

# **SUSTAINABLE FOREST MANAGEMENT PLAN**

## **2004/05 Annual Report**

### **TREE FARM LICENCE 30**

**Canadian Forest Products Ltd.**

Prince George Operations



CSA – SFM  
SUSTAINABLE FOREST  
MANAGEMENT PLAN  
for  
Canadian Forest Products Ltd.  
Prince George Operations – TFL 30 DFA

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## 1.0 INTRODUCTION

Canadian Forest Products Ltd. (Canfor) achieved registration under the Canadian Standards Association CAN/CSA Z809-96 Sustainable Forest Management Standards for Tree Farm Licence 30 in July 2001. A public group - The TFL30 Public Advisory Group (PAG) was formed in September 2000 to help Canfor identify quantifiable local-level indicators and Objectives of Sustainable Forest Management. The 40 Indicators and Objectives identified by the TFL 30 PAG were detailed with associated forest management practices to achieve those objectives in a Sustainable Forest Management Plan for Tree Farm Licence 30 (Canfor SFMP, June 2001 and updated May 2003). This report summarizes the status of each of those indicators.

This report is prepared as part of the annual assessment to confirm Canfor's continued implementation of the registered CSA SFM. This report provides a status, to the end of 2004 or to March 31, 2005, of the 40 Indicators and Objectives of the SFM plan. In this report, each Indicator is re-iterated, and a brief status update is provided. For further reference to the intent of the Indicators and Objectives, or the practices involved, the reader should refer to Canfor's Sustainable Forest Management Plan for Tree Farm Licence 30 (Canfor SFMP, May 2003).

Generally, the status of the Indicators has changed little since they were first reported in June's 2001 SFM plan. Given the long-term nature of forest management and forest management practices, these small changes are not surprising. Continued harvesting and growing forests have resulted in some changes to the seral stage and old growth representation, but generally, either the Objectives are still being met, or results are expected in the long-term.

Progress in 2004/05 has been made on many Objectives such as Stream Crossing Quality Index with 7 new watersheds assessed, Alpha Wildlife's work on Rare and Endangered Species under Species Related Verifiers, and continued reworking of the survey methodology for Commercial & Non Commercial Diversity Index . The remainder of this document and the detailed status of each indicator are provided below.

As shown in the following table 90% (36 of 40) of the indicator objectives have been met or are pending and 10% (4 of 40) of the indicator objectives were not met.

Indicator	Objective Met	Objective Pending	Objective Not Met
2.1 Late Seral Stage	X		
2.2 Forest Patches	X		
2.3 Forest Interior Condition	X		
2.4 Biodiversity Reserves	X		
2.5 American Marten Habitat	X		
2.6 Native plant Species Diversity	X		
2.7 Caribou Habitat	X		
2.8 Riparian Management Areas	X		
2.9 Fish Stream Crossings	X		
2.10 Species-related Verifiers	X		
2.11 Deciduous Tree Species		X	
2.12 Sanitation Harvest Index	X		
2.13 Accidental Industrial Fires	X		
2.14 Site Index	X		
2.15 Permanent Access Structures	X		
2.16 Rare Plant Communities	X		
2.17 Stream Crossing Quality Index		X	
2.18 Terrain stability	X		
2.19 Soil Conservation	X		
2.20 Peak Flow Index	X		
2.21 Seral Stage Distribution	X		
2.22 Volume of Timber Harvested	X		
2.23 Waste Residue			X
2.24 Areas Meeting Free Growing Dates	X		
2.25 Areas Regenerated with Ecologically Suitable Species	X		
2.26 Mean Annual Increment		X	
2.27 Long Term Sustainable Harvest	X		
2.28 Commercial & Non-commercial Use			X
2.29 Supply to Local Processing Facilities	X		
2.30 Local Contract Value	X		
2.31 Forest Management Satisfaction Score		X	
2.32 Canfor Response to Public Concerns	X		
2.33 Number of Public Advisory Meetings	X		
2.34 Public Advisory Group Questionnaire	X		
2.35 Aboriginal and Treaty Rights	X		
2.36 Aboriginal Participation on the PAG			X
2.37 Special & Unique Needs of Aboriginal Peoples			X
2.38 Approved Terms of Reference	X		
2.39 Approved Public Plans	X		
2.40 Opportunities for Public Input	X		

## 2.0 SFM INDICATORS AND OBJECTIVES

### 2.1 LATE SERAL STAGE DISTRIBUTION

**Indicator:** Late seral stage distribution by natural disturbance type by BEC zone by landscape unit within the DFA.

**Management Objective:** Maintain “old” and “mature & old” forests consistent with the targets (0% variance) in Table 1.

This is a “state of the forest” indicator and portrays the percentage of the landscape that is represented by the older age classes. Table 1 identifies the current status of late seral representation and targets associated with each landscape and ecosystem on TFL 30. See Appendix 1 for a map that spatially shows the late seral stage distribution across TFL30.

The late seral objective has been met in 2004/05 as 100% of the mature and old seral stage targets that were to be achieved annually were accomplished.

In a number of cases due to natural disturbances (such as fire) and past harvesting, the status of the mature and old seral stage category is below the target required. As the forest grows older, the seral stage status will start trending toward the targets. In these circumstances, it will take several decades before the targets are achieved. In late seral stages areas below the target, harvesting will not normally occur until the status is above the targets. Exceptions to this may be made for forest protection activities (beetles, windthrow).

It is recommended that this late seral distribution indicator methodology and targets be replaced with the newer old forest indicator as identified in the Prince George Timber Supply Area – Landscape Biodiversity Order. This would include using Natural Disturbance Unit (NDU) methodology. This change should occur during PAG discussion in the fall of 2005 as a new indicator matrix for the Z809-02 standard is created.

**Table 1. Current State of Indicator and Late Seral Stage Targets.**

Land- scape Unit	N D T	BEC Subzones	Seral Stage (years)	Current Status as of March 31, 2005	Target %	Achieved By	
Averil	3	SBSwk1, mk1	Mature>100	17.5 %	> 11%	Annually	
			Old>140	26.5 %	> 11%	Annually	
	1	ICHvk2*	Mature>100	17.8 %	> 17%	Annually	
			Old>250	14.6 %	> 13%	Annually	
	1	ESSFwk2*	Mature>120	60.9 %	> 19%	Annually	
			Old>250	0.0 %	> 19%	2081	
Seebach	2	SBSvk	Mature > 100	45.7 %	> 15%	Annually	
			Old > 250	1.8 %	> 9%	2055	
	3	SBSwk1	Mature > 100	7.4 %	> 11%	2055	
			Old > 140	53.9 %	> 11%	Annually	
	1	ICHvk2	Mature > 100	29.5 %	> 17%	Annually	
			Old > 250	15.8 %	> 13%	Annually	
	1	ESSFwk2, wc3	Mature > 120	49.2 %	> 19%	Annually	
			Old > 250	1.8 %	> 19%	2055	
	Woodall	2	SBSvk	Mature > 100	37.0 %	> 15%	Annually
				Old > 250	0.3 %	Long-term > 9%	2055
1		ICHvk2	Mature > 100	50.0 %	> 17%	Annually	
			Old > 250	2.0 %	> 13%	2055	
1		ESSFwk2, wc3	Mature > 120	66.2 %	> 19%	Annually	
			Old > 250	1.3 %	> 19%	2055	

## 2.2 FOREST PATCHES

**Indicator:** Percentage of forest patches by patch size category by landscape unit within the DFA.

**Management Objective:** Achieve the distribution of forest patches consistent with the targets (+/-10% variance) in Table 2.

The forest patch indicator provides information regarding the representation of young forest patches in various sizes across ecosystems and landscapes. Table 2 identifies the current status of patch size distribution and targets associated with each landscape and ecosystem on TFL 30. See Appendix 1 for a map that spatially shows the current TFL30 patch size distribution.

**Table 2. Current Patch Size Distribution and Targets by Category by Landscape Unit.**

Landscape Unit	Category	Size Range (ha)	Current Status as of March 31, 2005	Projected Status to Dec. 2008	Target	Achieved By
Averil (grouped into NDT 3)	Small	< 40	7 %	8 %	10-20%	2020
	Medium	40–249	46 %	38 %	10-20%	2080
	Large	250–1000	33 %	46 %	60-80%	2080
	Very Large	> 1000	14 %	8 %	0%	2015
Seebach (grouped into NDT 2)	Small	< 40	5 %	8 %	30-40%	2018
	Medium	40–79	17 %	25 %	30-40%	2060
	Large	80–250	29 %	36 %	20-50%	Annually
	Very Large	> 250	49 %	32 %	0%	2020
Woodall (grouped into NDT 1/2)	Small	< 40	5 %	12 %	30-40%	2080
	Medium	40–79	20 %	18 %	30-40%	2060
	Large	80–250	29 %	24 %	20-50%	Annually
	Very Large	> 250	46 %	46 %	0%	2020

The patch size objective has been met in 2003/04 as the targets that were to be achieved annually were accomplished. In most cases (10 of 12), due to past harvesting trends, the current status of the patch size category is outside of the target, however most are trending toward the target patch size distribution. One exception is the medium sized patches in the Woodall Landscape Unit. In future Forest Stewardship Plans, emphasis will be placed

on adding medium blocks to the Woodall landscape unit to provide a favorable trend toward the desired target.

It is recommended that this patch size distribution indicator methodology and targets be replaced with those used in the Prince George Timber Supply Area – Landscape Biodiversity Order.

## 2.3 FOREST INTERIOR CONDITION

**Indicator:** Forest interior condition by variant by landscape unit within the DFA.

**Management Objective:** Maintain the forest interior condition (-1% variance) consistent with the targets in Table 3.

Forest interior condition refers to the area in old forests where edge effects no longer influence environmental conditions (i.e. generally habitat conditions). Table 3 identifies the current status of the forest interior condition.

**Table 3. Current Forest Interior Condition and Targets by Variant by Landscape Unit.**

Landscape Unit	BEC	Current Status as of March 31, 2005	Projected Status as of Dec. 31, 2008	Target	Achieved By
Averil	SBSmk1	23 %	35 %	> 3.6%	Annually
	SBSwk1	19 %	26 %	> 3.6%	Annually
	ESSFwk2	0 %	0 %	> 6.3%	2074
	ICHvk2	13 %	13 %	> 4.3%	Annually
Seebach	SBSvk	1 %	1 %	> 3.0%	2090
	ICHvk2	5 %	5 %	> 4.3%	Annually
	SBSwk1	54 %	56 %	> 3.7%	Annually
	ESSF wk2 & wc3	1 %	2 %	> 6.3%	2100
Woodall	SBSvk	1 %	1 %	> 3.0%	2100
	ICHvk2	1 %	2 %	> 4.3%	2066
	ESSF wk2 & wc3	1 %	1 %	> 6.3%	2070



As shown in Table 3, the current status of the forest interior condition exceeds the minimum levels required in 100% of the ecosystems to be achieved annually (5 of 5). In these areas, current and future practice will be to continue to harvest while monitoring the availability the forest interior condition to ensure the minimum threshold limits are maintained. In the remaining ecosystems however, the forest interior condition is less than the target, or zero. This is due to the fact that currently there is very little or no forest in these ecosystems that is classified as old seral age class - having an age greater than 250 years old (a requirement for forest interior condition in these ecosystems). Current and future practice in these cases will be to avoid harvesting of any old forest while planning for recruitment of the interior forest condition from mature stands.

It is recommended that this interior forest habitat indicator methodology and targets be replaced with those used in the Prince George Timber Supply Area – Landscape Biodiversity Order.

## 2.4 BIODIVERSITY RESERVES

**Indicator:** Proportion of biodiversity reserves by BEC zone within the DFA.

**Management Objective:** Maintain the proportion of biodiversity reserves consistent with the targets (-1% variance) in Table 4.

Biodiversity reserves consist of any forest area deducted from the timber harvesting landbase including; mapped wildlife tree patches, riparian reserves, and all other large reserve areas. This indicator displays the proportion of TFL30, which is considered to be a “biological reserve” for each of the BEC zones.

As shown in Table 4, this indicator is further subdivided according to the type of biological reserve (small and large reserves). Small reserves are considered to be any reserve that is prescribed as part of the Silviculture Prescription/Site Plan. Large reserves are large geographical areas as established in the management plan.

**Table 4. Current Status of Biodiversity Reserves and Targets by BEC Subzone**

Biodiversity Reserve Type	BEC Subzone	Current Status As of March 31, 2005	Target (% area after 1996)	Achieved by
Small Scale Reserves: ✓ Wildlife Tree Patches ✓ Riparian Reserve Zones	Averil SBS mk1	9.5 %	> 8	Annually except for Seebach & Woodall ESSFwk2 (2010) and ICHvk2 (2020)
	Averil SBS wk1	10.4 %	> 10	
	Averil ICH vk2	7.2 %	> 7	
	Averil ESSF wk2	12.1 %	> 8	
	Seebach SBS vk	11.9 %	> 9	
	Seebach SBS wk1	10.4 %	> 8	
	Seebach ICH vk2	0.2 %	> 11	
	Seebach ESSF wk2	5.8 %	> 6	
	Woodall SBS vk	15.2 %	> 10	
	Woodall ICH vk2	12.3 %	> 6	
	Woodall ESSF wk2	1.6 %	> 2	
Large Scale Reserves: ✓ Giscome Portage Trail (Class A Provincial Park) ✓ Horseshoe Recreation Area ✓ High Value Caribou Habitat ✓ McGregor River Management Zone ✓ Seebach Riparian Management Zone ✓ Tri Lakes Recreation Area ✓ Woodall Recreation Area	SBS	2.1 %	> 2.0 %	Each 5-year re-inventory period proportional to the total productive forested area of the TFL.
	ICH	0.17 %	> 0.05 %	
	ESSF	4.8 %	> 4.5 %	
	Total	7.06 %	> 6.55 %	

Eight of the eleven small scale reserves are above the target. The small scale reserve not meeting the target (slightly below) is in the Seebach and Woodall ESSFwk2. As blocks are harvested in the Seebach and Woodall ESSFwk2 reserve areas are usually planned for 8-12% retention, therefore the overall small scale reserve is expected to continue to increase over time and is forecasted to meet the target in 2010. One hundred percent of the large scale reserves are above the targets.

## 2.5 AMERICAN MARTEN HABITAT

**Indicator:** Proportion of American Marten habitat by landscape unit within the DFA.

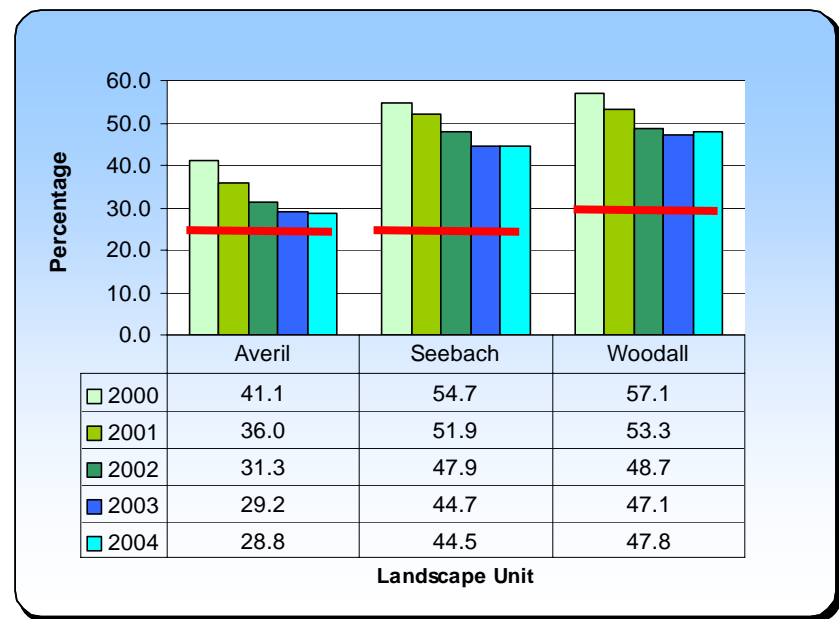
**Management Objective:** Maintain the proportion of wildlife habitat (0% variance) consistent with the targets in Table 5.

The current status of wildlife habitat as measured by American Marten habitat is shown in Table 5 and spatially on a map in Appendix 1. The targets have been achieved in 2004/05.

Current and future practice will be to continue to harvest while monitoring the availability the wildlife habitat to ensure the minimum threshold limits are maintained.

**Table 5. Area of American Marten Habitat.**

Landscape Unit	Current Status (area %) as of March 31, 2003	Marten Habitat Target (area %)	Achieved By
Averil	28.8 %	>25%	Annually
Seebach	44.5 %	>25%	Annually
Woodall	47.8 %	>30%	Annually



**Figure 1. Area of American Marten Habitat by Landscape Unit and Year.**

## 2.6 NATIVE PLANT SPECIES DIVERSITY

**Indicator:** Native plant species diversity index by plant associations within the DFA.

**Management Objective:** Maintain plant species diversity consistent with targets as identified in the Table 17 (SFM plan).

A diversity index is a mathematical measure of species diversity in a community. Diversity indices provide more information about community composition than simply species richness (i.e., the number of species present); they also take the relative abundance of different species into account.

In order for entire ecosystems to function effectively and be able to recover from disturbances (e.g. forest harvesting activities), it is necessary to retain a natural diversity of elements that are fundamental to ecosystem recovery. Largely, plant species provide the basic requirements and fundamental habitat for faunal species and contribute to the recycling of nutrients and other life sustaining elements necessary to sustain the productive capacity of the ecosystem. As a result, ecosystem resilience is strengthened if a natural diversity of plant life can be maintained throughout TFL30.

As shown in Table 6 all 5 site association have met the plant diversity index within managed stands.

**Table 6. Plant stand diversity index by Grouped site association**

Grouped Site Association	Current Status as of March 31, 2005	Shannon-Wiener Target	Achieved By
Sxw – Devil's club	3.045	>2.029	Annually
Sxw – Oak fern	3.052	>2.041	Annually
Sxw – Huckleberry	3.297	>1.415	Annually
Sxw – Horsetail	2.753	>2.216	Annually
BI – Oak fern	2.911	>2.041	Annually

## 2.7 CARIBOU HABITAT

**Indicator:** Availability of caribou habitat and connectivity corridors within the DFA.

**Management Objective:** Maintain the availability of caribou habitat (0% variance) and connectivity corridors (-1 variance) consistent with the targets in Table 7.

This indicator tells us how much of the TFL 30 is being maintained as caribou habitat. Current status of this indicator is shown in Table 7 and the targets have been met in 2004/05. No harvest activities took place in Caribou high, Caribou medium or within the 7 connectivity corridors.

**Table 7. Current Caribou Habitat and Connectivity Corridors and Targets.**

Caribou Management Areas	Current Status	Target	Allowable Variance	Achieved By
High Value Caribou Habitat	Current status is 100% reserved from harvest. (7171 ha in reserve)	Reserve 100% of the high value Caribou habitat (7171ha) from harvesting.	None	Annually
Medium Value Caribou Habitat	No harvesting was done in 2004/05 in medium Caribou habitat	Retain at least 67% of the pre-harvest basal area within each cutblock. Re-entry into the cutblock is after 81 years.	None	Annually
Caribou Connectivity Corridors	There are 7 corridor units (5459 ha) with a total of 20 BEC/NDT combinations for tracking. On average across all units currently 76% of the forested area is mature.	Maintain 7 functional caribou connectivity corridors. (functional is defined as at least 200 m in width and 70% mature forest.)	- 1 connectivity corridor	Annually

## 2.8 RIPARIAN MANAGEMENT AREAS

**Indicator:** Percent of riparian management areas consistent with the silviculture prescription after harvesting within the DFA.

**Management Objective:** 100% (-10% variance) of all riparian management areas will be consistent with the silviculture prescription/site plan after harvesting.

Riparian areas occur next to the banks of streams, lakes and wetlands and include both the area covered by continuous high moisture content and the adjacent upland vegetation. Riparian management areas contribute to sustainable forest management of TFL 30 through the conservation of riparian and aquatic environments, which are key for the survival of flora and

fauna species. Riparian management areas also provide for critical habitats, home ranges, and travel corridors for wildlife.

Over the last harvesting year (April 1, 2004 to March 31, 2005), from a review of our Incident Tracking System and EMS final harvest inspection forms, 100% of all riparian management areas were consistent with the site plans after harvesting.

## 2.9 FISH STREAM CROSSINGS

**Indicator:** Barriers to fish migration within the DFA.

**Management Objective:** 100% (0% variance) of new fish-stream crossings will provide for fish passage.

In order to maintain the natural diversity of fish species, fish stream crossings cannot be a barrier to the migration of fish species. As fish are also an important food source for other faunal species, the success of these stream crossings (i.e. to provide for fish migration) contributes to the maintenance of other faunal species on the DFA. This indicator contributes to the maintenance of species diversity and the maintenance of ecosystem productivity by maintaining of the natural diversity of flora and fauna.

Over the last harvesting year (April 1, 2004 to March 31, 2005), from a review of the company EMS final inspection forms completed, 100% indicated that fish passage was maintained as no non-conformances were reported into ITS.

## 2.10 SPECIES-RELATED VERIFIERS

**Indicator:** The percent of species at risk with management strategies being implemented.

**Management Objective:** On an annual basis, ensure that 100% (0% variance) of species at risk management strategies are being implemented as scheduled. On an annual basis, ensure that 100% (-20% variance) of species related projects are being implemented.

There were no species at risk encountered for 2004 therefore a Registered Professional Biologist review of our strategies dealing with site specific issues was not possible. Species at Risk management strategies have been updated in early may 2005. During 2004 the only species related project on TFL30 was the field verification of fisher habitat and therefore 100% of the projects were implemented. A report in March 2005 was produced on the verification of predicted distribution of Fisher in TFL 30.

## 2.11 DECIDUOUS TREE SPECIES

**Indicator:** Proportion of deciduous tree species basal area by BEC subzone within the DFA.

**Management Objective:** Achieve the proportion of deciduous tree species basal area by BEC subzone consistent with the targets (-1% variance) in Table 8.

Current status of this indicator (Table 8) remains unchanged from the information presented in the Sustainable Forest Management Plan for TFL30 – June 27, 2001. This indicator is expected to change after the next re-inventory period scheduled for early 2007.

**Table 8. Current Deciduous Tree Species Component and Targets.**

BEC subzone	Natural Stands Current Status *	Managed Stands Current Status *	Target Managed Stands (% deciduous species based on basal area)	Achieved by
SBS mk1	11	14%	>6%	Every 5 year re-inventory period
SBS wk1	7	15%	>5%	
ICH vk2	2	4%	>1%	
ESSF (all subzones)	0	0%	0	
SBS vk	2	8%	>2%	

\* the current status % were obtained by multiplying the percent composition of deciduous in each stand by BEC subzone reported in the VRI attribute file by the forested area within the stand then dividing by the total forest area in each BEC subzone variant (see table 51 and 52 in the MP 9 data information package for more details).

## 2.12 SANITATION HARVEST INDEX

**Indicator:** Sanitation Harvest Index for bark beetle infected area (pine, spruce, Douglas-fir) within the DFA.

**Management Objective:** Maintain Sanitation Harvest Index below 1000 (+100 variance) for all areas infected with pine, spruce, or Douglas- fir bark beetle.

Bark beetle populations (especially spruce bark beetle) have historically caused significant damage to TFL 30. To effectively manage a forest it is necessary to take a proactive approach in controlling potentially catastrophic outbreaks of bark beetles through the use of a variety of treatment techniques. The sanitation harvest index (SHI) is a method to prioritize treatments and the measure the relative success of the beetle management program. Over the long term, the index will help to identify trends in forest productivity and resilience.

Progress during the 2004/05 season includes:

- Aerial overview mapping (Heli-GPS) was conducted in the summer of 2004 on the western portions of TFL 30 to assess beetle populations with the remainder of the TFL area having the 2003 beetle sites “grown” utilizing the FORHEAL data base. No ground data was collected in 2004.
- The Sanitation Harvest Index was calculated with the following assumptions in place for individual epicenters: a) the area of the epicenter is 3.14 hectares based upon a 100 metre radius about a point and b) stand density was set a 350 stems per hectare and 100% of the stems were “host species.” The sanitation harvest index was calculated for each identified site and the following averages were taken for three areas of the TFL: North TFL (IBM) SHI= 27-LOW Ranking , South TFL (IBM) SHI=28-LOW, East TFL (IBM) SHI-143- LOW and East TFL (IBS) SHI-30 LOW.
- In summary, the SHI are consistent with the target indicator (<1000 SHI) in consideration of the active beetle management activities within the DFA. The range of SHI is generally interpreted as follows: 0-599=low priority, 600-999=moderate priority, and > 1000 = high priority.

The objective has been met in 2004/05.

## 2.13 ACCIDENTAL INDUSTRIAL FIRES

**Indicator:** Area of accidental industrial caused fires within the DFA.

**Management Objective:** No more than 10 hectares (0% variance) of accidental industrial caused fires annually.

This indicator provides an indication of forest losses due accidental industrial fires. An accidental industrial caused fire is a fire that is initiated because of industrial activity on the defined forest area.

After reviewing the Canfor Incident Tracking System and cross referencing the Ministry of Forests Fire Center information for the period April 1, 2004 to March 31, 2005, it was confirmed there was 0 hectares of accidental industrial caused fires on TFL 30. The objective has been meet in 2004/05.

## 2.14 SITE INDEX

**Indicator:** Site index by BEC subzone within the DFA.

**Management Objective:** Maintain the site index consistent with the targets (-5% variance) in Table 9.

Site index is a relative measure of forest site quality. It is a measure of the height growth that can be expected in 50 years (after trees reach 1.3 m in height) by a particular tree species on a given site. Since site index is a physical measure of the growth of trees in a stand at a specified point in time, it provides a good method to evaluate if the productivity capacity of the forest is being maintained.

Data in 1999-2004 was collated by BEC subzone for the site index calculation. The data mainly included pre 1987 silviculture surveys and recent free growing surveys, which allowed for growth intercept assessment of site index. The current status of this indicator (Table 9) in bold shows that it has been updated while the others remains unchanged from the

information presented in the Sustainable Forest Management Plan for TFL30 – June 27, 2001 (as there was not enough or zero sample data).

**Table 9. Current Site Index and Targets by BEC Subzone.**

BEC Subzone	Elevation	Current Status (Average Spruce Site Index (m))	Target (Average Spruce Site Index (m))	Achieved By
SBSmk1, SBSvk, SBSwk1	< 1000m	23.3	>20.8	A 5-year rolling average.
SBSvk, SBSwk1	> 1000m	23.5	>19.6	
ESSFwc3	> 1000m	12.1	>11.5	
ESSFwk2	> 1000m	15.0	>13.7	
ESSFwcp3	> 1000m	6.0	>5.7	
ICHvk2	> 1000m	22.4	>20.2	

## 2.15 PERMANENT ACCESS STRUCTURES / LAND CONVERSION

**Indicator:** Proportion of the DFA converted to permanent access structures or conversion to other uses.

**Management Objective:** Maintain reductions to the forest landbase due to permanent access structures or conversion to other uses to a maximum of 4 % (+/- 2 % variance).

A permanent access structure is a structure, including a road, bridge, landing, gravel pit or other similar structure, that provides access for timber harvesting and remains after timber harvesting activities on the area are complete. This indicator is simply a measure of the amount of area permanently removed on an annual basis from the productive forest as a result of development, in relation to the defined forest area.

The objective has been met in 2004/05 as a total of 2.02% of the productive forest landbase have been converted to permanent access structures.

## 2.16 RARE PLANT COMMUNITIES

**Indicator:** Rare plant community management strategies

**Management Objective:** On an annual basis, ensure that 100% (0% variance) of rare plant community management strategies are being implemented.

This indicator tells us about the extent that TFL 30 is being managed respective of rare plant communities. It provides structure relating to recognition, management, and reporting on these communities, leading to management practices that positively impacts the indicator.

- Rare plant communities on TFL 30 include the following:
- Black Spruce / Lodgepole Pine / Bog Laurel / Spagnum (BS)
  - Western Red Cedar / Devil's Club / Ostrich Fern (DO)
  - Hybrid White Spruce / Douglas Fir / Thimbleberry (DT)
  - Western Hemlock / Western Red Cedar / Cladonia (HC)

The amount of each of these rare plant communities is shown in the following table.

**Table 10. Rare Plant Community Areas on TFL 30.**

Rare Plant Community	BEC Subzone	BEC Subzone Area (ha)	Rare Plant Community Area (ha)
BS	SBSvk	81946	1013
DO	ICHvk2	10399	1181
DT	SBSvk	81946	1188
HC	ICHvk2	10399	160

Canfor has developed management/protection strategies for these plant communities. Species at risk training including rare plants and plant communities has been completed for operational staff.

For 2004/2005, no activities on the ground identified rare plant communities and there were no site plans that contained rare plant communities within the DFA, therefore no reviews by a Registered Professional biologist was needed. Species at Risk management strategies were updated in May 2005 and include strategies for rare plant communities.

## 2.17 STREAM CROSSING QUALITY INDEX

**Indicator:** Stream Crossing Quality Index (SCQI) for each watershed within the DFA.

**Management Objective:** Maintain SCQI consistent (-10% variance) with Table 18.

The stream crossing quality index is a measure, which indicates the potential of a stream crossing (permanent road stream crossings) to deliver sedimentation into the stream. A high index indicates a high potential for the crossings to add sediment to the adjacent stream whereas a low index indicates that the crossings are being well managed to reduce the possibility of sediment entering the stream from the crossing.

The following progress has been made on this indicator since June 2001:

- A stream crossing quality index scoring methodology has been developed by P. Beaudry & Associates for Canfor.
- An inventory map of stream crossing has been produced for TFL30 and is included in Appendix 1.
- An associated database of stream crossing information has been developed.
- Sampling of stream crossing covering 8 sub basins in TFL30 during 2002.
- Sampling continued in the summer of 2004 with the completion of the Upper Seebach and 7 new watersheds.

The SCQI current status of TFL30 sub basins sampled in 2002 and 2003 are shown in the following tables:

**Table 11. Current Stream Crossing Quality Index within TFL30 for 2002.**

Sub-Basin	Number of crossing surveyed	SCQI Current Status (March 31, 2003)	SCQI Rating Sum of ind. Crossing scores/sq. km	% crossings high H2O quality concern
Barney Creek	70	0.54	High	5.71
East Olsson	39	0.39	Moderate	5.13

Herring	67	0.30	Moderate	4.48
Lower Olsson	48	0.29	Moderate	14.89
Residual D	44	0.19	Low	2.27
Upper Seebach	154	0.29	Moderate	5.19
Basin 4	48	0.29	Moderate	14.58
Woodall	96	0.55	High	7.29

**Table 12. Current Stream Crossing Quality Index within TFL30 for 2003.**

Sub-Basin	Number of crossing surveyed	SCQI Current Status (March 31, 2004)	SCQI Rating Sum of ind. Crossing scores/sq. km	% crossings high H2O quality concern
Herring	83	0.39	Moderate	10.84
Upper Seebach	300	0.62	Very High	8.33
East Seebach	270	0.61	Very High	10.04
Averil	157	0.57	High	13.38
Limestone	60	0.30	Moderate	1.67
Watershed 20	62	0.81	Very High	22.58
Basin A	100	0.34	Moderate	5.0
Watershed 25	22	0.12	Low	13.64

Work will continue in 2004 to assess further stream crossings in the remaining sub basins. In addition, restoration plans for specific sites will be developed.

## 2.18 TERRAIN STABILITY

**Indicator:** Percent of silviculture prescriptions and road designs consistent with terrain stability field assessments within the DFA.

**Management Objective:** 100 % (0% variance) of silviculture prescriptions and road designs are consistent with the terrain stability field assessments annually.

A terrain stability field assessments (TSFA) are completed on any harvest or road building proposal that lies within an area identified as either unstable or potentially unstable. The TSFA is usually completed coincidentally with the site plan or road layout and design. The recommendations of the TSFA are then integrated into the site plan or road layout and design and carried-out in forest operations. To ensure the recommendations are carried through, Canfor provides for internal checks prior to the development project (pre-work meeting), and after completion of the project (final inspection). Inconsistencies are reported through our Environmental Management System.

Over the period April 1, 2004 to March 31, 2005, from a review of site plans and road designs, no terrain stability field assessments were needed.

## 2.19 SOIL CONSERVATION

**Indicator:** Number of cutblocks consistent with soil conservation targets in silviculture prescriptions within the DFA.

**Management Objective:** 100% (0% variance) of cutblocks are consistent with soil conservation targets identified in the silviculture prescription.

Over the period April 1, 2004 to March 31, 2005, from a review of silviculture prescriptions and completed EMS forms, 100% of cutblocks having activity conducted on them were consistent with soil conservation targets in site plan.

All areas proposed for harvest are reviewed to ensure protection of soil resource within acceptable limits. Minimizing the negative impact caused by forest management activities such as harvesting, road building, and

silviculture conserves soil. These impacts include soil compaction, displacement and mass wasting. The site plan provides standards to minimize impacts on soil productivity. Conservation of soils sustains the long-term productivity of the ecosystem.

## 2.20 PEAK FLOW INDEX

**Indicator:** Peak flow index (PFI) for each watershed within the DFA.

**Management Objective:** Each year, 100% (- 10% variance) of the watersheds will be below the baseline target in Table 13. Each year, all watersheds that exceed the baseline target will have a watershed review completed wherever new harvesting is planned (0% variance).

The peak flow index is a measure, which indicates the potential effect of harvested areas on water flow in a particular watershed. Most hydrologic impacts occur during periods of the peak stream flow in a watershed. Peak flow is the maximum flow rate that occurs within a specified period of time, usually on an annual or event basis. In the interior of British Columbia, peak flows occur as the snowpack melts in the spring.

Current status of peak flow index into the 27 independent watersheds is shown in the following table. A peak flow index trend graph is shown in Appendix 2. Currently, 100% of the watersheds are below the targets.

**Table 13. Current Peak Flow Index on the DFA.**

Watershed name	PFI as of March 31, 2005	Target	Achieved by
Averil	44	< 65	Annually
Barney Creek	32	< 37	Annually
Basin 20	39	< 65	Annually
Basin 25	44	< 80	Annually
Basin 27	45	< 80	Annually
Basin 7	43	< 80	Annually
East Olsson	34	< 37	Annually
Herring	45	< 65	Annually
Horn	27	< 37	Annually



Hubble	30	< 80	Annually
Limestone	45	< 80	Annually
Lower Olsson	41	< 65	Annually
Mokus	77	< 90	Annually
Residual A	21	< 65	Annually
Residual B	33	< 37	Annually
Residual C	41	< 65	Annually
Residual D	23	< 37	Annually
Residual E	27	< 65	Annually
Residual F	43	< 65	Annually
East Seebach	32	< 80	Annually
Lower Seebach	61	< 65	Annually
Upper Seebach	35	< 80	Annually
Tay Creek	31	< 80	Annually
Upper Olsson	29	< 80	Annually
Basin 4	33	< 65	Annually
Woodall	28	< 37	Annually
West Torpy	16	< 37	Annually

## 2.21 SERAL STAGE DISTRIBUTION

**Indicator:** Seral stage distribution by landscape units by BEC zone within the DFA.

**Management Objective:** To achieve seral stage representative distribution (+/- 10% variance) consistent with the targets in Table 14.

Table 14 identifies the current status of seral stage distribution as of March 31, 2005 associated with each landscape and ecosystem on TFL 30. A Seral Stage Distribution Map in Appendix 1 displays the current status spatially.

**Table 14. Current Seral Stage Distribution and Targets.**

Land-scape Unit	NDT	BEC Subzones	Seral Stage	Current Status	Target %	Achieved By
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Averil	3	SBSwk1,	Early < 40 yrs	42 %	34-44	12 decades
			Mid 40 – 100 yrs	14 %	34-44	12 decades
			Mature > 100 yrs	17 %	> 11	Annually
			Old > 140 yrs	26 %	> 11	Annually
	1	*ICHvk2	Early < 40 yrs	27 %	30-40	12 decades
			Mid 40 – 100 yrs	40 %	30-40	12 decades
			Mature > 100 yrs	18 %	> 17	12 decades
			Old > 250 yrs	15 %	> 13	2010
	1	*ESSFw k2, wc3	Early < 40 yrs	30 %	26-36	12 decades
			Mid 40 – 120 yrs	9 %	26-36	12 decades
			Mature > 120	61 %	> 19	12 decades
			Old > 250 yrs	0 %	> 19	2081
Seebach	2	SBSvk	Early < 40 yrs	42 %	33-43	12 decades
			Mid 40 – 100 yrs	11 %	33-43	12 decades
			Mature > 100 yrs	46 %	> 15	Annually
			Old > 250 yrs	2 %	> 9	2055
	3	SBSwk1	Early < 40 yrs	34 %	34-44	12 decades
			Mid 40 – 100 yrs	5 %	34-44	12 decades
			Mature > 100 yrs	7 %	> 11	Annually
			Old > 140 yrs	54 %	> 11	Annually
	1	ICHvk2	Early < 40 yrs	46 %	30-40	12 decades
			Mid 40 – 100 yrs	9 %	30-40	12 decades
			Mature > 100 yrs	30 %	> 17	Annually
			Old > 250 yrs	16 %	> 13	Annually
	1	ESSFwk 2, wc3	Early < 40 yrs	22 %	26-36	12 decades
			Mid 40 – 120 yrs	27 %	26-36	12 decades
			Mature > 120 yrs	49 %	> 19	Annually
			Old > 250 yrs	2 %	> 19	2055
Woodall	2	SBSvk	Early < 40 yrs	46 %	33-43	12 decades
			Mid 40 – 80 yrs	18 %	33-43	12 decades
			Mature > 100 yrs	37 %	> 15	Annually
			Old > 250 yrs	0.3 %	> 9	2055
	1	ICHvk2	Early < 40 yrs	25 %	30-40	12 decades
			Mid 40 – 100 yrs	23 %	30-40	12 decades
			Mature > 100 yrs	50 %	> 17	Annually
			Old > 250 yrs	2 %	> 13	2055
	1	ESSFwk 2, wc3	Early < 40 yrs	5 %	26-36	12 decades
			Mid 40 – 120 yrs	27 %	26-36	12 decades
			Mature > 120 yrs	66 %	> 19	Annually
			Old > 250 yrs	1 %	> 19	2055

\* New ecosystems resulting from TEM

Seral stage is a representation of the forest by age classes. Forest stands that exist under different soils, climatic, ecological and natural disturbance conditions will have different seral stage representations.

Canfor has been implementing the principles of landscape biodiversity at the Forest Development Plan level since 1999. These principles have included managing for a range of seral stages across landscapes and ecosystems. The current seral stage distribution is heavily skewed to the old/ mature and young ages. Very little change is noted from the numbers shown in the 2003/04 annual report.

## 2.22 VOLUME OF TIMBER HARVESTED

**Indicator:** Annual volume of timber harvested (m<sup>3</sup>/year) within the DFA.

**Management Objective:** The volume harvested will not exceed 100% (+10% variance) of the total AAC for the five year cut control period.

This indicator is a simple annual summary the volume of timber harvested from the DFA. These values are determined from timber scale billings and is the same data used by the crown to determine stumpage revenue.

The current status of volume cut in 2004 is shown in the following table. Since the year 2000, the actual volume cut for any single year has varied from 50% (2001) of the AAC to 114% (2002).

**Table 15. Current Allowable Annual Cut on the DFA.**

Year	Actual Recorded Cut (m <sup>3</sup> )	Allowable Annual Cut (m <sup>3</sup> )	% Recorded Cut of AAC	Rolling 5 Year Cut Control %
2000	285,016	328,688	86.7%	81.2%
2001	165,183	328,688	50.3%	
2002	375,231	328,688	114.2%	
2003	301,940	328,688	91.9%	
2004	135,220	328,688	56.5%	

## 2.23 WASTE RESIDUE

**Indicator:** Proportion of avoidable sawlog waste within the DFA.

**Management Objective:** No more than 4 m<sup>3</sup>/ha (+2.0 m<sup>3</sup>/ha variance for W 2003/04) of the timber harvested seasonally will be attributable to avoidable sawlog waste from MOF waste billings.\*

\*Change of variance from 0.5 m<sup>3</sup>/ha to 2.0 m<sup>3</sup>/ha accepted at Oct. 30, 2003 PAG meeting.

Proportion of avoidable sawlog waste is the volume of timber left on the harvested areas that should have been removed (in accordance with the utilization standards in the cutting authority) compared to the total timber harvested on an annual basis. It does not include the volume of timber that could not be removed because of physical impediments, safety considerations, or other reasons beyond the control of the licensee.

Currently Canfor, as part of our cutting authorities, must conduct waste and residue surveys following harvest. These surveys are then compiled and forwarded to the Ministry of Forests who may bill the company for avoidable waste. Summer 2003 and Winter 2003 current status of avoidable sawlog waste is shown below:

**Table 16. Current Avoidable Sawlog Waste by Harvest Season.**

Harvest Season	Avoidable Sawlog Waste (m <sup>3</sup> /ha)
Winter 1998	2.2
Summer 1998	3.2
Winter 1999	2.7
Summer 1999	3.9
Winter 2000	1.6
Summer 2000	3.4
Winter 2001	3.25
Summer 2001	2.9
Winter 2002	2.63
Summer 2002	1.98
Winter 2003	5.82
Summer 2003	6.44
<b>Winter 2004</b>	<b>6.32</b>
<b>Summer 2004</b>	<b>8.13</b>

The target for avoidable sawlog waste has not been met for the past four seasons in which data is available for. The residue and waste numbers currently are less than the government standard (10 m<sup>3</sup>/ha) but the trend is away from the 4 m<sup>3</sup> per hectare originally proposed as a CSA indicator target. At the October 30, 2003 Public Advisory Group meeting, a change to the variance of +0.5 to +2 m<sup>3</sup>/ha was presented and accepted by the PAG. With the adjusted variance, the number has still been exceeded with the summer and winter 2004 data. Recommended improvements include reevaluating the target as discussion start with the PAG to move to the Z809-02 standard for June 2006. New Ministry of Forests policies are also being reviewing regarding waste and residual and are expected to be complete in mid 2006.

## 2.24 AREAS MEETING FREE GROWING DATES

**Indicator:** Percentage of cutblock stratum meeting free growing dates within the DFA.

**Management Objective:** 100% (-5% variance) of cutblock stratum will meet free growing dates as outlined in approved silviculture prescriptions or exemptions.

A Silviculture Prescription (SP) is a legal contract between the Provincial Government and a Forest Licensee. The SP provides the Crown with a commitment from the licensee to establish a new stand on a harvested area within a specified timeframe. Silviculture Prescriptions are completed by a Registered Professional Forester and detail the steps required to establish a new stand over a harvested area. All harvested areas require a Silviculture Prescription prior to harvest. The only exception being, if the area is very small (< 1 ha) and the trees are being removed for the purposes of sanitation, the Ministry of Forests may approve an exemption. Exemption sites for sanitation harvesting are a temporary measure in the life of a stand. It is expected that the entire stand will be harvested and reforested at some point the future. Exemption sites make-up less than a fraction of a percent of the total area harvested each year.

Given the recent changes in forest acts and regulations, silviculture prescriptions are being replaced by site plans and will not require approval from the Ministry of Forests. However, licencees will be held to similar standards as in the past as there will be a requirement for stocking standards

to be approved at the Forest Development Plan stage that will be subsequently referenced in the Site Plan.

From 1987 to present, 100% of harvested areas within TFL30 have met the late free growing dates as outlined in the Silviculture Prescription.

## 2.25 AREAS REFORESTED WITH ECOLOGICALLY SUITABLE SPECIES

**Indicator:** Percent of harvested areas adequately reforested with ecologically suitable species within the DFA.

**Management Objective:** 100% (0% variance) of harvested areas will be adequately reforested with ecologically suitable species.

In maintaining the existing condition of the forest landbase, reforestation efforts should be directed at regenerating the harvested areas with tree species that are ecologically compatible with the harvested site and the surrounding forest ecosystem. Ecologically suitable tree species are those coniferous or deciduous tree species that are naturally adapted to a site's environmental condition, including the variability in these conditions that may occur over time.

Currently, 100% of the areas planted within TFL30 from April 1, 2004 to March 31, 2005 were planted with ecological suitable tree species.

## 2.26 MEAN ANNUAL INCREMENT

**Indicator:** Mean Annual Increment by BEC subzone within the DFA

**Management Objective:** Maintain the MAI (-10% variance) consistent with the targets in Table 16 (Sustainable Forest Management Plan – June 27, 2001).

The mean annual increment (m<sup>3</sup>/ha/year) is the average annual (year) volume growth (m<sup>3</sup>) for a given area of forest (ha). The mean annual increment will change with the life of the stand. MAI is generally highest in the mid-seral stages and then declines as trees get older.

There is a network of growth and yield permanent sample plots (PSPs) distributed across TFL 30 within natural and managed stands, however data needs to be re-measured and analyzed over time to monitor changes in status.

Current status of this indicator remains unchanged from the information presented in the Sustainable Forest Management Plan for TFL30 – June 27, 2001. This indicator is expected to change after the next re-inventory period scheduled for early 2007.

## 2.27 LONG-TERM SUSTAINABLE HARVEST

**Indicator:** Long-term sustainable harvest level

**Management Objective:** Do not negatively impact (-10% variance) the long-term sustainable harvest level.

The long-term sustainable harvest level is a level of harvest that can be maintained indefinitely given a particular forest management regime. The first determination of the long-term sustainable harvest level occurred in the first round of the first timber supply review (1992-1996). The analysis that accompanies the TSR is based on the best available information and provides a timber supply forecast for the next 250 years while considering various socio-economic and ecological issues

Since the Timber Supply Review occurs every five years, and incorporates new information and changing social values, this provides the opportunity to fine tune short-term and long-term harvest levels throughout time. Therefore being responsive to changing conditions while still considering the long-term sustainability of the forest ecosystem.

The following tables from the June 2001, Sustainable Forest Management Plan for TFL 30 has been updated to include long-term sustainable harvest information from Management Plan 9 (MP 9). The long-term sustainable harvest level from MP 9 basecase is 508,759 m<sup>3</sup>.

**Table 17. Long Term Sustainable Harvest Levels Forecasting Results.**

Scenario Planning Option	Long-term Sustainable Harvest Level (m <sup>3</sup> /year)	Difference over MP 8 Status Quo Long Term Harvest Level
MP 8 Status Quo	373,360	0 %
MP 8 Base Case	479,998	29 %
MP 8 Intensive Management	569,998	53 %
MP 8 Biodiversity/Wildlife	429,998	15 %
MP 8 Watershed/Fish	439,998	18 %
MP 8 Scenic Area/Recreation	439,998	18 %
MP 8 Biodiversity Guidebook	419,995	12 %
MP 8 Priority Biodiversity Planning	489,997	31 %
MP 9 Base Case	508,759	36 %
MP 9 short term 15% decline	512,399	37 %
MP 9 Increase yield 10%	559,999	50 %
MP 9 Decrease yield 10%	457,519	23 %

## 2.28 COMMERCIAL AND NON-COMMERCIAL USE

**Indicator:** Results of annual survey of commercial and non-commercial uses for the DFA.

Market and non-market use diversity index within the DFA.

A diversity index is a mathematical measure of diversity within a community. Diversity indices provide more information about community composition than simply the number of uses present. A commercial/non-commercial (market/non-market) diversity index is a result of information regarding: 1) the number of different uses/values on the DFA, and 2) the intensity (number of participants) for each use/value. As these data are collected through annual public surveys, it is possible to evaluate the change in diversity of uses/values over time.

Progress on this indicator includes:

- A commercial and non-commercial use survey was developed and sent to the Public Advisory Group (PAG) for review
- In 2001/02 the calculation of the diversity index was 0.98 for commercial use and 3.00 for non commercial use

- In 2001/02, commercial and non-commercial use maps were produced for TFL30. By far there is more variable of non-commercial use. Popular non-commercial uses include camping, hiking, hunting, fishing, snowmobiling, berry picking, skiing and others. Commercial use includes trapping, guiding and forestry (although no one noted this on the survey).
- The 2002/03 calculation of the diversity index was 0.76 for commercial use and 1.27 for non-commercial use.
- From the 2002-03 survey, the main commercial uses are trapping and forestry and the main non-commercial uses are skiing, hunting, camping, and hiking.
- October 30, 2003 PAG meeting led to recommendations that the current survey methodology be re-visited
- February 2004- small PAG working group developed new methodology to be presented to PAG members during the June 2004 meeting. It was hoped that data would be available for the 2004-05 annual report but due to contract delays none was collected.
- A contract has been established with UNBC in June 2005 to survey users of TFL30 for recalculating the diversity index. It is believed that several more samples will be included in this new survey approach. Results will be available for the 2005/06 annual report.

### 2.29 SUPPLY OF TIMBER TO LOCAL PROCESSING FACILITIES

**Indicator:** Proportion of timber extracted from the DFA supplied to local processing facilities.

**Management Objective:** At least 95% (-5% variance) of the timber apportioned to Canfor will be supplied to local processing facilities.

This indicator provides information regarding the volume (m<sup>3</sup>) harvest from TFL 30 which goes to Canfor's timber processing facilities located within the boundaries of the Prince George timber supply area (TSA), compared to the total volume of wood harvested from the DFA.

Each truckload of wood is scaled at an approved Ministry of Forest scale site. When the truckload is weighed at the mill's scale, the timber mark is recorded into Canfor's Genus Systems-Logs Production Module

(LOGSPROD) . Querying LOGSPROD , over the last year (June 2004 to March 2005) volumes indicate that 99.6% of the timber harvested was delivered to local Prince George TSA facilities.

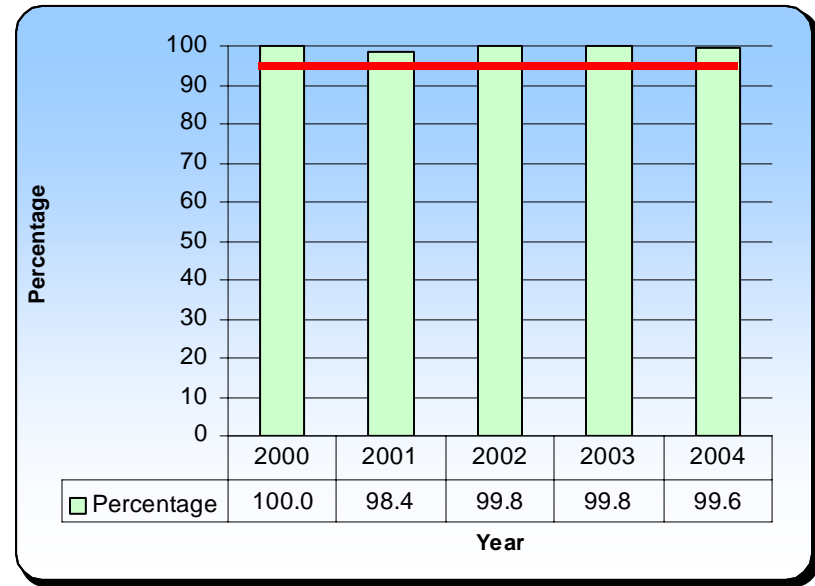


Figure 2. Percent of timber supplied to local facilities

### 2.30 LOCAL CONTRACT VALUE

**Indicator:** Percentage of contract value in dollars within the DFA serviced by north central British Columbia.

**Management Objective:** At least 90% (0% variance) of the contract value in dollars will be serviced within north central BC.

Forests not only provide a multitude of ecological benefits to the areas surrounding them, but they also provide many critical socio-economic benefits. In order to have sustainable socio-economic conditions for local communities associated with TFL 30, local forest related businesses should be able to benefit from the work that is required in the management of the

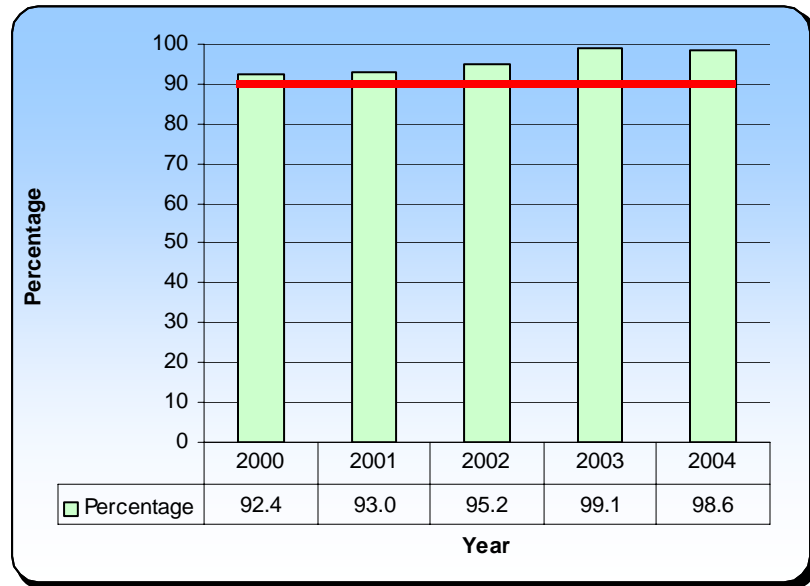
DFA. Local (north central BC) contracts are considered to be those of which the contractor is located in the geographic area bounded by 100 Mile House in the south, Fort St. John in the north, Valemount in the east and Terrace in the west.

Querying the financial data stored within Canfor's accounting system allows for the current status and tracking of the local contract value within TFL 30. As shown below 95.2% of the annual dollars spent during 2002 within the DFA goes to north central BC contractors.

**Table 18. Contract Value**

Current Status of Indicator	Year	Target	Achieve By:
92.4%	2000	> 90 %	Annually
93.0%	2001	> 90 %	Annually
95.2%	2002	> 90 %	Annually
99.1%	2003	> 90 %	Annually
98.6%	2004	> 90 %	Annually

the current status is based on a calendar year Jan.1 to Dec. 31.



**Figure 3. Percent of contract value serviced by northern B.C.**

### 2.31 FOREST MANAGEMENT SATISFACTION SCORE

**Indicator:** Level of positive operating climate for small forestry-based businesses.  
 Level of positive operating climate for small non-forestry-based businesses.  
 Level of satisfaction for opportunities for market and non-market goods and services.

**Management Objective:** (small forestry based businesses): Determine the current level of satisfaction within one year (+3 months variance) and maintain or increase over time (based on an annual survey).

(small non-forestry based businesses) Determine the current level of satisfaction within one year (+ 3 months variance) and improve to a high level of satisfaction over time (based on an annual survey).

(market and non market) Determine the current level of satisfaction of opportunities within one year (+3 months variance) and maintain a high level of satisfaction over time (based on an annual survey).

At the April 14, 2003 Public Advisory Meeting, the members approved to replace this indicator management objective with the following: Increase the survey satisfaction 3 year rolling average% (sum of agree and strongly agree) by 10% (-5% variance) of small forestry, non-forestry based businesses and market and non-market businesses.



**RESULTS OF THE FOREST MANAGEMENT SATISFACTION SURVEY – May 2004**

Which best identifies you or your company:

9 Forestry Business   4 Non-Forestry Business   0 Market use   1 Non-Market Use  
   Did not indicate

Forest Satisfaction Item	Strongly Agree		Agree		Neutral		Disagree		Don't Know		Total # of Responses
1. Opportunities exist for me to provide input to Canfor on forest management activities or concerns.	1	7%	4	29%	7	50%	2	14%	-	0%	14
2. My input is understood and considered by Canfor.	1	7%	6	43%	4	29%	3	21%	-	0%	14
3. Canfor responds quickly to my input.	2	14%	4	29%	7	50%	1	7%	-	0%	14
4. Canfor treats me fairly.	2	14%	8	58%	3	21%	1	7%	-	0%	14
5. I know who to contact at Canfor should I have a concern.	4	29%	9	64%	-	0%	1	7%	-	0%	14
6. Canfor is always courteous to me when I'm communicating with them.	4	29%	10	71%	-	0%	-	0%	-	0%	14
7. Canfor is communicating regularly with me.	3	21%	3	21%	5	37%	3	21%	-	0%	14
8. Canfor is communicating its environmental performance to me.	3	21%	5	36%	5	36%	1	7%	-	0%	14
9. Canfor is open to discussing business opportunities with me.	1	7%	7	50%	5	36%	1	7%	-	0%	14
10. I am happy with the present relationship with Canfor	3	21%	6	44%	3	21%	2	14%	-	0%	14
<b>Total</b>	<b>24</b>	<b>17%</b>	<b>62</b>	<b>44%</b>	<b>39</b>	<b>28%</b>	<b>15</b>	<b>11%</b>	<b>0</b>	<b>0%</b>	<b>14</b>

A draft survey was developed and sent to the PAG for review in 2001. Various comments were received from the PAG and the survey updated and sent out to 60 individuals that worked or use the TFL 30 landbase in 2002/03.

This indicator provides information relating to the level of satisfaction of companies that have business interactions with Canfor and/or the level of satisfaction that individuals have in dealing with specific interests regarding their uses/values on the DFA. The level of satisfaction was determined through the use of an annual survey, which was widely distributed to businesses that interact with Canfor and to individuals who have an expressed use/value on the DFA.

A total of 15 out of 81 (19%) responded to the survey with one response only supplying comments. The results of the surveys are shown in the table

above. Respondents were asked to identify which category best defines them (i.e. forestry business, Non-forestry Business,...).

Although the results show the 0 market use interests were identified, it is speculated that the Non-forestry Business interest would include some respondents with market interest. In 2003/04 the proportion of "strongly agree and agree" was 61%. This is the same percentage as the 2003/04 survey.

### 2.32 CANFOR RESPONSE TO PUBLIC CONCERNS

**Indicator:** Percentage of Canfor responses to letters regarding public plans and general concerns with practices on the DFA.

**Management Objective:** 100% (-5% variance) written response within 30 days by Canfor to letters of concern annually.

Canfor solicits feedback for all public plans and also receives ongoing general feedback regarding its practices and management of the DFA. It is the intent of Canfor to respond to all written letters of concern. This indicator will be calculated by comparing the total amount of letters to which Canfor responds divided by the total number of letters Canfor receives.

Over the last year (April 1, 2003 to March 31, 2004), Canfor responded to 100% (1out of 1) of written public concerns on the DFA regarding management and practices within thirty days.

Written comments during a formalized public plan review period are responded to after the round table discussion with review agencies.

### 2.33 NUMBER OF PUBLIC ADVISORY MEETINGS

**Indicator:** Number of PAG meeting per year regarding the DFA.

**Management Objective:** Maintain a PAG that meets a minimum of two times (-one meeting variance) per year.

The public advisory group is made up of a diverse membership of representatives that have defined interests, values or uses on the DFA. This

group has provided valuable input on the initial development of values, goals, indicators and objectives for this CSA-SFM certification process, and will continue to provide guidance, input and evaluation of this process. This indicator provides information regarding how often Canfor provides for the opportunity for the PAG to meet annually.

In preparation for CSA-SFM certification the public advisory group was formed in September 2000. Between September 2000 and April 2001, the Public Advisory Group met 13 times to develop the Values, Goal, Indicators and Objectives for CSA-SFM plan for TFL 30. Since April 2001, the PAG has met in October 2001, May 2002, April 2003 and October 2003. The next meeting is scheduled for the second week of June 2004.

Opportunities were provided for the PAG to participate in a field tour of TFL30 jointly with the Prince George LRMP members in June 2002. In addition, interested PAG members were invited to a ecosystem / species at risk workshop in November 2002.

Continual interaction with the PAG is considered of great benefit for the efficient progression of CSA certification and subsequent evaluation of the certification process through performance audits.

### 2.34 PUBLIC ADVISORY GROUP QUESTIONNAIRE

**Indicator:** Results of PAG questionnaire regarding the DFA.

**Management Objective:** Determine the level of satisfaction of the PAG members with the communication process annually (+ 2 months variance).

The public advisory group (PAG) is one of the key elements of public involvement in the CSA-SFM process. The PAG provides guidance, input and evaluation of the process and is instrumental in the process with regards to maintaining linkages with current local values and uses on the DFA. As such, it is important to have a positive working relationship with the PAG and Canfor should be able to respond to issues and concerns that may arise from the PAG.

A survey was provided to the PAG at the June 2004 and October 2004 meetings in order to determine their level of satisfaction. The results of the surveys along with PAG comments are included in Appendix 3. From the

review of the results and comments, the PAG seems satisfied with the meetings, facilitator, and logistics. Included in Appendix 3 is a trend graph showing this meeting in comparison to previous results obtained.

### 2.35 ABORIGINAL AND TREATY RIGHTS

**Indicator:** Level of legal compliance with duly established Aboriginal and treaty rights within the DFA.

**Management Objective:** 100% (0% variance) recognition and respect of Aboriginal and treaty rights.

Cultural heritage of aboriginal people is a key social value derived from forest ecosystems across Canada. Once aboriginal and treaty rights are legally affirmed on the DFA, it is the responsibility of Canfor to abide by the terms. Duly established Aboriginal and treaty rights are those rights that are recognized and affirmed in the Canadian Constitution. When discussed in relation to renewable resources, these rights generally relate to hunting, fishing, trapping, and, in some cases, gathering (source: CSA Z808-96 p. 31 Section 2.6.1).

Two First Nation Bands have asserted aboriginal interests in TFL30, the McLeod Lake Band and the Lheidli T'enneh Band. The McLeod Lake Band signed a Treaty 8 settlement agreement with the Federal and Provincial governments in 2000. None of the settlement lands are in TFL30. The Lheidli T'enneh First Nation is currently working on developing a treaty with the Federal and Provincial government that will clarify the nature and extent of aboriginal rights on the DFA.

Canfor has not been informed of any agreement describing treaty rights or aboriginal rights on TFL 30 because of treaty negotiations.

To date, no concerns have been raised regarding aboriginal rights on the defined forest area. Therefore, an assumption has been made that Canfor is 100% compliance with legally complying with all duly established Aboriginal and treaty rights on TFL30.



### 2.36 ABORIGINAL PARTICIPATION ON THE PUBLIC ADVISORY GROUP

**Indicator:** Annual percentage attendance by Aboriginal Group members at PAG meetings.

**Management Objective:** 90% (+/- 10% variance) attendance of Aboriginal Groups with an interest in the DFA at PAG meetings annually.

At the April 14, 2003 Public Advisory Meeting, the members approved to replace this indicator management objective with the following: Ensure that Aboriginal Groups involved and invited on the PAG are informed about meeting at least one month in advance and provide an opportunity to meet within one month after to debrief.

In order to maintain those social values, which have cultural and spiritual importance to First Nations, it is important to be able to incorporate input from representatives of local First Nations representatives. As such, the values of the local First Nations can more easily be incorporated into forest management planning, forest practices and management choices.

The two Aboriginal groups, McLeod Lake Indian Band and the Lheidli T'enneh First Nation, were involved in the PAG and were active members through the Development of the PAG process. Their attendance at the 13 PAG meetings (Sept.2000 to April 2001) to fill in the CSA matrix was 88%. Attendance dropped to 50% at the October 2002 PAG meeting and to 0% at the April 2003 meeting. Several attempts were made to encourage the Bands to attend the fall 2003 PAG meeting but were not successful.

Canfor will continue to work at encouraging First Nations to be active members in the Public Advisory Group although success has been quite limited over the past few years.

### 2.37 SPECIAL AND UNIQUE NEEDS OF ABORIGINAL PEOPLES

**Indicator:** Documented opportunities and incorporation of special and unique mutually agreed upon needs of Aboriginal peoples in

public plans for the DFA.

**Management Objective:** Identify special and unique mutually agreed upon needs within one year (+6 month variance) and create opportunities for Aboriginal peoples with an interest in the DFA to provide comment during preparation of public plans.

The incorporation of Aboriginal peoples needs in forest planning is a key aspect to sustainable forest management. As such, this indicator contributes to respecting the social, cultural, heritage and spiritual needs of people who traditionally and currently use the DFA for the maintenance of traditional aspects of their lifestyle. Working with Aboriginal peoples to identify, define and develop management strategies for these special and unique needs is an important component of being able to maintain elements on the landscape for the maintenance of traditional lifestyle values of Aboriginal peoples.

Canfor is involved in creating opportunities for interested parties (including Aboriginal Peoples) through the gathering of information from the interested parties and incorporating this information in the development of public plans. Canfor presently has working relationships with two of the local First Nations; the McLeod Lake Indian Band and the Lheidli T'enneh First Nation.

One of these First Nation groups (Lheidli T'enneh) remain members on the CSA-SFM certification Public Advisory Group. Current uses of the DFA by the Lheidli T'enneh people include, but are not limited to, berry picking and medicinal herb gathering, fishing, hunting, firewood gathering. One of the larger challenges remains in working on cultivating a long-term relationship, which will lead to a better understanding of each others needs and interests.

### 2.38 APPROVED TERMS OF REFERENCE FOR PUBLIC ADVISORY GROUP

**Indicator:** Approved Terms of Reference for the CSA Public Advisory Group for the DFA.

**Management Objective:** Maintain and review annually CSA PAG Terms of Reference to ensure consensus-based involvement process with credibility and integrity for the DFA (+2 month variance).



The Public Advisory Group is necessary to ensure that sustainable forest management occurs with "...decisions that are made as a result of informed, inclusive and fair consultation with local people who are directly affected by, or have an interest in, sustainable forest management. The PAG represents a diverse range of interest specific on the DFA. As such, each member on the PAG must be able to have effective and fair interaction and communication with one another, including Canfor, to ensure all values receive meaningful and fair consideration. The Terms of Reference document is intended to provide the necessary framework and protocol to ensure the effective input from PAG representatives.

The initial Terms of Reference document was developed by the PAG and approved for acceptance on October 30, 2000. The Terms of Reference document was reviewed and approved at the October 2001, May 2002, April 2003, October 2003 and October 2004 PAG meetings.

Canfor will ensure that PAG members will be given adequate notice when the Terms of Reference document will be reviewed. Canfor will continue to maintain the Terms of Reference documents, such that any revisions resulting from the annual review of the Terms of Reference document will be made and distributed to the PAG members.

### 2.39 APPROVED PUBLIC PLANS

**Indicator:** Percentage of public plans that address identified public concerns/values for the DFA.

**Management Objective:** 100% (0% variance) of all public plans will address identified public concerns/values for the DFA.

Canfor's public plans consist of Management Plans, Forest Development Plans, Pest Management Plans and the Sustainable Forest Management Plan. All of these plans are subject to public review during which public can review and provide feedback on the plans. The Prince George LRMP is not currently a higher level plan but is considered in the development of public plans. Statutory decision-makers approve these public plans, and the approval is based, in part, as to how public feedback regarding the plans has been incorporated and the consistency with other plans (e.g. LRMP). It is the

intent of Canfor to have 100% of all public plans approved by statutory decision makers and this indicator will report the percentage of public plans approved.

Currently, all public plans were made available for public review and feedback. The approval of public plans considers the feedback from interested parties. All public plans were submitted for public review and feedback, and the approval of public plans were recorded as follows:

TFL 30 Forest Development Plan – Approved on June 20, 2002 until April 2005.

Management Plan 9 for TFL30 – Approved on April, 2002 to April, 2007.

Canfor will continue to work towards maintaining a two-way communication process with interested parties by implementing it's "Creating opportunities for Interested Parties Document". Over the last year, 100% of the public plans submitted to Ministry Agencies for approval have addressed identified concerns in the LRMP and public review process.

### 2.40 OPPORTUNITIES FOR PUBLIC INPUT

**Indicator:** % public participation and number of public input opportunities provided within the DFA.

**Management Objective:** Increase % public participation in forest planning by maintaining at least one (0% variance) public involvement opportunity prior to drafting of public plans.

Public plans that are developed properly reflect societal issues and values, and consideration of those issues and values impact our practices contributing to sustainable forest management. The public has opportunity to provide input prior to the drafting of public plans, which leads to participation and continual improvement.

Canfor currently sends notification letters requesting input from all known interested parties during key phases in the Management Plan, Forest Development Plan and Pest Management Plan processes in addition to having advertisements published in the local newspaper. The Public input opportunity since 2002 is summarized in the table below.

**Table 19. Public Input Opportunities**

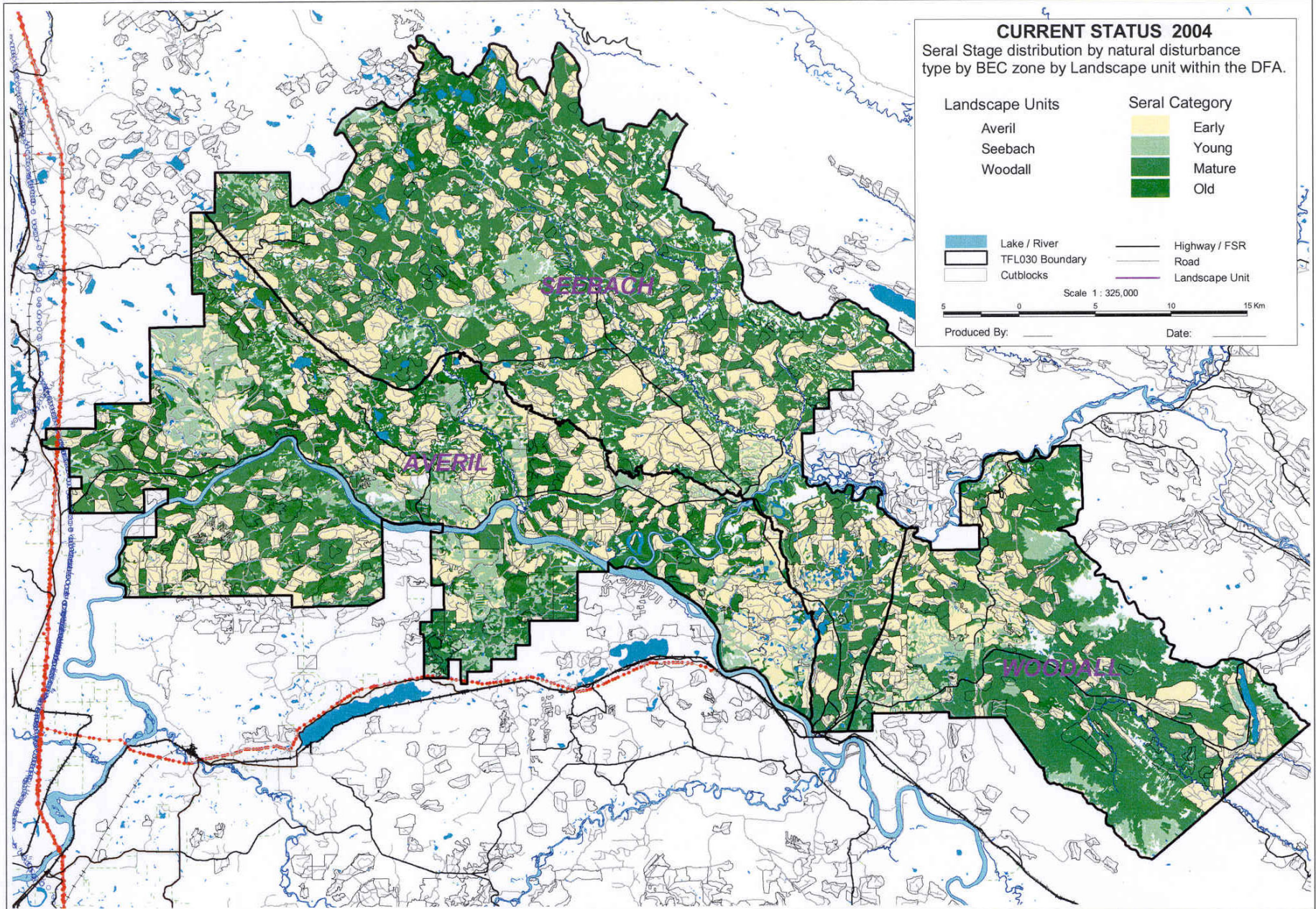
DFA Public Plan	Public Input Opportunity		
	Newspaper Ad	Notification Letter	Other
2002 Forest Development Plan	2 ads	31 letters	0
2002 Pest Management Plan*	4 ads	111 letters	1
Management Plan 9**	0 ads	0 letters	0
Sustainable Management Plan			3
2003 FDP Amendment #28	1 ad	22 letters	
2003 PMP	2 ads	149 letters	3

\* includes notification to treat

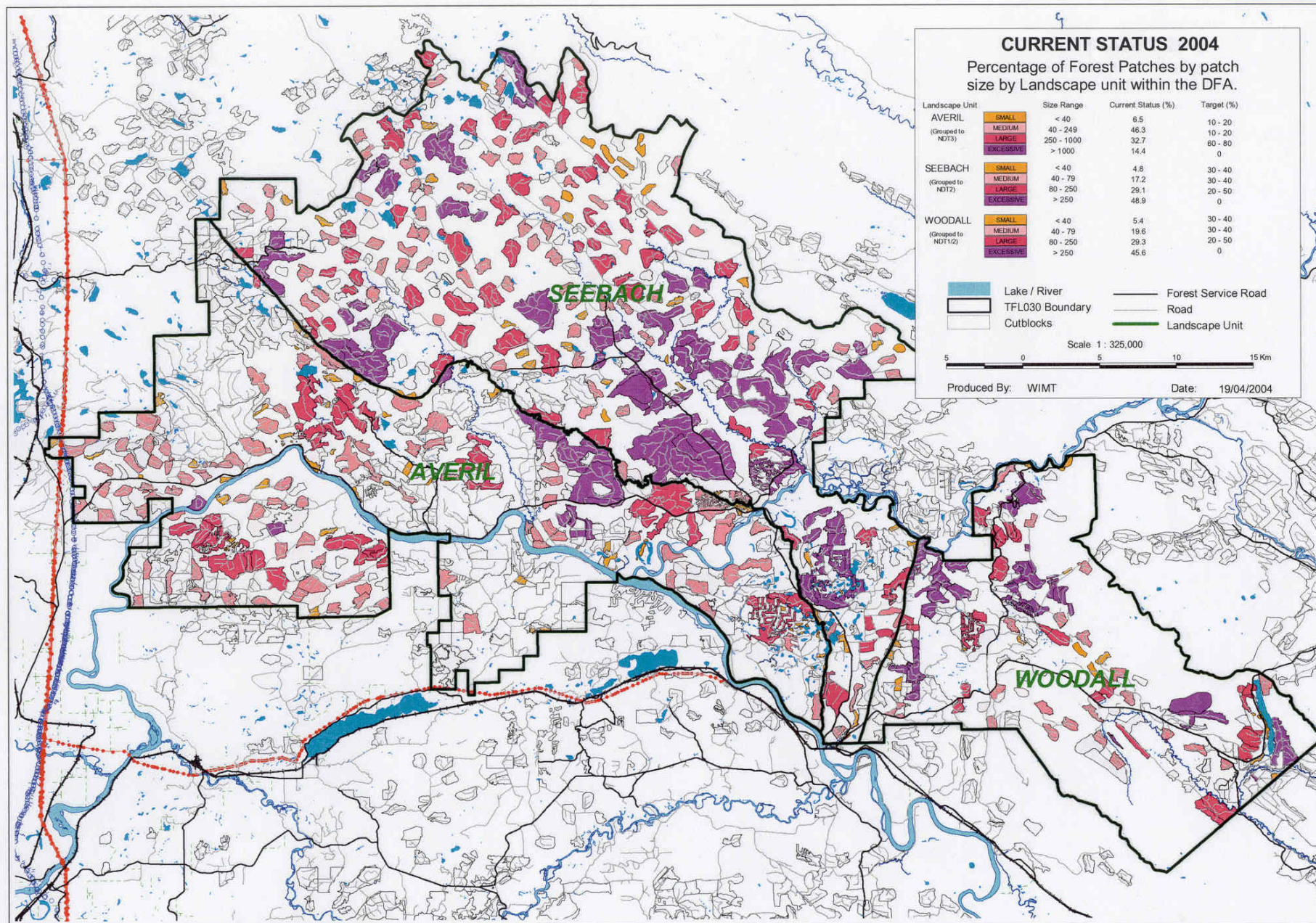
\*\* MP9 – all public input occurred in 2001/02 therefore zero for this year as MP9 is a five year plan

# **APPENDIX 1 – MAPS**

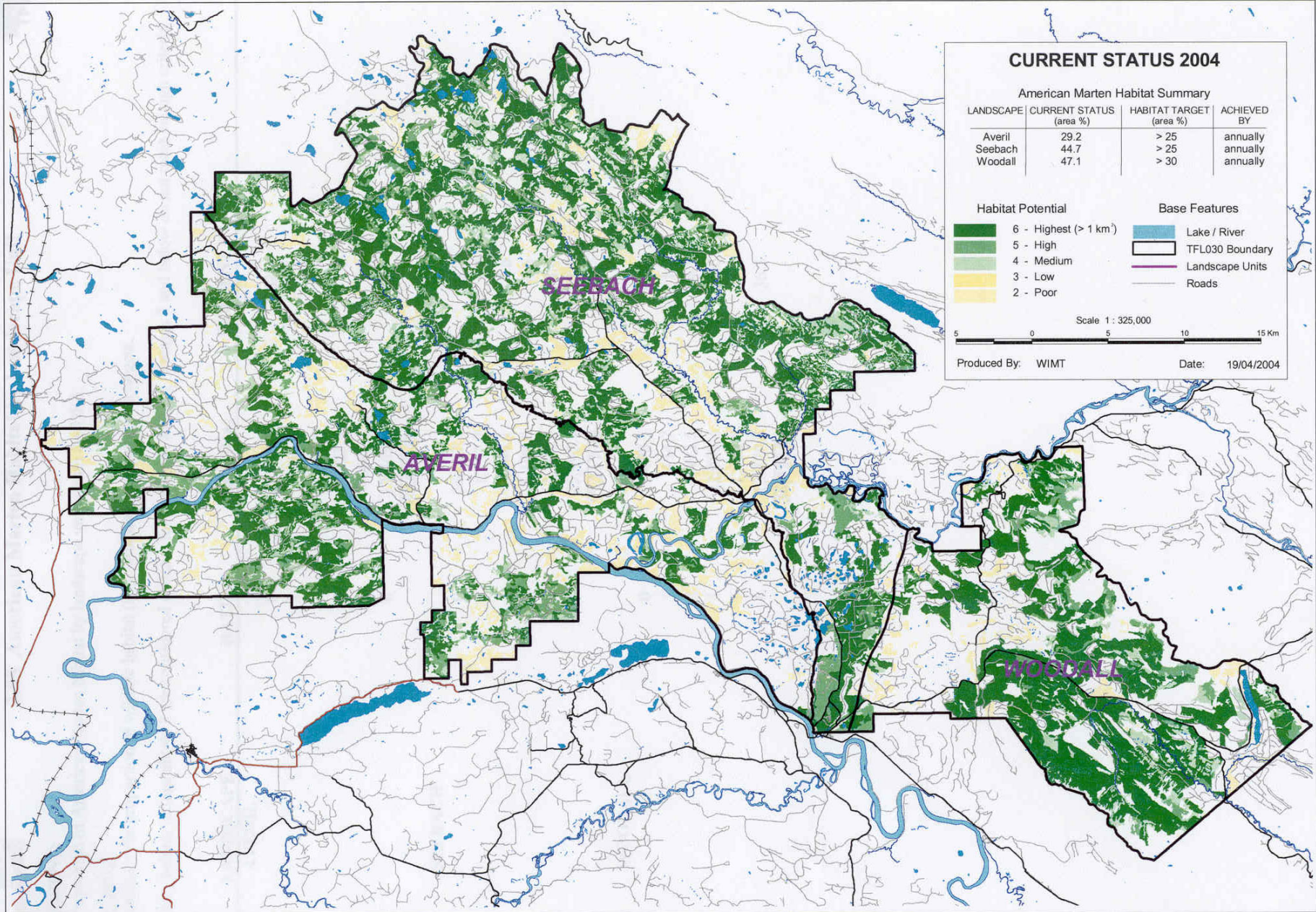
# TFL030 Seral Stage Distribution 3.21



# TFL030 Forest Patches 3.02



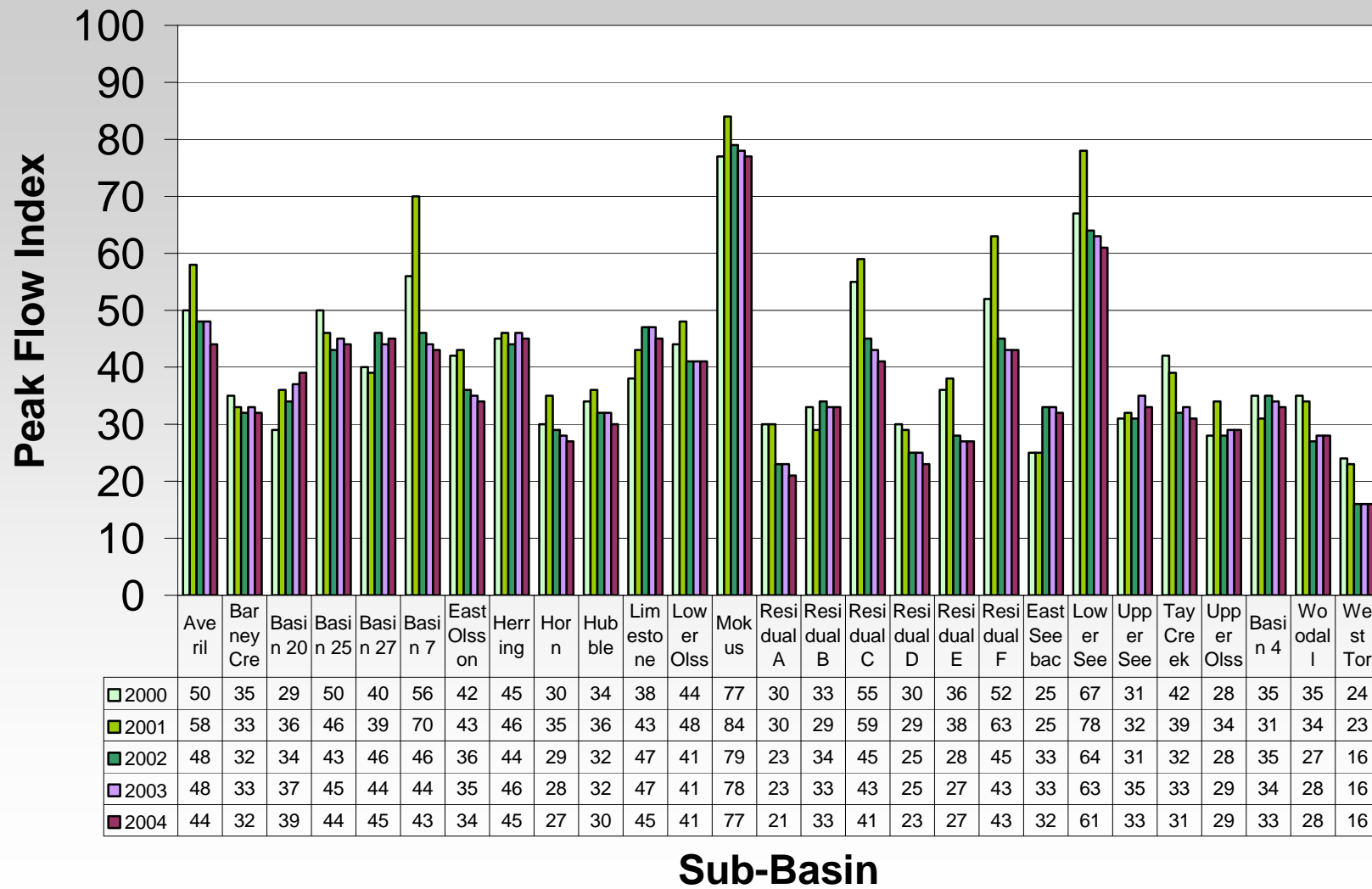
# TFL030 American Marten Habitat 3.05



# **APPENDIX 2 – PFI 5-Year Trend Graph**



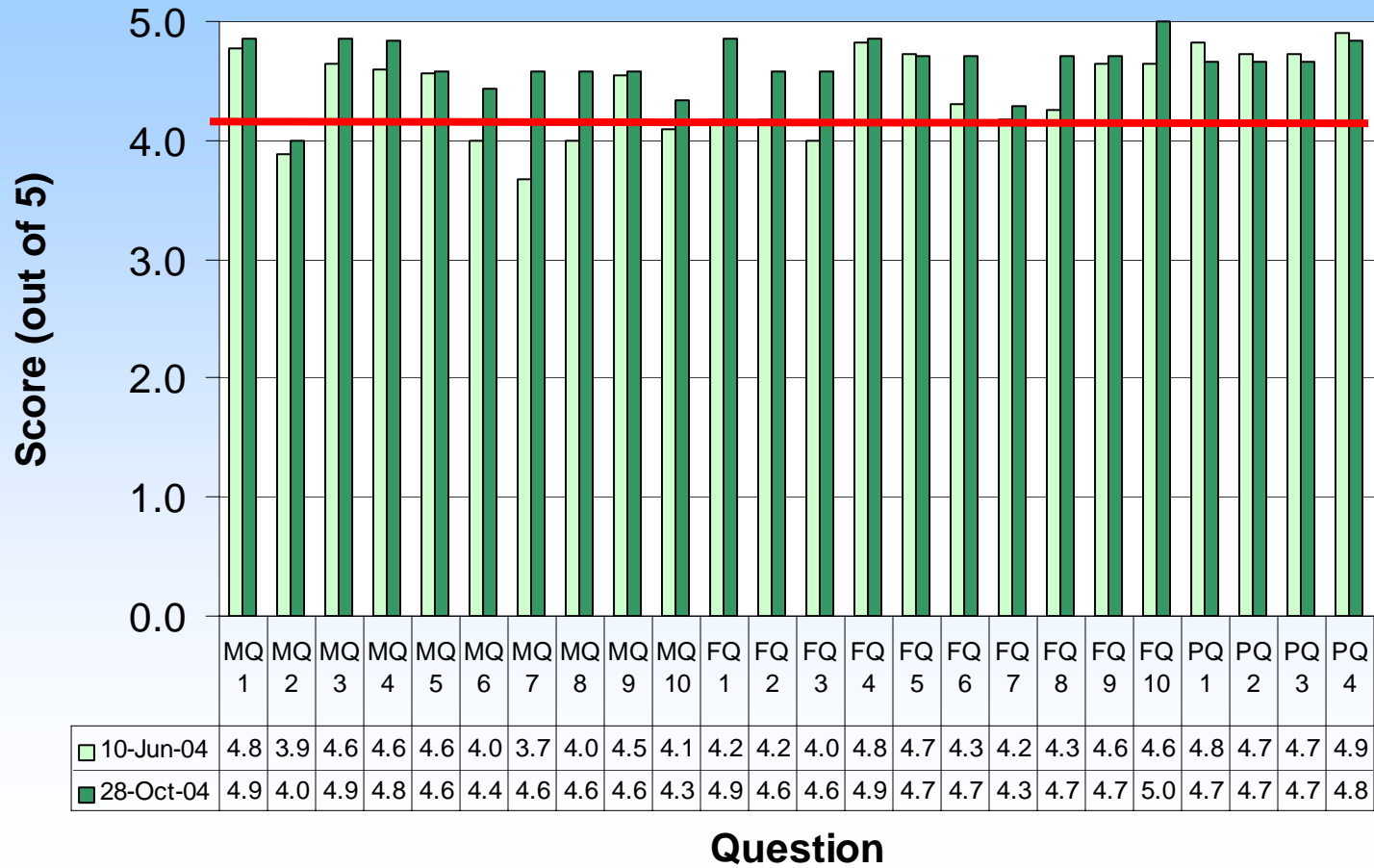
Figure: Five-Year Peak Flow Index Trends on TFL30.



# **APPENDIX 3 – PAG Questionnaire Results**

Figure: 2004 Public Advisory Group (PAG) questionnaire responses

### TFL30 PAG 2004 Meeting Evaluation Summary



Meeting Comments:

June 10, 2004:

Oct 28, 2004

Comments

Figure: Four-Year tend of Public Advisory Group (PAG) questionnaire responses

