FIVE-YEAR OPERATING PLAN

ABITIBI-CONSOLIDATED LIMITS

FOREST MANAGEMENT DISTRICTS 10, 11 & 12

2003 - 2007

FIVE-YEAR OPERATING PLAN

FOR ABITIBI-CONSOLIDATED LIMITS

FOREST MANAGEMENT DISTRICTS 10, 11, & 12

OPERATING PERIOD
JANUARY 1, 2003 TO DECEMBER 31, 2007

Prepared By: _____
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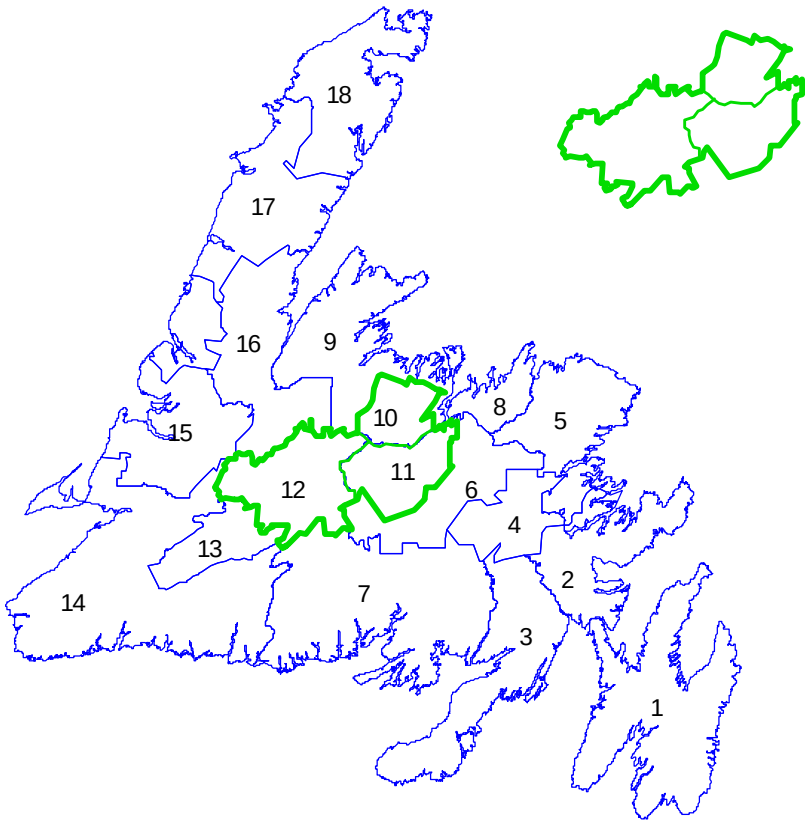
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1.0 INTRODUCTION

This forest management plan outlines the forest activities conducted by Newfoundland Woodlands during the past five-year planning period and describes the proposed forest activities for the next planning period (January 1st, 2003 to December 31st, 2007), which include: harvesting, road building, silviculture and forest protection. A description of the public consultation process and input from government agencies is also included, where mitigative measures identified by government agencies have been incorporated and the concerns expressed by the general public have been noted. The responses to identified concerns form part of this plan.

With interested parties, stakeholders, and government agencies having input into the planning process, Newfoundland Woodlands overall goal was to develop and implement an operational forest management plan within its jurisdiction, providing for multiple use and sustainability of the resource, which takes into account the social, economic and environmental benefits of the present and future generations. "Ecosystem Management" and "Adaptive Management" are probably the better descriptive phrases to describe the goals, processes and procedures that were part of this development and form an integral part of this five (5) year operating plan for Abitibi-Consolidated's limits in Forest Management Districts 10, 11 & 12.

Abitibi recognizes that the integrity of the ecosystem under its jurisdication must be maintained. Therefore, a "Landscape Management Approach" has been developed and incorporated into this plan, which requires maintaining ecosystem, species, and genetic diversity. This plan will outline areas proposed for harvesting and silviculture activities, which will provide for such diversity. A 20-year forest management plan or Sustainable Forest Management Plan has also been developed and outlines Abitibi-Consolidated's long term objectives and strategies with respect to forest management.

Not only in Canada, but also worldwide, the general public will not accept forestry practices having a significant negative impact on either the environment or the species that live within. They demand that values, other than timber products, must be taken into account during the planning process and when any forest activity is operational. As a company, it is our responsibility to ensure that the environment in which we operate is managed for such values, for the benefit of present and future generations. Some values are difficult to put a dollar figure on, while some of the more traditional values, such as hunting and fishing are not as difficult. It is no doubt that intrinsic values exists such as: the feeling of walking through the forest and listening to birds chirping in the background, or the satisfaction of knowing that a species is not on the rare, threatened or endangered list. These values have worth and have to be maintained.

The Socio-economic impacts of activities undertaken in our forest have also been considered in the development of this plan. The timber harvested from these forest management districts will be transported to the company's mills in both Grand Falls-Windsor and Stephenville for production into newsprint. The employees who work in the harvesting of the timber, building of the extraction roads, silviculture activities, and in the paper mills, help to maintain the fabric of the towns in which they live.

Our challenge, as a company, is to conduct on those activities in a manner that maintains the integrity of the environment. Largely, Abitibi-Consolidated has also developed and implemented a Forest and Environmental Management system for its Nfld. Woodlands Division. In January 1999, our division was successful in obtaining ISO 14001 registration. This achievement was in line with our corporate mandate to have all Abitibi-Consolidated woodlands divisions certified by year-end 2002. Realizing the ISO standard is focused on Environmental issues and that it does not specifically apply to Sustainable Forest Management, our commitment is aimed at making sure that our management system includes the six sustainable forest management criteria defined by the Canadian Council of Forest Ministers (CCFM) including:

- conservation of biological diversity
- ecosystem condition and productivity
- forest ecosystem contributions to global ecological cycles
- conservation of soil and water resources
- global benefits of the forest for society
- accepting society's responsibility in sustainable development.

For each of the six criteria above, indicators and objectives are defined to permit public reporting of our performance in SFM. The implementation of this strategy is clearly outlined within our 20-year sustainable forest management plan. The company's twenty-year plan and this five-year plan were developed with direct input from a public planning team as outlined in section 2.2.

Newfoundland Woodlands Policy

Newfoundland Woodlands is committed to achieving and maintaining a Forest and Environment Management System (FEMS) under the ISO 14001 standards through the integration of environmental, economic, social and cultural values. Our Environmental and Sustainable Forest Management Policy is coherent with Abitibi-Consolidated's Vision & Values, Environmental Health & Safety Policy, and the Sustainable Forest Management Policy.

Implementation of this FEMS ensures the interests of concerned stakeholders, while providing a sustained supply of quality wood fibre at a competitive cost.

Environmental and Sustainable Forest Management Policy

We Value.....	Our Policy
The Law & Leadership	Meet or exceed applicable legislative, regulatory and policy requirements within all aspects of its operations.
Public Participation	Open dialogue through representative public advisory groups to participate in the development of Sustainable Forest Management (SFM) Plans.
Prevention of Pollution	Undertake effective management techniques within our operations to minimize negative impacts on the environment.
Competence of our Employees	Provide employees with training, assistance and supervision to make them aware of their roles and responsibilities including the environmental benefits of improved personal performance.
Partnerships	Nfld. Woodlands will honour commitments to other organizations, including: Forest Products Association of Canada and Western Newfoundland Model Forest.
Research & Development	Participate in research that advances understanding of forest science and best management practices.
Continual Improvement	Measure our progress and periodically assess our performance through system and compliance audits, ensuring continual improvement of SFM and FEMS. In addition, provide a framework for setting and reviewing environmental objectives and targets.
Sustainable Forest Management (SFM)	A) Manage our forests to contribute to: 1. conservation of biological diversity, 2. maintenance & enhancement of ecosystem condition and productivity, 3. conservation of soil and water resources, and 4. maintenance of global ecological cycles B) Manage our forests, taking into account: 5. multiple benefits to society, and 6. responsibility of all members of society for sustainability.

2.1 (A) GENERAL DESCRIPTION OF FOREST MGMT. DISTRICTS 10, 11 & 12

Abitibi-Consolidated Company of Canada, through its predecessors, Price (Nfld.) Pulp & Paper Limited, and Anglo-Newfoundland Development Co. Ltd., acquired various rights that are now within Forest Management Districts 10, 11 & 12 as follows:

District 10	District 11	District 12
Nfld. Pine & Pulp Co. Ltd.	Crown	Crown
A.E. Reid (Nfld.) Ltd.	A.E. Reid (Nfld.) Ltd.	A.E. Reid (Nfld.) Ltd.
Bishop's Falls Pulp & Paper Co.	Bishop's Falls Pulp & Paper Co.	Bishop's Falls Pulp & Paper Co.
Reid Nfld. Co. and Mines & Forest (Nfld.) Ltd.	Reid Nfld. Co. Limited	Reid Nfld. Co. Limited
		E. Collishaw
		J. B. MIller

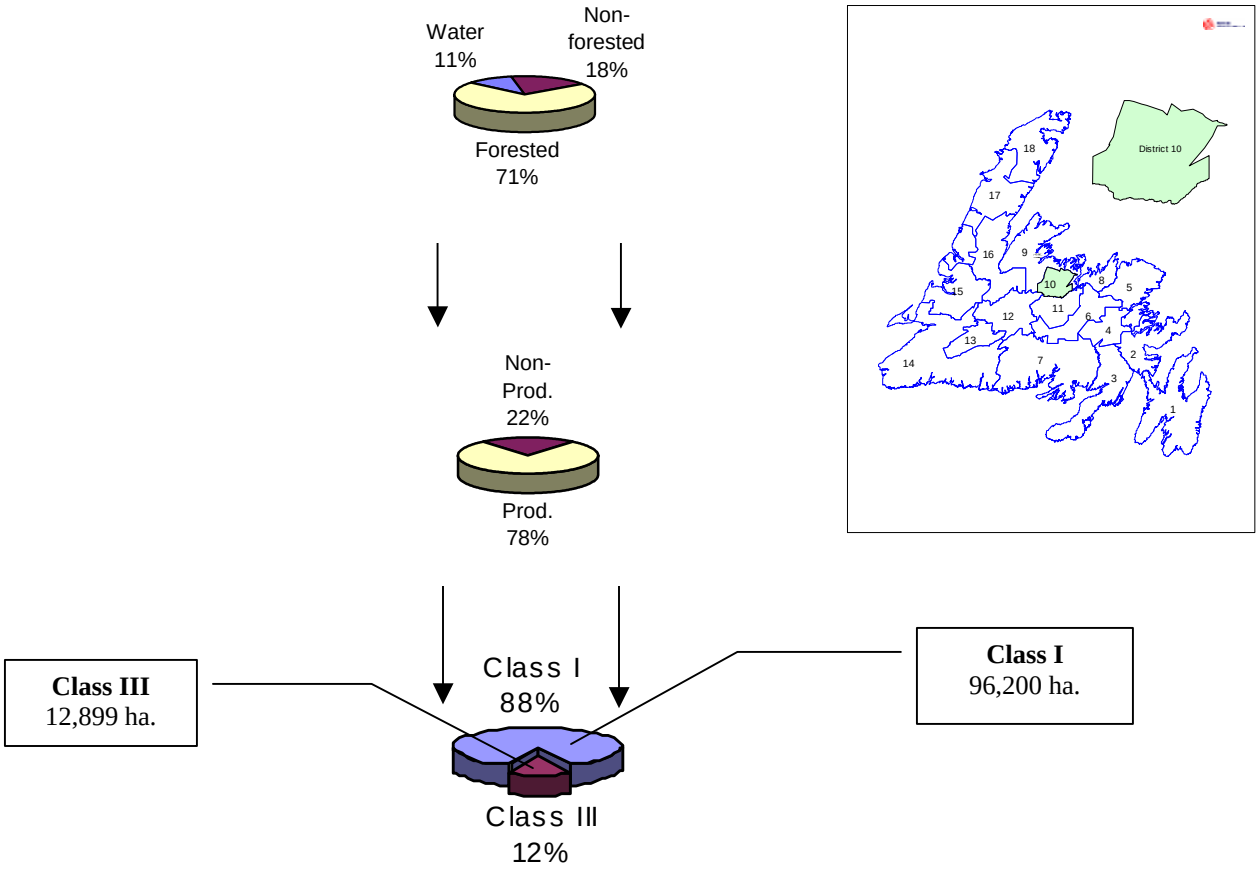
Easements for powerlines have been conveyed to Newfoundland Light & Power Co. Ltd. And Newfoundland Hydro, and some freehold property has been sold to various agencies and individuals.

DISTRICT 10

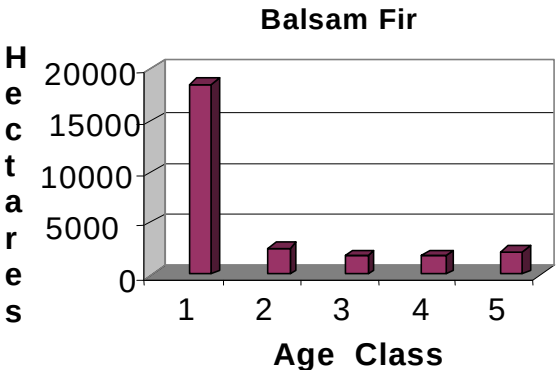
This district is bounded on the North and Northwest by district 09, on the South and Southwest by district 12, on the Southeast by district 11, and on the Northeast by district 08.

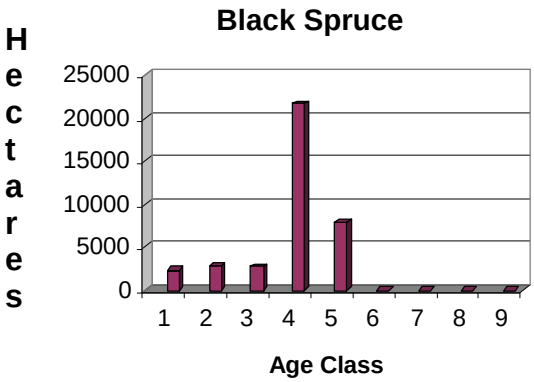
This district has a total land area of 201,200 hectares. Of this total, 21,700 hectares are composed of water, 36,700 are non-forested and 142,700 are forested. Of this forested area, 111,100 hectares are considered as productive area.

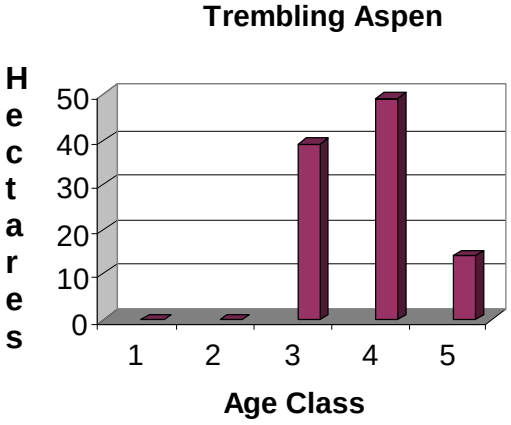
Graph illustrating distribution of landbase by percent & ownership for District 10.

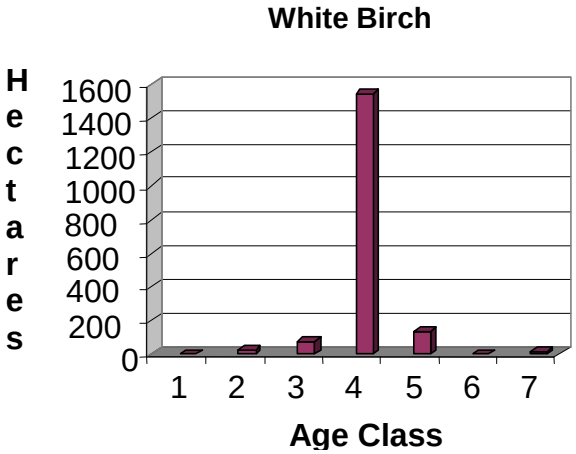


DISTRICT 10: AGE-CLASS STRUCTURE









DISTRICT 11

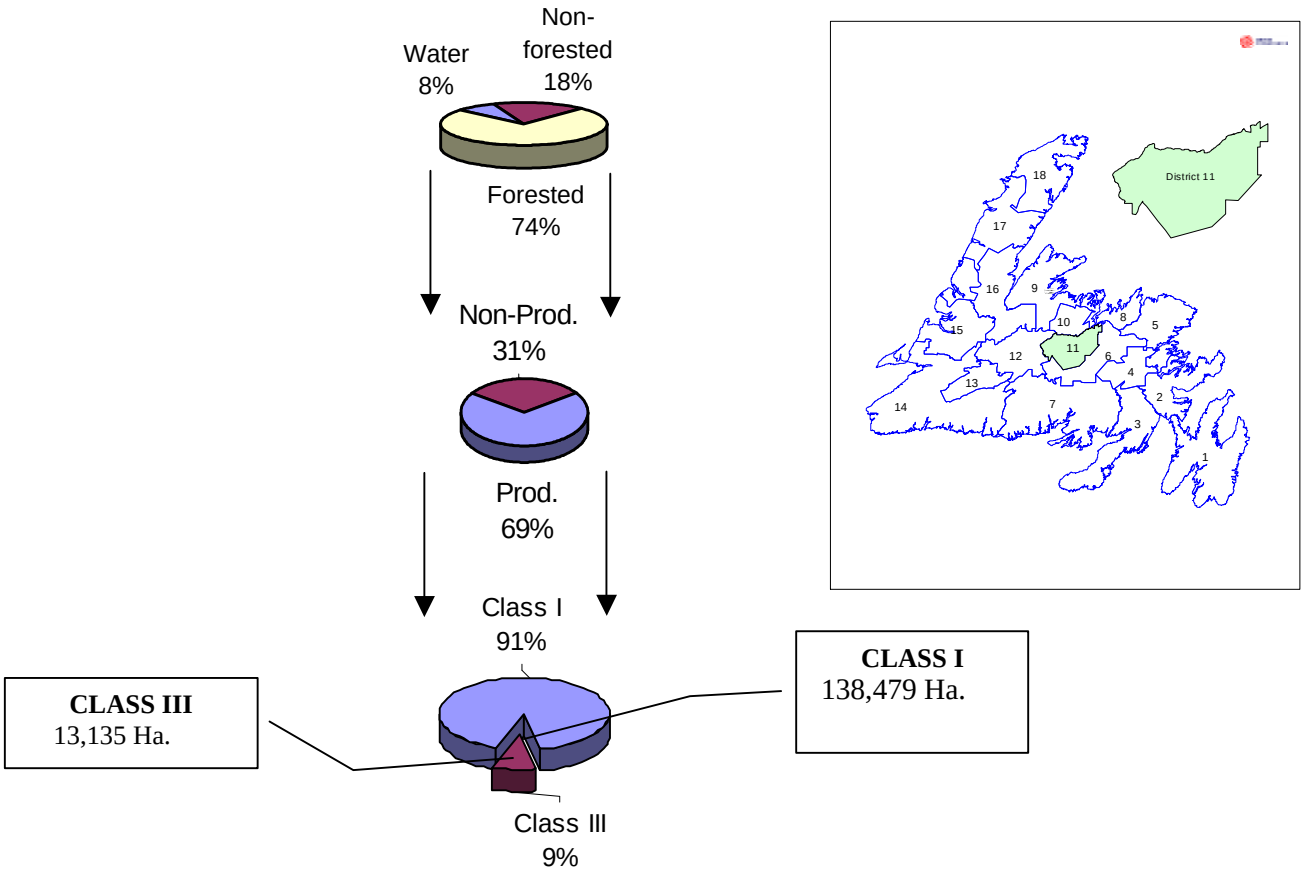
The company, through its predecessors, Abitibi-Price & Price (Nfld.) Pulp & Paper Ltd., has acquired the timber rights within district 11, through:

a) Crown,
b) A.E. Reed (Nfld.) Limited,
c) Bishop's Falls Pulp & Paper Co, and
d) Reid Nfld. Co. Ltd.

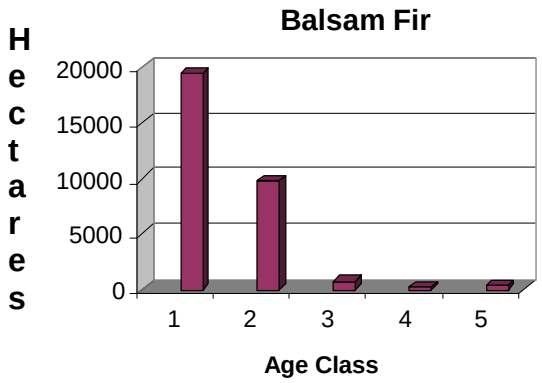
The company's timber limits extend just east of the Bay D'Espoir Highway, south of Miguel Lake, westward to Noel Paul Brook, west by Noel Paul Brook, and North by the Expoits River. This district contains several main waterbodies, which include: Sandy River, Pamehoc Brook, Rattling Brook, Stony Brook, and the Exploits River.

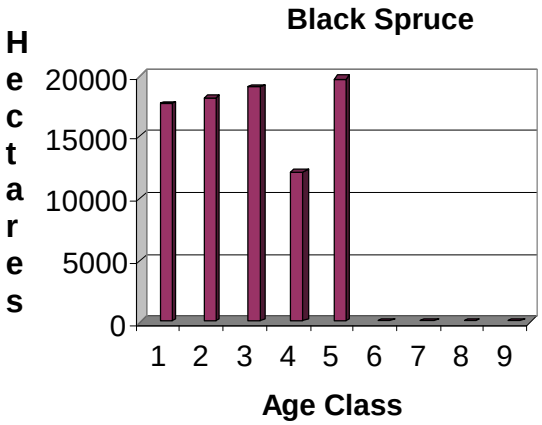
This district has a total land area of 294 700 hectares. Of this total, 23 400 are composed of water, 53 600 are non-forested and 217 700 are forested. Of this forested area, 150 700 hectares are considered as productive area.

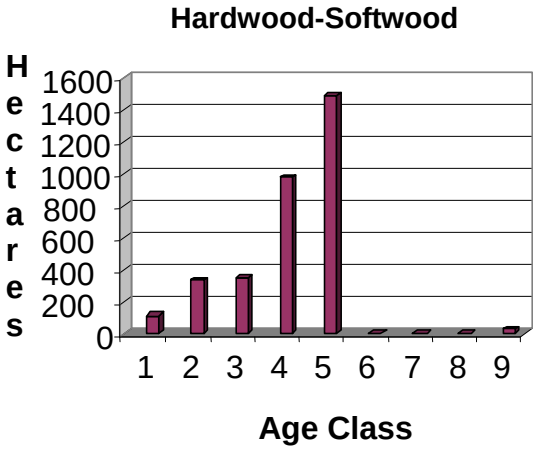
Graph illustrating distribution of landbase by percent & ownership for District 11.

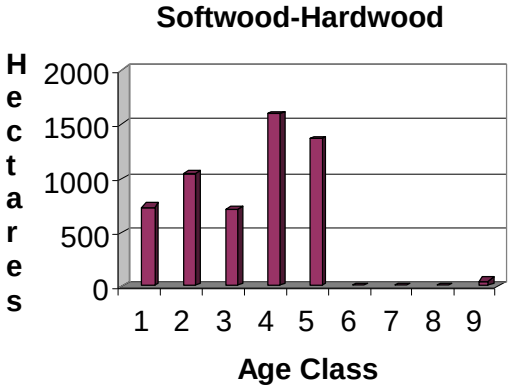


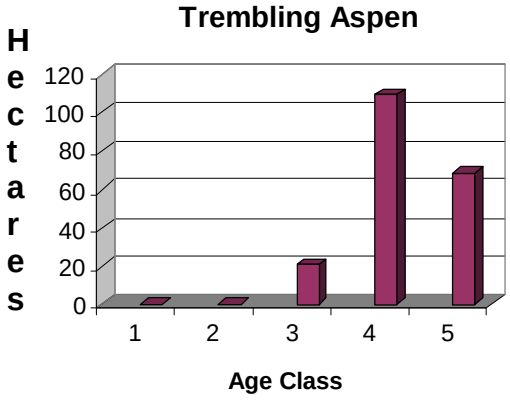
DISTRICT 11: AGE-CLASS STRUCTURE:







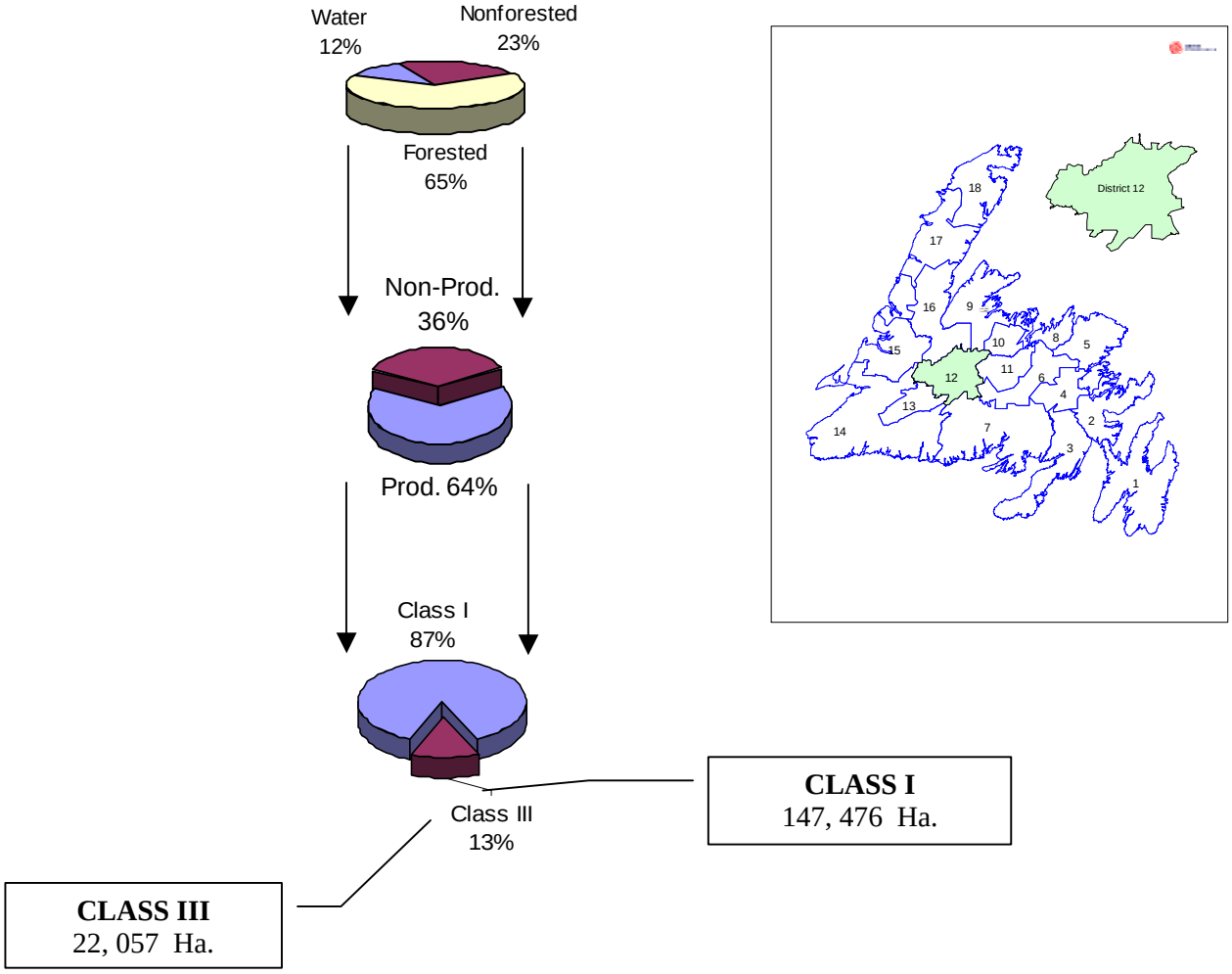




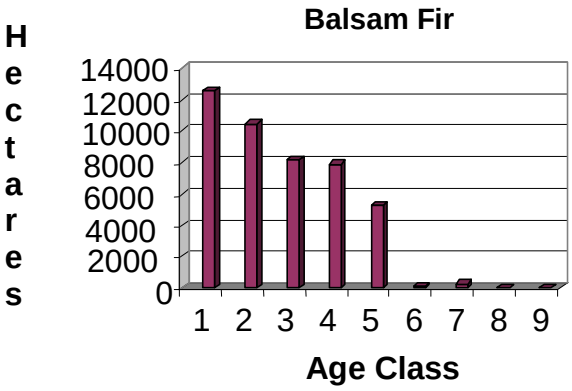
DISTRICT 12

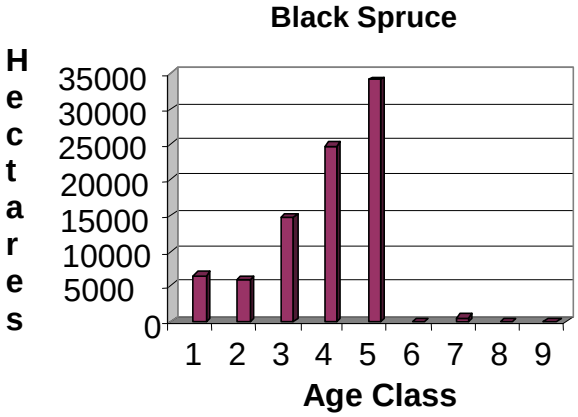
This district has a total land area of 399 100 hectares. Of this total, 46 700 are composed of water, 91 200 are non-forested and 261 200 are forested. Of this forested land, 168 000 hectares are considered as productive area.

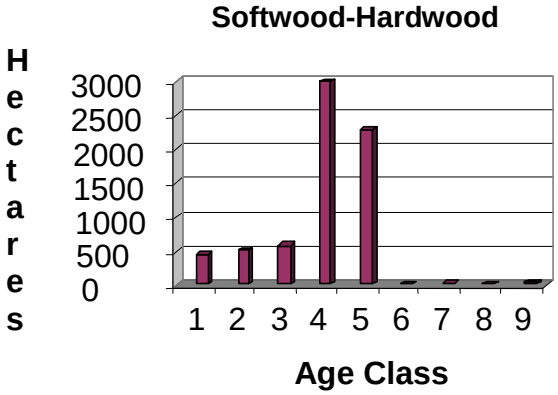
Graph illustrating distribution of landbase by percent & ownership for District 12.

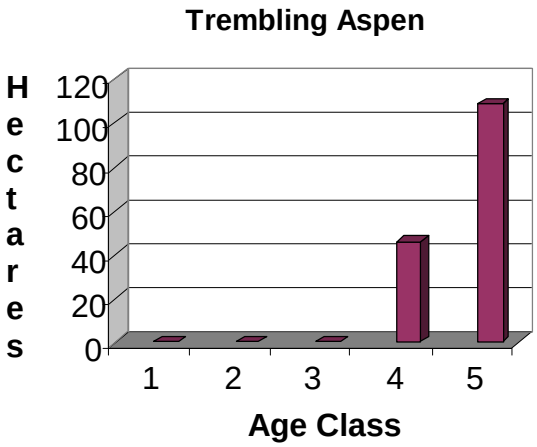


DISTRICT 12: AGE-CLASS STRUCTURE:

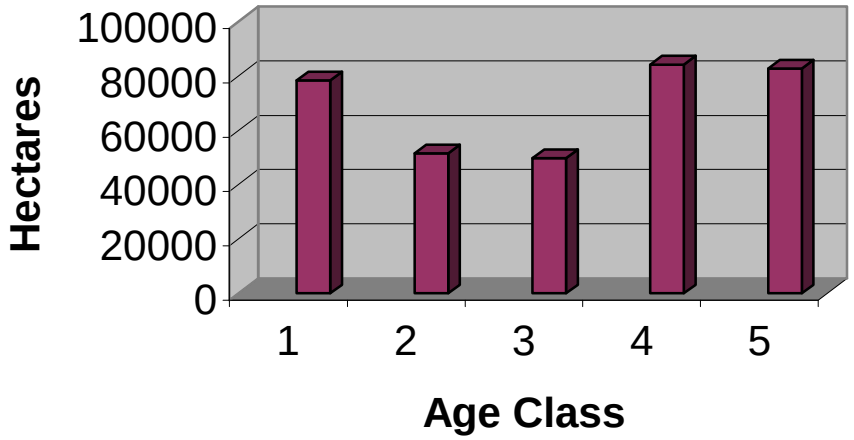








To obtain a complete overview of the forest structure on company limits within Districts 10, 11 & 12, with respect to age class structure, the following figure was produced.



It is evident in the above figure that overall within Districts 10, 11 & 12, there is a somewhat imbalanced age class structure. Larger amounts of older forest are evident through age classes 4 & 5, while a strong regeneration presence is identified through age class 1. However, there is a low point in the figure represented by age class 3 (ages 41-60 years).

This imbalanced age class structure (especially the low point), is the concern for strategic management planning. Because each age class, including the respective forest types, means different things to different users of the forest, it is the responsibility of the company to manage the forest resource in a manner, which promotes proper age class distribution and representative forest types across its DFA.

A balanced age class structure is a long-term objective of the company, which would promote a long-term sustainable resource for its mills, as well, provide sufficient habitat for wildlife species such as: Pine Marten, Migratory Birds, etc.. This plan is based on sustainable Annual Allowable Cut Calculations and sound environmental practices, where its successful implementation plan will aid the company in its long-term objectives and goals of achieving a balanced age class structure.

(B) Physical Features

Physical features vary a great deal over a large landscape. The following descriptions apply generally to the districts in this planning area.

(I) Topography

District 10

The elevation ranges from near sea level in the vicinity of Botwood to a high of 570 metres on Hodges' Hills. The northern extreme of this District has very rough terrain while the remainder is generally undulating. Logging is possible on slopes to a maximum of 35%. In this District, according to "Forest Inventory Statistics of Newfoundland", 91.2% of the productive forest area, and 90.0% of the merchantable volume are found on slopes ranging from 0-29%. The majority of this area and volume is found on slopes less than 20% (Anon., 1974). Although the figures are for Forest Inventory Region 3, it is felt that they are accurate when referring to the productive forest area and merchantable volume of this District.

District 11

The elevation ranges between a low of sea level at the mouth of the Exploits River just east of Bishop's Falls to a high of approximately 400 metres at the top of Miguel Hill, approximately 30 kilometres south of Grand Falls. Nowhere in the district is elevation alone known to prevent productive forest growth. The great majority of the land area lies below an elevation of 244 metres (approximately 70%), with the majority of land higher than 244 metres on the headwaters of Great Rattling and Stoney Brooks. These lands do tend to have lower productivity than the remainder of the district, but mainly because of poorer soil conditions.

The topography is generally undulating with smooth slopes seldom exceeding 10%. Some steep slopes occur east of Great Rattling Brook in the Stoney Lake and Rattling Brook watersheds where there is a pronounced folding of the underlying rock formations. In this area, accessibility is difficult because of disrupted drainage patterns.

District 12

The elevation ranges from 122 metres in the Exploits River Valley to a high of 610 metres on the Buchans' Plateau. Topographically, this district can be broken into two (2) areas: (1) north of Red Indian Lake, and west of the Railway from Buchans' Junction to Millertown Junction, and (2) south of Red Indian Lake and east of the Railway.

The majority of the area north of Red Indian Lake comprises part of the Gaff Topsails and the Buchans' Plateau. These are areas of high elevation and much open country with no significant tree growth with regards to logging. The remainder of the district (i.e. area 2), with the exception of a small area in the southeastern section in the vicinity of Island Pond south of Noel Paul River, is of great importance to our Company for logging operations.

The topography of the district south of Red Indian Lake and east of the Price (Nfld.) Railway is generally undulating. The Buchans area is covered with a thick deposit of glacial till derived predominantly from the area in close proximity to a major ice centre during glaciation. Glacial till deposits are generally drumlinized in the direction of ice

movement.

"Most of the area is covered by 'upland' barrens which consist of extensive areas of bog-soil-rock complexes above 244 metres elevation. The uplands can be divided into two districts based, in part, on elevation. "The upper unit, occurring in the northwest, lies generally between 366-610 metres elevation. This area consists of bog and exposed rock with thin deposits of glacial till remaining in lower and protected areas. The lower area at elevation between 244 and 366 metres is a bog-barren complex with a minor component of exposed rock.

"A range of mountain occurs in the southwest portion of the area. These mountains, consisting predominantly of treeless granitic outcrops, are a northerly extension of the Annieopsquotch range. There is an area between the mountainous area and Red Indian Lake, which is underlain by softer, less erosion-resistant sandstone, shale and conglomerates. Surface deposits here consist of medium textured glacial till, lacantrine and glacial-fluvial materials. Bog and wet soils limit the area's productivity for forests."

(II) Hydrography

District 10

The main rivers of this District are Badger Brook, Junction Brook, Mary Ann River, Western Arm Brook, New Bay River, Northern Arm Brook, and Peter's River. The southern boundary of this District is the north bank of the Exploits River.

The watershed of Badger Brook, including such large lakes as North and South Twin Lakes, Mary Ann Lake, Rocky Lake and Badger Lakes, is 446 km². The Exploits River is of extreme importance to the mill at Grand Falls, where the river's water is used for generating electricity for the production of paper.

District 11

The entire district is drained by the Exploits River, which forms the northern boundary of the District. Major tributaries are Great Rattling Brook with 130,000 hectares watershed, Sandy River with 56,000 hectares, and the Noel Paul River, which drains 20,000 hectares and forms the western boundary of the district. Minor tributaries are Pamehoc with 7,000 hectares; Tom Joe with 7,000 hectares; Stoney with 17,000 hectares, Greenwood's and Little Rattling with 16,000 hectares; Jumper's with 10,000 hectares; and Rattling with 42,000 hectares.

Most of these rivers have sufficient water storage areas to permit floating of pulpwood and all have been used for that purpose in the past. However, since 1992, Abitibi has discontinued the transportation of wood by water on all waterways.

District 12

The major rivers of the district are Star Brook, Shanadithit River, Buchans' Brook, Mary March Brook, Victoria River, Noel Paul River, Harpoon River, and Exploits River.

These rivers are all part of the Exploits River watershed and are all important to this company because they supply water for the year-round operation of the mill.

In the past, Victoria River had a large watershed area, but with the completion of the Bay d'Espoir Power Project, 53.5% of Victoria River's watershed was diverted. The original watershed of Victoria River was 1,955 km². Now, only 909 km² contribute water to Red Indian Lake. The major lakes adding water to the new watershed of Victoria River are Long Lake, Valentine Lake, Red Cross Lake, Quinn Lake, Lake Wilding, Rogerson Lake, Barren Lake, Kelly's Pond, Bobby's Pond and Lily Pond. Of these, only Long Lake and Valentine Lake flow into Victoria River in Management District 13. The watersheds of these two lakes are 88 km² and 28 km² respectively. The watershed area of Victoria River in District 12 is, therefore, 793 km².

Red Indian Lake is a very important water body for Grand Falls-Windsor mill because it is used for the continuous year-round operation of the mill, for the production of electricity. As well, its storage potential is of the utmost importance to the company during dry seasons of the year.

The Exploits River and the tremendous water storage at Red Indian Lake has increased in importance, as this Company increased its hydro output by means of the Star Lake Hydro Project.

(III) Climate

District 10

Management District 10, because of its interior location, experiences cooler winters, warmer summers, and less abundant precipitation than much of the coastal fringe of the Island. Annual fluctuation is wide with noticeable cyclical patterns in winter temperatures and summer precipitation. The unreliability of temperatures, wind and precipitation in all its forms has numerous logging and other forest management implications.

It has been the experience of the company that for some unexplained reason; the northern section of District 10 has heavier snowfalls than the more southerly regions of our timber limits.

District 11

Management District 11, because of its interior location, experiences cooler winters, warmer summers, and less abundant precipitation than much of the coastal fringe of the Island. The nearest continuous climatic data recording station is at Exploits Dam, some 24 Kilometres west of the District; however, a recording station at Grand Falls, which has been operating periodically over a similar period, confirms the data for the central part of the district. At Grand Falls, however, precipitation tends to be less than at Exploits Dam.

Exploits Dam experiences January-mean temperatures of -7 degrees Celsius, July-mean 15.4 degrees Celsius, annual total precipitation (1926-1975) of 104 cm, and an annual

total snowfall of 322 cm (1956-1975). Annual fluctuations about these means are wide with noticeable cyclical patterns in winter temperature precipitation.

District 12

Management District 12, because of its interior location, experiences cooler winters, warmer summers, and less abundant precipitation than much of the coastal fringe of the Island. The nearest continuous climatic-data recording station is at Exploits Dam.

(IV) Geology

District 10

The geomorphology of most of District 10 is not complex. "The underlying bedrock is sedimentary or metamorphic material such as shale, schist and sandstone dating from the Palaeozoic era, with intrusions of harder rocks such as granite and diorite. The entire area has been heavily glaciated and stony till with a sandy loam-to-loam texture covering the bedrock almost everywhere. Soil profiles developed in the till are chiefly orthic and humic podzols on the well-drained upland sites, and gleysols and peats on the low-lying sites." (1973, Richardson and Hall)

The northern section of this District has some steep terrain with treeless granitic outcrops. These occur in the vicinity of Mark's Lake, Frozen Ocean Lake and Lewis Lake.

The geology of the vast majority of the District, though, is typical of most of Central Newfoundland. "There are a number of steep monadnocks such as Hodges' Hills which rise sharply above the general level." (1973, Richardson and Hall)

In the central part of this District, above 213 metres elevation, is an area of bog and barren with a minor amount of exposed rock. Organic soils cover much of this area.

According to Canada Land Inventory Capability for Forestry maps, the predominant productive capability of this District is Capability 5. This accounts for 49% of the total area; Capability 4 is 5%.; and Capability 5 is 29%. Capability 7, which is non-productive, accounts for 17%. The limitations to growth on capabilities 3 and 4 are mainly fertility; on Capability 5, soil moisture deficiency and fertility; and on Capability 6, excess moisture and fertility.

District 11

The geomorphology of the Central Newfoundland area is also not complex. Practically the entire area of District 11 is covered with bedrock controlled glacial till with some less significant areas of outwash terraces and moraine deposits.

"The underlying bedrock is sedimentary of metamorphic material such as shale, schist and sandstone, dating from the Palaeozoic era, with intrusions of harder rocks such as granite and diorite.

The entire area has been heavily glaciated and stony till with a sandy loam to loam texture covers the bedrock almost everywhere. Soil profiles developed in the till are chiefly orthic and humic podzols on the well-drained upland sites, and gleysols and peats on the low-lying sites" (1973 Richardson and Hall). The better-drained, more permeable soils, which offer better machine mobility and make better road construction material are usually associated with poorer tree growth and fire history in this district.

The heavier, finer textured soils, which have greater water retention capabilities and poor vehicle mobility and make poor road building material, are usually associated with excellent tree growth. All of the stands on these soils have a logging history in recent years; however, some of the stands logged since 1960 have had a fire origin. The fires probably occurred during years of severe drought. Much of the regeneration on these soils following the fires was white birch because of lack of black spruce or balsam fir seed.

These heavier soils form an almost continuous strip along the Exploits River from the west to the eastern boundary of the district and south to the watershed dividing Tom Joe Brook and West Branch of Sandy River, then the north side of Stoney Brook to Lemottes Hill, and the remaining section of the district to the east of Stoney Brook and the north branch of Great Rattling Brook. There are some minor areas of more permeable soils within this area; however, they do not make up a significant portion.

There is a local system of outwash terraces, which occupies a narrow band along an earlier drainage channel of what is now Stoney Brook. The parent material is composed of well-sorted sands and gravels. "Kame terraces, composed of coarse-grained materials with a limited moisture holding capacity, are prevalent." (1971, Wilton & Bouzane)

Eskers and kames are common, reaching from this location on up the watersheds of both the Sandy River and its west branch. There is a local moraine deposit "situated below 150 m contour between Great Rattling and Stoney Brook." Drainage is gradual and disrupted here, causing a characteristic knoll and bog topography. (1971, Wilton & Bouzane)

According to the Canada Land Inventory Capability for forestry maps, the predominant productive capability of this District is Capability 5. The limitations to growth on Capabilities 3 and 4 are mainly fertility, on Capability 5 soil moisture deficiency and fertility, and Capability 6 excess moisture and fertility. Capabilities 6 and 7 predominate on the south side of the District further up the watersheds.

District 12

Geologically, this district can be broken down into the same two areas as it was for the section of topography. The areas are (1) north of Red Indian Lake and west of the Railway from Buchans Junction to Millertown Junction, and (2) south of Red Indian Lake and east of the Railway.

Area 1

"There are three major types of bedrock in this area: (1) medium to coarse grained granite

to the north, (2) volcanic rock immediately north of Red Indian Lake from Buchans Junction to the Shanadithit lowlands, and (3) red sandstone, conglomerate and shale in the Shanadithit lowlands.

The Buchans area is covered with a thick deposit of glacial till derived predominantly from the area in close proximity to a major ice centre during glaciation. Glacial till deposits are generally drumlinized in the direction of ice movement. "Most of the area is covered by 'upland' barrens which consist of extensive areas of bog-soil-rock complexes above 244 metres elevation. The uplands can be divided into two districts based, in part, on elevation. "The upper unit, occurring in the northwest, lies generally between 366-610 metres elevation. This area consists of bog and exposed rock with thin deposits of glacial till remaining in lower and protected areas. The lower area at elevation between 244 and 366 metres is a bog-barren complex with a minor component of exposed rock.

"A range of mountain occurs in the southwest portion of the area. These mountains, consisting predominantly of treeless granitic outcrops, are a northerly extension of the Annieopsquotch range. There is an area between the mountainous area and Red Indian Lake, which is underlain by softer, less erosion-resistant sandstone, shale and conglomerates. Surface deposits here consist of medium textured glacial till, lacantrine and glacial-fluvial materials. Bog and wet soils limit the area's productivity for forests."

"An escarpment along the northern shore of Red Indian Lake has surface deposits of strong glacial till with glacial-fluvial materials at the mouth of major brooks and streams. Forest growth is good along these sheltered slopes, although some areas are limited because of wet conditions."

Area 2

The geology of this area is typical of much of Central Newfoundland. "The underlying bedrock is sedimentary or metamorphic material such as shale, schist, and sandstone dating from the Palaeozoic era, with intrusions of harder rocks such as granite diorite. The entire area has been heavily glaciated and stony till with a sandy loam-to-loam texture covering the bedrock almost everywhere. Soil profiles developed in the till are chiefly orthic and humic podzols on the well-drained upland sites, and gleysols and peats on the low-lying sites" (1973, Richardson and Hall). "There are a number of steep monadnocks such as Harpoon Hill and Hungry Hill which rise sharply above the general level." (1973, Richardson and Hall)

According to Canada Land Inventory Capabilities for Forestry maps, the predominant capability of this district is Capability 5. This accounts for 47% of the total area; capability 3 is 1%; capability 4 is 13%; and capability 6 is 34% capability 7, which is non-productive, accounts for 5%. The limitations to growth on capabilities 3 and 4 are mainly fertility; on capability 5, soil moisture deficiency and fertility; and on capability 6, excess moisture and fertility.

2.2 THE PUBLIC CONSULTATION PROCESS

Timber management is viewed as one by-product of managing the forest to sustain biological diversity and long-term ecosystem health. However, it is recognized there are many other by-products, which are of value to society as a whole, and in particular, to the people who live and work in these forest management districts. With the goal of developing a five-year operating plan, Abitibi-Consolidated conducted public meetings to discuss the management of forest ecosystems for Districts 10, 11 & 12. The participation of the general public and consultation with government agencies and groups was an integral part of this planning process.

The chronological order of activities during the development of this plan was as follows:

(1) Invitations were sent out to various agencies, towns, etc., and held public meetings at Grand Falls -Windsor, to form an advisory group.

(2) Interested parties were identified; with representative stakeholders invited to form a planning team.

(3) Meetings held with the planning team to discuss the identification of timber and non-timber values. These included workshop information exchange, development of goals and objectives, and an adaptive management strategy.

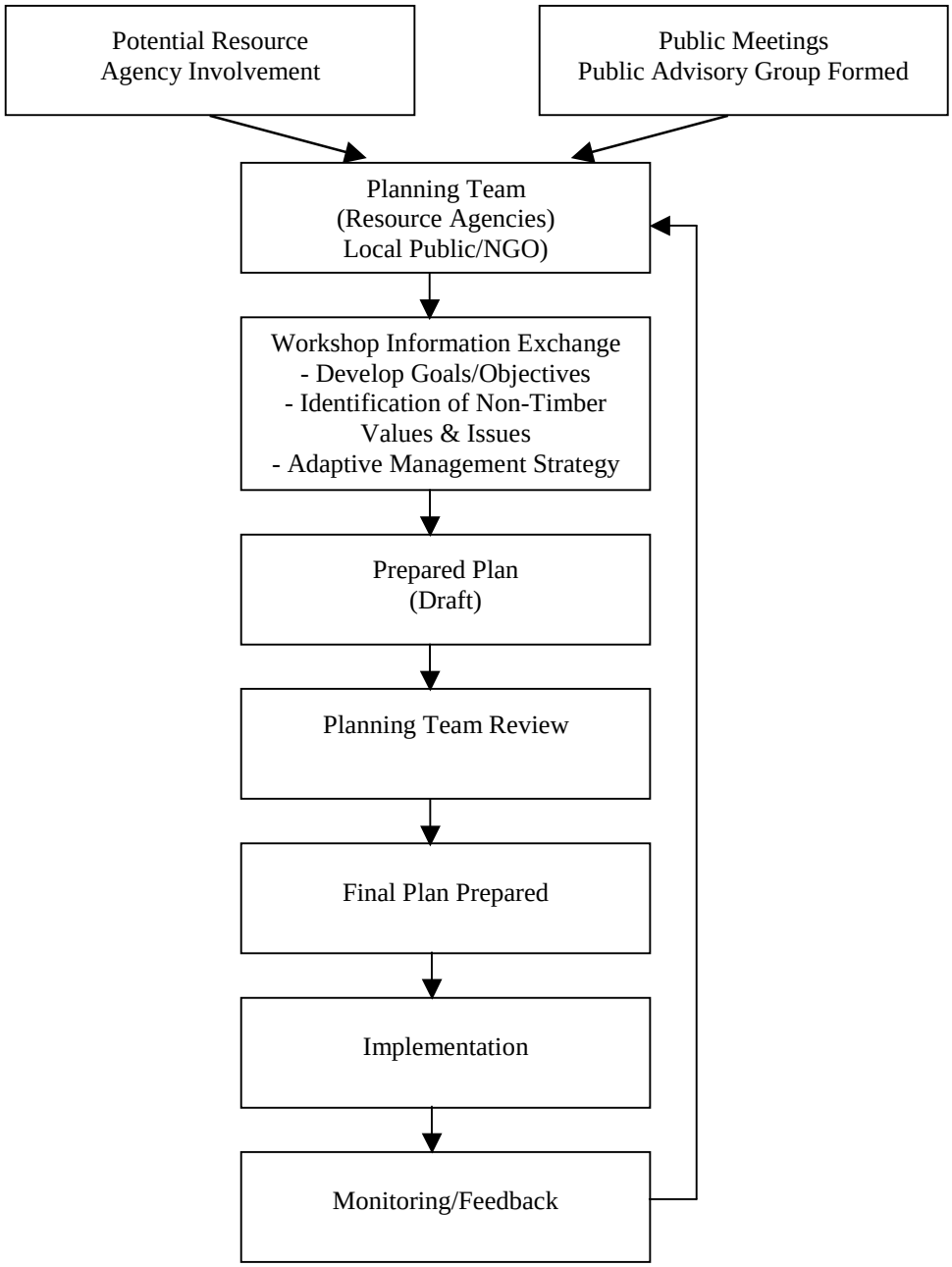
(4) Incorporate, where possible, the requests of the general public, interest groups and government agencies into a draft plan

(5) Draft plan prepared and made available for public and planning team review.

(6) Where possible, incorporate concerns expressed at the planning team meetings into the final management plan. This plan is then be submitted to government for approval. The minutes of these public meetings, as well as correspondence with other government agencies and interested groups, are available upon request.

An outline of the process in flow chart form is enclosed in Figure 2.1., a list of planning team members is found in appendix 1, and the minutes of the planning team meetings can be found in Appendix 8.

Figure 2.1
Consultation Process – Five-Year Plan



2.3 LINKAGES BETWEEN GOALS & OBJECTIVES IDENTIFIED THROUGH THE PUBLIC PARTICIPATION PROCESS OF THE STRATEGIC FOREST MANAGEMENT PLAN (2001-2021) & THIS FIVE-YEAR PLAN (2003-2007)

The technique of Forest Ecosystem Management (FEM) has seen a shift from traditional timber management to a more comprehensive view, incorporating non-timber values into the planning framework. To successfully implement non-timber values, the company recognizes the importance of external input from interested resource users.

Rising to the challenge of FEM and Sustainable Forest Management (SFM), the public consultation process emerged in 1997, when Jacques Whitford Environment Limited was contracted by the company to facilitate meetings and assist in developing a framework of public participation for the completion of a twenty year sustainable forest management plan.

Initially, three general meetings were held, where seventy-three individuals were identified, representing six groups of interested stakeholders, and include: business, government, citizen organizations, labour, environmental groups, and concerned individuals. From this, thirty-one individuals became interested in forming an advisory committee for the development of a twenty-year strategic forest management plan. In 2001, twenty-one individuals remain active members of this advisory committee, representing 100 % of the previous mentioned stakeholder groups.

Although very important, the Public Participation process is not an easy task to accomplish, given the company's large landbase, many stakeholders, communities and forest users. Two of the larger challenges facing a diverse group include:

a) Having participants agree to a set of ground rules, which offer guidance & direction to the meetings. An established set of ground rules enables meetings to be productive, providing resolution to sensitive situations.
b) Creating an atmosphere where the holder of the meetings (ie. the company) and its participants are informed of respective issues and concerns from each group or individual. This exchange of information allows for an educated committee, thus providing constructive input into the development of the SFM plan.

Our own in-house public participation process complements government's requirements to establish a strategic document for each district. Realizing this, Abitbi-Consolidated has addressed issues raised during both processes and incorporated these concerns into this five-year operating plan for management districts 10, 11 & 12.

As part of Newfoundland Woodlands commitment to sustainable forest management of the entrusted forest resource, this five-year operating plan is submitted to the Department of Forest Resources & Agrifoods and the Department of Environment for review and approval. Upon approval, this five-year operating plan is registered to the current Environmental Assessment Act.

Some common themes discussed during the development of the Sustainable Forest Management Plan and this Five-year Operating plan include:

(A) TIMBER RESOURCES:

One of the main objectives of Abitibi-Consolidated is to provide a long-term supply of fresh fibre to both its Grand Falls–Windsor and Stephenville mills located in the province of Newfoundland & Labrador.

Overall, Abitbi-Consolidated Company of Canada:

- Manages approximately 1.8 million hectares of forest land on the insular portion of the province, where only approximately 45 % is considered productive, resulting into an estimated 800, 000 hectares utilized to obtain Annual Allowable Cut levels.
- Has an annual demand of approximately 1.1 million meters of fibre to sustain production at both mills, which consists of fibre harvested from our own limits, purchase fibre from local sawmills and purchased fibre from offshore sources such as Labrador and Quebec.
- Employes approximately 900 people for its operations at both mills, and approximately an additional 400 people in the woodlands department. Newfoundland Woodlands is an equal employer company, where, over the past few months, a detailed human resources plan has been developed involving agencies such as the Women's Policy Office.
- Endeavors to promote healthy forests through annually conducting silviculture activities such as: Pre-commercial thinning, Planting, Site Preparation, and Plantation Cleaning.
- Has developed, adopted, and implemented a Forest Environmental Management Policy on its operations, which ensures the interests of concerned stakeholders, while providing for a sustained supply of quality wood fibre at a competitive cost.

(B) PROTECTION OF THE RESOURCE:

Newfoundland Woodlands undertakes its forest management activities according to the Environmental Protection Guidelines for Timber Management, which was developed by the Newfoundland Forest Service in May 1992. These guidelines provide direction to forest managers on conducting daily forest activities, to help conserve and manage the ecosystems of the province. In developing its five-year operating plans, Newfoundland Woodlands has incorporated these guidelines, which form the basis of all forest management activities proposed.

Newfoundland Woodlands also operates under a Certificate of Managed Lands, where certain schedules and conditions are established and must be followed to acquire a managed land status. If such conditions and criteria are not followed, proper authorities may deem the land unmanaged, resulting in Newfoundland Woodlands losing its Managed Land status.

Regular inspections form the Department of Forest Resources & Agrifoods, and other government agencies ensure Newfoundland Woodlands compliance to regulatory conditions and guidelines pertaining to its day-to-day forest activity.

Newfoundland Woodlands has a vested interest in the protection of the resource. Each year, company personnel ensure all fire fighting equipment is inspected and regular maintenance is conducted, and all fire equipment is strategically located throughout the operations. As well, regular field inspections are conducted during the forest fire season to ensure equipment is in proper working order and is within the regulatory distances to operating areas.

As well, in 1999, Newfoundland Woodlands implemented a Forest Environmental Management System (FEMS) throughout its woodlands operations. This FEMS was registered to the International Standards Organization (ISO) 14001 Standard. Unique to this process, Newfoundland Woodlands has also included within its registration, a commitment to the Canadian Council of Ministers six criteria. As part of this system:

- Monthly field inspections are conducted by Area Superintendents,
- Yearly internal audits are conducted,
- Yearly external surveillance audits are conducted (Quality Management Institute (QMI)),
- Corrective actions are implemented for all non-conformances & non-compliances,
- Employees receive training on best management practices on a continual basis (Front-Line Training / Logging for Wildlife), &
- External communications from the public on its forest activities are dealt with in a timely and professional manner,
- Corporate Environmental Audits conducted every three years
- Monitoring of approved five-year operating plans by various planning team committees.

(C) LANDSCAPE DESIGN / TOURISM / OUTFITTERS:

Newfoundland Woodlands recognizes the importance of other users of the forest resource entrusted in its care. In this respect, where proposed harvest operations infringe upon local outfitters operating areas, areas highly visible to vehicular traffic or within protected water supply areas, we have made and will continue to make every effort to mitigate the negative impacts of the harvest activity through:

- A landscape approach to forest management, which takes into account the proposed harvest regime and the conflicting resource user,
    - § Where possible, tailor time of harvest to have minimum impact on outfitting / tourism business,
- Extended buffers around areas of concern,
- Meetings with individual outfitters to discuss issues and obtain resolve,
- Meetings with other resource users such as: snowmobile clubs, local recreation committees, etc.. when conflicting situations arise from proposed forestry activity.

Abitibi-Consolidated believes that Newfoundland is blessed with diverse and plentiful natural resources. The Newfoundland Woodlands Division also believes that the ongoing prosperity of both the forest industry and tourism industry is dependent upon these natural resources and their continued long-term sustainability. As a result, Abitibi-Consolidated recognizes and believes that the activities of the forest industry & tourism industry are complementary and that the interest of both industries in provincial lands and resource can be mutually accommodated.

In light of this, on Abitibi-Consolidated's holdings, Newfoundland Woodlands has provided access and granted permits to numerous outfitting companies. In cases where our proposed harvesting may have potential impacts on outfitters operating zones, we have initiated the following activities:

- Modified cut block design to accomodiate wildlife and aesthetic values,
- Modified road design and construction periods,
- Implemented road decommissioning procedures,
- Scheduled harvesting operations around hunting seasons,
- Incorporated view scope management,
- Met with individual outfitters in outfitters association to discuss specific concerns,
- Encourage outfitters / tourism to participate in Forest Management Planning Meetings.

In other areas of tourism such as: snowmobiling clubs, eco-tourism companies, cross country ski clubs, etc… Abitibi-Consolidated will encourage these groups to also attend planning team meetings. It is by transparent consultation process like this, where mutual recognition and respect can be incorporated into forest management plans.

(D) HISTORICAL RESOURCES:

The Provincial Archaeolgoist, reviews all five-year operating plans under the environmental assessment review process. Therefore, any recommendations received from that department, with respect to archaeological sites are considered through the Annual Operating Plan process before any forest activity commences. Also, representatives from this department have viewed first hand, Abitibi-Consolidated's operations to gain a better understanding of any impacts such as: Pre-Commercial Thininng, Harvesting, Roadbuilding, or other forestry related activities that can have an historical value. In light of this, Abitibi-Consolidated has and will continue to implement a Stage I archeological survey where areas of concern are identified.

(E) WATER AND WATER QUALITY:

Newfoundland Woodlands strongly protects water quality throughout its limits through:

- Applying the regulation of a 20-meter buffer on all streams that appear on a 1:50,000 topo map, and around any stream which is greater than 1.0 meter in width. These

buffers are then field marked to ensure compliance. Abitibi-Consolidated has dedicated training to all personnel who's forest activities may have the potential for a negative impact on water resources.

- Increased buffers within protected water supply areas,
- All harvest operating areas are equipped with proper ULC fuel storage tanks, and spill kits are located on site.
- Actively participating in Watershed Monitoring Committees throughout its timber limits, such as in Gander, Grand Falls-Windsor, & Botwood.
- Applying to the Water Resources Division to obtain proper approvals for operating within protected water supply areas, and the installation of water crossings. As well, field supervisors ensure that the regulations stipulated by the Water Resources Division &/or Coast Guard are strictly followed.
- Currently under Newfoundland Woodlands FEMS to regularly monitor water quality (visual) on harvest operations to ensure desired targets are achieved.

(F) SPECIAL PLACES / NON-TIMBER VALUES:

In addition to preserving naturalness, promoting ecological processes & providing habitat to various wildlife species, special places present a favourite atmosphere to many people, providing them with opportunities for relaxation and quiet times. The company recognizes the value placed on these special places by other users of the forest, and in its attempt to provide the greatest good for the greatest number of people (including wildlife), the company has taken a proactive approach in preserving / protecting specific areas within its DFA, and include:

1.) **Bay du Nord Reserve**. This is a wildlife reserve area that was established in 1986,comprising approximately 42, 730 hectares within district 04.

2.) **Pine Marten Reserve**. This is a wildlife reserve area that was established in 1981 within Districts 13 & 14. This area comprises approximately 39, 202 hectares and was set aside to help marten population recover from the endangered species list.

3.) **King George IV Reserve**. This is an ecological reserve that was established in 1980, and represents approximately 1, 900 hectares within district 13. This area was set aside from harvest activity because it contains unique or representative species, ecosystems, or natural processes.

4.) **Grasslands-Robinsons River Reserve.** This reserve was established in 1980 within district 14, representing approximately 1, 113 hectares. The purpose of this reserve is to preserve delta site and its associated flora.

(G) WILDLIFE

In addition to the above noted reserves, Newfoundland Woodlands daily forest activity (from planning --- harvest --- forest renewal), is conducted taking into consideration various plant & wildlife species found throughout its DFA. Also, Newfoundland

Woodlands participates with the Western Newfoundland Model Forest in a program to identify rare plant species.

During the planning process throughout the development of five-year and annual operating plans, planners take into consideration:

1.) the time of proposed activity to:

a) Avoid / minimize negative impacts to fish spawning beds by scheduling forest activity (ie: water crossings) to occur outside known fish spawning times,

b) Avoid / minimize negative impacts to organic materials on wetland areas or sensitive sites (ie: bogs) by scheduling harvest activity to occur during winter months when the ground is frozen.

2.) Cut block design to allow connectivity & provide sufficient habitat in core Pine Marten Areas.

3.) Local Genetic Gene Pool -- Silviculture planners endeavour to contribute to the local gene pool by targeting 100 % local seed source to be planted.

4.) The Harvest method to be undertaken on the timber limits (ie: Clearcut), which is conducive to moose habitat requirements by exposing the advanced regeneration, helping to maintain healthy populations.

To help protect, maintain &/or preserve wildlife & wildlife habitat and healthy environments at the operational level; Supervisors, Superintendents, & Foremen ensure that:

- There is no harvest of live red or white pine, allowing for species diversity
- All cut blocks have a minimum of 10 snags / hectare after a harvest to allow for cavity nesting areas.
- Regulatory size buffers (and extended buffer zones if necessary), are established around known wildlife species areas such as:
  - § Birds of prey (ie: Osprey) nests,
  - § Bear denning sites, &
  - § Aquatic species such as fish located in streams, rivers, lakes.
- A hardwood component remains on Pre-Commercial Thinning Operations to provide for biodiversity and allow a food source for species such as: moose, grouse, etc..
- Speciality designed culverts for water crossings around known beaver areas are being installed, allowing a symbiotic relationship to exist, rather than a “pest control” situation developing, where the beaver has to be removed from its home.

(H) RESEARCH:

Abitibi-Consolidated, Newfoundland Woodlands has also taken a proactive approach in its research activities, over the past few years, Newfoundland Woodlands have:

1.) Participated on a Pine Marten Recovery Team, whose mandate is to identify marten habitat requirements. Newfoundland Woodlands participates on an East Coast and West Coast working group for pine marten, where specific models are being developed. Detailed marten habitat requirements will be inputted into this model, to produce a map of specific marten habitat areas within a district. In our efforts to maintain healthy Marten populations, Newfoundland Woodlands will consider the results of this model in future planning processes. However, until this model becomes fully functional, Newfoundland Woodlands have and will continue to consult with the Department of Wildlife during its planning process and the development of this five-year plan for districts 10, 11 & 12, to ensure sufficient marten habitat remains within its proposed harvest areas.

2.) Participating in a Red Indian Lake Pine Marten Education Program. This program is currently in its second year, where local residents are being made aware of a modified spring-loaded snare procedure, through educational sessions, meetings, etc… in an effort of reducing mortality rates of Pine Marten and other wildlife species.

3.) Participating in a plot-based National Forest Inventory Design Program. This is the first national summary based on this design, where contributions to Global Ecological Cycles are to be determined and evaluated.

4.) Newfoundland Woodlands is also an active participant in the Newfoundland Forest Inventory Program. Within this program, permanent sample plots (PSP's) and temporary sample plots (TSP's) are established to study growth and yield of various forest stratums in the province. As well, identify the various types of soils, plant species, and bird species within these plots.

(I) SAWMILL INDUSTRY:

To promote responsible stewardship of the resource within Districts 10, 11 & 12 (and throughout all its jurisdiction), Newfoundland Woodlands actively participates in the exchange of sawlogs to local integrated sawmills. With this exchange agreement, sawlogs can either be sold or exchanged for pulp chips.

As well, in various operating areas, such as Districts 14 & 16, Newfoundland Woodlands recognize "historic sawmillers" ability to harvest sawlogs to be exchanged or sold to local integrated sawmills.

(J) MINING:

Occasionally, Newfoundland Woodlands receives request from mining companies to conduct mineral explorations within its Defined Forest Area. Such activity is promoted, whereby we have developed and implemented a Mineral Exploration Policy for our landbase, allowing such activity to be conducted without causing any serious loss of forest landbase.

(K) AGRICULTURE:

Newfoundland Woodlands Recognizes the potential of agricultural development areas on its Defined Forest Area. With this topic, the company intends to maintain relations with the government agricultural department and any interested citizens, to explore the full potential of possible agricultural development. Where practical, available agricultural zones in land class III will be made available for agricultural development. In the Central region of the province, a dedicated agricultural zone has been established, plus Abitbi-Consolidated has made available lands for blueberry farming and has accommodated request for marketing of balsam fir Christmas Wreath Development.

(L) TRAINING & EDUCATION:

Abitibi-Consolidated, Newfoundland Woodlands has also taken a proactive approach in communicating and educating the general public, as well as its employees, on sustainable forest management issues, wildlife considerations, and best management practices. Recently, Newfoundland Woodlands has developed and trained employees on stringent Detailed Working Instructions & Logging for Wildlife issues, which outline best management practices when conducting daily forest activity, especially when working around waterbodies and sensitive areas. These working instructions are reviewed and updated on a continuous basis, and are developed under the company's FEM system to include:

- Proper fuel/oil handling procedures,
- Culvert / Bridge installation procedures,
- Hazardous chemicals procedures,
- Buffers procedure, etc…

As well, upon request, the company has and will continue to provide formal presentations to local agencies, high schools, and the general public on its forest activities.

(M) PUBLIC PARTICIPATION & COMMUNICATION:

Abitibi-Consolidated recognizes the importance of public consultation regarding forest management planning. We are actively participating in planning teams for the development of five-year operating plans on our DFA. This planning team process results in hundreds of planning team meetings, public information sessions, workshops, and a variety of field trips. Also, as part of this process, the company has conducted and will continue to conduct information sessions and field trips for interested groups within the Defined Forest Area.

To date, Abitbi-Consolidated has utilized planning teams for the development of a strategic 20-year plan that covers its entire landbase, and five-year plans for Districts 5, 6, 9, 10, 11, 12, 13, 14, & 16.

(N) SOCIO-ECONOMIC:

Socio-Economic values are a re-occurring item at the majority of planning team meetings. To address this issue, Abitibi-Consolidated, through partnerships with the Newfoundland Forest Service and Western Newfoundland Model Forest have initiated a project within Forest Management District 16. Its anticipated that the information and process learned from this study will be transferable to other districts, where it can be utilized in our forest management decision making process.

As well, during the winter of 2002, Abitibi-Consolidated Company of Canada is in the process of transferring approximately 100 acres of freehold land (Reid lot 247), to the community of Millertown, for the purpose of residential development.

(O) SUMMARY

The following table outlines a summary of common themes and the associated strategies identified during the public participation process for the development of the five-year operating plan (2003-2007) for forest management districts 10, 11 & 12.

DISTRICT 10

THEME / TOPIC	STRATEGY
1. **Road Decommissioning**	After harvest completion, existing forest access roads in Districts 10 harvest areas can targeted for decommissioning to avoid / minimize vehicular traffic. In this sense, decommissioning refers to road blockage, culvert &/or bridge removal.
2. **Sensitive Areas**	- Roads will avoid such areas as increased buffers. - Consultation with Government agencies.
3. **Recreation / Roads**	Forest Access Roads within District 10, which are not identified for decommissioning will be made available for public access.
4. **Protected Water Supply Areas**	- Operating plans presented at planning team meetings. - Operations within protected water supply areas, conducted according to strict environmental regulations. - Participating in local watershed committee, in Grand Falls-Windsor & Botwood, to ensure harvesting / silviculture activities are reviewed prior to implementation.
5. **Protection of Resource**	- All harvest operations to have spill kit on site (not regulatory). - ISO Environmental checklist (monthly). - Fire fighting equipment and continual monitoring to ensure compliance with forest fire regulations.

6. **Wildlife**	- Buffers on known osprey nests. - Conduct water-crossing activity outside known fish spawning areas. - Submission of Proposed Harvest Areas in District 10 to Dept. of Wildlife to determine wildlife corridors and areas of concern. - Retain 10/snags/hectare. - Buffer on black bear sites. - Buffers for beavers.
7. **Landscape Design / Tourism**	Landscape approach to forest management around conflicting areas: Ø Commercial outfitters, such as Hideaway Lodge Hunting & Fishing., where various "leave areas" were identified and various times for harvest were determined. Ø Protected watersheds around various communities within District 10 Ø Areas highly visible to vehicular traffic
8. **Commercial / Domestic Fuelwood Policy**	Abitibi-Consolidated permits cutting of non-commercial species on its cutovers. As well, the company is open to ideas of feasible commercial fuelwood lots, and has set aside areas for commercial fuelwood operators within District 10.
9. **Historical Resources**	Modified operations or extended buffers will be established around identified archaeological sites, as recommended by the Provincial Archaeologist, through the Environmental Assessment Process.
10. **Provincial Parks / Natural Areas**	Modified operations maybe necessary.
11. **Compliance Monitoring**	- Monthly field checks. - 1st, 2nd and 3rd party audits. - External communication from public. - Communication from advisory committee.
12. **Water and Water Quality**	- Buffers around waterbodies identified on a 1:50,000 topo map and around waterbodies greater than 1.0 metres in width. - Increased buffers in protected water supply areas. - Heavy equipment or machinery not permitted in any waterbody without proper approvals. - Woody material, of any kind, is not permitted to enter a waterbody.
13. **Biodiversity**	- Clumps of trees (snags) left on harvest and silviculture areas. - Areas containing rare and/or unique flora are protected from forestry activity. - Silviculture activities will target 100% natural seed source for planting stock, and within PCT program, a hardwood

	component will remain to accommodate biodiversity requirements.
14. **Sustainable Forests**	Utilization of a computer simulation model to analyze future wood supply. Model projects forest growth and depletion based on the current state of the forest, assumptions in the rate of harvest, silviculture treatment and forest development curves derived from measurements taken in the forest.
15. **Sawmill Industry**	Where possible, participate in the exchange of sawlogs to local integrated sawmills.

*DISTRICT **11***

THEME / TOPIC	STRATEGY
1. **Road Decommissioning**	After harvest completion, existing forest access roads in Districts 11 harvest areas can targeted for decommissioning to avoid / minimize vehicular traffic. In this sense, decommissioning refers to road blockage, culvert &/or bridge removal.
2. **Sensitive Areas**	- Roads will avoid such areas as increased buffers. - Consultation with Government agencies.
3. **Recreation / Roads**	Forest Access Roads within District 11, which are not identified for decommissioning will be made available for public access.
4. **Protected Water Supply Areas**	- Operating plans presented at planning team meetings. - Operations within protected water supply areas, conducted according to strict environmental regulations.
5. **Protection of Resource**	- All harvest operations to have spill kit on site (not regulatory). - ISO Environmental checklist (monthly). - Insect control – cost shared. - Fire fighting equipment and continual monitoring to ensure compliance with forest fire regulations.
6. **Wildlife**	- Participating in research to identify plant species – rare, threatened, and endangered. - Buffers on known osprey nests. - Conduct water-crossing activity outside known fish spawning areas.

	- Submission of Proposed Harvest Areas in District 11 to Dept. of Wildlife to determine wildlife corridors and areas of concern. - Retain 10/snags/hectare. - Buffer on black bear sites. - Buffers for beavers.
7. **Landscape Design / Tourism**	Landscape approach to forest management around conflicting areas: Ø Commercial outfitters. Ø Areas highly visible to vehicular traffic
8. **Commercial / Domestic Fuelwood Policy**	Abitibi-Consolidated permits cutting of non-commercial species on its cutovers. As well, the company is open to ideas of feasible commercial fuelwood lots, and has set aside areas for commercial fuelwood operators within District 11.
9. **Historical Resources**	Modified operations or extended buffers will be established around identified archaeological sites, as recommended by the Provincial Archaeologist, through the Environmental Assessment Process.
10. **Provincial Parks / Natural Areas**	Modified operations maybe necessary.
11. **Compliance Monitoring**	- Monthly field checks. - 1st, 2nd and 3rd party audits. - External communication from public. - Communication from advisory committee.
12. **Water and Water Quality**	- Buffers around waterbodies identified on a 1:50,000 topo map and around waterbodies greater than 1.0 metres in width. - Increased buffers in protected water supply areas. - Heavy equipment or machinery not permitted in any waterbody without proper approvals. - Woody material, of any kind, is not permitted to enter a waterbody.
13. **Biodiversity**	- Clumps of trees (snags) left on harvest and silviculture areas. - Areas containing rare and/or unique flora are protected from forestry activity. - Silviculture activities will target 100% natural seed source for planting stock, and within PCT program, a hardwood component will remain to accommodate biodiversity requirements.
14. **Sustainable Forests**	Utilization of a computer simulation model to analyze future wood supply. Model projects forest growth and depletion based on the current state of the forest, assumptions in the rate of harvest, silviculture treatment and forest development curves derived from measurements taken in the forest.

15. **Sawmill Industry**	Where possible, participate in the exchange of sawlogs to local integrated sawmills.

DISTRICT 12

THEME / TOPIC	STRATEGY
1. **Road Decommissioning**	After harvest completion, existing forest access roads in Districts 12 harvest areas can targeted for decommissioning to avoid / minimize vehicular traffic. In this sense, decommissioning refers to road blockage, culvert &/or bridge removal. As well, if deemed necessary, the company may include other methods of decommissioning, such as removing the first fifty feet of road to avoid vehicular traffic.
2. **Sensitive Areas**	- Roads will avoid such areas as increased buffers. - Consultation with Government agencies. - With respect to conservation / preservation of representative landscapes of the Central Newfoundland Ecoregion type IIb, ACI has proposed an area representing approx 3400 hectares within the Lloyd's River area which is currently under review by the Protected Areas Association and Wilderness & Ecological Reserves Act.
3. **Recreation / Roads**	Forest Access Roads within District 12, which are not identified for decommissioning will be made available for public access.
4. **Protected Water Supply Areas**	- Operating plans presented at planning team meetings. - Operations within protected water supply areas, conducted according to strict environmental regulations.
5. **Protection of Resource**	- All harvest operations to have spill kit on site (not regulatory). - ISO Environmental checklist (monthly). - Insect control – cost shared. - Fire fighting equipment and continual monitoring to ensure compliance with forest fire regulations.
6. **Wildlife**	- Participating in research to identify plant species – rare, threatened, and endangered. - Buffers on known osprey nests. - Conduct water-crossing activity outside known fish spawning areas. - Submission of Proposed Harvest Areas in District 12 to Dept. of Wildlife to determine wildlife corridors and areas of concern. - Retain 10/snags/hectare.

	- Buffer on black bear sites. - Buffers for beavers. - Working with Dept. of Wildlife to develop a Pine Marten Model, to determine appropriate habitat across District 12, and within areas proposed for the North & South sides of Red Indian Lake - Participating in the Red Indian Lake Snaring program, which helps to educate rabbit hunters on the use of a modified snare, to minimize the mortality rate of Pine Marten due to accidental snaring.
7. **Landscape Design / Tourism**	Landscape approach to forest management around conflicting areas: Ø Commercial outfitters, such as Snowshoe Lake Hunting & Fishing Ø Cabin development areas. Ø Protected watersheds Ø Areas highly visible to vehicular traffic
8. **Commercial / Domestic Fuelwood Policy**	Abitibi-Consolidated permits cutting of non-commercial species on its cutovers. As well, the company is open to ideas of feasible commercial fuelwood lots, and has set aside areas for commercial fuelwood operators within District 12.
9. **Historical Resources**	Modified operations or extended buffers will be established around identified archaeological sites, as recommended by the Provincial Archaeologist, through the Environmental Assessment Process.
10. **Provincial Parks / Natural Areas**	Modified operations maybe necessary.
11. **Compliance Monitoring**	- Monthly field checks. - 1st, 2nd and 3rd party audits. - External communication from public. - Communication from advisory committee.
12. **Water and Water Quality**	- Establish Regulatory Buffers around waterbodies identified on a 1:50,000 topo map and around waterbodies greater than 1.0 metres in width. - Increased buffers in protected water supply areas. - Heavy equipment or machinery not permitted in any waterbody without proper approvals. - Woody material, of any kind, is not permitted to enter a waterbody.
13. **Biodiversity**	- Clumps of trees (snags) left on harvest and silviculture areas. - Areas containing rare and/or unique flora are protected from forestry activity. - Silviculture activities will target 100% natural seed source for planting stock, and within PCT program, a hardwood component will remain to accommodate biodiversity requirements. - The establishment of this plan will aid the company in its long-term objective of balancing the age class structure within District 12. This balanced age class structure will provide the required habitat for a variety of species, such as

	moose, caribou, migratory birds, etc..
14. **Sustainable Forests**	Utilization of a computer simulation model to analyze future wood supply. Model projects forest growth and depletion based on the current state of the forest, assumptions in the rate of harvest, silviculture treatment and forest development curves derived from measurements taken in the forest.
15. **Sawmill Industry**	Where possible, participate in the exchange of sawlogs to local integrated sawmills.

2.4 SUMMARY OF PAST FOREST ACTIVITIES

Over the past five years, forestry activity conducted by Abitibi-Consolidated in Forest Management Districts 10, 11 & 12 included: harvesting of timber, road and bridge building activities to access the timber and silviculture activities.

1) **Harvesting Activity**

The past five years harvesting results are included in Table 2.1. The previous annual allowable cut (AAC) from 1996 to 2000 was:

84,000 m^3 per year for District 10
136,000 m^3 per year for District 11
184,000 m^3 per year for District 12

The level of harvesting activity proposed within this plan will reflect current AAC calculations and, if required, will be adjusted to meet any revisions.

Operations in these districts were carried out utilizing both mechanical and manual shortwood cut-to-length systems. These types of operations are efficient and have minimal environmental impacts to the forest floor. The mechanical operation allows for the safe harvesting of roads during all seasons and is not negatively impacted by winter conditions.

During the past five-year period (1997-2001), approximately 343 793, 537 474, & 884 917 m^3 were harvested in Districts 10, 11 & 12 respectively.

Table 2.1
Summary of Past Five Years Harvesting Results
for the period January 1, 1997 to December 31, 2001
(Net Cubic Metres)

Year	Actual Volume District 10	Actual Volume District 11	Actual Volume District 12
1997	84, 643	50, 258	182, 486
1998	17, 776	18, 077	96, 238
1999	135, 829	148, 500	92, 861
2000	31, 998	167, 094	318, 208
*2001**	*64, 547**	*153, 545**	*195, 124**
Total	334, 793	537, 474	884, 917

** Year 2001 is an estimate of volume. Actual numbers will be identified during the fall of 2002, during the completion of the Past Annual Report.*

2) **Forest Access Road Activity**

A summary of the roads that were constructed over the past five years are included in Table 2.2. There were approximately 273 km forest access roads constructed within Districts 10, 11 & 12, with numerous steel culvert installations. The trend on Abitibi-Consolidated limits over the past five year period in road building has been to construct roads using tracked excavators rather than rely on tractors, as was the past practice. This move to excavators has meant a reduction in the loss of productive forestland during road construction. More importantly, is the resulting reduction in the amount of silt and sediment, which flow into rivers and streams. The positive impacts are related to water quality and improved fish habitat.

The criteria regarding application for permission to construct bridges and install culverts was followed, i.e. if a brook was shown on a 1:50,000 scale topographic map then approval must be obtained from the Federal Department of Fisheries and Oceans, the Canadian Coast Guard, and from the Provincial Government's Water Resources Division. Recommendations from all parties regarding bridge openings and culvert sizes were followed, as were other mitigative measures that may have been recommended for construction and/or installation.

All forest access roads and cross drainage culverts were also approved and mitigative measures proposed. Those mitigative measures and approvals came from the federal department of Fisheries and Oceans.

The competence of our employees is foremost for Abitibi-Consolidated. To ensure all installations are carried out to consistently minimize negative impacts to the environment, a detailed training program has been initiated. All personnel who are actively involved with culvert/bridge installation have undergone specific training that targets best management practices. These detailed working instructions outline procedures all employees must follow while working around any waterbody. Continual improvement programs such as the dedicated training helps ensure Abitibi-Consolidated meets or exceeds all regulations associated with good forest management.

Table 2.2

Summary of Forest Access Road Construction (primary & operational) for the period January 1, 1997 to December 31, 2001

	ROADS (KM)		
YEAR	DISTRICT 10	DISTRICT 11	DISTRICT 12
*2001**	*9.9**	*29.7**	*31.3**
2000	2.4	29.4	29.4
1999	21.0	25.6	11.7
1998	2.3	9.7	9.3
1997	13.4	26.7	21.9
Total	49.0	121.1	103.6

** Year 2001 is an estimate of road construction. Actual numbers will be identified during the fall of 2002, during the completion of the Past Annual . Report.*

3) Silviculture Activities

The past five years silviculture activities are summarized in Table 2.3. In total for the three districts combined, there were 7152 hectares of young softwood stands pre-commercially thinned, 1865 hectares of planting activity conducted, and 1535 hectares of site preparation were completed.

Table 2.3
Summary of Silviculture Treatments
in Forest Management Districts 10, 11 & 12
for the Period 1997 to 2001

Year	AREA (HECTARES)								
	DISTRICT 10			DISTRICT 11			DISTRICT 12		
	Site Prep.	*Planting*	*PCT*	*Site Prep.*	*Planting*	*PCT*	*Site Prep.*	*Planting*	*PCT*
1997	124	112	-	82	112	1614	-	182	-
1998	329	258	-	82	-	1242	-	-	580
1999	70	355	-	-	-	362	217	-	857
2000	155	220	-	86	-	421	80	218	655
2001	-	165	312	310	150	516	-	93	593
TOTAL	**678**	**1110**	**312**	**560**	**262**	**4155**	**297**	**493**	**2685**

2.5 OVERVIEW OF PLANNING PERIOD (2003-2007)

This operating plan covers the period January 1, 2003 to December 31, 2007. There are 84 000 m^3, 162 000 m^3 & 191 000 m^3 annually proposed for harvest during this planning period in Districts 10, 11 & 12, respectively. This volume will be harvested using the traditional short wood harvesting systems and mechanical harvesters.

Forest access roads will be constructed to access any mature and overmature forest stands. There are approximately 142 kilometres of primary road construction planned within the scope of this five-year plan. (ref. Table 2.6). These roads will be located so as to minimize the damage to the environment and to avoid environmentally sensitive areas where possible. The latest in road building technology will be used. Other forest users, such as hunters and fishermen, are expected to avail themselves of those access routes to the forest.

There are 11, 490 hectares of pre-commercial thinnings planned (ref. Table 2.3A). This treatment will occur in stands that are 10-15 years old and will occur throughout all three districts. As well, there are approximately 2540 hectares of site preparation and planting proposed for the upcoming planning period.

The protection of the resources within the District is also discussed, with regard to insect and fire hazards, as outlined in section 2.9. The consultation process utilized in the development of this plan is summarized and located in section 2.2.

2.6 ALLOCATION OF WOOD SUPPLY

Abitibi-Consolidated manages 1.8 million hectares of forest land within its Defined Forested Area (DFA). These limits range from Terra Nova in the eastern portion to Stephenville in the western portion. The company has long term tenure on these limits with various expiry dates associated with different licenses. Of the 1.8 million hectares of total land area, only 45% is productive land available for the production of timber for the Stephenville and Grand Falls mills. The remainder consists of bog, barren, water and scrub land.

A primary objective of Abitibi-Consolidated's forest management activity is to provide a sustainable supply of high quality raw material to the mills at a competitive cost while ensuring other sustainable activities are being considered. Abitibi-Consolidated (in conjunction with the Dept. of Forestry), uses a computer simulation model to analyse the future wood supply for the two mills. The model projects forest growth and depletion based on the current state of the forest, assumptions in the rate of harvest, silviculture treatments, and forest development curves derived from measurements taken in the forest.

This past January, new Annual Allowable Cuts were released from the Department of Forest Resources, for the period 2001 – 2005, resulting in annual harvest levels of 84,000m³, 162,000 m^3, & 191,000 m^3 for Districts 10, 11 & 12, respectively (reference: table 2.4

However, new to this planning process, the Department of Forest Resources & Agrifoods has permitted the boundaries of the proposed harvest blocks to extend up to two times the annual allowable harvest for a particular district. With this in mind, the company cannot exceed its AAC for each district but can propose areas for environmental assessment that contribute in upwards of two times the AAC. It is the company's intention to track volumes harvested within each district and regularly report this information to the Department of Forest Resources & Agrifoods, to ensure that the maximum sustainable harvest identified for each district is maintained over the five-year period. Table 2.4 outlines the company's proposed harvest levels for this planning period.

Summary sheets outlining the proposed harvest areas for this upcoming planning period 2003-2007 for each forest management district are found in appendix 2, with actual maps of the operating areas within districts 10, 11 & 12 found in appendices 3, 4, & 5 respectively. Within these harvest boundaries, it is the company's intention to harvest the mature to overmature softwood species.

Table 2.4 Summary of Scheduled Harvest
Forest Management Districts 10, 11 & 12
January 1, 2003 to December 31, 2007

Year	VOLUME (M^3)		
	DISTRICT 10	DISTRICT 11	DISTRICT 12
2003	84, 000	162, 000	191, 000
2004	84, 000	162, 000	191, 000
2005	84, 000	162, 000	191, 000
2006	84, 000	162, 000	191, 000
2007	84, 000	162, 000	191, 000
Total	420, 000	810, 000	955, 000

Note: Projected volumes may vary by year but will balance within the AAC calculations over the five-year period.

FUELWOOD OPERATIONS

Commercial fuelwood areas located within Districts 10, 11 & 12 can be viewed on the attached maps in appendix 7. Within these proposed blocks, it is the company's intention to allow the harvest of the hardwood and larch species, upon request. Therefore, depending on the demand of commercial fuelwood operators within Districts 10, 11 & 12, some of these proposed commercial fuelwood areas may or may not be harvested over the upcoming planning period. As well, within District 12, there is an area proposed labelled "Badger Burn Area". This area was reverted back to the crown and therefore all forest management responsibility relies with the crown for issuing fuelwood permits, fuel / oil spills, etc…

2.7 SILVICULTURE

Regeneration in Districts 10, 11 & 12 occur naturally after harvesting. These harvested areas regenerate primarily to black spruce and balsam fir, with densities ranging from 20,000 to 100,000 stems per hectare. Pre-commercial thinning (PCT) will be the primary prescribed silviculture treatment for these young regenerating stands within this district. Utilizing brushsaws, immature softwood stands, with high densities, will be reduced to 2,100 stems per hectare, resulting in 2.2 metre spacing. PCT is typically implemented when young stands reach the age of 15-20 years, allowing time for the natural pruning to occur on the lower section of the stem. The objective of thinning treatments is to retain 2100 stems per hectare, allowing the remaining selected crop trees to grow much faster, by providing exposure to sunlight, nutrients and water. The end result will be a much shorter rotation age (time between harvests), resulting in the availability of extra volume,

over multiple rotations. By increasing the tree size on a site, a further benefit (from an economic perspective) is realized through potential lower harvesting costs.

A summary of the planned silviculture treatments for Districts 10, 11 & 12 can be seen in Table 2.3A. The areas are also outlined on the attached maps in appendix 6.

Table 2.3A
Summary of Scheduled Silviculture Activity
Forest Management Districts 10, 11 & 12
January 1, 2003 to December 31, 2007

FOREST MANAGEMENT DISTRICT 10				
Year	**Operating Area**	**Type of Treatment**	**Equipment Utilized**	**Scheduled Area (ha.)**
2003	Mary Ann Lake	PCT	Brushsaws	800
	Pearson's Peak	PCT	Brushsaws	250
	Powderhorn	PCT	Bushsaws	30
2004	Muskwash	PCT	Brushsaws	460
	Wooddale	PCT	Brushsaws	400
2005	Wooddale	PCT	Brushsaws	500
	Pt. Leamington Hwy	PCT	Brushsaws	200
2006	Red Cliff	PCT	Brushsaws	200
	Moose Pond	PCT	Brushsaws	250
	Middleton Lake	PCT	Brushsaws	350
2007	South Twin Lake	PCT	Brushsaws	600
	Peter's Pond	PCT	Brushsaws	140
TOTAL				4180

Note: Projected treatment areas may vary by year but will balance within the five-year time frame.

FOREST MANAGEMENT DISTRICT 11				
Year	**Operating Area**	**Type of Treatment**	**Equipment Utilized**	**Scheduled Area (ha.)**
2003	Max Simm's Camp	PCT	Brushsaws	400
	Jumper's Brook	PCT	Brushsaws	375
	Hayne's Lake	PCT	Brushsaws	230

2004	Stony Lake	PCT	Brushsaws	800
	Frenchman's Road	PCT	Brushsaws	60
	West Lake	PCT	Brushsaws	280
	Lynx Pond	PCT	Brushsaws	40
2005	Sandy Road	PCT	Brushsaws	250
	Stony Brook Road	PCT	Brushsaws	600
2006	Stony Brook Road	PCT	Brushsaaws	700
	Salt Pond / Rocky Road	PCT	Brushsaws	125
	Sluice Brook	PCT	Brushsaws	150
2007	Crow Lake	PCT	Brushsaws	300
	Frozen Ocean	PCT	Brushsaws	300
	Moccasin Lake Rd	PCT	Brushsaws	150
TOTAL				4760

Note: Projected treatment areas may vary by year but will balance within the five-year time frame.

FOREST MANAGEMENT DISTRICT 12				
Year	**Operating Area**	**Type of Treatment**	**Equipment Utilized**	**Scheduled Area (ha.)**
2003	Millertown Jct. Rd.	PCT	Brushsaws	500
2004	Selby's Pond	PCT	Brushsaws	500
2005	Bonanza Brook	PCT	Brushsaws	200
	Michael's Pond	PCT	Brushsaws	100
	303 Pond	PCT	Brushsaws	75
	Star Lake Road	PCT	Brushsaws	50
2006	Hardwoods Road	PCT	Brushsaws	250
	Valley Brook	PCT	Brushsaws	225
2007	Black Brook Road	PCT	Brushsaws	375
	Lake Douglas	PCT	Brushsaws	200
	Jones Pond	PCT	Brushsaws	75
TOTAL				2550

Note: Projected treatment areas may vary by year but will balance within the five-year time frame.

Generally, scarification and planting activity will follow the harvest schedules. Therefore, the projected planting over the next five year period include:

Projected Scarification & Planting Activity (2003-2007)					
	2003	2004	2005	2006	2007
District 10	75 hectares	100 hectares	150 hectares	100 hectares	100 hectares
District 11	165 hectares	200 hectares	200 hectares	200 hectares	200 hectares
District 12	250 hectares	200 hectares	200 hectares	200 hectares	200 hectares

***Note:** Projected treatements may vary from year to year, but will balance over the five-year period.*

2.8 RESOURCE ACCESS ROADS

As identified in the summary sheets of the proposed harvest areas for districts 10, 11 & 12 (appendix 2), there are approximately 155 km of primary forest access road construction proposed within this planning period. These roads are necessary to access mature, overmature stands and those stands that have been classified as dead or damaged due to insects or wind.

Table 2.6 Summary of Proposed Road Construction for planning period 2003-2007.

District 10		District 11		District 12	
Primary (Km)	Operational (Km)	Primary (Km)	Operational (Km)	Primary (Km)	Operational (Km)
8	83	30	207	104	194

It is recognized by Abitibi-Consolidated personnel that road construction activities may have potential negative impacts to the ecosystem, if proper procedures are not followed. Realizing the importance of this, Abitibi-Consolidated has developed standard operating procedures (SOP's), which encompass all water crossing activities. These SOP's are communicated to employees with operational responsibility through training seminars and are re-evaluated by internal and external 3rd party audits.

Throughout the road building activity, all streams that are highlighted on 1:50,000 topo maps will require approval from: the Dept. of Fisheries & Oceans, the Provincial Dept. of Environment (Water Resources Division), &/or the Navigable Waters Protection Agency. Only upon receipt of an appropriate Certificate of Approval will any water crossing activity occur, where all associated guidelines and mitigative measures stipulated will be followed.

The sensitivity of areas to environmental damage is taken into account when planning the proposed road location route. Any sensitive areas, such as grasslands near streams and rivers, are avoided. In the past, when harvesting has taken place near such sensitive areas, roads have been located back from those areas and increased uncut buffers have been maintained; this practice will continue.

The overall benefit of road construction and maintenance to other users of the forest became evident during the public meetings when concerns were expressed about who would maintain certain roads when Abitibi-Consolidated no longer had any wood to harvest from specific areas. Recreational users of the forest use the roads for, bicycling, hunting, fishing, photography, etc. There are other commercial users of those roads, such as mining companies who carry out mining exploration activity. Abitibi-Consolidated is committed to the proper construction of roads and bridges on its limits and to ensuring the least possible damage to the environment by avoiding environmentally sensitive areas.

Some concerns have been identified through the planning process relating to road decommissioning. As a result, Nfld. Woodlands is presently developing a road-decommissioning program to be implemented on its limits. As part of this program, the planning team can review, provide input, and recommend forest access roads for decommissioning.

2.9 PROTECTED WATER SUPPLY AREAS

Abitibi-Consolidated has been actively involved with watershed management and is a member of various Watershed committees. These groups meet on a regular basis to review all issues relating to watershed development. It's through this proactive approach that forest activities can be reviewed prior to implementation. However, within districts 10, 11 & 12, there are no harvest activities planned within protected water supply areas.

2.10 PROTECTION

The company recognizes the need of ensuring adequate protection for the resources within this District. Those resources are not limited to the timber resource but include protecting other resources such as water, soil, etc. The primary threats to the forests include: fire, insect, wind and possible damage from human activities, e.g. oil spills.

The company has an environmental response plan in place to deal with environmental incidents, should they occur on the operations. Since certification with ISO 14001, environmental checklists are conducted monthly on all aspects of our operations. In addition, there are internal (both in-house & corporate) environmental audits periodically conducted to determine the company's level of environmental compliance and to identify areas requiring attention. All harvesting operations have an on-site environmental spill

response kit and additional environmental materials are in stock at the mills at Grand Falls and Stephenville.

Protecting the forest resource from insect damage is a high priority and Abitibi-Consolidated is committed to help control and limit the damage from insects by supporting the application of insecticides. The present system of cost sharing the expenses between Abitibi-Consolidated, Corner Brook Pulp and Paper Ltd., and the Newfoundland Forest Service based on ownership sprayed - cost accrued ratio will be continued. The present silviculture areas represent a major investment into the future and need to be protected, if threatened, by applying government approved insecticides.

The Newfoundland Forest Service has forecasted some forest insect activity for District 12 in 2002. However, from an insect and disease perspective, the forests in this district are still considered very healthy.

The threat of forest fires is also taken very seriously and the company has invested in sufficient quantities of forest fire fighting equipment. The central storage depot for these Districts is the Grand Falls mill, however, each operating area has its own required quantity of equipment as per the provincial fire regulations. The inventory of available fire fighting equipment is outlined in Table 2.7. There are no domestic cutting permits during the fire season due to forest fire concerns. All operations are monitored on a regular basis to ensure compliance with the forest fire regulations.

Table 2.5
Forest Fire Fighting Equipment

Mgmt Dist.	Location	Type of Equipment	Quantity
10, 11, & 12	As per each operating area	Mark 3 Pumps	1
		Suction Hose	1
		Hose	2,000 feet
		Gas Can	1
		Tool Box	1
		Axes	4
		Shovels	4
		Water Cans	4

2.11 LANDSCAPE

When required, a landscape approach to forest management planning will be used to address conflicts between proposed harvesting operations and other resource users such as commercial outfitting operations, cabin development areas, protected watersheds, or areas that may be visible to high volumes of vehicular traffic. This approach will utilize techniques developed by Simon Bell (Forest Landscape Design) and taught by the Maritime Forest Ranger School. This technique involves modified harvesting patterns designed to break up cutovers, larger buffers, strategically located roads to reduce visual impacts and minimize ground disturbance.

2.12 SURVEYS

Operational surveys will be carried out in some areas that are proposed for the five-year plan; although the forest inventory figures as supplied by the Newfoundland Forest Service are generally used to formulate volumes. The surveys would gather information to determine volumes per hectare, terrain classification and mortality by species. The information gathered by those surveys can be utilized during discussions with other resource users who have a preference for certain habitat. For example, older blown down areas are of little value from a timber utilization point of view, but does make very good habitat for the Pine Marten, who use the blown down trees as entry points to hunt under the snow for the meadow vole and other rodents.

There are a variety of surveys that can be conducted, such as utilization surveys and the forest inventory program. We have ocular surveys from production foremen and area superintendents regarding timber analysis. This section does not specifically reference things such physical timber cruise surveys. However, this doesn't mean that it would not happen if the need arises.

2.13 CABIN POLICY

In 1992, Abitibi-Consolidated introduced a policy to have all existing cabins on their Freehold and Charter Lands registered with the Company. This policy was carried out extensively in 1994-1995. The Company has designated areas for new cabin development, and these areas will be inspected and approved before any new cabins are constructed on Company limits.

Upon Company approval, all cabin owners will be subject to the rules and regulations set forth by the Dept. of Environment, Dept. of Health, and Dept. of Forest Resources & Agrifoods.

There are no cabin development areas within District 10. However, within Districts 11 & 12, the following cabin development areas are found:

DISTRICT 11	DISTRICT 12
Tumbler Lake (Reid Lot 59)	Millertown / Joe Glodes (Charter)
Nugents Pond (Reid Lot 59)	Lake Ambrose (Charter)
French Pond (Reid Lot 59)	Selbys Pond (Reid Lot 234)
	Quinn Lake (Reid Lot 229)

2.14 COMMERCIAL/DOMESTIC FUELWOOD POLICY

The company will permit the cutting of non-commercial species such as Birch, Poplar and Larch. Domestic cutting permits are available free of charge from the Company. This permit is for wood to be cut for domestic use only, and non-merchantable hardwoods only may be harvested. In areas that were harvested during the winter, the high stumps can be cut for fuelwood. The harvest of Black Spruce, Balsam Fir, or Pine, is not permitted on Company limits. No cutting is permitted during the fire season (April 15 to September 15).

Abitibi-Consolidated realizes that domestic cutting has an impact on sustainable development and will work closely with the Dept. of Forest Resources & Agrifoods to develop and implement any corrective measures.

Commercial fuelwood areas are explained in section 2.6, and are identified on the maps in Appendix 7.

2.15 ENVIRONMENTAL PROTECTION GUIDELINES

These guidelines are generated from impacts described in the literature and from discussions with resource managers. As new information and management techniques become available, the guidelines will be changed to reflect this improved information base. Consequently, the guidelines will be reviewed on an annual basis to incorporate any necessary changes. The “General Guidelines” apply to all forestry activities (i.e., silviculture, harvesting, road construction), in forest management districts 10, 11 & 12.

Planning

1. The location and type of all waterbody crossings must be submitted to the Department of Environment and Labour and the Department of Fisheries and Oceans. Certificates of Approval are required from both departments for waterbody crossings. A waterbody is defined as any water identified on the latest 1:50,000 topographic map. Appropriate protection is still required for streams greater than 1.0 m in width (at its narrowest point from the high water mark) not found on the 1:50,000 topographic map.

2. All waste disposal sites require a Certificate of Approval from the Minister of Government Services.

3. Excessive bulldozing is not permitted and no more than 10% of the total forest within an operating area can be disturbed. In situations where specific operating areas require more than 10% disturbance to capture available timber, the operator is required to rehabilitate the area to reduce the total net disturbance to the 10% maximum. Where disturbance has been excessive, a rehabilitation plan will be developed with the Forest Service District Manager. Disturbance is defined as per the Ground Disturbance Survey Guidelines developed by the Newfoundland Forest Service.

4. When an archaeological site or artifact is found, the *Historical Resources Act* requires that all development temporarily cease in the area and the discovery be reported to the Historical Resources Division (709-729-2462).

   The Historic Resources Division will respond immediately and will have mitigation measures in place within seven days as agreed to by the Historical Resources Division and the operator. Forestry activity can then continue.
   The Historic Resources Division will be contacted during the preparation of five-year operating plans to determine the location of historic resources and appropriate mitigation measures will be designed. These measures will include such things as buffer zones and modified operations or surveys.

5. Should an oil or gas spill in excess of 70 litres (15 gallons) occur, make every effort to first, contain, and second, clean up the spill, after reporting the spill to the appropriate authorities:

   Government Services Centre
   Spill Report Line
   (709) 772-2083 or 1-800-563-2444

6. The Parks and Natural Areas Division will be contacted during the preparation of five-year operating plans. Where operations are within one kilometre of provisional and ecological reserves, wilderness reserves or provincial parks, modified operations may be necessary.

7. In areas where caribou utilize arboreal lichens during the summer/and or winter, and terrestrial lichens during the summer, a minimum amount of lichen forest must be maintained for the caribou. Forestry activity will be designed in consultation with the Wildlife Division where this situation has been identified.

8. Areas identified as containing rare and/or unique flora (through literature review) are to be protected from forestry activity by avoiding these areas.

9. Where mature stands of timber for moose shelter and moose yards are required, they will be identified in consultation with Wildlife Division.

10. The impacts of forest operations on pine marten have been an ongoing issue. Until appropriate guidelines are developed for pine marten habitat, forestry activities within high density pine marten areas and dispersion areas required for pine marten recovery will require consultation with the Wildlife Division.

11. During the preparation of five-year operating plans, areas identified as "Sensitive Wildlife Areas" in the Land Use Atlas require consultation with the Wildlife Division prior to any forestry activity. As well, any other identified "sensitive areas" will be given consideration for buffer extension, as per consultation with various Government Agencies, such as Department of Fisheries & Oceans, Wildlife, etc..

Operations

1. A 20-metre, treed buffer zone shall be established around all water bodies that are identified on the latest 1:50,000 topographic maps and around water bodies greater than 1.0 metres in width that do not appear on the maps. Where the slope is greater than 30%, there shall be a no-harvest buffer of 20 m + (1.5 x % slope). All equipment or machinery is prohibited from entering waterbodies; thus, structures must be created to cross over such waterbodies. Every reasonable effort will be made to identify intermittent streams and they will be subject to this buffer requirement. The District Manager of Forest Ecosystems is permitted to adjust the specified buffer requirements in the following circumstances:

    - The no-cut, treed buffer can exceed the 20 metres for fish and wildlife habitat requirements.

    - A 50-metre, no-cut, treed buffer will be maintained around known black bear denning sites (winter) or those encountered during harvesting. These den sites must be reported to the Wildlife Division.

    - No forestry activity is to occur within 800 metres of a bald eagle or osprey nest during the nesting season (March 15 to July 31) and within 200 metres during the remainder of the year. The location of any raptor nest site must be reported to the Wildlife Division.

    - All hardwoods within 30 metres of a waterbody occupied by beaver are to be left standing.

    - A minimum 30-metre, no-cut, treed buffer will be maintained from the high water mark in waterfowl breeding, moulting and staging areas. The Canadian Wildlife Service and/or the Wildlife Division will identify these sites.

2. Heavy equipment and machinery are not permitted in any waterbody, on a wetland or bog (unless frozen), without a Certificate of Approval from the Department of Environment and without contacting the DFO Area Habitat Coordinator.

3. No heavy equipment or machinery is to be refuelled, serviced, or washed within 30 metres of a waterbody. Gasoline or lubricant depots must be placed 100 metres from the nearest waterbody. All fuel-storage tanks (including JEEP tanks) must be registered with the Department of Government Services and Lands and installed in accordance with the Storage and Handling of Gasoline and Associated Products Regulations. Fuel storage within Protected Water Supplies are more stringent. Please refer to "Guidelines for Forest Operations within Protected Water Supplies" for more information.

4. Used or waste oil shall be collected either in a tank or closed container.

5. Above-ground storage tanks shall be surrounded by a dyke. The dyked area will contain not less than 110% of the capacity of the tank. The base and walls of the dyke shall have an impermeable lining of clay, concrete, solid masonry or other material, designed, constructed, and maintained to be liquid tight to a permeability of 25 $L/m^2/d$. There shall be a method to eliminate water accumulations inside the dyke.

6. Wherever possible, place slash on forwarded trails while forwarders are operating in an area. Skidding timber through any waterbody (as defined in Section 4.2.1) is prohibited.

7. Any forestry operation that directly or indirectly results in silt entering a waterbody must be dealt with immediately. (A government official must be notified within 24 hours.) Failure to comply will result in the operation being stopped.

8. Woody material of any kind (trees, slash, sawdust, slabs, etc.) is not permitted to enter a waterbody. Woody material on ice within the high water flood plain of any waterbody is prohibited.

9. To minimize erosion and sedimentation, waterbody crossings shall:

   i) have stable approaches;
   ii) be at right angles to the waterbody;
   iii) be located where channels are well defined, unobstructed, and straight;
   iv) be at a narrow point along the waterbody;
   v) allow room for direct gentle approaches.
   vi) have all mineral soil exposed during bridge construction and culvert installation seeded with grass.

10. Garbage is to be disposed of at an approved garbage disposal site. Prior to disposal it must be contained in a manner not to attract wildlife. All equipment is to be removed from the operating area where operations are completed.

11. Where safety is not an issue, a minimum average of 10 trees or snags per hectare (average on a cut block) or a clump of trees is to be left on all sites (harvesting and silviculture). Preference will be given to trees over 50 cm dbh.

Timber Harvesting Guidelines

Planning

1. There will be corridors to connect areas of forest that will not be harvested (isolated stands within cutovers are not considered forested areas). These corridors connect wildlife habitat, watersheds and minimize fragmentation. Acceptable corridor vegetation includes productive forest areas (all age classes) and softwood/hardwood scrub. These corridors do not have to be continuous (i.e., breaks in vegetation are permitted) and will be determined in the five-year operating plan and identified in the annual work schedule.

2. Complete utilization of harvested trees is required. (Complete utilization is harvesting trees to a top diameter of 8 cm and stumps to a height of 30 cm.) The District Manager can modify the stump height requirement to accommodate snow conditions. Where markets exist, non-commercial tree species that are harvested should be brought to roadside. This will be determined in consultation with the District Manager.

3. Pre-planning is required on all forest operations (Industry/Crown) at the request of the District Manager (for Industry) and the Section Head i/c Management Planning (for Crown). Pre-planning will include:

   - boundaries of protected water supplies (if applicable);
   - existing and proposed access roads;
   - skid trails and landing locations;
   - areas sensitive to erosion;
   - buffer zones around water bodies;
   - approved stream crossings;
   - fuel storage locations;
   - wildlife corridors.

4. Harvesting is not permitted within caribou calving areas from May 15 to June 15 (calving period). Harvesting is not permitted within post-calving areas from June 15 to July 31. The Wildlife Division will identify these areas.

5. Harvest scheduling should be modified during migration of wildlife (e.g. caribou) and during temporary wildlife concentrations (e.g. waterfowl staging). Wildlife biologists will identify the areas of concern, and in conjunction with district or company foresters, aid in the modification of forestry operations.

Operations

1. When skid trails and winter roads are to be constructed, soil disturbance and impacts on waterbodies are to be minimized. The operator will use culverts and/or log bridges depending on the conditions. The objective is to minimize erosion and sedimentation, to avoid restricting stream flow, and to ensure fish passage in fish bearing streams. Erosion control measures (e.g. laying down brush mats and the construction of diversion ditches for water run-off) are to be maintained while the skid trail is in use. All temporary crossings are to be removed at the end of the operating season, unless the District Manager agrees to extend the life of the crossing for more than one season.

2. A minimum 50-metre no-cut buffer is to be left between operations within approved cabin development areas.

Forest Access Roads Guidelines

Planning

1. Forest access roads, borrow pits and quarries shall avoid:

   i) wetlands, deltas and flood plain/fluvial wetlands;

   ii) terrain with high erodability potential;

   iii) known sensitive wildlife areas such as:

   - calving grounds, post calving areas, caribou migration routes, caribou rutting areas, and winter areas,
   - waterfowl breeding areas and colonial nesting sites,
   - established moose yards by one kilometre,
   - eagle and osprey nest sites,
   - where site conditions and engineering permits, main haul roads should be one kilometre from permanent water bodies and all other roads by not more than 100 metres,
   - endangered or endemic species or sub-species or flora or fauna and other areas to be determined by qualified authorities;

   iv) known sensitive fish areas such as:
   - spawning and rearing grounds;

   v) historically significant areas such as:
   - archaeological sites;

   vi) existing reserves such as:
   - parks (municipal, provincial, national);
   - wilderness areas and ecological reserves;

- rare and endangered plant sites and habitats.

2. With respect to borrow pits and quarries, the operator shall:

   i) minimize the number of new borrow areas opened for construction and/or maintenance;

   ii) use existing borrow areas are to be used whenever practical;

   iii) be in possession of a valid quarry permit from the Department of Mines & Energy prior to aggregate extraction activities;

   iv) not locate pits & quarries in sensitive areas as identified by planning process.

3. Forest access roads will not obstruct wildlife migration routes. The following guidelines will be followed to ensure the road is as unobstructing as possible:

   i) roads should be of low profile (less than 1 m above the surrounding terrain);

   ii) slash and other debris shall be removed;

   iii) the slope of ditches and road banks should not exceed 1½ horizontal to vertical.

4. Culverts and bridges are to be installed in accordance with the manufacturer's specifications and the specifications attached to the Certificates of Approval received from the Department of Environment and Department of Fisheries & Oceans. Culvert ends will be properly riprapped.

5. Where road construction is to occur around identified waterfowl breeding, moulting, and staging areas, the Canadian Wildlife Service is to be consulted.

6. Road construction is not permitted within any buffer zone except with the permission of the District Manager.

7. When a skid trail is on steep ground and is no longer in use, cut-off ditches and push lanes must be created. The frequency will be determined by the District Manager.

8. When disturbance is over 10%, the conditions in 1.1.3 will apply.

9. There shall be no bulldozing of standing merchantable timber or poor utilization of merchantable softwoods and hardwoods during cutting of the right-of-way.
10. Excavations required for the construction of piers, abutments or multi-plate culverts shall be completed in the dry. (Where exceptions occur, consultation with the District Manager is required).

11. On a site-specific basis, roads can be decommissioned and/or rehabilitated as directed by the District Manager. Decommissioning is defined as barring access; rehabilitation means to re-vegetate the road.

Operations

1. A "no-grub zone of 30 metres of undisturbed ground vegetation must be maintained around any waterbody crossing to minimize the damage to the lower vegetation and organic cover, thus reducing erosion potential. Manual clearing at waterbody crossing sites should be used to remove or control vegetation. Right-of-way widths at waterbody crossings should be kept to a minimum.

2. Fill materials for road building must not be obtained from any waterbody or from within the flood plain of any waterbody.

3. Trees are to be felled away from all waterbodies, and slash and debris should be piled above the high water mark so that it cannot enter waterbodies during periods of peak flow.

4. Equipment activity in water crossing areas is to be kept to a minimum. Whenever possible, any work is to be carried out from dry stable areas.

5. Unnecessary side casting or backfilling in the vicinity of waterbodies is not permitted. Where topographical constraints dictate that the roadbed must be constructed adjacent to a waterbody, road slope stabilization is to be undertaken at the toe of the fill where it enters the water (an area where active erosion is likely). The placement of large riprap or armour stone is recommended in such areas.

6. Side casting must be carried out in such a manner that sediment does not enter any waterbody.

7. Where borrow pit or quarry activity is likely to cause sediment-laden run-off to contaminate a waterbody, sediment control measures such as filter fabric berms or sedimentation ponds are to be installed. Contact is to be made with the District Manager prior to construction where such conditions exist.

8. Stabilize cut banks and fill slopes in the vicinity of waterbodies.

9. When using ditches, especially on long slopes, baffles and culverts are to be used at frequent intervals.

10. When constructing ditches near streams, the ditch itself is not to lead directly into the stream.

11. Keep ditches at the same gradient as the road.

12. In side hill and similar areas, install ditches on the uphill sides of roads to intercept seepage and run-off.

13. Borrow pits are to be located 50 metres from the nearest waterbody.

Silvicultural Practices and Forest Regeneration Guidelines

Scarification

1. Select scarification methods best suited for preparing the area for planting and minimizing ground disturbance.

2. Where slash is piled into windrows, ensure the windrows are placed where slash cannot be washed into streams at peak flooding conditions.

3. To minimize erosion, do not direct scarification equipment straight down slope.

4. Where safety is not an issue, a minimum average of ten cavity trees or snags per hectare, or a clump of trees, will be left on all sites.

5. Where possible, white pine regeneration will not be disturbed.

Planting

1. Landings will be stabilized through seeding (grass) or planting at time of plantation establishment.

Pre-Commercial Thinning

1. Where possible, do not carry out pre-commercial thinning in important wildlife areas during the periods of birth and/or hatching. These areas and times will be identified by the Wildlife Division.

2. Where white pine regeneration is present, the District Manager will determine how the pine will be thinned.

3. Trees cut will not be felled into waterbodies.

Forest Protection Guidelines

1. A pesticide application license must be obtained from the Dept. of Environment. This license will determine planning and operational requirements.

Guidelines for Forestry Operations Within Protected Water Supply Areas

The primary function of a protected water supply area is to provide the public with an adequate quantity of safe and good quality water on a permanent basis, to meet its present and future demands. Any other activity within water supply areas is considered secondary, and if permitted, must be strictly regulated and monitored to ensure that the water supply integrity is not threatened and the quality of the water is not impaired.

In Newfoundland, forestry operations are permitted in protected water supply areas on a limited and controlled basis provided the proposed operations have no, or minimal, water quality impairment potential.

The following permits and approvals are required prior to the beginning of forestry operations within a protected water supply area:

1) Approval of the forest operating plan by the Newfoundland Forest Service.

2) Approval of the forest operating plan by the provincial Department of Environment and issuance of a Certificate of Approval under Section 10 of the Department of Environment Act.

3) Quarry permits from the provincial Department of Mines and Energy for all borrow areas and ballast pits on unalienated Crown lands and alienated Crown land (i.e., leased and licensed land).

4) Stream crossing permits under Section 11 of the Department of Environment Act and from the federal Department of Fisheries and Oceans.

5) Other permits or approvals as required by natural resource management and regulatory agencies.

Planning

1. Prior to beginning any work, a forest operating plan must be prepared and approved by the Newfoundland Forest Service and Department of Environment, and a Certificate of Approval must be obtained under Section 10 of the Department of Environment Act for site specific activities such as road construction, commercial harvesting, silvicultural operations, and other activities associated with forestry operations.

2. In addition to the information normally contained in a forest operating plan, the plan must include maps to show:

   - the boundary of the protected water supply area;
   - existing and proposed access roads;
   - proposed harvesting areas;
   - areas sensitive to erosion;
   - buffer zones around waterbodies;
   - approved stream crossings;
   - proposed landing and skid trail locations;
   - proposed fuel storage locations;
   - peatland and other wetlands;
   - nearby communities;
   - other relevant information.

The plan must also contain a written section describing the harvesting techniques to be used, the equipment required for the operation, and the schedule of the operation.

3. Locate roads to avoid all waterbodies and areas of sensitive terrain.

3. The forest operating plan must identify an Operations Manager who shall have the responsibility for ensuring that the special protection measures are followed. The Operations Manager is responsible for coordinating clean-up efforts in the event of a fuel or oil spill.

Forest Access Road Construction

1. A "no-grub" zone of 30 metres of undisturbed ground vegetation must be maintained along the stream of any waterbody crossing to minimize the damage to the lower vegetation and organic cover, thus reducing the erosion potential. Manual clearing at waterbody crossing sites should be used to remove or control vegetation. Right-of-way widths at waterbody crossings should be kept to a minimum.

2. Clear-cutting up to the perimeter of any waterbody is not permitted. In all areas where road construction approaches a waterbody, a buffer zone of undisturbed vegetation must be maintained on both sides of the right-of-way using the buffer zone criteria outlined.

3. Fill materials for road building must not be obtained from any waterbody or from within the floodplain of any waterbody.

4. Provide adequately designed and constructed drainage ditches along forest roads to allow for good road drainage.

5. Take-off ditching can be used on both sides of the road or in conjunction with culverts to divert the ditch flow off into the woods or into stable vegetated areas above the no-grub zones. Where take-off ditches cannot be constructed, the use of check dams and settling basins in the ditches is required until the ditches become stabilized.

6. Trees are to be felled away from all waterbodies, and slash and debris should be piled above the high water mark so that it cannot enter waterbodies during periods of peak flow.

7. Equipment activity in water crossing areas is to be kept to a minimum. Any work is to be carried out from dry, stable areas.

8. When working near sensitive areas such as: streams or lakes, proper road building techniques must be followed to avoid / minimize erosion or siltation.

9. Unnecessary side casting or backfilling in the vicinity of waterbodies is not permitted. Where topographical constraints dictate that the roadbed must be constructed adjacent to a waterbody, road slope stabilization is to be undertaken at the toe of the fill where it enters water, an area where active erosion is likely. The placement of large riprap or armour stone is recommended in such areas. Contact is to be made with the District Manager prior to construction when such conditions occur.

10. Side casting must be carried out in such a manner that sediment does not enter any waterbody.

11. Maintenance support sites are to be located outside the protected water supply area.

Forest Access Road Stream Crossings

1. Stream fording is prohibited in protected water supply areas.

2. All stream crossings, whether culverts or bridges, require written approval under Section 11 of the Department of Environment Act.

3. The operator must comply with all terms and conditions of a Certificate of Approval for stream crossings.

Harvesting

1. Harvesting or other heavy equipment will not be used on wetlands or bogs.

2. Steep areas with high potential for erosion should not be harvested.

3. Wherever possible, skid trails should run along contours and never cross wetlands and waterbodies.

4. Landings will be few in number with a maximum size of less than 0.25 hectares All landings should be located at least 100 metres from a waterbody.

5. In sensitive areas prone to erosion, equipment must have wide tires, or harvesting must occur during the winter when the ground is frozen.

6. Harvesting equipment shall not enter a buffer zone or any waterbody without permission of the District Manager.

7. The operator must implement erosion control and rehabilitation measures in areas where soils have been unduly disturbed by harvesting activity. In addition to general erosion control measures presented in other sections of these guidelines, the following should also be considered in protected water supply areas:

   - undertake contour furrowing,

- construct diversion ditches to lessen the possibility of forming new drainage channels,
- seed or plant areas that are difficult to stabilize by other means,
- plow or rip prior to seeding any surfaces which have been compacted.

Buffer Zones

The Newfoundland Forest Service on unalienated Crown land and the appropriate company on leased, licensed, private or charter land will provide the operator with a map indicating the harvesting area and no-cut treed buffer zones, and will ensure that the operator is familiar with the boundaries.

No forestry activities are permitted within the following buffer zones.

Water Body	Width of Buffer Zone
1. Intake pond/lake/reservoir	A minimum of 150 m
2. River intake	A minimum of 150 m for 1 km upstream & 100 m downstream
3. Main river channel	A minimum of 75 m
4. Major tributaries, lakes or ponds	A minimum of 50 m
5. Other waterbodies	A minimum30 m

Fuel/Oil Handling and Storage

Fuel storage and the operation of fuel storage equipment is regulated by the Storage and Handling of Gasoline and Associated Products Regulations (1982) under the Department of Environment and Lands Act. According to the regulations, the owner or operator of a fuel storage system must submit a Schedule "A" Storage Tank System Application to the Department of Environment. The applicant must be in receipt of a Certificate of Approval for the system before the system is used for fuel storage. Section 9 of the above Act states "No owner or operator shall directly or indirectly cause pollution of the soil or water by causing, suffering or permitting leakage or spillage of gasoline or associated products from a storage tank system or vehicle."

In addition to the above regulatory requirements, the following guidelines are to be followed:

1. Bulk fuel is to be stored outside the protected water supply area. If fuel must be stored in the protected area, it must be in the least sensitive location and be approved by the Water Resources Management Division of the Department of Environment.

2. Fuel must be stored in self-dyked, above-ground Jeep Tanks which have been approved by the Dept. of Environment.

3. A maximum of seven days fuel supply can be stored within the water supply area.

4. Refuelling must not take place within 100 metres of a waterbody.

5. Daily dipping of tanks and weekly reconciliation's are mandatory. Visual inspection of the dykes and surrounding area must be maintained.

6. Each unit must be fitted with a locking valve system for the elimination of water inside the outer tank. The valve must be closed and locked except to drain precipitation.

7. Each person involved with fuel handling must be cautioned that any spillage is to be cleaned up immediately.

8. Each person involved with fuel storage must exercise extreme caution when refuelling equipment.

9. All waste materials and waste oil on the site must be collected in enclosed containers and removed to an approved site at least weekly.

10. Contaminated soil or snow must be disposed of at an approved waste disposal site.

11. Any spill in excess of 70 litres must be reported immediately through the 24-hour Spill Report Number (709-772-2083) or the Government Services Centre (1-800-563-2444).

12. All self-dyked Jeep Tanks must be located at a minimum distance of 500 metres from any major waterbody.

13. A fuel or oil spill clean-up kit must be kept on site within the protected area to facilitate any clean-up in the event of a spill. This kit must include absorbent pads, loose absorbent materials such as dried peat, speedy-dry or sawdust, and a container such as an empty drum for recovering the fuel/oil. If there is a bulk fuel storage facility within the protected area, the clean-up kit must include the following list of fuel or oil spill clean-up equipment:

    - Fire pump and 100 metres of hose.
    - Two hand-operated fuel pumps.
    - Six recovery containers such as empty drums.
    - Four long-handled shovels.
    - Two pick axes.
    - Ten metres of containment boom.
    - Twenty-five absorbent pads.
    - One hundred litres of loose absorbent material.

When any fuel spill occurs, stop the flow immediately. This may entail repairing a leak, pumping out a tank, or shutting off a valve. If fuel or oil is spilled onto soil, dyking may be necessary. If fuel or oil enters water, absorbent booms or barriers such as fencing or netting with loose absorbent or straw must be used to contain the spill. If necessary, culverts may be blocked off by earth or wooden barriers to contain fuel or oil, provided the threat of flooding is addressed.

All recovered fuel or oil must be stored in containers. Contaminated soil must be removed and placed in containers for transport and disposal. Extensive soil removal may cause problems such as erosion and the subsequent siltation of waterbodies; therefore, the affected area must be backfilled and sloped and re-vegetated as required by the Department of Environment.

Recovered fuel or oil should be reused or collected by a waste oil company for recycling. Oil debris and contaminated soils must be disposed of at an approved waste disposal site with the approval of the disposal site owner or operator. Contact must be made with the appropriate Regional Office of the Department of Environment before disposal.

Support Services and Structures

1. Storage of any type of pesticide, chemical or other hazardous material is prohibited within a protected water supply area.

2. Dormitory camps, garages or any other structures are prohibited within a protected water supply area.

3. The establishment of new sawmills is not permitted in protected water supply areas.

4. Wherever possible, toilet facilities must be provided in all work areas.

5. Garbage cans must be located in all work areas and garbage is to be collected regularly and disposed of in an approved waste disposal site outside the protected area.

Silviculture

1. Chemicals are to be used within a protected water supply area only under the approval of the Division of Water Resources.

2. Scarification must be minimized and restricted to the trench or spot types.

3. If scarification leads to erosion or sedimentation of small streams or water bodies, scarification operations must be suspended and remedial measures must be taken.

Abandonment

When forestry operations in a protected water supply area have been completed, an abandonment plan for the area should be developed. This will involve input from the Newfoundland Forest Service, the Community involved, and the Water Resources Management Division of the Department of Environment. In general, the purpose of the plan is: (i) to ensure that the post-harvest conditions do not lead to water quality impairment, and (ii) to discourage activities or use of the area that could lead to water quality impairment.
An important question will be whether access roads will remain open. This will be decided on a case-by-case basis in consultation with the municipality, Water Resources Management Division and the operator. Issues such as the rehabilitation of cutover areas, landing sites, skid trails, and the abandonment of roads are to be discussed during the consultation process to control post-harvesting environmental impacts and activities.

The following are recommended precautionary measures if roads are to be closed to control post-harvesting access to the area:

- Use water bars (trenches 8-10" deep dug across the road) to intercept and deflect surface roadside ditches rather than have it flow into a waterbody. Water bard can be placed 500 metres apart in gentle to moderate terrain (up to 10% slope), but should be no more than 150 metres apart in terrain greater than 10%. In most cases, it is sufficient to limit water bars to one kilometer on each side of a stream crossing.

- Road-side ditches should flow into the woods or into stable, vegetation covered areas.

- Stable bridge abutments and erosion protection works at crossings need not be removed.

- Bridge decking, culverts and other easily removable structures should be transported out of the watershed area.

- All disturbed areas of river banks will be stabilized and seeded.

Monitoring and Inspection

1. Forestry operations approved under Section 10 of the Department of Environment Act will be inspected from time to time by the staff of the Water Resources Management Division to ensure the operator’s compliance with the environmental protection guidelines and the terms and conditions of the approvals.

2. In case of an oil spill, the sedimentation of a water body, or any other water quality impairment related issue, the operator might be required by the Department of Environment to undertake water quality monitoring to assess the extent of the damage and to select appropriate mitigative measures to correct the harmful conditions.

3. Any water quality impairment problem should be reported to the Water Resources Management Division.

Processing Facilities and Support Services Guidelines

1. If possible, use previously disturbed sites (e.g. borrow pit).
2. Minimize the size of the area cleared for the establishment of any camp, processing or support structures. Wherever possible, these facilities should not be established within 100 metres of a waterbody.

3. All sumps containing effluent from a kitchen or washroom facility must be properly treated on a daily basis in compliance with Department of Health regulations.

4. Sewage disposal must be carried out in compliance with the Public Health Act.

5. A permit to occupy is required for Crown Land developments.

6. Facilities will not be located within known sensitive wildlife areas. These areas will be identified by the Wildlife Division.

7. A permit is required for a firearm.

Planning and Municipal Area Guidelines

1. Timber harvesting, resource road construction, silviculture, processing facilities, and support services are developments under the Urban and Rural Planning Act. Where these activities occur within a planning area boundary or within 400 metres of a protected road, a development permit is required before any activity takes place.

2. Consultation with the planning agency (usually municipality, but also the Development Control Unit of the Department of Municipal and Provincial Affairs) is to be made at the planning stage so that regulatory requirements can be made known and taken into account. This should occur three months before the desired commencement of the development and the permit obtained about one month before the development is to start.

2.16 COMPLIANCE MONITORING

The company recognizes the importance of monitoring its forest activities to ensure each objective and target, including all management strategies, are strictly enforced. Largely, there are various methods employed by the company to ensure that nonconformances and/or noncompliances are identified and appropriate corrective or preventive actions are undertaken to avoid occurrence and reoccurrence.

Throughout each year, various monitoring activities for determining nonconformances, noncompliances, and/or areas of concern, include:

1) monthly field inspections completed by supervisors and superintendents,
2) monthly field inspections completed by provincial government,
3) quarterly internal field audits (2nd and 3rd quarters),
4) yearly internal system audit,
5) yearly external system and field audit (surveillance audit),
6) 2nd party compliance audit every 3-4 years (corporate),
7) actual environmental incidences,
8) external communication from public, and
9) communication from SFM advisory committee.

The company considers all noncompliances, nonconformances and/or areas of concerns as very serious, such that as an occurrence happens, an investigative team is launched to determine root causes and identify corrective and/or preventive actions. Upon a given time frame, each case is then evaluated by the ISO/SFM Coordinator to determine the effectiveness of the corrective or preventive actions. If satisfactory, the case is closed. However, if the corrective/preventive actions are not considered satisfactory, the case is reopened for investigation. This process continues until the case is closed. To highlight the seriousness of each case (regardless of how minor it may seem) senior management, including the woodlands manager, is notified of each case and its progress through monthly forest management group meetings, as outlined in the company's Forest Environmental Management System.

As well, an advisory committee was developed from this five-year planning process, where committee members can meet on an annual basis to review the past annual reports, environmental assessment amendments, and have an opportunity to view the upcoming year's activity.

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