

**A POLICY FOR THE DISTRIBUTION AND PRICING OF  
GOVERNMENT OWNED GEOGRAPHIC INFORMATION  
FOR THE PROVINCE OF NOVA SCOTIA**

Prepared by the Task Group on Distribution and Pricing  
Land Information Systems Advisory Committee  
NS Land Use Committee

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# **A Policy for the Distribution and Pricing of Government Owned Geographic Information for the Province of Nova Scotia**

## **Purpose**

The purpose of this document is to recommend policy to facilitate the distribution of geographic information and to suggest a means of establishing access fees to government geographic information by the broad range of users who request this information.

**Note:** Technical terms used in this document are defined in Appendix A.

## **Summary of Goal and Policy Recommendations**

### **Goal**

**To provide timely and easy access to government owned geographic information to all users, government and non-government alike, thus encouraging its use and providing a favourable environment for the development of private sector commercial opportunities.**

### **Policy Recommendations**

#### **GENERAL**

- 1. Government will retain copyright to all government owned Geographic Information.**
- 2. The Land Information Management Services Division, Department of Municipal Affairs will be the focal point for the management and distribution of government owned Primary Databases of Geographic Information and products.**
- 3. Development of private sector, commercial opportunities around government owned Geographic Information will be encouraged.**

#### **DISTRIBUTION**

- 4. A directory of all Geographic Information (Primary Databases and Thematic Databases) about Nova Scotia will be provided by Government.**
- 5. A single, distribution/access centre in the Halifax Metropolitan area will be provided through which all provincial Primary Databases and their products will be available.**
- 6. Access will be provided to local coverage of the Primary Databases and their products, within Regions of the Province, wherever practicable.**
- 7. The appropriate departments of government will continue to manage and provide access to Thematic Databases and their products.**
- 8. The dissemination of Geographic Information should be coordinated with broader government efforts currently underway to disseminate information.**

## **PRICING**

- 9. Pricing will be established to encourage use and access to Geographic Information**
- 10. Government owned, digital Geographic Information will be distributed to departments without charge through a partnership agreement with each department.**
- 11. Government may donate government owned Geographic Information to educational and public libraries for reference use only.**
- 12. Access to and use of all government owned digital Geographic Information shall be documented with a license or similar documentation at the time the information is disseminated.**
- 13. Government must approve commercial use of government owned Geographic Information.**

**NOTE:** Nothing in this policy should be interpreted as precluding the province from forming

partnerships with any other group in a joint initiative which may involve data sharing or data exchange.

# **1. Background**

## **1.1 Geographic Information**

There is a growing demand for timely and easy access to current and accurate geographic information about the Province of Nova Scotia, at low cost. Geographic Information has been defined in a number of different ways, however, for the purpose of this document the following definition is used:

Geographic Information is defined as a file or groups of files of information or data which identify attributes about the earth. This information may be stored in or on a variety of formats including: maps, atlases, aerial photographs, publications, index cards, statistical data, computer processible files, paper files, etc. It may contain basic physical measurements at, above or below the surface of the earth as well as socio-economic information.

The term "Geographic Information" has numerous synonyms, such as "Land Information", "Spatial Data", "Geographically Referenced Data", etc.. The terms "Data" and "Information" are often used interchangeably. In this document the term "information" is used, and in most instances, it includes the literal meaning of "data" as well.

Irrespective of format, whether paper, film, digital, etc., geographic information is in ever increasing demand by a growing number of users involved in a variety of activities, within and outside of government. This demand has placed an urgent requirement on government to establish a policy to provide access to its geographic information, particularly, to the distribution and pricing of this information.

Many users, government and non-government alike, have a requirement for access to geographic information in the course of their normal daily business. Geographic information produced or acquired by government, as part of its mandate or as a result of other activities, has great value to these users. Some, particularly in the private sector, see commercial opportunities in a variety of activities related to government owned geographic information; in its raw state, customized or altered in some way, or as value added products. These users want timely and easy access to current and accurate information. In many instances they also state that they want it free, or if there must be an access fee, it should be at a "fair" and "flexible" price. Such statements are typical of both government and non-government users. Government must respond to this variety of requirements for access to government owned information.

## **1.2 Freedom of Information and Protection of Privacy Act**

The new Freedom of Information and Protection of Privacy Act (FIPPA) of July 1, 1994, seeks to provide prompt access to most records under the control of the provincial government and to

protect the privacy of the personal information of individuals. While most of the geographic information discussed in this document is in the public domain, there may be some information, which for reasons of confidentiality, is not for public distribution even under the Freedom of Information and Protection of Privacy Act.

### **1.3 Primary and Thematic Databases**

Government owned geographic information is frequently divided into two distinct groups commonly referred to as the "Primary" and "Thematic" Databases. The Primary Databases are foundation or infrastructure databases that accurately record the geographic position on the ground of easily identifiable physical, cultural or boundary features-- dependent on the database. As such, they form the foundation on which most other (Thematic) databases are built. The Primary Databases are:

Nova Scotia Coordinate Referencing System

Aerial Photography Database

Nova Scotia Topographic Database System

Nova Scotia Property Records Database

The Primary Databases are listed and briefly described in Appendix A. These databases are valuable sources of geographic information. They also provide the infrastructure upon which other databases (thematic) are built. It is through the Primary Databases that the geographic (or spatial) linkage is made between the information and its location on the ground.

Thematic Databases are those that describe a subject or theme. They are normally built upon the Primary Databases which provide the required positional accuracy, and ensure that the Thematic Databases can be integrated, merged or otherwise used one with the other. Examples of Thematic Databases include those which depict geology, soils, vegetation, shipwrecks, aquaculture sites, temperature, population, health, etc..

There is a demand for both types of database; therefore, policy recommendations contained in this document apply equally to each.

### **1.4 Chronology and Recent Evolution of Government Owned Geographic Information**

At present there is no single government policy with respect to the distribution and pricing of government owned geographic information. The following brief chronology of events will help to describe the situation leading up to the present:

### Primary Databases

- < 1972-1994 - responsibility for creation, distribution and pricing of most primary database products was assigned by the province to the Land Registration and Information Service (LRIS). LRIS also established regional Land Information Centres within the province to collect property information and distribute a range of geographic information products.
- < 1984 - establishment of a "Land Information Committee" (subsequently renamed the Land Information Systems Advisory Committee "LISAC" in March 1992) under the Nova Scotia Land Use Committee, to provide interdepartmental consultation and coordination of government owned geographic information.
- < 1990 - government approves in principle a Land Information Policy "to ensure that land information is easily accessed and shared among public and private information users". (See Appendix B).
- < 1991 - responsibility for the coordination and management of a NS Land Information System was assigned to the Department of Municipal Affairs. The Department established a Division of Land Information Management Services in August 1991 to reflect these new responsibilities (See Appendix C).
- < 1993 - responsibility for the Property Records Database was transferred from LRIS to the Department of Municipal Affairs. This included the regional Land Information Centres in Halifax, Lawrencetown, New Glasgow and Sydney.
- < 1993 - the Land Records Management Infrastructure (LRMI) Project was initiated as a joint project of the provincial and federal governments and the private sector. The LRMI project will establish and develop new information technology for land related records.
- < 1993 - an interdepartmental process (the Nova Scotia Committee on Standards for Geographic Information) was established to identify and document provincial standards for government owned geographic information.
- < 1993 - a Nova Scotia Map Fund was established by the government to receive revenue from the sale of government owned Primary Databases and their products. The revenue is to be used to complete Primary Databases and where appropriate to update and maintain them.
- < 1994 - responsibility for the Province's Registry of Deeds was transferred from the Department of Justice to the Department of Municipal Affairs.
- < 1994 - government releases a Nova Scotia Directory of Geographic Data and Information.
- < 1994 - LRIS was closed and its contract responsibilities for the Province of Nova Scotia

reverted to the Department of Municipal Affairs.

- < 1994 - the Nova Scotia Geomatics Centre was created in Amherst under the Division of Land Information Management Services, Department of Municipal Affairs. One of its primary functions is to contract with the private sector for creation of Primary Databases, and to be responsible for the management and distribution of the Primary Databases and their standard suite of products.

### Thematic Databases

The creation, maintenance and dissemination of Thematic Databases have been, and remain, the responsibility of the government departments having the mandate or responsibility for the specific theme.

## **1.5 Current Status - Distribution**

The geographic information management responsibilities for the Primary Databases and their products are being concentrated within the Department of Municipal Affairs as directed by government. The establishment of the Division of Land Information Management Service (LIMS), Department of Municipal Affairs (DMA) in 1991, with its goals and objectives as set out in Appendix C, was a major step forward. As a result of this and subsequent events, the following is a brief summary of the current status of the Primary Databases.

### Primary Databases:

- < ***Nova Scotia Coordinate Referencing System (Survey Control Point Information)***
  - , Responsibility for creation and maintenance of the system rests with DMA. The database is stored and disseminated from the Nova Scotia Geomatics Centre (NSGC) in Amherst and the regional Land Information Centres (LIC's).
  - , Responsibility for the survey of crown lands rests with the Department of Natural Resources.
  - , The Departments of Transportation and Communications, and Housing retain survey capability in support of in-house requirements.
  
- < ***Aerial Photography Database***
  - , Responsibility for the acquisition of aerial photography in support of the Primary Databases and their products ( e.g. topographic and urban mapping) rests with NSGC, LIMS, DMA.
  - , Responsibility for the acquisition of aerial photography for forest resource inventory rests with DNR.

- Storage, reproduction and distribution of prints from all government owned aerial photographic negatives is the responsibility of NSGC, LIMS, DMA.
  - Libraries of aerial photographic prints are held by the NSGC in Amherst, the local LIC and DNR in the Metro Area, and by a number of regional offices of DNR and the LIC's throughout the regions.
- < ***Nova Scotia Topographic Database***
- Responsibility for the creation, distribution and maintenance of the Nova Scotia Topographic Database and of products derived from the database rests with DMA.
  - Reproducible (film) hard copy products of the topographic database are held in a number of locations including the NSGC in Amherst and the LIMS regional LIC's.
- < ***Nova Scotia Property Records Database***
- Responsibility for the management of the Nova Scotia Property Records Database rests with DMA, LIMS in Nova Scotia. Its creation and update is performed in the LIMS regional LIC's. Responsibility for maintenance of the digital database rests with the NSGC. Distribution of products is the responsibility of the NSGC and regional LIC's.

#### Thematic Databases

A great variety of Thematic Databases are created and maintained by numerous government departments, that either have the mandate for the subject matter, or otherwise control the databases. Because of the diversity of disciplines and the expertise required to manage these databases, these departments are the most appropriate organizations to manage, maintain and disseminate products from these databases.

The use of the Primary Database as the foundation for the Thematic Databases ensures a common registration of geographic information, thus enabling information sharing and integration.

If a department wishes to have its government owned geographic information products distributed from a more central source (e.g. the NSGC or some of the DMA's regional, LIC outlets), it should be possible to do so. Such a decision, however, should rest with the database managers of those departments.

## **1.6 Current Status - Pricing**

During 1993 a member of the present Task Group prepared a report for the Land Information Systems Advisory Committee (LISAC) on the results of a survey to determine the prices charged by various departments to access government owned geographic information. The results clearly demonstrated a great range of responses: from the practise of giving information away free; different prices charged for the same product within different sections of the same department; to

departments that have long standing pricing structures. The main conclusion, however, was that there is presently no consistent policy with respect to fees charged for access to government owned geographic information.

With respect to the Primary Databases, until 1994 most of the pricing and distribution issues were handled on behalf of the province by LRIS. Responsibility for coordination of these and other distribution and pricing issues now rests with the provincial government. Thematic Databases, on the other hand, have historically been distributed by individual departments of government. These databases vary so greatly in content, use and popularity that it is understandable that access prices would also vary. A consistent distribution and pricing policy should be established for all types of government owned geographic information, in an effort to remove the existing confusion and frustration currently being experienced by users attempting to access this information.

## **2. Goal**

To provide timely and easy access to government owned geographic information to all users, government and non-government alike, thus encouraging its use and providing a favourable environment for the development of private sector commercial opportunities.

## **3. Policy Recommendations**

### **GENERAL**

### **3.1 Government will retain copyright to all government owned Geographic Information.**

Copyright is defined as the sole right to produce, reproduce, perform or publish a literary or artistic work. Copyright in Nova Scotia government information is held by "Her Majesty the Queen in Right of Nova Scotia".

Government does not relinquish its copyright when it distributes its geographic information. It is only access to the geographic information that is provided for a fee, and the right to use the information for a specified purpose as described in a license or other "right of use" documentation which must accompany the distribution of government owned geographic information. At no time does the government transfer ownership of its copyright through the distribution of its information.

To protect government's interest in the ownership of its geographic information, a statement regarding government copyright, or a copyright symbol, should appear on all government owned geographic databases and products disseminated.

### **3.2 The Land Information Management Services Division, Department of Municipal Affairs will be the focal point for the management and distribution of government owned Primary**

## **Databases and their products.**

Government has designated the Land Information Management Services Division (LIMS), Department of Municipal Affairs (DMA), as the agency with responsibility for management and distribution of government owned Primary Databases and their standard suite of products. LIMS, DMA should be assigned the responsibility for coordinating the implementation of policy recommendations listed in this document.

### **3.3 Private sector development of commercial opportunities around government owned Geographic Information will be encouraged.**

There is great value to government owned geographic information. Opportunities exist for the private sector to add value to and develop the information on a commercial basis. As part of its mandate, DMA must "encourage the development of a strong private sector industry in the land information field." This encouragement should be provided by DMA, and by all departments with responsibility for Thematic Databases, through the establishment of appropriate pricing and licensing practices.

## **DISTRIBUTION**

### **3.4 A directory of government owned Geographic Information (Primary Databases and Thematic Databases) about Nova Scotia will be provided by Government.**

Access to information assumes that users are aware that the information exists. Geographic information about Nova Scotia, collected or acquired by the government in the course of its business, is of great value to government and non-government users alike. There is commercial value to much of this information. Government has an obligation to publicize the information it owns to avoid possible duplication of effort and to promote and respond to possible commercial opportunities for its use.

The Nova Scotia Geomatics Centre (NSGC), Land Information Management Services Division (LIMS), Department of Municipal Affairs has the responsibility to compile and maintain a Nova Scotia Directory of Geographic Data and Information describing all Primary and Thematic Databases owned by the province. This Directory will list all geographic information data sets, describe their content, access policy and cost. It also provides other useful descriptive information about the data sets including the names, addresses and telephone numbers of contact persons responsible for management and distribution of the data set.

NSGC will update, maintain and make the Directory available by publishing a copy, at least annually. The Directory may also be made available in electronic form and through the electronic media. Individual government departments have the responsibility to supply revisions, updates and additions to the Directory as requested by NSGC.

Access to the Directory should be provided as widely as possible. Possible access points include: The Internet, Access Nova Scotia (Government One-Stop-Shops), LIC's, Educational and Public Libraries, etc.

**3.5 A single, distribution/access centre in the Halifax Metropolitan area will be provided through which all provincial Primary Databases and their products will be available.**

There is a requirement for a single outlet in the Halifax area where users can obtain copies of all Primary Databases and their products for the entire Province. This outlet should be established within LIMS, DMA. NSGC will have responsibility for distribution of all provincial Primary Databases and related products. NSGC will be tasked with providing the most efficient method of providing a complete geographic information distribution service for the entire Province.

**3.6 Access will be provided to local coverage of the Primary Databases and their products, within Regions of the Province, wherever practicable.**

Information users have an expectation to access information about their region as close to their place of business as practical. This will be possible with expanded implementation of electronic access to information, however, until then it should not be necessary for users to travel to the metro area each time they wish to obtain information on their region. Government maintains offices within regions of the Province and some of these should serve as information delivery points.

With the recent transfer of the Registry of Deeds offices, DMA now has a complete provincial network of regional offices. DMA should rationalize information delivery service outside the metro area so that equitable access to information is provided to as many residents of the Province as possible.

**3.7 The appropriate departments of government will continue to manage and provide access to Thematic Databases and their products.**

Because of the variety of databases and the requirement that professional interpretation and expertise may be required in support of their use, it is recommended that the appropriate departments continue to manage, coordinate, maintain and provide access to the Thematic Databases. The database managers must cooperate with DMA to adequately describe their databases for inclusion in the Nova Scotia Directory of Geographic Data and Information. These managers should also make every effort to provide equitable access to their information by all users in the Province. At the option of these database managers, the central or regional Primary Database distribution facilities may also be used to disseminate some of the Thematic Databases and their products.

### **3.8 The dissemination of Geographic Information should be coordinated with broader government efforts currently underway to disseminate information.**

Although these policy statements are directed towards government owned Geographic Information only, numerous other information related efforts are presently underway within government. Geographic Information should be considered within the broader context of government information distribution: e.g. Access Nova Scotia, Atlantic On-line, the Information Highway, etc.

## **PRICING**

### **3.9 Pricing will be established to encourage use and access to Geographic Information**

The discussion with respect to providing Geographic Information free, or charging a fee to obtain and use it, is hotly debated both within Canada and internationally. Some countries do not levy fees hoping to encourage use of the information; others charge what the market will bear in an attempt to recover some of the cost of producing it. The U.S.A. federal government policy is to provide information free or, at minimum, for the cost of distribution. This has contributed to a vibrant and growing geomatics industry. Canadian Federal Government departments, such as Natural Resources Canada and Statistics Canada, have taken more of a market based approach to the charge for Geographic Information, and have established prices substantially higher than the cost to distribute it. These federal government agencies have been widely criticized for this approach which information users contend has stifled the growth of the geomatics industry in this country. The information providers have argued that the revenue from sales have contributed significantly to the cost of creating and maintaining the data. In the case of Natural Resources Canada it is claimed that annual sales of National Topographic System data currently amount to a substantial portion of the annual cost of developing the National Topographic Database.

A case can be made for both sides of the issue: to provide information free, or to charge for it. Arguments in favour of providing Geographic Information free of charge include: adoption and use of provincial standards; elimination of duplication of effort; reduced administration with regard to pricing policies or invoicing; faster and simpler distribution and delivery of information; as well as positive encouragement for commercial opportunities.

However, there are costs associated with the distribution of geographic information which must be budgeted within departments responsible for information distribution. Arguments in favour of charging for information include: fees reduce the temptation to request "all of it," (a practice which could place information distributors in an untenable position with respect to control of their budget expenditures); the general fiscal economy in which we find ourselves; and the realization that revenue collected from the sale of Geographic Information can be used to reduce the cost to government of providing the information and can contribute significantly to the timely development of geographic databases.

The Task Group considered a wide range of pricing options based on a set charge per file (i.e. per 1:10,000 digital topographic database file). The range in price per file included:

- Full Cost Recovery \$450
- Market Value \$150
- Nominal \$ 25

(Source: NS Geomatics Centre)

It is of value to note the recent experience of New Brunswick and PEI. It was determined by both Provinces that the previously established prices (\$100 per 1:10,000 topographic file) for their topographic databases were too high, the products were not selling and that the established price was forcing government departments either to do without or to duplicate databases; a move which defeated the initial purpose of establishing the topographic databases. The new price was set significantly lower at \$25 per topographic file.

The Task Group, responsible for the recommendations contained in this document, believe that both the cost recovery and market value approaches may inhibit use of geographic information at this time. They recognize the requirement to generate funds to accelerate the completion and maintenance of the Primary Databases. They recommend, therefore, that a fee be charged for Geographic Information that will promote access to and use of the products.

### **3.10 Government owned digital Geographic Information will be distributed to departments without charge through a partnership agreement with each department.**

Government owned digital databases are created by government for a specific purpose or in response to a government mandate. Data produced in one department is often required in another department in the course of its daily work. This is especially true of the Primary Databases which are used as general reference or often provide the infrastructure for the creation of Thematic Databases. These databases which are or can be used by more than one department are considered to be provincial “Corporate Assets” and are frequently referred to as “Corporate Databases”. Government departments must have easy access to these databases to facilitate their own work. Departments of government working with databases often require complete provincial coverage. Acquisition of these databases at the established price list would cost approximately \$200,000 and that may inhibit use of the data. This would be counter productive in that it could lead to duplication of effort amongst government departments, could result in departments not using the best data available and could lead to loss of adoption of provincial standards. Under the current practice, primary digital databases are made available to departments at no charge. Therefore, it is recommended that for the interdepartmental distribution of government owned digital Geographic Information, the established price be waived and the data distributed under a licensing agreement, without charge.

Specific distribution and licensing agreements for interdepartmental use of data can be negotiated between departments. These agreements would include provisions that would allow for

redistribution within the user department. There would also be provision for the exchange of information for revision and maintenance of the databases.

**3.11 Government may donate its Geographic Information to educational and public libraries for reference use only.**

Government departments may provide Geographic Information to educational and public libraries at no cost, provided that the libraries treat the information as reference material, available to their clients in view only form. This will provide wider exposure and access to the information, encourage research, and provide more direct experience to both students and researchers with the use of Canadian information. Such dissemination of information must also be accompanied by the usual license and other documentation.

**3.12 Access to and use of all government owned digital Geographic Information shall be documented with a license or similar documentation at the time the information is disseminated.**

The license to use Geographic Information will stipulate the terms and conditions for the use of the digital information, including government liability disclaimers, and will prohibit its further dissemination or sale. Similar statements must accompany government owned Geographic Information distributed free of charge. Therefore, a license agreement is required to accompany all information disseminated, including any which may be distributed without charge.

Responsibility for managing the foregoing, with respect to the Primary Databases will rest with DMA. In addition, and if required, DMA will be available to provide advice to other departments that distribute digital thematic or other databases.

**3.13 Government must approve the commercial use of its Geographic Information.**

Non-government users wishing to undertake any commercial activity related to the redistribution or value added use of provincial Geographic Information require the permission of the government, and a redistribution license that outlines the rights of both parties. This applies to both the Province's Primary Databases and Thematic Databases.

The redistribution of government owned Geographic Information may also require that a Royalty Fee be paid to the government by the commercial user of the information. In addition, administration fees, information update fees, subscription fee, etc. may be levied.

In instances where distribution by one government department includes information produced by another department, it will be necessary to establish an appropriate agreement between the information provider and the information distributor. This is necessary to avoid duplication of data distribution services and to ensure that the databases are accompanied by the appropriate

documentation or license.

The Department of Municipal Affairs will be responsible for licensing arrangements related to the Province's Primary Databases. DMA will be available to provide advice and assistance to other departments of government that may have a requirement to enter into redistribution agreements for the Province's Thematic Databases.

**APPENDIX A**

**DISTRIBUTION AND PRICING OF GEOGRAPHIC  
INFORMATION**

**DEFINITIONS**

**Copyright**

"Copyright" is the sole right to produce, reproduce, perform or publish a literary or artistic work. Copyright in Nova Scotia government information is held by "Her Majesty the Queen in Right of Nova Scotia".

**Corporate Data**

Data that is or could be used by two or more organizations. Sometimes referred to as Corporate Land Information.

*Source: Nova Scotia Land Information Standards Manual - 1994 (adapted)*

**Data**

A representation of facts and ideas in a formalized manner capable of being communicated or manipulated by some process.

*Source: Nova Scotia Land Information Standards Manual - 1994*

**Geographic Information**

Geographic Information is defined as a file or groups of files of information or data which identify attributes about land or parcels of land, water or water lots. This information may be stored in or on a variety of formats including: maps, atlases, aerial photographs, publications, index cards, statistical data, computer processible files, paper files, etc. It may contain basic physical measurements at, above or below the surface of the earth as well as relevant socio-economic information.

*Source: Nova Scotia Land Information Index - 1982 (adapted)*

**Geomatics**

The science, technology and management of geographically-referenced information, including its acquisition, storage, analysis, display and dissemination.

*Source: Nova Scotia Land Information Standards Manual - 1994*

### **Geo-referenced Information**

Information that is referenced to a geographic location.

*Source: Nova Scotia Land Information Standards Manual - 1994*

### **Information**

That which results from the processing of data. Information is derived from the assembly, analysis or summarizing of data into meaningful form.

*Source: Nova Scotia Land Information Standards Manual - 1994*

### **Primary Databases**

The Primary Databases are essential to accurately record the position of all geographical and cultural features in Nova Scotia. These databases also serve as the underpinning for all overlay themes mapped using either conventional mapping methods or automated geographic information system (GIS) technology.

The Primary Databases are:

**The Nova Scotia Coordinate Referencing System** - including a network of control points positioned through the Province which serve as the tie points from which accurate horizontal and vertical measurements can be taken for any feature in the Province.

**Aerial Photography Database** - A database (library) of photographic negatives and prints of provincial aerial photography acquired over the past fifty or more years. The individual photographs can be referenced to the Nova Scotia Coordinate Referencing System to provide the positional accuracy required by users for mapping, resource inventory or other uses. This database is in hard copy format (film and/or paper) and represents a unique and irreplaceable resource to the Province.

**The Nova Scotia Topographic Database System** - a database describing selected physical and cultural features of the Province (e.g. water bodies, transportation routes, buildings, elevations, etc.), positionally accurate and tied to the Nova Scotia Coordinate Referencing System. This database is used as the basic reference as well as the foundation on which are overplotted a variety of themes describing the resources of the Province using either conventional or GIS mapping techniques. Numerous products at a variety of scales are generated from this database (base maps, topographic maps, digital elevation models, etc.).

**The Nova Scotia Property Records Database** - a database portraying the boundaries of

individual land parcels with random, unique, identification numbers (PIDs) assigned and linked to associated files listing descriptive, attribute information for each land parcel (e.g. owner name, owner address, location, size, etc.). This database is created as an integrated overlay on top of the Nova Scotia Topographic Database.

### **Thematic Databases**

Thematic Databases are those which describe a subject or theme. They are normally built upon the Primary Databases which provide them the required positional accuracy and ensure that they can be integrated, merged or otherwise used one with the other. Examples of thematic databases include those which depict geology, soils, vegetation, shipwrecks, aquaculture sties, temperature, population, health, etc.

### **Value Added Data or Information**

Value may be added to data or information in a variety of ways, e.g. by sorting differently, changing format substantially, combining it with other data to create new and different information products, etc.

## APPENDIX B

February 20, 1990

### Nova Scotia Land Information Policy

The goals and individual policy statements forming the heart of the Nova Scotia Land Information policy include:

- Goal 1: to ensure that land information is easily accessed and shared among major public and private information users.
- Goal 2: to encourage the development of a strong private sector industry in the land information field.

#### Policy Statements

1. Assign responsibility for overall management of the Nova Scotia Land Information System to a member of Executive Council.
2. Improve the quality and accessibility of information used by public and private sector decision makers in the management of Nova Scotia's land and water resources and the environment.
3. Develop and promote the efficient collection, use, and management of geo-referenced information within and across the departments of the provincial government.
4. Ensure that provincial activities in land information services are co-ordinated.
5. Ensure that strong co-ordinated provincial policy direction is provided to the Maritime Land Information Corporation.
6. Ensure that provincial departments have access to specialized information and knowledge with respect to land information technology.
7. Facilitate access to land information required for effectively planning and managing economic, social and physical development of the province.
8. Stimulate research and applications in the GIS field.
9. Stimulate and promote the development of the private sector and work in partnership with private firms and educational institutions.
10. Develop a multi-system network for the provincial land information management system. While a single system network has the advantage of making information sharing relatively straightforward, a single system may not be able to meet the needs of all of the participating agencies.

11. Adopt a phased approach to implementation of a land information management system by first establishing standards for data content, organization and structure, and then testing and refining the processes in a prototype prior to province-wide implementation.
12. Ensure that all departments using GIS technology appoint an individual as the departmental GIS contact person.
13. Ensure that departments are assigned responsibility for the corporate thematic information they are mandated to collect, subject only to maintaining the information to certain standards.
14. Ensure that all departments locate their information, corporate or otherwise, by reference to the official positional base; follow the official provincial standards, and maintain their own data.

## APPENDIX C

### DIVISION OF LAND INFORMATION MANAGEMENT SERVICES

#### GOALS:

1. TO ENSURE THAT LAND INFORMATION IS EASILY ACCESSED AND SHARED AMONG MAJOR PUBLIC AND PRIVATE INFORMATION USERS; AND
2. TO ENCOURAGE THE DEVELOPMENT OF A STRONG PRIVATE SECTOR INDUSTRY IN THE LAND INFORMATION FIELD.

#### OBJECTIVES:

1. TO DEVELOP AND PROMOTE THE EFFICIENT COLLECTION, USE AND MANAGEMENT OF GEO-REFERENCED INFORMATION WITHIN AND ACROSS THE DEPARTMENTS AND AGENCIES OF THE PROVINCIAL GOVERNMENT AND AMONG THE THREE LEVELS OF GOVERNMENTS
2. TO ACT AS A PROVINCIAL FOCAL POINT FOR INFORMATION AND KNOWLEDGE RESPECTING LAND-RELATED TECHNOLOGY IN NOVA SCOTIA
3. TO ESTABLISH ACCESSIBILITY TO, AND SHARING OF, LAND-RELATED INFORMATION REQUIRED FOR EFFECTIVE PLANNING AND MANAGEMENT OF ECONOMIC, SOCIAL AND PHYSICAL DEVELOPMENT OF NOVA SCOTIA (INCLUDING NS PROVINCIAL AND MUNICIPAL AGENCIES, PRIVATE SECTOR, INSTITUTIONS AND THE PUBLIC)
4. TO COORDINATE THE DEVELOPMENT AND IMPLEMENTATION OF GUIDELINES AND STANDARDS FOR COMPATIBILITY OF DATA AND SYSTEMS AMONG USERS
5. TO PROVIDE PROFESSIONAL AND TECHNICAL ADVICE WITH RESPECT TO THE INITIAL DEVELOPMENT, MAINTENANCE AND GROWTH OF A NOVA SCOTIA LAND INFORMATION MANAGEMENT SYSTEM
6. TO WORK THROUGH EDUCATIONAL INSTITUTIONS AND THE PRIVATE SECTOR TO STIMULATE RESEARCH AND NEW APPLICATIONS IN THE GIS FIELD
7. TO ENCOURAGE DEVELOPMENT OF THE PRIVATE SECTOR IN THE GIS AND RELATED FIELDS TO MEET THE NEEDS OF THE NOVA SCOTIA MARKET, THROUGH PARTNERSHIPS WITH THE PRIVATE SECTOR AND EDUCATIONAL INSTITUTIONS.

## **APPENDIX D**

### **TASK GROUP ON DISTRIBUTION AND PRICING OF GEOGRAPHIC INFORMATION**

#### **Membership**

A Task Group on Distribution and Pricing of Geographic Information was established under the Nova Scotia Land Use Committee to recommend a draft policy on this topic. Members of the Task Group are listed below:

- < K. AuCoin, Department of Natural Resources
- < E. Backman, Economic Renewal Agency
- < R. Doiron, Department of Municipal Affairs
- < B. Fay, Nova Scotia Land Use Committee (Secretary)
- < D. Gray, Department of Municipal Affairs
- < N. Lyttle, Department of Natural Resources (Chair)
- < L. McLaughlin, Department of Municipal Affairs
- < R. Ogilvie, Department of Education (Nova Scotia Museum)
- < D. Rice Smith (R. MacPherson), Department of Transportation and Communications