

File: 19700-61 TFL 47



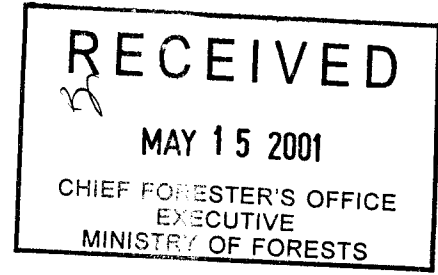
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May 11, 2001

RECEIVED
EXECUTIVE
FORESTER'S OFFICE

Ministry of Forests
Forestry Division
4th Floor, 595 Pandora Avenue
Victoria, B. C.
V8W 3E7




Attention: L. Pedersen, Chief Forester

Dear Larry Pedersen,

Re: TFL 47 - 2000 Annual Report

Enclosed please find the 2000 Annual Report for TFL 47 prepared under the new format.

Yours truly,


G. M. Brennenstuhl, R.P.F.

- c.c. D. Mosher, S. Lorimer, TimberWest, South Island
- Bruce Storry, TimberWest, Campbell River
- Dave Simpson, TimberWest, Beaver Cove Operation
- Stirling Angus, J. S. Jones Sandspit
- R. Willington, TimberWest, IRAS - Crofton
- R. Annett, District Manager, Campbell River Forest District
- J. Dryburgh, District Manager, Port McNeill Forest District
- K. Ross, A/District Manger, Queen Charlotte Forest District
- K. Collingwood, Regional Manager, Vancouver Forest Region, Nanaimo



TFL Forest Ltd.
Tree Farm Licence (TFL) 47
2000 Annual Report

May 2001

Prepared by:

A handwritten signature in black ink, appearing to read "Gilbert Brennenstuhl".

Gilbert Brennenstuhl, R.P.F.
GMB Forestry Consulting Ltd.

Submitted by:

A handwritten signature in black ink, appearing to read "Don McMullan".

Don McMullan, R.P.F.
Vice President and Chief Forester

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1.0 Introduction

TFL is divided into three distinct management units (MU): the Johnstone Strait MU covers the islands and adjacent mainland between Campbell River and Port McNeill, the Bonanza Lake MU is located south of Port McNeill and the Moresby MU is situated south of Sandspit on the Queen Charlotte Islands. The total TFL covers an area of over 160,000 ha.

The Moresby block is managed by J.S. Jones Sandspit Limited under an Operating Agreement with TimberWest.

The current Management Plan No. 2 is in effect until November 30, 2001. Management Plan No. 3 is currently being prepared.

The Allowable Annual Cut (AAC) for TFL 47 is 696,758 m³.

2.0 Management and Obligation Performance

2.1 Timber Harvesting

Calendar 2000 was the first year in the current cut control period. The total cut control charges were 1,044,137 m³ or 149.9 % of the AAC. This includes 12,000 m³ of an overcut carryforward allocated to 2000. The remainder of the 166,623 m³ overcut carryforward is evenly distributed over the remaining four years.

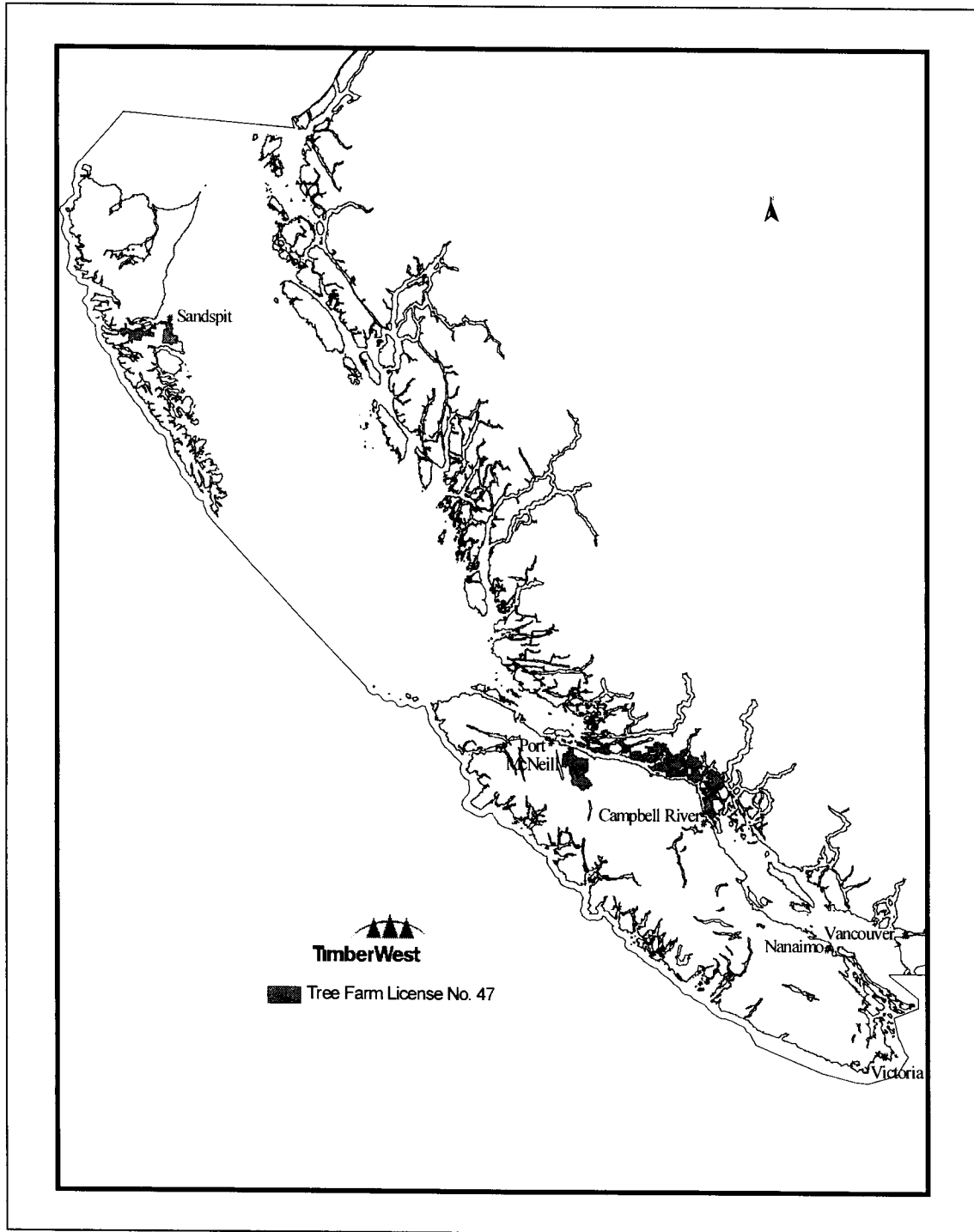
Year	2000	2001	2002	2003	2004	5 Year Total
AAC (m3)	696,758	696,758	696,758	696,758	696,758	3,483,790
Total Actual Cut (m3)	1,032,137					1,032,137
Overcut Carryforward (m3)	12,000	38,665	38,666	38,666	38,666	166,623
Total Cut Control Charges (m3)	1,044,137					
Percent (%) of Allowable Cut	149.9					34.4

Note: The indicated AAC is subject to change in the next AAC determination by the Chief Forester scheduled for 2001.

2.2 Contractor Clause Compliance

For the calendar year 2000 TimberWest achieved 184 % compliance with the contractor clause. That means, nearly twice as much timber was harvested by contractors than is required under the terms of the TFL agreement.

KEY MAP



2.3 Higher Level Plans

A higher level plan (HLP) has been established with an effective date of December 1, 2000 for areas covered by the Vancouver Island Land Use Plan. The HLP consists of Resource Management Zones (RMZ) and RMZ objectives. Two such RMZ are within TFL 47: Special Resource Management Zone (SMZ) 19 (Quadra Island) and RMZ 11 (Bonanza Lake). RMZ 11 is also referred to as an Enhanced Forestry Zone (EFZ). TimberWest's current forest development plan is deemed to follow the spirit of the HLP but has not been specifically checked for compliance. The next FDP will be in full compliance with the HLP. ✓

2.4 Items Identified in the Approval Letter of TFL 47 Management Plan No. 2 and AAC Rationale

1. The Chief Forester directed BCFS staff and TimberWest to examine procedures used to estimate the area lost to roads, trails and landings to help reduce uncertainty associated with these estimates.

Status:

Since the MP 2 timber supply analysis, significant improvements have been made to better estimate the area lost to roads. Road data has been loaded into TimberWest's GIS and buffered. The resulting buffers provide an accurate estimate of area lost to road. ✓

2. The Chief Forester requested that TimberWest quantify timber yield implications of employing alternative silviculture systems (including genetically improved stock).

Status:

TimberWest commissioned a report from Dr. Don Lester on the potential incremental gains from genetic improvement. The recommendations from this report on genetic gains that are currently achievable have been incorporated into the draft TFL 47 MP 3 timber supply analysis. ✓

TimberWest is also directing some of its FRBC funds to Weyerhaeuser's research into various aspects of variable retention harvesting.

3. Due to some uncertainty about whether volume yield estimates for managed stands were appropriately assigned to all stands aged between 30 and 40 years, the Chief Forester directed that stands in this age range be examined and accordingly defined as managed stands.

Status:

TimberWest had intended to compare operational cruise volumes to inventory volumes. However, during the current Management Plan period, ✗

there has been no harvesting in these stands. As a result, there have been no operational cruises undertaken in these stands.

4. Due to uncertainty regarding the estimate of non-recoverable losses the Chief Forester has directed BCFS staff and TimberWest to examine procedures used to estimate those losses to help reduce the uncertainty associated with these estimates. He also asked that salvage operations and non-recoverable losses be monitored.

Status:

TimberWest will enter into discussions with MOF to identify how the Chief Forester's objective can be achieved in a cost-effective manner. To date, this has not occurred. ✕

5. The Chief Forester directed that the harvesting of stands at first entry ages be reported in the annual report in a format to be set by the Regional Manager.

Status:

A reporting format was developed in consultation with the Ministry of Forests. Since 1997 TimberWest has been reporting the harvest of stands at first entry ages in the TFL annual reports. ✓

6. The Chief Forester directed that TimberWest provide the Regional Manager and District Managers with a rationale for harvesting up to 20% of the AAC from stands younger than first entry age.

Status:

A rationale was prepared as requested and submitted to the Regional Manager and District Managers in October 1997. ✓

7. Because deciduous stands are part of the forest inventory used in the timber supply analysis the Chief Forester expects that TimberWest harvest deciduous stands proportional to their occurrence (balanced by the need for biodiversity). He asked that a reporting format be agreed to with the Regional Manager and the deciduous reports be appended to the TFL annual reports.

Status:

This is an issue specific to the Johnstone Strait MU which has extensive alder stands.

The reporting format was developed in consultation with the Ministry of Forests. Since 1997 the deciduous harvest has been reported in the TFL 47 annual reports. ✓

Deciduous Harvest at Johnstone Strait

Year	Alder Harvest (m3)
1997	18,215
1998	5,032
1999	53,843
2000	38,987

Note: The above information excludes Nanaimo Lakes and Courtenay Management Units, which were part of TFL 47 in 1997 and 1998.

8. In his AAC Rationale the Chief Forester expressed his expectation that harvesting is to occur in the visually constraint areas if they are to continue to contribute to the harvesting land base.

Status:

This issue applies mostly to the Johnstone Strait MU where approximately 50% of the Total Harvestable Land Base is captured by the Visual Landscape Inventory. Over the last 5 years 35% of the harvest came from visually constraint areas. In the 20 year plan being prepared as part of the next management plan the contribution of visually constraint areas to the harvest rises to 42%.

9. The Chief Forester anticipated that an inventory audit of the Bonanza Lake management unit scheduled for 1998 would provide greater certainty for estimating existing stand volumes.

Status:

The Ministry of Forests conducted an inventory audit of the Bonanza Lake management unit but the final audit results have not yet been released.

10. In his AAC Rationale the Chief Forester holds the licensee to their commitments to maintain and update recreation inventories and to be sensitive to public concerns in the planning of harvest operations associated with recreation areas.

Status:

The recreation inventories have been or are being updated. See details in "2.5 Inventory Updates" below.

For the Johnstone Strait MU TimberWest has developed several strategy guidelines based on feature significance and feature sensitivity, in response to specific input at FDP public review process. These are contained in the FDP. All harvest areas proposed within a landscape visible from the ocean, Main Lake or from Chinese Peaks undergo visual impact analysis to ensure compliance with the approved VQO or designated scenic value as assigned by the District Manager. Known

tenured lodge owners and Eco-tour operators are contacted to review the F²DP annually.

11. The Chief Forester specified that the next management plan for TFL 47 should include an analysis of the extent and implications of archaeological and heritage resources.

Status:

The majority of archaeological areas which might impact forest management are culturally modified trees (CMT). However, the incidence of those trees in the Bonanza Lake and Johnstone Strait management units has been low historically. The one area where a larger concentration of CMT's is expected is Hanson Island. TimberWest has outlined how it will deal with this question in the recently submitted Timber Supply Analysis Information Package.

12. The conditional approval of Management Plan No. 2 required the preparation of a landscape level biodiversity plan.

Status:

The Regional Manager advised that his letter dated February 28, 2000 replaced the previous condition in the management plan approval of TFL 47 regarding the preparation of a biodiversity plan. In that letter the Regional Manager outlined the Landscape Unit Planning process with particular regard to responsibility for design and placement of draft old growth management areas (OGMA) and the roles of Ministries and licencees. The Ministry of Forests is leading the process and TimberWest is an active participant in it.

13. Monitoring of regeneration performance, specifically regeneration delay, should continue.

Status:

Survey and planting status remain current. Regeneration delay in the Johnstone Strait MU is running at one year, ahead of the assumptions in the last timber supply analysis.

14. The District Manager may use Part 15 of the Forest Act for a temporary AAC reduction if timber supply cannot be maintained due to management plans pertaining to Hanson Island.

Status:

To date, maintenance of timber supply has not been an issue. In fact, in draft MP No. 3 TimberWest proposes an increase in the allowable cut.

In the recently announced Central Coast Land and Resource Management Plan (CCLCRMP), Hanson Island was identified as a candidate protection area to Cabinet.

2.5 Inventory Updates

- The Recreation Features Inventory, Recreation Analysis and Management Strategy Report and Recreation Opportunity Spectrum for Blocks 4-12 were updated in 1999 and are awaiting approval by the Ministry of Forests.
- A Recreation Features Inventory and a Recreation Opportunity Spectrum update for Blocks 17 and 1-3 were initiated in 2000 and are scheduled for completion in 2001.
- A Recreation Analysis and Management Strategy Report for the Moresby Block was prepared in 2000 and will be submitted to the Ministry of Forests for approval in 2001.
- The Visual Landscape Inventory (VLI) for the Bonanza Lake and Johnstone Strait MU's were updated in 1999 and submitted to the Ministry of Forests for approval. The Regional Manager approved the VLI in his letter dated December 16, 2000.
- Detailed Terrain Stability Mapping has been completed for a portion of the Bonanza Lake MU under an FRBC funded program.
- An Archaeological Overview Assessment is being verified in the field in the Johnstone Strait MU. This work is expected to be completed in 2001.

3.0 Success in Meeting Management Objectives

3.1 Management and Utilization of the Timber Resource:

- **Partitions**
TFL 47 does not have a partitioned cut but the AAC has been allocated by Management Unit. The total harvest of the TFL was just under 150% in 2000. The harvest in all management units exceeded their allocations.
- **Integration with SBFEP**
To date, reductions in the allowable cut have been accommodated through area reductions. Since both parties work on separate and distinct land bases there is no need to formally integrate TW's and SBFEP's operations – other than to coordinate road use.
- **Deciduous volume harvested**
TimberWest is committed to harvesting deciduous species commensurate with their contribution to the forest inventory. Since the signing of an alder harvesting contract with Coast Mountain Hardwoods the alder harvest has increased significantly above that level in recognition of the fact that many

stands are approaching overmaturity. In 2000 the deciduous harvest was 38,987 m³.

3.2 Forest Health

- Forest health conditions

Moresby Management Unit

The Western Blackheaded Budworm, *Acleris gloverana*, and Western Sawfly, *Neodiprion tsuga*, are serious pests in the Moresby Management Unit (MU). These defoliating insects reached epidemic levels in 1998. In 2000, infestation levels remained high and resulted in an expansion in affected areas. The heaviest concentrations occur in the Haans and Deena watersheds. A monitoring program was established by the Pacific Forestry Center to study the effects of the infestation. J.S. Jones Sandspit Ltd. has supported this monitoring program by providing digital maps of the MU to the Pacific Forestry Center to assist in mapping the outbreak.

It is not known at this time what volume impacts the current outbreak will have as the level of severity and extent of the outbreak has not been experienced on the island before. J.S. Jones has budgeted for reconnaissance work in the summer of 2001 and will cooperate with the appropriate agencies in an attempt to further understand the implications of the outbreak.

Johnstone Strait Management Unit

There are no new incidence of pest or forest health problems. Balsam Woolly Aphid remains a minor level pest causing mortality in older second growth Abies. Generally, presence of Abies is scattered or isolated in small pockets and damage is therefore somewhat scattered. Root rots are present in some second growth areas, particularly on Quadra Island and in Reid Creek/Jackson Bay. Phellinus and Armellaria are the two most common types of root rot. Levels of incidence are generally low.

- Forest health related activities/treatments (conducted or planned)

Johnstone Strait

Root rot, where it is in areas large enough to manage (areas > .2 ha), is dealt with by post harvest stumping where possible. Where post harvest stumping is not practical, planting with resistant species is undertaken. In areas where the Balsam Woolly Aphid it thought to be present, planting with Abies species is limited to 30%.

3.3 Silviculture

TimberWest endeavours to achieve excellence in basic forestry practices through rapid reforestation with a suitable number of seedlings of the appropriate species of the best genetic stock available and careful attention to brushing and weeding requirements. We are proud to say that we achieve this goal. Harvested areas planned for planting are restocked within 2 years or less, 80% of our seedlings are of genetically improved stock, and our brushing and weeding (B&W) program is comprehensive, timely and large scale due to the prevalence of high site lands. Johnstone Strait was one of the first coastal operations granted a five year Pest Management Plan.

The table below shows the intensive silviculture activities in 2000.

Intensive Silviculture in Year 2000		
Management Unit	Juvenile Spacing	Fertilization
Johnstone Strait	29 ha	945 ha
Bonanza Lake	49 ha	117 ha

3.4 Variable Retention Forest Management

On May 10, 1999, TimberWest announced that it would replace clearcutting with Variable Retention harvesting over a four year period on both its private lands and public tenures. VR harvesting was expected to better deliver sound forest stewardship, support sustainable forest management and better balance the needs of neighbours, the owners of TimberWest and society. During the first 18 months of the implementation period TimberWest focused much of its efforts on its private lands.

TimberWest also recognizes that knowledge about how best to apply VR principles and the results of such application is limited and that adaptive management is needed to achieve the desired objectives over time. TimberWest will continue to refine how it applies VR based upon experience and the input of information from external sources. At the same time, the company continues to explore alternative approaches for methods that meet its land management objectives.

4.0 Timber Processing

Timber Flow

The net log production excluding waste was 1,015,917 m³ and was distributed as follows:

- Elk Falls Lumber Mill 165,516 m³
- Norske pulp 123,048 m³
- Other sales/trades 572,627 m³
- Stag Lumber/Teal Shingle Mills 154,726 m³

- Note: 1. Sandspit production is directed to Stag Lumber and Teal Shingle mills or sold/traded for equivalent, suitable volumes.
 2. Elk Falls Lumber Mill's consumption was supplemented from other tenures and private lands and totaled 447,796 m³.

Timber Processing

Primary Breakdown Facility		Primary Products		Markets
Elk Falls Lumber 447,796 m ³	2%	Higrade lumber	To	Domestic
	31%	Structural merch lumber	To	85% Japan, 15% domestic domestic/Chinese
	10%	Utility/economy low grade	To	
	36%	Chips		
	21%	Hog fuel		
Stag Lumber Teal Shingle 154,726 m ³	45%	Lumber		
	10%	Shakes & shingles		
	30%	Chips		
	10%	Sawdust & shavings		
	5%	Hog fuel		

• TFL harvest volume by district

TFL 47 is located in three forest districts. The total scale (excluding waste) of 1,015,917 m³ was distributed as follows:

- Campbell River Forest District 632,209 m³
- Port McNeill Forest District 229,010 m³
- Queen Charlotte Forest District 154,698 m³

• Volume of timber offered for sale within the forest region

Essentially all wood from the TFL less any consumption by our own mills (TimberWest and J.S. Jones) is offered for sale in the Vancouver Forest Region to veneer plants, shingle mills, saw mills, pulp mills, paper mills and pole producers. This amounted to 695,675 m³.

5.0 Employment and Economic Opportunities

If applicable, detail the extent to which an approved Job Creation Plan (JCP) has been implemented and the results achieved, including a comparison to the approved JCP objectives.

There is no approved JCP in effect for TFL 47. Various FRBC funded projects provide employment for local people, First Nations and various other parties.

6.0 Knowledge Gaps

At the licensee's option, identify areas of forest management where further research could provide direct benefit to the achievement of the TFL management objectives

As noted above, the company's own experience and on-going input from various parties are contributing to improved application of Variable Retention.

APPENDIX I

Deciduous Harvest (alder leading timber types only)

TFL, Block	Cutblock	Deciduous Timber Type (Alder leading)	Area Harvested (ha)
TFL 47, Blk 5	5-41A	DC 6+	9.8
TFL 47, Blk 5	5-41C	DC 4-6	3.9
TFL 47, Blk 5	5-60	DC 6+	21.2
TFL 47, Blk 5	5-60A	D 6+	4.4
TFL 47, Blk 5	5-60A	DC 2-4	3.7
TFL 47, Blk 5	5-64	DC 6+	7.5
TFL 47, Blk 5	5-71	DC 6+	9.8
TFL 47, Blk 5	5-71A	D 2-4	2.6
TFL 47, Blk 5	5-71B	D 2-4	22.7
TFL 47, Blk 5	5-72	DC 4-6	3.5
TFL 47, Blk 5	5-72	DC 6+	13.6
TFL 47, Blk 5	5-72B	DH 6+	4.0
TFL 47, Blk 8	8-9	D 4-6	.2
TFL 47, Blk 8	8-10	DH 6+	.1
TFL 47, Blk 8	8-10C	DH 4-6	.2
TFL 47, Blk 8	8-22	D 2-	.4
TFL 47, Blk 8	8-24	DH 4-6	2.4
Total			110.0

APPENDIX II

Before First Entry Age Harvest

For the purpose of this report "Before First Entry Age" is defined as any stand harvested prior to the early entry age listed in Table 32 of the Timber Supply Analysis Information Package of Management Plan No. 3 for TFL 46.

This appendix lists the actual stand parameters as determined in a cutting permit cruise or stand assessment.

TFL, Block	Cutblock	Cruise Type	Area Harvested (ha)	From Type Ave. Mean Stand Vol/ha	From Cutblock Ave. Mean Stand DBH	Site Index	Stand Age
TFL 47 Blk 5	5-71A	C 6+	3.0	666	32.1	24	65
TFL 47 Blk 5	5-71B	CD 6+	.7	617	32.6	22	65
TFL 47 Blk 8	8-9	FH 6+	.4	715	40.0	23	70
TFL 47 Blk 8	8-10B	H 2-4	.6	195	36.3	15	78
TFL 47 Blk 8	8-10C	FH 6+	.7	693	36.9	24	78
TFL 47 Blk 8	8-20	FH 4-6	.1	569	32.6	22	70
TFL 47 Blk 8	8-20	HC 2-4	.1	363	32.6	22	70
TFL 47 Blk 8	8-20A	F 2-	.2	84	34.6	17	90
TFL 47 Blk 8	8-21	H 4-6	3.2	537	36.6	22	70
TFL 47 Blk 8	8-24	HC 6+	.2	565	37.5	24	70
TFL 47 Blk 9	9-2B	FH 4-6	5.0	424	32.3	23	80
TFL 47 Blk 12	12-N7A	FH 4-6	3.2	397	32.4	26	72
TFL 47 Blk 12	12-70	FH 2-4	1.8	172	36.6	24	70
Total			19.2				

Appendix III

TFL 47 – Harvest from Younger Age Classes

Areas harvested from younger age classes in 2000 are summarized below. Stands harvested at younger ages are stands harvested prior to the biological culmination age.

The table below does not include stands harvested prior to the first entry ages used as an approximation of financial rotation in the TFL 47 MP #2 Timber Supply Analysis. These “below first entry age stands” are reported separately in Appendix II.

Timber types, harvest ages and site classes are estimated from TFL 47's timber inventory. Areas are mapped hectares at 1:20,000.

TFL 47 – Harvest from Younger Age Classes - 2000

TFL Block	Setting	Forest Type	Harvest Age	Site Class	Area Harvested (ha.)	Yield Curve	Cul. Age	m3/ha @ harvest age	Avg. DBH @ Harv. Age
5	5-41A	CF	70	35	4.1	JS0535	79	616	35
5	5-41B	C(H)	80	25	1.8	JS0525	93	495	32
5	5-60A	F(D)	69	35	8.4	JS0135	70	616	33
8	8-10	FH	62	35	2.2	JS0335	63	650	30
8	8-10B	CH	74	25	0.2	JS0525	93	452	30
8	8-10C	CH	74	25	0.1	JS0525	93	452	30
8	8-10C	CH(F)	76	25	0.2	JS0525	93	466	30
8	8-23	HC(F)	70	25	0.0	JS0825	73	471	30
9	9-7E	H	57	30	5.1	JS0630	59	538	30
					22.1				