

**Mineral Resource
Policy for
New Brunswick**

**Natural Resources
and Energy**

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INTRODUCTION

Following the release of the "Discussion Paper: Mineral Resource Policy for New Brunswick" in May 1992, consultation within government and with industry associations was carried out. Consideration was given to provincial policies (economic development, education and energy); investigation of environmental, rural land use and sustainable development issues; developments in other jurisdictions; and recent reports concerning competitiveness and human resources.

The following provincial agencies were involved in the preparation of the policy:

- Environment (DOE)
- Economic Development and Tourism (EDT)
- Municipalities, Culture and Housing (MCH)
- Advanced Education and Labour (AEL)
- the Occupational Health and Safety Commission (OHSC)
- Education (EDUC)
- Policy Secretariat (PS)
- the Regional Development Corporation (RDC), and,
- Natural Resources and Energy (DNRE) .

In addition, the provincial Finance Department, Natural Resources Canada and Environment Canada were consulted on specific issues.

The mineral resources in New Brunswick are owned by the Province and, as such, create a responsibility for resource management and reinforcement of goals related to environmental protection and sustaining economic benefits from the mineral sector .

For the most part, inventories of New Brunswick's mineral resources are difficult to determine. Since the resources are nonrenewable, it is critical to identify new reserves to sustain the mineral sector and it is equally important to attract private investment in mineral exploration and development by providing geological information. The government also has an active role in later stages of mineral sector activity including development, mining, milling and processing, manufacturing, trade, recycling and reclamation.

The province is endowed with a variety of known mineral deposits and areas with high potential for additional mineral resources. There are 1,100 mineral occurrences and more than thirty significant metallic mineral deposits known in New Brunswick. Significant mineral resources include copper-lead-zinc-silver, gold, tin-tungsten-indium, and antimony deposits; nonmetallic minerals including potash, peat, coal and limestone; and industrial minerals such as building stone and aggregates (sand and gravel). There also appears to be potential for oil, natural gas and several other mineral products.

In 1992, the New Brunswick mineral sector directly employed 4,500 persons. Most of the associated economic benefits to the province were realized from base metals (zinc, lead and copper) mining operations in the Bathurst area and from potash mining in the Sussex area. Peat operations in the Acadian Peninsula and coal mining in the Minto-Chipman area also provided significant economic benefits to the province and to local economies. Salaries and wages total more than \$150 million annually and the purchases of goods and services by the mineral industry are in the order of \$200 million per year .

The focus of the policy is to address declining mineral reserves, particularly base metals, to improve competitiveness in mineral markets, realize and sustain long-term economic benefits, and maintain sound public sector management and finances.

INVESTMENT CLIMATE AND LAND USE

Actions to provide an attractive investment climate and address industry competitiveness will include a taxation review, support for development of mineral processing and mine reclamation technology, integration and streamlining of the regulatory process, support for training and infrastructure development, and improved public awareness of minerals and the mineral sector. Joint working groups of industry, government and other stakeholders will address environmental and public awareness issues. The coordination of the project review process will be improved and DNRE will strengthen its role as guide to industry and coordinator of the review process.

In addition, initiatives designed to address concerns regarding the land use planning process and protection of mineral property rights will be implemented. Specifically, provisions for assessment and protection of mineral resources for land use purposes, improved information access for planning, strengthening the coordination of the regulatory review, and improvement of the level of public awareness will be initiated .

Existing provisions to address land use and land access issues will be continued and improved, where possible. These provisions include land use information included on claims maps and DNRE input to planning documents. The *Mining Act* also provides mechanisms for interaction with landowners and dispute resolution, and sets requirements for mine reclamation.

PRIORITY INITIATIVES

Of the initiatives presented in the policy, the following are considered of the highest priority:

- (a) focus detailed geological investigations in areas of high mineral potential
- (b) support technology development to enhance reserves, processing and mine reclamation (demonstrate reclamation technology for sulphide wastes)
- (c) review taxation issues to address competitiveness, higher value products, increased investment in exploration, environmental issues, and revenues
- (d) provide one-stop-shopping (an integrated and streamlined review process for environmental, land use and mining regulations)
- (e) develop higher value products (mineral resource strategies, alliances)
- (f) address land use and land access issues (integrated review process, implementing Public Communication Strategy, Resource Assessment Principle, Protected Mineral Reserves Designation).

Accelerating certain geological investigations and supporting technology development for processing and environmental issues are of the utmost priority for government in addressing future resource management and sectoral development.

MINERAL RESOURCE POLICY FOR NEW BRUNSWICK

MISSION STATEMENT

The government is committed to the long-term management of its mineral resources and support for development of the mineral sector, in a manner that both increases and sustains the economic value to present and future generations, and ensures the protection of the environment.

ISSUES AND GOALS

Issue 1: Mineral Ore Reserves

Goal: to help the private sector identify new mineral reserves and enhance known reserves

Issue 2: Value Added and Diversification

Goal: to increase the value of mineral resources to New Brunswick

Issue 3: Environmental Protection

Goal: to ensure environmental protection in relation to mineral development

Issue 4: Institutional Framework

Goal: to provide an effective fiscal and regulatory framework

Issue 5: Public Information and Awareness

Goal: to improve public awareness regarding the mineral industry

ISSUE 1 : MINERAL ORE RESERVES

GOAL: *To help the private sector identify new mineral reserves and enhance known reserves*

The following initiatives are designed to address depletion of strategic reserves and related impacts on employment, provide basic information for managing the resources, and reduce investment risk. They are also intended to encourage private investment in both mineral exploration and development, and optimize the return from New Brunswick's mineral resources.

INITIATIVES:

(a) ***Identify and Evaluate Mineral Resources***

Detailed geological mapping of areas with high mineral potential and investigations of mineral deposits will be more focused, with primary emphasis on the Bathurst mining camp.

DNRE will assist the private sector in targeting the exploration work necessary to replace declining base metal reserves. The geological mapping and investigations will include bedrock and Quaternary surveys, integration of geophysical and geochemical surveys and management of archival earth material (rock, till, core samples, etc). DNRE's geological work relating to nonmetallic minerals, and specialized and precious metals will continue.

(b) ***Support Development of Technology to Enhance Reserves***

Technical and financial support will be provided for research and demonstration of technologies to enhance known ore reserves and for recycling of mineral products and wastes. Enhancement of deposits through advances in processing and recovery will be pursued. Deposits, such as the tin-tungsten-indium ores of Mount Pleasant, the copper-lead-zinc of the Bathurst mining camp, and a variety of nonmetallic mineral resources will receive priority.

(c) ***Expand Computerized Database***

The computerized geoscience and mineral deposit databases will be expanded in size and modelling capability. Expertise in geological modelling will continue to be provided to serve and advise the mineral industry. These databases will be integrated with other resource management databases to serve resource and land use managers and project planners. For example, the existing drilllogs for mineral deposits and for natural gas and oil exploration will be computerized to develop models for further exploration by the private sector. The computerized database is part of a larger geoscience information base that includes maps, reports and scientific literature, as well as claim data and drill-core libraries.

(d) ***Provide Expertise to Assist Exploration Work; Provide technical assistance and evaluate incentives for prospecting***

Enhance and maintain scientific and technical expertise to target and assist mineral exploration by the private sector. Focus information and advisory services, resource promotion activities and training programs in areas with high potential for mineral ore reserves. The specialized geological expertise is critical in gathering, interpreting and modelling geological information, advising exploration interests and attracting investment in mineral exploration. Options for incentives to prospecting will continue to be explored.

ISSUE 2: VALUE ADDED AND DIVERSIFICATION

GOAL: *To increase the value of mineral resources to New Brunswick*

To improve the long-term competitive position of the mineral sector, specialized markets and the production of higher value products in New Brunswick must be developed. This approach will offer long-term economic benefits to New Brunswick including employment opportunities. Developing technology to improve metal recovery is key to increasing the utilization and economic value of our mineral resources, enhancing manufacturing and processing opportunities, and encouraging existing industry to stay in New Brunswick.

INITIATIVES:

(a) *Prepare Mineral Resource Strategies*

A strategy for each major group of minerals will be developed. *Development Strategies for Specific Deposits* and *Resource Allocation Policies* for peat and other nonmetallic mineral resources will also be designed. Provisions for the development of new mines, expanding existing operations or re-opening closed mines will be examined. Representatives from the Departments of Economic Development & Tourism, Natural Resources & Energy, and the Environment will continue to work together to address opportunities for and constraints to development.

(b) *Continue and improve support for technology demonstrations*

Government will continue financial support (e.g., industry-government cost-shared program) for technology development in the areas of mineral processing, mining and environmental protection. Assistance in finding additional funding to support demonstration projects, such as, the ferric chloride leach process and other extraction technologies for processing base metal ores and tailings will also be provided. Development of these technologies is required to address certain difficulties in processing New

Brunswick's base metal ores, to improve the economics of known deposits, to improve energy efficiency, to conserve water resources, and reduce waste.

Government recognizes that the development of technological improvements is one of the most important areas for support in order to address industry competitiveness, to increase the value of our resources, and to sustain the local mineral industry.

(c) ***Form Technology Development Alliances***

Form interdepartmental alliances and partnerships with industry, the Research and Productivity Council, CANMET (federal technology research facility), Regional Economic Development Commissions and universities to support technology development for deposit enhancement and to address processing and metal recovery difficulties. The Department of Natural Resources & Energy (DNRE) in conjunction with the Department of Economic Development & Tourism (EDT) will enhance the government's programs supporting technology development. DNRE will contribute technological and processing expertise to direct the program and government support to industry, and the Department of Economic Development & Tourism will provide financial advice and support. Closer cooperation on promotional work, for example publications supporting the development of certain resources, will also be encouraged.

(d) ***Form Market and Product Development Alliances***

Form interdepartmental alliances and partnerships with the Research and Productivity Council and Natural Resources Canada to address market research and development of higher value mineral products. Partnerships with Regional Economic Development Commissions and universities will also be established. The development of alliances involving financial, manufacturing and trading firms will be encouraged and supported. DNRE will provide mineral resource and technological expertise and fulfil its role as resource manager, and EDT will provide financial assistance, market research and trade expertise for manufactured products.

The potential for market and product development for polymetallic ores and industrial minerals will be considered. In addition, product development for evaporites will be investigated further .

(e) ***Support Upgrading of Infrastructure***

Government will support the maintenance and upgrading of infrastructure for development by including sector considerations in provincial energy and transportation policies, and by making representations to agencies outside provincial jurisdiction. Transportation considerations, the efficient use of energy and reasonably priced energy are important to the competitiveness of the mineral industry.

(f) ***Adapt training and skill upgrading to meet industry needs and to produce higher value products***

Further develop programs for continuous upgrading and updating of technical skills, apprenticeship for trades, acquisition of skills necessary to produce higher value products, literacy and numeracy. DNRE will encourage industry and labour to heighten their role in training and facilitate initial industry-labour contacts with the Department of Advanced Education and Labour .

Specialized training will play a key part in the shift to producing higher value products. As well, developing multiple and complex skills will be necessary to serve the changing industry demands. DNRE will assist, where possible, in finding financial resources to assist training initiatives. The government will also continue to ensure that industry provides safe and healthy working conditions for employees and appropriate safety training.

In addition, training and planning to address adjustment of the workforce after significant mineral resources have been depleted will also be initiated. Industry, labour and government will be involved in these training and retraining initiatives.

ISSUE 3: ENVIRONMENT PROTECTION

GOAL: *To ensure environmental protection in relation to mineral development*

Effective technologies and mine reclamation strategies are needed to ensure environmental protection. Of prime concern are those mineral sector activities that generate or have the potential to generate long-term acidic drainage. Most mineral sector activity impacts can be prevented or addressed with proven technology and engineering standards, but special measures are required for base metal operations at sulphide deposits. Both declining reserves and environmental constraints are important issues in considering the development of new sulphide deposits.

The Premier's Round Table on Environment and Economy recommended that we "create a mining industry which provides economic benefits without leaving behind a legacy of serious environmental problems." The integration of environmental and economic considerations is essential to sound resource management. Internalizing environmental costs will be further emphasized to ensure the integration of environmental and economic factors in decision making. High standards for environmental quality will improve the long-term competitiveness of the industry and enhance the quality of life for New Brunswickers.

In the last three decades, the understanding of environmental impacts associated with the mineral industry has increased and has led to more stringent environmental protection standards. Major improvements in effluent treatment were introduced in the 1970's and advances in mine reclamation were initiated in the 1980's. It is important to view the approach to reclamation of older sites and the planning of new operations within this historical perspective.

The policy initiatives are based on a clear understanding of environmental concerns caused by past and present operations, and the commitment to address existing situations and prevent future difficulties. Several new mines have already demonstrated the ability of the mineral sector to protect environmental quality.

INITIATIVES:

- (a) ***Ensure mine development and the reclamation/rehabilitation of mine sites meet identified performance standards.***

In keeping with the principle of recognizing and internalizing the full costs of environmental protection, complete and fully costed mine development and reclamation / rehabilitation plans will continue to be required for all mineral development proposals. Specific guidelines will be developed to clarify the performance standards to be met for mine development and reclamation / rehabilitation for the different types of mineral sector activity in the Province.

Special emphasis will be placed on the development and reclamation of sulphide ore deposits. Guidelines will address operational issues such as subaqueous disposal of tailings and the use of liners to allow for future development of sulphide ores in an environmentally acceptable manner. The goal for new mineral development is to eliminate long-term sources of contamination and avoid the need for treatment in perpetuity. Treatment in perpetuity as a planned reclamation strategy is incompatible with the principles of sustainable development.

To ensure that monies are available to undertake planned reclamation / rehabilitation, the Province will continue to require the provision of financial securities in association with mineral development. The existing legislation will be reviewed to ensure a fair and equitable system of funding such securities.

- (b) ***Encourage review of tax treatment of reclamation costs***

The Province supports the concept that future reclamation costs are costs of operation. As such, the Province will continue to advocate changes in the federal tax treatment of reclamation costs. Revisions to the provincial *Metallic Minerals Tax Act* to allow contributions to a reclamation fund as a deduction in calculating taxes payable are under review in conjunction with an overall evaluation of taxation affecting the mineral sector in New Brunswick (Refer to Issue 4 (a)).

(c) ***Support the investigation of technology for environmental protection and mine reclamation***

Financial support will be provided for research and demonstration of technology addressing environmental protection and mine reclamation issues, particularly acidic drainage. In this manner, the province will continue its commitment to the national Mine Environment Neutral Drainage (MEND) Program, a joint research program funded through industry, provincial and federal sources. From the provincial perspective, high priority will be placed on projects such as the demonstration of reprocessing or neutralizing sulphide tailings, as recommended by the Premier's Round Table on Environment and Economy.

(d) ***Establish working group to incorporate principles of Sustainable Development for mineral management and development***

A Mineral Sector Working Group, consisting of industry, government and other stakeholders knowledgeable of industry conditions, will be created to address pertinent issues. A Subcommittee on Sustainable Development will be initiated:

- (i) to establish environmental auditing of the mineral sector ,
- (ii) to prepare a sustainable development strategy for mineral management and development,
- (iii) to assist in addressing significant environmental issues, and,
- (iv) to receive an annual report on the mineral industry's environmental performance from the Standing Committee on Mining and the Environment.

The subcommittee will be co-chaired by DNRE and DOE representatives. This initiative will build on the work started by the Round Table on the Environment and the Economy.

Some of the issues to be addressed include the continued integration of economic and environmental criteria in decision making, acidic drainage, mine reclamation (for base metal, coal and peat operations), water and air pollution control, waste reduction, recycling, water and energy conservation and efficiency, product design, habitat conservation and rehabilitation, and handling and disposal of toxic substances.

ISSUE 4: INSTITUTIONAL FRAMEWORK

GOAL: *To provide an effective fiscal and regulatory framework*

The government framework, particularly the regulatory process, must provide an attractive climate for investing and working in New Brunswick, and must be effective in meeting environmental, land use planning and resource management objectives.

A number of measures to integrate administrative procedures have already been undertaken. For example, the Standing Committee on Mining and the Environment has been established to coordinate a major part of the review process for new projects. To integrate environmental, land use and mining regulations, the Committee consists of representatives from DNRE, DOE, the provincial Department of Municipalities, Culture and Housing and the federal environment department (Environment Canada) .The Standing Committee often meets with developers to discuss their proposed developments. The Committee is co-chaired by DNRE and DOE. DNRE is usually the first contact for proponents, and continues to provide advice and assistance to project developers through the project review.

In conjunction with the Standing Committee, DNRE, EDT and DOE share information on development issues and coordinate economic development and sustainable development directions. To minimize the number of committees and improve coordination, the Standing Committee will address most of the regulatory issues and serve as the focal point for government activities related to the mineral sector .

Timing, cost and the clarity of regulatory requirements are industry concerns that will be addressed by government agencies through the following initiatives.

INITIATIVES:

- (a) ***Review Metallic Minerals Tax Act, royalties, and other taxation affecting the mineral sector***

Taxation is a significant concern for the mineral industry in New Brunswick and across Canada. The proposed review will encompass the cumulative effect of taxes on New Brunswick's mineral sector activities. Ideally, the taxation measures will encourage industry alliances and production of higher value products in New Brunswick, will be competitive with other jurisdictions, provide a fair royalty for the purchase of mineral resources, generate revenue for government, encourage long-term mineral exploration in high-potential areas, and attain reclamation and environmental goals.

- (b) ***Continue to streamline and integrate the review process for environmental, land use and mining regulations***

Additional measures to provide "one-stop-shopping," and make the process more timely, open and efficient will be evaluated and pursued . A major review of environmental assessment requirements is underway to harmonize federal and provincial processes and reduce duplication. Changes in the land use planning process are also imminent. The Standing Committee will continue to review the approval process and recommend further changes.

- (c) ***Incorporate "Resource Assessment Principle " (RAP) in land use planning, environmental planning and integrated resource management***

The Province will incorporate an assessment of known and potential mineral resources and other resources on lands being considered for land use exclusions.

- (d) ***Develop provisions to designate "Protected Mineral Reserves" for high-value or strategic deposits***

Such provisions may be needed to prevent other types of development from preempting the future development of an important resource, for example, aggregate or limestone resources if they are uncommon or unique. Designation as a protected mineral reserve will identify important resources and serve as a guide in land use planning.

- (e) ***Strengthen industry, provincial government and university partnership in program planning***

This will be particularly beneficial in coordinating geoscience and technology development programs and economic development strategies. DNRE representatives will actively promote the statement of joint program goals by advisory committees and working groups.

ISSUE 5: PUBLIC INFORMATION AND AWARENESS

GOAL: *To improve public awareness regarding the mineral industry*

The public perception of mineral-related activity affects every aspect of the sector -- its ability to raise investment capital for exploration, development and other value-added activity, to attract new employees, and to obtain environmental and land use approvals. In particular, a negative public response affects the decision-making process including government economic development priorities, legislation and programs. The lack of understanding of the sector and, in many cases, an unwarranted negative reaction to mineral activity is prevalent. For example, as indicated in Issue 5: Environmental Protection, there is an important distinction between the environmental problems caused by past operations and the better environmental performance and higher standards of new mining activities.

The government's involvement in addressing the public concerns and public information issues will help the province realize the potential value of its mineral resources and will make New Brunswick a stronger competitor in global markets, more successful in attracting investment and will provide a stronger basis for decision making.

INITIATIVE:

(a) ***Develop and Implement Public Information Strategy***

A subcommittee of the Mineral Sector Working Group (see Issue 3 (d)) will be established to develop and implement a strategy for public information and communication. Industry and other stakeholders will be invited to participate in developing the public information strategy.

The strategy will be designed to improve the public's understanding of the importance of minerals, the mineral industry and of economic and environmental issues related to the sector.

This approach will formalize ongoing public communication activities involving the New Brunswick Mining Association, the Canadian Institute of Mining, Metallurgy and Petroleum, and the N. B. Prospectors and Developers Association. It will also help address industry concerns about the public perceptions of the industry. DNRE will share funding responsibility with industry.