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HOUSING AND MUNICIPAL AFFAIRS - LAND INFORMATION SERVICES

BACKGROUND

10.1 The Land Information Services Division (LIS) of the Department of Housing and Municipal Affairs (DHMA) was formed in 1991. Prior to that time, Land Registration and Information Services (LRIS) functioned as an agency of the Council of Maritime Premiers. In 1992 a decision was made by government to consolidate the major property records functions of the Registry of Deeds and LRIS. In 1993, Property Mapping and Records was transferred to Land Information Services from LRIS. In 1994, Registry of Deeds was transferred to Land Information Services from the Department of Justice, and the survey and mapping responsibilities of LRIS were also transferred to LIS in 1994. These changes were made to provide a focus for a corporate approach to land-related information in Nova Scotia.

10.2 Since the early 1970's, the Province has been working in cooperation with the other Maritime Provinces toward establishing a Province-wide geographic information infrastructure. This began with the placement of approximately 23,000 survey monuments in the Province for a coordinate referencing system which was completed in the early 1980's. Topographic, urban and property mapping were coincident with and followed the coordinate referencing system. Division staff estimate costs of \$70 million have been incurred to develop these corporate primary geographic databases.

10.3 Land Information Services is responsible, as the Provincial focus for corporate land-related information, for the development, maintenance and distribution of government-held geographic information; the development and maintenance of real and personal property registration systems; coordination of access to all government-held geographic information; and for advice and assistance in the development of a strong private sector industry in geomatics.

10.4 The major objectives of the Division are to ensure land information is easily accessed and shared among major public and private information users and to encourage the development of a strong private sector industry in the land information field.

10.5 Land is one of Nova Scotia's most valuable assets, representing the foundation of much of the Province's economic activity. The Department is responsible for developing and maintaining the infrastructure of policies, standards and foundation databases that enable Provincial, municipal, Federal, private sector and public users easy access to accurate and current geographic information required for a variety of uses. Current high profile uses include the E-911 system, natural resource management (including distribution of natural gas), community economic development, and the Province's eco-tourism industry. The Department also operates the real and personal property registration systems in the Province which enable the protection and conveyance of interests in property which are essential to the economic competitiveness of Nova Scotia. For a summary of the challenges in the current environment see Exhibit 10.1.

10.6 The Division maintains several major databases on behalf of the Province, including the Nova Scotia Property Records Database. Access to this database is available over the internet for a fee. For each property, this database provides such basic information as ownership, location (descriptive as well as visual), size, monument markings and book and page references for registered documents associated with the property.

10.7 Other major or primary databases are the Nova Scotia Topographic Database, the Nova Scotia Coordinate Reference System and the Nova Scotia Civic Address File. The users of these primary databases include the Provincial departments of Natural Resources, Environment, Health (Emergency Health Services) and the Assessment Division of DHMA; municipal fire and other emergency services; and lawyers and lending institutions. These users either build upon or make enquiries of the foundation or primary database.

10.8 The Land Information Services Division consists of three major sections (See Exhibit 10.2). The Nova Scotia Geomatics Centre, located in Amherst, provides corporate geographic data acquisition and maintenance, specialized technical services in geomatics, and coordinates data and information distribution services. The Policy and Standards Section develops and monitors policies related to corporate geographic information, manages the development of corporate land-related information, and promotes inter-agency consultation and cooperative ventures. The Property Registration Section is responsible for the Division's regional operations providing property registration, mapping and regional distribution services through a network of five regional Land Information Centres and 18 county Registry Offices.

10.9 The Division is responsible for administering the Personal Property Security Act and the Registry Act. The Division had gross expenditures of \$11.1 million in 1998-99. \$1.5 million from sales of maps and other geographic data is netted against gross operating expenditures for a net cost to government of \$9.6 million. Revenues of the Division totalled \$9.6 million during the year - \$5.2 million from Registry of Deeds activities and \$4.4 million from Personal Property Registry activities. The Division has a staff complement of close to 190 employees.

10.10 This was our first broad scope audit of Land Information Services of the Department of Housing and Municipal Affairs.

RESULTS IN BRIEF

10.11 The following are the principal observations from our audit.

- The strategic planning process within the LIS Division has been performed adequately, although we have recommended improvements in resource planning and monitoring. Plans are currently underway for a major restructuring of the way the Registry of Deeds conducts business and meetings have been ongoing with stakeholders throughout government and private industry.
- The performance measurement and reporting system within the LIS Division could be improved if regular reports of Divisional performance were prepared for stakeholders.
- The Division should prepare rationales for the fees charged for registering real property and personal property transactions.
- Overall, the procurement function for the Land Information Services Division has been well managed. The Division adheres to the Provincial Procurement Policy and the Atlantic Procurement Policy.
- The Personal Property Registry operating agreement provides for the Province's right to audit accounts maintained by the private partner. To date, there have been no audits and we recommended that such audits be conducted.

- Overall, we found controls over the computer environment and application for the Deeds On-line Registration and Information System to be satisfactory.

AUDIT SCOPE

10.12 The objectives of this assignment were:

- to determine whether the Division has an adequate strategic planning process and an adequate performance measurement system;
- to review and assess the process for setting the fees for revenues and recoveries and the internal controls over revenue;
- to determine whether systems and practices in the procurement area provide for adequate controls and due regard for economy and efficiency, and compliance with government policies; and
- to evaluate the adequacy of environmental and application controls for the computer installation at the Division including organizational controls; development and program change controls; operations controls; documentation controls; logical access controls; application controls; and disaster recovery and contingency planning.

10.13 The audit criteria were taken from recognized sources including the Canadian Institute of Chartered Accountants Criteria of Control Board's *Guidance on Control and Computer Control Guidelines*, along with the Provincial Procurement Policies.

10.14 The general criteria utilized in this assignment are summarized as follows.

- There should be adequate strategic planning and performance measurement reporting processes.
- There should be policies and practices to provide for establishment of fees, adequate monitoring of revenue and internal controls over revenue.
- The Division should comply with the Provincial Procurement Policy and have a process to monitor the post-implementation costs and benefits of major procurements.
- There should be adequate computer environmental and application controls.

10.15 Our approach consisted of interviews, examination of documentation and discussions with management and staff of the Department.

PRINCIPAL FINDINGS

Strategic Planning

10.16 The vision and objectives as laid out in the strategic plans provide the strategic directions for the Division. Past and present strategic plans have included numerous goals and objectives for both the current year and for future years. These goals are generally related to projects which the Division is planning to undertake. They usually involve completion of the project or are milestones to be achieved within the project.

10.17 The plans prepared by the Land Information Services Division are completed to the detailed work plan level to assist the Division in attaining its goals. These plans include a ten-year vision shown in Exhibit 10.3.

10.18 Strategic plans for the Division do not include an estimate of the type or quantity of resources that will be required to complete them. We recommended that plans should include an assessment of the resources that will be needed.

10.19 Goals are tracked throughout the year by senior management to determine status. This monitoring can result in revisions to the timing of achievement of specific goals or objectives. There are no regular reports prepared as a result of this monitoring. We recommended that a formal reporting process be put in place to document the monitoring of strategic goals.

10.20 Plans are currently underway for a major restructuring of the way the Registry of Deeds conducts business. This plan, called Registry 2000, has involved significant Divisional planning and collaboration with stakeholders throughout government and private industry. The vision of the participants is modernized land tenure legislation, delivered through an integrated, electronic system. Discussion commenced in the fall of 1997. Phase One was initiated in April 1999, with projected completion for this phase by fall 2000. This includes public meetings, preparation of a discussion paper and the completion of draft legislation which will be required to modernize the land registration system.

10.21 The strategic planning process within the LIS Division has been performed adequately, although we have recommended improvements in resource planning and monitoring. The Division's plans provide useful direction to guide operations. The plans include many goals and objectives the Division is expected to achieve, and senior management monitor progress and realign plans and objectives where necessary. The Division also works extensively with other government departments and with private partners to determine the needs of the Province and to incorporate those needs into strategic plans. Plans are currently underway for a major restructuring of the way the Registry of Deeds conducts business and meetings have been ongoing with stakeholders throughout government and private industry.

Performance Measurement and Reporting

10.22 Performance outcomes and targets set out in *Government by Design* were incorporated into Divisional plans. Outcomes were reported as part of the *Nova Scotia Counts* initiative. The Land Information Services Division and individual manager plans include a number of performance targets. Generally, these are milestones within specific projects, either project completion dates or completion of stages.

10.23 Monitoring of performance against targets occurs through senior management meetings where each project is reviewed and its current status is determined. This often involves revisions to the expected completion date/time frame for a project. The Division does not report directly against any of these targets. We recommended a more formal reporting process to document results against targets.

10.24 Monthly reports are available showing volume of documents dealt with at each registry. See Exhibit 10.4 for 1998-99 summary. The information has been used in the past for business planning purposes such as staff and space requirements and office consolidations.

10.25 The only reporting requirements outlined in legislation are the standard department accountabilities as outlined in the Public Service Act and the Management Manuals. The legislation for the Division, The Registry Act, contains only a reference to the Attorney General requiring a financial report showing total volume of fees.

10.26 There is no regular reporting to stakeholders. The Division has made presentations to stakeholder groups on request. The Department completes an annual report, however the report consists mainly of financial information and does not include reporting on performance of the division.

10.27 The performance measurement and reporting system within the LIS Division could be improved if regular reports of Divisional performance were prepared for stakeholders.

Revenues

10.28 *Background* - The Land Information Services Division of the Department of Housing and Municipal Affairs generated revenues of \$9.6 million during 1998-99. \$5.2 million of these fees were collected by the Registry of Deeds offices for registering and photocopying documents under rates established by Regulations under the Costs and Fees Act. \$4.4 million was collected for registrations and searches under the Personal Property Security Act. As well, \$1.5 million collected for the sales of maps and geographic data is netted against the Division's gross expenditures. See Exhibit 10.5 for Division revenues/recoveries for the past three fiscal years.

10.29 *Process for setting fees and relationship between fees and cost of services* - See Exhibit 10.6 for sample schedule of fees charged for Registry and Land Information Centre services and products. Registry of Deeds fees were last updated by Order in Council in May 1990. There may have been some rationale for establishing the rates, but at this date there does not appear to be any relationship between a specific fee and the cost of the service provided. The Division has recently analysed the relationship between the cost of providing the service and the fees recovered for providing that service. We have been advised that the relationship between Registry fees and costs will be examined in more detail as part of the Registry 2000 initiative.

10.30 Maps and geographic data are sold primarily through the Division's five Land Information Centres. The pricing policy for the sale of this geographic information was determined by an interdepartmental group established in 1994. Their recommendations were approved by a deputy ministerial committee and form the basis of the LIS pricing policy.

10.31 The Task Group considered three pricing bases - full cost recovery, market value and a nominal fee. According to their report, the selection among the various pricing bases is

“hotly debated 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 USA 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...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...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.”

10.32 There are many persuasive arguments on each side. This group felt that both cost recovery and market value approaches might inhibit use of geographic information and therefore recommended that the pricing be set so as to encourage the use and access.

10.33 We recommended that the Division prepare a rationale for the fees charged for registering real property and personal property transactions.

10.34 *Budgeting and reporting* - Division staff prepare estimates of annual revenue based on analysis of the previous year's trends and information about upcoming partnerships/contracts which will generate revenue. Actual results compared to estimates are monitored on a monthly basis throughout the year.

10.35 *Internal controls* - The Department of Housing and Municipal Affairs has an Internal Audit Division. This Division has responsibility to conduct audits/reviews of any area of the department.

10.36 Internal Audit has conducted one audit within the Land Information Services Division. This audit, in 1998, focussed on the financial aspects of the operations of one of the larger Registry offices. Reported weaknesses in internal controls resulted in procedural changes strengthening controls. Prior to 1996-97 the Department did not have an internal auditing capability, but requested and received support from the Department of Justice which conducted two audits.

10.37 Based on our discussions with staff and our review of the Division's policies, nothing came to our attention to indicate that controls over cash are inadequate. We have discussed, with staff, how internal controls over the accounts receivable function could be improved with proper segregation of duties.

10.38 There are no current plans to conduct audits in other Registries, but Internal Audit is currently preparing a longer-term audit plan which would include visits to other Registries. The Division has requested that all offices be audited on a five-year rotation.

Procurement

10.39 The Land Information Services Division follows the Provincial Procurement Policy (PPP), and adheres to the Atlantic Procurement Agreement (APA) for all of its purchases.

10.40 Internal LIS directives are in place to assign signing authority limits and to ensure adherence to the PPP. Internal limits have been restricted by the government's fiscal restraint policies which dictate that all purchases of over \$1,000 must be approved by the Minister.

10.41 Most of the purchases within the LIS Division are for general operating supplies, and are purchased by the local LIS office. LIS policy dictates that three quotes are required for all purchases over \$500 and purchase orders/requisitions must be submitted to the Halifax office where the Departmental procurement staff will review and enter them into the financial system. Staff review these to ensure compliance with Provincial procurement policies, and also to ensure that any government standing offers are utilized. The only exception is purchases made by the Geomatics Centre in Amherst which, due to the technical nature of many of the purchases, deals directly with the Provincial Procurement Agency. The Government Procurement Policy and LIS policies provide for economy and efficiency in all LIS purchases.

10.42 For 1998-99, procurements totalled \$2.3 million. Our testing did not uncover any deviations from proper procurement processes at LIS offices or at the Geomatics Centre. All purchases tested followed the procedures as outlined. There were no exceptions found that would have required reporting to the Purchasing Agency.

10.43 Overall, the procurement function for the Land Information Services Division has been well managed. The Division adheres to the Provincial Procurement Policy and the Atlantic Procurement Policy, and uses the Provincial Procurement Agency when necessary.

Personal Property Registration System

10.44 In the mid-1990's, LIS used the Co-operative Business Solutions (CBS) process to find a partner to modernize the Personal Property Registry (PPR). The goal of the project was to allow individuals and institutions to record their financial interest, as well as search for other interests, in personal property (cars, boats, appliances, etc.) at anytime from their own computer. We included this procurement transaction in our 1996 audit of government procurement and determined that it complied with the CBS process.

10.45 At approximately the same time, the Province partnered with the other three Atlantic Provinces to provide on-line access to provincial databases. This resulted in the formation of Atlantic Canada On Line (ACOL). The PPR electronic registry is operated through ACOL. The Province pays a fee based on the number of transactions in exchange for the provision of service and for the perpetual right to use the software. ACOL receives fees from users of the system, subtracts the usage fees based on the agreement and remits the remainder to the Province. The fees paid by users of the system were established by Regulation with the inception of the Personal Property Registration System in November 1997. Similar to Registry fees, there is no relationship between the PPR fee and the cost of service provided. See Exhibit 10.7 for comparison of fees collected by ACOL to PPR revenue recorded by the Province.

10.46 The Personal Property Registry Operating Agreement between the Province and the private partner to ACOL allows the Province to audit the provision of the service and the status of Provincial accounts. The Province has delayed performing an audit under this clause of the agreement as other provinces have recently joined the partnership. We have been advised the Province is contemplating a jointly conducted audit with the other partner provinces. We recommended that the Province complete an audit in this area.

10.47 The final phase of the project was a post-implementation review conducted jointly between the Division and the supplier. The review was to discuss how the system was working, and to make suggestions on improvements to the process for future similar projects. The review also included a survey of internal and external users, and the results were primarily positive.

10.48 Since the implementation of the PPR system, LIS and the supplier have also conducted annual reviews to see where the project stands relative to expectations. To date, the usage, and accordingly revenues received by Nova Scotia, have been slightly lower than the predictions in the business case although the revenues received have been higher than those previously received by the Department. According to LIS management, the national trend in recent years has been lower revenues from property registrations. A management committee with representation from both the supplier and the Department meets every six weeks to discuss current status. This issue is important to the supplier, as they do not receive full compensation for their development costs unless the revenues meet or exceed the targets in the business case.

10.49 The Division believes that with the success of the modernization of the Personal Property Registry, the Registry could be of greater use to other Provincial departments if its benefits were more widely known.

10.50 The modernization of the Personal Property Registry through ACOL in cooperation with the other three Atlantic Provinces was a good example of using the CBS process to provide an improved service to the people of Nova Scotia. The costs and risks of developing the new Personal Property Registration System were borne by a private partner and the Province has received higher levels of revenue than the previous system provided. We commend the Division for its implementation of this project.

Environmental and Application Controls for Computer Installation

10.51 Our review of environmental and application controls focused on the Deeds On-line Registration and Information System (DORIS), a basic electronic system for tracking real property transactions.

10.52 DORIS was designed and implemented several years ago and transferred from the Department of Justice. It does not have on-line access availability for the general public.

10.53 Overall, we found organizational controls, development and program change controls, operations controls, logical access controls, DORIS application controls, documentation controls and disaster recovery and contingency planning to be satisfactory. We had minor concerns which have been discussed with Division management.

CONCLUDING REMARKS

10.54 Land is the foundation for much of the Province's economic activity. Projects such as E-911 and natural gas distribution rely on geographic information provided and maintained by LIS.

10.55 Our audit resulted in the conclusion that improvement is required in the following areas of the Division's performance.

- Resources should be allocated to projects during the strategic planning phase.
 - Improved reporting on performance is required to keep stakeholders adequately informed on the Division's activities.
 - The level of fees charged for services should be supported by appropriate analysis.
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Exhibit 10.1

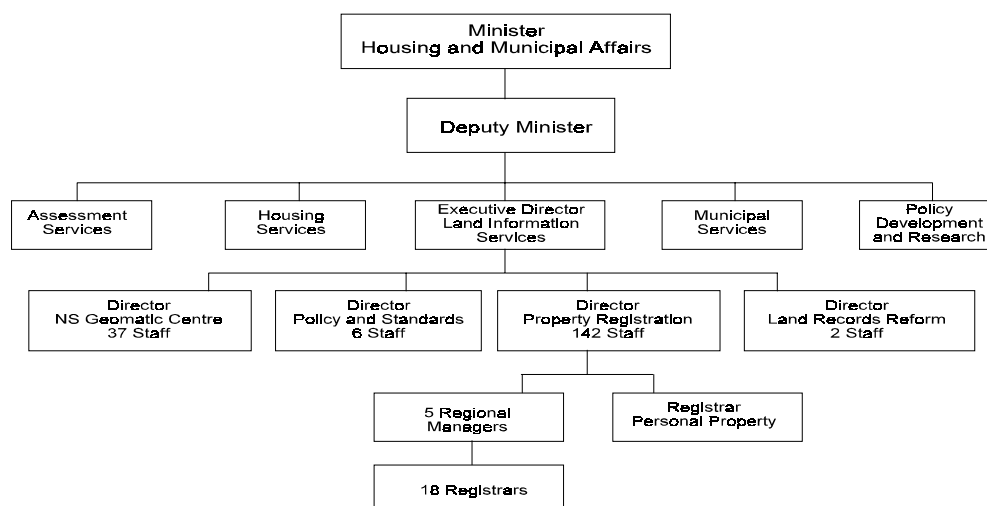
**LAND INFORMATION SERVICES
CURRENT SITUATION - EXTRACT FROM DEPARTMENT PLAN**

The basic geographic information infrastructure is in place, and we are positioned to begin capitalizing on our significant investment. A number of trends and pressures are influencing the direction government is taking in this field:

- ◆ requirement to include municipalities as key partners
- ◆ increased demand for streamlined business processes
- ◆ pressure from the legal community for new ways to convey property (e.g. titles insurance)
- ◆ increased burden to store and protect archival paper records; increased reliance on technology and partnerships to reduce data costs
- ◆ increased demand from technologically sophisticated users for more and better geographic information for new and innovative applications
- ◆ increased accessibility to technology providing demand for data and technology solutions to a variety of non-government community organizations

Exhibit 10.2

**LAND INFORMATION SERVICES DIVISION
ORGANIZATION CHART**



*Exhibit 10.3***LAND INFORMATION SERVICES
10 YEAR VISION - EXTRACT FROM DIVISION PLAN**

- ◆ the sharing of land-related information among provincial, municipal and federal agencies, private firms and individuals
- ◆ the capture of information once, as close to the source of the changes as possible: the registration of a deed or approval of a subdivision plan triggers an automatic update to the Nova Scotia Property Ownership Database
- ◆ electronic access points to a variety of land-related information services: a one stop shop where an individual can register a deed, acquire an air photo, or obtain the assessed value of their property
- ◆ a dispersed network of local access points, including remote electronic access from office or home
- ◆ an information environment which allows for streamlining of approval and decision processes
- ◆ direct economic benefit through partnerships with the private sector

Exhibit 10.4

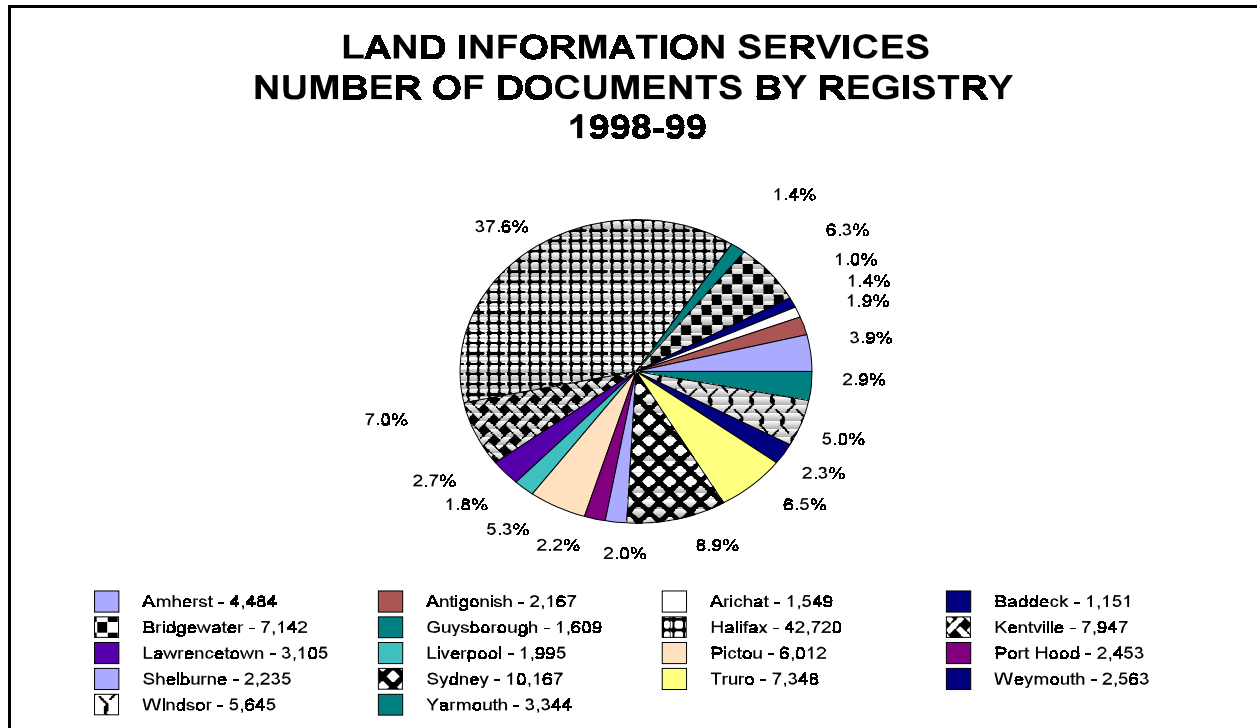
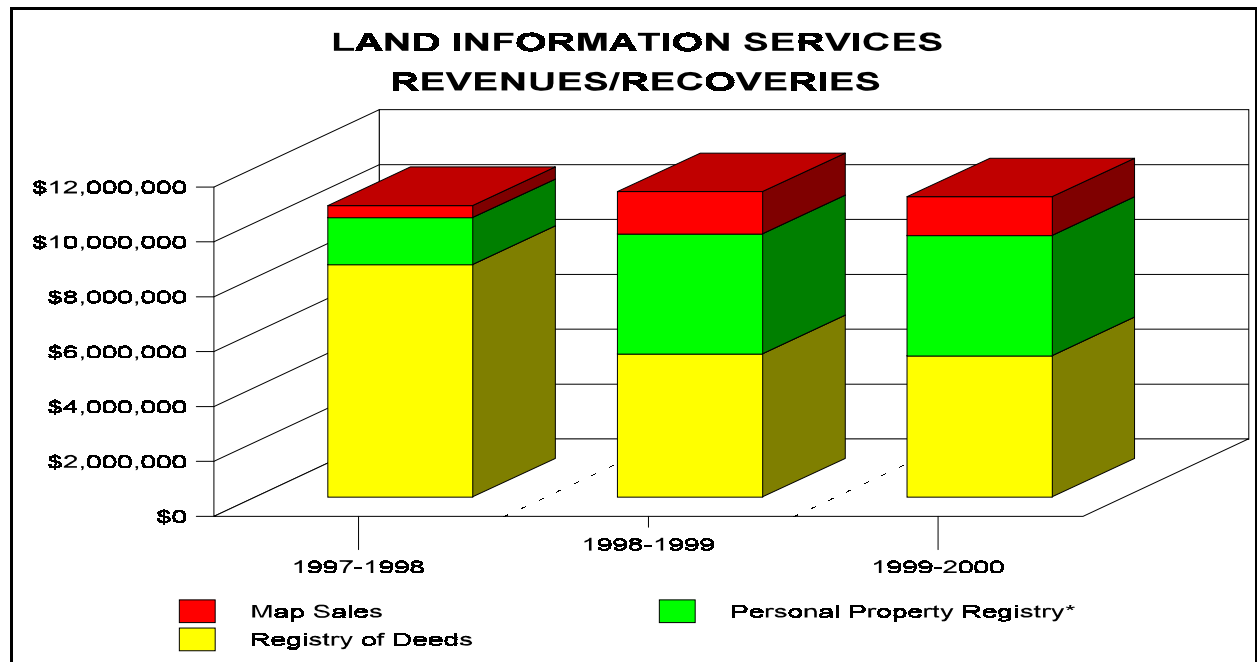


Exhibit 10.5



*Separated from Registry of Deeds revenue in November 1997

Exhibit 10.6

**LAND INFORMATION SERVICES
EXAMPLES OF FEES CHARGED**

Fees for Registry of Deeds

For entering and registering all documents	\$40.00
Copying or typing into records - per page	\$1.00
For all documents or plans required to be filed, each	\$30.00
For certifying or furnishing number, date, time or any other information for each such document	\$10.00
For searching any books, indexes or files per person per half day	\$5.00
For supplying copies of recorded or filed documents, plans, etc. for each page copied by a copier - per page	\$1.00
For preparing foreclosure certificate or any other certificate of title required in any other action or proceeding in any court when required of the registrar by statute	\$125.00

Personal Property Security Fees

To effect a registration where the period of time during which the registration is to be effective is 1 to 25 years	
- initial registration fee	\$20.00
- plus for each year of the period, per year	\$7.00
To effect a registration where the period of time during which the registration is to be effective is infinity	\$500.00
To search the Registry, per search	\$7.00

Retail Fee Schedule for Land Information Services Products and Services

To access the Map Library, per person per half day	\$5.00
Long distance fax, per page	\$3.00
Local fax, per page	\$2.00
Photocopy, per page	\$1.00
Topographic Map of Nova Scotia & Prince Edward Island (1:500,000)	\$8.00
Digital Topographic Map of Nova Scotia (1:500,000 Planimetric)	\$100.00
Nova Scotia Map Book	\$14.95
Property Map (diaz paper)	\$15.00
Control Monument Coordinates (Prov. "short list" microfiche)	\$5.00
Nova Scotia Property Records Database On-line access, max. 5 hours per month	\$75.00

Exhibit 10.7

