

SPECIAL ISSUE

Earth Sciences and the Environment

Foreword

Ian S. Spooner (Guest Editor)
*Department of Geology and
Program in Environmental Science*

Sandra M. Barr (Editor)
Department of Geology

Acadia University, Wolfville, Nova Scotia B0P 1X0, Canada

This issue of Atlantic Geology is the second special issue to focus on research in environmental earth sciences in as many years (see also Volume 33 Issue 2). This pair of special issues reflects the current high level of varied research activity in a broad range of geo-environmental projects in Atlantic Canada. This issue contains six contributions, several of which arose from oral and poster presentations at the Atlantic Geoscience Society Annual Meeting and Colloquium in Wolfville, Nova Scotia, in February, 1998.

The papers in this special issue represent a broad spectrum of topics pertaining to research in the environmental earth sciences. Two papers address the theme of the transportation and fate of neutralised mine tailings. The paper by A. Hulshof and A. Macdonald focuses on sulfide-rich tailings generated at the Stirling Mine site in eastern Cape Breton Island, Nova Scotia. N. Whitehead and A. Macdonald focus on tailings produced from the now closed Ba-Cu-Pb-Zn mine near Walton in central Nova Scotia. Both of these papers arise from B.Sc. honours student projects at Acadia University, and suggest that because of natural conditions in the areas, potential pollution problems associated with these deposits are less severe than might be expected.

I. Spooner, H. Fenton, and M. Myers report on the natural controls on water quality at two second-order streams in western Nova Scotia. This paper offers some insight into how basic water quality analysis coupled with an understanding of local geology and hydrogeology can influence how river restoration projects are managed. This paper also derives from B.Sc. honours theses at Acadia University. C. Desplanque and D. Mossman provide a comprehensive review of ice and tide observations in the Bay of Fundy and discuss ice hazard development in estuaries. K. Howells and D. Fox present a paper that investigates the potential effectiveness of a variety of geophysical methods in detecting shallow sulphide mineralization in the Halifax Formation. This study has important implications for the recognition of sites susceptible to acid rock drainage. Finally, a paper by I. Spooner investigates late glacial climate change in western Nova Scotia through the study of stratigraphic changes in lake sediment cores.

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