
New Brunswick surficial mapping program: review and highlights

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Extensive surficial geology data have been collected by the New Brunswick Department of Natural Resources, Geological Surveys Branch (GSB), as a result of till geochemistry investigations, granular aggregate mapping projects, and other surficial mapping projects that span the past five decades. However, only modest advances have been made in synthesizing detailed maps that are comprehensive and easily accessible by clients. This is due partly to the fact that the existing data sets did not provide the level of detail needed to produce such maps. Older detailed maps are available for some areas, but in many cases they are outdated, difficult for clients to access, and unavailable in a digital georeferenced format.

Since 2009, new mapping endeavours in areas of poor coverage, combined with advanced technological capabilities in the fields of remote sensing and GIS, have enabled GSB staff to 'bridge the gap' and produce detailed, up-to-date surficial geology maps for southwestern New Brunswick. These maps reflect a newly devised, consistent approach to field mapping and map production. The GSB has recently emphasized the compilation and publication of standardized digital maps for bedrock geology. Likewise, the current initiative to produce consistent surficial geology maps for southwestern New Brunswick represents the first step toward creating a standardized set of surficial geology maps for the entire province. Such maps will significantly improve the understanding of surficial geology in New Brunswick.

As part of the pilot project to publish standardized surficial maps for southwestern New Brunswick (NTS 21 G), the GSB staff has: (1) developed a new surficial geology map legend, deposit classification system, and map presentation style to be used in producing all new surficial geology maps in New Brunswick; (2) compiled and digitized all existing surficial geology data for southwestern New Brunswick (21 G); (3) conducted fieldwork in the Musquash, St. George, St. Stephen, Rollingdam, McDougall Lake, and Fredericton Junction map areas of 21 G; (4) conducted imagery interpretation of the St. George, McDougall Lake, Fredericton Junction, and McAdam map areas; and (5) published 1:50 000-scale surficial geology maps for the St. George, McDougall Lake, Fredericton Junction, and McAdam map areas.