

Proceedings of the Workshop

OPTIONS for SMALL SCALE WASTEWATER MANAGEMENT in NOVA SCOTIA

**held in Truro, Nova Scotia
May 14 and 15, 2002**

Background

The Centre for Water Resources Studies (CWRS) has undertaken applied research and technology transfer related to the subject of this workshop for more than 20 years. Our research in this area has been supported primarily by departments of the Province of Nova Scotia, and by Canada Housing and Mortgage Corporation (CMHC). Technology transfer has included courses and conferences directed to the designers, regulators, and managers of on-site and small scale wastewater systems in Nova Scotia and Atlantic Canada.

The activities of CWRS in this subject area have been guided by the CWRS Advisory Panel on On-site Wastewater Management. Most of these activities have related to the design and performance of these systems, but it has been increasingly recognized that their long term reliable performance depends on effective management, and on design of systems to permit that management.

This recognition resulted, in 1999-2001, of the formation by CWRS of an Ad-hoc Committee on Decentralize Wastewater Management, which grew to include representatives of government and private sector interests.

The Ad-hoc Committee proposed, and assisted in the organization of the Management Workshop Committee that developed the Workshop.

This report includes all of the hard-copy information provided by speakers and Workshop Chairs prior to or following the Workshop. It also includes the Workshop program, a participant list with contact information, and handout materials.

The workshop drew a total of 75 participants, including 12 speakers and 63 delegates. A participant list is contained in Appendix II.

Acknowledgements

This workshop could not have happened, or this report been produced, without the interest, support and participation of the following individuals, in their capacities as members of the CWRS Advisory Panel on On-site Wastewater Management, representatives of government agencies, the private sector.

The Ad-hoc Committee on Decentralize Wastewater Management included the following:

- Halifax Regional Municipality: T. Blouin, S. Bond, P. Duncan, R. Roberge.
- Municipality of East Hants: G. Bain

- Halifax Regional Water Commission: T. Gorman
- Service Nova Scotia and Municipal Relations: G. Cooke, B. Wishart
- Nova Scotia Department of Environment and Labour: R. Anderson, D. Briggins, S. Cameron; D. Fenton, C. Oldreive, D. Wigmore
- CRESCO Homes: Andrew Holley
- Clayton Developments: E. Richardson
- Consulting Engineer: J. Pinhey

The Management Workshop Committee included: T. Blouin: P. Duncan: G. Cooke: and C. Oldreive.

The essential contribution of the Workshop speakers, who are listed in the Program Outline, is gratefully acknowledged.

The organization and arrangement of the Workshop, on behalf of the Centre for Water Resources Studies, was the responsibility of Rick Scott, who also organized and produced this record of the Workshop. His experience and initiative was essential to its success.

Don Waller, Director, CWRS. April, 2002

TABLE OF CONTENTS

BACKGROUND	i
ACKNOWLEDGEMENTS.....	i
TABLE OF CONTENTS	iii
INTRODUCTION	ERROR! BOOKMARK NOT DEFINED.
<u>DON WALLER</u> , DIRECTOR, CENTRE FOR WATER RESOURCES STUDIES, DALHOUSIE UNIVERSITY.....	ERROR! BOOKMARK NOT DEFINED.
PANEL: PROBLEMS FOR INDIVIDUAL PROPERTIES AND SMALL COMMUNITIES	ERROR! BOOKMARK NOT DEFINED.
<u>DAVE WIGMORE</u> , N.S. DEPARTMENT OF ENVIRONMENT AND LABOUR	ERROR! BOOKMARK NOT DEFINED.
<u>PIERRE BREAU</u> , DIRECTOR OF ENGINEERING, MUNICIPALITY OF THE DISTRICT OF Lunenburg (not available)	
<u>MAUREEN RYAN</u> , PLANNING AND DEVELOPMENT SERVICES, HALIFAX REGIONAL MUNICIPALITY.....	ERROR! BOOKMARK NOT DEFINED.
<u>DAVID COTTON</u> , WASTEWATER TECHNOLOGIES INC., VERMONT.....	ERROR! BOOKMARK NOT DEFINED.
TECHNOLOGICAL OPTIONS	ERROR! BOOKMARK NOT DEFINED.
<u>ROBERT ANDERSON</u> , ENVIRONMENTAL INNOVATIONS, DEPARTMENT OF ENVIRONMENT AND LABOUR.....	23
<u>DAVID COTTON</u> , WSTEWATER TECHNOLOGIES INC., VERMONT (not available)	
MANAGEMENT ALTERNATIVES	ERROR! BOOKMARK NOT DEFINED.
<u>GRANT COOKE</u> , SERVICE NOVA SCOTIA AND MUNICIPAL RELATIONS	ERROR! BOOKMARK NOT DEFINED.
<u>PETER CASEY</u> , NATIONAL SMALL FLOWS CLEARINGHOUSE, WEST VIRGINIA.....	ERROR! BOOKMARK NOT DEFINED.
PLANNING ALTERNATIVES	ERROR! BOOKMARK NOT DEFINED.
<u>ANN MUECKE</u> , MANAGER OF THE REGIONAL PLANNING PROJECT FOR HRM.....	ERROR! BOOKMARK NOT DEFINED.
<u>JEFF PINHEY</u> , M.A.Sc., P.ENG. (not available)	
LOCAL CASE STUDIES	ERROR! BOOKMARK NOT DEFINED.
CONQUERALL BANK, LUNENBURG COUNTY. <u>PIERRE BREAU</u> , DIRECTOR OF ENGINEERING, MUNICIPALITY OF THE DISTRICT OF LUNENBURG AND <u>WILLARD D'EON</u> , CBCL	ERROR! BOOKMARK NOT DEFINED.
<i>Background and Project Description</i>	Error! Bookmark not defined.
<i>Fact Sheet</i>	Error! Bookmark not defined.
THE MUNICIPALITY OF THE DISTRICT OF GUYSBOROUGH. <u>GARY CLEARY</u> , DIRECTOR OF PLANNING AND DEVELOPMENT, MUNICIPALITY OF THE DISTRICT OF GUYSBOROUGH.	ERROR! BOOKMARK NOT DEFINED.
DISCUSSION GROUPS	ERROR! BOOKMARK NOT DEFINED.
DISCUSSION GROUP QUESTION SUMMARIES	ERROR! BOOKMARK NOT DEFINED.
Group 1. <i>What are the 4 most pressing problems related to servicing for areas outside of the current serviceable boundaries of N.S. communities? (not available)</i>	
Group 2. <i>What 3 servicing options are most likely to provide cost-effective solutions for problems that face your communities?</i>	Error! Bookmark not defined.
Group 3. <i>What do you feel would be the most effective approach for long-term management of on-site wastewater systems?.....</i>	Error! Bookmark not defined.
Group 4. <i>List what you believe are the 4 most important roadblocks to cost-effective wastewater management in your community. (not available)</i>	
Group 5. <i>Where do we go from here?.....</i>	Error! Bookmark not defined.
APPENDIX I	ERROR! BOOKMARK NOT DEFINED.
PROGRAM OUTLINE.....	ERROR! BOOKMARK NOT DEFINED.
APPENDIX II	ERROR! BOOKMARK NOT DEFINED.

PARTICIPANT LIST **ERROR! BOOKMARK NOT DEFINED.**
APPENDIX III.....ERROR! BOOKMARK NOT DEFINED.
HANDOUTS **ERROR! BOOKMARK NOT DEFINED.**