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SHORELINE EROSION ALONG LAKE ONTARIO

GOVERNMENT

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HEARING

BEFORE THE

COMMITTEE ON WATER RESOURCES

OF THE

COMMITTEE ON PUBLIC WORKS

UNITED STATES SENATE

NINETY-FOURTH CONGRESS

SECOND SESSION

ON

S. 3548

A BILL TO PROTECT THE SHORELINE OF LAKE ONTARIO

JUNE 15, 1976—ROCHESTER, N.Y.

SERIAL NO. 94-H50

Printed for the use of the Committee on Public Works



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SHORELINE EROSION ALONG LAKE ONTARIO

TUESDAY, JUNE 15, 1976

U.S. SENATE,
COMMITTEE ON PUBLIC WORKS,
SUBCOMMITTEE ON WATER RESOURCES,
Rochester, N.Y.

The subcommittee met at 10:10 o'clock a.m., pursuant to call, in room 238, New Federal Building, Hon. James L. Buckley, presiding.
Present: Senator Buckley.

OPENING STATEMENT OF HON. JAMES L. BUCKLEY, U.S. SENATOR FROM THE STATE OF NEW YORK

Senator BUCKLEY. I would like to call this hearing to order.

I might point out that the reason I am here alone is that the full Committee on Public Works is currently meeting in Washington.

I would like to thank all of the witnesses who have agreed to step forward and discuss a very serious problem. The Senate Subcommittee on Water Resources has authorized today's hearing in Rochester, N.Y., in order to investigate the persistent reports of residents along Lake Ontario that severe shoreline erosion continues unabated due to the artificial maintenance of the lake at abnormally high levels.

The subcommittee hopes to determine whether the Federal and international agencies responsible for lake level management are adequately equipped to deal with the problems of protecting the shoreline properties and whether the target levels the agencies attempt to maintain are the appropriate ones.

To focus the discussion on the options available, I have introduced a bill, S. 3548, which directs the Army Corps of Engineers to develop a plan for shoreline protection and beach erosion control along Lake Ontario. The report which the corps must make to Congress is expected to develop recommendations for the various means of protecting the shoreline, including a change in the range at which Lake Ontario is maintained.

I am aware that the problems involved are not going to be easily resolved, or they would have been long before now. The competing interests involved are strong. And all are legitimate. But by drawing attention to this one most vexing problem of shoreline erosion, I hope that some fresh thinking can be brought to bear on it.

It is awesome to consider the courage, or folly, of man's experiments with trying to manage and control his natural environment. Lake Ontario, even though the smallest of all the Great Lakes, is nevertheless an enormous body of water. It is not surprising that man's

mastery over the effects of the waves and the weather are still beyond his reach.

I am happy to welcome the people who live here and the professionals who daily must cope with these problems to offer their insights and recommendations to the subcommittee. I trust that this hearing will mark the beginning of some real progress in protecting the lakeshores of Lake Ontario from further unnecessary destruction.

[The bill, S. 3548, follows:]

94TH CONGRESS
2D SESSION

S. 3548

IN THE SENATE OF THE UNITED STATES

JUNE 10 (legislative day, JUNE 3), 1976

Mr. BUCKLEY introduced the following bill; which was read twice and referred to the Committee on Public Works

A BILL

To protect the shoreline of Lake Ontario.

1 *Be it enacted by the Senate and House of Representa-*
2 *tives of the United States of America in Congress assembled,*
3 That this Act shall be known as the "Lake Ontario Pro-
4 tection Act of 1976".

5 SEC. 2. The Secretary of the Army, acting through the
6 Chief of Engineers, is directed to develop a plan for shoreline
7 protection and beach erosion control along Lake Ontario, and
8 report on such plan to the Congress as soon as practicable.
9 Such report shall include recommendations on measures of
10 protection and proposals for equitable cost sharing, together
11 with recommendations for regulating the level of Lake On-

1 tario to assure maximum protection of the natural environ-
2 ment and to hold shoreline damage to a minimum.

3 SEC. 3. Until the Congress receives and acts upon the
4 report required under section 2 of this Act, all Federal
5 agencies holding responsibilities affecting the level of Lake
6 Ontario shall, consistent with existing authority, make every
7 effort to discharge such responsibilities in a manner so as to
8 minimize damage and erosion to the shoreline of Lake
9 Ontario.

10 SEC. 4. There is authorized to be appropriated to carry
11 out this Act such sums as may be necessary.

Senator BUCKLEY. The first witness is the Honorable Donald Riley, supervisor of the town of Greece.

STATEMENT OF HON. DONALD RILEY, SUPERVISOR, TOWN OF GREECE, N.Y.

Mr. RILEY. Thank you, Senator.

It is indeed a bittersweet pleasure to be in the county of Monroe for this particular subject. I look forward to your return, by calling a hearing of this nature for the town.

I have some prepared remarks for the sake of those in attendance and for the sake of the record that, I think, will summarize, at least from the point of view of the town of Greece, what we have been going through, and with your indulgence, I will read those remarks for the record.

Senator BUCKLEY. Please do.

Mr. RILEY. As a result of excessively high water supplies into Lake Ontario in the last several years, combined with the mismanagement of outflow regulation since 1964, by the IJC, the shoreline of the town of Greece has been needlessly battered by Lake Ontario since the spring of 1973.

The weekend of March 17 and 18, 1973, presented the town of Greece with one of the worst natural disasters in the town's 154-year history. Eight- to ten-foot waves caused by a savage northeast storm, and an excessively high lake level of close to 247 feet, produced an extremely hazardous situation in a heavily populated residential neighborhood.

Damage caused by erosion along the lakeshore and ponds' shores was substantial. Edgemere Drive was inundated with up to 18 inches of water, and scores of citizens were forced to evacuate their homes, which incidentally, are year-round dwellings, not summer cottages. The damage to this neighborhood was calculated to be in the hundreds of thousands of dollars. But in terms of the blow dealt to the citizens of Greece, no amount of calculation can estimate the severity of the damage done.

Since that time, the residents of the Greece shoreline have invested heavily in rebuilding their homes and in fortifying against a vicious Lake Ontario. And also since that time, the high water of Ontario has attacked. The most recent storm on April 25 of this year, once again flooded the residential streets of Greece, eroded the shoreline, crumbled breakwalls, shattered homes, and forced many to flee.

Senator Buckley has indicated that this subcommittee will consider instructing the Army Corps of Engineers to develop a plan for shoreline protection and control of beach erosion along the lake. In 1973, the Army developed "Operation Foresight" for the same reasons. Certain proposals designed to hold back the lake would have proven to be prohibitively expensive for the town of Greece, or any other municipality to maintain. All of the other remedial measures of "Operation Foresight" failed dismally to provide shoreline residents with relief.

The issue, as I see it, ladies and gentlemen, and many others will surely agree with me, is not how to hold back the high waters of Lake

Ontario, but rather, how to reduce the level of the lake and correctly manage its regulation.

My contention here, of course, is that for the past several years, the level of Lake Ontario has not been managed effectively, nor has it been managed in accordance with the Boundary Waters Treaty of 1909, which established the International Joint Commission and gave it the authority to control the levels of the Great Lakes.

Let me, for a moment, gentlemen, direct your attention to some extremely pertinent information, which you should be well aware of as you proceed in your deliberations.

First, the Boundary Waters Treaty of 1909 between the United States and Canada, states in article 8, and I quote:

The following order of precedence shall be observed among the various uses enumerated hereinafter for these waters, and no use shall be permitted which tends materially to conflict with or restrain any other use which is given preference over it in this order of precedence:

1. Uses for domestic and sanitary purposes.
2. Uses for navigation, including the service of canals for the purpose of navigation, and
3. Uses for power and for irrigation purposes.

Second, criterion B of the IJC criteria governing the regulation of Lake Ontario states, and I quote:

The regulated winter outflows from Lake Ontario from 15 December to 31 March shall be as large as feasible and shall be maintained so that the difficulties of winter operation are minimized.

Third, criterion G states, and I quote:

Consistent with other requirements, the levels of Lake Ontario shall be regulated for the benefit of property owners of the shores of Lake Ontario in the United States and Canada so as to reduce the extremes of stage which have been experienced.

Fourth, criteria H, I, and J specify that the level of Lake Ontario shall be maintained between the levels of 242.77 feet and 246.77 feet.

And, fifth, criterion K states:

In the event of excessive supplies, the works in the International Rapids section shall be operated to provide all possible relief to the riparian owners upstream and downstream. In the event of low supplies, the works in the International Rapids section shall be operated to provide all possible relief to navigation and power interests.

Quite evidently, gentlemen, the evidence shows conclusively that the interests of the riparians of Lake Ontario and the St. Lawrence River are to be considered first and foremost in the management of Lake Ontario's water levels. Also obvious is the fact that we are now experiencing a period of very excessive supplies as mentioned in criterion K.

Mr. Robert Conner, who we are fortunate to have with us today, is a member of the International St. Lawrence River Board of Control. Mr. Conner was in attendance at a meeting held on May 1 of this year in Sodus. When asked by riparians why the lake level couldn't be held at a lower range, Mr. Conner was quoted by the Rochester Democrat and Chronicle as saying, "If we had done that, we would have stopped all shipping in the St. Lawrence Seaway." He went on to say, "The two governments of the United States and Canada have a considerable investment in that navigation."

Mr. Conner has finally confirmed what so many of us have believed for some time now; that is that the IJC and its boards have blatantly violated the provisions of the Boundary Waters Treaty of 1909, in regulating the levels of Lake Ontario for the prime benefit of navigational and power interests.

As further evidence, let me refer you to the chart of lake levels. Note that from 1960, the year beginning the regulation of Lake Ontario, to 1963, the year beginning extremes of low supplies, the level of the lake fluctuated, on a consistent basis, between a low level of 243 feet and a high level of 246 feet.

In my opinion, the type of regulation exhibited at that time presented an acceptable range of levels for all interests concerned. However, in January of 1965, as a result of extremely low supplies in 1963 and 1964, the level of Lake Ontario reached the low point of 241.8 feet, almost a foot lower than the allowable minimum level.

In 1964, a Senate subcommittee held hearings on the low level problem. It was resolved that the level of Lake Ontario should never again be allowed to go to such low levels. Since that time, the IJC has made doubly sure that the levels would not go so low. In fact, they have assured that the levels will be consistently high. From 1965 to the present, the level of Lake Ontario has not been allowed to go below the level of 243.7 feet.

Under these conditions, gentlemen, and given the present trend of continued excessive water inflows, the residents of the town of Greece have nothing more to look forward to in the foreseeable future than continued high water and habitual flooding. This situation, needless to say, must not be allowed to continue.

For the welfare and safety of the lakeshore residents of both the United States and Canada, the Senate must order the IJC to own up to its lawful responsibilities. Specifically, I recommend that the Senate order the IJC to comply with the provisions of article 8 of the Boundary Waters Treaty of 1909, and with criteria G and K of the criteria governing the regulation of Lake Ontario.

Prior to this time, gentlemen, I have shown that the IJC has not complied with these provisions. I have also recommended that the regulated outflows of Lake Ontario during the late summer and winter months be such so as to provide for a low water level of 243 feet, and that the outflows from December 15th to March 31st be consistent with the criterion B of the criteria governing the regulation of Lake Ontario.

To sum up, gentlemen, the recommendations are clearly within the realm of possibility. There is no doubt in my mind that they represent the cheapest solution to our problem. Please do not make recommendations that will, in effect, offer the proverbial pound of cure. What the shoreline residents of Lake Ontario demand is that small ounce of prevention which will solve their disastrous situation.

Thank you very much.

Senator BUCKLEY. Mr. Riley, I gather from your testimony that the levels have been held higher than is prudent?

Mr. RILEY. Yes, Senator. Needless to say, I don't think anyone can quibble that we have had an excessive amount of inflow. When we have winter and spring storage we have to let that water out. I guess that

means in the summer and fall we let more water out, so when we do get excessive runoff we don't have the situation you witnessed in 1973.

I have photographs that highlight the storms that we had, and since you were there in 1973, you see that it is almost the exact situation, the water on a regular basis battering the homes.

The Corps of Engineers and the people themselves, the Small Business Administration, did help to rebuild after 1973, but it seems foolish to us that we allow this situation to repeat itself so soon after that time and effort has been put in. And the character of the shoreline in Greece has changed drastically.

We would ask for that relief on a permanent basis.

Senator BUCKLEY. Thank you.

Would you have any aggregate estimates of the annual shoreline property damage and how many people are affected?

Mr. RILEY. In the town of Greece we have approximately 2,000 residents directly affected, not only along the shoreline but we also have several ponds that are immediately adjacent to the lake that received damage. During the last storm we had four major incidents. I estimated that we had about a half million dollars worth of property damage.

That is almost impossible to put a definite figure on because I don't know what the undermining of the batteries has done to the protective work that people have spent in the Small Business Administration, and the Corps of Engineers has spent money.

We received at least a half million dollars worth of property damage.

Senator BUCKLEY. Thank you very much.

[The following was supplied for the record:]

ONTARIO, CANADA, June 19, 1976.

THE MAYOR OF GREECE,
City of Greece, New York State, U.S.A.

DEAR SIR: Greetings from Canada.

We live a few miles east of Toronto but have a summer home at Consecon on Lake Ontario, directly across the lake from your city. We have been plagued by this year's high water and have had to battle to keep our shore from eroding and when the water level recedes we will have to again retrieve our rocks from the lake and pile them against our shore, otherwise our property will eventually be in the Atlantic Ocean.

I have written to the newspapers to publicize the high water, and have written to my Federal member asking information as to whether the high water is an act of God or a miscalculation by the Joint Commission in controlling the water levels. In the reply from my government, they quote certain Joint Commission facts about the high water, its causes and what they have done to alleviate the situation, and they end up in informing me that if they hadn't been drastic in releasing the water the level would have been twenty inches higher. Twenty inches higher! Ye gods, we would have to trade in our house for an Ark!

Knowing governments and their agencies and their proneness to blundering error, I cannot be convinced by the reply from my government until I have some independent information regarding the accuracy of their behaviour regarding the high water. I know they could miscalculate the runoff; the amount of water held back during the winter; or they could even be deepening the water to favour the shipping interests. I do not know where to go for accurate information on this side of the border and I am wondering if you people are as concerned as I am concerned, and whether you have been doing anything to save yourself from the millions of dollars damage done to our lakefront properties.

Yours sincerely,

JOHN LIVINGSTONE.

TOWN OF GREECE,
Rochester, N.Y., July 12, 1976.

Mr. JOHN LIVINGSTONE,
Locust Hill RR No. 1,
Ontario, Canada

DEAR MR. LIVINGSTONE: Thank you for your letter of June 19th, expressing your concern over the high water levels of Lake Ontario.

The Town of Greece, for the past 4 years, has been brutally attacked by the waters of Ontario. The damage which has occurred has reached into the hundreds of thousands of dollars. The fact that the Greece shoreline is almost completely developed residentially makes this situation even more disastrous.

I am enclosing a copy of a statement that I made before a U.S. Senate Subcommittee hearing held in Rochester, New York, on June 15th. I am also sending a copy of your letter to the following people:

Mr. Donald Ketchum, 1550 Lake Road West, Williamson, New York, 14589 (Don is with the Lake Ontario South Shore Council) and

Mrs. Kay Bolton, 1656 Edgemere Drive, Rochester, New York, 14612 (Mrs. Bolton is very active and informed in these matters)

If you would like to correspond with these very active and informed citizens, I'm sure that they would be most happy to hear from you.

I also will be sending your letter to Washington, D.C. to become a part of the record of the hearing which I alluded to above.

While it pains me to see that our Canadian friends are experiencing problems with the levels of the Lake, I am pleased to note that you are just as willing as we are to do all that we can to alleviate the problem.

Sincerely,

DONALD J. RILEY,
Supervisor, Town of Greece.

Senator BUCKLEY. Mr. Campbell is next.

STATEMENT OF HON. VINCENT CAMPBELL, MONROE COUNTY LEGISLATOR, SEVENTH DISTRICT

Mr. CAMPBELL. I will make a brief statement on legislation which the Monroe County Legislature adopted in April of 1976, pertaining to high water problems of Lake Ontario.

On behalf of myself, my fellow colleagues of the Monroe County Legislature, and those among my constituency who have been the unfortunate victims of the high water problems of Lake Ontario, may I take this opportunity to express our appreciation for your presence here today, and of your concerns in seeking an effective solution to the serious high water conditions of Lake Ontario.

High waters with gusty winds have caused havoc to the entire southern shoreline of Lake Ontario, and in many instances has resulted in the erosion of precious land along the shoreline and the demise of homes. To date, this problem persists, vexing homeowners with no appreciable signs of relief.

I strongly urge you to review the present lake level guidelines established by the International Joint Commission to determine whether they are contributing factors to the high water problems that have occurred. If so, new guidelines should be established which must have as their foremost concern the protection and preservation of shoreline properties. In addition, we must effect appropriate legislation aimed at the immediate compensation of those damaged by the recent high water conditions.

In April of 1976, the Monroe County Legislature, at my request, unanimously adopted legislation aimed specifically at requesting var-

ious Federal and State agencies to seek an immediate solution to this problem. It expressed the concerns of the entire county of Monroe, not just lakeshore residents, that priority must be given to maintaining adequate lake level at appropriate depths so that homes and properties may be saved.

Let us not, as responsible representatives, sacrifice the constitutional rights of shoreline property owners for shipping and hydroelectric concerns.

I urge you to move ahead with all possible speed and effectuate an immediate solution to this very serious problem.

Thank you.

[A resolution from the county legislature of Monroe County, N.Y., follows:]

CLERK'S OFFICE, COUNTY LEGISLATURE

MONROE COUNTY, N.Y.

Rochester, N.Y., May 5, 1976.

To Whom it May Concern:

I Hereby Certify, That at a Session of the County Legislature of the County of Monroe, held in the County Office Building on April 8, 1976 a resolution was adopted, of which the following is a true copy and appears on page 258-260 of the official proceedings.

By Mr. Nagle—

Intro. No. 191

RESOLUTION NO. 121 OF 1976

Resolution Memorializing the International Joint Commission Regulating Lake Ontario Together with Governor Hugh Carey, the New York State Legislature and the Congress of the United States to Undertake Immediate Action to Stop Property Damage Along the Southern Shore of Lake Ontario.

Whereas, the outflow rates which directly affect the level of Lake Ontario are determined by the International Joint Commission according to guidelines it has established, and

Whereas, such Commission has the responsibility, amongst other things, to regulate such water level in a manner that will not jeopardize the lives and property of homeowners residing along the southern shore of Lake Ontario, and

Whereas, the level of Lake Ontario is rising at an alarming rate to the point where such level may exceed the historic high level mark of 1973 which resulted in serious property disaster and losses of millions of dollars, and

Whereas, as late as April 5, 1976, the Lake attained a level of 246.02 feet, for an increase of six-tenths (6/10) of a foot from the prior measurement of March 27, 1976 of 246.02 feet, and

Whereas, the Lake level has a forty per cent (40%) chance of rising even higher than its maximum of 246.77 feet, according to the United States Corps of Engineers, and

Whereas, if such Lake level continues at its current level or exceeds the current level, substantial property damage may result, which could cause damage in the millions of dollars: Now, therefore, be it

Resolved by the Legislature of the County of Monroe, as follows:

Section 1. This Legislature strongly urges the following remedial action be undertaken forthwith to remedy the problem of excessive lake level on Lake Ontario:

- a. That the International Joint Commission immediately undertake a review of its guidelines to determine whether or not such guidelines are the contributing factor to the high water problems that are occurring in 1976.
- b. That the International Joint Commission review its existing criteria and immediately implement outflow rates that will reduce lake levels so as to avoid property damage along the southern shore of Lake Ontario.
- c. That the International Joint Commission establish a more realistic basis to project lake levels that the projection system presently being utilized, as suggested by Congressman Horton.

d. That Governor Hugh Carey take all preliminary steps that will be required to declare the affected southern shoreline a Federal Disaster Area in the event of flooding due to high lake level.

e. That the International Joint Commission establish as a "first priority" in making its determination of lake level the preservation and protection of southern shoreline properties.

f. That the Clerk of this Legislature is directed to forward certified copies of this resolution to the International Joint Commission, Governor Hugh Carey, the Senate Majority Leader Warren Anderson, Speaker of the Assembly Stanley Steingut, the Honorable Frank Horton and the Honorable Barber Conable.

Sec. 2. This resolution shall take effect immediately.
Intergovernmental and Community Development Committee, April 8, 1976—
CV: 5-0. (File No. 76-300.)

Intro. No. 192

MOTION NO. 61 OF 1976

Providing that Intro. No. 191 of 1976 (Resolution Memorializing the International Joint Commission Regulating Lake Ontario Together with Governor Hugh Carey, the New York State Legislature and the Congress of the United States to Undertake Immediate Action to Stop Property Damage Along the Southern Shore of Lake Ontario) be amended.

Be it moved, that Intro. No. 191 of 1976 (Resolution Memorializing the International Joint Commission regulating Lake Ontario together with Governor Hugu Carey, the New York State Legislature and the Congress of the United States to Undertake Immediate Action to Stop Property Damage along the Southern Shore of Lake Ontario) be, and hereby is, amended to include Irondequoit Bay.

Adopted: Ayes 29, Noes 0.

Adoption of Intro. No. 191

RESOLUTION NO. 121 OF 1976—AS AMENDED BY MOTION NO. 61 OF 1976

Resolution Memorializing the International Joint Commission Regulating Lake Ontario Together with Governor Hugh Carey, the New York State Legislature and the Congress of the United States to Undertake Immediate Action to Stop Property Damage Along the Southern Shore of Lake Ontario and Irondequoit Bay.

Adopted: Ayes 29, Noes 0

STATE OF NEW YORK,
County of Monroe,
City of Rochester, ss:

I have compared the preceding with the original thereof on file in this office, and hereby certify that the same is a correct transcript therefrom, and of the whole of said original

Office Clerk, County Legislature.

Senator BUCKLEY. Of course, you are speaking on behalf of the county. Mr. Riley was speaking on behalf of the town of Greece. Do you have any estimates as to the number of people affected by this and the total damage?

Mr. CAMPBELL. The estimate of damage is extensive. I don't have specific figures, but most of the northern boundary of my district, in the town of Greece along Edgemere Drive, and I can tell you firsthand because I have witnessed it firsthand, that the damage is substantial; basements flooded; houses that front on the lake, shattered windows; broken foundations, moved back; walls completely destroyed.

The damage is substantial.

Senator BUCKLEY. But far beyond the town of Greece?

Mr. CAMPBELL. Far beyond.

Senator BUCKLEY. Thank you, gentlemen.

Our next witness will be Mr. David Lovenheim, who is representing Mr. Horton and Mr. Conable. Mr. Lovenheim.

JOINT STATEMENT OF HON. FRANK HORTON AND HON. BARBER B. CONABLE, REPRESENTATIVES IN CONGRESS FROM THE STATE OF NEW YORK, PRESENTED BY DAVID LOVENHEIM, ADMINISTRATIVE ASSISTANT

Mr. LOVENHEIM. Thank you, Senator.

I would like to express for both Congressman Horton and Congressman Conable their appreciation to you. They both have their own meetings in the House, or would be here personally.

With your permission, I would like to read their joint statement.

"Mr. Chairman, we appreciate the opportunity to make recommendations to this distinguished subcommittee on a matter of very pressing concern to us and to the residents of the Lake Ontario shoreline areas.

"Having asked that the Senate Public Works Committee hold hearings on this subject, we are deeply grateful that you, Senator Buckley, have responded quickly and forcefully to this request, because the level regulation rules governing operation of the control works in the Great Lakes are governed by the Boundary Waters Treaty of 1909, we felt that the United States Senate, which has jurisdiction over the ratification of international treaties, would offer the best forum for meaningful action on this problem.

"Because we know that the time of the subcommittee is very valuable and that there are many residents of the Rochester area here to testify, we will be brief as possible and to the point.

"The level of Lake Ontario is too high. It is too high today, and it has been too high since the aftermath of Hurricane Agnes in 1972 and 1973. While it is true to say that nature has provided the Great Lakes Basin with more water than the system can handle within normal lake level limits, it is also true that much more could be done by man to reduce the damage, erosion and frustration which high water levels have caused for shoreline interests and residents in both the United States and Canada.

"Several facts about the history and methods of lake levels regulation should be stated as a prelude to our recommendations to this subcommittee.

"First, since records were first kept on Lake Ontario levels in the 1800's, the current upper level limit of 246.77 feet (I.G.L.D.) has been breached about three times as often as the lower level limit of 242.77 feet (I.G.L.D.) has been violated. Since the St. Lawrence Seaway project and its control works were constructed in the 1950's, the maximum level has been breached more frequently than the minimum level.

"It is our understanding, further, that while lakeshore residents have suffered from the effects of high lake waters each year since 1973, there has been no time in the past 3 years when the minimum navigation profile in the St. Lawrence ship channel has been violated. In other words, despite the fact that the treaty requires a balancing of interests between riparian, navigation and power constituencies, the

shoreline interests have borne more than their share of the hardships resulting from the excessive water supplies the lake has received in the past few years.

"This point requires some further explanation. The term minimum navigation profile means the level of water in the ship channel of the seaway which will permit the safe passage of fully loaded vessels. Apparently, because of the nature of the channel, the effective water level in parts of the channel is reduced when outflows of Ontario water from the St. Lawrence River control works exceed a certain amount.

"We leave it to the engineers to explain how letting more water into the seaway lowers the level of water in the seaway, but nonetheless, we are told it is so. This has meant that during the lower level months from July through December, which are also the primary navigation months in the seaway, outflows from the lake have had to be limited to accommodate ship traffic.

"This fact is at the heart of the primary issue which concerns lake-shore residents, who are critical of lake level regulators for failing to reduce the level of the lake in summer and fall months to a lower level than has been experienced. Obviously, the lower the level can be reduced in the low water season of the year, the more leeway we have to control flooding and high water levels in the spring.

"We are all painfully aware that once we reach spring, it is too late to compensate for the failure to let sufficient water out of the lake in low water months. This is because high outflows during the spring runoff season causes severe flooding in Canadian areas downstream of the seaway in the St. Lawrence River.

"Yet, Mr. Chairman, despite repeated suffering of riparian interests in the spring months, there has been no effort to balance the interests by violating even for relatively short period of time, the minimum navigation profile required for fully loaded ships to pass through the seaway channel. It seems that riparian owners and users have been asked to bear the full burden of high water levels.

"We do not think this is what the treaty intended. If, in order to bring the level of Lake Ontario closer to its minimum level of 242.77, it would be necessary to make carefully planned violations of the minimum navigation profile for periods of time in the low water months, we feel that this can and should be done without risking navigation safety, although it might cause some temporary inconvenience in shipping schedules.

"One further fact has worked against the exercise of maximum effective human control of the lake. It has to do with the statistical method which is used to project what water supplies will occur in the lake basin in the short-run future. The current projection method, which is used to determine outflow levels to be permitted the following month, is to look at the long-term history of supplies for the month, and assume that supplies during that month in the present year will have a 50-percent probability of exceeding supplies of the past.

"Thus, even during a period of several months duration when supplies have been abnormally high, the assumption is always made that in the coming month they will be normal.

"We have suggested that a different method be employed which would allow the regulatory bodies to take short-term supply experience into account in setting outflow rates for the coming month or week.

For example, when recent supplies have been so high as to be in the range of 5 percent or 10 percent probability as compared with the 70-plus-year base period, a figure lower than 50-percent probability of exceedance should be used in the projection computer model. The current method does not even take into account what is known about recent supplies, and, thus, is little better than a bad guess, particularly during periods of high water supplies.

"These, Mr. Chairman, are the principal facts on which we rest our assertion that man is not doing everything possible or feasible to better control the incidence of flooding conditions along the Lake Ontario shoreline.

"We feel that the Senate Public Works Committee can make a very meaningful contribution to improving prospects for the future by seeking the cooperation of the United States Government and the Canadian Government, through the International Joint Commission in taking several immediate and long-term steps that can change and improve the current methods and procedures of lake level regulation.

"We recommend: One, that the committee ask the IJC to accelerate its current review of plan 1958-D, the regulation plan which currently governs all decisions on the outflow rates and operation of the St. Lawrence Seaway control works. We ask the committee to review the current plan and its operation to determine if it is consistent with the requirement of the Boundary Waters Treaty for balancing interests as among riparian, navigation and power constituencies of the lakes. Special attention should be directed toward reforming current supply projection methods.

"Two, that the committee ask the United States section of the IJC to prepare a plan for achieving lower Lake Ontario levels during low-water months, and that this plan incorporate procedures to provide outflow rates in excess of those needed to retain the minimum navigation profile whenever, in the previous spring season, the level of the lake has exceeded the maximum 246.77 feet.

"Three, that the Committee on Public Works of the Senate request the United States Army Corps of Engineers and the U.S. section of the IJC to undertake a study of the feasibility and of the cost benefit and environmental impacts of a dredging project that would permanently increase the depth of the St. Lawrence Seaway ship channel. Dredging of the channel to a deeper depth would increase navigation tolerances of higher outflow rates, and would thus enhance the ability of the IJC to regulate the lake at lower levels than we have experienced in recent years.

"Once again, Senator Buckley, we are very deeply grateful for your attention to this serious problem, and we stand ready to assume a leadership role in any action your committee may recommend, including your own bill that you have introduced, which would require action by the House of Representatives as well."

Senator BUCKLEY. Thank you very much.

I think we can dispense with the questions. Your statement was very comprehensive, and I think has offered suggestions that will be commented on by subsequent witnesses.

The next witness is Hon. Henry P. Smith, chairman of the U.S. section of the Joint Commission, accompanied by Mr. Stewart Fonda, U.S. Engineer Adviser to the IJC.

STATEMENT OF HON. HENRY P. SMITH III, CHAIRMAN, UNITED STATES SECTION, INTERNATIONAL JOINT COMMISSION

Mr. SMITH. Mr. Chairman, I have a prepared statement, and I am speaking also for Mr. Stewart Fonda, the Engineer Adviser to the U.S. section of the Joint Commission.

On behalf of the International Joint Commission, United States and Canada, I am pleased to be able to meet with you today to discuss the regulation of the water levels of Lake Ontario.

With respect to Lake Ontario regulation, I will summarize the Commission's actions during the past year and the results which have flowed from our actions. Gen. Robert Moore, who is here today, will present background and technical information regarding Lake Ontario regulation in a later presentation. Among his many responsibilities, General Moore serves as the U.S. cochairman of several of the Commission's boards, including the International St. Lawrence River Board of Control, which has the responsibility of ensuring that the Commission's order relating to Lake Ontario regulation is complied with.

Before we focus on the technical matters, I would like to make a few remarks concerning the International Joint Commission, United States and Canada.

The Commission is a permanent international body created by the terms of the Boundary Waters Treaty of 1909. The purpose of the treaty was to prevent disputes regarding the use of boundary waters and to make provision for the adjustment and settlement of questions arising along the common frontier which involved the rights, obligations, or interests of either in relation to the other or to the inhabitants of the other.

The Commission has two principal functions as provided by the terms of the treaty:

One, approving or disapproving applications for obstructions, uses or diversions of water which affect the natural level or flow of water on the other side of the international boundary.

And, two, investigating questions or matters of difference along the common frontier which are referred to the Commission from time to time by the two governments. In such cases, the Commission reports the facts and circumstances to the governments of Canada and the United States and recommends appropriate action by them. It is for the governments then to decide whether or not the Commission's recommendations will be accepted and acted upon.

The Commission's order approving the application for the power project in the St. Lawrence River illustrates the first treaty function. As I mentioned earlier, the International St. Lawrence River Board of Control was established pursuant to this order.

The Commission carries out its treaty functions by creating international boards. Since most of the functional responsibilities with which the board studies are concerned lie with State, Provincial, and Federal agencies—on both sides, Canadian and U.S.—board appointments are normally made from among responsible persons within State, Provincial, and Federal agencies. These persons do not, however, represent their agencies. Their appointments reflect the Com-

mission's view that the appointees are personally and professionally competent and are the persons who can best serve the variety of interests encompassed by the board's area of responsibility.

For the information of the subcommittee, I have attached to my statement copies of the Commission's 1974 Annual Report, which is this document. The report describes in considerably more detail the Commission and its operation. [The annual report referred to appears at p. 19.]

Except during periods of very high and very low water supply, Lake Ontario is regulated in accordance with regulation plan 1958-D. This regulation plan prescribe outflows which will maintain Lake Ontario within a 4-foot range of stage and will meet certain criteria prescribed for the protection of Lake Ontario and downstream interests in the St. Lawrence River, provided that water supplies to the lakes are no more or less than those of the past 100 years with which the plan was tested.

The prescribed range of stage and criteria were approved by the United States and Canadian governments for the regulation of Lake Ontario water level in December 1955.

When water supplies greater than those of the past 100 years occur, the water levels of Lake Ontario rise above the 4-foot range. When water supplies less than those for which the plan was tested occur, Lake Ontario levels will fall below the 4-foot range. This is the reason that the Commission's order of approval for the project contains the phrase, "as nearly as may be," to qualify the 4-foot range of stage, 242.77 to 246.77 feet above sea level.

During periods when the water supplies are either greater or less than the supplies of record, Lake Ontario is regulated in accordance with criterion K to the Commission's order of approval. Criterion K reads as follows:

In the event of supplies in excess of the supplies of the past as adjusted, the works in the International Rapids Section shall be operated to provide all possible relief to the riparian owners upstream and downstream.

In the event of supplies less than the supplies of the past as adjusted, the works in the International Rapids Section shall be operated to provide all possible relief to navigation and power interests.

Last June, Lake Ontario was at elevation 245.8 feet, and water supplies were below those requiring the application of criterion K. Our International St. Lawrence River Board of Control indicated its intent to regulate Lake Ontario in accordance with plan 1958-D. The Commission agreed with its board's advice. Throughout the remainder of 1975, Lake Ontario water levels remained very near normal.

During the late fall and winter, the water supplies potentially available to Lake Ontario exceeded the supplies of the past 68-year period. Because of this, water outflows through the St. Lawrence River were maintained as large as possible without causing an ice jam in the river during the winter and early spring.

As a result of the high outflows during the winter, the lake was 6 inches lower this spring. In view of the record water supplies this year, maximum outflows have been continued to this date, consistent with the flood situation downstream in Lake St. Louis.

Outflows through the St. Lawrence River are currently 350,000 ft³/s. This is the highest outflow ever discharged from Lake Ontario. If the St. Lawrence Seaway and Power project had not been built, the outflow rate this week would be only 335,000 ft³/s, and Lake Ontario water levels would be 1½ feet higher than they are now.

As the lake begins to fall this summer, maintenance of such high outflows will pose safety and loading problems for the large ships in the seaway. The Commission and its board are involved in studies to determine how we can provide the highest possible outflows through the late summer and fall in order to reduce Lake Ontario water level and still maintain reasonable conditions for the ships using the seaway.

You may rest assured that the decisions of the Commission and its board relating to Lake Ontario outflows and the reasons for them will be provided to the public as the year proceeds.

With respect to the possible improvement of the regulation of Lake Ontario, a joint Canada-Quebec study looking into problems in the all-Canadian section of the St. Lawrence River is now nearing completion. The Commission will continue the improvement of Lake Ontario regulation plans, taking into account the findings of the Canada-Quebec study and the experience acquired in the 1962-64 low water period and the present high water period.

We do not believe that much can be done to improve Lake Ontario regulation within the constraints of the present flow capacity of the St. Lawrence River. Thus, improvement of Lake Ontario regulation will depend upon the balance between the benefits which could be achieved by improved regulation and the very high costs of channel excavation in the St. Lawrence River necessary to achieve the benefits.

The Commission is acutely aware of the need for better communication between the Lake Ontario and St. Lawrence River shoreline property owners and the International Joint Commission and its International St. Lawrence River Board of Control.

As an experimental step in the direction of improved communication, the Commission in mid-April approved the establishment of a public participation advisory panel to our St. Lawrence board. We are presently working out the details as to how the panel should be constituted and how it should function. Our hope is that over the long term the two-way exchange of ideas and information will be mutually beneficial to those regulating the lake and those who are affected by the regulation.

In closing, I would like to add that the Commission has viewed with great concern and misgivings the fact that shoreline development continues in vulnerable areas of the shorelines of all the Great Lakes, including Lake Ontario.

I do not feel that adequate information is readily available to shoreline property owners.

Mr. Chairman, this concludes my statement.

Senator BUCKLEY. Thank you, Congressman Smith.

I wonder if you could, first of all, comment on the suggestions made by several of the people who have testified to the effect that the target levels are too high?

Mr. SMITH. With your indulgence, Senator, I am going to let my technical advisors answer those questions. Among these is General

Moore, of course, who, in 1973 when Niagara County and Orleans County, and part of Monroe that I then represented in the Congress, were being bombarded by wind and very high water levels, was Colonel Moore of the Buffalo District and he walked the shores of Lake Ontario, looking at the terrific damage provided by high water and wind. I am going to leave to these technical people, the engineers, the answers to those technical questions.

Senator BUCKLEY. Very fine.

Could you give me some idea of the time when the advisory panel details will be finalized?

Mr. SMITH. I would hope, Senator, as soon as possible. And to give a rough estimate, I would hope in the next 2 months we would be able to agree upon a method of representation and appointment, which we are now considering, and shall perhaps ask you for your advice in that connection.

We will appreciate all the input we can get, and some of the people here today, whom I have had the pleasure of meeting, have sent us suggestions of people who might well serve upon this advisory panel.

Senator BUCKLEY. Thank you very much.

One other subject, are you aware of the attitude of the other side of the international boundary? Are Canadian residents along the shoreline of Lake Ontario meeting the same problems and urging the same action?

Mr. SMITH. Apparently, up until fairly recently, we haven't had much indication that people on the north shore of the lake were having problems. Within the recent past, however, I understand there have been letters to the Toronto Globe and Mail that indicate that people on the north shore of the lake are having problems with high water.

Storms on Lake Ontario, particularly during the winter and spring months often come from the north rather than the other way around. Thus, the people on the south shore seem to be hit oftener. But apparently people on the Canadian shore are having problems, too.

Senator BUCKLEY. Thank you. Thank you for your statement.

[The annual report of the Joint Commission follows:]

*The Annual Report
of the
International Joint Commission
United States-Canada*

1974

*International Joint Commission
Washington May 1975 Ottawa*



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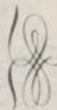
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Foreword

This is the First Annual Report of the International Joint Commission. Although the IJC has been in existence for nearly 65 years and has considered many water and other environmental problems common to the interests of both the United States and Canada and issued more than a hundred reports, never before has it endeavored to give to the Governments and an interested public a general overview of its activities on an annual basis.

The preparation of this report is also a reflection of the Commission's broadening role in United States-Canadian relations which seems to have been taking place since the early 1960's. During this time the Commission has become aware of the necessity of better informing the public of its activities, and this report is in partial fulfillment of a policy decision to improve its communications with all levels of government and with the public at large.





Chapter 1

HISTORICAL DEVELOPMENT

The United States-Canadian border extends 4,000 miles from the Atlantic to the Pacific, over half of which passes along rivers and lakes whose waters are shared equally by the two countries. There are another 1500 miles of border defining the Alaskan peninsula. By the turn of the Century it became apparent to Government leaders that some permanent provisions should be made for dealing with a number of complex problems that had developed. In 1909 the Boundary Waters Treaty was signed and eighteen months later ratified.

The IJC, established by the Boundary Waters Treaty, consists of six Commissioners; three from Canada, three from the United States. The Commissioners act, not as separate national delegations under instruction from their respective Governments, but as a single body seeking common solutions in the joint interest and, most important, in accordance with the agreed rules or principles set out in the Treaty. Over the sixty-four years of its existence, there has been little tendency for the Commission to divide on national lines. In almost every case which has come before the Commissioners, they have reached unanimous agreement.

The IJC has headquarters offices in Washington, D. C. and Ottawa, Ontario, each staffed with a small group of advisers and a joint Secretary as provided in the Treaty. A permanent regional office was established in Windsor, Ontario in 1973 specifically to assist the Commission in its responsibilities under the terms of the 1972 Great Lakes Water Quality Agreement. It is staffed jointly by Canadians and Americans and its costs of operation are shared equally by the two Governments.

In addition to its own staff, the Commission is given the right to obtain or impress assistance from federal agencies to assist in its work. For many activities,

international boards are set up whose job it is to carry out the directives of the Commission. The Great Lakes Water Quality Board, for example, is composed of 18 senior officials from various U.S. and Canadian federal, state and provincial agencies, and is the Commission's principal adviser on matters relating to the Great Lakes Water Quality Agreement.

During the last two years, 1973 and 1974, the Commission sat in formal session for 106 days and 97 days respectively, exclusive of travel. In addition, numerous other meetings held during the year required the attendance of one or more Commissioners from each section, and staff.

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

The first involves 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 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. In granting such approval, the Commission may, and in certain cases must, impose conditions to ensure that suitable and adequate provision is made for the protection and indemnity of all interests on the other side of the line which may be injured by the approved use, obstruction or diversion.

The second general category of IJC responsibilities under the Treaty is that of making investigations and studies of specific problems, when requested by either or both Governments. This is known as a Reference. Under Article IX of the Treaty, either Government may refer to the Commission any question or matter

of difference arising between them involving the rights, obligations or interests of either in relation to the other or to the inhabitants of the other, along the common frontier. In practice, the two Governments usually consult on the terms and then transmit a joint Reference to the Commission. The responsibility of the IJC in such cases is to investigate, to report the facts and circumstances to the two Governments and to make recommendations. Implementation of the recommendations in each case depends on the decisions of the two Governments, usually after consultation. References to the IJC have covered such diverse matters as utilization of the water resources of a river basin, design of remedial works to preserve the beauty of Niagara Falls, water and air pollution along the boundary, ecological and environmental effects of flooding the Skagit River valley, problems of residents of Point Roberts, Washington, resulting from its isolation from the rest of the United States, and the regulation of Great Lakes levels.

The third category of responsibility is that of surveillance and coordination. The IJC is required to monitor compliance with the terms and conditions set forth in Orders of Approval it has issued, and notify the Governments when discrepancies are found. In addition, when requested by the two Governments, the IJC may monitor and coordinate actions or programs that result from governmental acceptance of recommendations made by the Commission in reports under Article IX of the Treaty.

There is a fourth category of responsibility of the IJC under the Treaty which might be considered as held in reserve, since the Governments have not seen fit to avail themselves of the facility it offers. Under Article X of the Treaty, the Governments may refer questions or matters of difference to the Commission for decision rather than just for report and recommendations. The questions or matters that may be referred are similar to those described in Article IX, except that they need not be "along the common frontier." Article X contains an additional requirement, however—such a reference requires the consent of both Governments, and this involves the prior advice and consent of the U.S. Senate and the consent in Canada of the Governor General in Council.

Lastly, in implementing the recommendations contained in IJC reports on various Article IX Refer-

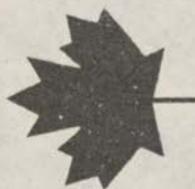
ences, the two Governments in some cases have given specific responsibilities and authority to the Commission in addition to those it possesses by virtue of the Boundary Waters Treaty. The Governments have accomplished this from time to time in various ways and with varying degrees of formality. The 1972 Great Lakes Water Quality Agreement is an example of the Governments formally conferring additional responsibilities on the Commission.

The nature of the continuing work of the International Joint Commission required that it consider a broad range of United States-Canadian boundary problems of varying degrees of importance during the course of any one year. The year 1974 was typical in this respect. It has been said that no problem is too large or too small to command the attention of the Commission.

The water levels and pollution problems of the Great Lakes affect the well-being of millions who reside along their shores in both Countries, as well as those who work in industries whose very existence depends on their ability to utilize the resources of the lakes. In contrast, the placement of an ice boom in Lake Erie at its outlet into the Niagara River is a small operation; albeit its benefits and advantages are indirectly enjoyed by vast number of residents of the Niagara Frontier.

Highlighting the Commission's activities in 1974 was the publication of the Commission's Second Annual Report on Great Lakes Water Quality; receipt, publication and conduct of public hearings on the Great Lakes Levels Board's exhaustive study to determine the feasibility of further regulating lake levels; the completion of field studies on a controversial Canadian proposal to control water levels and flooding along the Richelieu River and Lake Champlain; a proposal by British Columbia to reopen a 1942 Order of Approval to construct a dam on the Skagit River; and the conduct of a seminar to begin consideration of ways to increase the effectiveness of the Commission's operations.

A more detailed account of the Commission's activities during 1974 follows.



Chapter 2

WATER LEVELS AND FLOWS ALONG
THE BOUNDARY

The Great Lakes

Because of their very large size, the Great Lakes are normally able to store the water which reaches them with only relatively small changes in their water levels. However, the capacities of the rivers connecting or draining them are small, compared to the water volume stored in the lakes. Because of the limited capacities of the draining rivers, when precipitation persists for a period above or below the normal level, water levels of the lakes vary significantly.

The high water levels which occurred on the lakes in 1951-52 and those which have occurred during the past three years, are the result of persistently high precipitation. The very low levels of 1964-65 occurred because of persistently low precipitation.

When conditions which cause the extreme high or low levels have changed, it takes some time for the lakes to return to a more normal state. Their great size and limited outlet capacities do not permit them to respond quickly as would a much smaller lake with a relatively large outlet.

Existing Regulatory Works

Man, through various works, has affected to some degree the Great Lakes water levels. In several instances, because of the significant effects of proposed works on levels and flows, the International Joint Commission was responsible for approving the construction and operation of the works.

In 1914 the Commission approved the construction of the control works for power generation in the St. Marys River at the outlet of Lake Superior. In approving this decision the Commission stipulated that the level of Lake Superior should be maintained at a

prescribed level, and that the control works should be operated exclusively for the benefit of Lake Superior interests.

Lake Ontario water levels have been regulated by power facilities which were constructed in the St. Lawrence River in the 1950's under IJC Orders of Approval. The lake is regulated within a range of stage from elevation 244.0 feet to elevation 248.0 feet "... as nearly as may be," in accordance with eleven specific criteria approved by the two Governments.

Water Level Study

In the mid-1960's, when water levels in the Great Lakes were extremely low, public and private interests in both countries were suffering serious adverse effects. The Commission was directed to undertake a study to "... determine whether measures within the Great Lakes Basin can be taken in the public interest to regulate further the levels of the Great Lakes so as to reduce the extremes of stage which have been experienced."

The Great Lakes Levels Board, made up primarily of senior engineers from Government agencies of both countries was established by the Commission to make the detailed engineering studies. A little over nine years later the Board submitted its report with seven supporting appendices to the Commission.

In essence the final Board Report found that (1) regulation of the water levels of Lake Michigan and Huron was not economically feasible; (2) that some regulation of Lake Erie might be economically feasible; and (3) that small net benefits could be achieved at a nominal cost by a change in the present regulation of Lake Superior.

the Board's report, as individuals or as representatives of an interested organization or government agency. The Commission expects to formulate its report on further regulation of Great Lakes water levels and forward its findings and recommendations to the two Governments during the calendar year 1975.

Champlain-Richelieu Project

In 1937 the IJC approved the construction and operation by Canada of regulatory works in the Richelieu River to control flooding of adjacent lands in the Province of Quebec. The project also regulates the levels of Lake Champlain in the United States.

A control dam just below St. Jean, Quebec, in the Richelieu River and known as Fryers' Island Dam was completed in 1939, but other works which would expand the Richelieu River channel were never completed. As a result, the purpose of the project was never achieved.

In recent years high water supplies have caused considerable damage to riparian interests in the Richelieu River Valley and Lake Champlain Basin. In March 1973 the United States and Canadian Governments asked the IJC to "investigate and report on the feasibility and desirability of regulation of the Richelieu River . . . for the purpose of alleviating extreme water conditions in the Richelieu River and in Lake Champlain . . ."

The Commission immediately established the International Champlain-Richelieu Engineering Board composed of both United States and Canadian engineers and environmental specialists to undertake the necessary field studies and report to the Commission within one year. The Board submitted its report to the Commission in September 1974, pointing out that the study time had been too short to undertake

The levels of all the Great Lakes rose in 1972 and high levels have persisted throughout 1973 and 1974. In January 1973 the Commission received an emergency application from the United States Government requesting permission to reduce the flows from Lake Superior to alleviate conditions on the lower lakes. In response to this request and expressions of concern by the Canadian Government, the Commission ordered its Lake Superior Board to devise from an approved regulation plan to reduce the discharge from the lake.

In April 1973 the Commission received from its Great Lakes Levels Board an Interim Report suggesting consideration of a new concept for controlling water levels in Lake Superior—to give all possible relief to Lakes Michigan and Huron shore property interests without causing unacceptable conditions in Lake Superior. After public hearings throughout the Great Lakes Basin the Commission submitted (June 1973) a Special Interim Report to Governments recommending the new objective. However, the Commission made it clear that ". . . as soon as the emergency situation eases downstream or if Lake Superior conditions require, the Commission will find it necessary to revert to the [normal operating rule] unless further instructions have been received from the Governments."

The Board's final report on the overall lake levels study was released to the public in February 1974 and by the year's end the Commission had held 13 public hearings in the Great Lakes Basin—at Detroit, Green Bay, Duluth, Milwaukee, Chicago, Muskegon, Cleveland, and Rochester in the United States; Thunder Bay, Owen Sound, Sault Ste. Marie, Hamilton, and Montreal in Canada. About 1,300 persons attended the hearings, with over 200 witnesses giving testimony before the Commission on their views of

more complete investigation of possible environmental consequences of regulating Lake Champlain water levels.

The Board concluded that regulation of Lake Champlain for flood control purposes could be accomplished so as to reduce extreme water levels and the attendant damages. However, the Board differed on what the environmental effects of regulation would be on the United States side of the boundary. Some members believed environmental damages would be minimal, while others said damages could be significant. In any event, the report said that environmental acceptability of the project could not be determined without further study.

The Commission released the Board's Report following its October 1974 semi-annual meeting in Ottawa and held public hearings in early December in Burlington, Vermont; Plattsburgh, New York; and St. Jean, Quebec. (Note: On March 12, 1975, the Commission forwarded to the two Governments an interim report recommending that an intensive study be undertaken to determine the effects of regulation on the environment in both Countries. It also recommended that there be an accurate determination of net benefits; that the Project contemplated in the Commission's earlier Order of Approval not be completed nor operated; and that if Canada wished to proceed with a dam concurrently with the environmental studies it should file an application with the Commission, which the Commission would then consider with dispatch.)

The American Falls at Niagara

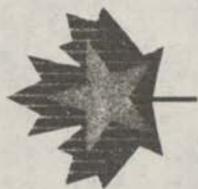
Another major study—The Preservation and Enhancement of the American Falls at Niagara—was completed for the IJC in June 1974. Originally

the U.S. Army Corps of Engineers was authorized by Congress in 1965 to undertake the study, but by 1967 it was expanded into an international study when the United States and Canadian Governments requested the IJC to investigate and report on measures necessary to preserve or enhance the beauty of the American Falls. The purpose of the study was to consider the scenic spectacle of the American Falls including the continuing process of changes in the form and appearance of the Falls.

The American Falls International Board was created by the Commission and undertook the necessary studies. In its final report to the Commission, the Board concluded that "the guiding policy should be to accept the process of change . . . and erosion and recession [of the Falls] should not be interrupted." The Board told the Commission, however, that it would be feasible, if desired, to remove all or any part of the talus (crumbled rock) which has accumulated at the base of the Falls, and to retard or prevent further erosion.

The Commission released the full Report of the Board for public review and held public hearings.

Aside from the Board's conclusions and recommendations on the American Falls itself, it also recommended that a broad international environmental study should be carried out which would include the American Falls "as a part of the larger scene which includes the flanks of the Falls, the adjacent parks, and the back-drop of city buildings and commercial enterprises."



Chapter 3

WATER POLLUTION
ACROSS THE BOUNDARY

Great Lakes Water Quality

The Commission's first involvement with boundary water pollution problems began in its first year of operation, 1912. Later, a major study, concluded in 1918, warned the two Countries that problems were developing in the Great Lakes and would become acute if remedial programs for handling municipal and industrial wastes were not undertaken.

With the accelerated industrial and municipal development in the Great Lakes Basin in the 1930's and during the World War II period, Lake Erie and Lake Ontario were hard hit by excessive and uncontrolled waste discharges. In 1946 the Commission was requested to investigate the water quality problems in the various connecting channels of the Great Lakes because of serious industrial pollution, particularly in the Detroit and Niagara Rivers. In 1950 the Commission clearly outlined the problems, recommended remedial action, and established international water quality objectives. The objectives were the forerunner of water quality standards later established by the two Governments as a major control measure.

Then in 1964 the two Governments requested the Commission to investigate the seriously polluted condition of the lower Great Lakes—Erie and Ontario—and to make recommendations. By 1970 the Commission filed its report, listing a wide range of remedial programs and actions that would be required to avert a major catastrophe in the Great Lakes.

The Governments responded and began a series of bilateral discussions that were concluded on April 15, 1972, with the signing of the Great Lakes Water Quality Agreement by President Nixon and Prime Minister Trudeau.

The Agreement sets out certain water quality objectives for the Great Lakes and outlines a wide range of remedial programs to be undertaken by the Governments to achieve them.

The Commission has been given a responsibility to coordinate programs set out in the Agreement, to evaluate their effectiveness and to assess progress in pollution abatement. The Agreement also directs the Commission to report to Governments at least annually on its evaluation of the progress and effectiveness of the Agreement.

The Commission's first report was released in July 1973 and covered Agreement activities for calendar year 1972. It reported on the formation of a Great Lakes Water Quality Board, a Research Advisory Board, a dredging committee, and a regional office as authorized in the Agreement. The two Boards serve as principal advisors to the Commission on matters pertaining to the Agreement and are a continuing body composed equally of United States and Canadian water pollution experts. The dredging committee created by the Agreement was established to review current dredging practices and to recommend by 1975 programs to minimize pollution of the lakes from this activity.

In this first report, the Commission said it was too early to assess progress and evaluate programs being implemented, but expressed optimism that the two Countries were making satisfactory progress in implementing the Agreement. In addition, the report said the continuing increased rate of degradation of Lake Erie and Lake Ontario appeared to be slowing down.

The Commission's second annual report, released in 1974 on its 1973 activities, concluded that the increasing rate of degradation in Lake Erie appeared to be halted, although it had no comprehensive scientific data to support its views. A serious deficiency, the Commission asserted, was the lack of funds and personnel to carry out a water quality assessment program. Considerable data are being collected but an adequate capability to evaluate and interpret on a uniform technical basis does not exist for all the Governments or agencies involved. Until it does, the Commission asserted, it would not be able to report on progress with any scientific accuracy.

At the time of the signing of the Water Quality Agreement, the Governments referred to the Commission two major problems related to Great Lakes water quality. First, the Commission was requested to undertake a water quality study of Lake Superior and Lake Huron, much the same as they had requested on Lake Erie and Lake Ontario almost 10 years before. Secondly, the Commission was requested to investigate the effects of various land use activities in the Great Lakes Basin on the water quality of the lakes.

Special teams of United States and Canadian scientists were organized in 1973 to undertake the studies and by 1974 the investigations were well underway. Over 200 federal, state and provincial government technicians and scientists are involved in carrying out the field studies. The Lake Superior and Lake Huron studies are expected to be completed by the end of 1975 while the Land Use Activities studies—a great deal more complex—is expected to be completed in 1977 or 78.

To assist the Commission and its Boards in the large task of coordinating programs initiated in both Coun-

tries under the terms of the Agreement and to make an annual assessment of the progress, a regional office was established in Windsor, Ontario. The regional office, with an authorized staff of 36, serves primarily as a Secretariat and as technical support of the Great Lakes Water Quality Board and the Research Advisory Board. In addition, it serves as a focal point for the collection and storage of water quality data and related information, and its facilities are in daily use by the numerous groups, committees and subcommittees organized to carry out the programs specified in the Agreement. The United States and Canada share equally in the total cost of its operations, as well as in the composition of the professional staff.

St. Croix River

The St. Croix River forms a portion of the boundary between the Province of New Brunswick and the State of Maine. Since before the turn of the Century, lumbering, milling and the manufacture of pulp wood have been the principal industries supporting a relatively small population. These industries were almost completely unregulated with respect to waste discharges until recent years.

In 1955 the Commission was requested to study the St. Croix River for better use, conservation and regulation of waters. In October 1959 the Commission reported to Governments with its recommendations on pollution abatement and other matters, including international water quality objectives. By 1966 the Commission had set up the Advisory Board on Pollution Control, St. Croix River, which has carried out a surveillance and monitoring function for the Commission since that time; reporting semi-annually on water quality conditions and pollution control activities of industry and municipalities.

Rainy River and Lake of the Woods

The Commission has been involved in matters pertaining to the Rainy River, its levels and flows, since an initial meeting in 1912. It was not until 1959, however, that the pollution of the Rainy River became a matter of special concern to the two Governments and the Commission was asked to investigate. The Commission presented its final report with recommendations in February 1965, finding that the waters of the Lake of the Woods were in satisfactory condition but that the Rainy River was polluted on both sides of the boundary.

Here again the Commission recommended water quality objectives for the river as minimum criteria for the establishment of water quality standards and abatement programs by the State of Minnesota and the Province of Ontario. Since 1965 provision of and improvements in municipal sewage treatment have been developing in the basin.

Current principal polluters to the Rainy are pulp mills of Boise Cascade Corporation located across the river from each other at International Falls, Minnesota and Fort Frances, Ontario.

The U.S. plant continues to be a principal violator of stream standards, and the Canadian plant has not yet achieved a satisfactory abatement program. The State of Minnesota is proceeding under the terms of an NPDES permit to require a vigorous waste treatment program at the International Falls plant. In November 1974 the Commission requested its Rainy River Water Pollution Board to report on the apparent continuing difficulties of the Canadian plant.

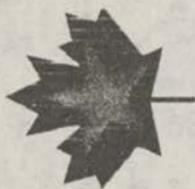
Progress in pollution abatement on the river has been slow in spite of the presence of the IJC. In 1968, the Commission conducted a public meeting in the St. Croix basin to discuss with industrial and municipal leaders and the public the quality problems in the river and the efforts being taken to correct them.

With satisfactory progress still not achieved, the Commission in 1971, after receiving a special report from the Advisory Board, requested the U.S. Environmental Protection Agency to take such steps within its authority, as are appropriate and necessary to obtain compliance at the earliest possible date with existing water quality objectives and standards in the St. Croix River.

EPA responded in November 1971 by filing a complaint with the U.S. District Attorney in Maine against the Georgia-Pacific Company and sought a permanent injunction against the company's "continued discharge of refuse matter into navigable waters of the United States."

In January 1972 the Justice Department filed suit against Georgia-Pacific. Since then, the company has responded by submitting plans and beginning construction of waste treatment facilities which will comply with the terms of a waste discharge permit which has been issued by the State under the provisions of the National Pollution Discharge Elimination System (NPDES).

The most recent report (September 1974) of the Advisory Board reported that construction on the Georgia-Pacific waste treatment facility was underway in July. When completed, it is anticipated that a major step will have been taken to return the stream to a water quality level capable of assuring salmon spawning.

*Chapter 4*

AIR POLLUTION
ACROSS THE BOUNDARY

Air pollution is not specifically referred to in the Boundary Waters Treaty. Nevertheless, in the past the Commission has been requested by the Governments to concern itself with three specific transboundary air pollution problems. Recently, it has been given continuing responsibility to carry out a general border surveillance and to advise the Governments of air pollution problems, actual or potential.

The matter of air pollution in the Detroit-Windsor area arose first in 1928, but again more urgently in 1968 when the Commission was requested to determine whether air quality there, and in the Port Huron-Sarnia area, was degraded to an extent that it was detrimental to public health, safety or general welfare of citizens on the other side of the boundary.

In July 1972, the Commission reported to Governments that transboundary and local air pollution

in the two study areas exceeded "the level that is detrimental to health, safety, and general welfare of citizens and to property on the other side of the international boundary."

During 1974 the Commission responded in October to numerous complaints from Canadian citizens of Ft. Frances, Ontario on unacceptable air quality conditions in the area caused by the Boise-Cascade kraft pulp mill at International Falls. The Commission requested the Governor of Minnesota to intercede into the situation and require an immediate correction to the problem or cause the plant to close. The Governor responded by dispatching State air pollution specialists into the area who worked with company officials to provide promptly an interim solution to the problem.



Chapter 5

OTHER MATTERS

The Commission had before it during 1974 numerous other problems of international importance, particularly to those citizens of both countries most directly affected. Among these matters are the following.

Ross Dam and the Skagit Valley

In 1942 the Commission approved an application by the City of Seattle to construct a power dam on the Skagit River which flows across the international boundary from British Columbia into the State of Washington. The dam was to be constructed in stages to raise the levels of the resultant lake to a maximum level of 1725 feet. A condition of the Commission's Order of Approval was the payment of adequate compensation to the Province for any damage caused in British Columbia, and that the water levels could not be raised until there was a binding agreement to assure compensation. Such an agreement was concluded in 1967. In 1970 the City of Seattle filed with the U.S. Federal Power Commission an application to amend a 1927 license to raise Ross Dam the last 125 feet. The effect of raising the final stage of the dam would be to enlarge the reservoir to the extent that it would inundate Canadian land in the Skagit Valley some eight miles beyond the boundary. As a result, the two Governments in April 1971 asked the Commission to assess the environmental consequences in Canada of raising Ross Dam to elevation 1725 feet.

In its 1972 report to Governments, the Commission found that the present characteristics of the environment would be changed, but the new environment would retain many of the former characteristics. Those who appreciate and use the Valley in its present state would inevitably suffer somewhat, although other people would find the new environment at

least as pleasant. The Commission pointed out, however, that the concept of "social preservation" was significant and should be taken into account in the decision-making process.

The Federal Power Commission had not acted on the Seattle application by the end of 1974, however the Commission received a formal request from the Province of British Columbia to reconsider the approval of the City of Seattle's original application.

The Commission has not yet responded formally to the Provincial request but has urged the parties to negotiate if possible, a mutually acceptable solution.

Ice Booms

For the past ten years the power entities (Power Authority of the State of New York and Ontario-Hydro) have been installing an ice boom in Lake Erie at the head of the Niagara River in the late Fall. This reduces heavy ice flows down the River during the Winter thus reducing the possibility of downstream flooding and interference with water diversion facilities required by the U.S. and Canadian power stations below Niagara Falls. Benefits of the ice boom installation to flood control and power production are significant, but some controversy has arisen during the last several years as to whether the booms hold the ice at the east end of Lake Erie for a longer period of time in the Spring, and if so, whether this contributes to adverse atmospheric conditions in the vicinity of Buffalo. Studies to date on this subject have failed to substantiate this charge. As the year ended, the Commission learned that the power entities were readying a request for an extension of the Orders of Approval to permit the installation of the ice boom for an indefinite period of years.

In another program, ice booms have been installed since the winter of 1959-60 in the St. Lawrence River by the Power Authority of the State of New York and Ontario-Hydro to form and maintain a stable ice cover in the River to reduce the probability of ice jams and allow a reasonably stable production of power. In 1974 the Commission, which issued Orders of Approval for the continuation and operation of the power plants, advised the Governments it now considers the ice booms to be an integral part of the control works and therefore subject to the Commission's Orders. The Governments have so agreed.

In a related area, the Commission is cognizant of the current U.S. Corps of Engineers' Winter Navigation Study which is looking into the feasibility of extending the winter navigation season in the Great Lakes system. The Commission directed its St. Lawrence River Board of Control to review a study proposal to install and operate an experimental ice boom in the St. Lawrence River at Copeland Cut. The Board advised the Commission that the experimental boom would not affect the levels and flows in the River.

Point Roberts

In 1971 the Commission was asked by the two Governments to undertake a study of the problems created by the presence and location of the International Boundary at Point Roberts, Washington, which causes the community to be isolated to some degree from the rest of the United States. In October 1973 the International Point Roberts Board submitted its report to the Commission. The Board concluded that a truly binational solution should be sought; one that would provide benefits to the people of both Countries. The Board recommended the establishment of an international conservation and recreation area that would include Point Roberts, certain adjacent Cana-

dan lands, and also a portion of the Gulf and San Juan Islands. A binational forum would be created to administer the program.

Public hearings were held in December 1973 and the major public response to the Board proposal was strongly adverse to the plan.

As a result the Commission redirected its Board to prepare a supplemental report focusing on solutions to the specific problems set out in the original Reference and affecting the Point within its geographic limits. These were subsequently identified and discussed by the Board in its supplemental report submitted in October 1974. The report considered the application of federal immigration and custom laws, regulations of both Countries with respect to the transportation of goods including perishable foodstuffs, the free movement of tradesmen, employment of U.S. residents of Point Roberts in Canada and visa versa, visa restrictions on Canadian residents, Canadian pension rights, Provincial and State rules regarding health and medical services, electric power and telephone service, law enforcement, and local regulation or provision of water sewage treatment and waste disposal.

The Board concluded that resolution of the major problems would require "... concept[s] of sufficient breadth to justify a marshalling of resources on both sides of the boundary." However, the Board also concluded that until the various levels of government accept the necessity for binational cooperation, little progress can be made. The Commission hopes that the State and Province and local governments will come to some agreement in principle regarding the future of the Point.

The Commission has not yet developed its report to Governments on Point Roberts in answer to the

initial reference, but will give further consideration to the complex problems of the Point during 1975.

Zosel Dam

In other actions during 1974, the Commission urged the Governor of Washington to repair Zosel Dam located on the Okanogan River near the International Boundary. It had partially failed with no loss of life or damage to property during a heavy rainstorm in August 1974. Zosel Dam was constructed in 1927 by private interests under a permit issued by the State of Washington and has been operated since 1946 under the Commission's Orders of Approval. While the Commission has been advised that private interests are no longer using the dam, the structure, stabilizing lake levels during the irrigation and recreation seasons, has become an integral part of a long established environment.

Prairie Portage Dam

The Commission also approved plans to rebuild Prairie Portage Dam located in the Boundary Waters Canoe Area of Superior National Forest in the State of Minnesota and Quetico Park in Ontario. The dam, first built in 1902, has been operated under the Commission's Orders of Approval since 1936. In 1941 the U.S. Forest Service replaced it with a cofferdam when the original structure deteriorated beyond repair. The cofferdam failed in 1968 and the Commission allowed it to be rebuilt provided a permanent structure was constructed. In October 1973 the IJC strongly urged the Forest Service to seek funding for a permanent structure. During 1974 funds were provided by Congress, plans and specifications for the permanent structure were completed, an environmental impact statement prepared, and agreement reached with Canada that construction can proceed

early in 1975 as weather permits under IJC supervision.

Public Participation

The Commission given attention during 1974 to a broad range of important border problems referred to it by the two Governments, but studies have been initiated into ways for improving its service to the citizens of the United States and Canada. The Commission is aware of the criticism voiced by many private citizens and groups during recent public hearings. It is asserted that the Commission's operations and responsibilities are not widely known to the public and there appear to be few avenues other than hearings for the private citizen to influence Commission decision in a timely way. The problem of citizen input to the Commission is now under study and the Commission expects to improve its communications with the public during 1975. Also reflecting the Commission's decision to better inform the public of its activities is the public information program developed at its regional office at Windsor, Ontario. This includes the hiring of a full-time public information officer to carry out the program. The Canadian Section of the Commission expects to employ a full-time public information officer in 1975.

Improving the Commission's operation and exploring its general role for the future was the subject of a seminar in Montreal in July 1974 at which a number of high ranking public officials, former Commissioners, private citizens and academic experts met with the Commission and staff. The seminar was the first systematic examination of the Commission in almost 65 years of existence as to the adequacy of its legal authority, its procedures and performance. As a result, it expects to make recommendations to the two Governments to increase its effectiveness.



Chapter 6

A LOOK AT 1975

Great Lakes levels are expected to continue abnormally high during the next several years.

Thus, the present problem of affording as much protection as possible to shore property interests above and below the control facilities presently in place in the St. Marys and St. Lawrence Rivers will continue to command the frequent attention of the Commission. In the meantime, the Commission expects to prepare and forward to Governments its report and recommendations on the feasibility of further regulating lake levels.

A second major program which will command much of the Commission's attention during 1975 is the coordination and assessment of United States and Canadian programs initiated pursuant to the provisions of the Great Lakes Water Quality Agreement. An important milestone in the Agreement will be reached at year's end when all programs and other measures directed toward the achievement of water quality objectives are supposed to be "completed or in the process of implementation."

In addition, the Richelieu-Champlain Report will have been submitted, and the Commission will be awaiting the response of both Governments to its recommendations.

In other areas, problems which may reach the Commission in 1975 for study include the controversial Garrison Project in North Dakota, the Okanagan-Similkameen River Basin in Washington and British Columbia, and another air pollution reference for the Detroit-Windsor area to monitor progress and effectiveness of an Ontario-Michigan air pollution control agreement. In the meantime some 28 Boards and Groups will be advising the Commission on numerous existing boundary problems from coast to coast.

Many years ago, in 1913, the former U. S. Secretary of State, Senator Elihu Root, a signatory of the 1909 Boundary Waters Treaty, said, "I do not anticipate that the time will ever come when the Commission will not be needed . . . to dispose of controversies along the boundary." The numerous vital matters the Commission now faces, and will face in 1975, seem to confirm that prophesy.

A new generation of problems that must relate water levels and use with water and air quality, and land use activities, gives a qualitatively new dimension to the Commission's role along the common frontier. Such a role will demand of the Commission the application of its traditional experience as well as novel approaches with the encouragement and support of both Governments.

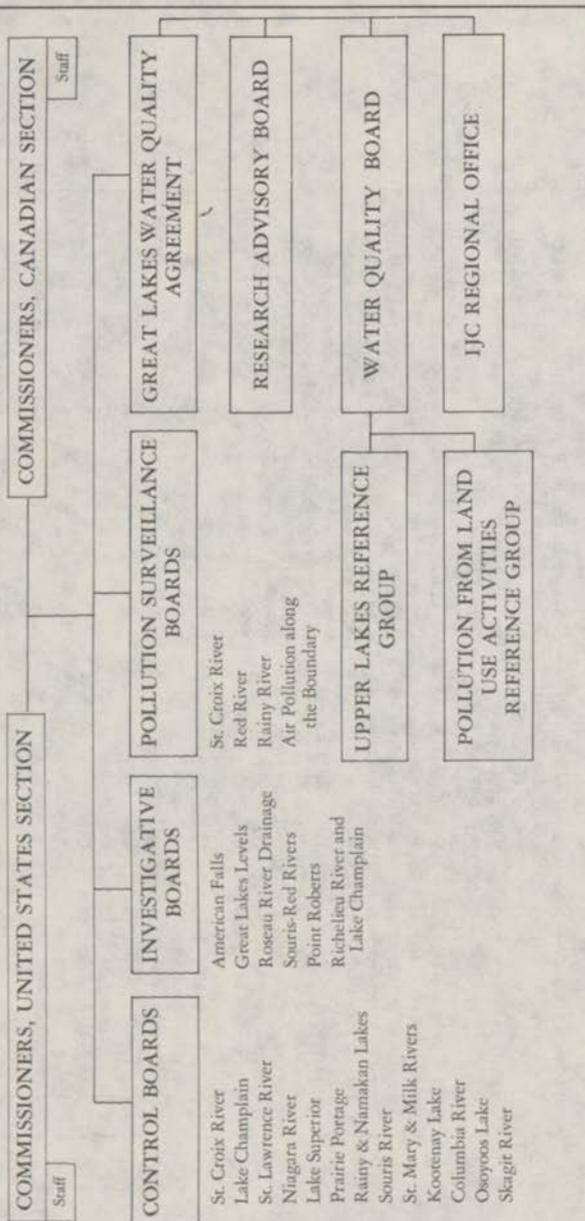


For the reader who is interested in examining the activities of the International Joint Commission in greater detail, the following historical, organizational and fiscal materials are appended.

Appendix A

IJC ORGANIZATIONAL ARRANGEMENT AND BOARDS

(1974)



Appendix 2

IJC LIST OF INTERNATIONAL PROJECTS

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 transboundary 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 applications 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 AND CAPSULE OF IJC DOCKETS

Year	Docket No.	Title	Action
1912	1 A	RAINY RIVER IMPROVEMENT CO. Kertie 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. Resolved in the 1923 Convention. Active board.
	4 R	POLLUTION OF BOUNDARY WATERS	Completed. Recommendations not implemented.
	5 R	LIVINGSTONE CHANNEL Detroit River	Completed. Recommendations implemented.
1915	6 A	MICHIGAN NORTHERN POWER CO. St. Clair River Dam (with No. 8)	Approved. Fire Board of Control. Active board.
	7 A	GREATER WINNIPEG WATER DISTRICT 100 mgal from Shoal Lake for Winnipeg water supply	Approved. No board.
	8 A	ALGOMA STEEL CORPORATION St. Mary's River Dam (with No. 6)	Approved. Active board.
1914	9 R	ST. MARY AND MILK RIVERS Article VI of BW 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.
1915	11 A	SPRAGUES FALLS MFG. CO. Grand Falls Dam (with No. 10)	Approved. No board.
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 imputed by St. Lawrence Power.
	15 A	ST. LAWRENCE RIVER & POWER CO. Mascota Weir	Approved. Board was established. Weir completed prior to St. Lawrence Power Project.
	16 A	CANADIAN GOTTONS 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 30.
	21 A	BUFFALO AND FORT ERIE PUBLIC BRIDGE CO. Bridge over Niagara River	Approved. No board.

Year	Docket No.	Title	Action	Year	Docket No.	Title	Action
1926	22 A	ST. JOHN RIVER & POWER CO. Grand Falls Dam on St. John River	Approved transfer of approval granted under Docket 19.	1936	36 A	MYBUM GEO. B. Repair of Prairie Portage Dam	Approved. Repair work on existing timber dam not implemented.
1927	23 A	CRESTON RECLAMATION CO. LTD. Dyking on Kootenay River in Canada until above the Lake	Approved. No board.	1937	38 A	CHAMPLAIN WATERWAY Deep waterway from St. Lawrence to Hudson River RICHELIEU RIVER REMEDIAL WORKS	Completed. Recommended new built. Approved. Only control gates installed. Dykes and excavation not implemented. Active board. Approved. Active board.
1928	24 A	ST. LAWRENCE RIVER & POWER CO. Kainé Masena Weir	No action. Hearing adjourned "sine die". Now inundated by St. Lawrence Power Project.	1938	39 A	WEST KOOTENAY POWER & LIGHT CO. LTD. Corra Linn Dam for Kootenay Lake Storage	Approval granted to reconstruct dam. Only cofferdam built. Active board.
1929	25 B	TRAIL SMELTER FUMES	Completed. Report not accepted by U.S. The tribunal award similar to IJC.	1939	40 A	UNITED STATES FOREST SERVICE Prairie Portage Dam	Governments approved interim measures recommended by IJC. Active Board of Control.
1929	26 R	ROSEAU RIVER DRAINAGE	Studies proceeding after a 40-year governmental delay.	1940	41 R	SOURIS RIVER Water apportionment	Approved. Settled outstanding disputes. No board. Initial approval under Docket 23.
1929	27 A	WEST KOOTENAY POWER & LIGHT CO. LTD. Kootenay Lake Storage	Withdrawn in 1934.	1941	42 A	CRESTON RECLAMATION CO. LTD. Dykes along Kootenay River in Canada	Approved for one year. Active board.
1931	28 A	ST. CROIX WATER POWER CO. and SPRAGUE FALLS MFG. CO. Grand Falls Dam on St. Croix River	Approved raising forebay 1.5 feet. Active board. Initial approval in Dockets 10 & 11.	1941	43 A	WEST KOOTENAY POWER & LIGHT CO. LTD. Additional two feet of storage on Kootenay Lake	Approved. Active board.
1932	29 A	KOOTENAY VALLEY POWER and DEVELOPMENT CO. Dyking on Kootenay River in Canada near Creston	Approved. No board.	1941	44 A	GRAND COULÉE DAM & RESERVOIR Backwater raised water level 1/2 ft on Kootenay Lake	Informal request considered to be unnecessary application.
1932	30	Docket number assigned in error — same as above		1941	45 A	WEST KOOTENAY POWER & LIGHT CO. LTD. Additional two feet of storage on Kootenay Lake	Approved. Board established when Seattle & B.C. reached agreement in 1937.
1934	31 A	MADAWASKA COMPANY Grand Falls Dam on St. John River	Denied. Related to claims outstanding to operation under Dockets 10 & 22.	1942	47 A	WEST KOOTENAY POWER & LIGHT CO. LTD. Additional two feet of storage on Kootenay Lake	Approved until end of the war. Board active.
1934	32 A	CANADIAN COTTONS LTD. Millstone Dam on St. Croix River	Approved. Active Board.	1942	48 A	CITY OF SEATTLE Ross Dam, Skagit River WEST KOOTENAY POWER & LIGHT CO. LTD. Additional two feet of storage on Kootenay Lake	Approved. No board.
1935	33 A	JEAN LARIVIERE Private small dam on Little St. John Lake	Approved. No board.	1942	49 A	STATE OF WASHINGTON Zoned Dam at outlet of Osoyoos Lake	Approved. Active board.
1936	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 Populzar River	Approved. Dam not built. No board.				

Year	Docket No.	Title	Action	Year	Docket No.	Title	Action
1944	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 cut-outs. Active board. See Docket 20.	1951	65 A	LIBBY DAM AND RESERVOIR	Withdrawn.
1944	51 R	COLUMBIA RIVER	Completed. Led to Columbia River Treaty.	1952	67 R	LAKE ONTARIO LEVELS	Completed. Studies concurrent with Application under Docket 68.
1946	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.	1954	68 A	ST. LAWRENCE POWER	Approved. Very active board.
1946	53 R	SAGE CREEK Appropriation of waters	Completed. No action by Government.	1954	69 A	LIBBY DAM AND RESERVOIR	No diversion. Problem solved by Columbia River Treaty.
1948	54 R	POLLUTION OF ST. CLAIR RIVER AND DETROIT RIVER AND ST. MARY'S RIVER	Completed. Surveillance over River Quality Agreement signed in 1972.	1954	70 A	CRESTON RECLAMATION CO., LTD. Modification of 1950 Order on Duck Lake	Approved. Board active.
1948	55 R	POLLUTION OF NIAGARA RIVER	Completed. Surveillance until Great Lakes Water Quality Agreement signed in 1972.	1955	71 R	ST. CROIX RIVER	Completed. Pollution aspect still under active surveillance.
1948	56	NORTHERN STATES POWER CO. Number assigned in error.	Was dealt with under Docket 41.	1956	72 R	PASSAMAQUODDY TIDAL POWER	Completed.
1949	57 R	WATERTON & BELL RIVERS Further uses and apportionment of waters	Studies completed. IC divided on national lines. Only Canadians reported.	1959	73 R	RAINY RIVER AND LAKE OF THE WOODS POLLUTION	Completed. Rainy River still under active surveillance.
1949	58 R	SOLIBIS & RED RIVERS Further uses and apportionment of waters	Completed. Board still reports on its umbrella activities.	1961	74 R	ADDITIONAL REMEDIAL WORKS ABOVE NIAGARA FALLS	Completed. Studies led to application under Docket 75.
1949	59 A	WEST KOOTENAY POWER CO., LTD. Additional two feet of storage on Kootenay Lake	Approved for four years. Board active.	1962	75 A	HEPCO AND PASNY Remedial Works above Niagara Falls	Approved. Active board.
1949	60 R	PASSAMAQUODDY TIDAL POWER	Completed. Government accepted apportionment of costs of further studies.	1962	76 R	PEMBINA RIVER Cooperative development of water resources	Completed. Recommendations not acted upon.
1949	61 R	AIR POLLUTION in Windsor-Detroit area from vessels	Completed. Surveillance activities terminated in 1966.	1962	77 R	CHAMPLAIN WATERWAY Commercial navigation	Completed. Negative report.
1950	62 A	CRESTON RECLAMATION CO., LTD. Levels of Duck Lake	Approved. Board active.	1963	78 A	POWER AUTHORITY STATE OF NEW YORK Shoal Removal, Niagara Falls	Approved. Active board.
1950	63 R	ST. JOHN RIVER Water resources of the basin above Grand Falls	Completed.	1964	79 A	LAKE ERIE-NIAGARA RIVER ICE ROOM	Approved. Active board.
1950	64 R	NIAGARA FALLS—Preservation and enhancement of their beauty	Completed and accepted by Governments. Active Board.	1964	80 A	VANCEBORO DAM	Approved. Active board.
				1964	81 R	RED RIVER POLLUTION	Completed. Active surveillance.
				1964	82 R	GREAT LAKES LEVELS	Studies not completed.
				1964	83 R	POLLUTION OF LOWER GREAT LAKES	Completed. Led to signing of Great Lakes Water Quality Agreement in 1972.

Year	Docket No.	Title	Action	Year	Docket No.	Title	Action
1966	84 A	COMINGO Two feet additional storage on Kootenay Lake	Approved for one season. Board active.	1973	96 R	ST. JOHN RIVER WATER QUALITY A CCMS project	Review and pass upon report of special U.S.-Canada Committee when submitted.
	85 R	AIR POLLUTION In Detroit-St. Clair River areas	Completed. Governments yet to act. General observation along rest of boundary.		97 A	U.S. DEPARTMENT OF STATE Emergency Regulation of Lake Superior	Application in suspense. Deal with on interim emergency basis, pending Government's confirmation.
1967	86 R	AMERICAN FALLS, NIAGARA RIVER	Studies not completed.		98 R	RICHELIEU-CHAMPLAIN REGULATION	Studies underway.
	87 A	FOREST CITY DAM On St. Croix River	Approved. Order void because applicant did not agree to con- ditions.				
1968	88 A	RAISIN RIVER Diversion from St. Lawrence River	Approved. Board active.				
1969	89 A	METROPOLITAN CORPORA- TION OF GREATER WINDSOR Diversion from St. Lake of St. Lawrence for domestic purposes.	IJC action deferred at applicant's request.				
	90 A	CRESTON VALLEY WINDUP MANAGEMENT AREA Disk Lake Levels	Approved. Active board.				
1971	91 R	SKAGIT RIVER Environmental consequences of flooding.	Completed.				
	92 R	POINT ROBERTS Socio problems of residents	Studies still underway.				
	93 A	COMINGO Kootenay Lake Storage	Withdrawn.				
1972	94 R	POLLUTION OF UPPER GREAT LAKES	Studies underway.				
	95 R	POLLUTION OF GREAT LAKES FROM LAND USE ACTIVITIES	Studies underway.				

Appendix 3

IJC ACTUAL AND ANTICIPATED EXPENDITURES

1970-1977

Fiscal Year	Canadian Secretariat OTTAWA		Great Lakes Regional Office WINDSOR ²	
	Expenditures	Man Years	Expenditures	Man Years
1970-71	499,000	11		
1971-72	536,000	11	***	4
1972-73	451,000	12	206,000	8
1973-74	504,000	14	640,000	15
1974-75**	1,180,000	14	850,000	20
1975-76**	1,450,000	24	1,800,000	26
1976-77**	1,500,000	26		

Fiscal Year	U.S. Secretariat WASHINGTON		Great Lakes Regional Office WINDSOR ³	
	Expenditures	Man Years	Expenditures	Man Years
1971	128,500	4		
1972	166,000	5		
1973	256,500	8	22,000	4
1974	314,000	9	152,000	2
1975*	349,000	9	404,500	4.7
1976**	372,500	9	580,000	10

*Estimated

**Anticipated

***Included in Ontario Secretariat budget

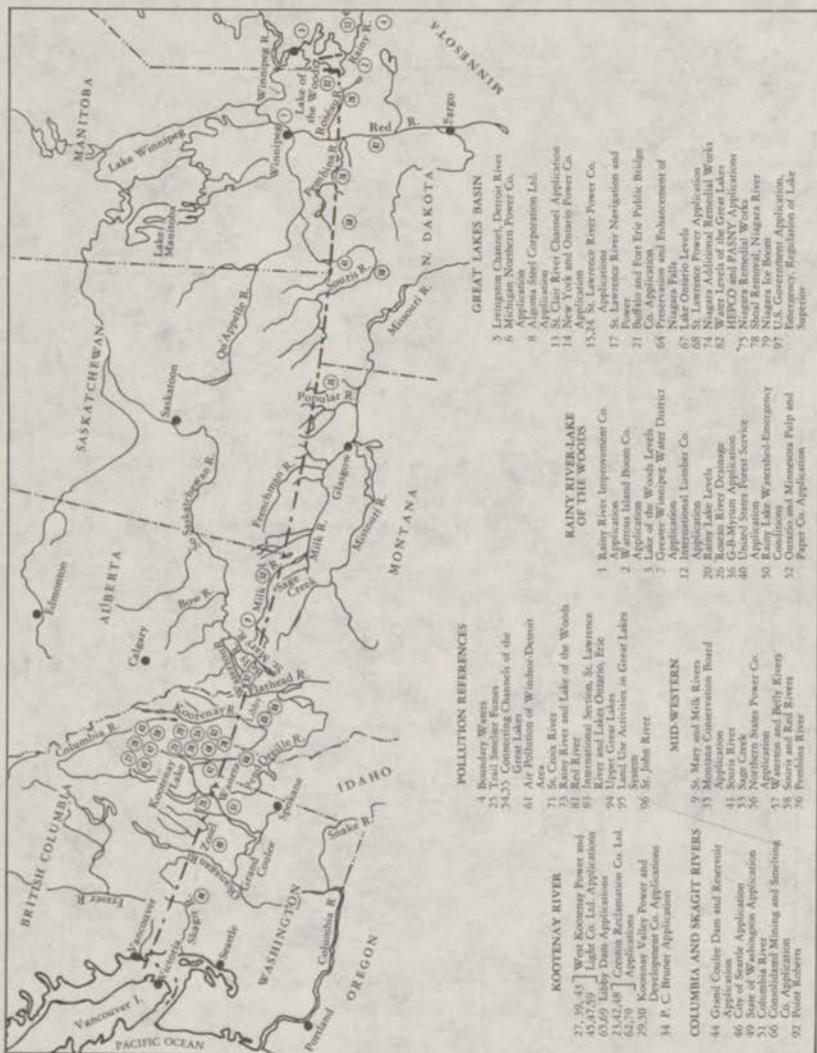
¹This includes payments to the Government of Ontario for one-half the costs of the work carried out by Ontario in direct support of the Commission's Land Use Activities Reference and the Upper Lakes Pollution Reference.

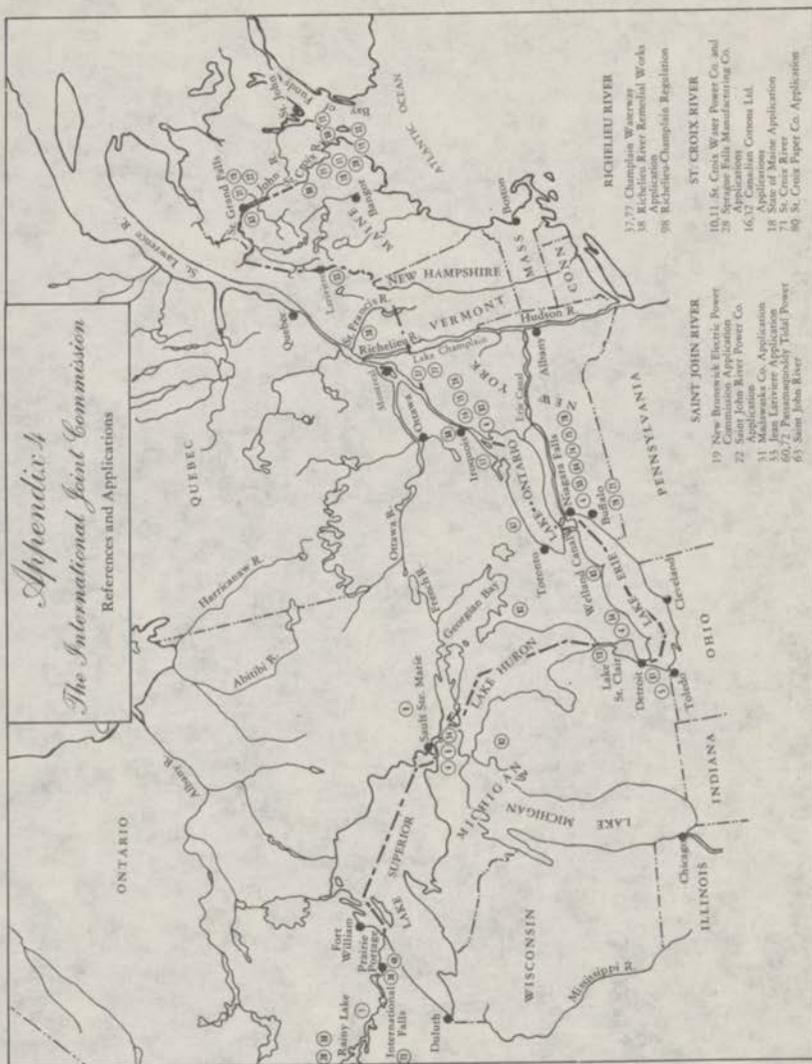
²The costs of the Regional Office at Windsor, staffed by Canadian and United States Public Servants, are shared equally between Canada and the United States except for salary taxes (shared equally) and operating costs (shared 70-30) for Canadian staff. Each country provides its own officials. The figures above represent salaries of Canadian professional and support staff and the total operating costs which are initially paid from Canadian appropriations and then are shared by the United States annually.

Differences indicated by Regional Office totals are caused by differing fiscal years. Canada—April 1 to March 31; U.S.—July 1 through June 30.

Canadian expenditures expressed in Canadian dollars; U.S. expenditures in U.S. dollars.

It is not possible to estimate approximate values of the services of other Departments which have been provided to the IJC during the same period, which have run into millions of dollars. Much of the work performed by Departments for the IJC consists of work required as well under ongoing Departmental programs.





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*As of the publication date, Chairman Hetter had resigned and had been replaced by Henry P. Smith, III. Mr. Oakley had been named Director.

Senator BUCKLEY. Our next witness is Brig Gen. Robert Moore of the U.S. Army Corps of Engineers, and chairman of the U.S. section of the St. Lawrence River Board of Control, and one who has walked many miles of the beach.

STATEMENT OF BRIG. GEN. ROBERT L. MOORE, U.S. ARMY CORPS OF ENGINEERS, AND CHAIRMAN, U.S. SECTION, INTERNATIONAL ST. LAWRENCE RIVER BOARD OF CONTROL

General MOORE. Thank you, Mr. Chairman, and ladies and gentlemen.

I might suggest before I get started on my prepared statement, I do have slides that I hope will help in understanding the questions already asked.

And I have come to admire and respect the Honorable Don Riley and his insight in the problems and concerns for his township. He mentioned "Operation Foresight," and I would like to say "Operation Foresight" was an emergency operation taken in 1973 and was restricted to what it could do, and applied to flooding conditions and not shoreline erosion conditions.

It is very, very difficult to separate the two when you talk about shorelines, which you have done on Edgemere Drive, but there are some things that can be done if you look at shoreline erosion vis-a-vis flooding, so I wouldn't scratch that.

Senator Buckley, ladies and gentlemen, I am pleased to have been invited to this hearing to provide you with a situation report on Lake Ontario regulation and the current lake level conditions.

My name is Robert Moore. I am the Division Engineer, North Central Division, U.S. Army Corps of Engineers. My area of responsibility includes all of the Great Lakes Basin including that portion of the St. Lawrence River Basin within the United States, as well as the major portion of the Upper Mississippi River Basin and the U.S. portions of the Souris-Red-Rainy River Basins.

As Mr. Smith told you, matters dealing with the Great Lakes boundary waters are under the jurisdiction of the IJC, as authorized by the Boundary Waters Treaty of 1909, and this, of course, includes regulation of Lake Ontario. I serve as ex officio U.S. chairman of three other international joint commission boards concerned with Great Lakes levels and flows. These are the International Lake Superior Board of Control, the International Niagara Board of Control, and the International Great Lakes Levels Board.

My statement today will cover the activities of the International St. Lawrence River Board of Control, and a review of the Lake Ontario situation. As such, I will be acting in my capacity as U.S. chairman of the U.S. section, International St. Lawrence River Board of Control.

When I act as a member of an IJC board, I am not representing the Corps of Engineers. I serve in a professional and personal capacity, under the direction of the Commission and neither the Corps of Engineers nor Department of Army are committed in any way by the actions I take as a member or by the actions of the board as a whole. In other words, on IJC matters I am responsible to the International Joint Commission and not the Chief of Engineers, U.S. Department of Army.

The International St. Lawrence River Board of Control is responsible for insuring that the provisions of the IJC's orders of approval are met relating to the levels and flows of Lake Ontario, the international rapids section of the St. Lawrence River and downstream. The Board is composed of eight members, four United States and four Canadian.

I might interject a comment here that Mr. Bill Kennedy is present with us from the St. Lawrence Seaway Development Corporation and Mr. Bob Conner from the Power Authority of the State of New York is here.

My Canadian counterpart on the Board is Mr. Ralph H. Smith, Chief, Waterways Development Division, Department of Transport, Ottawa, Ontario. The Board also coordinates the regulation of Lake Ontario water levels and outflows. By the way, it takes a unanimous position by the Board or the IJC must decide any matter related to regulation.

In 1954, the United States and Canada joined forces to build three dams and 16 miles of dikes, replacing the turbulent international rapids section of the St. Lawrence River with the expanse of Lake St. Lawrence. As the lake was created its channel bed was deepened and three locks built by United States and Canadian seaway organizations provided the final link to open the entire St. Lawrence River-Great Lakes water system to deep-draft, ocean-going ships.

The \$650 million cost of the power project was evenly divided between the Power Authority of the State of New York and Ontario Hydro. Adding in the cost of the navigation channels and facilities, there is an investment of well over \$1 billion by the Federal Governments, by Ontario Hydro and the Power Authority of the State of New York.

While the structures were being built, an operating regulation plan was developed to obtain maximum possible benefits for all interests. Obviously, I have stated to people here many times before, when you look at the many interests, you can't optimize one against the other.

Considered was a scheme that would provide a consistent source of water for power, maintain required depths during navigation season and provide a reduced range of stage—reduce high levels and raise low levels—for the riparian owners.

The Governments of Canada and the United States approved the range of mean monthly elevation for Lake Ontario of 242.77 feet to 246.77 feet, as nearly as may be. The maximum level recorded in history was 248.06 feet and the minimum was 241.45 feet, both prior to regulation. Those two were balanced together, and it was assumed that the hundred years of history was a sufficient record to, hopefully, suggest that the project could handle what was coming in the future. That is the way it was built, optimizing the balance of levels against the cost of the project. And criteria for a method of regulation of outflows and levels of Lake Ontario applicable to works in the international rapids section of the St. Lawrence River were also provided.

These are specified in the IJC's supplementary order dated July 2, 1956. To meet the needs of navigation on Lake Ontario, the St. Lawrence Seaway and the St. Lawrence Ship Channel, the project design and the regulation plan provided for certain navigable depths as well as limiting current velocities and crosscurrents.

Power developments on the St. Lawrence River at the Moses-Saunders powerhouses and Beauharnois-Cedars powerhouses require certain flows and water levels for good power production. Also, velocities must be limited during winter to allow the formation of a stable ice cover to avoid disruptive ice jams which would interrupt power generation and cause shoreline damage.

The IJC's orders of approval contain criteria and guidelines for maintaining water levels within ranges which will avoid damage to shore property interests not only on Lake Ontario, but all along the St. Lawrence River system, including Lake St. Francis, Lake St. Louis and the river at and downstream of Montreal.

These conditions were based on the recorded water supplies during the period 1860-1954. However, at times during the extremely low supply conditions of the 1960's and the extremely high supply conditions of the 1970's, some level and flow conditions have violated the IJC's criteria. Nevertheless, all three major interests, riparian owners, power and navigation still have benefited from the regulation of the levels of Lake Ontario.

The Board has carried out studies, incorporating recent operating experience, in an endeavor to develop improved regulation procedures by making any necessary or desirable modifications to the existing operating plan. In essence, the studies showed minor improvements to plan 1958-D may be possible from improved forecasting and other measures.

It is not practicable, however, within the existing physical constraints to design a plan to accommodate the extremely low and high water supplies received after the project was built, while meeting all the criteria governing the regulation of Lake Ontario. Only major changes in the project channels, or the criteria, or both, could accommodate the full range of supplies experienced to date. This is because the design regulation plan and, consequently, the project channel dimension, as well as some of the criteria, were all based on supplies prior to the construction of the project, that is, 1860 to 1954.

Since construction, however, lower and much higher supplies have occurred than any of those recorded in the previous 95 years. Furthermore, regulation plan 1958-D and its predecessors were designed in accordance with the overriding requirements of the orders of approval that downstream interests should have no less protection, that is, no greater damage than with the unregulated condition, so that channel works in the Canadian section of the river were not required.

Under such extreme water supply conditions, exercising of discretionary authority under criterion K, as mentioned by the Hon. Don Riley, is the only recourse available.

Before reviewing Lake Ontario's level situation, I would like to say that we also have problems with high water levels on all the other Great Lakes. For the past several months Lakes Michigan and Huron levels have been rising at a more rapid rate than 1 year ago and are expected to peak higher this summer than in 1975. Lakes Clair and Erie are 3 and 4 inches, respectively, above the levels for this time last year. Lake Erie's level was only 1 inch below its all-time maximum level recorded in 1973. Even Lake Superior experienced a rapid rise in the early part of this spring.

I will now review the Lake Ontario level situation since last winter. Lake Ontario reached its seasonal low level in December of 244 feet, which was only about 2 inches above its long-term average level. It then began its seasonal rise. The rise was somewhat greater than normal in late December and early January.

Yet, in early February the level conditions improved, falling below the level that occurred at that time in 1975. Then conditions worsened in mid-February. At that time the level began a rise of almost 2 feet, to 246.4 feet by the end of March. The level continued to rise to 247.1 feet by the end of April, and to 247.48 by the end of May.

This level was nearly 1 foot below what it would have been if releases this winter and spring had been strictly in accordance with plan 1958-D. Also, this level was 19 inches below the preproject level, the level that would have existed if the project had not been built.

Indications are that the lake has reached its annual peak level, assuming no extreme amount of rainfall during the coming few weeks. The present level is about 247.3 feet.

Let me explain the reasons why Lake Ontario is at such a high level today in spite of the Board's actions to make maximum possible flow releases since December 1975. Although heavy rains fell in the basin late last summer, the real problem was the heavy winter snow and spring rain. Considering the last 12 months, June 1975 through May 1976, Lake Ontario's precipitation has averaged about 31 percent above average.

Lake Ontario's water supplies so far this year are significantly above average. In fact, February and March monthly supplies were greater than supplies of record over the past 115 years. The high levels being experienced are the direct result of these extremely high water supplies from both the local basin from combined rainfall and the large amount of snow-melt runoff and the large flow coming in from the upstream lakes.

On the average, about 85 percent of the water supply to Lake Ontario flows from the upper Great Lakes. For this reason it is important to monitor the amount of storage on the upper lakes which will flow into Lake Ontario in the coming months.

At the beginning of November, an assessment of future water supplies potentially available to Lake Ontario through June 1976, were slightly more than the maximum supplies experienced during the period 1900 through 1968. This was again the case at the beginning of last December, and, as a result, the International St. Lawrence River Board of Control, at its December meeting, approved outflows as large as possible during the winter months, consistent with the need to maintain a stable ice cover.

I might add, Mr. Chairman, that was made in relation to the possibility of rainfall patterns over the basin that exceeded average rainfall, or were of a probability of occurrence of less than 50 percent, that is, a greater than normal amount.

Potentially excessive supplies were again indicated at the beginning of January. One month later, the assessment indicated the potential supplies through June 1976, had fallen below the 1900-68 maximum, that Lake Ontario had only one chance in twenty of reaching 246.77 feet, and would probably peak at 245.6 feet. The level of 245.6 feet was predicated on a 50-percent probability water supply.

Unfortunately, the record water supplies were then received in February and March. As a result, the April 1 indicator showed the supplies potentially available through June to be in excess of the maximum of the past. This condition continues for the June 1 assessment.

As mentioned earlier, regulation actions since December are responsible for significantly reducing the Lake Ontario level. Winter operations began on December 19, with ice formation in the Beauharnois section of the St. Lawrence River and continued until the end of March with the spring ice breakup. The early winter operations required flow reductions from 280,000 ft³/s to as low as 210,000 ft³/s, so that a stable ice cover could be formed.

Last winter, at least through most of February, was a severe one for the St. Lawrence River. It was characterized by the rapid formation of a relatively thick and rough ice cover. This type of ice cover constricts the discharge capacity of the river. A delicate balance between the force of the flowing water and the strength of the ice cover must be maintained while discharges are gradually increased once a stable ice cover is formed.

Flows were gradually increased during February to 280,000 ft³/s in early March, with occasional reductions in flow when significant increases in head loss occurred. The flow was increased on March 19 to 300,000 ft³/s. The March increases were the first opportunity since early February to discharge significantly above plan 1958-D flows. As a consequence of the Board's decision to overdischarge when possible last winter, the lake level at the end of March was about 6 inches below what the level would have been had plan 1958-D been strictly followed.

The International Joint Commission announced on April 1, 1976 that, because of the rapid rise in Lake Ontario levels since mid-February, the International St. Lawrence River Board of Control will formally begin operations under criterion K. This criterion requires that in the event water supplies to Lake Ontario are in excess of those of the past, the control works shall be operated, and I quote, "to provide all possible relief to the riparian owners both upstream and downstream."

However, the Commission pointed out that the same order requires, in condition (i), that, and I quote,

The project works shall be operated in such a manner as to provide no less protection for navigation and riparian interests downstream than would have occurred under preproject conditions.

Unfortunately, at this same time, heavy snowmelt runoff and rainfall on the Ottawa River was occurring. Montreal Island is at the confluence of the Ottawa and the St. Lawrence Rivers where combined high discharges from both rivers cause flooding. Therefore, starting on April 1, the Board began authorizing temporary reductions to as low as 275,000 ft³/s in Lake Ontario's outflow to relieve the serious residential flooding on the lower St. Lawrence River in the Lake St. Louis-Montreal area.

At that time the levels there were 2½ feet above flood stage and only 4 inches below the alltime record. The flow through Lake St. Louis on the St. Lawrence River was in excess of 500,000 ft³/s. The flood peak occurred on April 3-4, with the maximum Lake St. Louis reach-

ing $2\frac{2}{3}$ feet above flood stage. During the height of the flood over a thousand families were evacuated from their homes.

As the high waters in the Montreal area declined, the International St. Lawrence River Board of Control progressively increased the Lake Ontario outflow from 275,000 ft^3/s to 320,000 ft^3/s by April 17. At that time, the Ottawa River flows increased again as a result of more snowmelt and rainfall in the Upper Ottawa River Basin.

That delayed any opportunity to further increase the Lake Ontario outflow until May 1 when it was increased to 325,000 ft^3/s . The level in the Montreal area again started to decline because of decreases in the Ottawa River flow, but was still more than $1\frac{1}{3}$ feet above flood stage.

A Lake Ontario outflow reduction to 310,000 ft^3/s was again necessary on May 21 due to downstream flooding resulting from rainfall in the Ottawa River basin and the Montreal area. This lasted less than a week, then downstream conditions began to improve again.

The Lake Ontario outflow was then progressively increased, starting on May 28 to the present 350,000 ft^3/s . This outflow is equal to the record set in the summer of 1973. The flood level for Lake St. Louis has been defined as 72 feet at the Pt. Claire gage. This indicates an outflow of 380,000 ft^3/s .

Part of the Ottawa River flow combines with the flow from Lake Ontario to produce the flow out of Lake St. Louis.

The regulation problems facing us, now that the lake has seemingly peaked and is declining, relate to continuing the high outflows to reduce the lake level as quickly as possible, while maintaining minimum navigation depths in the international section of the St. Lawrence River. The problems occur because the Power Dam and Long Sault Dam are located 100 miles downriver from Lake Ontario. The dams were built 100 miles downstream because that is where the significant drop in the natural riverbed occurs.

As Lake Ontario levels decline, the capacity of the river limits the amount that can be discharged at the St. Lawrence project at Massena, N.Y., while maintaining adequate navigation depths through Lake St. Lawrence, some 30 miles upstream from Massena, N.Y.

I have provided this on the slide for you. When Lake Ontario drops down to about 245 feet, maintaining high outflow causes the river profile to drop significantly. When we maintain high outflows, the river profile drops above the power dam, so there is a lower profile starting at that point and proceeding upstream that quickly reduces the depths for navigation, and therein lies the problem. The project still has provided benefits to all, although they might not be recognizable at all times.

In other words, maintaining high flows through the project causes the river profile level to drop. When high outflows continue as Lake Ontario declines, this pulls the water level at the power dam down drastically, thereby increasing the river slope.

To maintain the minimum navigation profile when the Lake Ontario level is about 245.0 feet, a drop of one inch on Lake Ontario requires a reduction in outflow of, say, 2,000 ft^3/s . As you approach elevation 244.0 feet on Lake Ontario, a similar decline requires a reduction in outflow of about 10,000 ft^3/s .

Because of experiences in 1973, 1974 and again this spring, there has been great concern, and rightly so, expressed by the Lake Ontario riparian owners, who wish the level of the Lake to be maintained in the lower range of levels specified by the Orders of Approval. The Board expects to continue to authorize high flows this summer and fall to reduce the lake levels as rapidly as possible, consistent with downstream conditions and navigation requirements.

All that can be done under existing structural and regulating constraints has been done. Benefits have been achieved.

Extraordinary actions would be required to achieve a Lake Ontario level much lower than 244.0 feet by December when the lake is normally at its lowest level of the year. Actions that might be instituted and the impacts associated therewith are being investigated and will be investigated.

The Board, assisted by the St. Lawrence Seaway Development Corporation, will make field measurements in the St. Lawrence River above the project this summer to obtain some factual data. This will include depth surveys and flow velocity measurements in critical areas. This program will identify areas where dredging or other structural measures may be necessary.

It is imperative that the field data program be carried out during times when conditions are most critical, that is, during high discharges in conjunction with declining lake levels. My office is assisting the SLSDC in this endeavor. With the data from the investigations, the Board will be able to advise the IJC. It is not known at this time what actions might be possible this year or in the long-term.

In summary, I would like to say that at the present time the Board is doing everything within its authority to reduce the high lake levels. It appears that the lake has reached its peak level of the year at 247.51 feet on 31 May- 1 June, 19 inches below what the level would have been without the project.

This is a benefit that the project has afforded riparian owners. The lake's present outflow of 350,000 ft³/s is equal to the maximum of record that was first achieved in 1973.

The St. Lawrence project was designed to accommodate the historic water supplies received prior to the time the construction of the project was started in 1954. At that time the rationale was that this nearly 100 years of data was a reasonable basis to justify the expenditures of money to construct the project.

It was noted that a good share of the \$1 billion project costs were related to dredging channels to depths adequate for navigation and powerhouse discharges. Also, the governments of the United States and Canada agreed that downstream reaches of the river should receive no worse flood conditions than those that would occur under nature since no works were constructed downstream in the Lake St. Louis-Montreal area.

We now know that the St. Lawrence River cannot accommodate the high water supplies because of the physical limitations yet meet all the criteria specified by the IJC Orders of Approval. The regulation plan was designed, during times of flooding on the Ottawa River, to produce a level in lake St. Louis no greater than 72.0 feet. Similarly, the plan's maximum discharge was established at 310,000 ft³/s.

The Board in the past, both in 1973, 1974, and again in 1976, exceeded this maximum. It is noted that preproject outflows or plan flow, whichever is higher, have been considered the guideline when operating under criterion K with high water supplies, although less than plan and preproject outflows have been necessary at times to alleviate severe flooding conditions downstream.

In turn, we have gotten acceptance, as we do now, to discharging greater flows than preproject or plan flows for long periods of time to rapidly reduce the high Lake Ontario level. Such high discharges produce conditions that exceed the 4 feet per second desired velocity limit in several localities in the navigation channel. This has been done with fine cooperation of the navigation entities who are concerned about the safety of the vessels which make some 5,000 transits through the St. Lawrence River each season. The information from the field program will be reviewed by the Board and furnished to the International Joint Commission as quickly as possible for their evaluation.

The Board will continue to closely monitor the current high Lake Ontario levels and conditions on the St. Lawrence River, and will maintain high outflows as long as possible to alleviate the high lake levels on Lake Ontario.

Sir, this concludes my prepared statement. I will be pleased to answer any questions.

Senator BUCKLEY. Thank you, General.

Have you any historical perspective, not on the levels of the lake, but the damage done along the shores of the lake? Is there a pattern that suggests in recent years we have had a greater degree of erosion, property damage, and so on than historically is the case?

General MOORE. I will make a personal professional opinion, if I may.

The control of lake levels or any levels on a body of water affect or are bound to affect to some degree the amount of erosion experienced on the shoreline of that body of water. Reducing the height has the effect of somewhat reducing the wave impact.

I might also suggest that increasing the lows has an adverse impact on shoreline erosion by not providing periods of low water which are necessary for replenishment of sand beaches, the natural barriers against erosion losses.

Senator BUCKLEY. Has there been more of a history of greater damage before the seaway project?

General MOORE. I don't think there are historical records that compare. Is that what you are asking?

Senator BUCKLEY. Yes.

General MOORE. There was a damage survey made and prepared for the International Great Lakes Levels Board study, and a damage survey is going on today to determine the shoreline flooding and erosion damages that have occurred over the last several years of high water, carried out by the Corps of Engineers through the different States.

The answers to that effort probably will not be available for another year or two years. And Lake Superior got the priority for that effort because of emergency execution of Plan SO-901 for regulating the level of that lake.

I wouldn't have definite figures of that, I can provide you, Mr. Chairman, if you desire, the figures we have, and the only figures I have are on damages that were prevented by foresight structures provided in 1973. I could provide that to you, and that is about the best set of figures on damage that I have available to me.

Senator BUCKLEY. I would appreciate that.

Supervisor Riley stated, as he interpreted the international treaty that provided cooperation, that certain priorities, certain orders of precedence were established between different uses, and protection of riparian rights were considered superior to navigation or power production. But, it seems to me the gist of your testimony, you were under a mandate not to prefer one over the other but to balance.

General MOORE. At the time the project was debated and it was debated publicly, the tradeoffs between what might occur in lake levels against past history and what kind of depth we ought to go to for navigation and acceptable flows for power and the whole spectrum of shoreline interest on Lake Ontario and the St. Lawrence River region were balanced.

In fact, like a dam project, once you have decided on the project and their releases, you are stuck with that structure.

Senator BUCKLEY. The dams and so on are in concrete, but the regulations stating target areas are on paper.

General MOORE. It was determined that since we had reduced the natural conditions for the riparian owner and showed the regime that nature would have had if we had not had the project, that difference between that red line 244 and the natural conditions that had occurred, the present project was considered to be to the riparian owner's benefit.

The benefit to navigation was to settle for a 26-foot draft, if that is what it is, and the benefit to power was minimum flow of 180,000 cubic feet per second flow, and those were the tradeoffs and benefits perceived in that balance. What has occurred is nature has violated past history, and will do it in the future. She is just not that stable in her actions.

The question has to do with whether or not the International Board of Control has the authority to put a stop to navigation in relation to allowing the riparian owners to have greater benefit. The board has taken the position, the International Joint Commission, that it does not have that prerogative; we can't violate the minimum depths of navigation.

We have violated some criteria, but they are elements of engineering decision. For instance, we have violated preproject flow. That is, we are now flowing more water from the project than nature would have. But we have done that while informing the International Joint Commission of such action and informing them unless we hear otherwise we are going to proceed to do that.

Senator BUCKLEY. Early testimony suggested that over a period of years the upper limit has been violated more frequently than the lower limit. Could adjustment in your procedures equalize those violations?

General MOORE. I think the testimony was presented by Mr. Dave Loyenheim, and what he suggested was over the historical past the violations by nature have exceeded the highs more often rather than going

below the lows and has been three to one by nature. I also suggest we violated, since the lake has been regulated, about the same ratio, three to one. We had a violation of lows, in the mid-1960s at times, and violations of the highs have occurred at times since 1973, so it's three to one. So it's no better than what nature did.

Senator BUCKLEY. You are supposed to try to adjust to nature.

General MOORE. We did. And I might suggest to you in the history of regulation the only time we have violated the conditions of 246.77 is when nature has violated the regime of water provided in the past.

And I must suggest to you, once again, the structure was designed to optimize against 100 years of records which everybody thought would be a safe way to design the structure. Once you have designed it, there is very little maneuver room.

We have talked in the International Board. We talked about the potential for high water problems again in 1976 as early as last October, in fact, one of the reasons for calling the special meeting in December of the board, was to release more water. That was action taken by members of the board that suggested by looking at the regime of water on the upper lakes, and the prediction of the possibility of increased water supplies in Ontario, Michigan and Erie, that we had a probability of violating 246.77 feet in the Spring of 1976 and would be remiss if not taking water out in the winter months. That was a special action.

There are only about three to four months of the year that the International Board has the prerogative of releasing the water it would like to release in relation to conditions. That is about May to July. Early August, the minimum profiles for navigation take over. In December, as you have already read or has been presented here in testimony, the winter problem of regulation occurs. That occurs to about early March, and then the flood conditions, if they prevail, prevail on how you regulate then.

Senator BUCKLEY. General, the fact is, of course, there has been overwhelming damage, and several times in the last 4 or 5 years. We have had storms and I witnessed it 2 years ago, and I hope to go along the shoreline this afternoon.

So whatever the projections on the basis of which the planning was done were, we now have damage to riparian owners.

Do you have any thoughts, including the kind of program suggested in the statement by Congressman Horton, as to dredging? Do you have any ideas as to practical measures that could be implemented for the immediate future, including dredging, including revisions of international agreements, that would be able to provide lakeshore owners with greater safety, greater protection?

General MOORE. I have none that I have discussed with the International Joint Commission or the other members of the board. I have some personal feeling of some of the areas we might look at.

Senator BUCKLEY. I would like your personal assessment as a professional engineer.

General MOORE. I think we could look at the current configuration of the structure, with particular reference to the channels provided for navigation and balance the regime of water we now know violated the upper limit of regulation. And possibly we might channel upstream of the power dam in U.S. and Canadian waters that could pro-

vide a greater outflow and assist the board to get to 242.77 as a low in winter months, and that is the critical part. It has been expressed by riparian owners here that we should get that water down to the lowest level possible. We can't do that under the current criteria.

Senator BUCKLEY. The criteria are subject to amendment.

General MOORE. Yes, and we have yet to hear from the Canadian study looking at that in the all Canadian section of the river. I am not sure it will come up with anything productive in that regard.

We can look at the criteria or look at a combination of both. Those are, again, trade-offs. And they are trade-offs to navigation versus lake level control.

Senator BUCKLEY. Plus dredging, which presumably might accommodate both.

General MOORE. Dredging would be a technical term from my basic terms of looking at channel depth. There is solid rock there in that area. I would suggest a foot of dredging has a pretty high cost because it is rock, and I don't have a particular cost except a ball park figure of about \$30 million.

Senator BUCKLEY. There is an awful lot of damage being done to riparian owners. Has a study been made to assess the trade-offs of cost?

General MOORE. I am aware of damage to riparian owners. I have lived there, and it is not a pleasant thing to go through, and more unpleasant to go through as a member of a Federal agency and not be able to do anything about it.

Girly Goodwin, who is in the audience, and I stood together on her backyard that used to be 50-foot prior to 1973 and now about 20, and is about to lose her house.

I did offer a solution for the Honorable Don Riley at the time, for placing a rock structure at the cliff of Edgemore Drive in 1973 during Operation Foresight. That would be a costly thing to do, but can be effective. I am not sure how many owners would want that size of structure out there if we got a low-water regime.

I might also suggest that shoreline erosion projects along a body of water the size of the Great Lakes, any of the Great Lakes or all of them, is a very difficult question as to how you go about it, because it implies in intimate terms you are going to express where people can live and cannot live and provide protection. The same is true in flood control and flood-planning management. They are similar in that regard.

Some people have said that riparian owners have moved to shoreline property that used to be summer cottages and now are permanent residences. Should that have been done? You can get both answers to that. Should Chicago have been built by Lake Michigan? And I don't think anybody is going to propose to close Chicago, just as I am sure the Honorable Don Riley is not going to suggest we move the town of Greece.

But those are key questions, and have not only to do with cost of protection but impact on local property tax base you might exclude from habitation.

The other part of it is at the end of those structures you build to protect shoreline, you generally get greater erosion at the end prop-

erties, and, therefore, you become very, very liable to a discussion of whether or not the structure has an impact on other people.

So it's a delicate question and one that needs a lot of study. But certainly one thing should be provided, and would be a great benefit, and that is a good study to determine shoreline erosion rates and where people can and cannot expect to be harmed by future erosion. We do not have those kinds of studies. We have nothing to help local planners and State planners in that regard. And if your bill gets nothing else, I certainly hope it could get a study of that nature.

Senator BUCKLEY. It is intended to lick not only that, but also dredging and balances and so forth.

Thank you, General. I am sure we could spend a lot more time asking specific questions, but there are other witnesses and we may be back to you.

Our next witnesses are Mr. Robert Conner, resident manager, St. Lawrence Falls project, and Mr. William Kennedy, assistant administrator-resident manager, Massena, St. Lawrence Seaway Development Corporation.

STATEMENT OF ROBERT CONNER, RESIDENT MANAGER, ST. LAWRENCE FALLS PROJECT, POWER AUTHORITY OF THE STATE OF NEW YORK

Mr. CONNER. Senator, and ladies and gentlemen, I would like to express my appreciation for coming to Rochester. I am Robert Conner and—

Senator BUCKLEY. I hate to interrupt. Are you reading from a prepared statement?

Mr. CONNER. Yes.

Senator BUCKLEY. Is it a long statement?

Mr. CONNER. No, sir, about 6 minutes to read it.

I am resident manager of the New York Power Authority's St. Lawrence power project near Massena. In 1970, I was nominated by Governor Rockefeller and subsequently appointed by the International Joint Commission to membership on the International St. Lawrence River Board of Control.

Prior to the construction of the St. Lawrence Power and Seaway development, Canada and the United States, acting through the International Joint Commission, made studies to determine the feasibility of regulating the levels and outflows of Lake Ontario.

During the course of these studies, public hearings were held at various places around the lake to determine the wishes of those who would be affected by regulation. And after these hearings, the International Joint Commission established 11 criteria which set forth the aims of regulation plans for Lake Ontario. These criteria were approved by the governments of Canada and the United States and are contained in the International Joint Commission's order of approval for the St. Lawrence Power Project.

The entire St. Lawrence Power and Seaway Project was constructed during the period 1954-1958. The resulting channel improvements and control structures represent the investment of some \$665 million by the Power Authority and Ontario Hydro for power features as well as some \$425 million of the two federal governments

in navigation facilities. This nearly \$1.1 billion expenditure provided the features needed to implement regulation of Lake Ontario beginning in April 1960.

At this point, I would like to emphasize that the Power Authority of the State of New York is a public corporation created by New York's legislature in 1931. The Authority's role is to provide power for the State of New York at the lowest possible cost, and power is sold without profit to 44 municipal and cooperative systems in the State, cooperatives in Pennsylvania and New Jersey, the State of Vermont, industry, and to utilities for resale to their rural and domestic consumers.

The Authority, by law, cannot use tax money for its projects but is required to raise its funds in the private market. Authority projects are presently providing over one-quarter of electric energy used in the State of New York.

The Authority's borrowing of nearly \$350 million for its portion of the St. Lawrence Project relied on the regime of Lake Ontario outflows provided by the early regulation plans for Lake Ontario. One of the early plans, 12-A-9, established the depths to which channels were excavated during the construction period. These channels are now utilized by Seaway vessels engaged in domestic and international commerce.

The two governments of Canada and the United States, in approving the 11 criteria promulgated by the International Joint Commission for regulating Lake Ontario, struck an equitable balance in apportioning the benefits to be derived from the regulation of Lake Ontario among all of the affected interests: riparian property on Lake Ontario and in the upper St. Lawrence, riparian property downstream of the control structures in the all-Canadian sections of the river, as well as to navigation and power.

The St. Lawrence Board of Control under the supervision of the International Joint Commission has observed the performance of regulation plans and has modified the procedures as experience has been gained over the years. The present plan, known as 1958-D, has and will continue to provide benefits to all of those interests as compared to the conditions which would have prevailed with natural channels and flows. Moreover, the levels and flows of all the Great Lakes have been studied extensively by the International Great Lakes Levels Board over the last 10 years. They found no means of improving the present plan of regulation.

Since mid-1972 unprecedented high inflows have been received in Lake Ontario. With these high flows there has been some damage. However, the damage would be much worse without the channel improvements made as a part of the projects and the regulation plan governing their operation. The board's computations indicate that the present level of Lake Ontario would be nearly 1.6 feet higher under natural channel conditions and with natural outflows.

The 1973 supply to Lake Ontario was 3,645,000 ft³/s-months, was some 335,000 ft³/s-months or 10 percent higher than in the previous record-high year of 1952. Despite this, Lake Ontario's level in 1973 did not quite reach the level experienced in 1952 under natural conditions.

The highest flow ever recorded under natural conditions on the St. Lawrence was 308,000 ft³/s in June 1952 with Lake Ontario at a level of 248.2. In 1973, it was possible to release 350,000 ft³/s for a period of 2 months with Lake Ontario levels as low as 246.8. With slightly smaller flows the same pattern held true in 1974.

Much the same pattern has developed thus far in 1976. New high-supply records were established in both February and March. The April inflow was exceeded only 3 percent of the time in the past, and the May supply was exceeded only once before.

Although Lake Ontario was very near its long-term average level in December 1975, these high inflows early in 1976 brought a rapid rise in Lake Ontario levels. Outflows during the winter months, as pointed out by others must be limited because of the ice cover which forms on the St. Lawrence. An attempt to release very high flows would collapse the ice cover and cause an ice jam, thus severely restricting Lake Ontario outflows.

As has been noted by others, once the ice melted and spring arrived, the freshet on the Ottawa River, coupled with the flows out of Lake Ontario, caused serious flooding in the Montreal area. In early April, over 1,000 families were evacuated from their homes.

Lake Ontario levels again in 1976 have exceeded International Joint Commission objective level of 246.77, rising to elevation 247.5 in early June. I would again point out, as others have, that without regulation, the level would now be 249.1.

The weekly outflows from Lake Ontario are determined by unanimous decision of the eight-member Board of Control. The members must take into account all interests on Lake Ontario and downstream on the St. Lawrence River. The power entities must follow their instructions.

We are now passing 350,000 ft³/s, despite the fact that outflows in excess of about 325,000 ft³/s requires spilling or wasting water which is forever lost for power purposes. The Moses-Saunders Powerdam cannot pass the entire 350,000 ft³/s, and as a result, some 25,000 ft³/s is being released through the Long Sault Spillway.

This spill is equivalent to 150,000 kilowatts which can never be recovered. The fuel replacement value of such energy to New York would be approximately \$500,000 for each week the spill continues. The added cost of fuel burned to produce the replacement power is passed directly to consumers.

In summary, I am convinced that since it began in 1960, the regulation of Lake Ontario has produced very considerable benefits to all of the affected interests. I am equally convinced that, given the present channel configuration in the international as well as in the entire Canadian sections of the St. Lawrence River, the variation of inflows and the nonpredictable nature of such inflows, no significant improvement can be realized for Lake Ontario regulation.

The regulation must take into account all interests using the lake and the river, riparian interests in Canada and the United States, the entire navigation system and power consumers in New York, neighboring States, Ontario and Quebec.

The International Joint Commission criteria did so. Supplies vary from droughts such as those of the early 1930's and 1963-64, to high flows such as those of 1952, 1973 and 1976. The regulation must ac-

commodate all of these conditions and all of these interests. All that realistically could have been done, in view of existing channel capacity, to avoid damage has been done.

Senator BUCKLEY. Supervisor Riley quoted you as saying that the riparian owners' rights should be subordinated to shipping.

Mr. CONNER. He was reporting what was in the newspapers. I think what I said, in order to increase the flows, in answer to the questions from the audience, shipping might have to stop. I didn't say all shipping would stop.

Senator BUCKLEY. Thank you very much.

Mr. Kennedy.

STATEMENT OF WILLIAM KENNEDY, ST. LAWRENCE SEAWAY DEVELOPMENT CORP.

Mr. KENNEDY. Mr. Chairman, I, too, have a prepared statement briefer than Mr. Conner's.

Senator BUCKLEY. I want to save time for public members.

Mr. KENNEDY. Mr. Chairman, my name is William H. Kennedy. I am the assistant administrator and resident manager of the Saint Lawrence Seaway Development Corporation, one of the operating administrations of the U.S. Department of Transportation. I welcome this opportunity to be here today to comment on Lake Ontario, particularly since there seems to be a number of people who have misconceptions concerning the control of the level of Lake Ontario as it relates to navigation. It is sometimes alleged that the level of Lake Ontario is being manipulated and held artificially high so that seaway ships can draft deeper and thereby increase their cargo capacities. The level of Lake Ontario is high, but the high level is due to higher than normal precipitation and lower than normal evaporation rates over the Great Lakes basin drainage area, and in particular the Lake Ontario basin drainage area, during the past few years.

Since 1959, the maximum draft for vessels transiting the St. Lawrence Seaway has been jointly established by the Saint Lawrence Seaway Development Corporation of the United States and The St. Lawrence Seaway Authority of Canada. Drafts for safety reasons are carefully and continually monitored. To my knowledge, no vessels with drafts in excess of 26'0" have ever been permitted to proceed. It is obvious, therefore, that such statements as Seaway ships being able to increase the size of their cargoes due to higher than normal Lake Ontario levels are completely unfounded. They arise, I believe, from a lack of understanding of the facts involved.

From a navigational standpoint, we suffer from these high lake levels, and are, therefore, sensitive to the concerns of the shoreline property owners. It would be in our best interests to have the level of Lake Ontario at a more normal or average level than we are presently experiencing. Why does navigation suffer from higher than normal lake levels? Simply stated, it is because high lake levels result in higher than normal St. Lawrence River outflows which are being allowed in order to lower the level of Lake Ontario. Higher than normal outflows result in higher than normal currents. These resultant high current velocities, which are well above the Seaway design cri-

teria of 4 feet per second, force navigation to make compensatory adjustments which decrease the efficiency of both the system and the vessels using the system. Furthermore, there may well be a relationship between these high current velocities and a number of ship incidents. Continuous high flows through the St. Lawrence River results in lower water levels in Lake St. Lawrence (near Massena, N.Y.) later in the season. At this time of the year water depths are minimal and adverse wind conditions result in reduced channel depths. Ships which draw 25 feet must then go to anchor and wait for the wind to stop blowing until the water depths are restored. This causes economic hardship for the vessels being delayed by abnormally low water.

As you may be aware, in 1973, 1974 and again in 1976 the seaway entities instituted temporary speed restrictions in the St. Lawrence River during the time Lake Ontario was above elevation 246.77 feet to reduce wave action upon the shoreline for the benefit of riparian owners. However, it should be recognized that this speed restriction may reduce a vessel's maneuverability in the high currents, thus increasing the potential for severe environmental damage.

As we must all recognize, high lake levels are not new. In fact, they occurred prior to the construction of the power project, and except for the month of April of 1973, the high lake levels exceeded anything we had known since the regulatory plan was implemented. The April 1973 level came about following the extremely high precipitation period recorded during 1972, starting with Hurricane Agnes which hit the area during the summer of that year. However, if the seaway and power projects at Massena had not been built, the level of Lake Ontario would be much higher today than it actually is. Probably an improvement on the order of 20 inches over natural conditions has been realized because of the seaway/power project. The control works at Massena have made it possible to handle a large portion of the net supply due to the higher than normal precipitation and lower than normal evaporation rates during these recent years. It should also be noted that the navigation and power facilities built on the St. Lawrence River in the 1950's were designed so as to permit greater control of Lake Ontario levels by improving the distribution of outflows, without changing the flow regime to the detriment of downstream interests. Supplies for the period 1860-1954 were used in arriving at these design criteria and, based on the supplies of record, the project has been most successful in that, even with supplies in excess of those of the period on record, the level of Lake Ontario has been kept well below the level that nature would have permitted.

Having said all of this, one must ask what then can be done consistent with the very real interests concerned?

There is no question but that the solution to high lake levels is to be found in an alternative which provides additional discharge capacity for the St. Lawrence River. In the short range, this may be accomplished most efficiently by increasing the capacity in discharge flows during the winter, when under present conditions flows are substantially cut back due to ice jamming in the Ogden Island area. On the basis of studies performed in cooperation with the U.S. Army Corps of Engineers and other agencies participating in the congressionally authorized navigation season extension demonstration program, it appears as if additional ice control structures in the interna-

tional rapids section of the St. Lawrence River would provide the needed additional winter capacity to the mutual benefit of all interests. An extension of the demonstration project has been recommended for the purpose of doing further work on problems associated with extending the navigation season in the St. Lawrence River.

Mr. Chairman, I appreciate this opportunity to appear before you this morning. On behalf of commercial navigation on the Great Lakes and St. Lawrence Seaway I want to thank you, Senator, for taking the time to visit the shores of Lake Ontario and listen to all those concerned with this problem.

Senator BUCKLEY. Thank you, Mr. Kennedy.

I would like to ask you one question. Do I gather from the earlier part of your statement that you might favor lowering the target levels in the lake?

Mr. KENNEDY. I would like to see the lake remain consistently at a uniform average level, which is the same interest the riparian owners would like to have.

Senator BUCKLEY. That may not be feasible to keep it at a given level.

Mr. KENNEDY. Definitely a lower level than in the last 3 or 4 years.

Senator BUCKLEY. Thank you very much.

I would like to call up the citizens panel now. Brian Ives, Commodore of the Sodus Bay Yacht Club; Donald Ketchum, Vice President, Lake Ontario South Shore Council; W. J. Marcellus, Director, Lake Road Association; Judge Jane B. Moxham, President, Niagara-Orleans Shoreline Protection Association; Glen Stoddard, President, Butterfly Shores Property Owners Association.

I want to accommodate everyone who has come up and indicated a desire to testify. Therefore, I want to advise that the official hearing record will remain open for 30 days. And once it is printed, a copy of today's proceedings, including any written statements that are submitted during that 30-day period, will be provided to anyone who contacts our Rochester or Washington office.

So, again, anybody that does not have an opportunity to be heard at this hearing should feel free—in fact, I would urge you—to prepare a written statement which will then be put into the hearing record, and will be read to the benefit of the full subcommittee.

STATEMENT OF DONALD F. KETCHUM, VICE PRESIDENT, LAKE ONTARIO SOUTH SHORE COUNCIL

I am Donald F. Ketchum, a 60-year life-long resident of the shores of Lake Ontario. For the last 20 years I've lived on the lake shore 25 miles east of here in the town of Williamson in Wayne County.

I have waited over 3 years for this moment. I know Senator Buckley is one of the few men in Washington today who is dedicated to the principle of government "Of, For and By the People." I want to thank you, Senator Buckley and Senator Gravel, for bringing this Hearing to Rochester. In addition, I want to thank you, Senator Buckley, for your very persuasive effort in pushing for a "Public Participation Panel"—and advisory group of riparian owners to the River Board

of Control. This panel was approved last April by the IJC at their semiannual meeting.

I have confidence that Senator Buckley and Senator Gravel will listen carefully today and will react accordingly to alleviate our shoreline dilemma as soon as humanely possible.

As vice president of the Lake Ontario South Shore Council, Inc., I am speaking for thousands of residents on the shores of Lake Ontario, both in New York State and Canada.

For the majority of those riparian residents, living on the shores of this Great Lake is a way of life. Prior to the era of the regulators, we admired the magnificent rugged beauty of the shoreline, the fury of the winter storms out of the north, the high waters of the spring runoffs accompanied by their northerly storms, the dead calms in the hot summer days and cooling breezes in the evenings and again the fury of summer lightning storms off the lake. And further, we thoroughly enjoyed the fall low water times—again with the furious northerly storms. We especially enjoyed the northerly storms of the low water cycles because we knew that during these times nature was building up the protective barrier reefs so necessary to the shoreline during the storms of the high water periods—something that cannot happen while the lake is being manipulated in a high 2-foot range.

However, the Great Lakes riparian owners have been living a nightmare of hell since June 1972, the year of Hurricane Agnes. We have begged and pleaded with our elected representatives for over 3 years to stop this wanton destruction of our shoreline, our homes, our businesses, and a way of life guaranteed to us under the Constitution.

To this day, there is nothing on record leading to a permanent solution to what has become our perennial problem. Year after year we have had promises of help—promises that have dissolved in the spring run-offs. In essence we have been given aspirin when indeed we have pneumonia.

Gentlemen, we cannot—we will not take another round of high water. The Lake Ontario South Shore Council, Inc., a large organization of many smaller associations all around this Great Lake—including the Canadians—have elected to proceed with legal action that would hopefully force the regulators to immediately lower the level of the lake to within a range compatible with our shoreline and to collect damages sustained over the past 6 years as a result of the unwanted destruction of our shoreline, our homes, businesses and a way of life.

It is our fervent hope, gentlemen, that you will do everything in your power to force the regulators to immediately lower the level to a range satisfactory to all interests, as specified in the Boundary Waters Treaty of 1909 and the 1955 St. Lawrence River project papers relating to that treaty. Then, and only then, while the level is in the lowered range, can you leisurely work on a permanent solution to that regulation—if you choose to continue with that regulation.

I say that because there is, admittedly, a very delicate balance between the inflows and outflows of the Great Lakes system. You will have to admit that nature has done an excellent job of regulating that balance since 1838 (the earliest date of my records). Under God's supervision (nature, if you prefer) there was never wanton destruction of our shoreline. Admittedly, there is about 15 percent of the 11,000 miles of Great Lakes shoreline that is subject to critical erosion.

However, since 1972 through 1976, the other 85 percent of that shoreline has joined the 15 percent subject to critical erosion, thanks to the regulators mismanagement of the lake levels.

In a recent statement by the regulators (the International St. Lawrence River Board of Control) the following information was brought out:

Any regulatory efforts are dwarfed by the natural forces affecting the levels of the lakes. The problem remains that a few years of heavier than average precipitation can push the levels of some lakes by as much as 6.6 ft. above their low level marks. Add to that further effects of wind which can push the water to about 8 ft. at the downward end of the wind and the problems of control become ever more complicated. Greater than any regulatory works can accommodate. Amen.

In another statement by the regulators Henry Smith III & Stewart Fonda of the IJC, and Brig. Gen. Robert Moore of the ACE generously conceded that: "The ability of mankind to regulate the level of the Great Lakes is very limited."

In the light of these two statements by the regulators, I say to you Senators: How can you continue to allow those regulators to jeopardize thousands of miles of shoreline in the Great Lakes system while using their admitted limited ability at regulation?—Especially in view of the destruction wrought during 1952, and again in 1972 through 1976?

Now I would like to present a number of facts concerning our shoreline dilemma since 1952. These facts are indisputable.

1. The rules for regulation of the level of Lake Ontario can be found in the 1955 papers concerning operation of the St. Lawrence River project. These papers refer to the Boundary Waters Treaty of 1909.

2. It is the contention of the LOSS Council that the 1909 treaty and the 1955 papers relating to it are being violated by the regulators. You will have to admit, gentlemen, assuming (and I'm only assuming) that the regulators are not legally violating the treaty, they are indeed morally obligated to give first order of precedence to the riparian owners—which they are not doing.

3. According to the 1958-D plan of operation, the level of the lake was supposed to be regulated in a range from 242.7 to 246.7 ft. Yet, the regulators have attempted to operate the level in the top 2 feet of the range. But only once in 17 years (in about 1964) of operation has the level been in the low half of the range. And therein lies the major cause of our shoreline damage in the past 6 years. Operation from the mean (244 ft to 246.77 ft). It should be noted at this point that for 16 of the 17 years of dam operation, by operating in the top half of the range, the regulators have gradually increased the "average" level of the lake.

4. The regulators tell us: "The St. Lawrence River doesn't have the capacity to operate in the lower part of the regulation range and that Nature is to blame for our high water problems."

Gentlemen, doesn't it seem strange to you that:

At the public hearings in the middle fifties, prior to construction and operation of the dams, the public was told that:

a. The level would be maintained within a range of 242.7 to 246.7 ft.

b. That the extremes of stage of 6½ ft experienced under Nature would never happen under regulation.

c. That any property damage resulting from operation of the dams would be ameliorated.

d. That one interest would never be served to the detriment of one another.

5. We have had three major shoreline disasters in the last 5 years. All within the regulation range.

In the last 4 years the level of the lake has been at least 1 foot above flood stage (so-called by ACE) of 246.7 ft three times. This means that during fierce north wind storms, the level of the lake has reached 250 ft; and so, the disasters.

6. The riparian owners, backed by the Lake Ontario South Shore Council, have repeatedly requested the regulators to reduce and maintain the level in the lower half of the range, namely 242-245 ft above sea level—a range compatible with our shoreline.

The answer to this request was given to me in a letter from Stewart Fonda, U.S. consulting engineer to the I.J.C., and dated Feb. 13, 1976—and I quote:

It is not feasible to regulate the level in the range you advocate because it would damage shipping and power interests, and would cause severe problems for shoreline owners by restricting their recreational boating and the use of their beaches.

Gentlemen, I ask you: Aren't two interests (shipping and power) being served to the detriment of one other (riparian owners) in direct defiance of the treaty?

Concerning the severe problem (?) of restricting our recreational boating, we have two riparian owners who would like to testify today and who would take serious and beligerent opposition to that part of the statement.—They are: Brian Ives, Commodore of the Sodus Bay Yacht Club and Donald Shur of the River View Yacht Basin in Rochester, N.Y. Mr. Shur states that with another 6 inches of water he will be out of business.

And what was once a beautiful marina-harbor on the eastern boundary of the town of Williamson, Norman Hughes has lost his harbor-marina business of 20 years to the ravages of high water, winds, and waves—a loss in the neighborhood of \$250,000.

And during a meeting with our Canadian friends last night in Toronto, we were informed that several marinas in that area are ready to join the loss council—as are residents on the shores of Lakes Huron and Erie.

Finally, the Pultneyville Harbor and Marina in the town of Williamson also has been taking a severe beating, with losses in the thousands.

Concerning the two Williamson harbor-marinas, the Pultneyville management received Government grants in the thousands of dollars, yet Mr. Hughes has not received one cent and is currently out of business. Isn't it strange?

7. The Finger Lakes are flooded, not merely because of excessive precipitation, but mainly because of the extremely high water table caused primarily from the excessively high level of Lake Ontario.—It is worthy to note at this point that the waters from central New York areas ultimately end in Lake Ontario.

8. In Congressman Horton's weekly column of June 8, 1976, he states, and I quote:

"Unprecedented rainfall and imperfect lake level regulation policies and plans have caused 1976 to be yet another year of disaster, frustration, and anger for Lake Ontario shoreline residents. Communities along Lakes Michigan, Huron, and Erie have been similarly outraged by the continuation of high water levels."—Mr. Horton again admits the fallacy of this misregulation, but is there any sign of push for a permanent solution?

9. The IJC and ACE say the St. Lawrence River doesn't have the capacity to lower the level to the lower half of the range—that is 242.7 to 244.7 ft.

Is that a fact, or a misrepresentation of the fact? Gentlemen, you be the judge and jury. I submit the following evidence:

In 1972, 1973, 1974 and necessarily again in 1976, the regulators lowered the level $3\frac{1}{2}$ to 4 ft—down to 244 ft. Yet in 1975, with a peak just under 246 ft, the level was lowered only 18 inches, but again down to the mean of 244 ft. Please note: The capacity was there to lower the level to 242 ft—that would have been a lowering of $3\frac{1}{2}$ ft, just as was done in 1972, 1973, 1974 and 1976. If the lake were lowered 2 more ft in 1975, down to 242 ft, we would now be at 245.3 ft instead of the present disastrous 247.3 ft.

Asking the regulators why—why—why? The answer is:

"We are operating according to plan (plan 1958-D) and must necessarily take the level down to the mean of 244 ft, a level (they say) that is satisfactory to all interests."

I ask you: Would we be here today if that mean level of 244 ft satisfied all interests?

The regulators go on to say: "We take it to the mean of 244 because there is only a 1 in 20 chance of going over the maximum of 246.77 ft."

Gentlemen, I repeat: Three major shoreline disasters in 5 years, all within the regulated range, and 3 out of the last 4 years the level reached 1 foot over the maximum planned limit—a 1 in 20 chance?

At this point in time, shouldn't the regulators statistics be thrown over the dam? Shouldn't the regulators be forced to immediately lower the level to 242 feet, a level compatible with our shoreline?

10. At a meeting with riparian owners in Niagara-on-the-lake, in Ontario, Canada, about 3 weeks ago, a representative of a large shipping concern stated that:

"Shipping interests never complained of low water. Our major concern is the excessive rates of flow through the St. Lawrence."

I would say Senators that point is worth investigating.

11. Only 4 percent of all the power in this country is generated hydraulically, and the great majority of that in our northwest.

Are the hydraulic dams on the St. Lawrence worth the 3-day March 1973 Holocaust, which cost the riparian owners in Wayne and Monroe Counties \$20 million?

Really, is man's puny attempt at regulation worth the destruction of 11,000 miles of Great Lakes shoreline? We think not.

12. Now the final point:

We are sick and tired of being brainwashed by the regulators with this horrendous statement:

"The lake would be 2 feet higher if the project on the St. Lawrence hadn't been built."

We admit the St. Lawrence had been deepened and widened prior to operation of the dams. But, with the regulators continually increasing the average level, and adjusting their data to this false average, their statement simply is not true.

At present, Lake Superior is about 5 feet above its all time average. Lakes Michigan, Huron and Erie also are at an all-time high. Isn't it time to deregulate and give the controls back to nature? We think so.

As part of this testimony today, I have prepared several tape recordings of a public service documentary, concerning "Lake Ontario Regulation," which was presented over the Rochester Radio Station WHAM-1180 on May 30, 1976. Mr. Mike Morgan, Director of this Kaleidoscope 1 hour tape, produced an excellent commentary, on which were heard the voices from the IJC, ACE, the U.S. Congress, Lake Ontario riparian owners, the V.P. of the Loss Council and comments by Mike Morgan.

The five Lake Ontario Congressmen, Senators Gravel, Buckley, and Javits, and President Ford all have copies of that program.

Now, in closing, I want to thank you for listening.

[An additional statement and photographs supplied by Mr. Ketchum follows:]

LAKE ONTARIO South Shore Council, Inc.

July 13, 1976

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1550 Lake Rd. West
Williamson, NY 14589

K.P.

Dear Senator Buckley,

level

The Regulators of the Lake Ontario, have told us repeatedly that: "It isn't feasible to operate at 242-245 ft. because it would damage shipping and power interests and would cause severe hardship to Riparian owners because they would not be able to launch their boats."

Concerning that statement:

1. Bill Kenedy of the Seaway Authority stated at the June 15 Senate sub-committee Hearing in Rochester, that: "Shipping is NOT hurt by operation in the low end of the range. The only concern of the shipping interests is the HIGH RATE OF FLOWS through the St. Lawrence."
2. The only Riparian owners who may "suffer" a hardship during low water operation are those that might have built in the wet lands or marsh areas of the various bays and rivers joining the lake. --- Today's outrageously high levels have ruined the "effect" of these natural wet lands and marsh areas.
3. The third interest is the Power Entity. Therefore, I have obtained the following data from the Corps of Engineers at Buffalo. (Bill Erdle) ca July 12, 1976.

AVERAGE POWER PRODUCTION:

- | | |
|--|----------------------------|
| 1. All Januarys, 1960-1975 | 502,723 Mega Watt Hours. |
| 2. January 1965 (241.8 ft.) | 417,323 Mega Watt Hours. |
| Since 241.8 ft. was the lowest level during the 17 years of Dam operation below 244 ft., the year 1965 was the only complete year of operation in the low end of the range. Therefore: | |
| 3. 1960-1975* (Annual) | 6,506,749 Mega Watt Hours. |
| 1965** | 5,391,917 Mega Watt Hours. |

NOTE: Power generation depends upon two factors:

- a. Head of pressure or the difference between lake level and the level at the turbines.
- b. Flow-rate through the turbines.

Therefore, the LOSS IN POWER PRODUCTION WHILE OPERATING IN THE LOW END (241.8 ft.) OF THE SPECIFIED RANGE CAN READILY BE OBTAINED FROM THE FOLLOWING RATIO:

** 1965 ave. Mega Watt Hours production
* Average Mega Watt Hours production 1960-75

LAKE ONTARIO South Shore Council, Inc.

July 13, 1976. --- Page 2.

1656 Edgemere Dr., Rochester, N.Y. 14612

$$100 \text{ minus } \left(\frac{5,391,917}{8,506,749} \text{ times } 100 \right) = 100 - 83 = 17\%.$$

It logically follows, the question you and your colleagues must, or are obliged to, answer is this:

"Is the 17% loss in power production, by operating in the low end of the range, worth the ruination of the 11,000 miles of Great Lakes Shoreline?"

In addition, in view of the above data, you and your colleagues should logically ask the following question of the Regulators:

"Can the existing turbines, requiring a high head of pressure for maximum operation, be economically replaced with turbines requiring a much less head of pressure? If this can be done, the Regulators would have absolutely no excuse for not operating in the range of 242-245 ft.

I will respectfully await your reply.

Sincerely yours,

Don Ketchum

Donald F. Ketchum
Vice President
Lake Ontario South Shore
Council, Inc.

Enclosure

cc: McEwen, Walsh, Horton, Conable, LaFalce
Javits.

LAKE ONTARIO South Shore Council, Inc.

June 29, 1976

1656 Edgemere Dr., Rochester, N.Y. 14612



DONALD F. KETCHUM
1550 Lake Rd. West
Williamson, NY 14589

Vice President

Senator James L. Buckley
Senate Office Bldg.
Washington, D.C., 20510
ATTENTION: Donna Davis and / or Jackee Shafer

Dear Senator Buckley,

During my many months of direct contact with those who are trying to regulate the level of Lake Ontario, I have uncovered many unanswered questions and many disturbing problems.

As a result, I have two very pertinent questions that can be, and should be, answered immediately by the Army Corps of Engineers. I RESPECTFULLY REQUEST THAT THIS LETTER, AND THE ANSWERS TO THE POSED QUESTIONS, BECOME A PART OF YOUR JUNE 15 HEARING MINUTES AS PART OF MY TESTIMONY. (These questions were given to Donna Davis over the phone on June 24, 1976).

The Regulators of the level of Lake Ontario were FORCED to operate the St. Lawrence Power Dams with lake level at about 242 ft. once in the 17 years of operation (about 1964-65). They were FORCED to operate in the lowered end of the 4 ft. specified legal regulation range because of a very low precipitation period.

Since the Regulators flatly state (refer to letter from Stewart Fonda, U.S. consulting engineer to the I.J.C.): "It is not feasible to operate in the low end of the range because it would damage shipping and power interests ---", the following questions are most relevant.

1. What, IF ANY, was the PERCENT LOSS in power production as a result of operation in the low half of the specified range during the low precipitation year of 1964 or 65?
2. When the level of Lake Ontario approaches 242 ft., is power production INTENTIONALLY reduced, or is it NECESSARILY (INVOLUNTARILY) reduced because of an insufficient head of pressure??

According to Mr. Wm. Kennedy, of the St. Lawrence Seaway Development Authority, at the June 15 Lake Level Hearing, shipping interests are NOT hurt by operation at 242 ft. Likewise, it is quite obvious the shoreline of Lake Ontario is NOT damaged by operation in this lower end of the range. That leaves only power interests. Therefore, honest answers to the above questions will tell us where your priorities should lie.

We, the Riparian owners, are anxiously awaiting answers to these two vitally important questions.

Sincerely Yours,

Donald F. Ketchum

LAKE ONTARIO South Shore Council, Inc.

July 14, 1976.

1656 Edgemere Dr., Rochester, N.Y. 14612



DONALD F. KETCHUM
1590 Lake Rd. West
Williamsville, NY 14509

Vice President

Senator James L. Buckley
Senate Office Bldg.
Washington, D.C., 20510

Dear Senator Buckley,

The accompany photographs display the horror of the excessively high lake level storms, showing the natural beauty before the storms and the artificiality of the repairs after the storms.

Many Riparian owners, including the Ketchums, bought land on the shores of this Great Lake because of its rugged and natural beauty. We enjoyed the big beaches and the fierce storms of the four seasons.

Gone, now, are the beaches and the rugged and natural beauty. Instead we have the ugly walls of a reservoir and we dread the ferocious storms out of the north. We live in daily fear of yet another and another and another ---- calamity.

I hope my testimony will help you and your colleagues to come to a quick and just decision. --- One that is compatible with our shoreline but satisfactory to ALL interests.

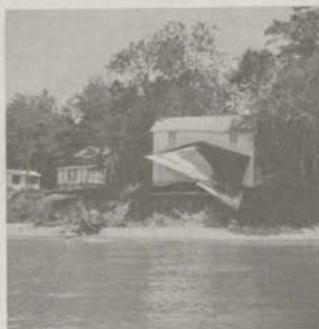
Sincerely Yours,

Donald F. Ketchum

Vice President



J
U
L
Y
2
1976



1 Mile West of Ginna
Power Plant.

These Cottages are
between 60 and 75 years
old. — Prior to 1950, they
had beaches extending
North 150-200 ft. And
in 1970 they ^{had} 75 ft. beaches.



DONALD F. KETCHUM
1550 Lake Hill Road
Williamsville, NY 14589

1.



2.



3.



March 1973



March 20, 1973


 DONALD F. KETCHUM
 1350 LACROSSE WYD
 BETHANY, WV 25809

I

 USE SHEET I & II TO
 COMPARE:

- 1) THE SHORELINE
(picts. 1-5)
- 2) THE POINT (2)
(picts. 1-5)
- 3) THE SYCAMORE TREES
(3) (picts. 2-5)
- 4) THE APPLE TREE (4)
WITH RESPECT TO THE
BANK (picts. 1-5)
- 5) THE FENCE POST AND
LILAC BUSH (5) WITH
RESPECT TO THE BANK
(picts. 2 & 6)
- 6) THE VEGETATION ALONG
SHORE (picts. 2,3,5)
- 7) THE BARN (7) WITH
RESPECT TO THE
POINT (2)
(picts. 1-5)

4



m
a
r
c
h
18,
1973

 DONALD F. KEITHUM
1350 Laurel Rd. West
Williamston, NY 14559 **II**
(use with sheet I)

5



m
a
r
c
h
30,
1976

6



m
a
r
c
h
27,
1976

M
a
r
c
h

1973

DONALD F. KETCHUM
1550 Lake Pl., West
Windsor, N.J. 07080

IV

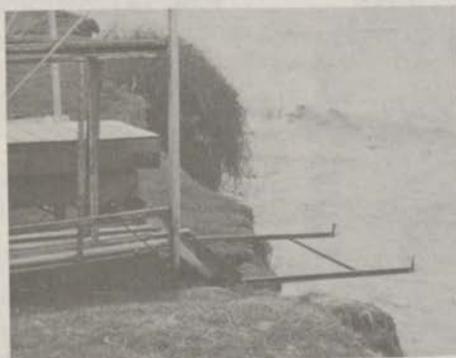
(Use sheets IV & V)

How it went & what went

Note:

- 1) Vegetation
(pics. 2, 4, 5)
- 2) Beach material
(pics. 3, 4, 5)
- 3) Access to water
(pics. 3-7)
- 4) Wild life refuge
(pics. 4-7)
- 5) Pictures 4-7 are
of same shore area
- compare -

1

M
a
r
c
h

1973

2

S
e
p
t.
9,

1970

3



J
u
l
y

11,
1967



DONALD F. KETCHUM
1590 Lake Rd, West
Baltimore, MD 21204

V

(use with sheet IV)

4



O
c
t
o
b
e
r

1971

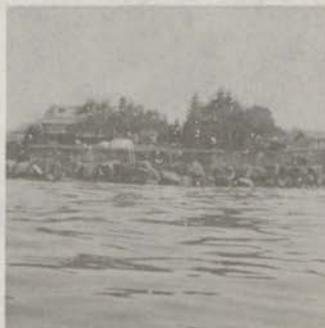
5



M
a
r
c
h

18,
1973

6



A
u
g
u
s
t

1973

7



DONALD F. KETCHUM
1390 LORA RD., WOOD
WILLIAMSVILLE, WV 26189

III

Compare lake bank and boat position with respect to apple tree

A
u
g

1967



A
u
g

1973



Compare distance from water to apple tree

J
u
n

1966



A
p
r
i
l

1973



A
P
r
i
l

1976

DONALD F. KETCHUM
1850 Lake Hill Road
Wilmington, WV 26399

VI

1975
Partial Replacement

of lost land (light green)

A
P
r
i
l

1976

A
P
r
i
l

27,

1976

1976 washout
&
piled on

Stream Side



DONALD F. KETCHUM
1550 Lake Rd. West
Williamson, NY 14589

VII



D
e
c
1974

High water has backed the Stream up so that it has been at flood stage for 6 mos. of each year since 1973.

The birch trees have had to be staked and sandbagged to keep them upright. The high water is gradually killing them.



M
a
r
c
h
1973

The evergreens and shrubs have been "drowned". The root path is under water also.

DONALD F. KETCHUM,
Williamson, N.Y., April 6, 1976.

To: Frank Horton, James L. Buckley, Jacob K. Javits, Barber B. Conable, John L. LaFalce, and John J. Walsh.

GENTLEMEN: S.O.S.—S.O.S.—S.O.S.

Lake Ontario level threatens shoreline for sixth year in a row:

Feb. 1, 1976: 244.0 ft.

Mar. 27, 1976: 246.06 ft.

April 1, 1976: 246.33 ft.

April 5, 1976: 246.62 ft.

April 1, 1976: The newly revised predicted peak is near 248 ft. in early June. The prediction has been revised 3 times in the last 5 weeks, each prediction progressively higher.

Because of the Ottawa River excessive run-off, downstream of the St. Lawrence Dams is a disaster area, which is aggravated by the outflow from L. Ontario (even though the Dams are holding back the major portion of that outflow).

Upstream of the Dams, the shoreline, a disaster for the last six years, could, in the face of the most recent frightening rise in the Lake level, become a major disaster that would obliterate the memory of the March 1973 Holocaust.—Wayne and Monroe Counties alone sustained damages in excess of \$20 million.

This most recent threat to the Lake Ontario shoreline is nothing new, and is NOT nature's fault as the following data clearly shows.

LAKE ONTARIO PEAKS AND LOW LEVELS FOR 1973, 1974, 1975, AND ESTIMATED BY THE ARMY CORPS FOR 1976
[In feet]

	Peak	Low ¹	Difference ²
June 1973	248.2		-3.8
December 1973		244.3	
June 1974	247.5		-3.0
December 1974		244.0	
June 1975	246.0		-2.0
December 1975		244.0	
June 1976	*248.0+		-3.4
December 1976		244.6	

¹ Lower limit of regulated range, since 1955. I.J.C. will not lower level below 244 ft.

² Allowable lowering by the I.J.C.

* Peak predicted by Army Corps, Apr. 1, 1976, with a 50 percent probability.

Note: 3 out of the last 4 yr we will have been 1 to 1½ ft above so-called flood stage of 246.7 ft.

Special note: In June of 1972, when Hurricane Agnes hit, and again in the Holocaust of March 1973, the level of Lake Ontario was within the regulated range of 244.7 to 246.7 and below floodstage of 246.7 ft.

Gentlemen: On about April 6, 1976, we will again be above the A.C.E. Flood Stage and helpless to resist a disaster that could strike at any moment from now until at least December 1976. All of the ingredients are there just waiting for a STIFF NORTH, NW, or N.E. Wind. We pray to GOD it doesn't happen, but if it does, all Hell will break loose.

We have been calling on you for help since January 1970, and we can not say our pleas have fallen on deaf ears, because you have answered. You have given us more Lake level Regulations and appropriated \$17 million, for "Further Studies of Great Lakes Levels" by the International Great Lakes Level Board and the Great Lakes Basin Commission. We do indeed appreciate your efforts but we shoreline residents face the same disaster today that we have since at least 1970.—You have given us no permanent solution to these Man-made disasters.

We know you can do nothing at the present time to relieve the predicament the I.J.C., the A.C.E., and the St. Lawrence River Board of Control have indiscriminantly placed us into. However, you can take immediate action to see that we never again are faced with such a man-made problem.

Of course Stewart Fonda's (of the I.J.C.) letter of February 13, 1976, File #68-3-2, to Congressman Frank Horton, states in paragraph six:

"It is not feasible to regulate the Lake at the 242-245 ft. range advocated by Mr. Ketchum. Such regulation—would produce damage to shipping and power

production, and would cause severe problems (?) for shoreline owners by restricting their recreational boating".

To this I would direct your attention to Article VIII of the International Boundary Waters Treaty of January 11, 1909:

"—The following order of precedence shall be observed among the various uses enumerated for these waters, and no use shall be permitted which tends materially to conflict with or restrain any other use which is given precedence over it in this order of precedence:

- (1) Uses for domestic and sanitary purposes;
- (2) Uses for navigation—;
- (3) Uses for power—.

The foregoing provisions shall not apply to or disturb any existing uses—."

I would further direct your attention to page 9 & 10, paragraphs g, i, k, of the I.J.C. "Dockets 67 & 68" dated October 29, 1952.

"(g) Consistent with other requirements, the levels of Lake Ontario shall be regulated for the benefit of property owners of the shores of Lake Ontario so as to reduce the extremes of stage which they have experienced."

"(i) Under regulation, the frequencies of monthly mean elevations of approx. 247.0 ft. and higher* on Lake Ontario shall be less than would have occurred in the past—". —(* Higher than 244.0 three periods in the last four years.)

"(k) In the event of supplies in excess of supplies of the past, the works shall be operated to provide ALL possible relief to riparian owners—".

Concerning I.J.C. Accountability to ameliorate damages of the last six years, I would call your attention to paragraph (a) of the State Department Bulletin, a press release #851, dated October 31, 1952.

"(a) All interests on either side of the International Boundary which are injured by reason of the construction, maintenance, and operation of the Works shall be given suitable and adequate protection and indemnity in accordance with the laws in Canada or the Constitution and laws of the U.S.—".

"Gentlemen, since the regulated range of 244.7-246.7 ft. has proven to be incompatible with the shoreline, we urgently and respectfully request that you make an immediate commitment to regulate the level of Lake Ontario within the range of 242-245 ft. as soon as possible. The suggested range is compatible with the natural shoreline of Lake Ontario.

In the event that I have not answered all pertinent questions to your complete satisfaction, I would respectfully request that you call an immediate Congressional Hearing so that the truth will be known once and for all. Our Congress is the only remaining hope we have for future rational regulation of the level of Lake Ontario.

Sincerely yours,

DONALD F. KETCHUM.

STATEMENT OF W. J. MARCELLUS, DIRECTOR, LAKE ROAD ASSOCIATION

Mr. MARCELLUS. My name is W. J. Marcellus, and I reside at 1312 West Lake Road in the town of Williamson, N.Y.

I would like, first of all, to thank you, Senator Buckley, for arranging this hearing. It is our fervent hope that this hearing will be a first step in alerting the Congress to our predicament and that additional steps will be taken by the Congress to alleviate the problems of lakeshore property owners. Believe me, when I say that we have tried desperately to obtain at least a promise of relief from the exceedingly high water level on Lake Ontario, but to say that we have failed would be the understatement of the year. We are ever hopeful, however.

I will not dwell here on the damages along the lakeshore. The extent of the damages is well known by all. The reason for the damages is also well known. Very simply, Lake Ontario is out of control and those who are charged with the responsibility of controlling the lake level are frantically searching for plausible reasons so that an effective snow job can be done on lake residents. I can assure you that

lakeshore property owners are fed up with baloney, and we want action and we want it now.

When I say that we want action now, I shall qualify that. I do not mean that action can be taken now to alleviate this year's high water problem. The damage has already been done and, other than allowing the maximum outflow from the lake at the present time, nothing further can be done. What I am talking about is definite action to plan ahead so that lakeshore property will be safe and sound next spring.

Every effort should be made toward this objective and safety valves should be included in such planning to correct errors in planning such as have occurred in the past and will, undoubtedly, occur in the future.

In this respect, the views and ideas of lakeshore people should and must be sought and seriously considered in future deliberations relative to lake-level planning. I have said it before and I say it again. There are people who have spent their lives living along the lakeshore, and they know the lake like the back of their hands, but have they ever been consulted? Not by a darn sight.

It would seem to me that their views should be sought out and given serious consideration. I realize that they have no fancy scientific instruments, and they have no fancy charts, but I will put my money on their predictions any day of the week.

In this regard, many of us applauded the announcement by the International Joint Commission on April 9th of this year, to the effect that the Commission had approved the establishment of a public-participation advisory panel to work with the International St. Lawrence River Board of Control.

I realize that these things take time, but I would hope that this panel would be formed shortly. Chairman Smith of the IJC informed me over the telephone last week that the formation of the panel was in the planning stage. Let us hope for prompt action. It is my belief that such a panel can be very helpful to all concerned.

In all fairness to the IJC, I should point out that I spent an enjoyable day at their offices in Washington, with Chairman Smith and Stewart H. Fonda, Jr., Engineer Adviser to the IJC, and I am glad to see you both here today. I received a very cordial greeting from everyone, and the discussion relative to lake problems was both pleasant and informative.

I learned some things I did not know, and I believe my views were informative to Chairman Smith and Mr. Fonda. It is my further belief that reasonable people on the proposed panel dealing with a reasonable IJC can come up with reasonable answers to our problem. To approach the problem in any other manner would be a complete waste of time.

At one time, I felt strongly that the Army Corps of Engineers was a topflight organization that could do no wrong. My views in this respect have undergone a drastic change. Unfortunately, I believe that Congress still holds to the belief that the corps is above criticism and above reproach.

Apparently, the corps can go merrily on its way and neither worry nor fear the consequences. I believe that they should be held accountable for their errors. I have attended numerous meetings with representatives of the corps in attendance, and have tried to be patient

while listening to the same old tired stories about why the lake is high and what to do to protect one's property. No matter how it is sliced, Senator, this is still just a bunch of baloney.

I, for one, am fed up with the holier than thou attitude of the corps. It is time that they were made aware of the fact that they are working for you and me. We pay the freight but deliveries have been extremely poor.

What can the U.S. Congress do to help us in our predicament? I think they can do quite a bit. I would like to see legislation introduced and passed in both houses of Congress, directing the American representatives on the International Joint Commission and the International St. Lawrence River Board of Control, and directing the U.S. Army Corps of Engineers to heed the views of lakeshore people in their deliberations.

We know that power and shipping interests are listened to, and we believe it is high time someone paid attention to us. After all, Senator, we are talking about our homes and businesses, and we have been ignored and neglected for too long. We are looking to you for help.

Thank you so much.

STATEMENT OF BRIAN IVES, COMMODORE OF SODUS BAY YACHT CLUB

Mr. IVES. I am Brian Ives, Commodore of Sodus Bay Yacht Club. Our yacht club consists of 300 people from as far away as Florida.

I guess I speak from two points of view. One, of course, is as a property owner along the shores of Lake Ontario. However, I would like to address myself to damage done to recreational facilities.

In many cases this damage is reversible. Now, the recreational user does not directly own property, but suffers the effects of high water. This high lake level has been detrimental to the health and safety of both swimmers and boaters, especially in areas such as Sodus Point. In Sodus Point, you have to remember, we are on a septic system. The high lake level has raised the water table. The septic systems don't work; we are pouring raw sewage in the lake, a health hazard to swimmers.

As far as boaters, the erosion tore the trees up, and all this trash and junk floats around the lake. This presents a navigational hazard to recreational boaters. I don't know how many of you are boaters. I assume you are, if shore residents. But I have a sailboat and I go out on Lake Ontario and see logs 20 feet, 30 feet long. Some of these trees have iron spikes. If you hit them going 10 knots, you are going to go spinning. We have had several instances where this happened, and people have had to be towed in and suffered lots of damage to their boats and endangered their lives.

It was mentioned we are going to be having a regatta. We are going to be host for the yacht races. We are expected to have something like 200 boats and over a thousand people. We don't quite know what we are going to do about sewage facilities when they show up. I am not sure we can rent enough porta-potties to service all of them.

We have been facing this problem every four years ever since Hurricane Agnes dumped all that water on us, and it hasn't gone away. The village of Sodus Point is building a sewage system to, hopefully,

take care of some of these problems. I am not sure they are going to be able to finish this year. Now they tell us in September, the rumor is, because of the high water level, when they dig trenches they are not able to connect people and hook us up.

And I guess my final point, I would like to say the erosion is destroying the beaches and other recreational areas. I don't know how many of you have gone to see Chimney Bluffs. The State bought that and there was talk of making a State park. But the erosion from the high wave action is destroying it. It's a loss to the entire State.

The Canadians are facing the same problem. I have been to the Kingston area. They are suffering from the same problems that we are.

I thank you for the opportunity to make the views of the recreational users known. We are not often thought of. People seem to think we don't care, but we really do. A recreational facility is part of our heritage we pay taxes to support.

Thank you Senator.

Senator BUCKLEY. I had asked General Moore earlier if he had any kind of history of the periods of heavy erosion along the lakeshore, and, I gather, that he did not.

But two of you have mentioned the fact you have lifetime experience. If anyone here knows or could compile, say, over the last 50-year period sort of a record of extraordinary erosion along the lakeshore, I think it would be helpful to help Congress get a perspective of the problems.

As I said, the hearing record will be open 30 days and you can forward the information.

STATEMENT OF JUDGE JANE B. MOXHAM, PRESIDENT, NIAGARA-ORLEANS SHORELINE PROTECTION ASSOCIATION

Judge MOXHAM. Ladies and gentlemen, I am Jane B. Moxham from the town of Wilson. Senator, Wilson is approximately 70 miles from this area bordering on Lake Ontario.

I am president of the Niagara-Orleans Shoreline Protection Association. We are young, about a month old, so we don't have too many axes to grind at this point. But I will accept all the prior statements of the people who testified before me other than the gentlemen over there.

I would like to tell you very briefly a couple of instances that we have in our area in Wilson. Prior to that, I must tell you that my group represents the whole area from Youngstown, New York, in Niagara County, and includes neighboring Orleans County. So, when we get through with this we are going to have many thousands of people, probably millions, and I know we will have each and every shoreline owner because so many already have shown a great desire to be a part of the Niagara-Orleans Shoreline Protection Association.

Now, I can say that probably, in 1976, we personally have lost probably 12 to 15 feet. I also think that it was as bad this year as it was in 1973, except we didn't have the high winds that came with the storm of 1973. But I do think the erosion was almost as bad.

Most of these people have put rock and/or something along their property, but all of this is eroding behind, and the water is coming

between the rocks. It doesn't seem to make any difference how good a job you had done. That doesn't seem to be the answer. It is the high level of the lake. We must work for, and get the lake level lowered.

I also would like to add that in 34 years living in Wilson, we personally have lost about 300 feet of frontage, which is a lot to lose and very distressing to see your yard being washed away year after year.

In the town of Wilson we have an area called Rossevelt Beach. In this area, they have lost a road and many homes which put many of the people in great jeopardy.

I would personally like to escort you around Wilson anytime, Senator. Please feel free to come down and I will take you all around. So you can see how sad this all is.

And, I thank you very much for having us come today. You were like the great white hope to us because we have had not real satisfaction from anyone. We have written letters to no avail. I thank you very much, and please let me show you our area, so you can have a first hand knowledge of our problems.

Senator BUCKLEY. Thank you. I would like to take you up on that. Mr. Glen Stoddard.

STATEMENT OF GLEN STODDARD, PRESIDENT, BUTTERFLY SHORES PROPERTY OWNERS ASSOCIATION

Mr. STODDARD. Senator Buckley, I don't intend to bore you people with what has been said previously. I concur 100 percent.

However, I would like to state that I, too, have been out on the shores of Lake Ontario for 60 years and I never can recall seeing that lake as high as it is at the present time. And I can prove it by rock on the shoreline in our area; also, offshore. In 75 to 100 yards, 12 and 15-foot water. Ordinarily, in previous years that one rock in particular on the last part of June starts coming out of the water. And it hasn't been out in 4 years, gentlemen. Why? If you could get Lake Ontario at 244 feet from December through the rest of the winter, why can't you lower that lake more?

I know you are going to say we have got to end that ice cover. But it all adds up to two words. If my memory serves me, I think there was ice breakers experimenting with the opening of that channel on the St. Lawrence River for future winter shipping.

Senator Buckley, I am sure that you are going to consider very seriously the best interests of all people, we the property owners, and the testimony the property owners have given before this committee.

I thank you very much.

Senator BUCKLEY. Thank you, Mr. Stoddard.

I have here a telegram from Mr. Joseph Romola, which will be put in the record.

[The telegram follows:]

[Western Union Telegram]

WATERTOWN, N.Y., June 14, 1976.

To: Hon. James L. Buckley, care Marjorie Sentiff, Upstate Regional Office of Senator Buckley, Rochester, N.Y.

While we find that a previous commitment has precluded our attendance at your hearing on high lake levels the Saint Lawrence-Eastern Ontario Commission wishes to make the following comments part of the record on this most important and timely topic.

The Commission recommends that the following elements be added to an investigation of problems associated with changing lake levels as proposed by the Lake Ontario Protection Act of 1976.

An important issue is the question whether total damages incurred by high water could be reduced through changes in the plan of control or its implementation to determine if adverse impacts could be reduced. One of the critical elements required would be stage damage relationships for both Lake Ontario-St. Lawrence River. Above controlled structure and for the St. Lawrence River below the control structure other necessary elements include the relationships between economic impact and various channel depths and on power interests from various modes of operation.

With this information estimates of the impact of alternative operation plans could be derived and trade offs between adverse impacts to any two or more parties could be evaluated objectively.

Currently this is not possible because these relationships have not been determined or used in deriving the optimum mode of operation thus decisions concerning water level regulation are not made to minimize total damages considering all interests. The Commission also recommends that in addition to continued investigation of engineering problems associated with Great Lakes levels the proposed act be expanded to authorize a thorough investigation of existing institutional arrangements our analysis of the high water problems indicates that current regulation procedures give low priority to Riparian interests and do not take into account the impact of changing water levels unless sustained productivity of water dependent natural resources.

Investigation of these elements would add new dimensions to the lake level program and perhaps assist in the achievement of a mode of operation which gives equal recognition to all interests impacted by changing lake levels.

JOSEPH A. ROMOLA,

Chairman, St. Lawrence-Eastern Ontario Commission.

Senator BUCKLEY. I am afraid we have come to the end of the time allotted. A number of individuals indicated they would like to present statements: Norbert Schroth; William Steinfeldt; John Lendro; E. S. Germain; Father George S. Wood; G. Goodwin; Mary Hannick; Al Steiglein; Katherine Bolton; Pete Frank.

As I indicated earlier, if you will present a written statement, it will be read and be put into the permanent record of the hearing for the benefit of my colleagues who were not able to be here.

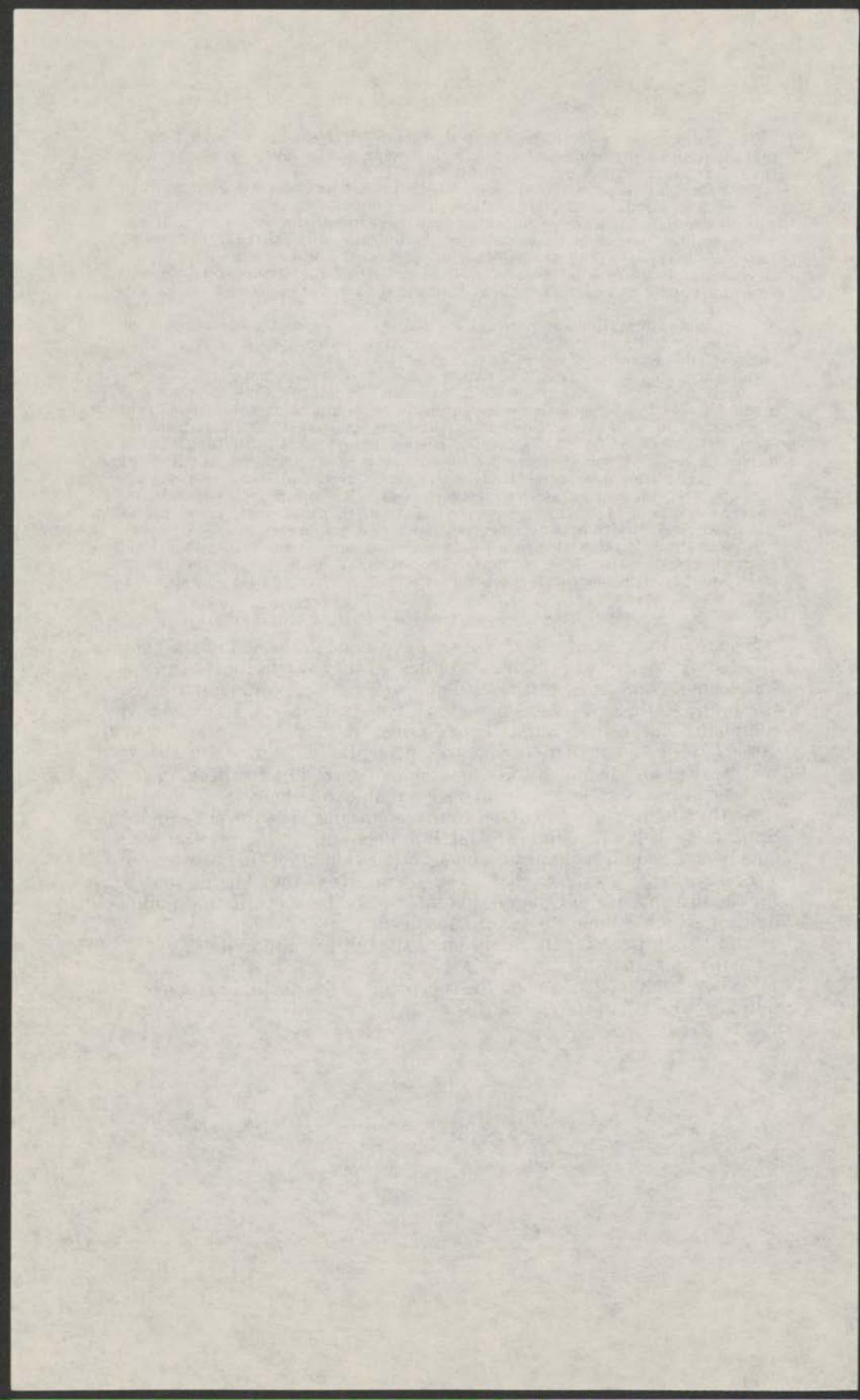
At this point, I am scheduled to move out and visit the sites under Supervisor Riley's guidance. And I understand he has several cars outside and would be happy to bring others along on this inspection.

In any event, I want to thank you all for attending. Thank you all for the informative testimony, that, obviously, have conflicting points of view which I hope we can get resolved.

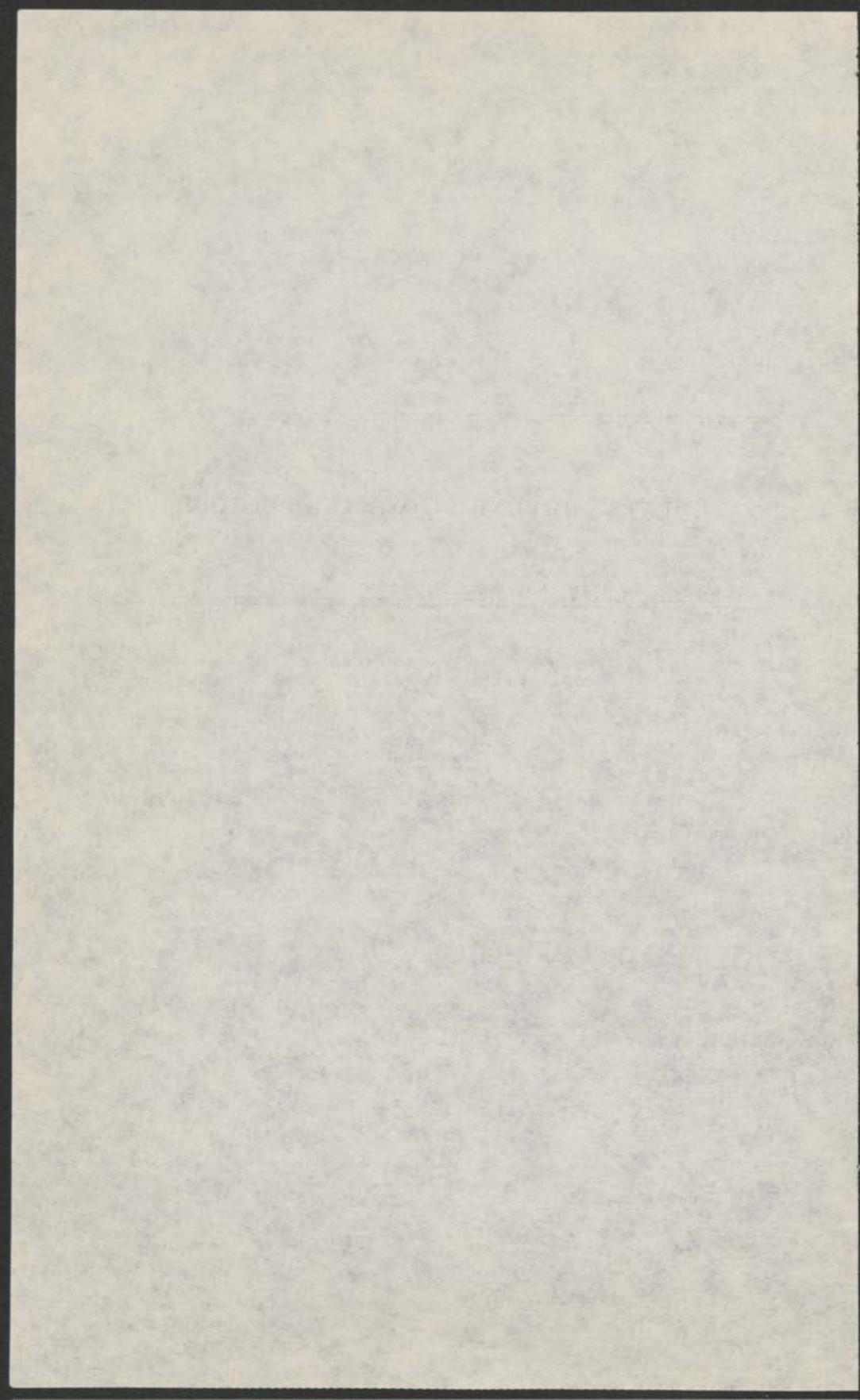
And I shall push for the adoption of the bill I introduced.

Thank you all.

[Whereupon, at 12:35 p.m., the subcommittee recessed, to reconvene subject to the call of the Chair.]



STATEMENTS, COMMUNICATIONS, AND PHOTOGRAPHS





THE ASSEMBLY
STATE OF NEW YORK
ALBANY

JOHN B. DALY
ASSEMBLYMAN 138TH DISTRICT
935 NIAGARA AVENUE
NIAGARA FALLS, NEW YORK 14305
(716) 262-2361

June 17, 1976

Honorable James L. Buckley
United States Senate
Washington, D.C. 20515

Dear Senator Buckley:

Unfortunately, I was unable to attend the public hearing in Rochester on Tuesday, June 15, concerning the problem of erosion due to high waters in Lake Ontario because of a previous legislative commitment.

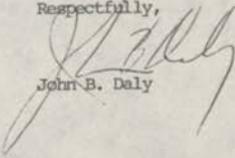
Therefore, I would deeply appreciate it if you would allow this letter to be introduced as testimony before your subcommittee.

There is no doubt that erosion of land on Lake Ontario is becoming a greater and greater problem to the people of Niagara County, Orleans County and Monroe County, etc. I am the State Assemblyman for the 138th Assembly District and I represent approximately forty miles of shoreline on Lake Ontario in Niagara County. Since I have taken office in January, 1973, the erosion problem has been one of the most consistent and difficult problems in my Assembly District. Certainly, the high water problem that faces us this year and in previous years is a major contributor to the erosion problem. I believe that intensive investigations must be held to determine if we are doing what we should be doing in maintaining the depth of Lake Ontario at the present level. I would hope that we would find that Lake Ontario can be kept at a lower level than we are presently maintaining. The heartbreak of many homeowners along Lake Ontario is obvious. As the waters erode more land, more homes are placed in jeopardy. In addition to the study of better depth control, I believe that you should also look at proper ways of preventing erosion at the shoreline with potential help from the federal government.

This problem, which has existed for a number of years, is becoming an even greater and more complicated one, and I believe that action should be taken immediately by the federal government in investigating all the present rules, regulations and changes which will help the people who own property on this great lake.

If there is anything I can do to be of assistance to your subcommittee, please feel free to call on me. I consider this one of the greatest problems in my Assembly District and would hope indeed that some solution can be found or some help given.

Respectfully,


John B. Daly

JBD/jb

Mrs. Henry Babcock
101 Grant Street
Lockport, New York 14094

July 10 1976

Senator James Buckley

Dear Sir

In 1973 we spent \$7500 to protect our shoreline on Lockwood Heights, Olcott, New York. Now in 1976 the water is so high it is taking out land above the protective gabions and big and small rocks. Please help us retain our land by lowering the Lake Ontario level.

Sincerely

Mrs Henry Babcock

BLINO SODUS BAY IMPROVEMENT ASSOCIATION
RED CREEK, N.Y.PETITION

WE the undersigned are all owners or occupiers or users of lake shore property along Lake Ontario and the St Lawrence River and are concerned with the erosion of the shore lines of said lake and river since 1970. We have all read the letter of Donald F. Ketchum dated the 6th day of April, 1976 (a copy of which is attached hereto and made a part hereof) and unanimously agree it represents our feelings in this matter. We implore you to take whatever affirmative action is necessary to correct this situation and eliminate the continual erosion of these shorelines. We feel that this is due solely to the regulation of the St. Lawrence Seaway level and is in violation of the International Boundary Waters Treaty of January 11, 1909.

It is the feeling of the undersigned that many of the erosion problems that exist in the spring could be eliminated if the winter level were substantially reduced to allow for the spring run off.

Name	Town Location of Property	Owner	User
Margie Liche	Wolcott	Blind Sodus Bay	Margie Liche
William Green	"	"	William Green W. Green
Howard E. Drum Jr.	"	"	Howard Drum Howard Drum
Sylvia Drum	"	"	Sylvia Drum Sylvia Drum
Thomas R. Wilcox	"	"	Thomas R. Wilcox Thomas R. Wilcox
Harvey H. Bogue	"	"	Harvey H. Bogue Ed. Bogue
Bettie H. Gove	"	"	Bettie H. Gove Ed. Gove
Raymond J. Datz	"	"	Raymond J. Datz
Al Stenglein	"	"	Al Stenglein
Clifford C. Harris	Town of Wolcott (Blind Sodus Pt)		Cliff Harris
Erof A. Harris	"	"	Erof A. Harris
M. Eugene E. Ester	Town of Wolcott	Blind Sodus Bay	M. Eugene E. Ester
Richard H. Hayes	Town of Wolcott	B.S.B.	R. Hayes
Daniel Schlegel	Town of Wolcott	P.O.D.	D. Schlegel
George W. Markel	Town of Wolcott		George W. Markel

Name	Town	Location of Property	Owner	User
Arthur J. Gifford	June 1910			
Henry Soules	Wolcott	BSB	H. Soules	H. Soules
Chauncey McDonald	"	"	C. McDonald	
Norman Fenske	"	Blind School	Norman Fenske	
Donald H. Feker	Bluff Bay	Blind School	Donald H. Feker	
Virginia Allen	Blind School	Bluff Bay	Jane	Jane
Joseph J. Gerula	P. Lind	Bluff Bay	Joseph Gerula	
John and Loretta	Town	Wolcott B.S. Sch. Bldg.	John Metzger	John Metzger
John Metzger	Town	Wolcott	Blind School	John Metzger
W. H. Reading	Town	Wolcott	Blind School	W. H. Reading
Luy Scaldone	Town	Wolcott	Blind School	L. Scaldone
Mary C. Dixon	"	"	"	M. C. Dixon
Adelbert H. Strickland	"	"	"	Adelbert Strickland
Jessie M. Strickland	"	"	"	Jessie M. Strickland
Christy E. Lott	"	"	"	Christy E. Lott
William C. Cottrell	"	"	"	William C. Cottrell
Norm Stoffel	"	"	"	Norm Stoffel
Marie Caywood	"	"	"	Marie Caywood
Kenneth Caywood	"	"	"	Kenneth Caywood
Kenneth L. Sucke	"	"	"	Kenneth L. Sucke

Law Office
 W. Alfred Brim
 419-421 Buelly Building
 Lockport, New York 14094
 Area Code 716
 Telephone 433-5500

July 8, 1978

Hon. Jacob K. Javits
 United States Senate
 Washington, D.C. 20510

Dear Senator Javits:

C I have had a summer home on the south shore of Lake Ontario since 1944. We have watched the bank gradually erode over the years due to high lake levels.

O The publicity and promises that were made concerning the St. Lawrence Seaway was that the level of Lake Ontario would be lowered and regulated to safe height to protect the land.

P Also, it is stated in the Treaty of 1909 between the United States and Canada that shore owners and riparian owners were to have preference as to the regulation of water levels.

Y Instead of the aforementioned, the record will show we have had higher lake levels every year, and there has been no effort to correct the situation. Even the shipping industry has stated they do not require the higher levels in the lake or harbors.

It has been claimed that studies are being made regarding this matter. The "studies" have been going on now for 12-13 years. It seems that if they have not arrived at anything after this time, they are probably hiding facts.

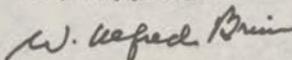
I feel this matter should be taken up directly with the President as no one on the International Joint Commission seems interested. This Commission serves at the will of the President without Senate Confirmation. People on the Commission cannot appreciate our plight as none of them lives anywhere near the shores of Lake Ontario.

- continued -

The lake shore landowners want the lake level lowered. The longer the Commission takes to honor our wishes, more land will be lost along our shores.

Therefore, I implore you to take steps to see that our request is honored immediately.

Very truly yours,



W. ALFRED BRIM

WAE/m

cc:

Hon. James L. Buckley
United States Senate
Washington, D. C. 20510

Hon. John J. LaFalce
House of Representatives
Washington, D. C. 20515

July 6, 1976

Hon. James L. Buckley:

Dear Sir:

after attending the Senate hearing at Rochester N.Y. conducted by you. It seemed that the Seaway authority has interpreted the Treaty wording to suit themselves, without giving due consideration to its content.

Why is it that all these efforts now being expended seem to be of a long range preventive plan rather than the present problem of needed repairs + maintenance.

The Corp of Engineers should be instructed to be more helpful in the field of Plans + suggestions for the repair of damages and giving some legal aid and supervision of work done at Govt. expense. Rules for Proper + Competant construction by the workers repairing the damage.

In the big rip off of 1973 of the repair funds advanced by the S. B.A.

#1

Much work was done of an inferior quality and which fell down less than three years after completion, and which the Federal Govt refused to give the property owners any assistance against the unscrupulous contractors who ripped them off to the extent that after three years we are right back where we were with the box still staring us in the face with no assistance available.

Why not be practical about it and the Corp of Engineers get busy and do some repair work with the millions spent on surveys which always seem to be obsolete

Sincerely

Howard Carr
61 W 5th St
Fulton NY
13069

Resolution No. 125
 Memorializing the International Joint Commission regulating Lake Ontario together with Governor Hugh Carey, the New York State Legislature and the Congress of the United States to undertake immediate action to stop property damage along the southern shore of Lake Ontario.
 By Legislator W. Bernard Craine

WHEREAS, the outflow rates which directly affect the level of Lake Ontario are determined by the International Joint Commission according to guidelines it has established, and

WHEREAS, such commission has the responsibility, amongst other things, to regulate such water level in a manner that will not jeopardize the lives and property of homeowners residing along the southern shore of Lake Ontario, and

WHEREAS, the level of Lake Ontario is rising at an alarming rate to the point where such level may exceed the historic high level mark of 1973 which resulted in serious property disaster and losses of millions of dollars, and

WHEREAS, as of the week of May 20-26, 1976, the lake attained a level of 247.05 feet for an increase of one foot four inches over the lake level for the same date last year, only five inches lower than May of 1973, and

WHEREAS, if such lake level continues at its current level or exceeds the current level, substantial property damage may result, which could cause damage in the millions of dollars, now, therefore, be it

RESOLVED, by the Legislature of the County of Cayuga, as follows:

Section 1. This Legislature strongly urges the following remedial action be undertaken forthwith to remedy the problem of excessive lake level on Lake Ontario:

A. That the International Joint Commission immediately undertake a review of its guidelines to determine whether or not such guidelines are the contributing factor to the high water problems that are occurring in 1976.

B. That the International Joint Commission review its existing criteria and immediately implement outflow rates that will reduce lake levels so as to avoid property damage along the southern shore of Lake Ontario.

C. That the International Joint Commission establish a more realistic basis to project lake levels than the projection system presently being utilized.

D. That Governor Hugh Carey take all preliminary steps that will be required to declare the affected southern shoreline a federal disaster area.

E. That the International Joint Commission establish as a "First Priority" in making its determination of lake level the preservation and protection of southern shoreline properties, as per treaty provisions.

F. That the Clerk of this Legislature is directed to forward certified copies of this resolution to the International Joint Commission, Governor Hugh Carey, the Senate Majority Leader Warren Anderson, Speaker of the Assembly Stanley Steingut, The Honorable Robert McEwen, Honorable Jacob Javits, Honorable James Buckley.

Section 2. This resolution shall take effect immediately.

I HEREBY CERTIFY, THAT I HAVE COMPARED THE FOREGOING COPY OF A RESOLUTION DULY PASSED AND ADOPTED BY THE LEGISLATURE OF CAYUGA COUNTY, AT A MEETING HELD ON THE 13th DAY OF July, 1976, WITH THE ORIGINAL RESOLUTION AND THAT THE SAME IS A TRUE AND CORRECT COPY AND TRANSCRIPT THEREOF, AND THE WHOLE THEREOF.

Florian Longley
 CLERK COUNTY LEGISLATURE

DATED July 14, 1976

623 Lake Road
 Youngstown, N.Y.
 14174

July 6, 1970.

Senator James Buckley,
 Senate Office Building,
 Capital Hill,
 Washington, D.C.

Re: Shoreline Erosion.

Dear Senator,

I am writing to express my concern and outline the problems I am experiencing with the high level of Lake Ontario.

My farm is situated on the Lake Ontario Shoreline, approximately one and one half miles from the mouth of the Niagara River. I have 1000 feet of lake shore frontage which is used for the operation of the farm business.

The farm was established in 1910 by its previous owner. Since that time until approximately 1968, lake erosion has caused the loss of approximately fifty feet of land from the depth of the property. However, from 1968 until the present, lake erosion has accounted for the loss of an additional fifty feet. In addition to the loss of land there has been the loss of twenty fruit trees to the erosive forces of the high lake level, since 1968. These were mature high bearing trees and their loss has subsequently caused a loss of income. This, as you can see, has been a marked increase in the damage caused by lake erosion..

I am bringing this information to your attention in the sure hope that it will help create a movement of affirmative action, on your part and on the part of your colleagues in the senate, toward the preservation of the Lake Ontario shoreline and the conservation of one of our most precious resources,, the land.

Yours truly,

Russell Diez

Russell Diez.

July 2, 1976

Dear Sirs: *Sen James S Buckley*

I own a cottage on Lake Ontario, at Shadageen N.Y. If the water level isn't kept down, my cottage will be in the lake. I have tried to grow grass and plants to keep the ground firm. But the last storm we have had took 200 tons of dirt in front of the cottage. I can't understand why, I should put more money into the land if you can't get the water level down. I have joined the Lakeshore Protection Ass. I hope this will put our ideas across to the government, that it is the United States side right now that we are worried about, I know the Canadians have a problem also.

It seems to me that the water level should be lower in the spring, when the worst storms are due. Right now I would like to know if the government would foot my bill for an extended wall to keep my cottage from going into the lake??

Something has to be done to help the people that own land on the shoreline. I am retired and if this keeps up I shall have to get loans to keep my cottage on land and not in the water.

I think something should be done now, before the next storms are due, for I don't know how to prevent my cottage going into the lake if the storm is from the East.

Please, understand our problem and help us.

Respectfully yours,

Alvin O. Desmarais
P.O. Box 153
Longport N.Y. 114694

75-421 168

Re: Lake Ontario Shore Line
Town of Wilson - Part of
Lot 34 - Township 15

We are owners of the above property. It was previously owned by Cornell Laboratories and used for experimental purposes. In 1973 the Niagara-Orleans County shoreline was declared a disaster area and Federal funds were provided under the small business loans to land-owners to curb further erosion. Cornell Lab did not apply for reasons unknown to us - possibly because they were not aware of it, as was the case of many property owners. Consequently our property shoreline was left unprotected.

This year there was a particularly damaging storm in late March. We lost approximately 15 feet of shore line at that time.

When viewed by Representative John J. LaFalce and State Assemblyman John B. Daley on Friday June 18, 1976 during a tour with members of the Niagara-Orleans Shoreline Protection Agency, it was evident that the properties protected by stone in 1973 had substantially less erosion than the unprotected areas. Also that the erosion of the unprotected properties is gradually cutting back into the protected properties making the work funded in 1973 all in vain unless there is prompt action.

We respectfully request:

1. That funds again be appropriated immediately to curb further damage. In particular to shore areas like ours that were not protected in 1973.

2. That, in accordance with the discussions at the public hearing of the Subcommittee for the Committee on Public Works held in Rochester Tuesday June 15, 1976 and chaired by U. S. Senator James L. Buckley, the Lake Ontario level be lowered particularly during the fall so as to stop the millions of dollars of damage caused by high water in the Spring.

Respectfully submitted

George A. Glaser

George A. Glaser, D.D.S.

and

Vera K. Glaser

Vera K. Glaser (Mrs. George A. Glaser)
125 South Fifth St.
Lewiston, New York 14092

cc: Senator James L. Buckley
Rep. John J. LaFalce
State Assemblyman John B. Daley
Joseph A. Foley, Army Corps of Engineers
Mrs. Jane Moxham, Town Justice, Wilson, N. Y.

July 12, 1976

Senator James L. Buckley
Senate Office Building
Washington, D. C. - 20510

Dear Sir:

We, Norman C. and Willa S. Heveron own property on Lake Ontario whose frontage is falling away as the Lake's high waters erode our lands.

Complete destruction of our home is getting closer and closer as the high water level is increasing instead of something being done to lower the lake level.

Taxes we are paying on land that has already been swallowed-up by Lake Ontario's high level is very unfair to us as taxes are rated on the amount of lot size which has decreased tremendously.

The U.S. Army Corp of Engineers visited us recently and offered a great deal of sympathy at the condition of our banks but action speaks louder than words and it seems we need a LOWER LAKE LEVEL solution rather than just talk.

The "Scuaw Island" project certainly is not the answer as in all probability, excess water would drain into Lake Ontario from the overflow of Lake Erie and we do not want this to happen.

We shall be intensely interested in all legislature that we feel you surely will introduce in congress. This protection of our shoreline is imperative and should have supreme priority in every respect to our interests.

All public meetings pertaining to this problem will be attended by us with the hope of hearing about a definite solution.

Respectfully,

Norman C. Heveron
Willa S. Heveron
Norman C. Heveron
Willa S. Heveron

Home address: 77 Greenway Blvd., Cheektowaga, N.Y. - 14225
Lake " West Lake Road, Lyndonville, N. Y.

Barker, N.Y.
June 30, 1976

Senator James Buckley
Senate Office Bldg.
Washington, D.C. 20510

Dear Senator:

I am writing you regarding the level of Lake Ontario. I was born and raised not far from it; and since 1950, I have made my home on the shores north of Barker, N.Y.

Over the years, I have watched my land disappear into Lake Ontario. I had a boathouse with room for two outboards, which we have had to move back once and this year is getting a good pounding whenever we have a notherly blow. A large willow tree next to it, toppled on it due to the high water washing the roots bare.

In 1973, a cement wall was erected to protect what was left of the front lawn. At the time, there was beach to the north of the wall. Today, there is nearly two feet of water against the wall. A ten foot protecting wing was built inland at the end to hopefully stop the water from working behind the wall. Due to the high water, it has finally managed to work behind at the end, during the storms.

Since the advent of the seaway, we have had many storms and continuous high water. I think it time that citizens were thought of; as well as the power and shipping lobby.

Due to the fact that we who elect to live on the lakeshore because we like it; we are discriminated against with higher assessments and consequently, higher taxes

Respectfully,

Arthur J. Hood
Arthur J. Hood

Senator James L. Buckley:

SENATE HEARING ON LAKE ONTARIO LEVEL REGULATION. June 15, 1976.

Rochester, New York, New Federal Bldg., Room 402, 10:AM.

Testimony of Ingraham Humphrey

1150 Lake Road West

Williamson, New York, 14589.

What seems to be forgotten in all discussions of lake levels is the effect of small increments, or documents, over a long period of time. To begin with, each differential of 1000 cu. ft. per second of water flowing into Lake Ontario, or withheld from it, changes the level 0.1476 inches per month. This seems infinitesimal, BUT:

1. How long has the Long Lac-Ogachi River Diversion been in effect? --- easily for 35 years and probably longer. The I.J.C. admits to a diversion of 5000 cu. ft. per sec. and during flood periods this has probably been much more. All this water either gets stored in Lake Superior, which is at an extremely high level at the present time, or goes into the lower lakes, all of which are also high. To calculate the effect on Lake Ontario, simply multiply 420 times 0.1476 inches. This equals 5.166 ft. Even if $\frac{1}{2}$ of this water is still in Lake Superior, we still have quite a tidy sum.

2. Conversely, the amount of water released through the Chicago Drainage Canal was limited by a supreme Court decision in a case involving the shipping interests against the City of Chicago. The drainage was limited to keep the level of Lake Michigan high for shipping purposes. Easily another 5000 cu. ft. per sec. could be let out through the Chicago Drainage Canal. This diversion would lower Lakes Huron and Michigan and ^{have} the eventual effect of less water coming into Lake Ontario. Together keeping more water out of Lake Superior and getting more water out of Lake Michigan would have the eventual effect of lowering ALL of the Great Lakes.

There are only 3 solutions to our shoreline dilemma:

1. Let more water out of Lake Ontario NOW and keep letting it out until the Lake has reached and maintained a decent level.

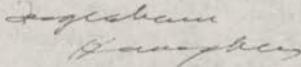
SENATE LAKE LEVEL HEARING --- Humphrey Testimony --- Page 2.

2. Keep the excess water from the Long-Lac-Ogachi River Diversion out of Lake Superior.

3. Let more water out of the Chicago drainage Canal.

Finally, It is no accident that the Lakes are at an all time high. IT IS NOT DUE TO "MOTHER NATURE" BUT RATHER TO MANS ATTEMPT TO BRING MORE WATER INTO THE LAKES.

Respectfully,
Ingraham Humphrey



LAKE BAY ASSOCIATION

400 LAKE ROAD
WEBSTER, NEW YORK 14580
AREA CODE 716-467-3879

*Elected Executive Officers to
Coordinate Organizations*

Peter W. Frank
President

Ryal De Volst
Vice President

Ronald J. Schneider
Treasurer

Elmer V. Smith
Secretary

June 23, 1976

Senator James L. Buckley
Senate Office Bldg.
Washington, D. C. 20510

Dear James,

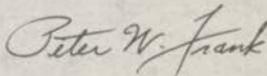
Enclosed is a copy of our presentation to the Senate Sub
Committee's hearing.

Because of the shortage of time we did not have chance to
deliver it at the Rochester hearing.

I hope you will give it some consideration.

Yours truly,

Att Julie Schafer.



Text of the LAKE, BAY and PROPERTY OWNERS ASSOCIATION
 To
 The U.S. Senate subcommittee's hearing, to investigate the high Lake Ontario
 water levels, on June 15, 1976, presented by Peter W. Frank.

We are asking Senator James L Buckley who is the Ranking Republican Member of the Committee on Public Works, to ask for a Congressional Senate investigation, on the high water lake levels in the Great Lakes Basin.

In order to hold this investigation, the Committee on Public Works, must hire a private Consulting Engineering Hydrologist firm to make the study of the Great Lakes Basin --- separate from the Corps of Engineers, Power engineers and Shipping engineers. The reason for this is the big engineering plot and deception of raising the water levels of all the Great Lakes. You Senator Buckley, the senate sub committee and the committee on public works can make their decision on these facts.

On May 3, 1973, the International Joint Commission held a public meeting in Rochester, N.Y. for the implementation of Plan SO-901. The disaster of March 16 thru March 23rd, 1973, caused the purpose of this hearing to be lost.

Peter W. Frank president of the Lake, Bay and Property Owners Assoc. and Congressman Frank Horton opposed Plan SO 901. The only ones as far as I know.

Plan SO901 was designed to change the regulating range of Lake Ontario from 242.77 ft. to 246.77 ft. in this manner. Plan SO901 lowers the maximum level by 0.03 ft. raising the minimum level by 0.02 ft. This raises the avg. level of Lake Ontario and changes the outflows of Lake Ontario under plan 1958D.

The question here is why would the engineers want to change the regulating range of Lake Ontario this small fraction of a foot? In the past three years they have been over 1 1/2 ft. above the low and high range. This is one of the reasons the Committee needs a private Consulting Engineering Firm to make a study of the hydrology and hydraulics of the Great Lakes Basin. The planning is chiefly for Power and Shipping interests, without regard, for the destruction of the shoreland and property.

With the proposal of changing the regulating range of Lake Ontario hundredths of a foot. The St. Lawrence River Board of Control are telling us they have complete control of regulating Lake Ontario to a fraction of a foot and I believe this, regardless, of the amount of rainfall in the Lake Ontario area.

Brig. Gen. Ernest Graves, Chairman of the International Great Lakes Level Board and Chairman of the St. Lawrence River Board of Control was the man in charge during 1972 and 1973. Either Gen. Graves would not make a pimple on the rear-end of a good engineer or he deliberately cause the high water of 1973. I think it is the last statement of that remark, but it may have been, he was acting under orders from his superiors.

At the hearing of May 1973 I question Gen. Graves on the floor. Why not plan SO 802 or plan SO 803, which did everything plan SO 901 did, but change the range of Lake Ontario. I did not get an answer.

What else did plan SO 901 call for? We were told it would store more water in Lake Superior thus it would lower the level of the other four Great Lakes by releasing it gradually. This statement is a great deception! In fact it raises them.

Lake Superior is 100% controlled by man both inflow and outflow. It has a regulated inflow of 5,000 cfs know as the Ogoki diversion from the Albany River Basin connected to James Bay in Canada.

In March 1974, I went to Washington, D.C. on Lake Levels and saw a report at the Army Corps of Engineers Headquarters. It showed 14,000 cfs of water flowing into Lake Superior almost three times the amount permitted.

Con't.

If you maintain a Maximum level of 602 ft. on Lake Superior and the more water permitted to flow in plus rainfall, it increases outflows, the other four lakes will be raised. The results is high levels in all the Great Lakes with avg. rainfall. Above avg. rainfall will cause high water destruction on all the Great Lakes.

Senator Buckley we need that Congressional investigation! We cannot have a set plan like SC 901, which was implemented under what is called guide lines, against a variable of natures rainfall.

Was the high water damage this spring 1976, caused by the St. Lawrence River Board of Control or here again is General Moore (Chairman) acting under orders from the Sec. of the Army through the President of the U.S.

During the fall of 1975, the Lake, Bay and Property Owners Assoc., sent a telegram to President Ford asking him to order the International Joint Commission to lower the level of Lake Ontario or we would be flooded in the spring of 1976. Again on March 17, 1976, we sent a telegram to President Ford telling him, "Because our warning was not taken serious we were now being flooded by high water. Criterion K of plan 1958D be put into effect and Long Sault Dam be opened as soon as possible". A copy of these telegrams were sent to all of elected representatives and people regulating the levels of Lake Ontario with no results.

Either our elected representatives must take the leadership on this problem or the people will. On June 14, 1976, members of the Lake Ontario South Shore Council Inc., which is an organization of organization along the southern shores of Lake Ontario, (American) attended a meeting in Toronto, Canada, with the Federation of Ontario Cottages Inc. (Canada) In the Providence of Ontario they are one million strong.

It was brought up at that meeting, the American citizens must join with the citizens of Canada to get all the Great Lakes water levels back to normal, this includes Lake Ontario. It was also agreed that our Congressmen should work with their counter parts in Canada on the problem for this is an international problem. It is very possible the Sec. of State will become involved. If no results are obtained the matter must be decided in the courts.

The Lake Ontario South Shore Council Inc. has already started this procedure with agreement of the Federation of Ontario Cottages Inc. It must be established who is responsible for the Great Lakes shore damage in the past three years and the future high water damage.

Damages must be paid for and it must be established who is going to be legally and financially responsible, before anymore changes are made to the Great Lakes levels, winter shipping or construction in the Great Lakes Basin.

We need a permanent and positive solution to this problem. If not from our elected representatives then from the people. It reveals the people have no real leadership from our elected representatives.

The Lake, Bay and Property Owners Association, hope you Senator James L. Buckley, will give our views some serious consideration in establishing the need for a Congressional hearing on this subject.

Thank you for permitting us time to express our views.

Peter W. Frank

LAKE ONTARIO South Shore Council, Inc.

1656 Edgemere Dr., Rochester, N.Y. 14612

June 15, 1976

STATEMENT

Senator Buckley,
 Senator Gravel,
 Members of the Senate Sub-Committee on Water Resources,
 Ladies & Gentleman

On behalf of all Lake Ontario South Shore Council members, I am making the following requests of the United States Senate through your committee.

1. That action be taken that would "demand" that the International Joint Commission, as the beaucroatic body charged with the responsibility for "controlling" the level of Lake Ontario, adhere to regulating that level to a lower range which will be compatable with the "Rights" of Shoreline Owners. Precisely, that in the off-season, (June thru December), the level of Lake Ontario be lowered to "242.77" ft. above sea level, as per their "Regulation Limit," rather than the "244" ft. they have been regulating to.

This will cause the Shoreline Owner to be protected from the "High Inflow Event" which causes "Extensive" shoreline damage, rather than protecting the Power and Shipping interests from the low inflow event as is now being done. According to the Sea Way plans, and subsequent regulations, the Power and Shipping interests are "supposed" to be "adequately" served at "242.77"ft., "If" they are operating within the established constraints.

Therefore, the resultant damages by adhering to the policy of lowering the Lake to "242.77" are non-existent. The Power & Shipping interests may lose some benefits they have been reaping, but they have not been entitled to them at the shoreline owners expense.

2. The LOSS Council's membership is convinced that the extreme high water in 1973 and subsequent years has been caused by "gross mismanagement" of the levels of Lake Ontario. Consequently all damage incurred during this period is a result of someones negligence.

Therefore, we ask that legislation be introduced, and expediently passed, granting the expenditure of monies to allow shoreline owners to restore their properties to the pre 1973 status. This expenditure could be directed to the individual homeowners, ~~and~~ through "constructive" public works projects. *IN AREAS WHERE REQUIRED.*

-2-

Direct payments to the individual homeowners would allow them to hire contractors on a one to one basis. This plan should include a method for obtaining reimbursement for monies already spent out of pocket attempting to restore and protect one's shoreline, as well as for additional required construction.

The Public Works Projects could consist of the following:

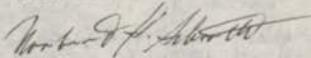
- A. Permanent breakwalls constructed on the shorelines of the properties.
- B. Groins installed perpendicular to the coast which would allow nature to start a natural build up of beaches.
- C. Possible installation of offshore breakwaters to eliminate wave action against an already revaged shoreline.

It is further felt that these costs be charged back to the Sea Way Operation, and subsequently to the Power & Shipping interests who have wrongfully benefited from the mismanagement of the level of Lake Ontario. The American Taxpayer should not have to pay for their gains.

It is our conclusion that both actions are absolutely required to provide adequate solutions to the vast multitude of problems that have been created along the shoreline.

We would further advise all those present, the Lake Ontario South Shore Council, intends to persue its law suit against any and all parties responsible for Lake Ontario Level Control. This will be continuing until an "acceptable" PERMANENT solution is provided, either through our federal lawmakers, or by judicial decree.

Lake Ontario South Shore Council, Inc.



Norbert H. Schroth, President

32 7 Buffalo Ave.
Niagara Falls, N. Y. 14303

June 27, 1976

Honorable
Senator James L. Buckley
United States Senate
Washington, D. C. 20510

Dear Senator Buckley,

I attended the hearing pertaining to excess shore damage suffered by Lake Ontario residents which you recently conducted in Rochester, N. Y. We sincerely appreciate your chairing this hearing regarding our plight.

I should like to state that the shore owners are not the only ones who are losing land, for as the location is on a border area, this constitutes loss of land perimeters of the United States of America.

At the hearing, I was struck by the slide presentation credits --- on the screen it showed that of the International Joint Commission members listed, four of the seven were associated with hydro-electric interests. To have over half of the representation on that commission to be "Power" people could suggest conflict of interest which could be subjected to weighted decision making.

You asked for specifics: Our lake property between Wilson and Olcott consists of about 200 feet. In the last two years we have lost approximately 20 feet on the bank. We have no protection and the previous owner did not take advantage of the Small Business Administration Loans at the time of the storm disaster. Proof of our recent damage are large trees uprooted and lying at lake side. Two large ones still have leaves growing from them though lying in the lake. They were victims of the April 25th high water and wind combination.

On one side of the property is a stream which empties into the lake. Here the high water levels with high wind action has eroded away another approximate 8 feet.

We welcome your inspection either personally or by members of your staff.

We are planning on having large stones placed on our shore but unless the lake level is lowered it will be a waste of money we can ill afford. Therefore, we anxiously await word that the lake level will be caused to be lowered by your good efforts so we can proceed with some protection as best as we can afford.

Sincerely yours,

Dena S. Mandeville
Dena S. Mandeville
(Mrs. Gregory W. Mandeville)

579 Lake Road,
Youngstown,
NEW YORK 14174

July 13th 1976

Senator James L. Buckley,
304 Russel Senate Office Building,
Washington, D. C. 20510

Dear Senator Buckley:

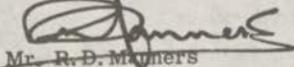
I am a member of the Niagara Orleans Shoreline Protection Association, living on the shore of Lake Ontario.

The Association was formed to protect and promote the interests of responsible year-round residents whose property is continually being eroded by high lake water levels. Since 1839 when my own property was first surveyed, over 100 feet have been lost to the lake. This rate has increased in the last ten years and appears to be due primarily to high water levels occasioned by locks and related structures at the eastern end of Lake Ontario.

Funding to provide protection administered by the Small Business Administration from Elmira in 1972/3 did not alleviate the situation. In fact, they made it worse by applying shoreline protection on a completely random basis.

We welcome your support of our Organization. Anything you can do to assist us in protecting our property from further loss will be greatly appreciated.

Very truly yours,



Mr. R. D. Manners

County of Monroe

NEW YORK

DEPARTMENT OF PLANNING
201 COUNTY OFFICE BUILDING
ROCHESTER, NEW YORK 14614



TELEPHONE:
(716) 428-6461

DON B. MARTIN, DIRECTOR

July 7, 1976

The Honorable James L. Buckley
Federal Building
Rochester, New York 14614

Dear Senator Buckley:

The Monroe County Lake Ontario Policy Committee has been formed as part of the New York State Coastal Zone Management Program. One of the major concerns of the members of this committee is the problem of erosion and wave action damage along our shoreline. Closely related is the concern that the lake levels on Lake Ontario have not been controlled properly by the International Joint Commission.

We would like to submit to you our position regarding the control of the levels on Lake Ontario.

The findings of the Lake Ontario Policy Committee concerning the regulated levels of Lake Ontario are as follows:

- 1) The Boundary Waters Treaty of 1909 between the United States and Canada states in Article VIII:

"The following order of precedence shall be observed among the various uses enumerated hereinafter for these waters, and no use shall be permitted which tends materially to conflict with or restrain any other use which is given preference over it in this order of precedence:

- (1) Uses for domestic and sanitary purposes;
- (2) Uses for navigation, including the service of canals for the purposes of navigation;
- (3) Uses for power and for irrigation purposes."

- 2) Criterion B of the I.J.C. criteria governing the regulation of Lake Ontario states:

"The regulated winter outflows from Lake Ontario from 15 December to 31 March shall be as large as feasible and shall be maintained so that the difficulties of winter operation are minimized."

- 3) Criterion G states:

"Consistent with other requirements, the levels of Lake Ontario shall be regulated for the benefit of property owners on the shores of Lake Ontario in the United States and Canada so as to reduce the extremes of stage which have been experienced."

- 4) Criterion H, I, and J specify that the level of Lake Ontario shall be maintained between the levels of 242.77 I.G.L.D. (1955) and 246.77 I.G.L.D. (1955).
- 5) Criterion K states, "In the event of 'excessive supplies,' the works in the International Rapids Section shall be operated to provide all possible relief to the riparian owners upstream and downstream. In the event of 'low supplies,' the works in the International Rapids Section shall be operated to provide all possible relief to navigation and power interests."
- 6) From 1959 (the year beginning the regulation of Lake Ontario) to 1963 (the year beginning extremes of low water), the level of Lake Ontario fluctuated, on a consistent basis, between a low level of 243.0 feet and a high level of 246.0 feet.
- 7) In January of 1965, as a result of extremely low supplies in 1963 and 1964, the level of Lake Ontario reached a low point of 241.8 feet, almost a foot lower than the allowable minimum level.
- 8) Since 1965, the level of Lake Ontario has not gone below the level of 243.7 feet.
- 9) For the past 25 years, the average rise of Lake Ontario, from its low level in winter, to its high level in late spring, has been 2.2 feet; the highest rise being 3.3 feet in 1973, the lowest being 0.8 feet in 1958.

As a result of these findings, the Lake Ontario Policy Committee makes the following recommendations:

That the regulated outflows of Lake Ontario during the late summer and winter months shall be such as to provide for a low water level

-3-

of 243.0 feet. The regulated outflows from 15 December to 31 March shall be consistent with Criterion B of the "Criteria Governing the Regulation of Lake Ontario."

That the I.J.C. comply with the provisions of Article VIII of the Boundary Waters Treaty of 1909, and with Criteria G & K, of the "Criteria Governing the Regulation of Lake Ontario," where heretofore they have not complied.

That the International Joint Commission give consideration to implementing the recommendations of the Lake Ontario Policy Committee.

Very truly yours,

Dot Fellows

Dot Fellows
Coordinator
Monroe County Coastal Zone
Management Program

DF/cm

Lake Ontario Policy Committee

Lawrence Merritt	Norman Brink
Ralph Cohn	Edward Beers
Milton Kaiser	Austin Warner
Skip Miller	Carol McDonald
Morton Linscott	Richard Klotzbach
Pam Langdon	Robert O'Neill
Edward Seitz	Elinor O'Brien
Donald Bushnell	Dr. Charles K. Buell
Richard Cooley	Violet Bennett
Joseph Reinschmidt	J.F. Jennejahn, Jr.
Thomas Younker	John Green
Kathryn Bolton	William A. Wise
Donald J. Riley	Cheryl D'Imperio
Grace Golden	Ken Ruedin
Herman Stoll	Patricia Lemm
Sam J. Chipp	John Schantz
Donald Deming	Jackie Fields
Stanley Hoffman	Bente King
Jan Shapiro	

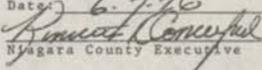
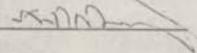
NIAGARA COUNTY LEGISLATURE

FROM: Economic Development & Planning Com. DATE: June 1, 1976 RESOLUTION # 207-76APPROVED AS TO FORM
NIAGARA CO. ATTORNEY

LEGISLATIVE ACTION

Approved: Ayes _____ Noes 0
Rejected: Ayes _____ Noes _____
Referred: _____

EXECUTIVE ACTION

Approved:
Vetoed: _____
Date: 6-7-76By: 
Niagara County Executive

RESOLUTION MEMORIALIZING THE INTERNATIONAL JOINT COMMISSION REGULATING LAKE ONTARIO TOGETHER WITH GOVERNOR HUGH CAREY, THE NEW YORK STATE LEGISLATURE AND THE CONGRESS OF THE UNITED STATES TO UNDERTAKE IMMEDIATE ACTION TO STOP PROPERTY DAMAGE ALONG THE SOUTHERN SHORE OF LAKE ONTARIO.

WHEREAS, the outflow rates which directly affect the level of Lake Ontario are determined by the International Joint Commission according to guidelines it has established, and

WHEREAS, such Commission has the responsibility, amongst other things, to regulate such water level in a manner that will not jeopardize the lives and property of homeowners residing along the southern shore of Lake Ontario, and

WHEREAS, the level of Lake Ontario is rising at an alarming rate to the point where such level may exceed the historic high level mark of 1973 which resulted in serious property disaster and losses of millions of dollars, and

WHEREAS, as late as April 5, 1976, the Lake attained a level of 246.62 feet, for an increase of six-tenths (6/10) of a foot from the prior measurement of March 27, 1976 of 246.02 feet, and

WHEREAS, the Lake level has a forty per cent (40%) chance of rising even higher than its maximum of 246.77 feet, according to the United States Corps of Engineers, and

WHEREAS, if such Lake level continues at its current level or exceeds the current level, substantial property damage may result, which could cause damage in the millions of dollars.

NOW, THEREFORE, BE IT RESOLVED BY THE LEGISLATURE OF THE COUNTY OF NIAGARA, as follows:

Section 1. This Legislature strongly urges the following remedial action be undertaken forthwith to remedy the problem of excessive lake level on Lake Ontario:

- a. That the International Joint Commission immediately undertake a review of its guidelines to determine whether or not such guidelines are the contributing factor to the high water problems that are occurring in 1976.
- b. That the International Joint Commission review its existing criteria and immediately implement outflow rates that will reduce lake levels so as to avoid property damage along the southern shore of Lake Ontario.

- 2 -

c. That the International Joint Commission establish a more realistic basis to project lake levels than the projection system presently being utilized.

d. That Governor Hugh Carey take all preliminary steps that will be required to declare the affected southern shoreline a Federal Disaster Area in the event of flooding due to high lake level.

e. That the International Joint Commission establish as a "first priority" in making its determination of lake level the preservation and protection of southern shoreline properties.

f. That the Clerk of this Legislature is directed to forward certified copies of this resolution to the International Joint Commission, Governor Hugh Carey, the Senate Majority Leader Warren Anderson, Speaker of the Assembly Stanley Steingut, the Honorable John J. LaFalce, the Honorable Jacob K. Javits and the Honorable James L. Buckley.

Section 2. This resolution shall take effect immediately.

ECONOMIC DEVELOPMENT AND PLANNING COMMITTEE

Joseph T. Pillittere Donald P. Lane
Richard L. ...
Brian ...
...
...

STATE OF NEW YORK)
) SS:
 COUNTY OF NIAGARA)

This is to certify that I, the undersigned, Clerk of the Niagara County Legislature of the County of Niagara have compared the foregoing copy of resolution with the original resolution now on file in this office, and which was passed by the Niagara County Legislature of said county and approved by Kenneth K. Comerford, County Executive, on the 7-th day of June 1976 and that the same is a correct and true transcript of such original resolution and of the whole thereof.

IN WITNESS WHEREOF I have hereunto set my hand and the official seal of the Niagara County Legislature, this 14th day of June 1976.

William E. ...
 Clerk of the Niagara County Legislature

Arvestington Beach
Barker, N.Y. 14012
July 6, 1976

Senator James L. Buckley:

Dear Sir:

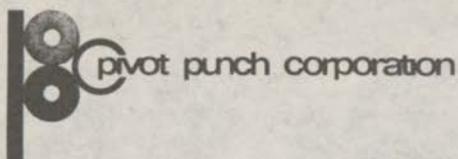
I reside on the shore of Lake Ontario in the town of Somerset. My husband is retired and we live on a pension so we do not have a lot of money to work with.

We are overwhelmed with our loss this year due to high water. We have lost 25 feet of our frontage and half of the cement pad in front of our boat house. The cement was undermined by the water and broke up.

We lived in Lockport before my husband retired. We both like living near the water so we sold our property in town and moved to the lake. We have had the property for 25 years and have never seen the lake this high. I know they continue to put articles in the newspaper that the lake is low but this is not so. I hope something can be done about this situation.

Thank you

Mrs. Thomas Nicholson



July 7, 1976

The Honorable James Buckley
United States Senate
5327 Senate Office Building
Washington, D. C. 20515

~~Dear Mr. Buckley:~~

This is to inform you that we have had tremendous amount of difficulty in the Olcott, New York area with the high water of Lake Ontario.

In the last few years we have spent approximately \$16,000 in dumping riffraff in the shore of our property, and reenforcing the concrete abutment that protects a portion of our property on Lockwood Heights. Approximately \$5000 of this amount has been refunded to us by the Federal Government.

Presently, however, our breakwall and other preventative shore protection has been eating away whenever there is a storm, and has continued to erode our lake front property.

Sincerely yours,

PIVOT PUNCH CORPORATION

Robert H. King
President

RHK/cw

Raymond M. Punch
10748 Lake Shore Rd.
Lyndonville, New York 14098

July 1, 1976

The Honorable James L. Buckley
United States Senate
Washington, D.C. 20510

Senator James Buckley:

I believe it is high time we get some low water in our Lake Ontario. Anyone who does not agree is all wet and should dry up. The government, (taxpayers) have already given most of us \$5000.00 to protect or replace what we lost. Shouldn't something be done to protect the protection?

Huge boulders were dumped on my frontage at a huge expense. Fill was brought in and put on top. I have lost some of these boulders. I am losing some of this fill. I have purchased my own little cement mixer and am doing my best to try and save what I have but the expense is more than I care to continue, as no matter what I do the old monster lake rises up and takes another bite. He gulps down a 10 ton boulder like you or I (maybe not you) would a poor mans martini.

I don't like to complain too much as there are others worse off than I. However, I would like you to consider this an invitation to visit our nice little shack. We could sit down and discuss the situation over a bowl of spiked soup, without the usual fanfare you often enjoy. Located at the end of Route 63 - 2 miles west.

But hey - don't ignore us lakers - we might decide another revolution is in order - and we already got Fort Niagara, a volunteer Navy, and a damn good cause.

Yours truly,



Raymond M. Punch

RMP/dl

RENSHAW BAY CORPORATION
GENERAL CONTRACTORSBOX 253, FISHER ROAD
EAST SYRACUSE, N. Y. 13057

A/C 315 - 437-3666

June 25, 1976

Senator James Buckley
United States Senate
Office Building
Washington, D.C. 20510Re: High Water
Lake Ontario

Dear Mr. Buckley:

As a property owner on the East end of Lake Ontario, I am very much concerned about the current high level of the water. It is presently causing great damage.

After the high water of two years ago, a joint commission was established to determine the causes of that condition. Last year the St. Lawrence-Ontario Commission released the results of their study.

It said that the record breaking high water level of that period was caused by two factors: (1) Rain and (2) The high level maintained by the control dams on the St. Lawrence River.

The study pointed out that the high lake level was maintained because the shipping and power interests found this to be to their advantage. It also stated that the high water did cause considerable damage to the property owners around the lake. The report indicated the property owners were not sufficiently organized to have their voice heard.

The natural balance between lake level and shore line preservation is very delicate and any change will be felt.

Those who control these dam structures periodically release news bulletins stating that they are releasing more water than would be discharged if the St. Lawrence Seaway had not been built and the water level would be higher if they did not control it.

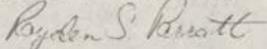
Page Two
Continued
June 25, 1976

I am not sure if they expect any one to take them seriously but what they say does have some element of truth. They are discharging at a high rate but what they fail to point out is that they have not allowed the water to reach a natural lower level in the fall and winter of the year thus allowing the lake a larger capacity for the very wet years, such as we are having now. During these periods of low water the beaches and sand dunes are naturally rebuilt. If these periods are not allowed the shore cannot rebuild, it can only be destroyed.

I am not optimistic about the results that can be obtained by writing those who represent us in Washington because of the powerful interests that benefit from our destruction, but I feel there is no alternative but to make you as much aware of our plight as possible.

Very truly yours,

RENSHAW BAY CORPORATION



Royden S. Parratt
RSP/inc

Dear SEN BUCKLEY,

I own property on Lake Ontario. (739 LAKE RD. YOUNGSTOWN N.Y.) IN the past years I've watched the high level of Lake Ontario eat my property away at a rate of 7-10 feet a year. Picture yourself standing on a car in a flooded area with the water slowly creeping up, ready to sweep you away, and you'll know how I, along with thousands of other property owners feel.

Not being a rich man, I spent three months last summer building a wall which I hoped would stop the land erosion. Before I built it I personally went to Buffalo, to the Army Corp of Engineers to talk over my plans. They said the plans look good and the wall will probably work. Well, \$400 and three months of back breaking labor later, the wall is gone. Swept out into the lake the second week of April 1976. Do you know what it feels like to see 3 months of hard work swept away!!!!

Do you know the feeling of hopelessness you feel inside!!!!

When you look out into Lake Ontario don't look just at the water, look under the water! See the millions of dollars of work, not to mention money, of people trying to save their land.

Then you ask yourself why?

Why can a group of men who head the International Joint Commission, sit like "God in heaven" and deal out "hell on earth" to so many people, trying desperately to save their homes and land?

The IJC says that the lake level has to be high in order to facilitate lake shipping and the generation of electricity. But why do the lake shore owners have to foot the bill? These

are private companies doing business for a profit, then why in hell are we paying for the expense????, and getting no share of the profit!!!

The IJC increased the flow of water out of Lake Ontario from 345,000 CFS to 350,000 CFS. This is not enough. The lake is almost a foot above mean level.

You tell me what's going to happen this winter and spring. They'll be Billions of dollars in property lost.

Then again you ask yourself "why" and for "what." Contrary to the opinion of the ITC, "If the control structures on the St. Lawrence River didn't exist we would have no ~~problem~~ problems."

As a passing note I would also like to say that I received no money from the government because of the high water in 1973. Even though the purchase offer had been signed by both parties, "and the other party had not applied ^{for} or received ~~and~~ any money" prior to the storm that caused the damage. When I ~~I~~ talked with the SBA in Buffalo, N.Y. they said I was entitled to the money but I would have to get it through the SBA office in Elmira N.Y.

In Elmira, N.Y. They told me even though the purchase offer had been signed by both parties prior to the storm, My name was not on the deed at the time of the storm so I was entitled to nothing, "which is exactly what I got".

I have (as hard as it is to believe) ~~good~~ great faith in our country.
 I "AM" more American than apple pie!
 And Senator Buckley I had faith in you when I voted for you and I still have faith in you now.

Help, not only me but thousands of other people like me. Show them and me that the government is still the servant of the people and not the master of the people. Because this is the way our forefathers intended it to be, 200 years ago today.

Sincerely
 Carl G. Smith

CARL G. SMITH
 173 PINE ST.
 LOCKPORT, N.Y.
 14094

6 Buchanan Road
Pittsford, N.Y. 14534
July 1, 1976

716-381-4936 (home)
716-458-1000 (business)
Ext. 75700

Senator James L. Buckley
Senate Office Building
Washington, D. C. 20510

Attn: Donna Davis and/or Jackee Shafer.

Dear Senator Buckley:

I am writing this on behalf of the Eagle Island Association, Inc., to express our increasing concern over the high water level of Lake Ontario.

We are an association comprised of riparian owners on Eagle Island in Sodus Bay, which is part of Lake Ontario. Our members have suffered great inconvenience and loss as a consequence of the apparent inability of the I.J.C. to maintain the lake at the prescribed level. Specifically, loss of land due to erosion, adverse environmental impact, loss of dock structures from higher wave height, extra expenses for raising of existing docks, and unsafe conditions on docks which are partially awash, all can be attributed to the high lake level which continues to persist and which seems to be so unnecessary.

It is reassuring to us that you are taking an interest in this matter, as indicated by the June 15 Hearing and your collaboration with the Lake Ontario South Shore Council. On the behalf of the Association, I thank you for the efforts that you have made so far.

We all will be most interested in the progress that can be made in the next few months to deal with the specific issues of why the "power interests" require the high lake level and why the lake level cannot be maintained at a lower level than it has been for the last few years.

Sincerely,

Bill

W. J. Staudenmayer
President
Eagle Island Association, Inc.

June 18, 1976

Senator James L. Buckley
U. S. Senate
Washington, D.C. 20510

Senator James L. Buckley:

It is indeed a pleasure to be permitted to add additional voice supporting the claim for improved level control (lower) of Lake Ontario. I was invited to attend the Senate Subcommittee Hearing in Rochester on June 15, 1976 and found the entire proceedings fascinating as well as discovering the acute perceptiveness of Senator Buckley.

Since time did not permit me to testify at the hearing I should like to present some of my personal interpretation of the evidence presented, as well as some observations made over a 50 year period.

1. One pertinent chart presented by Brig. Gen. Moore showed lake levels from 1900-1954. During that period it showed low levels around 242 feet and once or twice around the 241 plus feet. This was all before the Seaway Operation. And during those years, more to my knowledge from 1937-1954, the shorelines remained very much the same with none or practically no shoreline erosion. After the start of the Seaway Operation, but more specifically the last 10 years, almost unaccountable damage has been done to the shoreline and property. Why? Well, because raising the lake level and never going lower than 244 feet above sea level, THE RESERVE CAPACITY OF LAKE ONTARIO HAS ARTIFICIALLY BEEN LOST! Before the Seaway, the natural fluctuation of the lake level provided a reserve capacity to handle abnormal years of rainfall and runoff. I'm sure the years 1900-1954 provided times of heavy runoff and heavy rainfalls equal to 1976. And since the river had no obstructions like dams, locks and canals it took care of the high level periods without endangering property. Repeating my point once again, the REGULATING AGENCIES HAVE REMOVED THE RESERVE CAPACITY from Lake Ontario by raising the low limit from 241 plus feet to 244 plus feet. If that 3 feet of difference, or even 2 feet, were restored there would probably be no more shoreline damage. Some erosion might still occur but it would be minimal.

2. When talking of shoreline damage, not only must the damage estimate include the actual loss of property but to that must be added the RESALE LOSS of the entire property involved. What chance does one have of selling any property which is in danger of disappearing into the lake.

-2-

3. Last week I personally boated along Lake Ontario south shore from Port Bay to Fair Haven Bay, a distance of 8-10 miles. There are no beaches left and the bluffs are badly undermined which will cause further erosion for the next 1-2 years. The shoreline erosion caused by high water supported by heavy storms which slam and smash the water into the bluffs must be stopped as soon as possible. Other low lying areas, normally above water damage are badly flooded in the Spring especially if the lake is not dropped significantly below the 244' level in the Fall. Few people realize how destructive a 3 day storm accompanied by 50 mile gale winds, often repeated several times in the Spring, can be. The claim by the Seaway Control Board, to maintain uniform levels of flow during the winter to prevent ice jams with subsequent flooding and danger to power utilities, is also a Seaway contribution to the high level when the Fall and Winter should permit more lowering of the lake. The Seaway has removed the natural balance of water flow and level, and is directly responsible for the high lake level and to the almost unestimable property loss and damage. If, as is done, the highwater mark defines property boundaries, the artificial highwater mark caused by the recent high levels will increase the size of Lake Ontario and reduce the taxable size of N. Y. State.

4. There are thousands of people along the south shore of Lake Ontario involved with problems of property loss, flooding, pollution and recreational losses due to the abnormally and illegally maintained level of this lake. (treaty of 1909). These people are all TAXPAYERS AND VOTERS. As voters their affect will be of significant value in the up-coming elections.

Respectfully,

A. N. Stunglein
 Albert N. Stunglein
 President
 Blind Sodus Bay Improvement
 Association

NOTE: Reference to item #1. When levels are regulated as now between 244 plus to 247.5 feet above sea level, a difference of 3.5 feet, and if dropped at least 2 feet, this represents better than 50% of the reserve capacity, and if the low level is returned to 242 plus feet, 100% of the reserve capacity will be restored. This will be a return to the natural lake balance prior to the Seaway Installation and Operation.

TO SENATOR J. L. BUCKLEY

SUBJ: HEARING - LAKE ONTARIO - LAKE REGULATION
JUNE - 15 - 1976

PLEASE ADD, IF NOT TOO LATE, TO MY
WRITTEN TESTIMONY ONE MORE THING.
THIS TESTIMONY WAS SUBMITTED ON 6-17-76.

WHY NOT CONSIDER REQUESTING SHIPPERS
TO REDUCE TONNAGE SO AS TO REQUIRE AT
LEAST ONE FOOT LESS DRAFT, TEMPORARILY,
UNTIL A MORE PERMANENT SOLUTION IS
AGREED ON. THIS WOULD PERMIT LOWERING
L. ONTARIO ONE FOOT FOR THE TIME BEING,
AND START THE DOWNWARD LAKE LEVEL TREND.

VERY TRULY YOURS.

C. H. Stunglen
RD #1
Red Creek, Wis.
13143

1545 Lake Road
Youngstown, New York
14174
July 8, 1976

Senator William Buckley
Senate Office Building
Washington, D.C.

Dear Senator Buckley:

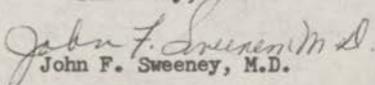
This letter is to inform you of the damages suffered as a result of the high water levels on Lake Ontario. I live on the south shore of Lake Ontario, 5 miles east of the Niagara River Outlet in the Village of Youngstown, Town of Porter, Niagara County, New York.

In 1973 approximately 20 ft. depth of land and 5 large Willow trees along our 200 feet of lake frontage were washed away in the storm of March 17. The next autumn we refilled the land and constructed a 7 foot high, 1 foot thick breakwall along this frontage under the SBA Loan program. The cost was approximately \$ 75.00.00.

In the Spring of this year the lake level, which is higher now than any time in the past four years that I have resided here, resulted in wave action striking this wall and cresting 13 feet above the wall to fall on the land recently replaced. Thirty-five percent of the restored land has, as a result, again washed away around the ends and through the drainage holes of the breakwall. This thirty-five percent of the wall length now stands exposed and is apt, with the next storm, to topple over into the lake. The remainder will most likely soon follow as the process continues. The loss of this \$ 7500.00 recent investment, although considerable, is small in comparison to the loss of our home which is the next structure in the path of the lake water.

I urge you to do all in your power to reduce the present lake level as soon as possible and to maintain it at least two feet below its' present level. This is the only step which will protect the lake shore homeowners against the loss of money already invested in barrier construction as well as the loss of their very homes and would still be within the limits allowed by Canadian-American Treaty agreement. It would also avoid the tremendous financial burden of construction of barriers along the entire lake shore, a solution which would most certainly fail again if the present high levels are maintained.

Sincerely,


John F. Sweeney, M.D.

JFS/vma

508 Meadowbrook Drive
 Jewettston, N.Y. 14092
 18-June-1976

Senator James L. Buckley
 60 Sutton Place South
 New York, N.Y. 10022

Dear Senator Buckley:

I was glad to learn that you are involved in the matter of Lake Ontario erosion. It is about time that our federal legislators took more than a passing interest in this problem. This rather unwarmed and hopeless battle against the lake levels rise to record highs has been waged for over twenty years, with very little or no help from our legislators in Washington. Five representatives in Albany are equipped with blinders as far as Lake Ontario is concerned, and the several times I've raised the subject with them I've been advised to contact federal authorities. Of course, keeping in mind New York's financial crunch - action on lake erosion has a mighty low priority. Certainly, it can't be more important than voting the 1975 "bill's" for the "undersaid" representatives in Albany. The state has a perfect record on lake erosion - it has managed to avoid the subject completely. It is a do nothing gang in Albany and it wasn't hard to come to the conclusion that if anything is done about erosion it will have to be at the federal level.

I am a disabled war veteran - owner of a small cottage on Lake Ontario and it is discouraging to see my land and trees slip into Lake Ontario with every passing storm. I've only owned my property a little over 2 years and I'm sure that I've lost from 6 to 10 feet of property. I have been advised by older residents at the lakeshore that these last two years have been the worst. Of course this is due to the artificially induced record water levels in Lake Ontario. From what I can learn - the Corp of Engineers has the capability to raise or lower the Lake Ontario water level by several feet. The exact data on this capability is a carefully guarded secret and should be made public. It is no wonder that the water levels have reached

II

record highs since the stewardship of Henry J. Smith as head of the National Joint Commission. Mr. Smith has one distinguishing characteristic which can be summed up in a few words - "Don't rock the boat" or better still "Don't make waves." This man managed to get in years as a Congressman in complete obscurity and he is now applying his "do nothing" doctrine to his present job as head of the Joint Commission. The sad thing about this is that "goofing off" in Congress can be glossed over because other - more conscientious Congressmen do get things done in spite of the drugs. As head of the Joint Commission, Mr. Smith is hurting thousands of property owners by his position ~~is~~ in favor of high water levels. It's obvious that he represents the hydro and shipping interests against the legitimate complaints of the lakeshore property owners. It is high time for a change and a good place to start would be the appointment of a fair and knowledgeable Chairman on the Joint Commission.

I understand from my contacts with old time residents at the lake shore that the Federal government did initiate a program to help lakeshore owners about 10-12 years ago. It consisted of an outright grant of \$,000 to each property owner to be used to build concrete walls or stone piers. There was also a provision for low interest loans. Very few owners (a minority) took advantage of the program. From the comments I heard - it seems that the program was rushed through with very little publicity and was of such short duration that 75% of the owners failed to take any action. Some never heard of it and others were confused about the provisions in the bill and as a result it was a failure. What we now have is an occasional concrete wall interspersed with hundreds of feet of unprotected - erosion ravaged coastline. The few walls standing are being outflanked by the encroaching waters. We need a program supervised by the Army Engineers using the most modern techniques to keep the lake at bay. A haphazard approach similar to the last phase would only waste more money.

III

Right now - immediate action is needed, to prevent the Army Engineers from initiating the Squaw Island canal to divert more water into Lake Ontario. This hare-brained scheme would only compound our problems.

Senator Buckley - I'm hoping that you stay with the problem until some positive action is taken. I'm willing to match Federal funds - dollar for dollar to build, provision for losses on my property. Maybe something on that order might be arranged. Possibly, an outright grant of \$5000 as was done previously, might be in order with property owners adding the balance needed to get the job done according to Engineer specifications. Whatever the course is followed - certainly Mr. Henry Smith's approach to do nothing is not the answer.

There is no doubt in anyone's mind that the high water levels serve the Hydro interests at the land owners expense. I'm hoping to see court action on this since it's my firm belief that if there is any justice, a court decision would be in favor of the long suffering lakefront owners.

Very truly yours
Bruce J. Swain

July 7th, 1976

Dear Senator James Buckley:

This is another letter of protest against the high lake level of Lake Ontario. Our family has lived here since July, 1960 so we know what has been happening as we can see it more and more each year. Believe me, it is heart-breaking. We have lost seventeen feet of Lake frontage plus a row of beautiful silver maple trees.

Now, thanks to the Small Business Administration, we have a wall and ramp. As of this year the footer of the wall is exposed and undermined and the boat ramp is in the water. I don't quite know what is going on, but whatever it is, it's ridiculous and certainly uncalled for. I am certainly 100% in favor of anything you can do on all our behalf and sincerely grateful you are on our side.

Thank you - Sincerely
 Rita M. Waterman
 Johnson Creek Road
 Barker, N. Y. 14012

Member Niagara-Ontario Shoreline Protection Association, Inc.

SENATE HEARING ON LAKE ONTARIO LEVEL REGULATION

Rochester, N. Y., June 15, 1976

In 1968 my husband and I began the construction of what was to become, in 1975, our retirement home. The site is off of County Route 20, near Marsh Road, in the Moon Beach Ontario Shores area. In 1974 we were forced to build a \$14,000.00 sea wall (\$5,000.00 was received from the U. S. Small Business Adm.) because our 150-ft. frontage on the lake had been pushed back by high water and erosion approximately 20 ft. in the intervening years. Now, in 1976, just 2 years later, the 10-ft. high wall built of reinforced concrete modules by the best marine engineering methods available, is completely wrecked for 40 ft. at each end by high water which has eroded the hardpan beneath the 5 ft. base of the wall. (Incidentally, the wall contained 2500 tons of gravel fill.) We are now faced with repairs and footing for a 4-ft. impact wall which will cost us another \$10,000.00. We are not rich people. We are retired school teachers. The foregoing sums represent all of our life savings.

But we, at least, had the wherewithall to fight against the ever-advancing destruction of high water, wind and erosion. However, within 8 miles of our location to the west (village of Fairhaven) and 10 miles to the east (city of Oswego) there are tens of families whose summer or permanent homes are now literally on the brink of the lake. In my immediate neighborhood, houses have been completely undermined and have fallen into Lake Ontario.

There is no answer to be found in costly and time-consuming studies to compare with simple observation of the destruction caused by needlessly high lake levels.

As you know, mortgages on lakeside properties are extremely difficult to secure, and our neighbors have no hope of salvaging any part of their losses unless you, Senator Buckley, and you, Senator Gravel, can get your bill passed to help us.

Thank you for your kind attention.

(Mrs.) Jean M. Woods
Ontario Shores
R. D. 2
Sterling, N. Y.
13156

PHOTOS SUBMITTED BY HAROLD BARNES

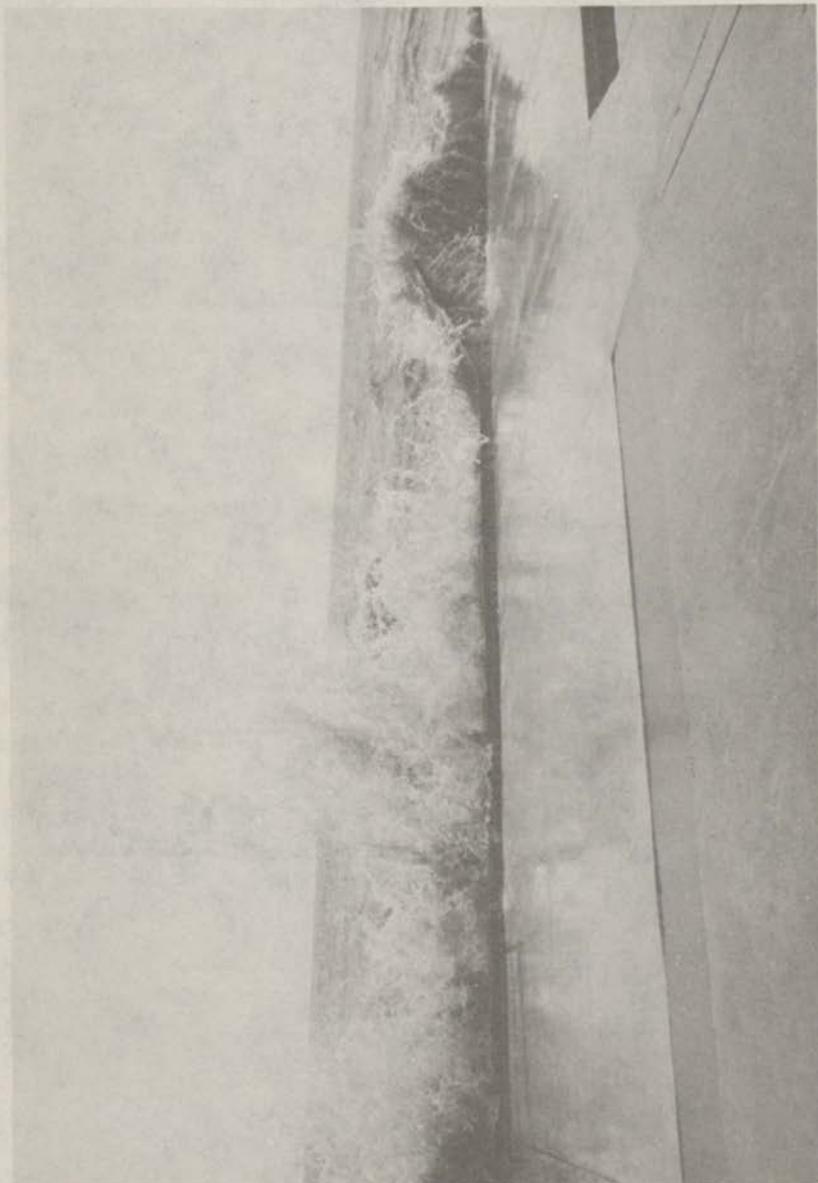


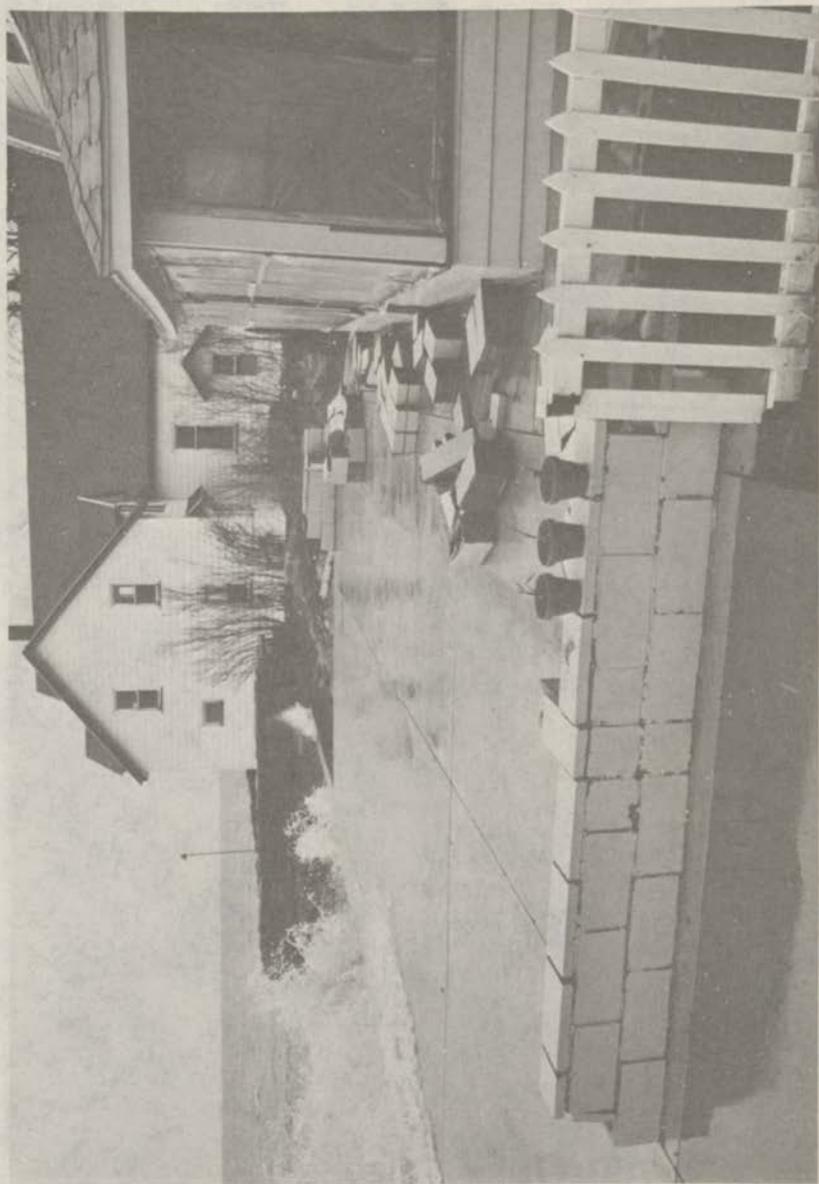




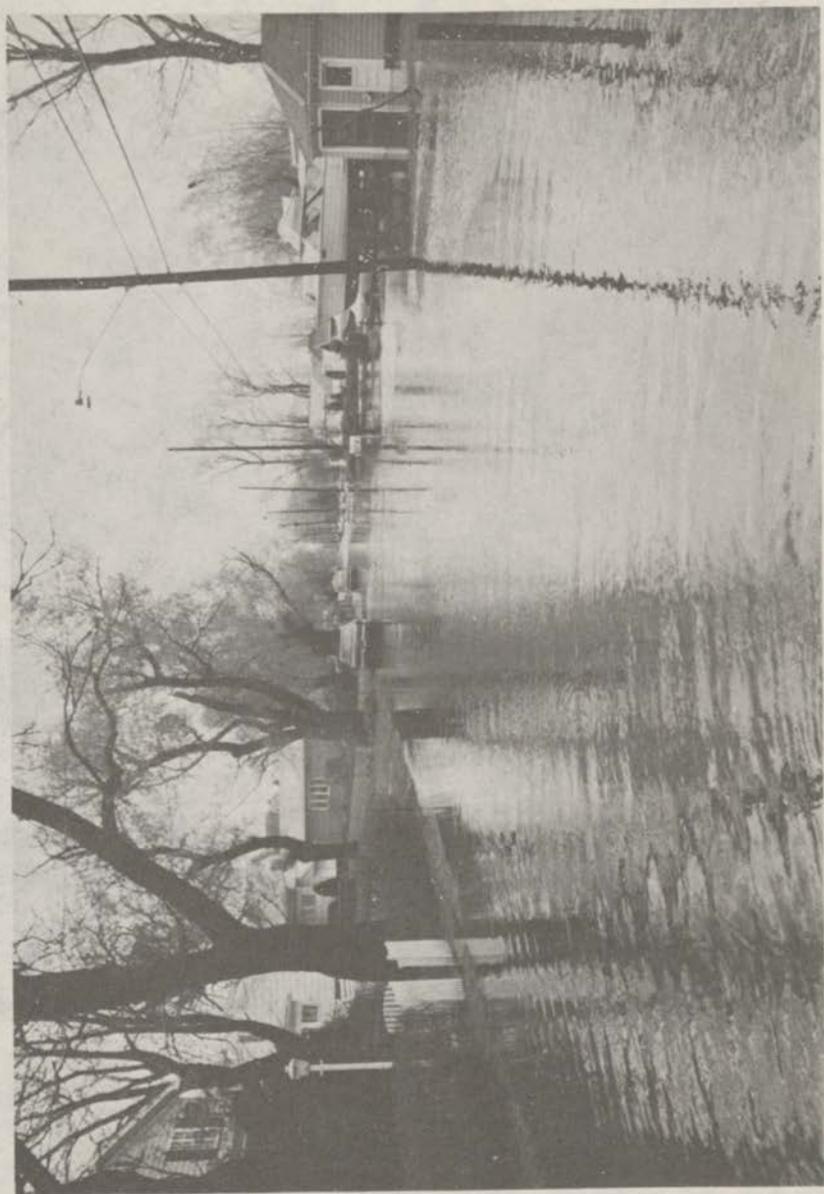


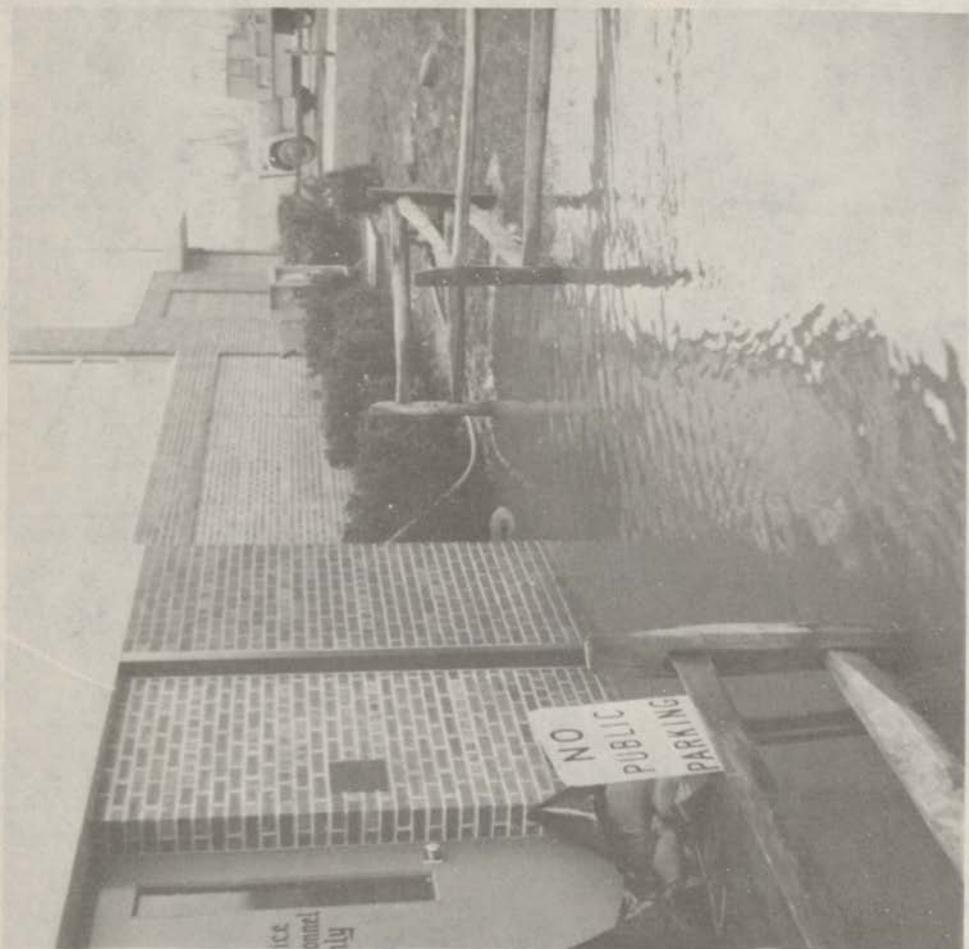
PHOTOS SUBMITTED BY THE TOWN OF GREECE, N.Y.
PHOTOS SHOW DAMAGE CAUSED BY STORM OF APRIL 1976





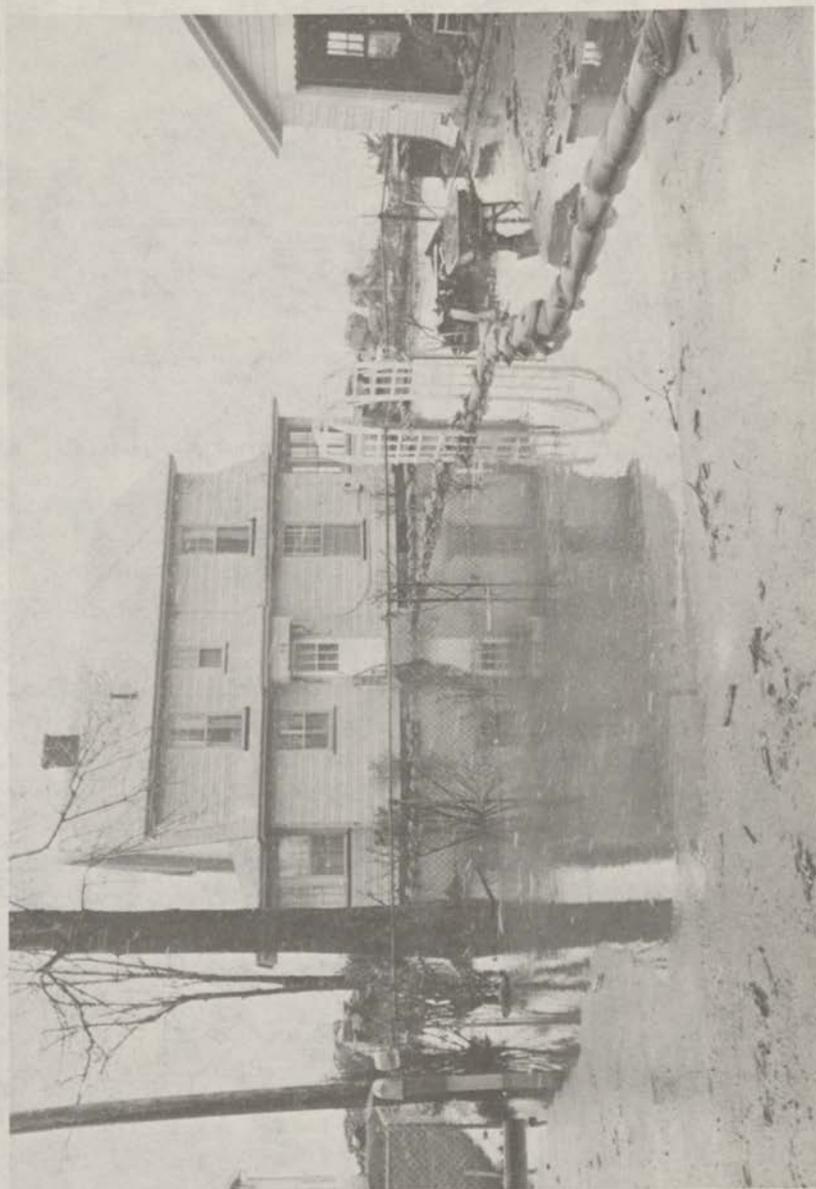












Sandy Pond Eastern Shores Association
 Fulaski, New York 13142
 August 2, 1976

Senator James L. Buckley
 Senate Office Building
 Washington, D.C. 20510

Dear Senator Buckley:

We the undersigned, who are year-round and summer residents would like to encourage your interest and solicit your help in lowering the water level of Lake Ontario.

It is imperative that steps be taken in the fall and winter of 1976 and 1977, to forestall more extensive and complete damage to our properties.

We strongly feel that the individual land owner should be represented at this time since we have had no voice in this matter in the past.

It would be beneficial if a "fair and sensible" agreement could be worked out for the good of all. No one power group should benefit at the expense of the individual.

We urgently ask that plans be formulated now to alleviate another spring of such utter land destruction along the shore lines.

Thank you for your efforts in our behalf.

Sincerely yours,

Residents of Sandy Pond and
 Eastern Shores of Lake Ontario

Mary Lou Matthews 107 Bancroft Dr. Canillee
 Jerome Hyde 209 Andalew Dr. Danville, N.Y.
 Fesse Thomkins 107 Bancroft Dr Canillee, N.Y. 13051
 Rhoda Thomkins 342 Northfield Ave Canillee N.Y.
 R. Wilbur Smith
 S. J. Cassidy 126 Ridgewood Dr. Syracuse, N.Y. 13206
 Nancy Bushnell 124 Sand Rd. N. Syracuse 13212
 Mary R. Jordan 142 Wash. St. Mayhew, N.Y. 13104
 Judy Hayward 201 Ferguson Blvd., No. Syr
 13212
 Barbara Harman 7642 Northfield Ln, Manlius
 A. R. Harman

