

Report to
December 1982

INTERNATIONAL JOINT COMMISSION

This report of
the activities of the
International Joint
Commission is for the period
from December 1980 through
December 1982.

Ce rapport est également disponible en français.

Design: Ludvic Saleh & Associates, Ottawa

Contents

MEMBERSHIP OF THE COMMISSION	5
THE INTERNATIONAL JOINT COMMISSION	6
TOWARDS A CONSENSUS	8
New Challenges	8
Future Prospects	9
THE IJC IN 1982-1982	11
Great Lakes Water Quality Agreement	12
Reason for Optimism	12
First Biennial Report	13
Contacts with Public	14
GREAT LAKES BASIN	14
St. Lawrence River	14
Niagara River Ice Boom	15
Lake Erie Regulation	15
International Rapids at Sault Ste. Marie	15
Other Developments	15
SKAGIT RIVER	16
POPLAR RIVER	17
RICHELIEU RIVER-LAKE CHAMPLAIN	18
OSOYOOS LAKE	19
ST. CROIX RIVER	20
APPENDICES	23



1



2

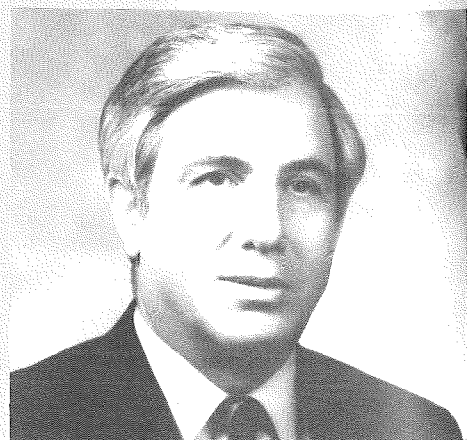


3



4

- 1 Charles M. Bédard
- 2 L. Keith Bulen
- 3 Robert C. McEwen
- 4 E. Richmond Olson
- 5 Donald L. Totten



5

Membership of the Commission

For the International Joint Commission the early months of 1981 were a period of uncertainty, as changes occurred in the Commission's membership. Two Canadian Commissioners left in December, 1980 and January, 1981, respectively and the three United States Commissioners left in March, 1981. For almost six months there was only one Commissioner, Jean Roy of Canada, who in turn left in August, 1981. Messrs. Olson and Bédard were appointed Commissioners for Canada in August and Messrs. Bulen, Totten and McEwen were appointed for the United States in September and October, 1981. Commissioner Olson was appointed Chairman for Canada in August and Commissioner McEwen Chairman for the United States in November, 1981.

The period under review ends with the naming of J. B. Seaborn as Commissioner (bringing the Commission back to full strength for the first time since December, 1980), the resignation as Canadian Chairman of Commissioner Olson, and the appointment of Commissioner Seaborn as Chairman for Canada on December 22, 1982.

The International Joint Commission

The International Joint Commission is a permanent unitary body established under the Boundary Waters Treaty of 1909.

This Treaty, which is unique in relations between the United States and Canada, was designed to help prevent and settle disputes regarding the use of boundary waters. The Treaty also provides for adjustment and settlement of questions between Canada and the United States involving the rights, obligations or interests of either in relation to the other or to the inhabitants of the other, along their common frontier.

The concept is that solutions to problems in which the United States and Canada have different or even opposing interests should be sought, not by the usual bilateral adversary negotiations, but in the joint deliberations of a permanent tribunal, the International Joint Commission.

The Commission consists of three Canadians appointed by the Governor-in-Council and three Americans appointed by the President with the advice and consent of the Senate. The Canadian co-chairman and the American co-chairman serve full time, while the other Commissioners are part-time. They act not as separate national delegations representing their governments, but as a single body seeking common solutions.

The IJC has headquarters offices in Washington, D.C. and Ottawa, Ontario, and a Regional Office in Windsor, Ontario, established in 1973 under the Great Lakes Water Quality Agreement.

The Commission's responsibilities under the 1909 Treaty fall into three general categories:

First, the exercise of quasi-judicial powers in approving or withholding approval of applications for the use, obstruction or diversion of boundary waters on either side of the line that would affect the natural level or flow on the other side. This responsibility extends also to approval of works in water flowing from the boundary waters and in waters that have crossed the boundary, when such works would affect the natural water level on the other side of the boundary.

Second, investigation and study of specific problems when requested by either or both governments. This is known as a Reference. Implementation of IJC recommendations made under a Reference is at the discretion of the two Governments and is not mandatory.

Third (a responsibility that has never been exercised), under Article X of the Treaty, the Governments may refer any questions or matters of difference to the Commission for decision rather than only for report and recommendations. These matters may embrace the subject of any difference between Canada and the United States. Such a Reference would require the consent of both Governments, and in the United States, the advice and consent of the U.S. Senate.

The Great Lakes Water Quality Agreement, a new kind of international accord for protection of the shared resources of two nations, was signed in 1972 by Canada and the United States and revised and renewed in 1978. The Agreement expresses the determination of each country to restore and enhance the water quality of the largest freshwater system in the world. It gives the International Joint Commission a number of specific responsibilities and functions including the provision of advice to Governments as to progress towards compliance with the Agreement. The Agreement also provides for two international boards to assist the Commission, the Great Lakes Water Quality Board and the Great Lakes Science Advisory Board.

The Commission does not maintain a large technical staff. It is empowered to select and use the most experienced and competent people in both countries and combine them as required in joint undertakings. Engineers, scientists and other specially qualified persons (usually from government departments) serve on international boards of advisors to carry out monitoring, technical studies and field work. In the case of reference studies their reports to the Commission usually are made public and hearings are held so that individuals, organizations and governments may comment. The IJC then takes into account the report of its board along with the information gathered at the public hearings, and reports to the Governments of Canada and the United States.

The Commission currently has twenty-four boards of different types. They include control, investigative and advisory boards. They are an indispensable part of the institutional structure set up to implement the 1909 Treaty.

Towards a Consensus

New Challenges

In recent years the Commission has begun to realize the need for wider public involvement and participation in its activities. Though the IJC has a long history of involving the public in its work through public hearings, issues today are infinitely more complex, the amount of information far greater than ever before, and new methods of two-way communication must be explored.

The efforts being made to implement the 1978 Great Lakes Water Quality Agreement have shown the importance of support for the Commission's work among persons living within and beyond the Great Lakes Basin, something that was noted in the Commission's first Biennial Report under that Agreement, issued in the summer of 1982. In this report, the Commission invited the Governments of the United States and of Canada to join it in taking new initiatives to give a continuing sense of purpose, direction and commitment to Agreement activities.

This need for new approaches rises from the growing understanding of the complexity of the issues facing the IJC in the 1980s. The Commission has adopted an ecosystem approach to the problems of the Great Lakes, which takes into account the interaction of air, land, water and all living organisms, including human beings, and this has made it inevitable that the widest possible spectrum of interests be involved in the Commission's future work if the Commission is to meet its mandate.

An informed public is needed to participate actively in the Commission's decision-making process. An improved flow of information to and reaction from the wide variety of communities affected by the IJC's work has become essential. The Commission is working to bring about this improvement.

The Commission is now examining new methods of involving the public, as noted in the First Biennial Report of the need to seek "a more direct form of discourse between the various institutions which are involved in the regulation of the environmental quality of the Great Lakes System, and the many individuals in the Basin (and beyond the Basin) who would be directly affected by institutional decisions."

Future prospects

The mandate of the International Joint Commission to help "prevent disputes regarding the use of boundary waters . . . between the United States and the Dominion of Canada", as called for in the Boundary Waters Treaty of 1909, remains as important to the two countries today as the day the Treaty was signed.

Indeed, it is more important, heavy consumption has led to water shortages in parts of both countries and water pollution is proving to be an issue that is extremely difficult to address. On a continent blessed with abundant supplies of fresh water, we have only recently realized that there are limits to these supplies, and we must preserve and protect them.

The Commission's International Great Lakes Diversions and Consumptive Uses Study Board has completed a five-year study of the effects of present and future diversions and consumptive uses. The Board has concluded that:

- diversion rates into, within and out of the basin cannot be altered to reduce extreme high levels or to increase extreme low levels without causing long-term economic loss.
- consumptive uses could have significant impacts on the Lakes. They should be monitored and public policies formulated to address this problem; this subject will continue to grow in importance over the next fifty years.

The Board's report is available from Commission offices in Ottawa and Washington.

Our society has grown used to the benefits derived from increased use of chemicals, many of them toxic. However, these same chemicals appear in the water we drink, the food we eat and the air we breathe. There is disagreement and confusion about what constitutes "safe" and "acceptable" levels of certain chemicals in our environment. The issues are complicated, and the resolution of the problems related to the use of chemicals will require the co-operative efforts of Canada and the United States.

The Commission has learned that pollutants carried on aerial pathways and from land use activities present major problems for those charged with protecting water quality. More information about what these pollutants are, at what levels they occur, and where they come from will enable development of more effective controls, but enough is known already about the atmospheric contribution of toxic and hazardous substances to the Great Lakes System to warrant considerable concern. These are particularly difficult problems, sometimes involving as they do people far removed from the waters protected. The Commission has reported on these matters to Governments and will continue to do so.

As technologies improve, the supply of information becomes almost overwhelming. What information is important and must be acted upon? What information may be discarded for the present? How do we establish priorities and who establishes them?

For answers, society must depend to a great degree on the knowledge of scientists, engineers and other specialists. But there is often misunderstanding and disagreement between the expert and the layman, and even between experts. One may decide that it is an acceptable risk to drink the water while the other for his own reasons may decide differently. Who is right? If these problems are to be resolved, communication, discussion and understanding between all groups must be improved.

One thing is certain: the burden of work confronting the IJC is not lessening. The gains that have been made must be preserved, but changes and improvements will be needed if the Commission is to continue to be effective in carrying out the ever more important task of protecting boundary waters. While the Commission must continue to serve the two Governments and peoples, care must be taken to preserve its independence as a body able to seek common solutions to common problems.

It is hoped that the spirit of impartiality and goodwill which has marked the work of the Commission in the past will help it to continue its service to the citizens of Canada and the United States in the difficult years ahead.

The IJC in 1981-82

In the two years under review the IJC carried forward important work on water bodies from Maine to British Columbia. Among the most notable events:

- The dispute between the province of British Columbia and the city of Seattle over the projected flooding of the Skagit Valley appeared close to resolution by the end of 1982. The IJC played an innovative co-ordinating role.
- The Commission's First Biennial Report under the Great Lakes Water Quality Agreement of 1978 called upon governments to reassess the long-term commitment of all parties to the aims of the Agreement, and suggested the need for a broader basis for assessing Agreement progress than the technical measures utilized to date.
- Two Orders of Approval were issued, one authorizing construction of new control works for Osoyoos Lake in British Columbia and the state of Washington, and the other authorizing construction and maintenance of a diversion dike in the St. Croix River, near Baileyville, Maine.
- Several important reports were issued concerning water quality in the Poplar River (in Saskatchewan and Montana), the Niagara River (Ontario and New York), regulation of the Richelieu River and Lake Champlain (Quebec, Vermont and New York), and on phosphorus management.

Great Lakes Water Quality Agreement

Work under the Great Lakes Water Quality Agreement of 1978 constituted a major part of the Commission's activities throughout 1981-82. The period under review began in January, 1981 with publication of three major reports by the two Governments.

- *A Special Report on Pollution in the Niagara River*, outlined the need to prevent further discharges of substances already exceeding or nearly exceeding Agreement objectives. The Commission requested the Governments to address the need to achieve these objectives and assess cumulative and inter-jurisdictional impacts, as well as the need for further monitoring and scientific study.
- *An Interim Report under the 1978 Great Lakes Water Quality Agreement*, was issued in response to the annual meetings and following receipt and review of the reports of the Great Lakes Agreement Boards. It addressed seven issues the Commission wished to bring to the attention of Governments in this off-year in the biennial reporting cycle. These were:

The Great Lakes International Surveillance Plan
Niagara River Pollution
Atmospheric Pollution of the Great Lakes
Specific Chemicals for Immediate Control
Substitutes for Phosphorus in Detergents
Waste Disposal Sites
Phosphorus Pollution Control.

- *A Report on Phosphorus Management Strategies*, was issued as a supplement to the Commission's 1980 Report on Pollution of the Great Lakes from Land Use Activities.

Reason for Optimism

In November, 1981, the recently appointed Commissioners met in Windsor with the Chairmen of the Great Lakes Water Quality Board and the Science Advisory Board to discuss with them possible measures to help the Commission meet its obligations under the Great Lakes Water Quality Agreement.

The Boards reported in Cleveland that clean-up efforts were meeting with some success. Scientists said there was reason to be optimistic about the future of Great Lakes fisheries. Education and information programs were proving to be valuable tools in dealing with pollution from non-point sources. It has been found that many people will adopt practices and programs to protect water quality when they realize that they are also money-savers and make good conservation sense.

First Biennial Report

The First Biennial Report issued under the Great Lakes Water Quality Agreement in August, 1982, recommended that the two Governments give top priority to the cleanup of eighteen specific "areas of concern" in the Great Lakes Basin where significant environmental problems persist and beneficial uses are impaired. In eighteen major rivers, estuaries, bays and harbours around the Lakes, the water continues to be contaminated by organic or inorganic substances which persist despite remedial measures. Most of these areas have been identified as problems in virtually every annual report of the Water Quality Board since 1974, so whatever remedial measures have been implemented by the Parties have not yet been sufficient to remedy the specific problems.

Although all phosphorus control objectives have not been achieved, progress has been made. The discouraging trends apparent in the late sixties and early seventies appear to have been arrested. Most large municipal facilities in the Lower Lakes have now achieved the phosphorus effluent limitation called for in the 1972 Agreement, and phosphorus concentrations in Lakes Erie and Ontario have improved over the early seventies. However, the current estimated phosphorus loads for all the Great Lakes still exceed proposed target loads set out in the 1978 Agreement.

Toxic and hazardous substances are another matter. The Great Lakes Basin ecosystem suffers from "widespread contamination and the lakes are a major sink for such substances," and the surrounding population is exposed to toxic and hazardous substances through a variety of pathways. The impact on human and environmental health is not well understood, and this is a matter of great concern. Further studies of the transport, fate and effects of such substances were recommended as well as the adoption of an overall strategy for toxic substances control programs.

The reception given to this Report by governments, agencies and the general public has been encouraging. There appears to be a general resolve to protect and improve the ecosystem shared by Canada and the United States, and the Commission is hopeful that this resolve can be harnessed into a continuing co-operative undertaking by the citizens of both countries.

Contacts With Public

In the fall of 1981 when the five new Commissioners attended their first Great Lakes Water Quality meeting in Cleveland, opportunity was taken to meet with leaders in municipal, business, environment and academic communities. Experimenting with new processes and procedures in Commission meetings began the following year with the Great Lakes Water Quality Agreement meeting in November. This being an "off-year" meeting, the Commission opted for a crisp, open style of reporting and public exchange. An environmental exhibition was opened to the public the day before the meeting and remained open throughout the following day.

A 12-minute slide/tape show, *Promises to Keep*, continued to be an effective means of telling people about the Great Lakes Water Quality Agreement. It was seen by about 14,500 people during the two years. It is distributed from the IJC offices in Windsor, Ottawa and Washington, on request.

Great Lakes Basin

Management of the waters in the Great Lakes Basin has been of concern to the IJC for many years (long before the signing of the Water Quality Agreement). In addition to pollution concerns, the Commission has continuing responsibilities with respect to the control of water levels at the outlets of Lakes Ontario and Superior and in the Niagara River.

St. Lawrence River

The changing nature of problems coming before the Commission is illustrated by a brief received from the St. Regis Band of Mohawks of the Cornwall/Massena area.

They are concerned about water levels and flows and environmental effects of regulation in the international section of the St. Lawrence River. The Commission has received a report on this subject from its St. Lawrence River Board of Control, which found no adverse effects in the levels and flows area but which pointed out that the environmental question could not be properly answered without the input of many disciplines not represented on the Board. The issues are both important and complex, and the Commission is making every effort to be responsive to these concerns.

Niagara Ice Boom

During the two years under review the Commission continued to explore means of settling disputes arising out of the use of an ice boom at the head of the Niagara River. This boom has been installed by the electric power entities each winter since 1965 to accelerate the formation of the natural ice arch and reduce ice runs into the river. This protects downstream shore property and helps prevent ice jams, which cause loss of hydro generation. Some Buffalo and area residents claim the ice boom causes longer, more severe winters locally. The Commission, by the end of this reporting period, had established a sub-committee to review possible initiatives and to make recommendations.

Lake Erie Regulation

Late in 1982 public hearings were held at Cleveland, Ohio, Niagara Falls, Ontario, and Ogdensburg, N.Y., to give the public an opportunity to comment on an IJC Board's report on the possibility of limited regulation of Lake Erie. The Board has concluded that regulation is not economically justified.

International Rapids at Sault Ste. Marie

The question of the amount of water to be diverted at various times through existing power canals, including that to the new Canadian plant under construction during the reporting period, instead of over the rapids where it might lead to sustaining fish, has occupied the Commission on a number of occasions. At the end of the period, the Commission was considering the information needed to address requests from both the Canadian and U.S. private power companies to divert additional water.

Other Developments

The Commission noted with satisfaction the founding of a Great Lakes Institute during 1981 at the University of Windsor. This institution will help make known the problems facing the Great Lakes and the steps being taken to deal with them.

The Great Lakes Basin Commission library, a comprehensive collection of documents pertinent to the Great Lakes, was installed in the IJC's Great Lakes Regional Office in Windsor. Established in 1965, the Basin Commission was a United States' planning agency representing all eight Great Lakes states, eleven federal agencies, and one interstate commission, and was disbanded in 1981.

Skagit River

Perhaps the most difficult problem facing the five new members when they joined the International Joint Commission in 1981 was that involving the projected flooding of the Skagit River Valley in British Columbia.

The problem had its genesis in 1942. In that year, the Commission granted an Order of Approval to the city of Seattle, Washington to increase the height of the Ross Dam to 526 metres (1,725 feet) above sea level. This would raise the water level at the international boundary, causing some 2,216 hectares (5,475 acres) of land in British Columbia to be flooded. The Order was to become effective following the signing of a "binding agreement" between Seattle and British Columbia.

From 1954 to 1966 annual interim agreements were made between Seattle and British Columbia allowing the City to flood up to 488 metres (1602.5 feet) elevation or about 202 hectares (500 acres) in British Columbia. In 1967 a 99 year agreement was entered into between Seattle and the Province; this agreement allowed Seattle to raise the reservoir level to 526 metres (1,725 feet) with Seattle paying an annual rent of \$34,566.

Due to public concern over the environmental value of the valley, in 1974 British Columbia filed a "Request in the Application" asking the Commission to declare the 1942 Order of Approval null, to rescind the Order or to declare that raising the natural water level of the Skagit River at the international boundary is contrary to the public interests of Canada and the United States. The Commission was also asked to declare the 1967 Agreement between Seattle and British Columbia to be invalid.

Noting that British Columbia and Seattle were proceeding towards direct negotiation, the Commission advised the parties that this was the most appropriate procedure; they were directed to continue as quickly as possible and to communicate the results to the Commission.

After two years of little progress the Commission asked the Province if it wished to proceed with the Request in the Application. The Province replied that negotiations had proceeded continuously and expressed optimism that the matter could be settled. The Commission then dismissed without prejudice the 1974 Request in the Application.

Negotiations continued unsuccessfully through 1979 and on August 14, 1980, British Columbia again asked the IJC to annul the 1942 Order. The Province claimed that the Commission had not followed proper procedures, that the Order was approved because of a national wartime emergency but not acted upon during the emergency, and that environmental factors were not considered. Comments from governments and interested people in response to the Province's request were sought by the Commission. More than 500 responses were received.

Following its meeting in Ottawa in early October 1981, the Commission issued a notice that final disposition on the matter would be made in April, 1982.

In April, the Commission issued a Supplementary Order directing that Seattle was not to raise the level of the water in the reservoir above current levels until April 28, 1983, while at the same time stating that the British Columbia request in the Application did not constitute sufficient grounds for the Commission to exercise its jurisdiction in the manner requested.

The Supplementary Order also provided for the appointment of a special body to co-ordinate, facilitate and review activities directed to achieving and implementing a negotiated, mutually acceptable agreement between Seattle and British Columbia. That body, subsequently termed the Joint Consultative Group, was chaired by Commissioners Bulen and Olson with representatives from the Governments of Canada and the United States, the Province of British Columbia and the City of Seattle, as well as two independent technical advisors.

Negotiations between the parties resumed with the assistance of the Joint Consultative Group. With the IJC playing a co-ordinating role, the parties were close to agreement by the end of 1982.

Poplar River

In January, 1981 the Commission presented to Governments its report on Water Quality in the Poplar River Basin. The river rises in Saskatchewan and flows south to the Missouri in Montana. The report was prepared under a Reference received in 1977. The Commission has previously reported on the subject of water apportionment for this river.

The 1977 Reference asked the Commission to study and report on water quality, including the transboundary water quality implications of the thermal power station and its ancillary facilities on the Poplar River near Coronach, Saskatchewan. The Commission reported that the Boundary Waters Treaty could continue to be honoured without delaying operation of the plant.

It also suggested that a mechanism should be established to provide a forum within which existing users of water in Montana who believe that they are being adversely affected by the project can seek compensation. The Commission pointed out that additional measures should be taken if impacts are more severe than envisaged.

The report listed suggested interim objectives for boron and total dissolved solids (TDS) which should be adopted. A bilateral group should be maintained to monitor water quality and water quantity in the Poplar Basin. The Commission recommended that appropriate governmental agencies in the United States should provide technical advice and other assistance to those in Montana who believe they are adversely affected.

Richelieu River-Lake Champlain

A report entitled "Regulation of the Richelieu River and Lake Champlain" was issued early in 1981 bringing to a conclusion one of the most complex and difficult studies the Commission has undertaken.

The report completed the work of the Commission initiated in March, 1973, by a Reference from the Governments asking the IJC to investigate and report on the feasibility and desirability of regulation of the Richelieu River to alleviate extreme water levels in the River and Lake.

Lake Champlain is located mostly in the states of Vermont and New York. Its outlet, the Richelieu River, flows northward through Quebec for 129 kilometres (80 miles) to the St. Lawrence River. Flooding and low water conditions have caused considerable damage in both countries.

The Commission reported in 1975 that aside from undetermined environmental consequences, regulation was desirable. A second international board was formed to study the environmental, physical and economic effects of regulation in both countries.

During the course of the study it became clear that citizens and agencies hold very strong opinions about the subject of regulation in this area. The Commission and its board met many times with the people of both countries who were interested in the subject to try to get a better appreciation of all the facts in this very complex issue.

The Commission concluded that a flood forecasting and warning system, in conjunction with flood plain regulation and flood-proofing, was both feasible and desirable and recommended that these activities be instituted in the Lake Champlain-Richelieu River Basin by the appropriate authorities.

The Commission also concluded that it was technically and economically feasible to operate a gated structure on the Richelieu River at St. Jean so as to relieve extreme water levels while still meeting the environmental criteria developed by its international board. The Commission was, however, unable to determine the desirability of the gated structure and was therefore unable to make recommendations regarding regulation.

The Commission concluded that it was appropriate for the Governments of Canada and the United States to determine the desirability of control works. A number of factors in addition to flood control will need to be considered in resolving the issue. Such factors include the emphasis which governments may wish to assign socio-economic values, environmental and other criteria.

Osoyoos Lake

Early in 1981 the International Joint Commission received an Application from the State of Washington for approval to construct new control works for regulating the levels of Osoyoos Lake in British Columbia and in the State of Washington. The proposed new dam would replace the existing Zosel Dam which partially controls the water levels of the lake.

Osoyoos Lake is a widened expanse of the Okanagan River running from British Columbia into the State of Washington, with the international boundary intersecting the lake. The Okanagan flows south into the Columbia. Zosel Dam is a timber structure built in 1927 to create a pond for log storage. It is in poor condition and has required repairs from time to time to maintain structural integrity.

In its Application the State of Washington pointed out that the existing dam is not effective in conserving water during drought periods because of seepage losses; the dam is also overstressed at higher water levels.

The Commission published notices in newspapers on both sides of the boundary to advise the public about the Washington Application. Governments and all interested parties were invited to present statements in response; the public notice was given in May.

In December, 1981 the Commission held public hearings in Oroville, Washington and Osoyoos, British Columbia. Both these hearings were well attended. Those people appearing before the Commission appeared to favor the Application to construct new control works, with Canadian speakers emphasizing that any plan of regulation should not take away existing water rights. The Application and information gathered at the public hearings was considered by the Commission and an Order of Approval has been issued.

St. Croix River

The second Order of Approval issued during the two years under review was for a diversion dike in the St. Croix River, near Baileyville, Maine. The river forms part of the boundary between Maine and New Brunswick. This dike will be a reconstruction of a rock crib originally built during the thirties and breached in 1952 by flood waters. The new dike will eliminate water flows which have obstructed the discharge from a powerhouse and lowered the head available for hydro-electric generation. Effects on the river will be minimal.

And Finally . . .

Over the period covered by this report, the Commission has recognized the expanding audience which shares the concerns of the Commission for the environment shared by the United States and Canada. This shared interest is reflected in the public participation activities of the Commission as an institution as well as in the person-to-person meetings of individual Commissioners with a growing community of interests. The following are examples:

The IJC exhibit, an eight-panel presentation of pictures and text, was displayed at the Pacific National Exhibition in Vancouver, British Columbia, in 1981, and the next year at Hamilton, Ontario, at the Man-Environment Impact Conference/Cousteau Society Festival.

The Commission's anniversary report, *Seventy Years of Accomplishment*, received first prize from the International Association of Printing House Craftsmen as the best multi-colour report in North America, and also a second prize from the Art Directors' Club of Tokyo, Japan.

Students from Canton High School, New York State, and Lisgar Collegiate, Ottawa, Ontario, presented a joint report in 1981 to the outgoing Ambassador of the United States to Canada, Kenneth Curtis, who is a former IJC Commissioner. The report followed a study initiated during the Year of the Child, when the two schools carried out a mini-IJC project with the assistance of the Commission.

During the semi-annual meeting in Washington, D.C., in the spring of 1982, the Commissioners met with President Reagan and Vice-President Bush, and in the autumn of 1982 Governor General Schreyer hosted a luncheon for the Commissioners during the semi-annual Ottawa meeting.

The trends which the International Joint Commission has perceived and attempted to adjust to are undoubtedly reflected throughout our society. As is the case with society at large, the Commission must adapt both at the institutional and the personal level to meet the challenges of the '80s.

Afterword . . .

The period ends with J. B. Seaborn assuming his responsibilities as Chairman for the Commission for Canada.



J. Blair Seaborn, Chairman

Appendix 1

IJC List of International Projects 1912-1982

Under the Boundary Waters Treaty and other international arrangements, the IJC generally receives its projects:

(1) by *Applications* to it for approval of certain activities on boundary or trans-boundary waters, or

(2) by referral to it by the U.S. and/or Canadian Governments to make investigations (*References*).

- A or R on the chart indicates *Application* or *Reference*.
- The year refers to the date the Application or Reference was submitted to the IJC.
- The IJC *Document number* is the official identification number for the purpose of keeping track of the projects.

Numerical Index of IJC Documents

<i>Docket No.</i>	<i>Title</i>	<i>Action</i>
1912	1 A Rainy River Improvement Co. Kettle Falls Dam	Dismissed as covered by a "special agreement."
	2 A Watrous Island Boom Co. Boom in Rainy River	Approved. No Board.
	3 R Lake of the Woods Levels	Completed. Resulted in the 1925 Convention. Active Board.
	4 R Pollution of Boundary Waters	Completed. Recommendations not implemented.
	5 R Livingstone Channel Detroit River	Completed. Recommendations implemented.
1913	6 A Michigan Northern Power Co. St. Mary's River Dam (with No. 8)	Approved. First Board of Control. Active board.
	7 A Greater Winnipeg Water District 100 mgd from Shoal Lake for Winnipeg water supply	Approved. No board.
	8 A Algoma Steele Corporation St. Mary's River Dam (with No. 6)	Approved. Active board.
1914	9 R St. Mary and Milk Rivers Article VI of B.W. Treaty	Issued Order in 1921 on method of water measurement and apportionment.
	10 A The St. Croix Water & Power Co. Grand Falls Dam (with No. 11)	Same structure. Approved in 1915. Amended in 1931 — Docket 28. Active Board.

	<i>Docket No.</i>	<i>Title</i>	<i>Action</i>
1915	11 A	Sprague's Falls Mfg. Co. Grand Falls Dam (with No. 10)	
1916	12 A	International Lumber Co. Boom in Rainy River	Approved. No board.
	13 A	St. Clair River Channel	Approved dredging. No board. Compensating works not constructed.
1918	14 A	New York and Ontario Power Co. Waddington Weir	Decision postponed. Now inundated by St. Lawrence Power.
	15 A	St. Lawrence River & Power Co. Massena Weir	Approved. Board established. Works removed prior to St. Lawrence Power Project.
	16 A	Canadian Cottons Ltd. Milltown Dam on St. Croix River	Withdrawn in 1919.
1920	17 R	St. Lawrence River Navigation and Power	Completed. Treaty drafted in 1932. U.S. Senate did not ratify it. Revived in Docket 68.
1923	18 A	State of Maine Fishways Fishway in St. Croix River	Approved. No board.
1925	19 A	New Brunswick Electric Power Commission Grand Falls Dam on St. John River	Approved without passing on the issue of downstream benefits. No board.
	20 R	Rainy Lake Levels	Completed. Led to Convention of 1928. Active Board. See Docket 50.
	21 A	Buffalo and Fort Erie Public Bridge Co. Bridge over Niagara River	Approved. No board.
1926	22 A	St. John River & Power Co. Grand Falls Dam on St. John River	Approved transfer of approval granted under Docket 19.
1927	23 A	Creston Reclamation Co. Ltd. Dyking on Kootenay River in Canada and above the Lake	Approved. No board.
1928	24 A	St. Lawrence River & Power Co. Raise Massena Weir	No action. Hearing adjourned "sine die." Now inundated by St. Lawrence Power Project.
	25 R	Trail Smelter Fumes	Completed. Report not accepted by U.S. The tribunal award similar to IJC.
1929	26 R	Roseau River Drainage	Completed.
	27 A	West Kootenay Power & Light Co., Ltd. Kootenay Lake Storage	Withdrawn in 1934.
1931	28 A	St. Croix Water Power Co., and Sprague's Falls Mfg. Co. Grand Falls Dam on St. Croix River	Approved raising forebay 1.5 feet. Active board. Initial approval in Dockets 10 & 11

	<i>Docket No.</i>	<i>Title</i>	<i>Action</i>
1932	29 A	Kootenay Valley Power and Development Co. Dyking on Kootenay River in Canada near Creston	Approved. No board.
	30	Docket number assigned in error — same as above	
	31 A	Madawaska Company Grand Falls Dam on St. John River	Denied. Related to claims pursuant to operation under Dockets 10 & 22
1934	32 A	Canadian Cottons Ltd. Milltown Dam on St. Croix River	Approved. Active Board
1935	33 A	Jean Lariviere Private small dam on Little St. John Lake	Approved. No board.
	34 A	Bruner, P.C. Dyking on Kootenay River in Canada	Approved. No board.
1936	35 A	Montana Conservation Board Dam on East Fork of Poplar River	Approved. Dam not built. No board.
	36 A	Myrum, Geo. B. Repair of Prairie Portage Dam	Approved. Repair work on existing timber dam not implemented.
	37 R	Champlain Waterway Deep waterway from St. Lawrence to Hudson River	Completed. Recommended new study after St. Lawrence Seaway built.
1937	38 A	Richelieu River Remedial Works	Approved. Only control gates installed. Dykes and excavation not implemented. Active board.
1938	39 A	West Kootenay Power & Light Co., Ltd. Corra Linn Dam for Kootenay Lake Storage	Approved. Active board.
1939	40 A	United States Forest Service Prairie Portage Dam	Approval granted to reconstruct dam. Only cofferdam built. Active board.
	41 R	Souris River Water apportionment	Governments approved interim measures recommended by IJC. Active Board of Control.
1940	42 A	Creston Reclamation Co., Ltd. Dykes along Kootenay River in Canada	Approval settled outstanding differences. No board. Initial approval under Docket 23.
1941	43 A	West Kootenay Power & Light Co., Ltd. Additional two feet of storage on Kootenay Lake	Approved for one year. Active board.
1940	44 A	Grand Coulee Dam & Reservoir Backwater raised water level in Canada	Approved. Active board.

	<i>Docket No.</i>	<i>Title</i>	<i>Action</i>
1941	45 A	West Kootenay Power & Light Co., Ltd. Additional two feet of storage on Kootenay lake	Informal request considered to be unnecessary application.
	46 A	City of Seattle Ross Dam, Skagit River	Approved. Board established when Seattle & B.C. reached agreement in 1967.
1942	47 A	West Kootenay Power & Light Co., Ltd. Additional two feet of storage on Kootenay Lake	Approved until end of the war. Active board.
	48 A	Creston Reclamation Co., Ltd. Reclamation of flooded lands in Duck Lake	Approved. No board.
	49 A	State of Washington Zosel Dam at outlet of Osoyoos Lake	Approved. Active board.
	50 R	Rainy Lake Watershed — Emergency conditions in Rainy and Namakan Lakes. Special jurisdiction under Convention of 1928.	Completed. Issued and subsequently modified Orders specifying rule curves. Active board. See Docket 20.
1944	51 R	Columbia River	Completed. Led to Columbia River Treaty.
	52 A	Ontario & Minnesota Pulp & Paper Co. Ash Rapids Dam in Lake of the Woods	Approved but not built. Lake of the Woods Board of Control to supervise.
1946	53 R	Sage Creek Appropriation of waters	Completed. No action by Governments.
	54 R	Pollution of St. Clair River, Lake St. Clair and Detroit River and St. Mary's River	Completed. Surveillance over water quality until Great Lakes Water Quality Agreement signed in 1972.
1948	55 R	Pollution of Niagara River	Completed. Surveillance until Great Lakes Water Quality Agreement signed in 1972.
	56 R	Northern States Power Co. Number assigned in error	Dealt with under Docket 41.
	57 R	Waterton & Belly Rivers Further uses and apportionment of waters	Studies completed. IJC divided on national lines. Only Canadians reported.
	58 R	Souris & Red Rivers Further uses and apportionment of waters.	Completed. Board still reports on its umbrella activities.
	59 A	West Kootenay Power Co., Ltd. Additional two feet of storage on Kootenay Lake.	Approved for four years. Active board.
	60 R	Passamaquoddy Tidal Power	Completed. Government accepted Apportionment of costs of further studies.

	<i>Docket No.</i>	<i>Title</i>	<i>Action</i>
1949	61 R	Air Pollution in Windsor-Detroit area from vessels	Completed. Surveillance activities terminated in 1966.
1950	62 A	Creston Reclamation Co., Ltd. Levels of Duck Lake	Approved. Active board.
	63 R	St. John River Water resources of the basin above Grand Falls	Completed
	64 R	Niagara Falls — Preservation and enhancement of their beauty	Completed and accepted by Governments.
1951	65 A	Libby Dam and Reservoir	Withdrawn
	66 A	Consolidated Mining & Smelting Co. Waneta Dam on Pend'Oreille River	Approved. No board.
1952	67 R	Lake Ontario Levels	Completed. Studies concurrent with Application under Docket 68.
	68 A	St. Lawrence Power	Approved. Active board.
1954	69 A	Libby Dam and Reservoir	No decision. Problem solved by Columbia River Treaty.
	70 A	Creston Reclamation Co., Ltd. Modification of 1950 Order on Duck Lake	Approved. Active board.
1955	71 R	St. Croix River Use, conservation and regulation	Completed. Pollution aspect still under active surveillance.
1956	72 R	Passamaquoddy Tidal Power	Completed.
1959	73 R	Rainy River and Lake of the Woods Pollution	Completed. Rainy River still under active surveillance.
1961	74 R	Additional Remedial Works above Niagara Falls	Completed. Studies led to application under Docket 75.
	75 A	Hydro Electric Power Co. of Ontario and Power Authority State of New York Remedial Works above Niagara Falls	Approved. Active board.
1962	76 R	Pembina River Cooperative development of water resources	Completed. Recommendations not acted upon.
	77 R	Champlain Waterway Commercial navigation	Completed.
1963	78 A	PASNY Shoal Removal, Niagara Falls	Approved. Active board.

	<i>Docket No.</i>	<i>Title</i>	<i>Action</i>
1964	79 A	Lake Erie-Niagara River Ice Boom	Approved. Active board.
	80 A	Vanceboro Dam	Approved. Active board.
	81 R	Red River Pollution	Completed. Active surveillance.
	82 R	Great Lakes Levels	Completed. Governments acted on recommendations.
	83 R	Pollution of Lower Great Lakes	Completed. Led to signing of Great Lakes Water Quality Agreement in 1972.
1966	84 A	Cominco Two feet additional storage on Kootenay Lake	Approved for one season. Active board.
	85 R	Air Pollution In Detroit-St. Clair River areas	Completed. General observation along rest of boundary by the International Air Pollution Advisory Board.
1967	86 R	American Falls, Niagara River	Completed.
	87 A	Forest City Dam On St. Croix River	Approved. Order void because applicant did not agree to conditions.
1968	88 A	Raisin River Diversion from St. Lawrence River	Approved. Active board.
1969	89 A	Metropolitan Corporation of Greater Winnipeg Diversion from Shoal Lake of water for domestic purposes	IJC action deferred at applicant's request.
	90 A	Creston Valley Wildlife Management Area Duck Lake Levels	Approved. Active board.
1971	91 R	Skagit River Environmental consequences of flooding	Completed.
	92 R	Point Roberts Social Problems of residents	IJC work under the Reference officially terminated in 1977.
	93 A	Cominco Kootenay Lake Storage	Withdrawn.
1972	94 R	Pollution of Upper Great Lakes	Completed.
	95 R	Pollution of Great Lakes from Land Use Activities	Completed.
	96 R	St. John River Water Quality	Completed.
	200 R	Great Lakes Water Quality Agreement	Superseded by 1978 Agreement.

	<i>Docket No.</i>	<i>Title</i>	<i>Action</i>
1973	97 A	U.S. Dept. of State Emergency Regulation of Lake Superior	No formal action taken on Application. Issues raised in Application dealt with on interim emergency basis under Dockets 6 and 8.
	98 R	Richelieu-Champlain Regulation	Completed.
1975	99 R	Air Quality	Commission reports annually to Governments on Michigan-Ontario Air Pollution.
	100 A	Toussaint-Causeway	Application approved.
	101 R	Garrison Diversion Project	Commission reported to Governments.
1976	102 A	Flood Control Works Richelieu River	Consideration deferred. Awaiting action under Docket 98.
1977	103 R	Lake Erie Regulation	Board studies completed; Commission preparing report to Governments.
	104 R	Great Lakes Diversions and Consumptive Uses	Board studies completed; Commission preparing report to Governments.
	105 R	Great Lakes Technical Information Network	Board established.
	106 R	Great Lakes Levels Advisory Board	Studies underway.
	107 R	Poplar River Water Quality	Completed.
1978	200 R	Great Lakes Water Quality Agreement (revised)	Active monitoring and surveillance; reports annually to Governments.
1981	108 A	Osoyoos Dam	Approved.
1982	109 A	Grand Falls Diversion Dike Construction St. Croix River	Approved.

Appendix 2

IJC Documents 1981

1. Supplemental Report on Phosphorous Management Strategies — January 30, 1981
2. Interim Report Under the Great Lakes Water Quality Agreement — January 28, 1981
3. Special Report on Pollution in the Niagara River — January 20, 1981
4. Water Quality in the Poplar River Basin — January, 1981
5. Regulation of the Richelieu River and Lake Champlain — January 1981

Board Reports to the IJC

1. International Lake Erie Regulation Study Board, *Lake Erie Water Level Study*, July, 1981
2. International Great Lakes Diversions and Consumptive Uses Study Board, *Great Lakes Diversions & Consumptive Uses*, September 1981

Great Lakes Water Quality Agreement Reports

1. Great Lakes Water Quality Board 1981 Report on Great Lakes Water Quality
2. Great Lakes Water Quality Board 1981 Report on Great Lakes Water Quality: Appendices
3. Great Lakes Water Quality Board 1981 Report on Great Lakes Water Quality: Appendix Great Lakes Surveillance
4. Report to the Great Lakes Water Quality Board: The Response of the Pulp and Paper Industry in the Great Lakes Basin to Pollution Abatement Programs
5. Report to the Great Lakes Water Quality Board: Toxic Substances Control Programs in the Great Lakes Basin
6. Great Lakes Science Advisory Board 1981 Annual Report
7. Report to the Great Lakes Science Advisory Board: Biological Availability of Phosphorus
8. Report to Great Lakes Science Advisory Board: Environmental Implications of Alternative Energy Futures for the Great Lakes Basin
9. Report to Great Lakes Science Advisory Board: Report of the Aquatic Ecosystem Objectives Committee
10. Report to Great Lakes Water Quality Board/Great Lakes Science Advisory Board — Workshop on the Compatibility of the Great Lakes Basin Cancer Registries
11. Report to Great Lakes Water Quality Board/Great Lakes Science Advisory Board — Committee on the Assessment of Human Health Effects of Great Lakes Water Quality

IJC Documents 1982

1. (a) First Biennial Report Under the Great Lakes Water Quality Agreement of 1978
- (b) Addendum to the First Biennial Report Under the Great Lakes Water Quality Agreement of 1978
2. Annual Report on Michigan-Ontario Air Pollution — 1982

Great Lakes Water Quality Agreement Reports

1. Great Lakes Water Quality Board

Annual Reports

Great Lakes Water Quality Board. 1982 Report on Great Lakes Water Quality to the International Joint Commission. Windsor, Ontario, November 1982.

Great Lakes Water Quality Board. Appendix E: Great Lakes Water Quality Status Report on the Persistent Toxic Pollutants in the Lake Ontario Basin. Presented to the Great Lakes Water Quality Board by the Implementation Committee. Appendix E: Status Report on Organic & Heavy metals Contaminants in the Lakes Erie, Michigan, Huron and Superior Basins. Reprinted in one volume, 1982. (Lake Ontario volume originally printed 1976; Lakes Erie, Michigan, Huron & Superior originally printed 1978.)

2. Great Lakes Water Quality Board and Great Lakes Science Advisory Board

Annual Reports

1982 Annual Report, Committee on the Assessment of Human Health Effects of Great Lakes Water Quality. Report to the Great Lakes Water Quality Board and the Great Lakes Science Advisory Board. Windsor, Ontario, November, 1982

Proceedings

Proceedings of the Roundtable on the Surveillance & Monitoring Requirements for Assessing Human Health Hazards Posed by Contaminants in the Great Lakes Basin Ecosystem held in East Lansing, Michigan, March 17-18, 1982. Sponsored by the International Joint Commission's Great Lakes Water Quality Board & Great Lakes Science Advisory Board through their Committee on the Assessment of Human Health Effects of Great Lakes Water Quality. Windsor, Ontario. November 1982

Special Reports

A Review of the Pollution Abatement Programs Relating to the Petroleum Refinery Industry in the Great Lakes Basin. Report to the Great Lakes Water Quality Board by the Petroleum Refinery Point Source Task Force of the Water Quality Programs Committee. Windsor, Ontario. November 1982

Great Lakes Water Quality Board. Guidelines and Register for Evaluation of Great Lakes Dredging Projects. Report of the Dredging Sub-committee to the Water Quality Programs Committee of the Great Lakes Water Quality Board, Windsor, Ontario. November 1982

Appendix 3

IJC International Boards

	Board Appearance	Frequency	Reports When
Boards of Control			
St. Lawrence River (4)*	Yes	Semi-	Apr-Oct
Niagara River (2)	Yes	Semi-	Apr-Oct
Lake Superior (1)**	Yes	Annual	Apr
St. Croix River (1)	No	Annual	Apr
Rainy Lake (1)*	AsRq	Annual	Apr
Lake of the Woods (1)*(x)	No	Annual	Apr
Souris River (1)	No	Annual	Apr
St. Mary-Milk Rivers (1)	No	Annual	Apr
Kootenay Lake (2)*	No	Annual	Apr
Columbia River (1)	No	Annual	Apr
Osoyoos River (2)	No	Annual	Apr
Skagit River (1)	No	Annual	Apr
Lake Champlain (1)yy	No	Annual	Apr
Pollution Advisory Boards			
St. Croix River Pollution (3)	AsRq	Semi-	Apr-Oct
Rainy River Pollution (2)	AsRq	Semi-	Apr-Oct
Red River Pollution (2)	AsRq	Semi-	Apr-Oct
Air Pollution-Boundary (3)	Yes	Semi-	Apr-Oct
Great Lakes Water Quality Agreement			
Great Lakes Water Quality (9)(xx)	Yes	Annual	Nov
Great Lakes Science Adv (8)(xx)	Yes	Annual	Nov
Investigative — Engineering Boards			
Lake Champlain-Richelieu River (5)	Yes	Monthly	
Souris and Red Rivers (3)	No	Annual	Oct
Michigan/Ontario Air Pollution (3)	Yes	Semi-	Apr-Oct
Lake Erie Regulation (4)	Yes	Semi-	Apr-Oct
Great Lakes Diversions and Consumptive Uses (5)	Yes	Semi-	Apr-Oct
Poplar Water Quality (4)	Yes	Semi-	Apr-Oct
Tech. Info. Network	Yes	Semi-	Apr-Oct
Great Lakes Levels Advisory	Yes	Semi-	Apr-Oct

Notes: (#) Indicates number of American and Canadian Board members. *Regulation Data Submitted weekly.
 **Regulation Data Submitted monthly. yy Inactive. (x) Strictly not an IJC Board since created by Convention and
 appointed by Governments. (xx) Created by both Governments but reporting to IJC. (AsRq) as required.

Appendix 4

Directory of Commissioners

Canadian Section

100 Metcalfe Street
18th Floor
Ottawa, Ontario, K1P 5M1
Telephone: (613) 995-2984

Commissioners

Stuart M. Hodgson	— April 15, 1979 to January 31, 1981
Jean R. Roy	— March 26, 1979 to August 12, 1981
E. Richmond Olson, Q.C.	— appointed August 13, 1981, served as Chairman, September 7, 1981 to December 22, 1982
Charles M. Bédard	— appointed August 13, 1981
J. Blair Seaborn	— appointed Commissioner December 20 & Chairman, December 22, 1982

Secretary

David G. Chance

United States Section

2001 "S" Street, NW, 2nd floor
Washington, D.C. 20440
Telephone: (202) 673-6222

Commissioners

Robert J. Sugarman	— April 1978 to March 1981
Charles R. Ross	— July 1962 to March 1981
Jean L. Hennessey	— October 1979 to March 1981
Robert C. McEwen	— appointed Commissioner and Chairman October 1981
L. Keith Bulen	— appointed September 1981
Donald L. Totten	— appointed September 1981

Secretary

David A. LaRoche

Regional Office

100 Ouellette Ave., 8th Floor
Windsor, Ontario, N9A 6T3
Telephone: Canada 256-7821
U.S. 226-2170