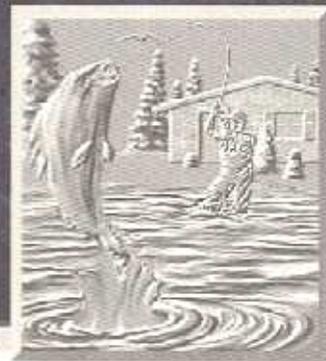
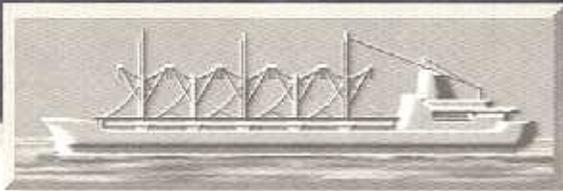
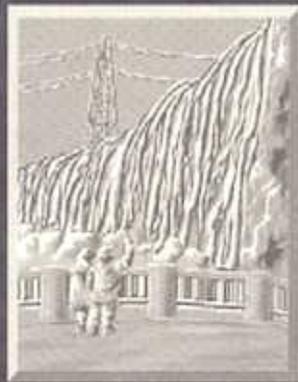


LEVELS REFERENCE STUDY GREAT LAKES-ST. LAWRENCE RIVER BASIN

ANNEX 5
CITIZENS ADVISORY
COMMITTEE



SUBMITTED TO
THE LEVELS REFERENCE STUDY BOARD
BY THE CITIZENS ADVISORY COMMITTEE
MARCH 31, 1993

FINAL REPORT

**Submitted to the
Levels Reference Study Board
by**

CITIZENS ADVISORY COMMITTEE

March 31, 1993

**Final Phase
Levels Reference Study
International Joint Commission**

ISBN 1-895085-49-7

LEVELS REFERENCE STUDY

April 12, 1993

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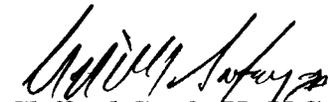
Dear Mr. D'Aniello and Mr. Wagner,

On behalf of the members of the Citizens Advisory Committee, we hereby submit our Citizens Advisory Committee Final Report. We understand that this report will be printed as Annex 5 of the Great Lakes - St. Lawrence River Levels Reference Study Board Report.

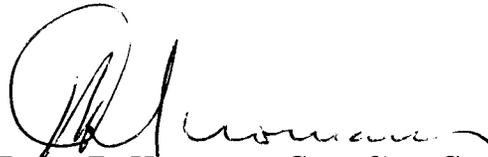
We wish to acknowledge the dedication and perserverance of our fellow colleagues on the Citizens Advisory Committee, members of the Study Team, and citizens who participated in the Levels Reference Study. We applaud the International Joint Commission for creating our group and giving us the opportunity to be so directly involved in the Study. We are especially appreciative of the fine work done by Anne Sudar, our resource person, who was extremely helpful to us throughout the Study.

Through the course of Phase II of the Levels Reference Study, we believe that much progress has been made in furthering the notion of direct citizen involvement. The results of the Study process confirm a place for such involvement in both the present and future activities of the International Joint Commission.

Sincerely,



Clifford Sasfy II, U.S. Co-chair
Citizens Advisory Committee



Peter B. Yeomans, Canadian Co-chair
Citizens Advisory Committee

Executive Summary

The Citizens Advisory Committee was established in May of 1990, at the beginning of the Phase II Study. Members were appointed by the Study Board. The group was designed to be a microcosm of the Great Lakes-St. Lawrence River Basin "publics" interested in and affected by fluctuating water levels. Members of the Citizens Advisory Committee came from all parts of the basin, both United States and Canada, and from all of the major interests: shoreline property owners; environmental groups; Native North Americans; recreational boaters, shoreline municipalities; hydroelectric power; and shipping.

The major task assigned to the Citizens Advisory Committee was to advise the Study Board on the operation and conduct of the Phase II Study. The Citizens Advisory Committee was intimately involved in all aspects of the Study, from beginning to end. Besides offering thoughtful comments and useful suggestions on all major Study documents as part of the Citizens Advisory Committee group, approximately half of the members also served as full members of either a working committee or the Study Board.

The Citizens Advisory Committee supports the recommendations of the Study Board (listed in section 3 of this report). A minority of four Citizens Advisory Committee members believe that three lake regulation should receive further consideration.

The Citizens Advisory Committee also recommends:

CAC 1. The Citizens Advisory Committee recommends examination of the practice of adjusting releases in the St. Lawrence River to provide adequate water to Montreal Harbor when large container ships are in port, and to allow for equitable apportionment of water, both upstream and downstream of Cornwall, for recreational boating at other times during the fall season. This would involve consultation among all affected parties. The Citizens Advisory Committee believes that such a practice may provide greater overall benefits to both shipping and recreational boating interests in the St. Lawrence River.

CAC 2. The Citizens Advisory Committee recommends that the International Joint Commission provide for continued citizen involvement in the Great Lakes-St. Lawrence River water levels issue, by including citizen representatives at the policy decision level (not day-to-day operation) of the management of Great Lakes-St. Lawrence levels and flows through whatever structures and institutions are operative.

CAC 3. The Citizens Advisory Committee recommends that the International Joint Commission appoint citizen members to future Study Boards on other issues as well as fluctuating water levels, and direct those Study Boards and committees to involve citizens directly as full members of working committees and task groups as well.

CAC 4. The Citizens Advisory Committee recommends that the International Joint Commission consider creating a single public involvement, citizens advisory function which would encompass the entire Great Lakes-St. Lawrence River Basin Ecosystem, both water quality and water quantity aspects.

CAC 5. The Citizens Advisory Committee recommends that, considering the time requirements and the responsibility associated with the type of involvement which Citizens Advisory Committee members had in the Levels Reference Study, future such efforts should make provisions for: 1) modest honoraria to partially compensate nongovernmental representatives for time away from work and family; and 2) the designation of an alternate to attend meetings when the member cannot attend.

CAC 6. The Citizens Advisory Committee recommends that, with respect to citizen involvement in the ongoing management of Great Lakes-St. Lawrence River water levels and flows, individuals should be appointed for three year terms, with a limit to one renewal, so as to ensure turnover in committee membership.

CAC 7. The Citizens Advisory Committee recommends that, following completion of the Levels Reference Study, all Study papers and documents be archived permanently at a location to be designated in both the United States and Canada.

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Chapter 1.

The Citizens Advisory Committee

The Citizens Advisory Committee was established in May of 1990, at the beginning of the Phase II Study. Members were appointed by the Study Board. The group was designed to be a microcosm of the Great Lakes-St. Lawrence River Basin "publics" interested in and affected by fluctuating water levels. Members of the Citizens Advisory Committee came from all parts of the basin, both United States and Canada, and from all of the major interests: shoreline property owners; environmental groups; Native North Americans; recreational boaters, shoreline municipalities; hydroelectric power; and shipping.

The major task assigned to the Citizens Advisory Committee was to advise the Study Board on the operation and conduct of the Phase II Study. The complete terms of reference for the committee are contained in Appendix A of this report. The Citizens Advisory Committee was intimately involved in all aspects of the Study, from beginning to end. Besides offering thoughtful comments and useful suggestions on all major Study documents as part of the Citizens Advisory Committee group, approximately half of the members also served as full members of either a working committee or the Study Board.

1.1. Members

The Citizens Advisory Committee had 18 members, nine from Canada and nine from the United States. Each section had a co-chair and Board liaison, making a total of four Citizens Advisory Committee members who were also Study Board members. This integrated system gave the Study Board direct input from a wide array of concerned interest groups. Short biographies of each Citizens Advisory Committee member are included below.

United States Study Board/Citizens Advisory Committee member **Fred Brown** is a retiree from the Dow Chemical Company after 28 years as a research and development wood technologist and forest products pathologist. He is a past president of the Michigan United Conservation Clubs and of Great Lakes United and continues to be active on several advisory bodies focusing on water related issues. He currently represents conservation groups on the Michigan Water Resources Commission.

Joan Eaton is a civil engineer specializing in water resource management from Toronto, Ontario and has worked for Ontario Hydro for 14 years. She currently serves on the Canadian Lake of the Woods Control Board (representing Ontario), the Ottawa River Regulation Planning Board (representing Ontario Hydro) and the International Niagara Working Committee (as an expert resource).

Edith Fuller is former mayor of the Town of Haldimand, Ontario, a rural community on the north shore of Lake Erie. Residents of her community experienced severe flooding and erosion problems during the high water levels of 1985 and 1986, and thus she has firsthand knowledge of the effects of fluctuating water levels. Edith was not able to participate in Citizens Advisory Committee activities during the latter part of the study due to illness.

Leroy Hamilton is a longtime marina operator on the St. Lawrence River at Iroquois, Ontario. Leroy is a member of the Ontario Marina Operators Association, a riparian property owner, and a recreational boater. He has an extensive background and understanding of water levels and flows and their effects on recreational boating and marina operations. He served on Working Committee 3 as well as the Citizens Advisory Committee.

Henry Hanka represented commercial navigation and maritime interests on the Citizens Advisory Committee, as well as the overall Lake Superior interest. He is past chair of the eight-state Great Lakes Commission. When the Levels Study began, Henry was government resources director for the Seaway Port Authority of Duluth. At the completion of the Study, he was Executive Director of the Arrowhead Regional Development Commission. Henry served on Working Committee 4 as well as the Citizens Advisory Committee.

Alex Harry is an attorney in Sault Ste. Marie, Ontario and past mayor of that city. Alex spends his summers on the shoreline of Lake Huron in the North Channel area, and has served on many community boards, including the Ontario Shoreline Management Advisory Council. Alex served on Working Committee 1 as well as the Citizens Advisory Committee.

Sharon Hazen, from Port Rowan, Ontario, is currently an Executive Board member of the International Great Lakes Coalition, having served as chairman from 1988-90. Her interest in water level issues began during her term of office on the International Biosphere Reserve Committee of Long Point and Long Point Ratepayers executive. As a Board member of that organization, she was acutely aware of the impact of extreme high levels on the Long Point sandspit which has been designated by the United Nations as internationally significant. Consequently, Mrs. Hazen represented the concerns of Long Point to the International Coalition and to study team staff members during Phase I of the study. Mrs. Hazen is a secondary school teacher employed by the Norfolk Board of Education at Delhi District Secondary School. She is also the publisher of the Port Rowan Good News, a community newspaper serving the Long Point - Port Rowan area. Sharon served on Working Committee 4 as well as the Citizens Advisory Committee.

Joe Milauckas is a lifelong riparian and previously served as Chair and Executive Board member of both the Great Lakes Coalition and the International Great Lakes Coalition. He continues to operate a small resort his family started over forty years ago on Lake Michigan, near the harbor town of Saugatuck, Michigan. He is a recreational boater and active in the local lakeshore property owners' association and area business organizations. His legal background includes serving as prosecuting attorney in several nearby shoreline communities. He became involved in the Levels Reference Study to help achieve a complete, factual, and fair study process that would produce credible and useful recommendations to mitigate the financial and

quality of life losses caused by recurring extreme high and low levels in the Great Lakes. Joe served on Working Committee 2 as well as the Citizens Advisory Committee.

Richard Moore, a water resources specialist with the Michigan United Conservation Clubs' office in Lansing, Michigan, joined the Citizens Advisory Committee midstream. His experience includes managing an environmental program near Saginaw Bay, where he interacted with many shoreline property owners who have experienced flooding problems.

Patricia Petersen joined the Citizens Advisory Committee and the Study Board in September of 1992. She has a professional background in municipal politics and planning. She is a political scientist who directs the Urban Studies Program at the University of Toronto. Pat was chairman of the Scarborough Planning Board for several years and also vice-chairman of Ontario's Shoreline Management Advisory Committee. She lives along the Scarborough Bluffs of Lake Ontario.

David Rebmann, who holds three graduate degrees, is a social studies instructor and part time assistant professor of business. David is co-chair of the South Shore Coalition, a past chair of the Erie County Shoreline Task Force and Urban Waterfront Advisory Committee, and has been president of Hoover Beach Association for 10 years. He has been involved with shoreline issues for over 20 years.

Howard Reynolds represented the Keweenaw Bay Indian Community on Lake Superior in Baraga, Michigan and is the Keweenaw representative on many federal and state councils on Indian affairs. He has been the environmental officer for the tribe for the past six years. Howard is a retired electrical and mechanical engineer, and has worked on various construction projects throughout the Great Lakes region, including the St. Lawrence Seaway. Howard believes that maintaining the integrity of the ecosystem should be top priority. Howard served on Working Committee 3 as well as the Citizens Advisory Committee.

United States Citizens Advisory Committee Co-chair and Study Board member, **Cliff Sasfy**, was one of the organizers of the Great Lakes Coalition and served as vice-chair of the U.S. Great Lakes Coalition and Executive Board member of the International Great Lakes Coalition. Cliff is a fourth generation riparian, following his great grandfather who was one of the original settlers of South Bass Island in Lake Erie. Cliff is presently a business executive with a major retail firm. His professional background includes the areas of real estate, real estate finance, and law. In addition to his riparian experience, Cliff's recent public service activities include the following: Commissioner, State of Michigan Great Lakes and Water Resources Planning Commission; Commissioner, LaSalle Township Planning Commission; Committee member, Monroe County Solid Waste Management Planning Committee; and Committee member, Toledo Area Regional Water Feasibility Study Committee. Cliff also served on the Public Information Committee during the Phase I portion of the Levels Reference Study.

Christian Simard is a director in the Union Quebecoise pour la Conservation de la Nature from Quebec City. He is also an articulate spokesperson for Quebecois interests in the St. Lawrence River area. His organization publishes a magazine and is active in the Strategie St Laurent, a plan to encourage public participation in the cleanup of the St. Lawrence River. Because of a

work conflict, Christian was not able to participate in Citizens Advisory Committee activities in the latter half of the Study.

John Sullivan Jr. is former mayor of Oswego, New York, on the shoreline of Lake Ontario. John is now an attorney in the city of Oswego. John had a very brief involvement with the Citizens Advisory Committee.

Dick True is executive secretary of the Empire State Marine Trades Association representing boating, marina and water dependent business interests and lives in the Albany, New York area. He is a member of the state's Boating Advisory Committee, chairs the Department of Environmental Conservation's and the Coastal Zone Program's Marine Advisory Committees, and serves on the Long Island Sound Study Citizens Advisory Committee and the Sea Grant Advisory Committee. Dick served on Working Committee 1 as well as the Citizens Advisory Committee.

Phil Weller served as Canadian Co-chair of the Citizens Advisory Committee and Study Board member from its inception to July, 1992. He was Executive Director of Great Lakes United (an umbrella for environmental organizations in the Great Lakes Basin), taught at the State University College at Buffalo, and authored three books on environmental issues.

Michael Williams is the assistant director of the Walpole Island Heritage Centre (Nin.Da.Waab.Jig), responsible for natural resources and environmental quality. The Walpole Island First Nation is located at the mouth of the St. Clair River, which funnels water from the upper Great Lakes to Lake St. Clair and the Detroit River. Fluctuating water levels affect the Walpole Island Community in many ways, including traditional hunting and fishing activities, shoreline erosion, pollution and other impacts from the St. Clair shipping channel.

Peter B. Yeomans was a Canadian member of the Study Board and also the Citizens Advisory Committee Co-chair. He is the Mayor of Dorval, a suburban city on Lake St. Louis and one of the 29 municipalities that comprise the Montreal Urban Community in the Province of Quebec. He is also Vice-Chairman of the Executive Committee of the Montreal Urban Community and has been designated by that Committee to participate in the Study. Peter served as Canadian Co-chair of the Citizens Advisory Committee from July 1992 until the end of the Study and was a Study Board member from the beginning. Peter's concerns focus on the St. Lawrence River's situation and challenges downstream from Cornwall, along with municipalities' ability to maintain freshwater intake ability, storm and waste water assimilation, recreational boating, shoreline management, and port city functions. Peter is an active member of the International Great Lakes - St. Lawrence Mayors Association.

Chapter 2. **Activities of the Citizens Advisory Committee**

2.1. Review and Comment on Key Study Documents

2.1.1. The Plan of Study

At their first meeting, the Citizens Advisory Committee reviewed the draft Plan of Study and provided the Board with both general and specific comments. These comments were considered in subsequent revision of the Plan of Study. A major comment was that the Plan of Study should explicitly state the "systemwide" nature of the Study. All measures and impacts must be considered from a systemwide perspective. The Study Board made this change at its next meeting.

Continuing general concerns with the Plan of Study were: its ambiguity (there is scope for many different interpretations of its goals and intentions); and doubts about how site-specific studies can lead to a systemwide analysis.

2.1.2 Native Survey

At their second meeting (July 1990), several Citizens Advisory Committee members mentioned the importance of Native North American riparians and were concerned that native people had not been included in the Riparian surveys. The Citizens Advisory Committee suggested that this gap be filled in Phase II. The Board responded by directing Working Committee 2 to conduct a survey of Native North American communities. Citizens Advisory Committee Native representatives Howard Reynolds and Michael Williams played a key role in developing and carrying out the Native Survey.

2.1.3 Communicating the Plan of Study to the Public

At their third meeting, September 17, 1990, the Citizens Advisory Committee agreed on the importance of making people aware of the Plan of Study. They recommended 1) a press release announcing the availability of the Plan of Study; and 2) that Working Committee 1 develop and distribute a summary of progress to date on the Study, including working committee membership and the time line. The Study Board endorsed these recommendations, and a press release on the Plan of Study was issued in the middle of October along with a summary of the Plan of Study.

2.1.4 Principles for Public Involvement

Also at their third meeting, the Citizens Advisory Committee identified the following principles for public involvement during Phase II.

- a. It must be a two-way process
- b. Understanding is a prerequisite for participation
- c. Communication opportunities should be dispersed throughout the study; not just at the end.

- d. A well-thought-out plan is a requirement for effective public involvement.
- e. The message must be clear, and consistent from all people involved in the study.

Working Committee 1 included these principles in their work plan and later in their Strategic Plan for Public involvement.

2.1.5 Selection of Working Committee Members

Citizens Advisory Committee members were invited to submit names of candidates for working committee memberships. They also were given an opportunity to comment on all proposed candidates. Following their fourth meeting, the Citizens Advisory Committee sent a letter to the Study Board Co-chairs requesting that members on the working committees should be expanded to include greater representation of qualified expertise from non-governmental organizations (including academic organizations).

The Study Board responded by encouraging Working Committees to give consideration to the appointment of members from non-governmental groups and academic institutions to Working Committees and Task Groups as they were formed.

2.1.6 Corresponding Members

Also at their fourth meeting, the Citizens Advisory Committee recommended to the Board that the working committees develop a category of members called "corresponding members" which would receive all correspondence of the working committee and would be able to attend (at their own expense) working committee meetings. Corresponding members would be able to communicate their views on the activities of the working committee to the WC Co-chairs. This would allow people who have a direct interest in the study to provide useful life experience input.

The Study Board implemented this recommendation at their next meeting.

2.1.7 Paper on Desirable Levels and Flows

The first step in this activity was a workshop conducted by Working Committee 3 on Great Lakes-St. Lawrence River basin hydrology and hydraulics held at the fourth Citizens Advisory Committee meeting on November 10, 1990. Several experts familiar with the design and operation of existing water level regulation plans made presentations and interacted with Citizens Advisory Committee members. A field trip on November 11 gave Citizens Advisory Committee members a first-hand look at several Niagara area features, including the Grass Island Pool structures, Robert Moses Power Plant, Peace Bridge, Bird Island Pier, Black Rock Channel, and Hoover Beach.

Working Committee 3 asked the members of the Citizens Advisory Committee to complete a questionnaire on their interest's opinions regarding preferred ranges of levels and flows. Responses were discussed at several Citizens Advisory Committee meetings, and a report was produced and submitted to Working Committee 3. The full report is included as Appendix B.

2.1.8 Review of Work Plans

At their fifth meeting on January 4, 1991, the Citizens Advisory Committee discussed the draft work plans, sent a detailed set of comments to the Study Board and Working Committee Co-chairs, and a letter to the Study Board Co-chairs summarizing six points on which the group reached consensus. The six points were:

- a. The Work Plans should be revised to make them more readable, more understandable, much shorter in length, and connections between the four documents should be apparent.
- b. The Citizens Advisory Committee wanted to have another opportunity to review the Work Plans before they were approved.
- c. The Citizens Advisory Committee needed more information on the budget and a chance to express their views on budget trade-offs.
- d. The Citizens Advisory Committee requested that a joint meeting be held, including the Citizens Advisory Committee, Study Board, and Working Committee Co-chairs, to discuss work plans.
- e. The system-wide perspective seemed to be absent in the draft work plans. The Citizens Advisory Committee believed it should be stated clearly that alternative measures will be evaluated from a system-wide perspective. That is, an action in one part of the system will be evaluated in terms of its impacts on the entire system.
- f. The Citizens Advisory Committee also noted the absence of specific discussion in the work plans around public participation issues in terms of input to the Plans and, additionally expressed concerns regarding the lack of direct public contact by Study personnel to date. The Citizens Advisory Committee felt that the work plans should contain provisions for public review (in addition to Citizens Advisory Committee review) and suggested that the Working Committees identify specific points where work plans would be publicized.

2.1.9 Ad Hoc Committee on Expectations

At their seventh meeting, March 19, 1991, the Citizens Advisory Committee supported and forwarded to the Study Board a concern about a growing discrepancy between expectations and what the Study will be able to realistically deliver within the given time and resources.

Subsequently, the Study Board formed the Ad Hoc Committee on Expectations to investigate this issue and report back to the Board. Fred Brown and Peter Yeomans (both Citizens Advisory Committee members) served on this committee, and Fred wrote the initial draft of the report.

After the report was finalized, the Citizens Advisory Committee recommended to the Board that the Ad Hoc Committee not be disbanded, but continue to function for the remainder of the Study. The Study Board accepted this recommendation.

2.1.10 Review of Study Evaluation Principles

At their eighth meeting on April 26, 1991, the Citizens Advisory Committee discussed the draft Goals and Principles document produced by Working Committee 4. The group had concerns and suggestions for revision on principles a to e, but fully endorsed principle f, "That decision-making with respect to the management of the Great Lakes-St. Lawrence River system should be open, respecting the full variety of interests affected by any decisions, and facilitating their participation in the policy process".

2.1.11 Review of the Evaluation Strategy

At their ninth meeting on June 13, 1991, the Citizens Advisory Committee discussed the draft Evaluation Strategy document and reached consensus on the following points:

- a. There was general acceptance of the notion that different methods would have to be used to evaluate different things.
- b. The first step of multi-criteria evaluation (displaying information on alternatives and their impacts in a matrix) was seen as useful.
- c. There was general discomfort with the weighting, scaling, and number-crunching aspects of the multi-criteria method.
- d. Whatever evaluation technique was used, there was a need for good data to feed into the evaluation process, and the Citizens Advisory Committee was concerned that there would be a scarcity of critical data.

2.1.12 Limited Involvement of States and Provinces

The Citizens Advisory Committee wrote to the Study Board on June 24, 1991 expressing considerable concern about the increasingly limited involvement of the States and Provinces in the Study. They felt that this issue was directly related to the "Expectations" issue which they had raised earlier.

Both the Study Board and the International Joint Commission made numerous efforts throughout the Study to secure more involvement of the States and Provinces. The issue of travel expenses was never resolved to the satisfaction of the States and Provinces; and participation was never as high as it should have been.

2.1.13 Review of Study Planning Objectives

At their tenth meeting on September 29, 1991, the Citizens Advisory Committee reviewed the draft Study Planning Objectives. A major concern was the elimination of Native North

Americans as an impact category. The Citizens Advisory Committee recommended to the Study Board that Native North Americans should have their own category. Their religion and culture are distinct from other groups in the Basin, and this leads to different impacts from fluctuating water levels.

The Study Board reinstated Native North Americans as an impact category at the September 30, 1991 meeting.

2.1.14 Participation in the Screening of Measures

Citizens Advisory Committee members completed measures ranking forms distributed by Working Committee 4, and several members attended the workshop on Screening of Measures held in Ottawa on October 23, 1991. The Citizens Advisory Committee was generally satisfied with the measures which remained on the list after screening.

2.1.15 Selection of Locations for Detailed Site Studies

At their eleventh meeting on December 2, 1991, the Citizens Advisory Committee reached consensus on the following list of detailed site studies:

U.S. sites	Canadian sites
Chicago, Illinois	Toronto, Ontario
Duluth, Minnesota	Montreal, Quebec
Ottawa Co., Ohio	Central Lake Erie, Ontario
Berrien Co., Michigan	Lake St. Clair, Ontario
Hoover Beach, New York	Severn Sound, Ontario
Oswego, New York	
Alexandria Bay, New York	Thunder Bay, Ontario (if resources allow)

At their December 3, 1991 meeting, the Study Board approved all of the sites which the Citizens Advisory Committee recommended.

2.1.16 Review of the Plan Formulation Guidance Document

This document was discussed at the December 2, 1991 and January 23, 1992 Citizens Advisory Committee meetings. Several Citizens Advisory Committee members had difficulty both understanding and accepting the plan formulation guidance.

2.1.17 Costs of Existing Shore Protection Structures and Future Avoided Costs

Several members of the Citizens Advisory Committee were instrumental in ensuring that the costs of existing shore protection structures and the future avoided costs of such protection under new water level regimes were included in the Study.

2.1.18 Progress Review Meetings

Citizens Advisory Committee members participated in the planning and organization of the three Progress Review meetings held in May of 1992. They also helped with logistical arrangements, encouraging attendance, setting up tours of the local area, and with giving presentations on the Study.

2.1.19 Recreational Boating Criteria For Regulation Plans

Following their June 1, 1992 meeting in Ann Arbor, Michigan, the Citizens Advisory Committee sent a letter to the Study Board asking that Recreational Boating be explicitly recognized as a distinct interest, with a specific criterion, in the existing regulation plans for Lake Superior and Lake Ontario, and in any future regulation plans which may be recommended by the Study. They also suggested that other interests, such as the environment and Native North Americans, should also be formally recognized in existing and future regulation plans. The Citizens Advisory Committee felt that the explicit recognition of all interests was needed to ensure that the multi-interest process adopted by this Study is continued in future regulation of the Great Lakes - St. Lawrence River System.

2.1.20 Participation in the Evaluation of Measures

Several Citizens Advisory Committee members attended the Measures Evaluation workshop on September 28-30 in Toronto. Those who were not able to attend had the opportunity of completing the written evaluation forms prior to the workshop.

2.1.21 Participation in the Development of Study Recommendations

A Joint Citizens Advisory Committee/Study Board meeting was held on December 14, 1992 to review and discuss the Decisions Document. At this meeting, Citizens Advisory Committee members presented their own recommendations to the Study Board, which had been developed at a special consensus-building meeting in November of 1992, and offered their comments and suggestions on the possible recommendations contained in the Decisions Document.

2.2. Participation on Working Committees

Participation on the working committees was first offered to Citizens Advisory Committee members in the role of observers. Citizens Advisory Committee members felt strongly that they should be full members of the working committees, and the Board agreed to expand Citizens Advisory Committee members' role in the working committees from observers to full members.

Each Working Committee had two members of the Citizens Advisory Committee designated as full members of the working committee. Citizens Advisory Committee members on working committees served in their personal and professional capacity, not necessarily representing the Citizens Advisory Committee. They also had a responsibility to report back to the Citizens Advisory Committee, and could present Citizens Advisory Committee views on major working

committee issues if these views were articulated by the Citizens Advisory Committee as a group. Specific responsibilities (as developed and agreed to by the committee) were:

- a. Attend meetings of the working committee;
- b. Participate at all stages of the work carried out by the working committee;
- c. Raise concerns of the Citizens Advisory Committee where appropriate, ensuring that major issues were addressed and that the investigations were responsive to the work plans;
- d. Assist the working committee and task groups in involving the public in their work; and
- e. Communicate progress of the working committee and task groups back to the Citizens Advisory Committee as a whole, and (with the assistance of the Coordinator/Secretary) pass relevant documentation to any other Citizens Advisory Committee members who expressed an interest in receiving such information.

2.3. Participation as Full Members on the Study Board

The Study Board included four members of the Citizens Advisory Committee as full participatory Board members. These were the United States and Canadian co-chairs of the Citizens Advisory Committee and one additional member from each the United States and Canadian Sections of the Citizens Advisory Committee, as chosen by the respective sections.

All four members participated fully in the "cofunction", i.e., at both the Citizens Advisory Committee and Board level. The co-functionality proved beneficial to all interests in the Study. The previously noted benefits provided by the diversity of citizens interests/participation were augmented significantly by give and take communication among the Citizens Advisory Committee, Board, and Working Committees. With four members on the eleven member Board, Citizens Advisory Committee diversity of concerns/positions were readily translated to Board consideration of same. Citizens Advisory Committee-initiated recommendations were articulated to the Board, considered, and largely implemented by Board action.

Equally important, feedback in all directions, among the Citizens Advisory Committee, Board and Working Committees, achieved an awareness of diverse interests and points of view that would not have been achieved otherwise.

The innovation represented by this "co-functionality" proved to be a significant, important, and critical aspect of the organization of the Study.

Chapter 3. Recommendations

3.1. Support of Study Board Recommendations

The Citizens Advisory Committee was involved in the development of, and supports the recommendations of the Study Board, which are summarized below. Additional Citizens Advisory Committee recommendations follow the Study Board recommendations. Two minority reports were also submitted, and are included in section 3.3.

Guiding Principles

1. The Board recommends that federal, state and provincial governments adopt the eleven Guiding Principles and that these principles be used as guidelines for the management of issues related to water levels and flows within the Great Lakes-St. Lawrence River System.

Measures - Lake Regulation

2. The Board recommends that Governments give no further consideration to five-lake regulation.
3. The Board recommends that Governments give no further consideration to three-lake regulation.
4. The Board recommends that the regulation plans of Lakes Superior and Ontario be modified to achieve water levels and flows similar to those described in Measure 1.21.
5. The Board recommends that the Orders of Approval for the Regulation of Lake Superior be reviewed to determine if the current criteria are consistent with the current uses and needs of the users and interests of the System.
6. The Board recommends that the International Lake Superior Board of Control be authorized to use its discretion in regulating the outflows from Lake Superior subject to conditions similar to those which authorize discretionary action by the International St. Lawrence River Board of Control.
7. The Board recommends that the criteria of the Orders of Approval for the Regulation of Lake Ontario be revised to better reflect the current needs of the users and interests of the System. In particular, the Board recommends that Criterion (d) of these orders be amended as follows:

Criterion (d): The regulated outflow from Lake Ontario during the annual flood discharge from the Ottawa River shall not be greater than would have occurred assuming supplies from the past as adjusted. *When Lake Ontario levels and supply allow, consideration should be given to reducing outflows from Lake Ontario during the annual flood discharge from the Ottawa River.*

8. The Board recommends that the Orders of Approval for the Regulation of Lake Ontario be modified by adding the following criterion:
 - Criterion (): Consistent with other requirements, the outflows of Lake Ontario shall be regulated to minimize the occurrence of low water levels on Lake Ontario and the St. Lawrence River downstream as far as Trois Rivières during the recreational boating season.
 - Criteria should be added that considers the environmental interest on Lake Ontario and the St. Lawrence River downstream as far as Trois Rivières.
9. The Board recommends initiating negotiations for the purpose of removing fills upstream of the International Railway Bridge on the Niagara River and lowering the mean level of Lake Erie by 0.03 to 0.06 meter (0.1 to 0.2 foot).
10. The Board further recommends that Nicholl's Marine be the first priority for fill removal.

Measures - Land Use

11. The Board recommends that any comprehensive approach to managing adverse impacts of fluctuating water levels and flows be multi-objective in focus and coordinated in application.
12. The Board recommends that consideration be given to establishing multi-level government funding of \$10 to \$20 million per year for planning and implementing land use and shoreline management projects. A possible funding cost-sharing formula might be 1/3 federal, 1/3 provincial/state, and 1/3 local.
13. The Board recommends that areas requiring land use and shoreline management measures be prioritized through a comprehensive shoreline management program in developed and undeveloped areas.
14. The Board recommends that consideration be given to implementing remedial measures when appropriate to the local conditions. The following measures are recommended for implementation, as appropriate:
 - Relocation of structures from hazard areas.
 - Flood proofing of existing structures.
 - Non-structural shore protection.
 - Structural shore protection, where other alternatives are not appropriate, only if well-designed and engineered, and only if impacts are not shifted to adjacent areas.
15. The Board recommends that the following preventive land use and shoreline management measures be implemented and applied consistently and uniformly around the Great Lakes and St. Lawrence River:
 - Erosion setbacks that include minimum requirements for a 30 years erosion zone for movable structures and a 60 to 100 year erosion zone for permanent structures plus an adequate distance to assure a stable slope. A provision for variance should be included

for areas where the slope has been, or is proposed to be, stabilized by a well-engineered structure.

- Flood setbacks and elevation requirements that include minimum requirements for a 1% flood risk line plus allowance for wave uprush and freeboard.
- Shoreline alteration requirements established in the context of a comprehensive plan. The environmental, updrift and downdrift impacts of shoreline alterations must be considered, along with hydraulic impacts on the connecting channels.
- Regulations in Canada to control fills and other obstructions in connecting channels. The most effective means of achieving this would be through amendment of the International Rivers Improvement Act.
- Real estate disclosure requirements where the seller should be required to disclose to prospective buyers that the property is within a mapped or known flood or erosion hazard area. The buyer should sign an acknowledgment that he or she has been informed of the risk.

16. The Board recommends that acquisition of undeveloped and developed land and habitat protection areas be considered in areas where it is appropriate.

17. The Board recommends that where hazard insurance exists or is implemented in the future that the following elements be included.

- A hazard insurance program should use historic shoreline change methods coupled with recession rate studies to identify and map long-term erosion hazards on Flood Insurance Rate Maps.
- A hazard insurance program should encourage community-based erosion management by establishing setbacks for new construction.
- The program should deny subsidized flood insurance for new or substantially-improved construction within the erosion hazard zone and should require that any structure substantially damaged during a storm be reconstructed landward of the hazard zone. The program should also deny subsidized insurance for recurring claims.
- A hazard insurance program should provide eligibility for mitigation assistance when the aggregate of damage claims exceed 50% of the fair market value of the insured property and provide mitigation assistance for structures imminently threatened by erosion with an emphasis on relocation of structures out of the hazard area, not demolition.

Emergency Preparedness

18. The Board recommends that the two federal governments, in cooperation with provincial and state governments, begin preparation of a joint and cooperative Emergency Operations Plan for the Great Lakes-St. Lawrence River as soon as possible.

19. The Board recommends as a priority that investigations continue into methods of alleviating high or low water crises on the lower St. Lawrence River and that investigations continue into avoiding increased damage as a result of crisis actions taken upstream.

20. The Board further recommends that the following be implemented in the near future:
- The authority necessary for deviation from the Lake Superior Regulation Plan during an emergency, similar to the authority to deviate that exists for Lake Ontario.
 - The installation of an ice boom at the head of the St. Clair River to reduce the risk of ice jams and flooding.
 - An increase in the flow capacity of the Black Rock Lock, so the flow through the lock may be increased in emergency situations by an additional 340 cms (12,000 cfs).
 - The manipulation of the four major Great Lakes diversions; Long Lac, Ogoki, Lake Michigan at Chicago, and the Welland Canal during crisis situations when conditions permit.
21. The Board recommends that, prior to implementing the manipulations of diversions, the potential impacts within and outside the Great Lakes-St. Lawrence River System to the Long Lac, Ogoki and Lake Michigan at Chicago diversions be determined.
22. The Board recommends that post-crises action reports be done to evaluate the effectiveness of emergency preparedness plans and to recommend areas for improvement.
23. The Board recommends that comprehensive emergency preparedness planning be undertaken immediately at the provincial, state and local government levels. The preparations should include public information programs, stockpiling emergency materials, active monitoring of water levels and flows, and identifying areas where community-based shore protection can be implemented immediately.

Institutions

24. The Board recommends that the membership of the Lake Superior Board of Control be expanded to include representation from citizens, states and provinces.
25. The Board recommends that the membership of the International St. Lawrence River Board of Control be expanded to include citizen representation from Lake Ontario, the upper St. Lawrence River and the lower St. Lawrence River.
26. The Board recommends that the functions of the Coordinating Committee on Great Lakes Basic Hydraulic and Hydrologic Data be formalized and that the Committee report to the Commission.
27. The Board recommends that a Great Lakes-St. Lawrence River Advisory Board be created to coordinate, review, and provide assistance to the Commission on issues relating to the water levels and flows of the Great Lakes and St. Lawrence River.

Communications

28. The Board recommends that a Great Lakes-St. Lawrence Water Level Communications Clearinghouse be established as a bi-national effort by the United States and Canadian Governments, with the responsibility to communicate with the public, to facilitate communication between the public and governments, and to facilitate coordination of agency communication activities related to the water levels and flows of the Great Lakes and St. Lawrence River.
29. The Board recommends that the Clearinghouse be established under major federal agencies such as Environment Canada and the United States Army Corps of Engineers, which already have significant responsibilities in this area, and that it be linked to larger units within these agencies to act as information resources and provide staff support in water level crisis periods.
30. The Board recommends that the Clearinghouse establish and coordinate a network of agencies and groups that communicate about water level issues.

Management and Operational Improvements

31. The Board recommends that action be taken to improve the information base used to manage the Great Lakes-St. Lawrence River resource in the following ways:
 - That the identified deficiencies in the precipitation and snowpack network be remedied.
 - That a risk analysis model be developed that takes into account uncertainties of water supply to Lake Ontario, storm surge on Lake Ontario, variations of tributary inflows to the St. Lawrence River downstream of Cornwall and updated stage-damage data in the Lake Ontario-St. Lawrence River system to assist in equitably managing outflows during high- and low-water supply periods. If discretionary authority is provided to the Lake Superior Board of Control, as recommended elsewhere in this report, this model should be implemented for Lake Superior, as well.
 - That efforts be made to improve long-range precipitation and temperature forecasts.
 - That new technologies such as satellite, airborne and ground-based radar be developed for use in the monitoring of lake evaporation, overlake precipitation and basin-wide snow conditions.
 - That work continue on upgrading models used for simulation, forecasting and regulation to formulate a comprehensive water supply and routing model that includes the whole basin through Trois Rivières, Québec.
 - That efforts to improve forecasting and statistical information be continued, so that all users throughout the system can make better decisions and that this be coupled with an upgraded system-wide supply and routing model.
 - That the suggestions referenced in Chapter 8 to improve communication be implemented.

32. The Board recommends that efforts be initiated to standardize hazard mapping methodologies across the Great Lakes-St. Lawrence River region and that efforts continue to identify and map all flood and erosion hazard areas in the system.
33. The Board further recommends that procedures be developed for allowing broad access to such maps for general use.
34. The Board recommends that long-term monitoring of shoreline erosion and bluff recession be undertaken and that future erosion damage assessments consider, or be based on, information and methodologies developed under this study to improve these approaches.
35. The Board recommends that the United States and Canadian land use mapping systems be updated on a periodic basis and that they be designed and developed cooperatively to promote uniformity.
36. The Board recommends that a potential damage sample survey be undertaken in the future to improve flood damage estimates.
37. The Board further recommends that the first priority for the potential damage sample survey be Lake Ontario and the St. Lawrence River.
38. The Board recommends that a comprehensive wetlands inventory be completed and that long-term assessments of the effects on wetlands of variations in levels and flows be continued.
39. The Board recommends that refinement of Global Climate Models be continued to improve their predictive capability and use as a planning tool.
40. The Board further recommends that efforts continue to develop a bi-national assessment of the potential impacts on the Great Lakes-St. Lawrence River Basin System and to coordinate a response to the expected climate changes.
41. The Board recommends that the following data elements be incorporated into Geographic Information System databases:
 - All land use information for the entire shoreline.
 - All hazard areas along the Great Lakes-St. Lawrence River.
 - All coastal wetlands.
42. The Board further recommends that cooperative bi-national coordination and planning of Geographic Information System development and use be considered to increase the usability of the information stored in Geographic Information Systems relating to the Great Lakes St. Lawrence River System, and that national and international standards for data transfer be established.

3.2. Additional Citizens Advisory Committee Recommendations

In addition to supporting the above Study Board Recommendations, the Citizens Advisory Committee also recommends:

CAC 1. The Citizens Advisory Committee recommends examination of the practice of adjusting releases in the St. Lawrence River to provide adequate water to Montreal Harbor when large container ships are in port, and to allow for equitable apportionment of water, both upstream and downstream of Cornwall, for recreational boating at other times during the fall season. This would involve consultation among all affected parties. The Citizens Advisory Committee believes that such a practice may provide greater overall benefits to both shipping and recreational boating interests in the St. Lawrence River.

CAC 2. The Citizens Advisory Committee recommends that the International Joint Commission provide for continued citizen involvement in the Great Lakes-St. Lawrence River water levels issue, by including citizen representatives at the policy decision level (not day-to-day operation) of the management of Great Lakes-St. Lawrence levels and flows through whatever structures and institutions are operative.

CAC 3. The Citizens Advisory Committee recommends that the International Joint Commission appoint citizen members to future Study Boards on other issues as well as fluctuating water levels, and direct those Study Boards and committees to involve citizens directly as full members of working committees and task groups as well.

CAC 4. The Citizens Advisory Committee recommends that the International Joint Commission consider creating a single public involvement, citizens advisory function which would encompass the entire Great Lakes-St. Lawrence River Basin Ecosystem, both water quality and water quantity aspects.

CAC 5. The Citizens Advisory Committee recommends that, considering the time requirements and the responsibility associated with the type of involvement which Citizens Advisory Committee members had in the Levels Reference Study, future such efforts should make provisions for: 1) modest honoraria to partially compensate nongovernmental representatives for time away from work and family; and 2) the designation of an alternate to attend meetings when the member cannot attend.

CAC 6. The Citizens Advisory Committee recommends that, with respect to citizen involvement in the ongoing management of Great Lakes-St. Lawrence River water levels and flows, individuals should be appointed for three year terms, with a limit to one renewal, so as to ensure turnover in committee membership.

CAC 7. The Citizens Advisory Committee recommends that, following completion of the Levels Reference Study, all Study papers and documents be archived permanently at a location to be designated in both the United States and Canada.

3.3. Minority Reports

The following minority reports were submitted by members of the Citizens Advisory Committee.

Editor's Note: With respect to the report of David Rebmann, Citizens Advisory Committee records show that correspondence and comments submitted by Mr. Rebmann were circulated to the other Citizens Advisory Committee members throughout the course of the Study. Also, a list of Citizens Advisory Committee meetings, including the date, location, and day of the week, is included as Appendix D of this report. A review of this list shows that some weekend meetings were held at the early and middle stages of the study.

**CITIZENS ADVISORY COMMITTEE
LEVELS REFERENCE STUDY**

**MINORITY REPORT BY:
SHARON HAZEN - MEMBER
JOE MILAUCKAS - MEMBER
CLIFFORD SASFY - U.S. CO CHAIR**

February 9, 1993

"It is acknowledged that considerable effort was made by most Study personnel to conduct the study in the most complete and unbiased fashion possible, given the constraints imposed as a result of the compressed work schedule and tight budget. Nonetheless, it is felt that the conclusions drawn by the Study Board in respect to the quantification of both costs and benefits attributable to the various lake regulation plans studied were, in fact, too preliminary to justify a firm basis for final decisions made by the Board in respect to determining the relative merits of a particular lake regulation plan. For this reason and others, some of which are mentioned below, we do not support the Study Boards decision to recommend that governments give no further consideration to lake regulation plans. In addition, we reserve comment on the remaining recommendations contained in the final report as there has not been an opportunity to review the complete draft (as revised) following the January CAC meeting and discuss the revised report among our members.

Of primary concern regarding the economic investigation was the elimination of the shoreline damage study originally planned which was to reconcile the damage data generated through the use of traditional stage damage curves. This study was abandoned due to technical glitches in the data program which rendered it impossible to capture the data in proper scale. It was then decided by the Board that "site specific studies" would be undertaken at 11 different sites/reaches around the basin with the idea that the results of these in depth studies - as to damage data - would be used to attempt to validate the figures generated by use of the updated stage damage curves. The results of the site specific studies at three of the sites were determined to be of sufficient quality to allow for some comparisons to be undertaken in respect to the area of damages. One of the three studies (Berrien County, Michigan) indicated damage figures showing that the stage damage curve dollar damages may have been under estimated by as much as 70%. In the case of the remaining site studies, they were either incomplete or not of sufficient quality to render them useful in this role. Consequently, it was ultimately determined by the Study Board that the existing stage damage curves would be primarily relied on to form the basis for all the cost/benefit

ratio comparisons. In using the curves without further validation, we believe that the Study Board ignored or prematurely dismissed the potential variance between actual and projected damages. This difference could be of a magnitude such that one or more of the lake regulation plans may have had economic feasibility. Presumably, such a finding would have led to a recommendation to further study the possible regulation plan. Therefore, the wisdom of the Study Board in acting in a final sense to pronounce that the lake regulation plans could not be found to be economically feasible is suspect.

Statements have been made by some Study personnel that any lake regulation plan which will provide benefits to the middle lakes will simply shift or transfer the negative impacts of the mitigated flows and levels to other parts of the Basin, both up and down stream. While there is no question that a lake regulation plan such as SEO Extended would have an effect on all parts of the Basin in respect to hydraulic and hydrologic impacts, we believe that a generalization such as typified by the "transfer of impacts" statement is suggestive that for any reduction in damages to the middle lakes there will be an equal corresponding increase to damages to the upper and lower portions of the Basin, which is not necessarily the case.

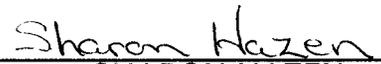
Traditional analytic approaches favor the use of the most credible data available covering the longest period of history when establishing the hydraulic basis of comparison ("BOC") to be used when modeling the various lake regulation plans to determine the effect of changes on the different portions of the system. Likewise, the stage damage curves track along the same period of record in order to project or produce damage estimates when certain hydraulic criterion are met as set forth in the modeling process. However, by using the historical period of record (1900-1989) to produce damage data using the stage damage curves, there is a resulting diminution of the amount of damage occurring in the past and most recent 40 years of the period (1950-1989) owing to the fact that there was only one significant period of damage during the first 50 years of the period of record (the low water crises in the 20's). Therefore, "spreading" the damage frequency over the entire period of record tends to result in a "weighing" or minimization of damage data away from the most recent and significant trends in basin hydrology; e.g. that there has been a lake level crisis during each decade since 1950 (three have been in consequence to high levels and one crisis due to low levels) and in the case of the high levels each period of crises exceeded both the previous record level and resulting damages.

As to the environmental feasibility of any such regulation plan, there was no attempt made to quantify any benefits or losses to the environment which would take place if a regulation plan were put into operation. Benefits/losses were qualitatively assessed in the most general way using wetlands as the primary and in most cases sole indicator of the environmental impact of any lake regulation plan; without due regard to the strong implications of improved water quality which would result from lake regulation.

The Crisis Response Plan originally approved by the Study Board at the Detroit meeting was the correct plan to be proposed to governments. This plan was considerably reduced in scope at the Toronto Board meeting without any opportunity for comment by the CAC. We believe this decision was incorrect and that the prior plan should have been submitted.

Other areas of concern to the undersigned throughout the conduct of the Study were the following:

- * The Study Team was heavily comprised of bureaucrats and agency personnel from both sides of the border which invariably resulted in a more subjective treatment of some aspects of the Study and in particular some which were parochial to the agency agenda such as land use controls and regulations and generally, those which may be ultimately carried out or implemented by a particular agency.
- * There were excessive revisions to major portions of the final draft report which resulted in a document being handed out for review at a meeting which hardly resembled the same document which had previously been reviewed and discussed. This contributed to the last minute passage of much of the work product without appropriate discussion time at the CAC level.
- * Through the final stages of the Study and compilation of the draft report, the CAC did not have an opportunity for adequate time to provide input to the Board. As an example, the CAC report was to be delivered in final draft form prior to even reviewing a finished copy of the final draft report, prior to the public hearings, and prior to the finalization of the report afterward. Many of the CAC members felt that there should have been an opportunity to carry through the CAC process until the Study had been formally concluded rather than to set the process aside in order to save the schedule.
- * Many of the CAC personnel had to carry on full time careers in addition to participating in the study process at various levels. Most of those who did so found that by the end of the Study, there was a strong sense of "burn out" owing to the amount of time required to provide meaningful input to the process."


SHARON HAZEN


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CLIFFORD SASFY

ANNE SUDAR
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ANNE,

COMMENTS TO BE ADDED TO THE FINAL REPORT OF THE PHASE
II LAKE LEVELS REFERENCE....

As agreed at the inception of the Phase II study and a condition of my involvement on the CAC. I request that the following comments be added to the final report as my INDIVIDUAL CAC MEMBERS REPORT to the conclusion of the Lake Levels Reference Study Phase II.

As a riparian and one of the leaders that demanded something be done after the 1985 storm about the Lake Levels. Which lead to this study. I had some definite opinions of what I hoped the study would accomplish. I am sorry to say that I am no more pleased with Phase II as I was with Phase I. I do not know at what exact point the study changed from a LAKE LEVEL STUDY to a LAND MANAGEMENT STUDY but it is quite evident that is what it has become . Perhaps because LAKE LEVEL CONTROLS will cost many millions of dollars while LAND MANAGEMENT CONTROLS will generate a whole series of new permits and fees and most important a whole new bureaucracy. With Governments on all levels strapped for money you can guess they will jump at any money generating scheme . I feel that riparians and specifically my involvement was mauled by the bureaucracy of this study. I felt that the technocrats and per diem contractors ran the study . I strongly object to the NON-LAKE LEVELS (LAND MANAGEMENT) aspects of the study. The desire of specific groups to legislate shoreline interest off the shore has harmed the riparian efforts much more that helped them.. I would have never been involved if I felt that the conclusions would have hurt riparians more than they have been hurt by the storm of 1985. Land acquisition, deed restrictions, seizure of property, increased property tax, loss of Flood Insurance and numerous other punitive actions suggested is NOT ACCEPTABLE-NOT FAIR -AND NOT RIGHT. For the very people who made this study happen are the ones to suffer from its' conclusions. I DO NOT WANT NOT PART OF THIS ATTEMPT TO LEGISLATE PEOPLE OFF THEIR LAND. I feel that the effort especially is being pushed by people who are unsympathic to the plight of the shoreline home owner. What the study has tried to do is solve the LAKE LEVEL problems by controlling the shoreline. I especially feel many of the staff and some of the board have an anti-riparian bias. The extensive STAFF developed several scenarios of possible structural change to control Lake Levels. Most seemed unworkable or too costly leading to the considerable money on LAND MANAGEMENT AS A SOLUTION. With Billions of Dollars of infrastructure along the shore the reality land management as the solution is totally unrealistic.

(1 of 3)

Much of my frustration comes from the fact that the involvement of so many interest groups made agreement impossible. But maybe that was the original plan was to pit so many groups against each other as to come to the conclusion that nothing could be done , therefore nothing will to be done. I have long stated that the bureaucracy loves studies as long as to they do not lead to any REAL work.

I also found that the salaries paid to the director and to the " jobbers " were excessive and that most of the SIX MILLION was spent on many of the same people who produced the failure called phase I. This while the study continued to be curtailed putting any useful conclusion further out of sight.

Several major tasks were curtailed or dropped (Basin-wide Lake Level studies, GIS Mapping). Some Tasks were left incomplete or the product produced was of little or no use and the "Jobbers" still got paid. Most cuts were done as an economy move however all contractors still got paid. I was rebuked when I mentioned that air fares were a third of normal if you fly on Saturday. After that I was harassed on my expenses to make the point to shut-up. I truly feel that administrative expenses were out line and a phone call or regular postage was preferable to overnight express air-mail or special delivery. Maybe it comes from that fact that I have to earn every dollar I make and no one is giving me someone else's money to spend..... It has literally cost me thousands of dollars of my own money to get to be included in this study and much more in salary and private income losses to continue to be part of the study.. So if money counts, I gave my share. I was mugged in Chicago by following the directions to get to the CAC meeting , so the cost to me was more than money.

The CONCEPT of the CITIZEN ADVISORY BOARD (CAC) was one I applauded but in reality we in most cases played LIP-SERVICE to already accomplished deeds of either the BOARD or Some Committee. When our input was sought it was usually with little time to react. In many cases our efforts were spent discussing what was done and why we didn't have a say in the action. When the study was curtailed and basin-wide become site-specific (later type-specific) we were told of the decision and our reaction meant little. I wanted the CAC to be interactive in all phases of the study. In reality we mainly reactive if not abstract to the process.. The PROCESS and TIMELINE became the driver not the PRODUCT. I am generally displeased the CAC was sounding board rather than an advisory board. Perhaps we filled the quantity of the need for Public Participation but in the area of productive quality I express some doubt. I feel tainted by the experience because I was inside this time and could do little to influence the outcome and will probably be expected to sign off on the end product. The concept of CAC has merit and in some other effort may prove to be the vehicle of change.. Hopefully however, the Commissioners will take seriously the need for the REAL PEOPLE to have a voice instead of the same old tired technocrat that thinks they know what is best for all.

Most displeasing to me, besides the failure of this riparian sponsored study, is the time spent on the effort. As one of few NON PAID CITIZENS on this study with A REAL JOB I found it especially difficult when meetings were scheduled in the middle of the week as a convenience to the bureaucrats and technocrats with little regard for the lost of pay to us or to the cost of personal time-off (only at the very end when all decisions were already made were weekend meetings scheduled). We served without STAFF however we were expected to be as prepared as Government Paid members many with several secretaries (some with three or more). The people I represent are especially displeased with the salaries paid to the director and technocrats on this study especially when the results will be of such little use to them (as the public hearing can attest). I spent hundreds of hours of my time in reading and reacting and in several cases my remarks were not even forwarded to my fellow members.

The expectations were SO GREAT the conclusion SO LITTLE that I leave feeling cheated. My disappointment should have been expected since I have dealt with this issue for over 25 years with little actually accomplished. I Have dealt with bureaucracy on ever level and can only say that it becomes more mind boggling the higher it gets.

Sadly, since nothing has been resolved in Phase II and Higher Water again seems to be upon us and storms will again cause us damage there will be demands for a study and the bureaucrats will suggest an Phase III to find the solution of the problems. I only hope that the damage and destruction will not be as great as the Storm of 1985. Hopefully by then Government will heed the need for action verses the same old "job creating " non-action. I STILL ASK THE SAME QUESTION- WHERE DID THE MONEY GO?



E.D. REBMANN

JANUARY 21, 1993

Appendix A

Terms of Reference and Internal Operating Plan

In accordance with the Study Directive, the Citizens Advisory Committee was set up with the following **Terms of Reference**:

- a. Elect two members, in addition to those already appointed, to serve on the Study Board; (each section may choose to elect its own member);
- b. Be advisory to the Board on the operation and conduct of the Phase II Study. In particular:
 - provide review and comment to the Board on the draft Plan of Study;
 - provide review and comment to the Board on the conduct of studies;
 - provide guidance to the Board on the dissemination of the results of the Study to the general public;
- c. Provide a mechanism for the ongoing dissemination of information from and about the study to the general public and provide opportunities for the communication of input from the various interest groups and the general public directly to the Study Board;
- d. Participate in a review activities of various work groups and task forces established by the Board, especially activities which involve an interface with the public; and
- e. Perform all other duties as requested by the Board.

The Citizens Advisory Committee developed and agreed to the following **Internal Operating Plan**:

- a. Operation of meetings. Citizens Advisory Committee meetings will be conducted under Roberts Rules of Order, but in an informal manner. Decisionmaking will be on the basis of general consensus whenever possible. If consensus cannot be reached, decisions will be made by majority vote.
- b. Recording of Minority Views. Minority or dissenting views will be recorded, even if held by a single member. Whenever consensus cannot be reached on an important issue, all views will be recorded and transmitted to the Board.
- c. Absences from meetings. When members must miss a meeting, they can provide their comments on agenda items prior to the meeting to the co-chairs or the staff person. These comments will be read aloud at the meeting and included as part of the meeting record.
- d. Language at meetings. Citizens Advisory Committee meetings will be conducted in English, but a bilingual person will be present for the Quebec members to assist them in interpreting technical parts of the discussion, and to clarify anything they may have missed.

- e. Language at Public Meetings. Interpretation and bilingual services will be provided at public meetings held in Canada during Phase II of the Study. Interpretation may be provided at meetings held in the United States if there is a need for this service.
- f. Travel Expense Reimbursement. Environment Canada will administer a fund (with contributions from the United States Army Corps of Engineers) for members' travel costs. All members will be paid in accordance with Canadian government travel regulations. Reimbursement will be handled through Environment Canada's Burlington office.
- g. Staff Support. The Board will provide staff support for the committee.
- h. Open Meetings. Meetings will be open to nonmembers.

Appendix B

Levels Reference Study, Phase II Citizens Advisory Committee Views on Desirable Levels and Flows in the Great Lakes - St. Lawrence River System

June 20, 1991

Introduction

The Citizens Advisory Committee was asked to consider the issue of desirable levels and flows by Working Committee 3. This report contains the views which have been expressed to date. It is important to keep in mind that these preferences are to some degree a "wish list". They were made in the context of not knowing the impacts and consequences of such water level regimes; not knowing if it is even possible to achieve such water level regimes. Therefore, it is quite likely that the Citizens Advisory Committee may wish to revise this paper as more information comes to light during the course of the study. In fact, several Citizens Advisory Committee members refrained from offering opinions on what lake levels and river flows would be "desirable" until they had the benefit of an assessment of the impacts of those levels and flows on the entire Great Lakes-St. Lawrence River Ecosystem. Other Citizens Advisory Committee members who did state preferences with respect to levels and flows may revise these when information on the systemwide effects of these water regimes is available.

Working Committee 3's original questions referred only to lake levels, but several members of the Citizens Advisory Committee make use of the flows in the connecting channels and the St. Lawrence River, so the views in this paper include both desirable lake levels and desirable flows. Views on desirable levels and flows seem to vary across two dimensions: 1) interest class; and 2) geographic location.

Riparians

The International Great Lakes Coalition, a citizens group composed of Great Lakes shoreline property owners, has developed a position on desirable water level regimes for the middle lakes, Lakes Michigan-Huron and Lake Erie. Four members of the Citizens Advisory Committee are active leaders in the Great Lakes Coalition. The preferred water level regime of these riparians is long term monthly (seasonal) average plus or minus one foot. This would result in a 3 foot range on Lakes Michigan-Huron and a 3.2 to 3.5 foot range on Lake Erie.

Three of the four Coalition representatives on the Citizens Advisory Committee agreed that long term average should be maintained. However, one person believed that the whole regime should be lowered to pre-1973 average monthly water levels.

With regard to damage thresholds, the high level periods in 1973-74 and 1985-86 caused large amounts of damage to shoreline property. Lake Michigan riparians report that levels on that lake more than one foot above long term monthly average begin to produce substantial damage during significant storm events.

Concerns were also expressed about future, unprecedented, extremes in water levels. Fluctuations seem to be increasing over time, and Great Lakes Coalition representatives see a need to have some capability in place to prevent extreme high and low water levels in the future.

Environment

Environmental interests generally do not support manipulation of lake levels and flows. They do not believe that it is in the best interest of the basin to manipulate water levels. However, they would favor the existing (somewhat manipulated) regime over new lake level control scenarios. The view was expressed that wildlife and vegetation are adjusted to the present fluctuating water level regime, and that they would suffer if it was further modified by man.

Environmentalists on the Citizens Advisory Committee are concerned about the impacts of water level regulation. How can we control a low level? We must store water somewhere. Where to store it? The location must be close so as to be able to release it when it is needed. Some Citizens Advisory Committee members wonder if it would be possible to do this in the Great Lakes system. Other concerns expressed by environmental interests were: how to control high levels; where to dump the water; what is the response time; how much can we control an anticipated high; what happens when the situation suddenly reverses itself, i.e., from a wet period to a dry period; and perhaps the most important question of all, what are the benefits to shore property of further regulation of the system, to what extent could flooding and erosion hazards be reduced.

Some environmentalists voiced the opinion that we are asking the wrong question here. Rather than asking what levels are desirable, we should be asking how we can best cope with the natural fluctuations that have historically existed. We should be asking how we can manage human activities so that the existing fluctuations of the system cause minimal damage to human structures.

St. Lawrence River

Fluctuations, especially low water, create turbulence and turbidity in the St. Lawrence River. This causes a deterioration in water quality which creates problems and increases costs for water treatment plants which have their intakes in the St. Lawrence River. High flows cause increased erosion underwater, which affects water intake pipes.

St. Lawrence River interests (riparians, environmentalists, ship owners, etc.) are in principle against further regulation of the lakes because small reductions in the levels of the lakes cause large increases in fluctuations in the St. Lawrence River. The middle lake riparian goal of "long term monthly average plus or minus a foot in the middle lakes" would be contrary to maintaining

a minimum flow in the St. Lawrence. Minimum levels in the Port of Montreal are specified in the existing regulation plan for Lake Ontario, 1958D.

Native North Americans

Native people believe that man does not have the right to control lake levels. They would prefer natural fluctuations. They are concerned about any new structures being built to control the water levels until a full study of the effects of existing structures is completed. Their major concerns are water quality change, wetlands, aquifers, recharge areas, working currents, spawnbed quality, quality of edible resources, and spawn run levels. They believe that the environment must come first. Native groups are also very concerned about land management when it causes the destruction of floodplains and wetlands that birds, wildlife, herbs and wild rice depend upon for their existence.

The existing Lake Superior water level regime, under the current regulation plan, is believed to be causing problems for fish spawning. Specifically, levels below 600.5 cause problems for fish spawning. Many small streams do not have enough water for the spawners to come in to reproduce. Also, many streams which have never needed to be dredged are now filling in, and this is believed to be linked to water level regulation on Lake Superior.

Walpole Island native people are affected by fluctuating flows through the St. Clair River. Shipping, dredging, and erosion are some of the problems experienced by Walpole Island native people. The marsh on the Walpole Island Indian Reserve is controlled by pumping and diking. However, the Walpole Island native representative believes that man does not have the right to control lake levels, and he did not know what a desirable levels regime would be on a system-wide basis.

Recreational Boaters

Recreational boaters in the St. Lawrence River area are particularly concerned about the levels from May to the end of October (the normal boating season). Fall seems to be the most critical time, because there is a natural seasonal decline in the water levels and flows then, and boaters need to have adequate water depths to continue boating through September and October, and then to get their boats out of the water for winter storage. St. Lawrence River recreational boaters would prefer that the August average monthly level be maintained through the end of October.

For recreational boating in the Saugatuck, South Haven, and Holland, Michigan harbors of Lake Michigan, July levels of 1990 (8 inches below long term average) created some concern. Local consensus is that another foot lower would have created near crisis conditions.

The opinion was also stated that long term monthly average plus or minus a foot for all lakes would be acceptable to recreational boaters, plus a minimum flow for the St. Lawrence River.

Recreation - Beaches

During the period of 1985 and 1986, when levels were 2 and 3 feet above long term average, many private and some public beaches were almost useless on parts of Lake Michigan.

Navigation

Generally speaking, shipping prefers higher water levels over lower water levels. However, what shipping would actually prefer is a relatively consistent water level. Ships would then be built to operate in that range and ships would not be constructed for a capacity that they could only carry two years in every ten when water levels were at their highest with wasted capacity potential the other eight years.

High water levels do benefit shipping to a point, but they are not without their downside. For example, high water levels make more water available to transit each lock, but when water levels rise above the lock side walls, there is no further benefit. With the high water levels of 1986, Lakers carried significantly more cargo on most transits, and distinct benefits were realized in terms of average tonnage per trip. The foregoing notwithstanding, the water levels were so high that vessels in many instances had to reduce their speeds significantly below speed limits to avoid shore erosion or dangerous effects to riparians in the connecting channels between Lake Superior and Lake Huron and between Lake Huron and Lake Erie. Moreover, water levels were so high that some difficulty was experienced in getting under loading rigs. Vessels may have had to arrive in some loading ports in full ballast to ensure they could get under the loading rig. Then, instead of arriving all ready to load, ballast had to be pumped out in a calculated manner as the cargo came aboard.

The levels on each lake are seldom of consequence to shipping. The key areas are in the connecting channels where manmade channels provide for depths varying from 27 to 30 feet to permit a maximum draft for vessels of 25.5 feet when the water level is at datum. It follows that water levels in these channels are dependent on the water levels of the upstream and downstream lake. Consequently, the minimum level targeted should be the level which ensures that vessels can transit the river at a draft of 25.5 feet, allowing for added ample clearance under the keel of 18 to 42 inches.

Maximum velocities should not exceed four miles per hour. Normal maximum currents presently experienced in the St. Clair River at Port Huron approximate 3.9 miles per hour, although strong north to northeast winds may produce somewhat swifter currents at times. Normal maximum currents in the St. Marys River are 2.2 miles per hour just below Soo Harbor.

The maximum levels on the upper lakes beyond which benefits to shipping do not accrue and/or safety deteriorates were reached in 1985/86 as follows:

Lake	1985/86 Level above IGLD
Superior	+2.2 feet
Michigan/Huron	+4.8 feet
Erie	+5.2 feet

Downstream in the St. Lawrence River, ships need a constant supply of water in Montreal Harbour and if the water level drops, they must offload.

Hydroelectric Power

Hydraulic generating facilities are located on the St. Marys River, the Niagara River, and the St. Lawrence River. Flows are presently regulated on the St. Marys River and the St. Lawrence River. The Niagara River flows are unregulated.

Hydraulic generating stations produce maximum power when flows available for generation are at, or near, the capacity of the turbines. Flows in excess of this limit must be stored upstream of the station or spilled. In the case of the Niagara River, no storage option exists, so excess flow is spilled over Niagara Falls.

If full system regulation of the Great Lakes were ever implemented, it is the regulation plan(s) that will determine whether the result is a loss or a gain of power generation. Structures can be operated so as to make levels of the reservoirs (lakes in this case) more constant, or so as to make the outflows (rivers in this case) more constant, or a compromise between these two objectives.

In general, any regulation plan that increases the incidences of extremely high or low flows in the connecting channels or the St. Lawrence River, will involve a substantial loss in hydroelectric power generation. A regulation plan that reduces or eliminates extremes in flows, benefits power.

A regulation plan that permits flexibility in the timing of flow releases is desirable for power production. There is variation in the value of hydraulic power generation to the utilities. Hydraulic generation during peak periods is worth more than hydraulic generation at a time when demand is low and base loaded generation would suffice.

There is no specific minimum flow below which each utility's load requirements are not met. Each utility has other (more expensive) means of supplying customers with power when the Great Lakes hydraulic generation is low.

However, each utility expects that historic minimum flows represent the extreme condition for which they must plan. Flows less than would occur under the present natural low flow regimes could cause the utilities serious difficulties in meeting load.

Flows in excess of station capacity are not useable. On the Niagara River, with present facilities, flows greater than about 250,000 cfs during the non-tourist season or about 270,000 cfs during the tourist season, are spilled. With expanded facilities in Canada planned for 1998, ability to use flow in the Niagara River will increase by about 35000 cfs. However, some older facilities may be retired which would offset this diversion capability somewhat. Also, continuous diversion at maximum capacity seriously limits operational flexibility at the generating stations. On the St. Lawrence River, flows greater than 330,000 cfs are not useable at Moses-Saunders generating station, and flows greater than 280,000 are not useable at the Beauharnois-Cedars generating stations.

The Niagara River flows too fast to form an ice cover. It is a shallow river, and is prone to jamming during periods of high river ice production, or Lake Erie ice runs. The Lake Erie ice boom has been effective in reducing the frequency and severity of ice runs from the Lake.

The ice booms in the St. Lawrence River are used to form and maintain a stable ice cover on that river during the winter. The formation of a stable ice cover enables high enough wintertime outflows from Lake Ontario to reduce the chances of flooding in the spring.

The ice booms on the St. Lawrence River and on the Niagara River are approved by the IJC. They are all performing well.

Peaking operations can help to offset the negative impacts of very low flows. However, between times of peaking, flows are reduced even further. Peaking operations cannot offset the energy losses that result from low flows. Higher cost fuels would still have to be used to make up for reduced hydraulic generation.

Several utilities have thermal (fossil fuel and nuclear) generating stations on the Great Lakes. These stations use the lakes for their cooling water supply. The cooling water intakes are designed to be operational for the historic water level regime. Water levels that are higher or lower than the historical range could cause operating problems at thermal generating stations.

Some of these stations have their fuel (coal, oil) delivered by ship. Lake level extremes that make navigation or docking difficult can also have a negative impact on station operation.

Appendix C

Evaluation of the Effectiveness of the Citizens Advisory Committee

1.0 Introduction

Effectiveness of an entity such as the Citizens Advisory Committee is not a straightforward thing to measure; it depends very much on the criteria which are used. This evaluation encouraged Citizens Advisory Committee members and others involved in the Study to set their own criteria. It is based on the results of three informal surveys of Citizens Advisory Committee members, and one survey of Study Board members and Working Committee Co-chairs.

2.0 Methodology

Surveys of Citizens Advisory Committee members were done in December of 1991, November of 1992, and April of 1993. These dates represented the mid point in the Study, late in the Study (but before major decisions were made), and after completion of the Study, respectively. Study Board members and Working Committee Co-chairs were surveyed only in December of 1991. The questionnaires were a combination of multiple choice and open-ended questions.

3.0 Results: Opinions of Citizens Advisory Committee Members on Effectiveness

Information

As shown in Table 1, most members of the Citizens Advisory Committee learned a great deal about the issue of fluctuating water levels through their involvement in the Study. Dialogue with other Citizens Advisory Committee members, interaction with the working professionals, and site specific visits were especially enlightening.

Table 1. Responses to the Question, "How much have you learned?"

	Dec 91	Nov 92	Apr 93
a great deal	9	5	11
a little	1	0	2
nothing	1	0	0

Appreciation of Other Interests

The Citizens Advisory Committee generated understanding and appreciation of the diverse views which exist in the water levels issue for the majority of members (Table 2). Although each member had a specific interest to represent, the group was generally balanced in its approach, and considerate of the views of others. One member felt that mutual understanding could have

been further enhanced if members had spent more time exchanging the basis for their positions early in the Study.

The comments of a few members, however, are indicative of deep-seated differences. One member said that his appreciation of the riparian interest group declined during the study. This member felt that a certain riparian member dominated the meetings, and that riparians got most of the attention during the study, while other interest groups were neglected. Another member felt that some of the riparians were trying to make an unfair improvement in their situation at taxpayers' expense. This person felt that shore property owners, who exclude the general public from using the shorelines, should not then ask for help from governments.

At the opposite pole, another member disagreed with the basic concept of the Citizens Advisory Committee, balanced representation from all of the interests affected by fluctuating water levels. This member felt that the interests should have been weighted based on their importance, and that riparians should have been given more weight than the other interests.

Table 2. Responses to the Question, "Have you gained a better appreciation of all the interest groups affected?"

	Dec 91	Nov 92	Apr 93
yes	10	6	11
somewhat	1	0	2
no	1	0	1

Forum for Raising Concerns

The Citizens Advisory Committee was an effective forum and vehicle for raising the concerns and airing the views of the interests affected by fluctuating water levels, as shown in Table 3. Comments indicated that views could be articulated not only at meetings, but through written products of the committee, through the Study newsletter and the International Joint Commission publication, Focus, and in decisions and recommendations to the Study Board. One member described the operating style of the committee as "first among equals", and felt that it had worked very well.

Table 3. Responses to the Question, "Did the Citizens Advisory Committee enable you to articulate your views on water levels?"

	Dec 91	Nov 92	Apr 93
yes	8	6	12
somewhat	3	0	2
no	0	0	0

Input to and Influence on the Decisions

Table 4 shows that the proportion of Citizens Advisory Committee members who felt that they had significant influence on Study Board decisions grew as the Study progressed. At the conclusion of the Study, eight members felt that the Citizens Advisory Committee had had a significant influence; five members reported some influence; and one member felt that the committee had no influence.

Most members felt that there had been ample opportunity for them to provide timely input to Board decisions. They felt that Citizens Advisory Committee endorsement was important to the Board, and that the Board would not have been able to make recommendations with any confidence if the Citizens Advisory Committee, as a group, had been opposed to them.

Some members expressed the view that the Citizens Advisory Committee's influence varied at different levels and aspects of the Study. They felt that the committee had significant influence in the input side of top management (the Study Board), but only some influence on the process side at that level. They felt that they had no influence on the real focus of the data being collected and studied. Even though the structure was there, with particular Citizens Advisory Committee members serving as members of task groups, in some cases there was little opportunity for these members to influence the work of the task group because the group never met.

Several members felt that the committee had been involved in the shaping of the Study, but not adequately in the directing of the Study. The view was expressed that in some cases, the Study was directed away from acquiring certain data which would have been helpful later. Examples cited were: the mapping of high hazard areas; recreational boating data; and the riparian and native survey data. This happened despite repeated requests from Citizens Advisory Committee members as to the status of such work.

Some members also felt that the Citizens Advisory Committee's influence on the Study Board was considerably reduced when some of the four citizen members were absent from Study Board meetings. Some members observed that towards the end of the Study, several important matters were rushed through at the end of Study Board meetings, when there were few or no citizen members present.

In the opinion of one member, the Citizens Advisory Committee had no influence on Study Board decisions or the final recommendations. This member felt that the committee was only established to placate citizens, as a "window dressing".

Table 4. Responses to the Question, "How much of an influence do you feel the Citizens Advisory Committee had on Study Board decisions and the final recommendations?"

	Dec 91	Nov 92	Apr 93
significant	3	2	8
some	6	4	5
no influence	1	0	1

Fairness of the Decisionmaking Process

Responses to this question, shown below in Table 5, indicate that at the end of the Study, most Citizens Advisory Committee members felt that the decision making process had been fair and legitimate, although many added qualifications to their "yes" responses.

On the positive side, the process was very open, and none of the members felt pressured, or lobbied by any of the interest groups.

Some felt that the attempt to have Study Board decisions made by consensus was difficult. This was due to the fact that some members were not in a position to negotiate, and had no authority to negotiate on behalf of their organizations. This problem ties into the "personal and professional capacity" issue mentioned later.

Some members felt that the decisionmaking process was fair and legitimate on the surface, but the wishes of the Citizens Advisory Committee did not reach the subcontractor level, where the actual work was done. Another member noted a lack of "follow through" on the part of the Study Board. An example of this was when the Board agreed (at the suggestion of the Citizens Advisory Committee) to set up a study planning objective for Native North Americans. The framework was there to include native concerns, a native survey was done, but after that, native issues seemed to fade out of sight. All the attention and emphasis was on benefit/cost analysis of water level regulation plans; impacts which were not measured in dollars did not receive much consideration.

The problem of attendance was mentioned by several CAC members in relation to the fairness of the decisionmaking process. It was felt that measures must be taken in the future to ensure continued representation of all interests throughout the Study.

It appeared to one member that decisions were made primarily out of concern for what current government policy may be (i.e. the policy of no net loss of wetlands), rather than by assuring a high degree of factual basis for the decisions.

The accelerated pace of the study during the last six months, and revisions of numbers, caused some Citizens Advisory Committee members to doubt the validity of the technical work, and therefore the validity of the decisions based on that work. The members who felt this way issued minority reports.

Table 5. Responses to the Question, "Was the decisionmaking process fair and legitimate?"

	Dec 91	Nov 92	Apr 93
yes	6	6	9
no	4	0	4
sometimes	0	0	1

Additional Expectations and Accomplishments (from open-ended questions)

Most Citizens Advisory Committee members felt that they collectively played a watchdog role in the Study. This role was viewed by most members as important and valuable. However, towards the end of the Study it became more difficult for Citizens Advisory Committee members to adequately monitor all of the Study activities; they were overwhelmed by paper and could not read everything. In fact, because they had so much information, it was difficult for them to pick out the significant parts, difficult to see the important connections which lay beneath the surface.

Some members hoped to meet and understand the working professionals involved in Great Lakes-St. Lawrence River issues. Serving on working committees and task groups provided opportunities for interaction between citizens and the technical people. Sometimes the data was too theoretical and the presentations were confusing, but overall this expectation was partially fulfilled.

Another objective of some members was to provide an awareness of citizen interest to the International Joint Commission. This was seen to improve during the course of the Study. Opportunities for Citizens Advisory Committee members to directly address the Commission in formal meetings were much appreciated, and attendance of Commissioners at Study meetings was also felt to be very beneficial.

Some Citizens Advisory Committee members were motivated to participate in the Study by the hope that it would lead to some solutions, or resolution of the issue of fluctuating water levels. Others were not this optimistic.

Other expectations which were not yet fulfilled at the end of the Study were: satisfaction of the shoreline interests; a healthy environment for the Great Lakes - St. Lawrence River Basin; and implementation of the recommendations.

4.0 Opinions of Study Board Members and Working Committee Co-chairs on Citizens Advisory Committee Effectiveness

Members of the Study Board and Working Committee Co-chairs generally felt that the Citizens Advisory Committee was very effective in the following areas:

- Communication;
- Providing a real world context for the issue;
- Providing advice and guidance on Study design;
- Assisting in public involvement activities by providing local contacts; and
- Being a forum where the views of others can be heard/shared and personal relationships developed.

In the opinion of Study Board members and Working Committee Co-chairs, the Citizens Advisory Committee was somewhat less effective in these areas:

- Defining the needs of users of Great Lakes - St. Lawrence River Basin waters (input was limited and confined mainly to the middle lakes); and
- Providing a consensus-building forum (in the end, the Citizens Advisory Committee was not able to achieve consensus)

5.0 Contributions of Citizens Advisory Committee Members to the Study

From the Viewpoint of the Citizens Themselves

The final survey asked Citizens Advisory Committee members what they felt was their major contribution to the work of the Study. Most felt that bringing the concerns and perspective of their specific interest group to the Study deliberations was their major contribution. Others, who came from groups which were less well-defined, tried to bring a wholistic approach to the Study, in terms of interest groups, geography, and science. And still others deliberately tried to be a moderating influence on the committee: by trying to resolve conflicts and move things along when they seemed to be stuck; by trying to bring the discussion back to the original issues when it went off on tangents; and by trying to lead the group in a more positive direction.

Those who served on working committees and task groups often felt that they made their major contribution in that arena.

Another type of contribution was providing a link between the bureaucracy and the public, and facilitating two-way communication between these groups.

From the Viewpoint of Study Board Members and Working Committee Co-chairs

The general feeling among the Study Board members and Working Committee Co-chairs was that participation of citizen members had enriched the Study.

Working Committee Co-chairs felt that in all cases, Citizens Advisory Committee members made valuable contributions to the Working Committees. It was felt that much of the success of early public meetings depended upon Citizens Advisory Committee contacts in the area of the

meeting. Citizen members also added a preview of issues which could be expected at those meetings.

At Working Committee meetings, citizen members' comments were seen as very important, revealing an oftentimes unrecognized aspect of an issue or course of action. Citizen members highlighted the needs of their specific interest, and contributed significant information on how fluctuating water levels affected them. Citizens Advisory Committee members also made working committees realize the complexity of understanding and explaining the technical aspects of levels-related problems.

Some Working Committee Co-chairs, however, felt that participation of citizens on their committees was too narrowly focused on the issue of private property damage.

Study Board members felt that the Citizens Advisory Committee members on the Board were very effective in bringing both the consensus of the committee and the continuing diverging views before the Study Board. The participation of citizen members during Board discussions was often much more forceful and convincing than the jurisdictional members. They also interpreted and explained the views and objectives of the various interest groups quite effectively.

6.0 Suggestions on How the Process Could be Improved

Most Citizens Advisory Committee members felt that involvement in the Levels Study was a worthwhile experience, and that the International Joint Commission should be commended for a sincere attempt to integrate public concerns in the Study. Although not perfect, the process worked well, and will serve as an example for future efforts.

Interviews with Citizens Advisory Committee members at the conclusion of the Study revealed two related problems which detracted from the effectiveness of the committee during the Levels Study. These were: the time required to effectively participate; and declining attendance at committee meetings.

For many members, the time required to read all the materials, travel to and from and attend meetings, etc. was much greater than expected. It was very difficult for Citizens Advisory Committee members who have non-water levels related jobs to keep up with everything in their spare time, and therefore very difficult to make as much of an intelligent and constructive contribution to the study as they would have liked.

Most members felt that public involvement programs should be equitable and balanced. The balance originally built into the Citizens Advisory Committee was upset in the latter half of the Study by the lack of attendance by some members. As attendance at Citizens Advisory Committee meetings declined, the dynamics of the group changed, to the point (January 1993) where three out of the six Citizens Advisory Committee members in attendance and five out of the eight total in attendance were members of the Great Lakes Coalition.

Citizens Advisory Committee members felt that the attendance problems could be eased in the future by: a) allowing appointees to choose an alternate; and b) careful screening of candidates.

A policy of allowing members to choose an alternate who would sit in when the member cannot attend meetings would improve attendance. Travel expenses would need to be paid only for one person (either the member or the alternate) to attend each meeting, and it would be the responsibility of the member to keep the alternate informed and up-to-date on Study progress.

Several members pointed out that the selection of people who serve on advisory committees is critical; the success or failure of such groups is highly dependent on the individuals selected. Most of the Levels Study Citizens Advisory Committee members were excellent candidates who took their responsibilities seriously and did the best they could to fulfill them. However, some seemed to be lacking in commitment to the effort; they never became engaged in the process.

Several members suggested that in the future, the International Joint Commission should set out specific criteria for members of advisory committees. A panel of persons could evaluate candidates based on these criteria, similar to a job interview process. Such a structured process would help to minimize politically expedient appointments. Some of the major criteria should be a demonstrated willingness to learn, to see all sides of an issue, and to work towards constructive solutions. Also, citizens must understand the process and their responsibilities before they accept the appointment.

With respect to the balance of interests on future advisory committees, efforts should be made to include more municipal representatives, because they bring the public trust aspect to the committee as well as the problems of shoreline communities. Some members commented that the interests are more complex and diverse than had previously been thought, especially the riparian interest. There are significant differences in the attitudes and concerns of riparians depending on the type of shoreline they own, where in the system they are located, and the use which they make of their property. The assumption that the Great Lakes Coalition spoke for the riparian interest was not completely correct. Future citizens groups need to include the other segments of the riparian interest.

Actually, the Citizens Advisory Committee did include several members who owned Great Lakes - St. Lawrence River shoreline property, who were not associated with the Great Lakes Coalition. All of these riparian members supported the Study Board recommendations and the seven Citizens Advisory Committee recommendations. The four members who issued minority reports were all middle lake riparians, all members of the Great Lakes Coalition.

Another issue which caused problems for some Citizens Advisory Committee member was the confusion over whether they were "representatives from" certain interest groups, or "a representative of" such groups. Even though members were asked by the International Joint Commission to serve in their personal and professional capacities, some felt that they were regarded by members of the Study Team as representatives of the groups to which they belonged.

Several members stressed the need for continued, ongoing citizen involvement in the water levels issue. One member felt that the reference study process is not an effective way to respond to the problem of fluctuating water levels because: a) it is reactive (after the crisis is over, usually); b) it is too late to get good data on the impacts of the crisis; and c) there is no accountability.

7.0 Follow-up

During the final interviews on Citizens Advisory Committee effectiveness, two important suggestions were made on follow-up activities. The first was that the committee should be reconvened at a point in the future (six months to a year from the end of the Study). The purpose of this meeting would be to monitor progress on implementation of the Study recommendations.

Another suggestion was that the International Joint Commission should take steps to capture, in written form, the knowledge and experience which some of the people who worked on the Levels Reference Study are carrying around in their heads. The most outstanding example of this phenomenon is Ben DeCooke, who was an invaluable resource to the Study.

Appendix D
List of Citizens Advisory Committee Meetings

Date	Day of the Week	Location
June 5, 1990	Tuesday	Detroit
July 24, 1990	Tuesday	Chicago
Sept. 17, 1990	Monday	Dorval
Nov. 10, 1990	Saturday	Niagara Falls
Nov. 11, 1990	Sunday	Niagara Falls
Jan. 4, 1991	Friday	Toronto
Feb. 25, 1991	Monday	Windsor
March 19, 1991	Tuesday	Toronto
April 26, 1991	Friday	Detroit
June 13, 1991	Thursday	Quebec
Sept. 29, 1991	Sunday	Traverse City
Dec. 2, 1991	Monday	Toronto
Jan. 23, 1992	Thursday	Dorval
Feb. 17, 1992	Monday	Detroit
April 23, 1992	Thursday	Washington
April 24, 1992	Friday	Washington
June 1, 1992	Monday	Ann Arbor
Aug. 23, 1992	Sunday	Quebec
Sept. 27, 1992	Sunday	Toronto
Oct. 21, 1992	Wednesday	Ottawa
Nov. 13, 1992	Friday	Detroit
Nov. 14, 1992	Saturday	Detroit
Dec. 13, 1992	Sunday	Detroit
Jan. 23, 1993	Saturday	Toronto
Jan. 24, 1993	Sunday	Toronto
March 15, 1993	Monday	Chicago

