Enhancing Our Forest Resources
A Forest Renewal Program --1991-1996

Province of British Columbia
Ministry of Forests
Minister's message

Our forests are our most important natural resource. They provide us with a wealth of benefits, both in their natural state, and from the many forest products they provide. To maintain the quality of life that we enjoy in our province, it is extremely important to ensure that our forest lands remain productive and wisely managed.

I am, therefore, proud to introduce the Forest Renewal Program, a five-year, $1.4-billion plan designed to achieve these goals:

- to ensure and monitor effective reforestation of areas currently being harvested;
- to eliminate most of the remaining unsatisfactorily reforested lands, a task to be completed by the year 2000;
- to increase the growth rate, quality and value of our second-growth forests;
- to undertake extensive research into silviculture practices and growth-response treatments; and,
- to improve the accuracy and content of the forest resources inventory.

This program is a comprehensive forest management plan which will assure British Columbians of all the benefits of a well-nurtured forest for generations to come.

Claude Richmond
Minister of Forests

Why do we need a forest renewal program?

To appreciate the importance of this program to British Columbians, we must understand the role of our forests in today's society, the steps we have already taken to preserve forest values, and the challenges we face in enhancing these values for the future.

Natural benefits of our forests

These include:

- parks, tourism and recreation opportunities;
- habitats for fish and wildlife — which also support our guiding, outfitting, hunting and fishing enterprises;
- clean water from community watersheds;
- a beneficial role in the carbon-dioxide cycle; and,
- preservation of genetic and biological diversity for the future.

Timber product benefits

Our forests support a forest products industry that produces 50 per cent of provincial manufacturing shipments. In 1989, it created products valued at $12.5 billion.

Most manufactured wood products are environmentally friendly; they come from a renewable resource and require relatively little energy to be made into products that are biodegradable and recyclable. The forest products industry also creates direct or indirect jobs for a quarter of a million British Columbians — almost one-fifth of the provincial labor force.

How much of each? — the dilemma

How much society wants to make use of each of these benefits can change rapidly. In the last decade, increasing demands worldwide for both timber and non-timber forest benefits have presented resource managers with real dilemmas in setting realistic goals for each resource and in managing the forest lands to meet them.

Safeguarding natural values

In response to public demand, the Forest Service has undertaken a number of initiatives to safeguard the values of the undisturbed forest. These include the Old-Growth Strategy Project, the Recreation Program, the Wilderness System Plan, cooperation with Parks '90, and others.

Please refer to Forest Service publications for details about these programs.
Safeguarding timber values

Taken together, these programs may result in a reduction in the land available for timber harvesting. But the forest products industry is the single greatest contributor to provincial economy. Therefore, while we take these actions to protect the values of the undisturbed forest, we must also take care to maintain a reliable timber supply to the industry.

Only by ensuring forest productivity can we ensure future generations will be able to make use of the same range of benefits from the forest that we enjoy today.

Basic silviculture

In recent years we have placed a strong emphasis on basic silviculture — the regeneration of forests on harvested areas. In 1987, for example, we made landmark changes to the Forest Act to make reforestation clearly the responsibility of those who are given the privilege of harvesting Crown timber.

The law now requires those who harvest timber to prepare a detailed plan for reforestation, before any harvesting, and to pay for all necessary reforestation activities. The Forest Service audits and monitors achievement of these legally enforceable standards.

This amendment to the Forest Act was made in part because, in the past, we had accumulated a backlog of lands that were not satisfactorily restocked after harvesting. This problem was addressed in part by the 1985-90 federal-provincial Forest Resource Development Agreement. The graph below shows the progress made in reforesting these areas.

All currently harvested areas are now required by law to be reforested by planting or by managing for natural regeneration. With the backlog now being progressively reduced, the total area reforested each year exceeds the total area being harvested. By the year 2000 the backlog will be eliminated, and B.C. will never again accumulate areas that are unsatisfactorily reforested. We have come a long way toward solving the reforestation challenge in our province.

Incremental silviculture

But reforestation on its own is not enough. The successful establishment of new, growing stands means we must now take on a whole new set of challenges, as we move into the era of caring for and enhancing the young new forests, as they grow toward maturity.

This is especially true today, with all the heightened social and environmental imperatives placed on the management of a finite forest by the growing demands of a growing world population.

What we demand from the forest now is not just more wood products. It is clean water, clean air, more fish, more wildlife, more wilderness reserves, more parks, more grazing areas, more recreation areas, and more room for urban expansion. At the same time, we worry about deforestation, global warming, and the loss of biological diversity.

These are all global issues, and in today’s interconnected world, the way in which each country, each province, each region and each community deals with these concerns is becoming increasingly critical.

In B.C., it’s not just the social and environmental pressures on the forest that must be addressed. The nature of our forest itself is also changing, as we begin to move away from the harvesting of our inherited forests and depend more on second-growth forests.

Unmanaged second-growth forests generally contain smaller trees than our inherited forests, which means a change — and in some cases a reduction — in the amount of wood available for harvest. The wood is also of a different quality than in our inherited forests. This presents a challenge in obtaining sufficient wood to meet projected increases in demand for wood products, and particularly the demand for high-quality wood suitable for value-added products.

These factors place a difficult set of responsibilities on foresters and resource managers. They have to set realistic goals for competing resources in the face of rapidly changing public opinion. Then they must manage the forest skillfully to meet them. Today this also means that they must find ways to meet the economy’s growing need for high-quality wood, from a shrinking land base, in ways that will be socially, economically, and environmentally sustainable. This is a difficult challenge.

However, resource managers, after many years of research and practice, have developed techniques to:
redirect flows of energy, nutrients and water; to tend the forest in ecologically sound ways; to improve the growth of new trees; and, to produce high-quality wood.

This is important because we can now reduce some of the conflict between the demands on the forest, in ways that will benefit the province for generations to come. On areas where society indicates that timber harvesting should be the prime objective, we can now improve the productivity of that forest and relieve pressure on other forest lands, leaving them available for other resource uses.

Doing this means putting more back into the forest than we ever have before — investing more energy and effort into what is called incremental silviculture, the treatments that will allow us to meet our growing demands for timber from a reduced land base.

The principles of incremental silviculture are somewhat similar to the careful growing of vegetables. To get a good yield of superior, healthy carrots, we don’t just plant seeds in the ground and forget them. We must prepare the ground, plant high-quality seed, thin the young ones, space them properly, fertilize if necessary, and keep pests away.

With new forests, we begin soon after harvest by promptly planting high-quality seedlings or actively managing for natural regeneration. This is basic silviculture, and it is now a legal requirement wherever harvesting is done.

With a firm reforestation program in place, we can influence the future yield and quality in a number of ways. We can start by reducing competing vegetation, then spacing the trees to give them room to grow. Next, if soil analysis shows nutrient deficiencies, trees can be fertilized to increase their growth rate. Finally, they can be pruned to produce more valuable, knot-free wood needed for higher-value products.

Not every hectare will be treated. The principle is first to analyze sites for their growth and economic potential. Then, where appropriate, we concentrate the growth on the crop trees in treated hectares, to produce trees of greater diameter, and higher quality. In B.C., we have enough good-growing sites, and enough expertise, to achieve dramatic results.

Incremental silviculture dramatically increases yield and final crop value.

As with any venture, we have to take careful stock of the probable benefits of different levels of investment. To maximize incremental silviculture benefits, we must know precisely how much wood needs to be grown, and where and when, to ensure an uninterrupted supply. For this, we must take careful inventory of each of the province’s management areas to determine opportunities to enhance the forest, and to find out the appropriate levels of investment to achieve required results.

We also need research projects, to determine:

- optimum growth responses to treatments over a wide range of forest conditions;
- the interactions of these techniques with biological diversity; and,
- the impacts of the treatments on other resource values.
All of these silviculture, inventory and research activities are challenges that must be met if we are to ensure that every available hectare of forest land for timber production is restocked with commercial tree species, and that the young forests are managed wisely, intelligently and intensively.

With the high expectations we have for integrated management of the many benefits we expect from the forest land today, we cannot afford to take any other approach.

The program

Underlying principles

The Forest Renewal Program will help make full use of forest lands by optimizing forest growth in accordance with all other resource uses. The following underlying principles will guide the activities of the program:

- **Biological diversity:**
  
  This is the primary attribute of healthy, natural forests.
  
  Biologically diverse forests contain a wide variety of vegetation, trees of varying species, sizes and ages, and a broad range of wildlife.
  
  Incremental silviculture techniques may enhance biodiversity by increasing light and creating space in the forest for new vegetation, which in turn supports additional animal species.

- **Integrated resource management:**
  
  This refers to managing forest resources for a combination of values which balance economic, social and environmental considerations.
  
  The forests are shared for a number of uses including fish, wildlife, watersheds, domestic livestock, recreation, and tourism, wilderness, timber and other resources.

- **Sustainable development:**
  
  This refers to managing our forests in a way that will always maintain the quality of the resource.
  
  In the long term, forest growth rates must match or exceed forest depletion rates.

Program components

**Current reforestation:**

- carry out the basic silviculture commitments of the Forest Service's Small Business Forest Enterprise Program;
- audit 4,000 harvest areas per year to ensure harvesters complete their reforestation obligations; and,
- ensure reforestation of areas burned or destroyed by pests.

**Outstanding reforestation obligation:**

- reforest two-thirds of the remaining treatable areas of the backlog of lands that were not satisfactorily reforested, including the actual planting of 240,000 hectares, toward the goal of completing the program by the year 2000.

**Incremental silviculture:**

- provide an expanded spacing, fertilization, pruning and forest health program; and
- provide a community forestry program of $5 million annually to develop special forestry projects in and around municipalities.

**Second growth inventory:**

- establish more than 6,000 new permanent sample points for monitoring the growth rate of young forests;
- update 13,000 maps for improved second growth management; and,
- reassess the growing forest on 1,700 map areas.

**Silviculture research:**

- undertake extensive research to support the Silviculture Program and ensure effective management in the areas of:
  - biological diversity;
  - silvicultural practice;
  - genetic improvement; and,
  - forest growth.

Program expenditures

The program's total budget of $1.4 billion over five years will include a federal government contribution of $90 million and will be allocated as follows:

<table>
<thead>
<tr>
<th>1991/92 - 1995/96 Expenditures ($ millions)</th>
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<tbody>
<tr>
<td>Treatments: $1,162.5</td>
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<tr>
<td>Administration: $65.3</td>
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<tr>
<td>Research: $90.9</td>
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<tr>
<td>Second-growth inventory: $97.4</td>
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<tr>
<td>Total: $1.4 billion</td>
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<td>over five years</td>
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Program delivery

The program was designed and initiated by the Forest Service. It will be administered by the Forest Service's headquarters, in Victoria, and delivered by its six regional and 43 district offices throughout the province.

Most of the field activities will be carried out by forest companies and silviculture contractors under the supervision of the Forest Service.

Program benefits

The program will produce the following benefits:

- improved forest growth of higher-quality wood;
- increased flexibility in land-use options;
- improved biological diversity;
- increased forest revenues in the future;
- more jobs; and,
- community stability.

Silviculture audits

For more information

Please contact your local forest district office, or:

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B.C. Forest Service
31 Bastion Square
Victoria, B.C. V8W 3E7