FOREST MANAGEMENT DISTRICT 7

FIVE YEAR OPERATING PLAN

APRIL 1, 2003 - MARCH 31, 2008

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DEPARTMENT OF FOREST RESOURCES & AGRIFOODS

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1.0 Introduction

This Five-Year Operating Plan provides details of all Forest Management Activities proposed on Crown timber limits in Forest Management District 7 and covers the period April 1, 2003 to March 31, 2008.

Forest Management District 7, also referred to as the Bay d'Espoir District, is one of eighteen Forest Management Districts contained on the island portion of the province. Located on the south coast, the District lies approximately halfway between St. John's and Port aux Basque. The northern boundary extends to Berry Hill Pond on the Bay d'Espoir Highway and to Great Burnt Lake and Meelpaeg Lake in the northwest section of the District (Figure 1).Unlike most districts to the north and west, District 7 has no industrial tenure. With the exception of small domestic plots, all land is held by the Crown.

The District held an initial public meeting to outline and discuss the approach that would be used in the preparation of forest management plans and the concept of adaptive ecosystem management. A planning team(i.e. the District 7 Ecosystem Management Planning Team) was established with a mandate to provide a forum for local user groups such as domestic cutters, outfitters, cabin owners and the public to address potential conflicts and resolve them at the local level. The overall goal was to develop a strategy document and an operational forest management plan, 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. (Adaptive Ecosystem Management) Maps outlining the planning boundaries were presented to those at the meetings and forwarded to various groups on the mailing list. Also contact was made with several government departments that have a resource values mandate.

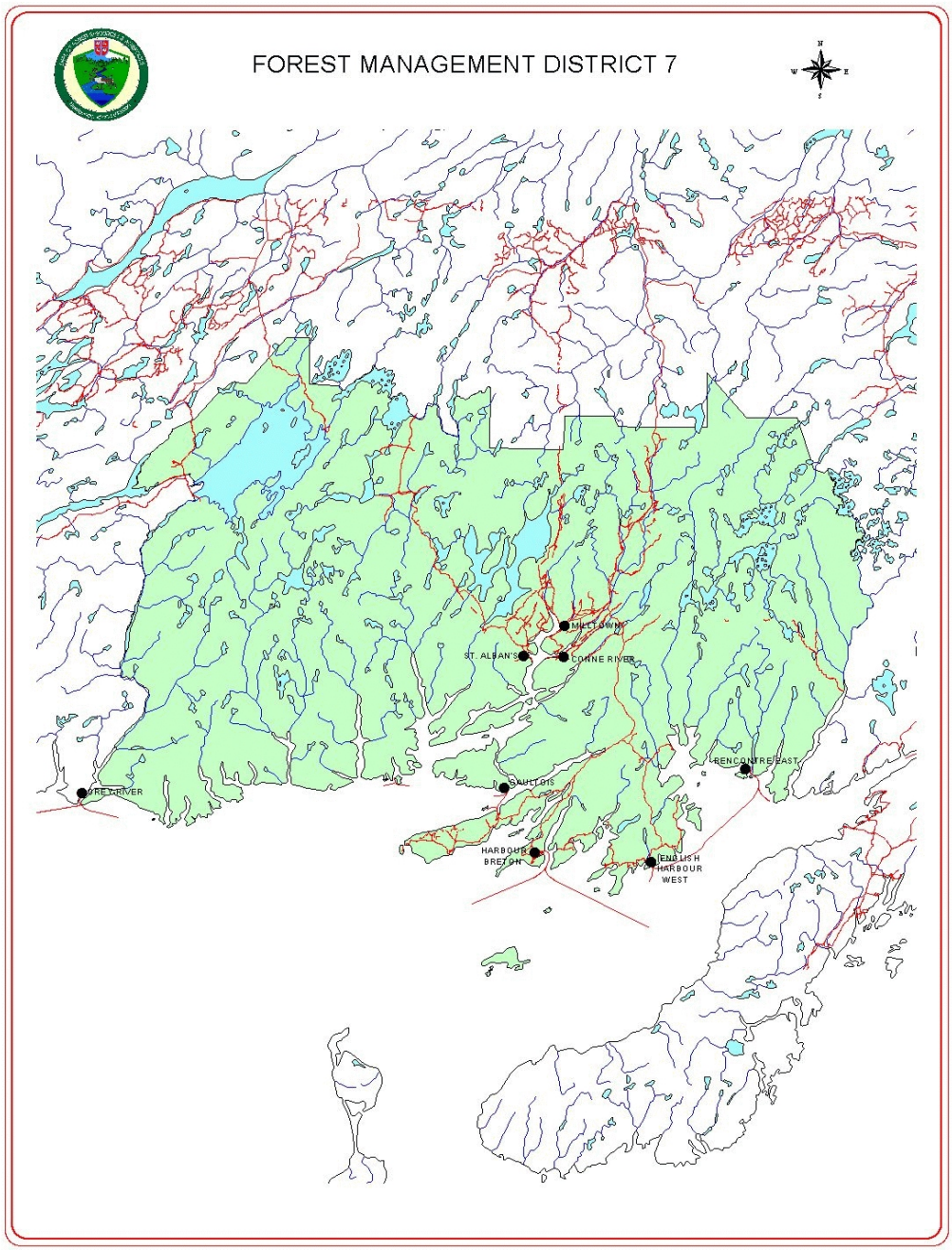
The Five Year Operating Plan outlines in a broad scope, the areas proposed for harvest, silviculture, road building and forest protection whereas the Annual Operating Plan which is developed from the five year plan outlines specific details of those proposed activities. The plan describes activities to measure indicators developed in the Forest Ecosystem Strategy Document and as well, protection, education and monitoring are discussed.
The Canadian Council of Forestry Ministers Criteria and Indicators is used to accomplish this role.

The allocation of the wood supply follows guidelines established in the Newfoundland Manuel of Forest Management Plan Requirements. The priority of allocation is to harvest merchantable damaged forest stands first, merchantable over-mature forest stands second and merchantable mature forest stands third. Harvest levels are to be maintained within the limits of the annual allowable cuts over the five year period. Any disturbed sites will be surveyed, according to established procedures, to determine the regeneration status of the areas and to take appropriate action for those sites which do not meet the criteria for stocking.

Domestic cutting blocks are distributed throughout the district. These blocks have been reviewed and appropriate changes made to reflect concerns or values that were not highlighted in previous planning processes.

Figure 1

Overview Map of Forest Management District 7



A silviculture program based upon the 2000 Wood Supply Analysis, of 100 hectares of pre-commercial thinning and 50 hectares of planting is proposed for implementation in 2003-08. In addition, incremental funding projects have been developed in anticipation of additional funds becoming available to the District. The main concentration of the incremental program would be to implement a stand reclamation, site preparation and planting program with the intent to increase the productivity of the existing land base.

The Resource Roads Program is developed primarily in association with the commercial harvesting areas and to a lesser extend in domestic areas. The larger commercial operators are encouraged to construct their own road system or extraction roads. An incentive of royalty reductions is the basic means of promoting this issue.

The protection of the forest from fire, insect and disease will continue as a priority within the district along with environmental protection. The Environmental Protection Guidelines for Ecologically Based Forest Management(Appendix 10) will be the catalyst for this endeavor. Compliance activities will continue to be an important factor in the management of our forest resource.

The education of all stakeholders in ecosystem management will be promoted through communication with the staff, commercial operators and the public. This will assist management objectives designed to promote sustainability of the resources.

Monitoring of proposed activities and actions will occur through a monitoring committee composed of interested stakeholder representatives on the planning team. The committee will review progress of the plan and plan adherence to stated goals.

2.0 Summary of Past Activities: 1998 - 2003

The major management programs carried out by the Crown in District 7 from 1998 to 2003 will be summarized and discussed in this section.

2.1 Harvesting

The harvesting that occurred over the past five year period credited against the AAC is presented in Table 1. The commercial volume harvested is in line with annual allowable cuts(30,000 m^3 from1996 to 2000 and 23,500 m^3 from 2001 to 2005) and has been relatively stable over the past five years. The amount of sawlog material, however, has increased over this time period. This is a result of the greater utilization of softwood species through the redirection of raw material to the sawlog industry that previously went to the pulp and paper industry. In the past, it was difficult at times for operators to sell pulpwood from this district. The main factor was the distance to market. Today, however, this situation no longer exists because of a healthy competition for any fiber produced.

Table 1

Summary of Harvesting and AAC's for District 7

Year	AAC (m^3)	Softwood Harvest (m^3)
1998/99	30000	25243
1999/00	30000	23580
2000/01	30000	21545
2001/02	23500	23515
2002/03	23500	Not Available

The production of the commercial sawmills in the district has decreased due to many of the sawlogs that are produced being transported out of the district to larger sawmills located throughout the island portion of the province. This trend reduces the amount of employment available to the district residents from the sawmilling industry. Table 2 provides information on the sawmill production in the District.

Table 2

Summary of Sawmill Production for District 7

SAWMILL PRODUCTION	
YEAR	**FBM**
1994-1995	1065541
1995-1996	1030746
1996-1997	890988
1997-1998	1056688
1998-1999	997346
1999-2000	748528
2000-2001	611485
2001-2002	514283

Domestic harvesting was from a combination of hardwood, Class I and Class III softwood, isolated stands, and salvage timber sources. Table 3 identifies the permits issued in the District and the volumes associated with them.

Table 3

Summary of Permits Issued and Association Volumes

Commercial Permits				Domestic Permits	
Year	Number of Permits	Fuelwood/ Pulpwood (M^3 Solid)	Sawlogs (FBM)	Number of Permits	Fuelwood (M^3 Solid)
1994-95	110	3084	905129	932	17475
1995-96	119	3494	1025141	966	13886
1996-97	132	3085	935413	845	12419
1997-98	138	3223	1100401	824	12229
1998-99	133	6845	1940265	737	11976
1999-00	108	7595	1761767	694	11278
2000-01	70	5725	1502215	735	11944
2001-02	79	5903	1062382	750	12188

2.2 Silviculture

The Silviculture program in District 7 during the past five years is presented in Table 4. The amount of area treated each year has ranged from a high of 420 hectares to a low of 207 hectares, and has averaged 290 hectares per year. Specific treatments have resulted in the following breakdown: 302 hectares of planting; 909 hectares of precommercial thinning; 55 hectares of plantation maintenance and 80 hectares of hardwood management; 55 hectares of PCT maintenance, 38 hectares of commercial thinning and 11 hectares of jack pine pruning. Other treatments that assist in maintaining biodiversity of forest ecosystems in Central Newfoundland included white pine pruning in the Upper Salmon area and maintenance of yellow birch stands. The target silviculture levels over the past two wood supply analyses has remained the same at 100 hectares of precommercial thinning and 50 hectares of planting. This would translate into a requirement of 500 hectares of precommercial thinning and 250 hectares of planting over the previous five years. Table 4 indicates that these targets were exceeded especially with regard to precommercial thinning.

Table 4

Summary of Silviculture Treatments 1998-2002

Summary of Silviculture Treatments for the Period 1998-2002 Forest Management District #7							
	Treatment (ha)						
Year	**P.C.T.**	**Planting**	**Hardwood Management**	**P.C.T. Maintenance**	**Commercial Thinning**	**Plantation Maintenance**	**jP Pruning**
1998-99	267.37	76.79	20.26	55.4	---	---	---
1999-00	333.14	---	20.58	---	6.64	---	--
2000-01	111.48	89.87	29.79	---	18.33	---	---
2001-02	121.29	40.31	9.06	---	13.51	29.5	---
2002-03	76.01	95.36	---	---	---	25.94	10.65
TOTAL	**909.29**	**302.33**	**79.69**	**55.4**	**38.48**	**55.44**	**10.65**

2.3 Road Construction

The location of primary forest resource roads construction during the previous five year period is presented in Table 5. A total of 14.65 kilometers of road was constructed and 6.5 kilometers of upgrading accomplished. The total capital roads program goes through the public tendering process. Operator built roads which were basically spur /secondary roads were constructed by several operators and were of D Class standards. There were also 5 bridges constructed. These were located on the Forebay (2), Thunderbolt, White Hills, and Bear Lake Resource Roads.

Maintenance funding was very limited during the past five years. Many of the resource roads in the district require considerable maintenance and upgrading. Regrowth of roadside alders which creates a dangerous situation by impairing visibility, the degradation of the road surfacing material, and the lack of regular maintenance are major concerns of the district. Commercial operators and the public, at times, complain about the condition of the resource roads.

Table 5

Summary of Resource Roads & Bridges 1998-2003

Summary of Resource Roads and Bridges 1998 to 2003					
Year	**Road Name**	**Primary Road #**	**Map #**	**Road Class and Length**	**Bridge**
1998-1999	Forebay Tangle Pond Thunderbolt	C-21c C127d C127d	1M13 12A1 12A1	Upgrading-C 6.5 km C 1.6 km C-2 1.5 km	16ft.; 26ft. 10 ft.
1999-2000	White Hills	C128b	12A1	C-2 3.0 km	14 ft.
2000-2001	Old Pauls Pond N.	C128b	12A1	C 2.0 km	Nil
2001-2002	Bear Lake	C-107b	12A1	C-2 3.50 km	18 ft.
2002-2003	Bear Lake	C-107b	12A1	C-2 3.05 km	Nil

2.4 Education

District staff are involved in various public information sectors of the Department. Presentations were given to various groups, agencies and associations including schools, municipalities and local service districts, church groups, and special interest groups. All requests are accommodated and in some cases may result in travel along the south coast to the isolated communities in the District. Also, staff have been involved with the youth in Cubs, Guides and Scouts in such activities as dig days (where trees are planted) and outings for various badges.

There are a multitude of topics that are covered including careers in forestry and wildlife, wildlife and forest management, environmental concerns and general topics on forest ecosystem management. Any fire department or development agency that request information or training in a particular mandate of the Department is accommodated by the staff. This would include such things as the fire regulations, silviculture standards and harvesting safety.

2.5 Surveys and Research

The District staff were available to assist and carried out surveys related to the management of the District's ecosystems.

Big Game

The staff assisted the Inland Fish and Wildlife Division of the Department of Tourism, Culture & Recreation in aerial surveys of moose and caribou in management areas associated with the area administered by the district.

Fish

Assistance was provided to a neighbouring district in completing creel surveys. The purpose of the surveys is to determine the amount of fishing activity that occurs in our ponds, lakes and streams and provides data to evaluate the sustainability of the resource.

Bald Eagle

The South Coast of the Island has a very high population of bald eagles. There were patrols along the coast to observe these birds and check on the nesting sites.

Erioderma

Erioderma pedicellatum is a species of lichen(boreal felt lichen) that has been placed on the Committee On the Status of Endangered Wildlife in Canada (COSEWIC) species at risk list in the last year. It has been categorized as a species of special concern because of characteristics that make it particularly sensitive to human activities or natural events. Over the past five years there was substantial time and effort involved in locating sites in the district where the boreal felt lichen exists. The staff from District 1 (Avalon) visited District 7 on several occasions and identified several sites where substantial numbers of the boreal felt lichen were present. The information gathered as a result of these surveys were recorded and used in the planning process.

Harvesting Utilization

The District staff completed a number of utilization surveys after being retrained by the Forest Engineering and Industry Services Division of the Department in utilization surveys necessary to improve AAC predictions. These surveys provide information to determine the logging losses due to high stumps, large tops, unharvested stands of merchantable timber, and merchantable volume left on cutovers. The surveys that were conducted in District 7 resulted in a utilization deduction of 10.8 % used in the last AAC calculations .

Regeneration, Growth and Yield

The Forest Ecosystem Management Division of the Department of Forest Resources & Agrifoods has permanent sample plots located throughout the province. These plots are reassessed on a regular basis to accumulate information or growth and yield of natural and managed stands. District staff were involved and assisted this group when the work was in progress. This work helps to improve the predictions of yield used in the wood supply analysis.

Tree Improvement

The plus tree selection program of the Silviculture and Research Division of the Department was active in the past five (5) years. There were black spruce, white spruce, white pine and eastern larch selected as plus trees and scions collected for the seed and clonal orchard at the Wooddale Provincial Tree Nursery.

These selections will produce seed and seedlings that will have superior qualities when compared to natural stands.

Road Construction

The district staff over the past five years have continued to assess the resource roads constructed by individual operators. Guidelines were developed by the Forest Engineering and Industry Services Division of the Department and were used in construction work completed in the District.

Silviculture

The past five years have seen a substantial increase in work on species that are of less importance to the pulp & paper and the sawmilling industry. There were several locations where pruning of white pine has occurred to try and reduce the loss of white pine that is being experienced in the province because of the white pine blister rust, a fungus that infects the needles of white pine and eventually kills the tree. The spores of the rust cycle from their alternate host shrub, currants, to the white pine. The seedling to sapling stage of white pine development is the most critical period as these stages aid in the spread rate of the blister rust by providing spore infection points that are close to the ground in lower branch whorls. Pruning reduces the potential for these trees to become infected with this serious disease.

Another species, yellow birch, has been targeted for work to try and promote a value added product for the district. Thinning of yellow birch will be monitored to determine the best approach to follow in managing these stands. Also, there has been work carried out in the Jack pine stands that are located along the Bay d'Espoir Highway. Spacing and pruning has been completed over the five year period and will be assessed over time to evaluate effects of these treatments.

2.6 Forest Ecosystem Protection

A very important part of forest ecosystem protection in the District is the fire suppression program of the Department. A total of 23 fires were actioned by fire prevention staff of District 7 from 1998 to 2002. Table 6 presents a summary of these fire occurrences for the district and indicates that 11.3 hectares of productive forest land was destroyed. This is a very low loss when one reviews the history of fires over the past twenty years.

Table 6

Summary of Forest Fire Activities 1998-2003

Summary of Forest Fire Activities 1998 to 2003			
Year	Number of Fires	Area Burnt (Hectares)	
		Productive	Non Productive
1998-1999	7	3.2	1.1
1999-2000	2	2	0
2000-2001	5	0	0
2001-2002	1	0	0
2002-2003	8	6.1	5.4

The success of the fire protection program can be attributed to many reasons, including: the continuous training and upgrading of our fire protection staff, improved equipment, and improved response times to action fires. The new air tanker fleet, a standby system during the fire season and an improved communication system have been major factors.

The public also played an important part in these efforts. The education of the public through various newspaper ads and promotional material has made the public aware of the importance of our forest resource. Notification of staff of fire starts and infractions of the forest fire regulations by the public have helped tremendously over the past plan period.

Environmental considerations have also played a role within District 7. Staff have reported infraction of Environmental Regulations and have assisted in cleaning up many of our old sawmill sites and harvesting areas. These issues will continue to be important in the future. Also, a cleanup of several abandoned wildlife/forestry cabin sites was completed by district staff. Removal of fuel drums and other debris was accomplished and proper disposal initiated. All woods roads and harvesting sites are inspected on a regular basis to ensure they are kept free of abandoned equipment and debris.

3.0 Forest Ecosystem Management - Initiatives For 2003 -2008

The scope of this five year plan for District 7 focuses on the health of our forest ecosystems and, as such, involves complex systems and processes that we may never fully understand. Although no widely accepted definition exists, the concept that good forest health is conditional on a forest ecosystem that sustains complexity or diversity while still providing for human needs, is inherently accepted (Burnside, et., at 1995).

Notwithstanding these facts, these ecosystems which have evolved since the last ice age, provide our society with a wide range of values that we all desire and want to maintain. Among the more important valued by the District 7 Forest Ecosystem Management Planning Team are commercial and domestic timber, employment, biodiversity, clean water and fish habitat, wildlife habitat, tourism and recreation, personal use products, and intrinsic values. Because we are manipulating these ecosystems through a series of disturbance regimes, we are obligated to develop a plan of human interventions that will not adversely affect the functionality and long term stability of the forest ecosystems.

This plan attempts to define forest ecosystem health in District 7 in terms of the sustainability of the framework of values developed in the Strategy Document for the District. It is assumed that sustaining forest values by measuring indicators which are correlated with these values and making adaptive corrections where necessary, will ultimately maintain the health of our forest ecosystems, thereby sustaining them.

Our forest ecosystems provide many benefits and the goal of sustaining healthy forest ecosystems will also support these values. Recognizing trends in the sustainability of these values will indicate where we are in terms of achieving ecosystem sustainability. In order to assess trends in these values, benchmarks or historical levels of measurable indicators must be established. The following subsections are an attempt to relate proposed on-the-ground forest ecosystem management activities to the values described in the District 7 Strategy Document. Selected, measurable indicators for each value are presented that will allow for the establishment of benchmarks as well as future evaluation of the proposed ecosystem management activities in sustaining the values.

3.1. Maintenance & Enhancement of Forest Ecosystem Condition and Productivity

Maintaining the productive capacity of our forest ecosystem is fundamental to their health. One of the best indications of a forest ecosystem's production capacity is it's Mean Annual Increment (MAI). Mean Annual Increment refers to the average annual growth of forest stands. Tracking tree growth can show how the site quality and site health is being affected.

The Department's Forest Inventory Section has completed work on the major working groups and measurements have occurred on silviculture plots. It is necessary for the district to review the information available and to establish a process of analyzing the information generated.

Also important is the regenerative status of harvested land. The Department has been completing regeneration surveys and predictions on the amount of land that has not sufficiently regenerated. Planting programs are aimed at reducing the land base lost to non-regenerating areas.

In order to maintain the reproductive capacity of forest ecosystems as well as habitat and wild species, permanent landscape changes must be inventoried. This inventory will assist the district in ensuring that the amount of land lost is balanced by regenerating non-sufficiently restocked stands. Regeneration of these areas ensures sufficient habitat is maintained. Surveys will be conducted to ensure harvested/disturbed areas are sufficiently regenerated.

3.2 Biodiversity

Managing for biodiversity is central to the concept of holistic management. All life forms have some value whether we as a society realize them or not. Managing for biodiversity will result in management of all life forms (Hunter, 1990). This in turn will result in greater ecosystem stability, as stability is increased with diversity (Elton, 1958). In order to determine if management activities are achieving biodiversity goals in our forest ecosystems, we must gauge our results in terms of known and measurable indicators. Biodiversity is generally viewed under two components; Species Diversity and Habitat Diversity.

3.2.1 Species Diversity-Maintenance of Native and Valued Species

Provincially, the range of white pine in the province is shrinking due to past harvesting practices and infection from blister rust, therefore, local protection is required. Other valued species in the province include spruce, fir, birch, big game animals, small game animals, furbearers, waterfowl, other avian species, and salmonids. While the majority of these species are not in any present danger, Newfoundlanders and Labradorians in general highly value these components of our ecosystems. All these species require management and protection to ensure their sustained use. During this planning period, documentation of management activities will be maintained as an account of the district's work with these species.

<u>White Pine</u>

The location of white pine stands within the district are concentrated in the Upper Salmon area. On a provincial scale, white pine is being protected on two fronts. Firstly, gene preservation gardens for these species and a clonal orchard for white pine have been developed at Wooddale Provincial Tree Nursery. At some point, the goal is to produce seed from these gardens/orchards to grow pine seedlings of native origin. Secondly, the Department has adopted a policy of no cutting of pine by non- traditional users and a phase out of cutting by traditional commercial users. In District 7, protection of these species will be strengthened by public education, no-cut conditions on permits (both domestic and commercial) and subsequent enforcement, and implementation of silviculture treatments designed to merge pine back into the landscape. This will involve the mixture planting of 2-5% of pine in plantations at the landscape level(when local gene stock is available), as well as the development of site specific pine stands.

During this plan period district staff will update the known range of white pine and continue to enhance the local gene pool of planted pine. This will involve the collection of white pine scions for the clonal orchard at Wooddale when required. Also, staff will implement stand level silviculture prescriptions such as pruning of immature white pine to reduce the infection rate of the blister rust.

Spruce & Fir

Black and white spruce and balsam fir are the main sawlog and pulpwood species in the province. As well, spruce and fir dominated stands comprise over 80 % of the available forested habitat in the district. These species will be managed for maximum sustainable harvest levels though the harvesting and silvicultural strategies referred to in the Forest Ecosystem Strategy Document for District 7. Protection and long term sustainability of these species will be achieved through strict adherence to AAC's and refinements to current AAC's as the land base changes.

White Birch and Yellow Birch

Traditionally, white birch and yellow birch have been valued species for domestic fuelwood. Today, however, they are emerging as important value added species in the sawmilling and manufacturing industries of the province. Hardwoods benefit the cycling of nutrients, the structure of forest soils, and can help in the reduction of insect infestations and in the decrease in spread rate of forest fires (Perry, 1994). There is now a shift to manage these species on a maximum sustainable basis as with spruce and fir. White and yellow birch dominated stands comprise only 5 % of the forested land base in the district.

With respect to hardwood management, the Department is currently working toward developing sustainable harvest levels for white birch. Paramount in sustainability, is the regenerative ability of a species. To ensure sustainability of birch in District 7, silvicultural prescriptions designed to favour hardwood regeneration on harvested sites that were previously dominated by white birch will be investigated. Where possible, a hardwood component will be left in all thinned areas as part of the strategy. This will ensure a birch component is maintained on the landscape, increase the diversity of both flora and fauna in thinned stands, and maintain natural processes within thinned stands.

Over this planning period district staff, in conjunction with the Forest Management Division, will support the development of an AAC for white birch, and strategies for the maintenance of this species on the landscape in historical proportions. This will require the development of silviculture strategies to favour birch regeneration. District staff will also survey domestic users of this resource to determine the total drain on this species.

Big Game

Big game animal populations on the Island are managed by controlling their annual harvest through the hunter licence quota system. Each year, the Department of Tourism, Culture and Recreation determines the population density of these animals on a big game management unit basis, and sets licence quotas to meet management objectives of optimum sustainable harvests. Periodically, to check estimates of these populations, an aerial census is conducted.

District staff will assist the Inland Fish and Wildlife Division of the Department of Tourism, Culture and Recreation in completing any census work as requested. Population trends as defined by the Inland Fish and Wildlife Division for all big game management units within the district will

be utilized as relative indicators of species diversity and ultimately ecosystem health within the district. Protection of big game animals will be maintained through the protection of their habitat and regular patrols by Conservation Officers to ensure illegal hunting activities are curtailed.

Song Birds

The distribution of songbird species in a forest ecosystem is widely considered to be a relative indicator of ecosystem health. Many songbird species are distinct to specific habitats (Whitaker et al., 1997), therefore the presence, absence, or health of a specific songbird population, can indicate the health of its corresponding habitat. Songbirds are also the natural predators of our native lepidoptera pests (ie. looper and budworm) and help to keep these populations in check. Consequently, their value cannot be underestimated. The relative abundance of songbirds in our forest ecosystems at different times during the year and the maintenance of a tracking record for songbirds will help to indicate the overall quantity and quality of habitat in the district.

In this planning period, district staff will attempt to determine the extent of songbirds in the district. Local information will have to be researched and an inventory established. Education of staff will be paramount in this undertaking. Information that already exists, for example Christmas bird counts, songbird census through the Forest Inventory Section of this Department, songbird census by Development Associations for hiking trails of the region, and other local research information such as Dr. William Montevecchi's checklist of birds of insular Newfoundland, will be investigated. Establishment of benchmarks for the relative abundance of songbirds can then be developed as historical levels to indicate species diversity as well as the sustainability of our forest ecosystems and their processes.

Other Avian Species

Other valued avian species include ptarmigan, grouse, migratory birds and raptors. The former include important game species, while the latter (ie. raptors) occupy higher trophic levels in the food chain. Higher level trophic feeders are considered important indicators of ecosystem health as they are sensitive to environmental stress.

Currently, there is limited local information available with regard to the status of populations of these species on a district basis. Population trends, however, for these species as defined by the Inland Fish and Wildlife Division and the Canadian Wildlife Service are available on a regional basis. During this planning period, district staff in conjunction with these agencies and local interest groups will attempt to establish relative abundance benchmarks for raptors in the district. Sightings of raptors by district staff and the public will be documented, and if possible, their associated critical habitat (eg. nesting sites) will be mapped. These initiatives will be supplemented with existing information from the Inland Fish and Wildlife Division. Over time, population trends of these species can serve to indicate both the maintenance of species diversity in the district, as well as the habitat quality and availability associated with these species.

Protection for raptors is legislated under the Wildlife Act and Regulations, and further through the Environmental Protection Guidelines for Ecologically Based Forest Resource Management. Under these guidelines, no forestry operations are to occur within 800 meters of a bald eagle or osprey nest during the nesting period, and not within 200 meters outside the nesting season. These guidelines are attached as terms and conditions to commercial operator permits. The locations of known bald eagle and osprey nests will be identified on cutting maps, and harvesters will be informed of their locations by district staff. Regular operator checks and routine patrols of domestic cutting areas by staff will ensure compliance with these guidelines.

Furbearers

Recognizing the fact that furbearing predator populations (eg. lynx, fox, coyote, mink, otter) fluctuate widely due to prey availability, and that the harvest of these and other furbearers (eg. beaver, muskrat) in general fluctuate with market demand, it is still beneficial to maintain trapping records of these species. The Inland Fish and Wildlife Division currently tracks the annual harvest of furbearers from trapper returns. This information can be utilized at the district level as a relative abundance indicator. Due to their varied habitat requirements the relative abundance of these furbearers can indicate species diversity as well as overall ecosystem diversity. Protection for these species is again provided through habitat protection and a maintained enforcement effort with respect to the Wildlife Act and the Wildlife and Trapping Regulations.

Salmonids

The population of salmon and trout in our rivers and ponds can serve as an excellent indicator of water quality. Where available from Department of Fisheries and Oceans and the Inland Fish and Wildlife Division, data on salmon populations in rivers and on trout populations in ponds within the district, will be utilized by district staff to maintain an historical record of these species, and by inference water quality.

Protection of these species currently exists under the Federal Fisheries Act and the Newfoundland Fisheries Regulations which describe the licences required, bag limits, and seasons. Furthermore, this protection is strengthened at times locally through partnerships with community-based watershed management groups. Designated protected public water supply areas (PPWSA's) also provide protection for these species through existing environmental regulations that apply to these areas (ie. increased buffers, usually 150 meters on intake ponds, 75 meters on main river stems, 50 meters on major tributaries and minimum 30 meter buffer regulated in the remainder of the watershed). District conservation officers will participate in enforcement patrol efforts in conjunction with federal fisheries officers to promote conservation of the salmonid stocks.

During the past five year period a partnership between the Federal Department of Fisheries and Oceans, the Western Newfoundland Model Forest Working Group, and Department of Forest Resources and Agrifoods resulted in the completion of a digital stream crossing classification inventory for the province. Data is available for District 7 and will be examined by district staff with the intent of determining impacts to salmonid habitat from the existing forest access road network. Based on an impact assessment of the results, district staff will investigate corrective

action to rehabilitate any impacted fish habitat from forest access road crossings on Crown land. Also, updating of the base information will be completed on an annual basis.

COSEWIC Species

It is important to document changes in the number of known forest-dependant species that have a COSEWIC designation as an indicator of ecosystem health. These species have been classified as being of special concern, threatened, or endangered. Because of their tenuous existence, changes in the relative abundance of these species can indicate the overall health of our forest ecosystems.

One of the more significant COESWIC forest dependant wildlife species in the province, pine marten, *Martes americana atrata*, is currently listed as endangered. While this species in all likelihood has been extirpated from the district from around the early part of the 20th century, a marten recovery effort is underway in eastern Newfoundland with the epicentre of reintroduction at Terra Nova National Park. It is anticipated that this introduction will eventually result in marten again becoming a resident of the district.
The first reported pine marten trapped in recent years in District 7 was accidentally taken in a fox snare on November 16,2002 at Twillick Brook and is in all probability an animal associated with this introduction. District staff will complete surveys over the plan period to determine the extent of the population in the district. This effort will be coordinated in conjunction with the recovery group and the Inland Fish and Wildlife Division.

Similarly, one of the more significant forest dependant lichen species, the Boreal Felt Lichen, *Erioderma pedicellatum* (Hue) P.M.Jorg., is currently listed as of special concern by COSEWIC. This species is typically associated with old growth balsam fir forests in the Avalon Forest and Maritime Barrens Ecoregions. The Maritime Barrens Ecoregion forms a major part of this District with locations of the Boreal Felt Lichen documented at Little River, Salt Pit/ Twin Brooks Road and the Bay du Nord Wilderness Area. A report entitled “The Boreal Felt Lichen in Newfoundland” by Alexander Robertson in 1998 gives details on these locations. Also District 1 staff ,who have worked on identification of this species for several years, visited the Bay d’Espoir area and trained conservation officers in identification of the species and located additional lichen. A systematic survey of the District will be completed in this planning period Guidelines that have been established in the above noted publication to protect known sites will be followed when harvesting operations occur in proximity to these sites. Research into the appropriate buffers required to protect this species is necessary and is being considered by the Inland Fish and Wildlife Division and this Department.

3.2.2 Habitat Diversity

3.2.2.1 Natural Areas

Natural areas are store houses of natural diversity that exists in a wild and pristine state. They serve as ecological bench marks indicating the natural succession of forest ecosystems and also preserve provincially significant representative and special natural features and outstanding recreational environments.

The Province of Newfoundland and Labrador's Natural Areas Systems Plan recommends that a minimum of 12% of the province's entire land base be protected. Currently, only 4.2% of the Islands' ecosystems have protected status. This District has a significant proportion of it protected by the Bay du Nord Wilderness Reserve and the Middle Ridge Wildlife Reserve. The Bay du Nord Wilderness Reserve in District 7 accounts for 44.8% or 129,648 hectares of the total reserve and protects representative areas of three ecoregions; the Maritime Barrens, the Western Newfoundland and the Central Newfoundland Forest.
There is presently one area under consideration for protection located at Devil's Bay (East of Francois).This area will represent the Maritime Barrens /South Coast Barrens Subregion. It will protect the barren cliffs and forest valleys of the south coast. The highest parts of this area contain arctic-alpine vegetation while the sheltered valleys protect more southerly species like yellow birch.

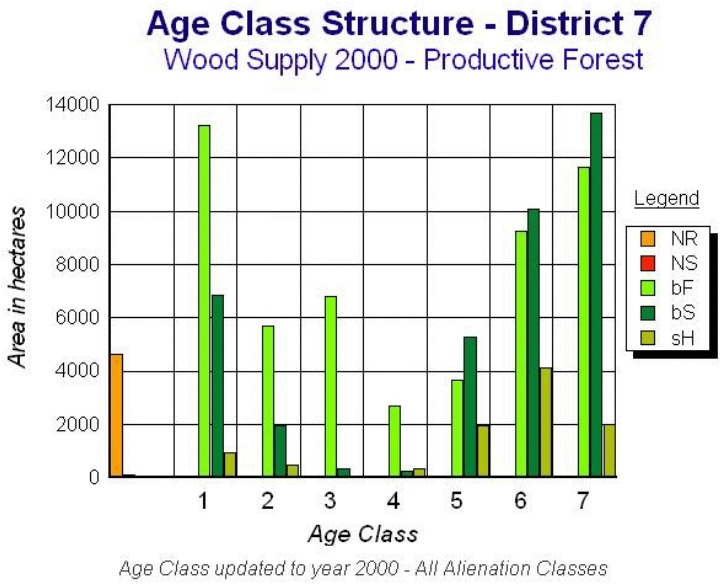
A provincial park that was located in the district at Little River was removed from the provincial parks system. A licence to occupy was issued to establish a nature park in the area , however, it only involved 58 hectares of land, resulting in limited protection for this former park The remaining area is considered Crown Land with restrictions placed on the uses that will be accepted by the Crown Lands Division of the Department of Government Services and Lands.

3.2.2.2 Wildlife Habitat

In order to conserve and protect wildlife habitat it's parameters must be understood and locations must be known. Many of the habitat requirements for our wildlife species are known to some degree, and therefore some of the critical habitat in certain districts has been located and mapped. Species/habitat information will be developed as new mapping becomes available and as well liaison with the Inland Fish and Wildlife Division of the Department of Tourism, Culture and Recreation to identifying critical habitat will be initiated. This will provide the basis to develop the successional stages important to wildlife species. Knowing the critical habitat and ranges of specific fauna, as well as their successional preferences, will facilitate the development of future harvest plans designed to minimize negative impacts.

In addition to the specific areas previously described, it is assumed that a diversity of unique features can be protected by maintaining a balance of all forest age classes on the landscape. Managing forest landscapes for diversity involves managing successional patterns, as different stages of succession contain different species, and some stages contain more species than others (Hunter, 1990).

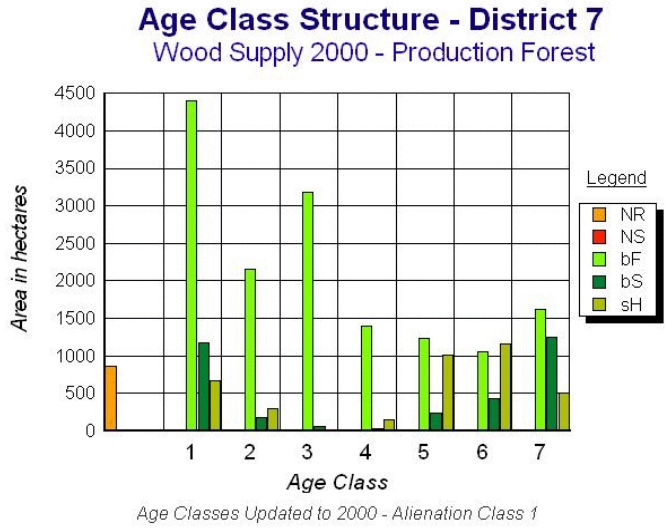
Figure 2(a)



At present in District 7, the age class structure of all productive forests , which consists of seven distinct age classes (Figure 2(a)), is unbalanced with the least amount of area in the 4th Age Class (ie. 60 -80 years). By ensuring that as little as possible of this age class is harvested in the upcoming five year period, the current percentage will be maintained. Many of the stands in this District are in the overmature age class. This is because many forest stands are isolated or are within protected areas. Therefore, balancing of the age class structure in the long term over the entire district is not an option.

However, balancing of the production forest is a strategy that will be considered. Figure 2(b) presents the production forest age class structure which is more balanced than the productive forest.

Figure 2(b)



From a wildlife habitat perspective, old growth stands are inherently important. This stage of forest development can contribute greatly to biodiversity as it supports a different mix of flora and fauna then associated younger stages. Old growth contains many structural and functional features such as water reservoirs, course woody debris and a steady state of nutrient flow and volume conditions, that are absent in younger stages. Many wildlife species therefore require old growth as an integral part of their overall habitat.
In order to maintain the functionality of forest ecosystems at the landscape level, there must exist a bridging between disturbed and undisturbed areas to allow for the flow of animals. This bridging can be developed from a variety of sources, and therefore maintain ecosystem connectivity at the landscape level. Such sources include riparian areas, scrub and bog forest, regenerating forest, hardwood forest, and planned travel corridors and leave areas of mature/over mature forest.

Landscape connectivity throughout a district is enhanced by the existence of special management areas where harvesting will occur on a modified basis such as protected water supply areas etc. Riparian areas also protect rich vegetation adjacent to water bodies that are important to numerous species. They act as natural filters and thermoregulators for water habitats for all aquatic life (Allen, 1991, and Scruton et al. 1998). They also provide important winter habitat for such species as moose and black bear. The geographic location of these areas will serve as connective fingers on the landscape. Strict adherence to required riparian buffer widths as outlined in section 2.1 of the Environmental Protection Guidelines for Ecologically Based Forest Resource Management by all operators will be enforced by District staff. These include a 20 meter, treed buffer on all water bodies that are identified on 1:50,000 topographic maps, and around water bodies greater than 1.0 meters in width that do not appear on these maps.
District 7 staff will plan for connectivity at the landscape level on an annual basis when planning

harvesting activities over the next five years. In some areas connectivity of wildlife habitat may be augmented through the application of partial harvests of stands. Maintaining a portion of the stand results in the retention of vertical structure and the reduction of open areas within a clearcut.

3.3 Timber

3.3.1 Commercial Timber

To sustain the value of commercial timber, District staff will implement the "Oldest First" strategy during this planning period and will also implement a silviculture program consisting of a minimum of 50 ha/yr of planting and 100 ha/yr of precommercial thinning. These silviculture levels for District 7, which were determined in the 2000 Wood Supply Analysis, are required to maintain the Class 1 Maximum Sustainable Harvest (MSH) level of 23,500 m^3. District staff will assess regeneration success in current harvest blocks and ensure stocking levels are adequate to maintain these levels.

An updated analysis of Provincial wood supplies is scheduled for completion by the end of 2005. New levels of silvicultural treatments will have to be examined and applied at the conclusion of that analysis. Accordingly, District staff will ensure that MSH's are not exceeded in this 5 year period, and conduct utilization surveys and a system of operator checks to reduce volumes left on site after harvesting below the current factor of 11%. If the value of commercial timber is to be sustained, more efficient harvesting methods and better end use of species will have to be employed by industry.

3.3.2 Domestic Timber

The ability to harvest forest products for personal use (ie. firewood, logs, construction timber) is considered to be a right of heritage by most residents of the Province. In order for this highly valued resource to be sustained, limitations have to placed on its use to discourage indiscriminate cutting and over exploitation. At present there are 26 domestic harvesting areas available for public use within the management jurisdiction of the Bay d'Espoir Office. These areas, indicated on an overview map in Appendix 8, and on individual 1:50,000 scale topographic maps in Appendix 9, have mainly been developed in close proximity to existing communities. Protection of domestic timber supplies will involve checks of harvesters by conservation officers to ensure adherence to regulations and permit terms and conditions, as well as the determination of the drain on the supply of this resource. Regulation requires that only one permit per household may be issued per cutting year, and that domestic timber may not be sold, traded or bartered. In all domestic areas permits are issued for a maximum of 23 m^3. Domestic cutters may utilize any 2 of the 26 areas to harvest the specified volume. These areas will be discussed in detail in Section 5.0 - Five Year Operations.

During the five year planning period, District staff will survey domestic harvesters to determine the volume of softwood and hardwood harvested from each of the domestic areas. The results of this survey will be used to indicate the drain on these species groups and individual areas, which can then be assessed against available supplies. Where possible, domestic harvesters will be

directed to utilize salvage timber (eg. fire and insect killed timber) for fuelwood to reduce the domestic demand on green timber. In domestic areas containing viable commercial stands small commercial permits will be issued. This has been the past practice in the district and ensures that commercial stands are utilized for maximum benefit. The majority of these permits are less than 1000 cubic meters.

3.3.3 Timber and Employment

The importance of forest ecosystems as employment generators for the region cannot be understated. As an integral component of ecosystems, communities and hence jobs need to be sustained. This is the underlying principle of sustainable development. Maintaining historical levels of employment from our forest ecosystems can be viewed as an indicator of their stability. Where statistics are available, District staff will document and track the employment in all sectors dependant on forest ecosystems in the region from Statistics Canada data. As well, the revenue generated from forest ecosystems, as determined by Statistics Canada, will be tracked as it relates to the province's gross domestic product (GDP).

3.4 Soil and Water

The soil and water attributes of ecosystems are essential to maintaining life and therefore must be safeguarded. These attributes are highly dependant on one another, as eroded soil will impair water quality. Suspended solids or turbidity, decreases water clarity and can inhibit photosynthesis by aquatic plant life, thereby decreasing food production. Excessive suspended solids which eventually settle can fill and thus smother fish spawning and rearing habitat (Clark et al., 1998).

The largest potential impact to create soil erosion and impair water quality is forest road construction. To a lesser extent, forest harvesting and silviculture operations can have a potential for impacts if these activities are carried out without due care. Several mitigative measures have been developed by this Department in conjunction with the Department of Environment to minimize the effects of forestry activities on the landscape. Firstly, the Environmental Protection Guidelines for Ecologically Based Forest Resource Management outline environmentally sound procedures for harvesting, road construction and silviculture. These guidelines ,provided in Appendix 10, are currently attached as terms and conditions to commercial operating permits. Regular checks by district staff will ensure strict adherence to these guidelines. Secondly, this Department has developed operational guidelines for road building. Currently it is district policy for operators who build their own roads, to sign a contract agreeing to adhere to these operational guidelines. The main focus of these road building guidelines is water/erosion/siltation control. Mitigative measures including legislation and higher stumpage fees are now in place to deal with cases of non-compliance with these contracts and the Forestry Act. Thirdly, this Department is required to apply to the Department of Environment for a Certificate of Approval to conduct silviculture and road building activities, and allow Crown commercial operators and domestic cutters to harvest within protected public water supply areas. The terms and conditions of the Certificate of Approval are automatically applied to the appropriate operating permits for the watershed concerned. These protection measures will be maintained in this planning period, and compliance ensured through routine patrols by Conservation Officers.

There are 10 protected public water supply areas and/or their associated watersheds in District 7. There are no commercial harvesting operations scheduled in the water supplies. There is, however, one protected public water supply area in which silviculture operations are proposed for implementation in this plan. Approval to operate in any protected areas over the next five years will be requested annually from the Water Resources Division of the Department of Environment and the appropriate municipalities. The terms and conditions of approval will be applied to all Crown permits and contracts and strictly enforced by district staff.

In addition to commercial operations, certificates of approval are required for domestic cutters to harvest within protected public water supply areas. There are 3 protected public water supply areas in which domestic cutting areas are proposed for this planning period. Domestic area numbers 19 and 26 outline these protected areas and are presented in Appendix 9. Approval to operate in these areas will be requested every five years from the Water Resources Division of the Department of Environment and the appropriate municipalities. The corresponding conditions for cutting within each respective protected public water supply area, will be attached to each domestic permit if ultimately approved.

In wet areas with a greater potential for site degradation and erosion, commercial operators in the district will be directed, where possible, to employ winter harvesting and road building techniques. This will be less intrusive to the sites concerned and minimize impacts. District staff will work with commercial operators who build roads, ensuring that only the minimum amount required to facilitate harvesting is built. This will reduce the future road density in the district, and ultimately, the impacts of road building.

As an important step in protecting the district's sensitive water resources, their locations must be mapped. The District has in the last year obtained a geographical information system(GIS) whereby information can be produced and updated related to public water supplies, salmon rivers, special habitat areas, waterfowl staging areas, cottage development areas etc. All of these have increased buffer zones to protect both soil and water. These maps will be updated on a five-year basis unless significant changes occur. Staff will undertake to track any hydrometric data available from other resource agencies (eg. Department of Environment, Department of Fisheries and Oceans and Environment Canada) for sites within the district, to maintain a record of water quality. These records will aid in determining if our water resources are being adequately protected.

Although there are no formalized watershed management groups in the district, Departmental staff have made contact with several communities during the development of this plan to obtain their views with respect to activities within protected water supplies. These relationships will be maintained in an effort to continue to narrow the knowledge gaps that exist with forest harvesting in and around watersheds. In any documented highly sensitive salmonid habitat areas (eg. spawning beds), District staff will work in conjunction with Department of Fisheries and Oceans to increase buffer widths beyond the regulated acceptable minimums.

3.5 Recreation and Tourism

Throughout the planning process participants noted the importance of recreation and tourism values and the requirement to pay particular attention to these values during harvesting operations. Mapping of values will be completed during this planning period and information entered into a geographical information system. This will improve the planning process and ensure future plans have the most recent information to develop integrated plans. Values of concern include the following: adventure tourism sites, archeological sites, cabin development areas, marine anchorages and tours, heritage sites, river and stream corridors, geological sites , outfitting lodges, scenic tours, parks and natural areas, hiking and snowmobile trails.

During the planning period any new tourism and recreation values will be documented and mapped. Where possible, District staff will support groups involved in the development of tourism/recreation opportunities to encourage the development of a greater diversity of revenue sources from our forest ecosystems. There are a number of tourism/recreation activities which can indicate stability in our ecosystems, as their levels are directly linked.

3.5.1 Hunting

Moose and caribou are highly regarded as the most important game species in the province by both the hunting public and the outfitting industry with black bear hunting, gaining in popularity in recent years. The combined revenue to the province from the hunting of these species is approximately $28 million annually. This includes both resident licence sales and those allotted to the outfitting industry. The buffer requirements specified in the Environmental Protection Guidelines for Ecologically Based Forest Management will be strictly adhered to with regard to forest operations adjacent to camps/lodges.

As a relative indicator of the sustainability of hunting as a tourism/recreation value, district staff in conjunction with the Inland Fish and Wildlife Division will track the historical levels of the number of hunting licences sold annually by type for the big game management areas in the district.

3.5.2 Recreational Fishing

Recreational fishing for salmon and trout is an activity that is widely revered by many Newfoundlanders and Labradorians. The local participation and economic value of salmon and trout angling in the province was documented by the Department of Fisheries and Oceans in 1995. It was determined that 123,000 residents participated in this activity, spending as much as $110 million on fishing trips and major purchases attributable to fishing activity (eg. boats, cabins etc.). Salmon and trout angling are also important tourism draws for the province which bring in approximately $2 million annually through the outfitting industry. In the majority of cases ,the same outfitting lodges involved in big game are the ones involved in recreational fishing. Operations are not expected to impact on any camp/lodge in this planning period. Continuous review of all camps/lodges will ensure that forest activities do not negatively impact their activities.

As a relative indicator of the sustainability of fishing as a tourism/recreation value, District staff in conjunction with Department of Fisheries and Oceans will track the historical levels of the number of rod days per year for the district's salmon rivers.

3.5.3 Cabin/cottage Development

Cottage and cottage life play a very important role in the lives of the people associated with District 7. Cabin/cottage development within the district is wide spread, playing a significant role in the recreational enjoyment of the outdoors for many residents. There are cottage development areas controlled by the Lands Division of the Department of Government Services and Lands that exist within the district. There are presently 22 areas where cottage lots have been designated, developed, or have significant demand or interest. Some of the more familiar developments are at Conne Pond, Twillick Brook, Long Pond, and Salmonier Cove. To protect this value, District staff will regulate a minimum 50 metre no cut buffer on all cabin development areas and a 30 meter buffer on all legal cabins in other areas. As an indicator of the maintenance of the sustainability of this value, District staff will liaison with Crown Lands Division to document and track historical levels of the number of cabin leases maintained within the district.

Cabin/cottage developments within the district have been closely tied to forest access road developments of the past. This has cause for concern from the following perspectives; erosion of the productive forest land base available for future sustainability of AAC's (especially the concern for the protection of silviculture treatments), and degradation of the quality of sensitive areas for other values including wildlife habitat and pristine natural environment for tourism (i.e. areas where road decommissioning may be required). To ensure that cabin development does not impact forest resources or other values temporarily impacted by access road development associated with the harvesting of forest resources, district staff will liaison with Crown Lands Division on future cabin developments, to ensure goals are being met with respect to other values.

3.5.4 Sea Scape Recreation

District 7 has a significant coastline that boasts a multitude of small bays, inlets, coves, and fiords. This makes the area an ideal environment for aquatic adventures. Tourist can enjoy sailing, scuba diving , canoeing, sea kayaking, whale watching, and bird watching especially for bald eagles. The largest impact to these values from forestry activities is the potential to lower the quality of the experience through degradation of the aesthetic marine vistas associated with these values. The only sections of the district where harvesting would have to be considered to have some impact on the marine viewscape is associated with domestic harvesting blocks next to the shoreline. These areas will be evaluated to ensure maintenance of viewscape integrity. Where domestic cutting is permitted to provide a supply of fuelwood for recreational cabin owners on the islands and some of the surrounding communities, district staff will review and make changes where necessary to the domestic cutting policy for maintenance of view scape integrity. This will involve the maintenance of a minimum 20 meter shoreline buffer, and investigation of the development of viewscape buffers around sensitive areas. As an indicator of the sustainability of seascape recreation, district staff in conjunction with the Tourism Division, will track the economic input from these industries in the District to the province.

3.5.5 Parks, Natural Areas and Trails

Special places includes habitats that are essential to the well being of significant populations of one or more species (Peterson et al., 1995). Additionally, they include areas that protect intrinsic values such as heritage and pristine environments. There are a number of special places within District 7 which add to their uniqueness and importance to the ecoregions concerned.

3.5.5.1 Parks and Natural Areas

Currently, there are no provincial parks within the district, however, a portion of a former provincial park exists as a nature park while several communities have small municipal parks. Other natural areas existing in the district range from the very large Bay du Nord Wilderness Area to the small viewing sites scattered throughout the District.

Jipujijkuei Kuespen (Little River) Nature Park

Jipujijkuei Kuespen (Little River) Nature Park is a major recreation area in District 7.(58 hectares) It is located on Route 360, 149 kilometers south of Grand Falls-Windsor. This park which was previously associated with the Provincial Park system boasts many of the natural features of the area. There are camp sites, hiking trails, playground and boating facilities, and interpretational information on the Mi'kmaq (Micmac) people of Conne River. The community of Conne River is located 12 kilometers from the park. The forests of the general area are typical of the Maritime Barrens Ecoregion and are important sites with regard to the endangered *Erioderma spp.*(Boreal Felt Lichen).

Bay du Nord Wilderness Reserve

The Bay du Nord Wilderness Reserve was established in 1990 to protect one of the last unspoiled wilderness areas on the Island portion of the province. The long term preservation of this vast inland expanse is guaranteed under the Wilderness and Ecological Reserves Act. It is 2895 km²(289,500 ha.) of rugged country typical of southern Newfoundland with wild rivers, erratic boulders, boreal forests, bogs and fens. District 7 encompasses 129,648 hectares or 44.8 % of this reserve.

Wilderness Reserves are extensive natural areas with minimal human disturbance set aside permanently to ensure protection of these natural values and features. These reserves protect native species of plants and animals, serve as study areas for researchers, educators and guarantee a natural wilderness environment for ourselves and future generations.

The Bay du Nord Wilderness Reserve was created with the goal of preserving the plants, waterways, animals and landscapes of this large, pristine natural area so that Newfoundland and Labrador could continue to enjoy high quality wilderness recreation, including hunting and fishing. The Reserve is of special significance because it protects representative areas of three provincial ecoregions; the Maritime Barrens, the Western Newfoundland and the Central Newfoundland Forest. It is home to the Island's largest population of caribou with an estimated population of

15,000 and one of the province's richest areas of Canada Goose habitat. The diversity of other wildlife add to the Reserve's importance in protecting values of the District.

The heart of the Reserve is the rugged Bay du Nord River. This dramatic 90 kilometer waterway with it's many lakes, steadies and rapids is considered to be the Island's finest remaining wilderness river. It was nominated as a Canadian Heritage River in July, 1992 - a prestigious national distinction that highlights this river's wilderness and recreational values.

Middle Ridge Wildlife Reserve

The Middle Ridge Wildlife Reserve was established under the Wild Life Act and protects wild life habitat for various species. The reserve covers a total area of 60,800 hectares of which 43,891 hectares or 72.2% is located in District 7.

Ecological Reserves

Ecological Reserves provide a sanctuary for unique, rare or endangered plants, animals or natural history artifacts such as fossils. At the present time, there are no ecological reserves defined for District 7.A Protected Areas System Plan is being developed by the Wilderness and Ecological Reserves Council and Parks Division. The completion of this report may increase the protected area in the district. One area under investigation is located at Devil's Bay (East of Francois)This area will represent the Maritime Barrens / South Coast Barrens Subregion .It will protect the barren cliffs and forest valleys of the south coast. The highest parts of this area contain arctic-alpine vegetation, while the sheltered valleys protect southerly species like yellow birch.

These areas are important in preserving various types of natural ecosystems. Cooperation and discussion with groups and organizations are important to continue the process of establishing reserves. For example, the District has cooperated with the Canadian Heritage Rivers Project to protect the lower section of the Bay du Nord River System. Harvesting blocks have been revisited to remove a section near the outflow of the river into the ocean. Staff will complete patrols of this area for compliance with this condition and to check on illegal activity. Also the proposed reserve at Devil's Bay has been excluded from domestic harvesting Area 30.

The greatest impact to both parks and natural areas from forestry operations is the visual impact to their surrounding aesthetics. Additionally, pristine natural areas can be degraded with long term access road development. No Crown commercial operations are planned during this five year period in the vicinity of either the Bay du Nord Wilderness Reserve, the Middle Ridge Wildlife Reserve, or Little River Nature Park. For municipal parks, district staff will liaison with the municipalities and agencies concerned to determine if adequate protection from forestry impacts are currently in place.

3.5.5.2 Trails

There are recreational trails that protect heritage and provide for expanded recreational opportunities within District 7. These trails are traditional walking links between the communities, lead to vantage points to scenic ocean vistas, and in season, whale and bird watching and at one time provided vital links between smaller outport communities and larger centers for the movement of provisions and trade, medical attention, hunting etc., when sea routes were not useable. Today, they provide recreational opportunities for hiking, skiing, viewing of exceptional landscapes, and nature walks, as well as preserving our heritage of isolated fishing and logging communities.

Some of the more important hiking trails that provide excellent opportunities to view nature and wildlife species include those at Harbour Breton, Hermitage, Belleoram, Gaultois, Milltown and English Harbour West. Several winter-season recreational trails add to the variety of outdoor activities available in the district, that make it an important year round tourism environment.

As with parks and natural areas, the greatest impact to scenic recreational trails from forestry operations is the visual impact to their surrounding aesthetics. District 7 staff have cooperated with community groups in the development and protection of some of these trails. "No-Cut" buffers of varying widths and specific "NO Cut" areas (eg. scenic hillside view scapes)will be reviewed with appropriate organizations and added to commercial and domestic permits if necessary.

District staff will also liaison with the municipalities, community groups and development associations concerned with the development of other trails, to determine if adequate protection from forestry impacts are currently in place. As indicators of the maintenance of these values, district staff in conjunction with the associated municipalities, local service districts, development associations and Parks Division, will undertake to maintain a record of the number of kilometers of available recreational trails contained within the district.

3.5.6. Intrinsic Values

3.5.6.1. Heritage

Not all values derived from the forest ecosystems are employment and/or revenue generating - nor should they be. The concise Oxford Dictionary defines heritage as “what is or may be inherited”. For present generations of Newfoundlanders and Labradorians, that which currently exists in our forests is what we have inherited. If, as a people, we are not proud of that inheritance we have two choices. We can continue, as we have for decades, along a path of singular resource management, or we can take serious steps to holistic management of ecosystems. By choosing the latter, we who now reside here will, over time, reap the benefits of sustained biodiversity in our forest ecosystems. Furthermore, the heritage that we leave to future generations will, because of our commitment, be greatly improved.

Maintaining a sense of heritage is important in the preservation of the Newfoundland psyche. In order to maintain this value, forest ecosystems must continue to provide for traditional uses and experiences. Some of these, including hunting, fishing, camping, and wood cutting were once the mainstays of life as our forefathers lived off the land and the sea. For all of these, "boiling up" has been a standard traditional activity carried out during any trip in the woods, and it continues to give peace of mind to those involved in the outdoors.

Of significant importance to our heritage is the existence of forests in their historical species components and distribution. For example, inherent to our heritage background were pine-clad hills, immortalized in "The Ode to Newfoundland". Intrinsic values such as these will be protected, and where possible efforts will be made to restore them. The management strategies and activities designed to protect these values were described in preceding subsections of Section 3.

3.5.6.2 Archeological Sites

Sites of archeological significance, such as those located at Furby's Cove, Little Passage, Piccaire, Green Point and Grandy Rocks also add to the maintenance of our heritage. These sites hold the key to our understanding of the native peoples, indigenous to this part of the Island in the past.

During this planning period, district staff will ensure existing buffers designed to protect heritage sites are adhered to, report any evidence of sites of archeological significance as they are discovered, and will account for such sites in the planning of management activities to further conserve our heritage. Additionally, district staff will liaison with the Culture and Heritage Division of the Department of Tourism, Culture and Recreation to determine if adequate protection exists for these and any other sites contained within the district. A review of the domestic cutting policy was completed for the last five year plan and staff determined that very limited forest stands exist in the above noted locations. A 30 meter buffer was recommended by the Culture and Heritage Division, however, it was decided not to reveal the sites on the domestic maps but to carry out patrols in these areas to ensure the protection of the sites. The District in conjunction with the Culture and Heritage Division staff will determine if changes are required to existing domestic cutting boundaries to protect archeological sites.

3.5.6.3 Geological Interest Points

Located throughout the district, there are sites of geological significance which are important to the tourism and recreation industry. These sites illustrate geological features, such as rock types and rock formations that indicate the processes and geologic ancestry of the parent material from which the soils of the district's ecoregions were derived. These Geostops can therefore be considered as important educational sites, and as well points of interest for tourists. The Newfoundland and Labrador " Traveller's Guide to the Geology and Guidebook to Stops of Interest" lists three significant areas in District 7. These are located at Trout Hole Falls (Route 361), Hermitage Bay area (Route 362) and Simmons Brook (Route 362).Any significant sites will be evaluated if operations are planned in close proximity to any strategic location.

3.6 Other Resources

There are at least three other resource based values that can either be impacted by forestry development or conversely, their development can impact sustainable forest development. The former includes agriculture, while the latter includes mining, and energy developments.

3.6.1 Agriculture

The majority of agriculture activity in the Bay d'Espoir area is that of home gardening and small subsistence livestock operations. Limited commercial development is concentrated in and around communities.

The major areas of arable soils and farm properties were designated as an Agriculture Development Area (ADA) in the 1970's, however, the area has not been legislated. This area is delineated on the Provincial Land Use Atlas and is used for planning purposes and is located along Route 361 as you enter the Milltown/Head of Bay d'Espoir area.

Within the (ADA) the majority of arable soils that are suitable for agriculture are also suitable for forestry work. Over the years, there has been considerable cooperation between the Forestry Branch and the Agriculture Branch of the Department of Forest Resources and Agrifoods in resolving issues associated with this particular area. It is recognized that agriculture development is the initial consideration in the ADA and that continued cooperation is required to ensure a viable agriculture presence.

The proposed commercial operations in this plan do not impact existing agricultural developments. In order to maintain this value within District 7, District staff will support the expansion of existing farms in areas where soil resources are favorable. This will involve prior consultation and subsequent approval of all proposed expansions by the Agriculture Division.Also the blueberry industry and the Christmas tree industry are expanding throughout the province. The District will support these initiatives on favourable soils, in areas not currently silviculturally treated or completed during this period. This will involve prior consultation and subsequent approval of all newly proposed developments by the Agriculture Division. Agricultural development has the potential to remove productive hectares from the landbase delineated for sustainable forest development.

3.6.2 Mineral and Energy Development

As with agriculture, both mineral and energy developments have the potential to reduce the productive forest land base. The location of the existing aggregate quarries in the district are available to staff. Should new developments occur during this planning period, district staff will ensure that any merchantable timber associated with these developments is allocated to the existing commercial operators of the district. Furthermore, District staff will monitor ongoing mineral development activity within the district through the Dept. of Mines & Energy website. This will provide an adaptive base for the planning of future forest ecosystem management activities within the district.

Energy development and in particular hydroelectric development is an important issue in District 7. There are major hydroelectric generating stations at Bay d'Espoir (616 MW),the Upper Salmon (84 MW), and the Granite Lake Project (42 MW)which is now under construction. Although in the majority of cases the flooding of areas for hydroelectric development reduces the land base available for forestry purposes , the district is very fortunate in being able to access timber stands that are considerable distance from communities via main roads constructed by Hydro to generating sites and transmission lines.

Energy development derived through the utilization of waste wood bi-products (ie. bark and sawdust from sawmill production)could be beneficial to sustainable ecosystem management. These sawmill waste bi-products piled in large quantities can be a fire hazzard, and as well detract from the aesthetics of the surrounding landscape from a tourism point of view. Should technologies be developed that utilize these waste products, it could virtually eliminate residue piles that exist throughout the district. The district staff will therefore support the development of energy or other products from waste wood bi-products during this planning period.

4.0 Forest Ecosystem Protection

In the Ecosystem Management Initiatives Section, many of the protection functions with respect to maintenance of ecosystem health were discussed. This section will concentrate on the protection of forests for the economical and social benefits derived from them. From this perspective, protection of the forest ecosystems has four basic areas of importance. These include protection of forest ecosystems from wildfire and major insect attacks, compliance by resource users with the acts and regulations designed to protect and conserve the resources of forest ecosystems, and public education. Considering the current precarious wood supply situation in the district and the Province, the industry cannot afford another major loss to the productive landbase. Every reasonable effort must be made by resource users to prevent the occurrence of activities that will negatively impact forest ecosystems. Where unregulated resource use occurs, a strong compliance program will be required to mitigate such activity to ensure the sustained use of our forest ecosystem resources.

4.1 Fire

The forest fire suppression effort in District 7 was very successful during the past five years. Only, 11.3 hectares of productive forest land in District 7 was destroyed by wildfire between 1998 and 2002. None of the fires that occurred during this period were serious, and their combined affect on the forest land base was minimal. The current fire-fighting capability of the District includes a seasonal three man fire crew at the Milltown depot and five permanent conservation officers. The district is supported by the Regional Forest Protection Center at Gander Airport. Two CL-215 water-bombers, a two-person helitack team, a Cessna spotter plane, the provincial fire equipment bank, and the Central Region fire equipment bank are located at this facility. In emergency situations, equipment from the Forest Protection Center is dispatched to the District.

The mobile communications system consists of a transmitter tower located at Gull Lake, a base radio station at the Milltown District office, mobile radios in all vehicles, and portable radios and cellular phones for conservation officers and fire crew.

The Department's public relations program developed in concert with the Newfoundland and Labrador Forest Protection Association, is effective in creating a positive attitude in the general public and private woods contractors toward forest fire safety. Some public relation activities which will continue through this planning period include posting signs along high traffic recreation areas/routes, maintaining a fire hazard sign in a central location, visiting schools and other youth groups to promote fire safety, support of local municipal fire departments in forest fire training, promote safety messages on radio or through other mass-media outlets, and maintain patrols on commercial operations, domestic harvesting and in high-use outdoor recreation areas. The district will also promote increased fire-fighting training for all field staff to improve the proficiency of fire-fighting personnel.

4.2 Insect and Disease

It is not within the mandate of the Regional Services Division/District to carry out actual field programs to combat insect and disease infestations. However, during field patrols, district staff will pay attention to the forest condition, and attempt to detect, as early as possible, any sign of new pest or disease problems. Also, annual assessments will be conducted in silviculture areas. Any problems detected will be communicated to the Forest Engineering and Industry Services Division (Insect Control) in Corner Brook and suitable courses of action will be discussed. Likewise, this information will be exchanged with the Department of Natural Resources-Canada to assist in targeting areas for their annual insect and disease survey. This survey will also be used to identify areas where reconnaissance efforts should be concentrated.

Several large-scale pesticide spray programs were conducted in District 7 during the past five years. The major forest pests were the eastern hemlock looper and the balsam fir sawfly. Any large-scale spray programs carried out in the district during this planning period will follow established guidelines and obtain necessary environmental approvals.

A pest that is also of concern in the District is the balsam woolly adelgid. This insect is evident in locations throughout the district. This situation will be monitored to determine the impacts on tree growth, and if necessary design management strategies to address this concern.

4.3 Compliance

The district will continue to enforce the Forestry and Wildlife Acts and associated regulations on Crown Land thereby continuing control over cutting, hunting, forest fire, and environmental concerns. Particular attention will be paid to the issues of overcutting, poor utilization, and poaching with regard to wood resources. The plan is to strictly enforce the allowable cuts, ensure compliance with designated cutting areas, and protect the more valuable forest sites and young stands for future commercial use. Incidences of illegal fire activity and non-compliance of the Forest Fire Regulations by operators on forested land and the public in general will not be

tolerated. Important wildlife compliance concerns, which will be focussed on during this five year period, are poaching of big game, small game and migratory birds. The environmental compliance concerns for enforcement efforts are: (1) operations within protected public water supply areas, (2) adherence to provincial road construction standards and water body buffer guidelines, (3) operations within sensitive areas, and (4) the indiscriminate disposal of waste associated with forestry operations.

During the previous five year period, the district targeted the removal of abandoned machinery and debris associated with historical forestry operations. This program will be continued in this five year period with emphasis on compliance with environmental conditions of permits and licences by existing operators.

4.4 Public Education, Involvement and Commitment

Society in general has to be committed to the idea of maintaining ecosystem health for the greater good of all, none the least of which includes future generations. Central to the Province's Forestry Act is the idea that our forest ecosystem management activities should not impair the ability of future generations to sustain themselves. Everyone has to understand that their actions affect ecosystems, and therefore they are responsible for ensuring that our natural resources are used in the most efficient, sustainable manner. Western societies such as ourselves have to curb "throw away mentalities", reduce waste production and carbon dioxide emissions, maintain clean ecosystems and become world leaders by demonstrating sustainable use and environmental concern. To illustrate where we are today, 25% of the world's population uses 80% of the world's resources. It has been stated, that the impact of every Canadian on the environment in 1993, was equivalent to 40-50 third world residents (Reid, 1993).

The American philosopher, John Dewey, has reportedly been quoted "Education leads to no final end; it is something continuous, a reconstruction of accumulated experience, which must be directed towards social efficiency. Education is life and not merely preparation for life". Education can therefore be viewed as the continued transmission of the values and accumulated knowledge of society. To the extent that ecosystem management is "holistic" in nature, any educational efforts must also be broad in scope in order to promote the most responsible utilization of forest ecosystems. The goal is to ensure sustainability of all values, thereby making the most of what we as a society have inherited. In order to meet this goal, it is proposed to promote education of forest ecosystem management on three fronts (ie. staff, forest operators and the general public).

<u>Staff:</u>

Departmental staff are of utmost importance in fostering new ideas and delivering education to the general public. Being conservation officers with forestry and wildlife training, they are an integral part of bringing management initiatives to the ecosystems. Because the Department's mandate is defined in the context of "adaptive management", it has to continually change, as new knowledge is developed. It is recognized, that continued staff development and training is pivotal to the management of forest ecosystems. An informed, knowledgeable staff will effectively deliver new

technologies to target stakeholder groups. During this planning period, efforts will be made to educate staff in new ecosystem management initiatives, and ensure that they are kept at the leading edge of technological developments. Several workshops that are promoted by the Department will be made available to district staff. An example of such a course is the one entitled "Logging for Wildlife" This workshop will emphasize endorsed principles on the topic of logging for wildlife, and the teaching skills required to transfer this technology to forest harvesters.

Forest Operators:

Forest operators, being the main group to affect large scale on-the-ground change in forest ecosystems, require continual education to increase their knowledge of ecosystem management initiatives and approved environmental and general operating procedures. This group includes commercial harvesters, road builders and silviculture contractors. During this planning period, it is planned to deliver the workshop "Logging for Wildlife" to commercial harvesters. Likewise, it is proposed to deliver a workshop on forest access road construction to commercial harvesters who build their own roads. The purpose of these workshops will be to relay endorsed procedures for forest harvesting and access road construction, aimed at reducing the potential impacts of these activities on the landscape. It is also proposed to develop a mechanism to deliver any new Departmental initiatives with respect to maintaining biodiversity in both harvesting and silvicultural operations to Crown operators and silviculture contractors.

General Public:

Recognizing that the general public is a part of, and can have a marked effect on the province's forest ecosystems, it is essential that they be informed and educated, so they can participate in fair decision making with respect to the sustained use of these ecosystems. Public participation in the management of forest ecosystems is necessary to ensure that the public's concerns and values are made known and considered in the decision making process (WNMF, 1996).

Improved public understanding of the Department's forest ecosystem management goals, policies, procedures and regulations can only be accomplished through continued interaction and education of the general public. Through such a process, the general public will acquire the understanding of ecosystem values, and new stakeholder groups can be incorporated in future planning.

During this planning period, District staff will continue to further public education through:

1. The delivery of presentations to schools and organizing field trips.

2. Participation in meetings with town councils and development associations, resource management groups and other government departments.

3. Participation in National Wildlife, Forestry, and Environment Weeks events.

4. Participation in outdoor-based youth groups and events such as the annual Boy Scouts Dig Day.

5. Maintenance of district signage appropriate to the lawful use of ecosystem resources.

6. Participate in discussions with resource users such as domestic wood cutters, recreational enthusiasts, hunters, fishers , etc.

An extensive framework of educational procedures and materials has already been developed by groups such as the Western Newfoundland Model Forest and the Thomas Howe Demonstration Forest to promote public understanding of the dynamics of forest ecosystems and environmentally sustainable forest practices. It is anticipated that this information can be utilized as a base to further the education initiative in District 7.

5.0 Five Year Operations 2003-2008

This section will outline all the operational activities that are proposed to occur on Crown land in District 7, for the period April 1, 2003 to March 31, 2008.

5.1 Allocation of Wood Supply

The current Crown tenure softwood AAC is effective for the period from 2001- 2005, all years inclusive, is 23,500 solid cubic meters per year as determined through the 2000 Wood Supply Analysis. The analysis completed for this District did not use the spatial analysis used in the majority of districts in the Province. This situation occurred because of the shortage of up to date mapping that is available . There were no maps available through the GIS system and the amount of up to date photography (1998) was limited. Therefore, the analysis was completed as in previous years. Generally, in the allocation of the wood supply to the major commercial operators, the first priority is given to damaged and diseased stands where feasible. The second priority is to harvest merchantable, overmature stands. Most scheduled operating areas will consist of stands in this 80+ year old age class. The third priority is to harvest merchantable mature stands.

In keeping with Departmental policy, harvesters with integrated sawmills will receive priority for any additional allocation of commercial timber that becomes available. Adherence to this policy will help to improve fiber utilization in harvesting and primary manufacturing.

5.2 Commercial Harvesting Areas

Harvesting by commercial operators during this planning period will mainly occur via the clear-cut method utilizing shortwood systems. Under this strategy, even-aged stands of mature to overmature wood will be harvested in a single cutting, in order to regenerate these sites under full exposure to sunlight through either the use of seedlings already on site, or seeds dissipated from adjacent stands and harvested trees, or by artificial regeneration (ie. planting and direct seeding). The clear-cut method mimics the natural regeneration of even-aged boreal stands that result from such disturbances as wildfire or insect attacks, while capturing volume that would otherwise be lost through mortality. The use of shortwood harvesting systems in clear-cut operations will ensure nutrients remain on the sites through the decay of branches, tops and foliage, thereby guarding against site degradation.

The District 7 Crown commercial operating areas are shown on an overview map in Appendix 2, and detailed in Table 7 and on individual 1:50,000 scale topographic maps (or other scale as the area dictates)in Appendix 3(b) with operating area forms presented in Appendix 3(a). The summary table provided indicates the potential merchantable volume available for harvest in each proposed operating area.

Table 7

Summary of Proposed Harvest

Summary of Proposed Harvest 2003-04 to 2007-08				
Project #	**Project Name**	**Map#**	**Available Harvest Volume(m3)**	**Area (ha)**
C-7-1	Great Burnt Lake	12A1	18750	375
C-7-2	Bailey Bridge	12A8/12A1	6650	95
C-7-3	White Hills	12A1	10500	150
C-7-4	Tangle Pond	12A1	3150	45
C-7-5	Old Pauls Pond	12A1	3150	45
C-7-6	Bear Lake	12A1/11P16	16875	225
C-7-7	Bernards Brook	2D4	1200	15
C-7-8	Godaleich Tower	12A8/12A1	20000	400
C-7-9	North Salmon Dam	12A8	10500	210
C-7-10	St. Joseph's Cove	1M13	2500	346
C-7-11	Forbay Road	2D4/1M13	4900	100
C-7-18	Granite Lake	12A2/12A7	21420	510
		Total	**119595**	**2516**

The total available softwood harvest volume contained within the five year commercial harvest blocks for Crown tenure presented above is greater than the allowable cut when combined with the domestic drain. The actual total harvest volume for the AAC landbase, however, for the next five years will not exceed the annual allowable cut. The additional volumes are included so as to provide for operational flexibility over the planning period. This is within the acceptable variance for planned harvesting since the 2000 Wood Supply Analysis was designed to ensure that operable

growing stock would be maintained at a minimum of two times the AAC throughout the 160 year planning horizon. That is to say, there will always be at least twice as much merchantable timber available on the landbase than will be cut in any one period.

Also included in domestic blocks are areas where small commercial permits may be issued. These stands have mainly resulted from previous commercial harvesting or because of their small size (ie. ranging from 2 ha to 20 ha)were never harvested by large contractors. These areas are difficult to define on maps, however, District staff will evaluate all requests to harvest blocks that are considered to have commercial potential.

Several operating areas contain merchantable birch volumes from a combination of birch stands and mixed softwood/hardwood stands. The priority of harvest for commercial birch allocations will be met first with remnant birch in mixed softwood/hardwood stands as a part of integrated harvesting operations. Utilizing this strategy, it is anticipated that approximately 50% of the birch volumes proposed for harvest will result from mixed stands primarily targeted for softwood harvest. Several operators harvest entirely firewood, birch and burnt timber, and several other operators have firewood allocations as integrated components of their operations. Birch is therefore essential in sustaining commercial operations within the district. As with other designations of timber, it is the Department's position that birch is to be harvested in a sustainable manner and are developing annual allowable cut figures to address this issue.

5.3 Domestic Operations

District 7 has twenty-six domestic harvesting areas, the majority of which were originally created along the coastline encompassing the scattered communities. These areas were designed to provide a supply of fuelwood and sawlog material close to the communities. They consist of both commercial and non-commercial stands, but as timber demand increased and AAC's were developed, many of the commercial stands have been removed from the domestic fuelwood areas or stands are restricted to commercial permit holders. Observation of these areas on the overview map indicates a significant landbase, however, the opportunity to obtain fiber from any block is very limited. This is especially true along the coast in Areas 6, 23, 25, 26, 27, 29, and 30. Domestic and small scale commercial operations will follow the same priorities for harvest as stated earlier, efforts will be directed in placing the domestic harvest (fuelwood)into low volume stands, and non-aac stands. All permits have various restrictions attached to them such as utilization standards, environmental concerns, and no cut sections. These points are highlighted when permits are issued.

Generally, the traditional domestic areas near communities have been expanded into harvested commercial areas to provide residents access to additional fuelwood supplies. Over time, these expansions into commercial areas will have to be closed to prevent the illegal harvest of immature stands. This is evident in a number of the domestic blocks where silviculture areas are designated as no cut areas.

There are a number of important issues which need to be addressed with regard to the domestic cutting sector. The most prominent and timely of these is the concern with utilization of commercial sawlogs and pulpwood as firewood. A second issue which has also surfaced, and will

continue to gain dominance during the next decade, is the harvesting of young sub-merchantable regenerative growth on past cutover areas. These problems point to the need for increased control over domestic cutting. The goal of protecting the provincial short-term commercial wood supply is of a primary concern with respect to maintaining the existing forest industry in Newfoundland and Labrador during the next several decades.This will involve a complete review of all domestic blocks for their commercial value, and where appropriate the allocation of valuable, operable stands to commercial operators.

To help offset any losses to the domestic landbase that may occur as a result of allocation of stands to commercial status, extensions/additions to domestic areas will be investigated in current commercial areas as timber management objectives are met, to provide alternative sources for domestic timber consumers. This will also facilitate silvicultural operations through the cleanup of commercially submarginal stands. Additionally, the concept of removing fuelwood and any merchantable pulpwood, produced as bi-products from proposed diameter limit thinning treatments, for both public and industrial use will be investigated during this five year period.

To sustain a middle and long term wood supply, growing stock that will be developed from older regenerative stands (i.e. age class 2) and precommercially thinned areas must be protected.Many domestic blocks contain areas that have been silviculturally treated in the past, and still contain potential areas for future treatment. These areas will be evaluated during this planning period and amendments will be made to the respective domestic cutting blocks to reserve appropriate areas for silvicultural treatment for enhancement of the future growing stock. The specific treatment areas will be identified on domestic cutting maps, These areas will be closely monitored and strictly enforced for no-cutting or trespassing.

5.4 Silviculture

In order to minimize impacts on the long-term timber supplies and ecosystem processes, a steady reforestation program will be conducted with the objective to plant all medium, or higher classed sites that are not regenerating to a satisfactory stocking level.

Reforestation of current cutovers through scarification and planting is a priority of the silviculture program during this planning period. Also, there is a considerable amount of non-sufficiently restocked (NSR) areas occupying productive sites in the district that resulted from past disturbances and in some cases cutting practices . These sites need to be converted to a more vigorous useful state by re-establishing forest cover. Reclamation of backlog, non-sufficiently restocked sites (NSR) through planting will: (1)result in an increase in the production forest landbase, thereby assisting the goal of maintaining 20 % Old Growth on the future landscape; (2) account for future losses to the landbase from permanent disturbances; and(3)result in the production of successional habitat that will aid in the maintenance of landscape connectivity for wildlife. The District's planting program consists of the planting of black spruce, white spruce, eastern larch, red pine and white pine.

From a silviculture perspective, the only potential treatment to lessen the projected timber supply shortages is precommercial thinning (PCT) in the 21/40 year age group, and a variation of PCT in larger diameter stands of the same age group known as diameter limit thinning (DLT). Thinning,

over a number of years, will advance the development of those treated stands, so as to essentially bump the age/development up a class, and can help to fill the shortfall in supply.

Thinning treatments (PCT/DLT) in natural fir/spruce stands and plantations (PM - plantation maintenance) in the district, however, also have merit from the perspective of promoting the development of high quality timber stands. These thinning treatments will allow natural and planted spruce/fir to grow more vigorously through the removal of competing, low quality ingrowth. These treatments will insure that such stands remain tracking along projected yield curves, resulting in protection of the future growing stock, and a cost benefit to future harvesting through gains in piece size compared to untreated areas.
Silviculture treatments designed to promote management of the District's hardwood component at both the landscape and stand levels will be conducted during this period to achieve the ecosystem management initiatives described earlier in Section 3.2.

Treatments will involve two stages of stand development (1) immature stand density management and (2) stand regeneration management. In the former case a hardwood component will be left where possible in all precommercial thinning, diameter limit thinning and plantation maintenance areas. Density management treatments are proposed for hardwood dominated immature stands. Both yellow birch and white birch areas are targeted.

Silviculture treatments designed to promote management of the District's white pine component at both the landscape and stand level will be conducted during this period to achieve the ecosystem management initiatives described earlier in Section 2.5. White pine pruning is proposed for immature stands to abate the advancement of white pine blister rust within the district. All proposed planting areas will incorporate ,where possible, a minimum of 5 % pine seedlings. Cone collections will be carried out as required and in consultation with the Provincial Tree Nursery to ensure sufficient seed supplies are available for the silviculture program.

The silviculture treatments proposed for the period 2003 -2008 in District 7 are outlined on an overview map in Appendix 6, and detailed in Table 8 and on individual 1:50,000 scale topographic maps in Appendix 7. The silviculture treatments having the highest priority are planting and precommercial thinning. A program of 740 ha of planting and 535 ha. of precommercial thinning is scheduled for District 7 during this planning period. It is anticipated that approximately 25 percent of all scheduled planting will require site preparation in the form of row scarification. Also 50 ha of pine management and 50 ha of hardwood management(included under tree pruning) are planned for District 7. The minimum areas needed to comply with the requirements of the 2000 Wood Supply Analysis are 100 hectares of precommercial thinning and 50 ha of planting per year.

Table 8

Summary of Proposed Silviculture Activities 2003-2008

Summary of Proposed Silviculture Activities 2003 - 2008	
Treatment Type	**Area (Hectares)**
PCT	535
Planting	740
Plantation Maintenance	50
Tree Pruning	100
Site Preparation	120
Diameter Limit Thinning	30
White Pine Management	50
Site Reclamation	60

5.5 Resource Access Road Program

Proposed resource access road construction for the next five years in District 7 is outlined on an overview map in Appendix 4, and detailed in summary Table 9 and on individual 1:50,000 scale topographic maps in Appendix 5. A total of 21 kilometers of road is planned for construction during this five year period along with 5.5 kilometers of reconstruction. All capital/primary roads constructed in the district are funded by the Department of Forest Resources and Agrifoods with several operators constructing their own operational/secondary roads. Departmental roads, being main trunks, will either be constructed to a Class C or C-2 standard and are designated as primary road systems. Proposed road construction by Crown operators will mainly be spur roads constructed to a Class D standard and are designated as operational/secondary roads.

Table 9

Proposed Resource Road Construction

Proposed Resource Road Construction 2003-04 to 2007-08					
Project #	**Road Name**	**Map #**	**Road #**	**Road Length**	**Bridge**
C-7-12	Bear Lake	12A1/11P16	C-2	1.5	Nil
C-7-13	White Hills	12A1	Reconstruction C-2	5.5 kms	Nil
C-7-14	Diversion Canal 1	12A8	C	1.5 kms	Nil
C-7-15	Diversion Canal 2	12A8	C	2.5 kms	Nil
C-7-16	Godaleich Tower	12A8/12A9	C-2	11.0 kms	Nil
C-7-17	North Salmon	12A8	C-2	4.5 kms	Nil

The majority of the road construction will be into overmature and mature wood for the primary purpose of accommodating commercial cutting operations. A secondary forestry use will be to provide access for silviculture operations. Other uses include domestic cutting, and recreation (ie. hunting, fishing and berry picking). At this time, no road is planned solely for domestic use.

Consideration of a host of tourism/recreation values that exist within the boundaries of District 7 were discussed by the planning team and the topic of road decommissioning was proposed as a means to alleviate some of the conflicts that exist when roads are constructed into an area. Decommissioning is to be considered on an area specific basis. It was agreed that the decommissioning of specific roads to protect other ecosystem values could take the form of removing bridges and culverts, in addition to replacing excavated material from adjacent embankments back into the roadway to restore the areas as close as possible to their natural state. The scheduling of road decommissioning must be done in concert with the completion of harvesting and silviculture activities in the areas of concern. At that time, the Department of Forest Resources and Agrifoods will convene a meeting of all interested stakeholders to determine the timing and details of decommissioning activities. While the Department of Forest Resources and Agrifoods can adopt this approach as a goal of the plan, the implementation of this strategy will be entirely dependant upon our ability to prevent the establishment of permanent structures such as cabins along the proposed road routes. While the District can commit to refusing approval of cabin sites in areas to be decommissioned, the actual authority rests with the Crown Lands Division of the Department of Government Services and Lands. During this planning period district staff will continue to liaison with Crown Lands Division in identifying operational roads that may require decommissioning.

6.0 MONITORING

To evaluate the results of the management activities proposed in this plan, the stakeholders committee has reached consensus agreement that a monitoring committee will be established, consisting of interested stakeholders from the Ecosystem Management Planning Team for District 7. The focus of the monitoring committee will be the evaluation of the progress towards the long-term goals as identified in the Ecosystem Strategy Plan and the evaluation of the effectiveness of activities and actions outlined in this five-year operating plan. The focus will be on compliance with regulations and accepted guidelines and protocols, maintenance of forest ecosystem health, and socioeconomic consequences.

A report of past annual activities will be prepared by District staff for each year outlined in the five year operating plan. The monitoring committee will review the report, collect any additional information required, and provide feedback to management staff detailing where anticipated goals are, or are not being met, in addition to detailing any recommended changes required in the plan. A response to those recommendations will be included in the subsequent annual work schedule plan.

7.0 AMENDMENTS

Should minor operational amendments to the implementation of activities outlined this plan be required, it will be at the discretion of the Director of Forest Ecosystem Management to approve such amendments within the allowable variance under current environmental regulations. In the event that a variance to the plan is required which is larger than those specified under current environmental regulations, the district manager will forward written information to the Planning Team for comment and if required will convene a meeting of the Planning Team to review the amendment. Consensus of the planning team members will be solicited prior to the Department of Forest Resources and Agrifoods submitting the amendment through the environmental review process administered by the Department of Environment.

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