

*A Summary of
Prince Edward Island's
Ecosystem-based
Forest Management
Standards Manual*



Environment,
Energy and Forestry
Forests, Fish and
Wildlife Division



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Providing Greener Alternatives for Island Forests



Forests play many different environmental, social and economic roles. They offer employment and income, habitat, clean water and air, and places for recreation and solitude.

The Island has some 260,000 hectares of public and private forest land. Most of this forest has experienced decades or even centuries of pressure from land clearances for agriculture and settlements, poor harvest practices, the loss of some native species, and the introduction of new species, diseases and insects. Today, the Island's forest is divided into thousands of small parcels owned by thousands of individuals. This makes it easy to manage small blocks of forest but hard to achieve larger scale changes or improvements. Over the years, successive management programs have made efforts to reverse or ease the impacts of many instances of past land use, sometimes with mixed results.

In 2005, the province commissioned hearings into the development of a new Forest Policy for Prince Edward Island. Hundreds of Islanders came out to express their appreciation of, and concern for, the Island's public and private forests. Many people felt that public money should only be invested in forests if there was a measurable public good. This led the province to develop an ecosystem-based

forest management manual with standards suited to the Acadian Forest. Today, these standards apply to all forest management and harvest activities on public lands, and serve as guidelines for landowners who participate in publicly supported forest management programs.

Eco-based forest management systems look at the forest as a whole ecosystem, rather than the more traditional focus of looking only at the trees. Decisions are made based on ecological considerations first, with economic, development and other factors playing important but lesser roles. Eco-system based forest management differentiates between plowed (disturbed) land and unplowed forest lands, and allows for more flexibility in response to the predicted effects of climate change in Prince Edward Island.



As part of the province's commitment to provide quality advice and services to private woodlot owners, the department has revised the Forest Enhancement Program (FEP). The revised FEP is based on standards of the Ecosystem-based Forest Management Manual and integrates the old Forest Renewal (full planting) Program. However, there is one important addition — *all landowners are now required to register an approved, personalized Forest Management Plan before they can participate in publicly supported forest management programs in Prince Edward Island. As well, all treatments including harvesting and planting must be prescribed in the plan and carried out in accordance with the plan's standards.*

Forest Management Plan

A forest management plan is a guiding document designed to match the capabilities of the forest with the goals and resources of the landowner. It serves as a statement of the landowner's commitment to their forest and identifies how they plan to achieve various environmental, social and economic goals. The plan will focus on the economic and environmental potential of the native tree and shrub species found on the woodlot, identify ecologically sensitive areas and critical wildlife habitats, and outline treatments and harvest options which are appropriate to the forest and the owners' goals. Plans are prepared by qualified private sector consultants and designed to address forest management issues over a 5 to 10 year period.



A well-prepared Forest Management Plan outlines strategies and plans of action for concerns such as **Infrastructure** (roads, bridges and culverts), **Tree Establishment** (full planting, partial planting and natural renewal), **Stand Improvement** (thinning, harvesting and pruning) and **Special Enhancement** (nesting boxes, wildlife cover, rare plants and animals, game species, recreation and more). Standards for these treatments are contained in the Ecosystem-based Forest Management Manual.

Varying degrees of assistance is available for many FEP treatments, with funding coming from the province, landowners and the forest industry.

Infrastructure

Infrastructure involves the development of your forest management plan and deals with the creation and maintenance of roads, trails bridges and culverts.

Roads and trails are an integral part of any forest management and harvest process, but they should be designed to blend into and work with the landscape. Ecologically friendly roads and trails are built so that they suit local terrain and soil conditions, different types of harvest or management equipment, and the length of time the road will be used. Poorly designed or maintained roads are easily rutted, expensive to maintain, limit seasonal access, and can lead to serious erosion and siltation problems.



Bridges and culverts are a critical part of any forest management system because they permit access across a watercourse to different areas of the woodlot. However, because they pass through ecologically sensitive areas such as riparian zones and seasonal wetlands, and cross over streams and rivers, extra care must be taken to minimize disturbances and ensure the free passage of water and aquatic creatures.

Your management plan will make recommendations for the establishment of any necessary roads, bridges and culverts but the FEP does not provide funding for building or maintaining these structures. Permits will also be required for any work on or near a watercourse.

Tree Establishment

Tree Establishment is the creation of a new forest stand by natural seeding and/or tree planting. The emphasis is on planting or encouraging Acadian Forest species which provide a range of economic and environmental benefits.

Natural Renewal:

If stand conditions permit, your forest management plan may recommend harvest and silviculture treatments designed to encourage the renewal of the site by seed from suitable existing trees. In a natural ecosystem, forests renew themselves after disturbances such as blow downs, insects, disease or fires by seeding in the affected area. These trees are usually genetically suited to local growing conditions and, with care and attention, the landowner can encourage the renewal of desirable species. However, in most cases, nature will provide both wanted and unwanted species in numbers which will require follow-up silviculture treatments in the years to come.



Tree Planting:

One of the primary policy changes is the requirement for landowners to have a pre-harvest forest management plan in place in order to access public funds and this also extends to planting for harvest sites. Your management plan may recommend planting the site if there are not enough suitable young trees growing on the site (an old field or a cutover) or on areas where the existing natural regeneration is of poor quality, does not meet the landowner's goals, or where new or additional species are required.



The FEP supports three planting systems including:

- **Full Planting** where an entire site is planted,
- **Partial Planting** where only some areas of the site require planting, and
- **Enrichment Planting** where selected species are planted in small numbers across the site.

The initial planting spacing is designed to provide optimum growing conditions for the seedlings while limiting the ability of unwanted species to out-compete the planted trees.

Cost-shared funding is provided for most Tree Establishment treatments recommended in your plan.

Stand Improvement

Stand Improvement focuses on increasing the value of a forest stand for high value timber, wildlife, recreation and/or non-timber forest products, by removing low value trees and species or introduced species, and focussing attention on those with the greatest potential to achieve the landowners' goals.

The intent of stand improvement operations is to reduce or reverse the impacts of several centuries of poor harvest and land use practices. Your plan will recommend which Acadian Forest species to leave standing and at what density in order to improve the stand for any number of goals. In all cases, the emphasis is on taking the poorest trees and leaving the better species and quality stems to develop.

Treatments include:

- **Pre-commercial thinning** (sometimes called cleaning) removes a percentage of young trees and provides the remaining young trees with more sunlight and root space. This operation does not generate any income to offset costs.
- **Commercial thinning** improves the quality of the stand by the removal of a percentage of the small diameter or poor quality trees. Harvested trees are usually large enough to be sold for low-value products such as pulpwood or firewood in order to offset some of the management costs.
- **Shelterwood harvest** system removes trees in a series of two or more cuttings so new seedlings can grow in the forest shade from the seed of older trees. Depending on the species, quality and quantity harvested in each cutting, the landowner may receive some economic return.
- **Release** is the removal of trees which overtop and thus shade more desirable tree species. By removing the overstory, more sunlight and nutrients reach the trees growing underneath. Depending on species and site conditions, the landowner may receive some economic return.



Most silviculture treatments recommended in your plan are eligible for cost sharing.

Special Enhancement Techniques:

One of the additional changes for the FEP is the inclusion of a Special Enhancement Techniques component. Many landowners have expressed the need for treatments which deal with the non-timber attributes and benefits of owning and managing forest lands.

These techniques may be related to:

- wildlife habitat
- forest aesthetics
- non-timber forest products
- recreational values

In many cases they are things which, while intangible, still mean a great deal to the owner and to the health and productivity of their forest lands.

As the owners' interests and goals dictate, the forest management plan may make recommendations for specific Special Enhancement Treatments. In some, but not all cases, cost-shared funding may be available.

To obtain a detailed copy of the Eco-system Based Forest Management Standards Manual or rates, visit www.gov.pe.ca/go/eco-manual or call (902) 368-4700.

Getting Started

If you are interested in learning more about how the Forest Enhancement Program can provide benefits to you and your forest land, it's easy to get started. Simply visit www.gov.pe.ca/go/fep, your local forest district office or call 902 368 4700. You will receive an application form and other documents designed to help you create a Forest Management Plan which meets your needs and the needs of your forest land.