

# Mineral Resource Land-use Information and Policy

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A senior planner and a land-use geologist provide the Minerals and Energy Branch with a focal point for land-use information, policy, and planning relating to mineral resources. The Land-use section provides a link between the provincial government's interests in geoscience and the public's need for geological and mineral resource information. Policy and regulatory analyses are conducted on various land-use, resource and environmental planning initiatives with the potential to affect mineral exploration and development. Principal clients include interested stakeholders in the use of land and resources, such as other resource departments, regional economic development agencies, municipal planning units, community groups, landowners, and non-government organizations. 1997 activities were directed toward the following areas: (1) information services, (2) policy review and planning and (3) integrated resource management (IRM).

## Information Services

The Land-use Section prepares geological, mineral resource, and land-use information, including maps, reports and digital products, using a geographic information system (GIS), to facilitate land-use, resource and environmental planning. The section also provides information to government and its clients on mineral resources, mineral use, mineral potential, land use, IRM, reclamation, mineral recycling, and sustainable development. As in the past, a variety of maps and reports were produced for geotechnical consultants, municipal planners, and departmental staff. The Land-use Section continued to respond to general inquiries about minerals, geology, and related land-use planning issues, as well as specific requests on issues such as Jim Campbells Barren, and presentations at local universities. Specific activities completed or in progress this year include mapping, GIS training, and mineral land-use presentations.

## Mapping

*MRLU Atlas:* The development of a digital, thematic atlas (a set of interactive, digital maps covering the province at a scale of 1:50 000) called the *Mineral Resource Land Use (MRLU) Atlas* continued in 1997. This is a

compilation of digital, mineral-based inventories that will be stored as thematic layers. So far the theme layers include mineral occurrences, sand and gravel deposits, coal seam traces, operating and abandoned mines, quarries and pits, old gold workings, drillholes, geomorphological features, geohazard indicators, mining leases and permits, and special land-use designations.

This year about 90% of all MRLU data were transferred from hard-copy maps and made available in digital form. Development of the digital atlas and a companion database will continue next year, with the addition of more thematic layers.

*Current and Past Producers:* This map was compiled in response to a long-standing need for a reference map of Nova Scotia's mining heritage. It shows the locations of more than 150 major current and former producing mines across the province. This map will be made available as an open file map early in 1998 at scales of 1:500 000 and 1:200 000.

*Land Designation and Ownership:* Nova Scotia's land-use and ownership patterns are the most complex of all Canada's mineral-producing provinces. Last year the Land-use Section began to develop a GIS-based provincial map titled *Land Designation and Ownership Map of Nova Scotia*. This year's work involved verifying and editing the multiple theme layers and compiling a corresponding database to provide details on each land designation, such as accessibility, land-use definitions, corresponding legislation or policies, jurisdictions, agencies and their contacts. This map should be released as an open file map by the Spring of 1998.

*Land Access to Mineral Resources:* This map classifies designated lands according to access limitations for the mineral industry. "No access areas" are closed to the mineral industry, such as a National Park. "Limited access areas" are technically accessible to the industry, although there is some variance in certainty with respect to access and maintaining tenure rights. "General access areas" are open to mineral-based interests providing the policy of asking the landowner for permission first is followed. This policy is used to gain entry to all land in Nova Scotia.

## GIS Training

The Land-use Section provides an in-house ArcView® GIS training service for staff of the Minerals and Energy Branch. Three desk-top GIS courses in ArcView® were offered this year to 17 geological staff including the department's three regional geologists.

## Mineral Land-use Presentations

The Land-use Section coordinated a series of papers presented by four members of staff at the Rural Resources/Rural Development Conference held in Bible Hill in June. The first paper, presented by F. J. Boner, highlighted the role of geoscience in planning and decision-making. The second paper, presented by H. V. Donohoe, focused on the main activities of exploration and mining and their economic effects in rural Nova Scotia. The third paper, presented by P. W. Finck, discussed the potential for kaolin mining and community development in rural Nova Scotia and provided examples from similar mine and plant developments in Georgia, USA. The fourth paper, presented by D. B. Hopper, addressed the need to integrate mineral resource information and land-use planning in Nova Scotia.

In addition, the fourth international conference on acid rock drainage was attended by land-use geologist F. J. Boner, who made a presentation about geoscience and water supply planning at a local workshop on groundwater. Planner D. B. Hopper was invited to a national land-use forum at the annual general meeting of the Federal-Provincial Committee on Land Use, in which he made a presentation on the scope and progress of the department's IRM process. Land-use staff also developed poster panels on land access in Nova Scotia for the annual meeting of the Prospectors and Developers Association of Canada in Toronto.

## Policy Review and Planning

Another important aspect of the Land-use Section involves providing advice on land-use matters and related policy initiatives as they affect the mineral industry. This involves monitoring, reviewing and advising on land, environmental and natural resource-based policy and planning initiatives. The objective is to ensure the protection of mineral resources, land access and mineral tenure for mineral exploration in Nova Scotia. Local land-use priorities, land access, tenure and environmental issues are also monitored and considered in mineral resource management, exploration, mining and

reclamation programs. The section also participates in various intra- and inter-departmental land-use, environmental planning, and strategic development initiatives.

This year the following draft initiatives were reviewed: Mineral Policy Action Plan, Heritage Conservation Act, Endangered Species Act, Fisheries and Coastal Resources Act, State of the Environment Report, Wilderness Areas Act, Department of Fisheries and Oceans Sustainable Development Strategy, and the Municipal Government Act.

Staff also participated in two environmental assessment reviews for the Blueberry Hill Gold Mine at Tangier and the Riverland Development Rock Quarry in Upper Sackville.

## Integrated Resource Management

The need to integrate geological and mineral resource interests with other land- and resource-use planning is clearly identified in the province's Mineral Policy, Nova Scotia's Sustainable Development Strategy, and the department's Integrated Resource Management process. This year, Land-use staff continued to work with the Central Region IRM team and the provincial IRM steering committee, which is known as the Integrated Resource Management/Land-use Committee. The land-use geologist cooperates with the regional geologists in representing geological and mineral-based interests in the IRM process. This involved producing the "Minerals and Energy" section of the Overview Document for Hants and Halifax Counties, and compiling a series of commitment maps (1:125 000 scale) illustrating current mineral industry activity (mineral licences, mining leases and permits). In addition, municipal water supply areas in Halifax and Hants Counties were compiled, updated and plotted on another series of 1:125 000 scale maps for IRM planning. A similar set of maps is being planned for the Eastern and Western regions.

The senior planner provided planning and process advice to the regional IRM teams as well as to the steering committee. At the regional level this involved attending monthly meetings and providing assistance in working through each of the steps in the planning process. At the provincial level draft IRM documents were reviewed for the steering committee, such as "Principles and Process for Integrated Resource Management" and "Provincial Goals and Objectives for Resource Management in Nova Scotia". In addition an internal paper was prepared for the committee entitled "A Review of Resource Management Goals and Objectives in Other

Jurisdictions”, which identified the key guiding elements of IRM planning used in British Columbia, Alberta and Ontario.

This year the major task of writing the department’s IRM framework document was assigned to the senior

planner. The main objective is to provide a clear, easily understood description of the IRM process for the regional IRM planning teams. This project is still in progress.