

FIVE-YEAR OPERATING PLAN

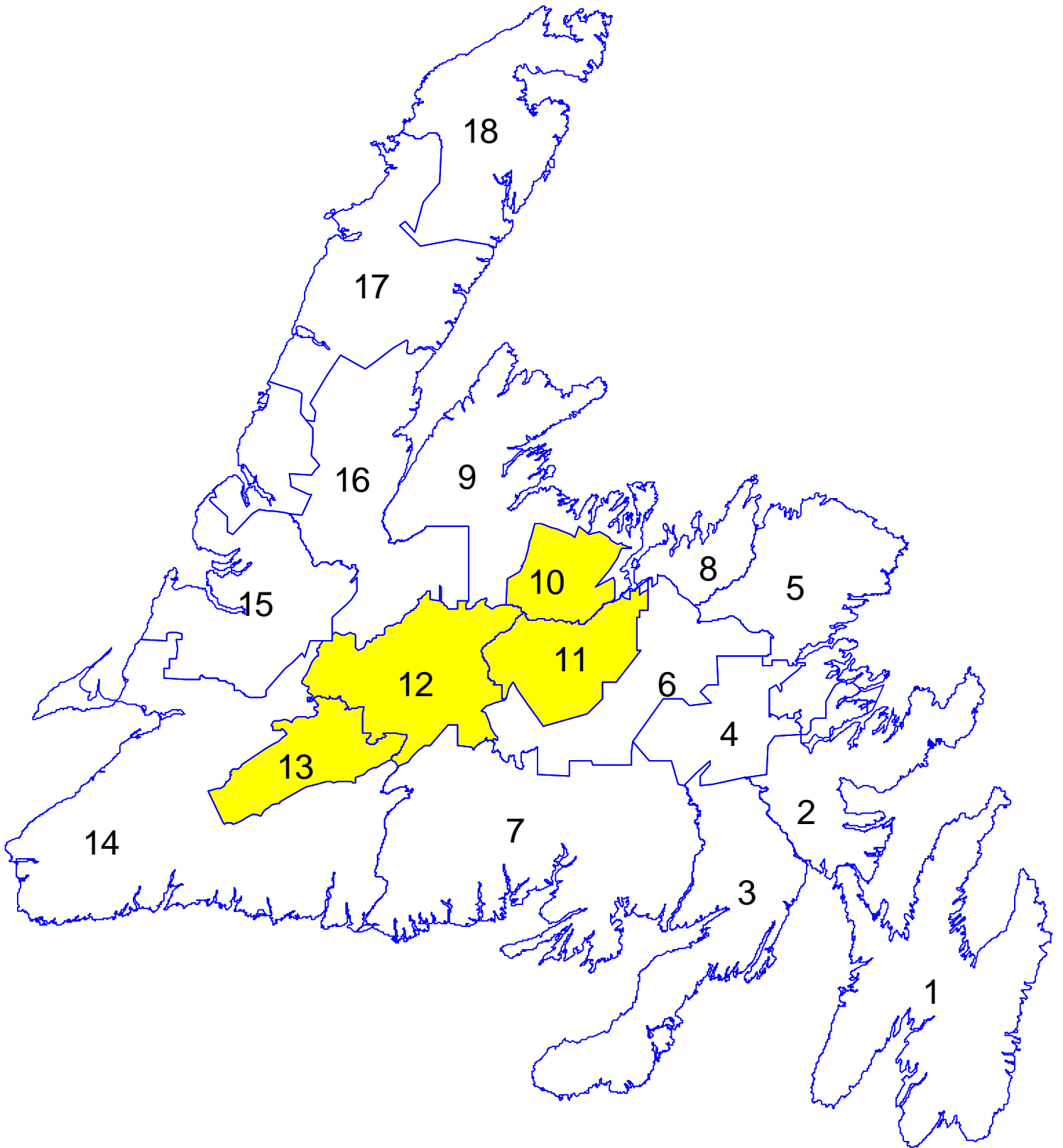
ABITIBI-CONSOLIDATED LIMITS



FOREST MANAGEMENT DISTRICTS

10, 11, 12, & 13

2008 - 2012



FIVE-YEAR OPERATING PLAN
FOR ABITIBI-CONSOLIDATED LIMITS
FOREST MANAGEMENT DISTRICTS 10, 11, 12, & 13

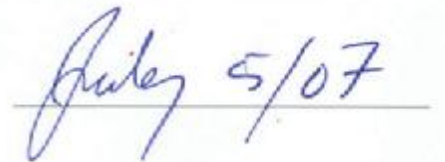
OPERATING PERIOD

JANUARY 1st, 2008 TO DECEMBER 31st, 2012

Prepared By:


Planning Forester

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July 5/07

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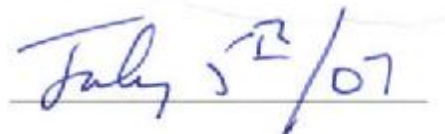

Manager of Forestry

Date:


July 5/07


General Logging Superintendent

Date:


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Woodlands Manager

Date:

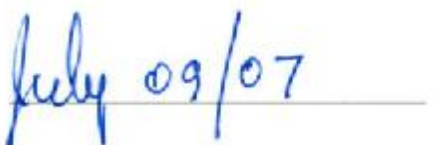

July 09/07

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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, 2008 to December 31st, 2012), 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, & 13.

Abitibi-Consolidated recognizes that the integrity of the ecosystem under its jurisdiction 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. Strategies in this plan fall under the umbrella of Newfoundland Woodlands twenty-year Sustainable Forest Management Plan, which 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 exist 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 must 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 Abitibi-Consolidated mill in Grand Falls-Windsor 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 mill, help to maintain the fabric of the towns in which they live.

Our challenge, as a company, is to conduct on these 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.

To complement our Forest Management initiatives, a sustainable forest management system was developed and registered to the Canadian Standards Association (CSA) Z809 Standard in 2003. With respect to the Environmental and Forest Environmental Management Systems; yearly external audits are conducted on our operations to ensure compliance with the above noted standards.



Environmental & Sustainable Forest Management Policy

Newfoundland Woodlands

Newfoundland Woodlands is committed to achieving and maintaining a Forest and Environmental 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 the Abitibi-Consolidated 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.

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 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 honor commitments to other organizations, including: the Forest Products Association of Canada and the 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)	<p>(A) Manage our forests to contribute to:</p> <ol style="list-style-type: none"> 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. <p>(B) Manage our forests, taking into account:</p> <ol style="list-style-type: none"> 1. multiple benefits to society, and 2. responsibility of all members of society for sustainability.

Feb. 18, 2002



W. P. Furey
Manager, Nfld. Woodlands

1.0 DESCRIPTION OF MANAGEMENT DISTRICT

Abitibi-Consolidated Company of Canada, through its predecessors, Abitibi-Price, Price (Nfld.) Pulp & Paper Limited, and Anglo-Newfoundland Development Co. Ltd., acquired various rights that are now within Forest Management Districts 10, 11, 12, & 13 as follows:

Table 1. ACCC's responsibility in FMD 10, 11, 12, & 13

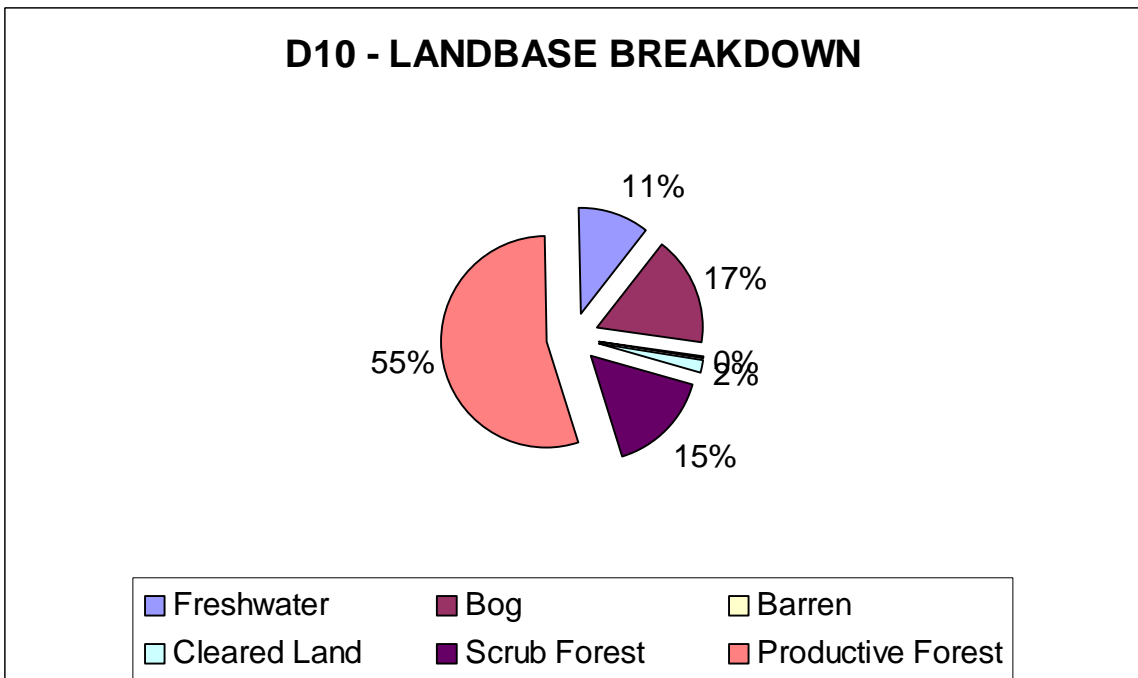
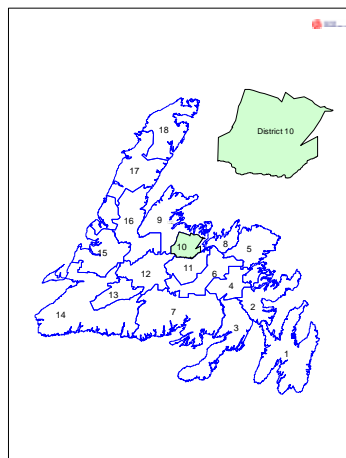
District 10	District 11	District 12	District 13
Nfld. Pine & Pulp Co. Ltd.	Crown	Crown	Charter Land (1905 Pulp & Paper Act)
A.E. Reid (Nfld.) Ltd.	A.E. Reid (Nfld.) Ltd.	A.E. Reid (Nfld.) Ltd.	Private Land
Bishop's Falls Pulp & Paper Co.	Bishop's Falls Pulp & Paper Co.	Bishop's Falls Pulp & Paper Co.	
Reid Nfld. Co. and Mines & Forest (Nfld.) Ltd.	Reid Nfld. Co. Limited	Reid Nfld. Co. Limited	
		E. Collishaw	
		J. B. Miller	

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 200,629 hectares. Of this total, 21,943 hectares are composed of water, 37,864 are non-forested and 140,822 are forested. Of this forested area, 110,360 hectares are considered as productive area.

Figure 1 - Distribution of landbase by percent for District 10.

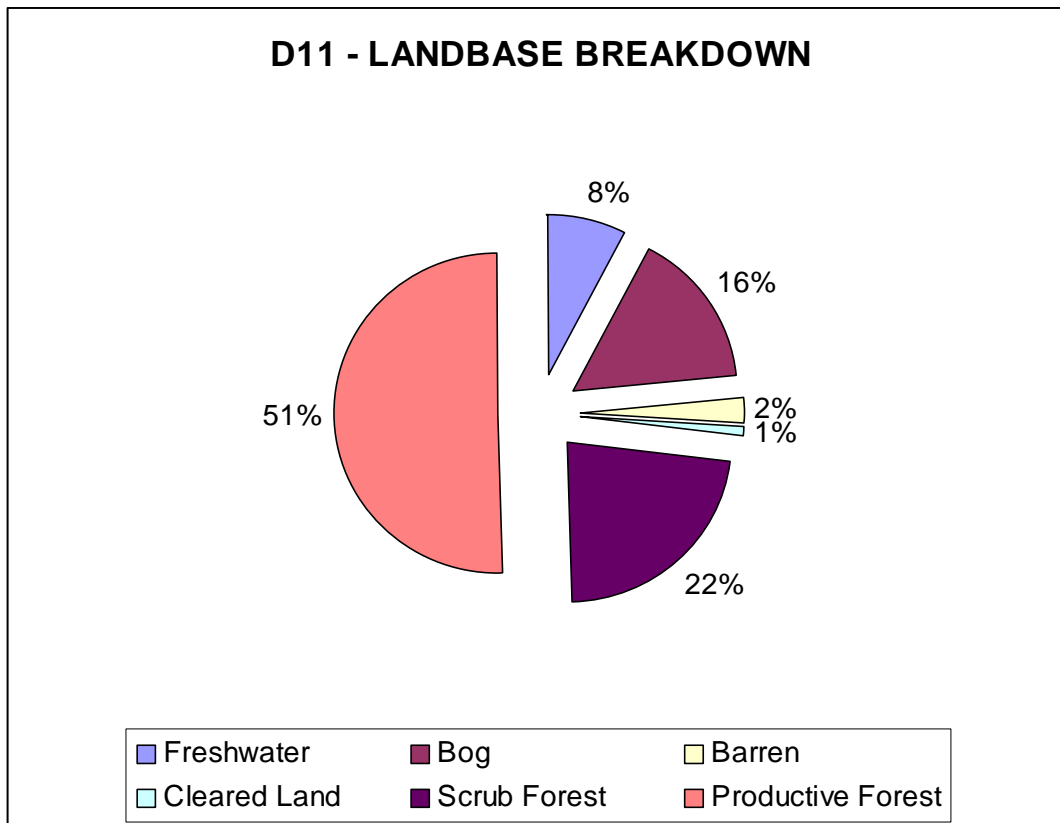
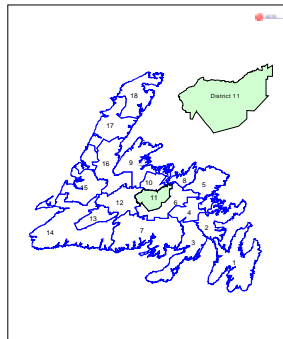


DISTRICT 11

The company, through its predecessors, Abitibi-Price & Price (Nfld.) Pulp & Paper Ltd., has acquired the timber rights within district 11, through: Crown, A.E. Reed (Nfld.) Limited, Bishop’s Falls Pulp & Paper Co, and 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 Exploits 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 296, 054 hectares. Of this total, 23, 312 are composed of water, 56, 505 are non-forested and 216, 137 are forested. Of this forested area, 149, 816 hectares are considered as productive area.

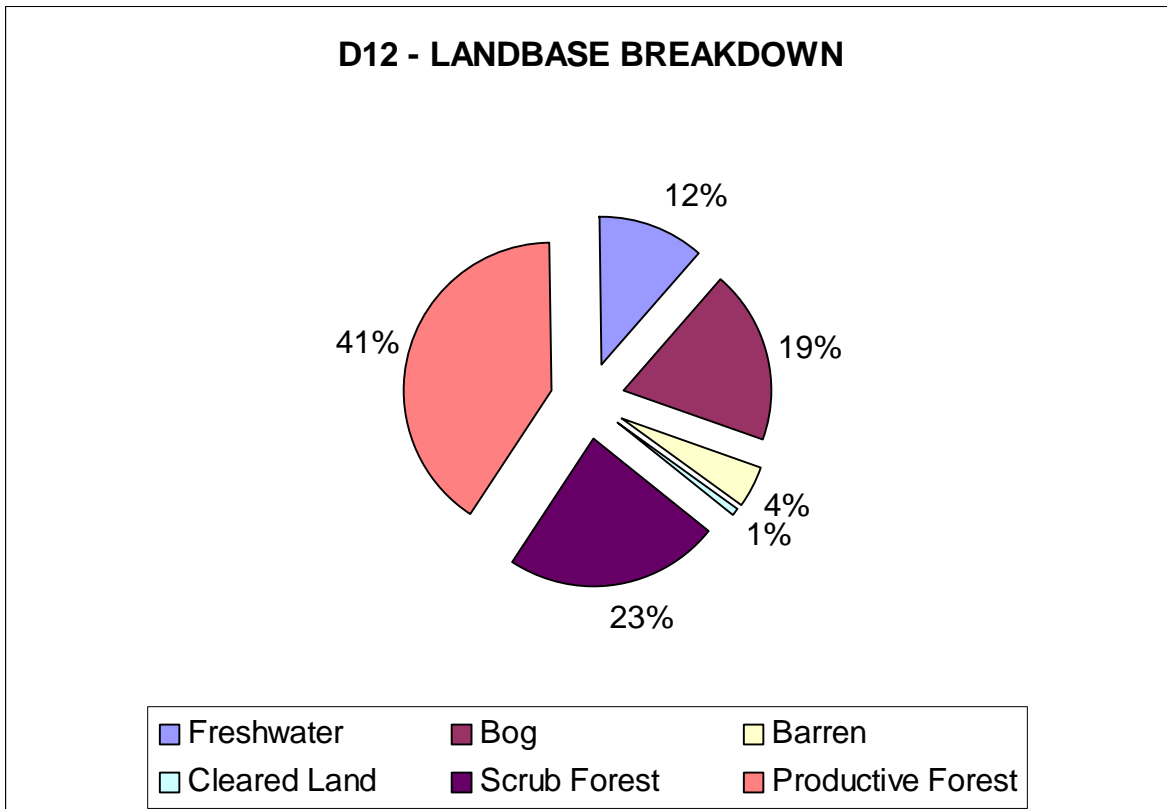
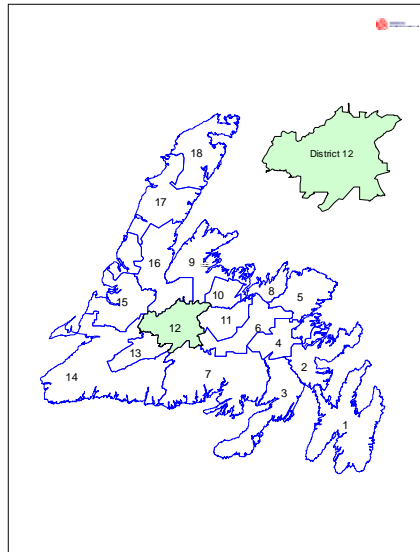
Figure 2 - Distribution of landbase by percent for District 11.



DISTRICT 12

This district has a total land area of 408, 987 hectares. Of this total, 48, 078 are composed of water, 97, 960 are non-forested and 262, 949 are forested. Of this forested land, 168 389 hectares are considered as productive area.

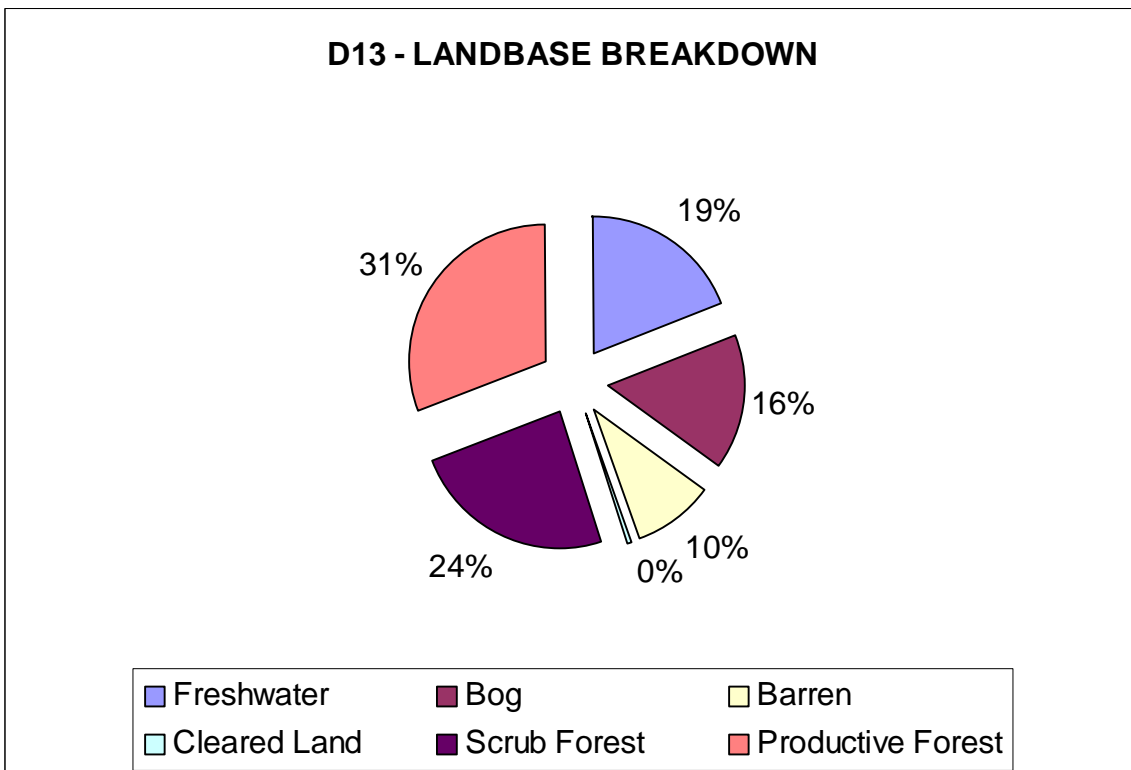
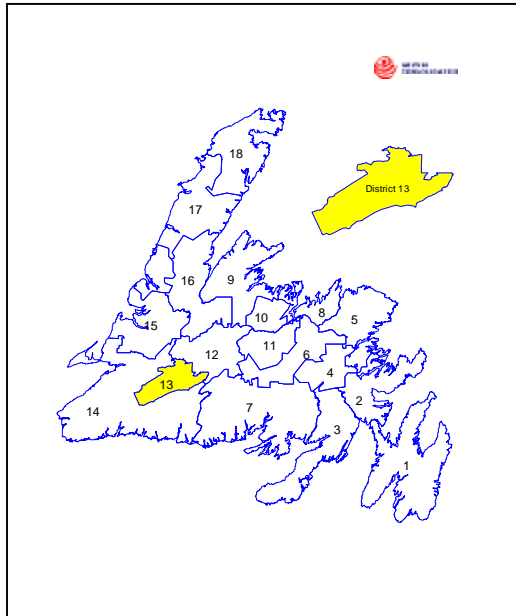
Figure 3 - Distribution of landbase by percent for District 12.



DISTRICT 13

This district has a total land area of 229, 681 hectares. Of this total 44, 010 are composed of water 59, 098 are non-forested and 126, 573 are forested. Of this forested land 71, 381 hectares are considered as productive area.

Figure 4 - Distribution of landbase by percent for District 13.



1.1 History

1.2 Physical Features

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

1.2.1 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, lacustrine and glacial-fluvial materials. Bog and wet soils limit the area's productivity for forests."

1.2.2 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.

1.2.3 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 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.

1.2.4 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, lacustrine 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.

1.3 ECOSYSTEMS

An ecosystem is a community of interacting and interdependent plants, animals and microorganisms, together with the physical environment within which they exist. It is important to remember that within an ecosystem the interactions between the biotic and abiotic components are at least as important as the component themselves. Another critical characteristic of ecosystems is their overlapping boundaries. While each is definable in time and space, and distinguishable from adjacent ecosystems, each is intimately integrated with other local ecosystems. Additionally, each local ecosystem is nested within increasingly larger ecosystems. The scale at which an ecosystem is viewed is contingent on the species or abiotic characteristic under consideration. While planet Earth represents the ultimate global ecosystem, complex ecosystems also exist under fallen logs and rocks.

1.3.1 The Forest Ecosystem

Forest ecosystems are comprised of many components interacting with one another in a given environment. These components appear to be dominated by trees; however, we must remember that other values (e.g. wildlife, water, & recreation) are also important. The forests of Newfoundland and Labrador form the eastern extent of North America's boreal forest region, which is characterized mainly by conifers intermixed with hardwoods, all of which are relatively small in relation to height and diameter. In addition to lakes, ponds, streams and rivers; barrens and bogs account for a significant portion of the boreal forest ecosystem.

Black spruce is the most prevalent species in Districts 10, 11, 12, & 13, which comprise some 54 % of the total productive land area of the district. The occurrence of black spruce stands is largely due to the result of fire, except on the poorer wet sites or the dryer rocky sites. In such areas, trees are stunted and have many branches. Balsam fir is found as the second major commercial forest type, representing approximately 46 % of the total landbase. The stands are mainly mature to overmature and are often subject to wind damage. With respect to other softwood species, white pine and larch can be found scattered throughout this landbase. In addition, lakes, ponds, streams, rivers, as well as bogs account for a proportion of the ecosystem found in these districts.

Soils of the boreal forests in these districts are predominantly classed as podzols although brunisols are also present. Throughout the contrasting areas of exposed bedrock, morainal deposits and low lying sphagnum bogs, this mosaic of soils and non-soils tends to be occupied by a range of plant communities dominated by lichens, shrubs and forbs.

Climatic conditions of this region are heavily influenced by the proximity to cold Arctic air masses and the Labrador Current in the north and warm moist air and the Gulf Stream in the south. The interaction of these phenomena results in moderate annual precipitation, high evapotranspiration rates during warm summers and overall the most continental climate on the Island of Newfoundland; with the warmest summers, coldest winters and the least wind and fog.

The primary natural disturbance factors attributed to boreal forests are fire and insects. Forest fires were frequent and extensive in north-central Newfoundland and resulted in specific successional trends that depended on site type. More often than not, the spruce component is increased following fire, whereas other disturbance types such as insects and cutting often results in an increase in the fir component. Repeated burning and cutting of dry, coarse-textured black spruce-feather moss site types can result in ericaceous species such as sheep laurel *Kalmia angustifolia* invading the site to produce heath-like conditions. Successional patterns on other forest cover types vary with site and type of disturbance. These are discussed in greater detail in subsequent sections of this report.

Forest development class, successional pattern and site influence the understory plant community present throughout the district. The species composition and structure of these plants significantly impact on the suitability of a site as wildlife habitat for various species. Some animals are very general in terms of habitat requirements and can occupy a wide range of site conditions, yet have specific seasonal requirements that can determine habitat quality. For example, moose require wintering areas with suitable combinations of available cover and browse. It is widely accepted that a variety of forest age classes can provide increased habitat and sustainability for many wildlife species. On the other hand, some species require a specific age class or habitat condition to maintain healthy populations (e.g., Newfoundland marten (*Martes americana atrata*)).

Aquatic ecosystems of the boreal forest are heavily dependant on forest cover for temperature regulation, nutrient cycling and stream flow regulation. Consequently, forest harvesting activities adjacent to riparian areas are critical to sustainability of fish habitat and maintenance of fish migration routes. Suitability of various streams and ponds as waterfowl breeding, feeding and resting areas are also dependant on adjacent forest cover. Biological production in streams is based on a combination of internal and external nutrient and energy pathways. Stream side vegetation has a strong influence on both since they are so closely linked to surrounding terrestrial events. Small streams in forested areas receive much of their materials from the surrounding terrestrial ecosystem. Detritus in the form of needle and leaf litter, twigs and branches, forms the major energy base for consumer organisms. In highly shaded headwater streams, algae production is often low and yields only a small and seasonally variable contribution to the overall energy budget. As streams become larger further downstream, sufficient light penetrates the forest canopy, and consumer populations can take advantage of both particulate detritus and algae (Toews and Brownlee 1981). For these reasons, maintenance of suitable riparian zones for protection of aquatic ecosystems, as well as providing wildlife travel corridors is a primary consideration of any forest management strategy.

Major watersheds within the Zone include: Badger Brook, Mary Ann, New Bay, Northern Arm, Peters River, North/South Twin, Exploits River, Great Rattling, Noel Paul, Red Indian Lake, Mary March River, Harpoon Brook, Victoria River, & Valentine Lake

As well, small to medium sized lakes are common throughout Forest Management Districts 10, 11, 12, & 13.

1.3.2 Ecoregions and Subregions

In Ecoregions and Subregions of Insular Newfoundland, Damman defined ecoregions as areas where comparable vegetation and soil can be found on sites occupying similar topographic portions on the same parent material, provided that these sites have experienced a similar history of disturbance. An ecoregion cannot be defined in isolation from the physical landscape; however, vegetation toposequence, vegetation structure, floristic composition and distributions can provide the primary criteria (Damman 1979).

According to Damman, Newfoundland has nine ecoregions, which are further divided into subregions (figure 2). However, Labrador has ten ecoregions. Each ecoregion and subregion contains many of the same ecosystem variables. It is the dominance and variance of these variables that determine the ecoregion and subregion classifications.

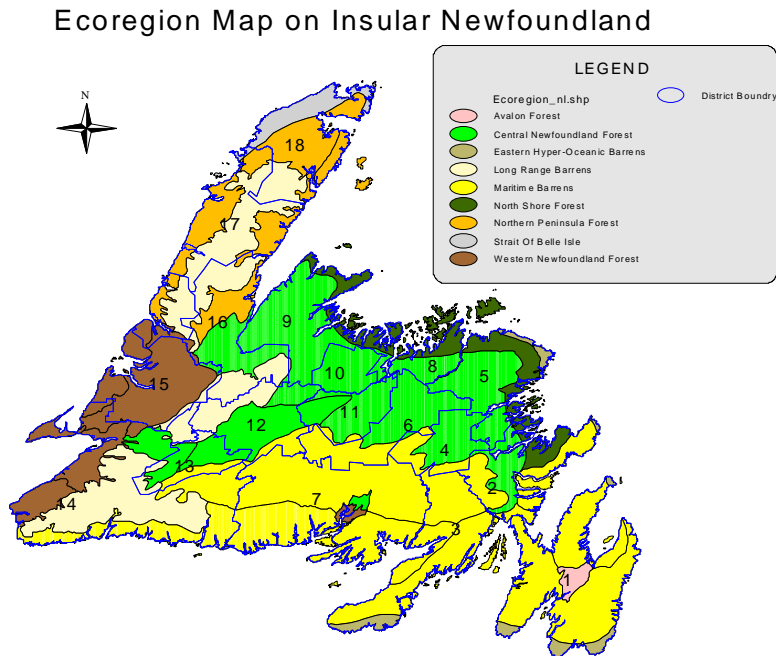


Figure 5 Ecoregion Map on Insular Newfoundland

1.3.2.1 Central Newfoundland Ecoregion

This Ecoregion has the most continental climate of insular Newfoundland. It has the highest summer and lowest winter temperatures. Because of the warm summers and the high evapo-transpiration losses, soils in the northern section of this ecoregion have a soil moisture deficiency.

The Hylocomium-Balsam Fir forest type occupies the zonal soils of this area. These soils are generally lighter in color and have lower organic matter content compared to other ecoregions. Forest fires have had an important role in the natural history of this region. Many sites have been converted to black spruce, while some of the richer sites are occupied by white birch and aspen. Yellow birch is absent from this region primarily because of the short frost-free period. Alders, rather than Mountain Maple are the most common problem on wet seepage slopes.

Northcentral Subregion

This subregion has the highest maximum temperatures, lowest rainfall and highest forest fire frequency than anywhere else in Newfoundland. The subregion extends from Clarenville to Deer Lake with a mostly rolling topography below 200 meters. The history of fire is evident by the pure black spruce forest and aspen stands which dominate the region. Relatively low moisture, coarse soils and the prevalence of black spruce cover types make this subregion particularly susceptible to regeneration failure. In addition, where regeneration is lacking, succession to dwarf shrub heath dominated by *Kalmia angustifolia* occurs on the nutrient-poor coarse textured till that is prevalent through much of this area. This subregion is characterized by rolling to undulating topography which supports shallow, medium till with a soil texture range from sandy loam to loam. There are also local areas covered by poor sandy till over glacio-fluvial deposits and outwash deposits along some of the major river systems such as the Terra Nova. It is in these landtypes that succession of productive black spruce forest types to ericaceous heath dominated by *Kalmia angustifolia* is most prevalent.

1.3.2.2 Maritime Barrens Ecoregion

This ecoregion extends from the east coast of the province to the west coast through the south central portion of the island. This ecoregion has the coldest summers with frequent intermittent snow cover particularly near the coast line. The annual precipitation exceeds 1250 mm. The landscape pattern consists of usually stunted, almost pure stands of balsam fir broken by extensive open heathland. The development of the heath landscape was precipitated by indiscriminate burning by European settlers. Railways in the nineteenth century also had a significant impact on fire frequency in the eastern part of the region. The heaths are dominated by *Kalmia angustifolia* on protected slopes where snow accumulates and by cushions of mat-forming, evergreen shrubs on windswept ridges and headlands. Good forest growth in this region is confined to long slopes found in protected valleys.

Attempts to afforest the heath with *Picea sitchensis* have been unsuccessful. However, eastern larch and scots pine may have potential for fuelwood stands (Hall 1986). However, site selection is critical because the historical removal of the forest has deflected the natural tree line to low elevations. Wind, lack of protective snow cover and soil frost disturbance are important factors limiting plantation establishment in this ecoregion.

1.3.2.3 Long Range Barrens Ecoregion

This ecoregion includes the mountainous areas above tree-line. Trees only occur as krummholz usually dominated by black spruce and eastern larch. Small patches of forest may occur in sheltered valleys. The vegetation is dominated by arctic-alpine plants clearly indicating that these barrens, unlike the Maritime Barrens, were never forested. This ecoregion extends from the south western coast to the northern part of the Northern Peninsula. It consists of three distinct subregions: Southern Long Range, the Buchans Plateau-Topsails and the Northern Long Range. They are separated by areas of more or less continuous forest.

1.4 Forest Characterization

1.4.1 Land Classification

The total mapped land area found throughout Forest Management Districts 10, 11, 12, & 13 is approximately 1,135,351 million hectares. There are four basic categories that currently represent how the land is classified; productive, non productive, non-forest and fresh water. The ratios across ownerships in each district are fairly consistent with some minor variations.

The four Districts have a total productive forestland of approximately 500, 046 ha.

1.4.2 Age Class

Individual tree ages in a stand can all be the same after disturbance such as fire or harvesting; however in most cases the ages vary. Forest managers describe stand ages in terms of age classes, which generally encompass 20 years. The age classes present throughout Forest Management Districts 10, 11, 12, & 13 include:

<u>Class</u>		<u>Age (years)</u>
1	0 - 20	regenerating
2	21 - 40	immature
3	41 - 60	semi-mature
4	61 - 80	mature
5	81 - 100	over mature
6	100 - 120	“
7	120 +	“

Figures 6, 7, 8, & 9 illustrate the age class structure within each forest management district covered under this plan. In general terms, the more balanced the age class distribution in a district, the higher the potential for an even flow sustained harvest of timber, because continuous timber supply is limited by the age class with the lowest frequency of occurrence. A balanced age distribution in the forest would also allow for the highest biodiversity by making habitat available at all stages of development, with the equivalent proportions of the forest to moving from one stage of development to the next over time. This would result in an ongoing renewal of habitat.

Figure 6 - DISTRICT 10: AGE-CLASS STRUCTURE

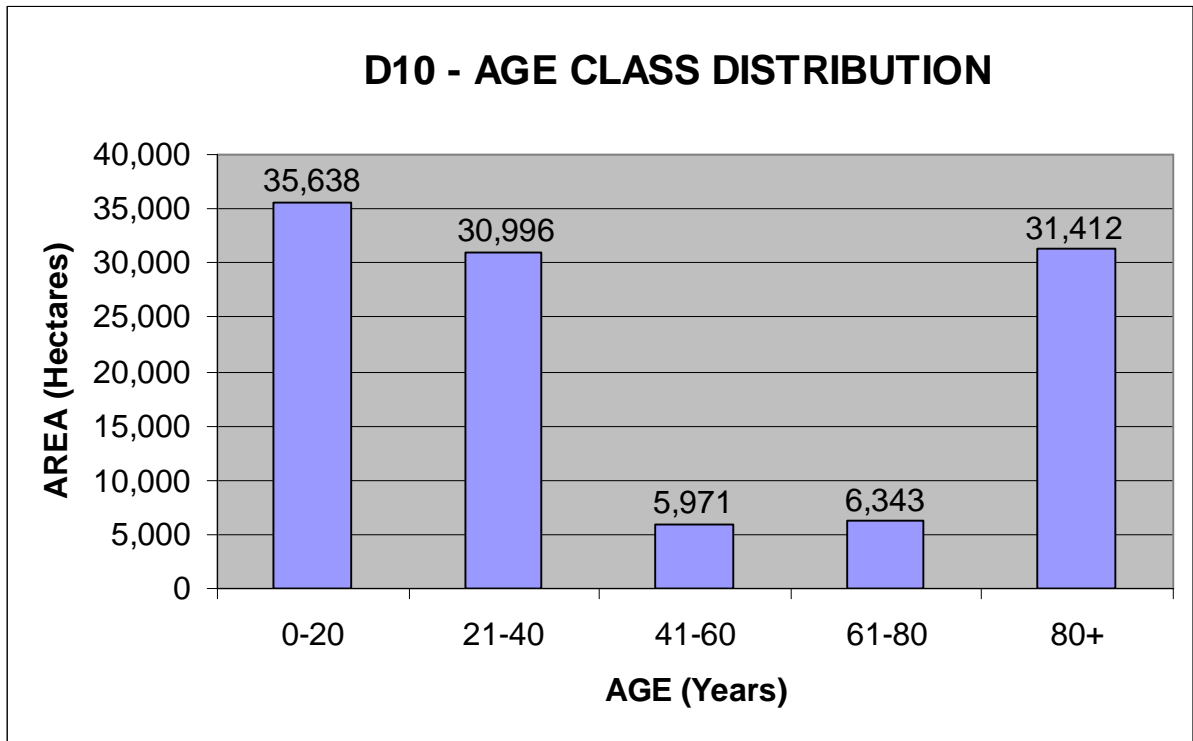


Figure 7 - DISTRICT 11: AGE-CLASS STRUCTURE:

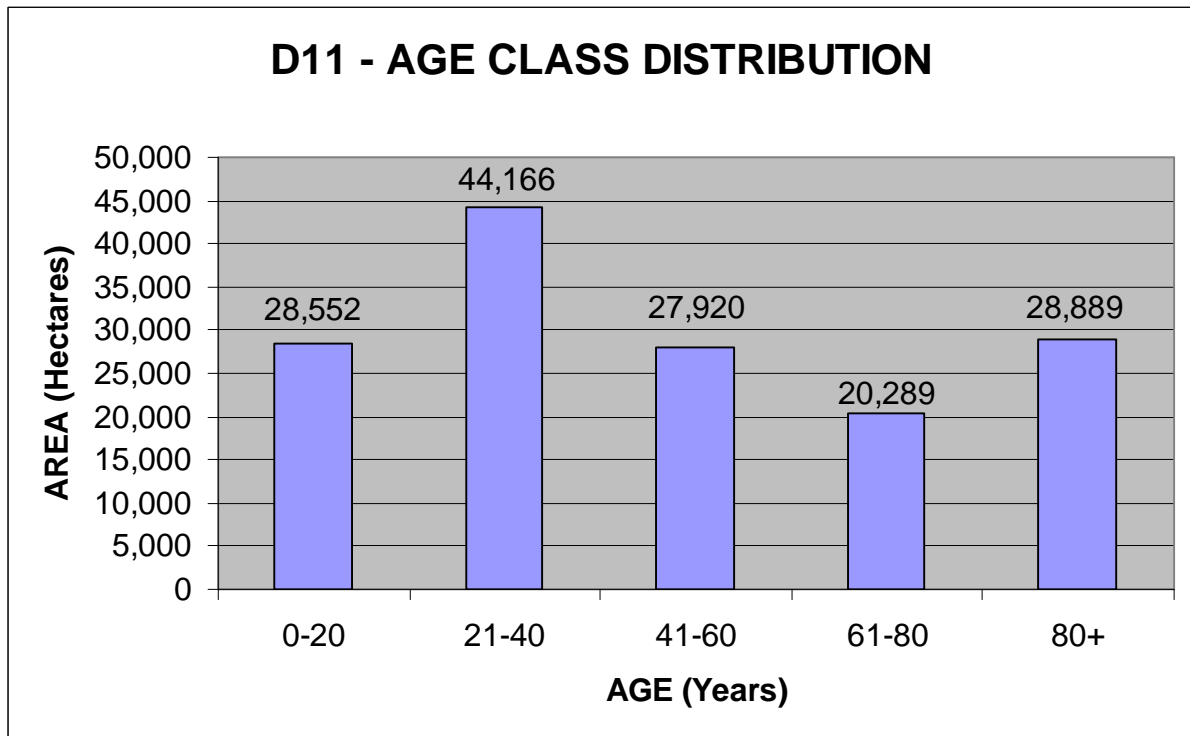


Figure 8 - DISTRICT 12: AGE-CLASS STRUCTURE:

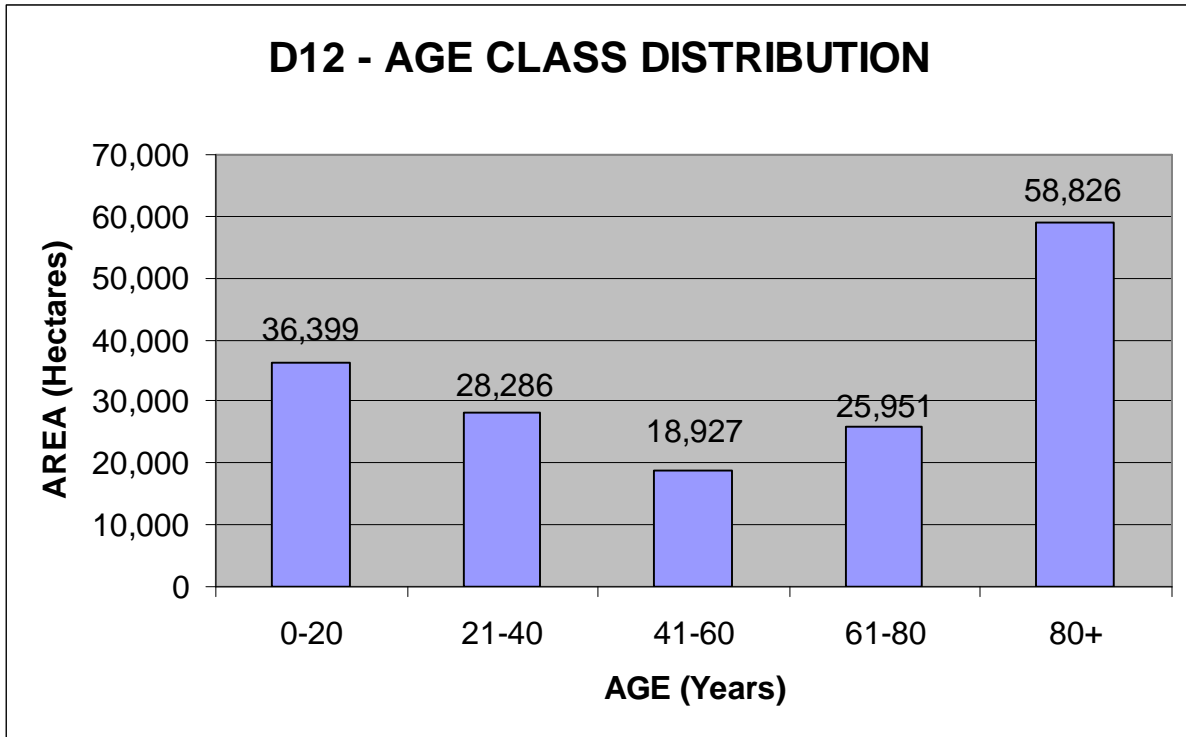


Figure 9 - DISTRICT 13: AGE-CLASS STRUCTURE:

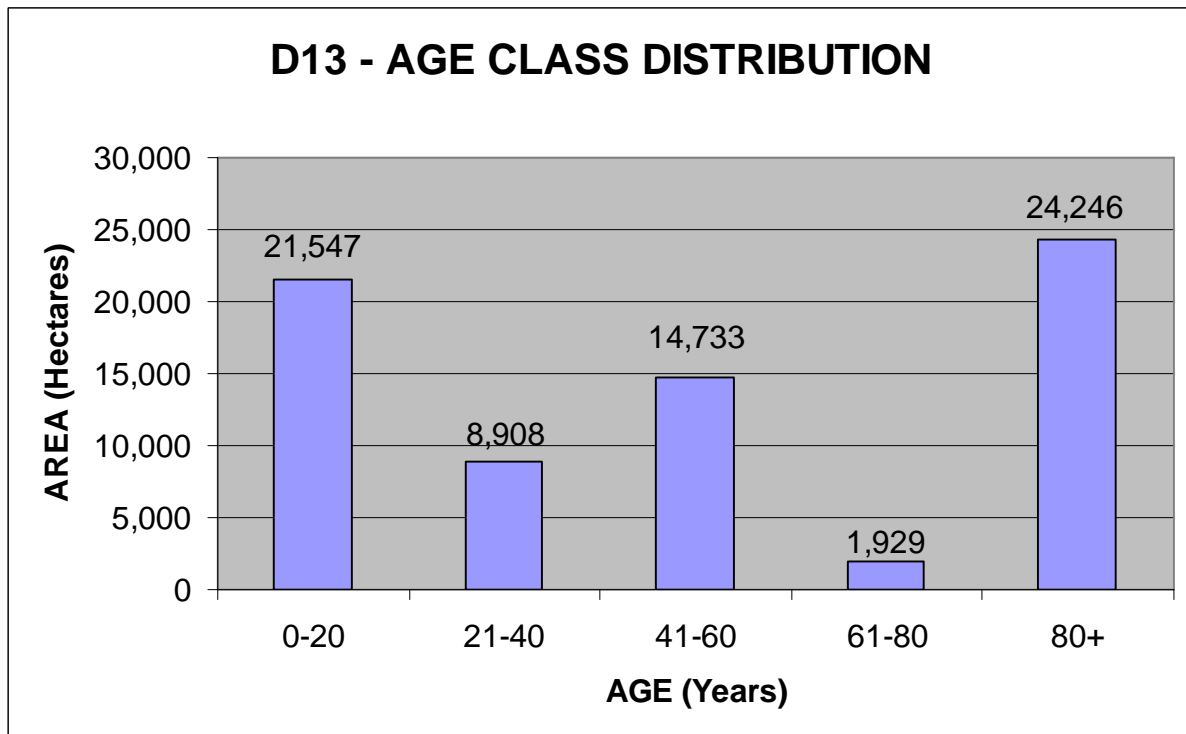
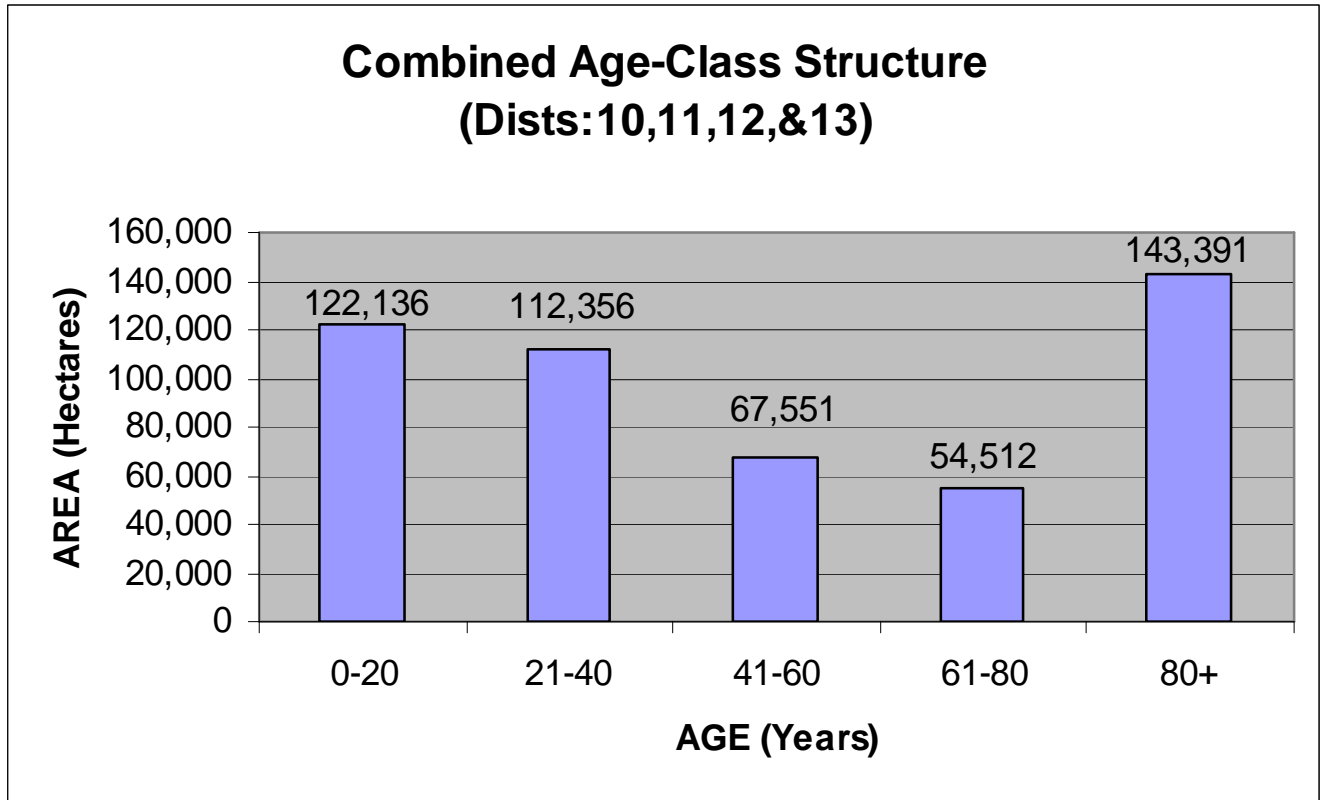


Figure 10 – Combined Age Class Structure of 4 Management Districts



1.4.3 Site Class

The Newfoundland Forest Service has identified four site classes that refer to the potential of a given site to produce timber. These are high, good, medium and poor. The classes are based on a number of factors, some of which are soil type, moisture content, slope, and fertility. Site class is determined through air photo interpretation supplemented with field checks. The classes indicate the volume of wood fiber a site has the capability of producing under natural conditions by the time the trees reach their rotation age (which averages, generally, between 60 and 80 years depending on the species and the location). On average, good sites are capable of producing > 2.6 m³/ha/yr, medium sites 1.7 m³/ha/yr, and poor sites 0.8 m³/ha/yr.

The following table indicates the average potential in cubic meters per hectare for each site class at maturity (based on the provincial average).

<u>Class</u>	<u>m³/ha</u>
High	200+
Good	150
Medium	120
Poor	80

The medium site class is by far the largest holding 65% of the total productive area. The next largest class is poor (18%), followed by good (17%).

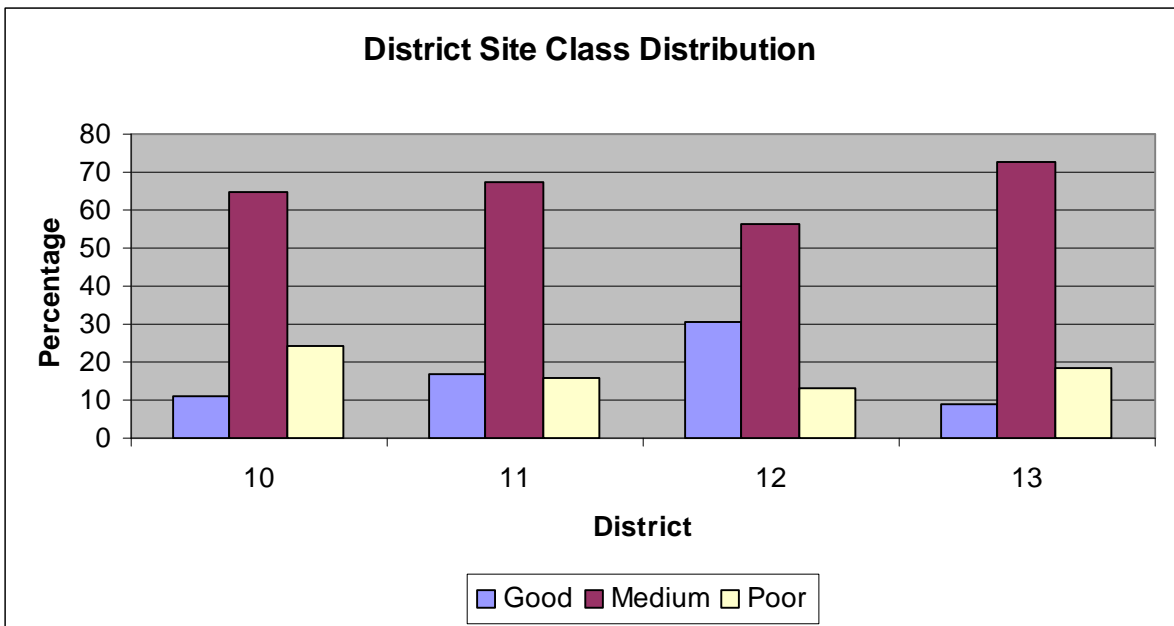


Figure 11 – Average Site Class in FMD’s 10,11,12, & 13

2.1 SUMMARY OF PAST ACTIVITIES

Over the past five years (2001-2005), forestry activity conducted by Abitibi-Consolidated Company of Canada in Forest Management Districts 10, 11, 12, & 13 included: harvesting of timber, road and bridge building activities to access the timber and silviculture activities.

2.1.1 Harvesting Activity

The past five years harvesting results are included in Table 2, for the period 2002-2006. The previous maximum allowable harvest for the period 2001-2005 was 84,000 m³, 162,000 m³, 191,000 m³, & 36,400 m³ in Forest Management Districts 10, 11, 12, & 13 respectively.

To ensure responsible stewardship of the entrusted landbase, the maximum allowable harvest level per district must not be exceeded over the planning period. As such, the company has worked closely with DNR in developing and implementing an Annual Allowable Cut balance plan for the period 2001-2005. Currently, the province is in a new wood supply planning period for the years 2006-2010.

Most of the company's operations are carried out utilizing a mechanical shortwood cut-to-length system. This type of operation is very efficient and has 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. However, there was a portion of each year's harvest that is conducted with a manual shortwood cut-to-length system.

Table 2
Summary of Past Five Years Harvesting Results
for the period January 1, 2002 to December 31, 2006
(Net Cubic Metres)

FOREST MANAGEMENT DISTRICTS HARVEST (M³)				
	10	11	12	13
2002	66, 297.31	152, 162.57	223, 744.61	32, 114.34
2003	104, 294.98	161, 649.11	201, 777.15	20, 428.24
2004	79, 735.82	158, 650.74	163, 104.29	22, 678.62
2005	92, 167.02	174, 905.75	209, 897.72	3, 005.22
2006*	35, 850	72, 512	165, 218	0
Total	378, 345.13	719, 880.17	963, 741.77	78, 226.42

* Year 2006 is an estimate of volume. Actual numbers will be identified during the fall of 2007, during the completion of the Past Annual Report.

2.1.2 Forest Access Road Activity

A summary of the roads that were constructed over the past five years are included in Table 3. There were 480.07 km and 23.08 km of Class “C” & “B”, respectively forest access roads constructed in Districts 10, 11, 12, & 13, along 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 Transport Canada, 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 was initiated. All personnel who were 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 3 Summary of Forest Access Road Construction (Primary & Operational) for the period January 1st, 2002 to December 31st, 2006

FOREST MANAGEMENT DISTRICTS – ROAD CONSTRUCTION (Km's)								
	10		11		12		13	
	B	C	B	C	B	C	B	C
2002	0	21.34	6.08	25.05	0	29.25	0	2.0
2003	0	23.23	7.40	32.90	7.60	37.40	0	0
2004	0	19.10	0	39.34	0	36.40	0	6.40
2005	0	29.71	0	45.01	2.0	28.85	0	1.29
2006*	0	16.0	0	36.8	0	50.0	0	0
Total	0	109.38	13.48	179.10	9.60	181.90	0	9.69

** Year 2006 is an estimate of road construction. Actual numbers will be identified during the fall of 2007, during the completion of the Past Annual Report.*

2.1.3 Silviculture Activities

The past five years silviculture activities are summarized in Table 4. The activities included planting, site preparation, and assessment surveys. A total of 10,340.22 hectares of area were silviculturally treated in the past five years.

Site preparation was carried out throughout the district on older cutovers and on burned areas that had a thick organic (duff) layer and were not regenerating naturally to acceptable stocking levels. Through scarification, the thick duff layer was broken up mixing it with the underlying mineral soil. This created ideal microsites for young seedlings to be planted, allowing them to grow vigorously.

Planting for the most part used black spruce container stock seedlings and was carried out on site prepared (scarified) ground. Young seedlings were planted at a spacing of 2.2 metres apart, giving a density of 2100 stems/hectare.

**Table 4 Summary of Silviculture Treatments
in Districts 10, 11, 12, & 13 (2002-2006)**

FOREST MANAGEMENT DISTRICTS – SILVICULTURE ACTIVITY (in Hectares)																
	10				11				12				13			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
2002	826.45	128.0	29.8	0	159.52	314.0	318.0	0	547.35	0	0	0	0	0	0	0
2003	0	0	25.6	0	833.0	533.5	328.35	0	44.0	0	0	0	245.0	0	0	0
2004	0	0	113.55	0	502.71	128.41	528.87	0	36.9	0	241.60	0	301.95	0	0	0
2005	309.57	231.04	43.78	0	0	714.26	164.92	39.54	186.68	0	544.30	0	231.0	0	0	0
2006	93.23	133.67	230.04	0	150.23	761.63	675.8	0	274.22	314.8	235.5	0	0	0	0	0
Total	1229.25	492.71	462.77	0	1645.46	2451.8	2015.94	39.54	1089.15	314.8	1021.4	0	777.95	0	0	0

NOTE: 1 = Pre-Commercial Thinning
 2 = Site Preparation (Scarification)
 3 = Planting
 4 = Gap Planting

3.0 TIMBER SUPPLY ANALYSIS

Abitibi-Consolidated manages 1,677,563 million hectares of forested land within its Defined Forested Area (DFA). These limits range from Terra Nova in the eastern portion to Portage Lake area in the western portion. The company has long-term tenure on these limits with a common expiry date set for 2010. Of the 1,677,563 million hectares of total land area, only 45% is productive land available for the production of pulpwood for the Grand Falls-Windsor mill. The remainder area 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 mill at a competitive cost while ensuring other sustainable activities are being considered. The company (in conjunction with the Dept. of Natural Resources), use computer simulation models to analyse future wood supply for its mill in Grand Falls - Windsor.

In 2006, a new wood supply analysis was completed for Forest Management District 10, 11, 12 & 13, realizing new AAC levels of 84,300 m³, 174, 000 m³, 206, 300 m³, & 41,500 m³, respectively. This new wood supply analysis was developed using both Aspatial and Spatial modelling techniques. Information on current state of the forest, assumptions in the rate of harvest, silviculture treatments, growth & yield were inputted into a computer software program called Woodstock. This software generated a maximum level of harvest that could be sustained over a five-year period (aspatial).

This harvest figure and current landscape detail was then incorporated into another program simulation called Stanley. This software physically identified where the harvest should occur over the landscape (Spatial). A discussion of the company's harvest levels can be found in chapter 6.2

4.1 Guiding Principles of Sustainability

There are five guiding principles of overall sustainability, which include: environmental, economic, political, social, and cultural sustainability.

Environmental sustainability looks directly at ecosystem health, both now and in the long run. Ecosystem health is determined by such factors as ecosystem integrity, biodiversity, productive capacity, and resiliency. The five-year operating plan must ensure that these factors are intact or there would be very few values left to manage.

Economic sustainability demands that forest resources be managed and distributed efficiently and equitably among the stakeholders, within the capacity and limits of the forest ecosystem. Economic development has been given top priority by many of Newfoundland's people and their representative, the government. This will probably remain the case until the economy improves. However, economic development should not proceed without the incorporation of the other factors into the decision making process.

Political sustainability refers to the goals and management objectives being applicable, administrable, and practical. These goals and objectives must then maintain these qualities well into the future with the aid of public input and support.

Social sustainability means fairness and equity to all stakeholders. The forest management strategy should not jeopardize the basic needs of the public; therefore, public involvement and some decision awareness, participation, and decision-making clout are a necessity.

Applying Newfoundland's culture to the planning process attains cultural sustainability. A forest management strategy cannot be successful without allowances within the strategy for traditional access and use of the land. For generations, many of Newfoundland's public had free range in Newfoundland's pristine wilderness, a fact that any forest management strategy cannot ignore.

All guiding principles are key interlocking components and each must be maintained if sustainable development is to be achieved. A guiding principle is defined as "a fixed or predetermined policy or mode of action". These modes of action would be implemented

in the five-year plan in the form of:

1. Policies that should be in place to protect or enhance the resource value;
2. Methods for negotiation or inclusion of other stakeholders in resolving potential conflicts;
3. Special management provisions/strategies - such as buffer zone consideration, temporal operating periods, modified harvesting, or a best management policy; and/or
4. Models and/or forecasting strategies to determine economic contribution, biodiversity impact, or community sustainability

4.2 Value Description

The forest ecosystems throughout Forest Management Districts 10, 11, 12, & 13 provide a wide range of values to different individuals and groups. These include consumptive values such as: timber products, hunting, trapping, sport fishing, and berry picking. As well, non-consumptive values such as: skiing, snowmobiling, hiking, and bird watching. There are also intrinsic and intangible values such as a feeling of wilderness and peace, which some people describe as spiritual. Although difficult to spatially describe or quantitatively measure, these spiritual values are considered to be a product or an accumulation of all values. Other values such as water quality, parks and protected areas etc. provide for the protection of the forest ecosystems, which can enhance the other values listed above.

Many of the values were identified directly/indirectly by this or previous planning teams. Presentations of pertinent information on values by knowledgeable individuals or groups provided stakeholders with relevant resource information to make informed decisions. Other values that may not be specifically outlined by the planning team are also identified and discussed, providing a more complete description of the range of values found throughout Forest Management Districts 10, 11, 12, & 13. The following represents a framework for characterizing values in a clear and consistent manner. This approach consists of three components:

a) Characterization

- § Description: Why the value is important, types of activities, intensity, spatial extent, employment, etc.
- § Data in support: Statistical references.

b) Critical Elements

- § Forest Features: Elements at risk from harvesting or enhanced by harvesting (viewscales, adjacency to water, mountains, habitat, wilderness ambiance, road access, etc.)

c) Guiding Principles

- § Policies and rules of conduct that will protect or enhance the resource value (negotiation, buffer zone consideration, tools and strategies to resolve conflict, modified harvesting, etc.)

Values were discussed both at the strategic and operational level. Strategic level information (characterization, critical elements, and guiding principles) are the focus of discussion in this section. They provide a mechanism to resolve conflicts that might arise in the five-year planning process. Where possible, the physical location of the value on the landscape (operational level) was also identified during discussions. This helps facilitate the preparation of the five-year operating plan.

In many instances, the Environmental Protection Guidelines form the guiding principles for a value. Quite often the spatial extent or location of all values is not known (eg., raptor nests). Specific guidelines are still listed in order to provide a direction or course of action when and if these values are encountered.

4.2.1 Biotic Values

4.2.1.1 *Big Game*

4.2.1.1.1 Moose

Characterization:

Moose are not native to the island. A pair was introduced to Gander Bay in 1878 and two pairs were introduced to Howley in 1904. Today, moose are distributed throughout the Island and the population is estimated to be about 125 - 140,000.

Currently, moose are managed on an area/quota system in the province. The Island portion of the province is divided into 50 management areas and license quotas are set annually for each area. Quotas are set based upon the management objective for each area (i.e., whether it is desired that population increase, decrease or stabilize). Generally, if an area has too high of a moose population, managers will increase quotas to bring down the population in order to prevent damage to the habitat. However, if the habitat is in good condition, and the area could support more animals, future quotas may be increased. Portions of moose management areas 11, 12, 13, 15, 16, 17, & 21 are located throughout Forest Management Districts 10, 11, 12, & 13.

Critical Elements:

Harvesting is not expected to have a negative impact on moose populations in this planning zone because moose prefer the early serial stages of a forest and generally do well in areas a few years post harvesting

4.2.1.1.2 Caribou

Characterization:

Caribou is the only native ungulate species on the island. Biologists estimate that prior to the railway being built in 1898 the population on the Island was approximately 100,000 animals but by 1930 the population had declined to about 2,000 animals. Between 1980 and 2000 the number of caribou has increased considerably on the Island with a population estimated at 70,000+ animals. However, in the past few years' populations have declined.

Critical Elements:

Given there is limited information about the distribution, movements, and habits of caribou, it is hard to determine if timber harvesting will have any negative impacts on

these animals. Potential drains to caribou population levels include disease and predation from bears, coyote, etc.. It has also been thought that as roads are constructed and access is improved into remote areas, there is generally an increase in the number of animals killed due to road-kill and poaching. The abundance and distribution of arboreal lichens has also been shown to impact caribou populations. Portions of caribou management areas 61, 62, 63, 66, 67, & 68 are located throughout Forest Management Districts 10, 11, 12, & 13.

4.2.1.1.3 Black Bear

Characterization:

The black bear is native to the Island and is found in forested areas. Currently, the number of black bears occurring on the Island is not known (due to difficulty in conducting a census) but is crudely estimated to about 6 - 10,000. Portions of black bear management areas 10, 11, 12, 13, 15, 16, 17, 18, 21, & 22 are located within Forest Management Districts 10, 11, 12, & 13.

Critical Elements:

- den sites for winter hibernation, &
- forest cover

Guiding Principles:

Big Game Management Strategy (moose, caribou and black bear)

Management of big game species in the Province is accomplished by a planning process in which a Big Game Management Plan is prepared annually by the Inland Fish and Wildlife Division (IFWD) of the Department of Tourism Culture and Recreation. This process takes into consideration information provided by the public, wildlife and forestry staff. To make decisions on types and numbers of licenses in each management area, the IFWD reviews all relevant data including: recent census work, information provided on license returns, and jawbone or skull data

Environmental Protection Guidelines (EPG)

Moose

Mature stands of timber required for moose shelter and moose yards will be identified in consultation with the Wildlife Division.

Caribou

To ensure the continued protection of these animals the following EPG's will be followed during forestry activities:

- In areas where caribou utilize lichens, a minimum amount of lichen forest must be maintained for caribou. (This amount is to be determined),
- Harvesting and road construction should be minimized during the May 15 to July 30 calving period, &
- Forest access roads, borrow pits and quarries shall avoid: known sensitive wildlife areas such as, calving grounds, post calving areas, caribou migration routes, caribou rutting areas and wintering areas.

Because the caribou population is in decline, the IFWD is in the process of identifying critical caribou habitat areas and is currently reviewing its guidelines for forestry activities within these areas. These guidelines will be developed cooperatively through the input of the wildlife division, forestry division, ACCC, & CBPPL. Once finalized, they will replace and/or enhance those listed above.

Bear

A 50-metre, no-cut, treed buffer must be maintained around known bear den sites (winter) or those encountered during harvesting. Den sites must be reported to the IFWD.

4.2.1.2 Furbearers

Characterization:

Ten species of furbearers occur in this zone, which include: lynx, red fox, beaver, otter, muskrat, short-tailed weasel, red squirrel, mink, coyote, and pine marten (will be discussed in more detail in next section). Of these, red squirrel, mink and coyote are not native.

Critical Elements:

- forest cover for protection,
- water quality maintenance,
- riparian buffer zones along aquatic areas, &
- snags and coarse woody debris (denning, nesting sites, etc.)

Guiding Principles:

Fur Bearer Management Strategy:

Recommendations concerning the management of furbearer species are developed annually, upon consultation with the Newfoundland and Labrador Trappers Association, general public, and DNR staff. Like the small game management plan, the fur

management plan, reviews the status of each fur bearer species annually and addresses the season dates and lengths, and if necessary closure of areas (or no open season). Management of all fur bearing species will continue to be managed through this process.

Environmental Protection Guidelines:

To protect beaver habitat, all hardwoods within 30 metres of a waterbody occupied by beaver are to be left standing during harvesting operations.

4.2.1.3 Pine Marten

Characterization:

Before 1900, marten range over most of the forested areas of the island but, unfortunately, is considered to be an endangered species by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). Snaring, accidental trapping, predation, disease and habitat removal are thought to be the primary reasons for the marten population decline in Newfoundland.

Since the initiation of the live-trapping program, it has been revealed the Main River watershed is a high-density marten area (on the island) and densities are comparable to those found in the Little Grand Lake and Red-Indian Lake areas. Marten have also been recorded in isolated pockets of Districts 4,5 & 6. Based on this information, it is important that marten habitat be protected. Furthermore, it is important some remnant stands of old growth (80+) forests be left throughout the zone and provision made to have connectivity (i.e., unbroken corridors of forest) between such stands. To accomplish this, a landscape approach to habitat management was initiated by the Forest Service in 1999. This involved working with stakeholders to identify critical or potential marten habitat, locating possible corridors, and identifying areas, which would not be harvested in the near future. This initiative has been ongoing since that time. To identify all factors affecting marten survival, stakeholders from the Forest Service, IFWD and both paper companies sit on a recovery team for Newfoundland marten. The purpose of this team is to set short-term and long-term population goals for the species, and to recommend ways which this may be accomplished. The Team is now in the process of identifying critical and recovery marten habitat and determining which forest activities can take place within these areas.

Critical Elements:

- sufficient habitat to support a viable population of marten, &

- areas of known marten populations remain closed to snaring and trapping

Guiding Principles:

The basic unit for evaluation will be home range size for male (30km²) and female (15km²). Forest types can be considered marten habitat if they meet the following requirements:

- Minimum patch size equals 20 ha,
- Basal area requirement equals 40 m³/ha (~18 m²),
- Hardwood stands (insect kill, wind throw) will be considered where crown closure is greater than or equal to 30%, &
- Softwood scrub meeting the minimum requirements (6.5 m) will be considered habitat. Where height is not known, softwood scrub within 50 m and adjacent to a qualifying stand is considered as habitat

Critical and recovery pine marten habitat is being or has been identified. In recent years, the development and evolution of a marten habitat suitability model has been a useful tool in identifying potential marten habitat and evaluating potential impacts of forest activity on this habitat. Continued development and refinement of this model will provide a more reliable means of evaluating potential impacts of forest activity on marten habitat. Pine marten is also being evaluated as part of an ongoing biodiversity assessment project (BAP). ACCC is a cooperative partner in this project and its progress is closely monitored. There is also ongoing research into a variety of aspects of marten dynamics through the Model Forest, Canadian Forest Service, and University of Maine. Recommendations resulting from any of these ongoing initiatives will be considered into future harvesting prescriptions as required.

4.2.1.4 Water Resources

Characterization:

The protection of water resources has emerged as a major issue in recent years both nationally and provincially. Events such as the E.coli 0157 outbreak in Walkerton, Ontario, our own Triahlomethane (THM) controversy, and numerous incidents of giradiasis in community water supplies have heightened public awareness on water issues. While much of the current focus is directed toward drinking water, it is also recognized that an equal importance must be attached to waters, which have other

beneficial uses. Human impacts both locally and globally have the potential to impair water for future uses. In districts 10, 11, 12, & 13, water is used beneficially for numerous purposes. There are numerous communities having water supplies that maybe protected under the province's Protected Water Supply Program. Recreational waters within this zone are utilized for activities including: fishing, boating, and a supply source for numerous cabin owners. With respect to fishing, the Exploits River is a scheduled salmon river flowing through FMD's 11 & 12 offering hours of enjoyment to many anglers. Over the past number of years, ACCC has spent millions of dollars at the GFW Mill Site along the Exploits River to aid in the success of salmon populations. In addition, proposed harvest areas along the Exploits River are analyzed on a site-by-site basis, where varying widths of buffers are imposed (ie: from 20-100 meters), especially along known spawning sites.

Human activity has the potential to alter water quality and quantity. Commercial forest harvesting is considered the predominant activity occurring throughout Forest Management Districts 10, 11, 12, & 13. There are numerous roads associated with forest management activity that interface with waterways on a regular basis.

Critical Elements:

Forest management activities including: road construction, use/maintenance, timber harvesting, silviculture, careless storage and handling of fuels by industrial and recreational users may substantially alter the quality of water draining from watersheds. It can affect other defining characteristics such as stream hydrology, sediment loadings, stream characteristics and aquatic discharges from municipalities.

Guiding Principles:

There are numerous protective measures listed in the Environmental Protection Guidelines under the broad categories of road construction, stream crossings, road abandonment, fuel oil handling/storage, support services/structures, harvesting, silviculture, and protected water supply areas. As well, ACCC will continue to work with DFO and ERMA for proper salmon management within the Exploits River.

4.2.2 Human Values

4.2.2.1 Timber Resource

Characterization:

One of the major resource values of a forest ecosystem is the harvesting of timber to

provide forest products. Initial uses of the timber resource were mainly domestic in nature to supply timber to build houses, fishing sheds and equipment and for heating and cooking. With the increase in population, more commercial uses have arisen to supply lumber, pulp and paper products. An annual allowable cut (AAC) on ACCC Limits of 506, 100 m³ of net scheduled volume is supported in Districts 10, 11, 12, & 13 combined. Domestic harvesting provides fuelwood to heat many homes throughout this area. Commercial activities provide jobs in harvesting, sawmilling, trucking, pulp and paper manufacturing and related spin off industries for local residents.

Silviculture treatments are important to the forest resource of this area because it ensures a vigorous and healthy forest. Renewal activities are critical to ensure the productive land base is maintained by planting areas deemed not sufficiently restocked. Forest improvement activity help enhance the growing stock, thereby potentially reducing harvesting cost, increasing forest product options and allowing for a sustainable timber supply. Appropriate access to timber in a timely manner is critical to planning any forestry operation. Primary, secondary and tertiary roads form an integral part of operating areas, which are generally used for recreational purposes upon completion of harvesting activity.

Historically, disturbances such as insect outbreaks and wildfires have contributed to changes in the landscape. As a result, protection of the forest from various disturbances is a major characteristic of any resource management. Protection of other resource values through modification of activities and enforcement is also important.

Critical Elements:

The overall objective of forest management is to ensure the AAC is maximized through conducting environmentally sound operations, while taking into account other resource values. This is normally accomplished through:

- maintenance or enhancement of productive landbase,
- planting of non-regenerating areas,
- minimizing loss of landbase to other users,
- minimize losses to fire, insect and disease,
- timely access road construction,
- enhancement of younger age classes through thinning to correct age class imbalance, &
- maintain both a sawlog and pulpwood industry in this area.

Guiding Principles:

- enforcement of forestry act, regulations, guidelines and policies,
- minimize loss of productive land base through spatial and temporal compromises and continuous dialogue with other resource users,
- education (public, ACCC Operators),
- aggressively conduct silviculture, access road, and protection activities, &
- implement best management practices.

The *Environmental Protection Guidelines for Ecologically Based Forest Resource Management* (EPG) outline courses of action and mitigative measures for forest activities. Items included in the EPG's include:

- garbage disposal,
- fuel storage,
- mineral soil exposure,
- buffer requirements,
- road and bridge construction, &
- silviculture and harvesting activities

4.2.2.2 Agriculture**Critical Elements:**

Surveys indicate that approximately five percent of the soils in the province are suitable for agriculture. It is not possible to identify and plan all sites for future agriculture use and often there is a conflict with other land uses particularly forestry because these sites are of high growing capability. Although a suitable land base is the first critical element necessary for a successful agriculture operation, markets and the interest of individuals are also prime factors in development and location. In the spirit of managing the ecosystem for multiple benefits, provisions must be given for the agriculture industry to expand. This is particularly important for areas outside established agriculture areas.

Guiding Principles:

Lands designated for forest management may include areas with high potential for agriculture. Consequently, the forest landholders will work with the Department of Agriculture to determine if opportunities exist for an exchange between agriculturally viable forest areas with unsuitable agriculture land within the Agriculture Development areas.

The agriculture leasing policy initiated in 1976 ensures that new or existing land allocated for agriculture continues to be used for agriculture. The leases have no provision for fee simple grants and must be used exclusively for agriculture purposes.

The following will provide guidance for the development of agriculture within FMD's 10, 11, 12, & 13:

- *Home gardening licences be confined to areas already developed for this activity,*
- *Any increases to agriculture leases should be adjacent to existing leases,*
- *New agriculture leases should include a business plan approved by the Agrifoods Division of the Dept. of Natural Resources, &*
- *Wood harvested on agriculture leases shall be completed through the company's forestry contractors or under a crown cutting permit. In any event, the company assumes first right of refusal for the harvested timber.*

4.2.2.3 Mining**Characterization:**

Within Districts 10, 11, 12, & 13 there is a diverse geological environment, which may host a variety of both metallic and industrial minerals.

Critical Elements:

Location of deposits close to markets is vital in controlling aggregate costs, which often increase dramatically with increased transportation distances.

Guiding Principles:

Harvesting timber for prospecting lines must meet the same rigor as commercial harvesting.

- *Every attempt will be made to extract timber harvested as part of mining exploration and development,*
- *If timber cannot be feasibly extracted using conventional means then timber shall be piled so that it may be extracted during winter months by snowmobiles,*

- *Infractions by mining companies will be dealt with through warnings and/or charges as necessary,*
- *Potential mining exploration will follow ACCC's mining policy, &*
- *Non-compliance with exploration permits will be passed to the Ecosystem District Manager and then submitted to Mines Division, Dept. of Natural Resources.*

4.2.2.4 Historic Resources

Characterization:

The provincial archeology office (PAO) is the agency responsible for management and protection of archaeological sites and artifacts in Newfoundland and Labrador. This program is carried out under the Historic Resources Act, which ensures any developments with potential adverse impacts on historic resources are investigated and monitored by a qualified archaeologist through an archaeological impact assessment.

Archaeological sites are non-renewable resources that are usually small spatially bound units and play a vital role in understanding our heritage. It is important to professionally record as much information as possible at an archaeological site to fully understand its history. Archaeological excavations and interpretive sites draw thousands of visitors each year to this province, resulting in a very important aspect to the tourism industry. The preservation and interpretation of archaeological sites is anticipated to benefit the tourism industry in this province for years to come.

Each year archaeology projects provide many seasonal jobs and often these people are successful in obtaining employment in archaeology and conservation for longer periods of time. As well, new businesses are created as a result of archaeological projects such as: bed and breakfasts, boat tours, restaurants and gift shops.

Critical Elements:

Major threats to historic resources are projects involving activities, which disturb soil layers and/or provide unintended public access to the archaeological resources. Forestry activities such as: constructions of access roads, harvesting, and mechanical site preparation have the potential to destroy historic resources.

While forestry activities can have adverse impacts on historic resources there are also beneficial effects. When archaeological sites are discovered through impact assessments

these resources are protected from damage or destruction and preserved, adding to our understanding of Newfoundland & Labrador's heritage.

Guiding Principles:

When projects involving land-use having the potential to adversely impact upon historic resources, the Provincial Archaeology Office should be involved at the planning stage to ensure mitigative measures protecting historic resources are developed. Known archaeological sites must be avoided and buffers required around them.

Occasionally there are accidental discoveries made of historic resources. In this event, activities should cease in the area and contact be made immediately with the Provincial Archaeologists at 729-2462

4.2.2.5 Newfoundland T'Railway**Characterization:**

A large portion of the Newfoundland T'Railway Provincial Park lies throughout Forest Management Districts 10, 11, 12, & 13 and has an impact on forestry operations. The former CNR right of way, which is 25 feet each side of the center line, is the main route for the T'Railway with some minor deviations. It provides for an all season multi use recreation corridor, managed with community partners, to maximize adventure tourism and recreational opportunities.

The T'Railway is protected for present and future enjoyment as part of the provincially designated parks and natural areas. The Provincial Parks Act provides the legislative framework for administration and management of the T'Railway.

The T'Railway constitutes the Province's contribution to the Trans Canada Trail System and it is the largest provincial park in the Province. It is used primarily for snowmobiling, skiing, hiking, walking and all terrain vehicle usage. Other new or historical uses such as commercial/domestic harvesting, quarry/mining and cabin access are also permitted.

Critical Elements:

- protection of the historical landscape integrity of the T'Railway corridor,
- preservation of the scenic quality along the corridor, &
- control of land usage adjacent to the T'Railway.

Guiding Principles

- *coordinate and build partnerships with other stakeholders and user groups such as communities and recreational organizations for the long term maintenance and development of the T’Railway,*
- *in an attempt to preserve the natural value of the T’Railway, other land management agencies are requested to maintain a 100 m buffer along the right of way,*
- *where access is required from the T’railway, landings or turnarounds are to be constructed 100 meters away from the railway bed,*
- *A one hundred meter no harvest zone shall be maintained from the center of the T’railway, &*
- *Where feasible, harvesting using the T’railway shall be from May to December to avoid conflict with other user groups.*

4.2.2.6 Parks and Protected Areas

Characterization:

The mission statement of the natural areas program is to protect large wilderness examples of provincial ecoregions including their natural processes, features and rare natural phenomena. Preserving the diversity and distinctiveness of the Province’s ecology allows sustainable future for the benefits of present and future generations.

Within the province, protected areas are of many types. The *Wilderness and Ecological Reserves Act* enables the Province to establish the following:

- wilderness reserves (Component 1),
- ecological reserves (Component 2) and
- ecological reserves (Component 3).

Component 1 reserves are defined using the critical habitat of high level, wide ranging species (i.e. caribou). They generally cross ecoregion boundaries, protect complete systems and are large (> 1000 km²).

Component 2 reserves protect representative samples of ecoregions (not included in Component 1 reserves) and are mid-sized (50-1000 km²).

Component 3 reserves protect exceptional natural features, such as, rare species or areas of unusual biological richness and are generally small (< 10 km²).

The benefits of protected areas include: preserving biodiversity, providing areas for scientific research, providing opportunities for environmental education and providing standards against which the effects of future development can be measured. Protected areas in these districts include: the T’Railway, Lloyds River Escarpment,

Critical Elements:

- preservation of biodiversity,
- maintenance of protected area integrity, &
- maintain natural processes and features

Guiding Principles:

- *only allow traditional (hiking, berry picking, hunting etc.) activities, educational activities and scientific research within protected areas provided it does not compromise the integrity of the reserve,*
- *within identified protected areas, prohibit all forms of new development such as mining activity, hydroelectric projects, agriculture activity, roads, trails, cabins and new structures, &*
- *where forestry operations are within one kilometre of provisional and ecological reserves, wilderness reserves or provincial parks, modified operations may be necessary*

4.2.2.8 Outfitting

Characterization:

An economic impact study conducted in 1995 by the Department of Industry, Trade and Technology suggests that a big game license has a net economic impact of \$6864 or approximately \$7,000. From a study in 2005, one of the planning team members suggested that the economic contributions of this industry to be approximately 45

million. As well, from this 2005 study, it is estimated that there are 1200 direct and 800 indirect people employed within the outfitting industry, An additional \$135 000 is estimated to be realized from fishing. (Bear hunting has not been included in the above figures.) Given 85% of the hunting market originates from the United States, one can assume the above monetary figures are reflections of money entering the province. It should be recognized the outfitting industry provides this revenue to the province annually and has the potential to do so for the foreseeable future. The ability to diversify has positively impacting the viability of outfitting operations. In recent years, a significant number of traditional hunting and fishing facilities have diversified into the non-consumptive areas of the tourism industry. Such activities include but are not limited to: snowmobiling, dog sledding, kayaking, canoeing, nature viewing, hiking, and wildlife photography. Diversification can extend seasons of operation, increase/lengthen employment, and reduce dependency on a single sector of the tourism industry.

Critical Elements:

Accessibility through access roads may lead to increased hunting and fishing pressures on a given area, which can lead to decreased success rates for tourists. This is of particular concern since Newfoundland is often considered the hunting destination of choice due to its high success rates. An increase in access roads tends to lead to increased cottage development, which may have a negative impact on both remoteness and game availability.

Forest harvesting has the potential to impact negatively upon travel corridors, bear denning areas, caribou feeding and calving areas. While clients of big game and fishing outfitters are primarily interested in hunting or fishing experiences, they also show a great respect and admiration for pristine conditions and a healthy looking landscape. The landscape view experienced by clients plays a large role in leaving a lasting impression of the province. Viewscapes become even more important once outfitters begin diversification into non-consumptive tourism activities. With these activities, there is no trophy to bring home and that which is taken away is experienced by the senses (i.e. sights, sounds, smells, etc.).

Guiding Principles:

It is necessary that management areas remain around outfitting camps as agreed upon by the company and individual operators. At times, these areas can be difficult to negotiate due to varying ranges of activity from operator to operator.

- *Where possible, roads and bridges maybe decommissioned after harvesting is completed. This will eliminate potential negative impacts to the hunting area by reducing the possibilities of increased hunting pressure. When roads are in use actively for harvesting purposes, access to hunters should be restricted or limited,*
- *Cottage development should be prohibited in areas adjacent to outfitting operations. This requires more vigorous enforcement of buffer zones, and should be co-ordinated through the crown lands office,*
- *Harvest in the winter whenever possible. Winter roads are less passable in summer and fall and will help to reduce traffic,*
- *Forest operations should be carried out in compliance with existing regulations,*
- *Efforts should be made to ensure that the integrity of the view from outfitter cabins is maintained when conducting forest operations, &*
- *Forest operations should ensure that whatever equipment (lunch shacks, fire shacks, etc...) is brought into an area is removed from the area once harvesting is complete.*

4.2.2.8 Recreation

Characterization:

Many areas throughout these districts have outstanding scenery, interesting topography, and opportunities for viewing wildlife and flora in a natural setting. These elements represent a small list of reasons why these districts are used for recreational purposes. Hiking, skiing, canoeing and snowmobiling are major recreational activities in the area. Non-timber recreational values are expected to play an increasing role in forest management practices.

Many hiking trails, ski trails, snowmobile trails, and excellent hunting and fishing areas highlight some of the recreational opportunities found throughout these districts.

Critical Elements:

Wilderness

Backcountry recreational activities are dependent on the existence of natural wilderness areas. The temporary removal or alteration of this wilderness through forest harvesting practices may result in a decrease in some recreational activities for some period of time.

Accessibility

An increase in forest access roads will increase the amount of accessibility to remote areas. This in turn may increase the amount of traffic in an area (both vehicular and pedestrian) and potentially decrease the value of the experience for many recreational activities. However, forest access is not always negative, built roads are used by various individuals /organizations such as: snowmobile association (groomed trails), hunters, ATV's etc...

Viewscapes

The majority of individuals who are involved in recreational activities are concerned about viewscapes. Many of the recreational activities occur because of a particular viewcape.

Guiding Principles:

To minimize negative ecological effects while ensuring a positive experience, access and levels of recreational activities can be monitored. Public surveys similar to those used by the WNMf in the GEO-Referencing Non-Timber Values project can be used to measure the experiences and the levels of recreation occurring throughout districts 10, 11, 12, & 13.

Wilderness

Forest operations that are necessary near wilderness areas where high concentrations of recreational activities occur, usually goes through stakeholder meetings to prevent potential conflicts.

Limiting Accessibility

Decommissioning of forest access roads could be a possible option when harvesting operations are completed. In sensitive areas & where possible, forest harvesting could be conducted using winter access roads, which create less traffic. The Crown Lands division of the provincial government should implement a complete moratorium on cabin development on newly developed forest access. Cabin development will increase traffic in areas where many recreational activities occur, which may negatively impact those recreational activities.

Viewscape

In areas where high concentrations of recreational activities occur, aesthetic views could be maintained using landscape design techniques where possible when conducting forest

operations.

- *Reforestation of areas with high aesthetic values should occur without delay in returning the site to a forested condition.*

4.2.2.9 Tourism

Characterization:

The tourism industry in Newfoundland and Labrador is based on our natural and cultural resources. Protection of such resources is critical for this industry to grow. The tourism industry in Newfoundland and Labrador has experienced significant growth since 1997. Tourism has been contributing between \$580 million and \$700 million annually to the provincial economy. Government tax revenue from tourism in 1998 was estimated to be \$105 million. The worldwide growth of tourism at rate of 41%, the national growth of 25% and the provincially growth of 33% indicates tourism is one of Newfoundland and Labrador's opportunities for economic diversification and growth.

There are many excellent tourist destinations throughout Forest Management Districts 10, 11, 12, & 13.

Critical Elements:

- viewscape,
- accessibility,
- wilderness ambiance, &
- remoteness

Guiding Principles:

Communicate with various interested tourism operators throughout these districts to implement strategies for minimizing the visual impact of harvesting operations on the aesthetic values associated with viewscales. If required, the Forest Service, ACCC, local Town Councils, and other relevant groups will get together to examine the viewshed issues where applicable throughout the districts.

As well, throughout each year, the company allows free access of our resource roads for the general public. This access provides an avenue for hunters, berrypickers, hikers, etc... to explore nature's resources.

5.0 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. It is recognized there are many other by-products of value to society as a whole, and in particular, to the people who live and work in these forest management districts. The participation of the general public was recognized as an integral part of the planning process, as was consulting with other government agencies and groups. Abitibi-Consolidated Company of Canada, conducted public meetings to discuss the management of the forest ecosystem for Districts 10, 11, 12, & 13, with the goal of developing and preparing a 5-year operating plan. A list of participants can be found Appendix 4.

The activities that occurred during the development of this plan was as follows:

- (1) Held public meetings in Grand Falls / Windsor with various interested stakeholders to form a planning team, which built upon the previous team developed at the last planning period.
- (2) Held meetings with the planning team to discuss the identification of timber and non-timber values. This involved a development of goals and objectives with an adaptive management strategy.
- (3) Incorporate, where possible, the requests of the general public, interest groups and government agencies into the plan.
- (4) Draft plan prepared and made available for planning team review.
- (5) Incorporate, where possible, the concerns expressed at those public meetings into the final management plan. This plan is then submitted to respective government agencies for approval. The minutes of those public meetings and stakeholder group meetings, as well as correspondence with other government agencies and interested groups, are available upon request.

This planning team group was formed in 1998 and its members have been involved in previous five-year plan developments, a twenty-year strategic plan, and the company's ISO & CSA certification initiatives. This group represents a variety of interested stakeholders from government to non-government individuals / organizations. The company and this planning team openly accept new members who express interest in forest management planning.

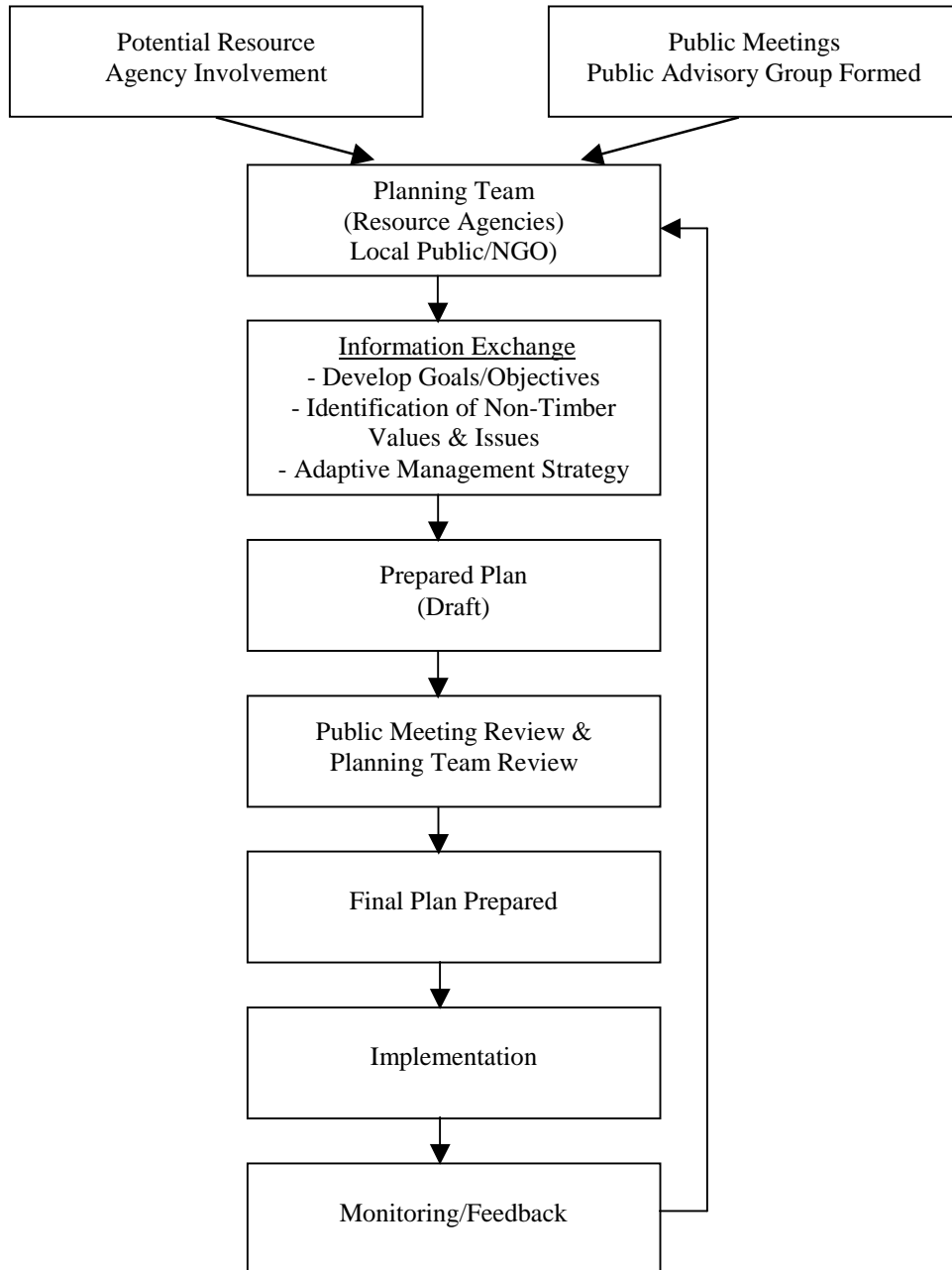


Figure 12. Public Participation Process

5.1 ITEMS DISCUSSED AT PUBIC PLANNING PROCESS

There were many items discussed during the whole public planning process for the development of a new five-year operating plan. However, some of the highlighted topics during this process include:

- 1.) With respect to removal of watercrossings, DFO would like to be notified of major Bridge removal plans. This would provide DFO with an opportunity to visit and discuss restoration details with the contractor while the equipment is in place.

Resolution: ACCC will notify DFO in central of any proposed major bridge or large culvert removals in advance of work actually being completed.

- 2.) In the areas of hunting lodges (ie: an 8 Km radial zone), the Department of Tourism suggested ACCC implement Ontario's Forest Harvesting Prescription.

Resolution: ACCC will work with the Wildlife Division and Department of Natural Resources to ensure sufficient habitat remains across the landscape for various wildlife species. Unless implemented with research from the Newfoundland Wildlife Division, the Guidelines that work in Ontario may not necessarily imply success in Newfoundland. In addition, a "blanket approach" for operating around lodges will not work. Past experiences have shown that various outfitters have their own independent needs and requirements. Therefore, with the aim of minimizing negative impacts to both ACCC and Registered Outfitters, ACCC will work with a respective outfitter on an individual basis when proposing operations within the general vicinity of a primary hunting lodge.

6.0 MANGEMENT OBJECTIVES AND STRATEGIES

6.1 HARVESTING

This operating plan covers the period January 1st, 2008 to December 31st, 2012. There are 3, 511, 674 m³ proposed for harvest during this planning period. This volume will be harvested using the traditional short wood harvesting systems. The proposed commercial hardwood operations are outlined on a topo map in appendix 3. Over the planning period, ACCC will ensure the maximum sustainable harvest for each Forest Management District will not be exceeded over the five-year period.

Forest access roads will be constructed to access mature and overmature forest stands. There are approximately 199 kilometres of road construction planned for Forest Management Districts 10, 11, 12, & 13 (ref. Table 7). These roads will be located to minimize the damage to the environment and, where possible, avoid environmentally sensitive areas. The company will allow free access of resource roads to the general public.

6.2 ALLOCATION OF WOOD SUPPLY

A new wood supply analysis was implemented in 2006 for the planning period 2006-2010. The Annual Allowable Harvest on Abitibi-Consolidated limits is: 84,300; 174,000; 206,300 & 41,500 m³ within Forest Management Districts 10, 11, 12, & 13 respectively.

Table 5 outlines ACCC's projected harvest levels for the period 2008-2012. As well, Appendix 1 provides a description of the harvesting areas and the associated maps for Forest Management Districts 10, 11, 12, & 13.

**Table 5 Summary of Scheduled Harvest
January 1st, 2008 to December 31st, 2012**

Operating Area Number	Operating Area Name	Volume (M³)
<i>FOREST MANAGEMENT DISTRICT 10</i>		
ACCC-10-01	Askel Lake West	7,800
ACCC-10-02	Trout Lake West	13,500
ACCC-10-03	Long Pond West	20,100
ACCC-10-04	Long Pond West 1	33,000
ACCC-10-05	Barren Pond East	40,200
ACCC-10-06	Rocky Pond	87,200
ACCC-10-07	Seal Bay River East	24,700
ACCC-10-08	Rocky Brook North	4,800
ACCC-10-09	Crooked Bog	4,200
ACCC-10-10	Otter Pond	67,700
ACCC-10-11	Middleton West	32,800
ACCC-10-12	Otter Pond North	21,500

ACCC-10-13	Long Pond	27,500
ACCC-10-14	North Twin	44,200
ACCC-10-15	South Twin	14,300
ACCC-10-16	South Twin 1	2,900
ACCC-10-17	Badger West	7,100
ACCC-10-18	Badger Northeast	16,900
ACCC-10-19	Badger Southeast	10,400
ACCC-10-20	Peace Brook West	11,400
ACCC-10-21	Peace Pond	38,200
ACCC-10-22	Hodges East	5,000
<i>FOREST MANAGEMENT DISTRICT 11</i>		
ACCC-11-01	North Great Rattling	66,900
ACCC-11-02	South Great Rattling	12,300
ACCC-11-03	Beaver Pond	16,400
ACCC-11-04	Paradise Lake 1	25,000
ACCC-11-05	Paradise Lake 2	3,300
ACCC-11-06	Kennedy's Pond	17,000
ACCC-11-07	Nugent's Pond 1	25,800
ACCC-11-08	Luffs Pond 1	78,400
ACCC-11-09	Luffs Pond 2	61,700
ACCC-11-10	Great Rattling West	25,700
ACCC-11-11	Luffs Pond 3	13,200
ACCC-11-12	Nugent's Pond 2	82,300
ACCC-11-13	Budgell's Pond	48,700
ACCC-11-14	Island Pond	26,300
ACCC-11-15	Hynes Lake	162,400
ACCC-11-16	Cannings Lake	115,000
ACCC-11-17	Rushy Pond	34,600
ACCC-11-18	Great Rattling West 2	18,300
ACCC-11-19	Peters Pond	71,100
ACCC-11-20	20 Mile	2,300
ACCC-11-21	Tote Lake	9,800
ACCC-11-22	Arthurs Lake	7,300
ACCC-11-23	Sunday Pond Road	98,000
ACCC-11-24	Miguel Lake	181,200
ACCC-11-25	South Side Road Upgrade	N/A
ACCC-11-26	Miguel West	7,000
ACCC-11-27	Sepepet Block 1	25,300
ACCC-11-28	Sepepet Block 2	22,600
ACCC-11-29	Trappers	17,000
ACCC-11-30	Patchy Pond	18,500
ACCC-11-31	Noel Paul	3,000
ACCC-11-32	Enfor Area	5,600
ACCC-11-33	Golden Gullies	1,000
ACCC-11-34	Mill Pond	20,000

ACCC-11-35	Sandy Lake	23,400
ACCC-11-36	Pistol 1	5,000
ACCC-11-37	Pistol 2	5,900
ACCC-11-38	Seacat Pond	2,800
<i>FOREST MANAGEMENT DISTRICT 12</i>		
ACCC-12-01	Fry's Ridge	43,483
ACCC-12-02	Election Pond West	23,045
ACCC-12-03	Cooper's Pond	56,349
ACCC-12-04	Cooper's Pond Southwest	47,980
ACCC-12-05	Southwest Bottom	16,658
ACCC-12-06	Little Red Indian East	4,951
ACCC-12-07	Red Indian West	3,983
ACCC-12-08	Hardwoods	6,237
ACCC-12-09	Purchase Road	17,123
ACCC-12-10	Valley Brook East	13,673
ACCC-12-11	Valley Brook West	17,458
ACCC-12-12	Warfords West	11,532
ACCC-12-13	Warfords East	11,121
ACCC-12-14	Buchans Tower	21,000
ACCC-12-15	Wiley's East	95,966
ACCC-12-16	Clemantine Lake Southeast	38,546
ACCC-12-17	Skidder Brook East	31,968
ACCC-12-18	Clench Brook	28,605
ACCC-12-19	Skidder Pond East	24,109
ACCC-12-20	Skidder Brook South	13,089
ACCC-12-21	Skidder Brook West	28,332
ACCC-12-22	Denny's Pond	44,831
ACCC-12-23	Denny's Pond North	61,732
ACCC-12-24	Denny's Pond Northwest	21,829
ACCC-12-25	Victoria River East	51,655
ACCC-12-26	Harpoon Brook North	27,404
ACCC-12-27	Wiley's Transmission Line	11,221
ACCC-12-28	Harpoon Brook East	4,000
ACCC-12-29	Denny's Pond Southeast	53,765
ACCC-12-30	Denny's Pond South	9,392
ACCC-12-31	No.5 Steady East	34,273
ACCC-12-32	Kelly's Pond Northeast	58,194
ACCC-12-33	Storms Brook West	6,638
ACCC-12-34	Carter Brook West	66,167
ACCC-12-35	Carter Lake East	24,764
ACCC-12-36	Carter Lake South	12,229
ACCC-12-37	Carter Lake South 1	25,950
ACCC-12-38	Portage Pond West	22,926
ACCC-12-39	Greenwood Pond East	9,145
ACCC-12-40	Spencers Pond	19,770

ACCC-12-41	Greenwood Pond South	20,242
ACCC-12-42	Rogerson Lake	60,217
ACCC-12-43	Lake Douglas	3,622
ACCC-12-44	Otter Pond	31,480
ACCC-12-45	Lake Ambrose West	26,243
ACCC-12-46	Herman's Lake	20,200
ACCC-12-47	Michaels Brook West	39,667
ACCC-12-48	Skidder Brook	23,800
ACCC-12-49	Wileys	24,200
ACCC-12-50	Election Pond South	16,200
ACCC-12-51	Patricks Pond	13,000
ACCC-12-52	Grindstone	10,000
ACCC-12-53	Coopers Pond	2,000
ACCC-12-54	303 Pond	20,000
ACCC-12-55	Badger Northwest	40,800
<i>FOREST MANAGEMENT DISTRICT 13</i>		
ACCC-13-01	Hospital Pond	20,390
ACCC-13-02	Hospital Pond Northwest	27,376
ACCC-13-03	Hospital Pond North	34,352
ACCC-13-04	Wilding Lake West	28,293
ACCC-13-05	Wilding Lake Northwest	32,999

6.3 SILVICULTURE

Regeneration in Forest Management Districts 10- 13 is primarily by natural means as the harvested areas regenerate primarily to black spruce and balsam fir. All harvested areas will be evaluated for potential silviculture prescriptions and implemented as required. The anticipated Silviculture practices will include: Pre-Commercial Thinning, Site preparation and Planting. Generally, both Site Preparation and Planting will follow the harvest schedule (ie: scheduled harvested areas will be assessed for stocking standards). However, a list of the potential Pre-Commercial Thinning areas can be found in Table 6, and the maps can be viewed in appendix 2. With the development of Regeneration Stocking Standards and Regeneration Assessment Procedures for Nfld. & Labrador, all recently harvested areas will be evaluated for potential silviculture activities and implemented as needed.

Table 6
Summary of Scheduled Silviculture Activities Forest Management Districts 10-13
January 1st, 2008 to December 31st, 2012

District	Operating Area #	Operating Area Name	Type of Treatment	Scheduled Area (Ha's)
10	ACCC-S10-01	Nanny Bag 1	PCT	600
	ACCC-S10-02	Nanny Bag 2	PCT	330
	ACCC-S10-03	Rocky Brook 1	PCT	50
	ACCC-S10-04	Rocky Brook 2	PCT	600
	ACCC-S10-05	Rocky Brook 3	PCT	150
	ACCC-S10-06	Powderhorn 1	PCT	150
	ACCC-S10-07	Powderhorn 2	PCT	100
12	ACCC-S12-01	Lake Bond Alt	PCT	250
	ACCC-S12-02	Election Pond	PCT	120
	ACCC-S12-03	Sutherlands 1	PCT	230
	ACCC-S12-04	Sutherlands 2	PCT	300
	ACCC-S12-05	Costigan Lake 1	PCT	300
	ACCC-S12-06	Costigan Lake 2	PCT	150
13	ACCC-S13-01	Portage Lake 1	PCT	200
	ACCC-S13-02	Portage Lake 2	PCT	200
	ACCC-S13-03	Portage Lake 3	PCT	200
	ACCC-S13-04	Southwest Lake 1	PCT	200
	ACCC-S13-05	Southwest Lake 2	PCT	200

6.4 RESOURCE ACCESS ROADS AND BRIDGES

There is a total of approximately 78.3 & 120.8 Km's of primary and secondary forest access road construction proposed in this planning period. A summary of this activity can be found in Table 7 and can be seen on the enclosed operating area maps. Those roads and bridges are necessary to access stands that have been classified as dead or damaged due to insects or wind and to access mature/overmature stands. Those accessed stands will then be harvested.

It is recognized by Abitibi-Consolidated personnel that road and bridge construction activities have the potential of doing damage to the ecosystem if proper procedures are not followed. Realizing the importance of this, Abitibi-Consolidated has developed dedicated standard operating procedures (SOP's) that encompass all water crossing

activities. These SOP's are communicated to employees with operational responsibility by means of training seminars and are re-evaluated by internal inspections 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 Navigable Waters Protection Agency. Certificate of Approvals for respective water crossings stipulate additional associated guidelines and mitigative measures to 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. However, the company will not commit to maintaining access roads where no further harvesting or silviculture activity will take place for the foreseeable future.

Table7
Summary of Forest Access Road Construction for
Forest Management Districts 10 - 13
(January 1st, 2008 to December 31st, 2012)

<i>DISTRICT</i>	<i>Proposed Area #</i>	<i>Scheduled "B" Roads</i>	<i>Scheduled "C" Roads</i>	<i>Scheduled Existing Road Upgrade</i>	<i>Identified Watercrossings (Bridge / Culvert)</i>
10	ACCC-10-05		10.3		
	ACCC-10-13			10.1	
	ACCC-10-14			3.7	
	ACCC-10-15			7.0	
	ACCC-10-16			2.6	
11	ACCC-11-01		2.2	13.8	3
	ACCC-11-02		2.5	4.4	
	ACCC-11-03			6.0	3
	ACCC-11-08	5.2			1
	ACCC-11-09	4.5			2
	ACCC-11-10	3.2			1
	ACCC-11-15	5.8	3.0		3
	ACCC-11-16	5.3	5.0		1
	ACCC-11-21		1.0		
	ACCC-11-22		1.0		
	ACCC-11-23		1.5	9.6	
	ACCC-11-24		9.0		
	ACCC-11-25			11.0	8
	ACCC-11-27		8.1		6
	ACCC-11-28		6.4		2
ACCC-11-30		2.8			
ACCC-11-35		5.1			
12	ACCC-12-01		4.6		1
	ACCC-12-02		2.5		2
	ACCC-12-15	8.5	9.9		4
	ACCC-12-16		4.5		
	ACCC-12-17	2.0	2.2		1
	ACCC-12-18	2.2	4.7		
	ACCC-12-19	1.5	7.8		6
	ACCC-12-20	2.1			
	ACCC-12-21	1.0	1.0		2
	ACCC-12-22			7.4	1
	ACCC-12-26		2.5		1
	ACCC-12-29	3.5	3.7		1
ACCC-12-30		2.0			

	ACCC-12-31		2.8		
	ACCC-12-32	5.0	4.1		4
	ACCC-12-34	12.2			
	ACCC-12-38	1.5			2
	ACCC-12-39	1.5		1.2	2
	ACCC-12-40		0.5		1
	ACCC-12-41	1.2			
	ACCC-12-42		2.9		3
	ACCC-12-45		2.0		
	ACCC-12-47		5.2		2
	ACCC-12-48	1.8			
13	ACCC-13-01	2.0			
	ACCC-13-02	1.5			
	ACCC-13-03	3.5			
	ACCC-13-04	3.3			

6.5 PROTECTED WATER SUPPLY AREAS

There are no planned harvesting activities located within protected watershed areas. However, if such activity occurs within protected watershed areas, the Dept. of Environment's Water Resources Division reviews all forestry activities. Prior to actual harvesting, logging contractors and crews are briefed on all required regulations. The guidelines outlined in the Environmental Protection Plan for Timber Resource Management are strictly enforced.

Abitibi-Consolidated is actively involved with watershed management and is a member of the various Watershed Committees. These groups meet regularly to review all issues relating to watershed development. It is through this proactive approach that harvesting/silviculture activities can be reviewed prior to implementation.

6.6 PROTECTION

The company recognizes the need of ensuring adequate protection for the resources that are within FMD's 10, 11, 12, & 13. 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. In addition, 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 mill in Grand Falls.

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.

In recent years, there has been minimal forest insect activity for Forest Management Districts 10-13. Thus, from an insect and disease perspective, the forest in this district is 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 8. 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.

Mgmt Dist.	Location	Type of Equipment	Quantity
		Mark 3 Pumps	1
		Suction Hose	1
		Hose	2,000 feet
		Gas Can	1
		Tool Box	1
		Axes	4
		Shovels	4
		Water Cans	4

6.7 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.

6.8 SURVEYS

Operational surveys are 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 conducted 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. Older blown down areas for example 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.

6.9 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. Designated Cabin development areas throughout the zone include: Joes Lake, Tumbler Lake, Nugents Pond, French Pond, Joe Glodes, Lake Ambrose, Selbys Pond, Quinn Lake, Portage Lake & Peter Strides Lake.

6.10 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, any high stumps may 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).

Commercial fuelwood operators will also be required to obtain a permit to harvest. This permit, when approved by the Department of Natural Resources, will identify the area where the cutting will be permitted, the amount and species to be cut, and the royalty rate to be paid. Areas that have been transferred to crown such as the New Bay Burn and Badger Burn areas in FMD's 10 & 12 respectively are included on the overview maps for ACCC's potential commercial areas. However, such areas transferred to crown are the responsibility of crown (Ref: Appendix 3 for map illustrating potential commercial fuelwood area)

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

7.0 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 (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.

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APPENDIX 1

Operating Area Descriptions & Maps

APPENDIX 2

Silviculture Areas

APPENDIX 3

Commercial Fuelwood Areas

APPENDIX 4

Planning Team Members