GREAT LAKES PROGRAM
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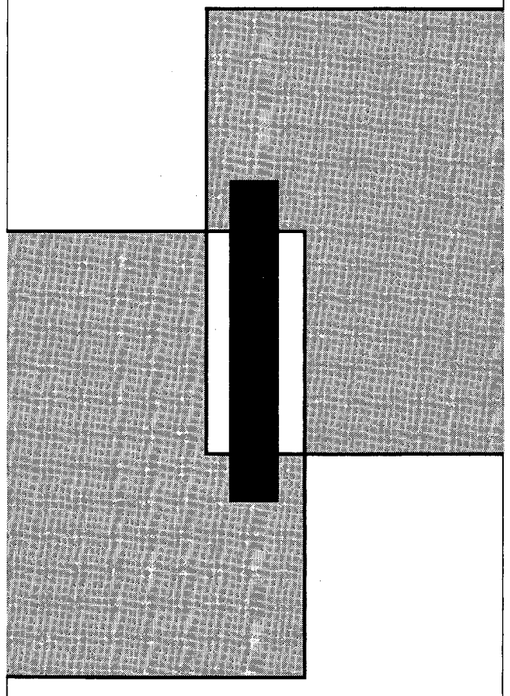

UNIVERSITY AT BUFFALO
STATE UNIVERSITY OF NEW YORK

GREAT LAKES PROGRAM

The Great Lakes play a major role in the lives of people in New York State. One-third of the State's boundary is bordered by parts of Lake Erie, Lake Ontario, and the Niagara and St. Lawrence Rivers. Over one-third of the State's population resides within the Great Lakes basin and depends upon these lakes for drinking water, industrial use, commerce, power generation, fisheries, recreation, and tourism. Management of the Great Lakes depends upon social and institutional processes involving many agencies, jurisdictions, and organizations. The making of public policy and implementation of effective management decisions is a complex process and one that requires the best available scientific and technical knowledge.

WHY THE PROGRAM WAS ESTABLISHED

The Great Lakes Program (GLP) was established in 1985 on the premise that it would serve as an information clearinghouse and engage in policy-oriented studies of great Lakes problems and issues. Most problems and issues, however, also involve major elements of science and technology, and resolution is frequently impeded by incomplete knowledge. The Great Lakes Program has evolved and expanded its scope of activities, therefore, to include science and technology-oriented research. More specifically, the GLP attempts to apply the results of research to the problems of society and quality of life. But interpretation of research must be set in a framework that is transmittable to policy makers. The making of rational public policy requires thorough understanding of linkages between society and the complex functioning of the Lakes' ecosystems. **Good public policy requires good application of science.**

MAJOR GOALS OF THE PROGRAM

The focus of the Great Lakes Program is on the synthesis of science in support of public policy formulation. Scientific synthesis ranges from data analysis and interpretation to comprehensive simulation modeling, targeting complex issues of concern to environmental managers.

Significant scientific and technical knowledge on Great Lakes systems is available. This information must be directed at specific policy issues and circumstances in the Great Lakes region. The Great Lakes Program intends to facilitate this process in a number of ways:

- pursue and sponsor basic and applied research;
- enhance the transfer of scientific information to decision-makers;
- aid in the education and training of scientists and specialists;

and

- promote the infusion of Great Lakes educational materials into primary & secondary school curricula to improve the level of public knowledge.

These activities involve basic and applied approaches to biophysical, social, and engineering sciences, and include risk assessment and management perspectives. **In this capacity the Program attempts to integrate the findings of many individuals and institutions toward a better understanding of the Great Lakes ecosystem, of which we are a part.**

It is imperative that we improve our understanding not only of biophysical systems but also of anthropogenic impact and natural environmental variability in the Great Lakes Basin and assess how they are expressed in political systems and economic markets. The GLP

encourages researchers to move toward a more interdisciplinary approach. The interaction between social scientists and biophysical scientists makes their respective work more relevant, more widely used, and more generally applicable to policy issues.

WHAT THE PROGRAM OFFERS

The State University of New York at Buffalo provides an ideal location for the Great Lakes Program, being located adjacent to Canada and between Lakes Erie and Ontario. This allows easy access to numerous human and natural resources. The proximity of a number of educational institutions and research agencies fosters a comprehensive, binational approach to issues of shared concern.

RESEARCH: The Great Lakes Program serves as a focus for Great Lakes interests at SUNY at Buffalo. Staff of GLP also collaborate with scientists at other U.S. and Canadian institutions on a regular basis. The Program espouses research not only to expand the boundaries of knowledge, but also to serve the public by assisting government and business in the making of policy and natural resource management decisions. It recognizes that a successful and productive research effort involves identification of important emerging issues while enlisting the best researchers to investigate these issues. The GLP reaches into the University to stimulate and encourage the campus community, involving all appropriate disciplines, to address common goals regarding Great Lakes issues. In its outreach capacity, the Program provides unified University resources and expertise to the local and regional Great Lakes community. The Program thus serves as a multipurpose unit where research findings and techniques from many disciplines are brought to bear upon Great Lakes-related problems. Issues of scientific enquiry targeted by the Program include global climate change, fluctuating water levels, the developing recreational fishery in Lakes Ontario and Erie, relationships between nutrient abatement and food web support of stocked fish, chemical contamination of fish, and links between Great Lakes toxic contamination and risks to human health. Support for GLP studies has come from the State of New York, the NY Sea Grant Institute, the Business Fund for Canadian Studies in the U.S., NOAA's National Marine Pollution Program Office, the Canadian Consulate, the Great Lakes Fishery Commission, Kodak Industries, and SUNY at Buffalo.

SMALL GRANTS: As part of its role of fostering research on Great Lakes issues of concern, the Great Lakes Program funds small grant projects to SUNY at Buffalo faculty. The overall objective of this small grants program is two-fold. First, it funds the study of current and emerging issues that will aid in developing a sound base of information on economic, ecological, social, institutional, and regulatory factors affecting the resources of the Great Lakes. Second, it focuses the interest and expertise of faculty and students from the various academic units at SUNY at Buffalo and encourages them to collaborate in the common theme of Great Lakes issues.

INFORMATION CLEARINGHOUSE: One of the Great Lakes Program roles is to serve as a clearinghouse for information related to Great Lakes natural resources. In this capacity the GLP provides valuable information to other academic institutions, government agencies, and the general public. The GLP maintains a computerized bibliographic search and retrieval system that can access scientific and technical publications related to Great Lakes natural resources. These publications, searched by keywords, provide social, technological, and biophysical science information on Great Lakes issues of concern to New York State. This service of information search and retrieval is available to the community.

The Great Lakes Program also maintains a computerized listing of professionals having expertise in a number of different disciplines that relate to Great Lakes issues. This list is kept up to date and easily searched by resource specialty. Through this list the GLP occasionally publishes directories listing Great Lakes resource people in both Canada and the U.S. The computerized resource listing is available on request.

The Great Lakes Program directs much of its activities toward the dissemination of information on Great Lakes natural resource issues of concern to the community at large, including special interest groups, other scientists, and governmental agencies. As part of these activities, the Program publishes an *Occasional Paper Series.* This Series strives to present, in a timely fashion, recent data and facts gathered as background information pertaining to the Great Lakes and their tributaries. Often these publications deal with the synthesis of science and its implications for public policy.

COMMUNITY OUTREACH: A corollary to the statement that good public policy requires good application of science, is that the making of good public policy requires an informed citizenry. In this regard, the great Lakes Program undertakes community outreach initiatives that focus on fostering the awareness, appreciation, and education of the general public on problems and issues related to the Great Lakes. These activities include the dissemination of information and the provision of technical assistance relating to Great Lakes resources. This outreach effort has involved the conduct of workshops for the general public, regulatory agencies, educational institutions, and public school teachers wanting to integrate Great Lakes materials into their curricula. Community outreach includes providing expertise to special interest groups, industry, and governmental agencies regarding specific issues of concern. When science reaches a conclusion, that conclusion then has to be converted into information that non-scientists and policy-makers can understand and utilize toward the most sound management of Great Lakes resources. To aid in this capacity, the GLP is investigating the use of *artificial intelligence* to enhance information transfer between scientists and the various users of information.

PROGRAM GUIDANCE

The Great Lakes Program is administered by a Director and Associate Director who are both experienced in multidisciplinary research and synthesis. The Program maintains an external **Advisory Board** comprised of individuals who bring to the Program a broad base of knowledge and experience related to the Great Lakes. Board members come from government, industry, and academia. The Advisory Board guides research priorities and outreach programs, the dissemination of research results and educational activities. Board members advise on the coordination of GLP activities with state agencies, academic institutions, and others involved in related Great Lakes resource programs. The GLP is also assisted by a **Research Advisory Panel** composed of faculty from SUNY at Buffalo. This Panel assists the Program in achieving its research objectives. Specific tasks include identification of research expertise within the University, guidance on study program priorities, aid with solicitation and review of research proposals, and monitoring of research progress.

WHAT THE GLP CAN DO FOR YOU

It has been estimated that within 10 years 75% of the entire population of the U.S. will live within 50 miles of an ocean or the Great Lakes. Presently, 30% of the U.S. population lives within the Great Lakes Basin, on one sixth of the total U.S. land area. Thus intensive, varied, and often conflicting uses are made of Great Lakes waters and shores. These uses already have resulted in degraded environmental quality and have contributed to substantial reductions in living resources. Society now demands that governments direct their attention to protecting and rehabilitating Great Lakes natural resources. Significant advances have been made in our understanding of the Great Lakes, but until our knowledge is increased substantially there will be uncertainty as to which management strategies to apply and what results to expect. The only way to reduce uncertainty is to improve understanding through both synthesis of existing knowledge and the search for new knowledge.

The management of the Great Lakes is a challenging task. The Great Lakes Program at SUNY at Buffalo recognizes the need to provide access to the best scientific and technical information available, including the appropriate synthesis and presentation of this information to decision-makers. With greater knowledge, the limits on what is possible are extended and the likelihood of making appropriate and effective management decisions is increased. The Great Lakes Program is available to assist in these areas and to respond to a variety of requests for information and expertise on the Great Lakes.

FOR FURTHER INFORMATION CONTACT:

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