to be desired. Clearcutting is not an acceptable forest practice. Walbran, Clayoquot, Nahmint, Meares Island.
- 1 AAC levels, continued clearcutting, helicopter highgrading, old growth liquidation.
- 201 Will re growth be monitored as effectively as past efforts
- 210 Concerned over any and all clearcutting.
- 216 I am concerned about the failure to leave large unfragmented watersheds. Upper Bulson Ursus watershed should be left untouched, as well as Carmanah and Walbran
- 224 I would like to see still more areas protected.

Question: 3b *Do you have any concerns about logging on TFL 44 ? If "Yes", what concerns do you have?*

Response No.

Response

- | | |
|-----|--|
| 226 | Clearcutting in Clayoquot Sound. Keep intact watersheds. Use selective logging. |
| | |
| 22 | Clearcut logging will kill every species in the clearcut the mammals will leave, the canopy eco system is destroyed and the 1000 year forests will never exist again because you will kill them again. |
| | |
| 230 | Because clearcutting has proven to be massively destructive to the environment economically unsustainable the native people and public have not been sufficiently consulted. |
| | |
| 231 | Get the hell out of the forest, you greedy, selfish, scumsucking trash |
| | |
| 233 | Destruction of pristine watersheds by building roads in Clayoquot Sound logging of old growth trees, older than our grandparents grandparents. |
| | |
| 236 | Loss of bio diversity habitat. Replacement of old growth with cash crop. |
| | |
| 23 | The continued rape of ecosystems everywhere. |
| | |
| 238 | Clayoquot Sound |
| | |
| 241 | Continued clearcutting of temperate rain forest. |
| | |
| 242 | We need to conserve large areas of original low elevation coastal forest. TFL 44 is one of these. |

- 244 Employment will continue to drop due to excess government controls.
- 249 Stop clearcutting
- 250 Clearcut logging is completely destructive for the sole purpose of greed by multinationals.
- 252 Logging is increasingly fragmenting ecosystem. Loss of habitat for animal plant species. Elimination of old growth ecosystem.
- 254 Patchwork logging has not been sustainable in steep terrain, coastal rain forest.
- 255 That conditions imposed through this process may result in unreasonable AAC reductions and my taxes will go up.

Question: 3b *Do you have any concerns about logging on TFL 44 ? If "Yes", what concerns do you have?*

Response No.

Response

- 256 The forested land is not being fairly/ustly looked at in terms of native urisdiction
- 25 Clearcut logging, patch clearcut logging, logging on steep terrain.
- 261 All of Clayoquot Sound this is "specific" because it constitutes a biosphere.
- 26 Will the public be made aware of the final result and specific goals of this "public input process"
- 268 Clearcutting is the most destructive form of forestry practice.
- 269 I want continued well planned logging to take place.
- 2 3 Concerned that once old growth forest ecosystem is cut, it won t return for thousands of years i f at all. Concerned about poor logging practices.
- 2 5 The forest must be logged in a way that ensures that it is sustained.
- 2 6 Clearcutting generally re planting species that thrive in new climate/high UV radiation
- 2 8 Clayoquot Sound has the most biomass of any forest and must not be cut anymore. 22 is too much
- 280 Clearcutting irreversible damage and change to the environment.

Question: 3c *Do you have any concerns about logging on TFL #44? If
If "No", would you please explain why you have no concerns.*

Response No.

Response

16 If the forest is managed properly, it is a "go".

20 I believe MB has learned care/outcome of good logging practices

100 Not as carried out by MB Limited.

2 1

2 2 MB is in business and I believe are trying to act responsibly

Question: 4 ***What concerns, if any, do you feel were addressed in this open house?***

Response No.	Response
15	Some of my recreation concerns specific areas e.g. Klitsa Plateau site location of cut blocks.
16	
1	I have seen nothing that does this.
20	Not sure.
22	
33	Concern for the forests, water, wildlife, people.
35	General concerns.
45	There were a lot of concerns addressed but not voluntarily by the Company the Company would not be doing any of them if not forced to.
46	None I thought the Open House poorly organized lots of room space but not utilized. More tables required to accommodate the various folio sections. There appeared to be a shortage of identifiable MB forestry personnel to answer questions.
100	No comments

108

109 Of necessity, my attendance was brief hence no comment.

111 I have suspicions of whitewash...

125 A sincere effort was made to answer my concerns about the relationship between planning by license processes such as Scientific Panel Central Region Board.

12 One point of view was expressed concerning this Co.'s plans for the absolute destruction of our land.

128 It reiterated the large scale massacre that will happen if the area is logged.

Question: 4 *What concerns, if any, do you feel were addressed in this open house?*

Response No.

Response

129 Clayoquot decision was well covered.

130 I was pleased to see the comments on sheets of paper on the wall.

132

133 That the logging companies are not responsibly looking after our forests. Companies are not responding.

134 Many concerns were stated, essentially logging companies don't manage for other forest values.

138 MB is at least willing to consider alternative methods of logging other than clearcutting.

139 Putting concerns on paper on the wall. Good.

144

145 It looks like MB is trying to plan out the future better but more has to be done.

14 None apparent on surface, just platitudes plaques.

152 Windsurfers concerns for continued open access to Rec. Site 88 18 area potential additional access via DL150.

153 None, but the Open House provided me with much more info about TFL 44.

15

163

1 Virtually none not to the fault of personnel.

201

Question: 4 ***What concerns, if any, do you feel were addressed in this open house?***

Response No.	Response
210	None.
216	None.
224	
226	This place doesn't feel accessible to public. How about public libraries
22	None. I feel you have made a facade of addressing concerns because you continue to log Clayoquot Sound unsustainably in spite of obvious public disapproval.
230	The information here was much of what I have already heard. A great deal of rhetoric and not a lot of effort to address larger issues.
231	You are fooling no one, this means war
233	You looked at what humans can gain from the areas in question but humans are only one of 30 million species.
236	No real ones.

23

238

241 None

242 Human concerns exclusively. Short term concerns.

244 Glad to see MB still in business.

249 None

250 The immensity of TFL 44 is my biggest concern, and my concerns for First Nations people

Question: 4 ***What concerns, if any, do you feel were addressed in this open house?***

Response No.	Response
252	None. TFL 44 should be revoked large areas of TFL 44 preserved the rest handed over to communities tenures, eco forestry.
254	
255	That the forest is in good hands with the sincere people who are managing MB s holdings.
256	None
25	None
261	Very little it appears as token public input.
26	Good information and maps provided, a better understanding of the issues involved in TFL 44.
268	Clearcutting is the most destructive form of forestry practice.
269	All possible concerns were addressed and answered.
2 1	Keeping the public informed

2 2 Your messages were quite general

2 3

2 5 There was evidence that some desire no logging at all on the Island

2 6 Staff were helpful and informative.

2 8 Basic management issues, assuming further clearcutting.

280

Question: 5 *What, if anything, did you learn from this open house?*

Response No.	Response
15	Potential cut plans/leave strips/bio diversity and Marbled Murrelet reserves in certain specific areas.
16	
1	Uncertain.
20	The huge areas on Vancouver Island not touched by logging
22	The Company cares too much about money and far too little about Mother Earth.
33	That people are looking for a better way of going about forestation concerned people.
35	More about the plan development process.
45	Where future logging will take place and what will hopefully be left not much from what I can see .
46	Nothing.
100	

108

109 I was very interested in your colour visual of MB interests via TFL 44 TFL 39. I have requested a copy.

111 Pleasant, eager, pleasing staff.

125 A sincere effort was made to answer my concerns about the relationship between planning by license processes such as Scientific Panel Central Region Board. Apart from that, very little

12 That it would be the biggest disaster since Chernobyl to take away the most precious part of our country.

128 That TFL 44 is so wrong greed is foul.

129

Question: 5 *What, if anything, did you learn from this open house?*

Response No.	Response
130	I learned about the different types of logging proposed for certain areas.
132	Something about the process, little about results.
133	
134	
138	MB is no longer able to "cut run" in former clandestine fashion.
139	That Clayoquot is an area of special concern
144	
145	MB has control over a lot of land.
14	MB is in it mainly for money.
152	There may be a possibility of additional Nitinat access if joint planning effort is made involving organized windsurfing group, MB MoF.

153 True size of TFL 44, inclusion of highly sensitive areas within TFL 44 e.g. Clayoquot Sound

15 New computer graphics, your better maps forest cover/cutblocks need to be made available to the public.

163

1 That despite Government forest industry propaganda, it's business as usual in the woods.

201 Basic issues involved, geography

210 That MB has no real commitment to public consultation.

216 I learned you are liquidating all valley bottom old growth.

Question: 5 ***What, if anything, did you learn from this open house?***

Response No.	Response
224	That MB says it has a sustainable Management Plan for TFL 44.
226	MB has nice PR people. 25 year licence has 5 year plans.
22	I learned that you are willing to do anything to protect your public image and that you have no idea what a living forest is.
230	That there may in fact be a desire for public consultation but it is not publicized or made accessible enough to be useful. What happens as a result of our opinions Does anything change
231	I learned what propaganda you are spewing to the public.
233	That MB has very little regard for the inherent value of every living thing.
236	Multinationals are scummier than the shit I stepped on yesterday.
23	You've decided to cover your ass by giving "Open Houses" to feed propaganda to Joe Public.
238	That logging this area is an atrocity
241	The extent of "holdings" MB has in the form of licences

242 MB is good at PR. MB frames the issue in terms of obs and re growable artificial forests

244 Few public attending mostly self interest groups.

249

250 I learned that MB has little concern for anything but its profit and public image.

252 No real commitment to biological conservation. Alternative silviculture systems ust tokenism.

254

255 That there are people trying to do a good ob.

Question: 5 ***What, if anything, did you learn from this open house?***

Response No.	Response
256	Nothing
25	That it's not really an open house in terms of listening to and acting on real public input. It's a corporate sham
261	
26	I learned that this type of public involvement is a slow very expensive process.
268	Yes, your spokespersons lie for you. Clearcutting is the most destructive form of forestry practice.
269	That Port Alberni operations may run out of fibre if an adequate AAC is not maintained.
2 1	That MB is doing a good job of keeping the public informed.
2 2	Not a great deal
2 3	
2 5	Silviculture systems.

2 6 Climate change/exotic species info.

2 8 About new potential guidelines arising from the Coastal Watershed Assessment.

280 Geographic boundaries of tree licence.

Question: 6 ***Do you feel it is useful to include the public in this manner during the development of the Management Plan?***

Response No.

Response

15 People should have the opportunity to know about proposed plans on public lands be able to recommend changes to plans.

16

1 We want TFL 44. You can stay with your plant we want forest homesteads, selective sustainable forestry practices.

20 Public needs to be included in logging decisions. MB needs more open PR.

33 More input someone may say something that would be of help.

35 The public are stakeholders where crown land is involved.

45 How else can you hear people's concerns, and also it gives the public a chance to talk to the people managing our forests.

46 A better informed public will be more understanding of the process most of the "eco freaks" are wallowing in ignorance.

100 Yes, if you can endure the foolish thinking of those opposed to forest practices as carried out by MB.

109 The "manner" is quite inert: rather exclusive in location: but yes, it is N.B. to include the public in some manner.

- 111 The public feels too many decisions affecting large numbers of people are made in the Boardroom where only immediate profit is considered.
- 125 Public should be included, but presentation ought to be improved. An oral or video presentation of Plan, after which one could ask questions. There is not time or opportunity to read detailed written presentation.
- 12 To show MB that there are many people in this province who care about preserving our national heritage for generations to come.
- 128 However, you must be prepared to listen. Over 1000 arrests doesn't tell you anything
- 129 But it should occur much earlier in the process as well, viable options should be listened to.
- 130 Most of the forests of B.C. are on Crown land, supposedly owned by the people, so people should have a say.
- 132 Only meaningful if public interest not government has a stake.

Question: 6 ***Do you feel it is useful to include the public in this manner during the development of the Management Plan?***

Response No.

Response

- | | |
|-----|--|
| 133 | I think there needs to be more community involvement because Crown land theoretically belongs to the people. |
| | |
| 134 | Crown land does belong to the people, so it is appropriate to have public input. |
| | |
| 138 | TFLs belong to the BC public therefore our opinions must be taken into account. |
| | |
| 139 | Greater public input in public Crown lands allows for opinions to be expressed/heard
open dialogue less likely to have angry demonstrators. |
| | |
| 144 | I would like to see some form of public veto power arising out of our input. |
| | |
| 145 | I think control of the public resources should not be in the hands of a few people. |
| | |
| 14 | A ray of hope. |
| | |
| 152 | Recreational users of land in TFLs are not clear about how the forest companies
Provincial Government interact re recreational users. The public values an opportunity to
make their values/suggestions known. |
| | |
| 153 | Provides forum for discussion and opinions on forestry practices, rational or otherwise. |
| | |
| 15 | I desire a more complete explanation all the maps and proposed cutting plans displayed
on the walls would be better. |

- 163 Crown land is public land and the public has a duty and right to ensure these lands are properly managed.
- 1 But I do not feel the public's input is addressed or incorporated or even welcomed. But it's good PR.
- 201 They have to live with the consequences of deforestation.
- 210 Because this is just an exercise in public relations there is no intention of listening to the public.
- 216 The public should have the right to study your plans before any approval.
- 224
- 226 Include the public but not just PR type. Public needs more information to be able to say "preserve wilderness and sustain the forest".

Question: 6 ***Do you feel it is useful to include the public in this manner during the development of the Management Plan?***

Response No.

Response

- | | |
|-----|---|
| 22 | I feel it is useful and I pray that you actually do implement some of my suggestions, but I am not holding my breath. You are profit oriented only. |
| | |
| 230 | Yes, but I do not feel public consultation is being done on nearly the scale necessary. Very few people knew this Open House was happening. This is public land |
| | |
| 231 | It s all lies and public relations BS. |
| | |
| 233 | You are logging OUR Earth, too. Once the current executives of MB are gone, we will have to deal with the barren Earth they have left behind. |
| | |
| 236 | By this point it s too late. Input is disregarded. |
| | |
| 23 | Hopefully, by including the public, we can reduce some damage. |
| | |
| 238 | There should be no "Management Plan". The area should be preserved as a wildlife reserve. |
| | |
| 241 | |
| | |
| 242 | Resource management planning should be done as a co operative, hands on process by the community near the forest government, environmental advocates and logging operators. |
| | |
| 244 | You have heard all the self interest group B.S. before no logging anywhere. |

- 250 It can be useful if MB listens to and acts on public concerns and does not jeopardize the future of the Earth for money.
- 252 If only to give opinions, ideas but the whole process, I believe, is a sham. There is no stopping the corporate agenda. Log till it's gone. Profits first.
- 255 It gives many people the opportunity to gain understanding of forest management.
- 256 The public has the right to express concerns over PUBLIC lands as you call it it is Native land as far as I am concerned.
- 25 But the public needs to be included in a real and democratic way, like access to negotiations and public input on TFL renewals, instead of some feeble input after they are signed.
- 261 The state of the forests affect everyone loggers, fishermen, others the public MUST be included.
- 26 But it seems limited in the number of people reached, whereas some of your excellent commercials i.e. the container box TV commercial seen recently was short, effective and reached more people.

Question: 6 *Do you feel it is useful to include the public in this manner during the development of the Management Plan?*

Response No.	Response
268	I feel that MB has deceived the public in convincing the public that clearcutting is OK, because it is not OK.
269	It is a waste of MB money and talent. The demonstrators outside the hotel were not interested in answers.
2 1	So that the public gets the correct answers.
2 2	Positive public response is vital
2 3	It is important to accurately gauge public reaction to an issue with more than economic impacts environmental/social.
2 5	The forest belongs to all people in B.C., so they have a right and an obligation to be informed.
2 6	Lots of factors are involved in reforestation.
2 8	Absolutely essential, since it's our land Or more realistically, First Nations land
280	It is good to know the public's concerns before a project goes ahead.

Question: 7b *Are there any aspects about TFL #44 you would like to know more about? If "Yes", what would you like to know more about?*

Response No.	Response
15	Rehabilitation plans. Potential recreation/bio diversity reserves.
1	A copy of your Management Plan for this time period
35	
109	Make available coloured visual of TFL 44 with related areas: past production: specific objectives in production renewal. I am requesting a copy of visual on display re TFL 44 and TFL
125	Economic considerations: does it make good economic sense to use high quality old growth wood for 2x4s. Wildlife habitat considerations, other than deer winter range.
12	How many jobs would be sustained in balance with the volume of wood cut
128	How many jobs will be lost because of clearcutting instead of saved by selective logging
129	Why isn't eco forestry or labour intensive selective harvesting being considered. Why are you only planning 20 years ahead rather than 200 years
132	Future of Nitinat Lake regarding camping for windsurfing.
133	Maps explaining when different areas are going to be cut and in combination with other logging companies, how this will leave Vancouver Island looking in the long term.

- 134 The ecology flora/fauna, etc. of the forest ecosystem.
- 138 Why didn't any of the staff present know anything about the well publicized slides in the Bulmer Creek area
- 139 Why MB has so much power/weight involved in decision making of such an incredible area of forested land.
- 144 I am interested in your claims that clearcutting mimics natural processes.
- 145 What, if anything, is being done to restore fish habitat
- 14 Logging styles/eco values.
- 152 Possibility/procedure of getting additional Nitinat access via DL150 next to Rec. Site 88 18.

Question: 7b *Are there any aspects about TFL #44 you would like to know more about? If "Yes", what would you like to know more about?*

Response No.	Response
153	Recreational opportunities access within, particularly plans for Nitinat campsite being a windsurfer .
15	High volume old growth stands, forest cover maps showing volume
163	I would like the maps to be more easily displayed.
1	Any plans to incorporate sustainable, selective logging the incorporation of forest integrity.
201	Future plans.
216	I would like to buy copies of your forest cover maps.
224	There was not enough written material available.
226	What kind of cutting is planned Road building in sensitive areas. What research into species of wildlife and flora
22	I want to know when you will stop killing it over and over again
230	When will a REAL public consultation negotiation process begin When will logging on public lands be in the hands of the community instead of corporations.

- 231 Where you are logging specifically.
- 23 How we, the public, can stop the granting of public land to corporate bastards like yourselves.
- 242 Complete species survey, including interdependencies and level of extirpation risk. Locally controlled selection cutting systems that maintain structure function of forest. Consider
- 244 Your tenure map should show the working forest remaining.
- 250 I would like to know where you are logging and how much you remove everyday.
- 252 Are you willing to let go of your tenure licence
- 26 I d like to know when all this consultation with the public will be finished, when it will be acted upon, will the public be informed about the final version of the plan or agreement.

Question: 7b *Are there any aspects about TFL #44 you would like to know more about? If "Yes", what would you like to know more about?*

Response No.

Response

- | | |
|-----|--|
| 268 | How long are you going to clearcut Until there are no forests left. |
| | |
| 269 | At the end of all this, will the AAC maintain operations at an adequate level for profitable operation |
| | |
| 2 3 | How economically sustainable are harvesting practices |
| | |
| 2 6 | Success of exotic species. |
| | |
| 2 8 | When clearcutting will end in the TFL, when no more old growth will be cut, and when the TFL will be transferred to the people out of MB's corporate control |
| | |
| 280 | When exactly certain blocks will be harvested and if they are to be clearcut. |

Question: 9b *Is there anything else you would like us to address in this Management Plan development process?
If "Yes", please tell us what topics or points you would like us to address.*

Response No.	Response
15	Rehabilitation of previous damage, update on success/failure of silviculture: plans to correct these problems.
16	
1	I've given Mike Hooper a copy of our proposals. Nanaimo office.
20	
22	
33	
35	Workforce stability in the logging sector.
45	
46	Better utilization of space.
100	Attack your opponents who remind me of the student Christian movement U. of B. dirty stinkers.

108

109 Your newsletter is "biblical": what specific info is there on current forest management practices, etc. Cite specifics current and future

111 More emphasis on preservation of biodiversity leave snags, swamps, streams. Currently you homogenize the landscape.

125 Examination of alternative silvicultural systems with analysis of both short term and long term economic and ecological impacts. e.g. Jobs from more labour intensive methods.

12 The number of jobs lost to technology, and how much of our old growth is exported and made into newspapers.

128 Clearcuts are costing jobs. Create more jobs by selective logging and log less trees.

129 Eco forestry practices.

130 More temperate rainforests should be protected for recreational use.

132 Field site visits with stakeholders Nitinat Lake.

133 Protection for recreation areas, salmon streams.

Question: 9b *Is there anything else you would like us to address in this Management Plan development process?
If "Yes", please tell us what topics or points you would like us to address.*

Response No.	Response
134	The assumption that the forest is there to provide products for us only, and the assumption that humans can create forests better than nature.
138	A credible thorough commitment to the integration of economic and ecological principles.
139	Tourism if areas are preserved. Modern techniques of forestry put workers out of ob
144	Canada's compliance or non compliance with the Biodiversity Convention on clearcutting.
145	I am concerned that the figures for sustainable yield could be wrong.
14	Real involvement not just a few lower officials.
152	
153	
15	Better maps of cutblock plans sizes, year where real alternative logging will take place. MB's commitment to maintain employment.
163	

- 1 Additional compliance, the CORE Act, Land Use charter and the UN Biodiversity Convention.
- 201 Environmental impacts need to be addressed in greater detail.
- 210
- 216 Detailed wildlife studies full ecological assessment.
- 224
- 226 Employment retraining, Company responsibility for creating new obs through new activities
i.e. recycling plants
- 22 I want you to try and envision a forest that is alive and supports the life of the planet
rather than a crop for profit.
- 230 What actions will be taken as a result of this process Who is it including as the public
when it seems so few people are told.
- 231 When are you going to get out of the forests
- 233 The complete end to old growth logging and road building

Question: 9b *Is there anything else you would like us to address in this Management Plan development process?
If "Yes", please tell us what topics or points you would like us to address.*

Response No.	Response
236	Clearcutting more than ever, less employment than ever
23	When you ll start putting the well being of society as a whole over your bottom line
238	Is taxpayers money going into this pro ect
241	
242	Preserving structures function of ecosystem in operating areas. Much less damaging meth ods with economic analysis. Species local risk research. First Nations planning input.
244	Provide logging tours instead of Open Houses. City people need to meet woods workers.
249	Get rid of TFLs.
250	Please use selective logging practices. This will provide more obs for thousands of year s
252	
254	

255 Botanical forest modules, signage for FM activities in TFL

256

25

261 More important than old growth issues is the honest adoption of eco forestry principles.

26

268 Stop clearcutting Clayoquot Sound.

269 Less "public" involvement but more effort through the media.

2 1

2 2

2 3 Economic feasibility study of the option of leaving old growth forest section intact i.e
. financial cost.

Question: 9b *Is there anything else you would like us to address in this Management Plan development process?
If "Yes", please tell us what topics or points you would like us to address.*

Response No.	Response
---------------------	-----------------

2 5	
-----	--

2 6	Plant exotics to see what thrives in new climate.
-----	---

2 8	Aboriginal concerns and input.
-----	--------------------------------

280	Forestry practices methods of logging proposals for value added logging.
-----	--

[Attachment 2](#)

CONSULTATION SURVEY - August 1997

TFL #44 Management Plan

Summary of responses to the Consultation Meeting Survey --
please refer to **Appendix XI** .

Questionnaire Responses

NOTE: Total responses are presented.

Question #2 a] **Did you know anything about TFL #44 before this meeting?**
If "Yes", would you briefly describe what you knew about #44.
TFL

	<u>Response</u>	<u>No.</u>	<u>Explanation</u>
Tofino	Yes	3	Tenure system granting MB rights to timber on public lands in TFL 44. Granted to MB in 1955. Covers close to 1/2 million hectares. 25 year lease recently renewed.
	No	3	
Port Alberni	Yes	1	
	No	2	
Victoria	Yes	3	Have attended previous public open houses re TFL 44 and have read SMOOP [Feb. '97]. Considerable public interest in the management and logging practices.
	No response	1	
Bamfield	Yes	3	Know physical area, attended forests presentation on TFL 44 earlier in year. Area/MB has license/road building.
	No	1	

Question #3 **Please state what you consider to be the most important value of the forest. Why do you say that?**

Tofino	<ul style="list-style-type: none"> - Old growth temperate rainforest is a globally rare ecosystem. - Its intrinsic value as a functioning ecosystem with all its biodiversity. - Renewable source of commodities. - Animal protection, environmental concern [ozone].
Port Alberni	<ul style="list-style-type: none"> - \$ in comparison to education, employment, development and competition to unemployed. - Having representatives present overviews of their plan/goals. - Home for wildlife .
Victoria	<ul style="list-style-type: none"> - Ecological values: fish/ wildlife habitat - biodiversity.

- Sustaining human use.
- Industrial application and aesthetic appeal.
- To sustain man through making oxygen, wood, jobs .

Bamfield

- Oxygen contribution to planet, removing toxins from atmosphere, soil retention.
- Non-replaceable ecosystem. Forests are a great treasure.
- Living ecosystem.
- Life-sustaining for humans and forest inhabitants. Oxygen contribution/enjoyment.

Question #4

- a] **Do you have any concerns about logging in TFL #44?**
- b] **If "yes", what concerns do you have. Please mention any specific areas, if applicable.**
- c] **If "no", please explain why you have no concerns.**

	<u>Response</u>	<u>No.</u>	<u>Explanation</u>
Tofino	Yes	4	Cannot replace large, undisturbed old growth ecosystems in Clayoquot Sound [Sydney/Clayoquot/Bulson/Ursus]. Old growth is not a renewable resource. Clearcutting or clearcutting with some patches of retention is still practiced. Current logging method does not leave basic elements of a natural forest intact. It seeks to replace the natural forest with tree plantations. Logging should be done so as to minimize impacts. Clearcutting - selective logging should be used instead of cutting old growth.
	No	2	Don't live here!
Port Alberni	Yes	1	Rate of cut is too high.
	No	2	TFL people show concern for what they are doing and are making public aware of what's going on.
Victoria	Yes	3	Continued reliance on conventional clearcutting as primary silvicultural system. Focus on short-term economic impacts and relative neglect of long-term consequences. Quality of second-growth wood, especially if more rapid growth is the objective of silvicultural treatments.
Victoria cont'd.			How will this affect our markets for high quality solid wood products? Less waste and environmental damage LIAs/lack of alternatives of cut/no intention to phase-out clearcutting.

	No	1	I feel BC's Forest Practices Code is enough to negate any concerns.
Bamfield	Yes	4	Cutblocks 1423 and 1434 - concerned about fish habitat, our water supply and visuals. Too many trees lost already. Concerned about trees, ecosystem, animals, birds, streams, ocean, sea creatures and us. All are affected by clear-cut logging. Large areas on mountain side cleared. Landslides. River/stream habitat for fish.

Question #5

What concerns, if any, do you feel were addressed at this meeting?

Tofino

- What does MB plan to cut in the next 5 years?
- Too general a meeting to get into specific concerns.
- Impressed by the level of interest of MB personnel.

Port Alberni

- Too many moneymakers, not enough workers, not enough progress, very little knowledge.
- Heard the rate of cut will come down slightly but not enough to address wildlife habitat concerns .

Victoria

- Environmental damage.

Bamfield

- Communication, willingness of MB, understanding of overall planning process.
- None which really needed to be addressed.

Question #6

What, if anything, did you learn from the meeting?

Tofino

- Logging, if done correctly, is good.
- Learned difference between TFL & TL.
- Not much; meeting was general.
- Packaging and delivery of the Management Plan information was very professional.

Tofino cont'd .

Port Alberni

- The competition of forest industry, environment issues, competition of employment, financing of Govt. to welfare.
- Learned that forest industry workers are taking a look around them .

Victoria

- Learned more about Clayoquot Symposium on alternative silvicultural systems [most useful and interesting].
- Extensive planning is required.

Bamfield

- Understanding of overall planning process, willingness of MB.
- Not much; there was no clear, specific explanation about Bamfield. Basically outlined the areas, that is all.
- The more I learn about logging practices and their effects on everything that surrounds and co-exists with them , the more I dislike what's going on.

Question #7 a] **Are there any aspects about TFL 44 you would like to know more about?**
b] **If "yes", what would you like to know more about?**

	<u>Response</u>	<u>No.</u>	
Tofino	Yes	1	What efforts are being made to stop relying on old growth and start relying on sustainable turnover on tree farms? Secondary manufacturing? Where does the timber from TFL 44 go? % exports?
Port Alberni	Yes	1	Training/job creation for young adults/info who to see and apply for jobs/training in the forest industry.
Victoria	Yes	2	Protection of wildlife habitat and stream classification and protection. Value-added opportunities and initiatives currently being pursued and promoted in the region. What is the % of area in Nahmint LIA being clearcut vs. partial cut? Number of blocks in each? Method of logging in partial cut? The % of wood from TFL 44 going to pulpwood.
Bamfield	Yes	3	Would like to know when actual cut plans are established for Blocks 1423 and 1434. What is the exact plan for Bamfield area? Plans to stop clear-cut logging and start selective logging in small areas away from watersheds, etc.

Question #8

Thinking now about forest harvesting and management, please indicate whether you agree or disagree with the following statements. Please use a scale of one to ten, where "1" means you *disagree completely* and "10" means you *agree completely*.

8a] Forests are precious ecosystems

	Disagree Completely	1	2	3	4	5	6	7	8	9	10	Agree Completely
Tofino												6
Port Alberni								1				2
Victoria							1					3
Bamfield												4
TOTAL							1	1				15

8b] Forests are critical economic contributors to B.C.

	Disagree Completely	1	2	3	4	5	6	7	8	9	10	Agree Completely
Tofino						1	2					3
Port Alberni						1		1				1
Victoria					1	1			1			1
Bamfield		1				1		2				
TOTAL		1			1	4	2	3	1			5

8c] Forests provide jobs.

Disagree Completely	Agree Completely
------------------------	---------------------

	1	2	3	4	5	6	7	8	9	10
Tofino					2					4
Port Alberni					1			1		1
Victoria						1		1		1
Bamfield					1				1	2
TOTAL					4	1		2	1	8

8d] *Some* old growth forests should be preserved.

	Disagree Completely 1	2	3	4	5	6	7	8	Agree Completely 9	10
Tofino	1									3
Port Alberni		1								2
Victoria										4
Bamfield	1				1					2
TOTAL	2	1			1					11

8e] *All* old growth forests should be preserved.

Disagree Completely 1	2	3	4	5	6	7	8	Agree Completely 9	10
-----------------------------	---	---	---	---	---	---	---	--------------------------	----

Tofino	2								3
Port Alberni		1			1				
Victoria	1			1					1
Bamfield									4
TOTAL	3	1		1	1				8

8f] The public should be involved in forest planning such as the Management Plans
of a company.

	Disagree Completely									Agree Completely	
	1	2	3	4	5	6	7	8	9	10	
Tofino					2				1	3	
Port Alberni										3	
Victoria									1	3	
Bamfield										4	
TOTAL					2				2	13	

- Question #9 a] Is there anything else you would like us to address in this Management Plan development process?
- b] If "yes", please tell us what topics or points you would like to address.

	<u>Response</u>	<u>No.</u>	<u>Explanation</u>
Tofino	Yes	2	Details of new joint venture. Corporation plans for Northern/Southern Clayoquot Sound. The impact on biodiversity, on health of streams and water quality. The economic impact on other economic sectors such as tourism & fisheries.
	No	2	
Port Alberni	Yes	3	Compare health, business, fashion, education and low money-making ideas to reduce outpay for the needless, specific restrictions to free money. Forest talks - communication on where our industry stands today. I would like to see roads in specific areas made impassable to vehicular traffic to protect wildlife made vulnerable by clearcuts due to loss of visual cover.
	No	3	
Victoria	Yes	2	What is the % of area in Nahmint LIA being clearcut vs. partial cut? No. of blocks in each? Method of logging in partial cut? The % of wood from TFL 44 going to pulpwood.
	No	1	
Bamfield	Yes	3	Describe all areas in detail so we have an idea. Logging in watershed areas. Clear-cut logging done away with and selective logging introduced. Restoration/increased local employment. Alternate pulp source - annual plant.
	No	1	

Question #10

a) Your Work

	Professional	Management	Labour	Technical	Clerical	Student	Other
Tofino		1		1		3	1
Port Alberni							2
Victoria			1	1			1
Bamfield	2				1		

[No response: 2]

Question #10 b] Which is the closest major city or town to where you live?

Chemainus	Kamloops	Pt. Alberni	Tofino	Trail	Vancouver	Victoria	No Response
1	1	7	2	1	1	3	1

Question #10 c] In which sector are you employed?

Clerical	1
Education	1
Engineering	1
Environmental	2
Forestry	1
Finance	1
Homemaker	2
Resource Inventory	1
Tourism	1
No response:	6

Question #10 d] Age

	14-18	19-25	26-40	41-55
Tofino	1	2	2	1
Port Alberni			3	
Victoria		1		2
Bamfield	1	1		2
[No response: 2]				

Question #10e

	Male	Female
Tofino	4	
Port Alberni	2	1
Victoria	3	1
Bamfield	1	3
[No response: 2]		



Province of
British Columbia

Ministry of
Forests

Vancouver Forest Region
2100 Labieux Road
Nanaimo, British Columbia
V9T 5E9
Tel.: 751-7001 Fax: 751-7190



File: 19710-30/TFL 44

[original document on file]

January 4, 1996

W. Pearson, R.P.F.
MacMillan Bloedel Limited
Woodlands Services
65 Front Street
Nanaimo, British Columbia
V9R 5H9

Dear W. Pearson:

The operability mapping for Tree Farm Licence [TFL] 44 has been reviewed and is acceptable for use in the upcoming timber supply analysis of TFL 44.

If you have any questions please contact John Johnson, Tree Farm Licence Forester, Vancouver Forest Region at (604) 751-7036.

Yours truly,

Tim R. Sheldon, Reg. Operations Mgr
for and on behalf of Ken A. Collingwood
Reg. Mgr.

K. Collingwood
Regional Manager

cc: M.K. Hooper
Resource Data Coordinator
MacMillan Bloedel Ltd.
65 Front Street
Nanaimo, B.C. V9R 5H9



Province of
British Columbia

Ministry of
Forests

Vancouver Forest Region
2100 Labieux Road
Nanaimo, British Columbia
V9T 5E9
Tel.: 751-7001 Fax: 751-7190



[original document on file]

May 9, 1996

S. Higman, E.I.T.
MacMillan Bloedel Ltd.
65 Front Street
Nanaimo, B.C., V9R 5H9

Dear Shelley:

I have reviewed your letter of April 24, 1996, and the attached procedures for TFL44 MP #3 Netdowns for Terrain Stability. The approach is consistent with the discussions at our meeting of April 12, 1996, on this subject. I feel that the approach outlined is satisfactory for the purposes intended.

Similarly, I understand that you still intend to use the netdown procedure for snow avalanches as outlined in the minutes of a meeting February 25, 1993 between the Ministry of Forests and MacMillan Bloedel Ltd. It is my feeling that these procedures are satisfactory. This agreement as was previously acknowledged in a letter dated June 8, 1993, from G. Sutherland to B. Waatainen.

Sincerely,

Terry Rollerson, P. Geo.
Research Manager

cc: G. Boothroyd



Province of
British Columbia

Ministry of
Environment
Lands and Parks

BC
Environment

Vancouver Island Region 1
Regional Headquarters
2569 Kenworth Road
Nanaimo, British Columbia
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Telephone (604) 751-3100
Facsimile (604) 751-3103

February 13, 1996

[original document on file]

File: 39645-65/44GEN

Mike K. Hooper
Resource Data Coordinator
Management Plans
MacMillan Bloedel Ltd.
65 Front Street
Nanaimo BC V9R 5H9

Dear Mike:

Re: TFL 44 Wildlife Habitat Inventories

Apologies for not having been able to respond to your letter of November 8, 1995, until now. The completion of the draft Ursus Special Management Area Findings Report occupied most of my available time in November and December. In addition, the secondment of our Port Alberni Forest Ecosystem Specialist to deal exclusively with the Clayoquot issue has again exacerbated our ability to deliver an effective operational planning system across the Port Alberni district. To this end, I have had to take responsibility for continuing to deliver a limited amount of the district level planning functions, despite my regional position and priorities.

With regard to the existing inventories of deer winter ranges, deer zones, marbled murrelet nesting habitats and Forest Ecosystem Networks [FENs], as indicated above, we have had little opportunity to effectively review these information layers over the last 24-28 months. Based on previous review of this material, I believe we can, however, state that these information layers use data from your 20-year plan for December 1994 capture an acceptable pre-Code base case scenario for integrated resource management of non-timber resource values in TFL 44.

In recent and on-going discussions with Bob Cerenzia, he indicates a need for boundary modification and resolution of a number of areas dealing most particularly with deer zones and FENs. I agree that refinement is necessary, but I believe that we are both appreciative that we have mapped FENs to guide our discussions.

Mike K. Hooper

- 2 -

February 13, 1996

With the recent release of the Forest Practices Code Biodiversity Guidebook, I would also suggest there is further need to discuss landscape units and landscape unit objectives, most notably, old-growth distribution representativeness, patch sizes, connectivity and forest interior conditions. I have lesser concerns for the issues of seral stage distribution and stand level retention which can perhaps best be addressed through stand level practices to maintain or enhance biodiversity, more so than by applying strict landscape unit objectives

You may consider the existing inventories satisfactory for your current timber supply analysis. We look forward to further discussions and refinement over the next management plan cycle.

Yours truly,

I.A. McDougall, R.P. Bio.
Fish and Wildlife Habitat
Protection Biologist

cc: B. Cerenzia, Habitat Protection Officer
L. Jones, Clayoquot Implementation Team
M.R. Whately, Regional Fish and Wildlife Manager
J. Laing, Tenures Officer, Port Alberni Forest District
C. Miller-Retzer, A/Forest Ecosystem Specialist
G. Boothroyd, TFL Planning Forester, Vancouver
Forest Region



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Vancouver Forest Region
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Tel.: 751-7001 Fax: 751-7190



File: 12450-01

[original document on file]

June 19, 1996

W. Pearson, R.P.F.
TFL Forester
MacMillan Bloedel Limited
65 Front Street
Nanaimo, British Columbia
V9R 5H9

Dear W.J. Pearson:

Both the TFL 44 recreation and landscape inventories which were recently updated have been reviewed and are acceptable for use in the upcoming TFL 44 timber supply analysis.

Yours truly,

Tim R. Sheldan, Reg. Operations Mgr
for and on behalf of Ken A. Collingwood
Reg. Mgr.

Ken Collingwood
Regional Manager



Province of
British Columbia

Ministry of
Environment
Lands and Parks

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2569 Kenworth Road
Nanaimo, British Columbia
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Telephone: (604) 751-3100
Facsimile: (604) 751-3103

November 9, 1996

[original document on file]

File: 43330-01

Bob Askin
MacMillan Bloedel Limited
65 Front Street
Nanaimo BC V9R 5H9

Dear Bob Askin:

Re: TFL 44 Management Plan Number 3 -
Riparian Management Proposal for Community Watersheds

This is in response to your letter dated October 19, 1995, describing your proposal for delineating riparian management areas and assessing netdowns within community watersheds for the TFL 44 Management Plan Number 3.

We have no objection to the use of the presented methodology for incorporating community watersheds into the Timber Supply Analysis and 20-year planning processes. Suggestions by Allan Chapman, Ministry of Forests, Regional Hydrologist, may also be considered to more accurately estimate the netdowns and produce a realistic timber supply assessment.

Although this procedure may satisfy the Timber Supply Analysis and long range planning requirements, future operational plans must include site-specific riparian management strategies based on actual channel widths and stream characteristics.

Thank you for including our agency's interests in planning your forest activities.

Yours truly,

R.J. Cook
Water Resource Planner
cc: John Laing, Ministry of Forests, Port Alberni
Graham Boothroyd, Ministry of Forests, Nanaimo



Province of
British Columbia

Ministry of
Forests

Timber Supply Branch
1st Floor - 1450 Government Street
Victoria, British Columbia
V8W 3E7
Tel.: 356-5947 Fax: 387-6751



File: 19710-40/44

[original document on file]

April 11, 1995

Nick Smith
Biometrician
Resource Analysis Section
MacMillan Bloedel Limited
65 Front Street
Nanaimo, British Columbia
V9R 5H9

Dear Mr Smith:

Thank you for your letter dated March 6, 1995, regarding the use of the regression tree approach for estimating site index in the base case of the timber supply analysis for Tree Farm Licence 44 [TFL 44], Management Plan No. 3 [MP No. 3].

Forest Service staff at Research Branch have reviewed your proposal and accept it as the best available current information [see attached letter]. Accordingly, we accept your proposal to use the regression tree method for the base case for the timber supply analysis of TFL 44, MP No. 3 only. The site index of stands, excluding those stands from 20 to 120 years breast height age for which there are inventory heights may be assigned using your method.

Please note that there are some outstanding issues identified by the Forest Productivity Councils of B.C. that have yet to be resolved.

Nick Smith
Page 2

Please provide a sensitivity analysis that uses the site indices that are currently on the TFL 44 inventory file.

If you have any questions, please call me at 387-8388.

Yours truly,

John B. Koch
Timber Supply Forester - TFL
Timber Supply Branch

Attachments [1]

cc: L. Pedersen
Chief Forester

R. Brick
Tree Farm Licence Forester
Resource Tenures and Engineering Branch

K. Matthews
Operations Manager, Harvesting
Port Alberni Forest District

K. Collingwood
Regional Manager
Vancouver Forest Region

D. Gilbert
Director
Resources Inventory Branch

A. Nussbaum
Growth and Yield Applications Specialist
Research Branch

J. Johnson
Tree Farm Licence Forester
Vancouver Forest Region



FEB 24 1998



File: 19710-30/TFL 44

February 19, 1998

Bill Cafferata
Vice President and Chief Forester
MacMillan Bloedel Limited
928 West Georgia Street
Vancouver, British Columbia
V6E 3R9

Dear Bill Cafferata:


It was brought to my attention that an error was made in the calculation of the pro-rate for Schedule B land appearing in the chief forester's Allowable Annual Cut (AAC) determination letter for Tree Farm Licence 44 (dated January 22, 1998). The Schedule B prorata used to produce the AAC summary table was calculated with gross area values instead of productive Forest Land. The schedule B prorata should have been 0.648 and not 0.675. Therefore, please find attached a revised AAC summary table.



If you have any questions about the contents of this letter, please contact Jacques Bousquet, Tree Farm Licence Forester with the Resource Tenures and Engineering Branch, at (250) 387-8303.

This letter is an integral part of MP No. 3 and should be attached to it.

Yours truly,


Jim Langridge, R.P.F.
Director
Resource Tenures and Engineering Branch

Enclosures (1)

Ministry of
Forests

Resource Tenures and
Engineering Branch

Location:
1450 Government St 3rd Fl
Victoria

Mailing Address:
P.O. Box 6510 Str Prov Govt
Victoria, BC V8N 5C2

Tel: (250) 387-6291
Fax: (250) 387-6445

Bill Cafferata, Vice President and Chief Forester
Macmillan Bloedel Limited
Page 2

cc: Ken Collingwood, Regional Manager, Vancouver Forest Region
Chris Hayhurst, Acting District Manager, South Island Forest District
Ted Baker, Director, Research Branch
Dave Gilbert, Director, Resources Inventory Branch
Jim Langridge, Director, Resource Tenures and Engineering Branch
Gary Townsend, Director, Timber Supply Branch
✓ Peter Kofoed, R.P.F., Region Forester, MacMillan Bloedel Limited

AAC SUMMARY
MP NO. 3 FOR TFL 44
MACMILLAN BLOEDEL LIMITED

Year	1998	1999	2000	2001	2002
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Note: This table is only to be used for the schedule B prorate

Schedule B prorate: .648



JAN 28 1998

File: 19710-30/TFL 44

January 22, 1998

Bill Cafferata
Vice President and Chief Forester
MacMillan Bloedel Limited
925 West Georgia Street
Vancouver, British Columbia
V6E 3R9

Dear Bill Cafferata:

This letter is to inform you of my determination of an allowable annual cut (AAC) for Tree Farm Licence (TFL) 44.



The AAC for TFL 44, determined in accordance with Section 8 of the *Forest Act*, is 1 890 000 m³, effective January 1, 1998.

In accordance with Section 8 (5) of the *Forest Act*, this AAC includes partitions of at least 40 000 m³ attributable to marginally economic stands outside Clayoquot Sound, and a maximum of 130 000 m³ for harvesting in Clayoquot Sound.

The temporary AAC reduction previously ordered for TFL 44 under Part 15 (now Part 13) of the *Forest Act*, related to Orders-in-Council (OIC) Nos. 718 and 719, is no longer required and has no effect given the OIC's have expired on December 31, 1997.

Also attached is an AAC Rationale that describes in detail the factors I have considered in determining an AAC for TFL 44.

... 2

Ministry of
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Ministry Executive

Location:
595 Pandora Avenue
4th Floor

Mailing Address:
P.O. Box 9525 Stn Prov Govt
Victoria, BC V8W 9C3

Tel: (250) 387-1298
Fax: (250) 387-8287

The AAC determination for the tree farm licence area, should not be construed as:

- (a) providing for or implying that the District Manager would approve a forest development plan prepared further to the 20-year plan submitted in support of the timber supply analysis;
- (b) precluding any requirements that may result from the *Forest Practices Code of British Columbia Act* or providing an exemption from that Act, or any regulations or standards made or established under that Act.

I have also attached an AAC Summary. While this summary assumes I will not re-determine the AAC before January 1, 2003, I may re-determine the AAC at any time before that date if I consider it to be appropriate.

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Yours truly,



Larry Pedersen, R.P.F.
Chief Forester

Enclosures (2)

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Chris Hayhurst, Acting District Manager, South Island Forest District
Ted Baker, Director, Research Branch
Dave Gilbert, Director, Resources Inventory Branch
Jim Langridge, Director, Resource Tenures and Engineering Branch
Gary Townsend, Director, Timber Supply Branch
✓ Peter Kofoed, R.P.F., Region Forester, MacMillan Bloedel Limited

Bill Cafferata
MacMillan Bloedel Limited

AAC SUMMARY

MP NO. 3 FOR TFL 44

MACMILLAN BLOEDEL LIMITED

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Schedule B prorate: .675

Bill Cafferata
MacMillan Bloedel Limited

PARTITION SUMMARY
MANAGEMENT PLAN NO.3 FOR TFL 44
MACMILLAN BLOEDEL LIMITED

	All operability types	Marginally economic	TOTAL
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2 Outside Clayoquot Sound	1 720 000 m ³	40 000 m ³	1 760 000 m ³
TOTAL	1 850 000 m ³	40 000 m ³	1 890 000 m ³



FAXED
DEC 29 1997

JAN 14 1998

File: 19700-30/TFL 44

December 29, 1997

Peter Kofoed, R.P.F.
Region Forester
MacMillan Bloedel Limited
65 Front Street
Nanaimo, British Columbia
V9R 5H9

Dear Peter Kofoed:

Management Plan Approval

In accordance with paragraph 2.27 of Tree Farm Licence (TFL) 44, I approve Management Plan (MP) No. 3 for TFL 44 for the period January 1, 1998 to December 31, 2002. My approval of this plan is subject to the following condition:



Second Growth Harvest - I would like to see performance in harvesting second growth stands near the minimum harvest age during the term of this plan. Within operational limitations, harvest levels should approximate the contribution of these stands to the timber supply. Would you please report on this performance in the TFL 44 annual report.

My approval of MP No. 3 is not to be construed as an approval of the allowable annual cut (AAC) you have proposed in that plan. An AAC determination is a statutory determination under Section 8 of the *Forest Act*. It is my intention to determine an AAC for TFL 44 early in the new year to be effective January 1, 1998.

.../2

Ministry of
Forests

Ministry Executive

Location:
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Mailing Address:
P.O. Box 9526 Stn Prov Govt
Victoria, BC V8W 9C2

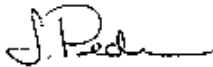
Tel: (250) 387-4266
Fax: (250) 387-3267

Peter Kofoed, R.P.F.,
MacMillan Bloedel Limited
Page 2

If you have any questions about the content of this letter, please contact
Jacques Bousquet, Tree Farm Licence Forester, Resource Tenures and Engineering
Branch, at (250) 387-8303.

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Yours truly,



Larry Pedersen, R.P.F.
Chief Forester

cc: Tod Baker, Director, Research Branch,
Ken Collingwood, Regional Manager, Vancouver Forest Region
Dave Gilbert, Director, Resources Inventory Branch
Jim Langridge, Director, Resource Tenures and Engineering Branch
Connie Miller-Retzer, A/Forest Ecosystem Specialist, BC Environment
202 - 4917 Pemberton Road, Port Alberni, B.C., V9Y 5J8
Tim Shelden, District Manager, South Island Forest District
Gary Townsend, Director, Timber Supply Branch



65 Front Street
Nanaimo, B.C. Canada V9R 5H9
Telephone: (250) 55 3500
Facsimile : (250) 55 3550

July 30, 199

Woodlands

K. Collingwood, RPF
Regional Manager
Vancouver Forest Region
Ministry of Forests
2100 Labieux Road
Nanaimo, B.C.
V9T 6E9

Dear Sir:

**Re: Statement of Management Objectives, Options and Procedures [SMOOP] for
Management Plan [MP] 3 of Tree Farm License [TFL] 44**

Thank you for your letter of June 12, 199 . Revisions have been made to the SMOOP as requested. Note that the changes to subsections 2.21 and 2.22 in the Goals and Objectives Section have instead been included as commitments in subsection 3.33 and 3.44 respectively.

Unfortunately, there was insufficient time to do an option that included thinnings as suggested in the point on subsection 4.18. However, a discussion on partial harvesting including thinnings in restrictive visual landscapes has been included in the Timber Supply Analysis.

This letter, your letter of June 12, 199 , and the revised SMOOP will be included as an Appendix MP 3.

A report is being compiled on comments received on the SMOOP and will be sent to you shortly.

If you have any questions please contact me at 250 55 3450.

Yours truly,

MacMILLAN BLOEDEL LIMITED
SOLID WOOD GROUP

P.J. Kofoed, RPF
Planning Forester



SUSTAINABLE FORESTRY

April 24, 1996

Mr. Terry Rollerson, P.Geo.
Forest Sciences Officer
Vancouver Forest Region
B.C. Ministry of Forests
2100 Labieux Road
Nanaimo, B.C.
V9T 6E9

Dear Terry:

Re: TFL 44 MP #3 Netdowns for Terrain Stability

At a meeting on November , 1995, we agreed on a procedure for assigning netdowns to Class IV, Class V, Es1 and Es2 terrain stability categories. At a further meeting on April 12, 1996, we examined results of this exercise and refined procedures.

Enclosed is a summary of the revised procedures and results. This summary describes the general approach, including the definition of seven ones. The procedure and resulting netdowns are then detailed for each one. Finally, area netdowns for sensitive soils are summarized by TFL block (excluding the Clayoquot Working Circle).

We require approval on this approach before proceeding with the netdown process as part of the information package for the TFL 44 MP 3 Timber Supply Analysis.

Thank you for making the time to meet with us. Your comments and questions have greatly helped our analysis.

Yours truly,

MacMILLAN BLOEDEL LIMITED
SUSTAINABLE FORESTRY

MacMILLAN BLOEDEL LIMITED
RESOURCE ANALYSIS SECTION

S. Higman, E.I.T
Terrain Specialist
Land Use Planning Advisory Team

Peter Kofoed
Resource Analyst

SH/bk
encl.

cc: Wally Pearson

SUMMARY OF THE PROCEDURES AND RESULTS FOR ASSIGNING NETDOWNS TO TERRAIN STABILITY CATEGORIES FOR TFL 44 MP #3

1.0 Purpose

Es mapping of TFL 44 overestimates the area of sensitive soils relative to what would be represented by 5 class terrain stability mapping. In order to better estimate the netdown for sensitive soils for the TFL 44 MP #3 Timber Supply Analysis, the procedure described below was developed.

2.0 General Procedure

2.1 Definition of Zones

TFL 44 has been divided into seven zones, as shown on the attached map. The zones were chosen on the basis of logical geographic boundaries, regions of similar biogeoclimatic characteristics and areas where full coverage, 5 class terrain stability mapping was available to calibrate the Es mapping. Outside of the Clayoquot Management Area, areas of 5 class mapping and comparable areas of Es mapping were then delineated (see map). The objective was to develop ratios between areas of Class V:Es1 and Class IV:Es2 for these trial areas for each zone, then to use this ratio to adjust the netdowns.

In the Clayoquot Management Area (Zone 6), the intent is to develop a timber supply analysis approach that is consistent across the three main tenure holders. Because the procedural detail has not yet been determined for this area, the Clayoquot Management Area is not included in this analysis.

2.2 TFL 44 Outside of Clayoquot Management Area

The netdown for Class V terrain areas will be 90%. Class IV terrain areas will be netted down by 20%. These percentages are the same both within and outside community watersheds. Netdowns for Es1 and Es2 terrain units will be according to the ratios described in the following sub sections.

All netdown areas and percentages described in the following notes refer to the physically operable productive forest.

3.0 Detail By Zone

3.1 Zone 1

Boundaries: East of Stamp River, east of Alberni Canal, east of Nitinat Lake, north of Klanawa Watershed. Includes Block 1 and some of Block 2 of TFL 44.

Reference 5 Class Area: China Creek Watershed.

Es Trial Area: Museum Creek Watershed and upper Franklin River Watershed.

Five class mapping in China Creek occurs on operable productive forest as follows:

Class IV	8.6
Class V	4.9

These percentages are compared to Es mapping in the adjacent Museum Creek and upper Franklin River to derive adjustment factors for Es areas:

	% of Area	Factor to convert to Class IV or V Terrain
Es2	28.9	8.6/28.9 0.30
Es1	23.1	4.9/23.1 0.21

Terrain mapping data is not available for most of the area to the east of Nitinat Lake. It is recommended that an adjustment be made for the terrain netdown in this area, based on results for the mapped portion of Zone 1.

The unmapped area has been defined as closely as possible by watersheds and major basins. The terrain netdown in the balance of Zone 1 is calculated as 4.6% of the physically operable productive forest. After allowing for the small area of Es mapping the appropriate terrain netdown is 4.5% of the operable productive forest.

A further step is required before applying this netdown in the timber supply analysis. Because the spatial location of this assumed netdown for terrain is not known it will be necessary to translate it into a netdown factor applied after other netdowns have been made. This will be developed as part of the information package process.

3.2 Zone 2

Boundaries: Between Trevor Channel (Alberni Canal) and Nitinat Lake. Includes much of Block 2, TFL 44.

Reference 5 Class Area: Klanawa River Watershed.

Es Trial Area: East side of Sarita River.

Five class mapping in the Klanawa Watershed occurs on operable productive forest as follows:

Class IV	20.8
Class V	.0

These percentages are compared to Es mapping on the east side of the Sarita River to derive adjustment factors for Es areas:

	% of Area	Factor to convert to Class IV or V Terrain
Es2	31.6	20.8/31.6 0.66
Es1	1 .	.0/1 . 0.40

3.3 Zone 3

Boundaries: Henderson/Uchuck area Block 4 of TFL 44.

Reference 5 Class Area: Nahmint Watershed (n.b. originally used Clemens Creek).

Es Trial Area: Zone 3.

It was agreed that the broad scale reconnaissance mapping (1:50 000 scale photos) used for 5 class mapping in Clemens Creek overstates the netdowns for sensitive soils. The recommendation was to use the 5 class mapping in the adjacent Nahmint Watershed as a more representative base for Zone 3.

Five class mapping in the Nahmint Watershed occurs on operable productive forest as follows:

Class IV	10.3
Class V	2.3

The Class V percentage has been increased from 2.3 to 6 to reflect wetter conditions in Zone 3 compared to the Nahmint, resulting in the following 5 class mapping percentages for operable productive forest:

Class IV	10.3
Class V	6.0

These percentages are compared to Es mapping in Zone 3 to derive adjustment factors for Es areas:

	% of Area	Factor to convert to Class IV or V Terrain
Es2	25.3	10.3/25.3 0.41
Es1	1 .5	6.0/1 .5 0.34

The base percentages of the Nahmint Watershed are also compared to the Class IV and Class V mapping in Clemens Creek to derive adjustment factors for these terrain classes on operable productive forest as follows:

	% of Area	Factor to convert to Adjusted Class IV or V Terrain
Es2	45.0	10.3/45.0 0.23
Es1	26.	6.0/26. 0.22

3.4 Zone 4

Boundaries: Nahmint Watershed.

Reference 5 Class Area: Not Applicable.

Es Trial Area: Not Applicable.

As the whole watershed has 5 class mapping, netdowns will use this data as is.

Five class mapping in the Nahmint Watershed occurs on operable productive forest as follows:

Class IV	10.3
Class V	2.3

3.5 Zone 5 (Alberni West; Block 3 except for Nahmint Watershed)

Boundaries: West of Stamp River, north of Nahmint Watershed and east of the Clayoquot Management Area boundary. Includes a large part of Block 3 of TFL 44.

Reference 5 Class Area: Nahmint Watershed.

Es Trial Area: Zone 5.

Five class mapping in the Nahmint Watershed occurs on operable productive forest as follows:

Class IV	10.3
Class V	2.3

These percentages are compared to Es mapping in Zone 5 to derive adjustment factors for Es areas:

	% of Area	Factor to convert to Class IV or V Terrain	
Es2	21.5	10.3/21.5	0.48
Es1	10.2	2.3/10.8	0.21

3.6 Zone 6

Clayoquot Management Area.

The process has been delayed for this area. The intent is to develop a timber supply analysis approach that is consistent across the three main tenure holders.

3. Zone 7

Boundaries: Maggie Lake/Mercantile area, south of the Clayoquot Management Area boundary. This is the Ucluelet Working Circle of TFL 44.

Reference 5 Class Area: Not Applicable.

Es Trial Area: Not Applicable.

Terrain class mapping in this area occurs on operable productive forest as follows:

Class IV	3.3
Class V	5.8

4.0 Summaries of Results

4.1 Summary of Conversion Factors From Es to Terrain Class Areas

	<u>Terrain Class IV/Es2</u>	<u>Terrain Class V/Es1</u>
Zone 1	0.30	0.21
Zone 2	0.66	0.40
Zone 3 (Es)	0.41	0.34
Zone 3 (Clemens Ck)	0.23	0.22
Zone 5	0.48	0.21

4.2 Summary of Netdowns for Terrain Stability Units

	% Netdowns			
	Class IV	Es2	Class V	Es1
Zone 1	20.0	6.0	90.0	18.9
Zone 2	20.0	13.2	90.0	36.0
Zone 3	4.6	8.2	19.8	30.6
Zone 4	20.0	N/A	90.0	N/A
Zone 5	20.0	9.6	90.0	18.9
Zone 7	20.0	N/A	90.0	N/A

4.3 Area Reductions for Terrain Stability Units

Preliminary estimates of total area netdowns resulting from applying the percentages listed in Section 4.2 are as follows:

Block	% of Productive Landbase not Loggable due to Sensitive Soils
Block 1 (contained in Zone 1)	4.3
Block 2 (contained in Zone 2 and part of Zone 1)	.0
Block 3 (contained in Zones 4 5)	4.2
Block 4 (contained in Zone 3)	.4
Ucluelet Working Circle (contained in Zone)	6.0
Average for all Blocks	5.6



FEB 24 1998



File: 19710-30/TFL 44

February 19, 1998

Bill Cafferata
Vice President and Chief Forester
MacMillan Bloedel Limited
928 West Georgia Street
Vancouver, British Columbia
V6E 3R9

Dear Bill Cafferata:


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Jim Langridge, R.P.F.
Director
Resource Tenures and Engineering Branch

Enclosures (1)

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Page 2

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JAN 28 1998

File: 19710-30/TFL 44

January 22, 1998

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Chief Forester

Enclosures (2)

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Bill Cafferata
MacMillan Bloedel Limited

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MP NO. 3 FOR TFL 44

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Bill Cafferata
MacMillan Bloedel Limited

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MACMILLAN BLOEDEL LIMITED

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FAXED
DEC 29 1997

JAN 14 1998

File: 19700-30/TFL 44

December 29, 1997

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Region Forester
MacMillan Bloedel Limited
65 Front Street
Nanaimo, British Columbia
V9R 5H9

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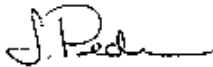
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Page 2

If you have any questions about the content of this letter, please contact
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This letter is an integral part of MP No. 3 and should be attached to it.

Yours truly,



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Chief Forester

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APPENDIX I

MB Philosophy, Woodlands Objectives, Policies and Procedures

Table of Contents

1.0	PHILOSOPHY	1
1.1	MB PHILOSOPHY ON MANAGING FOREST LANDS FOR THE FUTURE.....	1
1.2	FORESTRY IN TRANSITION.....	1
1.3	EXCELLENCE IN FOREST LAND MANAGEMENT.....	1
1.31	<i>Protection of Natural Resources.....</i>	<i>1</i>
1.32	<i>Silviculture</i>	<i>2</i>
1.33	<i>Recreational Development and Other Special Uses.....</i>	<i>2</i>
1.34	<i>Timber Development and Harvesting.....</i>	<i>3</i>
1.35	<i>Forest Research.....</i>	<i>3</i>
1.4	THE FOREST PARTNERSHIP.....	3
2.0	WOODLANDS OBJECTIVES.....	4
3.0	WOODLANDS POLICIES	4
3.1	TIMBER DEVELOPMENT AND HARVESTING POLICIES	5
3.11	<i>Harvest Planning and Management</i>	<i>5</i>
3.12	<i>Forest Access.....</i>	<i>5</i>
3.13	<i>Land-Use Audit.....</i>	<i>5</i>
3.14	<i>Forest Inventory.....</i>	<i>5</i>
3.15	<i>Legal</i>	<i>6</i>
3.2	FOREST PROTECTION POLICIES.....	6
3.21	<i>Fire Prevention and Control</i>	<i>6</i>
3.22	<i>Prevention and Control of Insects and Disease.....</i>	<i>6</i>
3.3	SILVICULTURE POLICIES.....	
3.31	<i>Yield Maintenance.....</i>	<i>7</i>
3.32	<i>Reforestation.....</i>	<i>7</i>
3.33	<i>Managing Competing Vegetation.....</i>	<i>8</i>
3.34	<i>Harvesting Stands Below Culmination Age.....</i>	<i>8</i>
3.35	<i>Logging of Hardwood Stands</i>	<i>8</i>
3.36	<i>Silvicultural and Land Use Research.....</i>	<i>8</i>
3.37	<i>Silviculture Audit</i>	<i>8</i>
3.38	<i>Incremental Silviculture.....</i>	<i>8</i>
3.4	RESOURCE CONSERVATION POLICIES	8
3.41	<i>Streamside Management</i>	<i>9</i>
3.42	<i>Domestic Water Supply</i>	<i>9</i>
3.43	<i>Wildlife and Plants</i>	<i>9</i>
3.5	FOREST RECREATION POLICIES.....	9
3.51	<i>Identification and Designation of Recreational Areas.....</i>	<i>9</i>
3.52	<i>Development and Management of Recreational Areas.....</i>	<i>9</i>
3.53	<i>Identification, Designation and Protection of Special Forest Reserves.....</i>	<i>10</i>
3.54	<i>Cultural Heritage Sites.....</i>	<i>10</i>
3.55	<i>Public Access.....</i>	<i>10</i>
3.6	MISCELLANEOUS POLICIES	11
3.61	<i>Firewood and Minor Forest Products</i>	<i>11</i>
3.62	<i>Commercial Users of Other Resources.....</i>	<i>11</i>
4.0	GLOSSARY	11
5.0	SILVICULTURAL ASSESSMENTS.....	13
5.1	PRE HARVEST ASSESSMENT AND SILVICULTURE PRESCRIPTION	13
5.11	<i>Definition</i>	<i>13</i>
5.12	<i>Sources of Information</i>	<i>13</i>

5.13	Procedures	14
5.14	Species Selection	14
5.15	Stocking Levels	15
5.151	Stocking Targets	15
5.152	Minimum Stocking Standards	15
5.153	Area Below Minimum Stocking Standards	15
5.16	Regeneration Targets	16
5.161	AAR/Year of Logging	16
5.162	Delay Allowances	16
5.163	Seedling Growth Targets	16
5.17	Free Growing Assessment	16
5.18	Recordkeeping	17
5.2	POST HARVEST ASSESSMENT AND PRESCRIPTION	1
5.21	Procedures	17
5.3	REFORESTATION ASSESSMENTS AND SAMPLING	18
5.31	General Procedures	18
5.311	Sampling	18
5.3111	Sampling Intensity/Error	19
5.3112	Field Data Collection	20
5.3113	Crop Trees	21
5.3114	Competing Trees	21
5.312	Survey Compilation	22
5.3121	Stand Stratification	22
5.3122	Stand Compilation Detail on Cards	22
5.3123	Stand Formula	23
5.3124	Minimum Satisfactory Stocking Levels	23
5.32	Stocking Surveys	24
5.321	Preparation	24
5.322	Field Examination and Compilation	24
5.323	Prescription and Records	24
5.33	Survival Survey	24
5.331	Preparation	25
5.332	Field Examination and Compilation	25
5.333	Prescription and Records	25
5.34	Regeneration Performance Survey	25
5.341	Regeneration Performance Stocking Target	25
5.342	Preparation	25
5.343	Field Examination and Compilation	25
5.344	Records	26
5.35	Free Growing Survey Procedures	26
5.351	Definition of Free Growing	26
5.352	Minimum Treatable Area	26
5.3521	Time of Survey	26
5.3522	Survey Procedures	26
5.3523	Prescription and Records	27
5.3524	Reporting	27
5.36	Determination of Breast Height Age and Tree Height	27
5.361	Timing	27
5.362	Sample Procedures	27
5.3621	Size of Sample for Breast Height Age and Tree Height	27
5.3622	Plot Location	28
5.3623	Plot Size	28
5.3624	Sample Tree	28
5.3625	Height	28
5.3626	Age at Breast Height	29
5.3627	Destructive Sampling Tools	29
5.3628	Definitions	30

5.3629	The average height and the average year in which BH was reached shall be calculated and reported annually with the inventory revisions.	30
5.4	Plantation Quality Assessments	30
5.41	Prescription	31
5.42	Procedure	31
5.421	Data Recording - Spacing Quality	31
5.422	Data Recording - Planting Quality	32
5.43	Compilation	32
5.431	Sampling Error	33
5.5	STAND MAINTENANCE ASSESSMENTS AND PRESCRIPTIONS	33
5.51	Release Surveys	33
5.511	Objective.....	33
5.512	Survey Procedures.....	33
5.513	Prescriptions and Records	34
5.52	Spacing Surveys	34
5.521	Objective.....	34
5.522	Preparation.....	34
5.523	Survey Procedure.....	34
5.524	Definitions of Tree Classes for Spacing Assessment	35
5.525	Plot Compilation on Card 01.04	36
5.526	Evaluation of Data and Formulating Prescription.....	36
5.527	Prescription and Records	36
5.6	FERTILIZER ASSESSMENT	36
5.61	Decision-Making Procedures for Selecting Operational Fertilization Projects 36	
5.611	Does the candidate meet all of the following requirements:	36
5.612	Is there a commercial thinning or final harvest scheduled within 10 to 15 years of the application date?	37
5.613	Is the height/diameter ratio less than 85?	37
5.614	Is the relative SDI between the B&C lines with Density Management Diagram for Douglas-fir?	37
5.615	Collect foliage samples as per attached procedure and send samples to Woodlands Services Environmental Lab for analysis. The nutritionist will advise on response expectation. Is there an expected response?	37
5.616	Calculate NPV. If the NPV is positive, does it rank high enough relative to other Divisional investment opportunities necessary to meet fibre flow goal?	37
5.62	Foliar Sampling	37
5.621	Type of Foliage.....	37
5.622	Time of Year	38
5.623	Crown Position.....	38
5.624	Representative Sample	38
5.625	Bagging and Labeling	38
5.626	Lab	38
5.627	Avoid.....	38
5.	DISEASE SURVEYS	39
5.71	Purpose	39
5.72	Phellinus Weirii Surveys	39
5.721	Procedures for Line Transect Survey.....	39

List of Tables

TABLE 5.1	MB Species Value Ranking	14
TABLE 5.2	Target Stocking Levels at Free Growing Assessment.....	15
TABLE 5.3	Regeneration Delay Allowances	16
TABLE 5.4	Seedling Growth Targets ¹	16
TABLE 5.5	Latest Acceptable Free Growing Declaration in Years Since Commencement of Felling.....	1
TABLE 5.6	Age to Reach 5 m Height	34
TABLE 5.	Non competitor Tree Height	35

1.0 PHILOSOPHY

1.1 MB Philosophy on Managing Forest Lands for the Future

Our commitment and responsibility to the forests under our care has always been strong. We have matched the historical challenges of harvesting this timber resource with a program of forest management and research unique in Canada. Increasingly, the challenge is to meet, on a sustained basis, a growing diversity of demands on the forest resource while contributing to the communities in which we operate and providing an acceptable return to the Company shareholders.

1.2 Forestry in Transition

Society expects us to be more than efficient managers of timber, or fish and wildlife habitat. We must ensure that our forest management practices result in the sustenance of forest resources by integrating our growing knowledge of the integrity and complexity of the forest into our decisions on resource development. We will learn to intensively cultivate forest stands and to manage a broader variety of forest values on the landbase under our stewardship. Our goal is balanced management of multiple resources, ensuring a continuous supply of those resources at a price society can afford.

1.3 Excellence in Forest Land Management

To achieve this goal, MacMillan Bloedel is committed to an ecologically and financially sustainable program of excellent forest land management. Achieving this will require our dedication and the involvement and trust of the public whose forests we help manage.

The essential components of our forest land management program are protection of the forest's natural resources, promotion of environmentally sensitive harvesting and silvicultural practices, enhancement of recreational opportunities and forest management research and its application.

1.31 *Protection of Natural Resources*

Protection of the forest's natural resources is a prerequisite for good forest land management. These resources include not only trees, but other plants, animals, water and soils. We will minimize the potential adverse impacts of harvesting on forest resources, and we will continue to work closely with government agencies, interested groups and the public in support of this objective.

We will manage the forest resource to maintain soil fertility, stream water quality and important habitat. We will continue to identify areas too sensitive for harvesting and ensure they are removed from the commercial forest landbase. The management of fish populations and fish habitat remains a priority under the cooperative planning process developed between industry and government

on the coast. Our concern for wildlife is focused on sustaining healthy populations of animal species and on maintaining adequate habitat diversity for a wide range of species.

Old growth forests are important in supporting habitat and species diversity. We have set aside, and will continue to conserve, old growth forests for deer winter range, for protection of fish habitat and for soil stability on sensitive sites. We will continue to develop our program to preserve and maintain perching and nesting trees for birds. We will protect the habitat of rare or endangered wildlife and fisheries species, and we will maintain biologically and socially acceptable species diversity within watersheds.

Disease, insects and fire are integral components of the forest ecosystem, but annual losses to these agents can be staggering. An active program to reduce fire and pest problems will concentrate on managing forest activities to prevent or minimize these problems.

1.32 *Silviculture*

Silviculture is the art and science of growing and tending forests to assure their use for the future. MacMillan Bloedel regenerates all harvested areas with ecologically suitable tree species, either through natural regeneration or by planting. We strive for mixed species stands that optimize ecological and economic flexibility.

We emphasize growing and planting quality seedlings from genetically improved seed. Protection of young forests from competing vegetation will be necessary in some areas. Although we believe government approved herbicides can be safely used, we prefer to use non chemical control methods where the results are expected to be economically and biologically comparable to those of herbicides.

Our efforts to ensure the use of these forests for the future do not end with regeneration. Depending on society's future wood requirements, we will tend these new forests by spacing, thinning and fertilization to produce the wood volume and quality we require. Whether forests are managed extensively or intensively, we will audit all silviculture activity to ensure that we meet management goals for the new forest.

1.33 *Recreational Development and Other Special Uses*

We support the principle of recreational use and development on the public and private lands we manage. All forests have some recreational value, but some have very special values. We will identify, protect and develop those values, where appropriate, for the enjoyment of all. Roads will be open to non commercial users on both public and private lands, subject to limitations for safety, fire or property protection.

We will maintain and enhance the distinctive values of significant heritage sites.

1.34 *Timber Development and Harvesting*

Harvesting the timber resource is the first step in the renewal of the forest. Successful forest renewal is part of our commitment to do our part in maintaining stable and sustainable forest based communities.

We will harvest in a manner that safeguards the natural resources and recreational values of the forest land. We will meet or exceed current environmental standards, and manage harvesting impacts in areas where visual esthetics is important. We will audit all land use activities to ensure we meet management goals and policies.

We will maintain accurate and up to date ecological and forest inventory data to ensure effective management of the timber resource. We will assess the impacts forest management practices and possible environmental changes may have on the growth and yield of the timber resources to ensure continuous harvests.

1.35 *Forest Research*

Development of better methods of forest resource management through a well planned and coordinated research program is essential in meeting our goal of excellence. We will continue to be leaders in the area of operational forest management research and to cooperate with other industry members, universities and government in the planning, implementation and communication of research programs.

1.4 *The Forest Partnership*

A partnership in managing the forest landbase has three components – society, industry and the employee. To ensure forest resources are managed to meet the expectations of all three components requires commitment, involvement and continuous education of all concerned.

We are committed to sustainable management of forest land to help provide economic stability to the communities in which we operate. We recognize that public involvement in managing public forests is essential. We will listen to people's concerns and work together in developing forest management programs and policies. Through these actions we aim to gain public support for our stewardship of the forest land.

This continuing program of education and communications involving the community and the company extends to our employees as well. Our commitment to excellent forest land management requires trained and motivated employees, partners in development and communication. We believe that well trained employees, working in an atmosphere of cooperation with the community, will serve society and the environment to the betterment of all.

2.0 WOODLANDS OBJECTIVES

Our goal at MacMillan Bloedel is to protect and enhance forest resource values and promote community stability, while managing our forest lands for continuous production of an economic flow of timber.

In pursuing our goal we are committed to forest land management practices which will:

- ❑ Safeguard the soil and water resources, maintain habitat for fish and wildlife and preserve representative examples of unique or special ecosystems.
- ❑ Provide continuity of employment and the opportunity for public enjoyment from the forest lands under our care.
- ❑ Maintain a sustained economic yield of timber from diverse and healthy forests.
- ❑ Maintain visual quality in scenic corridors while maintaining a sustainable level of harvest.

To this end, we have five specific objectives:

1. Timber Development & Harvesting

Our objective, while observing good forest practices, land stewardship, community stability and the needs of the other resources, is to harvest from each management unit a sustainable annual cut safely and profitably.

2. Forest Protection

Our objective is to protect our forests from damage by the ravages of fire, insects and disease safely and effectively.

3. Silviculture

Our objective is to regenerate and manage the new forests at the standard necessary to sustain the productivity of the land.

4. Resources Conservation

Our objective is to maintain plant, animal, soil and water resources at a standard commensurate with society's consensus of their specific values.

5. Forest Recreation

Our objective is to enhance the recreational potential of forest lands in our care in keeping with the value assigned to each area and its protected level of use.

3.0 WOODLANDS POLICIES

Our woodlands policies provide the framework for achieving our management objectives in timber harvesting the care of visual, recreation, fisheries, wildlife,

and water resources regeneration and tending of new forests and protection of our forest resources from fire, insects, and disease.

The policies express our commitment to sustainable timber production and the concurrent protection of site productivity and other resource values.

3.1 Timber Development and Harvesting Policies

MacMillan Bloedel's timber development and harvesting policies outline our position on the flow of timber from the forest, the conservation of other resource values, the maintenance of site productivity, and the provisions for public access.

3.11 Harvest Planning and Management

We will plan and conduct our development and harvesting activities in such a way as to conserve soil and water resources and maintain plant, fisheries, wildlife and public recreation values.

We will manage the forest lands visible from recreational waterways, communities and highways in consideration of the area's visual quality objectives, with the purpose of matching the visual impacts of harvesting with the scenic value of the site.

We will manage our harvest levels from forests adjacent to forest based communities to provide a flow of timber that will support forest related employment and contribute to community stability.

3.12 Forest Access

We will locate, build and maintain logging roads, bridges and culverts which:

- ❑ Provide safe access for forest management, protection, and recreation
- ❑ Reduce the risk of slope failure
- ❑ Meet environmental regulations designed to protect basic resource values

We will maintain access for recreational purposes and ongoing forest management and protection activities.

3.13 Land Use Audit

We will measure and report our progress by a program of land use audits at each Woodland Division.

3.14 Forest Inventory

We will review our forest inventory and growth and yield programs every five years to evaluate their adequacy with respect to our current and long term planning needs.

3.15 Legal

We will comply with all applicable legislation.

We will maintain prominent Private Industrial Road signs at all entry points to MacMillan Bloedel lands.

3.2 Forest Protection Policies

Our protection policies outline our commitments to ongoing prevention, monitoring and control measures to keep fire, insects and disease losses low.

3.21 Fire Prevention and Control

Each Woodland Division will:

- ❑ Emphasize fire prevention as the primary action to protect against fire loss.
- ❑ Prepare and maintain a fuel management plan commensurate with hazard and risk.
- ❑ Maintain a current presuppression plan.
- ❑ Train and organize its staff in methods of fire control.
- ❑ Contain all fires as quickly as possible.
- ❑ Maintain appropriate fire control equipment commensurate with the level of risk, and including a central pool of extra equipment for use on larger fires.
- ❑ Coordinate fire prevention and control activities with adjacent land managers.
- ❑ Regulate its woodland activities according to a Ministry of Forests approved fire danger rating system.

Woodlands will maintain a contingency plan to fight fires too large for a single division to control.

We will carry out prescribed burning activities in accordance with site protection and smoke control constraints as prescribed by the government agencies.

When warranted by fire danger, we will restrict public travel on forest access roads.

3.22 Prevention and Control of Insects and Disease

We will manage all forests to reduce susceptibility to insect or disease epidemics.

We will monitor our forest lands on an ongoing basis to identify potential pest problems. Where insect or disease epidemics are discovered, we will consult specialists to determine the appropriate response.

In cases where control using a pesticide is recommended, we will:

- ❑ Develop an action plan.
- ❑ Discuss the planned activities with the public.
- ❑ Implement the plan according to specifications of the pesticide permit issued by the Ministry of Environment, Lands and Parks.

We will minimize losses due to insect or disease epidemics by:

- ❑ Expedient salvage of trees and stands already dead, dying or threatened by pest infestations.
- ❑ Maintaining tight inventory control to keep the volume of logs susceptible to ambrosia beetle attack as low as practicable.
- ❑ Trapping insects such as ambrosia beetles, where appropriate.
- ❑ Carrying out harvesting and sanitation activities in areas identified as disease centers.

3.3 Silviculture Policies

Our silviculture policies are designed to sustain timber yields of suitable quality. This requires that we know the capability of the land and the yields that can reasonably be expected given the range of soil quality, climate, species and different levels of stocking and management. It also requires conscientious planning and performance and an objective audit of our performance.

3.31 Yield Maintenance

We will carry out regeneration and subsequent stand management treatments at the level and standard necessary to maintain the desired long run sustainable yield (LRSY) considering both present costs and future values.

We will compile the five year and annual growth targets necessary to sustain the target fibre flow.

We will compare results with planned levels on an ongoing basis.

3.32 Reforestation

We will prescribe, schedule and carry out forest regeneration to meet all commitments and achieve annual growth targets in a cost effective manner.

In planting we will:

- ❑ Use genetically improved seedlings where available suitability of species and provenance considered.
- ❑ Prescribe for each site one or more species considering ecological suitability, site specific experience and the corporate value rating of the species.

If an area regenerates naturally with a maladapted species, we will overplant with a suitable species.

3.33 *Managing Competing Vegetation*

Where necessary to achieve the forest crop yield, we will control competing vegetation. Non chemical methods will be preferred if expected results are economically and biologically comparable to those of herbicides.

When we propose to use herbicides within a domestic watershed, we will review our plans with local authorities or licensed users before seeking a permit and before application.

3.34 *Harvesting Stands Below Culmination Age*

Where we have projected that existing coniferous stands will yield less than 80% of the site's potential at culmination, these stands will be evaluated for early harvest and reforestation to standard.

3.35 *Logging of Hardwood Stands*

We will evaluate all hardwood stands for logging and reforestation to the most appropriate future crop considering site quality, timber and other resource management objectives.

3.36 *Silvicultural and Land Use Research*

We will fund research projects to improve our forest land management decisions.

3.37 *Silviculture Audit*

We will conduct an audit at every Woodland Division at least annually to determine that treatments are carried out in a technically sound manner and results are properly assessed and recorded.

3.38 *Incremental Silviculture*

We will conduct incremental silviculture to improve volume and value* of the future crop.

On Crown land, we will conduct treatments only when funding is provided by Government or its agents.

All work will be done to MB targets and standards as set out in Management Plans or the MB Silviculture Guidelines, except where variance is needed to protect or enhance other resource values.

3.4 *Resource Conservation Policies*

We will evaluate sites for the identified important plant, fish, wildlife, water, and other resources through the preparation of each Forest Development Plan.

* Criteria which contributes to value are assumed to be knot free logs or at least small branches, even growth rates and ring/cm (6 rings per inch) and small taper.

Where significant values have been identified, we will plan our management activities in cooperation with appropriate Federal and Provincial government agencies.

3.41 *Streamside Management*

On TFLs and Crown land actions to protect water quality and fish habitat will be guided by the Forest Practice Code Operational Planning Regulations. On private land outside Tree Farm Licenses, actions will be guided by the Coastal Fish Forestry Guidelines developed cooperatively by Government and Industry.

3.42 *Domestic Water Supply*

In watersheds providing domestic water, MB will adjust logging and silviculture treatments to maintain water quantity and quality.

3.43 *Wildlife and Plants*

To protect representative examples of unique or special ecosystems and resource values on forest lands that we manage, MacMillan Bloedel will:

- ❑ Defer or modify logging in critical wildlife habitat.
- ❑ Preserve nesting and perching sites.
- ❑ Designate and protect the habitat of rare and endangered wildlife and fisheries species.
- ❑ Cooperate in the establishment of ecological reserves.
- ❑ Carry out special treatments to ensure browse is available on crucial ranges.

3.5 *Forest Recreation Policies*

As we develop the forest we open access routes to previously inaccessible areas. Our policy is to provide clearly marked, safe access throughout the forest lands we manage for a wide range of forest recreation opportunities.

3.51 *Identification and Designation of Recreational Areas*

We will inventory potential recreation sites on our forest lands and identify the quality sites for protection and development. Demand for recreation use of potential sites will be the guide in designation of recreation site development.

3.52 *Development and Management of Recreational Areas*

We will develop and maintain our public recreation areas to standards comparable to those of the Ministry of Forests.

Each Woodland Division will carry the development and maintenance costs of recreation sites and seek reimbursement from the government for costs associated with sites on Crown land.

3.53 Identification, Designation and Protection of Special Forest Reserves

We will:

- ❑ Designate as Special Forest Reserves areas with resource values or ecosystems that are deemed so special or spectacular as to warrant their exclusion from the Production Forest.
- ❑ Identify sites with special aesthetic and recreation values such as scenic viewscapes, spectacular old growth stands, caves, special wildlife areas, waterfalls and canyons.
- ❑ Evaluate these candidate sites and designate the best as Special Forest Reserves based on a subjective comparison of sites and in consideration of the abundance of similar sites. Special Forest Reserves will be marked on development maps.
- ❑ Develop Special Forest Reserves where a specific commitment has been made in a Management Plan or by special arrangement with the agencies responsible for other values (e.g., Archaeology Branch of the Ministry of Small Business, Tourism and Culture, or Ministry of Environment, Lands and Parks).
- ❑ Protect caves designated as Special Forest Reserves from road and logging activities.

3.54 Cultural Heritage Sites

We will:

- ❑ Identify and report all cultural heritage sites found on forest lands under our management to the Archaeology Branch of the Ministry of Small Business, Tourism and Culture.
- ❑ Protect designated cultural heritage sites from industrial activity in accordance with agreements with the Archaeology Branch of the Ministry of Small Business, Tourism and Culture.

3.55 Public Access

We will:

- ❑ Maintain access to designated recreation sites on forest lands under our management.
 - ❑ Post and maintain information signs along highways and major forest access routes to highlight forestry activities to the general public.
 - ❑ Permit open road access for non-commercial public use, subject to limitations for reasons of safety, fire hazard, or the protection of company property. We may charge an entry fee for access to our privately owned forest lands.
 - ❑ Post signs to inform visitors of access rules at all major entry points to Woodlands operations.
-

3.6 Miscellaneous Policies

3.61 Firewood and Minor Forest Products

MacMillan Bloedel will issue permits to the public to cut firewood, shakeblocks and fence posts in designated areas. A fee may be charged for issuing permits for private lands.

3.62 Commercial Users of Other Resources

Where commercial users of other resources (e.g., trappers, beekeepers, prospectors, etc.) operate on forest lands managed by MacMillan Bloedel, we will:

- ❑ Grant permits for short term use of MB roads for exploration and feasibility studies.
- ❑ Inform known and registered users of other resources at the planning stage of all forest management operations that might impact on their operations.
- ❑ Negotiate and charge fees for the commercial use of MB roads or other facilities.
- ❑ Negotiate and enforce agreements with respect to fire hazard, damage to growing stock and other concerns, subject to provisions of the *Mineral Act*, *Forest Act*, and other relevant government acts and regulations.

4.0 GLOSSARY

allowable annual cut (AAC): The rate of annual timber harvest from a specified area of land. AACs are normally determined as part of a tree farm license's Management and Working Plan and are subject to reassessment every five years.

ambrosia beetles: A species of beetle which devalues logs by feeding in the sapwood at certain times of the year.

culmination age: The age at which a forest stand, for a stated diameter limit and utilization standard, achieves its maximum average rate of volume production. The age at which the mean annual increment (MAI) of stand growth is at its maximum.

fire closure formula: A formula for calculating the fire danger rating and the basis for suspending work for fear of fire.

fibre flow: A generic term equivalent to long run sustainable yield.

Forest Development Plan: A specific plan outlining harvesting, road construction, protection and silviculture activities over the short term (often 5 years) in accordance with the approved Management and Working Plan.

fuel-management plan: A plan outlining the actions to reduce fire hazard and spread rates by reducing volume of fuels and creating corridors of lower risk forest.

herbicide: A product used to control weeds.

heritage site: A forest site with historical cultural values such as a midden, pioneer site, culturally modified trees, or a unique tree.

long run sustainable yield (LRSY): In general terms, a measure of the sustainable productive capacity of a land base under specified management conditions. In forest planning, the LRSY is the level of harvest that can be sustained under a particular management scenario that includes objectives for timber and other resource values such as fish, wildlife, water, aesthetics and recreation, forest management programs, and constraints on the land base. The LRSY is one of the factors considered in the determination of allowable annual cut.

Management Plan: A plan required under the Forest Act for the management of a forest area, including the objectives, prescribed management activities, calculation of AAC and standards to be employed to achieve specified goals. New Management Plans are developed every five years.

merchantable wood: The sound wood in a stand that is suitable for marketing under given economic conditions. Size, species, quality, market demand, and value will affect what is determined to be merchantable.

objective: A measurable step towards achieving a goal.

pesticide: A general term for a product used to control pests such as insects, diseases or weeds.

pesticide use permit: A permit granted by the Ministry of Environment, Lands and Parks to holders of a valid Pest Control Service License and which regulates the use of forest herbicides for vegetation control.

policy: A statement which will provide a basis for judgment in handling repetitive situations to attain specific objectives.

preharvest assessment: A survey carried out on a stand prior to logging to collect specific information on the natural features and resource values of the site (e.g., soil, topography, water, timber, wildlife, fisheries, recreation, range, etc.).

prescribed burning: The knowledgeable application of fire to a specified land area to abate the fire hazard or prepare the area for reforestation.

sanitation activities: The removal of damaged or diseased stems to prevent the spread of insects or disease.

silviculture prescription: A site specific plan for the management of a cutblock that is completed in advance of logging. The SP identifies the harvesting, regeneration, and silvicultural activities to be carried out on the area over the next rotation, in consideration of the existing resource

values and characteristics of the site. Silviculture prescriptions are legal prerequisites to logging on all Crown lands.

site degradation: A reduction in the productive capacity of forest sites. The susceptibility of a site to degradation is determined by the site's physical, climatic, biological and ecological character. Slope, soil type and depth and the frequency of watercourses and gullies are common indicators of a site's sensitivity to degradation. Major types of site degradation are soil compaction, displacement, erosion and loss of soil nutrients.

site index curves: A measure of site productivity expressed as the relationship of tree height to stand age, usually based on height at 50 years, breast height age.

spacing: The act of removing competing trees from a young stand to favour the crop trees.

Special Forest Reserve: An area of forest set aside from harvesting in recognition of other, special values.

standard: The criterion of effective performance established before execution of the action that it is designed to measure.

vegetation management: The control of unwanted vegetation, usually by fire, cutting or use of herbicides.

weed control: A silvicultural treatment to remove undesirable vegetation which competes with seedlings for sunlight, water and soil nutrients.

yield maintenance: A system used by MB to ensure that denuded and reforested lands are managed at the level needed to sustain a long run target yield.

yield models: Computer models that forecast the future yields from forest stands or timber types.

5.0 SILVICULTURAL ASSESSMENTS

5.1 Pre-Harvest Assessment and Silviculture Prescription

OBJECTIVE: To develop a Silviculture Prescription (SP) for each area proposed for logging that integrates harvesting, non timber values and subsequent management.

5.11 Definition

Pre harvest assessment is the gathering and recording of field data and other information necessary to develop a SP.

5.12 Sources of Information

- Aerial photos.
-

- ❑ Forest cover, topographic and biogeoclimatic maps.
- ❑ Divisional index of non timber information:
 - Existing folio or capability maps.
 - Government (MoF, Wildlife, Fisheries, etc.).
 - Reports, maps and memos for soils, fisheries, wildlife, landscape, recreation, terrain, and heritage resources.
 - List of LUPAT reports and publications.
- ❑ Local knowledge.

5.13 Procedures

- ❑ Consult Forest Practices Code Guidebook.
- ❑ Review available resource information to identify conflicts. If conflicts are apparent, then resolve with appropriate MB staff, resource agencies or specialists.
- ❑ Collect site descriptive data and develop a draft prescription.
- ❑ Identify and resolve situations that may adversely affect forest management or conflict with other values (e.g. setting layout, road location or logging sequence).
- ❑ Complete the final prescription.

5.14 Species Selection

Choice of species for a site is based first on silvics and second on expected economic return.

Identify the species suited to the site using the current MoF field guide. In specific situations, based on knowledge and field experience of similar conditions, alternative species may be prescribed.

For planting, the final choice will be governed by such factors as capability of the species to survive and grow under the specific site conditions, availability of seed, the estimated cost of successful establishment, health and the anticipated yield, quality and value of the future crop.

MB ranks the species as follows:

TABLE 5.1 MB Species Value Ranking

Cy, Cw	High Value
Ss	
Hw, Ba, Bn, Fd, Hm, Bg, Pw, Se	
Pl, Bl	
	Low Value

5.15 Stocking Levels

5.151 Stocking Targets¹

MB stocking targets vary according to the silvics of the species and the anticipated return on investment for the site index class (Table 5.2). The stocking targets given are a general guide and **may be varied up or down** for reasons specified in the SP.

The following are the general targets at the Free Growing Assessment. Planting prescriptions should be based on local conditions and experience.

TABLE 5.2 Target Stocking Levels at Free Growing Assessment

Crop trees per hectare ¹ at 90% distribution.		
Site Index Class	Douglas fir Type ²	Western Hemlock Type ³
15 21	800	1000
24	1000	1200
1	As per Section 1.3.	
2	Fd, Pl, Pw.	
3	Hw, Hm, Bg, Ba, Ss, Cw, Cy. Higher densities are desirable for maximum value Cw and Cy on	
SI 2 .		

Stocking should be at or above these levels at the end of the regeneration delay period. Reliance on natural fill in between regeneration delay and free growing to achieve targets is unacceptable.

Due to the risk of attack from Balsam Woolly Adelgid, the acceptance of Abies species in either plantations or natural regeneration is limited.

5.152 Minimum Stocking Standards

The minimum acceptable stocking on MB tenures is:

- ❑ 600 stems of acceptable species per productive hectare (i.e., excluding non productive land).
- ❑ 80% distribution (i.e., 80% of all productive 1/550 ha plots has at least one established tree of an acceptable species).
- ❑ On sites greater than Site Index 21, stocking less than 800 stems per ha must be the exception, not the norm.

5.153 Area Below Minimum Stocking Standards

All areas which technically do not meet the MB stocking standards of 600 sph and 80% distribution shall be reviewed and professionally signed off by the Divisional Forester with written justification. Note that on Crown Land and TFL, this can only be done if the SP minimum has been achieved.

¹ All numbers of trees per hectare in Section 5.15 are stated using MB survey methods and calculations and are used for internal purposes.

5.16 Regeneration Targets

5.161 AAR/Year of Logging

An opening shall be deemed AAR no later than six months after logs are removed from a cutting block or any portion thereof that aggregates to more than one hectare. Partially harvested openings may be recorded as AAR as deemed expedient or practical by the Division. It is important to recognize that AAR date does not alter the SP regeneration delay obligation which is based on initiation of felling.

5.162 Delay Allowances

Natural regeneration is favored wherever it is feasible within the allowable time frame. The delay allowance begins December 31 in the year an opening is declared AAR.

TABLE 5.3. Regeneration Delay Allowances

Regeneration Prescription	Critical Sites Brush, Unstable, Aesthetics	Normal Sites		
		SI ³⁰	SI 24-27	SI ²¹
Plant	As soon as possible, but before 2 years	2 years	2 years	3 years
Natural (fill plant)	Not applicable	3 years	4 years	5 years

Areas planned for natural regeneration must be assessed prior to the end of the delay period, so that planting can be prescribed where required to achieve stocking targets on time.

5.163 Seedling Growth Targets

Target heights and leader growth (minimal browsing) are based on site index, species and ecological unit.

TABLE 5.4 Seedling Growth Targets¹

Site Class	CDFmm/CWHxm/CwHdm/CwHmm1 2		CwHvm1 2/CwHvh1		MHmm1	
	Ba, Bp	Other Species	Ba, Bp	Other Species	Ba, Bp	Other Species
36	100/30	100/30	100/30	200/50		
30 33	0/20	5/20	0/20	150/40	0/20	90/25
24 2	40/10	60/15	50/15	100/30	50/15	0/20
21	30/5	50/10	40/10	5/10	40/10	50/10

¹Figures are height/leader at 3 years after planting or Age 5 for natural seedlings (cm).

5.17 Free Growing Assessment

- ❑ **The earliest acceptable time to declare a stand free growing** to meet MoF commitments is 5 years after regeneration establishment. For MF 19, the earliest is at the regeneration performance survey (i.e., three years) on sites which clearly present no brush hazard. On all sites, prescribe the date for free growing assessment.

- ❑ **Latest acceptable time** to declare a stand free growing is that shown on MoF grids as summarized below:

TABLE 5.5. Latest Acceptable Free-Growing Declaration in Years Since Commencement of Felling.

Site Series											
Sub one	1	2	3	4	5	6	8	9	10	11	19 ¹
MHmm1	20	20	20	20	20	20	20	20	20		yr
CDFmm	11	11 ²	14	11	11	11	11	11		11 ²	11 yr
CWHxm1 2	11	11	11	11	11	14	11	11	11		11 ³ yr
CWHdm	11	11	11	11	11	14	11	11		11	11 yr
CWHvm1	14	11	14	11	11	14	11	11	11	11	11 ³ yr
CWHvm2	14	11 ²	14	14	11	14	11	11	11	11	11 yr
CWHmm1	14	14	11	11	11	14	11	11			11 yr
CWHmm2	14	14	11	11	11	14	11	11	11	11	yr
CWHvh1	14	11 ²	14	14	11	11	11	11	11		11 ⁴ yr
Use MoF definitions for free growing, i.e., conifers 150 and taller than brush and expected to remain free growing.											

¹Site Series 11 19, where applicable, are 11 years.

²Avoid Logging.

³Avoid Logging on Site Series 11.

⁴Avoid Logging on Site Series 12, 16, 18, 19.

5.18 Recordkeeping

- ❑ Data to substantiate each prescription must be recorded in FORKS.
- ❑ Maintain a copy of all prescriptions.

5.2 Post-Harvest Assessment and Prescription

OBJECTIVE: To confirm basic site data and amend the Silviculture Prescription, if necessary.

5.21 Procedures

- ❑ Confirm or re map strata (ecological units, site index, treatments).
- ❑ Review site information for accuracy and completeness.
- ❑ Determine for each stratum:
 - Slash, drainage and brush conditions.
 - Proportion of N.P. (Non Productive area).
 - Amount of soil disturbance and permanent access.
 - Amount and condition of advanced stocking.
 - Number of germinants.
 - Potential for natural regeneration in accordance with standards.
 - Number of hardwood seed trees, if not already treated.
 - Need for sapling felling.

- ❑ Conduct a Stocking (plantability) Survey where required for pre brush planting, to determine the need for site preparation, or to determine stocking.
- ❑ Assess the need to treat roadside slash accumulations and landings.
- ❑ Assess the need for site rehabilitation for degraded areas.
- ❑ Note road maintenance needs and inform appropriate Divisional staff.
- ❑ Confirm or revise prescription. If changes affect the approved Silviculture Prescription, revise and resubmit to MoF.
- ❑ Update SPARKS.

5.3 Reforestation Assessments and Sampling

OBJECTIVE: To measure stocking, survival and performance and, determine the success of the reforestation prescription.

5.31 General Procedures

This section describes the standard sampling (5.311) and survey procedures for:

- ❑ Stocking Surveys (5.32), to determine stocking status and plantability of areas currently classed as AAR.
- ❑ Survival Surveys (5.33), to determine plantation success and stocking one year after planting, but may be done after one growing season.
- ❑ Regeneration Performance Surveys (5.34), to confirm stocking status three years after planting or three years after declaring an area stocked naturally.
- ❑ Free Growing Surveys (5.35), to confirm free growing status and assess the need for treatment.

At the discretion of the Divisional Forester, survival and Regeneration Performance surveys may be combined as a single survey on land Site Index 18 or below.

5.311 Sampling

Survey should normally be done stratified by the Site Units established in the SP.

- ❑ Where additional stratification is desired,
 - Stratify into practical subunits, such as site associations, burned or unburned, etc., and sample each one, or
 - Run sample lines to sample the entire unit ideally, lines should be 100 m apart and at right angles to contours. Identify subunit boundaries on cards and/or map.
-

- ❑ For roadside slash accumulations, determine if it is necessary or practical to map the area as separate strata. Residue maps can be used for preliminary stratification. Depending upon the site involved, these areas should be:
 - treated to create plantable spots, or
 - if stocked, average proportionally into the overall stocking for adjacent strata.
- ❑ Where sampling must meet the accuracy standards specified in Section 5.3111, a Coefficient of Variation (CV) for the area is determined in order to calculate the number of samples required.
 - The CV may be assumed from experience on similar areas.
 - The CV may be calculated from a minimum of ten plots per stratum.
- ❑ The standard plot is circular with a 2.4 m radius (1/550 ha). Refer to Section 5.3111 for procedures to calculate the number of plots required.

5.3111 Sampling Intensity/Error

The following sampling intensity and error standards must be met for all surveys where:

- ❑ Surveys are to verify that MB's restocking commitments are completed.
- ❑ Surveys are carried out as a government funded project.

Assessment Survey Standards

Strata of less than 2 ha in size need not be surveyed to standard since for inventory maintenance purposes such areas will be included in adjacent stands.

The sampling intensity standard is a sample size that gives the number of trees/ha to a sampling accuracy of $\pm 15\%$, 19 times out of 20, subject to:

- ❑ The whole stratum being uniformly sampled.
- ❑ A minimum of 10 plots in any stratum larger than 2 hectares.

Note: If you plan to change the sampling intensity because the calculated CV indicates that a change can be made, a uniform sample over the whole stratum is required, including the portion already sampled.

All survey results are to record the confidence limits.

Calculation of Coefficient of Variation (CV)

$$CV = \frac{\text{Standard Deviation}}{\text{Mean No. of Crop Trees}}$$

Calculation of Number of Plots Required

$$n = \left(\frac{CV \cdot t}{A} \right)^2$$

where A desired sampling error (0.15)

t
n value from Student's tables
 number of plots

The following table shows the required number of plots for a range of CVs:

<u>If CV is</u> <u>this amount</u>	<u>then the following</u> <u>number of plots are required</u>
.2	10
.3	19
.4	30
.5	46
.6	64
.7	8
.8	112
.9	138

Calculation of Confidence Interval (CI)

$$CI \pm \left(\frac{CV}{\sqrt{n}} \right) t$$

CI (trees) CI Average number of trees per ha.

5.3112 Field Data Collection

The following procedures are for use with the Regeneration Assessment Card (01.03). **If on a TL or FL, see 5.322 for special procedures.**

Base procedure is as follows:

- ❑ Tally plot as N.P. if the plot is primarily rock or water, and there is no crop tree capable of growing to merchantable size.
- ❑ In the crop tree column, tally up to five crop trees per plot by species. **A crop tree is defined in Section 5.3113.**
- ❑ If there are less than target crop trees per plot, determine if more trees are needed by examination of the plot for "vacancies". Consider adjacent trees on and off the plot. Record up to three vacancies under the "no. needed" column of the "plantable spots" section.
- ❑ Classify and tally each "vacancy" as plantable or unplantable by type in the appropriate column. Actual locations may be modified according to planting spot selection/spacing criteria.
- ❑ Tally all competing trees. Competing trees are defined in Section 5.3114.
- ❑ Rate difficulty of each plantable spot as easy (E), moderate (M), or difficult (D) using the following criteria:
 - **Easy** Easy to select site and plant tree, essentially little or no brush, slash, rock or duff.
 - **Moderate** Moderately easy selection, planter must either search for spot or do some spot preparation.

- **Difficult** Difficult or severely difficult spot selection and planting due to:
 - slash cover,
 - deep organic layer (10 cm), either drought prone or unsuitable planting medium for the site association,
 - brush cover, site must be scalped,
 - shallow soil (10 cm over bedrock or till) or excessively stoney and well drained.

Note: Plantability data is only collected where it is needed for preparing planting plans, to substantiate site preparation prescriptions, and for planting productivity estimates in Industry Outstanding project proposals.

- **Under remarks:** record number and need to treat any hardwood seed trees or seedlings either on the opening or in the adjoining stand.

Note boundaries of vegetation types, or sub units (strata).

5.3113 Crop Trees

Crop (or Count) trees are defined as:

- ❑ An acceptable species ecologically suited to the site. (Normally listed in SP.)
- ❑ Spaced at least 2.0 m from any other crop trees on or off (i.e., influence trees) the plot. This optional distance may be reduced by the Divisional Forester in those areas where obstacles are present and a lesser distance is approved in the SP.
- ❑ Free from disease or severe damage, and of good form.
- ❑ Established and judged capable of surviving to free growing.

Notes:

- 1) In the case of germinants and very small seedlings, judgment is essential. Normally, three healthy germinants (three to nine months old) are equated to one established seedling. In the case of six or more germinants, the 2.0 m spacing rule must be carefully considered. An experienced assessor should use judgment in interpreting this rule, e.g., discount even healthy germinants unlikely to survive, or count as few as one or two as adequate in late winter/early spring surveys. Where stocking is composed primarily of germinants, a follow up survey is needed to confirm their continued survival.
- 2) In strata that are heavily stocked, i.e., consistently three or more crop trees per plot, Influence Trees may be ignored.

5.3114 Competing Trees

Competing trees are defined as:

- ❑ A coniferous or deciduous tree that will continue to compete with the crop trees until at least the free growing stage. Note: This definition may not be same as the Code definition.
- ❑ Trees whose height is within 0.5 m of the height of the crop trees. For trees with a height difference greater than 0.5 m of the crop trees, judgment must be used. See also Section 1.524 for crop and competing tree relationships for situations where crop trees are greater than two meters in height.

5.312 Survey Compilation

5.3121 Stand Stratification

If not previously stratified, examine survey cards and map compile data for each recognized stand. Stratification may be based on:

- ❑ SP site unit.
- ❑ Species differences, e.g., HF, FH, etc. (recognize each species with 20 plus crop tree count), or
- ❑ Significantly different ecological units, or
- ❑ Site index (3 m classes, maximum range approximately 5 m), or
- ❑ Age/date of germination (greater than two year variation), or
- ❑ Stocking (greater than 20 variation).

Stands should be kept as large as is realistic. Follow inventory guidelines on minimum size (2 ha between classes of type and 5 ha within classes of type).

5.3122 Stand Compilation Detail on Cards

For each stand, compile as necessary for the type of survey done:

- ❑ number of crop trees/ha:

$$\frac{\text{total crop trees}}{\text{total productive plots}} \times 550$$

- ❑ percent occupancy or distribution:

$$\frac{\text{number of productive plots with 1 crop tree}}{\text{total productive plots}} \times 100$$

- ❑ percent productive land:

$$\frac{\text{number of productive plots}}{\text{total plots}} \times 100$$

- ❑ number of plantable spots/ha:

$$\frac{\text{total plantable spots}}{\text{total plots}} \times 550$$

Notes:

1. Plantable spots are based on total plots since the objective is to determine the number of planting spots/ha on the area to be covered by the planting crew.
 2. Compilation detail will depend on degree of stocking present and level of answer required, e.g., if planting is difficult, but stand partially stocked cf. difficult planting and zero stocking. In the latter case, site preparation is clearly indicated and compilation unnecessary, in the former a partial planting may be justified.
- number of competing trees/ha:

$$\frac{\text{total competing trees}}{\text{total productive plots}} \times 550$$

In certain situations, determination of AAR may be based upon MoF stocking. To determine MoF stocking from MB 1/550 ha plot data use the following formula:

$$\text{MoF Stocking} = \left(\frac{(\text{fully stocked plots factor}) + (\text{trees from partially stocked plots})}{\text{total number of plots}} \right) 550$$

Factors for fully stocked (M plots) plots are as follows:

2.3	for	1500 sph	target stocking
2.18	for	1200 sph	target stocking
2.00	for	1100 sph	target stocking
1.82	for	1000 sph	target stocking
1.64	for	900 sph	target stocking
1.45	for	800 sph	target stocking

5.3123 Stand Formula

For each stand, compile and submit data according to the requirements in the MB Standard Practice Woodlands Inventory Maintenance manual.

Inventory Section will maintain the full formula in the database. Maps will show an abbreviated formula.

5.3124 Minimum Satisfactory Stocking Levels

MF and TFLs

Stands are satisfactorily stocked if the survey results using the MB compilation method show:

- For all acceptable species
1. more than an average of 600 crop trees/productive hectare,

2. 80 distribution, and
3. the confidence interval (19/20) is 15 or less, or the lower confidence level is above 600 sph.

Declare all stands that do not meet MB stocking levels as AAR and prescribe necessary site preparation and reforestation actions to achieve restocking standard.

All areas which technically do not meet the MB stocking standards of 600 sph at 80 distribution shall be reviewed and professionally signed off by the Divisional Forester with written justification. On Crown Land and on TFL this only can be done if the SP minimum has been achieved.

FLs and Unregulated TLs

Using MoF compilation method, classify the stand as satisfactorily stocked when the average number of trees per hectare exceeds the minimum stated in the SP and the confidence interval meets the MoF Standard or the lower confidence level exceeds the MoF minimum.

5.32 Stocking Surveys

OBJECTIVE: To determine restocking status to prescribe planting, site preparation, brushing and weeding or other future activities and, to schedule the next survey.

5.321 Preparation

- ❑ Obtain list of areas from SPARKS.
- ❑ Analyse regeneration delay periods.

5.322 Field Examination and Compilation

- ❑ On MF 19 and TFLs, use the procedures in Section 5.31. Where MB targets and minimums are not accepted, use the MoF compilation method.
- ❑ On FLs and Unregulated TLs, use the Forest Practices Code Silviculture Surveys Guidebook.

5.323 Prescription and Records

- ❑ Prescribe and schedule treatment or next survey.
- ❑ Update SPARKS.

5.33 Survival Survey

OBJECTIVE: To confirm stocking status of plantations and assess effectiveness of planting prescription to prescribe replanting, fill planting, or brush control on all or part of the stand to correct stand formula and, to schedule the next survey.

5.331 Preparation

Obtain list of one year plantations from SPARKS. Examination after one growing season is acceptable if work efficiency so dictates.

5.332 Field Examination and Compilation

Conduct a full survey (5.31) of each stratum and estimate whether the plantation is successful and/or the site is stocked as described in the inventory formula. It is optional to tally surviving planted trees separately to compare to record of tree/ha planted for a rough measure of survival.

Note: If the plantation is surveyed after one growing season, do not count "poor" trees past research has shown these trees generally die over winter.

On Douglas fir type Site Indices 15 and 18, make only one attempt with high quality stock and planting to achieve target. If less than 600 sph survive, fill plant to achieve the minimum 600 sph.

5.333 Prescription and Records

- ☐ Prescribe and schedule treatment or next survey.
- ☐ Update SPARKS.

5.34 Regeneration Performance Survey

OBJECTIVE: To confirm that the stand is established and the stand formula is correct to identify areas in need of fill planting or release to meet targets to classify as free growing (Section 5.35) or schedule earliest date for free growing survey and, to compare height of stand with targets.

5.341 Regeneration Performance Stocking Target

Stocking must be at least 80 % of target stocking or action shall be prescribed if lower than 80 %.

5.342 Preparation

Assemble from SPARKS:

- ☐ A list of the three year old natural stands and plantations.
- ☐ Any stands scheduled for re examination.

5.343 Field Examination and Compilation

A reconnaissance of each stratum in a stand is probably sufficient to determine if the stocking level and species composition agree with the descriptive formula. If it appears that the stocking level or species composition has changed more

than 20 , conduct a detailed survey, compile and develop the correct descriptive formula/fill plant prescription.

5.344 Records

- ❑ Compare results to seedling growth targets (Section 5.163).
- ❑ Record as satisfactorily established and free growing, or prescribe and schedule treatment or next survey (free growing, release or spacing).
- ❑ Update SPARKS.

5.35 *Free Growing Survey Procedures*

OBJECTIVE: To determine if a stand meets the free growing criteria to determine whether vegetation management is necessary and, to evaluate the original prescription against results.

5.351 Definition of Free Growing

A stand is free growing when there are sufficient free growing crop trees to meet the minimum stocking standard, and the crop trees are 150 of the height of competing vegetation and are growing as fast as or faster than the competing vegetation. To declare a stand free growing, 90 of the productive area must meet the above criteria with no area larger than 1 ha out of compliance.

5.352 Minimum Treatable Area

Patches less than one hectare that are not free growing need not be treated. The necessity to treat will depend upon present and future economic feasibility to treat, and the need to meet MoF District standards.

5.3521 *Time of Survey*

Free growing surveys shall be made no later than the dates shown in Section 5.1 and the SP.

5.3522 *Survey Procedures*

The Free Growing Assessments may be done by several methods:

- ❑ In conjunction with other surveys, determine if the stand meets the free growing definition. On TFLs and Crown land complete a survey to comply with the Silviculture Practices Regulation, Section 18.
 - ❑ Conduct a reconnaissance survey where conifers appear obviously free growing and species composition, stems per hectare and stand formula from the previous survey obviously are correct. Check back edges, corners and parts of the opening that are not readily visible. Make a prescription for the next treatment or survey.
 - ❑ If free growing status is uncertain or the stand formula is suspect, complete a regeneration performance survey (Section 5.34) with
-

sufficient samples to provide a new stand formula. Sufficient trees to meet minimum stocking standards must be free growing.

- ❑ If the stand is not free growing or requires additional treatment, make a prescription.

5.3523 Prescription and Records

Record survey results in SPARKS, update the Free Growing Status Report and ensure that all hectares in an opening are shown on the report until the entire opening has been declared free growing.

5.3524 Reporting

Report the results of free growing surveys to the MoF in accordance with current procedures.

If the stand will not be free growing by the latest date in the prescription, the reasons for the variance and a new prescription must be submitted to the MoF, and the Operational Forester where SP commitments will not be met.

5.36 Determination of Breast Height Age and Tree Height

OBJECTIVE: To determine an accurate breast height age and tree height for all stands and allow improved estimation of site index. This data will provide more accurate estimations of stand height for green up, ad agency and watershed rate of cut requirements.

5.361 Timing

Measure BH age and tree height at the first opportunity on all regeneration performance, free growing and stand maintenance surveys for stands on which the 100 tallest well spaced trees per hectare have reached a height of 1.3 m. For stands on which the BH age and tree height has been determined by this method before they reach 4 m in height, the BH age and tree height shall be **remeasured** when a survey is done after the 100 largest well spaced trees per hectare are 4 m or greater.

It may be necessary for stands that are already over 1.3 m or 4 m in height that a special survey be done to determine BH age where accurate data is required for logging or watershed planning.

5.362 Sample Procedures

5.3621 Size of Sample for Breast Height Age and Tree Height

- ❑ Ten plots, one tree/plot
-

5.3622 Plot Location

- ❑ Determine, prior to starting the survey, number of plots required for each strata. To provide even distribution with no more than 10 plots, divide the total number of required plots by 10. Sample for BH age and tree height on each plot that is a multiple of the dividend. **Example**, 230 plots divided by 10 = 23. Therefore, sample for BH age and tree height on every 23rd plot. Plots must be well distributed across the strata to allow for natural site variation.
- ❑ If there are no trees of the preferred leading species or ≥ 1.3 m in height on the plot, move a further 20 m along your planned survey line or go to the next plot. Record the plot as an "offset" plot. If the offset plot is at the next planned plot location subsequent plots to sample BH age and tree height shall revert to the original planned location.

5.3623 Plot Size

- ❑ 1/100th hectare plot (5.64 m radius). Use the centre of your normal survey plot, e.g., 2.4 m or 3.99 m plot. Measurement is only required to verify tall trees that are on or near the plot boundary. A logger's tape is an efficient means to determine the plot boundary.

5.3624 Sample Tree

- ❑ Pick the largest tree as your sample. Diameter is the preferred site parameter, however, height is acceptable on shorter stands. Pick either the tallest tree or the tree with the largest diameter which ever is easiest to measure. In a stand, always use the same parameter, i.e., do not take a mix of height and diameter as your sample. It may be necessary to measure more than one tree to determine the tallest or largest.
- ❑ The sample shall consist of trees of the same species for any stand, if it is a mixed species stand choose the leading species on the crop tree label or for the site unless the crop tree label is incorrect and will be revised as a result of the survey.
- ❑ Ideally, the leading label species (highest) should be a preferred species. The site species shall be recorded.

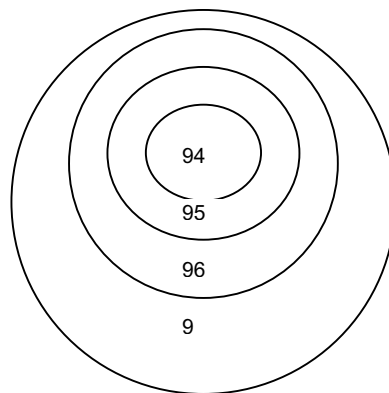
5.3625 Height

- ❑ Height must be measured accurately using a clinometer (Sunto) or measuring height pole.
 - ❑ Measure from the ground which is on the high side of the tree.
 - ❑ On small hemlock, below 2 m height and measured with a stick, straighten out the tip and measure to the tip. On larger hemlock, measure to the top of the droop of the leader.
 - ❑ On determinant species, e.g., Fd, Ss, Ba, Pine sp, measure to:
-

- the previous year's height growth, for surveys conducted between January 1 to July 31.
 - the current year's growth for surveys conducted between August 1 to December 31.
- ❑ On other indeterminate species, e.g., Hw, Cw, measure to the highest point all year round.

5.3626 Age at Breast Height

- ❑ Counting the whorls is a good option where feasible and where you are certain that all whorls can be identified.
- ❑ Otherwise, on trees up to 14 cm in dbh take a destructive sample and count the annual rings. Trees above 14 cm dbh take a core with a **sharp** increment borer. When using the increment borer, the core **must** go through the pith. A one year error can be close to a 10% error which is highly significant
- ❑ Count the early wood (white), do not count the pith. It is strongly recommended that you count by assigning to the outside white ring the year in which it was grown. Then work towards the centre assigning to each ring its year. Record the calendar year that the tree grows through BH age. Note that the first ring is often dark, like late wood.



- ❑ The reason this is recommended rather than counting the age back to breast height, e.g., 8 years old, is that counting age can result in misinterpretation of the year that the tree grows through breast height.
- ❑ Do not count false rings. A false ring can be identified by lack of an abrupt transition from the false late wood into more porous tissue that looks like early wood. Also, the ring may only occur around part of the circumference of the tree

5.3627 Destructive Sampling Tools

The recommended tools are a good, sharp and sturdy folding pruning saw for larger trees and pruning shears for anything that can be cut readily.

5.3628 Definitions

- Age and Date of Establishment:
 - Year of germination for planted species and trees that have germinated close to the date of logging.
 - For advanced regeneration use an estimated equivalent age. If it is clear that the tree is significantly older than the time since logging and has suppressed rings only count the years back to the time of release.
 - Are represented by the largest well spaced 100 trees of the same species.
 - Date of establishment can be prior to harvesting for stands planted immediately after harvesting or stocked or partially stocked with acceptable naturals at time of harvest.

5.3629 *The average height and the average year in which BH was reached shall be calculated and reported annually with the inventory revisions.*

Tree #	Height (m)	Year BH Attained
1	4.2	1992
2	3.5	1993
3	4.6	1991
4	3.8	1992
5	3.	1993
6	4.2	1992
	4.6	1991
8	5.	1989
9	2.8	1995
10	4.0	1993
Total	41.1	92.1
X	4.11	92.1
Report	Height 4.1	BH Year 1992

5.4 Plantation Quality Assessments

OBJECTIVE: To determine if plantation quality standards are met, and to guide and control planting crews and contractors.

Plantation quality assessments may be done using either the method outlined below or the Ministry of Forests (MoF) method. The MoF method is outlined in Section 6.82 of the MoF Silviculture Manual.

The fundamental difference between the two systems is how tree espacement is assessed. Either system may be used. MB silviculture audits will use the following system.

5.41 *Prescription*

Prior to planting, a prescription based on stocking and plantability assessment will estimate the number of trees to be planted considering:

- ❑ Existing natural stocking.
- ❑ Unplantable spots (brush/slash) UP.
- ❑ Unproductive area (rock/water) NP.

Departure from standard spacing may be prescribed to allow for:

- ❑ Expected mortality (closer spacing than standard).
- ❑ Additional natural fill in within waiting period (further than standard spacing).

The prescription shall be expressed in terms of crop trees per hectare, and as a target intertree spacing. For the purpose of planting supervision, a minimum intertree spacing is specified in accordance with the SP (generally 2.0 m).

MB silviculture audits shall evaluate the prescription on the basis of crop trees per hectare, planted plus acceptable natural.

5.42 *Procedure*

- ❑ Plot radius is 3.99 m or 1/200 hectare plot.
- ❑ Transects must sample the entire unit. Each day, the distribution and number of samples will be dictated by the crew size and area planted. On a cumulative basis for a unit, a sampling intensity of 1% of total trees planted or a minimum of 100 trees on small units is recommended. Silviculture audits will generally use a smaller sample. Sampling error can be used to determine if a greater or lesser number of samples is required to give a reliable answer.

These procedures assess two aspects of plantation quality:

- ❑ Planting quality, (i.e., root placement, firmness, depth, microsite, etc.) based on the trees exhumed.
- ❑ Spacing quality, based on unacceptable variance from the prescribed intertree spacing.

These results are combined in a single measure of plantation quality. This system differs from the MoF system in two key aspects:

- ❑ Spacing and planting quality are tracked separately, then combined whereas, the MoF system combines them during the assessment.
- ❑ Crop tree spacing is based on prescribed intertree spacing rather than a specified number of trees per plot.

5.421 *Data Recording - Spacing Quality*

At each plot the assessor will record the following:

- ❑ Number of acceptable crop trees established prior to the planting under assessment that are considered "planter visible".
- ❑ Number of newly planted trees.
- ❑ Actual number of plantable spots at the prescribed intertree spacing (optional).
- ❑ Spacing faults are recorded with a positive or negative sign when trees are either:
 - a) Too close to another potential crop tree (i.e. less than minimum intertree spacing). Record as " -".
 - b) A plantable spot has been missed (i.e. the distance from surrounding crop trees exceeds 90% of the target intertree spacing). Record as " +".

In the case of trees planted too close, the assessor must decide which tree is surplus. The surplus tree is recorded as a spacing fault and not exhumed. This avoids two faults for the same tree, in cases where the surplus tree is also poorly planted.

5.422 Data Recording - Planting Quality

Trees within the plot, with the exception of those classed as spacing faults, are exhumed and assessed for the following quality factors:

- ❑ Suitability of microsite. Be specific and consider options available to the planter.
- ❑ Planting spot preparation. Consider whether planter met contract prescription or supervisor's instructions.
- ❑ Adequacy of planting considering size of planting hole, root distribution, depth, material used to fill hole, firmness and straightness.

Record the number of poorly planted trees in the appropriate column.

Note: If the assessor does not exhume all trees in each plot, the number of exhumed trees must be recorded. An unbiased method of selecting trees for digging should be used. MB silviculture audits normally sample the trees within a 2.4 m radius from plot center.

5.43 Compilation

- ❑ Calculate the percentage of spacing faults in relation to total crop trees.

Note: Negatives and positives may be summed separately first to help identify underplanting or overplanting. The rationale for compilation, however, is that a surplus tree does not compensate for a miss elsewhere.

- ❑ Calculate the percentage of planting faults in relation to total trees exhumed.
- ❑ Calculate the percentage of spacing faults in relation to potential crop trees. Plantable spots are the sum of crop trees and missed spots,

based on target intertree spacing. Potential crop trees are the sum of natural crop trees plus plantable spots.

- ❑ Plantation quality is calculated by adding the percentage of spacing faults to the percentage of planting faults and subtracting the sum from 100 . Percentages are used because in most cases, the number of trees exhumed will be different from the number of crop trees.

The acceptable standard for MB silviculture audits is 90 plantation quality. Crop trees per hectare should be within 10 of the prescribed total stocking. For contract administration purposes, payment rates and quality standards are included in the planting contract and may be specified in greater detail if desired.

5.431 Sampling Error

Sampling error must be calculated when there is a potential penalty or nonpayment. It can also be used to determine if the sample size is adequate for a desired level of accuracy.

5.5 Stand Maintenance Assessments and Prescriptions

This section describes the procedures for assessing and prescribing release (inclusive of brushing and weeding) and spacing treatments, and evaluating the success of a treatment.

5.51 Release Surveys

5.511 Objective

To determine if stand needs release from weed competition. If so, what method will be most suitable. The survey will provide the data for prescription, plans and basis industry outstanding funding and/or contract preparation.

5.512 Survey Procedures

Carry out a recce to determine if:

- ❑ Conifer stocking is adequate.
- ❑ Present brush species will reduce yield significantly (now or in the future) or even suppress and kill the crop trees.
- ❑ On skid and back spar trails, alder is beneficial for rehabilitating the site and not a danger to the setting. If alder is beneficial and is prescribed for rehabilitation in the SP, plan to leave it.

A detailed survey is only carried out if there is uncertainty about the need for treatment or more specific data is necessary for planning purposes, pesticide permit, etc.

The detailed survey uses:

- ❑ The 2.4 m plot and standard rules for sampling (Section 5.31).

- ❑ The Stand Maintenance Assessment Card 01.04.

Data to be recorded will depend on the specific site and could include:

- ❑ Conifer stocking, spacing and height.
- ❑ Number, species, dbh, and/or height of weeds.
- ❑ Evidence of growth suppression or damage.
- ❑ Obstacles to herbicide use.
- ❑ Health and disease factors.

5.513 Prescriptions and Records

- ❑ Prescribe and schedule treatment or next survey.
- ❑ Update SPARKS.

5.52 Spacing Surveys

5.521 Objective

To identify candidate stands for spacing.

To provide the basic data for prescription, annual and five year planning and the basis for contract preparation.

If the stand does not need spacing, to confirm or revise the stand formula.

5.522 Preparation

- ❑ Review Spacing Guidelines and Practices in SPS 5.2 and Forest Practices Code Spacing Guidebook.
- ❑ Obtain list of stands from:
 - inventory stand listings
 - forward planning ledger (SPARKS).
- ❑ All stands will be assessed for stocking level and spacing requirements before they reach a height of 5 m.

TABLE 5.6 Age to Reach 5 m Height

Site Index	18	21	24	27	30	33	36	39
Douglas fir	19	18	1	15	14	13	12	11
Western hemlock	19	1	15	13	11	10	9	8

5.523 Survey Procedure

Recce stand to decide whether a detailed survey is necessary, i.e., is stand or portions of stand dense enough to require spacing, or is present stand description no longer accurate. Survey should be rescheduled if the stand is not tall enough.

If a survey is necessary:

- ❑ Use 2.4 m plot, Stand Maintenance Assessment Card 01.04 and standard rules for sampling (Section 5.31) OR MoF Sampling System for Spacing.
- ❑ Stratify the stand into spaceable and not spaceable on the basis of recce and sampling.
- ❑ Count all non competitors (Section 5.524) and record in "non crop tree" column.
- ❑ Count and record all competitor trees (Definition 5.524) by species and record in "potential crop tree" column. If stand is two storied, make a separate count of trees in dominant storey and note degree of dominance.
- ❑ Record wolf trees and undesirable residuals in remarks column.
- ❑ Measure height, diameter and total age of largest crop tree on each plot. If this is an "advanced growth", add total age to age since release plus adjustment for time to reach height at release under normal conditions. Do not measure a tree not representative of the stand as a sample tree.
- ❑ Measure height to live crown on potential leave trees.

For doubtful stands, examine current annual radial increment (CAI) on a range of trees to assess the degree of competition and the amount of release likely.

Remember, in a fully stocked stand, the maximum possible release in terms of increased CAI on leave trees equals the sum of CAIs of cut trees. Record your measurements/impressions in the comments column.

5.524 Definitions of Tree Classes for Spacing Assessment

- ❑ **Wolf tree** a very vigorous tree, but unacceptable as a crop tree because of poor form, excessive branching, etc.
- ❑ **Non-competitor** a tree so small in relation to mean dominant codominant trees that it is not using sufficient resources to impact the growth rate of the crop trees significantly. See Table 5.

TABLE 5.7 Non-competitor Tree Height

Mean dom-codom height	3	4	5	6	7	8 m
Non competitors	1	1.5	2	2.5	3	4 m
	33	38	40	42	45	50

- ❑ **Competitor** any tree taller than a non competitor. Leave trees are selected from this category.
- ❑ **Undesirable residual** any tree with clearly unacceptable characteristics, e.g., unhealed logging damage, curved trunk, disease.

Note: It is not necessary to define or identify leave trees at this point. Only when the stand is being spaced is this choice made.

5.525 Plot Compilation on Card 01.04

Sum the data and derive or compile:

- ☐ Stems/Ha.
- ☐ H/D.
- ☐ True Age.
- ☐ Changes to the stand formula if no spacing is planned in the next two years.

5.526 Evaluation of Data and Formulating Prescription

In evaluating the results of the survey and before formulating a prescription, follow these steps:

1. Identify the preferred crop species (1 or more) considering ecology and value (Section 5.52).
2. Refer to SPS 5.2 for The Considerations and Guidelines for formulating a prescription.

5.527 Prescription and Records

If a stand does not justify spacing, complete necessary records and prescribe next survey. If necessary, correct formula using competitor trees as count trees to a maximum of 5/plot.

If spacing is justified, make detailed prescription and schedule according to "urgency."

5.6 Fertilizer Assessment

Review the Forest Practices Code Forest Fertilization Guidebook.

5.61 *Decision-Making Procedures for Selecting Operational Fertilization Projects***5.611 Does the candidate meet all of the following requirements:**

- ☐ less than 5 years old
- ☐ greater than 0 volume of Douglas fir
- ☐ SI₅₀ 24 and greater for Douglas fir
- ☐ root rot is not widespread throughout the stand

No Stop, evaluate other stands.

Yes Proceed to Step 2.

5.612 Is there a commercial thinning or final harvest scheduled within 10 to 15 years of the application date?

No Stop evaluate stand objectives and other possible stands.

Yes Proceed to Step 3.

Note: If there is more than one stand at this point, priority must be given to stands where final harvest is scheduled after 10 years but before 15 years.

5.613 Is the height/diameter ratio less than 85?

No Stop response unlikely.

Yes Proceed to Step 4.

5.614 Is the relative SDI between the B&C lines with Density Management Diagram for Douglas-fir?

No Stop proceed only if spacing or thinning the stand will be conducted before fertilization.

Yes Proceed to Step 5.

5.615 Collect foliage samples as per attached procedure and send samples to Woodlands Services Environmental Lab for analysis. The nutritionist will advise on response expectation. Is there an expected response?

No Stop evaluate other stands.

Yes Proceed to Step 6.

It is recommended that a screening trial be installed to provide greater assurance of the anticipated magnitude of the response. Screening trial installation methods are attached.

5.616 Calculate NPV. If the NPV is positive, does it rank high enough relative to other Divisional investment opportunities necessary to meet fibre flow goal?

No Stop evaluate other stands.

Yes Fertilize the stand(s).

Note: If fibre flow goal cannot be met, then at General Manager discretion, stands with least negative NPV may be considered.

5.62 Foliar Sampling**5.621 Type of Foliage**

Sample the last foliage to have reached mature length.

5.622 Time of Year

For fertilizer prescriptions and general nutrient assessments, sample during dormant season. This is generally from October to March.

5.623 Crown Position

Sample only dominant and co dominant trees from the upper third of crown, but not leader or first lateral whorl down.

5.624 Representative Sample

The sample should reflect the stands or treatments (i.e. plot) nutrient condition. For the stand, 15 to 20 trees should be selected throughout the area and equal amounts collected from each tree (2 branch ends/tree). For research plots, the number of trees/plot and number of samples/tree will vary with requirements. For individual tree analysis, a minimum of 25 grams (1/2 small lunch bag) of fresh foliage from several positions on tree is necessary.

5.625 Bagging and Labeling

Clearly label plastic bags with site identification (i.e. tree/plot or stand/area). Labeling should be done near bottom of bag.

5.626 Lab

If possible, contact Environmental Services Laboratory prior to sampling for further information and/or to give date sample will be submitted. A sample submission sheet must accompany the samples giving sample details and analysis request.

5.627 Avoid

- ☐ Trees with heavy cone production, insect or disease damage.
- ☐ Sampling foliage near unpaved roads, etc. where dust contamination may be a problem.
- ☐ Touching foliage with hands.
- ☐ Storage foliage in bags.

Further information call Arlene Gammell, Sustainable Forestry at 55 3433. The following was an attachment to a memo from GvW to WNC, January 18, 1989.

Fertilization Policy

Operational fertilization may be undertaken where:

- ☐ application is compatible with environmental protection guidelines.
 - ☐ There is a commitment to harvest the increased volume by thinning or clearcut before it is (wholly or partially) lost to mortality.
-

5.7 Disease Surveys

Review the Forest Practices Code Root Disease Management Guidebook, the Dwarf Mistletoe Management Guidebook as applicable the Pine Stem Rust Management Guidebook and the Forest Health Surveys Guidebook.

5.71 Purpose

To determine the extent of disease in stands scheduled for treatment.

5.72 *Phellinus Weirii* Surveys

- ❑ Conduct surveys for Phellinus weirii on all stands scheduled for treatment or logging in which previous estimates show that a significant part of the area is visibly infected with Phellinus.
- ❑ It is recommended that surveys be conducted only by trained people since inexperienced crews tend to overestimate disease incidence.
- ❑ A line transect survey method is used to survey for Phellinus.

5.721 Procedures for Line Transect Survey

- ❑ The treatment unit ground survey is a 100 percent coverage, sketch mapping procedure, consisting of one or more baselines and perpendicular transect lines (recommended map scale is 1:2 500 to 1:5 000).
 - ❑ Baselines may be positioned inside or outside the stand boundary, but must run the full length of the stand to be surveyed. Tie baselines and transect lines into ground points to maintain mapping control.
 - ❑ A systematic grid coverage at 50 m transect line intervals should provide accurate coverage for most stand conditions. Flag interval points on the baseline and mark with line number before survey commencement. During mapping flag and mark the end of transect lines. Each transect line must run the width of the stand. To minimize coverage of dead ground, round off next transect line to the nearest multiple of 50 m within stand boundary.
 - ❑ Infection centres should be flagged and at least one tree painted.
 - ❑ Disease centres (based on visual symptoms only) are sketch mapped on topographic field cards, and then transferred onto 1:5 000 forest cover maps. The area infected and the surround should be mapped and the percentage of visual area infected computed.
-



Ministry of
Forests

Ministry Executive

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File: 19710-30/TFL 44

Bill Cafferata
Vice President and Chief Forester
MacMillan Bloedel Limited
925 West Georgia Street
Vancouver, British Columbia
V6E 3R9

Dear Bill Cafferata:

This letter is to inform you of my determination of an allowable annual cut (AAC) for Tree Farm Licence (TFL) 44.

The AAC for TFL 44, determined in accordance with section 8 of the *Forest Act*, is 1 890 000 m³, effective January 1, 1998.

In accordance with Section 8 (5) of the *Forest Act*, this AAC includes partitions of at least 40 000 m³ attributable to marginally economic stands outside Clayoquot Sound, and a maximum of 130 000 m³ for harvesting in Clayoquot Sound.

The temporary aAC reduction previously ordered for TFL 44 under Part 15 (now Part 13) of the *Forest Act*, related to Orders -in-Council (OIC) Nos. 718 and 719, is no longer required and has no effect given the OIC 's have expired on December 31, 1997.

Also attached is an AAC Rationale that describes in detail the factors I have considered in determining an AAC for TFL 44.

The AAC determination for the tree farm licence area, should not be construed as:

(a) providing for or implying that the District Manager would approve a forest development plan prepared further to the 20 -year plan submitted in support of the timber supply analysis;

(b) precluding any requirements that may result from the *Forest Practices Code of British Columbia Act* or providing an exemption from that Act, or any regulations or standards made or established under that Act.

I have also attached an AAC Summary. While this summary assumes I will not re-determine the AAC before January 1, 2003, I may re -determine the AAC at any time before that date if I consider it to be appropriate.

If you have any questions about the contents of this letter, please contact Jacques Bousquet, Tree Farm Licence Forester with the Resource Tenures and Engineering Branch, at (250) 387 - 8303.

This letter is an integral part of MP No. 3 and should be attached to it.

Yours truly,

Larry Pedersen, R.P.F.
Chief Forester

Enclosures (2)

cc: Ken Collingwood, Regional Manager, Vancouver Forest Region
Chris Hayhurst, Acting District Manager, South Island Forest District
Ted Baker, Director, Research Branch
Dave Gilbert, Director, Resources Inventory Branch
Jim Langridge, Director, Resource Tenures and Engineering Branch
Gary Townsend, Director, Timber Supply Branch.

Peter Kofoed, R.P.F., Region Forester, MacMillan Bloedel Limited
65 Front Street, Nanaimo, BC, V9R 5H9

AAC SUMMARY

MP NO. 3 FOR TFL 44

mAcmillan bloedel limited

Year	1998	1999	2000	2001	2002
<u>Schedule A :</u>	614 250	614 250	614 250	614 250	614 250
<u>Schedule B :</u>					
- SBFEP	89 873	89 873	89 873	89 873	89 873
- Licensee	1 185 877	1 185 877	1 185 877	1 185 877	1 185 877
	-----	-----	-----	-----	-----
Sub Total	1 275 750	1 275 750	1 275 750	1 275 750	1 275 750
<u>Total TFL AAC:</u>	1 890 000	1 890 000	1 890 000	1 890 000	1 890 000
<u>Total Licensee:</u>	1 800 127	1 800 127	1 800 127	1 800 127	1 800 127

Note: This table is only to be used for the schedule B prorate

Schedule B prorate: .675

Important Appendum to this Page

PARTITION SUMMARY

MANAGEMENT PLAN NO.3 FOR TFL 44

MACMILLAN BLOEDEL LIMITED

Area	Operability Type	Total
------	------------------	-------

	All operability types	Marginally economic	TOTAL
1 Clayoquot Sound	130 000 m ³	N/A	130 000 m ³
2 Outside Clayoquot Sound	1 720 000 m ³	40 000 m ³	1 760 000 m ³
TOTAL	1 850 000 m ³	40 000 m ³	1 890 000 m ³



TFL 44, MP #3

Report on Twenty-Year Harvest Plan

(1997-2016)

Prepared by: S.M. Northway, RPF
MacMillan Bloedel Limited
Resource Analysis

July 199

TABLE OF CONTENTS

1.0 PURPOSE OF THE PLAN	1
2.0 PROCEDURES	1
3.0 MAPS	2
4.0 RESULTS	3
4.1 HARVEST VOLUME BY PERIOD	3
4.2 SILVICULTURAL SYSTEMS	3
4.3 INVENTORY PROFILE	3
4.4 OPERABILITY	4
4.5 ENVIRONMENTALLY SENSITIVE AREAS (ESA)	5
4.6 VISUAL QUALITY OBJECTIVES (VQO)	6
5.0 SENSITIVITY ANALYSIS	7
6.0 CONCLUSION	8

List of Tables

TABLE 4.1.	20 Year Plan Harvest Volume Summary	3
TABLE 4.2	20 Year Plan Silvicultural System Summary	3
TABLE 4.3	Summary of Mature Inventory by Operability Class	4
TABLE 4.4	Summary of Mature Harvest Volumes by Operability Class	4
TABLE 4.5a	Alberni West ESA Summary	5
TABLE 4.5b	Alberni East ESA Summary	6
TABLE 4.6	VQO Summary	6
TABLE 5.1	Sensitivity Analysis	

List of Attachments

ATTACHMENT 1 Terms of Reference	9
ATTACHMENT 2 Individual VQOs Alberni East	22
ATTACHMENT 3 Individual VQOs Alberni West	29
ATTACHMENT 4 Harvest by Mapsheet for Alberni East	35
ATTACHMENT 5 Harvest by Mapsheet for Alberni West	44

1.0 PURPOSE OF THE PLAN

The Twenty Year Plan lays out a feasible harvest and road building schedule to describe the next twenty years of development in TFL 44. The plan is designed to:

- ❑ Demonstrate the feasibility of a harvest at the recommended Annual Allowable Cut (AAC) level. The layout and timing of the harvest blocks are consistent with the existing forest management constraints and guidelines.
- ❑ Show to the public and government agencies where development is intended to take place over the next twenty years. This should ensure they can identify concerns regarding development well in advance of the planned operations.
- ❑ Provide a strategic framework for future planning in TFL 44.
- ❑ Provide employees, business, and community a sense of direction and stability over the next 20 years.

The Twenty Year Plan is a mid level planning document, fitting between the Timber Supply Analysis (TSA) and the Development Plan. The TSA uses non spatial approximations to reflect planning constraints such as harvest block size and adjacency. Such simplifications allow the exploration of harvest levels and silvicultural activities over the next 200 years. The Twenty Year Plan tests the spatial feasibility of a harvest schedule for 20 years. It is, however, a conceptual plan presenting only one possible harvest schedule. It is not an Operational Plan. It is at the next level of planning, the Forest Development Plan, that detailed field information is incorporated into the planning process, resulting in a site specific determination of harvest block boundaries and refinements to the timing of harvest.

2.0 PROCEDURES

The criteria and planning guidelines used in the preparation of this plan were stated in the "TFL 44 Twenty Year Plan Terms of Reference." An amended version was submitted to the Ministry of Forests, August 15, 1996, and a copy is included in Attachment 1.

The results of the plan are presented for two working circles, Alberni East and Alberni West. The Clayoquot Working Circle and Ucluelet Working Circle were omitted, pending clarification of their future management objectives.

Two GIS based computer programs were used to assist in developing the Twenty Year Plan. PLANNER was used in the Alberni West Working Circle, and TYPO was used in the Alberni East Working Circle. These programs enabled a closer interaction of the engineer with the GIS.

The following steps were used in designing the plan:

1. Approximate harvest level targets were allocated to the two working circles for each of the four five year periods.
2. Proposed roads and openings were either entered directly into a GIS using one of the programs or drawn onto 1:20 000 work maps for subsequent digitizing and transfer into the GIS.
3. The proposed openings and their timing were tested for compliance to criteria by the programs, and, where necessary, the openings were altered from within the program to meet the criteria.
4. In the case of TYPO the opening boundaries had to be converted from a raster to a line representation, and transferred into the base GIS.
5. Reports and maps were produced from the base GIS.

3.0 MAPS

The map atlas contained in this Twenty Year Plan consists of several 1:125 000 scale overview maps, and detailed 1:20 000 scale maps as follows:

Overview Maps (1:125 000)

- a) Broad forest cover and 20 year plan cutblocks and roads (color coded by 5 year periods).
- b) Broad forest cover projected to the end of the plan and 20 year plan cutblocks and roads (color coded by five year periods).
- c) Broad forest cover and operability polygons.
- d) ESA polygons.

Detailed Maps (1:20 000)

- a) Detailed forest cover, operability and 20 year plan cutblocks and roads (color coded by 5 year periods).
- b) Detailed forest cover and ESA polygons.

Attachments 4 and 5 include, for each mapsheet, an area/volume summary by 5 year period by operability type, silviculture system and method of harvest.

4.0 RESULTS

4.1 Harvest Volume By Period

The following, Table 4.1, shows 20 years of harvest levels by period and Working Circle.

TABLE 4.1. 20-Year Plan Harvest Volume Summary (000 m³/year)

	Period				
	1997-2001	2002-2006	2007-2011	2012-2016	1997-2016
Alberni East	1 184	1 109	1 049	1 004	1 08
Alberni West	50	423	418	431	445
TOTAL	1 691	1 532	1 467	1 435	1 532

The rate of decline in the harvest levels of the plan is 15 over the 20 years of the plan.

The Alberni West Working Circle harvest levels decline at a slightly more rapid rate than Alberni East. This was not intended, and might have been eliminated with continued revisions to the timing of the cutblocks in the plan.

4.2 Silvicultural Systems

The following, Table 4.2, shows clearcut and selection cut areas by period.

TABLE 4.2. 20-Year Plan Silvicultural System Summary (ha/year)

	Period				
	1997-2001	2002-2006	2007-2011	2012-2016	1997-2016
Alberni East					
Clearcut	1 53	1 448	1 359	1 310	1 414
Selection	20	11	1	0	12
Alberni West					
Clearcut	28	598	625	543	623
Selection	155	230	151	245	195
TOTAL	2 440	2 287	2 152	2 098	2 244

Selection cuts are more heavily represented in the Alberni West Working Circle. This is a reflection of using selection cuts to minimize effects on viewscapes.

4.3 Inventory Profile

The following Table 4.3 shows the mature inventory (defined as any stand established prior to 18 4) by operability class at the beginning and the end of the plan. The distinction between conventional and unconventional operability

classes has become less meaningful as helicopter and long line systems have come into more common usage.

**TABLE 4.3. Summary of Mature Inventory by Operability Class
(000m³ and % of operable forest)**

	1996		2017	
Alberni East				
Conventional	26 488	90	9 69	8
Unconventional	2 30	8	1 115	10
Marginal	653	2	306	3
Alberni West				
Conventional	268	55	2 858	49
Unconventional	4 910	3	2 304	40
Marginal	1 153	8	655	11

In both Working Circles the proportion of mature volume in the different operability classes is not much changed during the life of the plan. The next section shows that the harvest is generally proportional to the amount of mature volume in the different operability classes.

4.4 Operability

The following, Table 4.4, shows the mature harvest volume by operability class and period.

**TABLE 4.4. Summary of Mature Harvest Volumes by Operability Class
(% of harvest)**

	Period				
	1997-2001	2002-2006	2007-2011	2012-2016	1997-2016
Alberni East					
Conventional	92	90	93	92	91
Unconventional	6	8	6	5	
Marginal	2	2	1	3	2
Uneconomic	0	0	0	0	0
Inoperable/scrub	0	0	0	0	0
Alberni West					
Conventional	64	50	5	54	5
Unconventional	28	39	31	36	34
Marginal	5	6	8		6
Uneconomic	3	3	3	1	2
Inoperable/scrub	0	2	1	1	1

The proportion of harvest from each operability class is consistent and is close to the proportions in the mature inventory. This is consistent with "cutting the profile of the forest."

In the Alberni West Working Circle some uneconomic and inoperable/scrub lands are included in openings. These areas are included on the basis of local knowledge.

4.5 Environmentally Sensitive Areas (ESA)

The following Table 4.5a and Table 4.5b show the amount of clearcut openings in ESAs over the length of the plan.

TABLE 4.5a. Alberni West ESA Summary

ESA	Productive Forest Area in ESA	ESA Area in Openings	Allowable % Area in Openings	% Area in Openings
Snow Avalanche	620	24	80	4
Recreation Er1	1,422	0	0	0
Recreation Er2	10,293	54	50	5
Community Watershed Eh1	66	0	0	0
Deer Winter Range Ew1	1,028	12	0	1
Deer Winter Range Ew2	531	4	50	9
Deer Winter Range Zones	2,010	245	2	12
Nahmint Old Growth	120	0	0	0
Marbled Murrelets	1,569	2	0	2
FEN	25,813	283	0	1
Riparian Mgmt S6	14	5	9	8
Riparian Mgmt S4, S5	,050	565	85	8
Riparian Mgmt S1, S2, S3	3,110	1 1	0	6
Riparian Reserves	4,544	23	0	0
Nahmint Riparian Mgmt	298	10	0	3
Nahmint Riparian Reserves	630	0	0	0
Lakes Wetlands Mgmt	14	26	85	4
Lakes Wetlands Mgmt	143	2	0	1
Lakes Wetlands Reserves	528	0	0	0
Soils Es1	11, 59	90	range	8
Soils Es2	23,344	3,328	range	14
Soils Terrain Class IV	1, 45	4 5	range	2
Soils Terrain Class V	1,160	205	range	18

TABLE 4.5b. Alberni East ESA Summary

ESA	Productive Forest Area in ESA	ESA Area in Openings	Allowable % Area in Openings	% Area in Openings
Snow Avalanche	3	1	80	3
Recreation Er1	69	12	0	2
Recreation Er2	10,6 6	91	50	9
Community Watershed Eh1	1,649	3	0	0
Deer Winter Range Ew1	1,512	2	0	0
Deer Winter Range Ew2	1	9	50	12
Deer Winter Range Zones	1,503	255	2	1
Marbled Murrelets	3,052	25	0	1
FEN	19,606	9	0	0
Riparian Mgmt S6	502	69	9	14
Riparian Mgmt S4, S5	10,824	1,83	85	1
Riparian Mgmt S1, S2, S3	4,456	600	0	14
Riparian Reserves	6,652	28	0	0
Lakes Wetlands Mgmt	292	25	85	8
Lakes Wetlands Mgmt	0	0	0	0
Lakes Wetlands Reserves	200	1	0	0
Soils Es1	13,151	2,5 4	range	20
Soils Es2	21,090	4,64	range	22
Soils Terrain Class IV	6,4 8	1, 4	range	2
Soils Terrain Class V	2,554	154	range	6

In preparing the plan the openings were designed to stay within the ESAs constraint levels. Several ESA classes show harvest levels above the allowed. These are all small incursions.

4.6 Visual Quality Objectives (VQO)

The following Table 4.6 shows the aggregate status of VQOs in each period of the plan.

**TABLE 4.6. VQO Summary
(% area <15 years)**

	1996	1997-2001	2002-2006	2007-2011	2012-2016
West					
Retention	2	4	3	4	3
Partial	5	8		8	9
Modification	6	9	8	8	
East					
Retention	2	4	4	4	4
Partial	6	9	10	11	13
Modification	11	16	12	13	13

In preparing the plan, the size and timing of openings were designed to keep within the constraints for individual VQOs. Individual VQO statistics are included in Attachments 3 and 4.

5.0 SENSITIVITY ANALYSIS

During the development of the plan questions were raised about the impact of the allowances made for some of the environmentally and visually sensitive areas. In particular the effects of FENs and VQOs were questioned in terms of both volume and economic activity. As a result, two sensitivity studies were undertaken to answer these questions.

The economic activity was measured as the gross sales value. The gross value of the sales is the total sales value generated by the final outputs produced in the forest sector. In 1995, the average coast sales value was 350/m³. This is the figure used in this analysis.

The first study looked at the impact of the FENs. This was accomplished by picking several planning units in the Alberni East working circle and doing a second Twenty year Plan disregarding the FENs. The original and this second plan were then contrasted by harvest volume and economic activity generated.

The second study looked at increasing the impact of the VQOs on several planning units through a more stringent level of allowable viewscape alteration. The allowable alteration in retention areas was reduced to 5%, partial retention to 15% and modification to 30%.

The following Table 5.1 shows the impact of these changes to the basic plan within the selected planning units.

TABLE 5.1. Sensitivity Analysis on Selected Planning Units

	Base	Difference
Relaxed FENs		
Harvest Volume	49 600 m ³ /yr.	58 300 m ³ /yr.
Economic Activity	1 4 million/yr	20 million/yr
Stringent VQOs		
Harvest Volume	215 00 m ³ /yr.	(5 100 m ³ /yr)
Economic Activity	5 million/yr	(1.8 million/yr)

As illustrated in Table 5.1 the effect of disregarding the FENs is to increase the planned harvest and economic activity by 12% while the impact of more stringent VQOs is to reduce the harvest and economic activity by 2.4%. These impacts can be expressed for the whole of TFL 44 by assuming a proportional effect over the planned 1 532 000 m³/year.

The cost of the FENs can be estimated at a reduction of harvest of 1 9 500 m³/year for the next twenty years at a cost of 63 million/year of economic activity.

The cost of more stringent VQOs can be estimated at a reduction of harvest of 36 200 m³/year for the next twenty years at a cost of 13 million/yr of economic activity.

6.0 CONCLUSION

This plan meets its purpose in demonstrating a feasible harvest level and illustrating, at a strategic level, where development is meant to take place over the next twenty years.

Section 5 illustrates the substantial impacts of FENs and VQOs in terms of both harvest level and economic activity.

ATTACHMENT 1

TERMS OF REFERENCE

I.	Purpose	10
II.	Ob ectives	10
III.	Criteria	11
IV.	Format of the Twenty Year Plan	19
V.	Preliminary Review with MoF	20
VI.	Schedule	21
VII.	Public Review	21

I. PURPOSE

The purpose of the Twenty Year Plan (TYP) is two fold:

- 1) The TYP provides supporting evidence for the Timber Supply Analysis (TSA) during review by the Chief Forester and Ministry of Forests staff.
- 2) The TYP will enable the public and agencies to identify concerns that they may have regarding development well in advance of planned operations.

British Columbia forest management planning is accomplished through a series of increasingly detailed planning levels. The TYP is a mid level planning document. It is a site specific, albeit conceptual, harvesting plan that demonstrates the feasibility of a planned harvest level for 20 years.

In detail, the TYP fits between the TSA and the Development Plan (DP). The TSA uses non spatial approximations to reflect forestry constraints and guidelines. Specific forest types are scheduled for harvest, but precise locations are not identified. As the locations are not explicitly identified, the impact of harvest block size and agency guidelines are only approximately reflected. These, and other, simplifications allow the exploration of the impacts of silvicultural activities and harvest levels over the next 200 years.

The TYP identifies potential harvest blocks covering the first 20 years of the TSA. These blocks are tested against forestry constraints and guidelines, demonstrating the feasibility of the TSA harvest levels.

The TYP, however, does not represent a development plan. Information gathered in future site visits will alter the cutblock boundaries and perhaps the timing of their harvest. The next level of planning, the DP, will involve the detailed site visits. The TYP is also useful in identifying areas of contention that can be subsequently dealt with in the preparation of a DP.

II. OBJECTIVES

The objective of the TYP is to provide the public and government agencies with sufficient information to assist in judging the suitability of the proposed Management Plan. This will be accomplished by providing interpretive maps and reports.

A. Maps

Maps will be prepared to show the location of protected harvest blocks by five year periods. The maps will show forest cover and planimetric, as well as other map detail (e.g., operability, forest ecosystem networks, FENS, ESAs, VQOs, and watersheds) needed to evaluate compliance to existing management and harvesting constraints.

B. Reports

Analytical reports will show harvest levels by periods and quantify compliance to management and harvesting constraints or guidelines.

III. CRITERIA

A. Period Covered by the Plan

The plan will span the 20 years of 1991 to 2016. To be in step with the Management Plan, 1991 will begin the first of four five year periods: 1991-2001, 2002-2006, 2007-2011, 2012-2016. Maps and reports will illustrate results for the five year periods.

B. Areas to be Covered by Twenty-Year Plan

This plan will cover the Alberni East and West Working Circles of TFL 44. Clayoquot Working Circle will be excluded until harvesting constraints are better defined and Ucluelet excluded due to its small size and connectivity with Clayoquot. Reports will separate plans for Alberni East (Franklin Division), Alberni West (Estevan Division), and Alberni West (Sproat Lake Division). The Plan will include the SBFEP but these blocks will not be separately identified.

C. Guidelines to be Accounted for in the Twenty-Year Plan**1. Operability**

Three categories of operable timber are recognized in the forest inventory of TFL 44:

- ☐ conventionally loggable, economic
- ☐ non conventionally loggable, economic
- ☐ marginally economic.

Two inoperable categories are also recognized in the inventory:

- ☐ uneconomic
- ☐ physically inoperable.

The basis for agreement on location and/or criteria for the categories of operable and inoperable timber used in the TYP will be documented in Management Plan No. 4.

The TYP will be designed so that, in the last five year period, harvest of the available operable old growth forest will be in proportion to its operability profile. That is, in the last period the volume harvested from conventional economic and non conventional economic timber will be proportionate to their occurrence in the forest inventory. Harvest in the previous three periods will demonstrate a definite trend towards achieving a proportionate balance in the final period. Although much progress has already been made in logging to the operability

profile, it is anticipated that a transition will be required for two reasons:

- to enable gearing up to proportional levels.
- to recognize operational limitations that require deferral of some areas accessible by helicopter until road access has been constructed for the conventional harvest of nearby areas during the normal course of access development. These roads may be required as drop sites for some of the areas operable only by helicopter logging.

Marginally economic volumes will be included in the Plan on the basis of the currently partitioned AAC volume of 50 000 m³/year for the TFL of which 30 000 m³ is attributable to the Alberni East and West Working Circles. Over the 20 Year period an average of 30 000 m³/year of timber classed as marginally economic will be harvested but it is not intended that this average will be achieved in each five year period of the TYP.

Because the forest inventory is accurate at the forest level and not the stand level, it is expected that a small portion of the harvest volume may be derived from scrub, uneconomic and/or physically inoperable stands based on site specific knowledge.

The TYP report will quantify, by period, the volume derived from each operability class and the available volume of these classes at the beginning of the plan.

2. *Partial Harvest*

Two categories of partial harvest will be recognized in the TYP:

- clearcut with reserves
- selection cuts.

Clearcut with reserves is a variation of clearcutting, in which trees are retained either uniformly or in small groups, designed to manage an area as an even aged stand.

Selection cuts involve the uniform removal of individual or groups of trees, in a series of cuts, designed to manage an area as an uneven aged stand.

Partial harvest blocks will be identified by harvest type and a percent retention. The TYP report will report areas and volumes derived from the different harvest types.

Selection cuts with a retention of over 40 % by volume, will not contribute to violations of constraints with cover class restrictions (e.g., VQOs).

3. *Environmentally Sensitive Areas*

Environmentally sensitive areas (ESAs) have been mapped for most of TFL 44. These have been identified as areas on maps with harvest restrictions designed to protect their values. The

harvest restrictions may take the form of a netdown or a cover constraint. The ESA polygons and constraint levels have been identified from broadly based inventories, and will be refined through site visits prior to planning the final harvest. Netdowns imply a more intensive inventory is likely to identify only a portion of the polygon as available for harvest. A cover constraint is a harvest restriction designed to limit the area of early seral stages within the polygon.

Meeting the ESA restrictions within the TYP will not guarantee the cutblocks can be harvested to the identified boundaries. Site visits may alter the locations of the boundaries. It does mean the harvest levels that are likely feasible, as judged from this broad level of mapping.

ESAs will be accounted for in the TYP through netdowns or cover constraints. These ESAs will be dealt with as consistently as possible in the TSA and the TYP.

Sensitive Soils

- TFL 44 has been mapped to show terrain sensitive soil areas. Part of the area has been mapped to show the standard five class soil sensitivity classes and the balance has been mapped to identify ES1 and ES2 categories. Appropriate netdowns for ES1 and ES2 classes are being derived on the basis of an assessment of the two mapping series. This work is being conducted with the participation and approval of Terry Rollerson of the Ministry of Forests.
- Terrain Sensitivity Class V 90 netdown of area
- Terrain Sensitivity Class IV 20 netdown of area
- ES1 (slightly different than Class V) being derived
- ES2 (slightly different than Class IV) being derived.

Difficult Regeneration

- Ep1: 90 netdown of area.

Snow Avalanche

- Ea1: 20 netdown of area with a cover constraint of 20 under 30 years of age (i.e., areas contribute in the period of harvest and five subsequent periods) on the balance.

Community Watershed

- All community watersheds under 1 km² in size will be treated as 100 netdowns.

Riparian Management Areas for Community Watershed Streams

- S1: 50 m exclusion one 20 m management one 30 netdown of volume

- ❑ S2: 30 m exclusion one 20 m management one 30 netdown of volume
- ❑ S3: 20 m exclusion one 20 m management one 30 netdown of volume
- ❑ S4: 0 m exclusion one 30 m management one 15 netdown of volume.

Riparian Management Areas for Streams Outside Community Watersheds

- ❑ S1: 50 m exclusion one 20 m management one 30 netdown of volume
- ❑ S2: 30 m exclusion one 20 m management one 30 netdown of volume
- ❑ S3: 20 m exclusion one 20 m management one 30 netdown of volume
- ❑ S4: 0 m exclusion one 30 m management one 15 netdown of volume
- ❑ S5: 0 m exclusion one 30 m management one 15 netdown of volume
- ❑ S6: 0 m exclusion one 20 m management one 3 netdown of volume.

The netdown percentages above are based on 60 of the maximum retention percentages for riparian management ones as shown in the Riparian Management Area Guidebook.

Estuaries

50 m exclusion one 20 m management one 30 netdown of volume.

Lakes and Wetlands

- ❑ Lakes 1 000 ha no riparian one
- ❑ Lakes 5 ha 10 m exclusion one no management one
- ❑ Lakes 5 ha 10 m exclusion one 20m managment one 15 netdown of volume
- ❑ Wetlands 5 ha 10 m exclusion one 40 m management one 15 netdown of volume
- ❑ Wetlands 5 ha 10 m exclusion one 20 m management one 15 netdown of volume.

Nahmint Fisheries

- ❑ Nahmint River: 60 m exclusion one 30 m management one 30 netdown of volume.
- ❑ Nahmint and Gracie Lakes: 60 m exclusion one 60 m management one 30 netdown of volume.

The above criteria represent a compromise from the assumptions specified for use in Attachment I of the Terms of Reference for the Timber Supply analysis for the Nahmint Watershed dated September 14, 1994. The widths of the exclusion (reserve) ones are retained as specified. The constraint on the adjacent river buffer one was reduced from a 90 netdown to a 30 net down. the constraint on the lake buffer was changed from 2.5 maximum area under 5 m height to a 30 netdown subject to applicable VQO constraints. These changes make the management area constraints more consistent with the criteria in the Riparian Management Guidebook. At the same time, the original reserve one widths which exceed those of the riparian guidebook, are retained.

Wildlife Habitat

- DWR 300 m: deer winter ranges 100 netdown of area
- DWR 300 m: deer winter ranges 50 netdown of area
- Deer ones based on discussion with MoELP a 3 average netdown of area is assumed.
- MAMU: Marbled Murrelet habitat areas 100 netdown of area.

Protected Area Reserve

- Nahmint old growth
- Oxalis Reserve
- Nitinat River Reserve

Recreation Areas

- A0, B0 100 netdown
- A1, B1, C1 A 50 netdown

The Twenty Year Plan will be designed such that harvesting within any ESA polygon will be constrained to be within the above netdown and cover constraint limits. There may be certain site specific cases where these limits may be exceeded based on changes to ESAs that have been agreed upon with regulatory agencies but have not been updated in MBs inventory.

4. *Landscape Management Guidelines*

VQO polygons have been mapped in TFL 44. The management of these areas is modeled through the application of Forest Cover Constraints. A maximum percentage restriction is placed on the area in a VQO polygon that has not achieved visually effective greenup. Mapping of VQOs does not directly recognize possibilities for using forest management and topography to affect views, this is done in a very detailed manner on the ground and prior to harvest. While the VQO calculations in the TYP are

different from these detailed practices, they are intended to approximate the results of the actual procedures.

The Twenty Year Plan report will quantify:

- For each VQO, the area classed as under visually effective green up (VEG) in comparison to the permissible levels based on the following criteria:
 - Retention polygons: 10 % of forested area.
 - Partial retention polygons: 20 % of forested area.
 - Modification polygons: 35 % of forested area.
- The cumulative area under VEG for each period of the plan.

The permissible levels of area under VEG are five percentage points greater than the permissible levels stated in current visual quality guides. This was done to reflect the anticipated revisions to these guides that were announced by the Chief Forester in March of this year when he reviewed the timber Supply Analysis of the Forest Practices Code (FPC). In this report the impact of the FPC on AACs in the Vancouver Region is offset, in part, by a 4. % increase in the AACs as a result of relaxation of visual quality guides. We understand that in the Timber Supply Analysis on which this result was based relaxation of visual quality guidelines were modeled by increasing permissible levels of area under VEG by five percentage points. In the absence of specific parameters on which to base relaxed visual quality guides, quantification of compliance of the TYP to visual quality guides will also be based on a five percentage point increase in permissible levels of area under VEG.

A harvest block will be considered under VEG in the period it is scheduled for harvest and for two subsequent periods (approximating 5 m).

Selection cuts with a retention of over 40 % will not contribute to the area considered under the age of VEG.

The above report will enable assessment of the plan in terms of compliance to Landscape Management Guideline criteria applied on a planimetric land base. (Note: Rate of viewscape alteration restraint can be significantly more constraining when applied on a planimetric basis due to the inclusion of land hidden by trees or topography.)

5. *Biodiversity*

Forest Ecosystem Networks (FENs) have been mapped for TFL 44. A low level of harvest will be considered in FEN linkages. These will be designed to maintain old growth characteristics, and will be at least 0 % retention partial harvests.

The TYP will not include an allowance for the impact of managing for biodiversity at the stand level. Until the biodiversity emphasis is determined for each landscape unit, there is no way to estimate the likely impact.

The TYP will include reports related to the landscape level biodiversity objectives enumerated in the Biodiversity Guidebook. As the biodiversity emphases for landscape units are as yet not determined, these reports can only function as a base line for the future. The reports will be by landscape unit, representing conditions at the beginning of the plan and at the end of the plan.

Seral Stage Distribution

- The distribution of forest area by BGC sub zone and age class will be quantified in tabular form.

Patch Size

- The distribution of forest area by patch size and age class will be quantified in tabular form.

6. *Block Size/Adjacency*

- Maximum opening size will be 40 ha unless exceptions are braced by reasons likely to be supported by all approving agencies. Selection cuts with a retention of over 40% will not contribute to the area considered under block size constraints.

Adjacency

- Leave areas between harvested blocks or blocks scheduled for harvest in an early period of the plan will be left until reforested trees on the harvested block reach 3 m in height. The leave areas will be equivalent in size to the earlier harvested block or 400 m in width, whichever is the lesser. A harvest block will be considered under 3 m in the period it is scheduled for harvest and for one subsequent period. Selection cuts with a retention of over 40% will not contribute to the area considered under 3 m.
- Adjacency constraints in Nahmint will be based on 5 m that includes the period of harvest and two subsequent periods. Selection cuts with a retention of over 40% will not contribute to the area considered under 5 m.

7. *Cumulative Effects/Watershed Rate-of-Cut*

No reports or constraints related to the Coastal Watershed Assessment Procedures (CWAP) will be included in this TYP because the procedures are not yet finalized.

8. *Second-Growth Harvesting*

a) Priority

Areas of second growth are scheduled for harvesting in this Twenty Year Plan. Available old growth timber will be given priority for harvest to maximize overall forest growth rates. Harvest ages and/or rationale will be indicated for cutblocks planned in second growth areas. Second growth may be harvested for operational and strategic purposes:

- ☐ Where insufficient old growth is available during a plan period
- ☐ where desirable for the control of losses due to root disease
- ☐ where necessary for wildlife habitat purposes
- ☐ where necessary to spread harvesting over a wider range of merchantable timber forest to facilitate compliance to rate of harvest constraints.

With respect to the last point above, potential impacts of various harvesting constraints, particularly watershed rate of cut, are not yet fully known. As this plan is in large part a feasibility plan, future planning efforts may incorporate more second growth harvesting. This plan will guide future Twenty Year and Five Year Development Plans in the timing of the initiation of a transition to more second growth harvesting.

b) Thinning

A small proportion of older second growth timber may be included in the plan for harvest by thinning. These will be compiled on the basis of a twenty five percent harvest of net merchantable volume. It is intended however that through operational trials a variety of stand ages would be harvested to a variety of intensities to develop further experience and knowledge.

c) Deciduous Harvest

Limited areas of deciduous timber may be planned for harvest and conversion to conifer. Since deciduous stands are not included in the forest land base contributing to the AAC, wood volume from deciduous stands will be compiled separately for the Twenty Year Plan. Total volume of coniferous stands with a deciduous component will be included in the plan volume compilation.

9. *Vancouver Island Land Use Plan (VILUP)*

Planning objectives and management criteria applicable to low, general and high forestry intensity areas as well as location of the latter two ones are not yet defined. The TYP does not address forestry intensity ones.

IV. FORMAT OF THE TWENTY-YEAR PLAN

The Twenty Year Plan will be presented in the following format:

A. Maps

1. 1:20 000 paper prints of the TFL 44 forest inventory maps (planimetry, existing roads, forest cover).
Additional detail to be shown:
 - ☐ Twenty Year Plan cutblocks , kind of logging (clearcut, partial, selection, thinning), cutblock numbers, and roads color coded by five year periods.
 - ☐ Operability classes:
 - economic, conventional
 - economic, non conventional
 - marginally economic
 - uneconomic
 - physically inoperable
 - ☐ non productive and non forest will be shown by gray stipple.
 2. 1:20 000 paper prints of TFL 44 forest inventory showing locations of FENs (permanent and linkage), ESAs, Marbled Murrelet habitat areas, community watersheds and polygons of designated visual quality objectives (VQOs).
 3. 1:20 000 clear acetate overlays showing cutblocks, numbers and roads color coded by five year periods on a background of broad forest cover classes:
 - ☐ non productive and non forest
 - ☐ deciduous
 - ☐ conifer, immature 1 20 years 21 40 years and 41 years
 - ☐ conifer, mature
 4. 1:125 000 maps showing:
 - a) Working circles, landscape planning units and FENS.
-

- b) Twenty Year Plan cutblocks and roads, color coded by five year periods, on a background of broad forest cover classes:
- ☐ non productive and non forest
 - ☐ deciduous
 - ☐ conifer, immature 1 20 years 21 40 years and 41 years
 - ☐ conifer, mature
- at the beginning and the end of the Twenty Year Plan period.

B. Report

Statistical summaries will show, by Working Circle and Division:

- ☐ Total volume harvested by five year periods and total.
- ☐ Area of mature coniferous by harvest method:
 - conventional clearcut
 - clearcut with reserves
 - selection
 - thinnings.
- ☐ Volume of mature coniferous harvested by operability class:
 - economic, conventional
 - economic, non conventional
 - marginally economic
 - uneconomic
 - physically inoperable.
- ☐ Profile of the forest at the beginning and end of the plan in terms of percent of total available mature timber in conventional, non conventional and marginally uneconomic classes.
- ☐ A summary of area in productive forest harvested in the various ESA classes and FENs by period (individual polygon statistics will be appended).
- ☐ A summary of VQO class status by period (individual polygon statistics will be appended).

V. PRELIMINARY REVIEW WITH MOF

Prior to final completion of the twenty year plans, a preliminary presentation will be made to Port Alberni District Staff. The purpose of the review will be to identify the approach and rationale and to review preliminary results, maps and

statistical data. It is not intended to seek approval at this time, however any suggestions by District staff will be considered for incorporation in the final draft plan.

VI. SCHEDULE

1. Complete preliminary review with Ministry of Forests District staff by November 15, 1996.
2. Submit final draft plan to Ministry of Forests by December 31, 1996.

VII. PUBLIC REVIEW

The plan will be reviewed with First Nations, labour organizations, Economic Development Commission, Alberni Clayoquot Regional District and specifically the City of Port Alberni. Opportunities will be provided for review by the public and other interested parties in Port Alberni.

ATTACHMENT 2

INDIVIDUAL VQOs ALBERNI EAST

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
R	0630	10	10. 0	0.00	0.00	0.00	0.3	0.3	0.3
R	0632	254	25.40	0.00	0.00	0.00	0.00	16.6	16.6
R	0634	12	12. 0	0.00	0.00	1. 5	1. 5	1. 5	0.00
R	0635	205	20.50	0.00	0.00	0.00	0.02	0.02	0.02
R	0636	43	4.30	0.00	0.00	0.00	0.12	0.12	1.52
R	0643	65	6.50	0.00	0.00	0.00	0.00	0.00	0.00
R	0 64	42	4.20	0.00	0.00	0.00	0.00	0.00	0.00
R	0 2	236	23.60	0.00	0.00	10.03	10.03	10.03	0.19
R	0 85	16	1.60	0.00	0.00	0.00	0.00	0.00	0.61
R	0848	124	12.40	0.00	0.00	12.03	12.03	14.60	15.23
R	0852	42	4.20	0.00	0.00	0.00	4.58	4.58	4.66
R	0854	1	0.10	0.00	0.00	0.00	0.00	0.00	0.00
R	0869	98	9.80	0.00	0.00	8.24	8.24	8.24	10.14
R	0883	255	25.50	0.00	0.00	2. 1	11. 2	11. 2	9.41
R	0890	125	12.50	0.00	0.00	0.00	0.00	1.39	3.5
R	0895	1	.10	0.00	0.00	8.30	8.30	8.35	0.05
R	0899	60	6.00	0.00	0.00	2.01	2.01	5.82	3.81
R	091	64	6.40	0.00	0.00	0.00	0.00	6.84	.24
R	0931	32	3.20	0.00	0.00	0.00	0.00	0.00	0.00
R	0949	21	2.10	0.00	0.00	0.00	0.00	0.00	0.00
R	0966	89	8.90	0.00	0.00	0.00	0.00	0.00	0.00
R	09	36	3.60	0.00	0.00	0.00	0.00	2.55	2.55
R	0981	29	2.90	0.00	0.00	0.00	0.00	0.00	0.00
R	0982	2	2. 0	0.00	0.00	0.00	0.00	0.00	0.00
R	0983	41	4.10	0.00	0.00	3.6	3.6	3.6	0.00
R	0985	2	2. 0	0.00	0.00	2.9	2.9	2.9	2.09
R	0996	55	5.50	0.00	0.00	0.00	0.00	0.00	0.00
R	0998	22	2.20	0.00	0.00	0.00	0.00	0.00	0.00
R	0999	23	2.30	0.00	0.43	0.43	0.43	2.15	2.15
R	1040	49	4.90	0.00	0.00	0.00	0.00	0.00	0.00
R	1046	13	1.30	0.00	0.00	0.00	0.00	0.00	0.00
R	1082	18	18. 0	11.44	13. 2	13. 2	2.28	1.24	1.58
R	1083	24	2.40	0.00	0.00	0.00	2.09	2.09	2.26
R	1084	63	6.30	0.00	21.54	21.54	29.16	.62	.62
R	1086	16	1.60	5.2	5.2	5.2	0.00	0.00	0.00
R	1089	19	1.90	9. 8	9. 8	9. 8	0.00	0.00	0.00
R	1090	108	10.80	1.69	1.69	1.69	0.00	10.80	10.80
R	1100	32	3.20	0.00	0.00	0.00	3.39	3.39	3.39
R	1101	25	2.50	0.00	0.00	0.00	0.00	0.00	0.00

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
R	1102	6	0.60	0.00	0.00	0.00	0.00	0.00	0.00
PR	0464	11	2.20	0.00	0.00	0.00	0.00	0.00	0.00
PR	0465	50	10.00	0.00	0.00	0.00	0.00	0.00	0.00
PR	0466	1	35.40	2 .62	2 .95	2 .95	10.99	10.66	10.66
PR	04 2	314	62.80	62.23	63.32	63.32	20.53	19.44	5 .95
PR	04 3	45	91.40	0.00	0.00	4.56	29.82	29.82	52.9
PR	0631	140	28.00	0.00	0.00	0.00	0.00	0.00	0.00
PR	0633	342	68.40	0.00	0.00	34.03	68.60	68.60	66.69
PR	0644	41	8.20	0.00	0.00	0.00	0.00	0.00	0.00
PR	0646	345	69.00	0.00	0.00	0.00	24.14	24. 3	63.38
PR	0 63	462	92.40	0.00	0.00	0.02	40.34	40.34	6.86
PR	0 65	69	13.80	0.00	0.00	14.06	14.06	14.06	11. 2
PR	0 6	28	5.60	0.00	0.00	1.59	1.59	1.59	1.44
PR	0 68	21	4.20	0.00	0.00	10.89	10.89	10.89	0.00
PR	0 69	128	25.60	0.00	0.00	22.18	22.18	22.18	25.23
PR	0 83	34	6.80	0.00	0.00	0.00	0.00	0.00	0.00
PR	0 94	113	22.60	0.00	0.	0.	11. 3	10.96	11.68
PR	0 9	60	12.00	0.00	2.8	2.8	3.03	0.23	0.23
PR	0853	11	2.20	0.00	0.00	0.00	2.26	2.26	2.58
PR	08 2	6	13.40	44.89	48.81	48.81	3.92	0.00	0.00
PR	08 5		1.40	0.00	0.00	0.00	0.00	0.00	0.00
PR	0881	53	10.60	0.00	0.00	8.92	8.92	8.92	10.53
PR	0882	94	18.80	0.00	0.00	12.41	12.41	12.41	8.90
PR	0884	1 0	34.00	0.00	0.00	1.94	1.94	1.94	0.00
PR	0888	143	28.60	0.00	0.00	4. 5	2 .69	2 .69	26.39
PR	0889	21	4.20	0.00	0.00	0.00	0.00	0.00	0.00
PR	0896	2	5.40	0.00	0.00	0.50	0.50	5.2	4.
PR	089	38	.60	0.00	0.00	0.00	0.00	3.95	6.90
PR	0898	49	9.80	0.00	0.00	0.52	0.52	8. 9	8.2
PR	0901	45	9.00	0.00	0.00	.86	.86	.86	0.00
PR	0914	393	8.60	31. 2	31. 2	31. 2	0.66	0.66	0.66
PR	0928	96	19.20	0.00	0.00	8.2	8.2	8.2	8.30
PR	0930	238	4 .60	0.00	0.00	0.00	20.34	20.34	48.94
PR	0935	1 4	34.80	0.00	0.00	0.00	0.00	11.0	11.0
PR	0950	100	20.00	0.00	0.00	4.01	10.82	10.82	12.83
PR	0951	63	12.60	0.00	0.00	5.20	5.20	5.20	12.61
PR	0952	49	9.80	0.00	0.00	.19	.19	.19	0.00
PR	0953	24	4.80	0.00	0.00	0.00	0.00	0.00	0.00
PR	0955	8	1 .40	4.02	4.02	1 .49	13.4	28.20	14. 3
PR	0958	84	16.80	0.00	30.15	30.15	30.15	0.36	0.36
PR	0969	20	4.00	0.00	0.00	0.00	0.00	0.00	0.00
PR	09 1	32	6.40	0.00	0.00	0.00	0.00	0.00	0.00
PR	0984	8	1.60	0.00	0.00	0.	0.	0.	0.00
PR	0989	158	31.60	0.00	0.00	0.00	0.00	11.43	11.43
PR	0990	244	48.80	0.00	0.00	32.52	32.52	32.52	0.00

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
PR	0991	18	3 .40	0.00	0.00	0.00	0.00	0.00	3.58
PR	0993	152	30.40	0.00	0.00	0.14	12.25	12.25	38.60
PR	0995	34	6.80	0.00	0.00	1.40	1.40	1.40	10.1
PR	099	13	2.60	0.00	0.00	0.00	0.00	0.00	5.44
PR	1000	66	13.20	0.00	0.00	0.00	0.00	0.00	0.00
PR	100	9	1.80	0.00	0.00	0.00	0.00	0.00	0.00
PR	1009	16	3.20	0.00	0.00	0.00	0.00	0.00	0.00
PR	101	130	26.00	0.00	31.29	31.29	31.4	23.39	23.39
PR	102	40	8.00	0.21	5.61	5.61	5.40	8.12	8.12
PR	1028	168	33.60	9.28	9.95	10.53	1.25	2.14	1.56
PR	1041	25	5.00	0.00	0.00	0.00	4.90	4.90	4.90
PR	1059	95	19.00	10.96	10.96	19.30	8.34	16.81	8.84
PR	1069	48	9.60	19.93	19.93	31.44	11.51	11.51	10.58
PR	10 2	29	5.80	0.00	0.00	0.00	0.00	9.38	9.38
PR	10	135	2 .00	0.00	6. 3	6. 3	19.6	2 .10	2 .10
PR	10 8	18	3 .40	63.02	63.03	63.03	23. 4	23. 3	30.69
PR	10 9	1	14.20	9. 6	10.05	10.05	4.13	.84	.84
PR	1081	5	11.40	0.00	0.00	10. 8	10. 8	19.14	8.36
PR	1085	24	49.40	0.00	29. 4	43.86	48.60	18.86	4 . 6
PR	1093	218	43.60	0.00	0.00	10.03	32.09	42.65	34.62
PR	1103	666	133.20	0.00	0.00	28.44	83.30	122.49	134.53
PR	1119	39	9.40	56.83	98.41	98.41	116.95	5.3	80.02
PR	1124	49	9.80	25.39	25.39	25.39	0.00	8.69	8.69
PR	1129	109	21.80	0.00	0.43	0.43	0.43	0.00	0.00
PR	1131	34	69.40	0.00	25.84	25.84	25.84	38.91	38.91
M	04 0	2	0. 0	0.00	0.00	0.00	0.00	0.00	0.00
M	0640	524	183.40	0.00	24.12	24.12	24.12	0.00	0.00
M	0641	36	12.60	0.00	0.00	0.00	0.00	11.59	11.59
M	0642	1	5.95	0.00	0.00	0.00	0.00	0.00	0.00
M	0645	31	10.85	0.00	0.00	0.00	0.00	0.00	0.00
M	064	154	53.90	0.00	0.00	0.00	19.19	19.19	54.8
M	0648	161	56.35	0.00	0.00	21.59	24.89	29.32	. 3
M	0649	351	122.85	0.00	0.00	0.00	28.34	28.34	35.59
M	0650	323	113.05	0.00	0.00	6.59	18.86	19.61	42.60
M	0651	26	9.10	0.00	0.00	0.00	0.00	4. .	4. .
M	0652	15	5.25	0.00	0.00	0.00	0.00	0.00	0.00
M	0653	149	52.15	8. 5	40.22	40.22	42.80	11.33	12.98
M	0654	83	29.05	8.49	8.49	11.90	6.10	.26	3.85
M	0655	14	51.45	2.31	2.31	2.31	0.64	0.64	.64
M	0656	51	1 .85	11.9	11.9	11.9	0.00	6.8	6.8
M	0 66	204	1.40	0.00	0.00	2.09	31.46	31.46	58.02
M	0 0	82	28. 0	0.00	0.00	0.00	0.00	0.00	18.26
M	0 1	100	35.00	0.00	0.5	0.5	24.28	23. 1	23. 1
M	0 3	94	32.90	0.00	0.00	8.5	8.5	16. 4	8.1
M	0 4	65	22. 5	0.00	0.00	0.00	0.00	0.31	0.31

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
M	0 5	596	208.60	0.00	0.00	66.94	69.9	169.54	126.
M	0 80	240	84.00	0.00	0.00	0.00	46.20	46.20	59. 8
M	0 81	26	9.10	0.00	0.00	0.00	.82	.82	8.99
M	0 82	109	38.15	0.00	0.00	0.00	0.00	0.00	0.00
M	0 84	12	4.20	0.00	0.00	0.00	0.00	0.00	0.00
M	0 86	58	20.30	0.00	0.00	0.99	0.99	0.99	0.00
M	0 8	3	25.55	0.00	0.00	0.00	15.31	15.31	26.30
M	0 88	285	99. 5	0.00	0.00	32. 2	33.94	85.98	53.26
M	0 89	2	25.20	0.00	8.28	8.44	11.6	22.0	21.91
M	0 90	8	2 .30	0.00	3 . 8	3 . 8	3 . 8	8.38	8.38
M	0 91	91	31.85	0.00	0.00	0. 4	0. 4	0. 4	0.00
M	0 92	91	31.85	5.6	5.6	8.86	3.19	6.01	2.82
M	0 93	2 5	96.25	0. 4	104.25	104.25	33.51	0.00	0.00
M	0 95	251	8 .85	2.0	2.0	16.00	23. 6	23. 6	38.29
M	0 96	105	36. 5	4 .42	58.01	58.01	23.24	15.32	15.32
M	0849	1	0.35	0.00	0.00	0.00	0.00	0.00	0.00
M	0851	1	24.85	0.00	0.00	2.33	23.50	23.50	21.1
M	08 0	6	2.10	0.00	0.00	0.00	0.00	0. 8	0. 8
M	08 1	15	5.25	0.00	0.00	0.39	0.39	0.39	0.01
M	08 3	43	15.05	0.00	0.00	3.13	4.03	4.03	0.90
M	08 4	34	11.90	0.00	0.00	0.00	0.00	0.00	0.00
M	08 6	1 6	61.60	0.00	0.00	0.00	0.00	0.00	5.53
M	08	212	4.20	0.00	15. 8	49.33	51.24	4 .26	3 .56
M	08 8	32	11.20	0.00	0.00	0.00	0.00	0.00	0.00
M	08 9	64	22.40	28.36	28.36	28.36	0.00	0.00	0.00
M	0880	39	13.65	9.9	10.24	12.29	2.32	2.05	11.92
M	0885	64	22.40	21.49	32.02	32.02	10.53	1 .13	1 .13
M	0886	292	102.20	1.91	95.13	95.13	51.62	28.40	6 .8
M	088	202	0. 0	30. 1	30. 1	4 .08	16.3	35. 1	19.34
M	0891	2 5	96.25	18.83	18.83	39.	20.94	23.35	2.41
M	0892	42	14. 0	0.00	0.00	0.00	0.00	12.58	12.58
M	0893	53	18.55	0.00	0.00	1.6	12. 9	13.62	11.95
M	0894	54	18.90	0.00	0.00	1.63	1.63	1.63	0.00
M	0900	139	48.65	0.00	0.00	13.99	13.99	38.36	48.41
M	0902	44	15.40	0.00	0.00	0.00	0.00	0.00	. 0
M	0903	14	4.90	0.00	0.00	0.00	0.00	0.00	0.00
M	0904	51	1 .85	0.00	0.00	0.00	0.00	0.00	0.00
M	0905	136	4 .60	0.00	0.00	0.00	0.00	0.00	0.00
M	0906	108	3 .80	0.00	0.00	10.00	10.00	10.25	0.25
M	090	183	64.05	2.38	29.62	64.82	68. 9	41.55	20.2
M	0908	56	19.60	0.00	11.34	11.34	11.65	0.31	1.99
M	0909	396	138.60	20.92	29.56	29.56	59.05	50.41	120.
M	0910	385	134. 5	48.42	69.83	69.83	35.	14.36	14.36
M	0911	62	21. 0	2.02	2.02	2.02	1.43	1.43	10. 6
M	0912	22	9.45	4.84	4.84	32.35	44.55	54.	2 .26

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
M	0913	13	4.55	0.00	0.00	0.00	4.50	4.50	4.50
M	0915	43	15.05	0.00	0.00	0.00	0.00	0.00	0.00
M	0916	41	14.35	0.00	0.00	0.0	0.0	9. 8	9. 1
M	0918	5	1. 5	0.00	0.00	0.00	0.00	0.00	0.48
M	0919	5	19.95	0.00	0.00	14.33	14.33	14.33	11.66
M	092	125	43. 5	0.00	14.58	2 .58	2 .61	13.03	31.20
M	0929	36	12.60	0.00	0.00	0.20	0.20	0.20	10.55
M	0932	291	101.85	0.00	0.00	0.00	5.68	5.68	25.11
M	0933	65	22. 5	0.00	0.00	34.3	44.02	44.02	25.15
M	0934	45	15. 5	2.00	2.00	2.00	0.00	0.00	0.00
M	0936	14	4.90	0.00	0.00	0.00	0.00	0.00	0.00
M	093	143	50.05	0.00	0.00	29. 5	29. 5	29. 5	0.00
M	0938	25	8. 5	0.00	0.00	0.00	0.00	5.86	5.86
M	0939	59	20.65	0.00	0.00	0.00	0.00	4.51	4.96
M	0940	30	10.50	0.00	0.00	0.00	0.00	0.00	0.00
M	0941	103	36.05	15.5	32.5	32.5	2 .09	36. 0	36. 0
M	0942	43	15.05	20.04	20.46	20.46	0.42	0.00	0.00
M	0943	38	13.30	14.29	14.29	14.29	0.00	1.44	1.44
M	0944	134	46.90	0.00	0.00	19.93	19.93	33.3	26.14
M	0945	2 0	94.50	0.00	0.00	5.15	20.02	32.99	36.05
M	0946	125	43. 5	0.00	12.	16.62	16.62	3.86	0.01
M	094	10	3.50	0.00	0.00	0.28	0.28	0.28	0.00
M	0948	104	36.40	0.00	32.18	32.18	32.18	0.00	1.41
M	0954	118	41.30	0.00	8.38	8.38	8.38	0.00	0.00
M	0956	1 6	61.60	0.00	53.06	53.06	60.44	.38	8. 3
M	095	42	14. 0	0.00	14.02	14.02	14.02	13.95	13.95
M	0959	203	1.05	0.00	0.00	0.00	0.00	0.00	0.00
M	0960	69	24.15	4.52	6.85	6.85	23.63	21.30	24.03
M	0965	30	10.50	0.00	0.00	0.00	0.00	0.00	0.00
M	096	14	4.90	0.00	0.00	0.00	0.00	0.00	0.00
M	0968		2.45	0.00	0.00	0.00	0.00	0.00	0.00
M	09 0	10	3.50	0.00	0.00	0.00	0.09	0.09	0.09
M	09 2	39	13.65	0.00	0.00	0.00	0.00	0.00	0.00
M	09 3	25	8. 5	0.00	0.00	0.00	0.00	0.00	0.00
M	09 4	31	10.85	0.	0.	0.	0.00	0.00	0.00
M	09 5	4	25.90	0.00	.6	.6	.6	0.00	0.00
M	09 6	61	21.35	0.00	0.00	0.00	0.00	0.00	0.00
M	09 8	10	3 .45	0.00	0.00	0.0	0.0	12.34	12.2
M	09 9	2	25.20	0.00	0.00	0.00	0.00	3.52	3.52
M	0980	6	23.45	.09	11.84	11.84	4. 5	0.00	13.92
M	0986	0	24.50	0.00	0.00	0.00	0.00	0.00	0.00
M	098	3	25.55	0.00	0.00	0.00	1.6	1.6	19.49
M	0988	0	24.50	0.00	0.00	0.00	13. 1	13. 1	13. 1
M	0992	36	12.60	0.00	0.00	0.00	0.00	0.00	0.00
M	0994	44	156.45	0.00	0.30	4 .33	90.29	125.91	95.3

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
M	1001	20	.00	0.00	0.00	0.00	0.00	0.00	0.00
M	1002	811	283.85	101.82	111.64	120. 8	43.8	34.05	83.94
M	1003	86	30.10	3.91	3.91	3.91	0.38	22.52	22.52
M	1008	88	30.80	0.00	2.20	2.20	2.26	0.06	0.06
M	1010	111	38.85	0.00	1.13	25.01	34.52	33.39	38.64
M	1011	213	4.55	88.68	9 .6	9 .6	8.99	6.89	13.51
M	1012	1 3	60.55	0.00	0.00	0.00	0.00	39.1	39.1
M	1014	334	116.90	0.00	1 .9	1 .9	31.88	16.	43.56
M	1015	5	1. 5	0.00	0.00	0.00	0.00	0.00	0.64
M	1016	66	23.10	0.00	1 .69	1 .69	1 .69	6. 2	6. 2
M	1018	222	. 0	0.00	3.56	3.56	3.56	0.12	9.21
M	1019	58	20.30	0.00	0.00	19.69	19.69	19.69	11.0
M	1020	14	4.90	0.00	0.00	0.00	0.00	0.00	0.00
M	1021	211	3.85	0.00	0.00	49.88	49.88	3.22	5 .08
M	1024	158	55.30	35.19	1.13	1.13	56.42	20.48	39.03
M	1025	55	19.25	0.00	0.00	0.00	0.00	0.00	4.15
M	1026	110	38.50	0.00	0.00	33.15	33.15	39.06	5.91
M	1029	45	15. 5	0.00	0.00	14.55	14.55	14.55	14.60
M	1030	55	19.25	15.46	25.10	25.10	9.64	0.00	0.00
M	1031	12	4.20	0.00	1.26	1.26	1.26	0.58	0.58
M	1032	38	13.30	0.00	1.11	1.11	1.11	0.00	0.00
M	1033	2	9.45	0.00	0.00	0.00	0.00	0.00	0.00
M	1034	22	. 0	19.65	19.65	19.65	0.00	0.00	0.06
M	1035	184	64.40	8.64	8.64	8.64	0.00	24.88	24.88
M	1036	125	43. 5	1.55	3.66	3.66	8.92	6.81	20.55
M	103	33	11.55	0.00	2.05	2.05	2.05	11.23	11.23
M	1038	36	12.60	0.00	0.02	0.02	6.31	6.29	14.16
M	1039	61	21.35	0.00	15.19	15.19	15.19	0.00	0.00
M	1042	56	19.60	0.00	0.00	0.00	0.00	0.00	0.00
M	1043	12	4.20	0.00	0.00	0.00	1. 6	1. 6	1. 6
M	1044	40	142.45	0.00	0.00	0.00	0.00	0.08	0.08
M	1045	246	86.10	0.00	2 .03	83.69	83.94	82.85	26.19
M	104	20	2.45	0.00	0.00	0.00	0.00	0.00	0.00
M	1048	18	6.30	0.00	0.00	0.00	0.00	0.00	0.00
M	1049	62	21. 0	4.13	4.13	4.13	10.68	10.68	22.20
M	1050	20	.00	16.	16.	1 .22	3.58	3.58	3.13
M	1053	28	9.80	0.00	0.00	0.00	0.00	0.00	0.00
M	1054	60	21.00	0.00	0.00	0.00	0.00	0.00	0.00
M	1055	123	43.05	51.58	59.46	59.46	.88	0.00	0.00
M	1058	22	. 0	.33	.33	.33	0.00	0.01	0.01
M	1060	65	22. 5	0.00	26.	26.	26.	6.69	15.34
M	1061	32	11.20	12.03	12.03	12.03	1.99	1.99	1.99
M	1062	32	11.20	12.84	12.84	12.84	0.00	0.00	4.01
M	1063	3	12.95	16.54	16.54	16.54	0.	0.	0.
M	1065	30	10.50	2.68	2.68	2. 2	0.65	0.65	4. 3

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
M	1066	240	84.00	0.00	1 .93	56.08	56.08	66.42	58.15
M	106	83	29.05	0.00	0.00	0.25	0.25	28.84	28.59
M	1068	208	2.80	0.00	0.00	0.01	0.01	0.01	0.00
M	10 0	254	88.90	.10	10.93	34.29	36.40	5 .50	34.14
M	10 1	110	38.50	0.00	0.00	14.28	14.28	29.10	14.82
M	10 6	16	5.60	0.00	0.00	0.00	0.00	5.81	5.81
M	1080	26	9.10	0.00	0.00	5. 5	5. 5	5. 5	4.90
M	108	21	.35	.31	.31	.31	0.00	0.00	0.00
M	1088	24	8.40	23.64	23.64	23.64	0.00	0.00	0.00
M	1091	38	13.30	1.26	1.26	1.26	12.64	12.64	13.26
M	1092	12	4.20	0.00	0.00	0.00	0.00	0.00	4.20
M	1094	12	4.20	0.00	0.00	0.00	0.00	0.00	0.00
M	1095	55	19.25	0.00	20.34	20.34	20. 0	0.36	0.5
M	1096	266	93.10	0.00	0.96	1 .88	40.0	63.30	1.8
M	1104	45	15. 5	0.00	0.00	5. 9	5. 9	9.18	3.39
M	1105	39	13.65	0.00	0.00	0.00	0.00	9. 5	9. 5
M	1106	88	30.80	20.64	20.64	20.64	16.53	16.53	31.08
M	110	59	20.65	0.00	0.00	0.00	0.00	0.00	0.00
M	1108	81	28.35	.30	.30	.30	0.00	0.00	0.00
M	1109	42	14. 0	14.44	14.44	15.11	0.6	1.64	0.9
M	1110	108	3 .80	0.00	0.00	0.00	20.54	20.54	36.52
M	1114	90	31.50	56.02	56.46	56.46	0.44	2 .55	2 .55
M	1115	130	45.50	54.0	54.0	54.0	15.08	28.8	34.4
M	1116	123	43.05	93.1	99.91	99.91	6. 4	11.63	11.63
M	111	103	36.05	44. 4	63.33	63.33	24.04	11.50	11.50
M	1118	24	8.40	2. 8	4.88	4.88	9. 8	.68	.68
M	1120	315	110.25	4 .21	6 .43	6 .43	53.66	.01	103.60
M	1121	84	29.40	51.89	51.89	51.89	0.00	1. 5	14.23
M	1122	9	2 .65	6 .38	6 .38	6 .38	0.05	1.51	4.53
M	1123	38	13.30	2.46	2.46	2.46	3.68	.02	.02
M	1125	869	304.15	1. 3	46.69	289. 5	303.0	311.02	250.80
M	1126	1	61.95	2.94	.63	.63	59.01	60.10	62.98
M	1130	43	15.05	0.00	8.22	19.95	19.95	11. 3	12.69

ATTACHMENT 3

INDIVIDUAL VQOs ALBERNI WEST

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
R	0118	491	49.10	0.00	0.00	0.00	0.00	0.00	0.00
R	01 1	14	14. 0	0.00	0.00	0.00	0.00	0.00	0.00
R	022	1	1. 0	0.00	0.00	0.00	0.65	0.65	0.65
R	0228	3	0.30	0.00	0.00	0.00	0.13	0.13	0.13
R	0380	4	0.40	0.00	0.00	0.00	0.00	0.00	0.00
R	0406	266	26.60	0.00	0.00	25.20	25.20	25.20	25.08
R	0410	125	12.50	0.00	0.00	0.00	0.00	0.00	0.00
R	0418	190	19.00	0.00	0.00	20.92	20.92	20.92	0.00
R	0421	23	2.30	0.00	0.00	0.00	0.00	0.00	0.00
R	0423	52	5.20	0.00	0.00	2.43	2.43	2.43	4.85
R	0461	63	6.30	0.00	0.00	6.15	6.15	6.15	0.00
R	0564	132	13.20	0.35	0.51	0.51	2.50	2.34	2.34
R	0565	96	9.60	1.80	4.33	4.33	2.53	8.12	8.12
R	05 0	102	10.20	0.00	0.00	2.51	2.51	4. 9	2.28
R	0595	10	1.00	0.00	0.00	0.00	0.00	0.00	0.00
R	0613	161	16.10	8. 9	8. 9	8. 9	10.24	10.24	10.24
R	0628	143	14.30	2.68	2.68	4.52	1.84	12.28	10.44
R	0 22	39	3.90	4.4	4.4	4.4	0.00	0.00	0.00
R	0 30	38	3.80	0.00	0.00	0.00	0.00	0.00	0.00
R	0 36	5	0.50	0.00	0.00	0.00	0.00	0.00	0.00
R	0 3	6	0.60	1.46	1.46	1.46	0.00	0.00	0.00
R	0 41	23	2.30	1.00	1.00	1.00	0.00	0.00	0.00
R	0834	54	5.40	3.13	3.13	3.13	0.00	0.00	0.00
R	0835	24	2.40	5.39	5.39	5.39	0.00	0.00	0.00
R	0836	39	3.90	3.5	3.94	3.94	0.3	0.00	0.00
R	0840	35	3.50	0.00	0.00	0.00	0.01	0.01	0.01
R	0842	14	1.40	0.00	0.00	0.00	0.00	0.00	0.00
R	0843	41	4.10	0.00	0.00	0.00	0.00	0.00	0.00
PR	0120	448	89.60	0.00	0.00	0.00	0.00	0.00	0.00
PR	0123	80	16.00	0.00	0.10	0.10	0.10	0.00	0.00
PR	0129	84	156.80	155. 3	1 0.64	1 0.64	14.91	0.00	3.83
PR	01 2	230	46.00	0.00	0.00	0.54	0.54	0.54	16.86
PR	01 5	29	5.80	0.00	0.00	0.00	0.00	0.00	0.00
PR	01 8	11	2.20	0.00	0.00	0.00	0.00	0.00	0.00
PR	0181	168	33.60	0.00	2.8	2.88	2.88	0.01	0.00
PR	0182	166	33.20	0.00	0.00	22.53	22.53	22.53	26.29
PR	0186	223	44.60	0.00	2.85	2.85	2.85	2.1	.80
PR	0190	1123	224.60	139.3	166.56	16 .3	90.21	63.02	133. 4
PR	0195	314	62.80	0.00	0.00	4.26	4.26	12.10	.84
PR	0196	334	66.80	0.00	55.06	55.06	55.06	16.60	16.60

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
PR	0201	2	5.40	0.00	4.0	4.0	4.0	0.00	0.00
PR	0203	315	63.00	0.00	0.00	3.44	3.44	3.44	0.00
PR	0204	6	1.20	0.00	0.00	0.00	0.00	0.00	0.00
PR	0205	61	12.20	0.00	0.00	0.00	0.00	0.00	0.00
PR	0206	158	31.60	0.00	0.00	0.00	0.00	0.00	0.00
PR	0209	100	20.00	1.02	1.02	1.02	0.00	13.42	13.42
PR	0210	64	12.80	0.00	0.00	0.00	1.28	1.28	1.6
PR	0214	16	35.20	11.33	11.33	11.33	12.43	12.43	12.43
PR	0215	128	25.60	3.89	3.89	3.89	0.00	0.00	1.21
PR	0216	51	114.20	65.66	65.66	112.26	1.8	84.10	111.90
PR	021	186	3.20	0.08	0.08	.14	.06	.06	0.0
PR	0220	640	128.00	0.00	56.11	6.3	86.92	54.1	5.52
PR	0221	245	49.00	5.21	5.21	5.21	0.00	12.8	12.8
PR	0222	248	49.60	31.36	31.36	31.36	0.00	22.30	49.38
PR	0224	68	13.60	0.00	0.00	0.00	12.91	12.91	13.20
PR	0225	8	1.60	0.00	0.00	0.00	0.00	0.00	0.00
PR	0226	54	10.80	0.00	0.00	0.00	0.00	0.00	0.83
PR	0229	33	6.60	1.11	1.11	1.11	0.00	0.00	0.00
PR	0230	19	35.80	59.55	59.55	59.55	3.98	3.98	3.98
PR	0231	391	8.20	2.02	2.02	2.02	32.14	3.8	3.8
PR	0232	61	123.40	0.00	0.40	0.40	0.40	22.44	56.22
PR	0233	424	84.80	0.00	0.00	39.95	60.16	2.35	88.60
PR	0235	162	32.40	0.00	0.00	0.52	0.52	21.6	29.31
PR	0236	64	12.80	0.00	1.85	1.85	1.85	0.02	0.02
PR	0241	1526	305.20	85.39	85.39	122.04	55.0	154.48	11.83
PR	0246	150	30.00	0.00	0.00	0.00	0.00	0.00	19.81
PR	024	22	4.40	0.00	0.00	0.00	0.00	0.00	0.00
PR	0249	106	21.20	0.00	0.00	0.2	0.2	4.10	3.38
PR	0251	643	128.60	4.28	36.85	53.80	52.45	50.9	34.02
PR	0253	23	4.60	0.00	0.00	0.00	0.00	0.00	0.00
PR	0259	200	40.00	0.00	0.00	0.00	0.9	0.9	0.9
PR	0261	126	25.20	0.00	0.00	0.00	0.00	8.58	8.58
PR	0264	48	9.60	0.00	1.23	1.23	5.19	3.96	3.96
PR	0266	43	8.60	0.00	0.16	0.16	0.16	0.00	0.00
PR	0268	98	19.40	11.45	6.28	110.92	99.4	120.52	108.15
PR	022	66	13.20	0.00	0.00	13.21	13.21	13.91	0.0
PR	023	3	.40	0.00	0.00	0.00	0.00	.4	.4
PR	024	189	3.80	0.00	0.00	0.00	0.00	2.48	2.48
PR	02	16	3.20	0.00	0.00	0.00	0.00	0.00	0.00
PR	038	190	38.00	0.00	0.00	10.3	10.3	10.3	0.00
PR	039	135	2.00	0.00	0.00	4.60	4.60	4.60	0.00
PR	0381	13	2.60	0.00	0.00	0.00	0.00	0.00	0.00
PR	0402	93	158.60	0.00	0.00	0.44	0.44	0.44	0.00
PR	0403	214	42.80	20.12	20.12	3.46	33.45	33.45	16.11
PR	0405	189	3.80	0.00	0.00	30.92	30.92	30.92	2.20

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
PR	040	850	1 0.00	0.00	0.00	1.91	4 .51	4 .51	45.60
PR	0409	331	66.20	0.00	0.00	8.23	18.99	18.99	10. 6
PR	0411	9	19.40	0.00	0.00	3.85	3.85	3.85	1.2
PR	0419	419	83.80	0.00	0.00	34.10	34.10	39.6	42.41
PR	0420	315	63.00	0.00	0.00	0.00	1.34	1.34	1.34
PR	0422	108	21.60	2.91	2.91	2.91	0.00	0.00	0.00
PR	0424	114	22.80	0.00	0.00	8.44	8.44	8.44	20.80
PR	0425	212	42.40	0.00	0.00	0.00	0.00	0.00	0.00
PR	042	823	164.60	5.18	84.64	111.19	88.0	8.61	10 .3
PR	0428	544	108.80	15.35	15.40	54.25	56.53	83.02	104.5
PR	0429	81	16.20	0.00	1.10	1.10	1.10	0.00	0.00
PR	0430	165	33.00	0.00	11.22	24.5	24.5	24. 1	11.36
PR	0432	1 5	35.00	3.33	3.33	3.33	1 .81	29. 2	29. 2
PR	0434	41	8.20	0.00	0.00	0.31	0.31	0.31	8.36
PR	0435	108	21.60	24.12	24.66	24.66	0.54	8.02	14.55
PR	043	118	23.60	19.0	19.0	19.0	0.00	2.52	2.52
PR	0438	183	36.60	0.00	4.2	32. 6	32. 6	28.49	0.00
PR	0439	103	20.60	0.55	0.55	0.55	0.00	11.44	11.44
PR	0454	189	3 .80	0.00	0.00	0.00	0.00	0.00	0.00
PR	0459	36	.20	0.00	0.00	1.83	1.83	1.83	0.00
PR	0460	334	66.80	20.98	23. 1	66.02	45.04	42.31	28. 4
PR	0463	40	8.00	0.00	0.00	0.00	0.00	0.00	0.00
PR	0563	539	10 .80	6.46	6.46	36. 0	35.89	2.10	104.39
PR	0566	56	11.20	0.00	0.00	0.00	0.00	0.00	0.00
PR	0568	143	28.60	0.03	35.95	35.95	49.42	13.50	28.26
PR	0569	408	81.60	64.60	94.11	94.11	34.48	26.03	51.19
PR	05 1	20	4.00	0.00	0.00	0.00	0.00	0.00	0.00
PR	05 2	135	2 .00	0.00	0.00	0.00	3.02	3.02	3.02
PR	05 3	14	29.40	0.00	16.12	24. 4	24. 4	1 .64	23.29
PR	05 6	91	18.20	0.00	15.91	15.91	15.91	0.00	18.15
PR	05 8	380	6.00	0.00	6.29	6.29	3 .09	30.80	66.06
PR	0582	180	36.00	0.00	0.00	0.00	15.54	25.84	25.84
PR	0583	42	8.40	0.00	0.00	0.00	0.00	0.00	0.00
PR	0584	4	14.80	0.00	0.00	11.21	11.21	11.21	0.00
PR	0590	461	92.20	0.00	10.09	4 .55	4 .55	86.54	5 .26
PR	0592	20	4.00	0.00	0.00	0.00	0.00	0.00	0.00
PR	0593	51	10.20	0.00	0.00	0.00	.65	.65	.65
PR	0594	19	39.40	0.00	0.00	0.00	3 .36	39.53	39.53
PR	059	41	8.20	0.00	0.00	0.00	.80	.80	.80
PR	0599	3 2	4.40	0.00	0.00	4.30	3 .60	43.23	38.99
PR	0603	5 1	114.20	0.00	33.03	64.14	65.88	60.22	109.42
PR	0606	253	50.60	8.12	9.64	9.64	3.58	6.49	6.49
PR	0609	2	14.40	0.00	0.00	3.60	3.60	10.95	.35
PR	0611	343	68.60	0.00	0.00	39.4	60.61	64.49	59.65
PR	0616	65	13.00	34.24	34.24	34.24	0.00	0.00	1.29

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
PR	061	185	3 .00	10.52	10.52	10.52	1.02	1.02	8.66
PR	0618	25	5.00	0.00	0.00	0.00	0.00	0.00	4.58
PR	0621	30	6.00	0.00	0.00	0.00	6.0	6.0	6.0
PR	0623	298	59.60	0.00	0.00	33.8	33.8	34.42	35.03
PR	0 16	193	38.60	20.35	4 .66	4 .66	2 .31	11.00	11.00
PR	0 19	2	55.40	10.14	10.52	38.1	28.03	2 .65	0.00
PR	0 24	358	1.60	45.1	45.1	46.62	18.15	20.21	25. 3
PR	0 35	23	4.60	8.60	8.60	8.60	0.00	0.00	0.00
PR	0 39	5 2	114.40	45.52	45.52	45.52	8.84	8.84	8.84
PR	0 46	32	6.40	0.00	0.00	0.00	0.00	0.00	0.00
PR	0 4	18	3.60	0.00	0.00	0.00	0.00	0.00	0.00
PR	0 48	21	4.20	0.00	0.00	0.00	0.00	0.00	0.00
PR	0 49	182	36.40	0.00	0.00	33.92	33.92	33.92	35.40
PR	0 50	1 8	35.60	0.00	0.00	0.00	28.69	28.69	28.69
PR	0 51	165	33.00	0.00	10.10	32.19	32.19	22.09	32.66
PR	0 52	142	28.40	0.00	1 .94	21.10	21.10	3.16	28.18
PR	0 54	62	12.40	0.00	0.00	0.00	0.00	0.00	0.00
PR	0 56	49	9.80	0.00	0.00	0.00	0.00	0.00	0.00
PR	0 5	23	4.60	0.00	0.00	0.00	0.26	0.26	0.26
PR	0 59	64	12.80	0.00	0.00	3.69	3.69	11.1	8.52
PR	0 60	2 4	54.80	0.00	0.00	28.59	54.31	54.94	54.5
PR	0 62	504	100.80	0.00	0.00	46.12	96.30	101.4	55.35
PR	0866	35	.00	0.00	0.00	0.00	0.00	0.00	0.00
PR	086	30	6.00	0.00	0.00	0.00	0.00	0.00	0.00
M	0115	3459	1210.65	0.00	22.43	2. 0	99.4	12 .85	130.8
M	0119	3	2 0.55	0.00	0.00	0.00	0.00	0.00	0.00
M	0121	263	92.05	0.00	0.00	0.00	0.00	0.00	0.00
M	0122	104	36.40	0.00	0.00	0.00	0.00	0.00	0.00
M	0128	1630	5 0.50	32.58	40.15	242.9	280.93	414.11	26 .14
M	0130	343	120.05	0.19	59.31	59.31	5.49	18.99	49.60
M	01 0	69	24.15	0.00	0.00	0.00	0.00	0.00	0.00
M	01 4	302	105. 0	0.00	0.00	0.00	0.00	0.00	0.00
M	01	149	52.15	0.00	0.00	0.00	3.9	3.9	3.9
M	01 9	85	29. 5	0.00	0.00	0.42	0.42	0.42	0.00
M	0180	46	16.10	0.00	0.00	0.00	0.00	0.00	0.00
M	0183	254	88.90	0.00	0.00	36.69	36.69	56.36	33.91
M	0188	8	2 .30	0.00	0.00	0.00	10.38	10.38	22.08
M	0198	616	215.60	4 .1	5 .99	2.88	25. 1	33.61	18. 2
M	0199	80	28.00	0.00	0.00	19.19	19.19	19.19	0.00
M	020	44	15.40	0.15	0.15	4.91	4. 6	11.39	6.63
M	0213	89	31.15	0.00	0.00	0.00	0.00	0.00	0.00
M	0218	12	44.45	0.00	0.00	0.00	0.00	0.00	0.09
M	0219	159	55.65	0.00	0.00	10.23	10.23	10.23	0.00
M	023	408	142.80	0.00	2 .83	66.46	66.46	93.63	55.0
M	0238	140	49.00	0.00	0.00	33.51	33.51	41.25	. 4

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
M	0240	214	4.90	0.00	0.00	0.02	0.02	0.02	0.00
M	0242	520	182.00	2.05	2.05	2.05	0.39	0.39	15.1
M	0245	152	53.20	0.00	0.00	14.2	14.2	51.01	50.05
M	0248	14	4.90	0.00	0.00	0.00	0.00	0.00	0.00
M	0250	16	5.60	0.00	0.00	0.00	0.00	0.00	0.00
M	0254	2	25.20	0.00	0.00	0.00	0.00	5.03	5.03
M	0255	69	24.15	0.00	0.00	0.00	1.34	1.34	1.34
M	0256	3	12.95	0.00	0.00	0.00	0.00	0.00	0.00
M	025	12	4.20	0.00	0.00	0.00	0.00	0.00	0.00
M	0258	38	13.30	0.00	0.00	0.00	0.00	0.00	0.00
M	0260	23	8.05	0.00	0.00	0.00	0.00	0.00	0.00
M	0262	492	1 2.20	0.00	62.20	62.20	131.52	96.80	101.49
M	0265	188	65.80	0.00	0.00	0.00	0.23	0.23	2.33
M	026	20	.00	0.00	0.00	0.00	0.00	0.00	0.22
M	0269	254	88.90	0.00	0.00	2.69	2.69	12.54	9.85
M	02 5	302	105. 0	35.54	45.02	45.02	9.48	0.00	0.00
M	0404	294	102.90	0.00	0.00	2.14	40. 8	40. 8	38.64
M	0408	588	205.80	0.00	0.00	31.03	31.03	50.36	19.33
M	0412	210	3.50	0.00	0.00	0.00	.32	.32	.32
M	0426	518	181.30	0.00	49. 5	81.85	93.69	46. 3	32.62
M	0431	266	93.10	0.00	3.03	21.51	21.51	24.64	6.16
M	0433	130	45.50	.82	80.10	80.10	2.28	14.50	14.50
M	0436	66	23.10	0.00	0.00	16.1	16.1	16.1	0.00
M	0440	431	150.85	4.03	4.03	25.15	30. 2	56.46	35.34
M	0441	1 94	62 .90	0.00	183.65	188.01	222.89	66.56	92.58
M	0450	2	0. 0	0.00	0.00	0.00	0.00	0.00	0.00
M	0451	3	1.05	0.00	0.00	0.00	0.00	0.00	0.00
M	0452	4	1.40	0.00	0.00	0.00	0.4	0.4	0.4
M	0453	53	18 .95	0.00	0.00	8.23	14.31	14.31	6.08
M	0455	113	39.55	0.00	0.00	0.00	0.00	12.31	12.31
M	0456	63	22.05	0.00	0.00	0.00	0.00	0.00	0.00
M	045	234	81.90	0.00	0.00	0.00	5.31	14.58	14.58
M	0458	3	1.05	0.00	0.00	0.00	0.00	0.19	0.19
M	0462	26	93.45	1 .86	55.43	56.10	48.83	3 .84	3 .1
M	0561	45	15. 5	0.00	0.00	0.00	0.00	0.00	0.00
M	0562	8	2 .30	0.00	0.00	0.00	0.00	0.00	22.4
M	056	11	40.95	85.0	85.0	85.0	0.66	.93	.93
M	05 4	289	101.15	3 .98	96.48	96.48	9.38	20.90	3.
M	05 5	221	.35	0.00	0.00	0.41	0.41	33.9	41.36
M	05	9	2 .65	0.00	12.43	12.43	12.43	0.00	3.84
M	05 9	2 2	95.20	0.00	0.00	0.00	8.03	32.8	5 .42
M	0580	19	6.65	0.00	0.00	0.00	.1	.1	.1
M	0585	55	19.25	0.00	0.00	12.61	12.61	23. 6	11.15
M	0591	43	15.05	0.00	0.00	0.00	0.00	0.00	0.00
M	0596	18	6.30	0.00	0.00	0.00	0.00	0.00	0.00

VQO Type	VQO No	Total Area	Max ha 15yr	Interval 1	Interval 0	Interval 1	Interval 2	Interval 3	Interval 4
M	0598	54	18.90	11.14	11.14	11.14	0.00	0.00	0.00
M	0600	51	1 .85	0.00	0.00	0.00	3.46	3.46	3.46
M	0601	50	1 .50	0.00	0.00	2.54	2.54	2.54	0.00
M	0602	20	.00	0.00	0.00	0.00	0.00	0.00	0.00
M	0604	453	158.55	0.00	36.22	3 .1	3 .1	0.95	0.22
M	0605	21	.35	0.00	0.00	0.00	0.00	0.00	0.00
M	060	59	20.65	0.00	3.60	5.22	5.22	16.68	15.06
M	0608	33	11.55	0.00	0.00	0.00	0.00	0.00	0.00
M	0610	156	54.60	1. 9	13.84	13.84	12.05	0.62	0.62
M	0612	14	4.90	0.00	0.00	0.00	5.01	5.01	5.01
M	0614	55	19.25	4.25	.20	.20	11.68	8. 3	8. 3
M	0615	4	16.45	9.81	9.81	9.81	0.00	4.94	4.94
M	0619	2	9.45	0.00	0.00	0.00	0.00	0.00	0.00
M	0622	1	24.85	0.00	0.00	4.86	24.33	24.33	19.4
M	0624	148	51.80	0.00	0.00	0.00	.63	.63	.63
M	0625	50	1 .50	0.00	0.00	0.00	1 . 5	1 . 5	1 . 5
M	0626	94	32.90	19.60	19.60	19.60	10.26	10.26	10.26
M	0629	6	2.10	1.58	1.58	1.58	0.00	0.00	0.00
M	063	10	3.50	0.00	0.00	0.00	3.3	3.3	3.3
M	0 1	2 2	95.20	41.23	44.25	61.10	21.02	18.00	1.15
M	0 18	86	30.10	12.35	12.35	18.22	5.8	14. 6	8.89
M	0 21	213	4.55	10.94	13.39	14.25	3.31	25. 8	24.92
M	0 23	4	25.90	.49	.49	.49	0.00	0.00	0.00
M	0 25	614	214.90	69.81	1.23	85.86	42.94	48.65	62.49
M	0 2	90	31.50	0.00	6.13	21.35	21.35	15.22	0.00
M	0 29	90	31.50	25. 4	25. 4	25. 4	0.00	0.00	0.00
M	0 31	1 4	60.90	0.00	0.00	1.58	1.58	1.58	0.00
M	0 33	202	0. 0	1.3	1.3	1.3	0.00	0.00	2 .29
M	0 38	85	29. 5	13.45	13.45	13.45	0.00	16.91	16.91
M	0 45	8	2.80	0.12	0.12	0.12	0.00	0.00	0.00
M	0 53	10	3.50	0.00	0.00	2.86	2.86	2.86	0.00
M	0 55	5	26.25	0.00	0.00	4.08	4.21	. 3	3.65
M	0 58	116	40.60	0.00	0.00	1.54	30. 4	30. 4	31.01
M	0 61	38	13.30	0.00	0.00	0.00	1.99	1.99	1.99
M	083	344	120.40	8.28	103.9	103.9	32.04	6.35	33.61
M	0839	38	13.30	0.00	0.00	0.00	5.1	5.1	5.1
M	0841	68	23.80	0.00	0.00	0.00	0.00	0.00	0.00
M	0845	121	42.35	0.00	0.00	0.00	0.56	0.56	0.56
M	0868	30	10.50	0.00	0.00	0.00	0.00	1 .18	1 .18

ATTACHMENT 4

HARVEST BY MAPSHEET FOR ALBERNI EAST

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
92c06	1	Conventional Economic	Clearcut	Conventional	158.6	93 459
		Conventional Economic	Clearcut	R/W	3.6	2 106
		Conventional Economic	Partial Cut	Conventional	12.0	16
		Marginal	Clearcut	Conventional	3.2	2 300
		Marginal	Clearcut	R/W	0.0	16
	2	Marginal	Partial Cut	Conventional	3.	1 351
		Conventional Economic	Clearcut	Conventional	206.4	153 186
		Conventional Economic	Clearcut	R/W	1.2	331
		Conventional Economic	Partial Cut	Conventional	8.4	6 21
		Marginal	Partial Cut	Conventional	0.1	56
	3	NonConventional	Clearcut	R/W	0.0	35
		NonConventional	Partial Cut	Conventional	0.9	518
		Conventional Economic	Clearcut	Conventional	151.1	109 820
		Conventional Economic	Clearcut	R/W	0.9	259
		Conventional Economic	Partial Cut	Conventional	2.4	2 031
	4	Marginal	Clearcut	Conventional	11.6	4 320
		NonConventional	Clearcut	Conventional	.3	3 989
		Conventional Economic	Clearcut	Conventional	1 3.1	124 599
		Conventional Economic	Clearcut	R/W	0.2	1 9
		Conventional Economic	Partial Cut	Conventional	4.8	3 41
92c068	1	Marginal	Clearcut	Conventional	56.2	20 41
		Marginal	Partial Cut	Conventional	1.	608
		Conventional Economic	Clearcut	Conventional	25.5	22 248
	2	Conventional Economic	Clearcut	Conventional	156.3	144 833
		Conventional Economic	Clearcut	Helicopter	29.	20 914
		Conventional Economic	Clearcut	R/W	1.8	1 996
		NonConventional	Clearcut	Helicopter	3 .	44 01
		Physically Inoperable	Clearcut	Helicopter	0.0	
	3	Conventional Economic	Clearcut	Conventional	3 .4	31 613
		Physically Inoperable	Clearcut	Conventional	0.0	9
	4	Conventional Economic	Clearcut	Conventional	105.4	95 553
		Conventional Economic	Clearcut	Helicopter	36.3	38 619
		NonConventional	Clearcut	Conventional	0.0	60
		NonConventional	Clearcut	Helicopter	14.9	1 146
92c0 5	1	Conventional Economic	Clearcut	Conventional	326.3	2 9 11
		Conventional Economic	Clearcut	Long Line	14.1	14 964
		Conventional Economic	Clearcut	R/W	5.9	3 304
		Marginal	Clearcut	Conventional	4.9	1 834
		Physically Inoperable	Clearcut	Conventional	0.0	4
	2	Uneconomic	Clearcut	Conventional	0.0	2
		Conventional Economic	Clearcut	Conventional	183.6	148 4
		Conventional Economic	Clearcut	Helicopter	0.0	1
		Conventional Economic	Clearcut	R/W	3.0	2 448
		Marginal	Clearcut	Conventional	5.0	1 18
	3	NonConventional	Clearcut	Helicopter	11.0	8 055
		Conventional Economic	Clearcut	Conventional	261.6	196 631
		Conventional Economic	Clearcut	R/W	1.	1 25
		Marginal	Clearcut	Conventional	2.0	915
		Physically Inoperable	Clearcut	Conventional	0.0	10
	4	Uneconomic	Clearcut	Conventional	0.0	2
		Uneconomic	Clearcut	R/W	0.2	58
		Conventional Economic	Clearcut	Conventional	2 4.4	23 290
		Conventional Economic	Clearcut	Helicopter	41.5	39 452
		Conventional Economic	Clearcut	Long Line	28.3	30 8 3
		Conventional Economic	Clearcut	R/W	2.6	1 45
		Marginal	Clearcut	Conventional	1.9	652

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		NonConventional	Clearcut	Conventional	2.0	1 689
		NonConventional	Clearcut	Helicopter	.6	20
		NonConventional	Clearcut	Long Line	3.	4 412
		Physically Inoperable	Clearcut	Conventional	0.0	19
92c0 6	1	Conventional Economic	Clearcut	Conventional	45 .0	413 99
		Conventional Economic	Clearcut	Helicopter	6.5	5 861
		Conventional Economic	Clearcut	R/W	12.0	8 9 5
		Conventional Economic	Partial Cut	Conventional	39.2	15 015
		Conventional Economic	Partial Cut	Helicopter	4.4	1 845
		Marginal	Clearcut	Conventional	5 .4	21 5 3
		Marginal	Clearcut	R/W	2.3	91
		Marginal	Partial Cut	Conventional	0.4	92
		NonConventional	Clearcut	Conventional	.1	8 293
		NonConventional	Partial Cut	Helicopter	.0	3 216
		Physically Inoperable	Clearcut	Conventional	0.0	12
		Physically Inoperable	Clearcut	R/W	0.0	22
		Uneconomic	Clearcut	Conventional	9.0	2 410
	2	Conventional Economic	Clearcut	Conventional	82.1	13 618
		Conventional Economic	Clearcut	Helicopter	95.3	88 458
		Conventional Economic	Clearcut	Long Line	182.3	181 101
		Conventional Economic	Clearcut	R/W	13.0	11 143
		Conventional Economic	Partial Cut	Conventional	18.6	11 460
		Marginal	Clearcut	Conventional	8.1	2 628
		NonConventional	Clearcut	Helicopter	28.0	25 4
		NonConventional	Clearcut	Long Line	14.3	14 322
		NonConventional	Clearcut	R/W	0.2	119
		Physically Inoperable	Clearcut	Helicopter	0.0	
		Physically Inoperable	Clearcut	Long Line	0.0	3
	3	Conventional Economic	Clearcut	Conventional	365.8	315 954
		Conventional Economic	Clearcut	Helicopter	8.4	5 21
		Conventional Economic	Clearcut	Long Line	.1	5 8 2
		Conventional Economic	Clearcut	R/W	2.3	2 08
		Conventional Economic	Partial Cut	Conventional	16.6	4 6
		Marginal	Clearcut	Conventional	12.2	4 121
		NonConventional	Clearcut	Long Line	9.	481
		Physically Inoperable	Clearcut	Conventional	0.0	8
		Uneconomic	Clearcut	Conventional	0.0	5
	4	Conventional Economic	Clearcut	Conventional	816.2	4 566
		Conventional Economic	Clearcut	Helicopter	96.1	103 040
		Conventional Economic	Clearcut	Long Line	1 .9	18 352
		Conventional Economic	Clearcut	R/W	5.0	4 08
		Marginal	Clearcut	Conventional	23.0	8 130
		NonConventional	Clearcut	Conventional	0.3	2 5
		NonConventional	Clearcut	Helicopter	2.5	2 099
		NonConventional	Clearcut	Long Line	15.3	15 516
		Physically Inoperable	Clearcut	Conventional	0.0	1
		Physically Inoperable	Clearcut	R/W	0.1	11
92c0	1	Conventional Economic	Clearcut	Conventional	28 .6	212 82
		Conventional Economic	Clearcut	Helicopter	43.6	28 442
		Conventional Economic	Clearcut	Long Line	83.2	65 823
		Conventional Economic	Clearcut	R/W	2.	1 368
		Marginal	Clearcut	Conventional	.9	2 906
		Marginal	Clearcut	Helicopter	14.	4 468
		NonConventional	Clearcut	Conventional	4.2	2 551
		NonConventional	Clearcut	Helicopter	4.3	2 814
		NonConventional	Clearcut	Long Line	6.6	5 55
		Physically Inoperable	Clearcut	Conventional	0.5	491
	2	Conventional Economic	Clearcut	Conventional	93.6	84 56
		Conventional Economic	Clearcut	Helicopter	83.8	4 510
		Conventional Economic	Clearcut	Long Line	20.2	1 226
		Conventional Economic	Clearcut	R/W	2.5	1 431
		Marginal	Clearcut	Conventional	0.	333
		Marginal	Clearcut	Helicopter	30.9	12 133

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Marginal	Clearcut	Long Line	3.6	1 818
		NonConventional	Clearcut	Conventional	1.4	992
		NonConventional	Clearcut	Helicopter	31.2	1 923
		NonConventional	Clearcut	Long Line	1.	998
		Physically Inoperable	Clearcut	Helicopter	0.0	4
		Physically Inoperable	Clearcut	R/W	0.0	40
	3	Conventional Economic	Clearcut	Conventional	10 .9	88 5
		Conventional Economic	Clearcut	Helicopter	0.5	51 192
		Conventional Economic	Clearcut	Long Line	148.	121 832
		Conventional Economic	Clearcut	R/W	1.2	888
		Marginal	Clearcut	Conventional	.	2 35
		Marginal	Clearcut	Helicopter	10.	5 300
		Marginal	Clearcut	Long Line	0.5	21
		NonConventional	Clearcut	Conventional	0.2	189
		NonConventional	Clearcut	Helicopter	14.9	9 311
		NonConventional	Clearcut	Long Line	13.0	10 0 8
		Physically Inoperable	Clearcut	Conventional	0.0	1
	4	Conventional Economic	Clearcut	Conventional	69.3	53 686
		Conventional Economic	Clearcut	Helicopter	15.6	150
		Conventional Economic	Clearcut	Long Line	3 .6	19 2 3
		NonConventional	Clearcut	Helicopter	36.8	21 594
		NonConventional	Clearcut	Long Line	1.4	51
		Physically Inoperable	Clearcut	Conventional	0.0	4
		Physically Inoperable	Clearcut	Helicopter	0.0	14
92c0 8	1	Conventional Economic	Clearcut	Conventional	31 .9	243 898
		Conventional Economic	Clearcut	Helicopter	12.6	12 299
		Conventional Economic	Clearcut	Long Line	62.2	52 065
		Conventional Economic	Clearcut	R/W	3.0	2 045
		NonConventional	Clearcut	Conventional	4.2	4 142
		NonConventional	Clearcut	Helicopter	15.3	14 0 0
		NonConventional	Clearcut	Long Line	6.8	6 348
		NonConventional	Clearcut	R/W	0.0	14
		Physically Inoperable	Clearcut	Conventional	0.1	42
		Physically Inoperable	Clearcut	Helicopter	0.0	4
	2	Conventional Economic	Clearcut	Conventional	232.3	215 01
		Conventional Economic	Clearcut	Long Line	15.5	11 648
		Conventional Economic	Clearcut	R/W	4.0	3 368
		NonConventional	Clearcut	Conventional	2.8	3 334
		NonConventional	Clearcut	Long Line	0.3	199
	3	Conventional Economic	Clearcut	Conventional	325.9	288 893
		Conventional Economic	Clearcut	Helicopter	32.1	2 65
		Conventional Economic	Clearcut	Long Line	30.0	20 581
		Conventional Economic	Clearcut	R/W	1.	963
		NonConventional	Clearcut	Conventional	2.2	1 953
		NonConventional	Clearcut	Helicopter	10.2	9 565
		Physically Inoperable	Clearcut	Conventional	0.0	20
		Physically Inoperable	Clearcut	Helicopter	0.0	8
	4	Conventional Economic	Clearcut	Conventional	225.8	192 32
		Conventional Economic	Clearcut	Helicopter	3.	1 6 1
		Conventional Economic	Clearcut	R/W	1.0	21
		Marginal	Clearcut	Helicopter	2 .0	12 034
		NonConventional	Clearcut	Helicopter	0.0	3
		Physically Inoperable	Clearcut	Helicopter	0.1	64
92c085	1	Conventional Economic	Clearcut	Conventional	93.5	61 400
		Conventional Economic	Clearcut	Long Line	35.3	29 34
		Conventional Economic	Clearcut	R/W	0.	233
		NonConventional	Clearcut	Conventional	1.6	1 353
		NonConventional	Clearcut	Long Line	1.1	1 154
	2	Conventional Economic	Clearcut	Conventional	26 .4	156 198
		Conventional Economic	Clearcut	R/W	1.3	5 8
		Conventional Economic	Partial Cut	Conventional	9.2	4 981
		Physically Inoperable	Clearcut	Conventional	0.0	13
		Physically Inoperable	Clearcut	R/W	0.0	39

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
	3	Conventional Economic	Clearcut	Conventional	161.2	9 9
		Conventional Economic	Clearcut	Helicopter	0.3	24
		Conventional Economic	Clearcut	R/W	1.6	698
		Conventional Economic	Partial Cut	Conventional	44.0	16 69
		NonConventional	Clearcut	Helicopter	11.1	8 096
		Physically Inoperable	Clearcut	Conventional	0.0	26
	4	Conventional Economic	Clearcut	Conventional	298.5	165 9 4
		Conventional Economic	Clearcut	R/W	0.6	316
		Conventional Economic	Partial Cut	Conventional	2.5	1 654
92c086	1	Conventional Economic	Clearcut	Conventional	29.0	632 658
		Conventional Economic	Clearcut	Helicopter	196.1	1 9 149
		Conventional Economic	Clearcut	Long Line	150.3	139 262
		Conventional Economic	Clearcut	R/W	26.2	22 482
		Conventional Economic	Partial Cut	Conventional	2.5	2
		Marginal	Clearcut	Conventional	3.6	1 329
		Marginal	Clearcut	Long Line	1.0	365
		Marginal	Clearcut	R/W	1.3	4 0
		NonConventional	Clearcut	Conventional	1 .6	15 224
		NonConventional	Clearcut	Helicopter	48.9	41 552
		NonConventional	Clearcut	Long Line	14.5	13 640
		Physically Inoperable	Clearcut	Conventional	0.0	3
		Physically Inoperable	Clearcut	Helicopter	0.0	3
		Physically Inoperable	Clearcut	R/W	0.3	168
	2	Conventional Economic	Clearcut	Conventional	2 5.	235 832
		Conventional Economic	Clearcut	Helicopter	5 .1	4 546
		Conventional Economic	Clearcut	Long Line	83.0	61 8 9
		Conventional Economic	Clearcut	R/W	6.6	4 493
		Marginal	Clearcut	Helicopter	0.3	156
		NonConventional	Clearcut	Conventional	0.4	389
		NonConventional	Clearcut	Helicopter	18.9	12 26
		NonConventional	Clearcut	Long Line	4.3	3 043
		Physically Inoperable	Clearcut	Conventional	0.0	5
		Physically Inoperable	Clearcut	R/W	0.3	163
	3	Conventional Economic	Clearcut	Conventional	08.	625 209
		Conventional Economic	Clearcut	Helicopter	122.4	108 646
		Conventional Economic	Clearcut	Long Line	215.	188 4 3
		Conventional Economic	Clearcut	R/W	5.0	3 8 5
		Conventional Economic	Partial Cut	Conventional	3.3	858
		Marginal	Clearcut	Conventional	4.9	1 9
		Marginal	Clearcut	Helicopter	5.	2 16
		Marginal	Clearcut	Long Line	3.6	1 316
		NonConventional	Clearcut	Conventional	1.2	804
		NonConventional	Clearcut	Helicopter	38.2	3 134
		NonConventional	Clearcut	Long Line	3 .2	32 03
		Physically Inoperable	Clearcut	Conventional	0.1	38
		Physically Inoperable	Clearcut	Helicopter	0.0	21
	4	Conventional Economic	Clearcut	Conventional	314.6	26 154
		Conventional Economic	Clearcut	Helicopter	38.0	38 428
		Conventional Economic	Clearcut	Long Line	120.8	96 81
		Conventional Economic	Clearcut	R/W	5.4	4 41
		Marginal	Clearcut	Conventional	0.0	33
		NonConventional	Clearcut	Conventional	3.4	2 06
		NonConventional	Clearcut	Helicopter	5.1	4 52
		NonConventional	Clearcut	Long Line	12.	9 5 4
		Physically Inoperable	Clearcut	Helicopter	0.0	2
92c08	1	Conventional Economic	Clearcut	Conventional	4 2.4	390 92
		Conventional Economic	Clearcut	Helicopter	29.	19 6 3
		Conventional Economic	Clearcut	Long Line	101.4	82 225
		Conventional Economic	Clearcut	R/W	13.0	10 021
		NonConventional	Clearcut	Conventional	1.9	1 311
		Physically Inoperable	Clearcut	R/W	0.5	451
	2	Conventional Economic	Clearcut	Conventional	62.6	63 129
		Conventional Economic	Clearcut	Helicopter	38.9	28 209

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Conventional Economic	Clearcut	Long Line	38.4	42 645
		Conventional Economic	Clearcut	R/W	.	5 610
		Marginal	Clearcut	Conventional	0.6	24
		NonConventional	Clearcut	Conventional	3.4	3 309
		NonConventional	Clearcut	Helicopter	22.	14 882
		Physically Inoperable	Clearcut	Conventional	0.0	38
		Uneconomic	Clearcut	Conventional	0.0	3
		Uneconomic	Clearcut	R/W	0.1	39
	3	Conventional Economic	Clearcut	Conventional	610.9	523 016
		Conventional Economic	Clearcut	Helicopter	22.9	16 88
		Conventional Economic	Clearcut	Long Line	1.6	62 883
		Conventional Economic	Clearcut	R/W	6.	5 849
		Marginal	Clearcut	Helicopter	1.9	969
		NonConventional	Clearcut	Helicopter	1.5	1 152
		NonConventional	Clearcut	Long Line	3.2	1 82
		Physically Inoperable	Clearcut	Conventional	0.0	11
		Physically Inoperable	Clearcut	R/W	0.1	122
	4	Conventional Economic	Clearcut	Conventional	448.1	3 459
		Conventional Economic	Clearcut	Helicopter	14.1	8 981
		Conventional Economic	Clearcut	Long Line	35.4	26 058
		Conventional Economic	Clearcut	R/W	2.6	1 915
		Marginal	Clearcut	Conventional	.3	2 440
		Marginal	Clearcut	Long Line	0.0	26
92c088	1	Conventional Economic	Clearcut	Conventional	38.9	31 293
		Conventional Economic	Clearcut	R/W	0.4	298
	2	Conventional Economic	Clearcut	Long Line	111.	12 455
		Conventional Economic	Clearcut	R/W	0.4	169
	4	Conventional Economic	Clearcut	Conventional	40.6	26 80
		Conventional Economic	Clearcut	Long Line	49.4	63 2 6
		Conventional Economic	Clearcut	R/W	0.	38
		NonConventional	Clearcut	Conventional	0.0	1
		NonConventional	Clearcut	Long Line	9.1	10 60
92c095	2	Conventional Economic	Clearcut	Conventional	11.8	042
		Conventional Economic	Clearcut	R/W	0.4	138
		Conventional Economic	Partial Cut	Conventional	0.5	1 5
92c096	1	Conventional Economic	Clearcut	Conventional	541.2	366 682
		Conventional Economic	Clearcut	Helicopter	8.5	5 654
		Conventional Economic	Clearcut	Long Line	55.5	4 831
		Conventional Economic	Clearcut	R/W	8.8	3 08
		Marginal	Clearcut	Helicopter	4.9	1 98
		Marginal	Clearcut	R/W	0.1	39
		NonConventional	Clearcut	Conventional	4.3	4 482
		NonConventional	Clearcut	Long Line	0.1	99
		Physically Inoperable	Clearcut	Conventional	0.0	8
		Physically Inoperable	Clearcut	Helicopter	0.0	2
		Uneconomic	Clearcut	R/W	1.2	23
	2	Conventional Economic	Clearcut	Conventional	338.2	222 628
		Conventional Economic	Clearcut	Helicopter	18.5	10 356
		Conventional Economic	Clearcut	Long Line	31.2	16 184
		Conventional Economic	Clearcut	R/W	3.5	1 6 4
		Conventional Economic	Partial Cut	Conventional	2.	936
		NonConventional	Clearcut	Helicopter	39.2	38 164
		NonConventional	Clearcut	Long Line	4.0	2 668
	3	Conventional Economic	Clearcut	Conventional	295.5	202 2 9
		Conventional Economic	Clearcut	Helicopter	18.9	19 066
		Conventional Economic	Clearcut	Long Line	24.2	21 85
		Conventional Economic	Clearcut	R/W	4.5	2 936
		Conventional Economic	Partial Cut	Conventional	10.	3 91
		Marginal	Partial Cut	Conventional	12.9	2 611
		NonConventional	Clearcut	Helicopter	5.5	3 943
	4	Conventional Economic	Clearcut	Conventional	532.4	3 3 4 3
		Conventional Economic	Clearcut	Helicopter	9.2	6 390
		Conventional Economic	Clearcut	Long Line	1 .1	19 213

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Conventional Economic	Clearcut	R/W	6.4	2 641
		Marginal	Clearcut	Helicopter	2.4	1 588
		Marginal	Clearcut	R/W	0.0	16
		NonConventional	Clearcut	Conventional	1.5	1 184
		NonConventional	Clearcut	Long Line	16.2	16 620
92c09	1	Conventional Economic	Clearcut	Conventional	43.1	663 123
		Conventional Economic	Clearcut	Helicopter	6 .9	49 533
		Conventional Economic	Clearcut	Long Line	34.9	31 404
		Conventional Economic	Clearcut	R/W	11.	8 33
		Conventional Economic	Partial Cut	Conventional	11.8	1 856
		Marginal	Clearcut	Helicopter	.9	3 488
		NonConventional	Clearcut	Conventional	2.3	2 228
		NonConventional	Clearcut	Helicopter	52.4	42 592
		NonConventional	Clearcut	Long Line	.5	5 840
		NonConventional	Clearcut	R/W	0.0	35
	2	Conventional Economic	Clearcut	Conventional	422.4	315 26
		Conventional Economic	Clearcut	Helicopter	85.9	60 92
		Conventional Economic	Clearcut	Long Line	1.	982
		Conventional Economic	Clearcut	R/W	9.	4 690
		Marginal	Clearcut	Conventional	1.5	632
		Marginal	Clearcut	Helicopter	9.8	4 392
		Marginal	Clearcut	R/W	0.	310
		NonConventional	Clearcut	Conventional	0.0	3
		NonConventional	Clearcut	Helicopter	5.1	61 606
		Physically Inoperable	Clearcut	Conventional	0.0	2
		Physically Inoperable	Clearcut	Helicopter	0.0	1
	3	Conventional Economic	Clearcut	Conventional	541.1	464 135
		Conventional Economic	Clearcut	Helicopter	51.0	3 253
		Conventional Economic	Clearcut	Long Line	61.0	45 320
		Conventional Economic	Clearcut	R/W	3.0	2 196
		Marginal	Clearcut	Helicopter	2.0	998
		NonConventional	Clearcut	Helicopter	59.4	39 80
		NonConventional	Clearcut	Long Line	0.6	460
		Physically Inoperable	Clearcut	Conventional	0.0	4
	4	Conventional Economic	Clearcut	Conventional	546.8	420 006
		Conventional Economic	Clearcut	Helicopter	34.0	24 808
		Conventional Economic	Clearcut	Long Line	8 .0	58 384
		Conventional Economic	Clearcut	R/W	3.	2 15
		Marginal	Clearcut	Conventional	1 .0	33
		Marginal	Clearcut	Helicopter	29.6	12 89
		Marginal	Clearcut	Long Line	8.0	4 156
		Marginal	Clearcut	R/W	0.1	65
		NonConventional	Clearcut	Conventional	3.1	2 580
		NonConventional	Clearcut	Helicopter	12.2	10 532
		NonConventional	Clearcut	Long Line	2.3	1 09
		Physically Inoperable	Clearcut	Conventional	0.5	381
92c098	1	Conventional Economic	Clearcut	Conventional	33.8	28 059
		Conventional Economic	Clearcut	Long Line	30.3	32 925
		Conventional Economic	Clearcut	R/W	0.6	493
	2	Conventional Economic	Clearcut	Conventional	58.0	44 560
	3	Conventional Economic	Clearcut	Conventional	19.0	1 39
		Conventional Economic	Clearcut	Helicopter	4.2	2 3 1
		Conventional Economic	Clearcut	Long Line	0.2	140
		Conventional Economic	Clearcut	R/W	0.2	12
	4	Conventional Economic	Clearcut	Conventional	30.0	19 124
		Conventional Economic	Clearcut	Long Line	45.	42 962
92f006	1	Conventional Economic	Clearcut	Conventional	119.2	64 605
		Conventional Economic	Clearcut	R/W	2.6	892
		Marginal	Clearcut	Conventional	20.1	6 6 2
	2	Conventional Economic	Clearcut	Conventional	105.1	40 959
		Conventional Economic	Clearcut	Helicopter	42.6	21 466
		Conventional Economic	Clearcut	R/W	2.	1 488
		Marginal	Clearcut	Conventional	0.2	53

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Marginal	Clearcut	Helicopter	.8	2 669
	3	Conventional Economic	Clearcut	Conventional	38.	24 082
		Marginal	Clearcut	Conventional	1.2	3 6
	4	Conventional Economic	Clearcut	Conventional	12 .5	58 454
		Conventional Economic	Clearcut	Helicopter	.	4 192
		Conventional Economic	Clearcut	R/W	0.9	319
92f00	1	Conventional Economic	Clearcut	Conventional	639.	445 0 6
		Conventional Economic	Clearcut	Helicopter	84.6	62 516
		Conventional Economic	Clearcut	Long Line	55.6	30 512
		Conventional Economic	Clearcut	R/W	25.1	13 8 0
		Conventional Economic	Partial Cut	Conventional	41.	20 108
		Conventional Economic	Partial Cut	Helicopter	0.0	4
		Conventional Economic	Partial Cut	Long Line	1.0	2
		Marginal	Clearcut	Conventional	8.2	2 6 2
		Marginal	Partial Cut	Conventional	0.6	20
		NonConventional	Clearcut	Conventional	33.6	30 890
		NonConventional	Clearcut	Helicopter	82.0	1 394
		NonConventional	Clearcut	Long Line	.0	5 025
		NonConventional	Clearcut	R/W	0.6	590
		NonConventional	Partial Cut	Conventional	1.5	1 498
	2	Conventional Economic	Clearcut	Conventional	30 .4	225 349
		Conventional Economic	Clearcut	Helicopter	234.2	206 241
		Conventional Economic	Clearcut	Long Line	24.0	16 892
		Conventional Economic	Clearcut	R/W	4.2	1 802
		Conventional Economic	Partial Cut	Conventional	23.6	8 083
		Marginal	Clearcut	Conventional	4.3	1 665
		Marginal	Clearcut	Helicopter	11.2	5 061
		Marginal	Partial Cut	Conventional	0.6	248
		NonConventional	Clearcut	Helicopter	125.	92 194
	3	Conventional Economic	Clearcut	Conventional	669.9	446 135
		Conventional Economic	Clearcut	Helicopter	88.3	62 369
		Conventional Economic	Clearcut	Long Line	123.1	103 89
		Conventional Economic	Clearcut	R/W	9.	5 655
		Conventional Economic	Partial Cut	Conventional	6.0	4 194
		Conventional Economic	Partial Cut	Long Line	1.	1 4 8
		Marginal	Clearcut	Conventional	3.3	1 068
		Marginal	Clearcut	Helicopter	11.9	4 12
		Marginal	Clearcut	R/W	0.0	3
		Marginal	Partial Cut	Conventional	0.1	39
		NonConventional	Clearcut	Conventional	0.3	303
		NonConventional	Clearcut	Helicopter	50.2	42 345
		NonConventional	Clearcut	Long Line	4.1	4 241
	4	Conventional Economic	Clearcut	Conventional	355.	224 84
		Conventional Economic	Clearcut	Helicopter	62.0	56 421
		Conventional Economic	Clearcut	Long Line	11 .5	80 666
		Conventional Economic	Clearcut	R/W	3.2	1 3
		Conventional Economic	Partial Cut	Conventional	4.4	3 3 9
		Marginal	Clearcut	Conventional	0.3	143
		Marginal	Clearcut	Helicopter	.4	3 99
		Marginal	Clearcut	Long Line	3.0	1 314
		NonConventional	Clearcut	Helicopter	5 .8	44 220
		NonConventional	Clearcut	Long Line	5.	2 965
92f008	1	Conventional Economic	Clearcut	Conventional	5.1	3 128
	2	Conventional Economic	Clearcut	Conventional	21.2	24 80
		Conventional Economic	Clearcut	Long Line	36.3	36 63
		Conventional Economic	Clearcut	R/W	0.6	139
		Physically Inoperable	Clearcut	Long Line	0.0	10
	4	Conventional Economic	Clearcut	Long Line	38.4	38 502
		Conventional Economic	Clearcut	R/W	0.3	46
92f016	1	Conventional Economic	Clearcut	Conventional	1.2	543
	2	Conventional Economic	Clearcut	Conventional	0.1	49
92f01	1	Conventional Economic	Clearcut	Conventional	523.	322 801
		Conventional Economic	Clearcut	Helicopter	19.8	15 393

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Conventional Economic	Clearcut	Long Line	4 .8	29 361
		Conventional Economic	Clearcut	R/W	10.5	4 204
		Conventional Economic	Partial Cut	Conventional	29.6	033
		Marginal	Clearcut	Conventional	1 .2	504
		Marginal	Clearcut	Long Line	21.9	091
		Marginal	Clearcut	R/W	0.	255
		NonConventional	Clearcut	Helicopter	14.3	10 0 2
		Uneconomic	Clearcut	R/W	0.0	1
	2	Conventional Economic	Clearcut	Conventional	563.8	331 048
		Conventional Economic	Clearcut	Helicopter	23.9	20 26
		Conventional Economic	Clearcut	Long Line	29.9	19 19
		Conventional Economic	Clearcut	R/W	5.6	2 955
		Conventional Economic	Partial Cut	Conventional	6.8	5 09
		Conventional Economic	Partial Cut	Long Line	0.8	55
		Marginal	Clearcut	Conventional	52.2	21 194
		Marginal	Clearcut	Helicopter	0.	226
		Marginal	Clearcut	Long Line	.	3 588
		NonConventional	Clearcut	Helicopter	1.5	1 430
		NonConventional	Clearcut	Long Line	0.1	41
		Uneconomic	Clearcut	Conventional	0.0	1
		Uneconomic	Clearcut	R/W	0.4	129
	3	Conventional Economic	Clearcut	Conventional	59 .1	3 1 01
		Conventional Economic	Clearcut	Helicopter	28.9	22 434
		Conventional Economic	Clearcut	R/W	3.9	1 639
		Conventional Economic	Partial Cut	Conventional	3.0	1 982
		Marginal	Clearcut	Conventional	31.8	12 38
		Marginal	Clearcut	R/W	0.0	2
		Marginal	Partial Cut	Conventional	0.8	401
		NonConventional	Clearcut	Helicopter	28.9	18 099
		Uneconomic	Clearcut	Conventional	0.0	
		Uneconomic	Clearcut	R/W	0.3	64
	4	Conventional Economic	Clearcut	Conventional	324.2	181 41
		Conventional Economic	Clearcut	Helicopter	1.8	940
		Conventional Economic	Clearcut	Long Line	38.4	19 411
		Conventional Economic	Clearcut	R/W	2.5	1 469
		Conventional Economic	Partial Cut	Conventional	1.6	854
		Conventional Economic	Partial Cut	Long Line	1.2	6 0
		Marginal	Clearcut	Conventional	28.6	10 9 0
		Marginal	Clearcut	Helicopter	20.5	9 958
		NonConventional	Clearcut	Conventional	0.3	353
		Uneconomic	Clearcut	Long Line	0.0	3
92f018	1	Conventional Economic	Clearcut	Conventional	91.3	189
		Conventional Economic	Clearcut	Helicopter	29.1	22 193
		Conventional Economic	Clearcut	Long Line	22.0	15 388
		Conventional Economic	Clearcut	R/W	2.0	1 080
		Marginal	Clearcut	Conventional	9.9	5 213
		Marginal	Clearcut	Helicopter	14.6	90
		Marginal	Clearcut	Long Line	0.2	86
		NonConventional	Clearcut	Helicopter	5.9	4 360
		NonConventional	Clearcut	Long Line	8.8	6 255
	2	Conventional Economic	Clearcut	Conventional	34.8	21 646
		Conventional Economic	Clearcut	Helicopter	16.4	16 196
		Conventional Economic	Clearcut	R/W	2.3	592
		NonConventional	Clearcut	Conventional	0.4	225
		NonConventional	Clearcut	Helicopter	25.0	16 656
		NonConventional	Clearcut	Long Line	39.3	26 82
		NonConventional	Clearcut	R/W	0.	395
	3	Conventional Economic	Clearcut	Conventional	43.5	2 302
		Conventional Economic	Clearcut	Helicopter	58.0	44 988
		Conventional Economic	Clearcut	R/W	0.8	693
		Marginal	Clearcut	Helicopter	20.4	10 1
		NonConventional	Clearcut	Helicopter	36.	21 424
	4	NonConventional	Clearcut	Helicopter	23.1	12 918

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		NonConventional	Clearcut	Long Line	9.2	5 94
92f02	1	Conventional Economic	Clearcut	Conventional	13.2	83
		Conventional Economic	Clearcut	Long Line	3 .0	18 0
		Conventional Economic	Clearcut	R/W	0.2	54
		Marginal	Clearcut	Conventional	3.1	1 040
	2	Conventional Economic	Clearcut	Conventional	156.9	6 006
		Conventional Economic	Clearcut	Helicopter	21.6	14 936
		Conventional Economic	Clearcut	Long Line	59.3	31 03
		Conventional Economic	Clearcut	R/W	6.	2 421
		Marginal	Clearcut	Conventional	68.9	21 020
		Marginal	Clearcut	R/W	0.2	65
		NonConventional	Clearcut	Helicopter	11.9	6 8 5
		NonConventional	Clearcut	Long Line	0.0	38
		Uneconomic	Clearcut	Long Line	0.0	0
	3	Conventional Economic	Clearcut	Conventional	123.	993
		Conventional Economic	Clearcut	Helicopter	8.4	2 66
		Conventional Economic	Clearcut	R/W	1.6	1 049
		Marginal	Clearcut	Conventional	1.5	445
		Marginal	Clearcut	Helicopter	5.6	1 533
		Uneconomic	Clearcut	Helicopter	0.0	3
	4	Conventional Economic	Clearcut	Conventional	252.9	202 802
		Conventional Economic	Clearcut	Helicopter	38.4	21 123
		Conventional Economic	Clearcut	Long Line	10.1	6 541
		Conventional Economic	Clearcut	R/W	0.9	229
		Marginal	Clearcut	Conventional	.2	3 141
92f028	1	Conventional Economic	Clearcut	Helicopter	0.6	15
		NonConventional	Clearcut	Helicopter	16.1	10 633
	2	Conventional Economic	Clearcut	Conventional	20.9	10 203
		Conventional Economic	Clearcut	Helicopter	1.0	339
		Conventional Economic	Clearcut	R/W	0.5	223
		NonConventional	Clearcut	Helicopter	21.6	14 938
	4	Conventional Economic	Clearcut	Conventional	14.1	6 526
		Conventional Economic	Clearcut	Helicopter	0.2	58
		Conventional Economic	Clearcut	R/W	0.2	5
		NonConventional	Clearcut	Helicopter	23.0	13 804
		Physically Inoperable	Clearcut	Helicopter	0.0	6
92f03	2	Conventional Economic	Clearcut	Conventional	14.1	9 293
		Conventional Economic	Clearcut	R/W	0.0	14

ATTACHMENT 5

HARVEST BY MAPSHEET FOR ALBERNI WEST

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
92c095	1	Conventional Economic	Clearcut	Conventional	10.2	6 09
		Conventional Economic	Clearcut	R/W	0.1	82
		Conventional Economic	Partial Cut	Conventional	26.9	11 420
		Uneconomic	Clearcut	Conventional	0.0	1
	2	Conventional Economic	Clearcut	Conventional	46.4	30 392
		Conventional Economic	Clearcut	Helicopter	1.4	963
		Conventional Economic	Partial Cut	Conventional	5.2	2 068
		Conventional Economic	Partial Cut	Helicopter	4.9	1 496
		Marginal	Clearcut	Helicopter	0.6	250
		Marginal	Partial Cut	Helicopter	1.1	261
		NonConventional	Clearcut	Helicopter	18.0	8 264
		NonConventional	Partial Cut	Helicopter	11.4	5 408
	3	Conventional Economic	Clearcut	Conventional	0.	364
		Conventional Economic	Partial Cut	Conventional	19.0	8 4 1
	4	Conventional Economic	Clearcut	Conventional	19.2	11 031
		Conventional Economic	Partial Cut	Conventional	80.1	38 9
		Marginal	Clearcut	Conventional	0.0	
		Physically Inoperable	Partial Cut	Conventional	0.0	4
92c096	3	NonConventional	Partial Cut	Helicopter	1 .2	11 062
92f005	1	Conventional Economic	Clearcut	Conv/Heli	20.9	13 632
		Conventional Economic	Clearcut	Conv/Long	0.9	614
		Conventional Economic	Clearcut	Conventional	229.2	146 3
		Conventional Economic	Clearcut	Helicopter	30.2	24 889
		Conventional Economic	Clearcut	R/W	3.1	1 533
		Conventional Economic	Partial Cut	Conventional	21.4	035
		Conventional Economic	Partial Cut	Helicopter	33.	11 464
		Marginal	Clearcut	Conv/Heli	12.5	4 826
		Marginal	Clearcut	Conventional	36.2	13 5 5
		Marginal	Clearcut	R/W	2.4	910
		Marginal	Partial Cut	Helicopter	6.3	1 408
		NonConventional	Clearcut	Conv/Long	0.0	14
		NonConventional	Clearcut	Conventional	.8	5 385
		Uneconomic	Clearcut	Conv/Heli	0.0	15
		Uneconomic	Clearcut	Conventional	34.0	10 921
		Uneconomic	Clearcut	R/W	3.0	636
	2	Conventional Economic	Clearcut	Conventional	23.8	13 539
		Conventional Economic	Clearcut	Helicopter	35.	25 406
		Conventional Economic	Clearcut	R/W	1.0	293
		Conventional Economic	Partial Cut	Conv/Heli	28.2	12 521
		Conventional Economic	Partial Cut	Conventional	3.3	2 299
		Conventional Economic	Partial Cut	Helicopter	6.1	3 435
		Marginal	Clearcut	Helicopter	0.2	2
		NonConventional	Clearcut	Helicopter	89.	53 59
		Physically Inoperable	Clearcut	Conventional	3.2	1 994
		Physically Inoperable	Clearcut	Helicopter	10.2	3 625
		Uneconomic	Clearcut	Helicopter	0.8	263
		Uneconomic	Clearcut	R/W	0.3	111
	3	Conventional Economic	Clearcut	Conv/Heli	16.9	9 51
		Conventional Economic	Clearcut	Conv/Long	32.9	21 916
		Conventional Economic	Clearcut	Conventional	100.4	58 363
		Conventional Economic	Clearcut	Helicopter	41.3	26 920
		Conventional Economic	Clearcut	R/W	0.1	41
		Conventional Economic	Partial Cut	Helicopter	49.	20 696
		Marginal	Clearcut	Conv/Heli	3.6	1 623
		Marginal	Clearcut	Conventional	21.5	8 119
		Marginal	Clearcut	Helicopter	11.5	4 1 6

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Marginal	Clearcut	R/W	0.2	8
		Marginal	Partial Cut	Helicopter	0.8	1 8
		NonConventional	Clearcut	Conv/Heli	22.2	13 83
		NonConventional	Clearcut	Conv/Long	1.3	841
		NonConventional	Clearcut	Helicopter	11.0	6 196
		NonConventional	Partial Cut	Helicopter	4 .5	16 506
		Physically Inoperable	Clearcut	Helicopter	0.0	2
		Uneconomic	Clearcut	Conventional	14.3	4 94
		Uneconomic	Clearcut	R/W	0.1	35
	4	Conventional Economic	Clearcut	Conv/Heli	42.4	30 431
		Conventional Economic	Clearcut	Conventional	16.3	12 239
		Conventional Economic	Clearcut	R/W	0.4	121
		Conventional Economic	Partial Cut	Conventional	38.9	21 602
		Marginal	Clearcut	Conv/Heli	0.	286
		Marginal	Clearcut	R/W	0.0	8
92f006	1	Conventional Economic	Clearcut	Conventional	14 .3	105 168
		Conventional Economic	Clearcut	Helicopter	0.1	63
		Conventional Economic	Clearcut	R/W	3.1	2 33
		Conventional Economic	Partial Cut	Conventional	15.2	6 88
		Marginal	Clearcut	Conv/Heli	0.3	93
		Marginal	Clearcut	Conventional	33.3	11 3 1
		Marginal	Clearcut	Helicopter	11.0	5 03
		Marginal	Clearcut	R/W	0.2	59
		NonConventional	Clearcut	Conventional	4.4	2 918
		NonConventional	Clearcut	Helicopter	62.4	43 013
		NonConventional	Clearcut	R/W	0.	501
		NonConventional	Partial Cut	Conventional	3 .8	23 09
		Uneconomic	Clearcut	R/W	0.0	25
		Uneconomic	Partial Cut	Conventional	9.2	2 423
	2	Conventional Economic	Clearcut	Conventional	4 .6	36 154
		Conventional Economic	Clearcut	Helicopter	0.3	246
		Conventional Economic	Partial Cut	Conventional	39.	22 38
		Marginal	Clearcut	Helicopter	24.4	12 951
		Marginal	Clearcut	Long Line	0.8	436
		NonConventional	Clearcut	Helicopter	24.8	15 583
		NonConventional	Clearcut	Long Line	2 .2	23 632
		NonConventional	Partial Cut	Conventional	11.5	8 982
		Physically Inoperable	Clearcut	Helicopter	1.1	608
		Uneconomic	Clearcut	Long Line	11.2	1 31
	3	Conventional Economic	Clearcut	Conventional	56.4	40 348
		Conventional Economic	Partial Cut	Conventional	42.6	13 18
	4	Conventional Economic	Clearcut	Conv/Heli	4.4	3 4 4
		Conventional Economic	Clearcut	Conventional	96.4	009
		Conventional Economic	Clearcut	Helicopter	0.0	4
		Conventional Economic	Clearcut	Long Line	2.5	2 10
		Conventional Economic	Clearcut	R/W	0.3	98
		Conventional Economic	Partial Cut	Conventional	42.3	26 910
		Conventional Economic	Partial Cut	Helicopter	1.	986
		Marginal	Clearcut	Conv/Heli	9.1	3 005
		Marginal	Clearcut	Conventional	0.	359
		Marginal	Clearcut	Helicopter	4.0	2 105
		Marginal	Partial Cut	Conventional	0.2	51
		NonConventional	Clearcut	Conventional	15.	12 5 9
		NonConventional	Clearcut	Helicopter	40.6	30 163
		NonConventional	Clearcut	R/W	0.0	16
		NonConventional	Partial Cut	Conventional	28.8	19 161
		NonConventional	Partial Cut	Helicopter	12.8	8 31
		Physically Inoperable	Clearcut	R/W	0.0	52
		Physically Inoperable	Partial Cut	Conventional	2.2	1 451
		Uneconomic	Clearcut	Conventional	4.6	1 583
		Uneconomic	Partial Cut	Conventional	1.8	599
92f014	1	Conventional Economic	Clearcut	Conventional	36.5	21 450
		Conventional Economic	Clearcut	R/W	0.6	161

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
	2	Conventional Economic	Clearcut	Conventional	32.1	19 923
		Conventional Economic	Clearcut	R/W	0.0	34
		NonConventional	Clearcut	Conventional	5.1	2 943
	3	Conventional Economic	Clearcut	Conventional	15.3	8 104
		NonConventional	Clearcut	Conventional	0.0	3
	4	Conventional Economic	Clearcut	Helicopter	1.8	1 1 5
		NonConventional	Clearcut	Helicopter	38.5	25 200
92f015	1	Conventional Economic	Clearcut	Conv/Long	0.0	50
		Conventional Economic	Clearcut	Conventional	248.6	158 8 4
		Conventional Economic	Clearcut	Heli/Long	13.9	10 261
		Conventional Economic	Clearcut	Helicopter	0.3	288
		Conventional Economic	Clearcut	R/W	6.9	3 4
		Conventional Economic	Partial Cut	Conventional	64.6	2 92
		Marginal	Clearcut	Conventional	48.8	16 958
		Marginal	Clearcut	R/W	0.5	188
		NonConventional	Clearcut	Conv/Long	0.1	91
		NonConventional	Clearcut	Conventional	58.6	32 385
		NonConventional	Clearcut	Helicopter	5.0	4 564
		NonConventional	Clearcut	R/W	1.1	52
		NonConventional	Partial Cut	Conventional	0.3	166
		Physically Inoperable	Clearcut	Conventional	6.0	1 983
		Physically Inoperable	Clearcut	R/W	0.	568
		Uneconomic	Clearcut	Conventional	.4	24 154
		Uneconomic	Clearcut	R/W	2.4	81
		Uneconomic	Partial Cut	Conventional	2.2	403
	2	Conventional Economic	Clearcut	Conv/Heli	42.2	26 84
		Conventional Economic	Clearcut	Conventional	231.	156 613
		Conventional Economic	Clearcut	Helicopter	39.8	25 1 8
		Conventional Economic	Clearcut	Long Line	14.9	8 4
		Conventional Economic	Clearcut	R/W	0.	210
		Marginal	Clearcut	Conventional	42.6	16 481
		Marginal	Clearcut	Helicopter	2.1	1 115
		Marginal	Clearcut	Long Line	1.2	583
		Marginal	Clearcut	R/W	0.0	13
		NonConventional	Clearcut	Conv/Heli	1 .8	12 040
		NonConventional	Clearcut	Helicopter	11 .0	85 50
		Physically Inoperable	Clearcut	Conventional	2.	1 00
		Physically Inoperable	Clearcut	Helicopter	2.	1 355
		Uneconomic	Clearcut	Conventional	15.9	4 685
		Uneconomic	Clearcut	Helicopter	32.6	11 420
		Uneconomic	Clearcut	R/W	0.0	10
	3	Conventional Economic	Clearcut	Conventional	184.	123 523
		Conventional Economic	Clearcut	Heli/Long	5.4	2 30
		Conventional Economic	Clearcut	Helicopter	68.2	35 580
		Conventional Economic	Clearcut	Long Line	19.6	10 25
		Conventional Economic	Clearcut	R/W	0.5	288
		Conventional Economic	Partial Cut	Conventional	15.1	8 154
		Marginal	Clearcut	Heli/Long	35.6	16 466
		Marginal	Clearcut	Helicopter	40.0	18 668
		Marginal	Clearcut	R/W	0.3	90
		NonConventional	Clearcut	Conventional	2 .2	19 904
		NonConventional	Clearcut	Heli/Long	44.1	33 656
		NonConventional	Clearcut	Helicopter	46.2	28 261
		NonConventional	Clearcut	Long Line	0.2	103
		NonConventional	Partial Cut	Conventional	0.3	210
		Physically Inoperable	Clearcut	Helicopter	1.	60
		Uneconomic	Clearcut	Conventional	42.3	13 508
		Uneconomic	Clearcut	Helicopter	11.0	3 385
		Uneconomic	Clearcut	R/W	0.4	136
		Uneconomic	Partial Cut	Conventional	0.0	6
	4	Conventional Economic	Clearcut	Conv/Heli	34.	21 199
		Conventional Economic	Clearcut	Conv/Long	14.5	11 231
		Conventional Economic	Clearcut	Conventional	2 5.3	153 3 9

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Conventional Economic	Clearcut	Helicopter	62.9	45 968
		Conventional Economic	Clearcut	R/W	1.8	1 163
		Conventional Economic	Partial Cut	Conventional	56.3	29 3 9
		Conventional Economic	Partial Cut	Heli/Long	1.	8 9
		Marginal	Clearcut	Conventional	52.6	20 442
		Marginal	Clearcut	Helicopter	8.	32 82
		Marginal	Clearcut	R/W	0.0	0
		Marginal	Partial Cut	Conventional	4.9	1 196
		NonConventional	Clearcut	Conv/Long	1.6	1 193
		NonConventional	Clearcut	Conventional	14.1	5 399
		NonConventional	Clearcut	Helicopter	63.2	40 012
		NonConventional	Partial Cut	Conventional	2.8	1 332
		NonConventional	Partial Cut	Heli/Long	18.1	11 1 4
		Physically Inoperable	Clearcut	Conventional	0.2	4
		Physically Inoperable	Clearcut	R/W	0.1	52
		Uneconomic	Clearcut	Conventional	64.0	18 18
		Uneconomic	Clearcut	Helicopter	0.0	9
92f016	1	Conventional Economic	Clearcut	Conventional	69.5	53 332
		Conventional Economic	Clearcut	Heli/Long	12.	8 242
		Conventional Economic	Clearcut	Helicopter	23.9	1 439
		Conventional Economic	Clearcut	Long Line	4.8	3 211
		Conventional Economic	Clearcut	R/W	0.9	82
		Conventional Economic	Partial Cut	Conv/Heli	1 .9	15 48
		Conventional Economic	Partial Cut	Conventional	41.6	25 585
		Marginal	Clearcut	Conventional	0.2	84
		Marginal	Clearcut	Helicopter	18.4	8 664
		Marginal	Partial Cut	Conventional	3.3	1 332
		NonConventional	Clearcut	Conventional	.4	3 663
		NonConventional	Clearcut	Heli/Long	14.6	561
		NonConventional	Clearcut	Helicopter	40.	34 28
		NonConventional	Clearcut	Long Line	11.2	64
		NonConventional	Partial Cut	Conventional	10.9	8 820
		Physically Inoperable	Partial Cut	Conv/Heli	0.0	0
		Uneconomic	Clearcut	Heli/Long	1.4	259
		Uneconomic	Clearcut	Helicopter	6.5	2 56
		Uneconomic	Partial Cut	Conventional	2.4	658
	2	Conventional Economic	Clearcut	Conventional	234.1	133 0 4
		Conventional Economic	Clearcut	Heli/Long	8.2	3 9 3
		Conventional Economic	Clearcut	Helicopter	35.5	2 0
		Conventional Economic	Clearcut	Long Line	12.5	398
		Conventional Economic	Clearcut	R/W	2.6	9 9
		Conventional Economic	Partial Cut	Conventional	88.4	44 418
		Marginal	Clearcut	Conventional	56.3	23 804
		Marginal	Clearcut	Heli/Long	1.0	33
		Marginal	Clearcut	Helicopter	3.6	1 82
		Marginal	Clearcut	Long Line	.1	3 281
		Marginal	Clearcut	R/W	0.5	2 9
		NonConventional	Clearcut	Conventional	6 .0	53 94
		NonConventional	Clearcut	Heli/Long	26.0	20 405
		NonConventional	Clearcut	Helicopter	5 .5	45 653
		NonConventional	Clearcut	Long Line	5.5	3 942
		NonConventional	Clearcut	R/W	0.3	2 8
		NonConventional	Partial Cut	Conventional	2.9	800
		Uneconomic	Clearcut	Conventional	.5	1 64
		Uneconomic	Clearcut	Heli/Long	0.3	146
		Uneconomic	Clearcut	Long Line	0.8	365
		Uneconomic	Clearcut	R/W	0.0	
	3	Conventional Economic	Clearcut	Conv/Heli	14.8	11 612
		Conventional Economic	Clearcut	Conventional	92.2	65 686
		Conventional Economic	Clearcut	Heli/Long	21.0	14 598
		Conventional Economic	Clearcut	Long Line	61.9	33 094
		Conventional Economic	Clearcut	R/W	0.8	190
		Conventional Economic	Partial Cut	Conv/Heli	14.2	10 523

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Conventional Economic	Partial Cut	Conventional	3 .0	19 055
		Marginal	Clearcut	Conv/Heli	3.	1 5 0
		Marginal	Clearcut	Conventional	13.2	4 885
		Marginal	Clearcut	Heli/Long	11.1	3 455
		Marginal	Clearcut	Long Line	1.2	458
		Marginal	Clearcut	R/W	0.8	410
		Marginal	Partial Cut	Helicopter	4.2	1 864
		NonConventional	Clearcut	Conv/Heli	0.9	880
		NonConventional	Clearcut	Conventional	11.5	11 320
		NonConventional	Clearcut	Heli/Long	2.6	1 41
		NonConventional	Clearcut	Long Line	6.0	3 88
		NonConventional	Clearcut	R/W	0.1	144
		NonConventional	Partial Cut	Heli/Long	15.2	13 0
		NonConventional	Partial Cut	Helicopter	9.9	8 049
		Physically Inoperable	Clearcut	Conventional	2.0	1 645
		Physically Inoperable	Clearcut	R/W	0.5	3 1
		Uneconomic	Clearcut	Conventional	0.	204
		Uneconomic	Clearcut	Heli/Long	8.0	2 498
		Uneconomic	Partial Cut	Helicopter	6.6	1 90
	4	Conventional Economic	Clearcut	Conventional	91.5	50 449
		Conventional Economic	Clearcut	Helicopter	6.	6 39
		Conventional Economic	Clearcut	Long Line	22.1	20 4 0
		Conventional Economic	Clearcut	R/W	0.6	458
		Marginal	Clearcut	Conventional	.8	3 269
		Marginal	Clearcut	Long Line	11.3	4 404
		Marginal	Clearcut	R/W	0.0	
		NonConventional	Clearcut	Conventional	36.4	30 982
		NonConventional	Clearcut	Helicopter	22.8	20 361
		NonConventional	Clearcut	Long Line	5.3	4 3 5
		NonConventional	Clearcut	R/W	0.1	132
		Physically Inoperable	Clearcut	Conventional	1.5	1 061
92f024	1	Conventional Economic	Clearcut	Conventional	115.6	6 586
		Conventional Economic	Clearcut	Helicopter	46.3	2 6 1
		Conventional Economic	Clearcut	R/W	4.0	1 94
		Conventional Economic	Partial Cut	Conventional	51.1	39 583
		Marginal	Clearcut	Conventional	3.4	1 205
		Marginal	Clearcut	Helicopter	8.	4 231
		Marginal	Clearcut	R/W	0.0	16
		Marginal	Partial Cut	Conventional	0.3	99
		NonConventional	Clearcut	Conventional	0.	528
		NonConventional	Clearcut	Helicopter	43.5	29 86
		NonConventional	Partial Cut	Conventional	3.8	3 118
		Physically Inoperable	Clearcut	Conventional	0.1	81
		Physically Inoperable	Clearcut	R/W	0.2	12
		Uneconomic	Clearcut	Helicopter	2.1	23
	2	Conventional Economic	Clearcut	Conventional	6.2	5 203
		Conventional Economic	Clearcut	Heli/Long	1 .1	690
		Conventional Economic	Clearcut	Helicopter	10.0	6 866
		Conventional Economic	Clearcut	R/W	0.6	501
		Conventional Economic	Partial Cut	Heli/Long	14.3	8 859
		Marginal	Clearcut	Heli/Long	2.9	1 165
		Marginal	Clearcut	Helicopter	11.2	5 001
		Marginal	Partial Cut	Heli/Long	5.2	2 301
		NonConventional	Clearcut	Conventional	1.3	948
		NonConventional	Clearcut	Heli/Long	21.	10 803
		NonConventional	Clearcut	Helicopter	26.3	24 2 6
		NonConventional	Partial Cut	Heli/Long	16.4	10 1 0
		Physically Inoperable	Clearcut	Heli/Long	4.1	1 952
		Uneconomic	Clearcut	Conventional	10.3	2 893
		Uneconomic	Clearcut	Helicopter	0.0	1
	3	Conventional Economic	Clearcut	Conventional	11.1	480
		Conventional Economic	Clearcut	Long Line	3.2	1 63
		Marginal	Clearcut	Conventional	1.	34

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Marginal	Clearcut	Helicopter	2.3	1 132
		Marginal	Clearcut	Long Line	1.4	689
		NonConventional	Clearcut	Helicopter	8.4	4 388
		NonConventional	Clearcut	Long Line	9.5	5 493
		Uneconomic	Clearcut	Helicopter	1.	632
		Uneconomic	Clearcut	Long Line	4.2	1 3 9
	4	Conventional Economic	Clearcut	Conventional	56.0	42 48
		Conventional Economic	Clearcut	R/W	0.8	319
		Conventional Economic	Partial Cut	Conventional	6 .1	60 134
		Marginal	Clearcut	Conventional	6.8	3 30
		Marginal	Clearcut	Helicopter	1 .4	8 290
		Marginal	Clearcut	R/W	0.3	10
		Marginal	Partial Cut	Conventional	9.1	4 056
		NonConventional	Clearcut	Conventional	15.3	8 6 8
		NonConventional	Clearcut	Helicopter	23.8	16 9
		NonConventional	Clearcut	R/W	0.5	310
		NonConventional	Partial Cut	Conventional	9.2	9 250
		NonConventional	Partial Cut	Helicopter	61.	31 350
		Physically Inoperable	Clearcut	Helicopter	1.6	980
		Physically Inoperable	Partial Cut	Conventional	5.1	5 13
		Uneconomic	Clearcut	Helicopter	0.	218
		Uneconomic	Clearcut	R/W	0.2	66
		Uneconomic	Partial Cut	Conventional	0.0	
92f025	1	Conventional Economic	Clearcut	Conventional	1 .2	132 010
		Conventional Economic	Clearcut	Heli/Long	13.5	9 206
		Conventional Economic	Clearcut	Helicopter	1.	49 129
		Conventional Economic	Clearcut	Long Line	29.4	13 698
		Conventional Economic	Clearcut	R/W	2.3	1 299
		Marginal	Clearcut	Conventional	6.2	2 512
		Marginal	Clearcut	Helicopter	1.1	334
		Marginal	Clearcut	Long Line	10.4	5 112
		NonConventional	Clearcut	Conventional	16.2	13 83
		NonConventional	Clearcut	Heli/Long	4.5	3 010
		NonConventional	Clearcut	Helicopter	101.	85 568
		NonConventional	Clearcut	Long Line	45.8	30 951
		NonConventional	Clearcut	R/W	0.5	398
		NonConventional	Partial Cut	Heli/Long	2 .5	12 891
		NonConventional	Partial Cut	Helicopter	39.2	30 242
		Physically Inoperable	Clearcut	Conventional	0.0	12
		Uneconomic	Clearcut	Helicopter	0.6	224
		Uneconomic	Clearcut	Long Line	10.6	4 183
	2	Conventional Economic	Clearcut	Conventional	46.0	33 690
		Conventional Economic	Clearcut	Heli/Long	18.3	12 092
		Conventional Economic	Clearcut	Helicopter	19.3	9 85
		Conventional Economic	Clearcut	Long Line	36.3	36 051
		Conventional Economic	Clearcut	R/W	0.6	44
		Conventional Economic	Partial Cut	Conventional	21.3	4 29
		Marginal	Clearcut	Conv/Heli	5.8	1 823
		Marginal	Clearcut	Heli/Long	8.1	3 8 8
		NonConventional	Clearcut	Conventional	1 .8	15 340
		NonConventional	Clearcut	Heli/Long	3.3	2 224
		NonConventional	Clearcut	Helicopter	65.4	52 122
		NonConventional	Clearcut	Long Line	5.5	5 003
		NonConventional	Clearcut	R/W	0.1	106
		NonConventional	Partial Cut	Conventional	0.	362
		Physically Inoperable	Clearcut	Conventional	0.0	1
		Physically Inoperable	Clearcut	Heli/Long	0.5	362
		Physically Inoperable	Clearcut	R/W	0.2	129
		Uneconomic	Clearcut	Conv/Heli	9.9	3 091
		Uneconomic	Clearcut	Long Line	0.4	152
		Uneconomic	Clearcut	R/W	0.2	2
	3	Conventional Economic	Clearcut	Conventional	84.4	52 451
		Conventional Economic	Clearcut	Helicopter	3.9	2 963

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Conventional Economic	Clearcut	Long Line	29.1	14 662
		Conventional Economic	Clearcut	R/W	0.2	145
		Conventional Economic	Partial Cut	Helicopter	16.6	9 336
		Marginal	Clearcut	Conventional	26.8	10 0 3
		Marginal	Clearcut	Helicopter	.9	2 125
		Marginal	Clearcut	Long Line	5.4	2 662
		Marginal	Clearcut	R/W	0.1	3
		NonConventional	Clearcut	Conventional	43.5	36 316
		NonConventional	Clearcut	Helicopter	46.0	38 69
		NonConventional	Clearcut	Long Line	35.5	24 13
		NonConventional	Clearcut	R/W	0.5	301
		NonConventional	Partial Cut	Helicopter	22.9	15 34
		Physically Inoperable	Clearcut	R/W	1.2	360
		Uneconomic	Clearcut	Conventional	8.6	2 8
		Uneconomic	Clearcut	Helicopter	11.9	3 830
		Uneconomic	Clearcut	R/W	0.9	2 3
	4	Conventional Economic	Clearcut	Conventional	10 .4	5 048
		Conventional Economic	Clearcut	Helicopter	1 .4	18 118
		Conventional Economic	Clearcut	Long Line	.8	10 90
		Conventional Economic	Clearcut	R/W	0.0	6
		Conventional Economic	Partial Cut	Conventional	.3	2 515
		Marginal	Partial Cut	Conventional	13.3	3 885
		NonConventional	Clearcut	Conventional	4.0	2 261
		NonConventional	Clearcut	Helicopter	119.4	98 506
		NonConventional	Clearcut	Long Line	21.1	16 9 8
		Physically Inoperable	Clearcut	Helicopter	4.3	062
		Physically Inoperable	Clearcut	Long Line	0.2	339
92f026	1	Conventional Economic	Clearcut	Conventional	32.6	14 12
		Conventional Economic	Clearcut	Helicopter	25.1	14 981
		Conventional Economic	Clearcut	R/W	1.0	38
		Conventional Economic	Partial Cut	Conventional	1 6.2	35 82
		Marginal	Clearcut	Helicopter	8.8	3 166
		NonConventional	Clearcut	Helicopter	11.6	8 952
		Uneconomic	Clearcut	Helicopter	8.	2 9 5
	2	Conventional Economic	Clearcut	Conv/Heli	.1	4 636
		Conventional Economic	Clearcut	Conventional	23.1	3 952
		Conventional Economic	Clearcut	Helicopter	0.2	20
		Conventional Economic	Clearcut	R/W	0.0	2
		Conventional Economic	Partial Cut	Conventional	316.3	56 560
		NonConventional	Clearcut	Conv/Heli	8.0	11 858
		NonConventional	Clearcut	Helicopter	6.9	6 808
	3	Conventional Economic	Clearcut	Conventional	19.8	9 140
		Conventional Economic	Clearcut	Helicopter	3.4	3 069
		Conventional Economic	Clearcut	R/W	0.3	159
		Conventional Economic	Partial Cut	Conventional	3.4	10 98
		Marginal	Clearcut	Conventional	14.3	6 210
		Marginal	Clearcut	R/W	0.2	1
		NonConventional	Clearcut	Helicopter	34.1	29 06
	4	Conventional Economic	Clearcut	Conventional	34.3	18 404
		Conventional Economic	Clearcut	Helicopter	8.3	6 388
		Conventional Economic	Clearcut	R/W	0.9	68
		Conventional Economic	Partial Cut	Conventional	164.5	18 818
		Marginal	Clearcut	Conventional	12.8	3 318
		Marginal	Clearcut	Helicopter	0.1	26
		NonConventional	Clearcut	Helicopter	5.9	3 069
92f033	1	Conventional Economic	Clearcut	Conv/Heli	0.4	269
		Conventional Economic	Clearcut	Conv/Long	0.3	13
		Conventional Economic	Clearcut	Conventional	201.8	134 051
		Conventional Economic	Clearcut	Helicopter	4.4	3 23
		Conventional Economic	Clearcut	Long Line	36.1	2 8 3
		Conventional Economic	Clearcut	R/W	3.3	1 59
		Marginal	Clearcut	Conv/Long	9.4	3 88
		Marginal	Clearcut	Conventional	.1	2 23

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Marginal	Clearcut	Helicopter	1.8	90
		Marginal	Clearcut	Long Line	2.6	1 068
		Marginal	Clearcut	R/W	0.5	160
		NonConventional	Clearcut	Conv/Long	15.1	11 124
		NonConventional	Clearcut	Conventional	40.0	2 340
		NonConventional	Clearcut	Helicopter	38.8	30 41
		NonConventional	Clearcut	Long Line	42.6	32 430
		NonConventional	Clearcut	R/W	2.1	1 316
		Uneconomic	Clearcut	Conv/Long	2.5	90
	2	Conventional Economic	Clearcut	Conventional	28.6	16 392
		Conventional Economic	Clearcut	Helicopter	0.4	201
		Conventional Economic	Clearcut	R/W	0.6	34
		Marginal	Clearcut	Helicopter	9.2	3 466
		NonConventional	Clearcut	Conventional	2.2	1 254
		NonConventional	Clearcut	Helicopter	53.0	38 684
		Uneconomic	Clearcut	Helicopter	19.0	8 6
	3	Conventional Economic	Clearcut	Conventional	13.5	528
		Conventional Economic	Clearcut	Long Line	19.8	13 899
		Conventional Economic	Partial Cut	Helicopter	19.8	6 313
		Marginal	Clearcut	Conventional	35.3	12 62
		Marginal	Clearcut	Long Line	0.2	81
		Marginal	Clearcut	R/W	0.4	146
		NonConventional	Clearcut	Conventional	19.	15 802
		NonConventional	Clearcut	Long Line	22.1	15 319
		NonConventional	Clearcut	R/W	1.0	6
		NonConventional	Partial Cut	Helicopter	28.8	16 966
		Uneconomic	Clearcut	R/W	0.2	52
	4	Conventional Economic	Clearcut	Conv/Heli	3 .4	26 289
		Conventional Economic	Clearcut	Conventional	20.3	14 003
		Conventional Economic	Clearcut	Helicopter	31.6	20 529
		Conventional Economic	Clearcut	Long Line	43.0	31 342
		Conventional Economic	Clearcut	R/W	0.4	2 2
		Marginal	Clearcut	Conventional	4.6	1 3 9
		Marginal	Clearcut	Helicopter	0.4	145
		Marginal	Clearcut	Long Line	13.3	5 5 2
		NonConventional	Clearcut	Conv/Heli	3 .6	2 3 9
		NonConventional	Clearcut	Conventional	22.1	14 848
		NonConventional	Clearcut	Helicopter	135.	98 383
		NonConventional	Clearcut	Long Line	49.5	40 806
		NonConventional	Clearcut	R/W	0.4	328
		Uneconomic	Clearcut	Helicopter	0.0	2
		Uneconomic	Clearcut	Long Line	.4	2 54
92f034	1	Conventional Economic	Clearcut	Conventional	23 .5	110 112
		Conventional Economic	Clearcut	Helicopter	0.2	109
		Conventional Economic	Clearcut	R/W	6.9	3 115
		Conventional Economic	Partial Cut	Conventional	183.6	50 5
		Marginal	Clearcut	Conventional	31.3	13 883
		Marginal	Clearcut	Helicopter	.1	2 98
		Marginal	Clearcut	R/W	0.6	29
		Marginal	Partial Cut	Conventional	1.2	205
		NonConventional	Clearcut	Conventional	5 .0	3 498
		NonConventional	Clearcut	Helicopter	8.3	6 3 9
		NonConventional	Clearcut	Long Line	33.0	30 283
		NonConventional	Clearcut	R/W	1.4	983
		Physically Inoperable	Clearcut	Conventional	0.0	11
		Physically Inoperable	Clearcut	R/W	0.4	229
		Physically Inoperable	Partial Cut	Conventional	0.8	188
		Uneconomic	Clearcut	R/W	0.6	169
	2	Conventional Economic	Clearcut	Conventional	126.	66 34
		Conventional Economic	Clearcut	Helicopter	40.5	21 404
		Conventional Economic	Clearcut	Long Line	12.3	6 93
		Conventional Economic	Clearcut	R/W	2.5	1 006
		Conventional Economic	Partial Cut	Conventional	143.0	31 633

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Marginal	Clearcut	Conventional	4.2	1 421
		Marginal	Clearcut	Helicopter	20.6	10 855
		NonConventional	Clearcut	Helicopter	65.	4 896
		Physically Inoperable	Clearcut	Helicopter	3.	1 990
		Physically Inoperable	Clearcut	Long Line	9.1	8 643
		Uneconomic	Clearcut	Conventional	13.2	4 148
		Uneconomic	Clearcut	R/W	0.0	18
	3	Conventional Economic	Clearcut	Conventional	230.1	128 9
		Conventional Economic	Clearcut	Helicopter	56.9	30 924
		Conventional Economic	Clearcut	R/W	2.5	09
		Conventional Economic	Partial Cut	Conventional	30.8	50
		Conventional Economic	Partial Cut	Helicopter	23.9	8 56
		Marginal	Clearcut	Conventional	1 .3	6 264
		Marginal	Clearcut	Helicopter	10.3	4 261
		Marginal	Partial Cut	Conventional	0.9	229
		NonConventional	Clearcut	Conventional	11.2	8 003
		NonConventional	Clearcut	Helicopter	56.2	40 944
		NonConventional	Clearcut	Long Line	1.3	1 319
		NonConventional	Partial Cut	Conventional	0.0	21
		NonConventional	Partial Cut	Helicopter	2.5	886
		Physically Inoperable	Clearcut	Helicopter	1.2	42
		Physically Inoperable	Clearcut	R/W	0.4	191
		Physically Inoperable	Partial Cut	Helicopter	14.0	4 22
		Uneconomic	Clearcut	Conventional	11.8	3 326
	4	Conventional Economic	Clearcut	Conventional	18 .9	104 20
		Conventional Economic	Clearcut	Helicopter	11.0	5 101
		Conventional Economic	Clearcut	Long Line	0.0	1
		Conventional Economic	Clearcut	R/W	3.3	1 810
		Conventional Economic	Partial Cut	Conventional	124.4	45 246
		Marginal	Clearcut	Conventional	21.	6 9
		Marginal	Clearcut	Helicopter	1.	50
		Marginal	Clearcut	R/W	0.2	5
		Marginal	Partial Cut	Conventional	12.5	2 663
		NonConventional	Clearcut	Conventional	.	4 155
		NonConventional	Clearcut	Helicopter	84.	55 069
		NonConventional	Clearcut	Long Line	9.5	6 500
		Physically Inoperable	Clearcut	R/W	0.0	2
		Uneconomic	Clearcut	Conventional	0.2	65
92f035	1	Conventional Economic	Clearcut	Conventional	151.6	86 93
		Conventional Economic	Clearcut	R/W	1.6	506
		Conventional Economic	Partial Cut	Conventional	2.6	956
		Marginal	Clearcut	Conventional	18.6	5 568
		Marginal	Clearcut	R/W	0.4	116
		Marginal	Partial Cut	Conventional	0.	226
		NonConventional	Clearcut	Conventional	21.2	11 992
		NonConventional	Clearcut	Helicopter	14.1	13 620
		NonConventional	Clearcut	R/W	0.2	132
		Physically Inoperable	Clearcut	Conventional	0.0	0
		Uneconomic	Clearcut	R/W	0.6	154
	2	Conventional Economic	Clearcut	Conventional	53.2	35 4
		Conventional Economic	Clearcut	Helicopter	43.0	28 981
		Conventional Economic	Clearcut	R/W	0.8	126
		Conventional Economic	Partial Cut	Conventional	2 2.8	39 81
		Marginal	Clearcut	Conventional	23.	8 681
		Marginal	Clearcut	Helicopter	8.9	2 989
		NonConventional	Clearcut	Conventional	29.8	18 829
		NonConventional	Clearcut	Helicopter	90.3	51 19
		NonConventional	Clearcut	R/W	0.0	18
	3	Conventional Economic	Clearcut	Conv/Heli	4.3	4 019
		Conventional Economic	Clearcut	Conventional	345.	184 884
		Conventional Economic	Clearcut	Helicopter	26.0	8 360
		Conventional Economic	Clearcut	R/W	0.	153
		Conventional Economic	Partial Cut	Conventional	3 .1	12 468

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Marginal	Clearcut	Conv/Heli	6.8	2 156
		Marginal	Clearcut	Conventional	6.9	2 212
		Marginal	Partial Cut	Conventional	11.6	2 0
		NonConventional	Clearcut	Conv/Heli	9.0	8 00
		NonConventional	Clearcut	Conventional	18.4	11 835
		NonConventional	Clearcut	Helicopter	55.3	40 39
		NonConventional	Partial Cut	Conventional	1 . 6	8 584
		Uneconomic	Clearcut	Conventional	13.3	3 8
	4	Conventional Economic	Clearcut	Conventional	82.9	50 2 3
		Conventional Economic	Clearcut	Helicopter	2.6	1 415
		Conventional Economic	Clearcut	R/W	2.3	1 588
		Conventional Economic	Partial Cut	Conventional	205.9	40 856
		Marginal	Clearcut	Conventional	16.1	6 953
		Marginal	Clearcut	Helicopter	2.4	81
		Marginal	Clearcut	R/W	0.0	4
		Marginal	Partial Cut	Conventional	11.8	2 165
		NonConventional	Clearcut	Conventional	6.1	3 25
		NonConventional	Clearcut	Helicopter	2 . 5	15 433
		NonConventional	Clearcut	R/W	0.0	5
		Uneconomic	Clearcut	R/W	0.0	28
92f036	1	Conventional Economic	Clearcut	Conventional	86.5	3 14
		Conventional Economic	Clearcut	R/W	0.	4 5
		Conventional Economic	Partial Cut	Conventional	12.8	2 0
	2	Conventional Economic	Clearcut	Conventional	1 .	9 264
		Conventional Economic	Clearcut	R/W	0.2	9
		Conventional Economic	Partial Cut	Conventional	129.6	12 685
		NonConventional	Clearcut	Conventional	9.6	4 680
		NonConventional	Clearcut	R/W	0.0	10
	3	Conventional Economic	Clearcut	Conventional	241.2	145 366
		Conventional Economic	Clearcut	R/W	2.5	1 16
		Conventional Economic	Partial Cut	Conventional	88.6	21 406
		Uneconomic	Clearcut	Conventional	16.8	6 289
	4	Conventional Economic	Clearcut	R/W	0.0	10
		Conventional Economic	Partial Cut	Conventional	225.3	48 6
		NonConventional	Partial Cut	Conventional	30.1	6 188
92f044	1	Conventional Economic	Clearcut	Conventional	110.	66 881
		Conventional Economic	Clearcut	Helicopter	0.8	548
		Conventional Economic	Clearcut	R/W	1.8	439
		Marginal	Clearcut	Conventional	1.0	493
		NonConventional	Clearcut	Conventional	40.9	29 101
		NonConventional	Clearcut	Helicopter	11.8	10 900
		NonConventional	Clearcut	R/W	0.8	5
		Physically Inoperable	Clearcut	R/W	1.0	54
		Uneconomic	Clearcut	Conventional	16.	4 859
		Uneconomic	Clearcut	Helicopter	5.1	1 6
		Uneconomic	Clearcut	R/W	0.0	0
	2	Conventional Economic	Clearcut	Conventional	61.0	38 9 0
		Conventional Economic	Clearcut	R/W	0.8	381
		Marginal	Clearcut	Conventional	1.3	614
		NonConventional	Clearcut	Conventional	0.3	236
		Uneconomic	Clearcut	Conventional	24.9	8 63
		Uneconomic	Clearcut	R/W	0.2	60
	3	Conventional Economic	Clearcut	Conventional	60.9	39 838
		Conventional Economic	Clearcut	Helicopter	6 . 0	41 604
		Conventional Economic	Clearcut	R/W	1.0	408
		NonConventional	Clearcut	Conventional	5.9	5 439
		NonConventional	Clearcut	Helicopter	1 . 1	10 3 2
		Uneconomic	Clearcut	Conventional	3.9	1 362
	4	Conventional Economic	Clearcut	Conventional	39.6	25 014
		Conventional Economic	Clearcut	Helicopter	0.3	109
		Conventional Economic	Clearcut	R/W	0.2	13
		Marginal	Clearcut	Conventional	11.0	3 551
		Uneconomic	Clearcut	Conventional	8.5	3 069

Mapsheet	Period	Operability	Silviculture System	Harvest System	Area(ha)	Volume
		Uneconomic	Clearcut	R/W	0.1	48
92f045	1	Conventional Economic	Clearcut	Conv/Long	1.2	583
		Conventional Economic	Clearcut	Conventional	91.	51 555
		Conventional Economic	Clearcut	Helicopter	1.0	5 3
		Conventional Economic	Clearcut	R/W	2.0	69
		Marginal	Clearcut	Conventional	3.8	1 123
		NonConventional	Clearcut	Conventional	2.8	1 389
		NonConventional	Clearcut	Helicopter	36.0	22 636
	2	Conventional Economic	Clearcut	Conventional	66.4	39 429
		Conventional Economic	Clearcut	Helicopter	13.6	231
		Conventional Economic	Clearcut	R/W	0.2	36
		Conventional Economic	Partial Cut	Conventional	46.3	6 539
		Marginal	Clearcut	Conventional	8.8	3 94
		Marginal	Clearcut	Helicopter	0.0	3
		NonConventional	Clearcut	Conventional	2.0	1 0 4
		NonConventional	Clearcut	Heli/Long	1.2	4
		NonConventional	Clearcut	Helicopter	51.1	31 825
		Uneconomic	Clearcut	Helicopter	0.4	111
	3	Conventional Economic	Clearcut	Conv/Long	24.2	11 404
		Conventional Economic	Clearcut	Conventional	36.6	1 858
		Conventional Economic	Clearcut	Helicopter	3.8	2 229
		Conventional Economic	Clearcut	R/W	1.	359
		Conventional Economic	Partial Cut	Conventional	96.2	10 995
		Marginal	Clearcut	Conv/Long	8.1	3 620
		Marginal	Clearcut	Conventional	20.5	10 510
		Marginal	Clearcut	Helicopter	.4	3 841
		Marginal	Clearcut	R/W	0.2	103
		NonConventional	Clearcut	Conv/Long	0.1	3
		NonConventional	Clearcut	Helicopter	29.0	18 139
		Uneconomic	Clearcut	Conventional	19.3	4 61
		Uneconomic	Clearcut	R/W	0.1	25
		Uneconomic	Partial Cut	Conventional	0.9	5
	4	Conventional Economic	Clearcut	Conventional	43.4	24 62
		Conventional Economic	Clearcut	Helicopter	0.2	94
		Conventional Economic	Clearcut	R/W	0.9	50
		Marginal	Clearcut	Conventional	5.3	1 549
		Marginal	Clearcut	Helicopter	0.6	2 5
		NonConventional	Clearcut	Helicopter	25.0	1 555
92f046	1	Conventional Economic	Clearcut	Conventional	21.1	18 035
		NonConventional	Clearcut	Conventional	2.	1 26
	2	Conventional Economic	Clearcut	Conventional	51.3	30 589
		Marginal	Clearcut	Conventional	4.2	2 168
		Marginal	Clearcut	Heli/Long	5.4	2 496
		NonConventional	Clearcut	Conventional	5.9	3 688
		NonConventional	Clearcut	Heli/Long	22.0	12 49
		NonConventional	Clearcut	Helicopter	4.5	2 903
	4	Conventional Economic	Clearcut	Conventional	14.	12 961
		Conventional Economic	Clearcut	R/W	0.2	100
92f055	2	Conventional Economic	Clearcut	Conventional	6.6	2 996
		Conventional Economic	Clearcut	Helicopter	0.0	0
		Conventional Economic	Clearcut	Long Line	20.0	11 380
		Conventional Economic	Clearcut	R/W	0.1	42
		Marginal	Clearcut	Conventional	0.1	2
		Marginal	Clearcut	Helicopter	.5	3 910
		Marginal	Clearcut	Long Line	2.5	1 305
		NonConventional	Clearcut	Conventional	8.	3 892
		NonConventional	Clearcut	Helicopter	8.0	026
		NonConventional	Clearcut	Long Line	15.4	11 33
	4	Conventional Economic	Clearcut	Conventional	2.6	1 559
		Marginal	Clearcut	Conventional	3.9	1 410
		Marginal	Clearcut	Helicopter	12.9	5 899
		NonConventional	Clearcut	Helicopter	19.6	15 404
		Uneconomic	Clearcut	Helicopter	4.0	1 458

MAPS

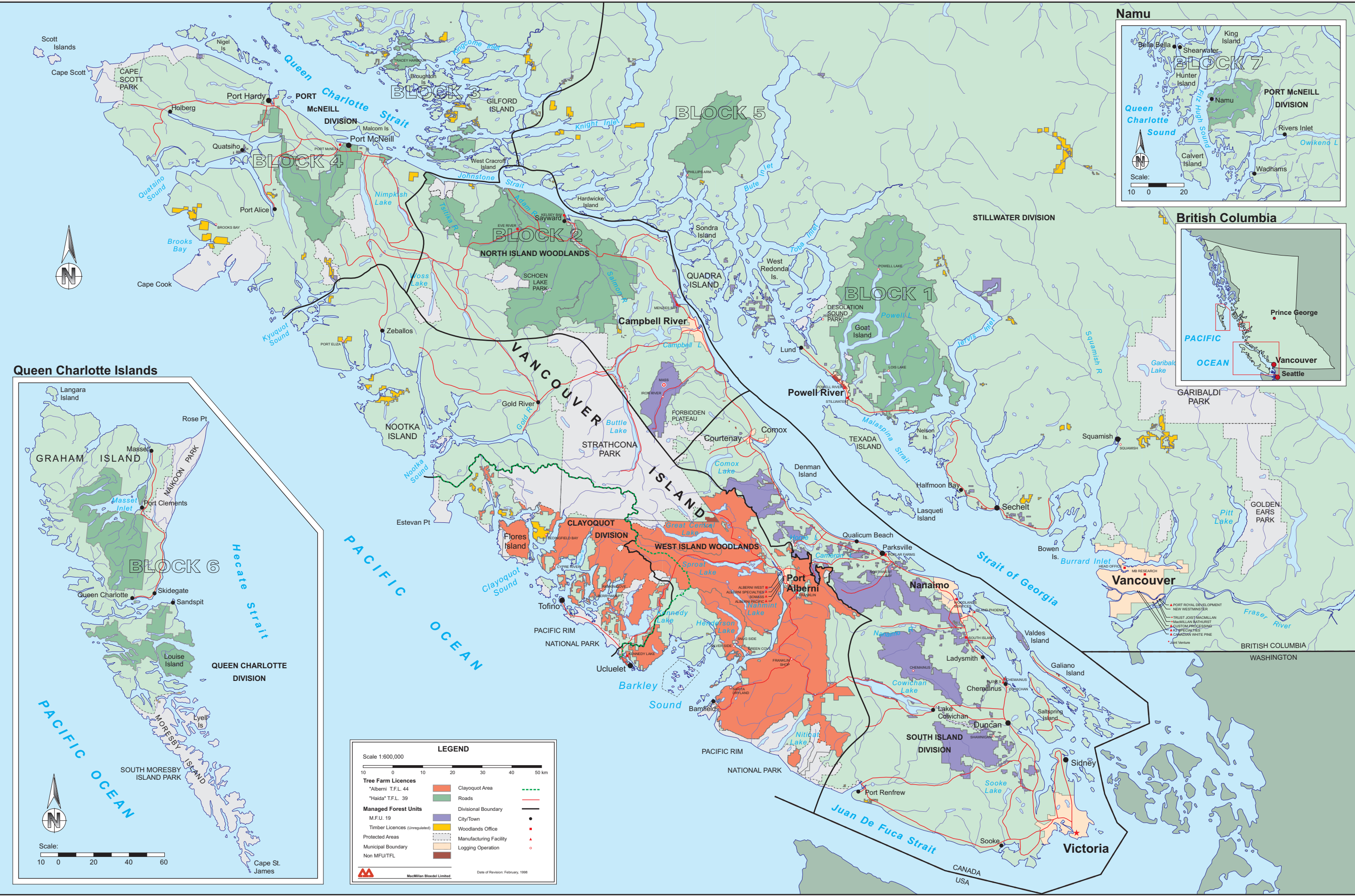
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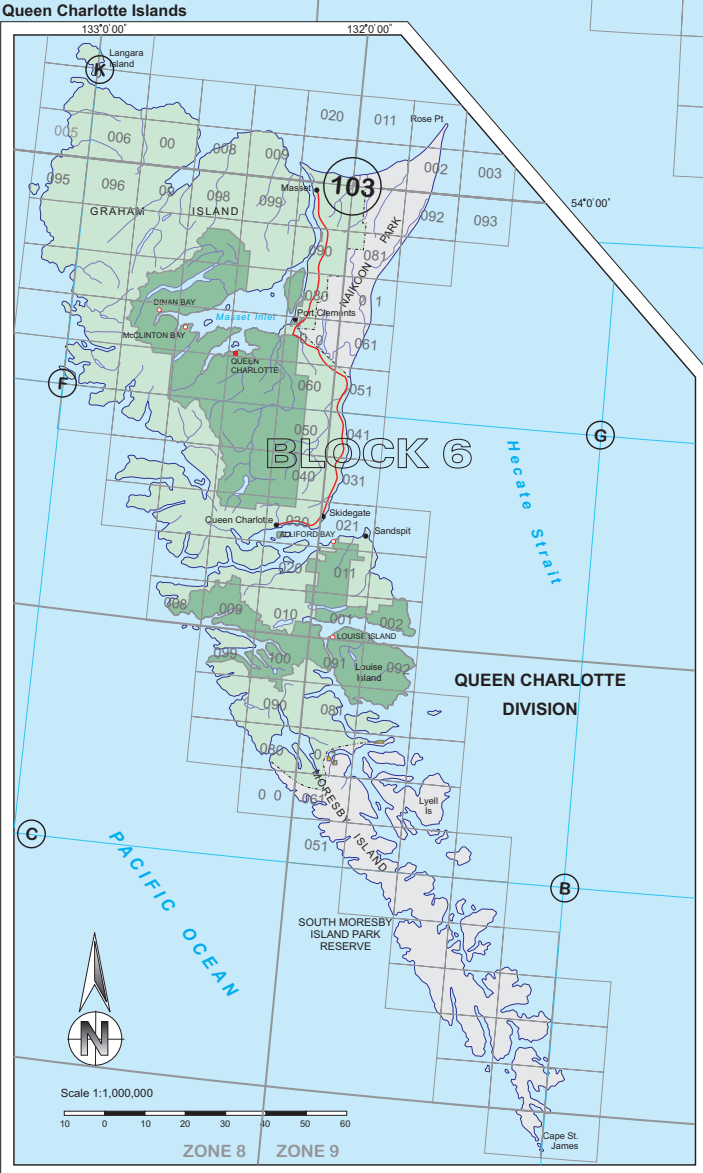
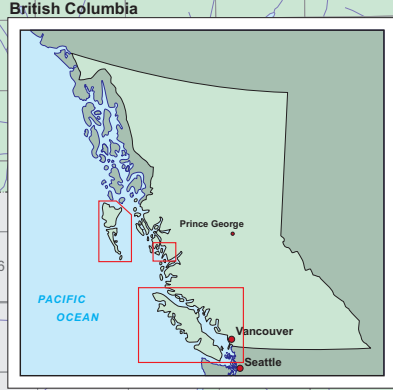
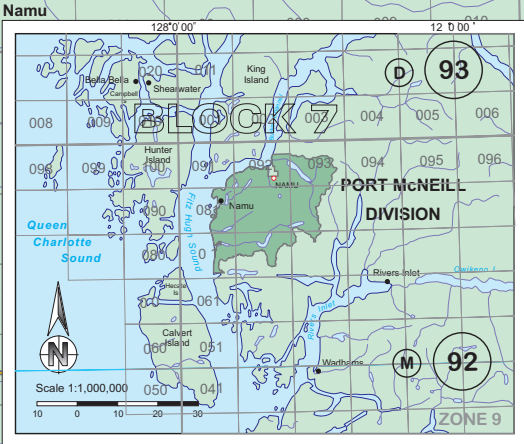
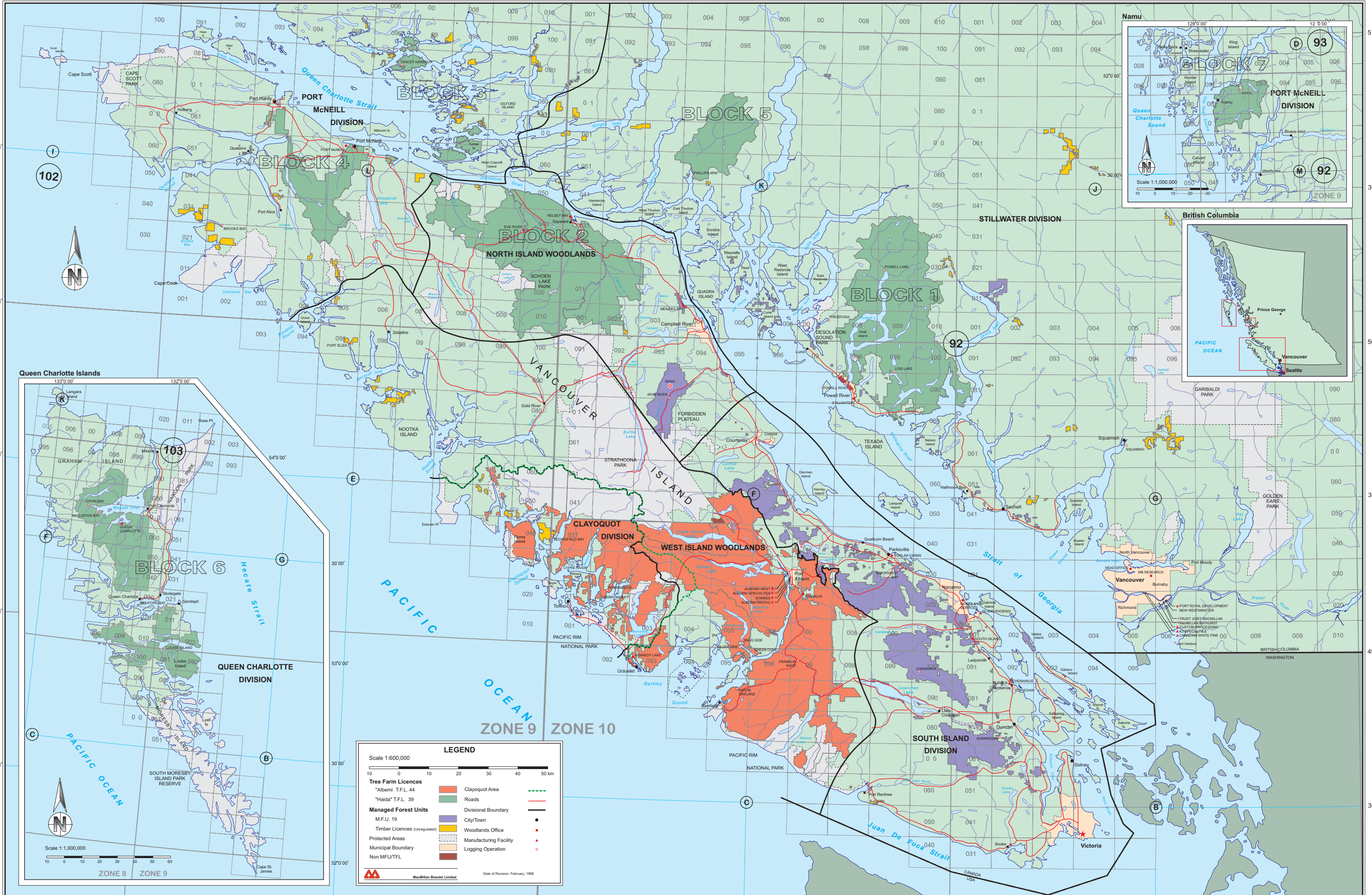
[MacMillan Bloedel Tenure Map](#)

[MacMillan Bloedel Tenure Map with 1:20 000 Grids](#)

[Arcview Images - Clayoquot Overview](#)

MacMillan Bloedel Tenure Map - Vancouver Island





LEGEND

Scale 1:600,000

10 0 10 20 30 40 50 km

Tree Farm Licences

- "Alberni" T.F.L. 44
- "Haida" T.F.L. 39

Managed Forest Units

- M.F.U. 19
- Timber Licences (Unregulated)
- Protected Areas
- Municipal Boundary
- Non MFU/TFL

Clayoquot Area

- Clayoquot Area
- Roads
- Divisional Boundary
- City/Town
- Woodlands Office
- Manufacturing Facility
- Logging Operation

MacMillan Bloedel Limited

Date of Revision: February, 1998

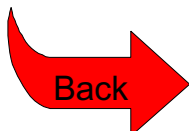
Management Plan No. 3

TFL 44

Click on portion of map you want to review

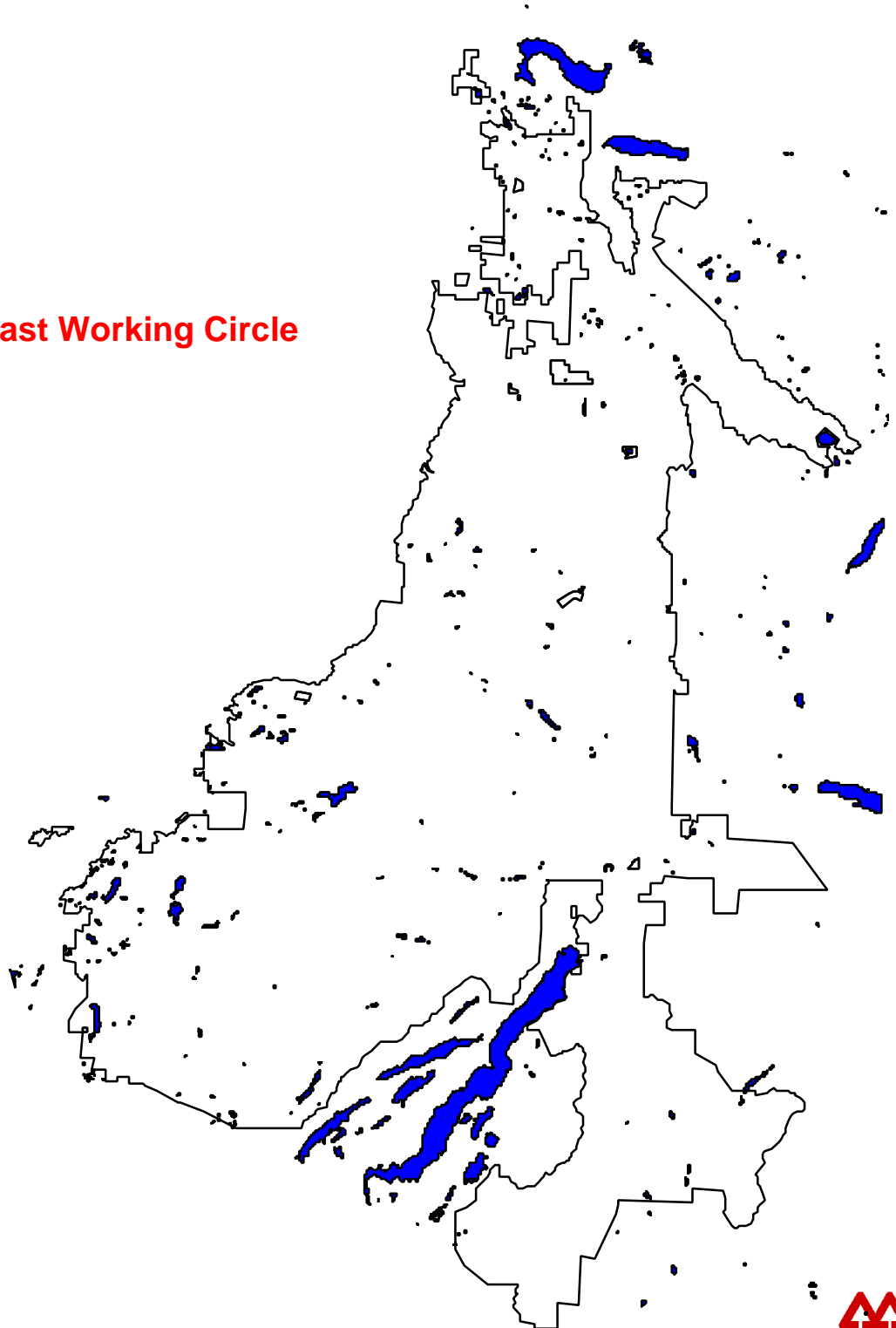


MacMillan Bloedel Ltd.



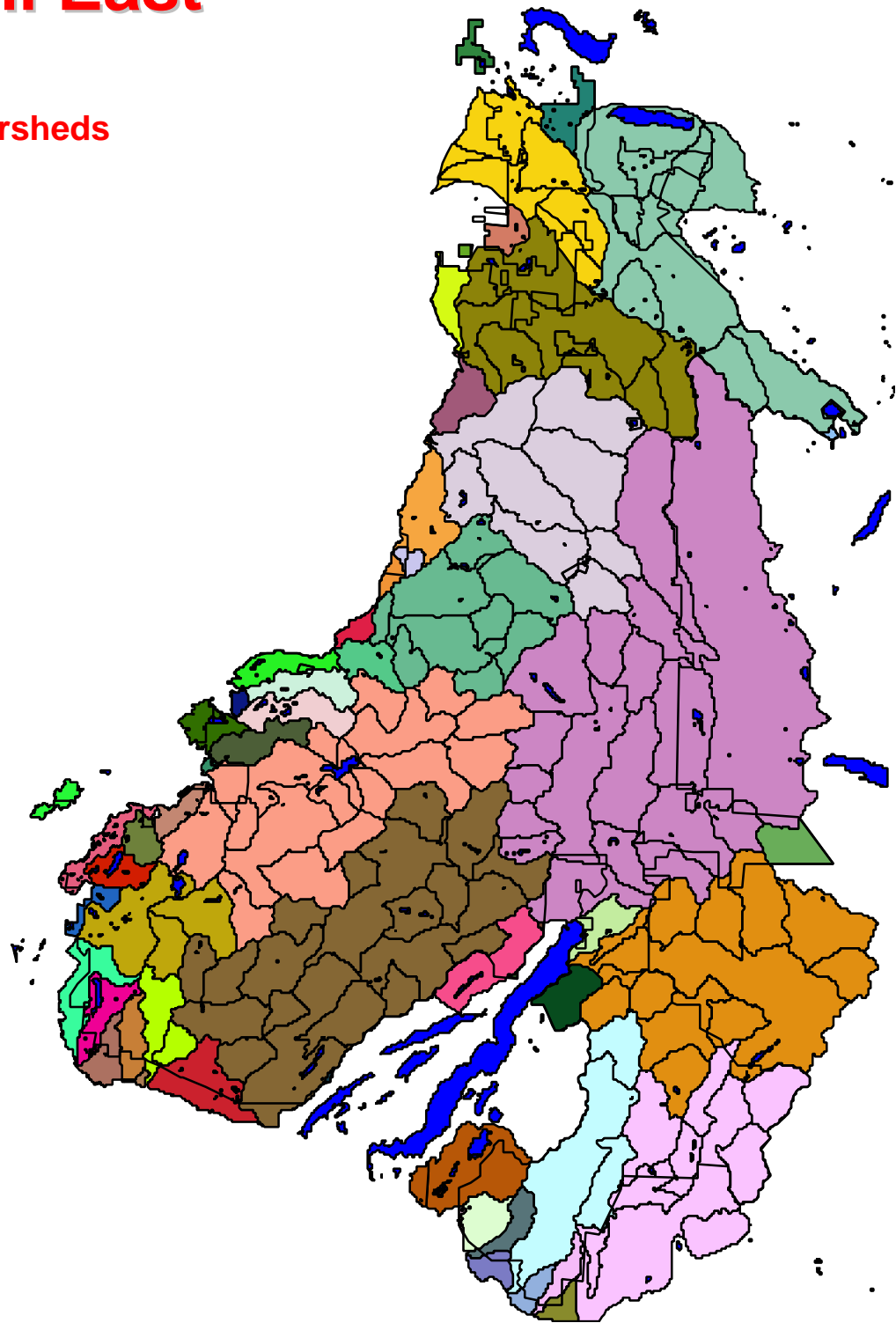
Alberni East

Alberni East Working Circle



Alberni East

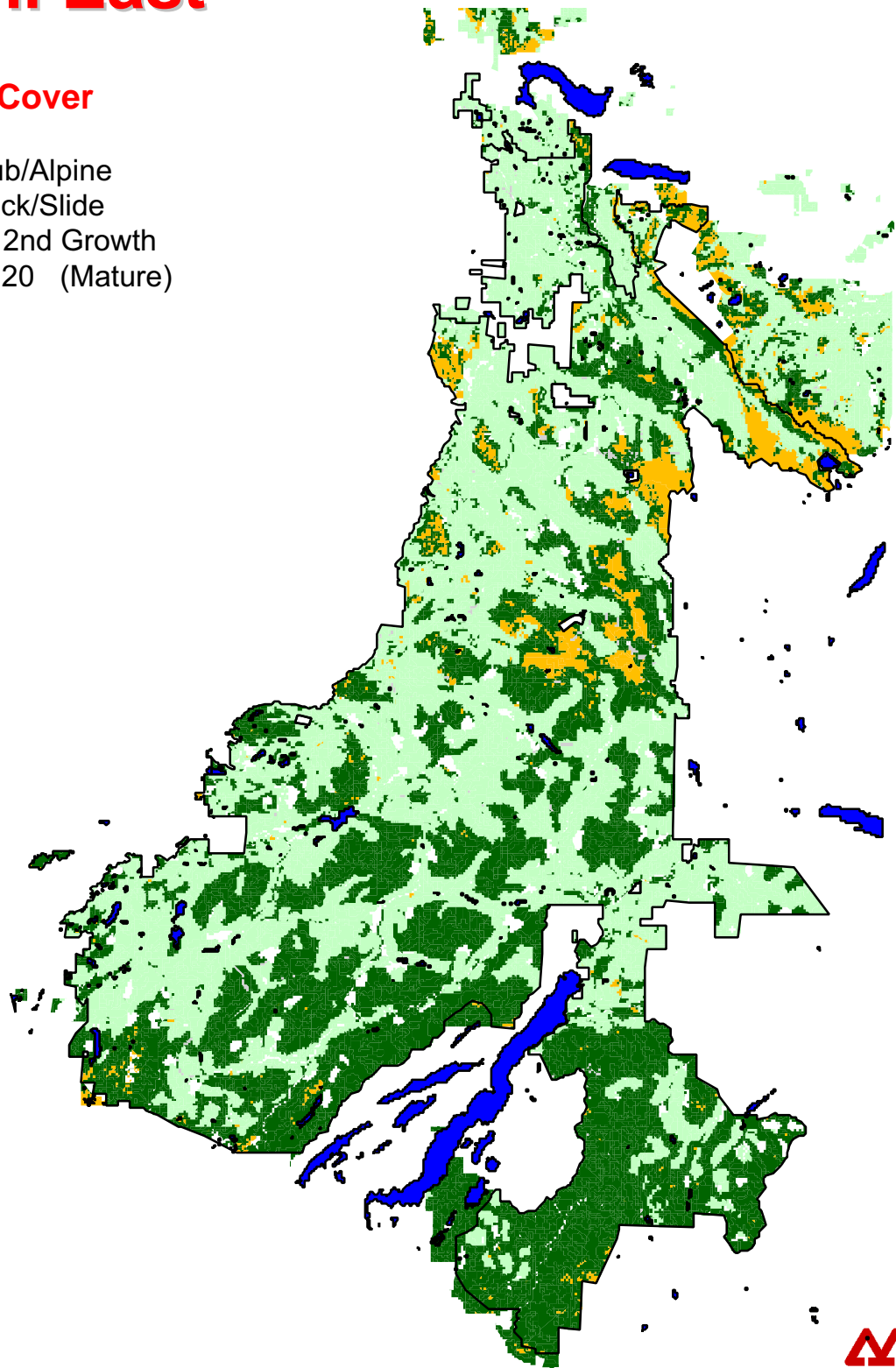
Watersheds



Alberni East

Forest Cover

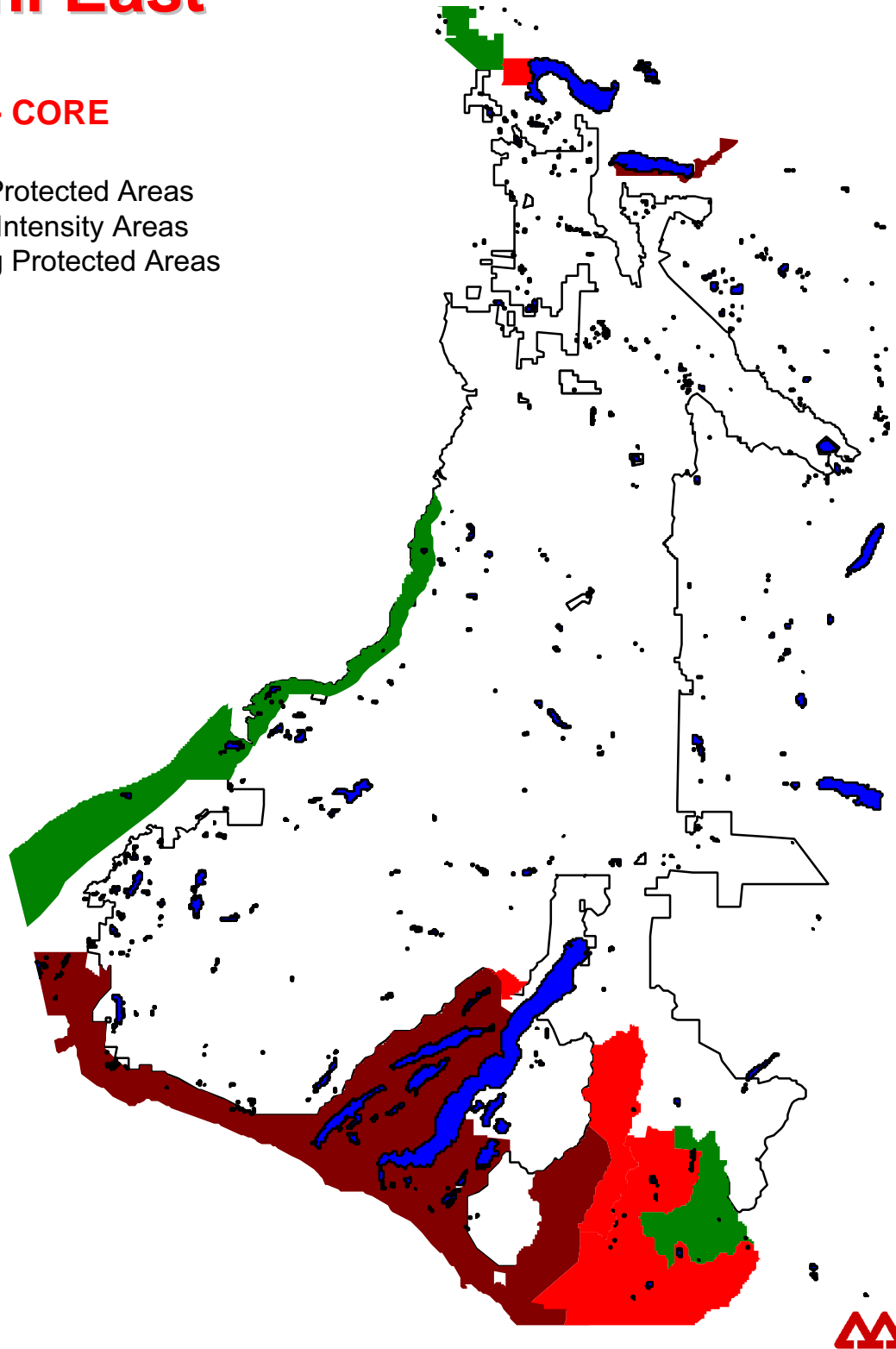
Tan Scrub/Alpine
Gray Rock/Slide
Light Green 2nd Growth
Dark Green 120 (Mature)



Alberni East

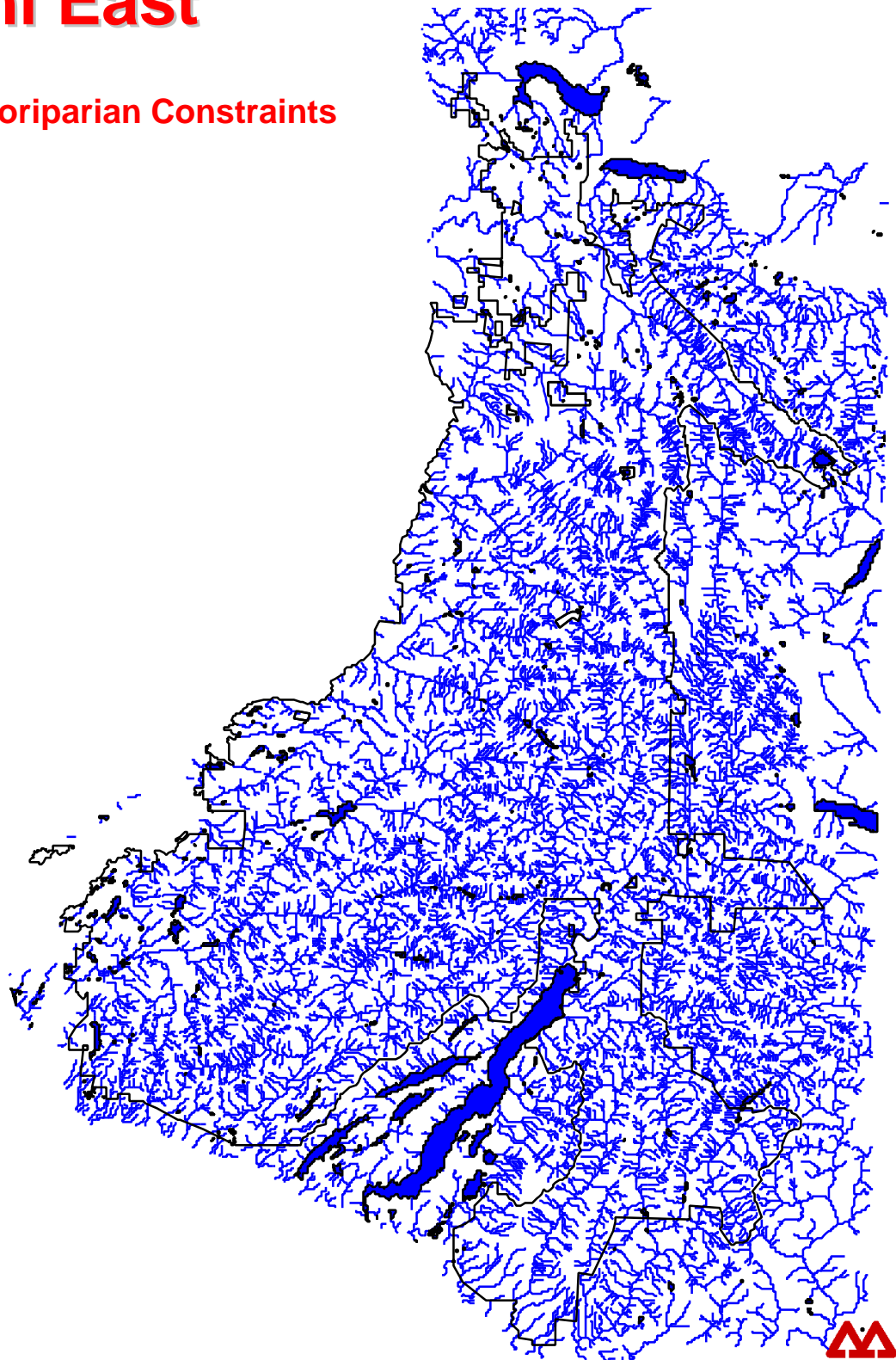
LIA's - CORE

Red Newly Protected Areas
Green Low Intensity Areas
Brown Existing Protected Areas



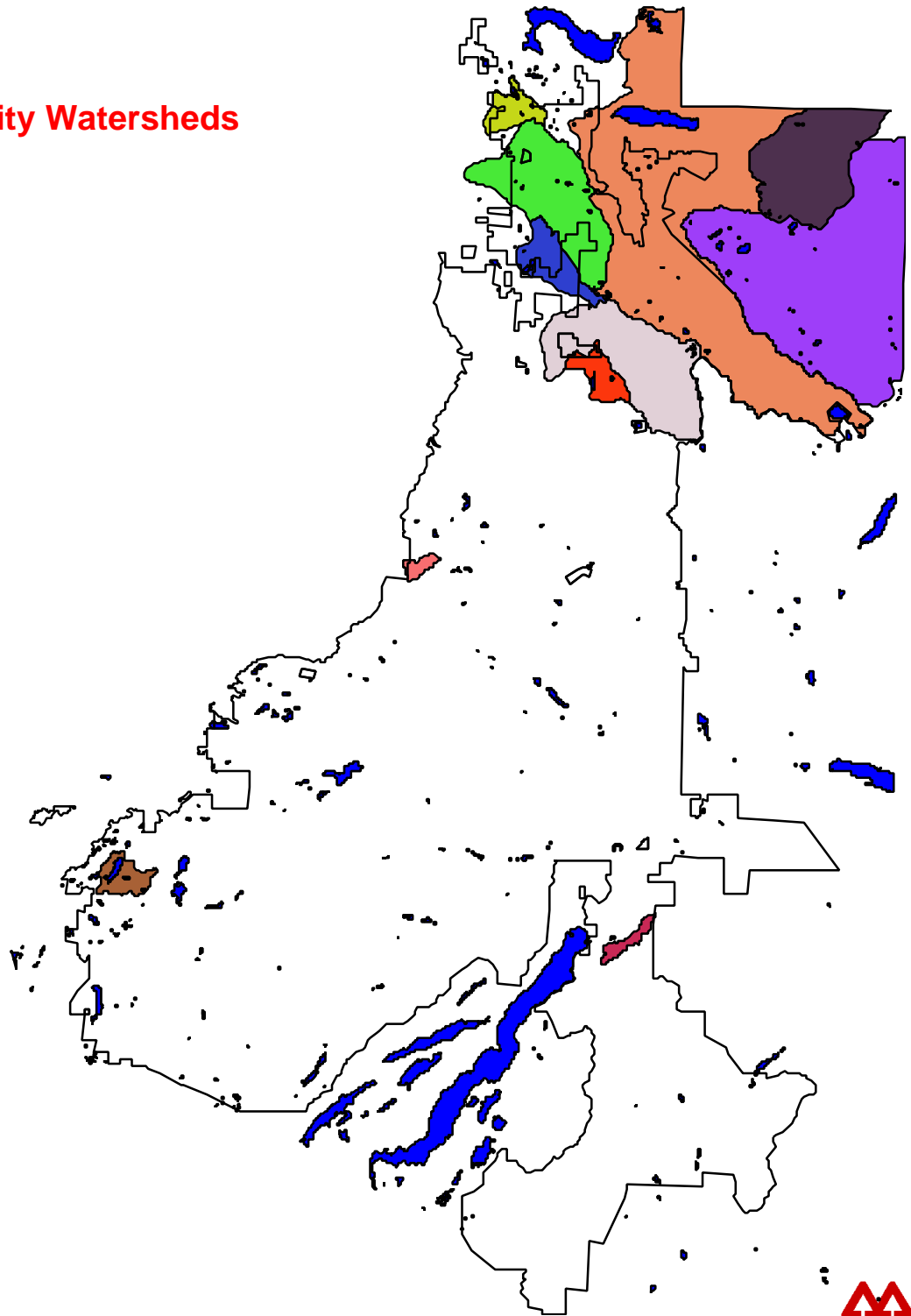
Alberni East

Hydroriparian Constraints



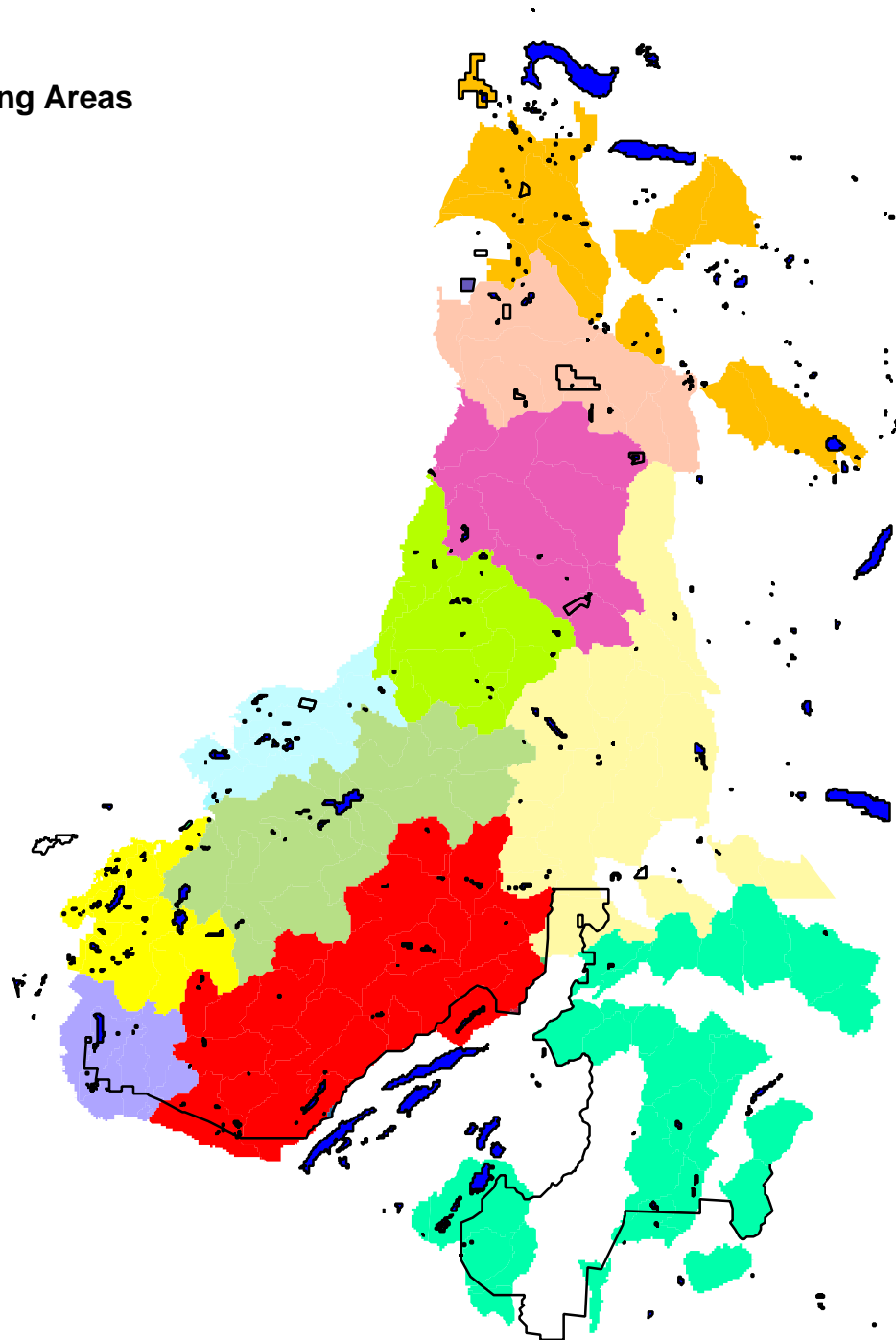
Alberni East

Community Watersheds



Alberni East

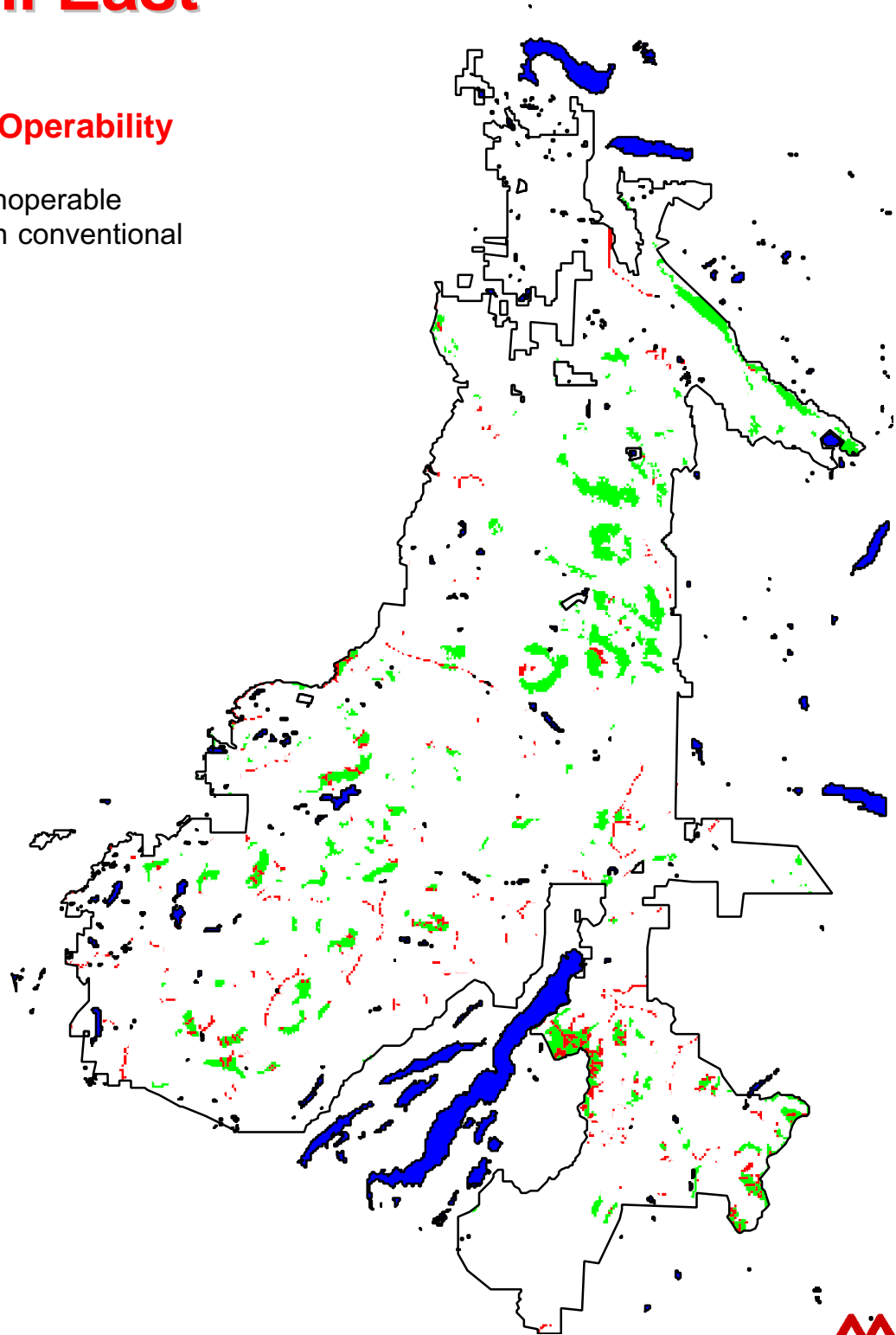
Planning Areas



Alberni East

Physical Operability

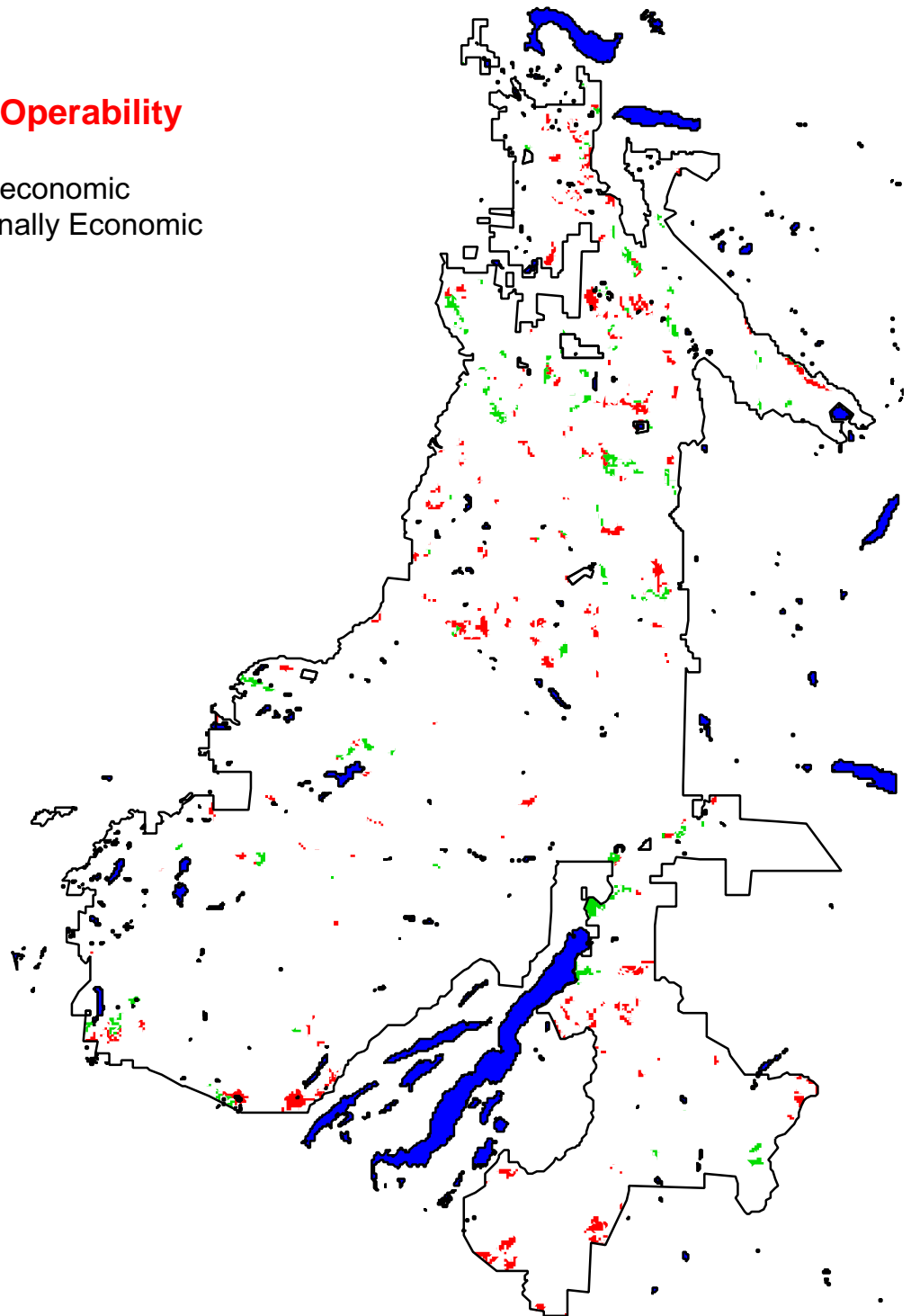
Red Inoperable
Green Non conventional



Alberni East

Economic Operability

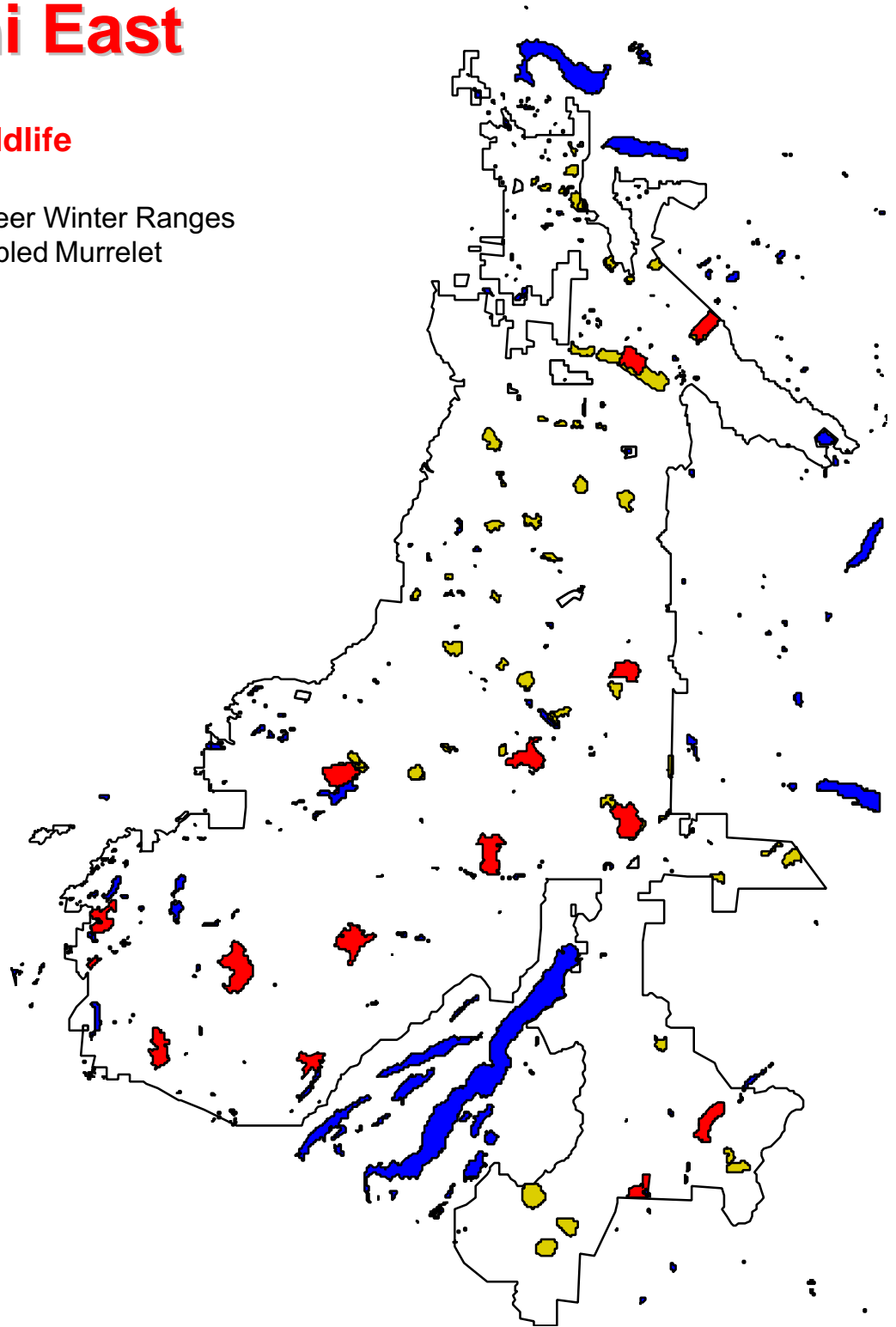
Red Uneconomic
Green Marginally Economic



Alberni East

Wildlife

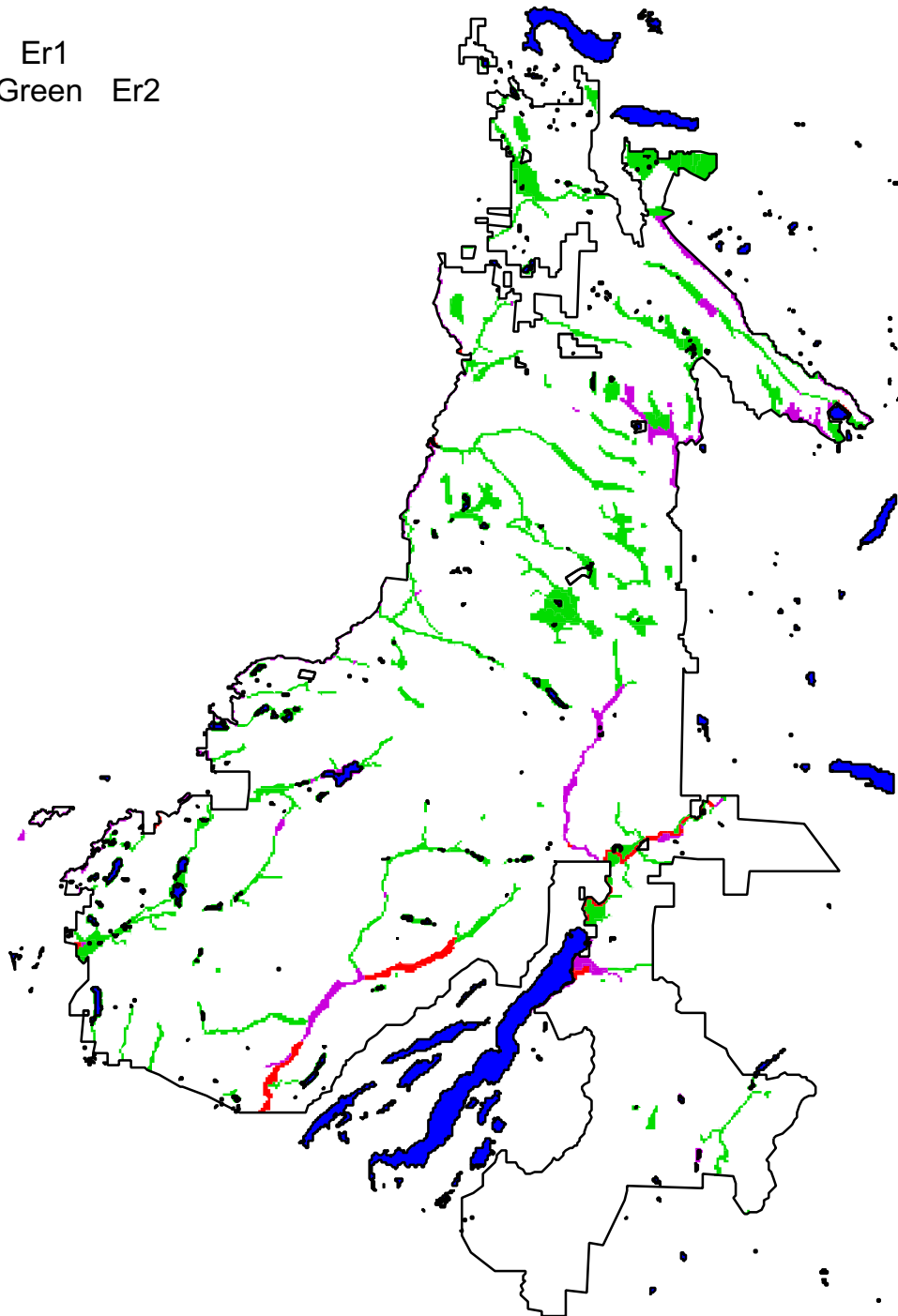
Light Brown Deer Winter Ranges
Red Marbled Murrelet



Alberni East

Recreation

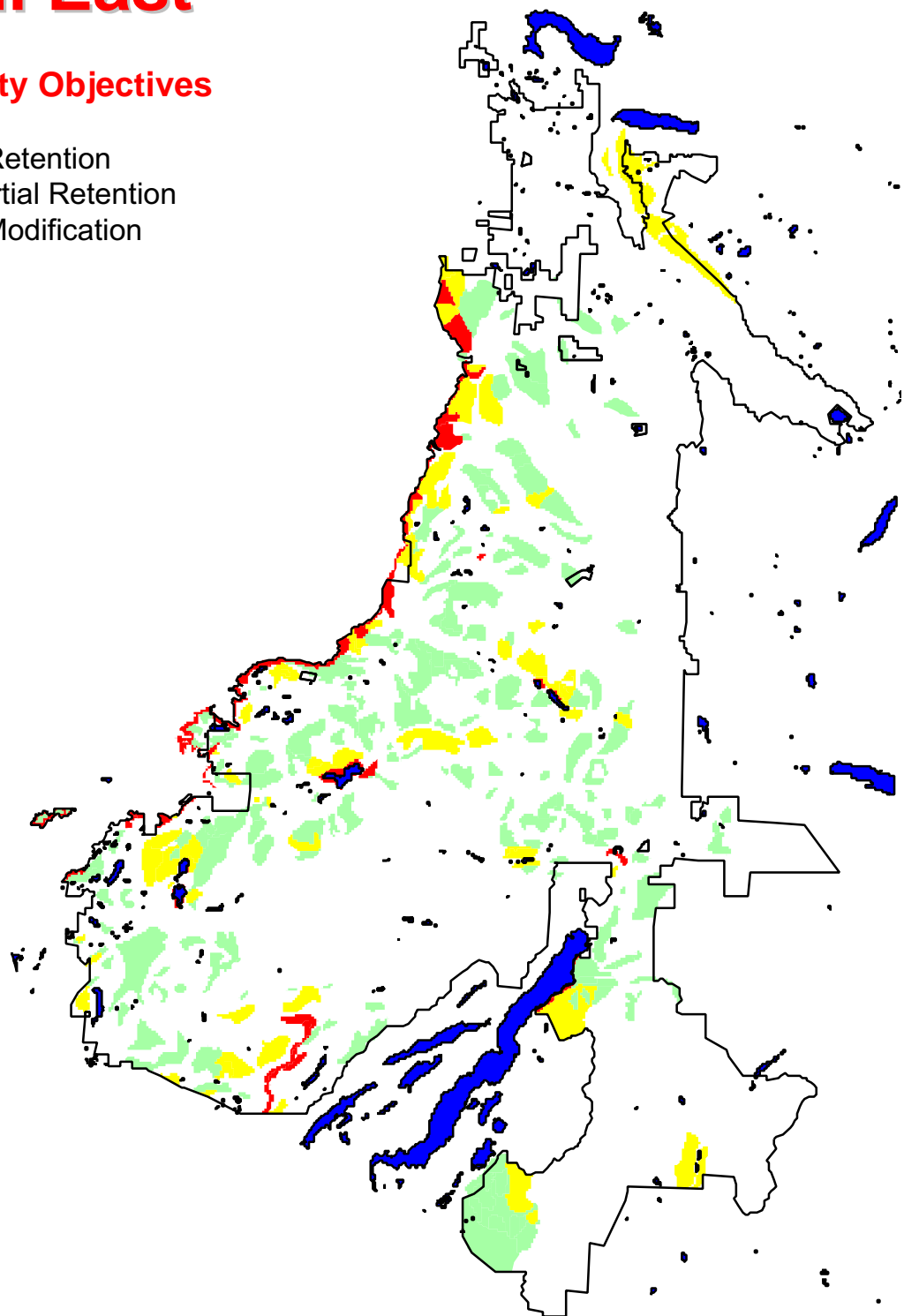
Red Er1
Light Pink/Green Er2



Alberni East

Visual Quality Objectives

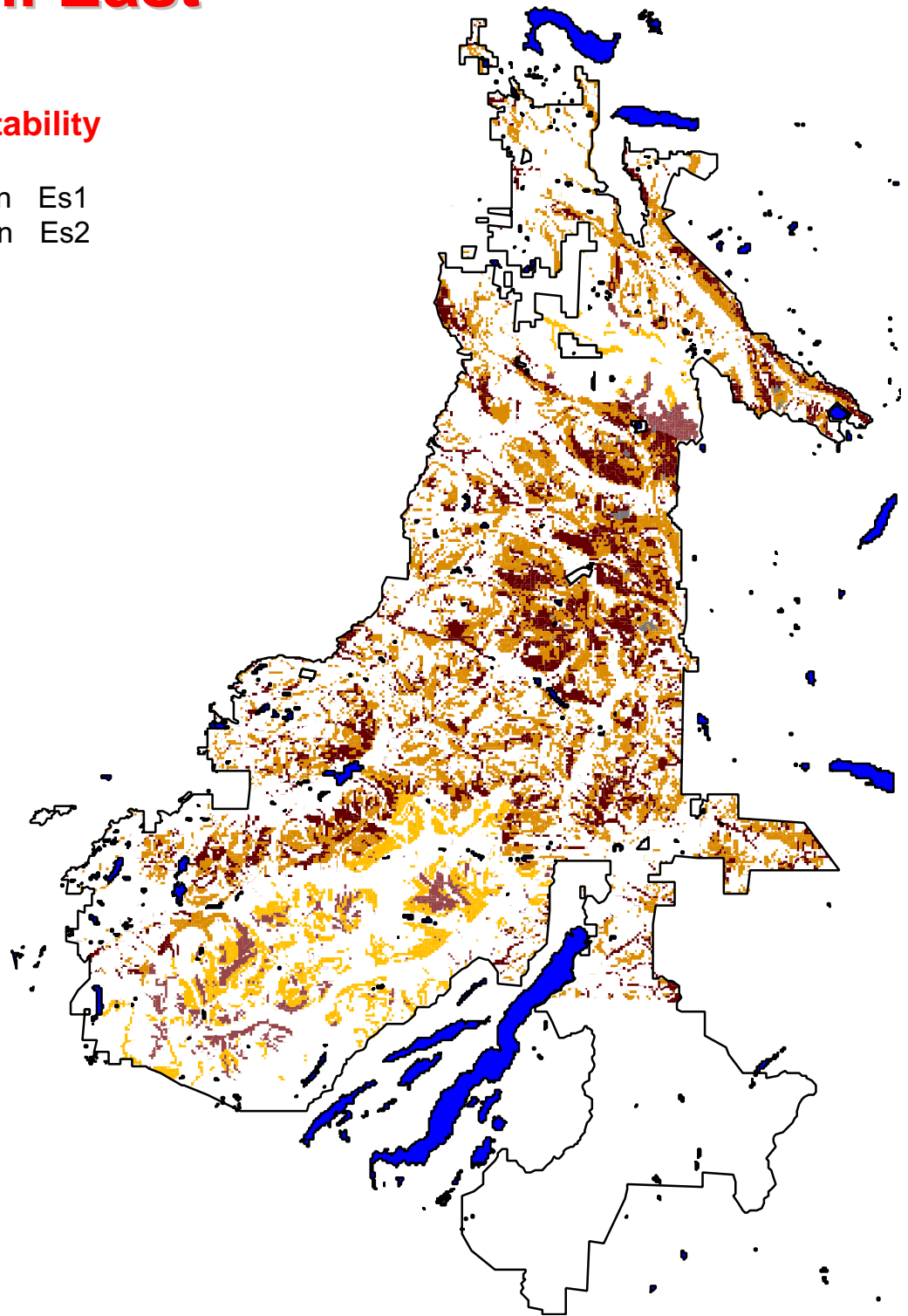
Red Retention
Yellow Partial Retention
Green Modification



Alberni East

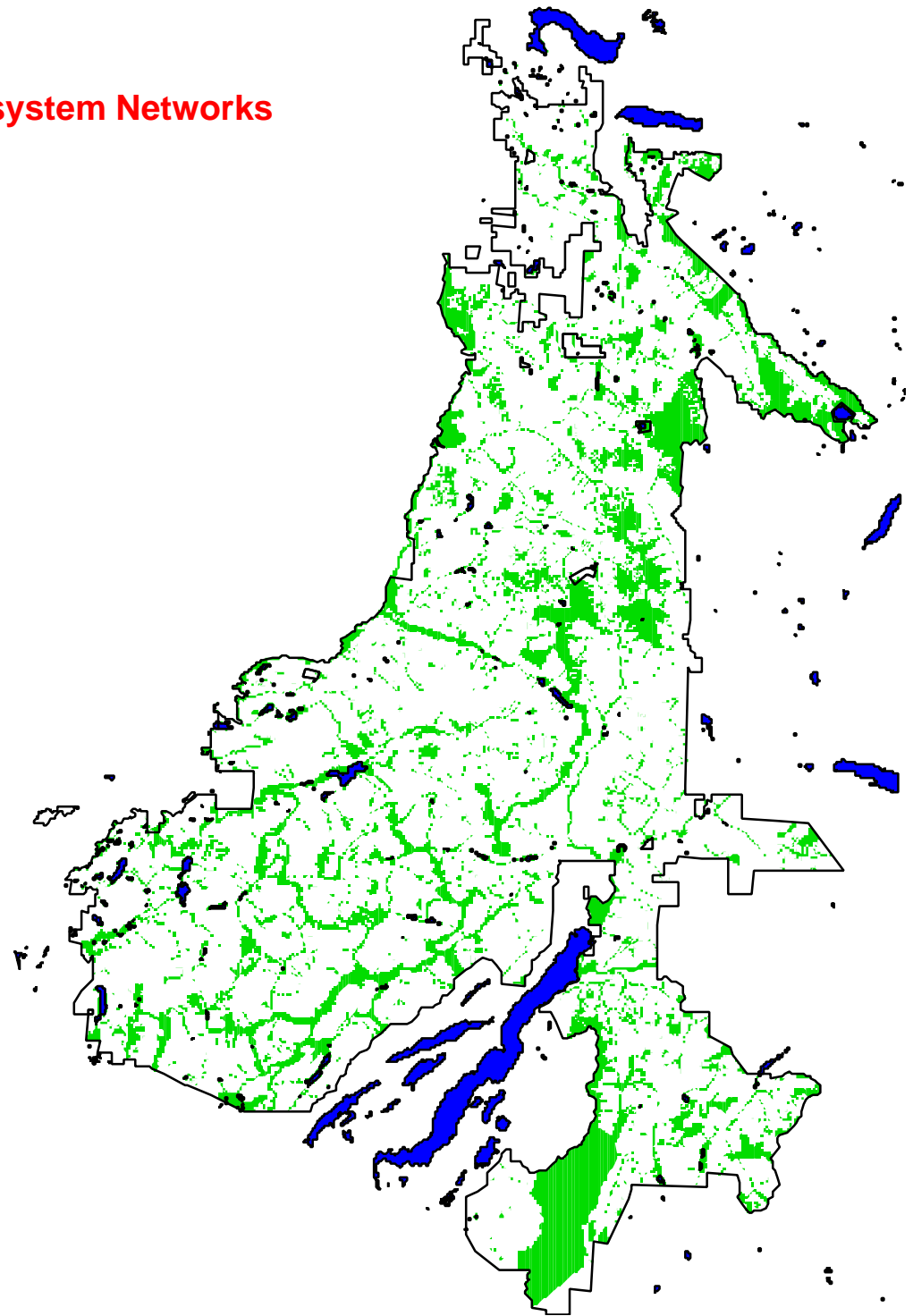
Terrain Stability

Dark Brown Es1
Light Brown Es2



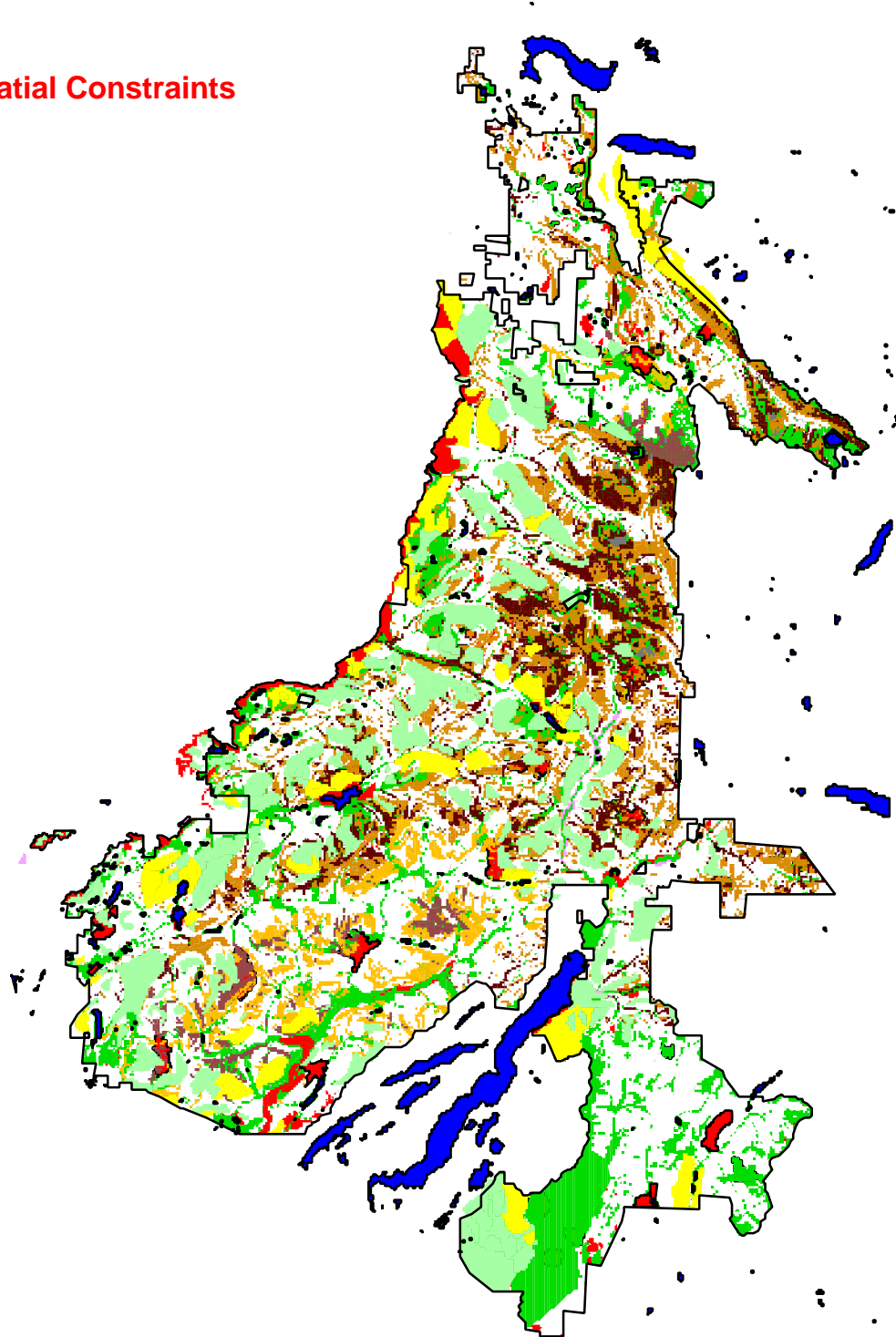
Alberni East

Forest Ecosystem Networks

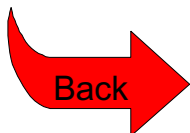
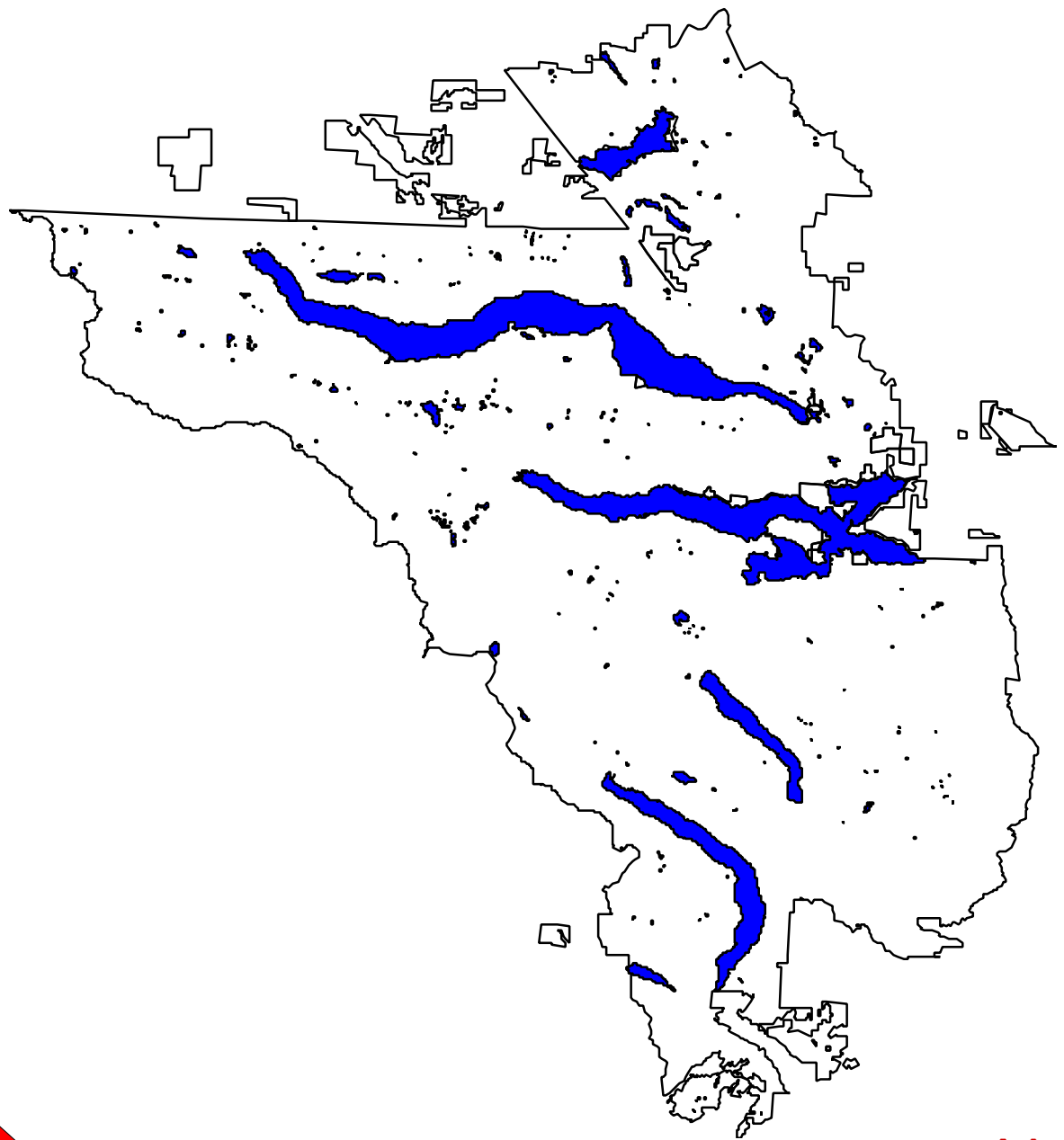


Alberni East

Spatial Constraints

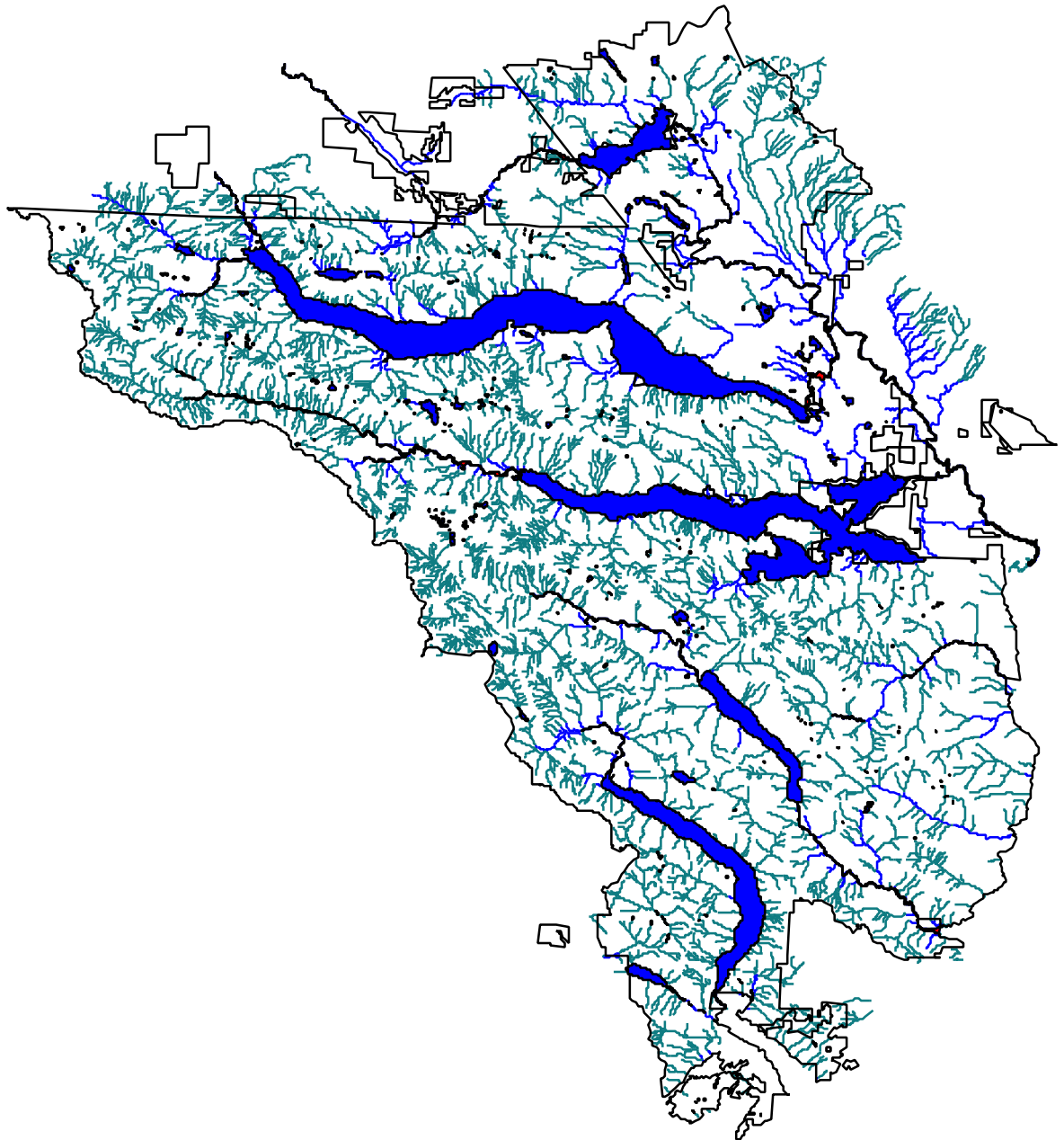


Alberni West



Alberni West

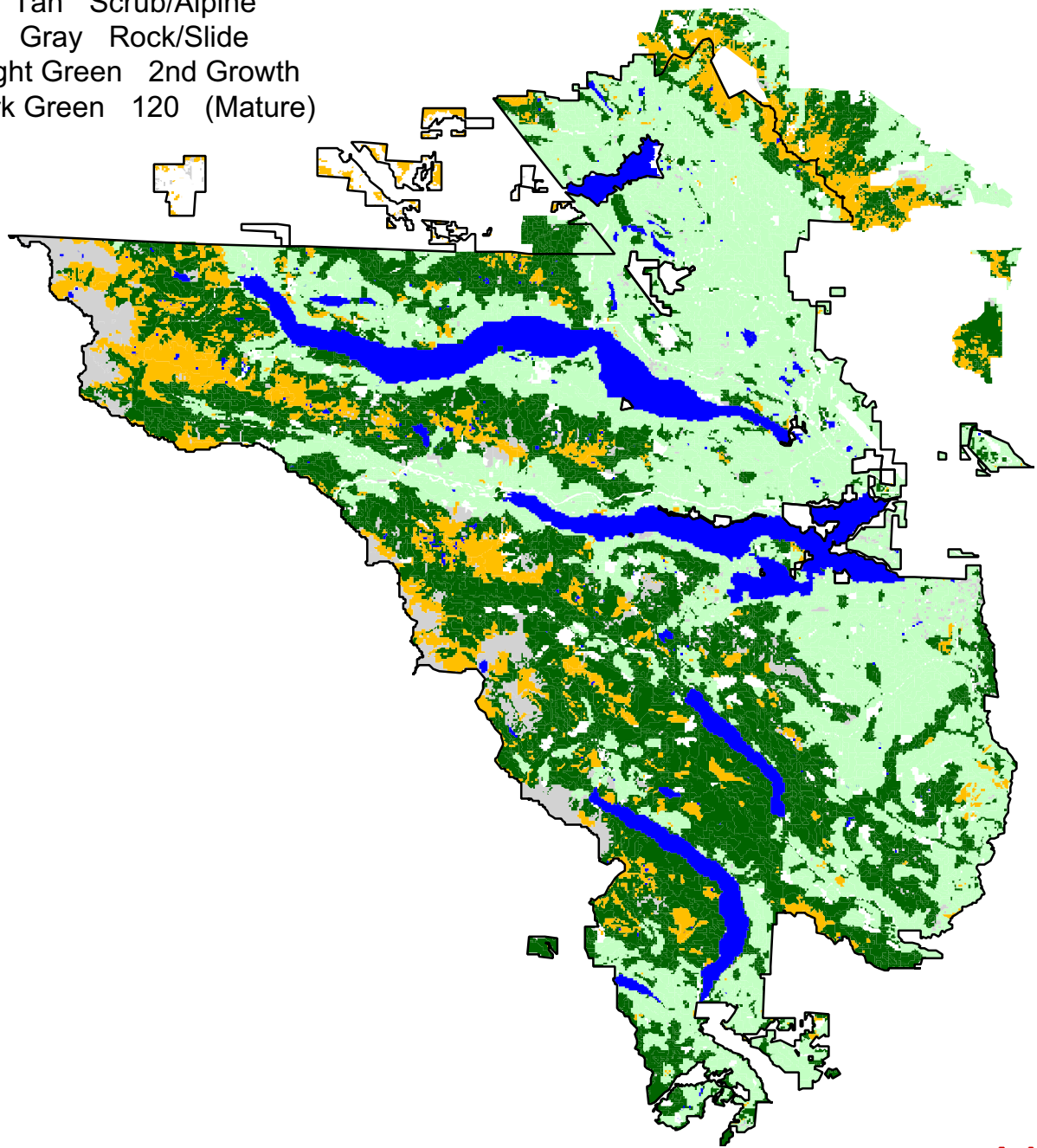
Hydroriparian Constraints



Alberni West

Forest Cover

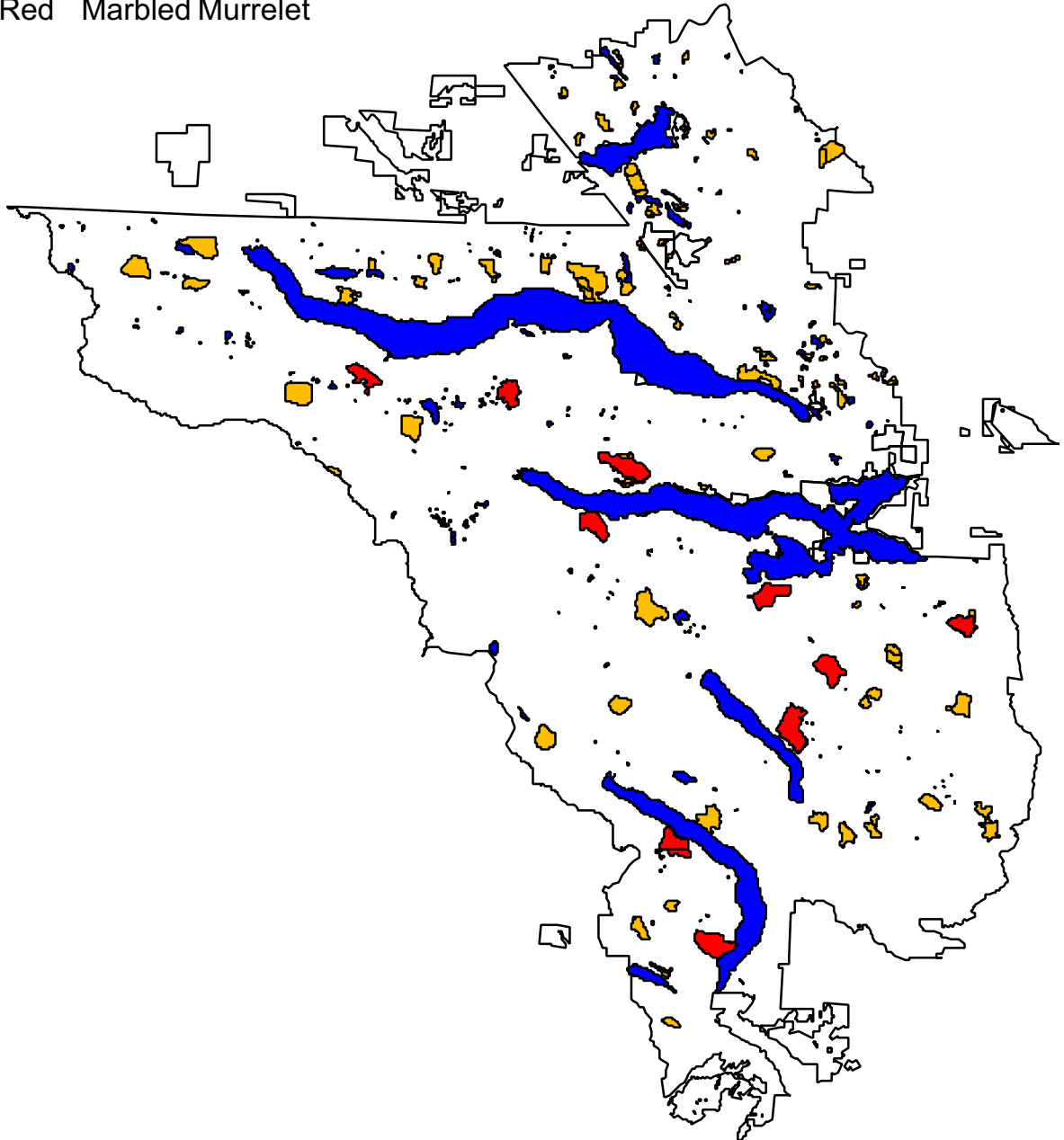
Tan Scrub/Alpine
Gray Rock/Slide
Light Green 2nd Growth
Dark Green 120 (Mature)



Alberni West

Wildlife

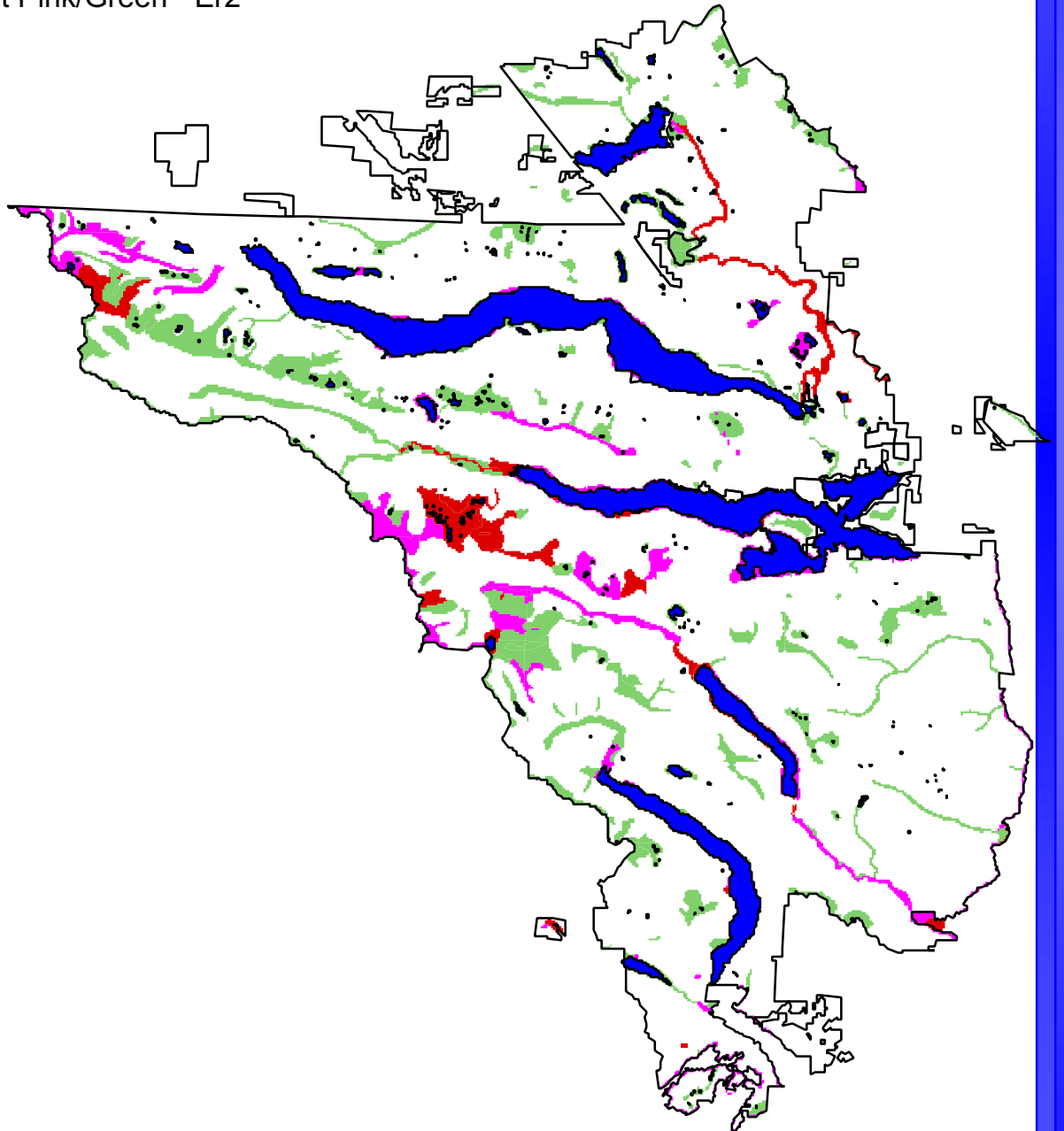
Light Brown Deer Winter Ranges
Red Marbled Murrelet



Alberni West

Recreation

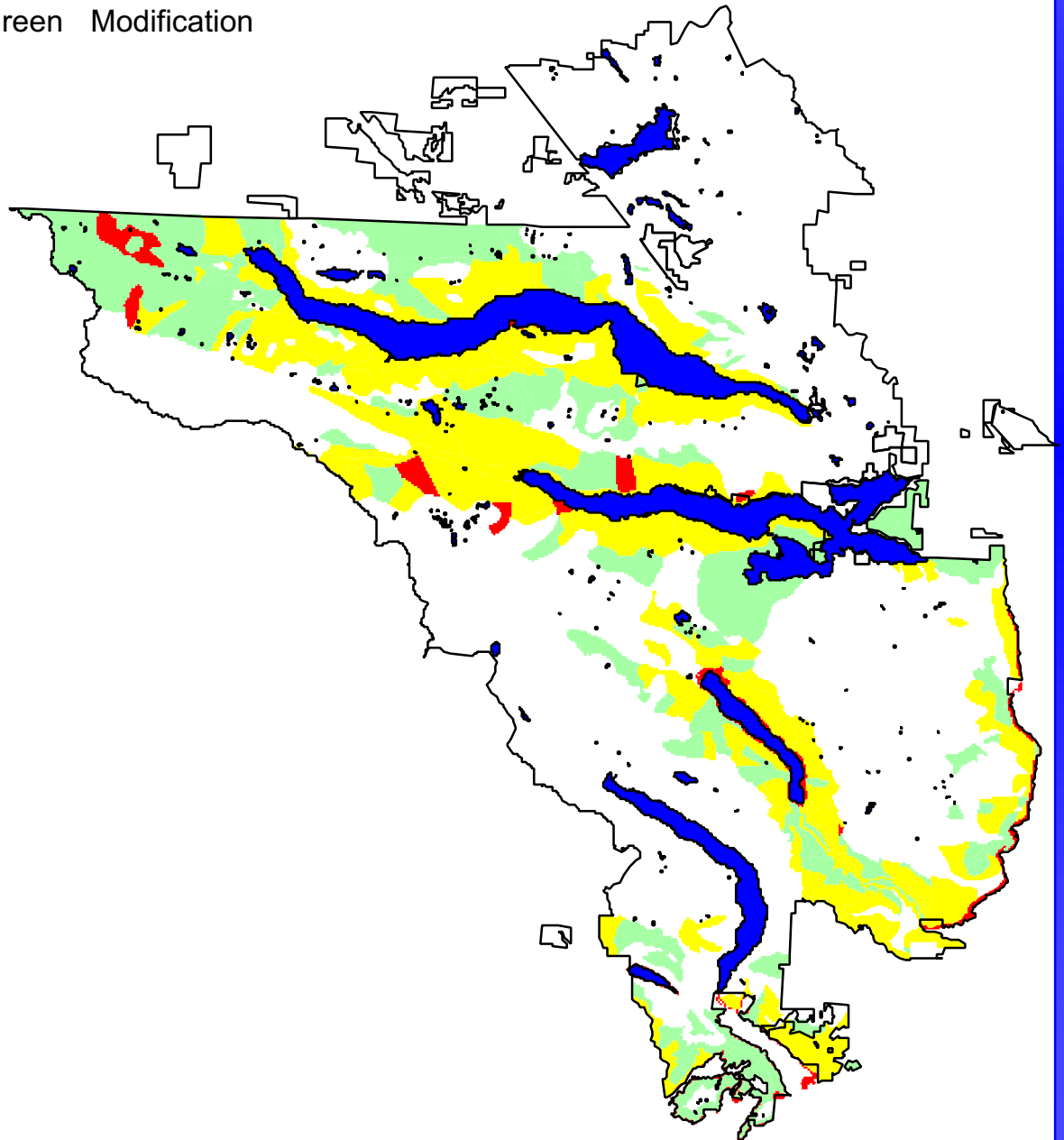
Red Er1
Light Pink/Green Er2



Alberni West

Visual Quality Objectives

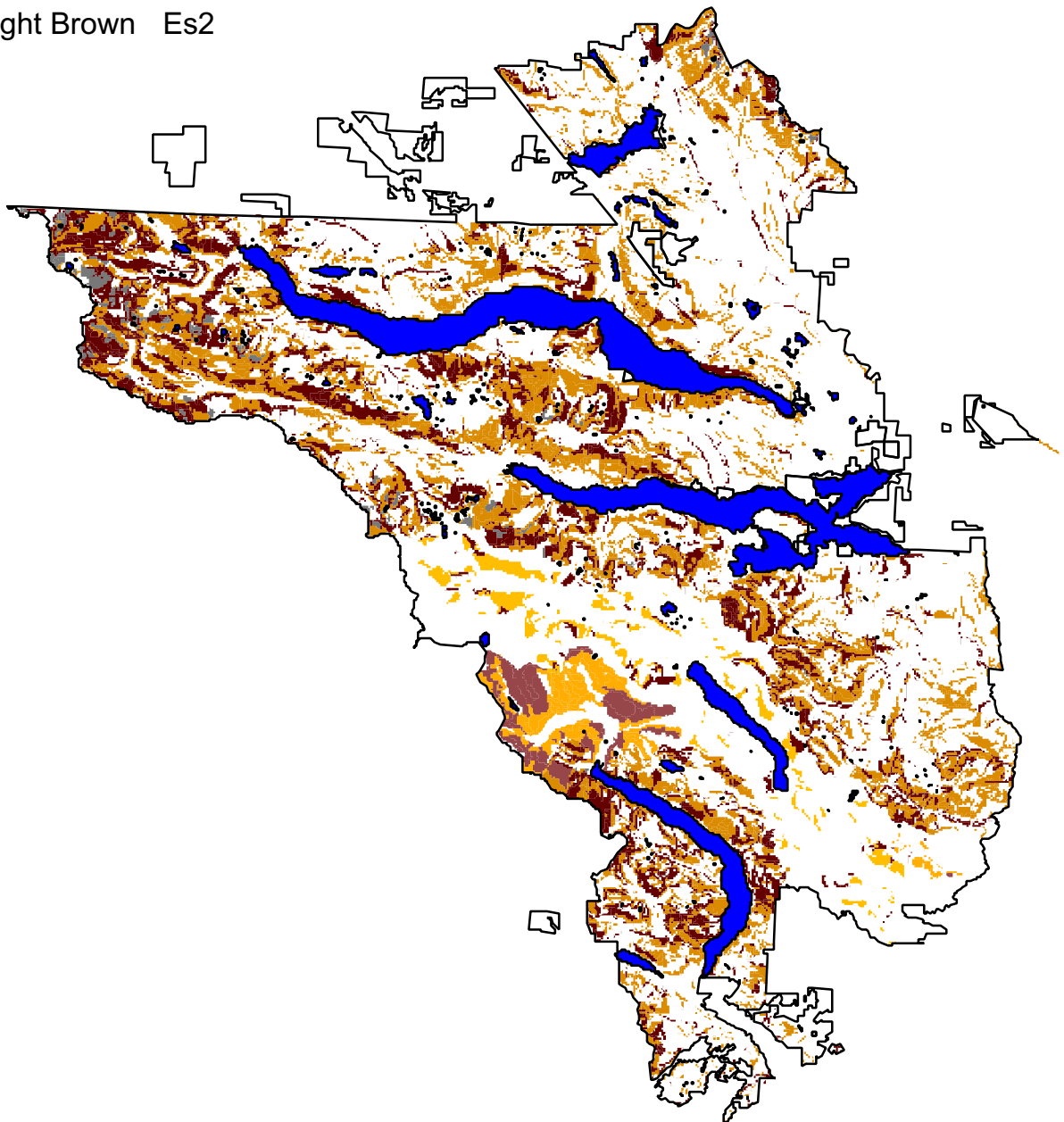
Red Retention
Yellow Partial Retention
Green Modification



Alberni West

Terrain Stability

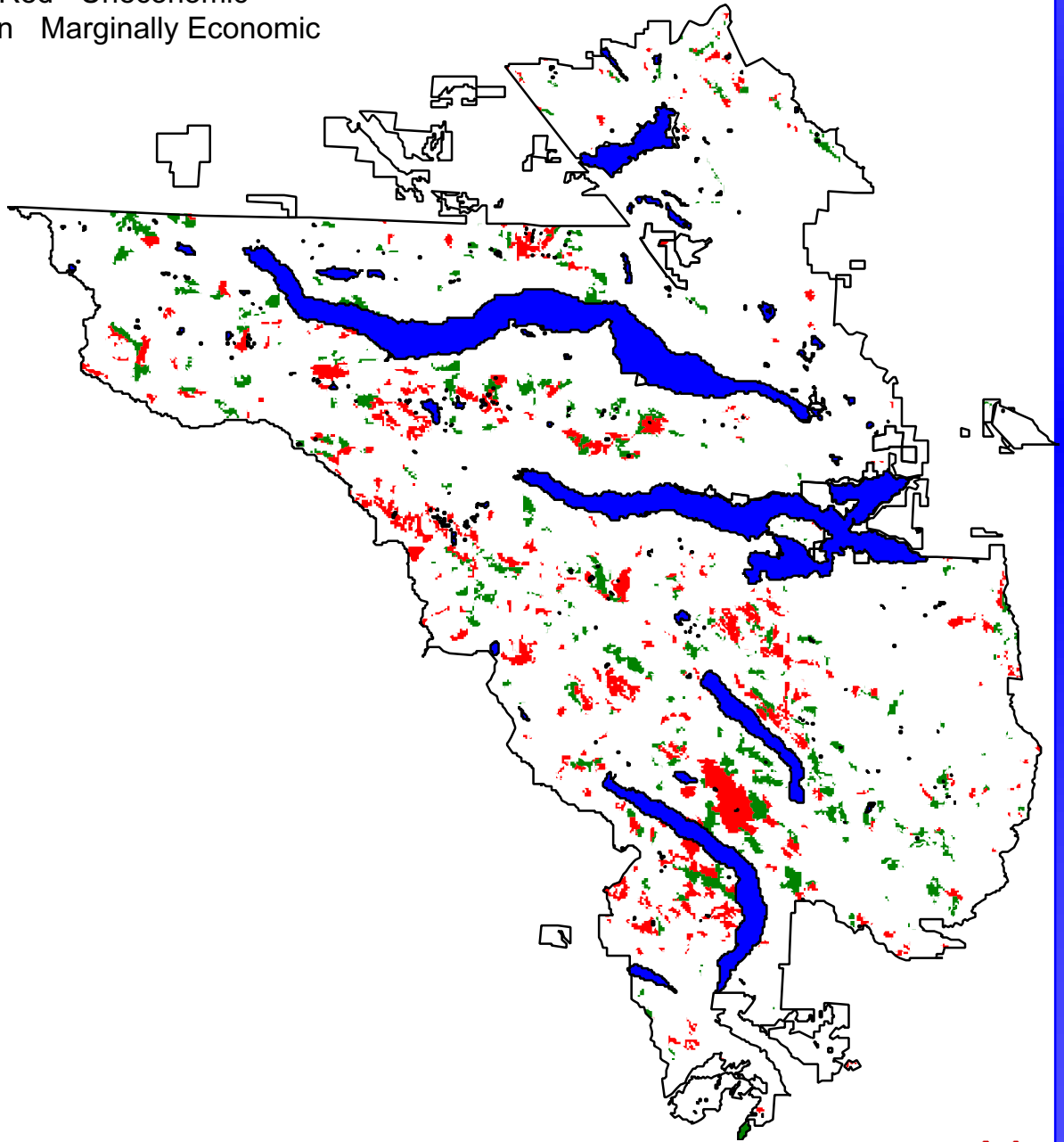
Dark Brown Es1
Light Brown Es2



Alberni West

Economic Operability

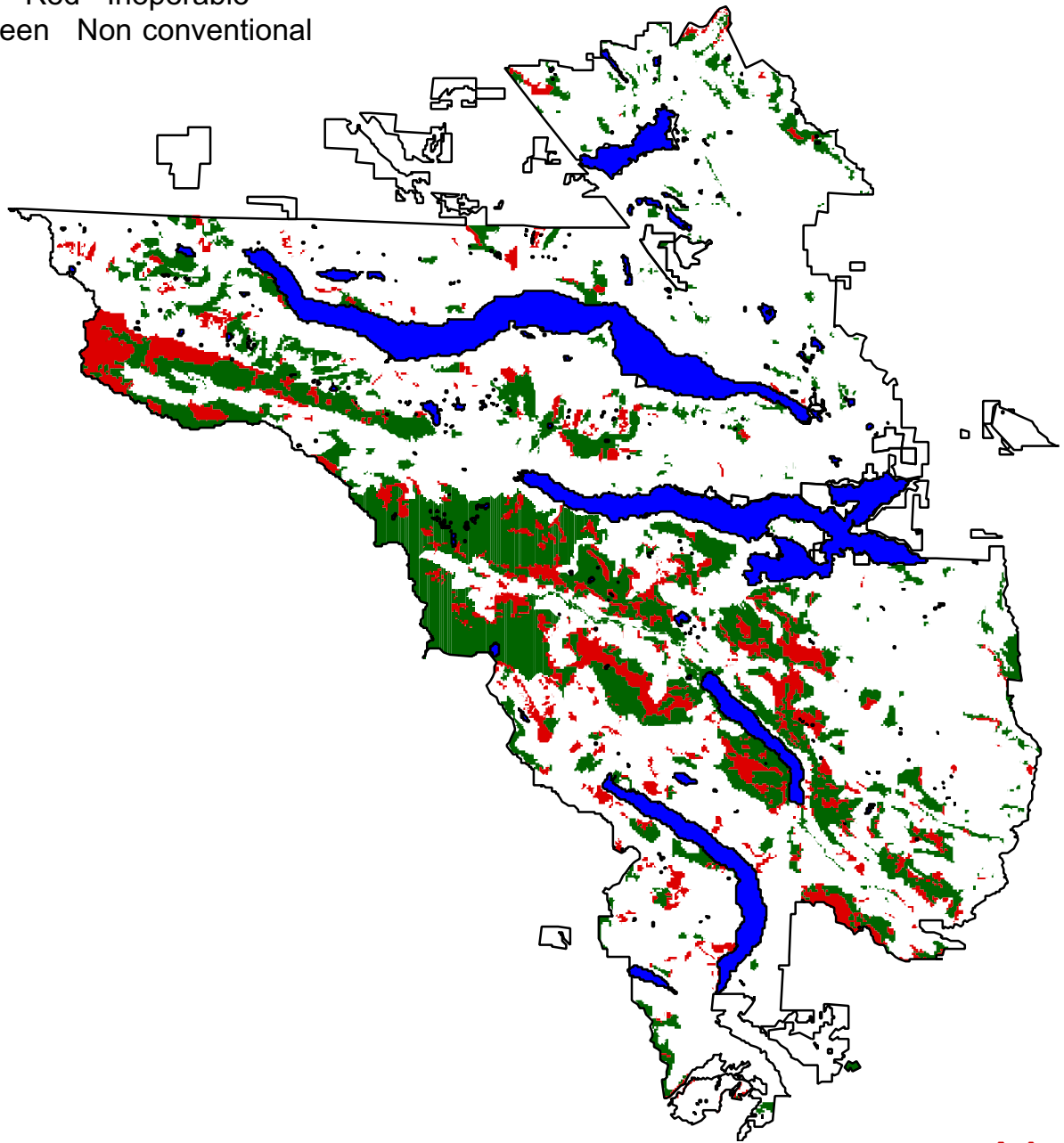
Red Uneconomic
Green Marginally Economic



Alberni West

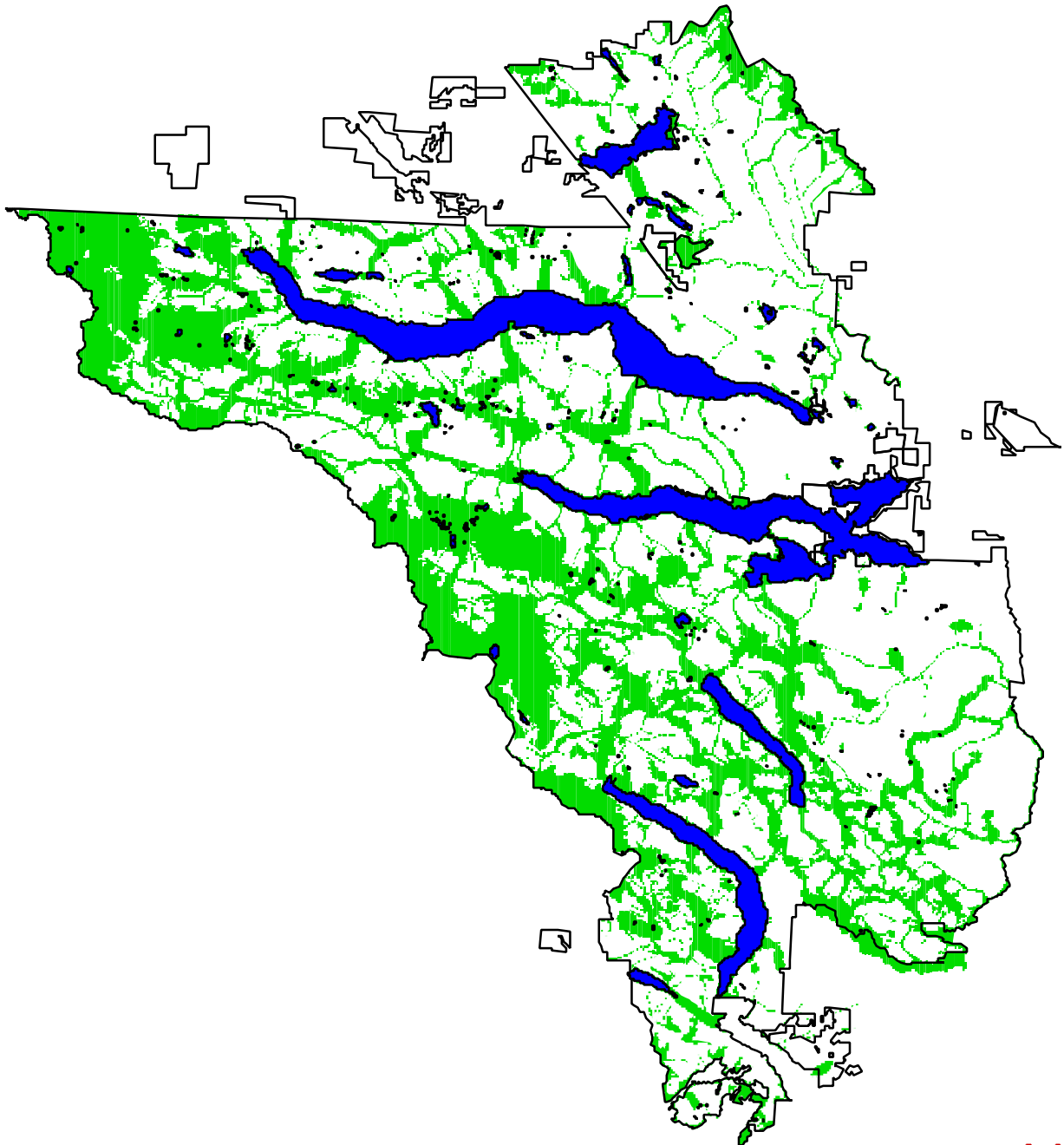
Physical Operability

Red Inoperable
Green Non conventional

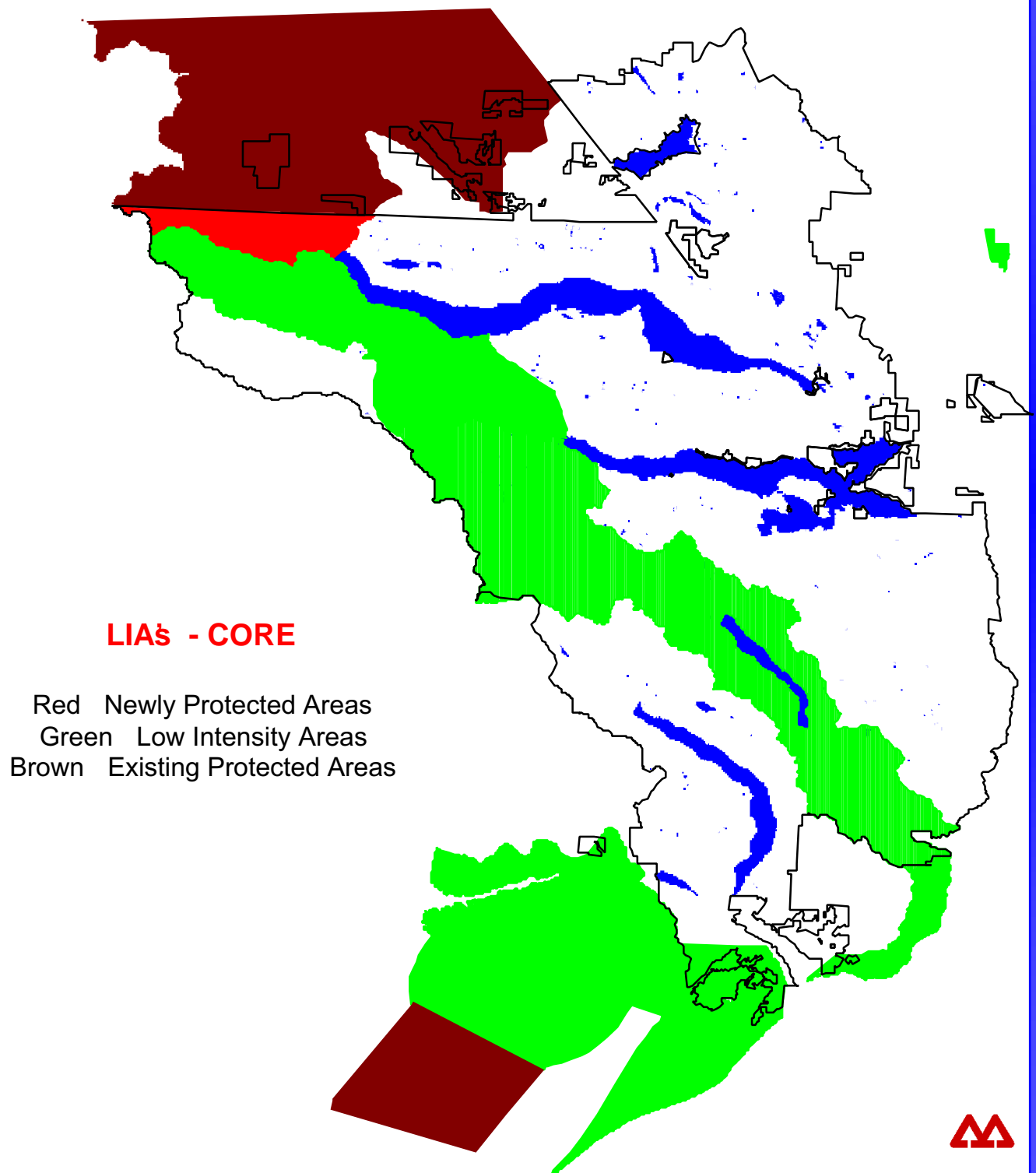


Alberni West

Forest Ecosystem Networks

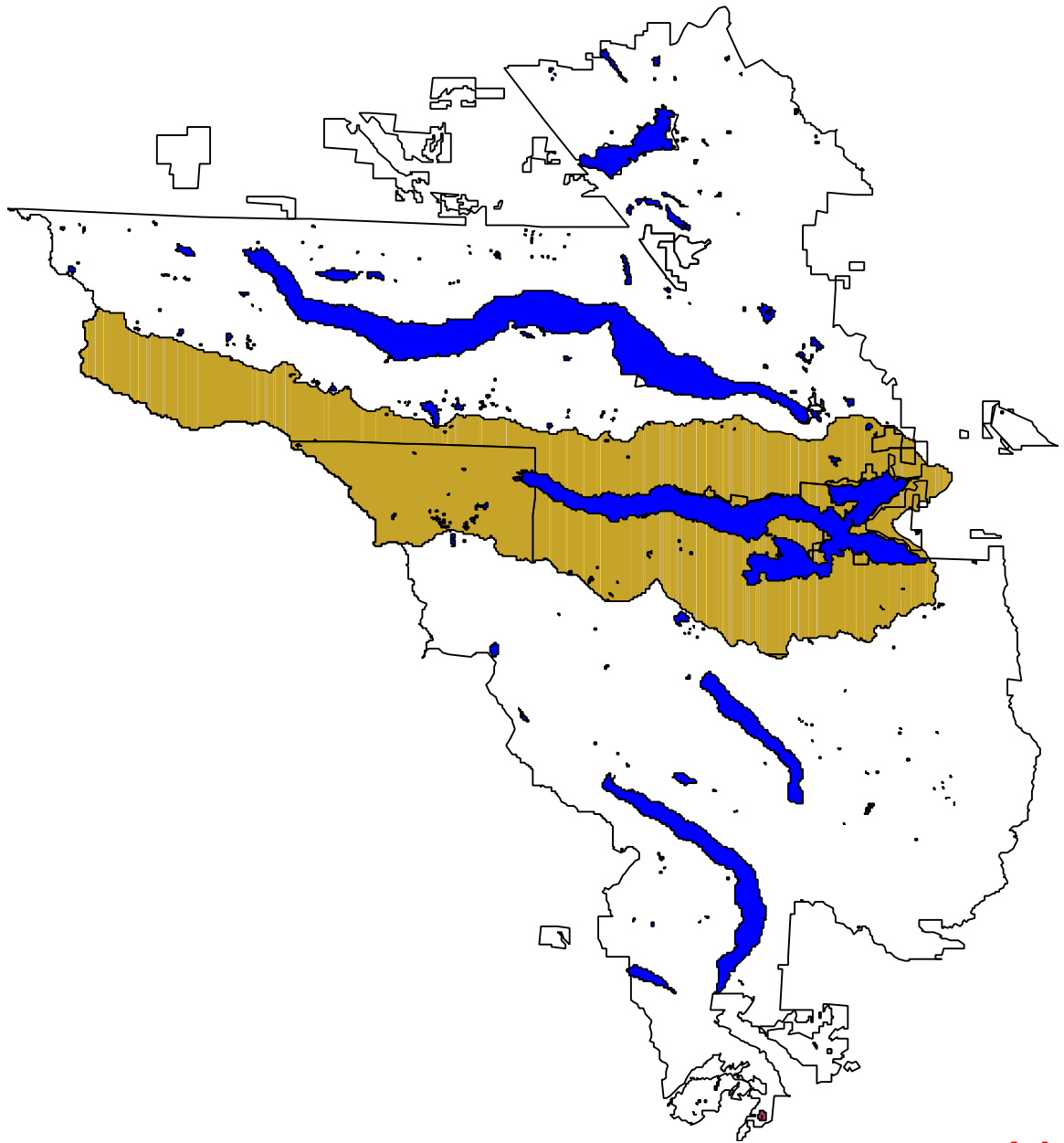


Alberni West



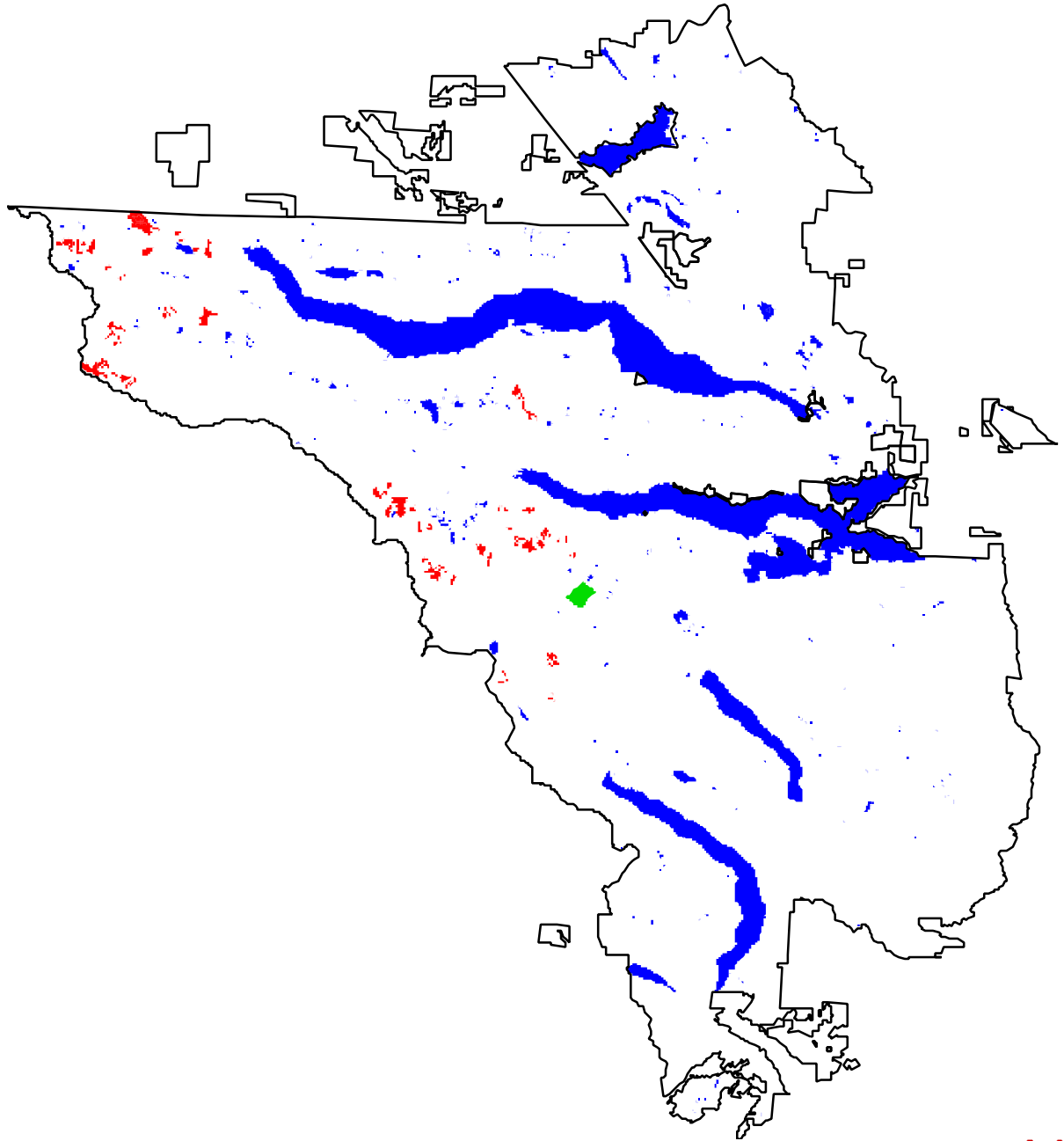
Alberni West

Community Watersheds



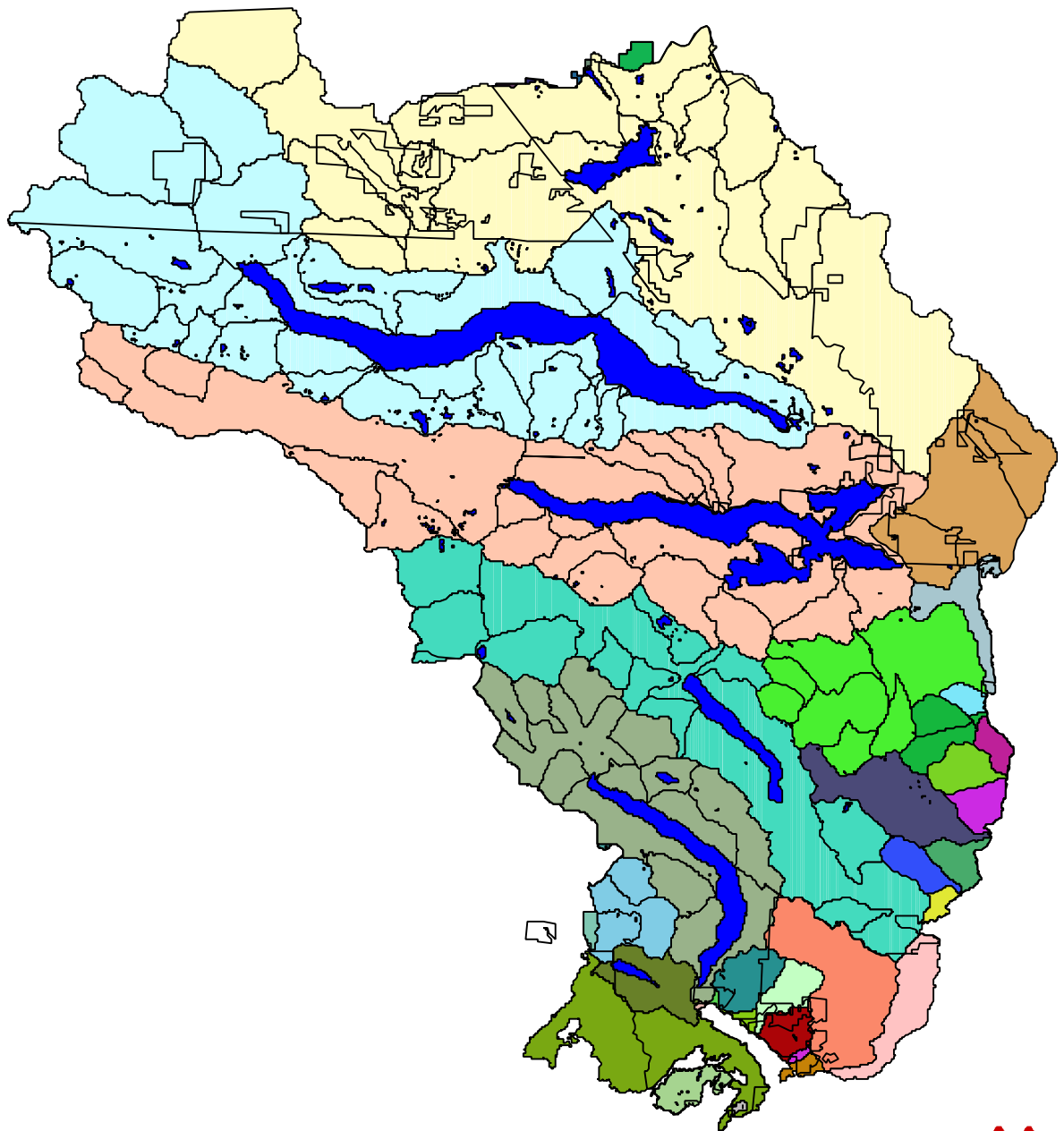
Alberni West

Red - Snow Avalanche Areas
Green - Old Growth Reserve



Alberni West

Watersheds



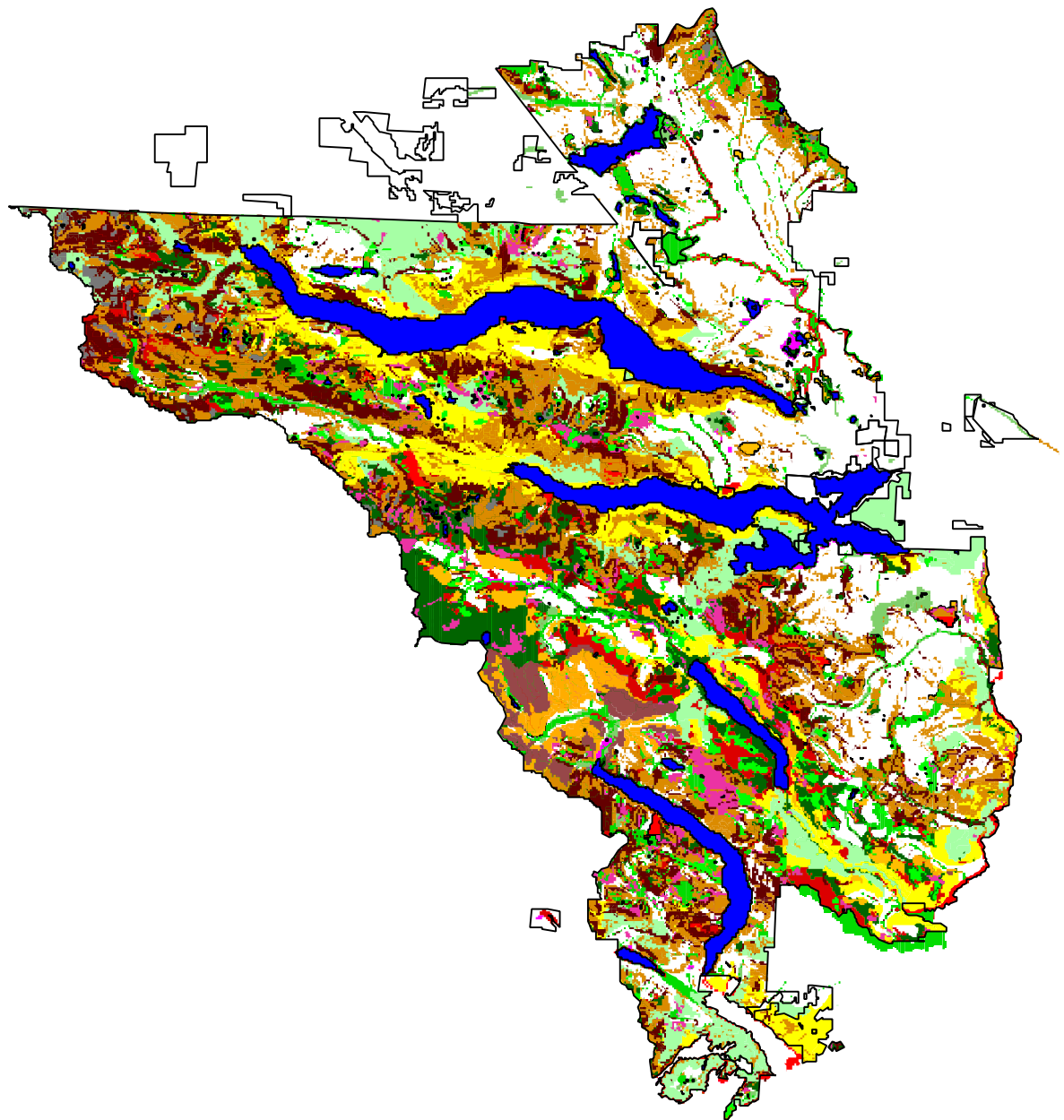
Excluded from Harvesting

- Terrain Stability Class Es1 (Class V)
- Recreation Class Er1
- Deer Winter Ranges
- Marbled Murrelets
- Forest Ecosystem Networks
- Hydroriparian Reserves
- Physically Inoperable Terrain
- Uneconomic Forest Areas
- Old Growth Reserve



Alberni West

Spatial Constraints



Harvestable Forest with High Retention

- Terrain Stability (Es2 or Class IV)
- Recreation (Er2)
- Snow Avalanche (Ea)
- Difficult Regeneration (Ep)
- Visual Quality Objectives (VQO)





APPENDIX VI

Area and Volume Summaries

Working Circles	Page
All	1
Alberni East	2
Alberni West	3
Clayoquot	4
Ucluelet	5
Blocks	
All Blocks	6
Block 1	
Block 2	8
Block 3	9
Block 4	10
Block 5	11
Block 6	12
Block 7	13
Block 8	14
Divisions	
All	15
Franklin	16
Alberni West	17
Clayoquot	18

TFL 44 - TOTAL Inventory as of December 31, 1995

Division Alberni West

Area Summary (ha)

Class of Type		Schedule "A"				Schedule	GRAND TOTAL	
		Private			TL	"B"		
		MF 74	not MF	TOTAL		Crown		
1	Productive Forest Land							
	a)	Mature Coniferous	4,424	18	4,442	11,507	43,557	59,506
	b)	Immature Coniferous						
		Age Classes						
		1- 10	617		617	2,822	5,416	8,855
		11- 20	2,227		2,227	1,576	9,087	12,890
		21- 30	3,141		3,141	83	8,587	11,811
		31- 40	4,188	9	4,197	29	5,052	9,278
		41- 50	5,201	28	5,229	67	3,101	8,397
		51- 60	4,665	21	4,686	75	4,811	9,572
		61- 70	1,407	14	1,421	26	1,232	2,679
		71- 80	298		298	4	91	393
		81- 90	423		423		70	493
		91-100	287	35	322	21	123	466
		101 - 110	105	2	107	28	126	261
		111 - 120	49		49		17	66
		121 - 130	7		7		14	21
		131 - 140			0			0
		141 - 150			0			0
	TOTAL		22,615	109	22,724	4,731	37,727	65,182
	c)	Mature Deciduous	57		57	26	26	109
	d)	Immature Deciduous						
		Age Classes						
		1- 10			0			0
		11- 20	7		7		14	21
		21- 30	1		1		31	32
31- 40		39	4	43		4	47	
41- 50		112		112	3	85	200	
51 +		186	5	191	2	226	419	
TOTAL		345	9	354	5	360	719	
e)	AAR	241		241	630	1,746	2,617	
TOTAL		27,682	136	27,818	16,899	83,416	128,133	
2	Non-Productive Forest Land							
	Scrub, NP	1,067	3	1,070	513	8,737	10,320	
3	Not Suited for Forests							
	Alpine, Rock, Water, Swamp	1,784	2	1,786	273	23,456	25,515	
	Industrial, Roads, RW	1,152	23	1,175	428	2,190	3,793	
4	GRAND TOTAL		31,685	164	31,849	18,113	117,799	167,761

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	963.5	9.1	972.6	2,325.5	3,454.8	6,752.9
White Pine	20.5	0.1	20.6	68.1	235.7	324.4
Redcedar	580.4	0.1	580.5	1,727.6	4,586.1	6,894.2
Cypress	70.9		70.9	316.6	2,795.3	3,182.8
Sitka Spruce	6.9		6.9	26.9	34.8	68.6
Hemlock Sp.	745.7	0.6	746.3	2,973.3	10,033.5	13,753.1
Balsam Sp.	289.6	0.6	290.2	1,277.6	6,617.5	8,185.3
Lodgepole Pine	5.5		5.5	0.1	14.6	20.2
Deciduous	7.0	0.3	7.3	28.6	50.1	86.0
GRAND TOTAL	2,690.0	10.8	2,700.8	8,744.3	27,822.4	39,267.5
Hectares	4,424	18	4,442	11,507	43,557	59,506
Volume/ha (m3)	608	600	608	760	639	660

TFL 44 - Total Inventory as of December 31, 1995

Working Circle - Alberni East

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL	
		Private			TL	"B"		
		MF 74	not MF	Total		Crown		
1	Productive Forest Land							
	a)	Mature Coniferous	10,346		10,346	22,363	25,759	58,468
	b)	Immature Coniferous						
		Age Classes						
		1- 10	1,726		1,726	3,614	6,205	11,545
		11- 20	3,446		3,446	405	8,813	12,664
		21- 30	4,421		4,421	26	8,831	13,278
		31- 40	1,089		1,089	104	10,475	11,668
		41- 50	2,525		2,525	18	5,061	7,604
		51- 60	3,516		3,516	21	7,577	11,114
		61- 70	3,459		3,459	72	1,283	4,814
		71- 80	561		561	10	380	951
		81- 90	446		446	43	277	766
		91-100	342		342	85	89	516
		101 - 110	11		11	16		27
		111 - 120	21		21			21
		121 - 130			0			0
		131 - 140			0		3	3
	141 - 150			0			0	
	TOTAL		21,563	0	21,563	4,414	48,994	74,971
	c)	Mature Deciduous	27		27			27
	d)	Immature Deciduous						
		Age Classes						
		1- 10			0			0
		11- 20			0			0
		21- 30	17		17		36	53
		31- 40	11		11		74	85
41- 50		389		389	11	892	1,292	
51 +		470		470	3	413	886	
TOTAL		887	0	887	14	1,415	2,316	
e)	AAR	997		997	1,332	1,399	3,728	
TOTAL		33,820	0	33,820	28,123	77,567	139,510	
2	Non-Productive Forest Land							
	Scrub, NP	2,229		2,229	127	2,028	4,384	
3	Not Suited for Forests							
	Alpine, Rock, Water, Swamp	3,198		3,198	257	1,637	5,092	
	Industrial, Roads, RW	1,205		1,205	571	2,810	4,586	
4	GRAND TOTAL		40,452	0	40,452	29,078	84,042	153,572

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	2,074.4		2,074.4	1,266.6	1,057.7	4,398.7
White Pine	79.6		79.6	64.6	80.9	225.1
Redcedar	642.3		642.3	5,866.4	7,072.8	13,581.5
Cypress	285.1		285.1	325.0	458.6	1,068.7
Sitka Spruce	20.1		20.1	123.0	97.8	240.9
Hemlock Sp.	2,988.3		2,988.3	9,303.0	9,400.4	21,691.7
Balsam Sp.	1,323.3		1,323.3	3,953.2	5,244.1	10,520.6
Lodgepole Pine	4.7		4.7	4.2	10.9	19.8
Deciduous	9.1		9.1	17.8	11.0	37.9
GRAND TOTAL	7,426.9	0.0	7,426.9	20,923.8	23,434.2	51,784.9
Hectares	10,346	0	10,346	22,363	25,759	58,468
Volume/ha (m3)	718	0	718	936	910	886

TFL 44 - Total Inventory as of December 31, 1995

Working Circle - Alberni West

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL	
		Private			TL	Crown		
		MF 74	not MF	Total				
1	Productive Forest Land							
	a)	Mature Coniferous	3,536	18	3,554	10,706	35,542	49,802
	b)	Immature Coniferous						
		Age Classes						
		1- 10	406		406	2,661	4,157	7,224
		11- 20	2,067		2,067	1,491	7,850	11,408
		21- 30	2,802		2,802	74	6,382	9,258
		31- 40	3,927	9	3,936	19	3,984	7,939
		41- 50	5,138	28	5,166	67	3,101	8,334
		51- 60	4,578	21	4,599	74	4,807	9,480
		61- 70	1,407	14	1,421	20	1,159	2,600
		71- 80	298		298	4	54	356
		81- 90	423		423		70	493
		91-100	287	35	322	21	117	460
		101 - 110	105	2	107	28	126	261
		111 - 120	49		49		17	66
		121 - 130	7		7		14	21
		131 - 140			0			0
		141 - 150			0			0
	TOTAL		21,494	109	21,603	4,459	31,838	57,900
	c)	Mature Deciduous	57		57	26	26	109
	d)	Immature Deciduous						
		Age Classes						
		1- 10			0			0
		11- 20			0		11	11
		21- 30	1		1		31	32
		31- 40	32	4	36		4	40
		41- 50	69		69		83	152
		51 +	186	5	191	2	226	419
	TOTAL		288	9	297	2	355	654
	e)	AAR	236		236	608	1,530	2,374
	TOTAL		25,611	136	25,747	15,801	69,291	110,839
	2	Non-Productive Forest Land						
Scrub, NP		895	3	898	471	7,025	8,394	
3	Not Suited for Forests							
	Alpine, Rock, Water, Swamp	1,732	2	1,734	221	20,885	22,840	
	Industrial, Roads, RW	1,003	23	1,026	406	1,762	3,194	
4	GRAND TOTAL		29,241	164	29,405	16,899	98,963	145,267

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	963.5	9.1	972.6	2,208.9	3,111.1	6,292.6
White Pine	17.1	0.1	17.2	63.5	185.5	266.2
Redcedar	203.4	0.1	203.5	1,566.0	3,092.4	4,861.9
Cypress	58.7		58.7	306.6	2,317.2	2,682.5
Sitka Spruce	1.8		1.8	27.6	9.6	39.0
Hemlock Sp.	627.8	0.6	628.4	2,779.7	8,186.9	11,595.0
Balsam Sp.	262.8	0.6	263.4	1,201.0	5,556.8	7,021.2
Lodgepole Pine	2.2		2.2	0.7	1.7	4.6
Deciduous	7.0	0.3	7.3	29.2	41.4	77.9
GRAND TOTAL	2,144.3	10.8	2,155.1	8,183.2	22,502.6	32,840.9
Hectares	3,536	18	3,554	10,706	35,542	49,802
Volume/ha (m3)	606	600	606	764	633	659

TFL 44 - Total Inventory as of December 31, 1995

Working Circle - Clayoquot

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL	
		Private			TL			
		MF 74	not MF	Total		Crown		
1	Productive Forest Land							
	a)	Mature Coniferous	368		368	10,177	51,050	61,595
	b)	Immature Coniferous						
		Age Classes						
		1- 10	29		29	1,502	3,602	5,133
		11- 20	176		176	766	5,531	6,473
		21- 30	268		268	142	2,590	3,000
		31- 40	357		357	40	2,397	2,794
		41- 50	289		289		387	676
		51- 60			0	14	153	167
		61- 70			0		8	8
		71- 80			0		32	32
		81- 90			0	25	3	28
		91-100			0	11	49	60
		101 - 110			0		34	34
		111 - 120			0		15	15
		121 - 130			0			0
		131 - 140			0			0
		141 - 150			0			0
		TOTAL		1,119	0	1,119	2,500	14,801
	c)	Mature Deciduous			0			0
	d)	Immature Deciduous						
		Age Classes						
		1- 10			0			0
		11- 20			0			0
		21- 30			0		11	11
		31- 40			0		22	22
41- 50		2		2		65	67	
51 +				0	11	7	18	
TOTAL		2	0	2	11	105	118	
e)	AAR			0	64	629	693	
TOTAL		1,489	0	1,489	12,752	66,585	80,826	
2	Non-Productive Forest Land							
	Scrub, NP	15		15	335	7,827	8,177	
3	Not Suited for Forests							
	Alpine, Rock, Water, Swamp	43		43	190	10,416	10,649	
	Industrial, Roads, RW	73		73	243	1,041	1,357	
4	Grand Total		1,620	0	1,620	13,520	85,869	101,009

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	1.0		1.0	212.9	881.3	1,095.2
White Pine	1.2		1.2	60.8	187.2	249.2
Redcedar	161.6		161.6	4,411.3	11,540.2	16,113.1
Cypress	2.6		2.6	145.7	4,371.4	4,519.7
Sitka Spruce	1.1		1.1	32.4	153.8	187.3
Hemlock Sp.	44.0		44.0	1,994.6	12,184.9	14,223.5
Balsam Sp.	4.9		4.9	841.7	7,522.5	8,369.1
Lodgepole Pine	0.2		0.2	10.5	77.3	88.0
Deciduous			0.0	7.3	36.0	43.3
GRAND TOTAL	216.6	0.0	216.6	7,717.2	36,954.6	44,888.4
Hectares	368	0	368	10,177	51,050	61,595
Volume/ha (m3)	589	0	589	758	724	729

TFL 44 - Total Inventory as of December 31, 1995

Working Circle - Ucluelet

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL		
		Private			TL	Crown			
		MF 74	not MF	Total					
1	Productive Forest Land								
	a)	Mature Coniferous	888		888	82	2,709	3,679	
	b)	Immature Coniferous							
		Age Classes							
		1- 10		211		211	22	837	1,070
		11- 20		160		160	11	956	1,127
		21- 30		339		339		2,114	2,453
		31- 40		261		261		851	1,112
		41- 50		63		63			63
		51- 60		87		87	1	4	92
		61- 70				0	6	73	79
		71- 80				0		37	37
		81- 90				0			0
		91-100				0		6	6
		101 - 110				0			0
		111 - 120				0			0
		121 - 130				0			0
		131 - 140				0			0
		141 - 150				0			0
	TOTAL		1,121	0	1,121	40	4,878	6,039	
	c)	Mature Deciduous			0			0	
	d)	Immature Deciduous							
		Age Classes							
		1- 10				0		0	
		11- 20		7		7	3	10	
		21- 30				0		0	
		31- 40		7		7		7	
41- 50		43		43	3	2	48		
51 +				0			0		
TOTAL		57	0	57	3	5	65		
e)	AAR	5		5	3	50	58		
TOTAL		2,071	0	2,071	128	7,642	9,841		
2	Non-Productive Forest Land								
	Scrub, NP		172		172	3	106	281	
3	Not Suited for Forests								
	Alpine, Rock, Water, Swamp		52		52	4	284	340	
	Industrial, Roads, RW		147		147	2	335	484	
4	GRAND TOTAL		2,442	0	2,442	137	8,367	10,946	

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	0.6		0.6		6.1	6.7
White Pine	3.5		3.5	0.1	30.5	34.1
Redcedar	377.0		377.0	31.4	1,004.8	1,413.2
Cypress	12.5		12.5	0.6	105.7	118.8
Sitka Spruce	5.4		5.4	0.2	25.6	31.2
Hemlock Sp.	118.2		118.2	21.9	372.0	512.1
Balsam Sp.	27.4		27.4	3.7	105.7	136.8
Lodgepole Pine	3.8		3.8		13.3	17.1
Deciduous	0.2		0.2		1.5	1.7
GRAND TOTAL	548.6	0.0	548.6	57.9	1,665.2	2,271.7
Hectares	888	0	888	82	2,709	3,679
Volume/ha (m3)	618	0	618	706	615	617

TFL 44 - Total Inventory as of December 31, 1995

Block All

Area Summary (ha)

Class of Type		Schedule "A"				Schedule	GRAND TOTAL		
		Private			TL	"B"			
		MF 74	not MF	Total		Crown			
1	Productive Forest Land								
	a)	Mature Coniferous	15,138	18	15,156	43,328	115,061	173,545	
	b)	Immature Coniferous							
		Age Classes							
		1- 10	2,372	0	2,372	7,799	14,801	24,972	
		11- 20	5,849	0	5,849	2,673	23,150	31,672	
		21- 30	7,830	0	7,830	242	19,917	27,989	
		31- 40	5,634	9	5,643	163	17,707	23,513	
		41- 50	8,014	28	8,042	85	8,549	16,676	
		51- 60	8,181	21	8,202	110	12,541	20,853	
		61- 70	4,866	14	4,880	98	2,523	7,501	
		71- 80	859	0	859	14	503	1,376	
		81- 90	869	0	869	68	350	1,287	
		91-100	629	35	664	117	261	1,042	
		101 - 110	116	2	118	44	160	322	
		111 - 120	70	0	70	0	32	102	
		121 - 130	7	0	7	0	14	21	
		131 - 140	0	0	0	0	3	3	
		141 - 150	0	0	0	0	0	0	
	TOTAL		45,296	109	45,405	11,413	100,511	157,329	
	c)	Mature Deciduous	84	0	84	26	26	136	
	d)	Immature Deciduous							
		Age Classes							
		1- 10	0	0	0	0	3	3	
		11- 20	7	0	7	0	22	29	
		21- 30	18	0	18	0	89	107	
		31- 40	50	4	54	0	145	199	
		41- 50	502	0	502	14	982	1,498	
51 +		657	5	662	16	639	1,317		
TOTAL		1,234	9	1,243	30	1,880	3,153		
e)	AAR	1,238	0	1,238	2,007	3,608	6,853		
TOTAL		62,990	136	63,126	56,804	221,086	341,016		
2	Non-Productive Forest Land								
	Scrub, NP	3,311	3	3,314	936	16,986	21,236		
3	Not Suited for Forests								
	Alpine, Rock, Water, Swamp	5,025	2	5,027	672	33,222	38,921		
	Industrial, Roads, RW	2,432	23	2,455	1,223	5,943	9,621		
4	GRAND TOTAL		73,758	164	73,922	59,635	277,237	410,794	

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	3,039.5	9.1	3,048.6	3,688.4	5,056.2	11,793.2
White Pine	101.4	0.1	101.5	189.0	484.1	774.6
Redcedar	1,384.3	0.1	1,384.4	11,875.1	22,710.2	35,969.7
Cypress	358.9	0.0	358.9	777.9	7,252.9	8,389.7
Sitka Spruce	28.4	0.0	28.4	183.2	286.8	498.4
Hemlock Sp.	3,778.3	0.6	3,778.9	14,099.2	30,144.2	48,022.3
Balsam Sp.	1,618.4	0.6	1,619.0	5,999.6	18,429.1	26,047.7
Lodgepole Pine	10.9	0.0	10.9	15.4	103.2	129.5
Deciduous	16.3	0.3	16.6	54.3	89.9	160.8
GRAND TOTAL	10,336.4	10.8	10,347.2	36,882.1	84,556.6	131,785.9
Hectares	15,138	18	15,156	43,328	115,061	173,545
Volume/ha (m3)	683	600	683	851	735	759

TFL 44 - Total Inventory as of December 31, 1995

Block 1

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL		
		Private				Crown			
		MF 74	not MF	Total	TL				
1	Productive Forest Land								
	a)	Mature Coniferous	9,411		9,411	466	2,453	12,330	
	b)	Immature Coniferous							
		Age Classes							
		1- 10		1,616		1,616	60	74	1,750
		11- 20		2,899		2,899	7	257	3,163
		21- 30		4,181		4,181		450	4,631
		31- 40		698		698		364	1,062
		41- 50		2,416		2,416	8	1,101	3,525
		51- 60		3,399		3,399	10	4,646	8,055
		61- 70		3,446		3,446	3	784	4,233
		71- 80		502		502		157	659
		81- 90		363		363	1	166	530
		91-100		330		330		41	371
		101 - 110		11		11			11
		111 - 120		21		21			21
		121 - 130				0			0
		131 - 140				0		3	3
		141 - 150				0			0
	TOTAL		19,882	0	19,882	89	8,043	28,014	
	c)	Mature Deciduous	27		27			27	
	d)	Immature Deciduous							
		Age Classes							
		1- 10				0		0	
		11- 20				0		0	
		21- 30				0		0	
		31- 40				0	17	17	
41- 50		332		332	189	521			
51 +		412		412	1	166	579		
TOTAL		744	0	744	1	372	1,117		
e)	AAR	960		960	61	177	1,198		
TOTAL		31,024	0	31,024	617	11,045	42,686		
2	Non-Productive Forest Land								
	Scrub, NP	2,163		2,163	20	1,304	3,487		
3	Not Suited for Forests								
	Alpine, Rock, Water, Swamp	3,108		3,108		399	3,507		
	IndustRial, Roads, RW	1,069		1,069	14	252	1,335		
4	GRAND TOTAL		37,364	0	37,364	651	13,000	51,015	

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	2,066.1		2,066.1	55.1	315.6	2,436.8
White Pine	75.3		75.3	2.5	7.3	85.1
Redcedar	384.0		384.0	65.7	210.6	660.3
Cypress	281.3		281.3	11.7	52.3	345.3
Sitka Spruce	0.8		0.8		0.2	1.0
Hemlock Sp.	2,704.2		2,704.2	136.9	784.2	3,625.3
Balsam Sp.	1,233.0		1,233.0	53.4	394.6	1,681.0
Lodgepole Pine	4.6		4.6		1.7	6.3
Deciduous	4.4		4.4	0.4	0.4	5.2
GRAND TOTAL	6,753.7	0.0	6,753.7	325.7	1,766.9	8,846.3
Hectares	9,411	0	9,411	466	2,453	12,330
Volume/ha (m3)	718	0	718	699	720	717

TFL 44 - Total Inventory as of December 31, 1995

Block 2

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL	
		Private			TL	Crown		
		MF 74	not MF	Total				
1	<u>Productive Forest Land</u>							
	a)	Mature Coniferous	935		935	21,897	23,306	46,138
	b)	Immature Coniferous						
		Age Classes						
		1- 10	110		110	3,554	6,131	9,795
		11- 20	547		547	398	8,556	9,501
		21- 30	240		240	26	8,381	8,647
		31- 40	391		391	104	10,111	10,606
		41- 50	109		109	10	3,960	4,079
		51- 60	117		117	11	2,931	3,059
		61- 70	13		13	69	499	581
		71- 80	59		59	10	223	292
		81- 90	83		83	42	111	236
		91-100	12		12	85	48	145
		101 - 110			0	16		16
		111 - 120			0			0
		121 - 130			0			0
		131 - 140			0			0
		141 - 150			0			0
	TOTAL		1,681	0	1,681	4,325	40,951	46,957
	c)	Mature Deciduous			0			0
	d)	Immature Deciduous						
		Age Classes						
		1- 10			0			0
		11- 20			0			0
		21- 30	17		17		36	53
		31- 40	11		11		57	68
		41- 50	56		56	11	703	770
		51 +	59		59	2	247	308
TOTAL		143	0	143	13	1,043	1,199	
e)	AAR	37		37	1,271	1,222	2,530	
TOTAL		2,796	0	2,796	27,506	66,522	96,824	
2	<u>Non-Productive Forest Land</u>							
	Scrub, NP	66		66	107	724	897	
3	<u>Not Suited for Forests</u>							
	Alpine, Rock, Water, Swamp	90		90	257	1,238	1,585	
	Industrial, Roads, RW	136		136	557	2,558	3,251	
4	GRAND TOTAL		3,088	0	3,088	28,427	71,042	102,557

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	8.5		8.5	1,211.6	742.1	1,962.2
White Pine	4.0		4.0	62.2	73.8	140.0
Redcedar	258.2		258.2	5,800.7	6,861.7	12,920.6
Cypress	3.7		3.7	313.9	405.9	723.5
Sitka Spruce	19.1		19.1	123.2	97.8	240.1
Hemlock Sp.	283.9		283.9	9,166.3	8,616.1	18,066.3
Balsam Sp.	90.7		90.7	3,900.1	4,849.4	8,840.2
Lodgepole Pine			0.0	4.4	9.3	13.7
Deciduous	4.6		4.6	17.6	10.7	32.9
GRAND TOTAL	672.7	0.0	672.7	20,600.0	21,666.8	42,939.5
Hectares	935	0	935	21,897	23,306	46,138
Volume/ha (m3)	719	0	719	941	930	931

TFL 44 - TOTAL Inventory as of December 31, 1995

Block 3

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL	
		Private			TL	Crown		
		MF 74	not MF	TOTAL				
1	Productive Forest Land							
	a)	Mature Coniferous	3,379	18	3,397	9,113	32,516	45,026
	b)	Immature Coniferous						
		Age Classes						
		1- 10	380		380	1,948	3,518	5,846
		11- 20	1,665		1,665	993	5,882	8,540
		21- 30	2,753		2,753	75	6,280	9,108
		31- 40	3,918	9	3,927	29	3,936	7,892
		41- 50	5,138	28	5,166	67	3,084	8,317
		51- 60	4,578	21	4,599	74	4,806	9,479
		61- 70	1,407	14	1,421	20	1,159	2,600
		71- 80	298		298	4	54	356
		81- 90	423		423		41	464
		91-100	279	35	314	14	111	439
		101 - 110	86		86	28	124	238
		111 - 120	49		49		17	66
		121 - 130	7		7		14	21
		131 - 140			0			0
		141 - 150			0			0
	TOTAL		20,981	107	21,088	3,252	29,026	53,366
	c)	Mature Deciduous	57		57	6	8	71
	d)	Immature Deciduous						
		Age Classes						
		1- 10			0			0
		11- 20			0			0
		21- 30	1		1		31	32
		31- 40	32	4	36			36
41- 50		69		69		74	143	
51 +		186	5	191	2	226	419	
TOTAL		288	9	297	2	331	630	
e)	AAR	226		226	580	1,438	2,244	
TOTAL		24,931	134	25,065	12,953	63,319	101,337	
2	Non-Productive Forest Land							
	Scrub, NP	888	3	891	360	7,456	8,707	
3	Not Suited for Forests							
	Alpine, Rock, Water, Swamp	1,732	2	1,734	219	20,172	22,125	
	Industrial, Roads, RW	975	23	998	306	1,571	2,875	
4	GRAND TOTAL		28,526	162	28,688	13,838	92,518	135,044

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	956.4	9.1	965.5	2,171.7	3,203.6	6,340.8
White Pine	17.0	0.1	17.1	61.9	166.7	245.7
Redcedar	138.2	0.1	138.3	1,091.6	2,109.4	3,339.3
Cypress	58.1		58.1	269.1	2,144.4	2,471.6
Sitka Spruce	0.3		0.3	12.5	1.1	13.9
Hemlock Sp.	584.7	0.6	585.3	2,398.6	8,181.6	11,165.5
Balsam Sp.	255.6	0.6	256.2	1,042.1	5,691.0	6,989.3
Lodgepole Pine	1.7		1.7			1.7
Deciduous	6.8	0.3	7.1	20.2	27.1	54.4
GRAND TOTAL	2,018.8	10.8	2,029.6	7,067.7	21,524.9	30,622.2
Hectares	3,379	18	3,397	9,113	32,516	45,026
Volume/ha (m3)	597	600	597	776	662	680

TFL 44 - TOTAL Inventory as of December 31, 1995

Block 4

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL	
		Private			TL	Crown		
		MF 74	not MF	TOTAL				
1	Productive Forest Land							
	a)	Mature Coniferous	157		157	2,312	8,332	10,801
	b)	Immature Coniferous						
		Age Classes						
		1- 10	26		26	852	1,061	1,939
		11- 20	402		402	572	2,249	3,223
		21- 30	49		49	8	193	250
		31- 40	9		9		265	274
		41- 50			0		17	17
		51- 60			0		1	1
		61- 70			0			0
		71- 80			0			0
		81- 90			0		29	29
		91-100	8		8	7	6	21
		101 - 110	19	2	21		2	23
		111 - 120			0			0
		121 - 130			0			0
		131 - 140			0			0
		141 - 150			0			0
	TOTAL		513	2	515	1,439	3,823	5,777
	c)	Mature Deciduous			0	20	18	38
	d)	Immature Deciduous						
		Age Classes						
		1- 10			0			0
		11- 20			0		11	11
		21- 30			0			0
31- 40				0		4	4	
41- 50				0		9	9	
51 +				0			0	
TOTAL		0	0	0	0	24	24	
e)	AAR	10		10	47	258	315	
TOTAL		680	2	682	3,818	12,455	16,955	
2	Non-Productive Forest Land							
Scrub, NP		7		7	150	1,175	1,332	
3	Not Suited for Forests							
	Alpine, Rock, Water, Swamp				0	50	3,000	3,050
	Industrial, Roads, RW		30		30	120	284	434
4	GRAND TOTAL		717	2	719	4,138	16,914	21,771

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	6.5		6.5	153.8	245.1	405.4
White Pine			0.0	6.1	38.5	44.6
Redcedar	65.2		65.2	604.6	1,471.9	2,141.7
Cypress	0.3		0.3	46.9	545.2	592.4
Sitka Spruce	1.2		1.2	14.2	8.1	23.5
Hemlock Sp.	42.8		42.8	552.8	1,479.9	2,075.5
Balsam Sp.	6.6		6.6	231.8	820.8	1,059.2
Lodgepole Pine			0.0	0.1	1.3	1.4
Deciduous			0.0	8.4	21.5	29.9
GRAND TOTAL	122.6	0.0	122.6	1,618.7	4,632.3	6,373.6
Hectares	157	0	157	2,312	8,332	10,801
Volume/ha (m3)	781	0	781	700	556	590

TFL 44 - TOTAL Inventory as of December 31, 1995

Block 5

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL
		Private			TL		
		MF 74	not MF	TOTAL			
1	Productive Forest Land						
a)	Mature Coniferous	1,205		1,205	4,054	37,619	42,878
b)	Immature Coniferous						
	Age Classes						
	1- 10	240		240	1,339	3,939	5,518
	11- 20	336		336	563	5,883	6,782
	21- 30	607		607	59	4,588	5,254
	31- 40	618		618	30	2,981	3,629
	41- 50	351		351		387	738
	51- 60	87		87	15	157	259
	61- 70			0	6	81	87
	71- 80			0		61	61
	81- 90			0	2	3	5
	91-100			0		33	33
	101 - 110			0		16	16
	111 - 120			0		15	15
	121 - 130			0			0
	131 - 140			0			0
	141 - 150			0			0
	TOTAL	2,239	0	2,239	2,014	18,144	22,397
c)	Mature Deciduous			0			0
d)	Immature Deciduous						
	Age Classes						
	1- 10			0		3	3
	11- 20	7		7		11	18
	21- 30			0		22	22
	31- 40	7		7		67	74
	41- 50	45		45	3	7	55
	51 +			0			0
	TOTAL	59	0	59	3	110	172
e)	AAR	5		5	48	513	566
	TOTAL	3,508	0	3,508	6,119	56,386	66,013
2	Non-Productive Forest Land						
	Scrub, NP	187		187	243	5,540	5,970
3	Not Suited for Forests						
	Alpine, Rock, Water, Swamp	93		93	94	8,021	8,208
	Industrial, Roads, RW	222		222	204	1,237	1,663
4	GRAND TOTAL	4,010	0	4,010	6,660	71,184	81,854

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	1.5		1.5	40.8	405.7	448.0
White Pine	5.1		5.1	22.3	111.9	139.3
Redcedar	516.1		516.1	1,670.4	8,185.3	10,371.8
Cypress	14.8		14.8	64.4	3,075.6	3,154.8
Sitka Spruce	6.9		6.9	22.2	131.5	160.6
Hemlock Sp.	155.8		155.8	722.0	8,854.2	9,732.0
Balsam Sp.	30.0		30.0	367.9	5,769.7	6,167.6
Lodgepole Pine	4.2		4.2	4.2	20.5	28.9
Deciduous	0.5		0.5	3.9	25.9	30.3
GRAND TOTAL	734.9	0.0	734.9	2,918.1	26,580.3	30,233.3
Hectares	1,205	0	1,205	4,054	37,619	42,878
Volume/ha (m3)	610	0	610	720	707	705

TFL 44 - TOTAL Inventory as of December 31, 1995

Block 6

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL	
		Private			TL	Crown		
		MF 74	not MF	TOTAL				
1	Productive Forest Land							
	a)	Mature Coniferous	15		15	3,523		3,538
	b)	Immature Coniferous						
		Age Classes						
		1- 10				0		0
		11- 20				0		0
		21- 30				0	25	25
		31- 40				0		0
		41- 50				0		0
		51- 60				0		0
		61- 70				0		0
		71- 80				0		0
		81- 90				0	13	13
		91-100				0	11	11
		101 - 110				0		0
		111 - 120				0		0
		121 - 130				0		0
		131 - 140				0		0
		141 - 150				0		0
		TOTAL		0	0	0	24	25
	c)	Mature Deciduous			0			0
	d)	Immature Deciduous						
		Age Classes						
		1- 10				0		0
		11- 20				0		0
		21- 30				0		0
		31- 40				0		0
41- 50				0		0		
51 +				0	2	2		
TOTAL		0	0	0	2	0	2	
e)	AAR			0			0	
TOTAL		15	0	15	3,549	25	3,589	
2	Non-Productive Forest Land							
	Scrub, NP				0	10		10
3	Not Suited for Forests							
	Alpine, Rock, Water, Swamp		2		2	12		14
	Industrial, Roads, RW				0			0
4	GRAND TOTAL		17	0	17	3,571	25	3,613

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir			0.0	15.5		15.5
White Pine			0.0	33.4		33.4
Redcedar	4.2		4.2	1,602.5		1,606.7
Cypress			0.0	56.8		56.8
Sitka Spruce			0.0	7.5		7.5
Hemlock Sp.	1.5		1.5	680.1		681.6
Balsam Sp.	0.7		0.7	193.6		194.3
Lodgepole Pine	0.4		0.4	6.7		7.1
Deciduous			0.0	1.9		1.9
GRAND TOTAL	6.8	0.0	6.8	2,598.0	0.0	2,604.8
Hectares	15	0	15	3,523	0	3,538
Volume/ha (m3)	453	0	453	737	0	736

TFL 44 - TOTAL Inventory as of December 31, 1995

Block 7

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL	
		Private			TL	Crown		
		MF 74	not MF	TOTAL				
1	Productive Forest Land							
	a)	Mature Coniferous			0	1,721	1,721	3,442
	b)	Immature Coniferous						
		Age Classes						
		1- 10				0	29	29
		11- 20				0	40	256
		21- 30				0	65	65
		31- 40				0	46	46
		41- 50				0		0
		51- 60				0		0
		61- 70				0		0
		71- 80				0	8	8
		81- 90				0	10	10
		91-100				0	22	22
		101 - 110				0	7	7
		111 - 120				0		0
		121 - 130				0		0
		131 - 140				0		0
		141 - 150				0		0
	TOTAL		0	0	0	115	328	443
	c)	Mature Deciduous			0			0
	d)	Immature Deciduous						
		Age Classes						
		1- 10				0		0
		11- 20				0		0
		21- 30				0		0
		31- 40				0		0
41- 50				0		0		
51 +				0	9	9		
TOTAL		0	0	0	9	0	9	
e)	AAR			0			0	
TOTAL		0	0	0	1,845	2,049	3,894	
2	Non-Productive Forest Land							
	Scrub, NP				0	39	436	475
3	Not Suited for Forests							
	Alpine, Rock, Water, Swamp				0	16	190	206
	Industrial, Roads, RW				0	4	24	28
4	GRAND TOTAL		0	0	0	1,904	2,699	4,603

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir			0.0	39.8	43.1	82.9
White Pine			0.0	0.5	4.3	4.8
Redcedar			0.0	910.3	538.1	1,448.4
Cypress			0.0	13.1	118.1	131.2
Sitka Spruce			0.0	3.5	3.2	6.7
Hemlock Sp.			0.0	400.3	445.9	846.2
Balsam Sp.			0.0	198.3	214.1	412.4
Lodgepole Pine			0.0			0.0
Deciduous			0.0	1.6		1.6
GRAND TOTAL	0.0	0.0	0.0	1,567.4	1,366.8	2,934.2
Hectares	0	0	0	1,721	1,721	3,442
Volume/ha (m3)	0	0	0	911	794	852

TFL 44 - TOTAL Inventory as of December 31, 1995

Block 8

Area Summary (ha)

Class of Type		Schedule "A"				Schedule "B"	GRAND TOTAL		
		Private			TL	Crown			
		MF 74	not MF	TOTAL					
1	Productive Forest Land								
	a)	Mature Coniferous	36		36	242	9,114	9,392	
	b)	Immature Coniferous							
		Age Classes							
		1- 10				0	46	49	95
		11- 20				0	100	107	207
		21- 30				0	9		9
		31- 40				0		4	4
		41- 50				0			0
		51- 60				0			0
		61- 70				0			0
		71- 80				0			0
		81- 90				0			0
		91-100				0			0
		101 - 110				0		11	11
		111 - 120				0			0
		121 - 130				0			0
		131 - 140				0			0
		141 - 150				0			0
	TOTAL		0	0	0	155	171	326	
	c)	Mature Deciduous			0			0	
	d)	Immature Deciduous							
		Age Classes							
		1- 10				0		0	
		11- 20				0		0	
		21- 30				0		0	
		31- 40				0		0	
41- 50				0		0			
51 +				0		0			
TOTAL		0	0	0	0	0	0		
e)	AAR			0			0		
TOTAL		36	0	36	397	9,285	9,718		
2	Non-Productive Forest Land								
	Scrub, NP				0	7	351	358	
3	Not Suited for Forests								
	Alpine, Rock, Water, Swamp				0	24	202	226	
	Industrial, Roads, RW				0	18	17	35	
4	GRAND TOTAL		36	0	36	446	9,855	10,337	

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	0.5		0.5	0.1	101.0	101.6
White Pine			0.0	0.1	81.6	81.7
Redcedar	18.4		18.4	129.3	3,333.2	3,480.9
Cypress	0.7		0.7	2.0	911.4	914.1
Sitka Spruce	0.1		0.1	0.1	44.9	45.1
Hemlock Sp.	5.4		5.4	42.2	1,782.3	1,829.9
Balsam Sp.	1.8		1.8	12.4	689.5	703.7
Lodgepole Pine			0.0		70.4	70.4
Deciduous			0.0	0.3	4.3	4.6
GRAND TOTAL	26.9	0.0	26.9	186.5	7,018.6	7,232.0
Hectares	36	0	36	242	9,114	9,392
Volume/ha (m3)	747	0	747	771	770	770

TFL 44 - TOTAL Inventory as of December 31, 1995

Division All

Area Summary (ha)

Class of Type		Schedule "A"				Schedule	GRAND TOTAL		
		Private			TL	"B"			
		MF 74	not MF	TOTAL		Crown			
1	Productive Forest Land								
	a)	Mature Coniferous	15,138	18	15,156	43,328	115,061	173,545	
	b)	Immature Coniferous							
		Age Classes							
		1- 10	2,372	0	2,372	7,799	14,801	24,972	
		11- 20	5,849	0	5,849	2,673	23,150	31,672	
		21- 30	7,830	0	7,830	242	19,917	27,989	
		31- 40	5,634	9	5,643	163	17,707	23,513	
		41- 50	8,014	28	8,042	85	8,549	16,676	
		51- 60	8,181	21	8,202	110	12,541	20,853	
		61- 70	4,866	14	4,880	98	2,523	7,501	
		71- 80	859	0	859	14	503	1,376	
		81- 90	869	0	869	68	350	1,287	
		91-100	629	35	664	117	261	1,042	
		101 - 110	116	2	118	44	160	322	
		111 - 120	70	0	70	0	32	102	
		121 - 130	7	0	7	0	14	21	
		131 - 140	0	0	0	0	3	3	
		141 - 150	0	0	0	0	0	0	
		TOTAL		45,296	109	45,405	11,413	100,511	157,329
	c)	Mature Deciduous	84	0	84	26	26	136	
	d)	Immature Deciduous							
		Age Classes							
		1- 10	0	0	0	0	3	3	
		11- 20	7	0	7	0	22	29	
		21- 30	18	0	18	0	89	107	
		31- 40	50	4	54	0	145	199	
41- 50		503	0	503	14	982	1,499		
51 +		656	5	661	16	639	1,316		
TOTAL		1,234	9	1,243	30	1,880	3,153		
e)	AAR	1,238	0	1,238	2,007	3,608	6,853		
TOTAL		62,990	136	63,126	56,804	221,086	341,016		
2	Non-Productive Forest Land								
	Scrub, NP	3,311	3	3,314	936	16,986	21,236		
3	Not Suited for Forests								
	Alpine, Rock, Water, Swamp	5,025	2	5,027	672	33,222	38,921		
	Industrial, Roads, RW	2,432	23	2,455	1,223	5,943	9,621		
4	GRAND TOTAL		73,758	164	73,922	59,635	277,237	410,794	

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	3,039.3	9.1	3,048.4	3,688.3	5,056.2	11,792.9
White Pine	101.7	0.1	101.8	188.9	483.9	774.6
Redcedar	1,384.4	0.1	1,384.5	11,875.1	22,710.7	35,970.3
Cypress	359.0	0.0	359.0	777.3	7,253.3	8,389.6
Sitka Spruce	28.6	0.0	28.6	183.0	286.6	498.2
Hemlock Sp.	3,778.5	0.6	3,779.1	14,099.0	30,144.3	48,022.4
Balsam Sp.	1,618.0	0.6	1,618.6	5,999.3	18,429.2	26,047.1
Lodgepole Pine	11.0	0.0	11.0	15.2	103.1	129.3
Deciduous	16.4	0.3	16.7	54.1	89.8	160.6
GRAND TOTAL	10,336.9	10.8	10,347.7	36,880.2	84,557.1	131,785.0
Hectares	15,138	18	15,156	43,328	115,061	173,545
Volume/ha (m3)	683	600	683	851	735	759

TFL 44 - TOTAL Inventory as of December 31, 1995

Division Franklin

Area Summary (ha)

Class of Type		Schedule "A"				Schedule	GRAND TOTAL	
		Private			TL	"B"		
		MF 74	not MF	TOTAL		Crown		
1	Productive Forest Land							
	a)	Mature Coniferous	10,346		10,346	22,363	25,759	58,468
	b)	Immature Coniferous						
		Age Classes						
		1- 10	1,726		1,726	3,614	6,205	11,545
		11- 20	3,446		3,446	405	8,813	12,664
		21- 30	4,421		4,421	26	8,831	13,278
		31- 40	1,089		1,089	104	10,475	11,668
		41- 50	2,525		2,525	18	5,061	7,604
		51- 60	3,516		3,516	21	7,577	11,114
		61- 70	3,459		3,459	72	1,283	4,814
		71- 80	561		561	10	380	951
		81- 90	446		446	43	277	766
		91-100	342		342	85	89	516
		101 - 110	11		11	16		27
		111 - 120	21		21			21
		121 - 130			0			0
		131 - 140			0		3	3
		141 - 150			0			0
	TOTAL		21,563	0	21,563	4,414	48,994	74,971
	c)	Mature Deciduous	27		27			27
	d)	Immature Deciduous						
		Age Classes						
		1- 10			0			0
		11- 20			0			0
		21- 30	17		17		36	53
		31- 40	11		11		74	85
41- 50		389		389	11	892	1,292	
51 +		470		470	3	413	886	
TOTAL		887	0	887	14	1,415	2,316	
e)	AAR	997		997	1,332	1,399	3,728	
TOTAL		33,820	0	33,820	28,123	77,567	139,510	
2	Non-Productive Forest Land							
	Scrub, NP		2,229		2,229	127	2,028	4,384
3	Not Suited for Forests							
	Alpine, Rock, Water, Swamp		3,198		3,198	257	1,637	5,092
	Industrial, Roads, RW		1,205		1,205	571	2,810	4,586
4	GRAND TOTAL		40,452	0	40,452	29,078	84,042	153,572

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	2,074.4		2,074.4	1,266.6	1,057.7	4,398.7
White Pine	79.6		79.6	64.6	80.9	225.1
Redcedar	642.3		642.3	5,866.4	7,072.8	13,581.5
Cypress	285.1		285.1	325.0	458.6	1,068.7
Sitka Spruce	20.1		20.1	123.0	97.8	240.9
Hemlock Sp.	2,988.3		2,988.3	9,303.0	9,400.4	21,691.7
Balsam Sp.	1,323.3		1,323.3	3,953.2	5,244.1	10,520.6
Lodgepole Pine	4.7		4.7	4.2	10.9	19.8
Deciduous	9.1		9.1	17.8	11.0	37.9
GRAND TOTAL	7,426.9	0.0	7,426.9	20,923.8	23,434.2	51,784.9
Hectares	10,346	0	10,349	22,363	25,759	58,465
Volume/ha (m3)	718	0	718	936	910	886

TFL 44 - TOTAL Inventory as of December 31, 1995

Division Alberni West

Area Summary (ha)

Class of Type		Schedule "A"				Schedule	GRAND TOTAL	
		Private			TL	"B"		
		MF 74	not MF	TOTAL		Crown		
1	Productive Forest Land							
	a)	Mature Coniferous	4,424	18	4,442	11,507	43,557	59,506
	b)	Immature Coniferous						
		Age Classes						
		1- 10	617		617	2,822	5,416	8,855
		11- 20	2,227		2,227	1,576	9,087	12,890
		21- 30	3,141		3,141	83	8,587	11,811
		31- 40	4,188	9	4,197	29	5,052	9,278
		41- 50	5,201	28	5,229	67	3,101	8,397
		51- 60	4,665	21	4,686	75	4,811	9,572
		61- 70	1,407	14	1,421	26	1,232	2,679
		71- 80	298		298	4	91	393
		81- 90	423		423		70	493
		91-100	287	35	322	21	123	466
		101 - 110	105	2	107	28	126	261
		111 - 120	49		49		17	66
		121 - 130	7		7		14	21
		131 - 140			0			0
		141 - 150			0			0
	TOTAL		22,615	109	22,724	4,731	37,727	65,182
	c)	Mature Deciduous	57		57	26	26	109
	d)	Immature Deciduous						
		Age Classes						
		1- 10			0			0
		11- 20	7		7		14	21
		21- 30	1		1		31	32
		31- 40	39	4	43		4	47
41- 50		112		112	3	85	200	
51 +		186	5	191	2	226	419	
TOTAL		345	9	354	5	360	719	
e)	AAR	241		241	630	1,746	2,617	
TOTAL		27,682	136	27,818	16,899	83,416	128,133	
2	Non-Productive Forest Land							
	Scrub, NP	1,067	3	1,070	513	8,737	10,320	
3	Not Suited for Forests							
	Alpine, Rock, Water, Swamp	1,784	2	1,786	273	23,456	25,515	
	Industrial, Roads, RW	1,152	23	1,175	428	2,190	3,793	
4	GRAND TOTAL		31,685	164	31,849	18,113	117,799	167,761

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	963.5	9.1	972.6	2,325.5	3,454.8	6,752.9
White Pine	20.5	0.1	20.6	68.1	235.7	324.4
Redcedar	580.4	0.1	580.5	1,727.6	4,586.1	6,894.2
Cypress	70.9		70.9	316.6	2,795.3	3,182.8
Sitka Spruce	6.9		6.9	26.9	34.8	68.6
Hemlock Sp.	745.7	0.6	746.3	2,973.3	10,033.5	13,753.1
Balsam Sp.	289.6	0.6	290.2	1,277.6	6,617.5	8,185.3
Lodgepole Pine	5.5		5.5	0.1	14.6	20.2
Deciduous	7.0	0.3	7.3	28.6	50.1	86.0
GRAND TOTAL	2,690.0	10.8	2,700.8	8,744.3	27,822.4	39,267.5
Hectares	4,424	18	4,442	11,507	43,557	59,506
Volume/ha (m3)	608	600	608	760	639	660

TFL 44 - TOTAL Inventory as of December 31, 1995

Division Clayoquot

Area Summary (ha)

Class of Type		Schedule "A"				Schedule	GRAND TOTAL	
		Private			TL	"B"		
		MF 74	not MF	TOTAL		Crown		
1	Productive Forest Land							
	a)	Mature Coniferous	368		368	9,458	45,745	55,571
	b)	Immature Coniferous						
		Age Classes						
		1- 10	29		29	1,363	3,180	4,572
		11- 20	176		176	692	5,250	6,118
		21- 30	268		268	133	2,499	2,900
		31- 40	357		357	30	2,180	2,567
		41- 50	288		288		387	675
		51- 60			0	14	153	167
		61- 70			0		8	8
		71- 80			0		32	32
		81- 90			0	25	3	28
		91-100			0	11	49	60
		101 - 110			0		34	34
		111 - 120			0		15	15
		121 - 130			0			0
		131 - 140			0			0
		141 - 150			0			0
		TOTAL		1,118	0	1,118	2,268	13,790
	c)	Mature Deciduous			0			0
	d)	Immature Deciduous						
		Age Classes						
		1- 10			0		3	3
		11- 20			0		8	8
		21- 30			0		22	22
		31- 40			0		67	67
41- 50		2		2		5	7	
51 +				0	11		11	
TOTAL		2	0	2	11	105	118	
e)	AAR			0	45	463	508	
TOTAL		1,488	0	1,488	11,782	60,103	73,373	
2	Non-Productive Forest Land							
	Scrub, NP	15		15	296	6,221	6,532	
3	Not Suited for Forests							
	Alpine, Rock, Water, Swamp	43		43	142	8,129	8,314	
	Industrial, Roads, RW	75		75	224	943	1,242	
4	GRAND TOTAL		1,621	0	1,621	12,444	75,396	89,461

Mature Coniferous Volume Summaries (000 m3)

Douglas-fir	1.4		1.4	96.2	543.7	641.3
White Pine	1.6		1.6	56.2	167.3	225.1
Redcedar	161.7		161.7	4,281.1	11,051.8	15,494.6
Cypress	3.0		3.0	135.7	3,999.4	4,138.1
Sitka Spruce	1.6		1.6	33.1	154.0	188.7
Hemlock Sp.	44.5		44.5	1,822.7	10,710.4	12,577.6
Balsam Sp.	5.1		5.1	768.5	6,567.6	7,341.2
Lodgepole Pine	0.8		0.8	10.9	77.6	89.3
Deciduous	0.3		0.3	7.7	28.7	36.7
GRAND TOTAL	220.0	0.0	220.0	7,212.1	33,300.5	40,732.6
Hectares	368	0	368	9,458	45,745	55,571
Volume/ha (m3)	598	0	598	763	728	733



APPENDIX VII

Use of License Timber and Dependent Employment

Table of Contents

1.0 UTILIZATION OBJECTIVE.....	1
2.0 TIMBER CONVERTING PLANTS.....	1
3.0 VALUE ADDED STRATEGY AND ACHIEVEMENT.....	1
4.0 EMPLOYMENT	2

List of Tables

TABLE 2.1 List of Mills, Specialty, and Capacity in Port Alberni	1
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1.0 UTILIZATION OBJECTIVE

The corporate objective is to maximize the profit from the timber it harvests. Meeting this objective starts with a strong emphasis in log manufacture, log sorting, log allocation and quality manufacturing and finishing. Manufacturing is directed to extracting highest value end products from its logs, provided they also add profit. In varying degree, partially manufactured products are sold or contracted to other companies for conversion to value added products.

2.0 TIMBER CONVERTING PLANTS

Since the early 1980s, MB mills have been and continue to be upgraded as part of a business strategy to remain competitive and to increase the proportion of higher profit, value added specialty products. In addition, MB has leased other mills or entered into contracts for remanufacture for the same purpose.

In meeting the objectives, the company directs logs to the appropriate mills. The current volume harvested in TFL 44 that is directed to other MB mills, traded or sold is about 600 000 m³. This is offset by more than 200 000 m³ that are delivered to the Alberni mills from other MB logging divisions and market purchases. Table 2.1 provides information about the mills in Port Alberni.

TABLE 2.1. List of Mills, Specialty, and Capacity in Port Alberni

Plant	Specialty	Consumption m ³
Alberni Pacific	Hem Bal Fir (mainly Japanese market)	800 000
Somass	Cedar Specialties	330 000
Alberni Specialties	<ul style="list-style-type: none"> • Light Weight Coated Paper • Telephone Directory • Specialty Papers 	430 000

3.0 VALUE ADDED STRATEGY AND ACHIEVEMENT

MB has embarked on a strategic plan to add value and profit by further manufacture, quality enhancement and innovative uses for waste or low value fibres. Already this has been successful and will continue to grow in response to research and development and market demands. Current research is underway on manufacture of medium density fibreboard and other composite wood products from low grade fibre. The feasibility of utilizing bark and residuals for board products is being studied.

Research and development in the use of scanning technologies has been implemented at Alberni Pacific Division and has lead to improved extraction and sawing patterns.

Already over 40% of MB's sawn wood is remanufactured in either MB owned or leased mills or by independents. Final products include a wide range of paneling, specialty siding, window stock, spindles, banisters as well as many other special products for the North American, Japanese and European markets.

MB has also moved into value added paper products. Over \$200 million has recently been invested in Nexgen technology at Alberni Specialties. Nexgen produces a competitive lightweight coated sheet using less wood fibre (than other processes) for a given output.

MB has a long history of successful research and development of new, value added products. Examples include Parallam™ and Timberstrand™. Further structural products made from low value fibre are in the development stage.

4.0 EMPLOYMENT ---

Employment levels have decreased considerably since the late 1980s, mainly because of reductions in AAC, from the Clayoquot Sound decision and planning processes, reductions to the tenure area and regulatory constraints (refer to the discussion in Appendix III TFL 44 Socio Economic Analysis). The approximate numbers in 1991 are:

- Woods
 - Company 890
 - Contract 160
- Mills 1,990
- **TOTAL..... 3,040**

There are approximately 850 additional direct jobs that result from timber management in TFL 44 (refer to Appendix III). An estimated 600 of these jobs are industry jobs outside the Alberni Clayoquot Region. These include jobs at MB's remanufacturing facilities located on the east side of Vancouver Island and the lower mainland, marketing and R & D facilities in the lower mainland and forestry support staff and some administration positions in Nanaimo. The other 250 jobs are in the government and silviculture sectors.

The forest sector also generates indirect and induced jobs in other economic sectors. The indirect jobs are created by companies that supply goods and services to the logging operations and mills. The induced jobs are realized from the expenditure of households which derive their income directly from the forest sector. In the following discussion the indirect and induced jobs are combined and referred to as indirect jobs.

It is estimated that each direct job in the forest industry supports one indirect job in the Alberni Clayoquot Region and another indirect job outside the region (refer to Appendix III). With these assumptions, the 1991 estimates for indirect jobs are 3,040 in the Alberni Clayoquot Region and 4,400 outside the region. In summary:

	Direct Jobs	Indirect Jobs	Total Employment
Alberni Clayoquot Region	3 040	3 040	6 080
Elsewhere	850	4 40	5 590
Province Total	3 890	80	11 6 0

The Timber Supply Analysis shows that with current regulations, the timber harvest is expected to decline further during the next twenty years.

MB will continue to support local employment. Employment levels will vary over time according to changes in timber supply and the continual need to strive for efficient operations in a globally competitive industry. Weather and market conditions can also influence employment levels, particularly for short periods.

Current strategies and projects that assist with employment include:

- ❑ Forest Renewal BC (FRBC) funding. MB is negotiating a multi year agreement for FRBC funding. The company is committed to allocating the enhanced forestry portion of the resulting funds between First Nations and MB IWA crews in an equitable manner.
- ❑ In addition, MB is supporting the proposal of CU Power International Limited and PanCanadian Petroleum Limited to build a gas fired cogeneration power plant on the Alberni Specialties mill site in Port Alberni. The 240 megawatt plant, costing about 200 million, will supply electricity to BC customers on Vancouver Island plus steam to the Alberni Specialties mill.

The BC government has given the companies approval to negotiate an electricity purchase agreement with BC Hydro. The project will create about 330 direct jobs during construction and 23 permanent jobs.

Participation of First Nations in the workforce has increased substantially during MP 2. There has continued to be some participation in harvesting. Most of the gains have occurred in silviculture, particularly in enhanced forestry work, funded by FRBC. Five First Nations groups now have crews working in this field. In addition they do some work in basic forestry activities such as planting and brushing and weeding.

The logging operations employ band members to assist with the operational planning process, in particular to act as a liaison on concerns regarding cultural heritage values.

In April of 199 , MB and the five First Nations of the Nuuchahnulth Central Region signed a Joint Venture Agreement for the northern portion of MB's Clayoquot Sound operations, the portion formerly managed by Estevan Division. The Joint Venture Company has an employment target for First Nations to achieve 50 % of all company forest industry jobs in Clayoquot Sound within 10 years.



APPENDIX VIII

History and Management Achievements

Table of Contents

1.0 CORPORATE AND DEVELOPMENT HISTORY	1
1.1 CORPORATE HISTORY	1
1.2 LOCAL HISTORY BEFORE THE SLOAN COMMISSION 194	1
1.21 Port Alberni Area	1
1.22 Tofino Ucluelet Area.....	2
1.3 HISTORY AFTER THE SLOAN COMMISSION REPORT	2
1.31 Forest Management.....	3
2.0 FOREST INVENTORY.....	4
2.1 HISTORY OF LAND AREA CHANGES AND FOREST INVENTORY	4
2.2 HISTORY AND MAINTENANCE OF THE FOREST INVENTORY	5
2.21 The Mature Inventory	5
2.22 Inventory of the New Forest.....	5
2.23 Inventory Maintenance.....	5
2.24 Aerial Photography.....	5
2.3 GROWTH AND YIELD OF THE OLD AND NEW FOREST	6
2.31 Background	6
2.32 Recent Accomplishments	6
3.0 RECORD AND EXPLANATIONS FOR SUCCESSIVE CHANGES IN AAC.....	7
3.1 WORKING PLAN 1	
3.2 WORKING PLAN 2	
3.3 WORKING PLAN 2 AMENDED.....	
3.4 WORKING PLAN 3	
3.5 WORKING PLAN 4	8
3.6 WORKING PLAN 4 AMENDED.....	8
3. WORKING PLAN 5	8
3.8 WORKING PLAN 5 AMENDED.....	9
3.9 MANAGEMENT PLAN 1	9
3.10 MANAGEMENT PLAN 2 TFL 44	9
4.0 FOREST ADMINISTRATION.....	10
4.1 THE HARVEST RECORD	10
4.11 Compliance with Balancing AAC and Actual Cut.....	10
4.12 Harvesting the Operability Profile	12
4.13 Small Business Forest Enterprise Program (SBFEP) Harvest Record.....	14
4.2 PERFORMANCE AUDITS	14
5.0 SILVICULTURAL ACCOMPLISHMENTS.....	14
5.1 COMPLIANCE WITH MB RESTOCKING POLICY.....	14
5.2 SUMMARY OF SILVICULTURAL ACHIEVEMENTS	15
5.21 Site Preparation and Reforestation	16
5.22 Stand Tending Treatments.....	16
6.0 FOREST PROTECTION HISTORY	17
6.1 FIRE HISTORY	1
6.2 HISTORY OF INSECT EPIDEMICS AND CONTROL	1
6.3 HISTORY OF DISEASE PRESENCE AND CONTROL	18
7.0 HISTORY OF FOREST RESEARCH.....	18
8.0 HISTORY OF OTHER RESOURCE CONSERVATION.....	20

8.1 SOIL AND TERRAIN CONSERVATION RECORD	20
8.11 Mapping Sensitive Terrain	20
8.13 Road Deactivation	20
8.2 FISH CONSERVATION RECORD	20
8.3 WILDLIFE CONSERVATION ACHIEVEMENTS.....	21
8.4 BIODIVERSITY AND WILDERNESS CONSERVATION	21
8.5 FOREST RECREATION HISTORY	22
8.6 VISUAL LANDSCAPE MANAGEMENT HISTORY	22
8. HERITAGE AND CULTURAL PRESERVATION.....	22
8.8 THE WATER RESOURCE CONSERVATION HISTORY	23
8.9 HARVESTING OF MINOR PRODUCTS	23
9.0 RECORD OF PUBLIC FOREST MANAGEMENT FUNDING	23

List of Tables

TABLE 2.1.1. TFL 44 Total Area by Tenure (ha).....	4
TABLE 4.11.1. Comparison of Approved and Actual Harvest	11
TABLE 4.12.1. Partition Summary for TFL 44 MP 2 AAC (000 m ³).....	12
TABLE 4.12.2. Harvest by Working Circle and Operability Class Divisional Records	12
TABLE 4.12.3. Harvest by Working Circle and Operability Class ad usted to Official AAC Numbers	13
TABLE 4.13.1. Record of SBFEP Harvest ¹ (000 m ³).....	14
TABLE 5.1.1. Compliance with MB Restocking Policy	14
TABLE 5.22.1. Summary of Silvicultural Treatments	16
TABLE 5.22.2. Volume Produced from Thinning and Stand Conversion	16
TABLE 6.1.1. Summary of Fire History 1955 1996	1
TABLE 9.0.1. Public Funding of Forest Management	24

1.0 CORPORATE AND DEVELOPMENT HISTORY

1.1 Corporate History

MacMillan Bloedel Ltd. is the result of a series of strategic mergers and acquisitions involving many pioneering entrepreneurs. These are described in the corporate history, *Empire of Wood* (D. MacKay 1992, Douglas and McIntyre). Briefly, two pioneering Vancouver Island companies, Bloedel, Stewart and Welch merged with H.R. MacMillan Export Company as MacMillan and Bloedel Ltd. in 1951. In 1960 a further merger with Powell River Company formed MacMillan Bloedel and Powell River Ltd. simplified in 1966 as MacMillan Bloedel Ltd.

Bloedel, Stewart and Welch started as a logging operation in 1911 in the Campbell River Sayward area before expanding to the Alberni area in the 1930s where they built a sawmill and later, in 194 , into pulp and paper. The Powell River Company, incorporated in 1911, pioneered newsprint manufacture at Powell River in 1912. Later they added solid wood products as well as pulp, container board and fine papers. The H.R. MacMillan Export Company incorporated in 1919 to sell lumber into world markets. Later sawmills and then forest lands were acquired to ensure supply of product. In 1950, a Kraft pulpmill was built near Nanaimo to improve overall wood utilization.

The company has a long history of innovation in silviculture, research and value added products. Valued added products developed by the company include K3 particleboard, chipboards, OSB, parallam and numerous specialty paper products. The company also persisted and finally pioneered in value added sales into Japan.

1.2 Local History before the Sloan Commission— 1947

1.21 Port Alberni Area

Timber harvesting and sawmilling in the Alberni area has been more or less continuous since the 1860s. Logging methods have developed from hand logging which involved falling trees directly into the Alberni Inlet. This was followed by ox logging next came the development of steam powered yarding which matured into the use of wooden spar trees. Railroads became the link between the logging site and the mills. Then railroads gave way to trucks and wooden spars to mobile spars and then cranes.

Early logging was done on timber licenses and timber sales or on Crown granted land, primarily in the E N railway land grant. Activity was centered around the head of the Alberni Inlet and around Sproat and Great Central Lakes.

In the mid forties, a large infestation of hemlock looper in the Sarita, Klanawa, Pachena, and Nitinat watersheds killed or damaged 1 642 000 m³ of standing timber on about 13 400 ha necessitating a major salvage operation. Some 0

of the damaged timber was harvested over a four year period before excessive defect rendered the remainder too hard to recover.

By 1955, development of the major drainages of the Alberni Inlet was well advanced. Rail hauls were phased out and all wood was delivered to tidewater with off highway trucks.

Initially, reforestation was left to nature however, through cooperation with the B.C. Forest Service, the first local plantation was established on private land on the shore of Great Central Lake in 1938. A modest annual planting program was maintained in the Ash Valley and at Franklin River until the early 1940s. At the same time, H.R. MacMillan introduced patch logging and the use of seed trees to ensure forest regeneration on private land in the Ash River area and in 1941 the first plantation was established in that valley.

Many sawmills have come and gone since the Anderson (circa 1860) became the first export mill in B.C. Although it closed in 1863 because the available timber supply was exhausted it was soon followed by others as handloggers were overtaken by horse and ox skidding and world demand grew.

Wood use slowly diversified. A plywood plant was built in 1942 to utilize the excellent Douglas fir that was found in the area. A large shingle and shake mill operated for many years before finally closing in the early 1950s. The present world class pulp and paper manufacturing facility evolved from a rather modest pulpmill built in 1941. It was the first to operate solely on wood waste a much earlier and long defunct mill had used rags imported from Scotland.

1.22 Tofino Ucluelet Area

Commercial use of the forests started as early as 1898 hand logging operations in the inlets and on the islands of the coastal area supplied raw logs for sawmills established near Ucluelet and on Meares Island. Other mills followed at Matilda Creek and Quart Bay. The last of these mills closed in 1943.

Sitka spruce was logged in the Moyeha River watershed, in the lower Cypre River watershed, at Bowden Bay (Flores Island) and inland from Ucluelet to meet the wartime needs of both the first and second world wars for this strong, lightweight wood favoured in airplane construction. The first permanent logging operation was established in Ucluelet Inlet in 1945 at the site of the Kennedy Lake operation.

1.3 History after the Sloan Commission Report

Forest Management Licenses (FMLs) No. 20 (Tofino) and No. 21 (Alberni) were awarded to MacMillan Bloedel's predecessor companies in 1955. The Crown granted properties included in these FMLs were certified as Tree Farms 13 and 14, respectively. Forest Management Licenses were later renamed Tree Farm Licenses (TFL) and TFs became Managed Forest Units.

In 1984, the two TFLs were combined as Tree Farm License No. 44, and the two TFs were combined to form Managed Forest Unit 4.

1.31 Forest Management

With the award of TFLs 20 and 21, a long term sustainable wood supply was ensured for the existing converting plants in Port Alberni. This justified the expansion of operations to harvest and utilize the growing capacity of the landbase and the expansion of the converting plants.

Under terms of the License, the road system west of Sproat Lake was developed to meet up with roads on TFL 22 to provide public road access to the Tofino Ucluelet area as well as access to the upper Kennedy River watershed. This road became part of the provincial highway system in 1964.

An access road to Franklin River camp was built and extended south to connect with roads in the Sarita Bamfield area. Roads were also developed east from Franklin River camp to connect with logging roads that accessed Nitinat from Lake Cowichan.

Development also extended into the Henderson Lake area, Great Central Lake, the Cameron River drainage, upper Taylor River, upper Nahmint River, Nitinat River, and the eastern portion of the Clayoquot Sound forest. Water accessed operations were established at Cotter Creek, Tranquil Inlet, Beddingfield Bay, Steamer Cove, and Cypre River. Due to the economic downturn in the early eighties, a large proportion of the cut capacity in these isolated operations was temporarily reallocated. These areas now fall within the jurisdictional area of the Clayoquot Sound Central Regional Board and are subject to the recommendations of the Clayoquot Sound Scientific Panel.

A key commitment of the Licenses was to reforest the 20 400 ha declared not sufficiently restocked (NSR) at that time. Over the next ten years, this NSR was either planted or was found to have regenerated naturally. Prompt reforestation of newly logged areas became the norm.

In December 1962, an Intensive Forestry Program was instituted on all company managed lands. This comprised higher standards of reforestation, and a significant extension of brush control and release programs, and initiation of spacing or precommercial thinning of overstocked, young stands.

This program was superseded by the Designed Forest System in 1980. In this program the emphasis is on increasing future yields from a management unit while also meeting economic or investment criteria. This system was designed to be used as the means for meeting a target sustained yield, equal to or larger than was presently approved at least cost.

Funding of silvicultural activities on Crown lands was achieved through cost recovery via stumpage allowances (forestry costs) until 1978. Then direct reimbursement of costs was made through Section 88 of the Forest Act until 1981 when basic silviculture costs became the responsibility of the licensee.

The concepts of Integrated Resources Management was first introduced in the late 1960s. A corporate Land Use Policy was established and a team of resource management experts from the various disciplines was established in 1974 to provide training and guidance on all resource management issues. This Land Use Planning Advisory Team (LUPAT) is based in Nanaimo and continues to:

- ❑ advise on resource management problems and issues
- ❑ direct research in all fields of resource management including soils, wildlife, fisheries and silviculture and
- ❑ direct inventory data collection as required for non timber resources.

At this time the first guidelines setting standards of operation and protection of fish and wildlife were introduced and gradually improved, culminating in the enactment of the Forest Practices Code in 1994.

2.0 FOREST INVENTORY

2.1 History of Land Area Changes and Forest Inventory

Over the years since establishment of the original Licenses, areas have been added to and deleted from the TFL.

The significant changes have included:

- ❑ Reversion of Schedule A Timber Licenses to Schedule B as logging is completed.
- ❑ Acquisition of Crown granted lands and inclusion of these lands into Schedule A of the TFL.
- ❑ Removal of lands for transmission line and highway rights of way.
- ❑ Land trades, sales and purchases to consolidate ownership.
- ❑ Pacific Rim Park trade.
- ❑ Designation of Parks and Protected Areas (particularly during the last decade).

A summary of the property tenures by Management plan is presented in Table 2.1.1

TABLE 2.1.1. TFL 44— Total Area by Tenure (ha)

	Date of Inventory	Schedule A		Schedule B	TOTAL
		Crown Grant	Timber License	Crown	
TFL 20/21					
M WP 1	1954	48 35	120 40	258 993	428 468
M WP 2	195	50 431	121 232	25 458	429 121
M WP 3	1966	51 204	121 103	258 1	431 024
M WP 4	19 1	50 989	119 653	260 298	430 940
M WP 5	19 8	3 582	115 336	264 80	454 25
TFL 44					
M WP 1	1982	4 313	9 362	299 422	453 09
MP 2	198	3 2	69 236	30 49	450 12 ¹
MP 3	1995	3 919	59 634	2 241	410 94 ^{1,2}

¹ Excludes Carmanah Pacific Park.

² Excludes Protected Areas removed according to the 1995 Park Amendment Act (Bill 53).

2.2 History and Maintenance of the Forest Inventory

2.21 *The Mature Inventory*

Since the original cruise was completed in 1956, the inventory has been continuously upgraded and updated as follows:

- ❑ In 1958, a more intensive cruise was made of the Douglas fir forests.
- ❑ In 1963, further area was cruised and all volumes were recompiled.
- ❑ In 1966, mature volumes were recompiled, to close utilization standards (15 cm top diameter for trees 22.5 cm and larger).
- ❑ In 1972, mature volumes were recompiled using new MB decay factors.
- ❑ Between 1973 and 1975, the TFL was re-inventoried.
- ❑ In 1980, data from 63 500 ha of operational cruising was melded with the inventory to improve the less intensive original inventory on these areas.
- ❑ In the area not operationally cruised average lines were recalculated using only the samples remaining.
- ❑ In 1995, an accuracy test of the 1975 inventory in Block 2 showed no significant difference between the test plot volumes and the inventory.

2.22 *Inventory of the New Forest*

When the original TFLs (20 and 21) were awarded, all the immature forest was cruised and mapped. Each stand was described according to age, species, site index class and stocking.

The new forest inventory is updated by a two stage process. First the stand information for new, planted or natural stands are added to the inventory yearly. Any changes found by assessment of survival or free growing status are also made annually.

Second, young stands are cruised as they reach pole size, generally at 30 years or older depending on site index. Currently this program is in arrears but, since 1975, 15 000 ha have been cruised.

2.23 *Inventory Maintenance*

The inventory has been updated annually to reflect changes in property status and forest cover due to logging, regeneration, and silvicultural treatments made in the new forest.

2.24 *Aerial Photography*

TFL 44 was re-photographed in colour in 1994 and 1995 at an approximate photo scale of 1:20 000. Black and white high level photography at 1:80 000 was taken in 1995 as part of the GIS project of converting the inventory mapbase to the BC Government TRIM mapbase (NAD 83 datum).

2.3 Growth and Yield of the Old and New Forest

2.31 Background

MB commenced establishing permanent sample plots (PSPs) on the License in 1954. This program was extended to MFU 19 in 1955 and subsequently to TFL 39. Plots have been remeasured on a 5 or 10 year cycle. In all, MB now maintains a database of 2,300 second growth PSPs, including a number established by the MoF on land later included in the TFLs. The oldest plot was established by the Research Branch in 1931, but most plots were established in the 1960s. About half of the plots are in managed stands (planted, spaced, thinned, fertilized). Numerous installations were established as statistically valid experiments with proper controls and treatments. There are 99 old growth plots that have been remeasured four times over 20 years.

The first natural stand yield tables based on MB data were compiled in 1970. Subsequently the XENO model was developed and used in the timber supply analysis in 1990.

2.32 Recent Accomplishments

Analysis of MB's PSPs completed during the last two years includes the effects of natural stocking, pre commercial thinning (spacing), thinning and fertilization on the yields of western hemlock and Douglas fir stands.

Results showed that spacing to 1200-1400 sph in Douglas fir and western hemlock reduced mid rotation (35-45 years) yields compared to unspaced plots.

Commercial thinning, at best, removed a portion of the future harvest sooner (the thinned volume and final yield in the thinned stand equals the final yield in the unthinned stand) but only if the smallest stems were thinned and less than 25% of the volume was harvested as thinnings. In operational conditions where larger trees were thinned, the total harvestable yield was reduced proportionally to the thinned volume, i.e., the proportion that the final standing yield in the thinned stand was lower than that in the unthinned stand and was the same as the proportion of the stand volume removed by the thinning.

Analysis of fertilizer trials showed a single 250 kg/ha application of nitrogen as urea increased yield in medium site Douglas fir by up to 5%. This effect, however, was transient as it lasted 6 years in unthinned stands and 13 years in thinned stands. The response of western hemlock to nitrogen fertilization was low and inconsistent.

A biophysical site index estimation model was developed to assign site index to very young stands or to old growth stands, where site index curves are invalid. The model was based on over 4,000 datapoints and was extensively tested and validated. It uses species, biogeoclimatic variant and geographic location (latitude and longitude) to assign site index. The model has been accepted for use in the base option for the MP-3 Timber Supply Analysis.

3.0 RECORD AND EXPLANATIONS FOR SUCCESSIVE CHANGES IN AAC

This section presents the AAC history. Firstly for TFL 20 and 21 combined for Working Plans 1 to 5 and for TFL 44 Management Plans 1 and 2.

3.1 Working Plan #1

1955 to 195 combined AAC 1 438 061 m³

3.2 Working Plan #2

1958 to 1962 combined AAC 1 636 061 m³

The AAC increase due to:

- ☐ New forest inventory.
- ☐ Increased area of mature accessible timber by 46 3 9 ha.
- ☐ Increased area of immature forest due to reforestation and reclassification.
- ☐ Use improved net factors for decay.
- ☐ Use improved height curves.
- ☐ Improved utilization standard.
- ☐ Higher MAI for immature stands.

3.3 Working Plan #2 Amended

1963 to 1966 combined AAC 2 1 4 126 m³

The AAC increase due to:

- ☐ Volume increase due to inventory recompilation using improved Forest Service net factors for decay. Flat rate allowance of 5 for breakage and inclusion of dead, usable timber except Pw.
- ☐ Intensified reinventory of Douglas fir peeler stands.
- ☐ Reduction of NSR due to reforestation.
- ☐ Higher MAI applied to immature due to use of B.C. Forest Service cubic foot merch volume factors.

3.4 Working Plan #3

1968 to 1972 combined AAC 2 5 360 m³

The AAC increase due to :

- ☐ Recompilation to Close Utilization Standard.
- ☐ Increased MAI of immature yields due to revision to USDA Technical Bulletins 201 and 12 3.

- ❑ Elimination of previous allowances in AAC that provided for non recovery to utilization standards.

3.5 Working Plan #4

19 3 to 19 5 combined AAC 3 482 96 m³

The AAC increase due to:

- ❑ 405 ha of scrub reclassified as mature accessible.
- ❑ Recompilation of inventory using MB net factors for decay and height curves adjusted to fit MB sample tree data.
- ❑ Reduction of rotation from 90 years to 80 years.
- ❑ Use of MB yield tables based on MB sample plot data in place of USDA Technical Bulletins 201 and 12 3.
- ❑ Use of constant NSR (less than actual) in anticipation of reduction of NSR.
- ❑ Area allotment check method of AAC calculation in place of Hanlik's formula.

3.6 Working Plan #4 Amended

19 6 to 19 9 combined AAC 3 020 100 m³

The AAC decrease due to:

- ❑ Arbitrary reduction in AAC to allow for breakage to conform with B.C. Forest Service Policy.
- ❑ Interim reduction of mature volume as indicated from preliminary results of reinventory.

3.7 Working Plan #5

1980 to 1982 combined AAC 2 829 10 m³

The AAC decrease due to:

- ❑ Reduced volume resulting from reinventory.
 - ❑ Increased breakage allowance.
 - ❑ Revised MB yield tables resulting in lower yields at cutting age.
 - ❑ Reduction of stocking to allow for deciduous component in immature.
 - ❑ Breakage and decay allowances applied to immature yields.
 - ❑ Reduction of mature volumes to allow for sensitive sites not expected to be logged.
 - ❑ Use of actual stocking percents in place of persistent gap allowances resulting in lower yields at cutting age.
 - ❑ Partly offset by reduced rotation age from 80 years to 78 years.
-

3.8 Working Plan #5 Amended

1983 to 1984 combined AAC 2 940 450 m³

The AAC increase due to:

- ❑ Addition of 22 668 ha to Schedule A.”

3.9 Management Plan #1

1985 to 1990 AAC 2 838 000 m³

The AAC decrease due to:

- ❑ Increased rotation age.
- ❑ Increased sensitive site allowance.
- ❑ Allowance for timber unloggable due to environmental factors.
- ❑ Allowance for Waste₂ to conform with MoF policy.

3.10 Management Plan #2 TFL #44

1991 to 1993 AAC 2 680 000 m³

The AAC decrease due to:

- ❑ Reduction in landbase due to withdrawal of Carmanah Park.
- ❑ Exclusion of lands with Site Index 16 or less from the Analysis.

January 1, 1994 to May 31, 1994..... AAC 2 450 000 m³

The AAC decrease due to:

- ❑ Netdowns for operability, sensitive sites and nontimber resources based on mapped inventories.
- ❑ Harvest constraints, particularly in visual landscapes.

June 1, 1994 to 199 .. AAC 2 228 000 m³

The AAC decrease due to:

- ❑ Government's Clayoquot Sound Decision of April 1993. This included removal of protected areas and designation of special management ones with additional constraints on timber harvesting.

4.0 FOREST ADMINISTRATION

4.1 The Harvest Record

4.11 *Compliance with Balancing AAC and Actual Cut*

Table 4.11.1 following, compares the approved AAC with the actual volumes cut for former TFLs 20 and 21 between 1955 and 1984 and for TFL 44 from 1985 onwards. The actual volumes harvested each year have been impacted by both markets and labour strikes. Good markets resulted in pushing the level of cut towards the maximum permissible in any one year or cutting balance period the reverse holds true for times when the markets were poor. On two occasions labour strikes resulted in lower than planned cuts.

4.12 Harvesting the Operability Profile

In a letter dated December 31, 1993, the Chief Forester partitioned the TFL 44 harvest by Working Circle and Operability Class. Refer to Table 4.12.1.

In a subsequent letter dated May 2, 1994, the Clayoquot portion of the harvest was reduced to 405 000 m³/year.

The intent of the operability partition was to ensure that timber is harvested across the operability classes. There was no specific cut control requirement by operability class.

TABLE 4.12.1. Partition Summary for TFL 44 MP #2 AAC (000 m³)
(beginning in 1994)

Working Circle	Operability			Marginally Economic ¹	TOTAL
	Conventional	Nonconventional	Subtotal		
Alberni East	1 145	23	1 168		
Alberni West	485	86	5 1		
Ucluelet	34	0	34		
Clayoquot	595	32	62 ²		
TOTAL	2 259	141	2 400	50	2 450

¹Marginally Economic was not partitioned by Working Circle.

²Reduced to 405 000 m³ starting June of 1994.

The operability classes defined in Table 4.12.1 are mapped as described in the Timber Supply Analysis Information Package. Refer to Appendix III of the Management Plan.

Harvest by mapped operability class has been estimated from Divisional records. Refer to Table 4.12.2.

TABLE 4.12.2. Harvest by Working Circle and Operability Class Divisional Records
(000 m³)¹

Working Circle and Operability Class	Year			
	1994	1995	1996	3-Year Average
ALBERNI EAST				
Conventional	808	1 028	1 121	956
Nonconventional	9	124	3	45
Marginal	0	25	1	9
Total	817	1 117	1 125	1 040
ALBERNI WEST				
Conventional	464	455	231	383
Nonconventional	85	11	4	92
Marginal	6	10	2	30
Total	555	582	377	505
UCLUELET				
Conventional		3	1	15
Nonconventional	0	0	0	0
Marginal	0	0		2
Total	7	37	8	17
CLAYOQUOT				

Conventional	244	100	44	129
Nonconventional	15	45	0	20
Marginal	9	5	0	5
Total	268	150	44	154
TOTAL				
Conventional	1 522	1 620	1 396	1 513
Nonconventional	109	286		15
Marginal	15	40	81	46
Total	1 647	1 946	1 554	1 716

¹Harvest volumes exclude SBFEP and residue.

The Divisional harvest estimates in Table 4.12.2 differ from the official MoF billed volumes. They also exclude residue. Table 4.12.3 shows harvest volumes adjusted to correspond to the official AAC numbers.

TABLE 4.12.3. Harvest by Working Circle and Operability Class adjusted to Official AAC Numbers
(000 m³)¹

Working Circle and Operability Class	Year			3-Year Average	Partition from MP 2
	1994	1995	1996		
ALBERNI EAST					
Conventional	9 6	1 122	1 254	1 118	1 145
Nonconventional	11	136	3	50	23
Marginal	0	2	1	9	
Total	987	1 285	1 258	1 177	
ALBERNI WEST					
Conventional	495	461	2 2	409	485
Nonconventional	91	119	86	99	86
Marginal	6	10	85	34	
Total	592	590	443	542	
UCLUELET					
Conventional	26	61	1	29	34
Nonconventional	0	0	0	0	
Marginal	0	1	8	3	
Total	26	62	9	32	
CLAYOQUOT					
Conventional	2 8	144	52	158	
Nonconventional	1	64	1	2	
Marginal	10		0	6	
Total	305	215	53	191	
TOTAL					
Conventional	1 5	1 88	1 5 9	1 14	
Nonconventional	119	319	90	1 6	
Marginal	16	45	94	52	50
Total	1 910	2 152	1 763	1 942	

¹Harvest volumes do not include SBFEP.

These results show that the harvest targets for nonconventional and marginally economic timber types have on average been achieved or exceeded during the period 1994 to 1996. The exception is the Clayoquot Working Circle where harvest levels have been reduced due to the Clayoquot Sound decision and planning process.

4.13 Small Business Forest Enterprise Program (SBFEP) Harvest Record

In 1988, the BC government assigned 5% of the Crown AAC on all major licenses to the SBFEP. For TFL 44, this amounts to 89 833 m³ annually. MB originally chose the option of making this volume available from cutblocks on Crown lands within the approved forest development plan. Table 4.13.1 records SBFEP harvest activity.

TABLE 4.13.1. Record of SBFEP Harvest¹ (000 m³)

Year	AAC	Cut	Residue	Total Cut
1994	89.9	40.	1.3	42.0
1995	89.9	25.6	0.0	25.6
1996	89.9	121.8	0.0	121.8

¹Records were not available for 1988 to 1993 at time of writing this report.

4.2 Performance Audits

MB has a long history of auditing performance in the woods starting with fire equipment audits and fire attack preparedness drills in the 1950s. Informal audits for compliance with the first environmental policy started in the 1970s. Formal silvicultural audits by MB were initiated in 1980 and were the first in the province. Random audits are made to measure compliance to company and government standards of land use and all silvicultural projects.

5.0 SILVICULTURAL ACCOMPLISHMENTS

The silvicultural work has been driven by:

- Firstly, the contractual agreement, especially.
- As well as various legislated changes to the industry's responsibilities, e.g., the silviculture regulations.

The proportion of logged area planted has been increasing over the years as quick reforestation assumed greater and greater significance. Reasons for this trend include:

- The wish to maintain or increase the AAC.
- The need for early greenup, whether to allow early logging or to meet hydrology, aesthetic or site sensitivity objectives.

Spacing projects started in 1963, well in advance of all other forest managers. Commercial thinning was also practiced between 1963 and 1974 as part of the Intensive Forestry Program in the accessible areas of older new forest around Port Alberni, but was abandoned due to high costs and low prices.

5.1 Compliance with MB Restocking Policy

At December 31, 1996, the area of NSR was 4 668 ha, equivalent to 2.4 years of logging. Of this, 461 ha violated MB policy (Tables 5.1.1).

TABLE 5.1.1. Compliance with MB Restocking Policy

	TOTAL
--	-------

Av Ann Denudation 1992 1996		1 984
NSR 96		4 668
NSR Outside Policy		461
96 NSR as years of Denudation		2.4

On sites scheduled for planting target is 3 years and for natural regeneration 5 years since start of felling.

5.2 Summary of Silvicultural Achievements

MB has always carried out an extensive array of projects designed to improve the stocking of the new forests and to maintain or improve their growth and yield.

Area summaries of all silvicultural achievements are provided in Table 5.22.1 following.

5.21 Site Preparation and Reforestation

To aid or improve reforestation, sites were prepared using prescribed and controlled fire, machine scarification, weed control mechanical and chemical.

Trees were planted where natural regeneration was not successful within the MB waiting period policy, or on high sites and other areas where natural regeneration was considered unlikely or would be of an unwanted species.

5.22 Stand Tending Treatments

Once established, the new crop was tended, where necessary, to protect the new trees from weeds or to thin out overly dense stands of natural regeneration.

Subsequent treatments were undertaken to improve the value of the new crop by pruning, and to increase yield and/or quality through thinning and/or fertilization. A considerable area of new forest over 60 years old has been thinned, primarily in the 1960s only small areas have been fertilized or pruned. Thinnings yielded 10 00 m³ from 42 ha.

Areas treated are shown in Table 5.22.1 and volumes thinned in Table 5.22.2.

TABLE 5.22.1. Summary of Silvicultural Treatments
(hectares)

PROJECT	1955-1990	MP 2 1991-1996	Total
Site Preparation ⁽¹⁾	16 255	3 230	19 485
Seed Tree Control	15	0	15
Sanitation Felling ⁽²⁾	38		394
Natural Regen	4 024 ⁽⁴⁾	3 813	50 83
Planting	3 233 ⁽⁴⁾	16 4 8	89 11
Seeding	1 624	0	1 624
Brushing Weeding	20 596	5 539	26 135
Spacing	12 256	293	12 549
Pruning	35	4	39
Fertilizing	23	540	

(1) Scarification and brush control, broadcast burning and accumulation burning.

(2) Felling of damaged and diseased saplings following logging.

(3) Release of conifer from alder, maple, salmonberry and other weeds.

(4) Includes 5 381 ha of second growth included as part of the E N lands addition in 1983. Planting and natural regeneration of this area is assumed to have occurred in the same proportions as other TFL areas established during the period 1955 to 1990.

TABLE 5.22.2. Volume Produced from Thinning and Stand Conversion
(000 m³)

Project	1955-1990		MP #2 1991-1996		TOTAL	
	Vol	Ha	Ha	Vol	Vol	Ha
	0	0	0	0	0	0
	0	0	0	0	0	38
Thinning	10	42	0	0	10	42

The volume above is more than shown on the cutting balance table. This is because the very light thinnings removed in the early 1960s were not included as part of the cut because they were deemed recovery of mortality.

6.0 FOREST PROTECTION HISTORY

6.1 Fire History

Fire has not played a significant role on the License. Good detection and quick attack have kept fires small. The exceptions have been the Tay fire in 196 and escaped slash fires. The Tay fire was started by a Department of Highways contractor working when industry had closed down. Fanned by high winds the fire spread very quickly burning 1 500 000 m³ of timber and a significant area of new forest. The next largest fire escaped from an area being burned for research purposes when the weather changed unexpectedly.

The full record of fires, showing origins and areas may be found in Table 6.1.1 below.

TABLE 6.1.1. Summary of Fire History 1955–1996

Number of Fires								
Plan No.	Period	Industrial	Public	Lightning	Slash Escapes	Other	Total	Ha Burned
WP 1	1955 5	14		1	0	4	26	1.2
WP 2	1958 6	22	26	22	50	3	123	3294.6
WP 3	1968 2	21	13	14	14	5	6	155.0
WP 4	19 3 9	2	44	18	12	0	101	221.0
WP 5	1980 84	9	11	12	28	0	60	10 .0
MP 1	1985 90	19	1	45	31	0	112	4 3.0
MP 2	1991 96	12	14	5	2	0	33	133.1
TOTAL	1955-96	124	132	117	137	12	522	4384.9

6.2 History of Insect Epidemics and Control

There has been only one insect epidemic in the TFL history in 19 0 the black headed budworm, *Acleris variana*, population started to increase all over the island. The area affected reached 24 00 ha in 19 2. Plans had been made to spray in spring 19 3 but the population collapsed during the winter.

The Sitka spruce weevil, *Pissodes strobi*, has attacked natural and planted spruce. Cutting and burning infested leaders was carried out between 19 0 8 but appeared not to reduce the infestation and was abandoned.

Surveys for balsam woolly adelgid, *Adelges*, were initiated in 1962 but it was not until 1993 that the adelgid was found in amabilis and subalpine fir near Labour Day Lake. Some dead timber was salvaged and the population appears to decline. It has recently been found active again and both old and advanced growth amabilis and subalpine fir has been killed. Fill planting is proposed in stands of advanced growth where the fir has been killed rendering the stands NSR.

The ambrosia beetles, primarily *Trypodendron lineatum*, have caused significant degrade to high value logs in the past. Initially, attempts were made to limit damage by spraying booms of susceptible logs in the 1960s and by trying to limit the inventory of the most susceptible logs and by keeping logs wet using sprinkler systems. As a result of research initiated at Simon Fraser University by Dr. Borden and supported by MB, pheromones now provide an additional assist and with the continuing emphasis on inventory control and use of trap bundles, losses are greatly reduced.

6.3 History of Disease Presence and Control

Hemlock mistletoe, *Arceuthobium camplopodium f tsugensis*, is widespread in the old growth and new stands established before broadcast burning or slashing of residual tree was introduced as a standard practice for logged settings in which hemlock mistletoe had been significantly present.

Pathogenic fungi include laminated root rot, *Phellinus weirii*, white pine blister rust, *Cronartium ribicola*, annosus root rot, *Heterobasidion annosum*, honey fungus, *Armillaria ostoyae*, and species of *Fomes*. Limited areas of late rotation age Douglas fir showing significant laminated root rot infection were logged and the infection centres stumped. Further stumping is not planned pending confirmation of the long term value of this expensive treatment. No control of other fungi has been attempted. When surveys showed annosus root rot was common in young western hemlock stands based on advice at the time, spacing crews were instructed to leave high stumps. This practice was abandoned when it was found ineffective.

To encourage natural selection of resistant strains, any white pine present are left when stands are being spaced.

7.0 HISTORY OF FOREST RESEARCH ---

MB has had a significant forest research program since 1954 when pioneering work was commenced on forest nutrition and reforestation problems under the direction of Dr. T.N. Stoate. The nutrition studies showed nitrogen to be deficient and that significant growth gains could be made on low and medium sites. No other macro or micro nutrient showed any consistent growth increase. Timing studies showed the nitrogen should be applied between the onset of fall rains through to March 31st.

The role of N in cone stimulation was also studied and tentative rules to apply at or just before bud break derived. It was also observed that N fertilization appeared to delay or prevent death of small pole (.5 cm - 15 cm) Douglas fir infected with honey fungus.

The research program was subsequently extended to include a major program of growth and yield measurement and analysis, as well as projects in spacing and thinning, thinning equipment trials, forest ecology and the development of a forest ecosystem classification, and efficacy of herbicides. In the mid 1970s, equipment trials the low technology, Mini Alp cable yarders and the small Holder skidder, coupled with intensive training, made thinning economic in times of

higher log prices. Further program expansion took place in the 19 0s when biologists, soils specialists and other post graduate specialist staff were added.

Other examples of pioneering work are:

- ❑ Herbicide trials, including efficacy, timing, concentration and method of application.
- ❑ Non chemical control of alder.
- ❑ Development of an ecological classification system.
- ❑ Insect control in seed production areas.
- ❑ Landslide rehabilitation and stabili ation of roadsides.
- ❑ Impacts of slash burning on site productivity.
- ❑ Development of a forest estate model (FEM) for deriving AAC options.
- ❑ Modeling of the various constraints on harvest for long term forest planning.
- ❑ Old growth age and structural characteristics.
- ❑ Vegetation and microclimate associated forest clearcut interfaces.
- ❑ Alternative silvicultural systems for coastal montane forests (MASS).

This work has all been detailed in the annual and other reports. In response to the economic recessions of the 80s and 90s, the program was trimmed. Latterly, greater emphasis has been placed on cooperative research with other agencies and on obtaining funding from Federal and Provincial sources.

Some examples of results which have been applied include:

- ❑ Use of genetically improved seed for five species of greater genetic diversity than the natural seed with which it was compared.
 - ❑ Cone induction in seed orchards.
 - ❑ Growing of improved nursery stock in nearly every aspect of seedling culture from sowing to storage and shipping.
 - ❑ Physiological testing of seedlings for frost hardiness and root regeneration capacity.
 - ❑ Improved matching of stocktype to field condition.
 - ❑ Use of planting windows, especially for fall planting at higher elevations.
 - ❑ Improvements in control of brush mechanically and chemically.
 - ❑ Changes in stocking standards in planting and spacing based on growth studies, silvical characteristics, economics and desired wood properties.
 - ❑ Landslide rehabilitation and stabili ation of road casting.
 - ❑ Yield forecasting and AAC derivation.
 - ❑ Modeling of cutting constraints for 20 year and development plans.
-

8.0 HISTORY OF OTHER RESOURCE CONSERVATION

8.1 Soil and Terrain Conservation Record

Work on soil conservation started in 1994, leading to early guidelines for use in road construction to reduce sediment in streams and recognize unstable soils and means of avoiding or reducing bank stability failures.

8.11 Mapping Sensitive Terrain

Sensitive terrain mapping was completed in 1994. This involved identifying and characterizing present and potential areas of instability with particular reference to inclusion or exclusion from forest management and general classification of risk if disturbed by road construction or logging.

Completion of the mapping, freed staff for site specific assessment. All Es1 and Es2 sites within the development areas were assessed on the ground and advice given on road location and construction, harvest method, and falling boundaries or whether the area should be disturbed at all.

8.13 Road Deactivation

Recognition of the major role roads have had in site and habitat degradation has led to a program of deactivation of abandoned and inactive roads.

In 1993, MB began a planned deactivation program starting with the worst, or highest priority, roads. This may involve many or all of:

- ☐ Removal of culverts and bridges.
- ☐ Restoration of drainage channels.
- ☐ Replacing sidecast soil on the roadbed.
- ☐ Planting or hydroseeding trees, shrubs, herbs, and grass to bind soil.

8.2 Fish Conservation Record

Woods workers were trained and certified in the revised BC Coastal Fishery Forestry Guidelines in 1993 and 1994 and received training to implement the FPC. All workers involved in setting layout were trained in Riparian Management Guidelines required by the FPC.

Watershed inventories have been carried out throughout the License. Classification of streams and lakes were updated to the Fish Forestry Guideline standards in 1994 and operational planning for individual openings will adjust inventories to FPC standards.

Restoration projects were undertaken in the Sarita, Cypre, Henderson, Kennedy and Mercantile watersheds. These projects are ongoing and additional projects will be started as funds become available from FRBC.

Seed funding was provided to initiate enhancement projects at Henderson Lake, Ahousat and Pachena River.

8.3 Wildlife Conservation Achievements

The License area provides habitat for a wide range of birds and other animals. Information continues to be collected about their ranges and critical habits. As the information and knowledge base has grown so have the attempts to plan and manage to conserve wildlife. Achievements include:

- ❑ Wildlife habitat suitability assessments including: seasonal ranges for deer and elk, spring forage planning, design of wildlife tree patches and bird populations in older second growth.
- ❑ A comparative analysis of bird populations in old and new forests of Vancouver Island has been completed in cooperation with Andrew Bryant.
- ❑ Assessments of marbled murrelet use of various areas including designated potential nesting areas.
- ❑ Bald eagle surveys on the west coast (research partnership with Canadian Wildlife Service).

8.4 Biodiversity and Wilderness Conservation

Substantial areas within TFL 44 are currently reserved from timber harvesting. This includes inoperable areas and areas mapped as having significant values for wildlife and recreation. Interim Forest Ecosystem Networks (FENs) have been mapped, and are used in operational and strategic planning. The FENs protect representative areas of old growth in each landscape unit and provide connectivity to larger protected areas.

Low Intensity Areas (LIAs) with objectives emphasizing biodiversity, visual landscapes and recreation were recently established as part of the Vancouver Island Land Use Plan. LIAs, wholly or partly within TFL 44, extend over approximately 41 000 ha of the TFL and include the Walbran, Alberni Inlet, Barkley Sound, Nahmint and Strathcona Taylor LIAs.

Close to 25 % of TFL 44 is in Clayoquot Sound. The planning process in Clayoquot Sound emphasizes biodiversity and other nontimber values.

MB has a five year program to map ecosystems at the 1:20 000 scale for TFL 44. The program is funded by Forest Renewal BC. Ecosystem mapping will assist forest planning including designing FENs to ensure that ecosystems are represented. At the end of the 1996/97 year, 110 000 ha of ecosystem mapping had been completed in TFL 44.

Computer tools have been adapted and developed to assist with FEN design and to project habitat supply resulting from forest harvest schedules. The intent of the habitat supply modeling is to develop a performance based approach to assessing the impacts of harvest on biodiversity.

8.5 Forest Recreation History

Over the years, the opportunities and facilities for recreation within the License have improved in response to development of access, increases in population, increased leisure time and the demands and expectations of the public.

Various recreation inventories have been conducted. The first major inventory and analysis was completed in 1983. The latest was completed in 1995.

Mapped recreation features are recognized in development plans and since 1993 allowances for recreation areas have been included in Timber Supply Analyses and other strategic plans.

The MB Alberni Forest Information Centre provides information on local recreation and on the local forest industry. Guided woods and mill tours are provided.

The TFL 44 recreation and logging guide has been available for more than 20 years, the latest update was released in 1996. The guide outlines logging roads and recreation opportunities including camping and picnic sites, boat launches, sites of interest, and hiking, boating and swimming opportunities.

In addition to the Parks and recreation sites managed by the Federal and Provincial Park authorities in the vicinity of TFL 44, the MoF and MB have established and cooperatively maintain several campsites and picnic sites in the TFL.

MacMillan Bloedel has established and maintains the Bill Motyka campground near the mouth of Macktush Creek. The site consists of 58 campsites, toilet facilities and a boat launch.

8.6 Visual Landscape Management History

Visual landscape inventories have been completed for most of TFL 44.

Visual impact assessments have recently become an integral part of visual landscape design required for operations in scenic areas.

Mapped visual landscape areas have been recognized in strategic analyses (e.g., Timber Supply Analyses) since 1993. This involves applying rate of harvest constraints to areas designated with Visual Quality Objectives.

8.7 Heritage and Cultural Preservation

MacMillan Bloedel recognizes the importance of aboriginal sites to First Nations people. Known heritage sites in the provincial inventory have been mapped and divisional personnel have been trained in the field identification of heritage features. Archaeologists and First Nations' advisors are utilized where activity is proposed in the vicinity of previously identified areas or where previous use may be a possibility.

Archaeological Impact Assessments are being done as required and culturally modified trees and other features are recorded on operational maps.

Increasingly, the emphasis has been on developing a mutual understanding of planning requirements. Review of Forest Development Plans is encouraged to ensure that significant features are identified early in the planning process.

8.8 The Water Resource Conservation History

There are seventeen Community Watersources registered over lands within the License. In addition many creeks and rivers are high value fish habitat.

The following activities have been undertaken to minimize impacts on the water resource and associated fish habitats:

- ❑ Hydrotechnical stream assessments have been conducted to assess flooding hazard and risk associated with bridge and culvert installations. For example in the Thompson Creek, West Walbran Creek, Haddon Creek, Lower Klanawa River, McQuillan Creek and Allison Creek watersheds.
- ❑ Analyses for stabilizing disturbed channel reaches have recently occurred in the Lower Sarita River and on Thistle Mine (TMR 500).
- ❑ Coastal Watershed Assessment Procedures have been initiated and are at different stages of completion in a number of watersheds. These include: Macktush Creek, Cous Creek, Sproat Lake, Haddon Creek, Klanawa River, China Creek, Sarita River and the Nahmint River.

The purpose of the CWAP is to assess the type and extent of potential water related problems in a watershed resulting from past forestry activities, and to recognize possible implications of proposed development.

- ❑ Starting in 1994, Forest Renewal BC funding has been utilized in watershed restoration projects throughout the TFL.

8.9 Harvesting of Minor Products

Harvest of minor forest products is uncontrolled and MB has no specific record. There is increasing recognition of the presence and value of other products of the forest. Harvesting of yew bark has occurred in at least three blocks in recent years. In addition, unknown quantities and values of greenery for florists and mushrooms are being collected within the TFL.

9.0 RECORD OF PUBLIC FOREST MANAGEMENT FUNDING

Public funds contributed to the costs of silviculture on Crown lands since the initiation of the TFL system. Up to 1999, a system of forestry costs reimbursed part of the silviculture costs on Crown land. A rate per unit was derived by dividing the costs of silviculture by the volume of logs scaled that year. The resulting rate was applied as a reduction to the stumpage paid on Crown timber the following year. The rate was reduced to zero when stumpage reached the calculated minimum return to the Crown.

In 19 9, a more equitable system was introduced. Section 88 of the Forest Act allowed reimbursement via a credit against stumpage of the cost of approved silviculture projects on Crown land. This was repealed in 198 and basic silviculture costs were legislated an industry responsibility. Since then some costs have continued to be paid through payment of approved costs on lands logged prior to October 198 and various funds such as the Federal Resource Development Agreement, Forest Renewal Initiative Program, South Moresby Forest Replacement Account and other special or training funds. Costs credited to MB are shown in Table 9.0.1 following. A large portion of the "other" category for 1995 and 1996 is for watershed restoration work, funded by Forest Renewal British Columbia (FRBC).

TABLE 9.0.1. Public Funding of Forest Management
(dollars)

Plan Period	Year	Basic	Intensive	Other	TOTAL
Pre award	1951 54			31 815	31 815
WP 1	1955 5				0 835
WP 2	1958 6				1 859 11
WP 3	1968 2				2 105 236
WP 4	19 3 9				026 859
WP 5	1980 84	2 093 4 3	631 89	650 811	3 394 21
MP 1	1985 1991	5 462 360	599 833	558 26	6 620 460
MP 2	1992	389 881	148 053		53 934
	1993	354 38			354 38
	1994	460 366			460 366
	1995	16 018	66 159	5 213	85 390
	1996	256 2 5	9 168	1 94 214	2 212 65
					26 231 273



SCHEDULE 'A' PROPERTIES STATISTICAL TABLE

Table No. II - 1 Schedule 'A' Area Summary

BLOCK NO.	BLOCK NAME	PRIVATE LANDS (HECTARE)	TIMBER LICENCES (HECTARE)	TOTAL (HECTARE)
I	CAMERON RIVER	36,831.84	651.00	37,482.84
II	NITINAT LAKE	3,122.59	31,38 .00	34,509.59
III	SPROAT LAKE	28,423.59	13,930.00	42,353.59
IV	HENDERSON LAKE	59.41	4,202.00	4,961.41
V	KENNEDY LAKE	4,028.54	6,358.00	10,386.54
VI	MEARES ISLAND	13.36	3,566.00	3,579.36
VII	MEGIN LAKE		3,116.00	3,116.00
VIII	FLORES ISLAND	40.4	419.00	459.47
GRAND TOTALS		73,219.79	63,629.00	136,848.79

Lands owned or controlled as of December 31, 1996.

The attached list of Schedule A properties does not include the deletion of Protected Areas removed by Bill 53 Park Amendment Act . As these areas have not formally been removed from our T.F.L. 44 contract with the Ministry of Forests, we continue to record the the properties as part of the T.F.L.

In the attached lists of Schedule A properties, MP 2 and MP 3 refer to lands owned or controlled as of December 31, 198 and December 31, 1996, respectively.

Table No. II - 2 Managed Forest Unit 74 Area Summary

		Hectares
TOTAL PRIVATE LANDS IN T.F.L. 44		73,219.79
LESS PROPERTIES IN T.F.L. BUT NOT CERTIFIED AS MFU 74		
BLOCK I	Block 105, D.L. s 159 196, Lot A, Alberni Dist.	9.00
	Lot 153, Alberni Dist, Plan 1854	4.85
	D.L. 42, Part Plan 166 R/W	0.69
BLOCK II	Frac. E 1/2 Sec. 12, Twp. 2, Barclay Dist.	10.68
BLOCK III	D.L. 124, Except Plan 482, Alberni Dist.	0.81
	D.L. 69, Clayoquot Dist.	18.00
BLOCK IV	D.L. 1248, Except Pcl. A, Clayoquot Dist.	4.22
BLOCK V	D.L. 4 8, Except Plan 02 , Clayoquot Dist.	3.33
TOTAL PRIVATE LANDS IN T.F.L., BUT NON M.F.U.74		51.58
TOTAL PRIVATE LANDS IN T.F.L. 44 & MFU 74		73,168.21

SCHEDULE "A" PROPERTY LISTING—BLOCK 1— CAMERON RIVER

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
Private Lands	BK 1021	ALBERNI	36.26	36.26	
	BK 105, DLs 159 196, LOT A	ALBERNI	0.00	9.00	Land Fill Exchange 1991
	BK 1054	ALBERNI	38.	38.	
	BK 1286	ALBERNI	309.60	309.60	
	BK 128	ALBERNI	356.13	356.13	
	BK 1288	ALBERNI	346.42	346.42	
	BK 1293	ALBERNI	116.96	116.96	
	BK 131	ALBERNI	2,413.19	2,413.19	
	BK 1318	ALBERNI	3,340.39	3,340.39	
	BK 1324, PART	ALBERNI	9,262.	9,262.	
	BK 1325	ALBERNI	93.34	93.34	
	BK 1326	ALBERNI	695.28	695.28	
	BK 188, S. PART, PLAN DD5683 N	ALBERNI	640.42	640.42	
	BK 189, S. PART, PLAN DD5683 N	ALBERNI	19.55	19.55	
	BK 235, EXCEPT PLANS 580 R 392 R/W	ALBERNI	106.03	106.03	
	BK 235, LOT 1, PLAN 9683	ALBERNI	15.58	15.58	
	BK 240, PLAN DD16998 N	ALBERNI	22.8	22.8	
	BK 244, PLAN DD16998 N	ALBERNI	484.50	484.50	
	BK 245, PLAN DD16998 N	ALBERNI	1,102.23	1,102.23	
	BK 246, PLAN DD16998 N	ALBERNI	32.09	32.09	
	BK 24	ALBERNI	0.00	31.85	Alberni Airport Land Exchange 1989
	BK 268	ALBERNI	48.56	48.56	
	BK 328	ALBERNI	214.08	214.08	
	BK 363	ALBERNI	8.13	8.13	
	BK 364	ALBERNI	32. 4	32. 4	
	BK 365	ALBERNI	1 .20	1 .20	
	BK 366	ALBERNI	49.05	49.05	
	BK 36	ALBERNI	3.9	3.9	
	BK 368	ALBERNI	16.23	16.23	
	BK 369	ALBERNI	6.88	6.88	
	BK 3 9	ALBERNI	24.44	24.44	
	BK 392	ALBERNI	32.21	32.21	
	BK 393	ALBERNI	16.59	16.59	
	BK 394	ALBERNI	2 .64	2 .64	
	BK 402	ALBERNI	60. 0	60. 0	
	BK 404	ALBERNI	95.91	95.91	
	BK 443	ALBERNI	129.50	129.50	
	BK 550	ALBERNI	286.52	286.52	
	BK 551	ALBERNI	511.53	511.53	
	BK 552	ALBERNI	1 1.19	1 1.19	
Private Lands	BK 60, PLAN 89	ALBERNI	649.54	649.54	
	BK 611, PLAN DD2 6 6 N	ALBERNI	8.09	8.09	
	BK 632	ALBERNI	6.89	6.89	
	BK 633	ALBERNI	138.81	138.81	
	BK 6	ALBERNI	326.18	326.18	
	BK 683	ALBERNI	45. 3	45. 3	
	BK 692	ALBERNI	504.25	504.25	
	BK 62	ALBERNI	106.44	106.44	

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	BK 63	ALBERNI	8 8.56	8 8.56	
	BK 64	ALBERNI	309.19	309.19	
	BK 80, PLAN 886	ALBERNI	429.92	429.92	
	BK 819	ALBERNI	63.94	63.94	
	BK 82, PLAN 886	ALBERNI	1, 9 .65	1, 9 .65	
	BK 821	ALBERNI	5 9.44	5 9.44	
	BK 822	ALBERNI	101.26	101.26	
	BK 823	ALBERNI	39.04	39.04	
	BK 824	ALBERNI	109.92	109.92	
	BK 825	ALBERNI	126.91	126.91	
	BK 826	ALBERNI	130.88	130.88	
	BK 82	ALBERNI	381.32	381.32	
	BK 828, EXCEPT PART ON PLAN 3035 R/W	ALBERNI	53 .80	53 .80	
	BK 83, LOT A BK 1152, PLAN 22640	ALBERNI	8.31	8.31	
	BK 83, PLAN 886	ALBERNI	1,09 .98	1,09 .98	
	BK 835	ALBERNI	3 .53	3 .53	
	BK 84, PART, PLAN 886	ALBERNI	488.06	488.06	
	BK 852	ALBERNI	410.08	410.08	
	BK 863	ALBERNI	6.0	6.0	
	BK 89, PLAN 886	ALBERNI	226.63	226.63	
	BK 934	ALBERNI	12 .88	12 .88	
	BK 935	ALBERNI	16.19	16.19	
	BK 950	ALBERNI	9. 3	9. 3	
	DL 132, S 1/2	ALBERNI	32.38	0.00	Land Fill Exchange 1991
	DL 159 196, BK 105, LOT A	ALBERNI	0.00	146.43	Land Fill Instrument 14
	DL 159, PCL A (DD9801 N)	ALBERNI	9.92	0.00	Land Fill Exchange 1991
	DL 159, PCL B (DD18585 N)	ALBERNI	1.90	0.00	Coulson Land Sale 1990
	DL 159, PCL B (DD18585 N), PLAN 145 R	ALBERNI	0.13	0.00	Coulson Land Sale 1990
	DL 181, EXCEPT PLANS 35 R/W 149 R/W	ALBERNI	60.94	60.94	
	DL 2001	ALBERNI	0.00	9 .	Alberni Airport Land Exchange 1989
	DL 240, PLAN DD121 3 F	ALBERNI	19.83	19.83	
	DL 241, PLAN DD121 3 F	ALBERNI	19.02	19.02	
Private Lands	DL 242, PLAN DD121 3 F	ALBERNI	20.90	20.90	
	DL 243, PLAN DD121 3 F	ALBERNI	16.39	16.39	
	DL 244, PLAN DD121 3 F	ALBERNI	20.64	20.64	
	DL 260, PART, EXCEPT PLAN 149 R/W	ALBERNI	30.48	30.48	
	DL 264	ALBERNI	24.28	24.28	
	DL 2 4	ALBERNI	0.00	16.15	Alberni Airport Land Exchange 1989
	DL 2	ALBERNI	0.00	13.12	Alberni Airport Land Exchange 1989
	DL 295	ALBERNI	46.54	46.54	
	DL 298	ALBERNI	3.85	3.85	
	DL 299	ALBERNI	3.28	3.28	
	DL 304	ALBERNI	14.81	14.81	
	DL 99, EXCEPT PLAN 126 R/W	ALBERNI	59.25	0.00	Land Fill Exchange 1991
	DL 99, PLAN 126 R/W	ALBERNI	5.50	0.00	Land Fill Exchange 1991
	LOT 153, ALBERNI DISTRICT, PLAN 1854	ALBERNI	38.04	38.04	
	TOTAL CROWN GRANTS - ALBERNI		32,223.76	32,429.01	
Private Lands	DL 1 , EXCEPT PLAN 89 R/W	BARCLAY	116.35	116.35	
	DL 266, PLAN 12 R/W	BARCLAY	2.95	2.95	
	DL 26 , PLAN 12 R/W	BARCLAY	3.09	3.09	

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	DL 42, EXCEPT PLAN 166 R/W	BARCLAY	50.30	50.30	
	DL 42, PART, PLAN 166 R/W	BARCLAY	0.69	0.69	
	DL 495	BARCLAY	10.52	10.52	
	DL 83	BARCLAY	25.90	25.90	
	LOT 1 , S1/2, PLAN 89 R/W	BARCLAY	2.64	2.64	
	SEC 1 , N1/2, PLAN 89 R/W	BARCLAY	2.83	2.83	
	SEC 40	BARCLAY	20.05	20.05	
	TOTAL CROWN GRANTS - BARCLAY		235.33	235.33	
Timber Licences	T0282 01 (TL4 2)	BARCLAY	24.00	24.00	
	T0282 02 (TL2659)	BARCLAY	140.00	85.00	55 ha Reverted 1988
	T0282 03 (TL45 2)	BARCLAY	100.00	100.00	
	T0284 05 (TL10006)	BARCLAY	33.00	33.00	Portion of T.L. also in Blk. II
Timber Licences	T029 01 (TL500)	BARCLAY	35.00	38.00	Digital Mapping Adjustment Portion of T.L. also in Blk. II
	T029 02 (TL501)	BARCLAY	60.00	60.00	Portion of T.L. also in Blk. II
	T029 03 (TL502)	BARCLAY	6.00	4.00	Digital Mapping Adjustment
	T029 04 (TL 01)	BARCLAY	85.00	80.00	Digital Mapping Adjustment
	T029 05 (TL 11)	BARCLAY	63.00	59.00	Digital Mapping Adjustment Portion of T.L. also in Blk. II
	T029 06 (TLS185)	BARCLAY	15.00	13.00	Digital Mapping Adjustment
	T0369 06 (TL92)	BARCLAY	1 .00	20.00	38 ha Reverted 1994 Area Adj . between Blocks I II
	T0600 00 (TLS18)	BARCLAY	65.00	65.00	
	TOTAL TIMBER LICENCES - BARCLAY		713.00	651.00	
Private Lands	BK 113	COWICHAN L.	602.19	602.19	
	BK 1294	COWICHAN L.	32.38	32.38	
	TOTAL CROWN GRANTS-COWICHAN L.		634.56	634.56	
Private Lands	BK 1034	DUNSMUIR	685.96	685.96	
	BK 1082	DUNSMUIR	519.63	519.63	
	BK 1112	DUNSMUIR	612. 1	612. 1	
	BK 1118	DUNSMUIR	153. 8	153. 8	
	BK 1152, EXCEPT PLAN 22640	DUNSMUIR	159.53	159.53	
	BK 81, PLAN 886	DUNSMUIR	1,149.33	1,149.33	
	BK 936	DUNSMUIR	3.86	3.86	
	DL 198	DUNSMUIR	20.90	20.90	
	DL 199	DUNSMUIR	20.90	20.90	
	DL 2000	DUNSMUIR	0.00	132.30	Alberni Airport Land Exchange
	DL 202	DUNSMUIR	4.05	4.05	
	TOTAL CROWN GRANTS - DUNSMUIR		3,400.65	3,532.95	
	TOTAL CROWN GRANTS		36,494.29	36,831.84	
	TOTAL TIMBER LICENCES		713.00	651.00	
	GRAND TOTAL BLOCK I		37,207.29	37,482.84	

SCHEDULE "A" PROPERTY LISTING— BLOCK II—NITINAT LAKE

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
Private Lands	DL 13, ROBBERS ISLAND	BARCLAY	65.9	65.9	
	DL 14, ROBBERS ISLAND	BARCLAY	8.51	8.51	
	DL 15	BARCLAY	64. 5	64. 5	
	DL 23, BK A	BARCLAY	11. 4	11. 4	
	DL 24	BARCLAY	11.58	11.58	
	DL 25	BARCLAY	15. 1	15. 1	
	DL 26	BARCLAY	12.55	12.55	
	DL 35	BARCLAY	13.15	13.15	
	DL 36, BK A	BARCLAY	19.34	19.34	
	DL 44	BARCLAY	62.32	62.32	
	DL 45	BARCLAY	29.11	29.11	
	D.L. 54, BLOCK A	BARCLAY	5.6	5.6	
	DL 84, PART	BARCLAY	30. 6	30. 6	
	SEC 16	BARCLAY	64.35	64.35	
	SEC , SANTA MARIA ISLAND	BARCLAY	12.95	12.95	
	TP 1, SEC 10, SE 1/4	BARCLAY	64. 5	64. 5	
	TP 1, SEC 15, NW1/4	BARCLAY	64. 5	64. 5	
	TP 1, SEC 15, SW 1/4	BARCLAY	64. 5	64. 5	
	TP 1, SEC 16, BK A	BARCLAY	48.00	48.00	
	TP 1, SEC 16, SW 1/4	BARCLAY	62.40	62.40	
	TP 1, SEC 1 , SE1/4, EXCEPT PLAN A 21(2)	BARCLAY	61.50	61.50	
	TP 1, SEC 22, SW1/4	BARCLAY	64. 5	64. 5	
	TP 1, SEC 26, N 1/2	BARCLAY	129.50	129.50	
	TP 1, SEC 28, SW 1/4, FR	BARCLAY	46.14	46.14	
	TP 1, SEC 29, N1/2, FR	BARCLAY	66.3	66.3	
	TP 1, SEC 35, S 1/2	BARCLAY	129.50	129.50	
	TP 1, SEC 9, FRAC. SW 1/4, EX. PL 44819	BARCLAY	15.06	15.06	
	TP 1, SEC 9, NE 1/4	BARCLAY	48.56	48.56	
	TP 1, SEC 9, NE 1/4, NW 1/4 OF	BARCLAY	16.19	16.19	
	TP 1, SEC 9, NW 1/4	BARCLAY	64. 5	64. 5	
	TP 2, SEC 10, FRACTIONAL SE 1/4	BARCLAY	12.14	12.14	
	TP 2, SEC 11, BK A	BARCLAY	51.18	51.18	
	TP 2, SEC 12, FRACTIONAL E 1/2	BARCLAY	42.90	42.90	
	TP 2, SEC 12, SW 1/4, EAST PART	BARCLAY	28.33	28.33	
	TP 2, SEC 2, BK A	BARCLAY	63.86	63.86	
	TP 2, SEC 3,	BARCLAY	230.68	230.68	
	TP 4, SEC 13, NE 1/4, W 1/2	BARCLAY	32.38	32.38	
	TP 4, SEC 13, NW 1/4	BARCLAY	64. 5	64. 5	
	TP 4, SEC 14, NE 1/4, E 1/2	BARCLAY	32.38	32.38	
	TP 4, SEC 14, W 1/2	BARCLAY	129.50	129.50	
Private Lands	TP 4, SEC 15, E 1/2	BARCLAY	129.50	129.50	
	TP 4, SEC 19, FRAC. NE 1/4	BARCLAY	23.0	23.0	
	TP 4, SEC 20, FRAC. NW 1/4	BARCLAY	61.11	61.11	
	TP 4, SEC 29, NW1/4	BARCLAY	64. 5	64. 5	
	TP 4, SEC 29, SW 1/4	BARCLAY	64. 5	64. 5	
	TP 4, SEC 32, FRAC. NW 1/4	BARCLAY	11.33	11.33	
	TP 4, SEC 5, NW 1/4	BARCLAY	64. 5	64. 5	
	TP 4, SEC 6, NE 1/4, E 1/2	BARCLAY	32.38	32.38	

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	TP 4, SEC 6, NE 1/4, W 1/2	BARCLAY	32.38	32.38	
	TP 4, SEC , FRACTIONAL	BARCLAY	252.53	252.53	
	TP 4, SEC 8, SW 1/4, E 1/2	BARCLAY	36.02	36.02	
	TP4, SEC8, NW1/4, W1/2	BARCLAY	31.40	31.40	
	TP4, SEC8, SW1/4, W1/2	BARCLAY	34.16	34.16	
	TOTAL CROWN GRANTS - BARCLAY		2,971.63	2,971.63	
Timber Licence	T0284 01 (TL1005)	BARCLAY	40.00	50.00	Digital Mapping Ad ustment
	T0284 02 (TL2654)	BARCLAY	36.00	33.00	Digital Mapping Ad ustment
	T0284 03 (TL6885)	BARCLAY	20.00	20.00	
	T0284 04 (TL10003)	BARCLAY	222.00	228.00	Digital Mapping Ad ustment
	T0284 05 (TL10006)	BARCLAY	143.00	143.00	Portion of T.L. also in Blk. I
	T0284 06 (TL10620)	BARCLAY	1 .00	1 .00	
	T0284 09 (TL1068)	BARCLAY	.00	81.00	Digital Mapping Ad ustment
	T0284 10 (TL10688)	BARCLAY	169.00	1 2.00	Digital Mapping Ad ustment
	T0284 11 (TL10689)	BARCLAY	.00	95.00	Digital Mapping Ad ustment
	T029 01 (TL500)	BARCLAY	4.00	4.00	Portion of T.L. also in Blk. I
	T029 02 (TL501)	BARCLAY	90.00	5.00	Portion of T.L. also in Blk. I 15 ha reverted 1989
	T029 05 (TL 11)	BARCLAY	1.00	1.00	Portion of T.L. also in Blk. I
	T032 01 (TL9280)	BARCLAY	210.00	20 .00	Digital Mapping Ad ustment
	T032 02 (TL9281)	BARCLAY	212.00	212.00	
	T032 03 (TL9282)	BARCLAY	1 9.00	156.00	23 ha Reverted 1994
	T032 04 (TL9283)	BARCLAY	259.00	198.00	61 ha Reverted 1994
	T032 05 (TL9284)	BARCLAY	18 .00	1 8.00	Digital Mapping Ad ustment
	T032 06 (TL9300)	BARCLAY	250.00	252.00	Digital Mapping Ad ustment
	T032 0 (TL106 6)	BARCLAY	235.00	186.00	42 ha Reverted 1994 Digital Map. Ad .
	T032 08 (TL106)	BARCLAY	166.00	149.00	10 ha Reverted 1994 Digital Map. Ad .
	T0329 01 (TL92 8)	BARCLAY	29.00	28.00	
Timber Licence	T0329 02 (TL92 9)	BARCLAY	125.00	96.00	24 ha Reverted 1994 Digital Map. Ad .
	T0329 03 (TL9285)	BARCLAY	115.00	110.00	Digital Mapping Ad ustment
	T0329 04 (TL9286)	BARCLAY	112.00	10 .00	Digital Mapping Ad ustment
	T0329 05 (TL928)	BARCLAY	4.00	68.00	Digital Mapping Ad ustment
	T0329 06 (TL9288)	BARCLAY	130.00	109.00	Digital Mapping Ad ustment
	T0329 0 (TL9294)	BARCLAY	191.00	182.00	Digital Mapping Ad ustment
	T0329 08 (TL9295)	BARCLAY	231.00	23 .00	Digital Mapping Ad ustment
	T0329 09 (TL9296)	BARCLAY	12.00	.00	Digital Mapping Ad ustment
	T0329 10 (TL929)	BARCLAY	5 .00	55.00	Digital Mapping Ad ustment
	T0329 11 (TL9982)	BARCLAY	23 .00	11 .00	116 ha Reverted 1994 Digital Map. Ad .
	T0329 12 (TL9983)	BARCLAY	146.00	164.00	Digital Mapping Ad ustment
	T0329 13 (TL9984)	BARCLAY	214.00	212.00	Digital Mapping Ad ustment
	T0329 14 (TL9985)	BARCLAY	111.00	10 .00	Digital Mapping Ad ustment
	T0329 15 (TL9988)	BARCLAY	250.00	251.00	Digital Mapping Ad ustment
	T0329 16 (TL9989)	BARCLAY	50.00	53.00	Digital Mapping Ad ustment
	T0329 1 (TL9990)	BARCLAY	132.00	130.00	
	T0329 18 (TL9991)	BARCLAY	230.00	190.00	40 ha Reverted 1994
	T0329 19 (TL10001)	BARCLAY	39.00	36.00	11 ha Reverted 1994 Digital Map. Ad .
	T0329 20 (TL10002)	BARCLAY	22.00	23.00	
	T0369 01 (TL92 2)	BARCLAY	130.00	159.00	10 ha Reverted 1994 Digital Map. Ad .
	T0369 02 (TL92 3)	BARCLAY	114.00	150.00	Digital Mapping Ad ustment
	T0369 03 (TL92 4)	BARCLAY	169.00	86.00	53 ha Reverted 1994 Digital Map. Ad .

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	T0369 04 (TL92 5)	BARCLAY	1 9.00	124.00	55 ha Reverted 1994 Digital Map. Ad .
	T0369 05 (TL92 6)	BARCLAY	108.00	3.00	24 ha Reverted 1994 Digital Map. Ad .
	T0369 06 (TL92)	BARCLAY	3.00	36.00	Reversion of 8 ha 1994 Area Ad . between Blks. 1 II
	T0389 01 (TL9299)	BARCLAY	129.00	122.00	Digital Mapping Ad ustment
	T0389 02 (TL99 9)	BARCLAY	11 .00	116.00	
	T0389 03 (TL9980)	BARCLAY	8 .00	91.00	Digital Mapping Ad ustment
	T0389 04 (TL9981)	BARCLAY	195.00	201.00	Digital Mapping Ad ustment
	T0389 05 (TL9992)	BARCLAY	163.00	166.00	Digital Mapping Ad ustment
	T0389 06 (TL9993)	BARCLAY	2.00	5.00	Digital Mapping Ad ustment
Timber Licence	T0389 0 (TL9994)	BARCLAY	204.00	191.00	Digital Mapping Ad ustment
	T0389 08 (TL9995)	BARCLAY	98.00	98.00	
	T0389 09 (TL9996)	BARCLAY	200.00	195.00	Digital Mapping Ad ustment
	T0389 10 (TL999)	BARCLAY	243.00	239.00	Digital Mapping Ad ustment
	T0389 11 (TL9998)	BARCLAY	193.00	16 .00	12 ha Reverted 1994 Digital Map. Ad .
	T0389 12 (TL9999)	BARCLAY	196.00	209.00	Digital Mapping Ad ustment
	T0389 13 (TL106 4)	BARCLAY	30.00	21.00	9 ha Reverted 1994 Digital Map. Ad .
	T0389 14 (TL106 5)	BARCLAY	43.00	50.00	Digital Mapping Ad ustment
	T0389 15 (TL12399)	BARCLAY	1 8.00	134.00	44 ha Reverted 1995
	T0389 16 (TL12400)	BARCLAY	5 .00	50.00	ha Reverted 1994
	T0394 01 (TL891)	BARCLAY	48.00	48.00	
	T0394 02 (TL2832)	BARCLAY	21.00	21.00	
	T0394 03 (TL2833)	BARCLAY	14.00	14.00	
	T0400 01 (TL 29)	BARCLAY	139.00	55.00	84 ha Reverted 1994
	T0400 02 (TL1000)	BARCLAY	28.00	8.00	20 ha Reverted 1989
	T0400 03 (TL8294)	BARCLAY	1.00	4 .00	24 ha Reverted 1994
	T0400 04 (TL8296)	BARCLAY	5 .00	0.00	5 ha Reverted 1994
	T0400 05 (TL829)	BARCLAY	9.00	0.00	9 ha Reverted 1994
	T0453 01 (TL10000)	BARCLAY	88.00	3.00	5 ha Reverted 1994 Digital Map. Ad .
	T0453 02 (TL10623)	BARCLAY	6.00	5.00	
	T0453 03 (TL106 8)	BARCLAY	23.00	15.00	Digital Mapping Ad ustment
	T0453 04 (TL106 9)	BARCLAY	16 .00	58.00	92 ha Reverted Digital Map. Ad .
	T0453 05 (TL10684)	BARCLAY	3 .00	36.00	
	T0453 06 (TL10685)	BARCLAY	11.00	10.00	
	T0453 0 (TL10686)	BARCLAY	24.00	23.00	
	T05 3 01 (TL280)	BARCLAY	112.00	112.00	
	T05 3 02 (TL2808)	BARCLAY	138.00	138.00	
	T05 3 03 (TL2812)	BARCLAY	185.00	185.00	
	T05 3 04 (TL2813)	BARCLAY	22 .00	22 .00	
	T05 3 05 (TL2814)	BARCLAY	1 6.00	1 6.00	
	T05 3 06 (TL2815)	BARCLAY	112.00	112.00	
	T05 3 0 (TL12406)	BARCLAY	238.00	238.00	
	T05 6 01 (TL2 94)	BARCLAY	251.00	254.00	Digital Mapping Ad ustment
	T05 6 02 (TL2 95)	BARCLAY	18 .00	189.00	14 ha Reverted 1994 Digital Map. Ad .
Timber Licence	T05 6 03 (TL2 96)	BARCLAY	248.00	260.00	2 ha Reverted 1994 Digital Map. Ad .
	T05 6 04 (TL2 9)	BARCLAY	221.00	165.00	66 ha Reverted 1994 Digital Map. Ad .
	T05 6 05 (TL2 98)	BARCLAY	259.00	223.00	2 ha Reverted 1994 Digital Map. Ad .
	T05 6 06 (TL2 99)	BARCLAY	221.00	224.00	Digital Mapping Ad ustment
	T05 6 0 (TL2800)	BARCLAY	259.00	156.00	108 ha Reverted 1994 Digital Map. Ad .
	T05 6 08 (TL2801)	BARCLAY	259.00	236.00	24 ha Reverted 1994

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	T05 6 09 (TL2802)	BARCLAY	259.00	251.00	8 ha Reverted 1994
	T05 6 10 (TL2803)	BARCLAY	242.00	245.00	12 ha Reverted 1994 Digital Map. Ad .
	T0584 01 (TL6 3)	BARCLAY	162.00	2.00	90 ha Reverted 1994
	T0584 02 (TL892)	BARCLAY	90.00	134.00	Digital Mapping Ad ustment
	T0584 03 (TL1 56)	BARCLAY	103.00	64.00	46 ha Reverted 1994 Digital Map. Ad .
	T0584 04 (TL5614)	BARCLAY	166.00	84.00	35 ha Reverted 1994 Digital Map. Ad .
	T0584 05 (TL5615)	BARCLAY	195.00	101.00	52 ha Reverted 1989 Digital Map. Ad .
	T0584 06 (TL6883)	BARCLAY	8 .00	66.00	3 ha Reverted 1994 Digital Map. Ad .
	T0584 0 (TL6884)	BARCLAY	116.00	2.00	44 ha Reverted 1994 Digital Map. Ad .
	T0584 08 (TL6886)	BARCLAY	49.00	10.00	2 ha Reverted 1994 Digital Map. Ad .
	T0584 09 (TL8120)	BARCLAY	206.00	18 .00	23 ha Reverted 1994 Digital Map. Ad .
	T0584 10 (TL8121)	BARCLAY	44.00	46.00	
	T0584 11 (TL8122)	BARCLAY	44.00	1 .00	12 ha Reverted 1994 Digital Map. Ad .
	T0584 12 (TL9151)	BARCLAY	122.00	91.00	26 ha Reverted 1989 Digital Map. Ad .
	T0584 13 (TL9152)	BARCLAY	233.00	223.00	16 ha Reverted 1989 Digital Map. Ad .
	T0584 14 (TL9153)	BARCLAY	221.00	221.00	4 ha Reverted 1989 Digital Map. Ad .
	T0584 15 (TL9155)	BARCLAY	254.00	1 .00	ha Reverted 1989
Timber Licence	T0584 16 (TL10833)	BARCLAY	211.00	196.00	10 ha Reverted 1989 Digital Map. Ad .
	T0584 1 (TL10834)	BARCLAY	1 2.00	143.00	30 ha Reverted 1994 Digital Map. Ad .
	T0584 18 (TL10835)	BARCLAY	20 .00	208.00	
	T0584 19 (TL10836)	BARCLAY	19 .00	134.00	5 ha Reverted 1989 Digital Map. Ad .
	T0584 20 (TL11 69)	BARCLAY	46.00	4 .00	
	T0584 21 (TL11 0)	BARCLAY	9.00	15.00	64 ha Reverted 1994
	T0584 22 (TL11 1)	BARCLAY	105.00	60.00	34 ha Reverted 1989 Digital Map. Ad .
	T0584 23 (TL11 2)	BARCLAY	111.00	55.00	56 ha Reverted 1994
	T0586 01 (TL2804)	BARCLAY	1 1.00	156.00	Digital Mapping Ad ustment
	T0586 02 (TL2805)	BARCLAY	131.00	106.00	15 ha Reverted 1994 Digital Map. Ad .
	T0586 03 (TL2806)	BARCLAY	133.00	118.00	Digital Mapping Ad ustment
	T0586 04 (TL2822)	BARCLAY	249.00	235.00	Digital Mapping Ad ustment
	T0586 05 (TL2823)	BARCLAY	259.00	209.00	20 ha Reverted 1994 Digital Map. Ad .
	T0603 01 (TL 10)	BARCLAY	2 .00	12.00	15 ha Reverted 1994
	T0603 02 (TL 12)	BARCLAY	68.00	36.00	32 ha Reverted 1994
	T0603 03 (TL2655)	BARCLAY	8.00	19.00	59 ha Reverted 1994
	T0603 04 (TL5636)	BARCLAY	53.00	2.00	51 ha Reverted 1994
	T0603 05 (TL5638)	BARCLAY	38.00	50.00	Digital Mapping Ad ustment
	T0603 06 (TL5639)	BARCLAY	16.00	15.00	
	T0603 0 (TL5640)	BARCLAY	22.00	21.00	
	T0603 08 (TL8298)	BARCLAY	85.00	91.00	Digital Mapping Ad ustment
	T0603 09 (TL8300)	BARCLAY	41.00	42.00	
	T0603 10 (TL8301)	BARCLAY	39.00	42.00	Digital Mapping Ad ustment
	T0603 11 (TL8303)	BARCLAY	14.00	0.00	14 ha Reverted 1994
	T060 01 (TL890)	BARCLAY	3.00	3.00	
	T060 02 (TL893)	BARCLAY	49.00	49.00	
	T060 03 (TL2415)	BARCLAY	11 .00	11 .00	
	T060 04 (TL2416)	BARCLAY	43.00	43.00	
	T060 05 (TL3628)	BARCLAY	1 1.00	1 1.00	
	T060 06 (TL9154)	BARCLAY	154.00	154.00	
	T063 01 (TL2809)	BARCLAY	228.00	188.00	4 ha Reverted 1994 Digital Map. Ad .
	T063 02 (TL2810)	BARCLAY	200.00	92.00	8 ha Reverted 1994 Digital Map. Ad .
Timber Licence	T063 03 (TL2811)	BARCLAY	259.00	266.00	Digital Mapping Ad ustment

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	T063 04 (TL281)	BARCLAY	239.00	192.00	4 ha Reverted 1994
	T063 05 (TL2818)	BARCLAY	259.00	259.00	
	T063 06 (TL2824)	BARCLAY	259.00	266.00	Digital Mapping Adjustment
	T063 0 (TL2825)	BARCLAY	259.00	259.00	
	T063 08 (TL2826)	BARCLAY	259.00	255.00	4 ha Reverted 1994
	T063 09 (TL282)	BARCLAY	91.00	164.00	F.S. Mapping Error Corrected
	T0645 01 (TL2819)	BARCLAY	18 .00	155.00	38 ha Reverted 1994 Digital Map. Adj.
	T0645 02 (TL2820)	BARCLAY	119.00	83.00	43 ha Reverted 1994 Digital Map. Adj.
	T0652 01 (TL2816)	BARCLAY	20 .00	209.00	
	T0652 02 (TL2821)	BARCLAY	212.00	131.00	81 ha Reverted 1994
	T0652 03 (TL5150)	BARCLAY	259.00	25 .00	
	T0652 04 (TL5151)	BARCLAY	259.00	256.00	
	T0652 05 (TL12394)	BARCLAY	104.00	110.00	Digital Mapping Adjustment
	T0695 01 (TL5634)	BARCLAY	6.00	66.00	10 ha Reverted 1994
	T0695 02 (TL5635)	BARCLAY	85.00	69.00	Digital Mapping Adjustment
	T0695 03 (TL5636)	BARCLAY	100.00	33.00	6 ha Reverted 1994
	T0695 04 (TL563)	BARCLAY	43.00	59.00	Digital Mapping Adjustment
	T0695 05 (TL8295)	BARCLAY	133.00	5.00	58 ha Reverted 1994
	T0 38 01 (TL1238)	BARCLAY	1 1.00	.00	80 ha Reverted 1994 Digital Map. Adj.
	T0 38 02 (TL12401)	BARCLAY	240.00	239.00	
	T0 38 03 (TL12402)	BARCLAY	42.00	32.00	Digital Mapping Adjustment
	T0 48 01 (TL10680)	BARCLAY	13 .00	144.00	Digital Mapping Adjustment
	T0 48 02 (TL10681)	BARCLAY	198.00	193.00	Digital Mapping Adjustment
	T0 48 03 (TL10682)	BARCLAY	18 .00	202.00	Digital Mapping Adjustment
	T0 48 04 (TL12392)	BARCLAY	206.00	201.00	Digital Mapping Adjustment
	T0 48 05 (TL12393)	BARCLAY	222.00	222.00	
	T0 48 06 (TL12395)	BARCLAY	5.00	69.00	Digital Mapping Adjustment
	T0 48 0 (TL12396)	BARCLAY	36.00	8.00	25 ha Reverted 1994
	T0 48 08 (TL1239)	BARCLAY	19.00	11.00	14 ha Reverted 1994 Digital Map. Adj.
	T0 48 09 (TL12398)	BARCLAY	152.00	164.00	Digital Mapping Adjustment
	T0 85 01 (TL12388)	BARCLAY	259.00	215.00	44 ha Reverted 1994
	T0 85 02 (TL12389)	BARCLAY	21 .00	206.00	Digital Mapping Adjustment
	T0 85 03 (TL12390)	BARCLAY	138.00	126.00	Digital Mapping Adjustment
	T0 85 04 (TL12391)	BARCLAY	15 .00	148.00	Digital Mapping Adjustment
	T0 85 05 (TL12403)	BARCLAY	139.00	148.00	Digital Mapping Adjustment
Timber Licence	T0802 00 (TL10683)	BARCLAY	234.00	234.00	
	T0885	BARCLAY	532.00	532.00	
	TOTAL TIMBER LICENCES - BARCLAY		24,865.00	22,025.00	
Crown Grants	DL 150	RENFREW	29.14	29.14	
	DL 159	RENFREW	29.95	29.95	
	DL 169	RENFREW	28.33	28.33	
	TP 1, SEC 5, NE 1/4, PART	RENFREW	60.30	60.30	
	TP 1, SEC 5, NE 1/4, PLAN 53 R/W	RENFREW	0.00	3.24	Not Included in MWP 2
	TOTAL CROWN GRANTS - RENFREW		147.71	150.95	
Timber Licence	T04 01 (TL6389)	RENFREW	259.00	259.00	
	T04 02 (TL8286)	RENFREW	259.00	190.00	5 ha Reverted 1994 Digital Map. Adj.
	T04 03 (TL828)	RENFREW	249.00	259.00	Digital Mapping Adjustment
	T04 04 (TL8288)	RENFREW	259.00	259.00	
	T04 05 (TL8289)	RENFREW	259.00	259.00	
	T04 06 (TL8290)	RENFREW	259.00	181.00	8 ha Reverted 1994

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	T04 0 (TL8291)	RENFREW	259.00	25 .00	
	T04 08 (TL8292)	RENFREW	259.00	259.00	
	T04 09 (TL8293)	RENFREW	253.00	194.00	68 ha Reverted 1994 Digital Map. Ad .
	T04 10 (TL12 15)	RENFREW	259.00	18 .00	2 ha Reverted 1994
	T04 11 (TL12 16)	RENFREW	259.00	259.00	
	T0493 01 (TL6399)	RENFREW	259.00	259.00	
	T0493 02 (TL6403)	RENFREW	259.00	1 2.00	6 ha Reverted 1994 Digital Map. Ad .
	T0493 03 (TL6404)	RENFREW	259.00	165.00	103 ha Reverted 1994 Digital Map. Ad .
	T0496 01 (TL6405)	RENFREW	259.00	259.00	
	T0496 02 (TL6406)	RENFREW	259.00	259.00	
	T0496 03 (TL1193)	RENFREW	255.00	196.00	59 ha Reverted 1994
	T0498 01 (TL6396)	RENFREW	252.00	126.00	109 ha Reverted 1994 Digital Map. Ad .
	T0498 02 (TL639)	RENFREW	259.00	104.00	149 ha Reverted 1994 Digital Map. Ad .
	T0498 03 (TL6398)	RENFREW	259.00	209.00	6 ha Reverted 1994 Digital Map. Ad .
Timber Licence	T0498 04 (TL6401)	RENFREW	259.00	129.00	120 ha Reverted 1994 Digital Map. Ad .
	T0498 05 (TL6402)	RENFREW	259.00	103.00	165 ha Reverted 1994 Digital Map. Ad .
	T0498 06 (TL640)	RENFREW	225.00	236.00	11 ha Reverted 1994 Digital Map. Ad .
	T0498 0 (TL6408)	RENFREW	222.00	193.00	24 ha Reverted 1994 Digital Map. Ad .
	T0506 01 (TL6385)	RENFREW	253.00	253.00	
	T0506 02 (TL638)	RENFREW	250.00	250.00	
	T0506 03 (TL6388)	RENFREW	249.00	249.00	
	T0506 04 (TL6390)	RENFREW	259.00	259.00	
	T0506 05 (TL6391)	RENFREW	259.00	180.00	9 ha Reverted 1994
	T0506 06 (TL6392)	RENFREW	252.00	252.00	
	T0506 0 (TL6394)	RENFREW	259.00	259.00	
	T0506 08 (TL6395)	RENFREW	259.00	261.00	Digital Mapping Ad ustment
	T0506 09 (TL12608)	RENFREW	259.00	259.00	
	T0533 01 (TL12604)	RENFREW	259.00	259.00	
	T0533 02 (TL12605)	RENFREW	259.00	259.00	
	T0533 03 (TL12606)	RENFREW	259.00	259.00	
	T0533 04 (TL1260)	RENFREW	252.00	252.00	
	T0542 01 (TL8886)	RENFREW	82.00	92.00	1 ha Reverted 1994 Digital Map. Ad .
	T0542 02 (TL9 30)	RENFREW	44.00	34.00	Digital Mapping Ad ustment
	T0542 03 (TL9 31)	RENFREW	38.00	16.00	22 ha Reverted 1994
	T0542 04 (TL9 32)	RENFREW	138.00	80.00	58 ha Reverted 1994
	T0542 05 (TL9 33)	RENFREW	66.00	0.00	66 ha Reverted 1994
	T054 01 (TL10669)	RENFREW	135.00	100.00	35 ha Reverted 1994
	T054 02 (TL106 0)	RENFREW	144.00	123.00	21 ha Reverted 1994
	T054 03 (TL106 2)	RENFREW	184.00	14 .00	3 ha Reverted 1994
	T0551 01 (TL10668)	RENFREW	3.00	2.00	
	T0551 02 (TL106 1)	RENFREW	28.00	6.00	22 ha Reverted 1994
	T0551 03 (TLS134)	RENFREW	408.00	322.00	36 ha Reverted 1994 Digital Map. Ad .
Timber Licence	T056 00 (9 34)	RENFREW	1.00	31.00	40 ha Reverted 1994
	T0581 00 (TLS2)	RENFREW	185.00	185.00	93 ha Reverted 1994 Digital Map. Ad .
	TOTAL TIMBER LICENCES - RENFREW		10,972.00	9,362.00	
	TOTAL CROWN GRANTS		3,119.34	3,122.59	
	TOTAL TIMBER LICENCES		35,837.00	31,387.00	
	GRAND TOTAL - BLOCK II		38,956.34	34,509.59	

SCHEDULE "A" PROPERTY LISTING— BLOCK III—SPROAT LAKE

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
Private Lands	BK 1260, PCL A	ALBERNI	166. 4	166. 4	
	BK 196	ALBERNI	193.16	193.16	
	BK 208, PART, PLAN 802 R	ALBERNI	16 .38	163.00	Inst. 26 from 1962 980 R/W
	BK 208, PART, PLAN 802 R	ALBERNI	4 2.28	4 2.28	
	BK 209, PART, EXCEPT PLAN 48620	ALBERNI	1,108.00	9 4.96	Alberni Airport
	BK 210, BK A, PLAN DD26236 N	ALBERNI	103.08	103.08	
	BK 210, BK C OF BK B, PLAN 411 R	ALBERNI	8.09	8.09	
	BK 210, PCL 1	ALBERNI	1,025.04	1,025.04	
	BK 210, BK D OF BK B, PLAN 411 R	ALBERNI	16.15	16.15	
	BK 211	ALBERNI	1 1.4	1 1.4	
	BK 211, PART, PLAN 412 R	ALBERNI	86.04	86.04	
	BK 212, PLAN DD26238 N	ALBERNI	16.19	16.19	
	BK 216, PLAN DD2623 N	ALBERNI	16.19	16.19	
	BK 248	ALBERNI	1,06 .18	1,06 .18	
	BK 396	ALBERNI	16.03	16.03	
	BK 39	ALBERNI	4 .59	4 .59	
	BK 4	ALBERNI	24.28	24.28	
	BK 494	ALBERNI	8.58	8.58	
	BK 584	ALBERNI	202.35	202.35	
	BK 58 , PLAN DD2 81 N	ALBERNI	64.4	64.4	
	BK 641	ALBERNI	65.16	65.16	
	BK 659	ALBERNI	0.00	30. 6	Purchase In 1988
	BK 669	ALBERNI	98. 5	98. 5	
	BK 6 8	ALBERNI	329.02	329.02	
	BK 680	ALBERNI	1,303.12	1,303.12	
	BK 698	ALBERNI	48.9	48.9	
	BK 3, PART, PLAN 8303	ALBERNI	83.49	83.49	
	BK 3, PLAN 8303	ALBERNI	93.00	93.00	
	BK 3, PLAN 8303	ALBERNI	809.39	809.39	
	BK 3, PLAN 8303	ALBERNI	9 .25	9 .25	
	BK 3, PLAN 8303	ALBERNI	809.39	809.39	
	BK 3, PLAN 8303	ALBERNI	28.45	28.45	
	BK 85, PLAN 886	ALBERNI	194.25	194.25	
	D.L. 106, EXCEPT PT. PLAN 2 R/W	ALBERNI	0.00	5 .28	Purchased 1988 Loop Farms
	DL 120, PLAN DD9228	ALBERNI	400.	400.	
	DL 124, EXCEPT PLAN 482	ALBERNI	20.9	20.9	
	DL 124, LOT 1, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 10, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 11, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 12, PLAN 482	ALBERNI	1.39	1.39	
Private Lands	DL 124, LOT 13, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 14, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 15, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 16, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 1 , PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 18, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 19, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 2, PLAN 482	ALBERNI	1.39	1.39	

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	DL 124, LOT 20, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 21, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 22, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 23, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 24, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 25, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 26, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 27, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 28, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 29, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 3, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 30, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 31, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 32, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 4, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 5, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 6, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 7, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 8, PLAN 482	ALBERNI	1.39	1.39	
	DL 124, LOT 9, PLAN 482	ALBERNI	1.39	1.39	
	DL 126, EXCEPT PCL A, ETC.	ALBERNI	48.44	48.44	
	DL 126, LOT 1, PLAN 18159	ALBERNI	1.96	1.96	
	DL 130, BK A	ALBERNI	13.4	0.00	Sold to Crown 1989
	DL 141, LOT A, PLAN 18415	ALBERNI	3.80	3.80	
	DL 156, LOT A, PLAN 896	ALBERNI	15.54	15.54	
	DL 161	ALBERNI	0.00	64.5	Inst. 9 Loop Farms
	DL 170	ALBERNI	36.51	0.00	Sold Alberni Airport
	DL 171, PART, EXCEPT PLAN 48620	ALBERNI	32.00	20.2	Sold Alberni Airport
	DL 172, PART, EXCEPT PLAN 48620	ALBERNI	31.84	31.84	
	DL 204, BK 208, LOT A, PL.34	ALBERNI	362.00	356.8	Area Adjustment
	DL 204, LOT 2, PART, PLAN 4600	ALBERNI	16.54	16.54	
	DL 204, PLAN 803 R	ALBERNI	1.00	10.62	
Private Lands	DL 255, EXCEPT PLAN 27 R/W	ALBERNI	0.00	45.94	Purchased 1988 Loop Farms
	DL 256, EXCEPT PLAN 146R	ALBERNI	0.00	36.08	Purchased 1988 Loop Farms
	DL 26, E 1/2, EX. PL 284 R/W 28 R/W	ALBERNI	0.00	29.92	Purchased 1988 Loop Farms
	DL 26, NW 1/4, EXCEPT PLAN 284 R/W	ALBERNI	0.00	16.02	Purchased 1988 Loop Farms
	DL 26, SW 1/4	ALBERNI	0.00	16.19	Purchased 1988 Loop Farms
	DL 261, EXCEPT PLAN 284 R/W	ALBERNI	0.00	21.85	Purchased 1988 Loop Farms
	DL 263, PLAN 1853	ALBERNI	223.39	223.39	
	DL 266, PLAN 1866	ALBERNI	5.2	0.00	Sold Alberni Airport
	DL 27, PLAN DD14 45	ALBERNI	59.6	59.6	
	DL 280, LOT A, PLAN 662	ALBERNI	2.83	2.83	
	DL 280, LOT B, PLAN 662	ALBERNI	18.65	18.65	
	DL 286, PCL A	ALBERNI	22.26	22.26	
	DL 284, ALBERNI DISTRICT	ALBERNI	20.35	20.35	
	DL 291	ALBERNI	16.59	16.59	
	DL 29	ALBERNI	34.80	34.80	
	DL 34, EXCEPT PLS 6 R/W, 5138, 381 ETC	ALBERNI	0.00	52.4	Purchased 1988 Loop Farms
	DL 35, EXCEPT PLANS 14235, 6 R/W, ETC.	ALBERNI	21.00	19.88	Inst. 21 (1.19 ha) Hwy Taking
	DL 36, EXCEPT PLAN 541 R, ETC.	ALBERNI	29.00	29.00	

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	DL 38, EXCEPT PCL A, ETC.	ALBERNI	5 . 2	5 . 2	
	DL 52, EXCEPT PLANS 14235 6 R/W	ALBERNI	60.25	60.25	
	DL 84, EXCEPT PLNS6 R/W, 5243, 8450, 48620	ALBERNI	0.00	42.20	Purchased 1988 Loop Farms
	DL 98, EXCEPT PLANS 408 , ETC.	ALBERNI	54.48	54.48	
	DL S 164 253, LOT A, PLAN 44810	ALBERNI	30.93	30.93	
	LOT 9, LOOP FARMS, PLAN 129	ALBERNI	0.00	9.23	Purchased 1988 Loop Farms
	LOT 10, LOOP FARMS, PLAN 129	ALBERNI	0.00	8. 6	Purchased 1988 Loop Farms
	LOT 11, LOOP FARMS, PLAN 129	ALBERNI	0.00	9.16	Purchased 1988 Loop Farms
	LOT 12, LOOP FARMS, PLAN 129	ALBERNI	0.00	.0	Purchased 1988 Loop Farms
	LOT 13, LOOP FARMS, PLAN 129	ALBERNI	0.00	10.16	Purchased 1988 Loop Farms
	LOT 14, LOOP FARMS, PLAN 129	ALBERNI	0.00	22.9	Purchased 1988 Loop Farms
	LOT 15, LOOP FARMS, PLAN 129	ALBERNI	0.00	1 .62	Purchased 1988 Loop Farms
	LOT 19, LOOP FARMS, PLAN 129	ALBERNI	0.00	8.42	Purchased 1988 Loop Farms
	LOT 19 PLAN 1860,	ALBERNI	63.	63.	
	LOT 20, LOOP FARMS, PLAN 129	ALBERNI	0.00	14.02	Purchased 1988 Loop Farms
	LOT 2 , LOOP FARMS, PLAN 129	ALBERNI	0.00	10.0	Purchased 1988 Loop Farms
	PCL A, LOT 148	ALBERNI	34.69	34.69	
	TOTAL CROWN GRANTS - ALBERNI		14,365.90	14,555.44	
Private Lands	DL 1009	CLAYOQUOT	9 .13	0.00	Inst. 13 Strathcona Park
	DL 1011	CLAYOQUOT	8 .82	0.00	Inst. 13 Strathcona Park
Private Lands	DL 1019	CLAYOQUOT	259.00	259.00	
	DL 1022, PART	CLAYOQUOT	11.95	11.95	
	DL 1023	CLAYOQUOT	2 .12	2 .12	
	DL 1062	CLAYOQUOT	22.14	22.14	
	DL 1081, PLAN DD52 93 I	CLAYOQUOT	63.13	63.13	
	DL 1614	CLAYOQUOT	42.09	42.09	
	DL 1655	CLAYOQUOT	8. 8	8. 8	
	DL 1658	CLAYOQUOT	10.00	10.00	
	DL 295	CLAYOQUOT	38.45	38.45	
	DL 500 A	CLAYOQUOT	2.02	2.02	
	D.L. 503	CLAYOQUOT	32.00	0.00	Land Sale 1991
	DL 56	CLAYOQUOT	3.14	3.14	
	DL 683	CLAYOQUOT	60.8	60.8	
	DL 684, N 1/2, FRACTIONAL	CLAYOQUOT	24.28	24.28	
	DL 684, S 1/2, FRACTIONAL	CLAYOQUOT	28.94	28.94	
	DL 69, CLAYOQUOT DISTRICT	CLAYOQUOT	120.00	120.00	Appl. to Remove 18.10 Ha
	DL 15	CLAYOQUOT	6.89	6.89	
	DL 33	CLAYOQUOT	9 .13	9 .13	
	DL 946, EXCEPT PLAN 1103 A	CLAYOQUOT	21.59	21.59	
	SEC 50 , EXCEPT PLAN 1103	CLAYOQUOT	20. 0	20. 0	
	SEC	CLAYOQUOT	6 .58	6 .58	
	TOTAL CROWN GRANTS - CLAYOQUOT		1,222.72	1,005.78	
Timber Licence	T0006 01 (TL4 5)	CLAYOQUOT	215.00	215.00	
	T0006 02 (TL4 6)	CLAYOQUOT	128.00	128.00	
	T0006 03 (TL10588)	CLAYOQUOT	205.00	205.00	
	T0006 04 (TL10589)	CLAYOQUOT	155.00	155.00	
	T0006 05 (TL10590)	CLAYOQUOT	143.00	143.00	
	T0006 06 (TL10591)	CLAYOQUOT	201.00	201.00	
	T0028 01 (TL20 1)	CLAYOQUOT	210.00	210.00	

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	T0028 02 (TL20 2)	CLAYOQUOT	142.00	142.00	
	T0028 03 (TL20 3)	CLAYOQUOT	181.00	181.00	
	T0028 04 (TL20 4)	CLAYOQUOT	163.00	163.00	
	T0028 05 (TL20 5)	CLAYOQUOT	1 3.00	1 3.00	
	T0028 06 (TL20 6)	CLAYOQUOT	200.00	200.00	
	T0028 0 (TL20)	CLAYOQUOT	236.00	236.00	
	T0028 08 (TL20 8)	CLAYOQUOT	213.00	213.00	
	T0028 09 (TL20 9)	CLAYOQUOT	148.00	148.00	
	T0028 10 (TL2080)	CLAYOQUOT	169.00	169.00	
Timber Licence	T0028 11 (TL3850)	CLAYOQUOT	160.00	160.00	
	T0028 12 (TL3851)	CLAYOQUOT	101.00	101.00	
	T0028 13 (TL3853)	CLAYOQUOT	101.00	101.00	
	T0028 14 (TLS1 2)	CLAYOQUOT	38.00	38.00	
	T0053 01 (TL62)	CLAYOQUOT	211.00	211.00	
	T0053 02 (TL628)	CLAYOQUOT	2.00	2.00	
	T0053 03 (TL18 8)	CLAYOQUOT	156.00	156.00	
	T0053 04 (TL3142)	CLAYOQUOT	88.00	88.00	
	T0053 05 (TL10881)	CLAYOQUOT	168.00	168.00	
	T0053 06 (TL10883)	CLAYOQUOT	1 8.00	1 8.00	
	T0053 0 (TL10884)	CLAYOQUOT	88.00	88.00	
	T0053 08 (TL109 1)	CLAYOQUOT	109.00	109.00	
	T0053 09 (TL13264)	CLAYOQUOT	151.00	151.00	
	T0068 00 (TL11 95)	CLAYOQUOT	25 .00	25 .00	
	T00 1 01 (TL623)	CLAYOQUOT	89.00	89.00	
	T00 1 02 (TL624)	CLAYOQUOT	1.00	1.00	
	T00 1 03 (TL1010)	CLAYOQUOT	138.00	138.00	
	T00 1 04 (TL1363)	CLAYOQUOT	49.00	49.00	
	T00 1 05 (TL9253)	CLAYOQUOT	259.00	259.00	
	T00 1 06 (TL10956)	CLAYOQUOT	44.00	44.00	
	T00 1 0 (TLS165)	CLAYOQUOT	4.00	4.00	
	T00 8 01 (TL1285)	CLAYOQUOT	18.00	18.00	
	T00 8 02 (TL3852)	CLAYOQUOT	99.00	99.00	
	T00 8 03 (TL10955)	CLAYOQUOT	23.00	23.00	
	T00 8 04 (TLS1 3)	CLAYOQUOT	9.00	9.00	
	T00 8 05 (TLS1 4)	CLAYOQUOT	19.00	19.00	
	T00 8 06 (TLS181)	CLAYOQUOT	0.00	0.00	
	T0106 00 (TL626)	CLAYOQUOT	219.00	219.00	
	T0108 01 (TL1050)	CLAYOQUOT	82.00	82.00	
	T0108 02 (TL1051)	CLAYOQUOT	1 9.00	1 9.00	
	T0108 03 (TL1052)	CLAYOQUOT	134.00	134.00	
	T0108 04 (TL1286)	CLAYOQUOT	38.00	38.00	
	T0108 05 (TL1838)	CLAYOQUOT	32.00	32.00	
	T0108 06 (TL1839)	CLAYOQUOT	150.00	150.00	
	T0108 0 (TL4492)	CLAYOQUOT	1.00	1.00	
	T0108 08 (TL10806)	CLAYOQUOT	8.00	8.00	
	T0108 09 (TL10812)	CLAYOQUOT	24.00	24.00	
	T0108 10 (TL10813)	CLAYOQUOT	188.00	188.00	
	T0108 11 (TL10880)	CLAYOQUOT	184.00	184.00	
	T0108 12 (TL12001)	CLAYOQUOT	91.00	91.00	
Timber Licence	T0108 (TLS1 5)	CLAYOQUOT	28.00	28.00	

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	T0108 14 (TLS182)	CLAYOQUOT	11.00	11.00	
	T0123 01 (TL3649)	CLAYOQUOT	8 .00	8 .00	
	T0123 02 (TL3650)	CLAYOQUOT	12 .00	12 .00	
	T0123 03 (TL3651)	CLAYOQUOT	89.00	89.00	
	T0123 04 (TL3652)	CLAYOQUOT	163.00	163.00	
	T0123 05 (TL9540)	CLAYOQUOT	145.00	145.00	
	T0123 06 (TL9554)	CLAYOQUOT	89.00	89.00	
	T0123 0 (TL1080)	CLAYOQUOT	39.00	39.00	
	T0123 08 (TL10808)	CLAYOQUOT	1 2.00	1 2.00	
	T0123 09 (TL10809)	CLAYOQUOT	96.00	96.00	
	T0123 10 (TL10811)	CLAYOQUOT	105.00	105.00	
	T0123 11 (TL108 5)	CLAYOQUOT	30.00	30.00	
	T0123 12 (TL108 6)	CLAYOQUOT	84.00	84.00	
	T0123 13 (TL108)	CLAYOQUOT	68.00	68.00	
	T0123 14 (TL108 8)	CLAYOQUOT	1 6.00	1 6.00	
	T0123 15 (TLS1 5)	CLAYOQUOT	86.00	86.00	
	T0208 01 (TL83)	CLAYOQUOT	212.00	248.00	6 ha Reverted 1994 Digital Map. Ad .
	T0208 02 (TL83 8)	CLAYOQUOT	154.00	155.00	
	T0208 03 (TL8380)	CLAYOQUOT	259.00	258.00	
	T0208 04 (TL8381)	CLAYOQUOT	258.00	263.00	4 ha Reverted 1994 Digital Map. Ad .
	T0208 05 (TL8382)	CLAYOQUOT	246.00	2 3.00	4 ha Reverted 1994 Digital Map. Ad .
	T0208 06 (TL8383)	CLAYOQUOT	258.00	252.00	6 ha Reverted 1994
	T0208 0 (TL8385)	CLAYOQUOT	248.00	252.00	ha Reverted 1994 Digital Map. Ad .
	T0208 08 (TL8386)	CLAYOQUOT	248.00	246.00	13 ha Reverted 1994 Digital Map. Ad .
	T0208 09 (TL8389)	CLAYOQUOT	251.00	250.00	9 ha Reverted 1994 Digital Map. Ad .
	T0208 10 (TL8392)	CLAYOQUOT	248.00	253.00	8 ha Reverted 1994 Digital Map. Ad .
	T0208 11 (TL8394)	CLAYOQUOT	259.00	324.00	Digital Mapping Ad ustment
	T0234 01 (TL9550)	CLAYOQUOT	211.00	211.00	
	T0234 02 (TL9551)	CLAYOQUOT	138.00	138.00	
	T0234 03 (TL9552)	CLAYOQUOT	146.00	146.00	
	T0234 04 (TL9558)	CLAYOQUOT	236.00	236.00	
	T0234 05 (TL141 2)	CLAYOQUOT	21.00	21.00	
Timber Licence	T0246 01 (TL343)	CLAYOQUOT	131.00	115.00	MWP 2 should be 115 Ha
	T0246 02 (TL6880)	CLAYOQUOT	100.00	100.00	
	T0246 03 (TL6881)	CLAYOQUOT	3 .00	3 .00	
	T0246 04 (TL6882)	CLAYOQUOT	95.00	95.00	
	T0246 05 (TL9538)	CLAYOQUOT	3.00	3.00	
	T0246 06 (TL9539)	CLAYOQUOT	69.00	69.00	
	T0246 0 (TL9542)	CLAYOQUOT	132.00	132.00	
	T0246 08 (TL9553)	CLAYOQUOT	85.00	85.00	
	T0246 09 (TL108 1)	CLAYOQUOT	49.00	49.00	
	T0246 10 (TL108 2)	CLAYOQUOT	100.00	100.00	
	T0246 11 (TL108 3)	CLAYOQUOT	132.00	132.00	
	TOTAL TIMBER LICENCES - CLAYOQUOT		13,813.00	13,930.00	
Private Lands	BK 489	NELSON	36.34	36.34	
	BK 490	NELSON	8.09	8.09	
	TOTAL CROWN GRANTS - NELSON		44.44	44.44	
Private Lands	BK 1041	NEWCASTLE	962.	962.	
	BK 1284	NEWCASTLE	84.99	84.99	
	BK 1285	NEWCASTLE	129.91	129.91	

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	BK 1330	NEWCASTLE	2,242.44	2,242.44	
	BK 1331	NEWCASTLE	550. 9	550. 9	
	BK 4 4	NEWCASTLE	8. 8	8. 8	
	BK 491	NEWCASTLE	14.93	14.93	
	BK 492	NEWCASTLE	4. 4	4. 4	
	BK 493	NEWCASTLE	11. 8	11. 8	
	BK 49	NEWCASTLE	195.8	195.8	
	BK 512	NEWCASTLE	68.80	68.80	
	BK 534, PLAN DD25492 N	NEWCASTLE	39.66	39.66	
	BK 535, PLAN DD25492 N	NEWCASTLE	8.09	8.09	
	BK 536, PLAN DD25492 N	NEWCASTLE	109.6	109.6	
	BK 53 , PLAN DD25492 N	NEWCASTLE	59.90	59.90	
	BK 604, PLAN DD2 6 N	NEWCASTLE	56.25	56.25	
	BK 605, PLAN DD2 6 8 N	NEWCASTLE	58.28	58.28	
	BK 62, PART, PLAN 89	NEWCASTLE	311.62	311.62	
	BK 62, PART, PLAN 89	NEWCASTLE	56. 8	56. 8	
	BK 62, PART, PLAN 89	NEWCASTLE	809.39	809.39	
	BK 62, PART, PLAN 89	NEWCASTLE	40.59	40.59	
Private Lands	BK 63	NEWCASTLE	9 .13	9 .13	
	BK 638, EXCEPT PLAN 15643	NEWCASTLE	66.3	66.3	
	BK 639	NEWCASTLE	34.40	34.40	
	BK 640	NEWCASTLE	39.66	39.66	
	BK 64	NEWCASTLE	21.85	21.85	
	BK 666, EXCEPT PLAN 13358	NEWCASTLE	312.44	312.44	
	BK 6 6	NEWCASTLE	63.13	63.13	
	BK 00	NEWCASTLE	1,566.98	1,566.98	
	BK 4, PLAN 886	NEWCASTLE	2,063. 8	2,063. 8	
	BK , PLAN 886	NEWCASTLE	530.15	530.15	
	BK 803	NEWCASTLE	6 9.89	6 9.89	
	BK 804	NEWCASTLE	40.0	40.0	
	BK 9 0	NEWCASTLE	.	.	
	BK 988	NEWCASTLE	6 .99	6 .99	
	PLAN 292 R/W	NEWCASTLE	0.32	0.32	
	TOTAL CROWN GRANTS - NEWCASTLE		12,817.93	12,817.93	
	TOTAL CROWN GRANTS		28,451.00	28,423.59	
	TOTAL TIMBER LICENCES		13,813.00	13,930.00	
	GRAND TOTAL BLOCK III		42,264.00	42,353.59	

SCHEDULE “A” PROPERTY LISTING— BLOCK IV–HENDERSON LAKE

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
Private Lands	DL 1248, EXCEPT PCL A	CLAYOQUOT	24.28	24.28	
	DL 1248, PCL A	CLAYOQUOT	2.02	2.02	
	DL 299	CLAYOQUOT	11. 4	11. 4	
	DL 301	CLAYOQUOT	11.33	11.33	
	DL 302	CLAYOQUOT	13. 6	13. 6	
	DL 305	CLAYOQUOT	19.83	19.83	
	DL 331, EXCEPT PCL A	CLAYOQUOT	12.30	12.30	
	DL 332	CLAYOQUOT	13.08	13.08	
	DL 333, EXCEPT SEC 9	CLAYOQUOT	20. 9	20. 9	
	DL 334, EXCEPT SEC 9	CLAYOQUOT	13.36	13.36	
	DL 336, EXCEPT SEC 9	CLAYOQUOT	9.83	9.83	
	DL 33	CLAYOQUOT	14.91	14.91	
	DL 44	CLAYOQUOT	9.51	9.51	
	DL 534	CLAYOQUOT	16.24	16.24	
	DL 535	CLAYOQUOT	12.95	12.95	
	DL 536	CLAYOQUOT	8.50	8.50	
	DL 596, EXCEPT LOT 5	CLAYOQUOT	8.18	8.18	
	DL 59	CLAYOQUOT	15.39	15.39	
	DL 598	CLAYOQUOT	14.26	14.26	
	DL 608	CLAYOQUOT	13.82	13.82	
	DL 9, PART, PLAN 1649 R	CLAYOQUOT	61.4	61.4	
	DL 96	CLAYOQUOT	20.90	20.90	
	SEC 4	CLAYOQUOT	168. 6	168. 6	
	SEC 6	CLAYOQUOT	20.64	20.64	
	SEC	CLAYOQUOT	152.98	152.98	
	SEC 8, EAST 30 CHAINS	CLAYOQUOT	61.11	61.11	
	SEC 8, BK 115, PLAN 429	CLAYOQUOT	0.19	0.19	
	SEC 8, BK 135, PLAN 429	CLAYOQUOT	0.20	0.20	
	SEC 8, BK 154, PLAN 429	CLAYOQUOT	0.18	0.18	
	SEC 8, BK 156, LOT 10, PLAN 429	CLAYOQUOT	0.25	0.25	
	SEC 8, BK 156, LOT 11, PLAN 429	CLAYOQUOT	0.25	0.25	
	SEC 8, BK 156, LOT 12, PLAN 429	CLAYOQUOT	0.25	0.25	
	SEC 8, BK 156, LOT 13, PLAN 429	CLAYOQUOT	0.25	0.25	
	SEC 8, BK 156, LOT 14, PLAN 429	CLAYOQUOT	0.25	0.25	
	SEC 8, BK 156, LOT 3, PLAN 429	CLAYOQUOT	0.25	0.25	
	SEC 8, BK 156, LOT 4, PLAN 429	CLAYOQUOT	0.25	0.25	
	SEC 8, BK 156, LOT , PLAN 429	CLAYOQUOT	0.25	0.25	
	SEC 8, BK 156, LOT 8, PLAN 429	CLAYOQUOT	0.25	0.25	
	SEC 8, BK 1 2, PLAN 429	CLAYOQUOT	0.15	0.15	
	SEC 8, BK 188, PLAN 429	CLAYOQUOT	0.21	0.21	
Private Lands	SEC 8, BK 203, PLAN 429	CLAYOQUOT	0.6	0.6	
	SEC 8, BK 4 , LOT 1, PLAN 429	CLAYOQUOT	0.31	0.31	
	SEC 8, BK 4 , LOT 10, PLAN 429	CLAYOQUOT	0.31	0.31	
	SEC 8, BK 4 , LOT 11, PLAN 429	CLAYOQUOT	0.31	0.31	
	SEC 8, BK 4 , LOT 12, PLAN 429	CLAYOQUOT	0.31	0.31	
	SEC 8, BK 4 , LOT 13, PLAN 429	CLAYOQUOT	0.31	0.31	
	SEC 8, BK 4 , LOT 14, PLAN 429	CLAYOQUOT	0.31	0.31	
	SEC 8, BK 4 , LOT 2, PLAN 429	CLAYOQUOT	0.31	0.31	

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	SEC 8, BK 4 , LOT 3, PLAN 429	CLAYOQUOT	0.31	0.31	
	SEC 8, BK 4 , LOT 4, PLAN 429	CLAYOQUOT	0.31	0.31	
	SEC 8, BK 4 , LOT 8, PLAN 429	CLAYOQUOT	0.31	0.31	
	SEC 8, BK 4 , LOT 9, PLAN 429	CLAYOQUOT	0.31	0.31	
	SEC 8, BK 49, PLAN 429	CLAYOQUOT	0.14	0.14	
	SEC 8, BK 2, PLAN 429	CLAYOQUOT	0.03	0.03	
	SEC 8, BK 94, PLAN 429	CLAYOQUOT	0.0	0.0	
	TOTAL CROWN GRANTS - CLAYOQUOT		759.41	759.41	
Timber Licence	T0189 00 (TL956)	CLAYOQUOT	2.00	2.00	
	T0195 01 (TL9150)	CLAYOQUOT	248.00	248.00	
	T0195 02 (TL9544)	CLAYOQUOT	95.00	95.00	
	T0195 03 (TL9555)	CLAYOQUOT	259.00	259.00	
	T0195 04 (TL9556)	CLAYOQUOT	253.00	253.00	
	T0195 05 (TL955)	CLAYOQUOT	259.00	259.00	
	T0195 06 (TL11 59)	CLAYOQUOT	219.00	219.00	
	T0195 0 (TL11 60)	CLAYOQUOT	200.00	200.00	
	T0195 08 (TL11 61)	CLAYOQUOT	143.00	143.00	
	T0195 09 (TL11 62)	CLAYOQUOT	39.00	39.00	
	T0195 10 (TL11 63)	CLAYOQUOT	190.00	190.00	
	T0195 11 (TL11 65)	CLAYOQUOT	130.00	130.00	
	T0195 12 (TL11 66)	CLAYOQUOT	191.00	191.00	
	T0195 13 (TL1 16)	CLAYOQUOT	223.00	223.00	
	T0195 14 (TL11 68)	CLAYOQUOT	129.00	129.00	
	T0311 01 (TL11 5)	CLAYOQUOT	129.00	129.00	
	T0311 02 (TL11 58)	CLAYOQUOT	104.00	104.00	
	T0622 01 (TL 0)	CLAYOQUOT	154.00	154.00	
	T0622 02 (TL3449)	CLAYOQUOT	160.00	160.00	
	T0622 03 (TL3450)	CLAYOQUOT	83.00	83.00	
	T0622 04 (TL3451)	CLAYOQUOT	143.00	143.00	
Timber Licence	T0622 05 (TL5613)	CLAYOQUOT	116.00	116.00	
	T0622 06 (TL5616)	CLAYOQUOT	180.00	180.00	
	T0622 0 (TL561)	CLAYOQUOT	16 .00	16 .00	
	T0641 01 (TL3442)	CLAYOQUOT	145.00	145.00	
	T0641 02 (TL3458)	CLAYOQUOT	1 1.00	1 1.00	
	TOTAL TIMBER LICENCES - CLAYOQUOT		4,202.00	4,202.00	
	TOTAL CROWN GRANTS		759.41	759.41	
	TOTALTIMBER LICENCES		4,202.00	4,202.00	
	GRAND TOTAL - BLOCK IV		4,961.41	4,961.41	

SCHEDULE "A" PROPERTY LISTING— BLOCK V—KENNEDY LAKE

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
Private Lands	DL 111, STAPLE ISLAND	CLAYOQUOT	29.54	29.54	
	DL 1328	CLAYOQUOT	42.49	42.49	
	DL 1399, PLAN DD6 862 I	CLAYOQUOT	123.85	123.85	
	DL 1425, NE 1/4	CLAYOQUOT	16.19	16.19	
	DL 1426, SE 1/4	CLAYOQUOT	16.19	16.19	
	DL 283	CLAYOQUOT	31.69	31.69	
	DL 285	CLAYOQUOT	31.5	31.5	
	DL 286	CLAYOQUOT	95.10	95.10	
	DL 289	CLAYOQUOT	6 .58	6 .58	
	DL 33	CLAYOQUOT	129.50	129.50	
	DL 36	CLAYOQUOT	148.12	148.12	
	DL 404	CLAYOQUOT	64. 5	64. 5	
	DL 42	CLAYOQUOT	128.29	128.29	
	DL 46	CLAYOQUOT	31.30	31.30	
	DL 4 0	CLAYOQUOT	2 .52	2 .52	
	DL 4 1	CLAYOQUOT	5 .00	58.68	Area Correction
	DL 4 2	CLAYOQUOT	44.52	44.52	
	DL 4 3	CLAYOQUOT	53.42	53.42	
	DL 4 6	CLAYOQUOT	64. 5	64. 5	
	DL 4 8, EXCEPT PLAN 02	CLAYOQUOT	19. 2	19. 2	
	DL 4 8, LOT A, PLAN 02	CLAYOQUOT	4. 4	4. 4	
	DL 4 8, PART	CLAYOQUOT	53.29	53.29	
	DL 4 9, EXCEPT PLAN 02	CLAYOQUOT	53.02	53.02	
	DL 480	CLAYOQUOT	62.50	62.50	
	DL 482, NW 1/4	CLAYOQUOT	14.5	14.5	
	DL 482, S 1/2	CLAYOQUOT	32.38	32.38	
	DL 51	CLAYOQUOT	9.31	9.31	
	DL 612	CLAYOQUOT	92.2	92.2	
	DL 619	CLAYOQUOT	32.38	32.38	
	DL 659	CLAYOQUOT	25.90	25.90	
	SEC 18, PART, EXCEPT PCL S A B, ETC.	CLAYOQUOT	53.00	52.35	Inst. 15 Sold
	SEC 34	CLAYOQUOT	64. 5	64. 5	
	SEC 35	CLAYOQUOT	64. 5	64. 5	
	SEC 38	CLAYOQUOT	64. 5	64. 5	
	SEC 40	CLAYOQUOT	20.64	20.64	
	SEC 41	CLAYOQUOT	1 5.23	1 5.23	
	SEC 66	CLAYOQUOT	95.91	95.91	
	SEC 6	CLAYOQUOT	186.16	186.16	
	SEC 68	CLAYOQUOT	64. 5	64. 5	
	SEC 0, EXCEPT PLANS 22802 44820	CLAYOQUOT	5.08	5.08	
Private Lands	SEC 1	CLAYOQUOT	118.29	118.29	
	SEC 2	CLAYOQUOT	129.50	129.50	
	SEC 3	CLAYOQUOT	93.08	93.08	
	SEC 4	CLAYOQUOT	64. 5	64. 5	
	SEC 5	CLAYOQUOT	102.39	102.39	
	SEC 80	CLAYOQUOT	81.34	81.34	
	SEC 81	CLAYOQUOT	64. 5	64. 5	
	SEC 82	CLAYOQUOT	118.1	118.1	

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
	SEC 84	CLAYOQUOT	59.90	59.90	
	SEC 85	CLAYOQUOT	156.29	156.29	
	SEC 86	CLAYOQUOT	129.50	129.50	
	SEC 8 , EXCEPT PLAN 15460	CLAYOQUOT	129.45	129.45	
	SEC 88	CLAYOQUOT	194.25	194.25	
	SEC 89	CLAYOQUOT	93.48	93.48	
	SEC 90	CLAYOQUOT	64. 5	64. 5	
	SEC 94	CLAYOQUOT	29.14	29.14	
	TOTAL CROWN GRANTS - CLAYOQUOT		4,027.52	4,028.54	
Timber Licence	T0060 00 (TLS196)	CLAYOQUOT	99.00	99.00	
	T0095 01 (TLS199)	CLAYOQUOT	110.00	110.00	
	T0095 02 (TLS231)	CLAYOQUOT	6.00	6.00	
	T0130 01 (TLS202)	CLAYOQUOT	484.00	484.00	
	T0130 02 (TLS214)	CLAYOQUOT	103.00	103.00	
	T0130 03 (TLS215)	CLAYOQUOT	12 .00	12 .00	
	T0130 04 (TLS236)	CLAYOQUOT	216.00	216.00	
	T0130 05 (TLS23)	CLAYOQUOT	192.00	192.00	
	T0130 06 (TLS238)	CLAYOQUOT	243.00	243.00	
	T0320 00 (TLS216)	CLAYOQUOT	314.00	314.00	
	T0419 01 (TLS232)	CLAYOQUOT	65.00	65.00	
	T0419 02 (TLS233)	CLAYOQUOT	258.00	258.00	
	T0419 03 (TLS234)	CLAYOQUOT	550.00	550.00	
	T0419 04 (TLS235)	CLAYOQUOT	538.00	538.00	
	T0469 00 (TLS256)	CLAYOQUOT	341.00	341.00	
	T0539 01 (TLS195)	CLAYOQUOT	9 .00	9 .00	
	T0539 02 (TLS19)	CLAYOQUOT	161.00	161.00	
	T0539 03 (TLS201)	CLAYOQUOT	96.00	96.00	
	T0539 04 (TLS204)	CLAYOQUOT	9.00	9.00	
	T0539 06 (TLS206)	CLAYOQUOT	1 6.00	1 6.00	
	T0539 0 (TLS223)	CLAYOQUOT	9.00	9.00	
Timber Licence	T0539 08 (TLS225)	CLAYOQUOT	31.00	31.00	
	T0539 09 (TLS226)	CLAYOQUOT	1 .00	1 .00	
	T0553 01 (TLS198)	CLAYOQUOT	9.00	9.00	
	T0553 02 (TL90)	CLAYOQUOT	100.00	100.00	
	T0553 03 (TL1028)	CLAYOQUOT	60.00	60.00	
	T055 00 (TLS200)	CLAYOQUOT	926.00	926.00	
	T05 9 01 (TLS21)	CLAYOQUOT	9.00	9.00	
	T05 9 02 (TLS218)	CLAYOQUOT	60.00	60.00	
	T0601 00 (TLS224)	CLAYOQUOT	16.00	16.00	
	T0619 00 (TLS255)	CLAYOQUOT	96.00	96.00	
	TOTAL TIMBER LICENCES - CLAYOQUOT		6,358.00	6,358.00	
	TOTAL CROWN GRANTS		4,027.52	4,028.54	
	TOTAL TIMBER LICENCES		6,358.00	6,358.00	
	GRAND TOTAL - BLOCK V		10,385.52	10,386.54	

SCHEDULE "A" PROPERTY LISTING— BLOCK VI-MEARES ISLAND

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
Private Lands	DL 643, WOOD ISLAND	CLAYOQUOT	13.36	13.36	
	TOTAL CROWN GRANTS - CLAYOQUOT		13.36	13.36	
Timber Licence	T0140 01 (TLS20)	CLAYOQUOT	156.00	156.00	
	T0140 02 (TLS208)	CLAYOQUOT	210.00	210.00	
	T0140 03 (TLS209)	CLAYOQUOT	1 9.00	1 9.00	
	T0140 04 (TLS210)	CLAYOQUOT	84.00	84.00	
	T0140 05 (TLS211)	CLAYOQUOT	628.00	628.00	
	T0140 06 (TLS212)	CLAYOQUOT	242.00	242.00	
	T0140 0 (TLS213)	CLAYOQUOT	146.00	146.00	
	T0140 08 (TLS220)	CLAYOQUOT	486.00	486.00	
	T0140 09 (TLS221)	CLAYOQUOT	49.00	49.00	
	T0140 10 (TLS222)	CLAYOQUOT	686.00	686.00	
	TOTAL TIMBER LICENCES - CLAYOQUOT		3,566.00	3,566.00	
	TOTAL CROWN GRANTS		13.36	13.36	
	TOTAL TIMBER LICENCES		3,566.00	3,566.00	
	GRAND TOTAL - BLOCK VI		3,579.36	3,579.36	

SCHEDULE "A" PROPERTY LISTING— BLOCK VII—MEGIN LAKE

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
Timber Licence	T0491 01 (TLS254)	CLAYOQUOT	191.00	191.00	
	T0491 02 (TLS258)	CLAYOQUOT	18 .00	18 .00	
	T0491 03 (TLS259)	CLAYOQUOT	1,149.00	1,149.00	
	T0491 04 (TLS263)	CLAYOQUOT	386.00	386.00	
	T0520 00 (TLS261)	CLAYOQUOT	191.00	191.00	
	T0525 00 (TLS262)	CLAYOQUOT	1,012.00	1,012.00	
	TOTAL TIMBER LICENCES - CLAYOQUOT		3,116.00	3,116.00	
	TOTAL CROWN GRANTS		-	-	
	TOTAL TIMBER LICENCES		3,116.00	3,116.00	
	GRAND TOTAL - BLOCK VII		3,116.00	3,116.00	

SCHEDULE "A" PROPERTY LISTING— BLOCK VIII—FLORES ISLAND

Tenure	Legal Description	Land District	M.P. #2 (ha)	M.P. #3 (ha)	Comments
Private Land	DL 363	CLAYOQUOT	40.4	40.4	
	TOTAL CROWN GRANT - CLAYOQUOT		40.47	40.47	
Timber Licence	T0531 00 (TLS253)	CLAYOQUOT	419.00	419.00	
	TOTAL TIMBER LICENCE - CLAYOQUOT		419.00	419.00	
	TOTAL CROWN GRANT - CLAYOQUOT		40.47	40.47	
	TOTAL TIMBER LICENCES		419.00	419.00	
	GRAND TOTAL - BLOCK VIII		459.47	459.47	