Weyerhaeuser BC Coastal Group

1999 ANNUAL REPORT

ALBERNI TREE FARM LICENCE

No. 44

July, 2000

DISTRIBUTION LIST

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STATEMENT OF AUTHORSHIP

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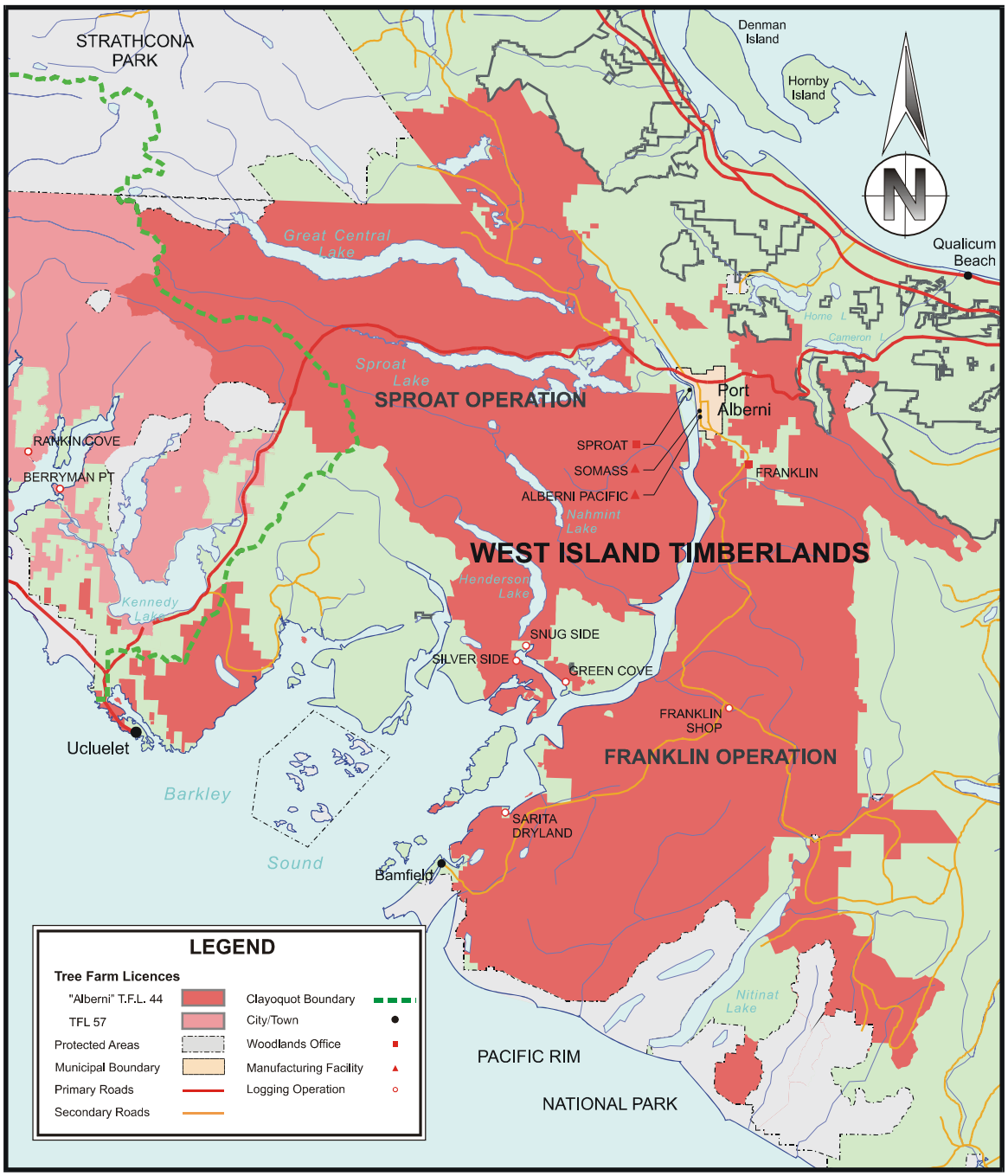
1.0 Introduction

TFL 44 is located in west-central Vancouver Island in the vicinity of the communities of Port Alberni, 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. Refer to the location map.



The TFL is held by Weyerhaeuser with management by West Island Timberlands. It is located in and administered by the South Island Forest District as part of the Vancouver Forest Region (Ministry of Forests)

TFL 44 covers over 320 000 ha, of which approximately 270 000 ha is productive forestland. The current Management Plan (#3) is for the period to December 31, 2002 and has an Allowable Annual Cut (AAC) of 1 766 200 m^3/year, including 81 608 m^3/year allocated to the Small Business Forest Enterprise Program (SBFEP).

The TFL 44 Annual Report for 1999 describes achievements in meeting management obligations and objectives.

2.0 Summary of Major Events and Initiatives in 1999

On June 21, MacMillan Bloedel Limited and Weyerhaeuser announced an agreement to merge the two companies. After regulatory (Canadian and US) and shareholder approvals, MB became part of Weyerhaeuser on November 1, 1999. The coastal operations are now known as the Weyerhaeuser B.C. Coastal Group.

Strategies continued to focus on corporate goals of safety in the workplace, business success and becoming a highly respected forest products company.

- The corporate commitment to safety has resulted in a dramatic reduction in medical incidents since 1997. The indicator used to measure safety has been the Medical Incident Rate (MIR) – the number of incidents per 100 workers that require a doctor's medical attention or result in lost work time. The MIR for the BC Coastal Group for 1999 was 8.3, a reduction by a third from the MIR achieved in 1998. In the future the safety indicator will be changed to Reportable Incident Rate (RIR), which is very similar to MIR. The target for 2000 is to reduce the RIR by a further 33%.

- Co-design, co-management or partnership programs continued at most Coastal BC operations. They are continuing to have a favorable impact on cost and profitability.

- The Forest Project passed an important milestone this past summer as a group of scientific experts gathered in Campbell River, BC to review the Company's Year One Progress. The 14-member review panel [selected by MB and environmental groups] included Canadian and U.S. forest experts drawn from universities, government and the private sector. The project is above target for achieving 100% variable retention on BC Coastal Woodlands within 5 years – for 1999, 35% of the area harvested was with variable retention.

- In May 1999, North Island Woodlands received certification status under both the Canadian Standards Association's [CSA] Sustainable Forest Management standards [it was the first in Canada to obtain CSA certification] and the ISO 14001 environmental management system - only the fourth operation in North America to achieve this. The area certified includes

230,000 hectares of forestlands near Campbell River and Sayward, in TFL 39, Block 2 and Blocks 8 and 9 of MF 19.

Other timberlands operations have commenced preparation for certification. This includes developing successful public participation processes, expanding environmental management systems and implementing a sustainable forest management system. The goal is to achieve CSA and ISO 14001 certification at all Weyerhaeuser Coastal Timberlands operations by the end of 2003. The BC Coastal Group is participating in the process to develop Regional Standards for Forest Stewardship Council (FSC) certification.

Plans also include achieving mill certification. This includes setting up a "chain of custody" tracking system that follows the wood from forest to customer and guarantees that certain environmental and sustainability standards are met.

- Re-engineering projects in 1999 included a "Tree to Plan" team that focused on improving efficiency in forest planning and approval processes, on providing more direct links between customer demand and operations. This co-operative effort between Weyerhaeuser and the Ministry of Forest has resulted in a number of initiatives.

  In a related initiative, Weyerhaeuser has actively co-operated with the MoF, MoELP and other licensees in a South Island Forest District process of continuous improvement - to streamline the operational planning and approvals process.

Most of the Clayoquot Sound portion of Tree Forest Licence 44 was transferred to TFL 57 and hence to Iisaak Forest Resources, effective from October 27, 1999. Iisaak Forest Resources is a new company owned 51% by Ma Mook Natural Resources Ltd. (owned by five First Nations of the Nuu-chah-nulth Central Region) and 49% by Weyerhaeuser.

Some improvement in Japanese markets and progress in reducing costs resulted in an improved year relative to 1998.

Weyerhaeuser (BC Coast) woodlands operations, and the mills that depend on them for logs, suffered the effects of the worst snow levels in 50 years. In early February, as coastal BC sawmills were struggling to keep working with increasingly tight log inventories, heavy snowfalls on the Coast, Vancouver Island and Queen Charlotte Islands shut down most of MB's Woodlands operations.

Franklin took a temporary shutdown in May as there was still 25-30 feet of snow at higher elevations - and even those woodlands operations not usually adversely affected by snow, such as Queen Charlotte Division, had been hampered.

The IPD sawmill in Nanaimo, started up one shift at the end of April after a four-month shutdown because of log shortages.

3.0 Management and Obligation Performance

3.1 Timber Harvesting

3.1.1 Volumes Harvested by Weyerhaeuser

Weyerhaeuser harvested volumes (including residue) on private and Crown land within the TFL as follows:

Private	381 175 m^3	25%
Timber Licences	570 348 m^3	38%
Crown	553 036 m^3	37%
Total	1 504 559 m^3	100%

Details of harvested volumes by operation, tenure and species are found in Appendix I, Table 1a.

3.1.2 Cutting Balance

This is the fifth year in the 1995-1999 Cut Control period. The harvest in 1999 was 83.7% of the AAC. Cut control status is shown below.

YEAR	1995	1996	1997	1998	1999	Total
Weyerhaeuser AAC (m^3)	2 138 127	2 138 127	2 138 127	1 800 127	1 772 524	9 987 032
Actual Cut (m^3)						
Log Scale	1 983 963	1 643 863	1 312 810	1 157 178	1 408 149	7 505 963
Residue	168 182	118 962	76 598	33 355	96 410	493 507
Total Actual Cut (m^3)	2 152 145	1 762 825	1 389 408	1 190 533	1 504 559	7 999 470
Undercut Adj.	(21 612)	(21 612)	(21 612)	(21 611)	(21 611)	(108 058)
Total Cut Control Volume	2 130 533	1 741 213	1 367 796	1 168 922	1 482 948	7 981 412
Percent of AAC	99.6%	81.4%	64.0%	64.9%	83.7%	79.0%

Two events occurred in 1999, resulting in a decrease in TFL 44 AAC available to Weyerhaeuser. The 1999 AAC (above) results from prorating these changes for the period of the year that they applied. Refer to the following table for a summary of these changes in the TFL 44 AAC and its allocation.

a. The majority of the Clayoquot Working Circle was separated from TFL 44 as TFL 57 and then transferred to Iisaak Forest Products (refer to section 8.1). The AAC for the residual TFL 44 was reduced from 1 890 000 m^3 to 1 766 200 m^3 of which 1 684 592 m^3 was available to the company (i.e. excludes SBFEP). This change in AAC was effective from October 27, 1999.

b. The Minister of Forests gave consent for the transfer of TFL 44 to Weyerhaeuser on October 29, 1999. Under Section 56 of the Forest Act, the licensee's AAC attributable to crown land is reduced by 5%, 14 days after consent is given for the transfer. Hence, effective November 12, 1999 the company AAC attributable to crown land has been reduced by 5% (48 994 m^3) to 930 884 m^3. In total (attributable to crown land and to private land and

timber licences) the company AAC is reduced from 1 684 592 m^3 to 1 635 598 m^3.

Weyerhaeuser is preparing a submission (under Section 56.1 of the Forest Act) that includes a job creation plan and requests an increase in company AAC equivalent to the 5% reduction.

The changes in the TFL 44 AAC and its allocation, that occurred during 1999, are summarized in the following table:

	TFL 44 before Oct 27, 1999	**Less TFL 57**	**TFL 44 net of TFL 57**	**Less SBFEP**	**Less 5% for company transfer**	**Net Company Allocation**
TFL 44 excluding Clayoquot	1 760 000		1 760 000			
Clayoquot	130 000	123 800	6 200			
Total TFL 44	**1 890 000**	**123 800**	**1766 200**	**81 608 (1)**	**48 994**	**1 635 598**

(1) The original allocation of TFL 44 AAC to SBFEP was 89 873 m^3. Of this 8 265 m^3 was transferred with TFL 57 and the balance (81 608 m^3) remains in the residual TFL 44.

The relatively low harvest (79% of AAC) for the five years (1995-1999) is accentuated by the Clayoquot Sound decision and planning process. If Clayoquot is excluded (i.e. for TFL 44 less Clayoquot) the five-year harvest is more than 88% of AAC.

The following table shows the 1999 harvests in the two areas:

Partition	**AAC Contribution m^3**	**Estimated SBFEP Allocation m^3**	**Estimated allocation of the 5% reduction for transfer**	**Weyerhaeuser Allocation m^3**	**Volume Harvested Including Residue m^3**
TFL 44 Economic (excl. Clayoquot)	1 720 000				1 472 580
Marginal Economic(1)	40 000				17 288
Total (excl. Clayoquot)	1 760 000	81 262	6 683	1 672 055	1 489 868
Clayoquot	107 614	7 117	28	100 469	14 691
Total	**1 867 614**	**88 379**	**6 711**	**1 772 524**	**1 504 559**

(1) The MP #3 AAC allocation includes 40 000 m^3 from the marginal economic inventory category. Harvest for this category is based on volume scaled to hammer marks used by Franklin Forest Products during 1999.

(2) The AAC allocations have been adjusted (prorated for period for which they applied) for the transfers that occurred in 1999 (refer to note above).

3.1.3 Volumes Harvested by SBFEP

Volume harvested in SBFEP sales during 1999 totaled 88 994 m^3 (refer to Appendix I, Table 2). The SBFEP harvest volume and allocation are separate from the Weyerhaeuser harvest and AAC allocation discussed in sections 3.1.1 and 3.1.2. The following table shows the SBFEP volume harvested over the last five years (note that residue may not be billed every year).

Year	1995	1996	1997	1998	1999
Harvest Volume (m^3	25 555	121 802	39 740	77 387	88 994

3.1.4 Compliance with Contractor Requirements

Contractor requirements are described in Section 14 of the current TFL 44 Licence Agreement. Further details on the calculation procedure are prescribed in the contractor clause compliance regulation.

For 1999, 110.5% of compliance was achieved.

Summary of Contractor production (m^3)

Full Contracts:		415 395	86%
Phase Contracts (in equivalent volume harvested)			
Roads	67 583		
Subtotal		67 583	14%
Total		482 978	100%

3.1.5 Second-Growth Harvest

In the approval letter for MP #3, the Chief Forester requested; “I would like to see performance in harvesting second growth stands near the minimum harvest age during the term of this plan.”

The MP #3 second-growth harvest strategy (section 6.57 of MP #3) makes provision for first harvest pass opportunities at an earlier age than previously considered. For simplicity they were grouped as follows:

Species Association	Site Index Range (m)	Minimum Harvest Age (years)
Douglas-fir	<27	70
Douglas-fir	>=27	50
Western hemlock	<27	60
Western hemlock	>=27	40

The approach for reporting on the 1999 second-growth harvest include:

- Species is based on the leading species (most stands contain a mixture of species).

- Where available, age is from the operational cruise. In general (particularly for the younger stands) the cruised age was less than the inventory age. Areas have been grouped by 10-year age classes.

- The site indexes reported here are area-weighted averages for each age class. Only one harvest area had a site index of less than 27.

Leading Species	Site Index Range (m)	Age Class (years)	Average Site Index (m)	Harvest Volume (m^3)	% of Harvest
Douglas-fir	>=27	41-50	36	3 191	1%
	>=27	51-60	36	73 075	27%
	>=27	61-70	37	28 058	10%
	>=27	81-90	31	46 856	17%
	>=27	91-100	31	31 198	12%
	<27	120-130	21	5 966	2%
Western hemlock	>=27	51-60	33	24 559	9%
	>=27	61-70	30	32 096	12%
	>=27	71-80	32	1 385	1%
	>=27	81-90	30	22 747	9%
Total				**269 131**	**100%**

3.1.6 Harvest Profile (operability class)

Results are based on Divisional volume data (excluding residue) and on the inventory classification for operability. In 1999 there was 964 000 m^3 of first growth harvested in the conventional economic class and 73 000 m^3 in the non-conventional economic class. A further 22 000 m^3 classified as marginal economic was logged. In addition 273 000 m^3 of second-growth timber was harvested. These numbers differ from the BCFS Billed volume (Table 1a) due to differing year-end dates. Harvest Profile production is shown in Appendix I, Table 1c.

3.2 Higher Level Plans

There were no higher level plans in place at the end of 1999. It is expected that Landscape Unit Planning will commence and that the Vancouver Island Land Use Plan will be approved during 2000.

3.3 Inventories

3.3.1 Visual Landscape

Field work for a revised visual landscape inventory was completed in 1999. The data will be entered into a GIS data base during 2000 and will be used in the analysis for MP #4.

3.3.2 Terrain

Five-class terrain stability mapping and surface erosion potential mapping (at Terrain Survey Intensity Level C) was completed in the Sproat Lake Community Watershed, with FRBC funding. This information will be entered into the GIS database in 2000.

3.3.3 Timber

TFL 44 was re-inventoried between 1973 and 1977.

In 1989, operational cruising on 63 500 ha was combined with the inventory (updated to 1987) 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 cruises.

A further inventory update (including more recent operational cruising and recompiling without logged samples) is planned prior to the MP #4 analysis.

In addition, a program to test (or audit) the accuracy of the TFL 44 mature (1970s) inventory was continued in 1999. In earlier years, work had occurred in Blocks 2 (Nitnat), 3 (Sproat Lake) and 4 (Henderson). The results of these tests show no significant difference between the test plot volumes and the inventory. Sampling was completed in Block 1 (Cameron) during 1999. A final report, which will include a comparison of audit and inventory volumes for Block 1 is planned for 2000.

During 1999, 2 805 ha of “31+” cruising were completed. The “31+” cruise is applied to young stands that reach “pole-size”, generally between 25 and 40 years of age. This re-inventory includes measurement of site index, basal area and volume.

Weyerhaeuser maintains an inventory of permanent sample plots in mature and second-growth stands to evaluate long-term growth trends. These sample plots are periodically remeasured. . Coast wide a total of 95 Second–Growth, 12 Planting Assessment, 5 Sustained Yield, 42 Spacing Assessment, 54 Nutrition and 20 Mature plots were remeasured. Specifically, in TFL 44, 37 Second Growth, 7 Planting Assessment, 3 Sustained Yield, 9 Nutrition and 5 Mature plots were measured in 1999.

3.3.4 Terrestrial Ecosystem Mapping (TEM)

The objective is to map ecosystems (site series) at 1:20,000 for all Weyerhaeuser BC Coastal Group tenures. This inventory will provide data for strategic and operational planning, including forest level analysis, landscape-level planning and silviculture prescriptions. Funding is provided by Forest Renewal BC. All projects are being done on the TRIM (NAD 83) base and follow the provincial Resource Inventory Committee (RIC) mapping and database standards. Final digital products were completed for the Great Central East and Henderson Lake areas during early 1999. Completed products for the Klanawa River are expected in early 2000. TEM mapping for TFL 44 is expected to be complete in 2002.

3.3.5 Cultural Heritage Resources

The locations of culturally modified trees [CMTs], discovered during surveys of proposed harvest blocks, have been entered into a GIS coverage. This information will contribute towards determination of allowances for CMTs in the MP #4 analysis.

3.3.6 Coastal Watershed Assessment Procedures (CWAPs)

As directed by the District Manager, a CWAP was completed for the Klanawa Watershed.

4.0 Success in Meeting Management Objectives

4.1 Management and Utilization of the Timber Resource

Refer to Section 3.1.

Nahmint Watershed Harvest Level

Consistent with the commitment in section 4.31 of MP #3, harvest levels in the Nahmint Watershed have been guided by the schedule described in the South Island District Manager's letter of March 27, 1997. Harvest in the Nahmint Watershed during 1999 was 76, 697 m^3**.**

4.2 Forest Health and Protection

Forest Protection includes a wide range of activities to eliminate or minimize the effects of fire, disease and insects.

Of note in 1999:

4.2.1 Forest Fires

Eight fires, burning a total of 10.4 ha, were reported in 1999. There was one lightning fire, three escaped slash fires and four fires caused by the general public. See Appendix I, Table 4 for details.

Burning of roadside accumulations on grapple yarder operations and areas where piles were made by mechanical piling or windrowing amounted to 41 ha (see Appendix I, Table 5).

Aerial fire watch patrols were carried out by Forest Industries Flying Tankers (FIFT) within two hours after each shift whenever moderate fire hazard extended for more than three days. During the past year, a total of 58 fire watch patrols were flown. In addition, 26 patrol missions were flown during periods of high fire hazard.

Additional ground fire patrols were performed during periods of extreme fire hazard.

4.2.2 Insects

Balsam woolly adelgid activity was noted in the Museum, Nadira and Labour Day Lake areas. Guidelines have been developed for the management of the Abies species in these areas. Recovery of timber from severely infected areas depends upon a number of factors, including an assessment of costs and benefits.

4.2.3 Disease

Stumping and replanting were used to treat an area [35 ha] infected with *Phellinus werri* in the Bainbridge area**.**

4.3 Silviculture

4.3.1 Forest Regeneration

Weyerhaeuser is committed to prompt reforestation of harvested land with appropriate species considering both silvical characteristics and economic values. Treatment activities include site preparation, planting and assessment of regeneration (both planted and natural) performance.

Site Preparation

In total, site preparation occurred on 532 ha during 1999. Major treatments (by area) included mechanical scarification, brush and grass control, alder seed tree control and burning accumulations. Refer to Table 5 in Appendix I for details.

Seed Procurement and Tree Improvement

Details on seed procurement, seed inventory and seedling inventory are described in Appendix II.

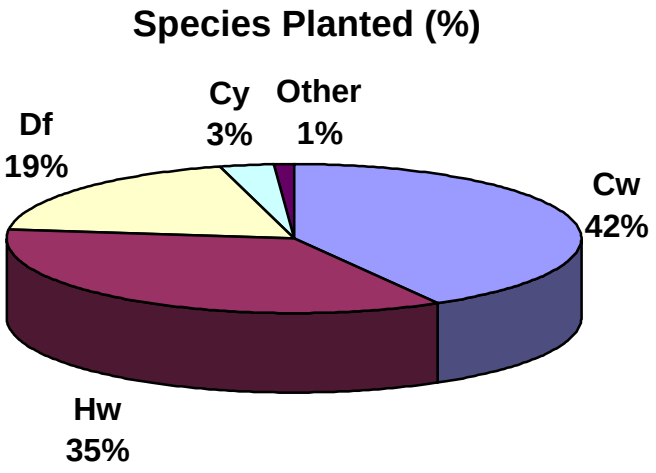
The forest genetics program of Weyerhaeuser's BC Coastal Group deals with supply of genetically improved seed for reforestation use on both Crown and Private Lands.

1n 1999, Weyerhaeuser entered into two long term (5 year) Seed Supply Agreements – one with Canadian Forest Products and one with Timber West. The Agreements secure high gain genetic seed for future Douglas fir and secure high gain seed for Hw, Cw, Pw and cutting production for Yc.

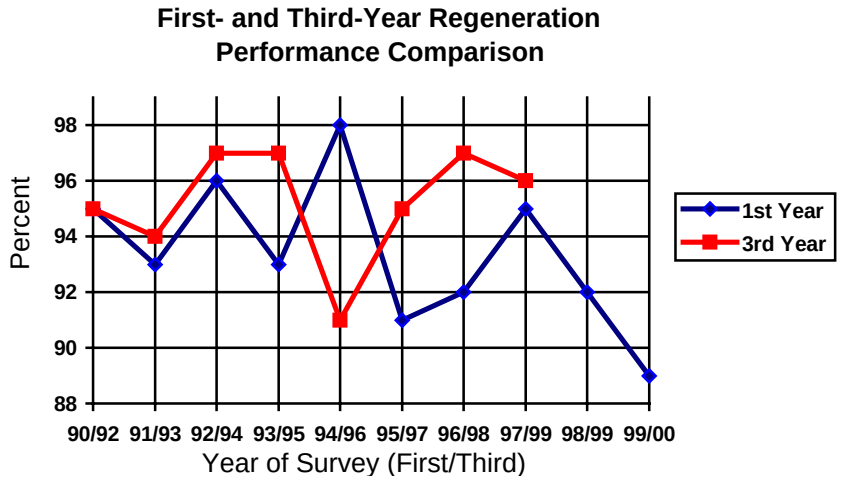
The program is exploring other techniques for delivery of high gain products for the reforestation program needs. These techniques include agreements for control-pollinated seed, cutting propagation and the potential of somatic embryogeneses as an alternative technique for Douglas fir.

Planting

Planting was completed on 1 520 of Area Awaiting Restocking (AAR) using 1 615 800 seedlings. Fill planting was done on 134 ha using 87 400 trees to bring the stocking level on those areas to Management Plan standards. Appendix I, Table 6 shows the number of trees planted by operation and Appendix I, Table 7 details the hectares planted by operation and tenure. The following graph details the percent of species planted in 1999



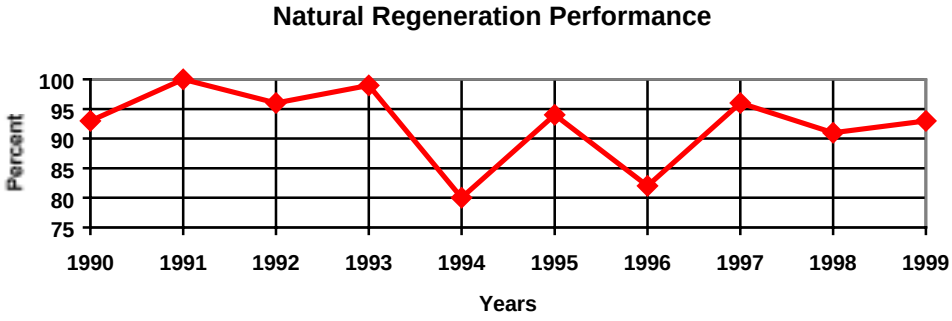
Survival surveys, completed one year after planting, on 2 082 ha showed a survival rate of 89%. Three years after planting, the survival rate remained at a high level, 96%, on the 4 443 ha surveyed in 1999. See Appendix I, Table 8 for details.



Re-examinations of third-year plantations showed regeneration performance exceeded survival performance on areas planted three years earlier for the Years 1992 through 1995. A number of factors contributed to the drop in third-year regeneration performance for 1996, namely: extreme weather conditions causing desiccation, stressed planting stock, poor planting quality, elk browsing, road deactivation and inadequate site preparation. The third-year regeneration performance again exceeded the first-year plantation survival in 1997 and this trend continues. The third-year data does not include plantations that failed the first year.

Natural Regeneration

Stocking surveys in naturally regenerated areas were conducted on 796 ha and 32% were found to be stocked. An assessment of 194 ha of naturally regenerated areas, three years after the first stocking survey showed 93% to be stocked. Details of these surveys by operation are found in Appendix I, Table 8. Natural stand regeneration has remained above 80% over the last ten years.



4.3.2 Stand Tending

The following table summarizes stand tending activities for 1999. Details by operation and tenure are described in Appendix I, Table 9.

Treatment	(hectares)
Brushing/Weeding	806
Spacing	232
Fertilization	2
Fertilization at Planting	1,006
Seedling Protection	30
Staking	47
Pruning	72
Total	**2,195**

The substantial areas treated for brushing/weeding and fertilization at time of planting reflect an emphasis on an early attainment of well stocked stands that are free growing.

Trees on 30 ha were flagged as leave trees prior to Brushing and Weeding.

4.3.3 Erosion Control

A total of 80 ha were dry or hydroseeded during 1999. Both roadside and slide areas were treated. Details are found in Table 10 of Appendix I.

4.3.4 Assessments

Assessments and audits are performed to ensure work is done to prescribed standards.

The results of various types of silvicultural assessments are used for planing future activities, monitoring the success of treatments, and to maintain up-to-date forest management records. Appendix I, Table 11 details the 10 942 ha surveyed for various assessments in 1999.

4.3.5 Operational Research

Operational research is carried out in several of Weyerhaeuser's Coastal BC operations. Results can be applicable to TFL 44 when species, site index, terrain and biological conditions are considered. Work in 1999 included:

Montane Alternative Silvicultural Systems (MASS)

Research continued on the cooperative Montane Alternative Silvicultural Systems (MASS) project. The participating organizations include: Weyerhaeuser, Canadian Forest Service, FERIC, UBC and UVIC. Forest Renewal BC provides funding. This project is designed to study the biological and economic consequences of various silvicultural systems in higher elevation forests. The systems being studied include: clearcutting, green tree retention, shelterwood and patch cutting. Harvesting was completed in 1993; post-harvest monitoring continued through 1999. Weyerhaeuser studies included: regeneration, growth and yield, microclimate, hydrology, forest bird diversity and vegetation succession. Activities and results for 1999 include:

Regeneration: An analysis was completed in 1999 on the full five years of seedling performance data from field experiments. The results confirmed pervious observations that the primary limiting environmental factors are nutrition and vegetation competition. The five year trend analysis indicates that these limiting factors are staged with nutrition being most limiting in the first few years and vegetation more limiting in the latter years. These effects were accentuated in high light environments and it was clear that they far outweighed the reduced light environment effects created by using non-clearcut silvicultural systems.

Monitoring of wind damage, seedfall and natural vegetation continued in 1999. Final reports for Forest Renewal BC on the results after five seasons will be completed in 2000.

Effects of Prescribed Burning on Some Coastal BC Sites

Three research sites are located southwest of Pt. Alberni in TFL 44. Ten-year measurements were completed in 1995. The best growth of Douglas fir, western red cedar and yellow cedar was on the highest intensity burns; however, these fires consumed significant amounts of nitrogen and other nutrients that may affect long-term productivity. Preparation of journal publications from 10-year results began in 1999 and will be submitted in 2000. Fifteen-year tree growth, vegetation and nutrition assessments will be done in fall 2000. This study represents unique data for coastal ecosystems in the Pacific Northwest that warrants continued monitoring.

Fertilization Trials

Various fertilization trials have been established during the last two years. They include trials in three juvenile (aged 15 to 18) western hemlock stands, established in 1998 and measured in 1999. Objectives are to measure volume per ha growth response to N and N + P and to examine whether stand measurements, foliar analysis or soil analysis provide any basis for selecting sites to fertilize. This work is funded by FRBC. A report on first year measurements will be prepared in 2000.

4.4 Resource Protection

4.4.1 Forest Project

In June of 1998, Weyerhaeuser BC Coastal Group announced a New Forest Management Strategy. Key components include phasing out clearcutting over a five-year period to be replaced by variable retention and an increase in conservation of old-growth forests and wildlife habitat.

The implementation of the strategy is on schedule.

- In 1999, for all company coastal operations, variable retention was applied on 35% of the area harvested. For TFL 44 the proportion of area harvested with variable retention was 26%. Refer to Table 1b in Appendix I.

- In 1999 a scientific panel was convened to review the first years progress on implementation of the Forest Project. Fourteen scientists were invited to the workshop to act as an expert panel. About half of the scientists were nominated by environmental organizations and half by the company. Also attending were representatives from seven environmental organizations, and Weyerhaeuser. The Panel Review indicated both successes particularly with stand level implementation and areas that needed improvement around landscape planning, zoning and adaptive management.

- Assessment and revisions of Stewardship Zones is ongoing. During 1999 consultation with Government, ENGOs and Divisional engineers has resulted in some shifting of zones. A complete ecological analysis of the zones will be conducted during 2000 for presentation at the Year 2 Panel Review.

- Emphasis has been placed on training. To-date, approximately 250 people have taken a 3 or 4-day training course covering safety, objectives, prescriptions and layout for variable retention. A video has been produced to introduce employees to the rationale and basic elements of the VR approach. There are plans to develop training videos that cover the detailed contents of the workshops.

An evaluation was completed of 1999 VR cutblocks to monitor performance and identify areas for improvement.

The Variable Retention Working Group facilitates on-going development of planning and policies. This group of foresters, forest engineers and biologists representing the BC Coastal operations meet on a regular basis.

Development continued on an experimental harvesting technique for single stems, whereby a helicopter removed a cut-and-limbed tree without it falling to the ground. This technique has applications on very sensitive terrain or as a first-pass removal of high-value stems prior to conventional yarding.

4.4.2 Adaptive Management and Monitoring

The Adaptive Management (AM) and Variable Retention (VR) Working Groups have finalized a preliminary monitoring framework. It will use an extensive and intensive split:

- **Extensive**—The extensive or passive adaptive management framework will consist of monitoring structure and organism presence or absence along with windthrow and forest health problems in current and future VR settings. During 1999 approximately 50 new VR settings were assessed for forest attributes including snags, coarse woody debris, live trees, and stand structure as well as evaluating bryophytes, birds and terrestrial gastropods as indicator organisms.

  This structural work will be used to establish the appropriate sampling design to achieve a power of the test that will allow us to detect a 10% difference 80% of the time. The program will continue to assess structural attributes in

2000 and will include birds, bryophytes and lichens, terrestrial and aquatic amphibians, terrestrial gastropods and squirrels in the organism assessment.

- **Intensive**—the intensive or active adaptive management framework will consist of five designed comparisons replicated three times and focused on specific stand level questions. Each Division will establish two or three comparison blocks over the next 4 years (15 total, company wide). Each block will have 4 or 5 treatments: clearcut, uncut (old growth or 2nd growth), and two or three variable retention alternatives (20 ha minimum size for each treatment).

In addition to this intensive and extensive framework the AM Working Group is refining the criteria and indicator approach summarized below: The refinements will be focusing on implementation of a scoring and a management action threshold system. The linking of monitoring back to management action is a fundamental component of an effective operational AM program.

Indicator 1 The distribution and abundance of species are maintained in four main geographic areas of Weyerhaeuser's BC Coastal tenure:

- the drier southeast Vancouver Island,
- the west coast-rain forest of Vancouver Island,
- the higher elevations and northern part of Vancouver Island, and
- the isolated Mid-coast and Queen Charlotte Islands

Indicator 2 The amount, distribution and heterogeneity of habitat and landscape elements important for biodiversity are maintained over time.

Indicator 3 Ecologically distinct habitat types are represented across Weyerhaeuser's BC Coastal tenure, to maintain lesser known species and ecological functions.

4.4.3 Landscape Unit Planning

Landscape reporting for old growth availability by BGC variant was completed and distributed to each operation. These reports highlighted the landscape units and variants that were short of the Old Growth targets. These reports and other associated mapping will be used in the formal process of Landscape Planning that was announced in October 1999 with release of the landscape Planning Guidebook. Training on the implementation of the Guidebook will occur during early 2000.

An related activity was the establishment of a Zoning Review Team to evaluate the impacts and options available under implementation of VR for landscape units with Intermediate Biodiversity Emphasis that have been designated as Timber Stewardship Zones under the Forest Project. This team consists of MELP and MoF representatives and Weyerhaeuser staff. Five example landscape units have been chosen to evaluate and analysis is underway

4.4.4 Recreation/Landscape

Franklin Woodlands maintains a total of 30 campsites located in campgrounds on Flora, Sarita, and Nitinat Lakes.

Alberni West has a campground at the MacTush Log Dump. Scouts Canada manages the 52-site campground.

4.4.5 Wildlife

Twelve areas in the Corrigan Watershed were assessed for winter range and the best areas were identified. Recommendations were made to enlarge the leave areas in an opening in East Alberni Operation to allow for the number of snags and wildlife trees in the proposed variable retention leave area. The Taylor Watershed deer winter range inventory identified three areas for future consideration. A Marbled Murrelet nesting suitability assessment identified the best areas in 30 study areas.

During 1999 Weyerhaeuser, through FRBC funding, was involved in population survey work on the Northern Goshawk on Vancouver Island. The work was done by the MoELP.

4.4.6 Hydrology

Upper Nahmint Watershed Hydrometric Study

The objective of this FRBC funded study is to obtain inventory information on key water resource parameters associated with seasonal precipitation and stream run-off characteristics in smaller drainage basins that contribute to the overall hydrologic behaviour of larger watershed areas. The collected information will allow the performance of the stream channels to be documented and compared over a period of time with forest land conditions and changes.

The fiscal year 1999/2000 was the third year of the five-year project. The 1999/2000 year marked the second year of data collection from the seven primary sites, as well as from five crest gauge sites used to measure peak flow on associated tributary streams. During year three channel surveying, stream reach inventories and determination of representative snow pack conditions were carried out, as well as extensive equipment repairs resulting from the extreme snow accumulation from the previous 1998/1999 winter season.

Walbran Hydrometric Station

Weyerhaeuser participated in a FRBC funded project to establish a hydrometric station to collect flow data from the Walbran watershed. The information will be added to a regional database managed by the Ministry of Environment Lands and Parks. This database contains all the hydrometric and climatic information available from hydrometric and weather stations located in the Vancouver Island Region of BC Environment.

4.4.7 Soils

Woodlands Waste Management Standard

The Weyerhaeuser B.C. Coastal Woodlands Waste Management Standard was issued jointly by Environmental Services and Nanaimo Woodlands in 1998. The standard was developed to reduce the environmental impacts and liabilities associated with all aspects of waste management and in particular the ongoing problems of landfill fires, leachate and costly landfill closure requirements. Requirements for the storage and disposal of various waste materials are outlined and new 'best management practices' are proposed for implementation at all Divisions to reduce short term and long-term environmental risks from landfills, dryland sorts, debris burn sites, shops and camps.

In 1999, the first major revision was completed and posted to the website. Key changes include a new section outlining the key elements of an Operating and Closure Plan, less stringent sideslope requirements, making the firebreak requirement optional and the addition of a template for a Fire Response Plan.

Landfill Spatial Database

Following the inventory in 1996 of all Weyerhaeuser Coastal B.C.'s active and inactive landfill sites, a database was developed to store the information collected. In 1999, this was taken a step further to develop a database that was spatially driven. In the spatial database, the landfill sites are displayed graphically, allowing the user to select individual sites and display available data.

5.0 Timber Processing

The following table lists the primary destinations for logs from TFL 44 in 1999. The total volume varies slightly from the billed volume because of differences in reporting periods.

In 1999, 61% of TFL 44 log volumes went directly to company sawmills and 18% (pulplogs) went to Pacifica's mills, mostly in Port Alberni and to a secondary extent in Powell River. Of the 21% that is categorized as resale, almost three fifths were delivered to sawmills and cedar shake mills on Southern Vancouver Island. These external sales are offset to some extent by mill purchases as logs are traded to better suit mill requirements.

Destination	1999 estimate (000 m^3)	% of TFL 39 Harvest
Weyerhaeuser sawmills:		
Alberni Pacific, Port Alberni	362	26.4%
Somass, Port Alberni	244	17.8%
Chemainus	105	7.7%
Island Phoenix, Nanaimo	14	1.0%
New Westminister	51	3.7%
Canadian White Pine, Vancouver	<1	0.0%
Custom Cut	58	4.2%
Pacifica		
Port Alberni	206	15.0%
Powell River	48	3.5%
Resale:		
Vancouver Island	165	12.1%
Other	118	8.6%
Total	**1,371**	**100%**

6.0 Employment and Economic Opportunities

Franklin Forest Products

Weyerhaeuser is committed to the Mediation Plan for Franklin Forest Products, dated April 29, 1994. The current economic plan provides up to 40 000 cubic meters of marginally economic timber to be harvested annually by Franklin Forest Products. The timber is harvested under cutting permits issued to Weyerhaeuser pursuant to TFL 44. During 1999, The MoF scale , including residue, for these cutting permits amounted to 17 288 m^3.

Forest Renewal BC (FRBC)

Weyerhaeuser and FRBC have a 5-year Multi-Year Agreement (MYA) that extends through March of 2003. During 1999, funding for projects in TFL 44 totaled $4 935 240. The wide range of funded activities included silviculture (e.g. brushing and weeding, juvenile spacing and pruning), assessments, inventories, stream rehabilitation and road deactivation. More details on the type of projects funded are described in Appendix I, Table 12.

First Nations

Relationships between Weyerhaeuser and local communities are important. Employment objectives include moving towards achieving a work force that broadly reflects the demographics of the local communities in which operations are located. Local Weyerhaeuser managers are responsible for developing relationships with local communities including First Nations.

Weyerhaeuser is developing business relationships and opportunities with several First Nation's groups in TFL 44. These relationships will be based on sound business practices. Currently, Weyerhaeuser has agreements for logging with several of the Alberni First Nations. The focus is on capacity building (training – development of skills) and on building enduring business relationships.

The company is preparing a submission seeking to recover the 5% reduction in crown AAC resulting from the transfer of tenures to Weyerhaeuser. A major component of this proposal will center on building enduring business relationships with local First Nations groups.

On October 27, 1999, most of the Clayoquot Sound portion of TFL 44 was transferred as TFL 57 to Iisaak Forest Resources Ltd. Iisaak is jointly owned by the Nuu-chah-nulth Central Region First Nations (Ahousaht, Hesquiaht, Tia-o-qui-aht, Toquaht and the Ucluelet) with 51% and Weyerhaeuser with 49%. An objective of the joint venture company is to provide employment opportunities to local First Nations people.

First Nations partners in the FRBC Multi-Year Agreement include the Uchucklesaht, Huu-ay-aht, Ditidaht, Hupacasath and the Ahousaht. During 1999 they were involved in spacing, brushing, pruning and in-stream work projects.

7.0 Knowledge Gaps

The discussion on knowledge gaps focuses on two subjects. In the first, the initiative for moving to variable retention has only recently been announced. As with any new approach there are areas of uncertainty and the following summarizes the approach for addressing these concerns. In the second theme, recent developments will over time reduce uncertainties in strategic assumptions by providing a direct link between operational practices and strategic assumptions.

Variable Retention

Issue:

The Forest Project was announced in June of 1998 (refer to section 4.4.1). Major components of this strategy include phasing out clearcutting to be replaced by variable retention and an increase in conservation of old-growth forests and wildlife habitat. The new approach is based on the best knowledge available at this time, on input from experts on forest biology, silviculture and timber harvesting.

To ensure success of the strategy, it is necessary to determine the effectiveness of the new forest practices at achieving management goals including sustaining biological richness and ecosystem productivity. The impact of variable retention on growth of the regenerated forest and forest health (including wind damage) are uncertain.

Strategy:

An Adaptive Management Working Group (AMWG) has been formed to guide the development and implementation of a monitoring system and adaptive management framework. The AMWG consists of a group of respected scientists from the MoELP, MoF, UBC Centre of Applied Conservation Biology and Weyerhaeuser. The preliminary monitoring framework includes both extensive and intensive activities. These are summarized in section 4.4.2.

Additional efforts in monitoring wind damage in variable retention blocks and in developing wind hazard predictions are planned for the period 2000 – 2001. Growth and yield studies have and will be initiated to assess the impacts of forest edges on tree growth. These include gradient analyses along transects and a random sampling design.

Strategic Timber Supply Assumptions

Issue:

Often there has not been strong feedback from operations to strategic planning. The main difficulty has been a lack of direct connection between strategic and operational spatial data. E.g. how does the area of timber unharvested on terrain class IV soils compare with assumptions made in Management Plan Timber Supply Analysis? The same type of question also applies to riparian areas, wildlife tree patches, recreation areas, culturally modified trees and now with the Forest Project incremental reserves with variable retention

Strategy:

Changes are occurring in data management and planning procedures that will allow direct comparisons of strategic assumptions and operational reality. Weyerhaeuser BC Coastal Group is focusing on developing and using digital tools for operational planning. This has included shifting its GIS from a centralized location out to the Timberlands Operations, and the acquisition or

development of an appropriate data base structure and planning tools. Development of such a digital (and spatial) operational data set will provide a basis for comparison with strategic assumptions including those on net-downs for riparian reserves, wild life tree patches etc. It is expected that sufficient operational data will be available within five years for useful comparisons.

8.0 Administration

8.1 Transfer of TFL 57

Most of the Clayoquot Sound portion of Tree Forest Licence 44 was transferred to TFL 57 and hence to Iisaak Forest Resources, effective from October 27, 1999. Iisaak Forest Resources is a new company owned 51% by Ma Mook Natural Resources Ltd. (owned by five First Nations of the Nuu-chah-nulth Central Region) and 49% by Weyerhaeuser.

The AAC for TFL 44 has been decreased by 123 800 m^3 to 1 766 200 m^3 to reflect the decrease in landbase associated with the creation of TFL 57. This AAC is allocated 1 684 592 m^3 to Weyerhaeuser and 81 608 m^3 to SBFEP.

8.2 Transfer of TFL 44 from MacMillan Bloedel Limited to Weyerhaeuser

On June 21, MacMillan Bloedel Limited and Weyerhaeuser announced an agreement to merge the two companies. After regulatory (Canadian and US) and shareholder approvals, MB became part of Weyerhaeuser on November 1, 1999. The coastal operations are now known as the Weyerhaeuser B.C. Coastal Group.

Under section 56 of the Forest Act, the licensee (company) AAC attributable to crown land is reduced by 5%, 14 days after consent is given for a tenure transfer. The Minister of Forests gave consent for the transfer of TFL 44 to Weyerhaeuser on October 29, 1999. Hence effective from November 12, 1999, the company AAC attributable to crown land has been reduced by 48 994 m^3 to 930 884 m^3. In total (attributable to crown land and to private land and timber licences), the company AAC allocation is reduced from 1 684 592 m^3 to 1 635 598 m^3.

Under Section 56.1 of the Forest Act, Weyerhaeuser is preparing a submission that includes a job creation plan and requests an increase in company AAC equivalent to the 5% reduction.

8.3 Alberni Forest Information Centre

The Alberni Forest Information Centre, located on the Harbour Quay in Port Alberni, hosted over 26 457 visitors during 1999. School presentations and tours involved 1 812 students and 69 program activities. Public forestry and special tours were made available to an additional 706 visitors in 80 groups.

The Information Centre participated in National Forest Week with public tours, a tree growing contest for grade five students and a display at the Alberni Mall. As well, the Information Centre had a display booth at the Alberni District Fall Fair with over 3 240 people visiting the booth over the four-day event.

8.4 Forest Development Plans

Development plans (1999-2003) for both Franklin and Sproat Lake operations were prepared and approved in 1999.

APPENDIX I - Table 1a

TFL 44 Volume Harvested in 1999
Based on Cut Control Letter Issued by Vancouver Forest Region
Volumes (m^3)

Working Circle	Tenure	Ha	Fir	Pine	Cedar	Cypress	Spruce	Hemlock	Balsam	Decid	Total Billed	Residue	Total Cut Control
Alberni East	Private	505	95,244	220	11,618	1,858	116	83,914	14,558	1,089	208,617	18,968	227,585
	TL	1,078	29,150	1,116	122,870	4,338	681	212,083	74,588	11	444,837	16,774	461,611
	Crown	875	13,237	3,019	148,167	8,858	808	126,139	61,241	22	361,491	25,040	386,531
	Total	2,458	137,631	4,355	282,655	15,054	1,605	422,136	150,387	1,122	1,014,945	60,782	1,075,727
Alberni West	Private	216	97,014	234	12,368	6	59	23,524	339	163	133,707	13,778	147,485
	TL	165	34,316	434	20,408	2,650	50	35,947	7,897	14	101,716	6,188	107,904
	Crown	227	50,923	210	18,393	3,824	122	48,437	18,497	116	140,522	15,662	156,184
	Total	608	182,253	878	51,169	6,480	231	107,908	26,733	293	375,945	35,628	411,573
Clayoquot	Private		3,254	31	355	2		2,068	132		5,842		5,842
	TL				833						833		833
	Crown		18	2	5,879	45	428	1,201	443		8,016		8,016
	Total		3,272	33	7,067	47	428	3,269	575		14,691		14,691
Ucluelet	Private				263						263		263
	TL												
	Crown				2,298	1		6			2,305		2,305
	Total				2,561	1		6			2,568		2,568
Total	Private	721	195,512	485	24,604	1,866	175	109,506	15,029	1,252	348,429	32,746	381,175
	TL	1,243	63,466	1,550	144,111	6,988	731	248,030	82,485	25	547,386	22,962	570,348
	Crown	1,102	64,178	3,231	174,737	12,728	1,358	175,783	80,181	138	512,334	40,702	553,036
	Total	**3,066**	**323,156**	**5,266**	**343,452**	**21,582**	**2,264**	**533,319**	**177,695**	**1,415**	**1,408,149**	**96,410**	**1,504,559**

Note: The volumes harvested in Clayoquot and Ucluelet Working Circles are salvage volumes and have no hectares recorded.

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Appendix I - Table 1b

TFL 44 Logged Hectares
by Silvicultural System - 1999
As Reported by the Timberlands Operations

Silvicultural System and Variant		Hectares Logged
Non Variable Retention		
Clearcut		1,815
	With Reserves	465
Total Non Variable		2,280
Variable Retention		
Retention	Group	100
	Dispersed	72
	Group and Dispersed	365
	Subtotal	537
Patch Cut	Group and Dispersed	6
Shelterwood	Strip	16
	Irregular	2
	Subtotal	18
Selection	Dispersed	2
Seed Tree	Group	3
	Dispersed	122
	Group and Dispersed	98
	Subtotal	223
Total Variable Retention		786
Grand Total		3,066
Percent Variable Retention		26%

Appendix I - Table 1c

TFL 44 Volume Harvested by Operability Class - 1999

As Reported by Timberlands Operations [1]

Excludes Residue

Volume (000 m^3)

	TFL 44 excluding Clayoquot	Clayoquot	Total
First Growth			
Conventional	964	15	979
Non-Conventional	73		73
Marginal	22		22
Total	**1 059**		**1 074**
Second Growth			
Conventional	271		271
Non-Conventional	2		2
Total	**273**		**273**
Grand Total	**1 332**		**1 347**

(1) Volume data is based on Timberlands Operations and may not agree with official MoF scale due to differing year-end dates.

(2) Volumes exclude residue.

(3) Harvest volumes do not include SBFEP.

(4) Conventional, Non-Conventional and Marginal categories are based on inventory classification and not on actual harvest method.

(5) The Clayoquot volumes are salvage volumes and are arbitrarily assigned to the Conventional operability class.

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APPENDIX I - Table 2

TFL 44 SBFEP Timber Harvested - 1999
Based on Billing from Vancouver Forest Region
Volume (m3)

BCFS District	Total Volume
South Island	88 994

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APPENDIX I - Table 3

TFL 44 Road Construction Report - 1999

Working Circle	Operation	New Construction (km)			Debuilt Road (1) (km)
		Mainline Branch	Spur	Other	
Alberni East	Franklin	2.0	54.0		
Alberni West	Sproat	35.8			12.1
Total		**37.8**	**54.0**		**12.1**

(1) Debuilt roads are defined as those in which the road structure has been rehabilitated as close to the original land profile as is feasible and, where practicable, restored to forest growing production.

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APPENDIX I - Table 4

TFL 44 Alberni Timberlands Fire Report - 1999

Number and Causes of Fires										
	Lightning		Escape Slash		Operational		Public		Total	
Operation	No.	Ha	No.	Ha	No.	Ha	No.	Ha	No.	Ha
Franklin	1	Spot	3	9.8			2	0.6	6	10.4
Sproat							2	Spot	2	Spot
Total	**1**		**3**	**9.8**			**4**	**0.6**	**8**	**10.4**

Area Burned by Forest Fires (ha)					
Operation	Mature	Immature	AAR	NSR	Total
Franklin				10.4	10.4
Sproat				Spot	Spot
Total				**10.4**	**10.4**

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APPENDIX I - Table 5

TFL 44 Site Preparation - 1999
(Hectares)

Working Circle	Operation	Tenure	Broadcast Burn	Burn Accum.[1]	Mechanical	Brush/ Grass Control	Three Metre Knockdown	Alder Seed Tree Control	Sanitation Cutting	Drainage Restore	Total Hectares
Alberni East	Franklin	Private									
		Crown	1	39	150		1			26	217
		Total	1	39	150		1			26	217
Alberni West	Franklin	Private									
		Crown			1	55		70			126
		Total			1	55		70			126
	Sproat	Private		2		78			9		89
		Crown				64	29		7		100
		Total		2		142	29		16		189
	Total	Private		2		78			9		89
		Crown			1	119	29	70	7		226
		Total		2	1	197	29	70	16		315
Total		Private		2		78			9		89
		Crown	1	39	151	119	30	70	7	26	443
		Total	**1**	**41**	**151**	**197**	**30**	**70**	**16**	**26**	**532**

[1] Actual hectares of roadside accumulations burned.

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APPENDIX I - Table 6

TFL 44 Summary of Planting - 1999
(000s of trees)

		Working Circle				Grand
		Alberni East	Alberni West	Clayoquot	Ucluelet	Total
Type of Planting	Species	No. Trees (000s)	No. Trees (000s)	No. Trees (000s)	No. Trees (000s)	No. Trees (000s)
Normal	Bn		1.1			1.1
	Cw	577.5	88.3	6.3	0.7	672.8
	Cy	1.1	49.3	0.4		50.8
	Df	176.8	129.4	0.2		306.4
	Ds			0.2		0.2
	Dg		0.2			0.2
	Hm		14.2			14.2
	Hw	394.4	175.7			570.1
	Total	**1 149.8**	**458.2**	**7.1**	**0.7**	**1 615.8**
Fill	Cw	16.9	2.6	19.7	0.4	39.6
	Cy	3.4	0.5	1.9		5.8
	Df	4.1	14.0			18.1
	Hw	22.8	0.4			23.2
	Pw		0.7			0.7
	Total	**47.2**	**18.2**	**21.6**	**0.4**	**87.4**

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APPENDIX I - Table 7

TFL 44 Hectares Planted - 1999

(hectares)

Working Circle	Tenure	Normal	Fill	Total Hectares	Plant + Fertilize
Alberni East	Private	96	6	102	94
	Crown	980	64	1 044	558
	Total	1 076	70	1 146	652
Alberni West	Private	84	11	95	76
	Crown	351	14	365	234
	Total	435	25	460	310
Clayoquot	Private				
	Crown	8	38	46	43
	Total	8	38	46	43
Ucluelet	Private	1	1	2	
	Crown				1
	Total	1	1	2	1
Total	Private	181	18	199	170
	Crown	1 339	116	1 455	836
	Total	**1 520**	**134**	**1 654**	**1 006**

Note: Planted and Fertilize hectares included in hectares planted.

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APPENDIX I - Table 8

TFL 44 Plantation Survival And Regeneration Performance Report - 1999

Working Circle	Operation	Natural			Plantation		
		Examined (ha)	Stocked (ha)	Percent Stocked	Examined (ha)	Successful (ha)	Percent Successful
		Stocking Survey			Survival Survey (First Year)		
Alberni East	Franklin	653	230	35	1 707	1 505	88
Alberni West	Franklin	15	8	53	138	128	93
	Sproat	124	9	7	126	111	88
	Total	139	17	12	264	239	91
Clayoquot	Corp For, Nan	4	4	100	110	109	99
Alberni West	Ucluelet				1	1	100
Total		**796**	**251**	**32**	**2 082**	**1 854**	**89**

		Regeneration Performance (Third Year)			Regeneration Performance (Third Year)		
Alberni East	Franklin				2 515	2 394	95
Alberni West	Franklin	42	28	67	638	616	97
	Sproat	120	120	100	941	929	99
	Total	162	148	91	1 579	1 545	98
Clayoquot	Corp For, Nan	32	32	100	274	264	96
Alberni West	Ucluelet				75	75	100
Total		**194**	**180**	**93**	**4 443**	**4 278**	**96**

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Appendix I - Table 9

TFL 44 Stand Tending - 1999
(hectares)

Working Circle	Operation	Tenure	Brushing/ Weeding	Spacing	Fertilize	Plant + Fertilize	Tree/Seedling Protection	Staking	Pruning	Total Hectares
Alberni East	Franklin	Private	120			94				214
		Crown	359	8		558				925
		Total	479	8		652				1 139
Alberni West	Franklin	Private								
		Crown	42	10		49			18	119
		Total	42	10		49			18	119
	Sproat	Private		5		76			15	96
		Crown	31	34		185			31	281
		Total	31	39		261			46	377
	Total	Private		5		76			15	96
		Crown	73	44		234			49	400
		Total	73	49		310			64	496
Clayoquot	Corporate	Private								
	Forestry,	Crown	239	108		43	30	46	5	471
	Nanaimo	Total	239	108		43	30	46	5	471
Ucluelet	Franklin	Private	3		2			1		6
		Crown	12	67		1			3	83
		Total	15	67	2	1		1	3	89
Total		Private	123	5	2	170		1	15	316
		Crown	683	227		836	30	46	57	1 879
		Total	**806**	**232**	**2**	**1 006**	**30**	**47**	**72**	**2 195**

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Appendix I - Table 10

TFL 44 Erosion Control Seeding - 1999
(Hectares)

Working Circle	Operation	Tenure	Hydro Seeding	Dry Seeding	Total Hectares
Alberni East	Franklin	Private	2		2
		Crown	42	24	66
		Total	44	24	68
Alberni West	Sproat	Private	1		1
		Crown	10	1	11
		Total	11	1	12
Total		Private	3		3
		Crown	52	25	77
		Total	**55**	**25**	**80**

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APPENDIX I - Table 11

TFL 44 Miscellaneous Stand Surveys and Assessments - 1999
(hectares)

Working Circle	Operation	Pre-log Prescript	Post-log Prescript	Forestry Wood Prescript	Stand Maintenance Prescript	Post Treatment Evaluation	Free Growing	Total Area Assessed
Alberni East	Franklin	800	3 734	697	3 195	125	182	8 733
Alberni West	Franklin	175	70		27		293	565
	Sproat		20				114	134
	Total	175	90		27		407	699
Clayoquot	Corp For, Nan		25			14	1 471	1 510
Total		**975**	**3 849**	**697**	**3 222**	**139**	**2 060**	**10 942**

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APPENDIX I - Table 12

TFL 44 Funding Credits - 1999

Operation	Source	Activity/Description	$	Ha	Km
Alberni	FRBC	Brushing and Weeding	708 649	471	
Timberlands	FRBC	Detailed Assessment - Upslope Roads	66 790		
	FRBC	Fertilization	1 663		
	FRBC	Park Improvement	15 166		
	FRBC	Juvenile Spacing	436 315	96	
	FRBC	Planting	83 528	96	
	FRBC	Pruning	103 358	36	
	FRBC	Road Deactivation	2 345 567		59
	FRBC	Riparian Treatment	333		
	FRBC	Stream Rehab	583 142		7
	FRBC	Enhanced Forest Inventories	16 816	858	
	FRBC	Backlog Forestry Surveys	178 161	3 128	
	FRBC	Terrain EcoSys Mapping	184 678		
	FRBC	Terrain Stability Mapping	70 831	32 000	
	FRBC	Water Quality Testing (6 surveys)	113 743		
	FRBC	Wildlife Inventory	26 500	34	
Total			**4 935 240**	**36 719**	**66**

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APPENDIX I I - Table 1

Weyerhaeuser Cone Collection - 1999
as of December 31, 1999

Species	Kilograms of Seed			
	Weyerhaeuser Orchards	Contract Orchards	Wild Collections	Total
Ba			25	25
Cw		3		3
Fd	48	38		86
Hw		2		2
Pw			12	12
Total	**48**	**43**	**37**	**128**

Note: There are 133k Yc cuttings in the inventory.

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APPENDIX II - Table 2

Weyerhaeuser Seed Inventory - 1999

Species	Weyerhaeuser Seed Inventory[1]				
	Seed Orchard Seed (gm)	Seed Orchard Control Cross (gm)	Wild Seed[2] (gm)	Total Seed (gm)	Approx. Seedlings (000's)
Ba			359 351	359 351	1 718
Bg			14 354	14 354	171
Bn			35 908	35 908	179
Cw	76		11 625	11 701	2 297
Fd	60 198		11 705	71 903	2 459
Hm			736	736	92
Hw	40 277		37 221	77 498	11 191
Lw			493	493	22
Plc			1 914	1 914	254
Pli			38	38	6
Pw	4 477		1 617	6 094	82
Py					
Ss	7 533		2 506	10 039	1 564
Sx			2 912	2 912	370
Sxs			525	525	39
Yc			89 346	89 346	2 655
Total	**112 561**		**570 251**	**682 812**	**23 099**

[1] Does not include seed from 1999 collections
[2] Wild seed from all seed zones are included

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APPENDIX II - Table 3

Planting Stock Inventory and Sowing Request
as of December 31. 1999

Species	Planting Stock Inventory plus Request (000s of Trees)		
	Spring 2000	Fall 2000 / Spring 2001	Total
Ba	84	266	350
Bg	1		1
Bn	3	40	43
Cw	1 443	2 296	3 739
Dg	2		2
Fd	2 531	3 703	6 234
Hm	7	74	81
Hw	669	1 642	2 311
Plc	281	159	440
Pw	13	210	223
Ss	295	258	553
Sx		7	7
Yc	337	638	975
Total	**6 003**	**9 931**	**14 959**

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