

SUBJECT: PEAT MINING POLICY



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Table of Contents

Peat Mining Policy	2
1.0 Policy.....	2
2.0 Scope and Application	4
3.0 Allocation of Rights to Crown Peat	5
4.0 Adding Value to the Peat	6
5.0 Feeder Operations	7
6.0 Reclamation of Peat Extraction Operations	7
7.0 Policy evaluation plan	10
8.0 References	11
9.0 Inquiries.....	11
Appendix A	12

Peat Mining Policy

1.0 Policy

1.1 Policy Statement

Purpose It is the policy of the Department of Natural Resources to maximize the benefits of using peat, a non-renewable resource, by promoting increased processing in the Province of New Brunswick and by addressing the issue of post-mining site reclamation.

1.2 Background

Peatlands, peat resources and the peat industry Peatlands cover about 2% or 140 000 ha of the total land mass of New Brunswick. About 80 % of the peat extracted in New Brunswick comes from Crown lands where its use is regulated by the *Quarriable Substances Act*.

The Province of New Brunswick is the leading producer of peat in Canada and an important player on the international scene. The peat mining industry is a major contributor to the economy of eastern and northeastern New Brunswick. In 2009, the sector employed at peak 1,400 persons: 400 full time and 1,000 part time employees. The production of peat, including the cost of packaging, was valued at \$150 million.

There is a finite and limited supply of commercial grade peat in New Brunswick and careful management of the resource base is necessary to sustain the industry over the long term.

Early challenges and development of a regulatory framework

In 1972, following a period of rapid expansion in the number of peat mining operations, the Province, through the Community Improvement Corporation and the Federal Regional Economic Development agreements, undertook a series of detailed investigations of this industry sector. These studies were conducted in response to industry's financial problems brought on by production overcapacity. The studies concluded that the royalty and land rental system had in a large part been responsible for the situation. Changes were proposed leading in 1979 to approval of the Crown Peat Resources Management Policy.

In 1975, a preliminary aerial photography inventory of provincial peatlands was completed. Subsequently, the Department of Natural Resources undertook a detailed field program as an activity under the Canada - New Brunswick General Development Agreement. The investigation of the peat resources of the province was completed by the Department in 1983 (Keys and Henderson, 1988).

In 1987, at the request of the Cabinet Committee on Economic Policy and Programs, a review of the provincial policies with respect to the peat industry was undertaken. A revised Crown Peat Resource Management Policy was approved in 1988. Adoption of that new policy led to major changes to the

Quarriable Substances Act, the legislative tool used to allocate rights to extract peat on Crown Lands. On April 1st 1993, a completely revised Act came into force.

Of the current 48 peat leases in the Province, twenty-three have been issued by the Department since 1988. Prior to 1988, the process of issuing peat leases was not generally concerned with promoting a policy of value-added peat production and environmental impacts were not evaluated. Beginning in 1988, the peat lease process gradually became more structured. Internal consultations form an important part of the preliminary evaluation of project proposals and mechanisms have been developed to ensure a coordinated approach between DNR and the Department of Environment. More careful evaluation of the potential environmental impacts of peat mining activities requires that applicants conduct baseline field studies in support of their lease applications.

**A new outlook:
adding value to
the resource
and site
reclamation**

Beginning in 1999, Government conducted an extensive review of all provincial policies regarding the peat industry sector leading to the announcement in 2001 of a Provincial Peat Policy on Peat Mining. The *Quarriable Substances Act* and Regulations were amended in 2004 and in 2005, DNR approved an updated version of the 2001 policy that focuses on adding value to the primary resource and that addresses the reclamation of commercial peatlands at the end of operations.

1.3 Policy Objectives

- To ensure that the resource makes a maximum contribution to the long-term economic development objectives of the Province by encouraging and stimulating the development of secondary processing while sustaining the existing employment levels at peat operations.
 - To encourage peat production from freehold as well as from Crown lands.
 - To ensure that peatlands used for the extraction of peat are, upon cessation of activities, restored to a natural wetland habitat. An alternate economic use of the land may be considered if the basic wetland function is preserved.
 - To collect sufficient financial security during the active life of the peat extraction operation to guarantee site reclamation at the end.
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1.4 Definitions

The following definitions apply to terms when used in this policy:

“Base capacity”: For the purpose of applying this policy, base capacity is defined as the commercial Crown peatland area held under a peat lease in 2001.

“Commercial peatland area”: A peatland area with a peat thickness greater than one metre.

“DNR”: The New Brunswick Department of Natural Resources.

“Old security”: Reclamation security collected under the old regime of \$20 per hectare of lease area.

“New entrants”: Individuals or companies not connected with individuals or companies that are currently extracting peat from Crown lands in New Brunswick.

“Non-renewable resource”: Peat is in fact a renewable resource, but because it takes many centuries to accumulate any significant thickness of peat, it is treated as a non-renewable natural resource.

“Peatland”: An area with or without vegetation with a naturally accumulated peat layer of at least 40 cm at the surface.

“Peatland area”: The total Crown land area on a specific peatland as determined from the Peatland Inventory database (Keys and Henderson, 1988).

“Reclamation”: A series of actions that include the stabilization of the soil surface, assurance of public safety, aesthetic improvement, and usually a return of the land to what, within the regional context, is considered to be a useful purpose.

“Restoration”: the process of assisting the recovery of an ecosystem that has been degraded, damaged or destroyed.

“Wetland”: Land that has the water table at, near, or above the land's surface, or which is saturated, for a long enough period to promote wetland or aquatic processes as indicated by hydric soils, hydrophytic vegetation, and various kinds of biological activities adapted to the wet environment.

2.0 Scope and Application

2.1 Application

This policy applies to all peatlands located on Crown lands and replaces any other provincial policy on peat mining.

2.2 Authority

Quarriable Substances Act, chapter Q-1.1

- Section 9 (1) The Minister may grant a peat lease authorizing the taking or removal of peat from Crown Lands.
 - Sections 9 (1 and 2) Reclamation plans must be submitted to the Minister for approval.
 - Section 9 (3) Reclamation security must be provided to the Minister.
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3.0 Allocation of Rights to Crown Peat

3.1 Introduction

Competitive process

The acquisition of rights to extract peat on Crown Lands is subject to a competitive process administered by the Minerals and Petroleum Development Branch. Crown peatlands of less than 40 ha in area may be excluded from this process.

Companies or individuals may at any time express their interest in the commercial development of a specific peatland area by completing a Quarry Application Form available at any DNR office. Upon receiving such an application, the Minister may decide to initiate a public request for proposals.

3.2 Request for proposals

Public announcement

When the Minister decides to proceed with a request for proposals, a formal public announcement is made inviting any company or individual to submit a development proposal. Companies or individuals holding a Peat Exploration Licence are not eligible.

Selection of a peatland area

At the discretion of the Minister, the peatland area proposed may consist of:

- A specific peatland; or
- An unspecified peatland area consisting of a maximum of approximately 250 ha of commercial peatland area. That area may include a grouping of two or more contiguous peatlands. A grouping that consists of two or more geographically separated peatlands may be allowed but it shall not lead to the splitting of a group of contiguous commercial peatlands.

3.3 Evaluation of proposals

Evaluation committee

- A three member inter-departmental committee, consisting of two representatives from DNR and one from the Department of Business New Brunswick evaluates the proposals.
- The committee is chaired by DNR.

Selection criteria

Proposals are examined according to the following criteria:

Primary considerations

- Economic benefits to the Province: value-added production, capital investment and employment
- Replacement of lost base capacity on Crown lands to maintain current level of activity and employment.

Secondary considerations

- Past performance and risk assessment
- General business information and financial performance

New entrants:

- New entrants are required to process in the Province 100% of the peat extracted into value-added peat.

Condition for expansion:

- Any proposal to expand base capacity must direct 100% of the proposed additional production to value-added peat.

Final decision After evaluating the proposals, the committee forwards its recommendations to the Minister of Natural Resources. The Minister reserves the right to reject any or all proposals. Acceptance of a proposal leads to the issuance of a **Peat Exploration Licence**.

3.4 Peat Exploration Licence

Introduction

- A **Peat Exploration Licence** gives the holder exclusive rights to apply for a peat lease for a specific peatland area.
- Only one licence may be held at any one time by a company or an individual.

Terms and conditions

- The application fee for a Peat Exploration Licence is \$100.
- The term of the licence is of one-year duration with provision for a single, one-year renewal.
- Where the term of a peatland exploration licence expires and the applicant has not submitted a **peat lease** application in the form of a feasibility study report as per paragraph 9(1)(a) of the Act, the application process is terminated.

3.5 Peat Lease

Introduction

- A **Peat Lease** is required to extract peat from Crown lands.

Terms and conditions

- Only one Peat Lease may be issued on any specific peatland.
- A Peat Lease is issued for a term not exceeding ten years.
- The Minister may renew a peat lease and upon renewal, add or delete terms and conditions.

4.0 Adding Value to the Peat

What is value-added peat? Value-added is defined as any process, activity or technology that adds a significant amount to the existing value of a primary product. Value-added activity does not necessarily increase overall employment in industrial operations but given increased further processing capabilities, it should make resource industries more stable, more viable and less susceptible to commodity price fluctuations.

Base capacity for ordinary peat	In New Brunswick, any future increase in base capacity production on Crown peatlands shall be exclusively through value-added activities. This implies capping the production of ordinary peat at the 2001 level.
Defining value-added peat	With respect to the peat mining industry, the following definitions of <i>value-added</i> will apply as follows: <ul style="list-style-type: none"> • Screened and packaged material consisting of 100% peat will be considered value-added if the product is made in New Brunswick and sold for a plant f.o.b. price that is at least twice the base price of an equivalent volume of ordinary peat; and • Manufactured peat and peat-based products are considered value-added if they are made in New Brunswick and sold for a plant f.o.b. price that is at least twice the price of an equivalent volume of ordinary peat.
Calculating the price of ordinary peat	The ordinary price of peat is calculated using the average peat production value of the two most recent years for which information is available for New Brunswick as published by Statistics Canada (Publication No. 26-202-XIB - Canada's mineral production). If such information from Statistics Canada is not available or is not reasonably current, similar information may be substituted.

5.0 Feeder Operations

Definition	Feeder operations are defined as small operations producing peat from peatlands of less than 40 ha in total surface area. These operations typically sell bulk peat to major operators who process, bale and market the final product.
Terms and conditions for feeder operations	An application for a small-scale peat-only development on Crown Lands may be given consideration under the following conditions: <ul style="list-style-type: none"> • A firm long-term, at least five years, contractual agreement must be established with one or more commercial operators located in New Brunswick that can guarantee a minimum price for the peat and a minimum annual volume purchase. • A business plan must be submitted for approval and it must demonstrate conclusively that the project is viable. • The development proposal is subjected to the same evaluation criteria that apply to commercial peat operations, including the necessity to undertake site reclamation work after cessation of extraction activities and the requirement to register the project under the Environmental Impact Assessment regulation, <i>Clean Environment Act</i>.

6.0 Reclamation of Peat Extraction Operations

6.1 Introduction

Reclamation plan	All peat lessees shall have a reclamation plan approved by the Minister of
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Natural Resources for all peatland area that currently falls within the boundaries of a peat lease. All reclamation plans shall be developed to ensure that peatlands that have been used for peat mining are, upon cessation of activities, restored to a natural wetland habitat. An alternate economic use of the land may be considered, provided the basic wetland function of the peatland is preserved.

Reclamation security

As part of the approved plan, each lessee shall post with the Minister a reclamation security. The intent of the reclamation security is to ensure that reclamation activity is carried out in accordance with an approved reclamation plan.

In situations where the lessee is unable to meet the reclamation commitment, the reclamation security shall be used by the Minister to complete any unfinished reclamation obligation.

6.2 Administrative Process

Reclamation plan

The holder of a Peat Lease shall have on file with DNR an approved reclamation plan that includes:

- An operational map showing the current situation.
- A reclamation map showing how the site will look after closure.
- A report describing the proposed reclamation activities, associated costs and any potential environmental impacts of these activities.

The guiding principle is that upon completion of the reclamation plan, the site shall be safe for public and for wildlife; vegetated and physically stable; and non-polluting of the ambient air, water and land. Appendix 1 offers guidelines to assist in the preparation of a reclamation plan.

Periodic reviews

- The peat lessee is responsible to conduct periodic reviews of an approved reclamation plan to ensure that it conforms to the policy.
 - The reclamation plan is reviewed at the time of renewing the lease and more often if required by the Minister.
 - At any time, a peat lessee may forward a request to revise a reclamation plan or to reassess reclamation security obligations.
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6.3 Reclamation Security

Introduction

A reclamation security is required for each individual peat lease. At any time, cash security held will only be equivalent to the cost of reclaiming peatland area that is actually disturbed, i.e. area that is in production or that is abandoned but not restored.

Using the security

The Minister may take action to realize on the reclamation security or require that all or part of the security be used to reclaim all or part of the extraction site, when :

- Compliance with the approved reclamation plan has not occurred.
- All or part of an extraction site has been permanently closed without obtaining an approval from the Minister;
- All or part of an extraction site has been abandoned.
- The lessee becomes insolvent.

Forms of reclamation security

The reclamation security shall be in one of several forms prescribed by regulations.

- For companies that provide deposits of money, the required security may be paid in staged instalments over a portion of the lifetime of the operation as described in 6.4 and interest will be paid by the Province.
- For any other method of providing security, the full security amount shall be provided at once and no interest will be paid.

Reimbursing the security

At any time during the time a lease is active and before final closure, a lessee may access part of the funds held in security to conduct approved reclamation work:

- Half of the amount held per hectare is paid upon completing the approved work.
- The remaining half is paid after reclamation has been achieved as per approved criteria.

Release from reclamation obligations

A minimum waiting period of five years shall follow an approved restoration activity before a lessee may be released of his obligations.

Before being released from his obligation to reclaim a former peat extraction site, the lessee shall provide to the Minister, the following information in writing:

- An analysis and evaluation by an independent DNR accredited consultant of monitoring data from the reclamation program and personal field observations indicating compliance with requirements established in the approved reclamation plan.
 - A list and assessment of any remaining environmental liabilities.
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6.4 Specific Cases

Category 1: Permanently closed operations

For leases that have permanently ceased operation before December 31, 2005:

- No additional security is required.
- Lessees are required to provide annual proof that scheduled reclamation activities have taken place as per the approved reclamation plan.
- DNR contributes a grant of \$250 per hectare of Crown peatland formerly under operation. Half of that amount is paid upon completing the approved reclamation work; the other half being paid after reclamation has been achieved as per criteria.

Category 2: Operations active in 2002

For peat leases that were in operation in 2002:

- The security is based on \$750 per hectare of disturbed Crown peatland area.
- DNR contributes a grant of \$250 per hectare of Crown peatland under operation. Half of that amount is paid upon completing the approved

reclamation work; the other half being paid after reclamation has been achieved as per criteria.

- The security is collected over a period equivalent to 75% of the remaining estimated life expectancy of the operation.
- The grant is paid out over a period equivalent to 75% of the remaining estimated life expectancy of the operation.

**Category 3:
All other
operations**

For any new lease and all leases that were not in operation in 2002:

- The security is based on \$750 per hectare of disturbed peatland area.
 - There is no DNR grant.
 - Security payments begin five years after peat extraction begins.
 - The security is collected in equal payments over a period of fifteen years or over 75% of the remaining estimated life expectancy of the operation, whichever period is the least.
 - Any old security held by DNR is credited to the appropriate peat lease.
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7.0 Policy evaluation plan

Introduction

Within the framework of any good policy design and implementation plan, a comprehensive evaluation procedure is essential in determining the effectiveness of the policy and in providing the basis for future decision-making. In designing a policy evaluation plan, DNR needs to consider how the policy objectives can be accurately and effectively measured and how the evaluation data collected will be used as a basis for decision-making. The evaluation process consists of looking at the particular policy in practice, both in terms of objectives and means employed.

7.1 Policy Review

**Questions to be
asked during
the review**

- Has the level of secondary processing of peat increased?
- Has existing employment level been sustained?
- Is the production of unprocessed peat from Crown lands leveling off?
- Is production of peat from freehold land increasing?
- Are abandoned former commercial extraction areas being restored to wetland habitat or reclaimed to alternate economic use?
- Is the security sufficient to guarantee site reclamation in the case of default by the lessee?

**Collection of
data**

- Production and employment statistics for all Crown peat leases and freehold operations.
- Land use patterns on Crown peat leases: peatland under production, abandoned, restored, in natural state.
- Actual costs of restoring former production areas in New Brunswick.

Responsibility

The Peat Resources Geologist is responsible for compiling the data

Collection and storage of data

- Semi-annual peat royalty reports submitted by peat lessees are used to compile production and employment statistics. Individual reports are confidential and stored in Bathurst (Minerals and Petroleum Development Branch), in Fredericton (Recorded information services) and at the Department of Finance in Fredericton.
- Compiled provincial statistics are published twice a year by MPDB (March and August) and posted on the DNR's public web site.
- GIS maps of individual peat operations are updated annually during the fall and winter months based on data collected during the summer's field season. Maps and land use statistics are stored in electronic form.

Consultation

- Selected DNR agencies, Business New Brunswick
 - New Brunswick Peat Producers Association
 - DNR staff
 - Proposed revisions to the policy are to be accompanied by a summary of the results of the internal and external consultations identifying any significant or recurring comment.
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8.0 References

Sources

Keys, D. and Henderson, R.E. (1988) An investigation of the peat resources of New Brunswick. New Brunswick Department of Natural Resources. Open File Report 83-10.

Quinty, F. and Rochefort, L. (2003) Peatland Restoration Guide, second edition. Published by the Canadian Sphagnum Peat Moss Association and the New Brunswick Department of Natural Resources. Available at the following web address : http://www.gnb.ca/0078/minerals/Peat_History-f.aspx#Legislation

Peatland Ecology Research Group (PERG) – Université Laval :
<http://www.gret-perg.ulaval.ca/index.php?id=7585&L=1>

9.0 Inquiries

General contact

Inquiries concerning this policy or about peat lease applications may be directed to the Peatland Resources Geologist, Minerals and Petroleum Development Branch at Phone (506) 453-7429 or Fax: (506) 547-7694 or Email: Jacques.Thibault@gnb.ca

Appendix A

Guidelines for a Reclamation Plan

Introduction The guidelines provided below are intended to assist holders of peat leases in preparing, submitting or updating a reclamation plan. A reclamation plan consists of three basic elements:

- An operational map
 - A reclamation map
 - A reclamation report
-

Operational Map The operational map describes the current land use status and includes:

- The projected maximum extent of the operation.
- The boundary of the peat lease and the perimeter of the peatland.
- Current drainage ditch system, sedimentation ponds, location of infrastructure (roads, buildings, storage areas, and electric power transmission lines), natural areas and conservation zones.
- Vegetation borrow areas; in the absence of local sources, identification of sources in the report (i.e. another operation or an adjacent natural peatland).

Reclamation Map The reclamation map consists of a conceptual presentation of how the site will look after closure, when reclamation activities have been successfully completed.

This includes the following elements:

- The projected position of the 40 cm peat depth contour line at the end of operations (see note¹).
- Infrastructure removed.
- Blocked sections of ditch system.
- The outline of sectors to be restored as forest habitat, open water, wetland vegetation, or another form of natural restoration.

The following guidelines apply:

- Forest habitat: only areas with less than 40 cm of peat may be restored as forest habitat. In restoring a forest habitat, the goal is to establish a forested landscape similar to what is commonly found around peatlands.
 - A maximum of 25% of the peatland may be restored as open water area. The percentage may be exceeded in special cases where other options are not possible or impractical
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¹ There is no obligation to maintain a minimum thickness of peat at the end of commercial operations. The 40 cm is only used to delineate areas that may be restored as forest habitat.

- Sphagnum revegetation following the method developed by PERG² and described in the Peatland Restoration Guide (Quinty and Rochefort, 2003).

Other options may be considered but any such proposed activity should be compatible with the basic nature of the site which is a wetland.

Reclamation Report

A short report will be prepared to provide or address the following items:

- Geographic setting including PID number of the property, a regional scale map and an aerial photograph showing the location of the operation and the access route.
- Runoff pattern: current water dispersal pattern compared to the situation after reclamation. How will closing the site and blocking ditches affect the way water is dispersed? Will the proportion of water draining towards the various streams and watersheds change significantly?
- Life expectancy of the peat extraction operation and a schedule of projected peatland reclamation activities.
- Description of the methods used to reclaim the former peat extraction site: reforestation, open water creation, revegetation and ditch blocking.
- Proposed monitoring program to determine the success of the reclamation program.

² PERG : Peatland Ecology Research Group