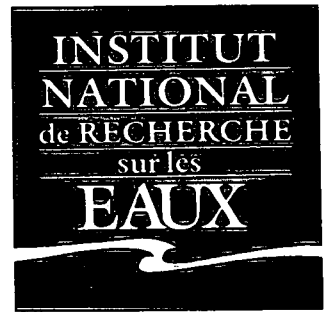
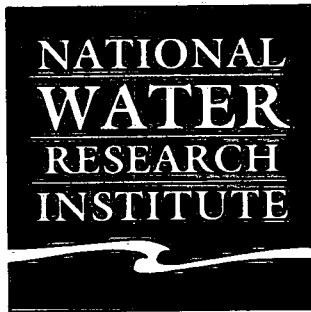


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SCIENTIFIC PUBLICATIONS
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Compiled and edited by
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NWRI Contribution No. 93-01
January 1993

MANAGEMENT PERSPECTIVE

This report is an alphabetic listing by senior author of the scientific publications of the Lakes Research Branch (LRB) of the National Water Research Institute, Environment Canada, from 1987 to 1992. The alphabetic senior author listing eliminates duplicate entries when more than one author was from LRB. Papers in press and the many published abstracts have not been included. The papers and reports are primarily relevant to Environment Canada's priority issues under the Great Lakes Action Plan and the St. Lawrence Action Plan, as well as various other components of the Green Plan, such as the Arctic Environmental Strategy, the Fraser River Action Plan, and the Canadian Environmental Protection Act.

SOMMAIRE À L'INTENTION DE LA DIRECTION

Ce rapport comprend une compilation d'articles scientifiques, publiés entre 1987 et 1992, par les chercheurs de la Direction de la recherche sur les lacs de l'Institut national de recherche sur les eaux, Environnement Canada. Afin d'éviter la duplication des entrées des travaux qui comprennent plusieurs auteurs de la Direction, les publications sont présentées en ordre alphabétique selon l'auteur principal. Les articles sous-presse ainsi que plusieurs résumés publiés ne font pas partie de ce document. Les divers articles traitent surtout des priorités concernant Environnement Canada sous le Plan d'action pour les Grands Lacs et le plan d'action du Saint-Laurent, ainsi que d'autres éléments du Plan Vert tels que la Stratégie pour l'environnement arctique, le Plan d'action de la rivière Fraser et la Loi canadienne sur la protection de l'environnement.

PREFACE

The Lakes Research Branch (LRB) came into being in 1987 as one of the three research branches created by a reorganization of the National Water Research Institute (NWRI). Lakes Research Branch (LRB) was originally organized into five projects titled Sediment-Water Interactions, Air-Water Interactions, Nutrient-Contaminant Interactions, Nearshore-Offshore Interactions, and Lake Restoration.

The first rationale behind this five project organization for LRB was the structure of the 1987 Protocol to the Great Lakes Water Quality Agreement (GLWQA) between Canada and the United States. Since this revision of the GLWQA, LRB has received most of its operational research funding (other than salaries), from the Great Lakes Action Plan (GLAP) put in place by Canada to respond to the objectives of the 1987 Protocol. Those Annexes most important for LRB were Remedial Action Plans for Areas of Concern and Lakewide Management Plans, Contaminated-Sediments, Atmospheric Toxics and Ecosystem and Water Quality Objectives.

The second rationale for the LRB structure was to create multidisciplinary project teams made up of mixes of research scientists with backgrounds in environmental chemistry, limnology, geochemistry, sedimentology, biology, ecology, engineering and modelling. These multidisciplinary teams focused their efforts on one or two specific Annexes, e.g., Sediment-Water Interactions focused on the Contaminated-Sediments Annex 14 of the Protocol, while Air-Water Interactions focused on the objectives of the Airborne Toxic Substances Annex 15. This clearly focused objectives for the LRB research program and in supporting funding requests under the GLAP, because these could be clearly linked to policy requirements of the GLWQA. Of course, there were cost effective overlaps in that the research conducted under one Annex was often equally applicable to an objective under another Annex.

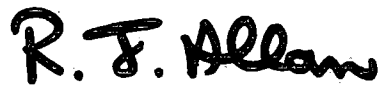
For example, sediment toxicity assessments for remediation purposes in Areas of Concern under Annex 2, were equally valuable in the discussions leading to the setting of Ecosystem Objectives under Annex 1 of the Protocol; or resolution of atmospheric toxics inputs to the lakes under Annex 15 were equally applicable to the development of Lakewide Management Plans under Annex 2. Because of these overlaps it is difficult to assign some individual papers or reports to one specific GLWQA Annex of the Protocol or even one Action Plan in compiling a list of LRB publications. To some extent such partitioning of the list could lead the user of this bibliography to overlook important publications listed under a different issue, Annex, title, or Project. The list is thus simply alphabetical by senior author's name. The user can very quickly scan the titles and arrive at a selected shorter list relevant to any specific subject area.

Since 1987, LRB has been relatively stable with few staff departures or additions. The main change came in 1990, when the Lakes Restoration Project was ended in anticipation of a greater emphasis in the mid-1990s on Lake Management Plans (LAMPS) as opposed to the Remedial Action Plans (RAPs) for the Areas of Concern which was the focus for the late 1980s, early 1990s. The remaining four Projects all then contained the word interactions. This further reconfirmed the original third rationale for the 1987 LRB organization, which was to create groups of scientists who would take on more ecosystemic approaches to the health of the Great Lakes. Namely, the attempt is to focus on the movement of toxics and other pollutants across the ecosystem interfaces, for our part between land, water, sediments, and aquatic biota, and the ability to determine impacts, trends and ecosystem health status for inclusion in broader in state of the environment type of reports.

The list of publications which follows is from 1987 to 1992 inclusive. The listing is alphabetical by senior author. This eliminates duplicate entries. Authors who are or were LRB staff have their names darkened. The number and diversity of the

papers and reports speaks for itself and I believe that the staff of the Lakes Research Branch can take pride in both their individual and collective productivity. The staff of LRB are not, of course, confined to the authors but also include support staff. At times, the combined permanent and support staff of LRB has exceeded 100, if term and contract employees, post-doctoral fellows, and students are included. All of the support staff are part of the LRB team contributing to these publications, as are other support staff at the NWRI outside the LRB. Only very few of the support staff both within LRB and outside in other parts of NWRI appear as authors but they too can take pride in their contribution to the environmental issues these publications deal with.

Collectively, we hope that the user will find this listing a valuable information source, contributing to the specific issues as well as to environmental sciences in general.



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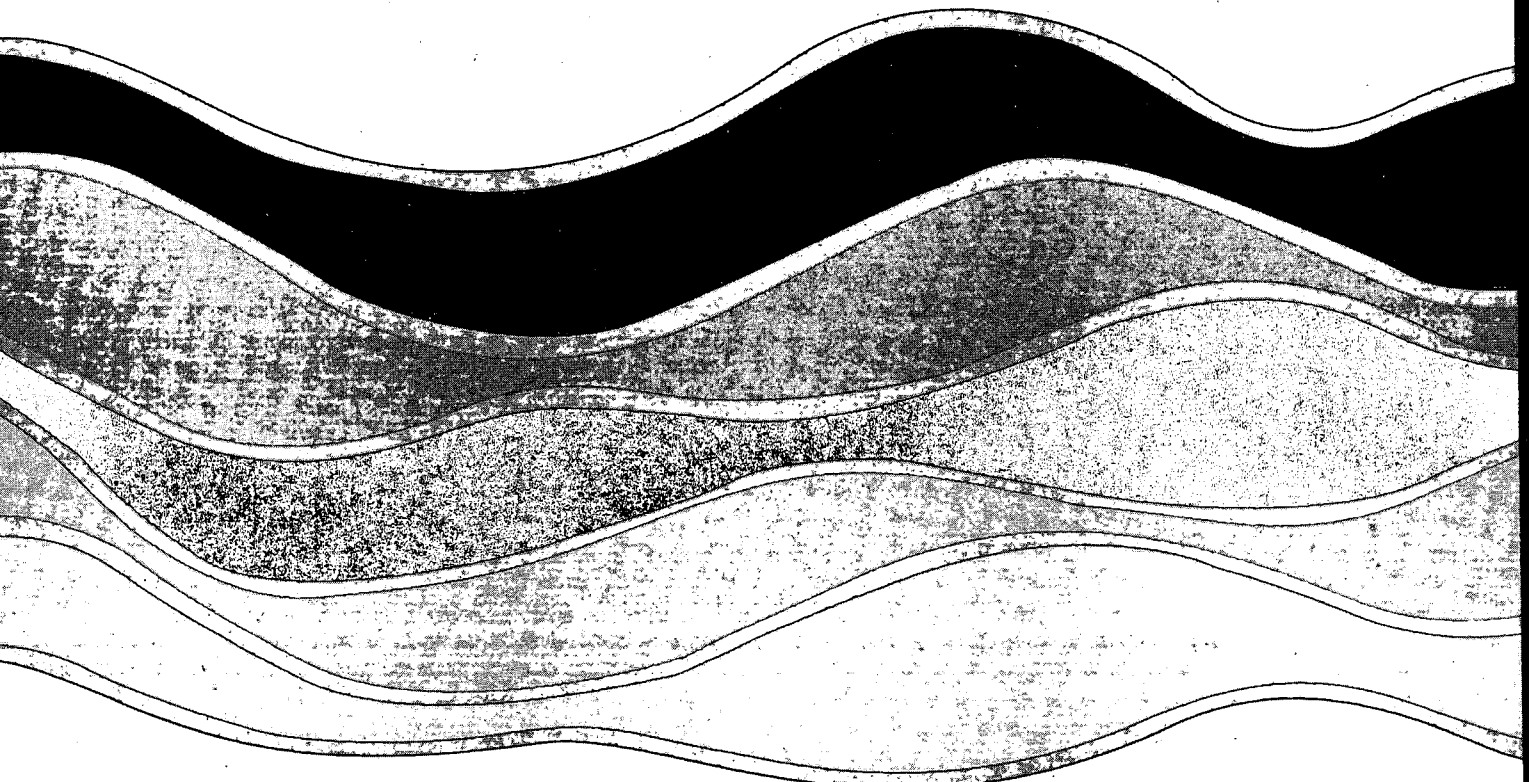
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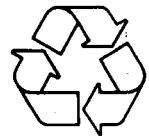


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