

**WEYERHAEUSER  
BC Coastal Group**

**2001 ANNUAL REPORT**

**TREE FARM LICENCE**

**No. 39**

**November, 2002**

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## TABLE OF CONTENTS

<b>1.0</b>	<b>INTRODUCTION</b>	<b>1</b>
<b>2.0</b>	<b>SUMMARY OF MAJOR EVENTS AND INITIATIVES IN 2001</b>	<b>2</b>
<b>3.0</b>	<b>MANAGEMENT AND OBLIGATION PERFORMANCE</b>	<b>6</b>
<b>3.1</b>	<b>Timber Harvesting</b>	<b>6</b>
3.1.1	Volumes Harvested by Weyerhaeuser	6
3.1.2	Cutting Balance	6
3.1.3	Volumes Harvested by SBFEP	6
3.1.4	Compliance with Contractor Requirements	7
3.1.5	Harvest Performance by Block	8
3.1.6	Harvest Profile (operability class)	8
3.1.7	Harvest from Deciduous Areas	9
<b>3.2</b>	<b>Higher Level Plans</b>	<b>9</b>
<b>3.3</b>	<b>Inventories</b>	<b>10</b>
3.3.1	Recreation	10
3.3.2	Timber	10
3.3.3	Cultural Heritage Resources and Archaeological Sites	10
3.3.4	Terrestrial Ecosystem Mapping (TEM)	11
3.3.5	Terrain Stability Mapping	11
3.3.6	Coastal Watershed Assessment Procedures (CWAPs)	11
<b>4.0</b>	<b>SUCCESS IN MEETING MANAGEMENT OBJECTIVES</b>	<b>11</b>
<b>4.1</b>	<b>Management and Utilization of the Timber Resource</b>	<b>11</b>
<b>4.2</b>	<b>Forest Health and Protection</b>	<b>12</b>
4.2.1	Forest Fires	12
4.2.2	Insects	12
4.2.3	Disease	12
4.2.4	Wind Damage	12
<b>4.3</b>	<b>Silviculture</b>	<b>13</b>
4.3.1	Forest Regeneration	13
4.3.2	Stand Tending	14
4.3.3	Erosion Control	14
4.3.4	Assessments	14
4.3.5	Type 2 Analysis	15
<b>4.4</b>	<b>Resource Protection</b>	<b>15</b>
4.4.1	Forest Project	15
4.4.2	Adaptive Management and Monitoring	17
4.4.3	Enhanced Forest Management Pilot Project [EFMPP]	18
4.4.4	Landscape Unit Planning	18
4.4.5	Recreation/Landscape	18

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4.4.6	Wildlife	19
4.4.7	Hydrology	19
4.4.8	Soils	19
<b>5.0</b>	<b>TIMBER PROCESSING</b>	<b>19</b>
<b>6.0</b>	<b>EMPLOYMENT AND ECONOMIC OPPORTUNITIES</b>	<b>20</b>
6.1	Local Communities	20
6.2	Forest Renewal BC (FRBC)	21
6.3	First Nations	22
<b>7.0</b>	<b>KNOWLEDGE GAPS – OPERATIONAL RESEARCH</b>	<b>23</b>
<b>8.0</b>	<b>ADMINISTRATION AND COMMUNITY INVOLVEMENT</b>	<b>27</b>
8.1	Management Plan Process	27
8.2	Stillwater Timberlands Pilot Project	28
8.3	Forest Development Plans	28
8.4	Community Advisory Groups	28
8.5	Other Community Involvement	29

## **APPENDICES**

### **Appendix I**

Table 1a.	TFL 39 Volume Harvested in 2001	31
Table 1b.	TFL 39 Logged Hectares by Silvicultural System — 2001	32
Table 1c.	TFL 39 Volume Harvested by Operability Class — 2001	33
Table 2.	TFL 39 SBFEP Timber Harvested — 2001	34
Table 3.	TFL 39 Road Construction Report — 2001	34
Table 4.	TFL 39 Fire Report — 2001	35
Table 5.	TFL 39 Site Preparation — 2001	36
Table 6.	TFL 39 Summary of Planting — 2001	37
Table 7.	TFL 39 Hectares Planted — 2001	38
Table 8.	TFL 39 Seedlings Fertilized During Planting — 2001	39
Table 9.	TFL 39 Stand Tending — 2001	40
Table 10.	TFL 39 Erosion Control Seeding — 2001	41

### **Appendix II**

Table 1.	Weyerhaeuser Cone Collection — 2001	42
Table 2.	Weyerhaeuser Seed Inventory — 2001	42
Table 3.	Planting Stock Inventory and Sowing Request	43

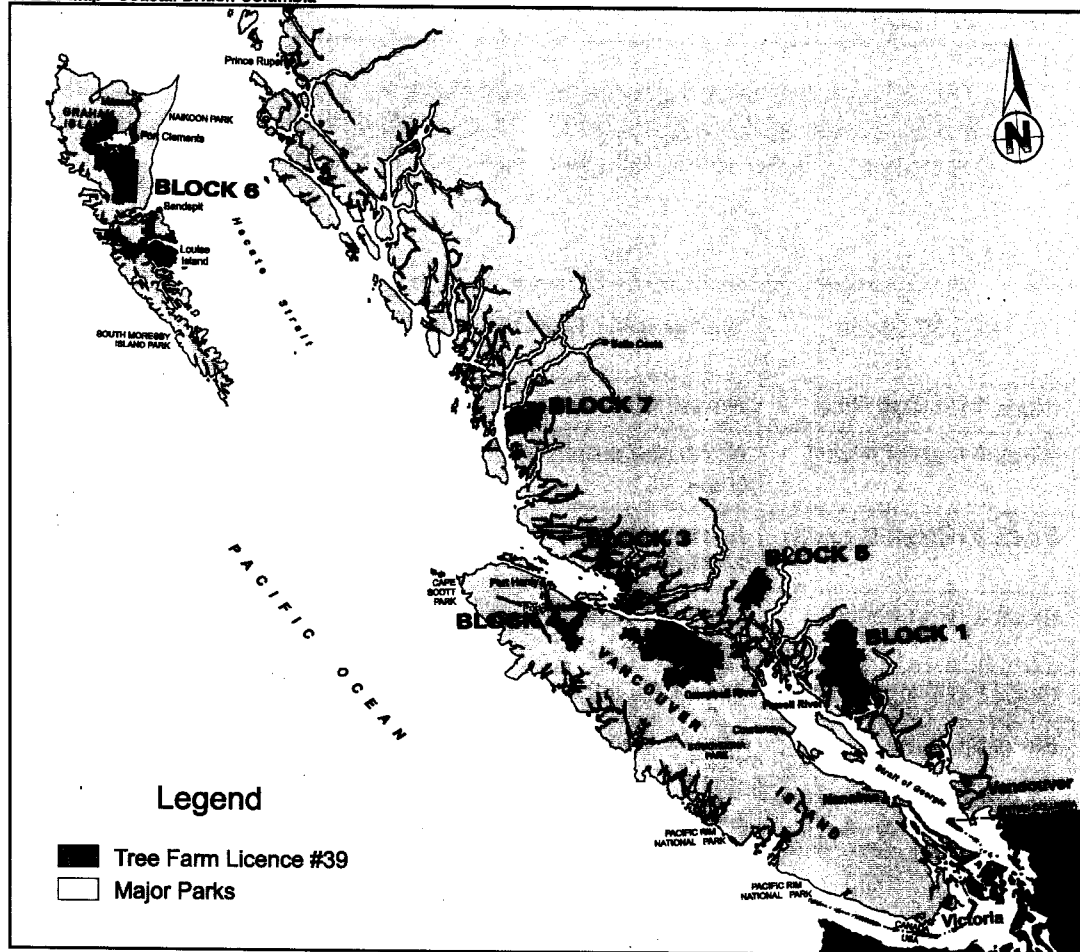
## 1.0 Introduction

TFL 39 includes seven geographically separate blocks that are dispersed along the BC Coast and are managed by four of Weyerhaeuser's Coastal BC operations. Refer to the following table and to the location map.

<b>TFL 39 Block</b>	<b>Geographic location</b>	<b>MoF Forest District</b>	<b>Weyerhaeuser Timberlands Operation</b>
Block 1 (Powell River)	Powell River Area	Sunshine Coast	Stillwater
Block 2 (Adam River)	North of Campbell River	Campbell River	North Island
Block 3 (Coast Islands)	Islands off Port McNeill	Port McNeill	Port McNeill
Block 4 (Port Hardy)	North Vancouver Island	Port McNeill	Port McNeill
Block 5 (Phillips River)	NW of Bute Inlet	Campbell River	Stillwater
Block 6 (QCI)	Queen Charlotte Islands	Queen Charlotte Islands	Queen Charlotte
Block 7 (Namu)	Central Coast	Mid Coast	Port McNeill

TFL 39 covers over 800 000 ha, approximately two-thirds of which is productive forest land. Management Plan #8 was approved on July 30, 2001 for the period August 01, 2001 to June 30, 2006. An Allowable Annual Cut (AAC) of 3 660 000 m<sup>3</sup>/year was determined, effective November 21, 2001. This total TFL 39 AAC includes 162 218 m<sup>3</sup>/year allocated to the Small Business Forest Enterprise Program (SBFEP) and 152 522 m<sup>3</sup>/year assigned elsewhere because of the transfer of TFL 39 from MacMillan Bloedel Limited to Weyerhaeuser in November 1999.

TFL 39 Map - Coastal British Columbia



The TFL 39 Annual Report for 2001 describes achievements in meeting management obligations and objectives.

## 2.0 Summary of Major Events and Initiatives in 2001

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

- The Company is committed to safety. The result has been a dramatic decrease in medical incidents between 1997 and 2001. The indicator used to measure safety is the Recordable Incident Rate which is very similar to the previously used 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 RIR for the BC Coastal Group for 2001 was 5.95, a significant improvement over the RIR of 8.3 in 2000. The corporate commitment and effort to further increase safety (and hence reduce the RIR) is represented by the saying, "We believe in Zero" (zero medical or lost-time accidents).

- Good progress occurred in the Forest Project. For all company operations, variable retention was applied on 75% of the area harvested. In TFL 39 the proportion was 84%. Both are well above the target of 60% by the end of 2001.

The third Scientific Panel meeting focused on landscape forecasting, riparian issues and visualization. Assessment and revisions of Stewardship Zones have been ongoing. An ecological analysis of the zones was presented at the Scientific Panel meeting. During the last three years (1999 to 2001), 154 cutblocks (4,016 ha) in BC Coastal Operations have been evaluated for performance and to identify areas for improvement. Key findings are reported. A strategy for windthrow planning and monitoring was implemented during 2001.

The adaptive management and monitoring program included more monitoring of structure and organism presence, or absence, and the first installation of a designed comparison in the Tsitika Landscape Unit of TFL 39, Block 2.

- The Weyerhaeuser BC Coastal Group made significant progress during 2001 in achieving certification status for woodlands and mill operations. Refer to the following table. Certification standards include:
  - ISO 14001 standard for Environmental Management Systems (EMS) — ISO is the International Organization for Standardization.
  - Canadian Standards Association (CSA) Z809 standard for Sustainable Forest Management System (SFM).

“Chain of Custody” is a tracking system that follows the wood from forest to customer and guarantees that established environmental and sustainability standards are met.

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In summary, the Weyerhaeuser BC Coastal Group certification at the end of 2001 included:

Unit	CSA Z809 Sustainable Forest Management	ISO 14001 Environmental Management System	Chain of Custody
<b>Timberlands</b>			
North Island	Certified	Certified	Certified
West Island	Certified	Certified	Certified
Port McNeill	Certified (2001) <sup>(1)</sup>	Certified	Certified (2001)
Stillwater	Certified (2001) <sup>(2)</sup>	Certified (2001)	Certified (2001)
Queen Charlotte Islands		Certified (2001)	
<b>Manufacturing Facilities — Primary</b>			
Chemainus		Certified	Certified
Somass			Certified
Alberni Pacific		Certified (2001)	Certified (2001)
New Westminster		Certified (2001)	Certified (2001)
Island Phoenix			Certified
<b>Manufacturing Facilities — Secondary</b>			
Plenks			Certified
Specialty Cedar			Certified
Mid-Island Reman			Certified

(1) Currently, the Port McNeill Defined Forest Area for the Sustained Forest Management Plan (CSA Z809) does not include Block 7 (Namu) of TFL 39.

(2) Currently, the Stillwater Defined Forest Area for the Sustained Forest Management Plan (CSA Z809) includes Block 1 of TFL 39.

The goal is to achieve CSA and ISO 14001 certification at all Weyerhaeuser Coastal Timberlands Crown Land operations by the end of 2003. In addition, the BC Coastal Group is participating in the process to develop Regional Standards for Forest Stewardship Council (FSC) certification.

- Good progress on the Stillwater Timberlands Pilot Project (Block 1 of TFL 39) occurred in 2001. The Stillwater Pilot Project Regulation (B.C. Reg. 96/2001) was approved in April. A draft Stewardship Plan was developed, with public review planned in early 2002.

- Approval of Management Plan #8:

On July 30, 2001, Management Plan #8 for TFL 39 was approved by the Deputy Chief Forester (of BC) for the period August 01, 2001 to June 30, 2006.

The Deputy Chief Forester determined the AAC for TFL 39 to be 3,660,000 m<sup>3</sup>, effective November 21, 2001.

- Market Conditions:

Difficult market conditions prevailed during 2001. Contributing factors included:

- An economic recession in Japan. Also market share in Japan has declined during the transition from green lumber to kiln dried and laminated products following the 1995 Kobe earthquake.
- The United States market has been constrained by quota. This was replaced by a countervailing duty and an anti-dumping duty during 2001. Preliminary rulings were for a countervailing duty of 19.31 % and an average anti-dumping duty of 12.6%, for a total of close to 32%.
- Consumers are not willing to pay significantly higher prices (i.e. to match the 32% in duties in the U.S. market). Competition is stiff from other lumber producing areas of the world (there is no shortage of world timber supply) and from substitute products (e.g. steel, concrete and plastics).
- The BC Coast is the highest cost producer of wood products in the world. Efforts continue to be made to reduce costs. This includes restructuring of logging operations (e.g. combining of operations at North Island Timberlands) and of sawmilling (e.g. the announced closures of the Canadian White Pine sawmill and the K3 particleboard plant).

The result has been considerable downtime at both sawmills and logging operations during 2001. Such downtime was experienced not just by Weyerhaeuser BC Coastal Group, but by industry operations coast-wide. The relatively low harvest level in TFL 39 during 2001 reflect this reduced sawmilling and logging activity.

- Restructuring:

In November, Weyerhaeuser announced that the Canadian White Pine sawmill and the K3 particleboard plant (both located in the Lower Mainland area) would permanently close in early 2002 as part of restructuring efforts to improve economic viability of the coastal business. Coastal timber supply has decreased significantly during the last ten years and market conditions and the log profile of available timber supply are also changing. Weyerhaeuser will redirect the volume of wood previously manufactured at Canadian White Pine to its five remaining coastal sawmills. The K3 facility,

Weyerhaeuser's only particleboard plant in Canada, lacked the scale to compete in today's global marketplace.

### 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	37 147 m <sup>3</sup>	1%
Timber Licenses	555 299 m <sup>3</sup>	20%
Crown	<u>2 220 463 m<sup>3</sup></u>	79%
TOTAL	<u>2 812 909 m<sup>3</sup></u>	<u>100%</u>

A detailed summary of timber harvested by division, block, tenure, and species is shown in Table 1a of Appendix I.

##### 3.1.2 Cutting Balance

This is the first year in the 2001—2005 Cut Control period. The harvest in 2001 was 84.1% of the AAC. Cut Control status is shown below.

Year	2001
Weyerhaeuser AAC (m <sup>3</sup> )	3 416 274 <sup>(1)</sup>
Actual Cut (m <sup>3</sup> )	
• Log Scale	2 609 300
• Residue	203 609
Total Actual Cut (m <sup>3</sup> )	2 812 909
Percent of AAC	82.3%

<sup>(1)</sup> The Deputy Chief Forester re-determined the AAC for TFL 39, effective November 21, 2001. Hence, the Weyerhaeuser AAC for 2001 (for cut control purposes) is a prorate of 324 days (January 1 to November 20) at 3,425,260, and 41 days (November 21 to December 31) at 3,345,260.

##### 3.1.3 Volumes Harvested by SBFEP

Volume harvested in SBFEP sales during 2001 totaled 49 012 m<sup>3</sup> (refer to Appendix I, Table 2). The SBFEP harvest volume and allocation (162 218 m<sup>3</sup>) 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	1997	1998	1999	2000	2001
Harvest Volume (m <sup>3</sup> )	160 854	45 571	101 219	65 058	49 012

### 3.1.4 Compliance with Contractor Requirements

Contractor requirements are described in Section 14 of the current TFL 39 Licence Agreement. Further details on the calculation procedure are prescribed in the Contractor Clause Compliance Regulation.

For 2001, 130.6% of compliance was achieved. The calculation is summarized as follows:

	Reference #	Volumes (m <sup>3</sup> )
Weyerhaeuser Allocation of TFL 39 AAC	#1	3 416 274
Weyerhaeuser AAC attributed to Schedule B lands	#2	2 893 490
Weyerhaeuser harvest (excludes residue)	#3	2 609 299
Harvest volume attributed to Schedule B lands (#3 X #2 / #1)	#4	2 210 004
Volume target for Contractor requirements (0.5 X #4)	#5	1 105 002
Total Volume contracted	#6	1 443,133
% compliance ((#6 / #5) X 100)		130.6%

### Summary of Contractor production (m<sup>3</sup>)

Full Contracts	1 179 225	82%
Phase Contracts (in equivalent volume harvested)		
Roads	211 323	
F & B	5 048	
Yarding	26 093	
Loading	9 844	
Hauling	8 700	
Towing	2 900	
Sub-total	263 908	18%
<b>Total</b>	<b>1 443 133</b>	<b>100%</b>

### 3.1.5 Harvest Performance by Block

TFL 39 consists of seven separate Blocks that are geographically dispersed along the BC coast. The approval letter for MP #7 defined AAC contributions by Block (Blocks 3 and 4 were combined) and requested a summary of annual harvest performance by the same units. The following table summarizes harvest by Block for 2001.

Block	AAC Contribution m <sup>3</sup> <sup>(1)</sup>	SBFEP Allocation & contribution to 5% reduction m <sup>3</sup> <sup>(2)</sup>	MoF District	Weyerhaeuser Allocation m <sup>3</sup>	m <sup>3</sup>	Variance	
						m <sup>3</sup>	%
I	456 795	43 658	Sunshine Coast	413 137	615 063	201 926	48.9
II	1 335 000	105 589	Campbell R	1 229 411	1 085 848	(143 563)	(11.7)
III, IV	413 315	35 088	Port McNeill	378 227	417 056	38 829	10.3
V	99 438	7 931	Campbell River	91 507	30 484	(61 023)	(66.6)
VI	1 203 260	106 748	Queen Charlotte	1 096 512	597 106	(499 406)	(45.5)
VII	187 699	15 726	Mid-Coast	171 973	16 853	(155 120)	(90.2)
Deciduous <sup>(3)</sup>	35 507	--		35 507	50 499	14 992	42.2
<b>Total</b>	<b>3 731 014</b>	<b>314 740</b>		<b>3 416 274</b>	<b>2 812 909</b>	<b>603 365</b>	<b>(17.7)</b>

(1) The AAC contribution by Block is a prorate of MP #7 allocations from January 1 to November 20 and MP #8 Base Option allocations from November 21 to December 31.

(2) This column accounts for TFL 39 AAC that is not credited to Weyerhaeuser. This includes the allocation to SBFEP. It also includes the 5% decrease in Schedule B (Crown) contribution to the Company AAC because of the transfer of TFL 39 from MacMillan Bloedel to Weyerhaeuser.

(3) MP #7 included an allocation of 40,000 m<sup>3</sup> to deciduous areas (refer to Section 3.1.7). In 2001, the deciduous area harvest includes 34,170 m<sup>3</sup> from Block 1; 3,197 m<sup>3</sup> from Block 2 and 13,132 m<sup>3</sup> from Block 6.

### 3.1.6 Harvest Profile (operability class)

Results are based on Divisional volume data (excluding residue) and on the inventory classification for operability. In 2001, 1 189 055 m<sup>3</sup> of first growth was harvested in the conventional economic class and 415 298 m<sup>3</sup> in the non-conventional economic class. A further 15 214 m<sup>3</sup> classified as marginal economic was logged. In addition, 845 128 m<sup>3</sup> 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.

### 3.1.7 Harvest from Deciduous Areas

The deciduous AAC allocation of 40 000 m<sup>3</sup> is not specifically assigned by Block but is allocated to areas described as deciduous in the timber inventory. This includes stands with a deciduous species (usually red alder) as the leading or primary species.

In a letter dated August 18, 1998, the Regional Manager confirmed the procedure for reporting of harvest performance in deciduous stands. The following table shows the resulting estimates of deciduous stand harvest volumes for 2001 and for 1996 to 2001. Prior to 2001, all of this "deciduous" harvest has occurred in Block 1 (Powell River).

#### Harvest from Deciduous Stands – 2001

Timberlands	Harvest Volume (000 m <sup>3</sup> )
Queen Charlotte	13 132
North Island	3 197
Stillwater	34 170
<b>Total TFL 39</b>	<b>50 499</b>

#### Harvest from Deciduous Stands (1996 to 2000)

Year	Harvest Volume (000 m <sup>3</sup> )
1996	24 306
1997	6 131
1998	34 119
1999	45 058
2000	8 141
2001	50 499
<b>Total</b>	<b>168 254</b>

### 3.2 Higher Level Plans

The Vancouver Island Higher Level Plan (HLP) took effect on December 1, 2000. The HLP includes Blocks 2 and 4 of TFL 39 and makes some components of the VILUP enforceable under the FPC. These involve the Resource Management Zones and objectives, including specified variances from the general provisions of the FPC for some of these zones. The HLP is incorporated into operational plans and is referenced in MP #8 for TFL 39.

The Powell Daniels Landscape Unit Plan (Block 1) was approved in 2001. The plan objectives are now subject to a higher level plan Order. The Bunster Landscape Unit Plan (a small portion is in Block 1) was approved in 2000.

It is expected that further progress will be made on other landscape unit plans during 2002, particularly in Blocks 1 and 2.

Weyerhaeuser is actively participating in the Central Coast Land and Coastal Resource Management Plan (CCLCRMP) planning process. This planning area includes Block 3 (Islands), Block 5 (Phillips River) and Block 7 (Namu) of TFL 39.

### **3.3 Inventories**

#### **3.3.1 Recreation**

The Block 1 recreation inventory has been updated. Field work was completed in 2000 and data entry in 2001. In March of 2002, the Manager of the Sunshine Coast Forest District approved the inventory for use in operational planning.

#### **3.3.2 Timber**

During 2001, 2 055 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 105 natural and managed plots were remeasured in 2001.

Various studies have been initiated to examine the impacts of variable retention on tree and stand growth. Activities coast-wide during 2001 included:

- Edge experimental study sites (50m transects by aspect). One new site was established and twenty-one sites were remeasured.
- Experimental Variable Retention Sites. Three study sites were established and one was remeasured.
- Monitoring Variable Retention Study Sites. Seven study sites were remeasured.

#### **3.3.3 Cultural Heritage Resources and Archaeological Sites**

A portion of the FRBC Multi-Year Funding was allocated for Archaeological Inventory Studies in Block 6. Work on this project continued in 2001. Archaeological sites have been reviewed and new data has been collected from interviews with elders and from literature reviews. A report is scheduled for 2002.

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The resulting Archaeological Overview Assessment is expected to provide a predictive model of presence of cultural heritage sites (e.g. Culturally Modified Trees) that will assist operational planning. It will also provide improved estimates of cultural heritage resources for strategic analyses.

### **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. Forest Renewal BC provided funding. 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 and loaded in the GIS library in 2001 for the following areas: Block 1 — Lois Lake East and West, Block 2 — Salmon River 2, Block 4, and Block 6 — Louise Island.

### **3.3.5 Terrain Stability Mapping**

Most of TFL 39 has been mapped for terrain stability; however, the mapping in different areas has occurred at various times during the past 25 years, at various levels of detail and to different standards.

A three-year FRBC-funded project was initiated in 2001. The purpose of this project is to upgrade existing terrain stability mapping (detailed and reconnaissance at 1:20 000 and 20-chain scales) on Crown land within TFL 39 to acceptable professional standards which will satisfy a results-based BC Forest Practices Code (FPC) and meet operational planning needs.

The assessment report completed after the first year provides a review of existing mapping and assesses the level of upgrading necessary based on overall quality and reliability and conformance to provincial standards. Data gaps are identified and work plans for the following two years are developed.

New terrain mapping projects were completed in the Jefferd Creek Community Watershed in Block 1 during 2001.

### **3.3.6 Coastal Watershed Assessment Procedures (CWAPs)**

During 2001 CWAPs were re-assessed for the Haslam Lang watershed, which is partially in Block 1, and for the Benson, Waukwass and Cluxewe watersheds in Block 4. A CWAP was also completed for the Jefferd Creek Community Watershed, part of which is in Block 1.

## **4.0 Success in Meeting Management Objectives**

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### **4.1 Management and Utilization of the Timber Resource**

Refer to Section 3.1.

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## **4.2 Forest Health and Protection**

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

Of note in 2001:

### **4.2.1 Forest Fires**

Nine fires were reported during 2001, seven in Block 1 (Stillwater Timberlands) and two in Block 2 (North Island Timberlands). The public was responsible for all of the fires except one in Block 2 that was inadvertently started by operations. All fires were spot fires with negligible area burnt. Refer to Appendix I, Table 4.

A total of 67 ha of logging accumulations (roadside or landings) were burned in 2001. Refer to Appendix I, Table 5.

Air or ground patrols are usually carried out within two hours after each shift whenever moderate fire hazard conditions exist for more than three days. During the past year, 10 fire watches were flown by Weyerhaeuser Air. In addition, seven fire patrols were flown during periods of high fire hazard.

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

### **4.2.2 Insects**

Populations of the black-headed budworm in the Queen Charlottes were monitored (including mapping and sampling). Infestation levels are significantly lower than recent years. Low to Moderate infestation levels were observed in the Ferguson and Dinan/McClinton areas. Low levels occurred in the Skidegate area and nil to low infestation levels were observed on Louise Island and the Alliford area. An FRBC funded project was initiated to measure growth impacts of the black-headed budworm infestations. Of interest are implications for silvicultural treatment prescriptions and for future timber supply.

Pheromone-baited traps continue to be used in log storage areas for ambrosia beetle control.

### **4.2.3 Disease**

No reports of forest diseases were reported in 2001.

### **4.2.4 Wind Damage**

A severe windstorm centered in the Block 2 area occurred in December of 2001. North Island Timberlands (Block 2) have plans to recover approximately 600 000 m<sup>3</sup> of blowdown timber, mostly in 2002. Impacts (although significantly less than those in Block 2) were also experienced elsewhere. Stillwater Timberlands have plans to salvage 25 000 m<sup>3</sup> in Block 1.

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## **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 287 ha during 2001. Major treatments (by area) included burning accumulations, mechanical scarification, roadside piling and three-meter knockdown. 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.

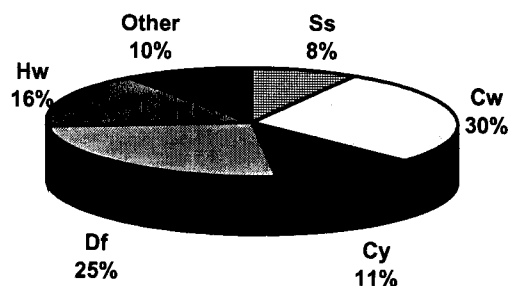
In 1999, Weyerhaeuser entered into two long-term (5-year) Seed Supply Agreements — one with Canadian Forest Products and one with TimberWest. The Agreements secure high gain genetic seed for future Douglas fir and high gain seed for Hw, Cw, Pw and cutting production for Yc.

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 3 919 ha of Area Awaiting Restocking (AAR) using 3 760 700 seedlings. Re-planting was done on 313 ha using 167 300 trees. Seedlings fertilized at time of planting numbered 2 381 500. Refer to Appendix I, Tables 6, 7 and 8 respectively for details on the number of trees planted by operation, the hectares planted by operation and tenure, and the number of seedlings fertilized at planting. The following graph details the percent of species planted in 2001.

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**Species Planted (%)**

#### 4.3.2 Stand Tending

The following table summarizes stand tending activities for 2001. Details by operation and tenure are described in Appendix I, Table 9.

Treatment	(hectares)
Brushing/Weeding	1 182
Spacing	431
Riparian (habitat enhancement) Spacing	219
Fertilization	1 118
Pruning	37
Seedling Protection	249
Other	12
<b>Total</b>	<b>3 248</b>
Fertilization at Planting (000 seedlings)	2 382

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

#### 4.3.3 Erosion Control

A total of 20 ha of slide areas and 361 km of roadside areas were treated either by hydro- or dry seeding. Refer to Appendix I, Table 10 for details.

#### 4.3.4 Assessments

The results of various types of silvicultural assessments are used for planning future activities, monitoring the success of treatments and to maintain up-to-date forest management records.

#### **4.3.5 Type 2 Analysis**

A "Type 2" silvicultural analysis for TFL 39, funded by FRBC, was completed in April of 2001. This forest level analysis of silvicultural options is intended to provide direction for investment in incremental silviculture in TFL 39. Priority incremental silvicultural treatments include vegetation treatments to reduce both above ground and below ground competition, fertilization prescriptions and riparian wide spacing. Fertilization treatments include late rotation fertilization in Douglas-fir stands, treatment of Salal-Cedar-Hemlock sites (as identified by the Salal-Cedar-Hemlock Integrated Research Program [SCHIRP]) and fertilization at time of planting on selected sites (particularly where impacts of spatial constraints such as adjacency or visual landscapes may be realized). Riparian (habitat enhancement) wide spacing is beneficial where treatments occur in reserved areas and assist in recruitment to meet old seral targets, thereby allowing release of alternative reserve areas for harvest. The analysis also supports the management emphasis on regeneration activities such as initial stocking, tree improvement and stand maintenance (e.g. weed control).

Age-class distributions are not a major issue for timber supply in the medium-term. Spacing and pruning should be directed more towards treatments that provide non-timber benefits (e.g. structural diversity and habitat) as well as timber benefits. Often the more significant timber benefits are indirect, resulting from a change in harvest scheduling, for example, due to meeting landscape biodiversity or habitat requirements.

Treatment areas during 2001 (refer to Sections 4.3.1 and 4.3.2 above) reflect the emphasis on initial stand establishment, control of brush competition, and fertilization and habitat treatments (habitat spacing) in appropriate areas.

#### **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 in variable retention over a five-year period and an increase in conservation of old-growth forests and wildlife habitat.

The implementation of the strategy is on schedule.

- In 2001, for all company coastal operations, variable retention was applied on over 75% of the area harvested. For TFL 39 the proportion of area harvested with variable retention was 84%. The company's target for 2001 was 60%. Refer to Table 1b in Appendix I.
  - In 2001 a scientific panel was convened to review the third year's progress on implementation of the Forest Project. Thirteen scientists were invited to the workshop to act as an expert panel. One-third of the scientists were nominated by environmental organizations and by the company, with the final one-third representing Federal and Provincial governments. Also attending were representatives from seven environmental organizations and Weyerhaeuser.
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The focus of Year 3 was on landscape forecasting, riparian issues and visualization. The Panel convened for one day with Weyerhaeuser staff for a workshop on key landscape metrics. They then reported out to the larger audience prior to the Day 2 progress session. Landscape visualization led off Day 2. This was a video presentation of harvest schedules for all three Stewardship zones over 45 years in Block 2 of TFL 39. The presentation was designed to answer the Panel request from Year 2 to “show us the Movie” or the visual comparison of VR versus clearcut futures on large landscapes. The Panel provided praise for the visualization demonstration, stand level implementation and progress in adaptive management.

- Assessment and revisions of Stewardship Zones are ongoing. During 2001 consultation, landscape planning processes have resulted in some shifting of zones. A complete ecological analysis of the zones has been conducted and was presented during the Year 3 Panel Review. Our analysis indicated good correspondence of Stewardship zones to BEO designations and location of SMZs; however, correspondence with ENGO concern areas was poor. We remain approximately 20,000 ha short of our OG Zone target and the Panel recommended this be directed towards Old Growth restoration in the CWHxm, CWHdm and CDFmm subzones.
- A computer-based tool was developed and distributed to operations. This tool and a previously produced video introduces employees to the rationale and basic elements of the VR approach and provides an easily accessible reference.
- Assessments to monitor performance and identify areas for improvement. A further 59 Variable Retention cutblocks representing 1194 hectares logged in 2001 in BC Coastal operations were evaluated as part of this monitoring program. In total, 154 cutblocks and 4016 hectares have been assessed over the past three years. Key findings from this Symmetree Consulting evaluation include:
  - Safety emphasis has been maintained, with an improvement in the company's RIR (Recordable Incident Rate) during the past three years.
  - Two-thirds of blocks were rated good to excellent at achieving VR goals.
  - Prescriptions have shown steady improvement in retention of structural attributes.
  - VR blocks have a wide range of group sizes, spatial designs and retention levels (22% average).
  - Significant stream protection is being achieved using retention groups and buffers.
  - There were no major issues regarding high-grading, tree damage or pathogens.

- Each year of monitoring has found improvement in prescriptions and communications
- A strategy for windthrow planning and monitoring was implemented during 2001. A sample of individual VR cutblocks was monitored to assess wind damage, record observations in a database and run analyses for trends. A windthrow hazard model designed by Dr. Steven Mitchell has been calibrated for Weyerhaeuser lands in coastal B.C. using this data. The model will be used to complete hazard maps for all coastal operations.
- 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 meets on a regular basis.

#### 4.4.2 Adaptive Management and Monitoring

The Adaptive Management (AM) and Variable Retention (VR) Working Groups have developed a framework that includes criteria and indicators and both extensive and intensive approaches to monitoring. Refer to the 2000 Annual Report for a summary of this framework.

- The extensive approach included more monitoring of structure and organism presence or absence during 2001. Thirty new VR settings and twenty benchmark sites were assessed for forest attributes including snags, coarse woody debris, live trees, and stand structure as well as evaluating canopy epiphytes, birds, terrestrial gastropods, salamanders, aquatic breeding amphibians and beetles as indicator organisms.
- The first installation of designed comparisons (intensive approach) was initiated in 2001 in the Tsitika Landscape Unit within TFL 39 Block 2. Harvest occurred, pre-assessment work on structure and organisms has been completed, and post-assessments will be conducted in 2002.
- A comprehensive framework document on rationale and application of the indicators will be completed in 2002. The linking of monitoring back to management action (feedback) is a fundamental component of an effective operational Adaptive Management program. The three main indicators of success are:
  - **Indicator 1- Representation (Coarse Filter)**

Ecologically distinct habitat types are represented across the tenure to maintain *lesser known species and ecological functions*.
  - **Indicator 2- Structure (Medium Filter)**

The amount, distribution, and heterogeneity of habitat and landscape elements are maintained over time.

- **Indicator 3- Species (Fine Filter)**

Productive populations of species are well distributed throughout the tenure.

#### **4.4.3 Enhanced Forest Management Pilot Project [EFMPP]**

The EFMPP, funded by FRBC, was a combined Weyerhaeuser/Government initiative to develop a silvicultural investment strategy integrated with a total resource harvest plan for Block 2, TFL 39. Refer to the 2000 Annual Report for a summary of this project. The analysis of phase 2 was completed in 2001 and the project came to a close March 31, 2001.

#### **4.4.4 Landscape Unit Planning**

In Block 1, the Powell Daniels and Bunster (a small portion is in Block 1) Landscape Unit Plans have now been approved as high level plans. Draft Old Growth Management Areas (OGMAs) were defined in the Lois, Powell Lake, Haslam and Brittain landscape units during 2001.

In Block 2, draft OGMAs were defined in all landscape units except the Adam Eve. This work is on hold, pending review of ungulate winter range areas.

In the Central Coast (Blocks 3, 5 and 7) and the Queen Charlotte Islands (Block 6), landscape planning has been deferred until regional planning processes are completed.

#### **4.4.5 Recreation/Landscape**

Weyerhaeuser has built and maintains a number of campsites throughout TFL 39. The following activities were reported for 2001.

- **North Island (Block II):** A total of 11 sites were maintained at the Junction Pool (7), Tsitika Junction (2), Wowo Lake (1) and Montague Creek(1) locations
  - **Queen Charlotte:** A total of three sites in the Ferguson area (Pappa John location) were maintained by Queen Charlotte Timberlands.
  - **Port McNeill:** Campsites are maintained at a number of locations in Block IV. They include those at Clint Beek (13), Rupert Arm (2), Alice Lake (4), Kathleen Lake (4), and Maynard Lake (2). Campsites receive maintenance during the summer season. This includes cleaning and stocking of washroom facilities; firewood collection; removal of litter; brush cutting and grass mowing, and the removal of danger trees at sites and along trails.
  - **Stillwater:** Campsites in this Division are located on some of the many lakes found in the area. The Powell Lake Canoe Route has a total of 17 sites. All these sites were maintained in 2001.
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#### **4.4.6 Wildlife**

During 2001 Weyerhaeuser, through FRBC funding, continued to support population inventories of Northern Goshawks on Vancouver Island. This work, managed by the MoWLAP, has now extended over eight years

#### **4.4.7 Hydrology**

Weyerhaeuser continued to participate in an FRBC Project to collect flow data on the Benson River (from a previously established hydrometric station) in Block IV and the Theodosia River in Block 1. The information will be added to the Ministry Water, Land and Air Protection database containing all hydrometric and climatic information available from hydrometric and weather stations located in the Vancouver Island Region.

Rainfall shutdown criteria were adopted by all operations in TFL 39 in 2001. The primary purpose of these criteria is worker safety — they were developed in conjunction with the Workers Compensation Board (WCB).

#### **4.4.8 Soils**

##### **Woodlands Waste Management Best Practices**

The Weyerhaeuser Facilities Best Management Practices for Forestlands in the BC Coastal Group for waste management were updated.

##### **Landfill Spatial Database**

This database was fine-tuned during 2001. More feedback and changes are planned before expected distribution to operations in 2002.

### **5.0 Timber Processing**

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The following table lists the primary destinations for log sales from TFL 39 in 2001. The total volume varies from Billed volume because of differences in reporting periods.

In 2001, 45% of TFL 39 log volumes went directly to Company sawmills and 26% (pulplogs) went to NorskeCanada's mills (primarily Powell River). Of the 29% that is categorized as resale, 13% went to sawmills and cedar shake mills in the Vancouver/Fraser Valley area and almost 5.5% went to sawmills on Vancouver Island. The other category includes local sales, sales to the North Coast, sales to Brokers, log exports and boomsticks. The external sales are offset to some extent by mill purchases as logs are traded to better suit mill requirements.

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Destination	2001 estimate (000 m <sup>3</sup> )	% of TFL 39 Harvest
<b>Weyerhaeuser Sawmills:</b>		
Alberni Pacific, Port Alberni	110	4.3%
Somass, Port Alberni	30	1.2%
Chemainus	112	4.4%
Island Phoenix, Nanaimo	218	8.5%
New Westminster	280	10.9%
Canadian White Pine, Vancouver	166	6.5%
Custom Cut	247	9.6%
Pacifica, Powell River	633	24.7%
Pacifica, Port Alberni	23	0.9%
<b>Resale:</b>		
Other Vancouver Island	139	5.4%
Vancouver Area	342	13.3%
Other	266	10.4%
<b>Total</b>	<b>2,986</b>	<b>100%</b>

## 6.0 Employment and Economic Opportunities

### 6.1 Local Communities

Weyerhaeuser supports the local communities in which it conducts business. Local Weyerhaeuser managers are responsible for developing relationships with local communities, including first Nations. Relationships with these communities include support for local initiatives and employment and working with local businesses and recreationists.

These relationships have been both increased and formalized through the CSA Sustainable Forest Management (SFM) plans. Community Advisory Groups (CAGs) at North Vancouver Island (Blocks 3 & 4) — Port McNeill Timberlands, the Campbell River area (Block 2 — North Island Timberlands) and Powell River (Block 1 — Stillwater Timberlands) have developed indicators for measuring success at meeting environmental, social and economic goals. The SFM plans and data sets may be accessed as follows:

Port McNeill Timberlands (Blocks # & 4):      contact the operation in Port McNeill

North Island Timberlands (Block 2):            internet site <http://www.niwag.org>

Stillwater Timberlands (Block 1):            internet site <http://www.cagstw.org>

## 6.2 Forest Renewal BC (FRBC)

Government announced the folding of FRBC and replacement by an alternative funding program called the Forest Investment Account (FIA), commencing April 1, 2002.

The following summarizes the extent and achievements of the FRBC program over the four years from 1998/1999 (i.e. April 1, 1998 to March 31, 1999) to 2001/2002.

**FRBC Expenditures for 1998/1999 to 2001/2002.** This summary includes some expenditures in the neighboring TSAs.

General Category	\$000 by Timberlands Operation				
	Queen Charlotte (Block 6)	North Island (Block 2)	Port McNeill (Blocks 3,4 & 7)	Stillwater (Blocks 1 & 5)	Total TFL 39
Silviculture					
Backlog	2,826	795	756	631	5,008
Enhanced	1,288	3,407	1,787	1,318	7,800
<b>Total</b>	<b>4,114</b>	<b>4,202</b>	<b>2,543</b>	<b>1,949</b>	<b>12,808</b>
Environmental					
Roads	4,526	4,653	2,647	4,070	15,895
In-stream	1,946	784	1,219	161	4,110
<b>Total</b>	<b>6,472</b>	<b>5,437</b>	<b>3,866</b>	<b>4,231</b>	<b>20,005</b>
Operational Inventories	1,193	2,094	565	989	4,842
Recreation	93		21		114
EFMPP <sup>(1)</sup>		1,493			1,493
<b>Total</b>	<b>11,872</b>	<b>13,226</b>	<b>6,994</b>	<b>7,171</b>	<b>39,262</b>

(1) EFMPP – Enhanced Forest Management Pilot Project.

### First Nations Involvement

First Nations partners in the FRBC Multi-Year Agreement included the Sliammon, Kwakwilt Laich-Twil-Tach, Musgamagw, Heiltsuk, Quatsino and Haida. The partnerships were intended to enhance and facilitate “capacity building”.

The First Nations participated in a wide range of activities including silviculture, in-stream and riparian projects, as well as inventory surveys (archaeological and fish) and road deactivation. Close to 69,000 person days of First Nations' employment were generated.

**Silvicultural treatment areas** funded by FRBC during the period from 1998/1999 to 2001/2002.

	<b>Treatment Area (ha) by Timberlands Operation &amp; Block</b>						
	<b>Stillwater</b>		<b>North Island</b>	<b>Port McNeill</b>		<b>QCI</b>	<b>Total</b>
<b>Treatment</b>	<b>Block 1</b>	<b>Block 5</b>	<b>Block 2</b>	<b>Blocks 3&amp;4</b>	<b>Block 7</b>	<b>Block 6</b>	<b>TFL 39</b>
Backlog Silviculture							
Brushing	156	178	120	161		1,805	2,420
Planting	48	34	20			29	131
Surveys	2,533		4,784	12,420		11,970	31,707
Retro-tubing						114	114
Enhanced Silviculture							
Juvenile Spacing	363	105	612	158	31	583	1,852
Pruning	54		52	32		33	171
Fertilization			3,642	1,453		99	5,194
Forest Health (spacing)		9					9
Forest Health (pruning)			3				3
Habitat spacing	13	18	304	14	12	21	382
Surveys	3,367	991	13,960	1,648	1,168	637	21,771

**Funded inventories and studies include:**

- Terrestrial Ecosystem Mapping (TEM) — throughout TFL 39.
- Marbled murrelets — radio telemetry studies in Blocks 1 & 2 and assessments in Block 6.
- Goshawks — monitoring in Blocks 2 and 6.
- Fish inventories in Blocks 2, 4, 6 & 7.
- Water quality testing in the Theodosia Watershed in Block 1 and the Benson Watershed in Block 4.
- A windthrow project including model calibration in Block 2.
- Variable retention adaptive management and growth and yield projects in Block 2.
- Archaeological inventory studies and an overview assessment in Block 6.
- Black-headed budworm — installation of plots to study impacts in Block 6.
- Enhanced Forest Management Pilot Project (EFMPP) in Block 2.

### **6.3 First Nations**

Weyerhaeuser is committed to developing mutually beneficial relationships with First Nations whose communities are within the TFL operating area.

During 2001, operations continued to develop partnerships involving business and other opportunities with several First Nations' groups in TFL 39. The focus is

on assisting the First Nations in developing economically self-sufficient forest enterprises and on building enduring business relationships. Refer to Section 6.2 for a summary of First Nations' involvement in FRBC work during the last four years.

Communication and information sharing are emphasized as fundamental for maintaining quality, working relationships between First Nations and Weyerhaeuser. Communication forums include business meetings, operational meetings, Forest Development Plan and Management Plan reviews and participation in Public Advisory Groups.

An example of recent initiatives is Port McNeill Timberland's involvement with the First Nation Information Exchange Group. This venue provides for First Nation participation in the exchange of information including, but not limited to, certification. To date, representative of five different First Nations have participated.

## **7.0 Knowledge Gaps – Operational Research**

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Emphasis continues to be on addressing the uncertainties of Variable Retention (VR). Current projects (summarized below) include the co-operative Montane Alternative Silvicultural Systems (MASS) study and work on VR and small streams; VR and windthrow and growth and yield research of the impacts of VR. Refer also to Section 4.4.2 on adaptive management and monitoring.

Operational research is carried out in several of Weyerhaeuser's Coastal BC operations. Results can be applicable to TFL 39 when species, site index, terrain and biological conditions are considered. Work in 2001 included:

### **Montane Alternative Silvicultural Systems (MASS)**

The co-operative Montane Alternative Silvicultural Systems (MASS) study examines the biological and economic consequences of various silvicultural systems in higher elevation forests. The participating organizations include: Weyerhaeuser, Canadian Forest Service, FERIC, UBC and UVIC. Final reports for Forest Renewal BC were completed in 2000, representing the completion of FRBC funding for 5-year post-harvest measurement. A workshop presenting findings to operational foresters was held February 7-8, 2001 in Nanaimo. A summary of project results and publications is maintained on the Canadian Forest Service's MASS website at: [www.pfc.cfs.nrcan.gc.ca/silviculture/mass/](http://www.pfc.cfs.nrcan.gc.ca/silviculture/mass/). Although many studies are completed, the site will continue to be monitored for long-term impacts on forest growth and biological diversity.

### **Effects of Prescribed Burning on Some Coastal BC Sites**

Three research sites comparing a range of burning intensities with unburned areas are located southwest of Pt. Alberni in TFL 44. Fifteen-year tree growth, vegetation and nutrition assessments were completed in fall 2000. The first of three journal publications on fire effects, vegetation response and site productivity was submitted in 2001. The remaining papers will be completed in 2002.

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### **Salal-Cedar-Hemlock Integrated Research Program (SCHIRP)**

This multi-agency research co-operative was established to determine the processes causing poorly performing plantations on salal-dominated sites in wet climates and to develop silvicultural treatments. A field trial funded by FRBC was established near Ucluelet within TFL 44 in March, 1996, to test optimum combinations of species (Cw, Hw and 50-50 mix), fertilization (7 grams N and P), mechanical site preparation (excavator spot scarification) and density (1,000 and 2,000 sph) for CwHw-Salal sites. This trial will help us extrapolate the SCHIRP results from northern Vancouver Island to a wider range of sites. Five-year tree growth, vegetation cover and foliar nutrition measurements were completed in fall 2000 and a report was completed in April 2001. Highlights were summarized in the 2000 Annual Report

The research site will continue to be maintained. The next scheduled measurement is 10 years post-treatment (2005).

### **Variable Retention and Small Streams**

Small headwater streams may be important for maintaining the productive capacity of downstream fish habitat by processing and exporting nutrients, organic matter and stream invertebrates. This study was initiated to evaluate the response of small streams to the new Variable Retention (VR) approach to forest management being applied in coastal forests by Weyerhaeuser's BC Coastal Group. Two sites in TFL 39, one in the Tsitika River drainage of Northern Vancouver Island and the other at Lewis Lake near Powell River were chosen for study. Pre-logging surveys of streams at the two sites identified disparities between adjacent, similar-looking streams both in nutrient chemistry and benthic communities, emphasizing the need for extensive pre-treatment data sets.

Tsitika streams tended to be nitrogen-limited while Lewis Lake streams were more phosphorus-limited. Dissolved organic carbon levels in all streams were sufficiently high (10 mg/L — 30 mg/L) to block UV penetration. While DOC levels increased in the autumn following logging, similar increases were seen in control streams as well. Logging did significantly increase phosphorus loading to streams at the Tsitika site. Comparison with phosphorus levels in a stream in a two-year-old clearcut at Tsitika suggested that elevated phosphorus levels following logging would not persist more than 2 years. Logging also increased stream temperatures in Tsitika. Initial results indicated that temperature elevation was similar regardless of the VR treatment. The streams of the Lewis Lake area represent diverse assemblages of invertebrates for a series of small streams. In general the streams are similar in composition, but differ in relative abundance. The differences highlight the critical importance of having before-and-after comparisons within streams so that the initial conditions can act as a covariate for differences in the starting conditions.

Two additional study sites will be chosen in 2002. Research will continue with funding by the Forest Investment Account and project co-operators, which include UBC and the Federal and Provincial governments.

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### **Variable Retention Windthrow Monitoring Pilot Project**

This FRBC funded pilot project was carried out by Golder Associates in West Island Timberlands (WI) in TFL 44 and Queen Charlotte Timberlands (QCI) in TFL 39. The overall project objectives that are partially addressed by the pilot project are:

- Document the amount of windthrow associated with VR.
- Document the spatial distribution or patterns of windthrow associated with VR.
- Document regional differences in the extent of windthrow associated with VR.
- Identify the qualitative and quantitative factors associated with VR windthrow including both environmental factors and treatment effects.
- Identify specific management options to control windthrow associated with VR.
- Develop field indices and decision-making tools for windthrow hazard assessment by operational planners.
- Communicate results to field staff to help reduce the potential for wind damage by improving harvesting layout and silvicultural treatments.

Approximately half the 419 sample plots for the pilot study are located in the QCI and half in the WI operation. About 75 percent of the sample plots are external setting edges, 20 percent represent retained patches or groups of trees, and five percent occur in strips of timber. A total of 28 kilometers of external falling boundary were sampled, 15 kilometers in the QCI and 13 kilometers in the WI operation. The sample plots representing retained groups of timber range in size from 0.1 to 0.55 hectares.

A copy of the report documenting the approach and preliminary results of this pilot project is available on request. Further work is planned for 2002 and recommendations for monitoring procedures are expected in early 2003.

### **Windthrow Hazard Mapping using GIS**

Wind damage to cutblock boundaries and reserves is a significant management problem in coastal forests, conflicting with timber, visual quality, riparian and biodiversity objectives. This project was initiated in June 2000 as part of Weyerhaeuser's windthrow monitoring and management strategy. The specific objectives of this project are:

- To map windthrow occurrence along cutblock boundaries using aerial photos.
  - To develop methods for characterizing topographic exposure and cutblock design.
  - To build windthrow risk prediction models.
  - To produce windthrow hazard maps for selected Weyerhaeuser operating areas.
-

The windthrow risk model and hazard maps are based on actual windthrow occurrence within a study area. Windthrow hazard maps were produced for Port McNeill Timberlands (TFL 39, Block 4) and for selected mapsheets in Queen Charlotte Timberlands (TFL 39, Block 6) based on model development and aerial photo interpretation for similar terrain on northern Vancouver Island for Western Forest Products. Further aerial photo sampling and model development was undertaken for North Island Timberlands (TFL 39, Block 2) in 2001 in order to expand the application of the model. All boundaries of cutblocks harvested between 1987 and 1994 were examined on recent aerial photography for 1:20,000 mapsheets selected to represent the range of conditions in the operating area.

Boundary segments were classified as being windthrown if the percent of segment area within a windthrow polygon exceeded a chosen threshold.

The logistic regression model predicts the probability of windthrow damage to cutblock edges under given combinations of environmental and management conditions. Two sets of models were fit: one for a low damage cutpoint (>10% of segment area damaged — WTC10), and another for a higher cutpoint (>50% of segment area damaged — WTC50). The former is useful where any but the lowest level of damage is of interest; the latter where only severe damage is of interest. The best-fit models included ecosystem variables. The models were fit using 1800 edge segments. Another 1200 segments were reserved for testing the accuracy of the models. The models for WTC10 and WTC50 accurately predicted the damage status (damaged/undamaged) for 72% and 75% of the test segments in the Pt. McNeill study area, respectively. Both models were better at predicting the status of undamaged segments than damaged segments.

Windthrow hazard maps will be completed for TFL 39, Block 2 in 2002. Because these maps use stand level information from broad scale inventories, they indicate conditions at the stand level not at the microsite or tree level. Furthermore, aerial photograph interpretation of wind damage does not detect low levels of damage which might be important in riparian areas or areas of unstable terrain. These maps are intended for strategic planning during the development plan stage. Windthrow risk and potential impacts should be assessed in the field during cutblock layout.

### **Growth and Yield Research**

In 2001 some 40 permanent plots were remeasured as part of Weyerhaeuser's natural and managed stand permanent plot program.

In addition, 40 random prism/fixed area plots were established or remeasured in several areas harvested by variable retention in 1999. This is part of a long-term analysis of 'edge' effects on growth response within patches, among dispersed trees and in harvested areas with distance to trees or patches.

A total of 50 planted transects (40—60m long) were established or remeasured on a variety of sites to examine the effect of shading on seedling growth response. Light was also monitored at a subset of sites using a combination of sensor- and fish-eye photography.

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46 experimental monitoring plots were established at three sites examining the effects of variable retention on yield.

## **8.0 Administration and Community Involvement**

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### **8.1 Management Plan Process**

The process for developing Management Plan (MP) #8 was completed in 2001.

Public review of the draft MP extended until February 2001. A report summarizing the process and results of the public review was submitted to the Vancouver Forest Region Manager on April 5, 2001.

The Timber Supply Analysis was accepted (approved) by the Timber Supply Branch in a letter dated March 8, 2001. The Twenty-Year Plans were accepted by the five Forest Districts (Queen Charlotte Islands, Mid Coast, Port McNeill, Campbell River and Sunshine Coast).

Changes were made to Management Plan #8 based on feedback from the public and from the Ministry of Forests. The resulting "Proposed Management Plan #8 for TFL 39" was submitted to the Chief Forester of BC on April 5<sup>th</sup>, 2001.

On July 30, 2001 Management Plan #8 for TFL 39 was approved by the Deputy Chief Forester (of BC) for the period August 01, 2001 to June 30, 2006. The one exception was that "establishment of alder on suitable sites" was not approved — approval of this aspect is contingent on acceptance of a hardwood management strategy by the Vancouver Forest Region Manager. A hardwood management strategy will be submitted in 2002.

Requests made in the MP approval letter include:

- Confirm operability of marginally economic areas, particularly in Block 7.
  - Finalize Stewardship Zone boundaries and include a firm commitment on retention levels within each zone in MP #9. Report on the level of retention by stewardship zone in the Annual Report.
  - Complete the update of the recreation inventory for Block 1 and include in the MP #9 analysis.
  - In accordance with the Vancouver Island Land-Use Plan Higher Level Plan Order, ensure that old seral requirements in the Salmon and Sayward landscape Units of Block 2 are reflected in forest development plans and are incorporated into MP #9.
  - Better quantify retention levels in riparian management zones (using empirical data) for use in the next timber supply analysis.
  - Subject to available funding, encourage terrestrial ecosystem mapping is completed so that site productivity can be assessed from that basis.
-

- Noted commitments to implementing a windthrow monitoring program and to document the amount of windthrow occurring in variable retention areas.

Progress on these items will be reported in future TFL 39 Annual Reports.

The Deputy Chief Forester determined the AAC for TFL 39 to be 3,660,000 m<sup>3</sup>, effective November 21, 2001. The determination included a partition of 125,000 m<sup>3</sup> for areas known as "Haida interest areas" on Block 6 of TFL 39.

## **8.2 Stillwater Timberlands Pilot Project**

In the summer of 1999, the BC government established a program (Part 10.1, FPC), for creating pilot projects to explore more efficient and less costly ways to combine forest management with the protection of social and environmental values.

The Stillwater Pilot Project area encompasses Block 1 of TFL 39, some 180,000 hectares near Powell River on the Sunshine Coast. Roughly one-half the area is productive forest land.

Good progress on the Stillwater Timberlands Pilot Project (Block 1 of TFL 39) occurred in 2001. The Stillwater Pilot Project Regulation (B.C. Reg. 96/2001) was approved in April. A draft Stewardship Plan was developed, with public review scheduled for early 2002. It is anticipated that the final submission for approval of the Stewardship Plan will occur by mid-2002.

Public consultation, particularly with the community advisory group, is an important component of the process.

In other significant initiatives for the pilot project area, Stillwater Timberlands was certified to the ISO 14001 standards and the pilot project area was certified to CSA Z809 standards during 2001. In addition, much of the landscape unit planning was completed in Block 1 of TFL 39 (refer to Section 4.4.4).

## **8.3 Forest Development Plans**

Forest Development Plans (FDPs) were approved for North Island Timberlands (Block 2) for 2001—2005 and Port McNeill Timberlands (includes blocks 3&4) for 2002—2006. In addition, a major amendment to the FDP for Block 5 (Stillwater Timberlands) was approved and a FDP was submitted by Queen Charlotte Timberlands (Block 6) for 2001—2005.

The proposed FDPs were available for public review at Company Timberlands offices. In addition, open houses were held in Masset/Old Masset, Port Clements, Sandspit and Queen Charlotte/Skidegate in the Queen Charlotte Islands (Block 6).

## **8.4 Community Advisory Groups**

Community (Public) Advisory Groups (CAGs) were active at North Island Timberlands (TFL 39 Block 2 — Campbell River — Sayward area), Stillwater Timberlands (TFL 39 Block 1 — Powell River Area) and Port McNeill

Timberlands (TFL Blocks 3&4 — Port McNeill/Port Hardy area). The community advisory groups have a broad representation from the local community. They are effective in communicating community input and concerns and for developing joint understanding of forestry planning and issues.

## **8.5 Other Community Involvement**

Public events were attended to distribute information. These included public review of the Stillwater (Block 1) Pilot Project (refer to Section 8.2), and a National Forestry Week Display, and attendance at a children's festival in Campbell River.

Meetings were also held with specific interest groups and to discuss development plans for specific areas. These included a field meeting with Haslam Street residents (Block 1 – Powell River); and at North Island Timberlands (Block 2) meetings with the Sayward Futures Society, the Sayward Estuary and Trails Society, the Sayward Fish and Game Society, the Big Cypress Tree Society and Sayward Council.



APPENDIX I — Table 1a

TFL 39 Volume Harvested in 2001  
Based on Cut Control Letter Issued by Vancouver Forest Region  
Volumes (m<sup>3</sup>)

Block	Timberlands Operation	Tenure	Ha	Balsam	Cedar	Cypress	Decid	Fir	Hemlock	Pine	Spruce	Total Billed	Residue	Total Cut Control
I	Stillwater	Crown		34 841	102 301	8 307	11 210	313 261	139 175	65	115	609 275	28 642	637 917
		Private		62	1 410		638	6 811	2 089	1	5	11 016	299	11 315
		Royalty			1							1		1
		Total	677	34 903	103 712	8 307	11 848	320 072	141 264	66	120	620 292	28 941	649 233
II	North Island	Crown		175 174	69 696	29 051	2 863	89 265	251 716	267	1 800	619 832	67 996	687 828
		Private												
		Royalty		87 429	65 342	7 907	4	36 679	182 614	45	1 355	381 375	19 842	401 217
		Total	1 283	262 603	135 038	36 958	2 867	125 944	434 330	312	3 155	1 001 207	87 838	1 089 045
III	Port McNeill	Crown		12 265	1 859	6	56	52	44 944	1	591	59 774	863	60 637
		Private											1 056	1 056
		Royalty		601	18 793	972	180	978	16 156	4	526	38 210	3 627	41 837
		Total	148	12 866	20 652	978	236	1 030	61 100	5	1 117	97 984	5 546	103 530
IV	Port McNeill	Crown		54 515	26 272	7 734	373	3 414	129 605	148	3 112	225 173	9 750	234 923
		Private		1 928	5 711		15	1	11 908	200	2 047	21 810	873	22 683
		Royalty		7 219	20 190	986	8	3 878	199 555	65	737	53 039	2 882	55 921
		Total	356	63 662	52 173	8 720	396	7 293	161 468	413	5 896	300 021	13 505	313 526
V	Stillwater	Crown		8 223	4 299	6 496		81	8 390	46		27 535	2 813	30 348
		Private												
		Royalty			132			1	1			134		134
		Total	26	8 223	4 431	6 496		82	8 391	46		27 669	2 813	30 482
VI	QCD	Crown			226 766	44 275	9 214		139 961	14 606	73 437	508 259	43 698	551 957
		Private			756	236					81	1 073	1 020	2 093
		Royalty			30 180	1 673			16 443	2 034	2 463	52 793	3 396	56 189
		Total	774		257 702	46 184	9 214		156 404	16 640	75 981	562 125	48 114	610 239
VII	Port McNeill	Crown											16 853	16 853
		Private												
		Royalty												
		Total											16 853	16 853
ALL		Crown		285 018	431 193	95 869	23 716	406 073	713 791	15 133	79 055	2 049 848	170 615	2 220 463
		Private		1 990	7 877	236	653	6 812	13 997	201	2 133	33 899	3 248	37 147
		Royalty		95 249	134 638	11 538	192	41 536	235 169	2 148	5 081	525 552	29 747	555 299
		Total	3 264	382 257	573 708	107 643	24 561	454 421	962 957	17 482	86 269	2 609 299	203 610	2 812 909

Appendix I — Table 1b

**TFL 39 Logged Hectares  
by Silvicultural System — 2001**  
As Reported by the Timberlands Operations

Silvicultural System and Variant		Hectares
Non Variable Retention		Logged
Clearcut		281
	With Reserves	341
<b>Total Non Variable Retention</b>		<b>622</b>
<b>Variable Retention</b>		
Retention	Group	3,006
	Dispersed	46
	Group and Dispersed	154
	Subtotal	3,206
Patch Cut	Group	29
Shelterwood	Strip	1
<b>Total Variable Retention</b>		<b>3,236</b>
<b>Grand Total</b>		<b>3,858</b>
Percent Variable Retention		84%

Appendix I — Table 1c

**TFL 39 Volume Harvested by Operability Class — 2001**

As Reported by the Timberlands Operations <sup>(1)</sup>

Excludes Residue

Volumes (m<sup>3</sup>)

Economic Class (2)	First Growth		
	Conventional	Non-conventional	Total
Economic	1,189	415	1,604
Marginal	10	6	16
<b>Total</b>	<b>1,199</b>	<b>421</b>	<b>1,620</b>

	Second Growth		
	Conventional	Non-conventional	Total
<b>Total</b>	<b>836</b>	<b>9</b>	<b>845</b>

Economic Class (2)	Total		
	Conventional	Non-conventional	Total
Economic	2,025	424	2,449
Marginal	10	6	16
<b>Total</b>	<b>2,035</b>	<b>430</b>	<b>2,465</b>

<sup>(1)</sup> Volume data (m<sup>3</sup>) based on Timberlands Operations records and may not agree with official BCFS billed volumes due to differing year-end dates.

<sup>(2)</sup> Economic class and conventional/non-conventional refer to classifications used in the MP #7 analysis and not to actual harvest method

APPENDIX I — Table 2

**TFL 39 SBFEP Timber Harvested — 2001**  
Based on Billing from Vancouver Forest Region  
Volume (m<sup>3</sup>)

BCFS District	Total Volume
Port McNeill	29 643
Queen Charlotte	16 393
Sunshine Coast	2 976
<b>Total</b>	<b>49 012</b>

APPENDIX I — Table 3

**TFL 39 Road Construction Report — 2001**

Block	Timberlands Operation	New Construction (km)			Debuilt Road (1) (km)
		Mainline Branch	Spur	Other	
I	Stillwater	17.9	35.0		
II	N. Island	5.2	34.1		0.5
III	Pt McNeill		5.2		
IV	Pt McNeill		24.8		
V	Stillwater	1.2	1.0		
VI	QC	1.9	34.3		99.1
<b>Total</b>		<b>26.2</b>	<b>134.4</b>		<b>99.6</b>

- (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.

APPENDIX I — Table 4

TFL 39 Fire Report — 2001

Block	Timberlands Operation	Number and Causes of Fires									
		Lightning		Escape Slash		Operational		Public		Total	
		No.	Ha	No.	Ha	No.	Ha	No.	Ha	No.	Ha
I	Stillwater							7	Spot	7	Spot
II	North Island					1	Spot	1	Spot	2	Spot
Total						1		8		9	

Area Burned by Forest Fires (ha)						
Block	Operation	Mature	Immature	AAR	NP	Total
I	Stillwater				Spot	
II	North Island	Spot				Spot
Total						

APPENDIX I — Table 5

**TFL 39 Site Preparation — 2001**  
(Hectares)

Block	Timberlands Operation	Tenure	Burn Accum. <sup>(1)</sup>	Mechanical	Three Metre Knockdown	Roadside Piling	Total Hectares
I	Stillwater	Private Crown	1 12				1 12
		Total	13				13
		II	North Island	Private Crown	16		8
Total	16				8	75	99
III	Port McNeill			Private Crown			
		Total					
		IV	Port McNeill	Private Crown	21		
Total	21						21
V	Stillwater			Private Crown			
		Total					
		VI	QC	Private Crown		49	85
Total				49	85		134
VII	Port McNeill			Private Crown	17		3
		Total	17		3		20
		All Blocks	Private Crown	1 66			
Total	67		49	96	75	287	

<sup>(1)</sup> Actual hectares of roadside accumulations burned.

APPENDIX I — Table 6

**TFL 39 Summary of Planting — 2001**  
(000s of trees)

Type of Planting	Species	Timberlands Operation							Grand Total
		Bk I	Bk II	Bk III	Bk IV	Bk V	Bk VI	Bk VII	
		Stillwater	N. Island	McNeill	McNeill	Stillwater	QC	McNeill	
		No. Trees (000s)	No. Trees (000s)	No. Trees (000s)	No. Trees (000s)	No. Trees (000s)	No. Trees (000s)	No. Trees (000s)	No. Trees (000s)
Normal	Ba		62.2	3.9	48.9	7.3		55.6	177.9
	Cw	324.1	251.5	7.6	186.9	76.0	119.1	113.4	1 078.6
	Df	534.0	399.0		41.2	6.3			980.5
	Hm		61.0					4.6	65.6
	Hw		456.9	7.9	59.5	67.2		13.8	605.3
	Pl				4.2		133.5		137.7
	Ss			2.9	12.0	2.0	246.9	23.5	287.3
	Yc	32.1	274.5		20.6	31.7	20.0	48.9	427.8
	<b>Total</b>	<b>890.2</b>	<b>1 505.1</b>	<b>22.3</b>	<b>373.3</b>	<b>190.5</b>	<b>519.5</b>	<b>259.8</b>	<b>3 760.7</b>
Re-Plant	Ba			4.6	4.9	2.7			12.2
	Cw	2.8	1.3	9.4	5.2	10.9	14.2	1.3	45.1
	Df	9.1	5.7			1.9			16.7
	Hw		19.5		6.7	5.5			31.7
	Pl						15.0		15.0
	Ss				1.0		33.7		34.7
	Yc	2.2	6.8			0.2	2.7		11.9
	<b>Total</b>	<b>14.1</b>	<b>33.3</b>	<b>14.0</b>	<b>17.8</b>	<b>21.2</b>	<b>65.6</b>	<b>1.3</b>	<b>167.3</b>

Appendix I — Table 7

**TFL 39 Hectares Planted — 2001**  
(hectares)

Block	Timberlands Operation	Tenure	Normal	Re-plant	Total Hectares
I	Stillwater	Private	32	1	33
		Crown	638	52	690
		Total	670	53	723
II	North Island	Private			
		Crown	1 244	32	1 276
		Total	1 244	32	1 276
III	Port McNeill	Private			
		Crown	20	18	38
		Total	20	18	38
IV	Port McNeill	Private	64	8	72
		Crown	264	16	280
		Total	328	24	352
V	Stillwater	Private			
		Crown	185	41	226
		Total	185	41	226
VI	QC	Private	49		49
		Crown	1 232	137	1 369
		Total	1 281	137	1 418
VII	Port McNeill	Private			
		Crown	191	8	199
		Total	191	8	199
All	Total	Private	145	9	154
		Crown	3 774	304	4 078
		Total	3 919	313	4 232

APPENDIX I — Table 8

**TFL 39 Seedlings Fertilized During Planting — 2001**  
(000s)

Block	Timberlands Operation	Number of Seedlings Planted		
		Private	Crown	Total
I	Stillwater	47.9	856.3	904.2
II	North Island		835.6	835.6
III	Pt McNeill		9.4	9.4
IV	Pt McNeill	63.2	10.7	73.9
V	Stillwater		211.6	211.6
VI	QC		346.6	346.6
VII	Pt McNeill		0.2	0.2
<b>Total</b>		<b>111.1</b>	<b>2270.4</b>	<b>2381.5</b>

Appendix I — Table 9

**TFL 39 Stand Tending — 2001**  
(hectares)

Block	Timberlands Operation	Tenure	Brushing/ Weeding	Riparian Spacing (1)	Spacing	Fertilize	Pruning	Seedling Protection	Other	Total Hectares
I	Stillwater	Private Crown	38					3		41
			656	13	48		17	55		789
		Total	694	13	48		17	58		830
II	North Island	Private Crown	15	140	91	1 107	20	71	3	1 447
		Total	15	140	91	1 107	20	71	3	1 447
III	Port McNeill	Private Crown								
		Total								
IV	Port McNeill	Private Crown	16	14	37					67
		Total	16	14	37					67
V	Stillwater	Private Crown	97	19	32			7	9	164
		Total	97	19	32			7	9	164
VI	QC	Private Crown	312	21	219	11		113		676
		Total	312	21	219	11		113		676
VII	Port McNeill	Private Crown	48	12	4					64
		Total	48	12	4					64
All	Total	Private Crown	38					3		41
			1 144	219	431	1 118	37	246	12	3 207
		Total	1 182	219	431	1 118	37	249	12	3 248

(1) Riparian spacing - spacing treatments for habitat enhancement

Appendix I — Table 10

**TFL 39 Erosion Control Seeding — 2001**  
(Hectares)

Block	Timberlands Operation	Slide Area (ha) Treated	Roadside	
			Area (ha) Treated	Km Treated
I	Stillwater			121
II	North Island	6		65
III	Port McNeill			
IV	Port McNeill			16
V	Stillwater	2		5
VI	QC	12		154
VII	Port McNeill			
<b>All</b>	<b>Total</b>	<b>20</b>		<b>361</b>

APPENDIX II — Table 1

**Weyerhaeuser Cone Collection — 2001**  
as of December 31, 2001

Species	Kilograms of Seed				Approx. seedlings (000's)
	Weyerhaeuser Orchards	Contract Orchards	Wild Collections	Total	
Dr			5.6	5.6	2072
Ba			38.5	38.5	177
Hm			0.4	0.4	56
Hw		15.0		15	3000
Cw		4.6		4.6	920
Fdc		30.0		30	1410
Pw		5.2		5.2	68
<b>Total</b>		<b>54.8</b>	<b>44.5</b>	<b>99.3</b>	<b>7703</b>

APPENDIX II - Table 2

**Weyerhaeuser Seed Inventory - 2001**

Species	Weyerhaeuser Seed Inventory <sup>(1)</sup>				
	Seed Orchard Seed (gm)	Seed Orchard Control Cross (gm)	Wild Seed <sup>(2)</sup> (gm)	Total Seed (gm)	Approx. Seedlings (000's)
Ba			364 588	364 588	1 686
Bg			14 820	14 820	161
Bn	17 467		52 821	70 288	307
Cw	12 296		34 309	46 605	9 375
Fd	48 236		23 130	71 366	2 508
Hm			533	533	63
Hw	30 080		38 722	68 802	8 923
Lw			492	492	20
Plc			2 703	2 703	301
Pli			33	33	6
Pw	6 252		14 008	20 260	359
Py			3 722	3 722	1 335
Ss	3 763		9 087	12 850	2 344
Sx			3 089	3 089	417
Sxs			525	525	37
Yc			79 810	79 810	215
<b>Total</b>	<b>118 094</b>		<b>642 392</b>	<b>760 486</b>	<b>28 057</b>

<sup>(1)</sup> Does not include seed from 2001 collections

<sup>(2)</sup> Wild seed from all seed zones are included

APPENDIX II — Table 3

**Planting Stock Inventory and Sowing Request**  
as of December 31, 2001

Species	Planting Stock Inventory plus Request		
	(000s of Trees)		
	Spring 2002	Fall 2002 / Spring 2003	Total
Ba	99	225	324
Bn	62	3	65
Cw	1,813	1,386	3,199
Dr	204	115	319
Fdc	4,063	4,616	8,679
Hm	10	29	39
Hw	715	970	1,685
Plc	154	50	204
Pw	168	114	282
Ss	442	197	639
Sx	7	2	9
Yc	222	480	702
<b>Total</b>	<b>7,959</b>	<b>8,187</b>	<b>16,146</b>

