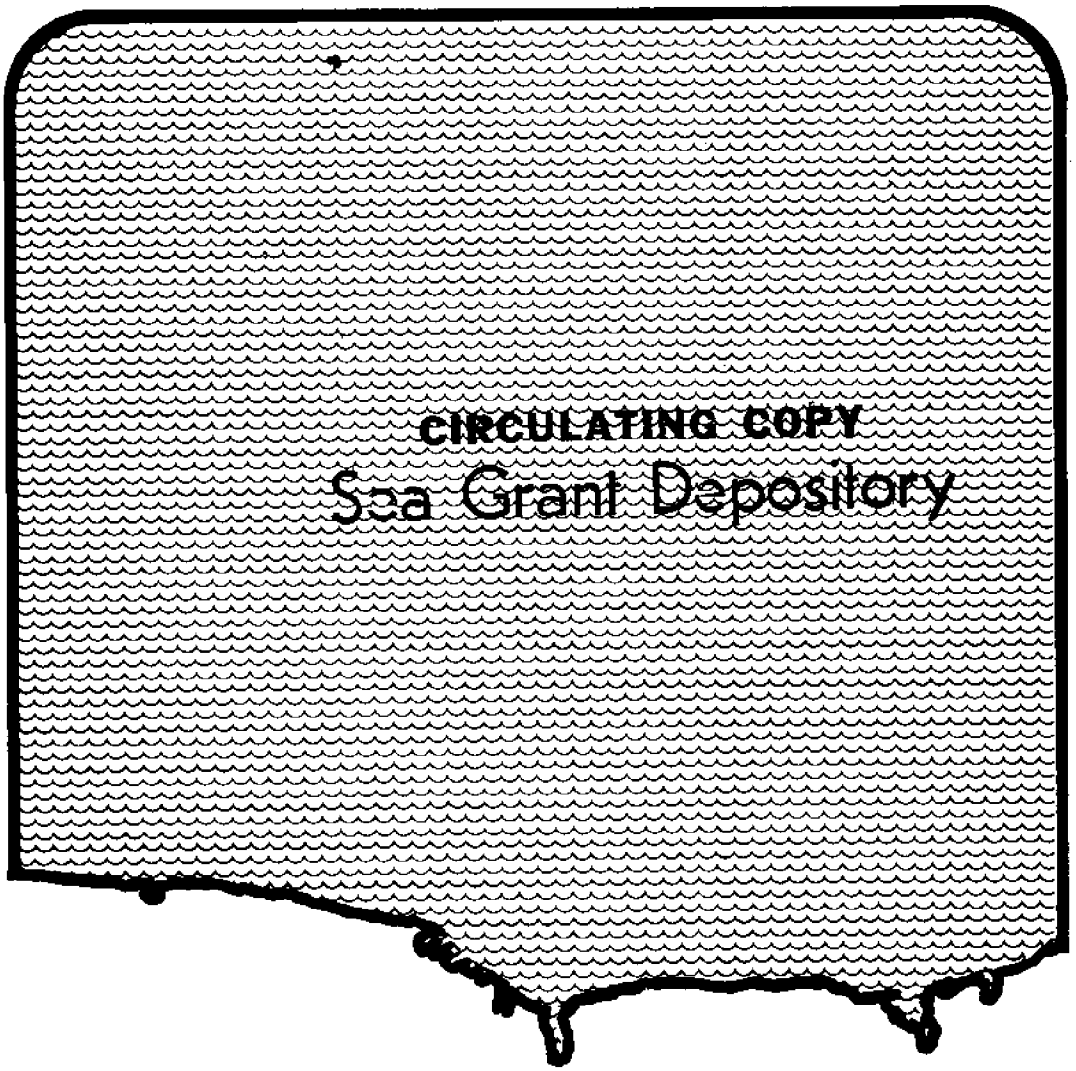
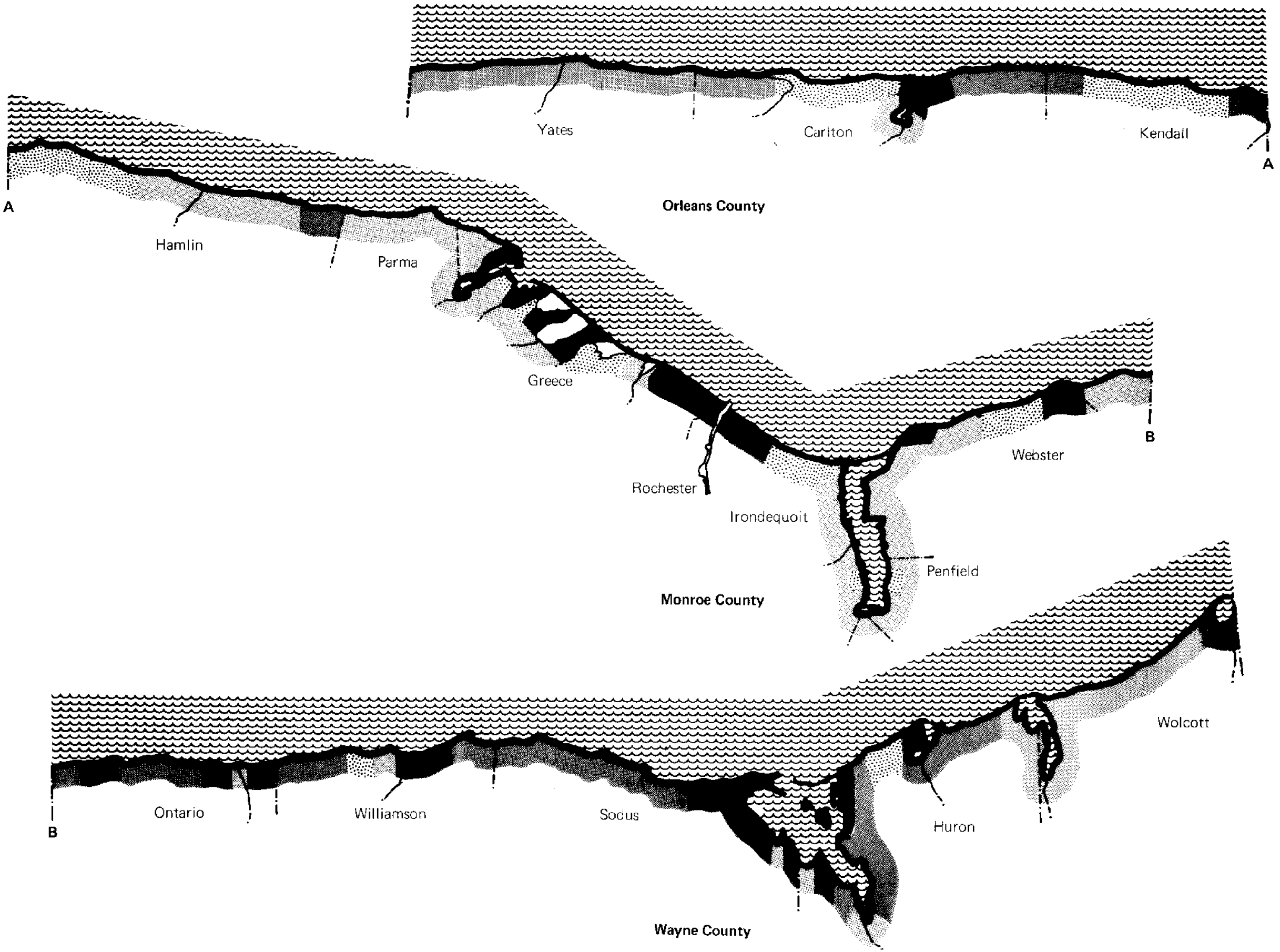


Proceedings

The Regional Shoreline - Resources & Management Conference 1973

Sponsored by Genesee/Finger Lakes Regional Planning Board & New York State Sea Grant Program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Proceedings

The Regional Shoreline--Resources & Management Conference 1973

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Lake Ontario Shoreline

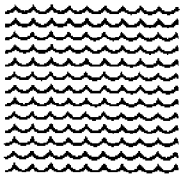
Proposed Development Control District

Resource Management Areas No further development permitted. Preservation designations are recommended for areas which are unique and important due to the presence of environmental, ecological and esthetic features.

Development Areas

Park Areas

Conservation Areas Limited and selected development permitted if it is related to open space preservation and recreation activity.



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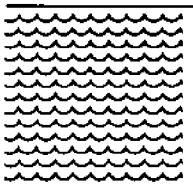
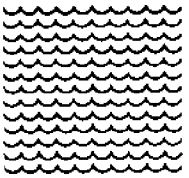


INTRODUCTION

Of all the natural resources-environmental policy problems facing the people of the Genesee/Finger Lake Region, maybe the most important one appears centered in and around the shoreline. This is not to say that the Lake Ontario Shoreline is the only area subject to the pressures of development and misuse, but rather identified in its broadest sense, similar shoreline problems are found along the rivers, streams and the Finger Lakes. The coastal resources are not as widely scattered geographically as are other natural resources; they are concentrated in rather narrow bands where the land meets the water. The pressure on these limited coastal resources has grown with increases in population, wealth, mobility and leisure time. With this growing pressure has come increased conflicts over who is to use the resources of the Coastal Zone, how they are to be used and when that use is to take place.

The conference – THE REGIONAL SHORELINE--RESOURCES AND MANAGEMENT, held jointly by the Genesee/Finger Lakes Regional Planning Board and the New York State Sea Grant Program on September 28, 1973, provided, for the first time, an opportunity to look at the shoreline and discuss some of the alternatives for future use. The working sessions of the conference were held by dividing the participants into small groups to elicit suggestions, recommendations, and opinions concerning various aspects of land, water and interface resources, and land, water and interface management. The findings of these sessions are included in this report.

In a broad sense this conference provided the opportunity for the participants to begin to "invent their future" concerning the shoreline. It has often been said that the lifeblood of any democracy is an educated and well-informed public. Through conferences such as this, we foster understanding. Through the process of adoption, understanding breeds acceptance and acceptance brings support. Public support and participation are essential for the decisions which affect us and our future goals.



OVERVIEW OF THE COASTAL ZONE

W.A. Steggles
Ministry of Environment
Canada

Our coastal zones, whether they be the lands and waters of the Great Lakes System or the interface between lands and waters in the regions of the sea coasts of Canada and the United States, are frontiers which are being assaulted to support conflicting mixes of needs and demands ranging from development and resource utilization to resource preservation and conservation. Many of the resources involved have yet to be discovered or have their potential identified. This, at a time when much fresh legislation has been enacted, and new or modified institutions are being contemplated or under development to implement measures mandated or encouraged by the law. While we struggle with strategies and mechanism to assure people that our plans and programs are not narrowly based but considerate of broader social interests, it will be our contemporaries and successors who will judge our governments' success and management capabilities in the light of promises kept, plans and programs implemented, and agreements fulfilled.

The year 1975 has a particular significance to those of us in the Great Lakes Basin who expect, by then, conclusion of the first phase of the Great Lakes Water Quality Agreement. In their setting on the Lake Ontario Shoreline, residents of local municipalities will someday judge the effectiveness of regional governments in implementing action programs with their proposed targets for preservation, conservation, rural and development needs.

The preparations for this conference have been well made. You will be considering various options and a possible action plan for the future identified by the conference organizers. Yours is a preferred position, whereby, you are able to consider various future possibilities, identifying their implications and move ahead with a plan.

For a moment, I would like to stand back and consider a broader framework, circumscribing world issues which our contemporary governments are being called upon to address——for two reasons——firstly, to perceive as global citizens the responsibilities identified at the Stockholm Conference on the Human Environment and secondly, to consider these in the light of environmental responsibilities in the Great Lakes area where an international agreement is being translated into specific courses of action by all levels of government.

Stockholm Conference on the Human Environment

We would all agree that the resolutions of the Stockholm Conference caught the thrust of concern of world environmentalists for prompt and effective implementation by governments and the International Community of Measures to protect and enhance the human environment for the benefit of present and future generations, and that responsibility for ensuring protection and enhancement of the environment rests primarily with governments.

Further, the Stockholm Conference recognized that environmental protection and enhancement can be exercised more effectively in the first instance at local levels of government, but that regional, state and national governments have their responsibilities as well. Environmental problems of broad international significance must be co-ordinated within the United Nations system with due respect for the sovereignty of states and the principles of international law.

Are we citizens and planners mindful that environmental problems for two-thirds of the world's population are of lesser concern to these people than poverty, malnutrition and illiteracy——problems which are formidable and intensely immediate to these people.

In terms of global environmental quality the conference recognized that a nation's economic strength is the major determinant of its capability to deal effectively with environmental problems and the developed nations will be increasingly called upon to augment flows of assistance and environmental technology to developing countries. Against this backdrop we in the developed world face a Herculean task--that being to address our domestic problems of congestion, noise, land shortages, air, water, soil and food pollution as well as resource depletion by facing squarely the issues of maldistribution of population and related imbalances of land and resource use and consumption, while at the same time maintaining strength to take on the challenges of assistance to developing nations.

Ontario Active in National Policy

Because of the far reaching implications of the Stockholm recommendations, the Ontario Government formed a task force in October 1972, to evaluate the impact of Stockholm on policies and programs in Ontario as part of a Canadian program to assess and develop a national position on environmental matters. The task force has addressed these issues across the entire field of government with participation of the following ministries and agencies of the Ontario Government: Agriculture and Food, Colleges and Universities, Community and Social Services, Consumer and Commercial Relations, Education, Energy, Health, Industry and Tourism, Environment, Natural Resources, Transportation and Communications, Treasury and Economics and Intergovernmental Affairs. The Ontario Housing Corporation

and Ontario Hydro are also represented on the task force. The task force is expected to conclude its position for presentation to the other provincial governments and the Federal Government sometime this fall. This work has led to the development of an informal agreement between Environment Canada and Environment Ontario on areas of jurisdiction. It is within this framework that the intergovernmental agreement between Canada and Ontario on Great Lakes water quality is being re-negotiated. It was the original agreement between Canada and the Province signed in August 1971, which secured a Canadian pledge for support of the Canada-United States Agreement on Great Lakes Water Quality signed by the leaders of our governments in April 1972.

The Stockholm Conference placed some 109 recommendations before the nations of the world covering the following issues:

Development and environment

Identification and control of pollutants, especially those of international significance

Planning and management of human settlements

Maintenance of a viable resource base

Information, education and research aspects of environmental issues

Institutional arrangements and responsibilities of governments

Development and Environment

In considering the often conflicting goals of development and the environment it is very clear that all governments must reorder their policies of economic and social development and face squarely environmental problems created by maldistribution of population and related imbalances of consumption, land and resource use.

Projects or proposals for resource use and development should include a demonstration of a project's contribution to planning objectives, including expected benefits and costs, in language reflecting environmental and social objectives.

Assessment of these projects or proposals should not merely involve a commitment to a procedure but the authority should reside with governments to

set conditions, amend or reject an undertaking based upon an environmental assessment which would be done at the earliest possible time to influence decision making.

In recognition of the need for a before-the-fact assessment to avoid environmental pitfalls the Provincial Government has indicated its intention to introduce legislation this fall to assure this approach is taken at the conceptual stage to allow for possible changes in future developments. Yesterday, my minister invited public participation to determine the best course to follow in involving the people of Ontario in future environmental assessment procedures.

In Ontario, a provincial planning framework, including optimum populations for urban regions and land-use policies, is under development based upon the environmental, social and economic consequences of implementing the objectives and policies of the ministries of the government in each development region in Ontario. 5

Since the conference, which recommended that governments must ensure the quality of water systems and air masses, such that damage to neighboring states or common resources is minimized, new evidence of the atmospheric transport in rainfall and dustfall of heavy metals, sulphur dioxide, nitrogen, and phosphorus into the Great Lakes from distant sources has been assembled. Further, the influence of large developments on climate and the effects of conventional road transportation systems on the quality of water have also been suggested recently as other factors which may have significant environmental effects.

As nations and states pursue environmental quality objectives or standards, adverse effects on inter-state or international trade particularly between the developing and developed nations may emerge which will require identification and resolution. The same situation may apply to interstate or interprovincial commerce. It should be realized that as countries pursue international objectives or standards for environmental quality whereby recognition will be given to a floor of resource use within certain limitations, environmental comparative advantages may emerge as significant economic factors, particularly in places where little development has taken place to date. This will be particularly true of developing parts of the world that are striving for some level of economic development. Nevertheless, before such development occurs, environmental technology involving assessment of the proposed development should be directed towards evaluation of the benefits and costs of the various options associated with such developments.

Maintenance of the Resource Base

As increased resources are made available to local governments to improve their ability and effectiveness in directing development, the emphasis should shift from

measures of restoration or recovery from past mistakes to those of anticipation——stressing prevention of social problems and environmental enhancement. It is axiomatic to say so——but it must be continually repeated that in order to achieve these objectives, proposals for development, energy, transportation, utilities, recreation, and conservation should stress wise use for the greatest benefit. Presently in Ontario, proposals for energy production, conversion, transportation, transmission, and use are now reviewed publicly to determine among other impacts the possible effects of thermal discharges and stack emissions on water bodies and surrounding country side. With emphasis on conservation of energy, it is recognized that business and industrial planning must be integrated with community development and land use planning including construction and manufacture of more efficient, less power consuming products, structures and methods of transportation.

Food and fibre production should be organized to achieve needed productivity while maintaining diversity. Full and immediate consideration should be given to those values such as aesthetics, preservation, environmental protection and conservation. For example, remaining wetlands of the Great Lakes which in many sections of the lower lakes are all but displaced by heavy commercial and industrial development require firm action for their preservation. Utilization of nonrenewable resources should provide for wise use and conservation of resource extraction.

In considering conference recommendations on fisheries, management people recognize the need for restructuring of the fish communities of the Great Lakes and their tributaries along with improved methods for introduction of new species and their exploitation and more positive action in support of international fisheries programs in the Great Lakes.

Other areas of concern enveloped by the conference include the establishment of genetic banks to protect plant and animal species, co-operation in international resource management programs and contributions to better nutrition and population control.

Particularly difficult recommendations pertain to improvement of water quality and the safeguarding of plant and animal life in the open seas at a time when many nations continue to adhere to the concept of freedom of the seas. Surely environmental concerns can be made compatible with development prospects and vessel navigation needs without undue discomfort for the commercial and shipping interests of the world.

As our governments proceed with responses to the recommendations of the Stockholm Conference they must do their utmost to keep the spirit of Stockholm and the interest of the public alive, for without this the support needed for the

recommendations across the world will die.

Future Planning Strategies

While current remedial measures promised by the Great Lakes Agreement are largely dedicated to restoration of acceptable conditions in the lower Great Lakes—in effect a massive recovery operation—our present investigative and planning energies should pursue the mapping of courses which can be followed in future years to shape use of land and coastal resources. Moreover, the Great Lakes Water Quality Agreement actually provides a base for coastal zone management linking land and coastal zone use to effects on water quality. Upon this base the findings of current investigation can be built into regional plans through international co-ordination.

Intergovernmental Co-ordination

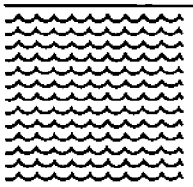
While the International Joint Commission is charged with the responsibility of monitoring the implementation by the eleven governments involved of their responsibilities under the Great Lakes Agreement, the prime responsibility for implementing the agreed programs and measures is carried by the governments. In Canada, both the federal and provincial governments have pledged fiscal support for conclusion of high priority municipal pollution control programs by 1975 and have agreed to implement the other required programs and measures of the agreement. In the case of the supporting Canada-Ontario Agreement, a board of review comprised of equal membership from the federal and provincial governments, assures that proposed capital expenditures and supporting research and development contracts for waste treatment projects are developed to meet the terms of the international agreement.

In the implementation of phosphorus removal programs according to a provincial policy position adopted in 1971, priority was assigned to the problems in the basin of the Lower Great Lakes. Municipalities are encouraged through incentives under the Canada-Ontario Agreement for 100 percent assistance on costs of research and development work shared equally by the federal and provincial governments to implement phosphorus controls at sewage treatment facilities.

While legislation and other active measures are being developed by the government to strengthen municipal and regional government planning and administration in the province, a specific project of particular interest to coastal zone managers is the implementation over the period 1972-76 of the Metropolitan Toronto and Region Waterfront Plan by the Regional Conservation Authority. The Authority is responsible for the planning, development and management of the waterfront except for the central harbor core. The program ensures provision of public access to the waterfront for recreation giving recognition to the natural forces acting on

the shoreline. All waterfront projects involving restoration, development and management of the natural resources of the waterfront are carried out within the planning and land use controls of the Ontario Planning Act administered by the municipalities involved.

In conclusion, may I offer this observation--there are those today who would suggest that governments should de-emphasize environmental and related matters in favor of redirecting attention to other social issues at a time when people are preoccupied with many other concerns such as housing, economic and government institutions. We must have strengthened and effective local institutions to cope with the needs of an impatient public, but moreover, planning by government must reflect increased responsiveness by institutions to the challenge of more effective resource utilization. Further, provision must be made for public participation an decisions to ensure that the effects of development are fully beneficial.



WATER RESOURCES

The water resource base for the Lake Ontario Shoreline is extensive. About one-half of New York State that fronts Lake Ontario lies in the Genesee Finger Lakes Region. Aspects of the water resource include Lake Ontario itself, its near shore waters, embayments, and tributaries.

The objective of the water resources discussion was to (1) delineate resources, (2) determine a possible need for their inventory, and (3) problems associated with these resources. Major study topic areas were recreation, boating, fishing, swimming, water quality, environment and water quantity.

RECOMMENDATIONS AND OPINIONS

A. Recreation Resources

(1) While there may be overlaps between recreation and other resource designations, the focus point is on these resources solely from a recreational perspective.

The shoreline, then, must be considered as a recreational resource in which swimming, boating and fishing are uses. And the question is that of best use coupled with proper site location. Within Monroe County there is only one beach that fulfills this criteria and that is Hamlin Beach. Water quality problems not frontage problems, have restricted Ontario Beach Park (which may be opened in 1974).

(2) The Statewide Comprehensive Outdoor Recreation Plan states that by 1990 the greatest recreational demand will be for swimming. Boating will also be in great demand. Frontage is divided into facility classes, both State and private. Both classes will be insufficient by 1990. However, it is unclear, due to lack of data, whether the problem results from insufficiencies or areas capable of being used are restricted by degraded water quality.

(3) The waterfront areas in other countries and Canada have a great public attraction and are in public ownership. Also, control is maintained for public access. In this

country there is a strong tradition of private ownership and consequently there is a great deal of difficulty in overcoming this.

This tradition of private ownership is emphasized by the Small Business Administration loan program for the construction of sea walls to protect private property. The question might be whether it would not have been cheaper for outright purchase of devastated lands.

Acquisition, however, is a very political issue at the Federal, State and local levels. It may be that easements can be an acceptable form of access to the water.

Access to the water is a complex issue involving property rights, fiscal resources and public and private needs.

B. Boating Resources

(1) There is increasing demand for boating resources. However, there are not many good harbors on Lake Ontario. The major ones are Oak Orchard, Braddocks Bay, Genesee Harbor and Sodus Bay. There is, then, a large demand for Harbors of Refuge and while there is need for more, the resource base does not provide for enough.

(2) There is a conflict between smaller and larger boats for the limited harbor areas. This might be a management problem, however, and could be partially alleviated by greater buoy tie-ups.

Greater public accessibility through private marina areas would allow for the needs of the short term recreational boater (sunfish and row boats) to be achieved.

(3) More information should be gathered on the public needs for boating resources and this should be measured against the accessibility of the public to the water resources.

C. Fishery Resources

(1) The introduction of Coho Salmon will create serious problems unless proper recognition is made of the inherent problems: (a) there must be a way to meet the needs and service requirements of fishermen. (b) There must be a mechanism to protect the interest of the property owners while at the same time allowing access for fishermen.

(c) there must be sufficient public facilities such as boat launches, rest rooms and camping facilities that are provided by the State.

(2) There must be an emphasis on fish stocking and locational attitudes so that concentrations of fishermen can be reduced. It may be that control of the numbers of fishermen will have to be undertaken.

(3) A close watch must be kept on fish and the environment so that water quality, mercury and DDT levels will be satisfactory for human consumption and so that a commercial base can be re-established.

(4) Some sort of guidelines and agreement must be drawn up so that landowners can charge for access.

D. Swimming Resources

(1) It is considered that 2,000 people per linear mile is optimum. However, the New York State present average is 16,000 per mile. By 2000 A.D. it is expected that the state will average 8,000 per mile. The question is, should people be allowed to own shoreline frontages that completely block public use? There should be a drive to remove Federal subsidies on shoreland construction.

(2) Water quality must be upgraded and other criteria besides uniform standards should be used so that swimming resources can be used to the maximum.

E. Water Quality Resources

(1) There has been serious degradation of water resources from industrial and municipal waste sources. However, this is being managed fairly well in the large tributary areas, but not so well in the smaller development areas. Additionally, significant farm and agriculture runoff is a major factor that needs rectification.

(2) Some possible solutions to water quality resources are: (a) various levels of government response are needed to finance sewers to take care of predicted population. (b) eliminate all shoreline development. (c) require septic systems to be moved farther back from the shoreline and a need for creation of a state law for regulating development.

F. Environmental Resources

(1) What are the parameters of thermal pollution before and after construction of plants? There are several solutions that can be utilized such as cooling towers and ponds.

(2) There are many uses of the lake, some of which are recreation, boating, and commercial shipping; but other uses are made such as disposal of harbor dredging.

Research needs to be undertaken concerning the long time effects on the water and land, and investigation should be made on the economic effects of not allowing it.

(3) There is inadequate public legislation which identifies critical resources such as wetlands.

(4) Lake Ontario is a catchall for upland problems and because of its relationship to the other Great Lakes, such problems such as agriculture, waste water, urban development, pesticides and pollutants with long term effects, are critical. Research and decisions need to be made between pollution abatement and control and total environmental effects of solid waste, air and water pollution.

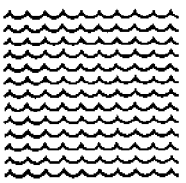
(5) Concern for the use of the Lake Ontario Basin is not sufficient to account for the population concentrations that will be established by both the United States and Canada.

G. Water Quantity Resources

(1) There is a definite need for legislation that controls the resources along the lake front. Implicit in this control is a short and long range plan to control high water damage and to establish proper and best land use.

(2) A case should be made to the U.S. Corps of Engineers to preserve the Charles Point to Cresent Beach Bluff area.

(3) Means and mechanism need to be established to: (a) improve data for lake level management. (b) educate both the public and private sector to show the need for shoreline management to minimize water damage. (c) plan for waste water treatment, transportation and wetlands needs. (d) improve water level control procedures.



INTERFACE RESOURCES

The definition of interface is that area where land and water meet in both vertical and horizontal directions. It includes surface water, land, and groundwater. It has depth and quality, inflow streams and output. We generally have different perceptions of the interface and of their uses and also of their inter-relationships. This may be one of the most significant problems in wetland, coastal zone and interface resources which is, of course, the legal definition.

RECOMMENDATIONS AND OPINIONS

A. Supply

(1) The major opinion of this work group was that there is no clear definition of what the interface is. Additionally there are different perceptions of the interface and of their uses and inter-relationships. An example of the problem of identification would show that wetlands are changing in two ways: (1) decreasing due to filling, and (2) increasing due to prolonged higher water levels.

(2) The quality of interface resources is threatened by shoreline development and serious problems of sewage along the shoreline.

B. Recreation

(1) Predominate types of recreation in the interface wetland area are birdwatching, fishing and hunting, photography, and ecologic and education study.

(2) There is a need to consider all types of resources when planning for a type of resource use. Resource managers have problems because of conflicts of interest over types of usage.

(3) There is a significant lack of access to estuaries and bays. However, this is being partly remedied by comprehensive outdoor recreational master planning and an availability of Federal funds.

C. Fish and Game

(1) The wetlands of the coastal zone are ecologically productive and these interface areas provide valuable

resource areas for fishing and hunting. They also provide a habitat for waterfowl, shorebirds, furbearers and fish nursing areas.

(2) State acquisition does not guarantee that lands will be preserved. There must be additional cooperation from other agencies. Plans should be made to utilize and yet preserve wetlands so that their usage and resources will always be available.

(3) There is a need for recognition of the interface zone as a key element in the ecological food chain and the maintenance of a dynamic equilibrium.

D. Drainage, Soil and Bottom Resources

(1) One of the most important parts of the interface is the soil or bottom portion. It serves various functions. This area ranges in size and is a dynamic zone. It serves a filtering function and a hydrologic buffering function. Because of the wide variety of uses there is a need for public recognition of the value of the littoral zone.

(2) Flooding is made significantly more destructive by the filling and construction in flood areas. There is, therefore, a need for a long range policy to protect this resource and and to eliminate or control development.

(3) There are questionable gains with respect to development trade offs. For example, mucklands are very valuable for farming but the destruction of wetlands creates a situation in which flooding causes significant damage.

E. Marina Resources

(1) Marinas are not economically efficient, they must be managed as a big business on a year round basis for the highest probability of financial success.

(2) Concern was voiced because of the lack of boating marinas and ramps if there is development of the salmon planting program. This program might provide significant opportunities for marinas and a proper utilization of the interface.

(3) One of the major conflicts is the competition between interface users. This also is important because of the

nature of what the public wants and what the public will support.

F. Public Welfare

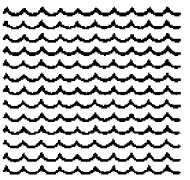
(1) There are several financial factors which contribute to a rational public use of the interface zone. These are zoning, acquisition, legislation and enforcement. Additionally there is competition between users, i.e., local vs. state, national and international concerns.

G. Environmental and Unique Resources

(1) Every element of the interface can be considered as an environmental resource. The major problem is, however, to properly define the capacity of each element. Additionally, we have problems in the inability to measure the value of wetlands, marsh or the coastal zone. Comparatively, we know the costs of development and the value received, but what are the costs and benefits associated with the coastal zone.

(2) There is a question of whether or not greater environmental value can be derived from shoreline resources if they are held in public ownership or in private ownership.

(3) From an environmental point of view, the Federal flood insurance program subsidizes private development. It was felt that a stronger direction should be taken in the flood insurance program to restrict development rather than to encourage it.



LAND RESOURCES

There is a need to assess and develop land resources in consonance with the capabilities of the area. Major impact, however, evolves around land resources policy decisions which must include short term results as well as long term interests.

At the present time, there is sufficient justification to warrant a change in public attitude that would treat land resources as a subject that could be utilized rather than a commodity to be exploited.

As a first step, we need a scope of the components of land resources.

RECOMMENDATIONS AND OPINIONS

A. Recreation Resources

(1) A large amount of the Lake Ontario Shoreline has been developed since 1950. The areas that were developed as housing are, for the most part, on the same lands that user intensive recreation occurs on. Development of lake front lands usurp valuable recreation land.

(2) Recreational resources should be incorporated into a comprehensive land use policy. In many cases, land that is currently a liability could be an asset under sound land-use planning.

(3) While many of our recreation resources are under intensive user pressure, particularly near urban areas, large tracts remain unused and undeveloped short distances from the highly used areas.

B. Unique Land Areas

(1) Initially, it is probably a definition problem--what is included in unique lands? Secondly, how can we use or what are the limiting factors of these unique lands?

(2) It may be that local advisory commissions could be established somewhat similar to conservation councils to provide technical expertise and to assist in the analysis and resolution of conflicts.

(3) Because of the limited amount of land under intensive user pressure, it is important that public control mechanisms be limited to zoning and sub-division regulations. In addition, public acquisition should be handled through easement rather than through purchase.

C. Public Health

(1) Public health is concerned primarily with protection of public safety. The uses of land in the coastal zone as a development resource is influenced by problems relative to public health. Specifically, wetlands and areas subject to flooding are unsuitable for spetic tank systems, and gravity fed lines are difficult to use because of the outfall location relative to treatment plants.

(2) Landfills in coastal areas are hazardous to natural water systems particularly with regard to channel dredgings.

(3) Concern for public water supply is the key factor in the management of a public health system. It is important from the standpoint that historically and traditionally health has been keyed solely to water borne diseases.

D. Agriculture

(1) While there are a declining number of farm producers, the size and efficiency of farms has increased. However, intensive pesticide use and hyperfertilization were noted as problems concerning the aquatic environment.

E. Highway and Access Resources

(1) Generally speaking, there are good to excellent east/west roads to and along the shoreline. There is, however, additional need for improved north/south access to the shoreline.

(2) As important as highways, is the need for trails. This may be a problem, in a basic sense, of right of way. In particular, there are numerous existing roads, railroads and utilities which, under proper developmental patterns, could be utilized as additional transportation links.

(3) There is a need, also, to establish trails for different kinds of activities such as snowmachines, trail bikes, cross country skiing, hikers and horseback riding.

(4) Another major trail consideration should be that of

waterways. There is a need to provide access to creeks and rivers for canoeing. In conjunction with these should be hiking trails which intersect, and camping facilities.

F. Economic Resources

(1) Historically the use of land resources has been based predominantly on economic factors-- current trends seem to indicate that a new balance must be achieved against environmental goals. What is needed is a change in public attitude toward land to change it from a commodity to be exploited to a resource that should be utilized in a stewardship context.

(2) It may be that an overall land use policy is needed that considers long term goals as well as short run interests. This means a coordinated public policy with respect to shoreline resources is needed. However, a policy vacuum exists at present; there is a need for Federal and State guidelines to serve as a framework for local land use control.

CONGRESSMAN HORTON'S REMARKS AT THE LAKE ONTARIO SHORELINE CONFERENCE

Hon. Frank Horton
Representative 34th Congressional District
New York

Before I thank you for inviting me to speak to you, let me first, on behalf of each of my nearly 500,000 constituents thank the Genesee-Finger Lakes Regional Planning Board and the Sea Grant Program for sponsoring this conference. Rarely have people gathered in this city to discuss a subject which was in more dire need of comprehensive discussion and action. While the title of this conference, The Regional Shoreline—Resources and Management, is a little ambitious, it is most appropriate. Lake Ontario and its surrounding shoreline, like those of the other Great Lakes, has suffered from a lack of comprehensive interest, in addition to comprehensive and responsive planning and implementation of such plans. To an inexcusable extent, the history of government and community involvement in actions affecting the lake and its shoreline is a history of reacting, or worse yet failing to react to crises of one kind or another.

Whether or not this conference can stimulate any further progress toward placing the proper priority on shoreline and lake resource planning and implementation, it will serve to train a necessary spotlight on the myriad of problems, challenges and opportunities which face the citizens of both nations who reside on or near the Ontario shoreline. Thus, I say again, that we in the Greater Rochester area are grateful that this conference has been called. And we will be watchful for its content and for its results.

I feel especially privileged to have been asked to address you today. I share your hope that this first Regional Coastal Zone Management Conference will result in the shoreline in this region becoming a model of intelligent planning and cooperation, to be followed by other Coastal Zone Regions throughout the State and throughout the Great Lakes.

As a Federal representative, my experience and jurisdiction falls more heavily on the wet side of the shoreline than on the dry side, although I must admit that Federal involvement in trying to keep the land side dry has been the subject of considerable interest and attention of late.

Therefore, I have neither the expertise nor the authority as a Congressman to comment upon the specifics of the shoreline land use plans and programs which are being discussed here today. I will say that all of the localities with jurisdiction over lake shore segments in this region can stand to benefit a great deal in the

long run from a coordinated effort at land use, recreation, conservation and development planning.

To the extent that each local jurisdiction can be responsive to the needs and desires of its individual citizens and to the extent that the county and regional planning bodies can be responsive to the needs and desires of each local jurisdiction, I feel that something like the proposed Early Action Program of the Genesee-Finger Lakes Regional Planning Board can be made to function effectively in our area.

I must say that there has been some impressive progress made, on a somewhat smaller scale, in the hammering out this year of a coordinated and cooperative master plan for the Irondequoit Bay shoreline. While there are certain to be some substantial bumps and barriers to hurdle between the master plan draft and implementation of the plan by each jurisdiction, I think their progress offers some proof that competing local interests and neighboring localities can work together on a problem like this for their mutual benefit.

On a grander scale, and for more limited purposes, we have in the House of Representatives an organization called the Conference of Great Lakes Congressmen, made up of most of the Representatives of all the states which border the Great Lakes. Of course, in that arena, competing interests abound, but we are able to focus constructive attention on the common needs of the Great Lakes Region which would be either uncoordinated or impossible without the Conference. Some of you may recall that a number of New York Congressmen, including myself recently objected to the current plan to conduct experiments with year-round shipping in the St. Lawrence River during the heavy winter months because we felt that a higher priority competing interest could be harmed by such experiments at that time. While the issue ended in somewhat of a compromise, the vehicle of the Conference of Great Lakes Congressmen proved again to be useful in hammering out the compromise.

On an even grander scale is the Canada-United States Interparliamentary Group, to which I have been a delegate for several years. I must say, however, in this connection, that the intervention of national sovereignty in such a forum has usually prevented us from doing more than promoting some much-needed understanding about our mutual problems involving the Great Lakes.

With these involvements and experiences in the background, I know how difficult it is and will be for this region to be able to conceive and implement the most enlightened kind of plan and design for lakeshore use, when one or another aspect of such a plan is bound to run head on into the short-run interests of many of the localities whose cooperation will be needed to make the plans function. On the other hand, the experiences I mentioned make me all the more convinced that

such cooperation must be made to happen, and that the inevitable problems must be faced and solved. To continue to avoid and duck these touchy political and jurisdictional problems can only threaten the well-being of the lake, the shoreline, the regional as a whole, and the citizens of the region, as individuals.

There are many examples at hand of what lack of planning and lack of coordination and lack of concern can do to the Great Lakes. The fact that for many decades, the individual nations, individual states and provinces, individual localities and individual persons and businesses have pursued their own interests and desires with regard to the Great Lakes, with little or no regard for the lakes or for the needs and desires of others has resulted in a tragic water quality problem. As we know, years and perhaps decades will pass, and billions of dollars will be spent before the man-inflicted injury to the water quality of the Great Lakes can be healed and corrected.

The sad fact is that in both the management of lake water quality and lake level control, we have been more capable of patchwork reactions to crises than of comprehensive planning and programming.

Back in 1966, when pollution was all but an unknown word to most people, and when beaches were still open, I brought my Government Operations Subcommittee on Natural Resources and Power to Rochester to hold hearings on the water quality problems of the lower Great Lakes, the Genesee River and the Barge Canal. The headlines generated by those hearings in this community were among the first front page headlines ever focused on the problems of lake water quality.

One experience my nostrils will not permit me to forget was the tour our subcommittee took of the Durand Eastman sewage treatment plant, which at that time, had had virtually no improvement since the 1920's. What that tour did not tell us about the pollution problems of the Rochester embayment of the lake we learned later the same afternoon in a Coast Guard vessel plying the water and other substances just north of the treatment plant's outfall pipe and the Genesee River inlet to the lake.

Of course, there has been nothing short of miraculous progress made in pollution abatement since 1966. In the seven relatively short years since those hearings, Rochester, Monroe County and its Pure Waters Agency have mounted, with substantial State and Federal assistance, a model frontal attack on water pollution in this area. In contrast to the situation that existed then, there now exist the laws and the prospects for funds that will be needed to enforce and construct the controls that will be needed by municipalities and industries to slowly return the lake to an acceptable level of water quality.

There is even some serious discussion about the possibility of reopening some of the public bathing beaches next year. Whether this occurs next year or sometime in the future, the lesson to be learned from the Great Lakes pollution problem is that mismanagement, or better non-management and inattention to this problem deprived millions of people of some of the most important and attractive recreational and health benefits that are supposed to be among the advantages of living near a large body of water.

Even today, we are far from being able to relegate Great Lakes pollution to the history books. There is still far more to be done in the area of interstate and international cooperation to defeat the water quality abuse that has taken place. At one point in the late 1960's, the problem seemed so hopeless that I proposed the creation of an international environmental agency by the United States and Canada which would have not only advisory but enforcement authority to ensure the water quality of all of the hundreds of miles of boundary waters, including the Great Lakes. Such a step would have required both Congress and the Canadian Parliament to surrender some cherished authority to this international body--it may even have required a Constitutional Amendment to achieve.

Since I made that proposal, the President and Prime Minister Trudeau have signed a treaty greatly improving the opportunity for mutual resolve and cooperation in the matter of Great Lakes pollution. But even as the two nations embark on a greater spirit of cooperation between them, we in the United States have not done all we can to coordinate and focus on the problem of pollution on our own side of the lakes.

As many of you know, a draft Environmental Protection Agency proposal for a concerted attack on Great Lakes pollution sat unapproved for over a year at the Office of Management and Budget, and the fate of this Federally-sponsored plan for the lakes is still unclear.

I am not here suggesting that we should or could pull out all the stops to attack this problem. Probably the pace we are proceeding at now is close to the best we can achieve, given the circumstances. Among these circumstances, of course, is the fear among many, that under present international and domestic economic conditions, if we move too far ahead in the field of mandatory environmental controls, we will help to keep certain American industries at a permanent disadvantage relative to foreign counterparts which are not so regulated. It has been my experience in government that if you seek to move on a crash basis toward any single goal, no matter how desirable, the almost inevitable result is that you make less progress than you could have made had you set a more moderate pace and coordinated your plans with those having other interests and points of view.

Perhaps there is a lesson in that experience for those of you who will be involved in trying to hammer out a workable shoreline management plan for this region.

As uncoordinated as our efforts at attacking Great Lakes pollution have been, the situation with regard to lake levels is, if anything, much worse.

One of the primary difficulties with the governmental side of lake level control is that those responsible for the regulation of lake levels have many interests to reconcile, and imperfect tools to work with. Not all of the competing interests in the lake level field are predictable or cooperative. It is not enough to blame the high lake level problem on the unpredictability of Hurricane Agnes, however. The fact is that when lake levels are low or moderate, there is little concern or reason for concern on the part of shoreline residents and property owners. During such periods, lake level control is pretty well worked out by the quiet planning and operation of the boards of control which operate the control facilities at the St. Lawrence River and at Lake Superior, under the policy eye of the International Joint Commission. These bodies are fairly well dominated by power and navigation interests and the plans under which they operate carry out the basic purposed of the Boundary Waters Treaty which include consideration of both of these interests.

This is all well and good during low and moderate water level periods. However, the lack of effective level control facilities, the lack of publicly understood policy-making procedures and the lack of lakeshore resident representation on the controlling bodies shows its ugly head whenever the lakes threaten to swallow docks and cottages and when they begin lapping up against the living room furniture in lakeshore dwellings.

To me this, in itself, is an incredible fact, showing the need for far greater responsiveness to the public on the part of the Commission and its subsidiary boards of control. When the hearing was held in Rochester, it was mainly for the purpose of considering an inadequately explained plan for changing the pattern of lake level regulation of Lake Superior. Since area residents were rightfully more concerned about the fate of their living room furniture, it was a predictably rocky session. I will not repeat this afternoon the salient points of my testimony before the Commission last May, except to say that I am among those who believes that there is much that could have been done after Hurricane Agnes in the summer and fall of 1972 to at least lessen the high water problems of last winter and spring.

I have made no secret of my unhappiness with the responsiveness of the International Joint Commission (IJC) to lakeshore interests. I have looked over their shoulder on literally a week by week basis as they adjust the outflow rates from Ontario into the St. Lawrence, realizing that high water levels on the upper

lakes will be visited upon us sometime in the not too distant future. I have asked the President to take the next available opportunity to appoint a qualified lakeshore resident to the U.S. section of the IJC. I have also asked Chairman Christian Herter, Jr., of the U.S. section to arrange immediately for a public meeting in the Rochester area to explain the IJC's current policies and projections with regard to Lake Ontario water levels in the next 12 months.

I still feel that a public meeting held in Rochester a year ago by the IJC could have cleared much of the air and solved many of the problems of public anger and confusion which were generated earlier this year. At this moment, I have not yet had a final answer from Mr. Herter as to whether or not he supports the idea of a public meeting this fall.

I explained earlier that from the Federal level, my area of jurisdiction and experience lies more on the wet side of the shoreline. However, the questions of pollution and water levels have a very major impact on many of the decisions you will be making and suggesting about lakeshore land-use planning.

One thing that the Federal government, with the full support of Congress, has been pushing for through its flood insurance program, is intelligent and mandatory flood plain planning and zoning on the local level. Especially in undeveloped lakeshore areas, it makes little sense to permit developments which will inevitably at some time in the next century be the target of more flood disaster loans and assistance. There are ways of planning development to minimize flooding risk while taking full advantage of the development potential of the lands in question. Additionally, however, water levels and water quality will also have an impact on the nature and extent of recreational and transportation uses of lakeshore areas, and must be integrated into the total land development pattern.

These questions will determine the extent of future residential and commercial development of the shoreline, which in turn will determine the need for transportation corridors, bathing and marina facilities, etc. Also having potential impact on shoreline plans will be the success or failure of plans to lure travelers to a surface-vessel carrier service linking Rochester with Toronto. Water quality considerations will also influence local reaction to the planned project to open Irondequoit Bay to the lake.

What I have admired so much about the planning of this conference is the fact that you are looking not only at the lake, or at the shoreline, but you are trying to focus on the problems surrounding the interface of water and land. As sensible and as necessary as this approach is, no one should underestimate its difficulty. Your task is difficult because of the myriad of disorganized, independent jurisdictions, planning bodies and levels of government which all have a crucial say in the fate of the lakeshore. This is especially true on the Ontario shoreline,

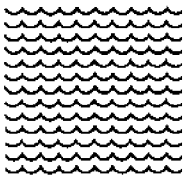
because, to a certain extent, we are affected by everything that happens to the lakewater in the other four Great Lakes, and in countless rivers and streams in the Great Lakes Basin. In terms of water levels, we are affected by international decisions, and by the Lord and his rainfall. In terms of transportation planning, we are affected by all three levels of government. And in terms of planning conservation and development, we are affected by each individual county, city and town planning and zoning body.

As a Federal representative, I can and will pledge to try to get the Federal government to make some of these tasks of planning and coordination easier to deal with. First, we can and should help at the international level by doing all that needs to be done, including review of the Boundary Waters Treaty to see that international cooperation on water quality and lake levels is effective as well as publicly responsive. Second, we can help to provide funds for hardware and controls that will be needed to bring the lakewater to a level of quality that is acceptable so that the lake and its shoreline can provide the fullest potential of enjoyment and benefit to the citizens of both countries.

Third, we can help by adopting policies and incentives which will further encourage the kind of regional coastal zone planning which you are undertaking here today. An example of this is flood plain zoning requirements which are built into our Federal Flood Insurance Statute. Fourth, we can help by providing the necessary planning funds, and the necessary data from Federal research, which you may need to plan in the most effective and enlightened way.

While not all of these priorities and aids from Washington will be available overnight, I think the Federal government's priorities should be insuring a swimmable and drinkable quality of Great Lakes water, and insuring that the point of interface between water and land which you are focusing on is not located around the living room chairs of lakeshore dwellings.

Again, I thank you for what you are undertaking to do for the people of this area.



WATER MANAGEMENT

Because water does not remain static, it cannot be managed as easily as a parcel of land. Rather, many factors have an effect upon it. With few exceptions, most of our concern focused on questions of at what level of government and with what technique could we manage water resources. Most of the problems, however, and their solution transcend many areas of concern.

RECOMMENDATIONS AND OPINIONS

A. Boating Management

(1) There is a need to resolve the conflict between boat users as users of the water surface. Additionally, boat licensing and identification needs to be undertaken to a greater degree, as does the control of boat pollution.

B. Recreation Management

(1) There are three factors which affect recreation: (a) density of use, (b) time of use, and (c) quality and performance standards associated with outdoor recreation. All need to be considered in the development of a recreation program.

(2) A possible alternative would be to provide artificial water-bodies for recreation and associated water uses which are expendable and which serve to protect these values of natural bodies which would be jeopardized by meeting the recreational needs of the general public.

C. Fishing Management

(1) Questions were raised as to the re-establishment of endangered species, the eradication of the lamprey eel and the development of an aqua culture industry.

(2) Great monetary resources need to be channeled into the Great Lake Commission and other bodies to re-establish fishing as a viable industry.

D. Water Quality Management

(1) Water quality may be the most important part for consideration. Without good water quality management, other areas become more difficult to manage--good water quality will enhance overall water management.

(2) A suggestion for cleaning up the Genesee River was made, to be accomplished by placing a filtering system of some type in the river to trap sediment.

(3) Water quality management is not a local program. All aspects of the total watershed must be considered and participation at all levels is needed in order to make the water quality improvement program successful.

E. Public Decision Making

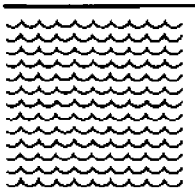
(1) It was felt that comprehensive planning does not play a major role in public decision making but rather an incidental role. However, the Regional Shoreline and Monroe County Irondequoit Bay plans are good starts toward a comprehensive management system.

(2) Large sums were spent on the Adirondacks and Catskills. Should the shoreline receive the same state aid priority?

(3) Not only a dispersion of planning power exists, but there is little leverage or power to implement such plans. This results in numerous directions being taken and most wind up being academic exercises.

F. Education Programs

(1) Action is needed in two major areas. The first is the dissemination of knowledge concerning the coastal zone coupled with environmental appreciation, and the second is redirection of vocational and higher education study programs to promote background and technical expertise.



INTERFACE MANAGEMENT

Of all the management areas, probably least is known and understood concerning the interface. Established patterns of public decision making have not worked well enough in the coastal zone because of a lack of scientific information, lack of a historical and legal body of knowledge, and multi-directional efforts of conflicting public and private bodies.

RECOMMENDATIONS AND OPINIONS

A. Flood Management

(1) Concerning the shoreline flooding on Lake Ontario, it was questioned whether or not the flooding was natural or man made. Could human actions have been taken which could have prevented such floods. If the premise could be accepted that the cause was due to human faults, then representation on decision making bodies may be a problem.

(2) It was felt that private citizens have little voice in regulating the lake levels. And while navigation and power interests appear to have a large voice in management, questions were raised as to the trade offs between protecting a few property owners versus economic welfare of the northeast United States.

B. Intergovernmental Management

(1) There is a real need for a legal definition of where state authority begins and ends and where controls by local government begins and ends concerning the interface. The jurisdictions do not appear to be enforced and the lack of definition means that local governments do not or cannot control the interface.

Conversely, many problems that are handled by townships are regional in nature. Ordinances are needed that provide an overall guide for future development and management.

(2) Most local jurisdictions do not have the resources to hire experts capable of dealing with the interface

problems; but, are townships willing to accept Regional, State and Federal control?

(3) Problems exist between rural and urban interface townships. They do not understand each other's problems and it is difficult to get groups to agree.

C. Environmental Management

(1) There is no definition for the environmental boundary of the interface. For example, state authority governs the water, but how is this policy affected by filling and high water.

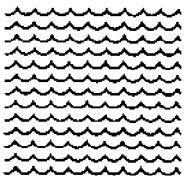
(2) It was felt, though, that the towns have been granted fairly extensive local power for the management of the environment, but it is not used. An example would be zoning, which apparently is legally adequate but not enforced well enough because of bias. Another example would be the establishment and use of an environmental management control.

(3) It must be recognized that there is a need to manage the shoreline as a critical resource that should benefit all the citizens.

D. Marina Management

(1) Most marinas appear to be marginal operations and are privately owned. There is a need for public involvement; one suggestion is through state acquisition and leasing to private concerns. This may take the form of a UDC type arrangement with state assistance rather than state control. Another way might be to have the state construct slips and boat launches and turn them over to public management.

(2) Areas where the state could aid marinas is through money, design and management assistance.



LAND MANAGEMENT

Traditionally and historically our ties with land and its ownership have been a keystone of our social system. Comprehensive land management encompasses the use and selectivity and goals and objectives of the resource base. This base includes, among others, land, water, air, and biological species. Properly conceived it could be considered as the environmental system.

RECOMMENDATIONS AND OPINIONS

A. Economic Management

(1) Agriculture is prosperous because of unique features of soils, climate and because of prior investment in canning facilities. The importance of shipping by rail was stressed but conversely the problem of removing rails for human access provides conflicting goals.

(2) It is inefficient to provide municipal services in linear form rather than in concentrated form. Summer cottages become a heavier burden on public services because of their limited occupancy.

B. Land Use Planning

(1) The basic conflicts surrounding shoreline problems evolve around various interests. One factor contributing to the disarray is too many governmental structures and the concomitant problem of agreement for public action.

(2) Planning becomes a static process of producing a report. Ultimately plans are developed; however, not much attention is paid to the process and the capability to carry out the plan. For example, necessary capital improvement programs fail to accompany plans.

(3) Land use revolves around the tax base. If land moves from private to public domain, there must be a way to recover lost tax money.

C. Public Decision Making and Participation

(1) There are numerous groups both public and private which have an interest in the decision making process

concerning the shoreline. Among them are International, Federal, and State bodies, Regional, County, townships and cities and private groups.

D. Land Zoning

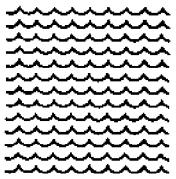
(1) Probably the one best way to manage the shoreline is to zone. It may be considered that zoning is restrictive; however, there are efficiencies that can occur to the builder and the public by controlling and/or restricting development to selected areas.

(2) The General Municipal Law, however, might well be rewritten to allow for zoning at a higher level than by the town. Such ideas, a waterfront zone and zoning of the interface, then might become possible.

E. Power Plant Siting

(1) It is felt that power plant siting is really done by the power companies, and state agencies are asked to agree on their choices. This may not be in the best interest of the people or of the environment.

(2) There are two types of problems concerning power plant siting: 1) Is there a real or perceived problem with radiation, and 2) Is thermal pollution, both air and water, a serious problem or can it be managed fairly easily?



NEW DIRECTIONS FOR THE COASTAL ZONE

Donald F. Squires
Director
New York State Sea Grant Program

It is a pleasure to be here speaking for the New York State Sea Grant Program, the co-sponsor with the Genesee/Finger Lakes Regional Planning Board of this conference on The Regional Shoreline. The National Sea Grant Program was initiated as a cooperative Federal/State program by Congress, recognizing that the coastal resources of the nation were not receiving adequate attention. Through institutions of higher education, Congress wished to establish centers for research, advisory services and education in support of the objectives of the program: the development, exploitation, management and conservation of the coastal resources of the nation. The New York State Sea Grant Program, administered by the State University of New York for the consortium of State University of New York campuses and Cornell University, has as its theme: (1) developing an awareness among the citizens of the State of the value of the coastal region and coastal resources; (2) providing assistance to citizens and their governmental agencies in the management of the coastal region and the coastal resources; (3) providing technical assistance to marine-based industries.

In 1972 Congress passed the Coastal Zone Management Act to encourage states to develop plans and management programs for the coastal region. This act recognized the special nature of the coastal zone and the heavy pressures placed upon it by the often-competing interests of industry, commerce and recreation.

In February 1973 New York's Sea Grant Program sponsored a conference in Albany entitled "Managing Our Coastal Zone". Copies of the proceedings of that conference are available from the Sea Grant Office. In keynoting the conference, Assembly Speaker Perry B. Duryea urged quick recognition by the State of the special problems of the coastal regions along the Atlantic Ocean and along the Great Lakes. I am happy to report that under the leadership of the Office of Planning Services and the Department of Environmental Conservation, with the continued participation of the Sea Grant Program, development is underway of a coastal zone plan and a management plan within New York State.

This conference on the regional shoreline is particularly timely. It permits the citizens of the Genesee/Finger Lakes region to voice their concerns to state agenencies while coastal planning is in its initial stages.

When we deal with the coastal zone we must recognize that conflict is built in: competition for use of coastal waters and lands is almost inescapable. Because of

this, the most significant thing we as citizens can undertake is to state priorities. If we cannot have everything we want, we must determine which things we want most. What uses of the coastal zone are most important to us? Having determined that, are we prepared to give up something else? For example, if we want to use the shoreline and adjacent waters for recreational boating, recreational fishing and other sports, are we prepared to give up using coastal waters for the generation of electrical energy? Completely or partly?

In some places, citizens happily filled in coastal marshes and wetlands to build houses on, forgetting that, at the same time, they were destroying the recreational fishery, an important human value and a source of economic return to coastal communities. Numerous conflicts and confusion of priorities cause inaction at all levels.

Coastal management is not just another conservationist issue of saying "Thou shall not". Coastal zone planning is not just another environmental tactic for delay. It is among others, a way of saving the economic health of the towns along the shore. A thriving coastal economy is completely dependent upon a thriving marine environment. Nowhere do we see it more clearly than in the case of Lake Erie's coastal region. Here, because of environmental degredation, coastal lands have not increased in value. Everywhere else in the state, shoreland values have spiraled upward.

I want to complement Stuart Denslow for selecting the focus of this meeting -- "interfacing the water and the land". He has put his finger on the critical spot.

We have learned much from today's meeting. We have learned that coastal zone planning is complex. The biological, physical and social actions are intermeshed; they don't permit simplistic solutions. We have also learned that New York is complex politically, and that in each region coastal responsibilities may be shared with other region, other states, and other nations. We may want to control our own environment, but "our own" is inextricably part of a larger system. Workshop reports have referred over and over to the need for compromise between local jurisdiction and higher governmental levels. I want to urge all of the conference participants not to be discouraged by these complexities: complexity is somebody else's problem. Resolving the differences between the biological and physical systems is the technologist's problem, and compromising local and regional interests is the politician's problem. By making your views heard, and stating your priorities, you provide the basis for action by technologists and politicians.

We recognized in all the workshop reports that the coastal zone is a valuable resource to the Genesee/Finger Lakes Region. That recognition is reflected by the degree to which local and regional bodies have moved ahead agressively with programs relating to the coastal zone. In fact, the coordinated plan for Irondequoit

Bay was released today. The Genesee/Finger Lakes Regional Planning Board has developed a comprehensive study of the coastal region and has initiated its **Early Action Program.**

We have learned that we are in a period of change -- change in the way we see our world and the way in which we respond to it. As our social values change, we must remain flexible. In the fast pace of international and national events it is difficult to fully anticipate the impacts of increasing dependence on overseas oil supplies, of increased leisure time, of increased affluence, and above all, of the fruits of the environmental improvement programs initiated in past years. While some of these factors suggest that we may increase recreational use of our coastal zone, we may not have the oil and gas supplies to permit conventional present-day recreational activities. Will recreational motor boating continue to grow as it has during the past few years, or will it be supplemented by other forms of recreation?

The high water problem has threaded in and out of all our discussions today. I urge that we see this as a short-range problem. I would like to remind you of a recent publication by the Canadian government, which quotes from headlines of Great Lakes newpapers of past years. While today we are faced with high water levels, in the late 1960's the problem was low water levels. In the mid-1950's it was high water levels. The key issue is man's capability to manage his environment. How much of our monetary resources, how much of our energy requirements do we wish to devote to the problem of keeping a constant water level in the Great Lakes Basin? The rainfall in the watershed of the upper Great Lakes which caused the high water problem may be extremely important in food production for the nation. We are only beginning to have an understanding of the ways in which man can affect rainfall. We do have some capability for regulating waterflow through the Great Lakes. Is the best solution to ameliorate fluctuations in water level caused by cyclic patterns of rainfall? To manage lake levels by controlling the flow through huge engineering works? Or would it be better to recognize in our development of the coastal zone that lake levels will indeed fluctuate? Congressman Horton pointed out very well that our mechanisms for management are still far from perfect.

I would like to thank Stuart Denslow, the staff of the Genesee/Finger Lakes Regional Planning Board, and Richard Gross of the New York State Sea Grant Program for putting together such a successful conference. I would particularly like to thank all of you who participated for your hard work and for developing so many important points with respect to the Genesee/Finger Lakes coastal region of Lake Ontario.

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