

2012

NSLFFPA FSC SILVICULTURE
GUIDEBOOK



Nova Scotia Landowners and Forest Fibre
Producers Association (NSLFFPA)

4/2/2012

NSLFFPA FSC SILVICULTURE GUIDEBOOK

Table of Contents

Relevant FEC Information	3
Managing for Appropriate Future Conditions.....	3
Overview of FSC Requirements.....	3
FSC Maritime Standard	3
Acadian Forest Management	4
Best Practices	4
Soil Conservation.....	4
Safety and Liability.....	4
Property Lines	5
Interpretation of Forest Management Plans	5
Silviculture Technical Standards.....	5
GPS Introduction and Use.....	5
Contractor Referencing Program	6
Funding Requirements and Availability.....	6
Site Inspections	7
Silviculture Rates	7

Relevant FEC Information

Forest management planning and implementation through harvesting and silviculture treatments is based primarily on the Nova Scotia Forest Ecosystem Classification (FEC) and Ecological Land Classification (ELC) Systems. This information specific to individual woodlots is included in the respective management plan. The full documents are available through the DNR website:

<http://www.gov.ns.ca/natr/forestry/programs/ecosystems/ecosystems.asp>

Managing for Appropriate Future Conditions

The forests of Eastern Nova Scotia that we see today are a result of many centuries of human intervention. Practices such as high-grading for ship timbers and other products, clearing for agriculture, as well as intensive forest management have resulted in forests today that are typically dominated by early successional, intolerant species such as white spruce, balsam fir, red maple and white birch. In some cases, due to the natural disturbance and site conditions of a particular area, these species are what would occur on the site naturally. Examples of this include the Highland balsam fir forest which is shaped by the regular disturbance pattern of spruce budworm, as well as the black spruce and fir dominated forests of coastal areas that are influenced by frequent hurricanes and poor site conditions. However, many forested areas today are very different in character than what might have existed on the same site 400 years ago.

It is also important to understand, that while we may have some understanding of what potential 'climax' conditions of a site are, this condition is not static. Even prior to human influence forests were still disturbed on occasion, resulting in a range of conditions that can be considered appropriate for the site.

It is the overriding objective of this forest management program to restore those sites that are significantly different from their natural range of conditions to a state that would have been typical in the past. This is an objective that may in some cases take 100's of years; far exceeding the scope of this plan. However, it is important to take those steps today that will begin the process of restoring these stands to a more natural condition. The natural condition for any particular area is based on the dominant natural disturbance regimes and the potential climax species associations.

Overview of FSC Requirements

FSC Maritime Standard

-All silviculture treatments administered through this program are governed by the Forest Stewardship Council (FSC) Maritime Standard Principles and Criteria. The standard can be found online at:

<http://www.fsccanada.org/maritimesstandard.htm>

Acadian Forest Management

-All treatments are in line with a sequence of events which lead toward the development of appropriate Acadian Forest conditions and natural disturbance patterns. The overall treatment objective on a case by case basis is outlined in the respective management plan. If this information is deemed inadequate or unclear, a re-assessment should be requested from the appropriate group manager.

Best Practices

- All work carried out within this program is expected to meet and / or exceed provincial and federal regulations and the work standard as outlined in the 'Best Management Practices Guidelines' (Nova Forest Alliance publication).

-Applicable Laws / Regulations are available in the FSC Management Plan and FSC Maritimes Standard Appendix I.

Soil Conservation

- Management plan soil interpretation is largely based on the soil classification system developed by the Department of Natural Resources. Soil types are considered prior to the field cruise by examining the local eco-section(s), appendix V-C, and relating available drainage conditions and texture classes to establish potential soil types within a given woodlot. This information is verified in the field through vegetation typing, drainage and topography observations, and infrequent soil samples. This approach is intended to provide a rough picture of the likely and / or potential soil types within the woodlot in order to incorporate into management planning. All soil types and descriptions, hazard ratings and background information is taken from: Forest Ecosystem Classification for Nova Scotia *PART II: SOIL TYPES (2010)*. This is a comprehensive and recent publication and is available online (pdf) at:

<http://www.gov.ns.ca/natr/forestry/programs/ecosystems/forecoclassif.asp>

- It is recommended to verify potential soil types listed for your woodlot prior to using the information for any extensive planning purposes, aside from soil conservation measures.

- If planning harvesting or site preparation work and no soil assessment was included in your management plan, an assessment is highly recommended.

Safety and Liability

-Any work carried out must include appropriate safety equipment and hazard risk assessment. The best available source which includes this information is 'The Forest Professional' available online at:

<http://www.gov.ns.ca/lae/healthandsafety/docs/forestprofessional.pdf>

and a paper copy can be made available for any party with no computer access.

-All work carried out is to be in accordance the Nova Scotia Occupational Health and Safety Act including documented proof of appropriate WCB coverage, liability insurance and health and safety certification.

Property Lines

- Demonstrate a reasonable effort to establish visible property boundary lines prior to any forestry treatment being carried out. In the case where no boundary markings are evident, a survey should be carried out or an agreement reached between adjacent property owners.

Interpretation of Forest Management Plans

Any treatment carried out within this program should be done within the context of the management plan. At a minimum (relating to silviculture), the forest management plan for the property in question should contain maps which demonstrate the current forest cover and development stage(s), a map of prescribed treatments, a water table map and an aerial photo. Supporting tables with forest inventory information should include species type, age, size dimensions (height / diameter), FEC and volume estimates.

For plans developed through NSLFFPA, relevant silviculture information can be found using the table below.

Information	Location in NSLFFPA Management Plan
Forest Inventory	Table 1 (Section 6)
Treatment Recommendation Summary	Table 1 (Section 6) and Section 3 Treatment Schedule
Soil Assessment	Section 2.6
Water Table	Appendix V-F
Treatment Map	Appendix V-D
Aerial overlay	Appendix V-E
Restoration Objectives	Section 2.4; Section 3; Appendix III

The shapefile for each specific woodlot is available with the landowners permission through the group manager.

Silviculture Technical Standards

The technical standards for silviculture are those defined through the Association for Sustainable Forestry (ASF). There are seven categories of silviculture treatments for which funding is available with 'pre' and 'post' treatment requirements listed for each. The standards can be viewed online at <http://www.asforestry.com/default.htm>.

GPS Introduction and Use

The NSLFFPA has a GPS training and loan program in effect. The Association has 2 Trimble Juno SB field units equipped with Arcpad software that are available to FSC group members and contractors in the contractor referencing program for use on FSC group member woodlots. These field units will come equipped with individual member property and stand lines and a formatted polygon shapefile for

silviculture claims. General use instructions and silviculture funding claim form instructions are included in the NSLFFPA GPS User Guide Document on the website at <http://www.nslffpa.org>

Contractor Referencing Program

NSLFFPA Forest Management Partnership is a system and service provided by the Nova Scotia Landowners and Forest Fibre Producers Association. The objective of the Forest Partnership is:

“to facilitate the completion of appropriate forest management activities by creating a 'community' where like-minded forest contractors and woodlot owners can interact”

The system has been developed with the needs of both forest contractors and landowners in mind.

For landowners, Forest Management Partnership provides a means of finding forest management contractors who have demonstrated a commitment to sustainable forest management. It also provides independent supervision of operations on their land, a benchmark of acceptable forest practices, and guidance on issues to discuss with a forest management contractor.

For contractors the partnership provides access to a database of identified, mapped and cruised forest management treatments, and the landowners that want these treatments completed. Membership in the Forest Management Partnership also offers contractors a way of distinguishing themselves as having met standards that are acceptable for working on an FSC certified landbase.

Further information is available on our website under the 'Contractor Reference System' section.

Funding Requirements and Availability

Funding for silviculture on private land is currently available through three different sources. The Association for Sustainable Forestry (ASForestry.com) provides funding for silviculture on both small and large private land throughout Nova Scotia. As well, many of the large buyers of private wood are required to carry out silviculture on private land in Nova Scotia. For more information on this option you will need to contact the buyers directly. A list of these registered buyers is available on the DNR website (<http://gov.ns.ca/natr/forestry/registry/ovrvuindx.asp>). If you want to get regular planting or herbicide done on your woodlot then it will have to be done through one of these programs.

A new option available to certified woodlots in the province is through either the NSLFFPA or FNSWO. Each of these associations has developed a silviculture program open to their certified members, or other certified woodlots in their area. Both the ASF and the woodlot association programs are unable to provide funding for regular planting or herbicide. For more information on getting silviculture done on certified private woodlots visit www.nslffpa.org or www.fnswo.ca.

Site Inspections

'Pre' and 'Post' site inspection requirements will vary dependent upon the governing group manager.

NSLFFPA requirements are as follows:

-Pre-assessment surveys are required for each application. Procedure for these assessments are in accordance with the ASF assessment standards with the exception that no shapefile is required for the pre-assessment. These standards can be found in appendix II and also on the ASF website(<http://www.asforestry.com/PDFs/manual/AssessmentProcedures.pdf>).

-Post-assessment surveys are required for each completed treatment. Procedure for these assessments are in accordance with the ASF assessment standards and a shapefile is required for the completed treatment.

-NSLFFPA field staff will sample completed treatment claims randomly to ensure silviculture standards are met. Claims will not be processed for treatments that do not meet silviculture or FSC Maritime Standard requirements.

Silviculture Rates

Treatment rates are the same as those posted through the ASF. Please visit both www.nslffpa.org and www.asforestry.com. The summarized funding rates are as follows:

Category	Description	Rate (\$/HA)
1	Natural Regeneration Establishment a) fill plant 0 to < 300 trees per ha b) fill plant greater than or equal to 300 trees per ha	N/A 300
2	a) Established Plantation b) Intensive Plantation	N/A N/A
3	Early Competition Control: Manual Only Plantation& Natural	300
4	Plantation (2): Density Control & Release	450
5	Natural (1): Density Controlled & Released	800
6	Commercially Thinned	550
7	Quality Improvement: a. Crop Trees Released b. Crop Trees Pruned c. Selection Managed	3/tree* 300 550**