The Use of Geological Information in Nova Scotia's Rural Areas[1]

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Geology is one of the most important components of our bio-physical environment. Geological materials and the Earth's natural processes have, over hundreds of millions of years, shaped the very nature of human development. Most of our basic needs depend on geological materials such as soil, water and minerals. Thus, society constantly interacts with the physical environment through many different types of surface and sub-surface activities, yet we often ignore what's under our feet when we engage in land-use planning exercises. The inclusion of geological information in land-use decision making in rural Nova Scotia is important because it can help decision makers protect existing infrastructure and/or investment and, at the same time, help identify valuable mineral and water resources.

Geological information can play a vital role in land-use planning and development decisions. The identification of potentially hazardous or environmentally sensitive areas is very important to society to guard against potential threats to life and/or property and negative impacts on the environment. Occasionally, surface activity alters the subsurface equilibrium that has been established over thousands or even millions of years and results in undesirable impacts on the environment and society. Examples of these problems in Nova Scotia include groundwater contamination from agricultural activity, acid drainage due to road building, and sinkhole development associated with groundwater withdrawal. Geological information is more commonly used by mineral exploration companies, prospectors, and hydrogeologists in their search for new mineral and water resources. Mineral resource development provides new jobs and other economic benefits to the rural economy and has played an important role in the development of Nova Scotia's rural heritage. The location and protection of groundwater resources is a priority for many communities and geological information is used in both the exploration and protection phases of groundwater supply development. By identifying these potential mineral and groundwater resources during the planning process, resources and economic opportunities can be protected.

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