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ST. LAWRENCE SEAWAY

GOVERNMENT

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HEARINGS

BEFORE THE

SUBCOMMITTEE ON

CONTROL—RIVERS AND HARBORS

OF THE

COMMITTEE ON PUBLIC WORKS

UNITED STATES SENATE

NINETIETH CONGRESS

FIRST SESSION

ON

S. 1455

A BILL TO PROVIDE FOR A MORE CONSERVATIVE CAPITALIZATION OF THE ST. LAWRENCE SEAWAY DEVELOPMENT CORPORATION, AND FOR OTHER PURPOSES

AND

S. 2131

A BILL TO AUTHORIZE REHABILITATION OF NAVIGATION STRUCTURES AND APPURTENANT WORKS OF THE ST. LAWRENCE SEAWAY PROJECT TO BE CARRIED OUT BY THE ST. LAWRENCE SEAWAY DEVELOPMENT CORPORATION AND FINANCED FROM APPROPRIATIONS

AUGUST 29 AND 30, 1967

Printed for the use of the Committee on Public Works



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ST. LAWRENCE SEAWAY

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CONTENTS

	Page
Hearing held on—	1
August 29, 1967-----	67
August 30, 1967-----	2
Text of S. 1455-----	3
Text of S. 2131-----	3
Agency reports—	
Department of Transportation-----	3
Bureau of the Budget-----	4
Treasury Department-----	5

STATEMENTS

Burdick, Hon. Quentin N., a U.S. Senator from the State of North Dakota-----	13
Butler, Col. Earle B. (ret.), commissioner of harbors, Cleveland, Ohio----	58
Danielian, N. R., president, Great Lakes-St. Lawrence Association-----	43
Dodge, Brig. Gen. Roy T., division engineer, north central division, Corps of Engineers, Chicago, Ill.; accompanied by William R. Waugh, chief, concrete branch, engineering division, Civil Works, Office, Chief of Engineers-----	32
Fredin, Conrad, commissioner, Seaway Port Authority of Duluth-----	62
Goodsell, Col. Leonard J., executive director, Great Lakes Commission----	67
Griffin, Hon. Robert P., a U.S. Senator from the State of Michigan-----	102
Guillon, John C., chief waterway engineer, State of Illinois-----	90
Halpin, Gregory W., deputy director, Maryland Port Authority, also representing North Atlantic Ports Association-----	52
Hart, Hon. Philip A., a U.S. Senator from the State of Michigan-----	100
Lessing, Carl, vice president, transportation, Chicago Board of Trade----	91
MacKey, Cecil M., Assistant Secretary for Policy Development, Department of Transportation, accompanied by Joseph H. McCann, administrator, St. Lawrence Seaway Development Corporation; and B. T. Jose, assistant administrator-----	15
Maryland Port Authority-----	54
McCann, Joseph H., administrator of the St. Lawrence Seaway Development Corporation-----	30
Mondale, Hon. Walter F., a U.S. Senator from the State of Minnesota----	7
Nelson, Hon. Gaylord, a U.S. Senator from the State of Wisconsin----	14
Oberlin, David W., manager of trade development of the Toledo-Lucas County Port Authority, accompanied by John A. McWilliam, staff attorney for Toledo-Lucas County Port Authority-----	79
Smith, Robert T., port director, Seaway Port Authority of Duluth, Duluth, Minn.-----	106
Stallecop, Gilbert E., executive vice president, Northwest Terminal Elevator Association-----	91
Tangerose, James G., director of waterway analysis, competitive transportation division, Association of American Railroads-----	74
Wilcox, Thomas D., counsel, Great Lakes Task Force and Great Lakes Terminal Association-----	87

COMMUNICATIONS

Danahy, James W., chairman, New York-New Jersey Committee for a Self-Supporting Seaway, New York, N.Y.: Letter, dated August 21, 1967, to Senator Randolph-----	111
Gwynne, John T., secretary, New York Chamber of Commerce, New York, N.Y.: Letter dated August 21, 1967, to Senate Committee on Public Works-----	110

IV

Hammond, Harold F., president, Transportation Association of America, Washington, D.C.: Letter, dated September 7, 1967, to Senator Stephen M. Young-----	Page 110
Proxmire, Hon. William: Letter dated September 15, 1967, to Senator Stephen M. Young-----	112
Smith, Robert T., port director, Seaway Port Authority of Duluth, Duluth, Minn.: Letter dated August 16, 1967, to Senator Stephen M. Young--	104
Tasch, Bruno J., president, Corn Exchange of Buffalo, Buffalo, N.Y.: Telegram, dated September 1, 1967, to Senator Young-----	109
Tobin, Austin J., executive director, The Port of New York Authority, New York, N.Y.: Letter, dated August 21, 1967, to Senator Stephen M. Young-----	111

ADDITIONAL INFORMATION

Chronological history, concrete repair and remedial work, Eisenhower lock-----	26
Finance under present law and under S. 1455 (a table)-----	13
Major repair costs, Eisenhower and Snell locks, April 1959 through June 30, 1967 (a table)-----	22
Plan for Eisenhower lock (a chart)-----	36
Trade area of Seaway Port of Duluth (a map)-----	108

ST. LAWRENCE SEAWAY

TUESDAY, AUGUST 29, 1967

U.S. SENATE,
SUBCOMMITTEE ON FLOOD CONTROL, RIVERS, AND
HARBORS, OF THE COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The subcommittee met at 10:10 a.m., pursuant to call, in room 4200, Senate Office Building, Senator Birch Bayh (chairman of the subcommittee) presiding.

Present: Senators Bayh and Jordan (of Idaho).

Senator BAYH. The subcommittee will please come to order.

The purpose of this hearing is to consider legislation, S. 1455, introduced by the distinguished Senator from Minnesota, Senator Mondale, and cosponsored by many of his Great Lakes colleagues who share a deep concern in the successful operation and the financial viability of the seaway.

Senator Mondale, in turn, has joined some of us in sponsoring S. 2131, dealing with the repair of the Eisenhower and Snell lock facilities.

I have a prepared statement outlining the main features of both measures under consideration. I ask that it be included in the hearing record.

The Chairman of the committee, Senator Randolph, has been most gracious in scheduling 2 days of hearings on these bills, and we will make every effort to accommodate everyone who has indicated a desire to testify.

The committee has received several communications regarding the pending legislation. Without objection they will be included in the record at an appropriate place.

For the benefit of those interested in submitting statements on this matter, the record of proceedings will be held open through Friday, September 15, 1967. I urge any who have material bearing on the matter before us to submit the information to the committee by that date.

S. 1455 would relieve the St. Lawrence Seaway Corporation of certain financial burdens which it bears under the provisions of the St. Lawrence Seaway Act (Public Law 358, 83rd Congress; 33 U.S.C. 985).

Under the Seaway Act, the St. Lawrence Seaway Corporation was authorized to borrow from the Treasury up to \$140 million at prevailing interest rates to finance construction of the U.S. Seaway facilities. The debt was evidenced by revenue bonds issued to the Treasury by the Corporation.

The act also required that toll rates be set at levels sufficient to cover all of the following: costs of operating and maintaining the seaway facilities, payments in lieu of taxes, an allowance for depreciation of the works, interest on the Corporation's obligations, and repayment of the capital debt within 50 years.

Section 1 of S. 1455 provides for the conversion of the revenue bonds of the Corporation, along with all accrued interest, into capital stock paying a 3.61 percent cumulative dividend.

This would eliminate the onerous requirement of repayment of the capital debt and accrued interest to the Treasury, while providing the Treasury with an owner's share and a dividend return.

The second major change contemplated by S. 1455 is to relieve the Seaway Corporation of the burden of financing maintenance costs from toll revenues. The cost of such maintenance would be paid for by appropriations made from the Treasury and would not be included in toll rate calculations.

That is a brief explanation of S. 1455. Others present today will, I am sure, expand on this statement.

The second measure to be considered during these hearings is S. 2131, which provides for the rehabilitation of locks and structures of the St. Lawrence Seaway.

The purpose of this legislation is to provide for the restoration of the Snell and Eisenhower locks which have seriously deteriorated during the past few years. Witnesses present today will give us the details and suggest the measures necessary to restore these structures to acceptable engineering standards.

We have a number of witnesses who desire to be heard this morning, including Senator Mondale and other sponsors of the legislation.

Mr. Cecil Mackey, Assistant Secretary for Policy Development, Department of Transportation, and Mr. Joseph H. McCann, Administrator of the St. Lawrence Seaway Development Corporation, are present and will give us the official position of those agencies on the bills.

Others who have requested an opportunity to testify will be heard either today or tomorrow. In this respect, we will do our best to accommodate all who have indicated a desire to be heard.

Senator BAYH. I would also like to put in the record at this time copies of the two measures which I just discussed, S. 1455 and S. 2131, and the departmental reports thereon.

(The insertions are as follows:)

[S. 1455, 90th Cong., first sess.]

A BILL To provide for a more conservative capitalization of the Saint Lawrence Seaway Development Corporation, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That (a) section 5 of the Act of May 13, 1954 (Public Law 358, Eighty-third Congress; 33 U.S.C. 985), is amended (1) by inserting "(a)" immediately after "Sec. 5." and (2) by inserting in the first sentence ", prior to the date of enactment of subsection (c) of this section," immediately before "revenue bonds".

(b) Such section is further amended by adding at the end thereof the following new subsections:

"(b) In order to protect the investment of the United States in the Corporation's assets, the Secretary of the Treasury and the Corporation are authorized and directed to convert the revenue bond obligations referred to in subsection

(a) hereof to capital stock in an amount equivalent to the outstanding principal amount of said revenue bonds and accrued interest. The Corporation shall pay a cumulative dividend on such capital stock of 3.61 per centum per annum.

"(c) To finance its activities, the Corporation may issue to the Secretary of the Treasury, after the date of enactment of this subsection, capital stock with cumulative dividends payable from corporate revenue. The Corporation shall pay a cumulative dividend on such capital stock at a rate determined by the Secretary of the Treasury, taking into consideration the current average rate as of the last day of the month preceding the issuance of the capital stock on current marketable obligations of the United States maturing more than five years thereafter.

"(d) The capital stock of the Corporation may be redeemable at the option of the Corporation in such manner as may be stipulated in such obligations."

SEC. 2. Subsection (a) of section 12 is amended by adding after the first sentence thereof the following sentence: "The division of the revenues of the seaway may be based on the respective annual costs of the Corporation and the St. Lawrence Seaway Authority of Canada only if comparable costs are used in arriving at the division."

SEC. 3. (a) Paragraph (4) of section 12(b) of such Act (33 U.S.C. 988(b)(4)) is amended to read as follows:

"(4) That the rates prescribed shall be calculated to cover, as nearly as practicable, at full-capacity operations, all costs of operating the works under the administration of the Corporation, payment of interest on the obligations of the Corporation, payment of 3.61 per centum per annum cumulative dividend of the capital stock of the Corporation, and payments in lieu of taxes. The costs of maintaining the works under the administration of the Corporation shall be paid from appropriations made from the Treasury and shall not be included in the rate calculations."

(b) Paragraph (5) of such section (33 U.S.C. 988 (b)(5)) is repealed.

[S. 2131, 90th Cong., first sess.]

A BILL To authorize rehabilitation of navigation structures and appurtenant works of the Saint Lawrence Seaway project to be carried out by the Saint Lawrence Seaway Development Corporation and financed from appropriations

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That there is authorized to be appropriated to the Saint Lawrence Seaway Development Corporation (hereinafter referred to as the "Corporation"), without fiscal year limitation, not to exceed \$13,100,000 to carry out a special program to rehabilitate the navigation locks and appurtenant structures of the Saint Lawrence Seaway located within United States territory, necessitated by abnormal deterioration of these facilities. Appropriations hereunder shall be applied against or in reimbursement of any costs or obligations for the initial plans and work of such special rehabilitation program which the Corporation has incurred or may incur prior to the availability of sums appropriated.

Expenditures and obligations by the Corporation from appropriations made pursuant to this authorization (a) shall not be considered for purposes of the debt limitation of the Corporation in section 5 of the Act of May 13, 1954 (68 Stat. 94; 33 U.S.C. 985), (b) shall not be subject to the amortization requirements of said Act of May 13, 1954, and (c) shall not be required to be taken into account by the Corporation in the negotiation or establishment of the rates of charges or tolls levied for the use of the Saint Lawrence Seaway.

THE SECRETARY OF TRANSPORTATION,
Washington, D.C., July 10, 1967.

HON. HUBERT H. HUMPHREY,
President of the Senate,
Washington, D.C.

DEAR MR. PRESIDENT: I transmit herewith for the consideration of the Congress a draft bill¹ To authorize rehabilitation of navigation structures and appurtenant works of the St. Lawrence Seaway Project to be carried out by the St. Lawrence Seaway Development Corporation and financed from appropriations.

¹ Subsequently S. 1341.

The proposed rehabilitation program for the St. Lawrence Seaway Eisenhower and Snell Locks is estimated to cost approximately \$13.1 million. This estimate, together with the proposed work program, is based upon the most current preliminary data available and has been developed by the U. S. Army Corps of Engineers after a recent survey of the seriously deteriorating condition of the concrete in the Eisenhower Lock and to a lesser extent of the Snell Lock.

The objective of the program will be to restore the locks to accepted engineering standards. It is planned that program work will be restricted to non-navigation seasons (December–April) and will be completed in 5 years from the time it starts in fiscal year 1968. The program is not expected to affect the operational status of either lock or the St. Lawrence Seaway system in general. Since the system is made up of single locks, the locks cannot be shut down for major overhaul work during navigation seasons without closing the Seaway. This, of course, must be avoided if the Seaway is to remain competitive as a world trade route.

The proposed work program is scheduled to begin in December 1967 and the preliminary first year cost estimates total \$3,660,000 (\$3,255,000 for the Eisenhower Lock and \$405,000 for the Snell).

Very careful consideration has been given to the most suitable and appropriate financing plan. Ordinarily, maintenance charges are covered through the Corporation's usual methods of finance and would be reflected in the toll charges. The Corporation's present schedule for debt amortization and the toll rates contemplate these expenses. However, because of the extraordinary character of the present deterioration, its wholly unanticipated magnitude (approximately 40% of the original construction cost), and its advent in the early years of operation, the use of the presently available financing techniques would be completely disruptive of the overall financial plan of the Corporation and would require a level of tolls which, in our judgment, could be seriously harmful to the Seaway's competitive position as an important segment of the Nation's international trade routes. With these considerations in mind, the financing plan reflected in the attached legislation has been developed.

The Administration strongly supports the proposed legislation whereby the Corporation would receive authority for appropriations from the general funds of the U.S. Treasury up to a maximum amount of \$13.1 million to finance the rehabilitation program. The bill would permit those appropriations to be used for reimbursement of costs of initial work which the Corporation may have undertaken prior to the availability of appropriations and financed from additional borrowings from the Treasury.

I urge the favorable consideration of this proposal by the Congress. We have been advised by the Bureau of the Budget that there would be no objection to the submission of this legislation from the standpoint of the Administration's program.

Sincerely,

ALAN S. BOYD.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., August 28, 1967.

HON. JENNINGS RANDOLPH,
Chairman, Committee on Public Works,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your request of April 12, 1967, for the views of the Bureau of the Budget on S. 1455, a bill "To provide for a more conservative capitalization of the Saint Lawrence Seaway Development Corporation, and for other purposes."

The bill would amend section 5 of the Act of May 13, 1954, creating the Saint Lawrence Seaway Development Corporation to require that the revenue bonds which the Corporation has issued to the Secretary of the Treasury, together with accrued interest on such bonds, be converted into an equivalent amount of capital stock. The Corporation would be required to pay a cumulative dividend of 3.61 percent a year on such stock.

In the future, the Corporation would be authorized to issue additional—apparently unlimited—capital stock to the Treasury to finance its activities. Dividends on such stock would be determined by the Secretary of the Treasury based on current interest rates on certain United States obligations.

The bill further provides that the division of revenues of the seaway may be based on the annual costs of the Corporation and the Canadian Seaway Authority only if comparable costs are used to determine the division. Finally, it provides that, in setting its tolls or rates, the Corporation shall cover (at full-capacity operations) all operating and dividend costs and payments in lieu of taxes, but not the costs of maintaining its works. The latter costs are to be paid from appropriations.

The proposed amendments would alter present requirements that the Corporation (1) repay its revenue bond obligations to the Treasury over a period not to exceed 50 years; (2) pay interest on those obligations based on the current average rate on marketable obligations of the United States of comparable maturities at the time of issuance; and (3) base tolls on the need to cover all operating and maintenance costs, including certain depreciation, interest and payments in lieu of taxes.

The provisions of the bill are wholly inconsistent with the basic concept that the Corporation operate on a potentially self-sustaining basis. It was on that basis that the creation of the Corporation was justified, that agreements have been negotiated with Canada, and that this and prior Administrations have proceeded. The Corporation has made major strides to achieve that objective, and we believe that concept remains sound for a business-type operation such as that of the Corporation.

The bill would, in effect, provide the basis for a major subsidy for the users of the Seaway at the expense of the general taxpayer and competitive modes of transportation. It would remove from the toll base the current need to repay over \$140 million which the Corporation has borrowed from the Treasury or which it owes as interest on its borrowings. The need to cover maintenance costs would also be eliminated; we do not know of any justification for excluding such a normal business expense.

In view of the above and other factors cited in the report of the Department of Transportation, the Bureau of the Budget strongly recommends against enactment of the bill.

Sincerely,

WILFRED H. ROMMEL,
Assistant Director for Legislative Reference.

THE GENERAL COUNSEL OF THE TREASURY,
Washington, D.C., August 29, 1967.

Hon. JENNINGS RANDOLPH,
*Chairman, Committee on Public Works,
U.S. Senate, Washington, D.C.*

DEAR MR. CHAIRMAN: Reference is made to your request for the views of this Department on S. 1455, "To provide for a more conservative capitalization of the Saint Lawrence Seaway Development Corporation, and for other purposes."

Under existing law, the St. Lawrence Seaway Corporation is authorized to issue revenue bonds to the Secretary of the Treasury in a face amount not exceeding \$140 million. The maturity of bonds cannot exceed 50 years, and the interest rate is based on the current average rate on marketable obligations of the United States of comparable maturities as of the last day of the month preceding the issuance of the bonds. Interest payments may be deferred but any such deferred payments bear interest after June 30, 1960.

Existing law also requires that the tolls prescribed for the use of the St. Lawrence Seaway be calculated to cover all costs of operating and maintaining the works under the administration of the Corporation, including depreciation, payment of interest on the obligations of the Corporation, and payments in lieu of taxes. In addition, the tolls are required to provide revenues sufficient to amortize the principal of the debts and obligations of the Corporation over a period not to exceed 50 years.

The St. Lawrence Seaway Corporation has issued to the Secretary of the Treasury \$124.8 million of revenue bonds as of March 31, 1967, under the foregoing authority. The Corporation is in deficit and the amount of unpaid deferred interest and interest on such deferred interest amount to \$18.5 million as of March 31, 1967.

S. 1455 provides for the recapitalization of the Corporation by the conversion of the outstanding revenue bonds and the accrued interest thereon to capital stock with cumulative dividends of 3.61 percent, which is the weighted average of

interest rates on outstanding borrowing from the Treasury, including interest on deferred interest. The Corporation would be authorized to issue additional capital stock to the Secretary of the Treasury after the enactment of S. 1455. The bill would also revise the existing criteria for calculating toll charges to provide that the rates prescribed shall be calculated to cover, as nearly as practicable, at full-capacity operations, all costs of operating the works under the administration of the Corporation, payment of interest on obligations of the Corporation, payment of 3.61 percent per annum cumulative dividend on the capital stock of the Corporation, and payments in lieu of taxes. The existing requirement that rates be sufficient to cover all costs of maintaining the works and to amortize the principal of the debts and obligations of the Corporation would be eliminated, as well as the requirement that depreciation be considered in setting toll charges. The costs of maintaining the works would be paid from appropriations.

The bill states that in "order to protect the investment of the United States in the Corporation's assets", the Secretary of the Treasury and the Corporation are directed to convert the revenue bonds into capital stock. In that regard, the Department is of the opinion that the proposed legislation would impair, rather than protect, the investment of the United States in the Corporation. There would be no assurance that the Government's present investment or any additional investment would be returned since the new criteria for establishing toll charges would no longer contain a requirement that the rates shall provide sufficient revenues to amortize the principal of the obligations of the Corporation.

To establish toll charges on the basis of a lower rate calculated on the basis of "full capacity operations" would not yield sufficient revenues to permit the repayment of the Government's investment. The bill does not define "full capacity operations" and the capacity of the Seaway is not clear. Operating and maintenance costs can be expected to rise as the project becomes less efficient with age. The exclusion of depreciation in calculating rates would result in its exclusion as an operating cost which is presently required.

Thus, the net effect of the proposed legislation would be to permit the establishment of toll charges under criteria that would be contrary to the principle of the legislation originally authorizing the construction of the St. Lawrence Seaway, which contemplated that the Seaway be self-supporting through the imposition of toll charges adequate to cover all its costs. Clearly, the provision to pay the costs of maintaining the works from appropriations and to exclude them from rate calculations would result in a direct cost to the Government and would be a departure from the self-supporting principle. Also, the reduced toll charges that would be permitted under the bill would result in the impairment of the Government's investment in the Corporation. A very substantial undisclosed subsidy in the form of lower toll charges would accrue to the benefit of the users of the Seaway, which subsidy would be borne by the taxpayers of the country as a whole.

Moreover, the Corporation's December 1, 1966, "Report to the Secretary of Commerce Concerning Seaway Toll Proposals," considered the approach taken in S. 1455, and other alternatives to a toll increase, but recommended instead an increase in tolls of approximately 10 percent. However, on March 13, 1967, the Department of State announced an agreement with Canada that there will be no toll increase for at least four years. The announcement stated that the United States considers that in view of the rapid growth in Seaway traffic a toll increase is not necessary.

The existing St. Lawrence Seaway legislation results in a proper financial disclosure of the operations of the Seaway. If there is no way to increase the revenues of the Corporation or to decrease its expenses, operation under present law will most accurately disclose its true financial condition. If the Corporation cannot be self-supporting, its losses should not be hidden by changing bookkeeping practices and permitted decreases in tolls that would result in indirect Government subsidies.

In the circumstances, the Department would be strongly opposed to the proposed legislation.

The Department has been advised by the Bureau of the Budget that there is no objection from the standpoint of the Administration's program to the submission of this report to your Committee.

Sincerely yours,

ROY T. ENGLERT, *Acting General Counsel.*

Senator BAYH. We have had numerous correspondence dealing with this matter. It would be helpful if the staff chose representative samples and those were included in the record at a later point.

Our first witness is Senator Walter F. Mondale, our distinguished colleague from Minnesota, who expressed his concern about the future of the seaway during the 1966 hearings. We are pleased to have him here to start our hearing this morning.

Before we go on, I would like to say that we are indebted to the distinguished chairman of this committee for permitting us to hold these hearings. Those of us who live in the Midwest-Great Lakes area owe him a debt of gratitude for the concern that he shares with us over the continued successful operation of the seaway.

Senator Mondale.

**STATEMENT OF HON. WALTER F. MONDALE, A U.S. SENATOR
FROM THE STATE OF MINNESOTA**

Senator MONDALE. Thank you, Mr. Chairman.

I would like to join with you in expressing my appreciation to the chairman of the full committee for permitting us to have these hearings. I would particularly like to express my appreciation to you for your leadership.

These are deep and difficult problems, and it is easy for one to concentrate on other areas that may be more dramatic. But the issue we are dealing with here is as profound and important to the balanced economic growth of this country as any other measure now before the Congress.

While my testimony does not deal specifically with the other proposal authored by the chairman of this subcommittee for the repair of the Eisenhower and Snell locks, I nevertheless was pleased to join with him as a cosponsor of that measure. At the outset of my testimony, I would urge its adoption and the authorization of that expenditure in this session of the Congress.

Our testimony, Mr. Chairman, has special significance today, because I think we all realize that we are operating under a very limited time problem. Last year, with the help of the chairman of this subcommittee and others, and after several months of fruitless efforts, we finally had to go to the President of the United States and plead for his personal assistance in averting a 10-percent increase in tolls on the St. Lawrence Seaway.

We are all grateful to the President for personally intervening and changing the announced policy of our representatives in dealing with the Canadians at those negotiations, in calling for a delay.

We have now obtained that delay of a toll increase, but only for 4 more years. I am very fearful that unless we use these years quickly and expeditiously to reconstruct the financial structure of the seaway on a basis that will establish tolls that will actually contribute to further use of the seaway, rather than the threatened increase in tolls which will interfere with the use of the seaway, that unless we move quickly and effectively, we may find that 4 years from now we are much worse off than we are today.

Therefore, I appreciate this opportunity to appear in support of S. 1455, which I introduced with the sponsorship of 13 other Senators earlier this year.

This bill, with some revisions to bring it up to date, is the same as S. 3698, introduced in the 89th Congress. The bill at that time was

part of a larger, and I might add, successful effort to avert a dangerous toll increase on St. Lawrence Seaway shipping.

We cannot delay action to reorganize the St. Lawrence Seaway's financial structure. The recent United States-Canadian agreement for a moratorium on toll increases has not solved anything. It merely gave us a little more time to work out a permanent solution to the seaway's financial problems.

No amount of bookkeeping wizardry can hide the gloomy reality of seaway finances. The problem is not going to disappear or solve itself. It is going to get worse. The Seaway has no reasonable prospect of ever meeting its obligations under the present financial structure without a toll increase.

Thus we must either act now to put the seaway on a sound financial basis or else face the fact that toll increases are inevitable. If we delay action, we will again be confronted with a toll increase in a few years but without the option we had last year of asking for a postponement.

Not only will there be even greater pressure for a toll increase, but there will also be pressure for an even larger increase than was proposed last year. The seaway's own traffic estimates indicate that they will be \$5 million farther behind in repayments in 1971 than they are now.

Because we were successful in postponing toll increases for 4 years—and the chairman of this subcommittee was instrumental in that effort—we now have an opportunity to deal with the basic inequity of the St. Lawrence Seaway Act of 1954.

That legislation established the Seaway Corporation and authorized it to borrow up to \$140 million to finance construction of the seaway.

The principal was required to be repaid out of toll revenues, with interest at prevailing rates, within 50 years. This was the first time that any waterway of the United States had been financed with repayment requirements on initial construction.

Under the provisions of the Seaway Act, the Corporation is also responsible for expenses of operation and maintenance of the seaway itself, again, out of toll revenues. No other federally constructed waterway is required to bear these expenses either. In every case, except that of the St. Lawrence Seaway, the expenses of operation and maintenance are paid from Federal appropriations.

The financial scheme established by this legislation has not been a success, and should be changed. A little past history will clarify the picture considerably.

Last year, when we introduced this bill as S. 3698, the Corporation and its Canadian counterpart had decided to recommend, and in December 1966 did recommend, a toll increase of 10 percent in order to make the required repayments on a reasonable schedule.

A package was recommended calling for a toll increase of 10 percent and a decrease in the U.S. share of seaway revenues from 29 percent to 28 percent. Noting that the outstanding debt obligations of the Corporation, including deferred interest, capitalized interest, and revenue bonds, at the end of 1965 totalled \$141,719,000, a Corporation report in May of 1966 set up certain repayment goals for a 5-year period from 1967 through 1971.

This report stated:

*** an approximate 10-percent increase in tolls would, if traffic expands as predicted, allow the corporation to begin to repay its debts within the 5-year forecasted period. (1967-71.)

This estimate was based on the fact that the lag in traffic and tonnage from 1959 to 1965 had resulted in an \$8.2 million greater deficit than was anticipated when tolls were established in 1959.

In those negotiations, the suggested 10-percent increase was blocked. The St. Lawrence Seaway Corporation therefore did not receive the increase it thought necessary in order to meet its revenue repayment obligations, and in addition suffered a reduction in its share of total toll revenues from 29 percent to 27 percent, instead of to 28 percent, as it had recommended.

This means that over the 5-year study period of 1967 to 1971, the Seaway Corporation revenue estimates—approximately \$40,800,000 will actually total only about \$35 million. Using the Corporation's own traffic estimates, this would mean a reduction, from what they anticipated, of approximately \$1,076,000 per year.

This makes it extremely important that we make every effort now to work out a solution to the apparent financial dilemma. There is, of course, always the theoretical possibility that traffic increases alone will permit the Seaway to meet its obligations.

But the projections on traffic growth in the past have always exceeded the actual tonnage, with the exception of 1966, when the actual tonnage exceeded estimates by slightly over 1.2 million tons.

This one successful year still leaves us 51.3 million tons short of the estimates that were made for the 8-year-life of the Seaway from 1959 through 1966.

The easiest expedient, in the face of a seemingly impossible repayment schedule, would be to increase tolls.

However, we must not forget that 17 States are in the area tributary to the seaway or Great Lakes. These States account for over 75 percent of the total annual production of wheat, corn, barley, oats, rye, sorghum grain, soybeans, and flaxseed in the United States. This agricultural commerce is carried on in a trade where fractions of a cent in transportation costs often determine the means of transportation, and even the sale itself.

Many transportation specialists have testified, and many representatives of the Great Lakes ports will testify today that the toll structure is already very burdensome, that it is at what specialists call the critical point.

A modest increase can result in a disastrous and disproportionate decrease in the use of the Great Lakes for shipping purposes.

I am especially familiar with the seaway port of Duluth, and can testify to the ever-increasing commerce handled through it. Total exports carried through the Port of Duluth in Minnesota have more than doubled since the seaway was opened. The largest portion of that general export figure is grain, nearly 3.7 million tons of the 4.1 million tons carried in 1966.

A toll increase would certainly diminish traffic and dampen the commerce which the seaway has stimulated. Such a result would harm our export trade, our farmers, and reduce the beneficial effect of the competition of the fourth sea coast.

What are the basic, compelling reasons for passing S. 1455?

First of all, we cannot escape the fact that the St. Lawrence Seaway is the only waterway in the history of the United States that has been financed with repayment requirements, covering construction, operation, and maintenance.

In addition, toll revenues are required to cover depreciation, as well as payments in lieu of taxes and interest.

The very substantial allowance for depreciation, \$1,686,000 in 1965, is impossible to justify as a required element of tolls. Even if it were true that the facilities of the seaway were slowly becoming worthless, despite their maintenance, it makes no sense to require tolls to cover both capital repayment and depreciation.

This means that the users of the seaway—and that includes our exporters of grain and other commodities—have to pay for it twice, once in repayment of the capital to the Treasury and once again in a depreciation allowance.

Section 1 of the bill would direct the conversion of the revenue bonds of the Corporation, along with all accrued interest, into capital stock paying a 3.61 percent cumulative dividend. This rate of return is approximately the combined average interest charge on outstanding bonds and deferred interest.

Based on the state of the Corporation as of December 31, 1965, this would mean issuance of capital stock to the Treasury in the amount of \$124,276,050 and deferred interest in the amount of \$17,444,244.

This reorganization does not represent a total abandonment of the concept that the seaway should pay its way to the Treasury.

Many of us would prefer a measure which wholly eliminated tolls and put us on the same footing as the other federally maintained waterways. However, it is our frank appraisal that the legislative possibilities will not permit this.

We are, in effect, under this bill extending the repayment period in perpetuity, but at a rate of payment which will permit maintenance of toll levels that will not depress the traffic.

It may even be possible—and I hope it will be—to lower tolls under this proposal. Under the provisions of this bill, seaway toll revenues would still return over \$5 million annually to the Treasury. In the next 45 years at present traffic rates, it would pay the Treasury about \$230 million.

There is certainly no other transportation facility that has ever been made to pay for itself to that high a degree. Yet this arrangement would afford substantial relief to the seaway Corporation by eliminating the high burden of repayment of capital.

The second major change made by this legislation is that it would relieve the Corporation of the burden of maintaining its facilities. This provision, too, is a compromise. In every other federally financed waterway, both maintenance and operation are paid from appropriations, not to mention original construction.

Certainly it is not unreasonable to provide for payment of maintenance of the St. Lawrence Seaway from Federal appropriations.

The proposal, in providing the level of interest payments to be achieved by tolls, is computed without regard to the depreciation element, which previously resulted in tolls to cover double the cost of the seaway. The return to the Treasury of the cumulative dividend of over \$5 million per year will be sufficient to protect the interests of the Government without additional depreciation reserves.

I think it is especially important to note, in connection with this legislation, the critical importance of not placing ourselves in a position where toll increases will be necessary. The Canadian Govern-

ment has provided for substantial toll increases along its Welland Canal locks. As a matter of fact, at the end of the next 5 years, a ship will have to pay an additional \$800 for passage one way through the five locks of the Welland Canal. This will certainly increase shipping costs and have a deleterious effect on export and import traffic through the seaway.

It seems to me that the only opposition to this legislation comes from those who would be forced to compete more vigorously in terms of traffic and rates if the seaway were to continue to increase traffic through it and draw more export efforts—and who would rather blockade the fourth seacoast.

We have everything to gain by additional competition in the field of transportation and shipping, and it seems to me that narrow short-range commercial interest should not dictate to the Congress a policy for allowing the fourth seacoast to be blockaded. An increase in tolls will mean in reality a blockade of the St. Lawrence Seaway.

For this reason, Mr. Chairman, I think this is the time to adopt S. 1455. It is a fair—indeed, it is a modest proposal. It does not call for a substantial appropriation. It continues to maintain the St. Lawrence Seaway as the only seaway in the country that pays tolls.

It would pay over \$5 million worth of tolls annually on this revised repayment program and, despite that, we still hear opposition to this proposal. I think the basic question we must ask is whether the various regions of this country are going to try to dry up the other regions and just have their own economic development.

Whether we are going to have economic activity on our respective seacoasts and a vast wasteland in between, or whether there is going to be given a reasonable opportunity to the upper Midwest, as well as other regions, to have a chance to grow economically, is the question.

One of the great arteries of commerce, one of the great areas of potential growth for the upper Great Lakes area, is the Great Lakes themselves and the St. Lawrence Seaway. The present financing structure is such, however, that we are denied the full potential. And if the tolls are increased, we will be denied it even further, perhaps disastrously.

Thus, 14 Senators, from eight States, representing both political parties, including the Minority Leader of the U.S. Senate, come to this committee pleading that this reasonable and modest proposal be adopted, so that the St. Lawrence Seaway can be placed on a firm setting.

Mr. Chairman, I am proud to be a sponsor of the Appalachia program, because I think that region of the country needs help, and I note that a large portion of the effort in Appalachia deals with highways and development roads, and that we have already spent several millions of dollars and will spend perhaps over a billion dollars creating highways in the area we call Appalachia.

I am pleased to support that. I think the area needs it.

I suppose I could take the attitude of some who oppose the St. Lawrence Seaway financial restructuring and say: "No, if it is not for my area, if it is not contributing to the development of the economy of my State, I am against it."

But I don't believe that is the way we ought to approach it. It may be the way this country approached its problems some years ago, but I think the way to approach the problem of this seaway, the

problem of Appalachia, the difficulties of other areas that are having economic problems, is for us to look at this thing from a national standpoint—and hope that we can have economic development and vitality in every area of this country.

That is why this St. Lawrence Seaway proposal is so terribly important, and why I am pleased to be a sponsor.

Finally, Mr. Chairman, I can't conclude without making a comment about the testimony of Mr. Mackey, in opposition to this proposal.

I just think this proposal is a typical example of a limited, narrow, squinty vision of what we are trying to do. Now, we have talked to the Department of Transportation time and time again about the problems of the seaway tolls.

Nevertheless, this subcommittee is going to shortly hear testimony that simply bases the whole policy of the Federal Government on a thin and narrow tradition in history of the bill of 1954. Nowhere in there will you find a treatment of the question of whether it is fair that the St. Lawrence Seaway should be the only federally maintained waterway which is required to pay tolls, or that we have to pay tolls which in some cases amount to \$16,000 or \$17,000 on a single ship.

Nowhere in this testimony will you find any treatment of the question of the importance of the growth of the St. Lawrence Seaway to the economic vitality of the upper Midwest. All you will find is a sterile historical treatment of the act of 1954—and on the basis of it, a thin argument that we ought to pay our way pursuant to that unfair financing structure.

I am sorry that the administration that I support has done this. I am sorry that it was necessary to go over their heads last year and get the President of the United States to change their minds, so we could avert their toll increase, and I think it is tragic that they are back here again, arguing essentially an anti-St. Lawrence Seaway position, on a basis that is totally unsupported.

Senator BAYH. Thank you very much, Senator Mondale. You have made a splendid lead-off witness for the study that the committee is undertaking.

I particularly appreciate the fact that you once again pointed out that the St. Lawrence Seaway is in a category all its own in the matter of toll charges.

In view of the substantial investment we have in the seaway, don't you think it would be sound business practice to protect that investment and see that it is successful?

Senator MONDALE. I don't think there is any question about the advisability of that. If we can restructure the financing of the St. Lawrence Seaway, so that the tolls are such that it actually encourages traffic on the St. Lawrence Seaway, two things will happen: First of all, the economic vitality of our States will be much higher. Secondly, the revenues will increase. The tolls will increase.

Under this restructuring, in the next 45 years we would pay nearly \$230 million into the Federal Treasury—hardly a parsimonious proposal—on just dividends alone. This is based on present traffic patterns.

It seems to me that that is a proposal that: No. 1, doesn't cost the Government anything; No. 2, from the most conservative standpoint, will pay it back more than twice for its initial capital outlay; and,

No. 3, for that reason, and because of the more modest tolls, will permit us to attract more commerce to the St. Lawrence Seaway. From every standpoint I think this bill—except from the most parochial and narrow and sterile point of view—this measure should be adopted.

Senator BAYH. I appreciate very much your letting us have your thoughts. We are going to pursue this.

As you can see, we have a rather extensive list of witnesses.

Senator MONDALE. Yes, Mr. Chairman.

In concluding, I would like to include a table of the difference between financing under the existing law and under S. 1455 for the record, if I might.

Senator BAYH. We will include that for the record.

Senator MONDALE. Thank you.

(The table referred to follows:)

FINANCES UNDER PRESENT LAW AND UNDER S. 1455

This analysis uses 1965 year-ending figures

I. Under present law, tolls are required to cover:		
(a) Operation	-----	\$598,071
(b) Maintenance	-----	712,593
(c) General administration	-----	455,084
(d) Interest	-----	¹ 4,899,621
(e) Depreciation	-----	1,686,017
Subtotal	-----	8,341,386
(f) Principal:		
(1) Revenue bonds	-----	124,276,050
(2) Deferred and capitalized interest	-----	17,443,234
Total	-----	141,719,284
II. Under Mondale bill, S. 1455, tolls are required to cover:		
(a) Operation	-----	\$598,071
(b) General administration	-----	455,984
(c) Dividends	-----	5,116,056
Total	-----	6,169,211
Revenue available during 1965 for application to these costs was \$6,371,814—		
(a) when compared with present laws, resulted in deficit of \$1.9 million;		
(b) when compared with Mondale bill, results in surplus of \$200,000.		

¹Interest, if fairly constant over next 45 years, with no diminution of principal, will total roughly \$216,000,000.

Senator BAYH. I am informed that Senator Burdick and Senator Nelson had intended to appear. It is now learned that they cannot make it due to other business, so their statements will appear at this point in the record.

(The statements are as follows:)

STATEMENT OF HON. QUENTIN N. BURDICK, A U.S. SENATOR FROM THE STATE OF NORTH DAKOTA

Mr. Chairman, distinguished committee members, it is a privilege and honor for me to appear here today to lend my voice in support of S. 1455.

By providing a healthier capitalization for the St. Lawrence Seaway Development Corporation, S. 1455 will add new life to the economic miracle that is the St. Lawrence Seaway. And miracle it is. The geographer is struck by the uniqueness of an ocean waterway penetrating the heartland of countries as vast as the United States and Canada. The engineer marvels at the scientific ingenuity with which the project was conceived and executed. Those of us live and work in this

heartland, well, every so often we find ourselves asking if it is really true. Some notions, like the notion that North Dakota is almost 2,000 miles from any ocean, do not leave us easily. In fact, the ocean is only about 230 miles away, at our nearest Seaway port, Duluth.

By bringing low-cost ocean shipping to our door, the Seaway allows premium North Dakota grains to compete for world markets previously closed because of higher overland freight rates. North Dakota has long recognized the importance of foreign markets to its economy. Since 1959 a primary effort of the North Dakota Wheat Commission has been the development of foreign markets for its hard red spring wheat and durum. Without the St. Lawrence Seaway, the program would have had little chance of succeeding.

We cannot permit competitive gains achieved for products of the entire central North American continent to be lost by unnecessarily increasing charges to Seaway users. Charges can be kept realistic if we adopt measures such as S. 1455. The bill would merely unburden the St. Lawrence Seaway of its inequitable financing strictures and bring the project into the pattern used in other waterway and port projects.

I respectfully urge you to act favorably upon S. 1455. The economic liberation brought by the Seaway to the vast middle region is too vital to be surrendered by failure to take this step.

STATEMENT OF HON. GAYLORD NELSON, A U.S. SENATOR FROM THE STATE OF WISCONSIN

Mr. Chairman, I am pleased to offer my complete support for S. 1455, to provide for a more reasonable financing system for the St. Lawrence Seaway Development Corporation, and S. 2131, to authorize rehabilitation of navigation structures of the St. Lawrence Seaway projects to be carried out by the St. Lawrence Seaway Development Corporation and financed from appropriations. I am honored to be a cosponsor of this legislation.

For far too long, the St. Lawrence Seaway has been the victim of unfair and inequitable transportation policies. We need the modifications and authorizations provided by this legislation to correct the injustices of the past and present.

No other waterway in North America is required to pay off its original construction costs as the St. Lawrence Seaway must do. Our Midwest tax dollars have been spent to develop the Mississippi River, the Houston ship canal, the Delaware River Basin and other public waterways. There is no reason why the St. Lawrence shouldn't be treated equally as well.

It is high time that this discriminatory burden be removed or at least that the Seaway's financial responsibilities be reduced.

Reports persist that other transportation carriers are continuing in their all-out efforts to divert business from the Seaway by offering abnormally low shipping rates from Midwest points to the East Coast.

But, despite these obstacles, the St. Lawrence Seaway is now beginning to realize its full potential. During last year, a record high 49 million tons were shipped through the Seaway, more than 13% above 1965 and a million tons more than original predictions.

The Port of Milwaukee handled 730,635 tons of cargo last year from 442 vessels, a far cry from twenty years ago when 12 ships carrying 2,000 tons visited the port. Milwaukee and other key Wisconsin ports now receive ocean-going cargo from 300 cities in 21 states.

The St. Lawrence Seaway has provided previously land-locked states with a nearby direct route to the ocean. Estimates indicate that the Seaway has resulted in a savings of \$60 million on grain shipments from the Midwest and more than \$200 million on total transportation charges.

S. 1455 will refinance the Seaway's indebtedness by converting the outstanding principal and interest owed to the government into interest-bearing capital stock owned by the government. Under this procedure, the Seaway would save \$1.8 million annually and at the end of 60 years will have paid into the U.S. Treasury a total of \$285.5 million.

S. 2131 will authorize the appropriation of \$13.1 million, to be spread over a five-year period, for the repair work necessary to insure the uninterrupted operation of the Eisenhower and Snell locks and related structures.

I strongly recommend favorable action by this subcommittee on these two bills vital to the economic well-being of the entire Midwest.

Senator BAYH. Our next witness this morning is Mr. Cecil Mackey, the Assistant Secretary for Policy Development, Department of Transportation.

Mr. Mackey, you might care to identify the assistants you have with you. I see that you identify one of them in your testimony, so we will let you proceed as you see fit, sir.

STATEMENT OF M. CECIL MACKEY, ASSISTANT SECRETARY FOR POLICY DEVELOPMENT, DEPARTMENT OF TRANSPORTATION, ACCOMPANIED BY JOSEPH H. McCANN, ADMINISTRATOR, AND B. T. JOSE, ASSISTANT ADMINISTRATOR, ST. LAWRENCE SEAWAY DEVELOPMENT CORPORATION

Mr. MACKEY. Thank you, Mr. Chairman.

On my right is Mr. Joseph McCann, who is Administrator of the St. Lawrence Seaway Development Corporation. And on my left is Mr. Tom Jose, who is Assistant Administrator for the Corporation.

Before I present my prepared statement, I would like to make one or two comments in the light of Senator Mondale's statement.

First, I think that the Department of Transportation and Secretary Boyd are on record many times and in many places as being very strong supporters of the St. Lawrence Seaway, of the transportation system of the Midwest, and of the Midwest as a region.

The question was raised in hearings on a similar bill last year as to the Department's attitude toward the seaway, and Mr. Boyd went into some detail at that time to hopefully lay to rest any fears that he was antiseaway or, in fact, that he had an attitude or a philosophy which favored any one region of the country over another.

The Department of Transportation was created to promote transportation. It was created to promote transportation for all modes, for all regions of the country.

In the time that Mr. Boyd has had association with the seaway, in his prior role as Under Secretary of Commerce for Transportation, and as Secretary, I can say personally that I know he has worked very hard to promote the interests of the region and to promote the seaway.

Mr. McCann can vouch for that. And the members of the St. Lawrence Seaway Advisory Subcommittee, I think, will also vouch for that fact. The fact we address ourselves in our statement to the technical aspects of the bill should not in any way be taken as an indication of a lack of our promotional interest, our willingness to work as hard as anyone to promote the seaway. It certainly should not be taken as any indication that we are less than very optimistic for the future of the seaway and the region which it supports.

They are all vitally important to us and to the country.

Senator BAYH. I appreciate the fact that you state in such uncertain terms the commitment of the Department and the Secretary, as well as yourself, for strengthening the position of the St. Lawrence Seaway in the national transportation system.

Unfortunately, I have not had the opportunity to read your testimony.

We were all very concerned last year when Mr. Boyd and others recommended an increase in the Seaway tolls. We did not in any

way attribute to the Secretary an ulterior motive, but we were concerned about the validity of the judgment.

Mr. MACKEY. We were delighted that we did not have to have a toll increase, and the fact that we were able to negotiate successfully with the Canadians and not have one is certainly an indication of our faith in the future of the Seaway.

Senator BAYH. We like to feel that perhaps the voice of the Congress strengthened your hands in that negotiation.

Mr. MACKEY. It certainly did, sir. We are fully aware of that.

Mr. Chairman, I am Cecil Mackey, Assistant Secretary for Policy Development of the Department of Transportation. I have introduced the gentlemen who are with me.

I will testify first, Mr. Chairman, on S. 1455. And thereafter I would like to speak briefly on S. 2131.

Mr. McCann will speak at greater length on S. 2131, and the Corps of Engineers is also prepared to comment on that.

The Corporation, by its incorporating statute, is subject to the direction and supervision of the Secretary of Transportation. That explains the relationship of us who are here today.

Under the existing law which created the St. Lawrence Seaway Development Corporation, the Corporation is authorized to issue revenue bonds to the Secretary of the Treasury in a face amount not exceeding \$140 million.

The maturity of the bonds cannot exceed 50 years, and the interest rate is based on the current average rate on marketable obligations of the United States of comparable maturities as of the last day of the month preceding the issuance of the bonds.

Interest payments may be deferred with the approval of the Secretary of the Treasury, but any such deferred payments bear interest after June 30, 1960.

Existing law also requires that the tolls prescribed for the use of the St. Lawrence Seaway be calculated to cover all costs of operating and maintaining the works under the administration of the Corporation, including depreciation, payment of interest on the obligations of the Corporation, and payments in lieu of taxes. Any tolls are required to provide revenues sufficient to amortize the principal of the debts and obligations of the Corporation over a period not to exceed 50 years.

As of December 31, 1966, the Corporation's total bond and interest debt was approximately \$141.98 million. The debt is composed of \$124.8 million of revenue bonds issued to the Secretary of the Treasury, and unpaid deferred interest and interest on such deferred interest amounting to \$17.2 million.

As I said, this latter figure includes both deferred interest during construction (not charged to the borrowing authority) and deferred interest during operations (not earned from tolls nor charged to the borrowing authority).

I might say that the deferred interest during operations, the \$8.2 million figure which was amended, is the amount of interest which was accumulated as a result of the tolls being set on the basis of traffic projections which were made at the time the seaway began operations.

Traffic grew more slowly than was anticipated, and so the deferred interest accumulated more rapidly. So there is this amount which the

seaway owes, which was not anticipated in the setting of the original tolls.

Seantor BAYH. Since you did depart from your text there, would you care to inform us for the record of the estimated completion time of the connecting channels and what the impact of this delay was on the revenue capability of the seaway?

Mr. MACKEY. The seaway was completed on schedule, Mr. Chairman.

Senator BAYH. The connecting channels, the depth of certain port facilities?

Mr. MACKEY. Mr. McCann advises me that all of the connecting channels and the other things which you mention were completed approximately a year ago.

Senator BAYH. When was it originally estimated that they would be completed?

Mr. McCANN. I doubt if we had an estimated time of completion of the connecting channels. It was just something that followed after the seaway.

Nobody gave the connecting channels much thought until the seaway was completed. This, of course, contributed greatly to our slower buildup of traffic.

Senator BAYH. That is what I am trying to get at the time between the completion of channels and reaching the estimated traffic revenues. It seems to me there is a definite correlation there.

Mr. MACKEY. The deepening of some of the Great Lakes harbors has also been a factor, and this has just recently been completed.

It unquestionably had some impact on traffic growth, but they were not scheduled for completion in such a way that this influenced traffic projects.

The economists projected future traffic, and they missed it.

Senator BAYH. Why were the projections so far off the mark?

Last year, if memory serves me correctly, was the first time you reached the 1959 projection, wasn't it?

Mr. MACKEY. That is right. We passed it last year. And as of last year the rate of growth in traffic was faster than had been forecast. I suppose the only explanation you can give is that economics and the art of forecasting is still an art, and it is not a science.

The economists did the best they could, and it is not unusual to miss economic forecasts which extend over that long a range of years.

Senator BAYH. The reason I dwell on the faulty estimate is that it is the only reason for the proposed legislation. The failure to live up to the 1959 tonnage estimate and the resulting lag in revenues has left the seaway even further in debt than it was 8 years ago. This accumulated interest has become a very serious problem.

Please go ahead with your statement.

Mr. MACKEY. While it is a principal factor, I think it might be worth knowing that we are approximately 51 million tons behind—or about 1 year's tonnage at the present rate—and that judged by the standards of economic forecasting, this is not a particularly bad error, though it does have a serious impact on the seaway.

Senator BAYH. It seems to me that what we must be concerned about is refusing to recognize the error that was made in 1959. We have new data now and I believe it would be logical to project some new estimates and revise the revenue schedule.

Mr. MACKEY. S. 1455 would amend section 5 of the Seaway Act to authorize and direct the Corporation to convert the present revenue bond obligations held by the Treasury, including current interest thereon, into capital stock held by the Treasury.

A cumulative dividend of 3.6 percent per annum would be paid on the stock. Capital stock would also be issued to the Treasury to finance further activities of the Corporation at a dividend rate determined on the same basis as the Corporation's bond interest rates are presently determined. The Corporation would be permitted to redeem such capital stock as may be stipulated in the obligations held by the Treasury.

S. 1455 would also amend section 12 of the seaway statute so that the Corporation and the St. Lawrence Seaway Authority of Canada may determine the division of revenues between the two entities based on their respective annual costs only if comparable costs are used in arriving at the division.

In addition, the rate formula would be revised and a provision would be made for appropriated funds to be used to finance the costs of maintaining the United States section of the seaway.

Finally, the bill would repeal the language which requires tolls to amortize the principal of the Corporation's debts and obligations within 50 years.

While we recognize in this legislation, as in its predecessor of last year, S. 3698, concern and interest in insuring the seaway's continuing growth as a vital artery of domestic and international commerce, we do not believe that S. 1455 reflects an appropriate method for accomplishing that end.

The basic economic justification in 1954 for the St. Lawrence Seaway project was the agreement that it could be self-supporting and non-subsidized. This recognition is entirely consistent with the fundamental principle that transportation facilities be paid for by those who directly benefit from their use, and that such charges improve efficiency in the use of resources.

However, while the bill states that the purpose of the conversion of the revenue bonds is "to protect the investment of the United States in the Corporation's assets," it does not do so.

Specifically, the new toll criteria no longer contain the existing requirement that the tolls shall provide sufficient revenue to amortize the principal of the obligations of the Corporation. It thereby writes off over \$141 million in debt of the Corporation.

Such action by eliminating losses through accounting adjustments results in very substantial government subsidies, and it reflects, in our opinion, an admission of failure as to the seaway's self-sustaining potential.

We do not believe such action is either appropriate or necessary, particularly in the face of the seaway's substantial growth, both in traffic and revenue.

The proposed new criteria for calculating toll charges require:

That the rates prescribed shall be calculated to cover, as nearly as practicable, at full-capacity operations, all costs of operating the works under the administration of the Corporation, payment of 3.61 per centum per annum cumulative dividend on the capital stock of the Corporation, and payments in lieu of taxes. The costs of maintaining the works under the administration of the Corporation shall be paid from appropriations made from the Treasury and shall not be included in the rate calculations.

Under these criteria, there is no indication that the establishment of tolls based on operations at full capacity would yield sufficient revenues to permit the repayment of the Government's investment.

During the seaway's operations, traffic at its highest point has reached only about 76 percent of a projected annual capacity of 65 million tons. Full capacity may not be achieved for some years, and operating costs can be expected to rise as the project becomes less efficient with age.

The requirement for the payment of interest on the obligations of the Corporation appears unnecessary in any event. The new section (c) in the bill enables the Corporation to finance its activities by issuing capital stock to the Treasury and paying dividends on capital stock. Therefore, the Corporation would have no obligations bearing interest.

The exclusion of depreciation in calculating tolls would result in its complete exclusion as an operating cost. Presently, the seaway statute provides that depreciation should be recovered as nearly as practicable. Generally, depreciation is not considered practicable of recovery through tolls, and a joint agreement between the two countries reflects this understanding; only such machinery as is replaceable within 50 years is depreciated in calculating tolls.

As to the seaway's accounts, however, depreciation is calculated pursuant to GAO accounting procedure.

We disagree with the provision that maintenance costs are not to be included in the toll formula, because in our view ordinary maintenance is a legitimate cost properly chargeable to the toll base.

We wish to emphasize, however, that the proposed rehabilitation program for the Eisenhower and Snell locks contemplated in S. 2131 recognizes that the estimate of \$13.1 million for extraordinary costs involved should not properly be chargeable to the toll base. The Department is of the opinion that this very substantial sum which would be funded from Treasury appropriations should represent the limit of direct Federal expenditures.

The proposed legislation would require that tolls cover certain specified costs, as well as provide for cumulative dividends, as nearly as practicable, at full capacity operations.

As noted previously, we have not yet achieved full capacity. Moreover, the phrase "full capacity of operations" may be difficult to identify with any degree of accuracy. The capacity of the seaway has been increasing in recent years from the 50 million tons originally estimated, and is dependent upon many factors: size of the vessels transiting the seaway, type of cargo tonnages carried, particularly general cargo, the efficiency of the entire operations, and the fact that the schedule for the repair program will prevent any substantial lengthening of the shipping season over the contemplated 5-year period. Improvement in both shipping and operating technology will further affect the capacity of the existing facilities.

We would also note that the toll-sharing formula agreed to in a 1959 international agreement between the seaway entities provided for tolls to be divided based upon each country's respective annual charges for operation, maintenance, interest, and retirement of debt on the seaway.

Any refinancing plan by one country and not the other would affect the results of applying this formula and would require appropriate adjustment acceptable to both countries.

Therefore, any significant financial relief could rebound to our disadvantage if Canada should refuse to amend that part of the original international agreement pertaining to toll sharing. In the circumstances, the proposed amendment to section 12(a) regarding the divisions of the revenue is largely meaningless and, in fact, might be considered to abrogate the existing international agreement in which we represent a distinctly minor interest.

Following consultation, the Governments of Canada and the United States exchanged notes on March 31, 1967 (Canadian Note No. X-124 and United States Note No. 240), whereby the St. Lawrence Seaway Tariff of Tolls was changed in the following respects:

(1) That provision for payment of tolls for through transits of the Montreal-Lake Ontario section was changed to 73 percent in Canadian dollars and 27 percent in U.S. dollars; and

The Canadians have added a tariff for transit of the Welland.

I might add that the Welland is entirely within Canadian territory, and while they advised us of what they were doing in their plans for this charge, it is essentially a Canadian matter.

The Governments also agreed to review the sufficiency of tolls and division of tolls at the end of the 1970 navigation season at the request of either party to the 1959 tolls agreement, as amended.

At the present toll levels, and given the present upward traffic trend which, until the recent seamen's strike, was proceeding at a pace ahead of that for the comparable period during the record year of 1966, we believe that the Seaway Corporation, despite the change in the toll divisions, will continue to hold its own.

In fact, we believe that it will do more than hold its own, that its prospects are good and that it can meet the original statute.

In view thereof, we believe that full and complete disclosure of the true financial condition of the Corporation was, and should remain, congressional intent. The legislation advanced clearly results in very substantial indirect Government subsidies by eliminating losses through accounting adjustments.

The Seaway Corporation has already been accorded significant benefits in that the joint costs involved in the overall multipurpose project—power and waterway development—are charged to the power element and not to the Corporation.

We believe that the self-sustaining philosophy which led to the creation of the seaway should continue.

For the foregoing reasons, we believe that the seaway's debt can and will be paid without the enactment of this proposal and the administration opposes the enactment of S. 1455.

Mr. Chairman, I would like to turn now to S. 2131. This is an administration proposal, introduced by the chairman, and to put the matter briefly, it would authorize to be appropriated the sum of \$13.1 million to rehabilitate the Eisenhower and Snell locks on the St. Lawrence Seaway.

This sum, together with the proposed work program, is based upon the most current data available and has been developed by the Corps of Engineers after a recent survey of the seriously deteriorating con-

dition of the concrete in the Eisenhower lock and, to a lesser extent, of the Snell lock.

The objective of the program will be to restore the locks to accepted engineering standards. It is planned that program work will be restricted to nonnavigation seasons—December to April—and will be completed in 5 years from the time it starts at the close of the present navigation season.

The program is not expected to affect the operational status of either lock or the St. Lawrence Seaway system in general. Since the system is made up of single locks, the locks cannot be shut down for major overhaul work during navigation seasons without closing the seaway. This, of course, must be avoided for the sake of those who depend on the seaway and in order that the seaway will remain competitive as a world trade route.

The proposed work program is scheduled to begin in December 1967. Pending enactment of this bill S. 2131, the initial costs will be financed from additional corporate borrowings from the Treasury. It is clearly contemplated, however, that such costs would be recovered under S. 2131 and that no part of these costs would go into the toll base.

Very careful consideration has been given to the most suitable and appropriate financing plan. Ordinarily, maintenance charges are covered through the Corporation's usual methods of finance and would be reflected in the toll charges.

The Corporation's present schedule for debt amortization and the toll rates contemplate these expenses. However, because of the extraordinary character of the present deterioration, its wholly unanticipated magnitude—actually it runs to approximately 40 percent of the original construction cost in the case of the Eisenhower lock—and its advent in the early years of operation, the use of the presently available financing techniques would be completely disruptive of the overall financial plan of the Corporation and would require a level of tolls which, in our judgment, could be seriously harmful to the Seaway's competitive position as an important segment of the Nation's international trade routes and our domestic waterway system.

With these considerations in mind, we went into the details developing the plan in S. 2131.

Mr. McCann and representatives of the Corps of Engineers are prepared to testify at greater length on the history of this situation and on the technical aspects of the proposed rehabilitation.

I will therefore conclude my statement by indicating the administration's strong support of S. 2131.

Senator BAYH. Thank you very much, Mr. Secretary.

In dealing with S. 2131, I would like to have you reiterate, once again, the position of the administration.

Are you suggesting that merely the cost necessary to rehabilitate the locks be covered by direct Treasury appropriation, or those costs plus the past costs which have been incurred by the Corporation in maintaining these structures?

Mr. MACKAY. The way S. 2131 is drafted, Mr. Chairman, it would cover the \$13.1 million which is the prospective rehabilitation program only. The problem arises because we need to be ready to start work as soon as the seaway closes down this year, which will be December

15. The Corps of Engineers is proceeding so they will have contractors ready to work on that day.

In the event that S. 2131 is not passed prior to that date, there would be no money authorized or appropriated for the contracts, so we propose to go ahead and fund the initial year's work on the rehabilitation program out of the bonding authority, if necessary, and then when 2131 passes, that would be repaid in an accounting transaction, but it would keep it out of the toll base, so no part of the \$13.1 million would go into the toll base.

Senator BAYH. Do you have an estimate of the cost that has been incurred by the seaway already because of this deterioration?

Mr. MACKEY. The best estimate, and we can furnish more precise figures, is about \$1 million, which has been spread over several years, as we have begun work, as we have examined the lock and found out what the situation was. That would be for the Eisenhower lock. There has also been an expenditure of approximately \$250,000 on the Snell lock. It was in the early sixties that we first began to notice the deterioration, and no one was aware of this, so perhaps \$1.3 million total could be attributed to the deterioration of the concrete.

Senator BAYH. Can we get specific figures and send them to the committee?

Mr. MACKEY. Yes, sir, we can supply them.

(Subsequently the following information was submitted:)

MAJOR REPAIR COSTS, EISENHOWER AND SNELL LOCKS, APRIL 1959 THROUGH
JUNE 30, 1967

The following costs have been incurred by the Corporation in repairing, rehabilitating, and reinforcing the original Seaway lock structures since their being placed into service in April 1959, and in the investigation studies of the deterioration of the concrete:

EISENHOWER LOCK

1959-61: Repair and improve valve guides (includes anchorage modification)-----	\$45, 873
1959-61: Repair and improve trunions (includes anchorage modification)-----	141, 370
1960-61: Reinforcing and extending of upper sill to protect against collision-----	65, 746
1962-63: Repairs to downstream gate sill-----	138, 084
1963: Replacement of downstream gate sill-----	111, 934
1962-64: Repair of tunnel ceiling-----	13, 390
1965-66: Concrete repair work honey comb areas of lock culvert walls and ceiling-----	280, 128
1966-67: Concrete condition studies of Eisenhower Lock-----	225, 982
Subtotal-----	<u>1, 022, 507</u>

SNELL LOCK

1959-61: Repair and improve valve guides (includes anchorage modification)-----	\$45, 877
1959-61: Repair and improve trunions (includes anchorage modification)-----	141, 370
1960-61: Reinforcing and extending of upper sill to protect against collision-----	70, 104
1962: Reinforcing downstream gate sill-----	27, 245
Subtotal-----	<u>284, 596</u>
Total-----	<u>1, 307, 103</u>

Senator BAYH. If you are going to be consistent, it seems to me, we ought to relieve that past burden of \$1 million.

Mr. MACKEY. That would be consistent with the philosophy of 2131.

Senator BAYH. You heard Senator Mondale's testimony about the unique characteristic of the financial structure of the seaway. First of all, that this burden of construction, operation, maintenance, and depreciation is borne by a toll structure which is unique in U.S. history. Second, there is a time limit placed on the repayment, 50 years to be exact.

Do you still feel, in light of Senator Mondale's testimony, that this idea of a general user charge is really our philosophy? We talk about self-support, and of course we want our waterways to contribute to the general health of the economy, but in the past we have measured this contribution on the basis of a cost-benefit ratio.

Mr. MACKEY. That is certainly correct, Mr. Chairman. We feel that the philosophy is consistent with past expressions of congressional intent, and with administration positions which have been taken historically by both Democratic and Republican administrations.

Mr. MACKEY. No, sir, that the waterways should pay, should contribute to the payment of the cost incurred, and that the user should pay.

Senator BAYH. Do you know of any other waterway, any canal or river system that is required to amortize its cost by charging a toll?

Mr. MACKEY. No, sir, but we have tried a number of times, we have sent user charge legislation up which would apply this same philosophy to other waterways, to the waterways generally.

Senator BAYH. You see, all of us on this committee are dedicated to the idea which you have expressed about economically sound projects. The cost-benefit ratio, as you know, is derived by calculating benefits that the waterway supplies to other segments of the economy. If these benefits are substantial, and I believe that they are in the case of the seaway, then when you attach a toll to it, you are really providing for a double benefit.

Mr. MACKEY. There is a difference in the procedure which is, applied by the Corps of Engineers in determining cost-benefit ratio and the philosophy which requires the direct beneficiaries or the users of the specific projects to pay the costs of those. I think you were discussing principally the philosophy behind evaluation of Corps of Engineers projects. The user charge philosophy is one which Congress has expressed, and which the administration has adopted and fostered.

We apply the principal in other areas. It has not passed the Congress as a general proposition, applicable to waterways, but I don't think it is an inconsistent philosophy.

Senator BAYH. Here we have gone through one-seventh of the repayment period, and the Seaway Corporation has not yet paid a nickel on the principal.

Mr. MACKEY. That is right.

Senator BAYH. And now there is accumulated interest of \$17.2 million?

Mr. MACKEY. Yes, sir.

Senator BAYH. You have expressed disfavor with S. 1455. What would be the administration's position about eliminating this interest burden, at least as a first step toward a realistic refinancing program?

In other words, why should the seaway have to continue to bear this interest burden, which is the result of miscalculation at the very outset?

Mr. MACKEY. Well, first let me say that we feel that the seaway can pay its way, that it will be able to meet the obligations. If you are going to undertake some refinancing, I think the most logical first step would be to attack that part of the financial structure which contributes to what we all identify as the problem, and that is the \$8.2 million, the interest which was unanticipated. So I think that would be a logical approach, if you were going to refinance some part of it, and try to relieve some of the burden which exists.

Senator BAYH. Well, you said, "If we are going to refinance." Do you or the Secretary or the administration feel there is no need to realistically reappraise the position we are in now. Can the seaway continue to carry this burden of miscalculation? Do you have any alternatives to the Mondale proposal?

Mr. MACKEY. We believe that the seaway can pay off the debt which now exists, that the capacity of the seaway will continue to increase, the tonnage and the revenues will increase, and that over the payout period provided in the statute that we can recover the costs of the project.

Senator BAYH. We are at 76 percent, though, you say, right now.

Mr. MACKEY. That is right, sir, and that means that we have quite a bit of growth potential left, and we are optimistic for that growth.

Senator BAYH. Your statement didn't anticipate that the seaway would reach 100 percent in the immediate future.

Mr. MACKEY. That is correct, because the capacity of the seaway itself hasn't been fixed. The capacity has increased substantially. It has increased from approximately 50 million tons a year when the seaway first opened, to about 65 million now, because of improved operating techniques, and because of larger sizes of ships which go through. These are trends which we think will continue. We are already handling at a figure which was considered to be full capacity in the original view of the seaway. And we have increased capacity, so we are increasing the room for growth.

Senator BAYH. Let me dwell just a moment here on the Welland financing proposal. What was the effective date of the charges on the Welland? Was this shipping season the first?

Mr. MACKEY. The first increment of \$20 per lock became effective this year. This will increase \$20 per lock per year over a 5-year period, so the charges will ultimately be \$100 per lock. There are eight locks on the system.

Senator BAYH. What is your estimate of the impact of this on the use of the canal?

Mr. MACKEY. Our best estimate so far is that it will not substantially reduce the traffic growth. The studies done by both the United States and the Canadian consulting firms, done for the two authorities, indicated that within this range, the demand was relatively inelastic, and that there would not be any substantial diversion of traffic with toll increases of this magnitude.

Senator BAYH. Senator Hart suggested last year that in the negotiation with Canada we might consider the possibility of cost-sharing and thus be in a position where there was no need for a toll at all. Was that considered?

Mr. MACKEY. Yes, sir; it was discussed. I don't know how far it goes beyond the fact that we discussed the idea. I would not want to say we didn't give serious consideration to Senator Hart's proposal, but I don't think that it was considered as one of the more realistic alternatives.

Senator BAYH. Has there been any thought in the Department about the construction of an all-American canal?

Mr. MACKEY. There has been talk of the possibility of an all-American canal, but I don't think it has ever been considered as you describe it.

Senator BAYH. You don't. Well, you are not saying it is feasible or not.

Mr. MACKEY. The Corps of Engineers has looked into this at one time. I would like to be sure I understand what you said. An all-American canal in approximately the same location?

Mr. MACKEY. I would say not too far, on that.

Senator BAYH. Well, Mr. Secretary, I appreciate your testifying. In summary, you would support the provisions of S. 2131. Further, as I understand it, you feel that to be consistent, the seaway should recoup past costs similar to those included in S. 2131.

Mr. MACKEY. Yes, sir; I think that would be completely consistent.

Senator BAYH. But to date the Department apparently does not have an alternative proposal to Senator Mondale's bill for refinancing.

Mr. MACKEY. That is correct, sir; we don't have an alternative proposal. We have examined the future financial condition of the seaway, and we haven't come up with an alternative proposal, because we don't think that there is clear evidence that we need to refinance.

Senator BAYH. But you do feel in regard to a certain amount of the accumulated interest, the unexpected burden of interest, that we could legitimately expect the support of the Department on eliminating that?

Mr. MACKEY. I wouldn't be prepared to give an administration position on it today. I think that we could all agree that that amount is certainly the heart of the problem that has confronted us, and it lies at the base of the concern which you and the other Senators and Congressmen expressed last year. When you begin to think of refining, that looks to me like a logical place to start, and since we are optimistic about the future anyway, we would be considerably more optimistic if that were not part of the toll structure.

Senator BAYH. It would be a very small step to take, wouldn't it, toward refinancing?

Mr. MACKEY. Well, sometimes a small step is all that is necessary to accomplish the purpose, Senator.

Senator BAYH. At least a small step would be better than no step at all.

Thank you very much, gentlemen. I appreciate your taking time.

Mr. MACKEY. Mr. Chairman, Mr. McCann had a statement which dealt somewhat more with 2131. We have covered in the discussion most of it, and/or all of it. Perhaps there is no need to have Mr. McCann go through his prepared statement at this point.

Senator BAYH. Well, I hate to deny Mr. McCann the opportunity to testify here. He has done so very ably before.

Mr. McCANN. Rather than submit my statement to you, Mr. Chairman, I have a history of the lock deterioration to submit for the record.

Senator BAYH. That will be included in the record at this point.

Mr. McCANN. All right, sir.

(The exhibit follows.)

CHRONOLOGICAL HISTORY, CONCRETE REPAIR AND REMEDIAL WORK, EISENHOWER LOCK

VALVE TRUNNIONS AND GUIDES

After the first operating season, 1958, an inspection of the emptying and filling valves of both locks revealed that the trunnion bearing anchorages were deficient in that the cap bolts were sheared and anchorages were pulled from the concrete pads.

Under the terms of the contract, the Contractors were required to repair these anchorages and install additional bracing struts prior to start of the 1959 Navigation Season. Upon completion of these repairs, the job was accepted by the Corps of Engineers.

The inspection after the 1959 season revealed that the anchorages still were not satisfactory and an entirely new design was prepared by the Saint Lawrence Seaway Development Corporation and the Buffalo District Office. The anchorage modifications were made during the 1959-60 and 1960-61 maintenance seasons to both locks by Saint Lawrence Seaway Development Corporation forces at a cost of \$56,200.00 for valve guides and \$169,980.00 for the trunnions.

UPSTREAM MITER GATE SILL, EISENHOWER LOCK

On October 20, 1960, the vessel "CORINTHIAKOS," in leaving Eisenhower Lock, downbound, reversed her engines in error and backed into the upstream miter gate sill, Eisenhower Lock. Subsequent operations and examinations revealed that the concrete sill block had become loosened at the construction joint between the sill block and the main sill by the blow of the ship. Eventually, the operation of the miter gates had to be abandoned and the lock was operated with the emergency vertical lift gate for the last 2 or 3 weeks of the navigation season.

The damaged sill was removed and replaced during the winter 1960-61. At the same time and under the same contract, upstream sill extensions were constructed at Snell Lock and Eisenhower Lock and the upstream miter gate sill block at Snell Lock was drilled and pinned as a precautionary measure. The original miter gate sill blocks at both ends of both locks were not reinforced nor anchored to the main sills. The new upstream sill block constructed at Eisenhower Lock was anchored to the main sill.

During the 1960 navigation season, the upstream guide wall monolith N2 was struck by the vessel "Brittania" and was displaced approximately 15"-17" northward. The blow sheared the monolith at a construction joint 14½ ft. below the top of the wall with the displacement on the top portion. The removal and replacement of this portion of N2 was accomplished under the above contract during the early spring of 1961.

DOWNSTREAM MITER GATE SILL

No concrete work performed during the 1961-62 maintenance season, painted upstream miter gates, Eisenhower Lock.

On April 12, 1962, after the Eisenhower Lock was flooded and several dummy lockages were performed prior to the start of the navigation season, leakage below the water surface below the downstream miter gate was noted and difficulty in maintaining a full chamber became apparent. The lock was spilled and dragging, probing, and a diving inspection below the water surface along the upstream face of the miter gate sill block revealed that something was wrong with the sill block. The lock was immediately unwatered and after the sill block was exposed, it was apparent that the block failed at the construction joint at the main sill and was raised 2" to 3" and displaced downstream several inches.

Drilling operations were started immediately in a pattern which could be used either for demolition and replacement of the block or for salvage and pinning the existing block.

The Buffalo District Office, Corps of Engineers, was notified of the failure immediately thereafter and subsequent operations and decisions made jointly between Corps of Engineers and the St. Lawrence Seaway Development Corporation are well described in the "Report on Damage, Repair & Analyses, Lower Miter Sill of Eisenhower Lock—Saint Lawrence Seaway."

After the decision was made to salvage and anchor the existing sill block, the work was accomplished jointly by contract with Merritt-Chapman & Scott and with Corporation forces. Repairs were completed and the lock flooded on April 22, 1962, and the first ship was lock, downbound, at 3:20 a.m. on April 23, 1962.

During the 1961-62 maintenance season the sill blocks at both locks had been inspected for cracking. This had been included in our standard operating procedure after the failure of the upstream block at Eisenhower Lock. No distress was evident in any of the blocks which could be determined by visual means at the time of this inspection except that there were vertical temperature cracks in all sills. These temperature and shrinkage cracks existed since the completion of the locks. No vertical or longitudinal movement of the block was noted at any time prior to the failure.

The cost, not including shipping delays, of the repair of the Eisenhower Lock sill in April 1962 was \$99,300.00 which included \$53,815.00 contract cost to Merritt-Chapman & Scott.

During the operating season of 1962, the Corporation decided to remove and replace the Eisenhower Lock sill block that failed earlier in the spring. This decision was substantiated by the Board of Consultants formed by the Corps of Engineers to make an evaluation study of Eisenhower Lock after the lower sill block failure. This Board met at the Massena, New York Corporation Headquarters, Administration Building, Seaway Circle, Massena, New York, on December 13, 1962, and their final report, which is in the files, was received in April 1963.

After the downstream sill failure at Eisenhower Lock, more thorough inspections and investigations were made locally of other portions of the lock. Some deterioration was noted in the downstream miter gate recesses and lower portions of the Lock. Some voids were noted in the culvert ceilings but they appeared to be honeycombed areas and were not extensive.

The lower miter gate sill block, Eisenhower Lock was removed and replaced by contract during the 1962-63 maintenance season at a cost of \$85,500. In removing the existing sill block, excavation of the concrete in the main sill under the block revealed some "punky" and soft concrete in the main sill. In places this extended to as much as 3 ft. below the construction joint. This bad concrete was removed throughout the sill prior to placement of the new concrete.

The anchors which were installed when the old sill was repaired were saved and additional anchors were grouted into the main sill.

During the 1962-63 maintenance season, additional honeycombed areas became apparent in the culvert ceilings and small areas in the walls in the vicinity of emptying and filling valves. These areas were excavated by Corporation forces and replaced by intrusion prepackt methods by contract at a cost of \$17,600. Although, at this time, no extensive deterioration of the culvert walls was found by sounding, we became apprehensive of the culvert concrete and anticipated more deterioration the following years.

1963-64 MAINTENANCE SEASON

During the winter maintenance season of 1963-64, the Corporation's maintenance crews were mainly engaged in sandblasting and painting operations on the buoys. There were some honeycomb areas in the culvert ceilings that were excavated and replaced by Corporation forces using the intrusion prepackt method. However, with the exception of the work that was accomplished in the Highway Tunnel at Eisenhower Lock by intrusion prepackt under contract, no further maintenance other than mentioned above was performed on the concrete in the lock during this season.

1964-65 MAINTENANCE SEASON

After Eisenhower Lock was dewatered in December of 1964 and starting the 1964-65 maintenance season, an inspection revealed that large areas of concrete in the culverts had deteriorated and extensive repairs would have to be made.

Mr. Edwin W. Nelson, Corps of Engineers, North Central Division, was informed of the culvert wall and ceiling conditions and representatives were invited to inspect the deteriorated areas. A meeting was held on January 20, and 21, 1965 by an inspection team composed of Corps of Engineers' personnel and Saint Lawrence Seaway Development Corporation representatives. Reports of these inspections are in the files.

Following the January 1965 inspection of the culvert conditions, the Corps of Engineers took a more active interest and proposed coring and testing programs. The initiating of investigations triggered the comprehensive program proposed by the Corps of Engineers. In this comprehensive investigation was to be included research on Corps of Engineers' structures in addition to Eisenhower Lock. The investigation project as it pertains to Eisenhower Lock concrete is outlined and defined in various documents in the file generally identified as "Project Plan, for Research in Mass Concrete-Investigation of Concrete in the Eisenhower and Snell Locks, St. Lawrence Seaway. Phases I, II, III, and IV," and estimated to cost approximately \$55,000.00.

The repair work in the culverts performed by Corporation forces in the 1964-65 season consisted of prepackt and conventional concrete work on the walls and ceilings and culvert-value & bulkhead areas. During this season, more extensive deterioration of the surface concrete in the culvert walls became apparent. Sounding the walls by hammer blows revealed large areas of "drummy" concrete. It was decided that generally only those areas where the surface concrete was actually eroded and disintegrated would be repaired and not touch the remainder of the drummy areas. However, concrete which was suspect and located in critical areas around valve tainter gate seals, etc. was removed and replaced with good concrete. The time and resources available for the repair work mainly contributed to this decision. However, since many of these drummy areas were located, they could be observed during the 1965-66 season and determine how much additional disintegration had occurred.

Included in the more extensive deteriorated areas in the culverts were the walls and ceilings of the curved sections of the culverts as they enter the wall monoliths below the intakes. Due to the requirements of complicated form work for conventional or prepackt concrete in these parts of the culverts, gunite work was considered so as to eliminate the forms. Fortunately, a contractor who was doing grouting work at the Moses Power House at this time also did gunite work. This contractor was hired under a purchase order contract in the amount of \$2,500.00 to gunite approximately 1000-1500 sq. ft. of area in the curved sections. However, Corporation forces assisted the Contractor which raised the total cost to approximately \$9,500.00. It was decided that if gunite held up, and Corporation forces were oriented in the work by the contractor, there was no reason why it couldn't be done in the future totally with Corporation forces. The total cost of repair work during the 1964-65 season reached \$57,500.00.

Our experience with the culvert repairs over the seasons indicated that the lock chamber would have to be pumped down every season and remain dry during the entire maintenance season. It was reasonable to decide that protection was desirable to prevent freezing conditions in the culverts by bulkheading off all openings and adding heat as necessary. This was initiated in the 1964-65 season. Protective bulkheads were prefabricated during the 1965 navigation season so that they could be installed immediately after the pump-down in the fall while the concrete was still unfrozen. This protection would also help to retain the heat that remained in the concrete after pump-down. This worked out very well for the 1965-66 season and only a minimum amount of heat was required to maintain the culverts in an unfrozen condition.

1965-66 SEASON

As anticipated, extensive surface disintegration showed up after dewatering in 1965. The deterioration extended into the concrete as much as 18 inches and had to be excavated. Gunite equipment was purchased by the Corporation and the repairs were accomplished to a large extent by gunite methods with some conventional and prepackt work. During this season, as many of the emptying and filling ports in both culverts were repaired by gunite as the time permitted. A record has been maintained of the repaired culvert areas since the 1963-64 season on Drawings Nos. SLS-326-39, 40, 41, and 42, available in the files. Also a pictorial record is being maintained in albums also in the files.

During the 1965-66 season, deterioration also appeared in the vertical lift gate recesses, upstream, Eisenhower Lock. This was first noticed as a bulging on the chamber side just downstream of the recesses in Monoliths Nos. N44 and S11

and below the top of the Vertical Lift Gate sill. Several cores were taken in this area which verified the existence of deterioration. This deterioration seemed to increase in the lower elevations of the recesses and the vertical lift gate supports at the bottom of the monolith recesses were so soft they could be excavated with picks. Further detailed inspection of the sill recess revealed that chunks of the concrete overhang over the walkway at the bottom of the slot had fallen off onto the walkway.

Following the unwatering of the upper sills, it was evident that the entire north half of the vertical lift gate horizontal seal had broken away from the sill and fallen into the recess. The seal angle anchors had broken out of the concrete. In replacing the seal, the old concrete was excavated to 3'-4' upstream of the vertical lift gate and 3'-4' below the top of the sill. Even then, the concrete was questionable. There was some indication that there was something wrong with the seal during trials of the vertical lift gate during the navigation season. Leakage appeared below the gate during its operation.

The six concrete pedestals which support the vertical lift gate in the sill recess were cracked to approximately 4 ft. from the top. It appeared that these cracks resulted from the swelling of the timber pads which were imbedded in the concrete at the top of the pedestal. The existing concrete was removed to the bottom of the cracks and replaced. These pedestals were reinforced vertically.

Drawings showing the concrete excavated and replaced in the vertical lift gate wall recesses and at the horizontal seal during the 1965-66 season are on file.

The deterioration of the concrete at the horizontal seal, the appearance of the downstream face of the sill, and the examination of the few cores taken in the time allowed indicates that the entire downstream face of the vertical lift gate sill upstream of the recess may be questionable.

All repairs were made during the 1965-66 season with Corporation personnel. At times, three eight-hour shifts were used in concrete excavation. There were approximately 105 employees available for winter work including support personnel. Of this number, an average of approximately 60-75 were available for concrete work. Costs accumulated during this season amounted to approximately \$140,000.00 which includes labor and materials.

The lock was unwatered and dry on December 23, 1965, and flooded for the start of navigation on March 13, 1966. Concrete excavation was started on January 6, 1966.

Closing in the work areas, erecting bulkheads, and installation of L.P.G. heating started on December 22, 1965, and was completed on January 24, 1966. However, the filling and emptying culverts and their ports were enclosed with bulkheads by January 1, 1966. The vertical lift gate area was enclosed last, after it was determined that concrete work was required.

1966-67 MAINTENANCE SEASON

Corporation forces—

1. Repaired an eroded pocket 15' long by 5' wide by 12" deep at the entrance to the culvert.
2. Excavated in the culvert of Monolith N-55 an inspection pocket to determine the extent of deterioration. This pocket was backfilled with concrete.
3. Pinned down the top lift of the lower sill.

With advice from Corps of Engineers' personnel—

4. Carried out a core drilling program in the culvert, chamber walls and both upstream and downstream sills.
- Installed instrumentation as suggested by the Corps of Engineers and its consultants. Readings have been taken, recorded and reported as recommended.
- The Corps of Engineers made sonoscopic examination of the quality of concrete in the culvert walls.

1967-68 MAINTENANCE SEASON

Through a series of meetings and much correspondence, tentative agreement has been reached with the Corps of Engineers for its design and supervision of remedial measures to be undertaken during the 1967-68 maintenance season. Contracts are to be let for repairs to the highway tunnel, lift gate sill and chamber face of Monolith N-54; and for installation of tendons in the walls of the monoliths.

The Corporation is in the process of issuing Invitations to Bid on the furnishing and erection of a cover for the lock chamber.

Senator BAYH. And what about the figures that added up to \$1 million? Are those correct, to your knowledge?

Mr. McCANN. Yes, sir; we will get exact figures and put those in the record, Mr. Chairman.

Senator BAYH. We appreciate that. What are your thoughts on reimbursing the Corporation for funds already spent?

Mr. McCANN. I think this is quite logical, and I think that as far as my statement is concerned, in our general discussion we have pretty well covered all the material.

Senator BAYH. Are you prepared to take a contrary view, or a more forceful position than the Secretary, as far as the elimination of accrued interest charges is concerned?

Mr. McCANN. No; I think we are in complete agreement, Mr. Chairman.

Senator BAYH. That comes as quite a surprise. [Laughter.]

Well, gentlemen, unless there are further points that you would like to elaborate on, Mr. McCann, we will now hear your statement.

STATEMENT OF JOSEPH H. McCANN, ADMINISTRATOR OF THE ST. LAWRENCE SEAWAY DEVELOPMENT CORPORATION

Mr. McCANN. Mr. Chairman and members of this committee, it is with great pleasure that I appear here to testify on legislation concerning the St. Lawrence Seaway. The issues we are to discuss today have been of concern to me since I first became connected with the seaway some 6 years ago. I will chiefly address my comments to S. 2131, which would authorize appropriations in the amount of \$13.1 million for the rehabilitation of seaway locks.

I have been deeply involved in this problem since 1962. We have an engineering history prepared by the Corporation which I will not read, but would like inserted for the official record. As we were preparing to open the 1962 season, a crack in the sill was discovered on April 12. At first, we thought the waterway would have to be closed for 2 weeks. The sill, incidentally, is a huge slab of concrete on which the gates of the chamber rest. The crack was 80 feet long and 3 inches wide in some spots. Our Corporation personnel, the Corps of Engineers, and the construction firm of Merritt-Chapman & Scott, worked around the clock and were fortunate in being able to open the seaway on April 23, or 11 days after the crack was discovered. From that time on, we began a thorough investigation of the locks. It was apparent that Eisenhower lock needed a great deal of work. This was forcefully pointed out in a memo of July 25, 1965, by the Corps of Engineers which states: "There are local areas of concrete in the Eisenhower lock that are in a soft and weakened condition." The corps, at the same time, took numerous cores from the culvert walls to study and analyze at their research laboratories at Vicksburg. The corps issued an interim report in 1966 which indicated that permanent repair of the disintegrated concrete should be initiated not later than the winter of 1967-68. Consultants from the Department of Transportation also studied the locks and reported in 1966 that undue delay could result in excessive damage and could interfere with the orderly operation of the seaway. They recommended that immediate steps be taken to have the Corps of Engineers prepare a comprehensive repair plan of

detailed drawings and specifications with recommendations as to contracting procedures.

On November 2, 1966, Secretary Boyd wrote to Secretary of the Army, Stanley E. Resor, in accord with Executive Order 10771 which authorizes the Secretary of Defense to direct Corporation functions dealing with construction. Secretary Boyd pointed out that the Corporation had reported to the Defense and Commerce Departments on May 18, 1966, concerning an exchange of correspondence between the Buffalo district, Corps of Engineers, and the Corporation in regard to "the apparent rapid deterioration of the concrete" of the Eisenhower lock and highway tunnel under the lock. The Secretary pointed out that the disintegration had reached a point where prompt action was required.

As more information was developed, it was discovered that the proposed and necessary work could be divided into four parts:

1. Repair of upper sill;
2. Repair of Eisenhower tunnel;
3. Cover for lock chamber; and
4. Reinforcement of lock chamber walls by prestressing.

The Corporation made arrangements for the corps to perform design and contracting services in connection with the proposed rehabilitation program on a reimbursable basis.

Since the waterway opened in 1959, it has overcome a shaky beginning to become a successful highway of commerce and an economic benefit to a great region of the country. We are confident that before the 50-year period is up, it will also be a financial success with toll payments sufficient to cover the entire investment plus interest charges. However, there is no reasonable way to pay off these totally unexpected rehabilitation costs. In fact, it would probably result in putting the seaway more than a half million a year further in debt. At no time in seaway history was it ever anticipated that the waterway would be in such poor physical condition. We are ready to cover all other expenses of running the seaway and I think in time we will be able to do so. But in the case of rehabilitation work, the Seaway Corporation urges the passage of S. 2131.

Thank you, Mr. Chairman, for allowing me to present the views of the Corporation and the Department of Transportation regarding this legislation. I believe my remarks also have some bearing on Senate bill S. 1455 on which Mr. Cecil Mackey, Assistant Secretary for Policy Development, has testified in some detail. I would like merely to comment that the Corporation believes itself capable of meeting its obligations without further assistance beyond appropriation of funds for rehabilitation. As I recall, the rehabilitation problems were among the reasons for the drafting of S. 1455. I believe passage of S. 2131 will resolve many of the issues which led to the introduction of the recapitalization legislation.

Senator BAYH. The next witness is Brig. Gen. Roy T. Dodge, the division engineer of the north central division of the Corps of Engineers, in Chicago.

General Dodge, it is good to see you here this morning. We are anxious to have your expert testimony for our record. You have had a significant responsibility for building in my own State. We appreciate all that the corps has done.

**STATEMENT OF BRIG. GEN. ROY T. DODGE, DIVISION ENGINEER,
NORTH CENTRAL DIVISION, CORPS OF ENGINEERS, CHICAGO,
ILL., ACCOMPANIED BY WILLIAM R. WAUGH, CHIEF, CONCRETE
BRANCH, ENGINEERING DIVISION, CIVIL WORKS, OFFICE,
CHIEF OF ENGINEERS**

General DODGE. Thank you, Mr. Chairman. I am pleased to be here this morning and represent the Corps of Engineers.

We have prepared an outline of the actions we have taken to investigate the problems at the Eisenhower and Snell locks, and of our proposals for making remedial repairs.

I have a rather detailed statement which I will offer for the record, and at this time would like to present you a brief summary of that statement, which I am prepared to amplify as you so desire at the conclusion.

Senator BAYH. Fine. We will put the entire statement in the record at the end of your oral statement.

General DODGE. As you know, sir, the locks on the St. Lawrence Seaway were designed and constructed by the Army Engineers, acting as agent for the St. Lawrence Seaway Development Corporation. The construction was started in 1955 and was completed in 1958.

There has been some abnormal and unanticipated deterioration of the concrete in the Eisenhower lock. Since discovery of the damage, the Army has conducted exhaustive investigations to try to determine the cause.

Another matter of concern with both Eisenhower and Snell locks is the existence of cracks. These cracks extend from the filling-and-emptying culverts to the back face of the lock wall. The prolonged stability of the walls under this condition is questionable and, therefore, strengthening measures are necessary.

In the detailed statement, I have discussed the investigations which have been conducted, the findings from these investigations, and our recommendations for remedial work.

Repairs to restore the lock walls and rehabilitate the frost damaged regions of concrete are essential to continuing operation of the seaway. Design studies are underway. The most urgent work is restoration of the emergency gate sill, including the intake manifold section, and strengthening of the Eisenhower lock walls, particularly the north wall. This part of the work is planned for the coming winter's shut-down. The total cost of the repair program is about \$13 million and will take about 5 years, working only in the winter when the locks are out of operation.

The St. Lawrence Seaway Development Corporation has requested Army Engineers to perform design and contracting services for the repairs to the locks, and the Army has agreed. The district engineer, Buffalo district, has been assigned this work.

This, sir, is a very brief summary of our actions. As I said, I am prepared to amplify any part you so desire, or to answer any questions. I have with me Mr. William R. Waugh, who is Chief of the Concrete Branch, Engineering Division, Office, Chief of Engineers.

Senator BAYH. Glad to have Mr. Waugh with us.

General, what was the original cost of the Eisenhower structure: Do you have that at your fingertips, please?

General DODGE. Yes, sir, I do. The original cost was \$29,988,000. That was in the period 1955-58. I think it is significant, since we are dealing in today's prices in regard to the repairs, that we should escalate the original cost to today's price level, for a proper comparison, and that at today's cost it would be \$45,881,000, which is more comparable to our \$11 million for repair of the Eisenhower lock.

Senator BAYH. So the repairs would be nearly one-third, roughly, of that revised cost estimate?

General DODGE. About 24 percent for the Eisenhower lock based on today's costs.

For the two of them, it is about 12.6 percent, the Snell being 3.5 percent.

General DODGE. The \$1 million has already been expended by the seaway. This year they will give us, well, \$3.6 million, which includes a cover for the lock which they themselves will buy, and this \$3.6 million which we will expend this coming year is a part of the \$13 million overall.

Senator BAYH. What happens if this measure isn't passed?

General DODGE. The seaway is going to provide the money. If they are not able to be reimbursed, I don't know that I can speak to that, sir. It is imperative that these repairs be made.

Senator BAYH. Therefore, it is not a question of economizing by not enacting the legislation to provide the funds?

General DODGE. These repairs must be conducted.

Senator BAYH. Can the repairs be conducted without hampering the use of the canal during the operating season?

General DODGE. Yes, sir, we issued proposals on one contract, which went out the 18th of August, we are issuing invitations for another contract on the 11th of September, with the expectation that we will have a contractor all selected, his orders for materials placed, and he will be ready to begin work just as soon as the seaway shuts down in December. During the winter months there will be a cover over the lock, and everything is gaged and scheduled to insure that our work is completed before the spring opening.

Senator BAYH. Have the past repairs been done by the corps?

General DODGE. Mostly by the seaway themselves, using their own forces.

Senator BAYH. They paid for it. I thought perhaps they utilized your people.

General DODGE. No, sir, they did not, until they got into this major problem, then the seaway asked us to do this part.

Senator BAYH. Would you care to express any thoughts on the proposal I suggested to the Secretary, of permitting the Seaway Corporation, to recoup the maintenance costs already expended?

General DODGE. The \$13 million, sir?

Senator BAYH. No, the \$1 million. The cost of repairing and maintenance which was directly attributed to the fact that construction was short of the mark.

General DODGE. To answer specifically, I would like to know exactly what the \$1 million covers, but it is my view that any abnormal repair work that was required due to this deteriorated concrete should be reimbursable. I know that much of their work in the past years has been plastering and patching some of this spalled concrete, but I can't speak to the entire million, because I don't know the breakdown.

Senator BAYH. Do you care to make any prophecy or make any suggestions or point to any technological innovations which may make it possible for us to extend the use of the seaway for significant periods of the year, perhaps an open end operation?

General DODGE. I am sure you are perhaps familiar with the fact that the corps does have an authorization to make a study on extending the navigation season on the Great Lakes.

Senator BAYH. I wondered how you were coming, if we could have a sneak preview?

General DODGE. The first step we have taken is one, sir, to complete an investigation we are performing with our lake survey district, on what you might say is the basic formation and extent of the ice cover on the Great Lakes. So the study for extending navigation, per se, has not been started. We expect that this study may start next year, after we get this basic data from our lake survey research. At that time we will move into it, working with the Coast Guard on ice breaking, with bubbler systems for locks, any modifications we need to make to our lock gates, and gate recesses, to pass ice. We will study all measures on that.

Senator BAYH. Is it too early to give us any idea?

General DODGE. We are just getting started, sir, and I don't have any facts yet.

Senator BAYH. Can we anticipate any technological breakthroughs in the area of shipping that might make it necessary to consider increasing the size of the lock facilities?

General DODGE. We are just completing the new Poe lock at Sault Ste. Marie, between Lake Superior and Huron, which we expect to have in operation next June. That will be the largest lock in the seaway chain, some 1,200 feet long and 110 feet wide.

Senator BAYH. Will you repeat those again, please?

General DODGE. 1,200 feet long and 110 feet wide.

Senator BAYH. How does that compare with the largest lock presently constructed?

General DODGE. At Sault Ste. Marie, the MacArthur lock is 80 feet wide and 800 feet long. It will take a 760-foot ship. We have been approached about allowing a ship 105 feet wide to pass through the Poe lock. This has been approved as we can take a ship 105 feet wide and a thousand feet long, which is the biggest thing we have heard of anyone thinking about so far. That is a lake shipper.

Senator BAYH. That doesn't give you much tolerance, does it?

General DODGE. No, sir. Two and a half feet on each side.

Senator BAYH. Now is it feasible to consider that same type of ship going on out to the deep waters at a later date?

General DODGE. Yes, sir, it is. We also have another study to look into the requirement for augmenting or increasing the St. Lawrence Seaway locks, and during the course of that study we will look into the required lock size. I think it is quite probable that a lock of that larger size may be required. We will prove this out in our studies.

Senator BAYH. Very fine.

Well, General, I see no reason to detain you further. We appreciate very much your bringing your expertise to the committee, and I look forward to reading in detail your more specific statement.

Thank you very much.

General DODGE. Thank you, sir.

Senator BAYH. You, too, Mr. Waugh.
General, we will insert your full statement at this point.
(The prepared statement is as follows:)

PREPARED STATEMENT OF BRIG. GEN. ROY T. DODGE, DIVISION ENGINEER,
U.S. ARMY ENGINEER DIVISION, NORTH CENTRAL

Mr. Chairman, members of the committee, I respectfully submit for the record the following statement on the difficulties which have developed at Eisenhower and Snell Locks; the investigations which have been made to determine the cause of these difficulties; and, the need for remedial work on the locks.

As you know, these locks were designed by the Corps of Engineers and constructed under the Corps supervision acting as agent for the St. Lawrence Seaway Development Corporation. This work was performed by the U.S. Army Engineer Buffalo District, which is under the U.S. Army Engineer Division, North Central, with headquarters in Chicago, Ill. The construction of the locks was started in 1955 and was essentially completed in 1958.

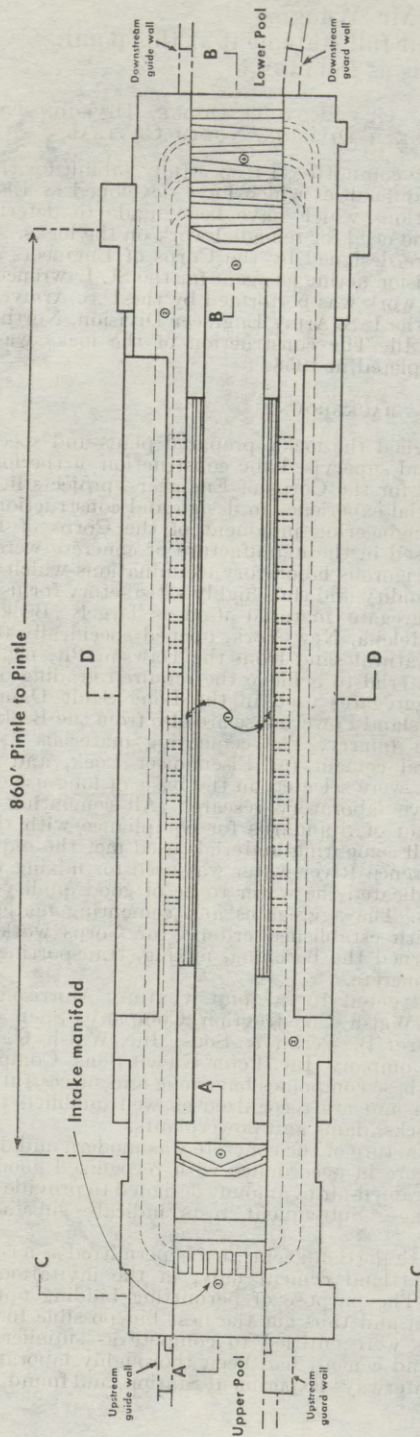
BACKGROUND

The Corps of Engineers designed the locks, prepared plans and specifications for construction of the locks, and supervised the construction of the locks using the engineering criteria in effect for the Corps of Engineers' projects in 1955-56. These criteria reflected substantial experience in design and construction of locks and were based on the best engineering judgment of the Corps of Engineers at that time. The aggregates used in the manufacture of concrete were selected after having been subjected to rigorous laboratory examinations which indicated the material to be of excellent quality and thus highly satisfactory for use in these important structures. The aggregate material used is largely Beekmantown dolomite, from a quarry near Helena, New York, opened specifically to provide aggregate for the two locks. Natural sand from the Dawson Pit, near Helena, N.Y., was used as blending material to achieve the required grading of the fine aggregate. Incidentally, the aggregates used in the Long Sault Dam and the American side of the Barnhart Island Powerhouse are also from the Beekmantown dolomite, but from a different quarry. The cementing materials used, Type II-portland cement and natural cement for Eisenhower Lock, and Type II-portland cement for Snell Lock, were selected on the basis of long use experience supplemented by comprehensive laboratory research. All cementing materials were tested by National Bureau of Standards for compliance with the appropriate Federal Specifications. All cementing materials used met the requirements of these specifications. St. Lawrence River water was used for mixing water and for curing. Laboratory tests indicated the water to be of good quality and thus satisfactory for these purposes. The aggregates and cementing materials were proportioned in accordance with established criteria for Corps work. Criteria established by the Corps governed the batching, mixing, transporting, placing, curing, and protecting of the concrete.

Eisenhower Lock was constructed by a joint venture: Morrison-Knudson Company/Perini Quebec, Inc./Walsh Construction Company. Snell Lock was constructed by a joint venture: B. Perini & Sons, Inc./Walsh Construction Company/Morrison-Knudson Company, Inc./Peter Kiewit Sons' Company/Utah Construction Company. All of these companies have long and successful records in the field of heavy construction and are recognized as well qualified to perform such work as construction of locks, dams and powerplants.

The plant used for the manufacture of the concrete was modern and dependable and the procedures followed were in accordance with recognized good practice. All of the concrete required entrained-air in amount designed to provide maximum protection against frost damage. Subsequent tests indicate substantial conformance.

Natural cement in a blend with portland cement was permitted as a contractor's bidding option, along with portland cement only, in the invitation for both Eisenhower and Snell Locks. The purpose of permitting bidding options is to generate maximum competition and thus get the best bid possible for the work and natural cement producers were entitled to compete as suppliers. Natural cement in a blend with portland cement had been thoroughly laboratory-tested by the U.S. Army Engineer Waterways Experiment Station, and found to produce



LOCATION OF DETERIORATED CONCRETE

- ① LOCK CHAMBER WALLS BELOW LOW POOL
- ② FILING AND IMPACTING CONCRETE INCLUDING PORTS
- ③ INTAKE MANIFOLD
- ④ UPPER WEIR SILL
- ⑤ LOWER WEIR SILL
- ⑥ BRUSHES

PLAN

EISENHOWER LOCK

concrete equivalent in quality to that made with portland cement alone. Also, it had been successfully used by the Corps in the following major projects:

	<i>Completed</i>
Wolf Creek Dam, Kentucky.....	1952.
John H. Kerr Dam, Virginia.....	1953.
Philpott Dam, Virginia.....	1953.
Clark Hill Dam, Georgia.....	1954.
Bull Shoals Dam, Arkansas.....	1957.
Table Rock Dam, Missouri.....	1959.
Greenup Lock, Ohio-Kentucky.....	1957.

The joint venture for Eisenhower Lock bid on the option to use a blend of natural and portland cement. Bidding for the Snell Lock was later, and by this time all of the available supply had been committed for Eisenhower Lock, Long Sault Dam, and the U.S. portion of the Barnhart Island Powerhouse. Otherwise it is likely that the Snell contractor would have also bid on the option to use natural cement in a blend with portland cement.

Natural cement has a long history of successful use in this country starting before portland cement was first produced—about 1871. Natural cement was being produced as early as 1830 in this country and was used alone in some notable structures which are still in service. One of these is the Brooklyn Bridge. Natural cement in a blend with portland cement is no longer used in concrete pavements in New York State, but was used for a period of about 28 years, beginning in 1934, with generally good results. It was also used to some extent in pavements in Maine, New Hampshire, Vermont, and Massachusetts, with generally good results. Prior to 1871, essentially all concrete work in this country was made using natural cement alone. It is true, of course, that much of the early concrete placed with natural cement was quite different from the Eisenhower Lock concrete in cement content, aggregate size, and proportioning.

The lock walls were designed as massive gravity sections to resist the applied loads by their weight. The walls were proportioned in accordance with the criteria in use at that time.

The Seaway was opened to 14-foot draft traffic on July 4, 1958, and to 27-foot draft traffic on April 25, 1959, and was finally completed October 8, 1959.

CORPS OF ENGINEERS CRITERIA FOR CONCRETE FOR LOCKS IN SEVERE CLIMATES

The concrete for the Eisenhower Lock was manufactured in accordance with the then existing Corps of Engineers criteria. The Corps of Engineers had no evidence at that time that concrete made with the natural and portland cement blend under the then existing criteria would not be adequate for the conditions at Eisenhower Lock.

The criteria for concrete in exposed parts of locks constructed for operation in severe winter climates have been revised in the light of this experience and resulting research into the relationship between compressive strength and frost resistance. The curing period for concrete made using pozzolans and special cements has been increased. The minimum protection temperature has been increased and the protection period has been extended. These changes are intended to insure that the concrete will reach a stage of maturity sufficient to make it safe against damage during the first winter after placing and to achieve a level of maturity at the time a lock is put into operation which will insure against saturation to a dangerous level.

HISTORY OF DIFFICULTIES

In April 1962 as preparations were being made to open the 1962 navigation season some difficulty developed at Eisenhower Lock. With the lower miter gates closed to hold upper pool, the top 5 feet (last lift) of concrete in the lower sill lifted about 3 inches and moved downstream about 5 inches. The loss of seal made it impossible to hold upper pool in the lock. When the lock was unwatered and the sill could be examined it was discovered that the construction joint between the top lift and the adjacent lower lift had been float-finished for a width of about one (1) foot adjacent to the upstream edge of the top lift. This area was never cleaned nor properly prepared for bonding of the adjacent lifts. It seems reasonably certain that water entered this poorly bonded region and froze, thus acting as a wedge which caused the beginning of a failure in tension in the vicinity of the joint. The crack thus formed was presumably extended by subsequent

repetitions of this action, each exaggerating the previous damage, until the cracked area was extensive enough to cause complete failure due to hydrostatic uplift in the cracked area with the lower gate closed and the sill under the head of the upper pool.

Emergency repairs were completed in a period of about 8 days and navigation began on April 23, 1962, about nine days after scheduled opening date. During the following shutdown in the winter of 1962-63 permanent repairs to the sill were made.

At the request of the St. Lawrence Seaway Development Corporation, the Department of Justice has brought suit against the contractors for the Government's expenses in repairing the lower sill at Eisenhower. Suit was filed in Southern District of New York on July 3, 1967.

INITIAL INVESTIGATION OF DETERIORATION OF THE CONCRETE

In 1962 also, some concrete deterioration was noted at Eisenhower Lock. It was noted that deterioration of the concrete to a depth of several inches had occurred along the front edge of the bottom of the recesses for the lower miter gates; and, there was evidence of deterioration in the diffusers which are located just downstream from the lower sill; and in isolated locations in the lock chamber walls. Upon discovery of this deterioration a limited investigation was undertaken to try to determine the cause. Cores taken from both Eisenhower and Snell Locks were studied at the U. S. Army Engineer Waterways Experiment Station for clues to the cause, or causes, of the deterioration. Samples from both locks were examined and compared. The investigation yielded no clues to the possible cause of the deterioration. The concrete in the cores was found to be of excellent quality. Also samples from the deteriorated concrete were examined for evidence of ice crystal imprints, indicative of damage by freezing within a few hours after placing. No ice crystal imprints were found.

A Board of Consultants was convened by St. Lawrence Seaway Development Corp. to review the sill failure and make recommendations on repairs. The Board was composed of Messrs. A. F. Griffin, Emil Praeger, and Dr. Roy W. Carlson. The Board was also asked to "determine the probable cause of deteriorated concrete in the lower gate recesses and other places and recommend remedial measures." Only a limited investigation was made since it did not appear at that time that there was any widespread deterioration of the concrete. In their report, submitted in April 1963, the Board of Consultants responded as follows:

"There is no discernible cause for the deteriorated concrete. Concrete in general is good concrete and adequate. Only minor areas of deteriorated concrete have been found. There is no evidence of major deterioration or reason to be concerned for the stability of the lock based on deterioration which exists."

During each winter's shutdown after the locks were placed in operation until the winter of 1965-66 the locks were unwatered late in the fall just before freezing weather closed the Great Lakes to through navigation. They were kept unwatered until shortly before the beginning of the navigation season in the spring after the winter ice thawed. Beginning with the winter of 1965-66 the Snell Lock has been unwatered, inspected and filled to low pool throughout the winter. Due to repairs required inside the Eisenhower Lock culverts and the investigations conducted last winter to delineate the extent of the damage, it has been necessary to unwater that lock and keep it unwatered during the 1964-65; 1965-66; and 1966-67 shutdowns. However, the filling-and-emptying culverts have been kept closed and heated during the shutdowns starting in the winter of 1964-65.

FURTHER INVESTIGATIONS

When the locks were unwatered for inspection at the end of the 1964 navigation season the St. Lawrence Seaway Development Corporation discovered deterioration of the concrete in the filling-and-emptying culverts of Eisenhower Lock. No evidence of substantial deterioration of the concrete was found in the Snell Lock at that time nor has any been found since. Investigation of the concrete quality at this lock will continue.

Detailed explorations were conducted at Eisenhower Lock last winter to delineate the full extent of areas where deterioration of the concrete has occurred. Major deterioration has occurred principally in the region below low pool in the lock chamber walls, in the culvert walls adjacent to the lock chamber walls, and in the in-take manifold portion of the emergency gate sill. Moderate deterioration has occurred in the culvert floor but only minor deterioration has occurred in

the ceiling and landward wall of the culverts. Major deterioration has also occurred in the lower miter sill block and in the diffusers. Moderate to minor deterioration has occurred in the upper miter sill block. (See attached chart for general location of areas where deterioration has occurred.) When Eisenhower Lock is unwatered all of these regions are subjected to the severe winter temperatures of that region except that the filling-and-emptying culverts have been kept closed and heated—starting with the winter of 1964-65.

In 1964 a further intensive investigation was started to try to determine the cause of the deterioration. During the 1964-65 shutdown cores were taken from the walls and floor of the culverts in both Eisenhower and Snell Locks and exhaustively examined at the U.S. Army Engineer Waterways Experiment Station for the cause, or causes, of the deterioration. The cores from the Snell Lock culverts were examined for the purpose of identifying differences between the concrete in the two locks which might account for the contrast in performance of the concrete in the two locks. The results of these examinations and tests are not conclusive as to the cause of the deterioration.

A sample of natural cement secured from the source in New York State which supplied all but a very small amount of the natural cement used in the construction of Eisenhower Lock was analyzed and the results compared to natural cement from two other sources (one in Kansas and one in Indiana). A small amount of natural cements from the source in Indiana was used in Eisenhower Lock in an emergency. Data on the two other natural cements used in the comparison was from previous investigations. The mineralogy and chemical analyses of the three cements were similar. Examination of the sample from the main source of supply did not reveal anything of an unusual nature which could have been a clue to the cause of the deterioration of the concrete.

Also as a part of this investigation in 1965-66, a soniscope survey was made of the concrete in the wall between the filling-and-emptying culverts and the lock chamber walls in both locks to try to determine the degree of deterioration which had occurred. There are a total of fifty monoliths in Eisenhower Lock. Fifteen monoliths were surveyed. In ten of these the degree of deterioration was indicated to be severe, in four moderate to minor, and in one no damage. Three monoliths were surveyed in Snell Lock. In all three the velocities were very high indicating concrete of excellent quality.

In view of the deterioration of the concrete in the filling-and-emptying culverts concern developed over the quality of the concrete in the roof of the vehicular tunnel in Eisenhower Lock. This is a slab about six (6) feet thick which continually carries the weight of the water of the upper pool. A soniscope survey was made of the underside of this slab. The survey gave lower pulse velocities than would have been expected in sound concrete. This was contrary to the visual evidence of good condition. Cores were then secured and tested in the laboratory. Pulse velocities on the cores were very high indicating that the concrete was in excellent condition. The cores were also tested for strength and found to have a very high compressive strength also indicative of excellent quality. The average compressive strength of the cores was 6500 psi. Petrographic examination of the cores also indicated the concrete to be of excellent quality. Although the quality of the concrete in the slab is currently very good, a steel liner will be installed to provide safety against a failure should the quality of the concrete decline with time and to alleviate a persistent leakage problem through construction joints.

In view of the proximity of the Eisenhower Lock to the large aluminum reduction plants, which utilize direct current electricity in the aluminum refining process, it was thought possible that the deterioration of the concrete could have been caused by stray currents from the aluminum plants. A stray current survey was made of the area and of the lock structure to determine if stray direct currents were present. The results of the survey indicated that there were no stray currents present at the structure or site of sufficient magnitude to cause deterioration of the concrete.

One of the prominent features of the deteriorated concrete is heavy secondary carbonate deposits. Initially, it was thought possible that the concrete made using a combination of natural and portland cement might be susceptible to leaching and that leaching might have caused the concrete to be easily saturated and thus very vulnerable to frost damage. Laboratory investigations, however, have demonstrated that the leaching tendency of concrete made with natural and portland cement is about the same as for concrete made with portland cement only. The conclusion may be that the prominent secondary carbonate deposits are not a contributor to the deterioration.

Information on ground water and river water was examined for evidence of aggressive elements which might have caused or contributed to the deterioration

of the concrete. According to our investigations to date neither contains aggressive elements.

It was considered possible that the deterioration of the concrete might have resulted from deviations in the specifications from the Corps criteria current at that time or from noncompliance with the specification requirements. A detailed study was made of the specifications and construction records, and as many of the inspectors who worked on the project as could be located were questioned. The specifications were demonstrably in compliance with Corps criteria. It appears from the records that concrete mix proportioning was adequately inspected for the various locations in the structure. Records show that in some cases the concrete was required to be replaced because the contractor had delivered the wrong class of concrete, or the concrete was improperly placed. The contractor was responsible for proper preparation of placing areas, correct placing procedures, curing, and protection. While the records are not conclusive with respect to strict and complete compliance with these requirements, the inspectors have reported that the specifications covering these requirements were complied with. Even though some instances of noncompliance may have gone undetected, the good quality of the concrete in higher locations in the lock walls which were placed concurrently with the lower locations where deterioration has occurred implies that the deterioration is not a result of noncompliance with specification requirements.

It has been generally accepted that air-entrained concrete is highly resistant to frost damage even at very early ages, i.e., when the compressive strength is quite low; however, there is now evidence that relatively low strength air-entrained concrete subjected to below freezing temperature might be damaged to an extent which would make it vulnerable to subsequent frost damage. Therefore, in addition to the work already described, a laboratory investigation was undertaken to try to determine whether there was a critical relationship between compressive strength of concrete and frost resistance. Although there are some anomalies, the general trend of the data indicated that there is a relationship between frost resistance and strength that had not been previously recognized. It will be noted in this connection that the exterior concrete placed at Eisenhower Lock had an average compressive strength at 28 days of 2812 psi for concrete placed in 1956 and 3205 psi for concrete placed in 1957 whereas comparable values at the Snell Lock were 3954 psi for concrete placed in 1956 and 3849 psi for concrete placed in 1957. These data would tend to show that Snell Lock concrete attained greater early frost resistance after placement than Eisenhower lock concrete.

At this point in time, we believe that the deterioration of the concrete occurred as a result of severe frost action. What has not yet been clearly delineated, however, is why concrete which was designed to be highly resistant to frost action should have become so severely damaged. Applying the indications from the investigation of the relationship between frost resistance and strength, a study was made of the possibility that the concrete which has deteriorated was frozen 16 to 20 days after it was placed. The concrete was protected against freezing for 14 days after placing. At 16-to-20 days age the compressive strength of the concrete was relatively low. As a part of this analysis a temperature study was made. This study indicates that the temperature of the concrete was above the freezing point of water until the concrete was more than 60 days old. By this age the concrete in the lock walls had attained substantial compressive strength. Also the concrete had been subjected to drying which removes some of the water from the concrete thus reducing the potential for damage due to freezing. Thus the possibility of damage due to freezing at an early age, or even at a later age during first winter after placing, does not offer a positive explanation for the beginning of the deterioration.

Another possible explanation for the severe frost damage has also been considered. The locks were constructed during 1956 and 1957 and were first put into operation on 4 July 1958. They were operated for shallow draft traffic until winter shutdown in late 1958. The locks were then completely unwatered and left unwatered throughout the winter. It is possible that the concrete became nearly saturated during the first period of operation. Then as freezing progressed inward from the surface water was forced into pore and air-void spaces of unfrozen concrete saturating those spaces of the concrete, and as frost penetrated the saturated regions damage occurred. However, by the summer of 1958 when the lock was first put into service, the concrete around the filling-and-emptying culverts, and in the damaged regions of the lock chamber walls below low-pool elevation, was from one to two years old and by that age the concrete should have been quite mature and thus should have been relatively impermeable. By that time it would be expected that the air voids system would adequately protect against frost damage.

It is entirely possible that the damage mechanism may have been a combination of two actions. Initial damage by earlier freezing could have rendered the concrete susceptible to critical saturation by making it more permeable. If this is the explanation for the damage, it was progressive over a period of several years, finally becoming prominent in 1964 after six years of operation of the locks and five winters of severe freezing of the concrete with the lock unwatered and unprotected. However, the same climatic and maintenance conditions prevailed at the Snell Lock through 1964, and no evidence of substantial deterioration has been found at Snell Lock.

CRACKING IN LOCK WALLS

Another matter of concern with both Eisenhower and Snell Locks is the existence of cracks. These cracks extend from the upper landside corner of the filling-and-emptying culverts to the back face of the lock wall. The prolonged stability of the walls under this condition is questionable, and therefore, strengthening measures are necessary and are planned.

The records do not contain specific information concerning the time when the cracks developed. They have been present for a number of years; however, it was not until last winter's investigation that the true nature and extent of the cracks became known.

In the winter of 1958-59, during the performance of maintenance repairs, ice build-up along the landward corner of the culvert in the Snell Lock south wall was noted which would indicate water leakage from a crack at that location. A similar ice build-up was first noticed in the Eisenhower north wall culvert during the winter of 1961-62. During the culvert repair work of 1965-66 in the Eisenhower south wall, difficulty was experienced in applying gunite to the culvert wall due to leakage from a crack. A crack in the Snell Lock north wall was noted during the 1966-67 maintenance season.

Last winter it was first noted that the crack in the north wall of the Eisenhower Lock was much more prominent than the cracks in the other walls and was leaking water in varying amounts along its entire length. Measurements showed the maximum width of the crack to be about $\frac{3}{8}$ -inch at the culvert surface.

Investigations are underway to determine the cause, or causes, of the cracks. Design, construction, and service conditions are being reviewed to locate possible contributing factors. It appears probable that a combination of factors, such as differential drying shrinkage, and temperature contraction stresses or vertical tensile stresses due to loads, led to the present condition. The greater size of crack in the Eisenhower north wall might be considered more critical as a result of concrete deterioration in the faces of the pillar between culvert and chamber. In the cracked condition, the distribution of stresses in the wall is such that stresses are greatest at the chamber face where concrete is deteriorating. The redistribution of stresses resulting from the deterioration would be such that a movement tending to increase the crack width could occur.

In March 1967, a new Board of Consultants, consisting of Dr. Roy W. Carlson, Dr. Arthur R. Anderson, and Dr. Edward L. Wilson, was convened to evaluate the present condition of the lock walls and to advise on remedial works if appropriate. The Board has recommended strengthening of the walls and measures are presently being developed under the Board's guidance.

The lock walls were designed in accordance with standard criteria in use at that time. Later, the criteria were revised to provide that rigid walls of this type should be designed for greater horizontal earth pressures, designated at-rest pressure. It is possible that earth loads against the wall in excess of design loads developed. The resulting movement would be in the direction to open the crack and would also reduce, at least temporarily, the earth pressure intensity.

At the time of design, culvert reinforcement was a requirement only if computed tensile stresses were in excess of that allowed for plain concrete. Under the assumed loadings, the allowable tensile stress was not exceeded and reinforcement was not provided. It was the practice of some design offices in the Corps of Engineers to provide reinforcement around culverts as well as other openings in lock walls; however, this practice was not universal throughout the Corps until very recently. Current reinforcement criteria require reinforcement around all water passages to withstand the total computed tensile force without reliance on tension in the concrete and require that, as a minimum, $\frac{7}{8}$ -inch diameter bars, spaced at 12 inches center to center, shall be placed around all such passages.

It is recognized that the accuracy of our present methods for evaluating stresses in such massive structural members may be insufficient. This aspect is currently being investigated through use of the recently developed finite element method of

analysis which employs the electronic computer. Results should be available by August of this year.

REPAIRS COMPLETED TO DATE

Temporary repairs were made on the lower sill in April 1962. The repairs consisted of grouting the large crack, water-proofing critical upstream areas of the sill, installing anchors and drains, and resetting and embedding the miter gate seal angle. During the 1962-63 shutdown permanent repairs were made to the sill. The damaged upper part of the sill was removed and replaced with new concrete and anchored with dowels to the undamaged lower part of the sill. Cost of repairs was \$245,560.

During the latter part of the winter shutdown of 1966-67, as a result of investigations being carried on with respect to the concrete deterioration problem a crack was discovered at a level below where the first failure occurred. The crack extended from the upstream face of the sill down to just upstream of the miter gate seal. Fearing this could conceivably lead to another failure of the sill additional anchors were drilled and grouted through the seal extending down to the bottom of the sill concrete. Further explorations are planned in this area early in the 1967-68 shutdown to ascertain the extent of additional repair work called for. The cost of this work was \$6,250.

During the 1964-65 and 1965-66 shutdown repairs were made in the filling-and-emptying culverts, the lock wall faces adjacent to the vertical lift gate slots, and to the vertical lift gate seal. The cost of this work was \$257,605.

The leakage problem in the vehicular tunnel has necessitated periodic repairs to the tile. Also, an attempt was made to stop the leaks by grouting. The cost of the work in the vehicular tunnel was \$13,151.

During the 1966-67 shutdown a program of explorations was conducted to delineate the extent of the deterioration. No repairs were made during the 1966-67 shutdown except to the lower sill as described above. The cost of the field work on the exploration program was \$138,586.

REPAIR PROGRAM

The objective of the repair program is to arrest the deterioration and to restore the lock walls to a state of adequate safety and serviceability. The program will include removal of deteriorated concrete and replacement with sound concrete; and post-tensioning of the lock walls.

Repairs to restore the lock walls to a state of adequate safety and to arrest deterioration and rehabilitate the frost damaged regions of concrete are essential to continuing operation of the Seaway. Design studies and preparation of plans and specifications for the repairs are underway. The most urgent work is restoration of the emergency gate sill, including the intake manifold section, and strengthening of the Eisenhower Lock walls, particularly the north wall. This part of the work is planned for the coming winter's shutdown.

Strengthening of the Snell Lock walls is scheduled for the winter of 1968-69. Also scheduled for that winter is the start of the repairs to the wall between the filling-and-emptying culverts and the lock chamber in Eisenhower Lock.

Other work, including repairs to the land wall, ceiling, and floor of Eisenhower Lock culverts, and the lower sill, is scheduled for the 1969-70 shutdown and subsequent years.

The working conditions are severe and the rate of progress is difficult to predict, thus the work might require as many as five working seasons for completion. A cover will be provided for the entire lock chamber of Eisenhower Lock to protect the lock from further damage, and to provide a favorable environment for the repair work.

Our preliminary estimate of costs of the repairs and for possible emergency action are as follows:

EISENHOWER LOCK	
Post-tensioning lock walls.....	\$1, 500, 000
Intake manifold repairs.....	810, 000
Vehicular tunnel modification.....	365, 000
Chamber face and culvert chamber wall repairs.....	6, 325, 000
Culvert floor, ceiling, and landward wall repairs.....	900, 000
Lower sill and diffuser repairs.....	720, 000
Cover for lock chamber.....	175, 000
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Total for repairs.....	10, 795, 000
Possible emergency measures.....	405, 000
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SNELL LOCK	
Post-tensioning lock walls.....	\$1, 500, 000
Total for repairs.....	1, 500, 000
Possible emergency measures.....	405, 000
BOTH LOCKS	
Estimated total costs for repairs.....	12, 295, 000
Estimated total costs for possible emergency measures.....	810, 000
Estimated total costs for repairs and possible emergency measures..	13, 105, 000

The estimated costs for repairs are preliminary, and will be revised when the design for the repairs has been completed.

ARRANGEMENTS FOR DESIGN AND CONTRACTING SERVICES FOR THE REPAIRS

The St. Lawrence Seaway Development Corporation has requested the Corps of Engineers to perform design and contracting services for the repairs to the locks, and the Corps of Engineers has agreed to perform these services. The District Engineer, Buffalo District, has been assigned this work.

Senator BAYH. Our next witness will be Dr. Danielian, president of the Great Lakes-St. Lawrence Association.

Dr. Danielian, we are grateful for your coming before us this morning. You are one of the real pioneers in this venture, and we are anxious to have your thoughts.

STATEMENT OF N. R. DANIELIAN, PRESIDENT, GREAT LAKES-ST. LAWRENCE ASSOCIATION

Mr. DANIELIAN. Mr. Chairman, I appreciate this opportunity I am certainly glad to see a new generation of enthusiasts about the seaway and its prospects, and I think that with leaders such as yourself and Senator Mondale's, we can expect great things to happen in the development of the Great Lakes area.

As you know, Mr. Chairman, I have been interested in the St. Lawrence Seaway project since 1939 when the Roosevelt administration invited me to make a study of the economics of the St. Lawrence Seaway and power project. This study was conducted as Special Assistant to the Secretary of Commerce, and published in seven volumes in 1941.

As a result of the war, the project was then put aside. I renewed my interest in the project after the war; first, as Special Assistant to Under Secretary of State, and later, as president of the Great Lakes-St. Lawrence Association, which was composed of a large group of private individuals and corporations interested in the development of the Great Lakes area.

Also, I served 4 years on the Advisory Board of the St. Lawrence Seaway Development Corporation. Appointed by President Kennedy in 1961, I served as a member of that Board until my resignation in 1965.

I must make another admission, though this may not be too popular at the present time, and it is this: I was personally responsible for initiating and securing concurrence of the interested parties, both public and private, in devising a financial formula and legislative program that would make the St. Lawrence Seaway self-liquidating through the charging of tolls.

I know this is not too attractive now, but in the perspective of the period 1947-53, this was the only way we could have salvaged the seaway project from complete political oblivion. It was this phase that made the project acceptable to the Canadian Government and to the U.S. Congress.

In 1946, the Senate Foreign Relations Committee reported a seaway bill. But a headcount by Senator LaFollette of Wisconsin indicated that there were only 30 votes in the Senate. Therefore, Senator Barkley, then majority leader, decided not to take up the measure, and it died on the calendar.

It was then that I approached Mr. C. D. Howe, the Canadian Minister of Trade and Industry at the time, and asked him whether the Canadian Government might accept the principle of charging tolls. His response was, "Why, of course. We have a budgetary problem and the seaway would be more acceptable to us on a revenue-producing basis."

In January 1947, therefore, I went to Senator Vandenberg, who was the chairman of the Senate Foreign Relations Committee and President pro tem of the Senate, and advanced the idea to him. His response was, "If you can assure that the proponents of the seaway will accept the principle of paying tolls, I can guarantee the passage of the bill."

My response was, "If you can guarantee the passage of the bill, I can promise the concurrence of the supporters of the project."

As a result, I spent 3 months in securing the concurrence from the future users of the seaway. I think it is to their credit that nearly all consented to pay for this project. It was because the project became thus economically feasible that Canada, in 1951, offered to build the whole seaway by itself. It was because of this, Canada's willingness to build the seaway on its side of the boundary, that the U.S. Congress agreed to put up enough money to build part of the project on American soil. Senator Vandenberg's prediction came true. I am only sorry that he did not live long enough to see it realized.

At the time the project was approved by the Congress in 1954, we were all sincerely convinced that the project would pay for itself through reasonable tolls. Now we are here because apparently these predictions have not been borne out by financial results.

I want to treat this subject under three headings: "The Physical Transportation Aspect;" "The Financial Aspect;" and "The Remedies Proposed."

PHYSICAL TRANSPORTATION ASPECT

The physical utilization of the seaway is one of the outstanding success stories of any navigation project. Within the short span of 8 years, the seaway has almost reached its originally estimated capacity of 50 million tons. That capacity is now estimated to be in excess of 60 million tons. In the case of the Panama Canal, which was finished and opened in 1914, total traffic after 10 years was still only 24 million tons.

In the case of the seaway, opened to traffic in 1959, with only 20 million tons, it is now carrying almost 50 million tons. Agriculture is one of the primary users of the seaway, with 20 million tons last year. Another is industrial raw materials, primarily iron ore and coal, with 18 million tons.

A facility that is used so extensively, producing for the two Seaway authorities almost \$24 million in revenues, cannot be considered a failure. Both the Canadian and American authorities are to be congratulated for facilitating the transportation of such a tremendous volume of trade in and out of the mid-continent of America with hardly a serious hitch.

THE FINANCIAL ASPECT

Now let us turn to the question: Why is a facility which has had such an astounding success in physical utilization unable to earn its way? The reason is simply that the cost of the project proved to be way in excess of the original estimates on the basis on which we gave assurance to the Congress that the project would pay for itself through tolls.

The original estimates of out-of-pocket cost of construction presented to congressional committees in 1953 was \$263 million for both Canada and the United States, of which \$88 million would be the U.S. share for building three locks at the International Rapids section.

Adding interest at 3½ percent during a 5-year construction period, the cost at the time of the initial operation on the books should have been \$286 million. With interest at 3½, sinking fund for amortization, and operating and maintenance costs at 1952 prices, the annual costs were estimated at \$16,827,000.

On the basis of these capital costs and annual expenses, the seaway would have been a whopping success story as an investment, since the annual revenue is now close to \$24 million.

It was on the basis of these figures that I gave assurance to congressional committees that this project would pay for itself, and the major users of the seaway affirmed this commitment.

However, by 1957, it was quite clear that the costs would be much greater. When this became apparent, some of us felt that it was our moral obligation to warn the Congress that on the basis of the new and enlarged cost figures it appeared doubtful that toll revenues would meet the total cost of the project.

At that time, the St. Lawrence Seaway Corporation appeared before the House Public Works Committee asking for an additional borrowing authority. On April 9, 1957, I said this before the House Public Works Committee:

We support such additional authorization of financing as is necessary to carry out the authorized purposes of the Wiley-Dondero Bill, with the reservation, however, that there are now grounds for considerable doubt in the minds of the (user's) committee members that all of the additional costs already incurred, and proposed, by the United States Corporation, as well as the Canadian Authority, can be recaptured in tolls.

This conclusion was arrived at after months of intensive study and thorough deliberations. It is motivated by two considerations; one, ethical and moral, in our relations with the Congress, and the other economic.

We are in favor of seeing this job through and we favor the authorization of such additional money as may be necessary to complete the authorized project, but we want to make it clear to the Congress, and the public, that in our opinion it is not going to be easy to achieve the complete repayment of principal, interest, operating and maintenance expenses within the 50-year period, in the light of these rising costs.

We arrived at these conclusions then because of the fact that, whereas the original cost estimates in 1953 had been \$286 million,

the final cost by 1959 for the two parts of the seaway had risen to \$470 million.

In 1953, I estimated possible revenues of \$27.8 million for 46 million tons of traffic. These estimates were presented both to the Senate Foreign Relations Committee and the House Public Works Committee. Present toll revenues are in the neighborhood of \$24 million to the two entities, close to the combined expenses of the two seaway authorities as of now.

Even at these increased costs, therefore, the present toll rates and traffic should be able to sustain the overhead and the operating expenses of the seaway. Our original estimates on the basis of which we sold the project to the Congress stand affirmed by historical developments.

What really has happened is that the increased costs of almost \$200 million over estimates robbed the seaway authorities of Canada and the United States of the elbow room they needed during the developmental period, which in a facility of this kind could reasonably have been assumed to be at least 10 years.

During this period of development of traffic, they have accumulated deficits which enter into the capital structure and therefore cause a runaway bookkeeping inflation of annual charges. Interest during construction and deficit in interest payments during the past 8 years of operation have amounted to about \$17 million for the U.S. Seaway Corporation. It is required to pay interest on this deferred interest. Although current revenues can probably pay for all current charges, it is going to be difficult to pay off the accumulated deficits.

This is nothing new in the history of these major projects. The Panama Canal went through exactly the same experience. Although the Panama Canal's original cost was about \$375 million, as a result of accumulated unpaid interest which was capitalized, the cost went on the books at \$500 million. Of course, the users could not pay this off, and in 1950 the Panama Canal Company had to be recapitalized.

THE REMEDIES PROPOSED

I am not here to assess and allocate blame. We confront a realistic problem of how to reorganize the books of the St. Lawrence Seaway Corporation in order to reflect facts as they are.

I am quite convinced that from here on the St. Lawrence Seaway from Montreal to Lake Ontario can pay its way at current toll rates, if it is not burdened by past deficits that are capitalized on the books, and if it is not also burdened by unanticipated faults in construction that may have to be shored up.

Now let us come to the specific legislation before the committee and what it will do to solve this problem. S. 2131 presents a simple question of equity. It appropriates \$13,100,000 to repair the locks. If there have been mistakes in construction, whose responsibility is it? And, is it right morally and in economic equity to ask the users to pay for such extensive repairs due to faulty construction?

As these are questions of fact as to responsibility and questions of law as to liability, I do not wish to express any judgment on this subject except to say that it certainly is not equitable to charge this to the users. Therefore, S. 2131 should be passed, leaving the question of liability to be settled among the various parties concerned.

As for S. 1455, it does primarily two things. It eliminates amortization of the Treasury's investment over a 50-year period, and it converts Treasury's bondholding into cumulative dividend bearing stocks of the St. Lawrence Seaway Corporation, with cumulative dividend rates at 3.61 percent.

In actual fact, I do not see in this proposal much financial advantage to the Corporation and to the users. The average interest being paid or obligated to the Treasury has been in a neighborhood of $3\frac{1}{2}$ percent. Between two Government agencies, the payment of interest at $3\frac{1}{2}$ percent or cumulative dividends at 3.61 percent makes hardly any difference, since the proposed bill still calls for the inclusion of the cumulative dividend in toll rate calculations.

Certainly the Treasury is not going to foreclose on the St. Lawrence Seaway Corporation for nonpayment of interest, and changing the nomenclature from "interest" to "cumulative dividends," even at a higher rate than the interest paid at the present time, is of little advantage to either the Corporation or the users, except perhaps in one respect.

Whereas deficits in interest payment may be compounded and capitalized, interest being paid on unpaid interest, perhaps cumulative dividends will not be capitalized, although this is not assured in the language of the proposed amendments. If it is true that from now on the total income of the seaway is likely to meet the expenses and the interest payments, then this provision will be of little value.

There is the added handicap that, to the extent that past deficits in interest payments have already been capitalized, the Corporation would be issuing cumulative dividend stocks to cover them and thus imbedding into future costs an item which will continue to be a burden on the users.

The real question that confronts the Corporation and the Congress is to determine what to do with the interest deficits which are in excess of \$17 million that have been accumulated since the commencement of operations—deficits that were due to overcosts above estimates of such magnitude that not even the spectacular growth of business of the seaway could overcome.

I would dislike to see cumulative dividend stock issued to cover these past deficits which still would become a burden on the Corporation at the rate of 3.61 percent of cumulative dividends.

I hope the committee will pay some attention to this question of what to do with the past deficits.

In conclusion, Mr. Chairman, I want to say that none of the proponents of the seaway in and out of Congress have any reason to regret their commitment to this project and none of the users need to apologize because they now are actually paying almost the total cost of operation, maintenance, and interest payments on the basis of 50 million tons of traffic a year.

Thank you very much.

Senator BAYH. Thank you very much, sir.

May I ask a question or two, please.

Mr. DANIELIAN. Certainly.

Senator BAYH. You do feel that the repair costs should not be borne by the Seaway Corporation?

Mr. DANIELIAN. Right. I want to make one point on that, Mr. Chairman. I think it is very important that any legislation passed on this should take care of this point.

It is one thing to consider the equitable treatment of the Corporation and the users of the facility, in charging that to taxpayers, or to Corps of Engineers appropriations, or to whatever. But we must make certain that in the calculation of the cost of the seaway, we include it in the formula on the basis of which tolls are divided between Canada and the United States. Because to the extent that money expenditures are appropriated out of general funds, the Canadians may raise the question that they do not properly belong to the formula for the division of tolls between the two countries.

In other words, what I am suggesting is that the books to be kept in connection with the division of tolls between Canada and the United States should take account of costs of the seaway. On the other hand, I do not think that in the determination of the tolls, they should be included in the rate.

Senator BAYH. Thank you.

Second, you expressed concern that the burden of accumulated interest be removed, and that the seaway be put on a pay-as-you-go basis from this point hence.

Mr. DANIELIAN. And I think it would pay for itself from now on, and we won't have to worry about it. It is the past accumulated deficits that are a millstone around the Corporation's neck.

Senator BAYH. When you say pay as you go from now on, I am not quite certain from your statement whether you are referring to maintenance and operating costs now—

Mr. DANIELIAN. Maintenance operating cost and interest payments.

Senator BAYH. What about repayment of the principal for original construction, as was originally planned?

Mr. DANIELIAN. Well, I think as the Corporation has now reached a point where it can meet those three items, an increase in traffic from now on, out to 60 or 65 million tons, will make it possible to make a contribution to the amortization. However, I for one am not wedded to the idea that a facility of this kind need necessarily be amortized in 50 years. I think as long as you maintain a facility in working condition, the principle of repaying the total cost of the Treasury really is immaterial, as long as you are maintaining the interest payments on the capital costs. So I would say that paragraph 5 of section 12 of the original seaway legislation may be repealed. But that would not be a loss to the Treasury, because the Corporation would be paying interest on the investment.

Mr. DANIELIAN. There were many hands in this legislation. At what point this double accounting between depreciation and amortization sneaked into the legislation, I have no recollection. But I think that double accounting is certainly not justified.

Senator BAYH. In talking about interest costs, the Secretary differentiated between interest that could be expected, the interest which accrued during the building process, and that which accrued during the early years of operation and prior to the canal's reaching the 1959 tonnage projection.

Would you differentiate between those two, or when you talk about accrued interest, are you talking about all interest that has accrued to this particular point?

Mr. DANIELIAN. I personally feel that the \$17 million that has been built up as a deficit on account of interest, you can either forgive

it or you can set it aside in a suspense account, and try to pay the interest of the original investment from the Treasury, and then wait for another 10 years to see whether the revenues are going to be large enough to pay arrears, you might say. I think that this business of compounding interest on interest deficit is just going to aggravate the financial problem of the Corporation, and also, leads to unnecessary and undeserved adverse publicity about the seaway.

I think that the seaway is a great success, and the sooner we have the country recognize this, the better, and if we by making some accounting changes can achieve this, I think it is all to the good.

Senator BAYH. Well, I agree with you wholeheartedly. You have heard my questioning directed to this point. Why do we have a different system, philosophically, for the seaway than other waterways.

Mr. DANIELIAN. Of course, one way of diminishing the criticism from other sections of the country may be for the Great Lakes Senators to come forward with the proposition of paying for the New York Harbor improvements by some kind of charge, and maybe you can trade off the publicity warfare that way. I think some groups have made too much of the small deficits on interest payments over the past 8 years.

Senator BAYH. Well, unless my memory is faulty, the improvements in the New York Harbor and New Orleans Harbor, and indeed the construction of the Burns Harbor in Indiana, these expenditures are direct appropriations.

Mr. DANIELIAN. Yes, I know.

Senator BAYH. In contemplating where we go from here, is it correct—I don't want to put words in your mouth, but is it correct to say—that you believe that a toll structure can support the costs of future interest, operating, and maintenance, as well as reasonable amortization?

Mr. DANIELIAN. As of now, my study of the figures—

Senator BAYH. I am talking, remember, about future interest, not past interest.

Mr. DANIELIAN. Yes, from now on, on the basis of 50 million tons of traffic, and the toll revenues of about \$24 million to the two entities, I am quite sure that we are very close to paying the operating expenses and maintenance and interest, but I am not sure about amortization. Now future traffic growth might also make a contribution toward amortization. At present toll rates, the seaway having demonstrated its vitality, witness the fact that traffic has increased spectacularly from 20 to 50 million tons in 8 years, we can therefore expect that if we didn't have this millstone of accumulated deficits of the past, the seaway can be considered from now on, even a financial success.

Senator BAYH. Just how much growth? What is our upper limit? You talk about 50 million tons. It has been suggested that 60 million is possible.

Mr. DANIELIAN. That is limited only by the capacity of the seaway. I think the business prospects are limitless in the Great Lakes. It is the capacity of the seaway that will limit the growth.

Originally we had thought on the assumption of certain sizes of ship transits, and so on, a certain number of ship transits, 50 million tons would be the capacity. Now we are told that on account of improvements in operation, we can expect 60 or 65 million tons a year traffic.

Senator BAYH. What do you think?

Mr. DANIELIAN. Well, I am not an engineer, sir, and I do not know what the recent improvements in operation have been, but I think on the basis of increased size of ships, it is not beyond the possibility that the traffic capacity can be improved beyond 50 million. Whether it will be 60 or 65, I am not in any position to say.

Senator BAYH. I don't think the administration is fulfilling its responsibility to say that we shouldn't start now to review the mistakes that have been made, and make the seaway a paying operation, if the seaway was rid of this accumulated interest burden, for which it is not responsible the Corporation could operate a profitable pay-as-you-go waterway.

What would you think about an open-ended amortization period? And, possibly, all revenues not needed for operation and maintenance can be used to amortize the debt. Would that be realistic?

Mr. DANIELIAN. I think that would be fair enough. I think that as a policy matter, some basic decision has to be made. And it is this: Say a project is useful in perpetuity, and it is going to be renewed and kept in operating condition, year after year, which would require, of course, maintenance as well as some depreciation reserves, in order to take care of replacements, in which case I think amortization is not even necessary.

You can extend it to 75 or a hundred years, and it would not make any difference, as long as you are paying interest on the borrowed money.

Now there is that possibility, of just making sufficient allowance for maintenance and depreciation reserve to take care of replacement, and considering this thing a facility in perpetuity, in which case amortization does not become necessary.

Now no one really has faced the question: Suppose we paid off this in 50 years. Will the seaway become a toll-free seaway? I am afraid that some of those in the eastern coast and the South will raise these issues. They would be terrified at the prospect of paying off this cost of the seaway and making it a free waterway, after awhile.

Senator BAYH. Frankly, I hope I live to see that day.

Mr. DANIELIAN. I hope I live that long, and if that is going to be the result, I would like to be here to see it, too. But as a business proposition, as long as the facility is maintained in good working order, amortization is not a necessity. So I would not be averse to modifying that part of the legislation.

I will agree with you that if we make it an open-ended proposition so that any surpluses are contributed toward amortization, that would be fine.

Senator BAYH. Another problem the seaway is likely to face is the lack of adequate facilities. It seems to me that the Corporation must consider the problem of larger ships and begin to study ways of accommodating these vessels.

Mr. DANIELIAN. I think that in another 5 to 10 years, we must face the doubling of the locks on the Lower St. Lawrence River from Montreal to Lake Ontario.

Senator BAYH. You think so, the doubling?

Mr. DANIELIAN. Yes.

Senator BAYH. Let me ask you one last question.

Mr. DANIELIAN. In which case I hope the locks would be designed in larger sizes than the present ones.

Senator BAYH. We had a real battle last year on the question of tolls. I think we would be remiss in not getting your thought on the record as to what impact tolls might have on future growth. What part will the toll play in the growth that can be expected in the use of the seaway? Where do we reach the point of diminishing returns, where higher tolls lead to less traffic?

Mr. DANIELIAN. Well, the same tolls have been in effect now since 1959, except for the Welland Canal, and it seems to me that within this toll structure, we have seen a very rapid and very gratifying growth in traffic, so presumably it has not inhibited the development of this traffic in such a short time, so the maintenance of the present levels cannot be considered an inhibiting factor.

Now if it is correct that except for the accumulated deficits of the past, the Seaway Corporations are now at the point of paying their way, then it seems to me that the present toll structure may be maintained, and if so, I think we can expect continuing growth in traffic.

You are quite familiar with all the programs of this country and Canada in the field of agriculture, and the field of industrial development, and foreign trade policy, which all are designed to increase international trade and, therefore, I am quite optimistic that the growth rate will be maintained.

Senator BAYH. What about increase, though? We were very concerned about that last year. Do we have room for a toll increase?

Mr. DANIELIAN. What I am saying is that increase will not be necessary, if we just take care of this accumulated deficit, and they are on a paying basis. The increase becomes necessary if we insist that this burden of the past be carried on as a user charge.

Senator BAYH. What some of us have been concerned about is that a toll increase might divert traffic to other areas and thus net income would be off.

Mr. DANIELIAN. Well, I think there is no question that the increase in tolls is going to have some effect on marginal business.

I am told—for instance, I was reading one of the reports of the engineering firms—that Pittsburgh has now become the dividing line in the benefits of the seaway, and that if there is an increase in tolls, Pittsburgh would revert to the eastern seaboard watershed, you might say, in the matter of costs of transportation, and I think you are going to find a shifting of the watershed of transportation costs, if you increase the seaway tolls. There will be a narrowing. More of the Ohio Valley, for instance, may become less accessible through the seaway, if you increase the tolls. There is no question about that.

Senator BAYH. Thank you very much, Mr. Danielian, The committee appreciates having your testimony and your thoughts.

Mr. DANIELIAN. Thank you.

Senator BAYH. Are Mr. Gene Graves and Mr. Francis Lorenz present?

Do we have Mr. Guillou, the chief waterway engineer, State of Illinois, present?

Mr. W. Gregory Halpin, deputy director of the Maryland Port Authority, also representing the North Atlantic Ports Association?

Glad to have you with us, sir.

STATEMENT OF W. GREGORY HALPIN, DEPUTY DIRECTOR, MARYLAND PORT AUTHORITY, ALSO REPRESENTING NORTH ATLANTIC PORTS ASSOCIATION

Mr. HALPIN. Thank you, Senator. I appreciate the opportunity to speak before you today. I might add that the Maryland Port Authority has filed a very brief statement concurring with that of the North Atlantic Ports Association. I don't intend to read them, sir; we are simply supporting the position of the North Atlantic Port Association.

My statement is brief, and with your indulgence I would like to read it to you.

Senator BAYH. Very well.

Mr. HALPIN. The North Atlantic Ports Association is made up of more than 50 public and private marine terminal operators serving the North Atlantic ports from Maine to Virginia. Because of the competitive relationship between the ports served by the St. Lawrence Seaway and the North Atlantic ports, the North Atlantic Ports Association has always taken a strong interest in the seaway.

Last year, we presented testimony at the hearings held in Chicago by the St. Lawrence Seaway Development Corporation on their proposal that tolls be increased to satisfy the legal requirements of self-support which were an essential element of the original legislation authorizing the construction of the seaway jointly by the United States and Canada. We also presented testimony to this subcommittee last year on a bill similar to S. 1455 which is now under discussion.

S. 1455, introduced by Senator Mondale, has one basic objective, to convert the present outstanding bonded indebtedness of the seaway to capital stock, all of which would be held by the U.S. Treasury. The effect of this conversion of capital assets would be that the Seaway Corporation, instead of paying interest and retiring principal on a regular schedule, would pay dividends on a 3.61 percent cumulative basis on the stock when and if funds available to the Corporation out of its revenue made it possible to do so. The bill would also provide that seaway tolls be "calculated to cover, as nearly as practicable, at full-capacity operations, all costs."

Conversion of the outstanding indebtedness of the St. Lawrence Seaway Development Corporation, which stood at \$141,719,000 at the end of 1965, would, of course, also eliminate the need for repayment of the debt. This would, we submit, provide a direct subsidy to seaway users to be paid for by the taxpayers in general and by competitive ports in particular.

This would be in direct contravention of the fundamental prerequisite of existing legislation which provides that the seaway is to be financed on a self-supporting and self-amortizing basis. Such a shift in the ground rules can be characterized only as an outright repudiation of the original action taken by the Congress in enacting the legislation which made it possible for the seaway to be constructed.

I should also like to point out that the Canadian investment in the seaway is much greater than that of the United States—about three times as large—and for this reason the financial status of the seaway in Canada is more precarious than here in the United States. Nevertheless, the Canadian Government has made no move to alter the basic financial structure of its investment in the seaway.

In fact, the unwillingness of our Government to agree to an increase in seaway tolls, coupled with the expenditures which Canada will incur in developing a new Welland Canal, have literally forced that country to impose lockage fees on the Welland Canal, fees which are actually much higher than the increase which it had proposed in seaway tolls.

Further, this proposal completely overlooks the relationship between the United States and Canada in the development and operation of the seaway. Nothing is indicated as to whether or not Canada would be expected to follow the same procedure, or what arrangements would be worked out with Canada if that country sought to increase its share of the tolls to make it possible to recover the Canadian investment at the end of the mandated 50-year period. In fact, the proposed revision of section 2 would write into U.S. law the seeds of conflict with Canada regarding future division of tolls.

When all is said and done, however, all the arguments about regional benefits, the rosy predictions for the future of the seaway, and other such arguments used to justify changes in the seaway's financial structure, are beside the point in terms of what is actually at stake.

The basic question, which has been stated so often that it need not now be developed at any length, is that the seaway came into being only on the basis that it would be a self-supporting facility. Later, after this decision was made, when the toll structure was being considered, the North Atlantic Ports Association and many other interested agencies and organizations stressed their belief that the seaway could not be self-supporting at the toll levels then proposed and adopted and now in effect.

It should be noted that on both occasions, first when the original legislation was passed and later when the toll structure was established, those who are now arguing most strongly for changing the conditions under which the seaway was authorized, ardently, supported the principle of a self-supporting seaway.

It may also be noted that the proposed revision of section 12(B) paragraph (4) under which the toll rates would be required to "be calculated to cover, as nearly as practicable, at full-capacity operations," would provide a deliberate open end to calculation of future revenue required to meet the Seaway Corporation's costs.

The limit of seaway capacity has never been defined. Initially, it was estimated at 40 million long tons of cargo annually. Subsequently, this was increased to 50 million tons with suggestions of 60 million tons and more. What it will be estimated at in the future depends entirely on who will make the estimate and under what assumption.

This provision can have only one conceivable purpose. This is to write into law conditions which will make it impossible in the future to review the toll structure on any realistic basis of costs measured against revenues, and thus to insure a continuing and ever-increasing subsidy to seaway users.

For these reasons, we believe that it would be inappropriate to alter the existing financial structure of U.S. investment in the seaway.

Turning now to S. 2131, this bill would provide for a direct appropriation of up to \$13 million to rehabilitate the locks and appurtenant structures of the Eisenhower locks. The locks are located completely within U.S. territory and it is therefore our responsibility to maintain them. There is no argument, that they should be properly maintained.

What we do argue with, however, is the manner in which this maintenance should be financed.

To seek to finance this work out of direct appropriations rather than out of St. Lawrence Seaway Development Corporation funds indicates that seaway advocates in this country are not even satisfied with enactment of S. 1455 and that their real objective is to push for additional legislation which would shift additional costs of the seaway to the taxpayers. This we regard as immoral, as a deliberate violation of their own testimony and of the good faith of the Congress.

This proposal should therefore be rejected summarily. Instead the rehabilitation should be financed by increasing the capital invested in the seaway, to be repaid in the same manner as provided for in the existing legislation as regards the initial investment; that is, out of seaway income.

In conclusion, the North Atlantic Ports Association wishes to go on record at this time as being in complete opposition to S. 1455 and S. 2131 on the grounds that they are directly contrary to, and would violate, the principles of the legislation under which the seaway was created.

Mr. Chairman, that completes my statement on behalf of the North Atlantic Ports Association. I would now ask that its statement for the Maryland Port Authority be placed in the record.

Senator BAYH. It is so ordered.

(The statement of the Maryland Port Authority is as follows:)

STATEMENT OF THE MARYLAND PORT AUTHORITY

The Maryland Port Authority wishes to record its opposition to S. 1455 and S. 2131. The Authority is an agency of the State of Maryland and is responsible for protecting and increasing the waterborne commerce of the State.

The basis for the Authority's opposition to these bills is outlined in the statement of the North Atlantic Ports Association which will be presented to the subcommittee at its hearings in Washington, D.C.

The Authority would like to point out, however, that in the past decade more than \$50 million has been invested in the development of the ports of Maryland and over \$3 million spent during that same period in promoting these facilities. None of this effort was financed by the Federal Government. Over the next 10 years, expenditures in both development of facilities and promotion will be twice those of this past decade.

The Authority asks only that it be given the opportunity to continue its work in an atmosphere of free competition among ports and port regions. It is felt that S. 1455 and S. 2131 would impair the present competitive situation through unnecessary government involvement in the development and promotion of one area of ports to the disadvantage of others, including those that are the responsibility of the Maryland Port Authority.

The Authority, therefore, states its opposition to S. 1455 and S. 2131.

Senator BAYH. Let me ask you a question about the last part of your statement first, and then I would like to, if you have the time, also ask you some about the first part.

Mr. HALPIN. Yes, Sir.

Senator BAYH. You are opposed to S. 2131 because you regard this as immoral, as a deliberate violation of the Seaway Corporation's own testimony and the good faith of the Congress.

Let me ask you: You talk about the competitive position of the North Atlantic ports with the seaway. I am certainly cognizant of that fact, and think that everyone should be treated fairly and equally. What would happen if a port facility that was constructed by the Army Corps of Engineers in one of the ports that you repre-

sent was poorly constructed, and it began to fall apart and it had to be reconstructed, and the additional maintenance cost was more than had been anticipated. How would that be paid for?

Mr. HALPIN. It would be paid for by direct appropriations, sir.

Senator BAYH. Yet you oppose this as a means to repair facilities that were poorly built in the first place.

Mr. HALPIN. I do, sir. In doing so—

Senator BAYH. In other words, it is all right to follow one plan on the northeast coast, but we shouldn't follow that same plan on the seaway.

Mr. HALPIN. Well, sir, I submit that we are being completely consistent in this, because I think all questions and arguments on this issue—and there have been arguments between ourselves and, I might add, our friends and colleagues on the seaway, many of whom are here today, men that I work with in the port business all the time and have great respect for—I think the fundamental fact, sir, that we have to keep coming back to is very simply an expression that was made here earlier today, and that is the St. Lawrence Seaway when it was considered and before it was developed, and before it was legislated, when it was being considered, there was an open question whether this Government should invest this kind of money to open up the inland ports to international trade, whether, indeed, we did not already have sufficient facilities along all of the coast, gulf coast, the North Atlantic and South Atlantic, to take care of our trade and take care of it adequately, considering that the Federal Government and regional governments had made long and very deep investments in these ports.

So serious was this consideration, so doubtful in the mind of Congress was a new seaway, that it was not until the self-supporting legislation was introduced that the seaway became a successful matter of legislative record, and this is record.

Now when you ask me today, therefore, what would happen, and I know the example that you may have in your mind, sir, because in the Port of Baltimore, we have the Chesapeake and Delaware Canal, and the Corps of Engineers is now spending \$110 million to widen and deepen the Chesapeake & Delaware Canal. Our competitive position in the Port of Baltimore, against not the seaway, its competition we do not fear as much as other North Atlantic ports, is greatly dependent upon completion of this project.

We are happy to say the money is going ahead. We are not paying for this. The corps is paying for it and, in turn, the taxpayers are paying for it. We are doing it because we have been developed on the standards of an open, free port. The St. Lawrence Seaway was not. What we submit is that this question was settled. It was settled once by the Congress of the United States, and this, of course, is the basis for the statement we make about the repairs to the lock. What we are saying is that it is capital investment.

Senator BAYH. I want to rephrase the question, because you missed the point. It is one thing to argue whether the original construction should be made at taxpayers' dollars with direct appropriation, or whether it should be financed on a pay-as-you-go basis, but S. 2131 doesn't deal with that at all. We are talking about the faulty construction as it was originally made. It needs to be put in the condition in which it was supposed to have been in the first place.

Mr. HALPIN. Well, sir, in answer to this, the question you are raising is, do you consider that as a special or extraordinary maintenance cost, or do you consider that the maintenance is so expensive, and it is by testimony here today about one-third, as I understand, of the cost.

Senator BAYH. Were you here when General Dodge testified? We had the same testimony last year. The thing wasn't built right in the first place.

Mr. HALPIN. And I would consider this, therefore, definitely a capital investment of the seaway to be set up on a certain financing program.

Senator BAYH. It was part of the original investment. Now we have to duplicate that.

Mr. HALPIN. Exactly, sir.

Senator BAYH. Make the same investment twice.

Mr. HALPIN. Yes, sir. Let me say, sir, let me put it in the position of building my own port facility, in Baltimore.

Senator BAYH. You can't put it on that basis, because you don't have to pay anything at all. The users don't. You get any repair, any modernization, any construction comes out of direct appropriation. I know. I support it.

Mr. HALPIN. Senator, I think when you said before that I didn't understand your question, I think I did, and I think in answering it I still got back to the fundamental point. The point of the \$13.1 million is how you consider the money. In other words, whether you consider this as an extraordinary sum, or whether you consider this as something as you said that you have to do over again. If you have built a building, and it has collapsed or something has happened to it, and you have to reinvest in that building, you are reinvesting capital funds. When you reinvest capital funds in a seaway, you are putting capital funds against a financing program that has been established.

Now your argument, either that it shouldn't have been established that way, or it should be changed at this point, I am arguing against that point. I don't think the two of us have any fundamental difference in the way you are presenting the question to me. What I am saying is if I agree with you that the St. Lawrence Seaway either should have been financed in another way, or should now be free of its obligations to repay debt, then I also agree with you that the Eisenhower lock repairs ought to be paid out of capital, direct appropriation.

If, however, I say that this is a capital investment in something that already has been set up on a program, I simply have to say now that I think this ought to be a continuation of the program.

Senator BAYH. Then I don't think that I am going to get you to change your mind. I just might say that your attitude makes it increasingly difficult, for those of us who are willing to take the taxpayers' dollars to modernize and build and construct port facilities in other parts of the country, to rationalize to our constituency our inability to convince other sections of the country of the value of the seaway to the economy of the Midwest.

Mr. HALPIN. Senator, let me say that—

Senator BAYH. We shouldn't get into a regional controversy over this at all. It is in the best interests of the entire country, and the less sectionalism we have, the better off we are.

Mr. HALPIN. Senator, I would agree with you, and I am sympathetic with you. I think you have a very difficult problem, an extremely difficult problem in the seaway for many reasons. I think, however, the seeds of that problem were sown some time ago, and one of the problems that we have in our position, and I would like to defend this, if I can now, because we have been accused of being regional and parochial, and I don't really think this is true. This was a national issue at the time. Therefore, it is a matter of national concern.

I think we have a right to be concerned about the fact that there is a repudiation of what was originally an agreement between those who supported the St. Lawrence Seaway and the people of the United States. I gather that the statement you just made, sir—I do sympathize with you, because I think the seaway has problems and will continue to have problems, until something is done. I, of course, would oppose the methods that are being used to do this.

Senator BAYH. Not all of these problems are the result of the so-called pay-as-you-go plan adopted in the original act. The basic problem today is the continued accumulation of interest due to the 1959 miscalculation on tonnage.

Mr. HALPIN. Well, Senator, I would say that we take no smug satisfaction out of the fact that when the calculations were made, I think our voices were raised the loudest that they were not realistic, not on the basis of one that wanted to destroy the seaway concept, but as late as 1958 we were pointing out that the projections had no realism. Projections of maintenance cost, for example, over the entire payout of the St. Lawrence Seaway, without increasing those maintenance costs.

As every one knows, maintenance cost is one of the most dramatically increasing costs of any kind that you face in any type of construction work.

Senator BAYH. Did any of you anticipate that the Eisenhower lock wouldn't have been built properly?

Mr. HALPIN. We assumed they would be, sir. We have been the beneficiaries of the Corps of Engineers operation, and it is uniformly good.

Senator BAYH. It certainly is.

Mr. HALPIN. I would say that we are as surprised as anyone in what has happened there.

Senator BAYH. That doesn't change the fact that this has significantly altered the ability of the Seaway Corporation to meet its original commitments.

When a structure to be built at one of the port facilities that you represent in the Northeast part of the country is being considered, it goes through Congressional committees. You are aware, of course, of the necessity of establishing a cost/benefit ratio. Right?

Mr. HALPIN. That is correct, sir.

Senator BAYH. Is any effort made after the port is constructed to see whether this cost benefit ratio does in fact meet the requirement as it passed the Congress?

Mr. HALPIN. To be completely honest with you, senator, I don't know. I would suspect not, unless the Corps of Engineers carries out a study that we don't know about.

Senator BAYH. I don't know of any. I would just like to clarify the point that we have two standards—one for every waterway and another standard for the seaway.

Mr. Halpin, I appreciate your willingness to testify before the subcommittee.

Mr. HALPIN. Thank you, sir.

Senator BAYH. Let's call Colonel Butler, the commissioner of harbors for the city of Cleveland.

Colonel?

I may say for the convenience of those of you who are still with us that we will probably go here until about a quarter to 1, and then we are going to have to reconvene tomorrow morning. As much as we would like to finish today, we had 17 witnesses, and I think we have gone through at a pretty good pace so far.

Colonel, please proceed, sir.

**STATEMENT OF COL. EARLE B. BUTLER (Retired), COMMISSIONER
OF HARBORS, CITY OF CLEVELAND, OHIO**

Colonel BUTLER. Thank you, Mr. Chairman.

My name is Earle B. Butler. I am commissioner of the harbors of the city of Cleveland and, as such, general manager of the Port of Cleveland. I represent the city and the port, and in addition represent the International Association of Great Lakes Ports, of which I am the American chairman and a director.

I appear here today in support of both S. 2131 and S. 1455. I would like to submit detailed statements for the record. In the interest of time I will only make a brief summary statement now.

Senator BAYH. Pardon me. Off the record.

(Discussion off the record.)

Senator BAYH. Proceed, Colonel.

Colonel BUTLER. Briefly, we support both 1455 and 2131 because they are the first ray of hope that we have seen that recognizes that the tolls charged at the present time are both discriminatory and unfair. These bills make an effort to reverse this obvious wrong.

As mentioned by Senator Mondale and many other witnesses preceding me, the St. Lawrence Seaway is the only Federal waterway in the United States ever called upon to completely pay amortization, maintenance, and operation. We feel that these payments are discriminatory, and do not recognize the public benefit, as you have brought out many times, Mr. Chairman, do not recognize the public benefit of the seaway as is recognized in all other Federal navigation projects in the United States. Certainly the increased costs in administration, operation, and maintenance that inflation will bring on will continue to threaten to increase these tolls still further. To avoid this vicious cycle, we support both of these bills, and recommend their passage.

Thank you, Mr. Chairman.

Senator BAYH. Thank you very much, Colonel.

We will ask that your entire statements be put in the record for consideration.

(The statements on S. 2131 and S. 1455 follow:)

**STATEMENT ON S. 2131 BY EARLE B. BUTLER, HARBOR COMMISSIONER,
CLEVELAND, OHIO**

My name is Earle B. Butler. I am Commissioner of Harbors of the City of Cleveland, Ohio and, as such, General Manager of the Port of Cleveland. I appear today not only in behalf of the City and Port of Cleveland, but also in behalf of the International Association of Great Lakes Ports, of which I am Chairman of

the United States Section and a Director. The Association is an organization of 16 major United States and 5 Canadian Great Lakes ports. It was formed, among other things, to consult and take appropriate joint action on matters of common interest to the Great Lakes-St. Lawrence Seaway region, including, but not restricted to, legislation, physical development and use of water resources.

It is a privilege for me to be afforded the opportunity to appear before you to support S. 2131 calling for appropriated funds in the amount of \$13,100,000 to carry out a special and urgent program to rehabilitate the navigation locks and appurtenant structures of the United States section of the St. Lawrence Seaway.

It is understood that these repairs are necessitated by *abnormal deterioration* of these facilities. Unless the repairs are completed, the Seaway could be closed to all traffic. This would be an *economic catastrophe* for a great part of the agricultural and industrial Midwest for which our ports are the closest, most logical gateways to World markets.

It is not a question therefore of whether these repairs *are required to be made*, but rather *how they are to be paid* for. How these repairs are paid for bears directly on the tolls problem! If the Bill S. 2131 is not considered favorably by this Committee and the Congress, it would add about 10% additional to the original capital cost of the U.S. portion of the Seaway that would have to be amortized by *collection of additional tolls*.

We feel that the *present tolls are discriminatory*, and thus work against the interests of the whole Great Lakes economy and its vast and increasingly populous hinterland. Navigation projects costing many millions are approved by your Committee and the Congress each year and many millions are appropriated each year for construction and operation and maintenance of navigation projects throughout the United States that *are completely toll free!* Already, by the imposition of the present Seaway tolls, many millions have been returned to the U.S. Treasurer from these tolls to pay not only 100% of the operation and maintenance cost of the Seaway, but a large amount against capital construction cost and interest. (In 1965, U.S. tolls income was \$6,300,000—operation costs \$1,700,000 and \$4,600,000 was paid to the U.S. Treasury against interest and principal).

The future success of the Seaway has been and will be based upon the Ports' ability to enable their customers to have their products delivered at the lowest cost. This, too, helps the economy of the whole country. There is a *general public benefit* that results from Seaway shipping. There have been many products which have moved across our docks and, I'm sure, many others where the difference of a few cents per hundred pounds enabled the shipper to be competitive in World markets.

We are all aware that the success of Cleveland and other Great Lakes Ports has been achieved in spite of many problems. Importers and exporters had to be oriented and still require to be told the Seaway story. Harbor depths, dock construction, opposition from domestic inland carriers, monetary requirements, an 8-month shipping season, pilotage costs, and the fact that we are still plagued with the lack of American Flag bottoms, outline a few of such problems. These obstacles and many others have been met head-on and have been or will be overcome. However, the constant threat of increasing tolls to cover escalating administrative, maintenance and operating costs will hinder growth.

The present tolls, pilotage, ship construction requirements for pollution control, labor problems both in the Great Lakes and abroad, the limited season and draft limitations, make much of the shipping business in the Great Lakes extremely marginal. A threat of a further increase in tolls caused by these extraordinary repairs, if not funded by S. 2131, will eliminate much of the existing service. Without this service, some of our new hinterland importers and exporters will cease to be competitive in World markets. This will result in a decreased total revenue for the Seaway entities and losses to our national economy. It could be a never ending and discouraging spiral!

For these reasons, we support S. 2131 and strongly recommend its favorable consideration by your Committee, Mr. Chairman, and its ultimate passage by the Congress.

Thank you for this opportunity to appear before your Subcommittee.

STATEMENT ON S. 1455 BY EARLE B. BUTLER, HARBOR COMMISSIONER,
CLEVELAND, OHIO

My name is Earle B. Butler. I am Commissioner of Harbors of the City of Cleveland and, as such, General Manager of the Port of Cleveland. I appear today not only in behalf of the City and Port of Cleveland, but also in behalf

of the International Association of Great Lakes Ports, of which I am Chairman of the United States Section and a Director. The Association is an organization of 16 major United States and 5 Canadian Great Lakes ports. It was formed, among other things, to consult and take appropriate joint action on matters of common interest to the Great Lakes-St. Lawrence Seaway region, including but not restricted to, legislation, physical development and use of water resources.

I appreciate the opportunity to appear before you today to support S. 1455. S. 1455, to provide a more conservative capitalization of the St. Lawrence Seaway Development Corporation, is of considerable concern to all the United States Great Lakes ports; and, we believe, of much importance to the great agricultural and industrial Midwest, for which our ports are the closest, most economical and most logical gateways to World markets.

In 1966, the Seaway handled 49,249,358 cargo tons. Of this amount, 29,125,037 cargo tons, or 59%, were either loaded or discharged at United States Great Lakes ports and of this United States commerce, 10,047,290 cargo tons were in foreign overseas trade. Overseas exports via the Seaway amounted to 6,948,795 cargo tons, and overseas imports amounted to 4,098,495 cargo tons, a ratio of roughly 7 to 4.

The United States-Canada St. Lawrence Seaway Tolls Commission report of the Tolls Committee of June 12, 1958, projected an ultimate annual tonnage level for the Seaway of 50,000,000 tons to be reached in 1968 and to thereafter level off at about that figure. Tonnage estimates and actual tonnages have finally met, but it has been a long, hard road.

Cleveland stands second to none in international cargo growth patterns, development of waterfront facilities, and desire to become one of the country's great ports for international commerce. We are very proud that foreign cargo handled through our port during 1966 reflected an increase of ten and three tenths percent (10.3%) over 1965. We are showing further increases for 1967, and we will continue to grow in the coming years.

That the Seaway has finally been able to attain the cargo levels envisioned for it, has been due, of course, to many forces. Not the least, however, have been the vast capital investments made, and being made, in dock facilities by nearly every major port along its route. This is so evident, it rather speaks for itself. However, I can say, with respect to Cleveland, that we already have about \$15,000,000 invested in City-owned facilities for the handling of overseas cargo, are now completing several new and costly installations and are going to the voters in November with a bond issue for \$7,000,000 to enable us to acquire additional badly needed lakefront land for additional development. This is just a sample of what is going on. Millions and millions of dollars are now going into the Seaway oriented facilities.

I have spoken only of public investments. Think of the great outlays being made also by private interests. United States iron ore movements to the United States through the Seaway have now reached over 13,000,000 tons per year, up from 5,000,000 tons in 1959. Cleveland alone is getting nearly 4,000,000 tons annually, all over privately owned facilities, which must be continually modernized.

The recent Seaway success, however, was not always so. It took a long time to get off the ground; to get people interested in investing money; to get facilities constructed; to get marine terminal companies organized and longshoremen trained and to get steamship lines to establish service. In brief, to get set up so the Midwest might be able to capitalize on the great asset of the Fourth Seacoast. Sometimes ships came before there were any docks to accommodate them. This was true in 1959. Sometimes docks were available, but ships had to forego cargo because they couldn't be reached for lack of the 27 ft. depth originally contemplated for all the major harbors and connecting channels. This was the depth on which utilization and tonnage projections were predicated, which lead to the toll estimates and the current amortization scheme. It was six years late in reaching Cleveland, yet we were the first of the Great Lakes ports to be given the 27 ft. depth.

We are all aware that the present level of success of Cleveland and other Great Lakes ports has been achieved in spite of many problems. Importers and exporters had to be oriented and still need to be told the Seaway story. Opposition from domestic inland carriers, the 8-month shipping season, pilotage costs, and the fact that we are still plagued with the lack of American Flag bottoms, outline a few of such problems. These obstacles and many others have been met head-on, and have been or will be overcome.

The success of the Seaway has been and will be based upon the Ports' ability to enable their customers to have their products delivered at the lowest cost.

This, too, helps the economy of the whole country. There have been many products which have moved across our docks and, I'm sure, many others where the difference of a few cents per hundred pounds enabled the shipper to be competitive in the World markets.

The St. Lawrence Seaway is *the only Federal waterway in the United States* ever called upon to completely pay its own way of all construction, operation and maintenance costs without regard to any other public benefits.

We feel that Seaway tolls were imposed at the insistence and through the influence of powerful interests which always have been and still are bitterly opposed to the existence of this great international navigational facility.

We feel that Seaway tolls are discriminatory, and thus work against the interests of the whole Great Lakes economy and its vast and increasingly populous hinterland.

We feel that continued adherence to the principle of recovering capital costs, plus interest, and the exorbitant cost of administration, maintenance and operation through tolls, means that any decrease in the level of cargo must inevitably necessitate a higher level of tolls.

This latter point means that we have one more uncertainty than our competitors. A constant threat of increasing tolls to cover escalating administrative, maintenance and operating costs will hinder growth. American Flag lines, even with subsidy, provide only a small percentage of the Great Lakes service—at Cleveland, barely 1% of the sailings. The foreign flag lines are not subsidized and must make a profit to live. The present tolls, pilotage, ship construction requirements for pollution control, labor problems both in the Great Lakes and abroad, the limited season and draft limitations make much of the shipping business in the Great Lakes marginal.

The constant threat of further increases will eliminate much of the existing service. Without this service, some of our hinterland importers and exporters will certainly cease to be competitive in World markets. This will result in a decreased total revenue for Seaway entities and losses to our national economy.

Senate Bill S. 1455 is the first ray of hope that we have seen that recognized the problem and makes an effort to reverse an obvious wrong. With the physical capacity of the Seaway reasonably fixed as a matter of practical dimensions and operating facilities and with so many years having passed during which the Seaway was not given the tools for full utilization, it is unlikely that the toll revenue to come in the future can possibly overcome the amortization deficits of the early years. It would be disastrous, in our judgment, to try to make up the lag by an increase in tolls. This bill suggests a splendid way to solve the dilemma.

The Federal Government has \$140,000,000 invested in the St. Lawrence Seaway, but think of the millions other agencies of the public and private citizens have invested also in this route of sea trade. We must not be unmindful of their interests.

Increased tolls is the way to destruction. The higher the tolls, the less attractive the Seaway route. The less the attraction, the less tonnage offered. The less tonnage offered, the less steamship service scheduled. The less service, the less tonnage, the less tolls, the greater the deficit for amortization and, eventually, maintenance. Then, the demand for even higher tolls and so on and on. It is not inconceivable that the vicious cycle would eventually dry up the Seaway for all practical purposes.

To avoid being caught in a vicious cycle of ever increasing tolls, we strongly support S. 1455 and urge approval by your Subcommittee and the Senate Committee on Public Works and passage by the Congress.

Thank you for the opportunity to appear before your Subcommittee.

Senator ВАН. Colonel Butler, I would like to ask you one question concerning the present tolls. I think you probably were here when Dr. Danielian, one of the earliest supporters of the seaway, pointed out that he wasn't too concerned about the present toll rate inhibiting the future growth of traffic. He was more concerned, he said, about the interest that has accrued because traffic has not lived up to the rosy predictions made in 1959. Though, I should add, the seaway has been doing very well in recent years?

Do you favor completely changing the financial obligations of the seaway or can an adjustment in the interest payments do the job.

Colonel BUTLER. I think there can be an adjustment to consider the public benefits, which are not considered in the toll structure at the present time. The public benefits, the benefit-cost ratio that you referred to earlier this morning are considered in all other Federal navigation projects, and even if it was a 0.5 to 1 benefit-cost ratio, we should get the credit for the 0.5. This is a hypothetical case, but I feel that these public benefits have been ignored, and that an adjustment is due, and for this reason I say that they are unfair.

Senator BAYH. Very well. Thank you. There is no need detaining you further. We appreciate your letting us have your thoughts.

Colonel BUTLER. Thank you, Mr. Chairman.

Senator BAYH. Mr. Conrad Fredin, commissioner of Seaway Port Authority, Duluth, Minn., accompanied by Mr. Jack Chestnut, attorney.

Is Mr. Chestnut with you?

Mr. FREDIN. Mr. Chestnut is not here at the moment, sir.

Senator BAYH. I think Mr. Fredin probably we had better consider your testimony the last we will be able to hear today. You may proceed, sir.

STATEMENT OF CONRAD FREDIN, COMMISSIONER, SEAWAY PORT AUTHORITY OF DULUTH

Mr. FREDIN. My name is Conrad M. Fredin. I am one of the commissioners of Seaway Port Authority of Duluth.

On behalf of my fellow commissioners and of our community, I wish to express my appreciation for the opportunity to appear before your committee today.

As I understand the legislation under consideration, there would be a refinancing of that portion of the seaway expense allocated to navigational development. This sum of approximately \$140 million is now represented by interest-bearing bonds. These bonds would be replaced by an equity, a stock in the Seaway Development Corporation, paying a cumulative dividend of 3.61 percent; in those years in which traffic was light this dividend might be skipped, but the difference would be made up in years when traffic was heavier. In any event, this would be a fixed annual charge.

There would be a readjustment of seaway bookkeeping in order to eliminate the duplication of a repayment charge, plus an amortization charge, which, in effect, is double depreciation.

There would be a ceiling placed on tolls, and a reallocation of the annual maintenance expense of this facility.

Our basic position is that we support this legislation. I would like to take a few minutes of your time in order to give you some of the background and some of our reasons for this position.

We tend to think of foreign trade as a static quantity, a pie of a certain size. Under this theory, there is a fixed quantity of goods in movement, and whatever traffic comes to and from the Great Lakes is necessarily taken—stolen, if you will—from the Atlantic, Pacific, or gulf coast trade.

To a considerable extent this is not true. Much of the development, much of the potential of the Great Lakes is new business. It represents articles which would not move in foreign commerce were it not for the seaway bringing the heartland of America closer to the trade routes of the world.

To give you a dramatic example, 40 percent of all Americans live in the Great Lakes basin, and this is the heartland of both agricultural and industrial production of the United States. A substantial portion of the enormous movement of commodities and hardware involved in our Vietnamese effort comes from this area. And yet, only a tiny fraction of this total movement is seaway traffic. The bulk of it moves by ordinary transport to the shores from which ocean movement begins. At the same time, there is a tremendous amount of cargo moving from the Great Lakes via the seaway to other lands and for other purposes.

Another point we would like to make is to get this matter of investment put in its proper perspective.

One hundred and forty million dollars is the national investment allocated to national development of that portion of the seaway between Montreal and Lake Ontario. This is the portion to be borne by all of the people of the United States. Duluth is one port on the Great Lakes coast. This is a city of 100,000, located over 1,000 miles west of the seaway development. The people of our city, our county, and our State joined to invest \$10 million in port facilities. Pick out the port cities along this Great Lakes coast, and you will find this story repeated—Milwaukee, Chicago, Detroit, Toledo, Cleveland, Buffalo, and many other cities. In each of these communities there has been a substantial investment, both of non-Federal tax money and of private capital.

The Federal investment, therefore, is but a portion of the total commitment made on the future of the Great Lakes Basin—I believe, when all of the investments of local government and of private capital are combined, it will turn out that the Federal investment is the smaller portion of the two.

Then, we should recognize the importance of tolls. Two things should be kept in mind. First, in a field where the penny is too gross a unit, and where costs are figured by the mill, tolls represent an increase in expense—a penalty against the Great Lakes region. A second factor is the psychology of tolls. A toll is an open, obvious, segregated item of expense and easy to use as an argument against Great Lakes trade. The threat of increasing this highly visible item of cost tends to discourage the flow of capital which brings increases in foreign trade.

It seems to me that one of the great things about Americans is their sense of fairness. I mean this seriously, and I think the spirit of justice and fairplay is one of the unifying forces of this Nation.

And I say, let's be fair to the people of the Great Lakes Basin. Give us a fair shake in developing the potential of this, our fourth seacoast.

This is what I mean: development of rivers, harbors, navigation aids on the west coast, on the Gulf of Mexico, along the Mississippi River and along the east coast is all a matter of proper Federal investment without any charge for the use of this facility. The theory has been that, by free development of our navigation potential in this country, we benefit the entire people by an increase in trade and development.

Then there is another factor which has received little attention. I don't suppose a Swiss watch has moved by water to the United States for a number of years. More and more the cream of general cargo business—the items of high portable value—are moving by air transport. This is true both in domestic and in foreign trade. The airports, the navigational aids, the tremendous development of this

field of transportation is all being accomplished by the establishment of bases constructed and properly constructed by the Federal Government as a matter of general public expense.

Competing with these coasts and competing with air traffic and other forms of transportation, the people of the Great Lakes should not be placed at a disadvantage, and the Great Lakes Basin should be given its opportunity to develop the new potential for foreign trade available to the heartland of this country.

In brief, we support this legislation because it is a step in the right direction. We recognize that this is a matter of international negotiation and that the legislation, once passed, must be administered in such a way as to make its purpose effective. This is a matter which we leave to the administration of the Government with considerable faith that the interest of the people of the Great Lakes will be protected.

That completes my statement, Senator. I would now like to repeat some of its highlights.

Senator BAYH. Of course, Mr. Fredin.

Mr. FREDIN. Thank you. As I said, we are in favor of this legislation. First, we have been talking about international traffic as if it were some static quantity—as if it were a 10-inch pie and would never get any bigger. I think we miss the boat. I think what we are talking about here is new business, new traffic; goods and commodities that would not move in interstate commerce at all, were it not for the seaway. That when the people from New York say that we are taking business away from them, we are probably creating business for them. That this grain planted in the Midwest, these agricultural and industrial products of the Midwest, that would not find their way into commerce at all, and will bring us new business in the heartland of America that we would not otherwise have in New York or Baltimore or any place else.

The next point I want to make, and it is a very brief one, is that we are talking about \$140 million as that portion of the cost of the sea which will be borne by the American people, the Federal Government.

Now, I would like to talk about Duluth. It is a city of a hundred thousand. We are located 1,000 miles west of this international seaway. In our city, our county, and our State, just our little group, we got up \$10 million for a port facility. Now you have done the same in Milwaukee, and you have done it in Chicago, you have done it in Cleveland, you have done it in Toledo. You are doing it on the other shores of the Great Lakes.

I submit, sir, that it may be that the non-Federal tax investment and the private investment in Great Lakes facilities is the larger of the two.

Senator BAYH. Excuse me. Your \$10 million was above and beyond the expenditure by the Federal Government?

Mr. FREDIN. Yes, sir. This is just to build the Duluth Port facility. We obtained that.

Senator BAYH. Was there any Federal money appropriated for construction?

Mr. FREDIN. None.

Senator BAYH. None whatsoever.

Mr. FREDIN. None of it, sir. Not that we haven't had good help from the Corps of Engineers in developing our harbors, but this facility was built entirely with non-Federal money.

Senator BAYH. Dredging?

Mr. FREDIN. No; I am talking about just the facility. The dredging and other help from navigation came from the Corps of Engineers.

Senator BAYH. How much money was involved in that?

Mr. FREDIN. I do not know, sir. I do not, but I could probably get the information for you if you wished, sir.

Senator BAYH. It will not be necessary.

Mr. FREDIN. What I am asking, sir, is, we get some sense of proportion, we are talking about \$140 million as if it were some large sum of money, and as if it were the only investment. What I am saying is that while it is large, it is not the only investment.

The other matter is this one of tolls. There are two things about a toll: First of all, it is an expense, it is a cost; and people who are smart enough, who have not gone bankrupt in the shipping business, are measuring their cost by the mill. The people who are using the seaway are acutely conscious of costs. Then there is the second point about tolls: Psychologically, they are obvious. It is a segregated, separate item of expense, and the investment that people would make to develop trade is not made with the threat of this separate, segregated item of cost going up.

One more point, and I am through. I am talking about fairness, which we have all talked about here, and which I think is one of the great unifying forces in this country, is that we have a sense of fairness.

The thing that I would like to bring out is that I don't believe a Swiss watch, made in Switzerland, has come to this country by waterborne transit for many years. The big factor in future development in the carriage of general cargo, these items of high portable value, like radios, watches, et cetera, this is all moving by air transport.

It is estimated that in another 10 years, the cargo business of the airlines will be greater than their passenger business, and this, too, this enormous development in airports, navigational aids, is all Federal money spent for the good of the entire Nation. And it doesn't seem to me that the people living along the seaway coast should compete with air transportation and should compete with coastal transportation, all built at the expense of the general public, and this one facility be singled out for additional tolls, additional expense.

Now it is spoken of as if it is a breach of faith if we change our method of calculating these tolls. I submit, sir, that if we made a mistake, there is no reason to be consistent and perpetuate it. If we made a mistake, let's recognize it and change it.

Thank you very much for your time.

Senator BAYH. Thank you, sir.

You mentioned additional tolls and other unexpected increases in costs.

Mr. FREDIN. Well, for instance, the purpose of the second piece of legislation under consideration today is an item of expense in connection with the Eisenhower lock. Is this going to be capitalized and become the subject of argument for additional toll, or is it going to become an appropriation expense? This is what I mean, sir.

I think one of our abilities to survive, sir, is our ability to take a fresh look at things, and maybe this is one of the things we should take a fresh look at.

Senator BAYH. I just wondered what you thought. It seems to me that a number of alternative toll structures are feasible. We can have a toll rate based on operation, maintenance, present interest, and perhaps amortization over an extended period. That is one toll structure.

Mr. FREDIN. Yes, sir; this is one of the problems we should take a fresh look at, I submit.

Senator BAYH. Very fine. Thank you very much.

Mr. FREDIN. Thank you, sir.

Senator BAYH. We will recess now and reconvene tomorrow at 10. I might point out for those of you who are here that Senator Hart will be the first witness.

Sorry to have to ask you to come back tomorrow, but we have some business on the floor of the Senate that requires my presence.

Thank you, gentlemen, for your patience. We will be in recess.

(Whereupon, at 12:37 p.m. the committee was recessed, to reconvene at 10 a.m. Wednesday, August 30, 1967.)

ST. LAWRENCE SEAWAY

WEDNESDAY, AUGUST 30, 1967

U.S. SENATE,
SUBCOMMITTEE ON FLOOD CONTROL,
RIVERS AND HARBORS OF THE
COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The subcommittee met at 10:30 a.m., pursuant to recess, in room 4200, Senate Office Building, Senator Birch Bayh presiding.

Also present: Joseph Van Vladriken, professional staff member.

Senator BAYH. The first witness this morning will be Col. Leonard J. Goodsell, executive director of the Great Lakes Commission. The experience of working with you in the past, Colonel Goodsell, has been a very pleasant one. We are anxious to have your thoughts here this morning.

STATEMENT OF COL. LEONARD J. GOODSSELL, EXECUTIVE DIRECTOR, GREAT LAKES COMMISSION

Colonel GOODSSELL. Thank you, Mr. Chairman. Glad to work with you and the State of Indiana. Incidentally, I am still working for the State of Indiana, among others.

Senator BAYH. Glad to hear that.

Colonel GOODSSELL. My name is Leonard J. Goodsell. I am executive director of the Great Lakes Commission.

I have a statement I will present for the record and request that it be entered therein.

The Great Lakes Commission is the operating entity of the Great Lakes Basin compact, ratified by the legislatures of and wholly supported by the States of Illinois, Indiana, Michigan, Minnesota, New York, Ohio, Pennsylvania, and Wisconsin. The commission has been operating as the advisory and recommendatory agency for the eight Great Lakes States on regional water resources matters for almost 11 years. Actually, it is a little over 11 years.

Ours, we like to think, was and is a real pioneer effort in interstate cooperation and consideration. Indicative of the commission's interests in water resources matters are the fields of activity of its five standing committees: (1) pollution control, (2) water resources, (3) fisheries and wildlife, (4) shoreline use and recreation, and (5) seaway, navigation, and commerce.

We in the Great Lakes Commission keep abreast of activities and developments which affect the Great Lakes region, and initiate or respond to actions which occur or need to be undertaken.

Among its activities in the field of seaway, navigation, and commerce for the Great Lakes region, the Great Lakes Commission:

(a) Hosted a symposium on the St. Lawrence Seaway, the Seaway Institute, in March 1964.

(b) Supported efforts to effect a more equitable share of military cargo through the Great Lakes ports and the seaway.

(c) Recommended initiation of the studies now underway to determine the feasibility of extending the Great Lakes shipping season.

(d) Promoted increased use of Great Lakes ports for exporting surplus agricultural products under the Government assistance program.

(e) Recommended an expanded traffic development program to be undertaken by the St. Lawrence Seaway Development Corporation.

(f) Opposed the exacting of tolls and user charges for all inland waterways of the United States, including the Great Lakes-St. Lawrence Seaway waterway.

(g) Supported the appropriation of Federal funds to construct seaway channels and facilities.

(h) Supports current legislation in Congress to provide assistance to the nonsubsidized U.S. merchant marine, including lake vessel operators, for vessel construction and modernization.

The Great Lakes Commission is most optimistic about the growth and progress of the Great Lakes region and the agricultural, mining, industrial, commercial, residential, and recreational hinterland served by the Great Lakes-St. Lawrence Seaway traffic artery.

I might insert here, Mr. Chairman, we are planning in 1969 a regionwide United States and Canadian trade promotion observance of the 10th anniversary of the seaway and we are going to do this through the State entities, ports, and Canadian interests, so we can bring people in here to show what actually happens in the Great Lakes region, the products we have, the resources we have, the services we can provide, and things of that sort. This will be a trade commission in reverse. Of course, for that we want to see the St. Lawrence Seaway alive and prospering and doing a good business and this is what we are working for.

Senator BAYH. Fine.

Colonel GOODSELL. Recent studies of the projected traffic on the seaway demonstrate unquestionably that traffic on the seaway will very shortly, probably this year, exceed the maximum tonnages earlier predicted and which were used as a basis for exacting tolls. In fact, St. Lawrence Seaway Development Corporation officials estimate cargo tonnages of 60 million tons by 1970—20 percent greater than the 50 million ton maximum projected by the 1958 tolls committee, which was a subject of discussion yesterday, to a degree. Actually, a few mistakes were made in some of those projections and we are saddled with them. A recent study made by consultants for the Corporation indicate a traffic volume for 1980 ranging up to 70 million tons. The studies for improving the seaway are going on now, and one day we can have this type tonnage.

Senator BAYH. You say it was 50 million tons at one time and one witness yesterday talked about 60 million tons. With technological advances and a growing economy in the Great Lakes region, I don't think it is unreasonable to predict that the seaway will exceed the

original tonnage estimates. There will have to be an expansion of the seaway's facilities, of course, in order to accommodate larger vessels. What are your thoughts on future traffic patterns?

Colonel GOODSELL. I think the statement made yesterday by Mr. Fredin of Duluth was if the seaway were not there a lot of traffic would not be generated; it is not taking traffic away from any part of the country; it is generating new traffic.

Last year's traffic of 49.2 million tons exceeded the tolls committee's forecast of 1966 and, as of mid-August, the 1967 traffic was about 1.1 million tons ahead of last year's figure to this date.

On June 8, 1966, the St. Lawrence Seaway Development Corporation held a public hearing in Chicago, Ill., to consider the proposal to increase toll rates on bulk cargo from 40 to 44 cents per ton, on general cargo from 90 cents to \$1 per ton, on gross registered tonnage of each vessel from 4 to 4.5 cents, along with a proposal for lockage charges on the Welland Canal (Canadian) starting at \$20 per lock the first year, 1967, and increasing to \$100 per lock the fifth year, 1971.

This year, several weeks before the seaway opening date, it was announced that tolls would remain at their present level through 1970, but the companion proposal for Welland lockage charges at their escalating rate were imposed. By 1970 the charge will total \$800 for a one-way passage through the Welland, and for the average-size lake vessel of about 8,500 gross registered tons and a cargo capacity of 16,800 short tons, 15,000 gross tons, will amount to more than an 11-percent increase in costs of transiting the seaway.

We point out some of these sales were made on price quotas which compete on a cents or even a mils basis. Any increase of this size is bound to affect traffic through the seaway, either it is going to cause it to go to other modes of transportation or shut the traffic off.

Senator BAYH. If you are correct, and I think you are, in the assumption that the seaway has created new business, this business must have been in response to the opening of the Midwest to direct overseas export.

An increase in tolls, for example, would make this particular run be less attractive and the businesses would either close or ship via another port. Isn't that so?

Colonel GOODSELL. It could very well, yes, sir. In fact, we keep rather close touch with Canadian shippers and people who represent the Canadian industry, the shipping industry, and we have had indications already that there are moves afoot because of the lockage charges on the Welland for the Canadian railroad system to give very favorable rates for cargo, bulk commodities, and actually go around Welland now. Here is traffic that would otherwise move through the Great Lakes system and the Welland Canal which probably in a very short time is going to move through the rail system on the Canadian side. We can expect that this is happening on the U.S. side.

Senator BAYH. Is it your judgment that the St. Lawrence Seaway Development Corporation is cognizant of this potential loss of tonnage and, since it is a joint Canadian-United States venture, is the Corporation making an effort to impress this upon the Canadian authorities?

Colonel GOODSELL. We have great confidence in the efficiency of the personnel of the Seaway Development Corporation and are positive that these are things that we can see as well as anybody else. The Corporation will recognize that one day, I am sure.

Senator BAYH. What about the suggestion that I have presented, not in any great detail, about the United States building a new "Welland lock" totally within the U.S. jurisdiction to avoid this increase in toll, or participate in the Canadian venture so that we would not have a toll?

Colonel GOODSSELL. We believe, in the Great Lakes Commission, that the authorization of the so-called all-American canal to connect with Erie, Ontario is an absolute must because there may come a time when we have to have it, not only from the point of view of its wonderful value and leverage for keeping down the charges on the Welland but also one day the Welland, even with improvement, is going to be flooded and we are going to actually need an additional facility.

Senator BAYH. Too much traffic?

Colonel GOODSSELL. As General Dodge pointed out, we are looking for larger vessels and unless the Welland Canal in its modernization program provides passage for these larger vessels then we will have lost much vessel efficiency. The other thing of course is we have to develop vessels which will not only navigate the lakes, but also navigate the oceans.

Senator BAYH. Yes, indeed.

Do you have an estimate of what such a structure would cost, an all-American canal?

Colonel GOODSSELL. The all-American canal—I have not had any figures on it in several years, but as I recall, it is about \$700 million.

Senator BAYH. \$700 million?

Colonel GOODSSELL. In that neighborhood. As I recall, it has about four high lift lock structures and then there is a replacement lock at Blackrock Channel. It would be quite an engineering undertaking.

Senator BAYH. It is quite a piece of change.

Colonel GOODSSELL. It is a big one.

At the Chicago hearing on the proposed seaway tolls increases there were 61 witnesses and of these only six testified in favor of exacting higher seaway tolls. Further, many statements were specific and others implicitly included a sense that the Great Lakes region suffers from and decries the discrimination which was built into the legislation and the procedures which led to the establishment and operations of the seaway, Public Law 358, 83d Congress.

During the 1950's and earlier there were many farseeing individuals who could and did understand the necessity for developing our fourth seacoast. We have some of those people with us. Dr. Danielian was with us yesterday, and Mr. Harry Brockel, from Milwaukee, is still very much interested in the seaway.

These dedicated leaders worked diligently to demonstrate the need and to get Federal authority and assistance to realize an accomplishment which was then, and has since been proven to be a major economic consideration in the whole future of the Great Lakes region and of the Nation. Because of the opposition of self-serving interests, the seaway came into being branded as the stepchild of a second-rate region of the United States, the Great Lakes Basin. Historically, there was, of course, no reason for such debasement of the region. Because this is actually the heartland of America. This is evident to you, gentlemen, I am sure. The Great Lakes region, even though saddled with the penalty of tolls on its direct waterborne trade with eastern

Canada and all overseas areas, has made valiant efforts to overcome this handicap to its commercial and industrial development and in the process to obtain the necessary surcharges to meet the imposed obligations.

Currently, undue concern is being displayed by some with respect to the financial well-being of the seaway—again encouraged and abetted by others from outside and definitely not interested in the overall well-being of the Great Lakes basin. This view is not based on the performance of the seaway in terms of the traffic volume achieved—which is already about equal to the ultimate amount forecast by the tolls committee—but is based on the fact that the committee's expectations for the early years of the seaway were unrealistically high. A major factor which apparently was not considered, or at least not adequately so, was the necessity for improvements in the Great Lakes harbors in order to fully accommodate the seaway vessels and traffic. This lag has been overcome only recently.

It was mentioned yesterday, I believe, the connecting channels project is actually in a good useable condition now, but only last June a year ago we opened up the Calumet Harbor in Chicago and this is an important factor. The port up in Milwaukee received its final dredging treatment in the summer of 1966.

The tolls committee's inaccurate traffic estimates—expecting too much too soon—has been reflected, of course, in the tolls revenues, and over the years the seaway has been in operation, these premature tonnage goals with discriminatory tolls charges have created a cumulative revenue deficit. Concurrently and contrary to the figure-juggling that led to the proposed toll rate increases, the Seaway Development Corporation produced figures to show that the estimate of 50 million tons per year as the maximum traffic volume was definitely out of date and no longer realistic, and projected that instead of 50 million tons we would have in 1980 a tonnage of 69 million. Earlier I rounded that off to 70.

Further, the Corporation through its consultants recognize that toll charges, and especially any increase in toll charges, would have a significant retarding effect on seaway tonnages, and could operate to render the projection for 1980 meaningless and signal the demise of this most important international waterway.

Mr. Chairman, at the Chicago hearings on June 8, 1966, myriad facts and figures were presented which in and of themselves painted a vivid picture of the retarding effect that a tolls increase would have on agriculture, mining, industrial, and commercial environments and activities in the Great Lakes region. With very minor exceptions the theme of the Chicago hearing was—give the seaway a chance, encourage its existence and operation, and let the Nation benefit therefrom. May I suggest that that viewpoint be adopted as the theme of the hearings now in progress.

S. 1455 is a bill which would reduce the stigma which has been imposed on the St. Lawrence Seaway and the Great Lakes region. It would assist by relieving somewhat the choking hold of present high-rate tolls. It would give the seaway a better chance to serve and benefit the Nation. It would cause to be returned to the U.S. Government a fair interest rate on its capital investment and would generate the funds to defray the costs for operation. It would be a reasonable and proper step toward recognizing the St. Lawrence

Seaway as being on a par with other public works projects throughout the Nation.

As the chairman pointed out yesterday, this is the only waterway in the North American Continent on which tolls are exacted.

The Great Lakes Commission is interested in the well-being of the Great Lakes region, and believes that the seaway is an integral factor in the future development of the region.

Perhaps a few facts about the present features of the seaway traffic will illustrate this view.

In 1966, the U.S. Great Lakes ports handled more than 11 million tons of direct overseas cargo. In addition to this huge direct movement of goods between our lake ports and areas throughout the world, about 2.4 million tons of our Midwest grain moved via the seaway in lake freighters to eastern Canadian ports for transshipment to ocean carriers bound for overseas destinations. Perhaps it should be noted, too, that practically all of the U.S. grain which moves out through the seaway—about 7.2 million tons of it in 1966—is for the commercial market and, therefore, is an important dollar earner. This is separate and apart from the market in which we don't get any United States dollars back.

Regarding the significance of a healthy export grain trade to the well-being of the Great Lakes region's world trade developments, it should be noted that U.S. grain cargoes are carried by nearly half the salt water vessels that call in the lakes. During the first half of the current shipping season, through July, for example, a total of 542 ocean freighters passed through the Welland Canal into Lake Erie and beyond. While in the lakes 195, or 36 percent, of these ships loaded grain at U.S. ports, some of them taking on such cargoes at more than one port. This important attraction of ocean shipping to the lakes could easily be destroyed by increased transit charges along the seaway route. Such a loss, in turn, would diminish the shipping services needed to assist in developing the Midwest's international trade and assure the economic well-being of the seaway.

With reference to shipping services, mention should be made of the U.S.-flag vessel operations. This year up to midseason, the end of July, only 10 U.S. ocean carriers had entered the lakes. This was about the same number as the midseason figure for 1966 and last year's season total of 18 lake trips by U.S.-flag vessels was the lowest number since the Seaway opened.

We are trying to encourage U.S. ocean shipping to greater participation in the expanding overseas trade of our lake ports, believing that it will be profitable for them and the region. The U.S. Government has expended sizable amounts of money in developing the ports, Great Lakes connecting channels and the locks at Sault Ste. Marie. Higher seaway tolls certainly would not stimulate these developments, and the prospects of such action appear certain to arise periodically unless legislation of the nature of that now under consideration is enacted.

Senator BAYH. Since you are talking about U.S.-flag vessels, would you care to comment on the fact that you apparently have been unable to secure shipping contracts for defense cargoes out of the Great Lakes area?

Colonel GOODSELL. Mr. Chairman, I don't have too many facts and figures on this immediately at my disposal. I could supply some

if you would like. When the seaway was being considered for authorization, the Department of Defense indicated that there was quite likely to be about a million tons of defense cargo shipped out of the lakes per year.

This has not materialized, in fact I believe in 1966 we had 30 some-odd thousand tons of defense cargo shipped out of the lakes I can verify. The trend appears to be slightly up at the present time, and this is an indication of something good we believe; we hope it is going to continue. We should get more of the cargo generated shipped out through the lake ports. This is defense cargo.

Senator BAYH. Do you care to make any comment on the reason why we have been unable to realize the original prediction?

Colonel GOODSSELL. I don't know why we have not except that apparently it is almost a chicken-and-egg business. Either the cargo is not there or the bottoms are not there to carry it. I cannot give you the background on why we have not been generating more than we have.

Senator BAYH. Of course, one of the stipulations in the shipment of defense cargoes is that it must be an American bottom, and I just wondered if you have any comment? Is this failure directly related to the lack of American bottoms in the area?

Colonel GOODSSELL. We don't have the bottoms in the area. We see traffic going past the ports of Detroit and Toledo by rail.

Senator BAYH. That is the question we need to answer. Why have American bottoms been avoiding this type of cargo shipment out of Great Lakes areas?

Colonel GOODSSELL. That is a good question. I don't know the full answer to it.

Senator Bayh. I won't pursue it further.

Colonel GOODSSELL. We believe the bill before this committee, S. 1455, is one which will grant a degree of equality to the waterway of our region and will benefit the whole Nation. We urge your favorable consideration and request your further efforts to have the bill enacted into law at the earliest.

S. 2131 also being considered at this hearing today would authorize rehabilitation of navigation structures and appurtenant works of the St. Lawrence Seaway project.

As noted in testimony presented in support of S. 1455, we in the Great Lakes region look upon a healthy, operating St. Lawrence Seaway as a necessity.

One of the key links in the seaway system is, of course, the Eisenhower lock at Massena, N.Y. This lock has shown a deterioration of the concrete in the lock wall, which must be repaired. The estimated cost of such repairs is about \$13 million and the repairs must be undertaken without delay—which means that work to repair the lock should begin immediately upon the closing of the seaway navigation season about December 15, 1967.

The lock has been in use since 1959 and has been in the maintenance and operation phase during that period. We believe it would be highly illogical to charge costs for the repair job back against the initial capital investment or as an item to be included for payment from seaway tolls.

Under the River and Harbor Act of 1909 Congress has historically directed the repair, modernization, and replacement of navigation structures to permit them to operate efficiently in our navigable waterways. As a matter of equity the costs for repairs to Eisenhower lock should be treated in like manner and treated as are the costs for all other like navigation structures in the United States. Primarily, it has been demonstrated that present seaway tolls are a burden to and an unfair charge against the commerce of the Great Lakes-St. Lawrence Seaway system. Additions to the present overall debt which encumbers the seaway would be unconscionable.

The Great Lakes Commission supports S. 2131 and urges its enactment.

Senator BAYH. Colonel, you have presented a very precise, analytical statement. Let me ask you just one question now because you have been kind enough to let me interrupt as you went along. On the basis of your experience in the Corps of Engineers, do we have any precedent in the construction of other corps projects where the deterioration was as rapid?

Colonel GOODSSELL. Mr. Chairman, this is the type of activity that happens in any big construction job. The most difficult things the construction engineer has to face are subsurface conditions and construction conditions. The Eisenhower lock was built under trying construction conditions but every attempt was made, I'm sure, to assure quality construction.

Now the corps has been doing research in what we call civil works investigations. It has been some time since I have been on this but I know I used to defend a budget item in the amount of \$200,000 and this was for civil works investigations. Every year I would go before the committee and would be asked to point us out some examples. What good you have gotten out of this research? Can you show us where you have gotten any money back? Have you come up with any tangible results? This is a very difficult thing to do in the research business, but among some of the items being explored, not only subsurface investigation and methods of procedure and things of that sort, but also we worked in concrete admixtures, things of that sort. Use of fly-ash, a very fine concrete admixture that has been proved out. The corps is always trying to look for new methods, better methods, not only do the job but do it more cheaply.

Senator BAYH. Thank you very much, Colonel.

Colonel GOODSSELL. Thank you, Senator.

Senator BAYH. Mr. James G. Tangerose, please.

We are glad to have you with us.

STATEMENT OF JAMES G. TANGEROSE, DIRECTOR OF WATERWAY ANALYSIS, COMPETITIVE TRANSPORTATION DIVISION, ASSOCIATION OF AMERICAN RAILROADS

Mr. TANGEROSE. Thank you, Mr. Chairman.

Senator BAYH. I understand you also had the opportunity to serve the Army Corps in one capacity or another.

Mr. TANGEROSE. Yes, I worked with the Corps of Engineers for approximately 17 years.

My name is James G. Tangerose, director of waterway analysis, Association of American Railroads, Washington, D.C. The AAR is a voluntary nonprofit organization comprising railroads handling 99 percent of the railroad line-haul traffic and producing 96 percent of the operating revenues of the railroads in the United States. I appreciate the opportunity to appear before your committee in behalf of the association in opposition to S. 2131 and S. 1455.

I would like to briefly summarize and supplement my prepared statements.

Senator BAYH. Please proceed.

Mr. TANGEROSE. I will first testify on S. 1455.

The act of May 13, 1954, provided that the seaway be self-liquidating over a period not to exceed 50 years or by the year 2009. It was this future of the act that was principally responsible for obtaining congressional approval for construction of the seaway. S. 1455 would nullify the self-liquidation provision of the authorizing act. The authorizing act also required that tolls cover all costs of operating and maintaining the seaway. S. 1455 would have the general taxpayer assume the costs of maintaining the seaway rather than the seaway users.

The cumulative effort of S. 1544 as developed in my prepared statement is to subsidize seaway users a total of approximately \$181 million over the next 41 years.

Based on studies made for the Seaway Corporation and the Canadian Seaway Authority it is evident that the seaway could be self-liquidating. We submit therefore that it is both unwarranted and unnecessary to nullify the self-liquidating feature. It is also unfair to shift the maintenance costs from the users to the general taxpayers. Consequently the association recommends that this committee report unfavorably on S. 1455.

My remaining comments are directed to S. 2131. This bill would appropriate \$13.1 million for the rehabilitation of navigation structures of the Seaway Corporation. The appropriation would not be considered for the purpose of the debt limitation of the Corporation. Neither would the appropriation be subject to the amortization requirements of the authorizing act, nor would it have to be taken into account by the Corporation in establishing tolls.

Since we believe that the seaway can be self-liquidating we are concerned only with who should pay the cost of the rehabilitation of the Eisenhower lock.

As pointed out in my prepared statement, interest and amortization of the proposed expenditure will amount to approximately \$600,000 annually based on an interest rate of 3½ percent and an economic life of the seaway extending to the year 2009.

We submit that the cost of rehabilitating Eisenhower lock should be financed from seaway tolls and not by the general taxpayers. Users of the seaway are the principal beneficiaries and it is reported they saved \$200 million in transportation costs between 1958 and 1965 inclusive. Clearly seaway users should assume some of the risks involved in the construction and operation of the seaway and not just be the recipients of benefits. Consequently, the association recommends that this committee report unfavorably on S. 2131.

This concludes my oral statement.

(Mr. Tangerose's prepared statement follows:)

STATEMENT OF JAMES G. TANGEROSE, DIRECTOR OF WATERWAY ANALYSIS,
ASSOCIATION OF AMERICAN RAILROADS

My name is James G. Tangerose, Director of Waterway Analysis, Association of American Railroads, Washington, D.C. The AAR is a voluntary nonprofit organization comprising railroads handling 99 percent of the railroad line-haul traffic and producing 96 percent of the operating revenues of the railroads in the United States. I appreciate the opportunity to appear before your Committee in behalf of the Association in opposition to S. 2131.

S. 2131 would appropriate \$13.1 million for the rehabilitation of navigation structures of the Saint Lawrence Seaway project to be carried out by the Saint Lawrence Seaway Development Corporation.

The \$140 million debt limitation of the Corporation provided in Section 5 of the Act of May 13, 1954, amended July 17, 1957, would not be affected by this appropriation. Neither will the expenditure be subject to the amortization requirements of the Act of May 13, 1954, nor would it be required to be taken into account in establishing Seaway tolls. Interest and amortization of the proposed appropriation will amount to approximately \$600,000 annually, based on an interest rate of 3.5 percent and a 40-year remaining economic life. (The average interest rate on the Corporation's debt in 1965 was 3.53 percent.)

Sponsors of this bill have pointed out the decision to use a mixture of 75 percent portland cement and 25 percent natural cement in the construction of Eisenhower and Snell Locks has resulted in the deterioration of these locks, particularly Eisenhower Lock. They also have noted that responsibility for this faulty construction rests with the United States Government and not with the Corporation, and that it is only fair to appropriate funds from the general Treasury to correct the condition.

Section 3(a) of the Act of May 13, 1954, authorized and directed the Corporation to construct the United States' portion of the Seaway. On September 24, 1954, the Corporation designated the Corps of Engineers to serve as its design, contracting, and construction agent. This delegation of authority to the Corps of Engineers was terminated effective December 31, 1958, although the Corps of Engineers continued to serve as contracting agent for those contracts not completed as of December 31, 1958. Construction work on these contracts was completed by December 31, 1959.

As noted above, sponsors of the bill have placed the responsibility for the faulty construction with the United States Government (Corps of Engineers) and not with the Corporation. This rationale implies that if the Corporation, and not the agent, had been directly involved in the construction of the Seaway, it would have reached a decision different than that of the Corps of Engineers concerning the use of natural cement in the construction of Eisenhower and Snell Locks. This is very conjectural. Moreover, it should be emphasized that the Corps of Engineers was acting as the agent for the Corporation and presumably kept the Corporation informed on matters such as this. Consequently, there is no valid reason for relieving the Corporation of the cost of this error in judgment by the Corps of Engineers when the Corps was in fact the agent of the Corporation. Furthermore, the Corporation is just as much a part of the United States Government as is the Corps of Engineers. In addition, even though the use of natural cement proved to be a mistake, it was nevertheless made for the purpose of helping Seaway users—by lowering costs and expediting construction. Had it proved successful, Seaway users would have benefited. Unfortunately, it did not work out, but this is no basis for the "heads I win, tails you lose" proposal. We submit that this cost should be shouldered by Seaway users and not the general taxpayers.

It is quite clear that the intent of the Act of May 23, 1954, as amended July 17, 1957, was to assure that users of the Seaway pay for it, rather than the general taxpayers. The self-liquidation feature of the Act was instrumental in getting Congressional approval of the Seaway.

It would be unfair and unwarranted to require the general taxpayers to pay for rehabilitating the Seaway. Users of the Seaway are the principal beneficiaries, and it is reported that Seaway users have saved \$200 million in transportation costs, 1959-1965 inclusive (*Congressional Record*, January 16, 1967, page A109). Since they are the principal beneficiaries of the project, it is only reasonable that they be expected to assume some of the risks involved in the construction and operation of the Seaway.

The Corporation is apparently a self-insurer of damage to and loss of its assets. Self-insurance can be provided for through annual contingency payments or

damages and losses can be paid for as they occur, and the costs capitalized and amortized over the remaining life of the project. In either event, there are certain costs involved which should be reflected in the Seaway toll structure.

We submit, consequently, that not only should users of the Seaway be required to pay for the rehabilitation of the locks herein involved, but they can well afford to pay such costs. The expense should be capitalized and amortized over the remaining economic life of the project and, of course, be used to calculate future Seaway tolls.

For the above reasons, we recommend that this Committee reject S. 2131.

Senator BAYH. Thank you very much, Mr. Tangerose. You represent an industry that has a significant impact on the health of the economy and we are pleased to have your view.

I say to you, sir, what I said to the representative from the North-eastern Ports Association yesterday, that I think it is incumbent upon the rail industry and the various sections of our country to not get themselves involved in a regional dispute, one section of the country against another, and one industry against another.

You mentioned the fact that the users of the seaway are the principal beneficiaries. I think that is absolutely correct. I suppose we could say the same thing about the railroads, could we not?

Mr. TANGEROSE. In this sense, yes.

Senator BAYH. Could you tell me why it was that in the period from about 1850 to 1871 the U.S. Government gave the railroads 183 million acres on which to build track?

Mr. TANGEROSE. I am not too well qualified to talk on this subject since I didn't come prepared to talk on it.

Senator BAYH. I am sure you were not in the railroad business at that time, but I thought maybe you might have good judgment as to why this was done by the country.

Mr. TANGEROSE. One of the basic reasons, as I recall, was that it would open up the West.

Senator BAYH. Correct. It would allow the newer areas of our country to develop by gaining access to the markets of the South and East.

Mr. TANGEROSE. It would allow it to develop faster.

Senator BAYH. This development was considered an asset to the general economy.

Mr. TANGEROSE. Yes, sir.

Senator BAYH. The Joint Economic Committee valued this land at \$143 billion in the report I saw and probably, by today's standards, it would be an underestimate. But I think this was a good expenditure of the funds.

Mr. TANGEROSE. Well, so do I; but there was also involved here the fact that the railroads receiving land grants, also provided land-grant rates to the Government for shipping Government materials. I think studies by the Interstate Commerce Commission demonstrated that land-grant rates more than paid for the value of the land grants.

Mr. TANGEROSE. Well, I would agree with you on this, Mr. Chairman, but in the days of the railroads' actual construction I think the railroads paid their way. There were land grants involved, but not to all railroads.

Senator BAYH. What I am saying is that we must draw a parallel between a seaway system which is designed to provide business opportunity, and I think we have ample evidence that there is business now

developing in the Great Lakes area because of access to deep water transportation, and is required to charge tolls and the railroads which have benefitted the country but were not charged for the land.

Mr. TANGEROSE. Well, looking at the traffic that moves on the seaway, for example, I am talking now from memory, the principal seaway traffic is iron ore, I am sure that this iron ore would be moving with or without the seaway.

Senator BAYH. What about grain exports?

Mr. TANGEROSE. I think they would be moving with or without the seaway.

Senator BAYH. I am sure I am not going to convince you of my argument but I want the record to show, first that the railroad is a significant factor in the growth of our country.

I think it is incumbent upon the railway industry, in turn, to recognize problems faced today by a different form of transportation.

Mr. TANGEROSE. I think that you recognize the problem faced by the St. Lawrence Seaway Corporation but there are alternative solutions that the Corporation and the Government could pursue, from the testimony I heard yesterday, and the testimony that I heard today, that they are seeking a solution without considering increasing or adjusting the toll structure.

Senator BAYH. It is easy for the railroad men to say that the easiest way to solve this is get the tolls up so high you don't have any cargo. Is that a good way to solve the problem?

Mr. TANGEROSE. I am not suggesting this, Mr. Chairman.

Senator BAYH. I think this is a suggestion some might follow and I think it is totally unrealistic.

Mr. TANGEROSE. Well, I think it is totally unrealistic when you study a problem to just make the basic assumption that you won't touch the tolls but you will look at other adjustments that you can make in the financial structure of the Corporation.

Senator BAYH. Of course we are going to have to consider this problem of tolls 4 years from now.

Mr. TANGEROSE. I agree.

Senator BAYH. Although some witnesses have testified in favor of a toll-free seaway, I think most people are realistic enough to realize it may never come to pass. What we want to do now is maintain the tolls at a level that will continue to attract traffic enough to pay for the investment that has been made.

Just as I think the land grants to the railroads were good investments, not only because it helped the railroads but it helped communities to develop, so I personally feel that the seaway is a good investment because of the industrial development it has attracted to the Midwest.

I don't need to pursue this further. You have been very kind and your statements have been very helpful to us. I appreciate the fact that you have come before the committee.

Thank you very much.

Mr. TANGEROSE. Thank you, Mr. Chairman.

Senator BAYH. Mr. David W. Oberlin, Port of Toledo.

Mr. Oberlin, we are glad to have you with us this morning.

STATEMENT OF DAVID W. OBERLIN, MANAGER OF TRADE DEVELOPMENT OF THE TOLEDO-LUCAS COUNTY PORT AUTHORITY, ACCOMPANIED BY JOHN A. McWILLIAM, STAFF ATTORNEY FOR TOLEDO-LUCAS COUNTY PORT AUTHORITY

Mr. OBERLIN. Thank you, Mr. Chairman.

Mr. Chairman, I am accompanied by Mr. John A. McWilliam of the port authority.

Senator BAYH. The record will so state.

Mr. OBERLIN. Mr. Chairman, my name is David W. Oberlin. I am manager of trade development of the Toledo-Lucas County Port Authority. On behalf of the port authority and our area citizens, I wish to support S. 1455.

First I would like to extend the regrets of our executive director, Mr. Louis C. Purdey, that a prior commitment has made it impossible for him to be here today, particularly in view of his strong continuing support of this legislation.

I have submitted a statement and I would like to make some comments.

Senator BAYH. Any way you want to proceed is fine.

Mr. OBERLIN. My statement sets forth a review of the bill much of which is obvious as it has already been covered. The importance of the seaway to the port authority is also covered in my statement.

I think it is significant to note that the economic value to the Toledo community last year of waterborne cargo exceeded \$130 million, so this is a very vital thing. We believe the seaway is a very real success despite the fact that there are some financial problems. Far too often the negative approach is taken. It is a very real success; but the trouble is the success is very tenuous. It is going to take very little to reverse the tide. A few more "tolls" or lock charges on the Welland or an increase in tolls and we are going to lose the gains that we have made to date.

I think that our Government must undertake immediately discussions with Canada regarding lockage charges on the Welland. Obviously by 1971 the charges will amount to a 10 per cent increase in vessel costs and these are prohibitive.

Now there are those people who say that the Seaway is going to be self-supporting and we should leave it alone but, as I see it, under present legislation, major toll increases are inevitable. This is particularly true in view of the statement of Secretary Mackey yesterday that given upward traffic the seaway could hold its own. We are not interested in the seaway holding its own, so to speak, we are interested in the growth of the seaway and of the great midwestern area.

Senator BAYH. Although I don't agree with everything that Secretary Mackey said, I think we have to recognize that when talking about holding its own, he did not mean to imply no increases in seaway traffic. In order to hold its own the seaway will have to attract more traffic.

Mr. OBERLIN. Yes. We believe that in order to hold its own financially it is going to be absolutely necessary to raise tolls despite a growing traffic pattern. This in turn will have the adverse effect of not permitting growth, so we think there is an inconsistency there.

Senator BAYH. I just wanted to make certain we were on the same wavelength here.

Mr. OBERLIN. Right. I want to emphasize that tolls are a very real detriment. There has not been much testimony about the relationship to tolls but a shipper in Indiana or Ohio takes a look at his cost sheet and he decides, am I going to ship through New Orleans or the west coast or the east coast? He talks about his ocean rate and his inland rate. Only when he talks about shipping through the seaway does he have to add a little extra item in there, that is not so little, the tolls. Only on the seaway is there this major difference. There is always one more item of cost on the seaway. There is no question in my mind that the tolls have prevented business expansion in the Great Lakes States. They have also presented more substantial growth in both general and bulk cargoes.

Now as proof of this I think one only has to look at the strong opposition of the coastal ports as illustrated by their testimony yesterday to maintain the status quo. Don't change the toll structure. Every hearing we have, it is the same thing.

We are seeking to get rid of a competitive disadvantage here, we are not looking for a competitive advantage, we are looking for equal treatment. Everybody should have equal treatment, and if we have to have tolls then everyone should have tolls. This is an absolute must.

Now I realize from a practical standpoint that eliminating tolls is nil but we support this legislation strongly as a step in the right direction.

Another thing I think we have to look at, Mr. Chairman, is progress. Is the seaway to be forever financially tied to the present level so that it will be gradually outmoded, or can we forge ahead? This legislation has got to be passed so that consideration can be given to the future. Let's forget about the past and look at the future. The seaway is reaching saturation. By 1970, or early in the 1970's it will be saturated at the present rate growth, assuming no toll increases. There must be larger locks, 1,200-ft. locks, much deeper, much wider in order to handle the bigger ships that are being built today.

All the lake interests agree that something must be done, but are engineering plans and estimates being made? Whose responsibility is this? As we see it, it is the responsibility of the Seaway Corporation and the Department of Transportation to formulate long-range progressive policies toward this end.

Senator BAYH. Do you know of any such plans at the present?

Mr. OBERLIN. No, sir; I do not. I know there have been certain plans with regard to studies being made with regard to the all-American canal. I know of no plans in the Department of Transportation for expanding the seaway.

Senator BAYH. It seems to me this should be a responsibility of the Seaway Corporation.

Mr. OBERLIN. Under the Department of Transportation I feel that an active step toward the future must be taken.

Now, there has been another thing stressed here throughout this testimony, Mr. Chairman. Existing legislation and legal requirements are continually being fallen back upon. "This is what we agreed to *x* years ago." Now I am of the impression that these requirements were made by this Congress and this Congress has the option and

the right to discharge its duty by changing such legislation and that is the reason we are here. We cannot forever justify something wrong based on past history. We can no longer afford to look backward, we have to look ahead to the future.

In summary, I would like to say that the Port Authority of Toledo urges the enactment of S. 1455 because it is a necessary step in relieving the pressure upon the Great Lakes ports and seaway for higher tolls. This is a constant pressure. It will give the seaway financial stability which is necessary from the standpoint of the steamship operator and the shipper. He can then project his costs a few years ahead rather than on a year-to-year basis.

Finally, it will enable us all to look ahead and to stop the constant expenditures of our energies (and it is a constant expenditure of our energies) in combating toll increases and other unnecessary charges based on facts long since ancient history. We want to move ahead, not regress.

Mr. Chairman, I also would like to make a comment on military cargo and American-flag service in response to some questions you raised earlier today. I think it should be pointed out military cargo flowing through the seaway has never at any time been a significant amount of cargo in proportion to the amount of military cargo that flows through the other ports. For example, on the average the total overseas military cargo has been almost 100 times in quantity of that which has gone through the lakes.

In 1964 there were 85,000 measurement tons through the lakes. During the same period there were 3.2 million measurement tons which left through the east coast. So, although we do have some military cargo, there is very little in the overall.

Senator BAYH. Why is that? The Midwestern area prides itself on being a nuts-and-bolts producer of military hardware that is needed all over the world. Why is it that such an insignificant percentage of this is shipped from Great Lakes ports close to the source of production?

Mr. OBERLIN. The fundamental reason, of course, is that although the military cargo is theoretically supposed to move at the lowest overall cost, the law requires that except under unusual circumstances it be moved by American-flag ships. There is no real attempt being made by the American-flag lines to service the Great Lakes and pick up the military cargo in the Great Lakes.

The American-flag lines in our judgment have not aggressively attempted to conduct sound business operations in the Great Lakes. In fact, the president of one American-flag line said "as long as we can get the cargo on the east coast why should we compete with the Midwest? Why should we compete with ourselves?" Yet at the same time the foreign-flag operator has no difficulty in competing in the Great Lakes and making money.

Just a little while ago Mr. de Smedt of the American Export Line in a letter to the Maritime Administrator asked to withdraw from service in the Great Lakes and gave several reasons. Before I comment on those reasons I would like to state for the record that the letter requesting withdrawal of service was not submitted until after the lake groups urged the Maritime Administration to withhold subsidy from that line. I suppose the lines theory was that their best defense was a good offense.

The following statements were made by this company and were put into the record of a senatorial hearing on appropriations by the Maritime Administrator.

That "the inadequacy of port facilities on the Great Lakes was one factor." We categorically state that this is ridiculous. The Great Lakes has some of the finest port facilities in the world. They are modern and they are much better than many of the ocean ports served by this particular company.

"The inability of the operator to attract steady clients." We submit first that the foreign operators apparently have no problem attracting clients since they are growing steadily. Secondly, if a man is competing against himself perhaps he is not lending his full efforts to develop clientele through the lakes especially when the majority of his business is in another area.

Thirdly, he talks about the lack of promotional rail rates. There has been very little support given by the American-flag lines to any reduction in rail rates to lake ports, but the domestic rates that are in effect are quite ample to put the cargo on a competitive basis in most cases. Some are not, but when there is actual business we can obtain adjustments.

On the other hand, the foreign-flag operator again works under the same inland rail rates. It is the foreign-flag operator who receives no subsidy from the Government that can compete in the Great Lakes. The American-flag operators on the other hand, seem to have a great many impediments.

Now there was another statement made about time lag. We agree that due to the locks there is some difference in time, but in our experience with shippers when there is a substantial saving to be involved, time is not an important factor. If it is an important factor, generally the cargo would move by some other means of transportation, such as air, or will be handled as a special package.

Senator BAYH. In the case of certain types of defense equipment the element of time might be a critical factor.

Mr. OBERLIN. Yes, sir. We would be the last ones to say that all military cargo should move through the Great Lakes just because it is made there, but we certainly would say that a great amount of this military equipment which is stockpiled, which is put into the pipeline for future use, should logically move through the Great Lakes at less cost to the Government, and could move at less cost to the Government.

Now their last excuse I think is something that has not been introduced at this hearing, but it is germane to this whole problem, and this is his (Mr. de Smedt's) statement on containerization. This line which was supposed to be developing business out of the Great Lakes has on the other hand, been putting all its efforts on containerization out of the east coast. At the same time while pleading for increased subsidies from the U.S. Government to build containers and container ships to move out of the east coast, they are decrying their inability to complete out of the Great Lakes.

Mr. de Smedt flatly says that the advent of containerization eventually will eliminate the Great Lakes ports as significant handlers of either the outbound or inbound general cargo.

Senator BAYH. What is this business of containerization?

Mr. OBERLIN. The business of containerization specifically is a provision by the steamship line of a box, a container, which is then moved to dockside, either filled at the plant or at dockside and is loaded onto a special container ship which runs back and forth (theoretically) between one port in the United States and one port in Canada, Europe, or whatever part of the world it is destined.

Now, the theory is that because of the faster ship turnaround there are a great many economies, and this is true. But, we can handle containers in the lakes now, we are handling them now.

Senator BAYH. But the seaway ports can't handle containerized ships?

Mr. OBERLIN. We cannot handle containerized ships that are designed by our Maritime Administration as being too big for the Great Lakes. We can handle containerized ships that are being designed in other countries that are not quite as large. In other words, we are faced with paying taxes to support a subsidy to build ships to compete with the Great Lakes, when the ships won't even go into the Great Lakes. We beg for equal treatment.

I have no other testimony, Mr. Chairman, except to comment on 2131, to the effect that the Eisenhower lock is an integral part of the seaway. We understand that the lock has deteriorated. There has been testimony here that if the seaway is going to operate efficiently the lock has got to be repaired as soon as possible beginning this year. No thinking person would agree that this deterioration is the result of normal wear and tear. It is not a normal maintenance item under any stretch of the imagination. It would not be handled in any corporation as a normal maintenance item. In any business that we know of, such an abnormal, extraordinary expense would be handled through special financial treatment.

For this reason, we urge the passage of this legislation so that the funds are available for the prompt repair of the lock and so that the tolls won't have to be raised so high as to shut the seaway down. That would be what would happen if you had to raise tolls in order to recover the money soon enough to make the repairs—\$13 million.

Senator BAYH. I want the record to show that Toledo is recognized as one of the outstanding Great Lakes ports. This is due, for the most part, to Mr. Purdey, the port director. Are you familiar with any industries that have been attracted to the Toledo area because of the port facilities and access to the seaway?

Mr. OBERLIN. Yes, sir, I think this is of course most markedly illustrated by the grain industry. Toledo has grown from a very small grain port into one of the largest grain ports in the United States. This is advantageous to all the farmers in the Midwest, that they have a better market for their products, they get more money for their products, and certainly no one would deny that farming is not a major industry.

Senator BAYH. Is it fair to say that as a result of the seaway the American farmer is more competitive and has new markets?

Mr. OBERLIN. Absolutely, without question.

Senator BAYH. You can argue that a bushel of corn can be shipped by rail as well as by ocean-going vessel. The question we have to deal with, I think, is whether you are going to have a market. In other words, do we have markets now because of less expensive transportation of that bushel of corn via the seaway?

Mr. OBERLIN. I think that definitely has occurred. Soybeans to the Orient is a very excellent illustration of that. The volume and usage of soybeans has risen remarkably since the opening of the seaway due to the lower transportation costs involved.

I note from the list of witnesses that a gentleman who is much more qualified to comment on this than I will appear a little later on the program from the Chicago Board of Trade, but I would like to say that our trade with Japan through the Great Lakes is completely new to our area. We have had an interchange that has occurred since the seaway opened. There have been new industries in our hinterland which can benefit from the growth and the availability of lower cost transportation.

Just to take an example, if one of our industries is competing overseas, in order to compete with the manufacturer from, say, South America or some other part of the world, he must be in a position to deliver his product on an overall competitive basis. So we have been assured by many of the area industries that they are able to compete in the world markets much more efficiently than they would have been able to compete without the transportation savings available to them in the seaway.

Senator BAYH. Thank you very much, Mr. Oberlin. We appreciate very much both of you gentlemen joining us.

Mr. OBERLIN. Thank you, sir.

(Mr. Oberlin's prepared statements follow:)

STATEMENT ON S. 1455 BY DAVID W. OBERLIN, MANAGER OF TRADE DEVELOPMENT, TOLEDO-LUCAS COUNTY PORT AUTHORITY

My name is David W. Oberlin. I am the Manager of Trade Development of the Toledo-Lucas County Port Authority. On behalf of the Port Authority and our area citizens, I wish to support S. 1455.

But first, I would like to extend the regrets of our Executive Director, Mr. Louis C. Purdey, that a prior commitment has made it impossible for him to be here today, particularly in view of his strong continuing support of this legislation.

At the present time, the St. Lawrence Seaway is the first public waterway of the United States financed so that repayment of the debt obligation is accomplished by the assessment of tolls. These tolls are also designed to recover all other expenses of the waterway.

Moreover, the Seaway is the only federally constructed waterway ever obligated to bear the burden of its own cost of maintenance and operation at the expense of the user. In addition to these discriminatory and burdensome requirements, the St. Lawrence Seaway Development Corporation must also pay an amount calculated as depreciation, notwithstanding the fact that it has also been required to make payments for maintenance.

The Toledo-Lucas County Port Authority is of the opinion that these requirements have significantly hindered the rate of the Seaway's growth. For these reasons we support the proposed Bill, as a major step in the direction of allowing the Seaway to develop fully. Moreover, we believe the Bill will not only provide a stable foundation for the growth of the Seaway, but will furnish a sound base upon which to continue discussions with Canada related to tolls and other aspects of the Seaway future.

The Mondale bill will change the method of financing by converting the present capital debt and accrued interest into capital stock to be held by the Treasury. The Treasury would receive an annual return in the form of a dividend of 3.61% which we understand is the approximate amount of interest now being paid on the obligations of the Corporation. Thus, the Seaway would be relieved of its heaviest burden—the annual payments on the principal.

The bill further provides that the cost of maintenance be paid from Federal appropriations on the same basis as the other great Federal navigation works, by appropriations made directly from the U.S. Treasury.

Finally, the Mondale bill sets a basis of capitalization designed to encourage reasonable future toll rates by providing that tolls shall be calculated upon capacity traffic rather than upon a traffic level encountered during the early years of Seaway operation. It is intended by the legislation that tolls be set so as to cover the following:

1. The cost of operation.
2. The 3.61% dividend to the Treasury.
3. Interest on other outstanding obligations of the Corporation.
4. Payments in lieu of taxes.

The onerous depreciation charge is eliminated as a required expense item.

There is no question that this legislation will result in placing the Seaway on a much sounder and more equitable financial basis.

In speaking on behalf of this Bill, I would like to present a short background of the Port Authority and discuss the effect the Seaway has had on its development. This will enable this committee to have a fuller understanding of the relationship of one port—the Port of Toledo—and the Seaway, and the significant impact that this waterway has had on the development of this nation's Fourth Seacoast.

The Port Authority was created in 1955 pursuant to the Ohio Port Authority Act, which was passed in that year by the Ohio Legislature. The port authority legislation contained an emergency clause in order to permit the prompt organization of port authorities to take advantage of the St. Lawrence Seaway project authorized by the National Congress. The Act provides that a port authority created in Ohio shall promote, advertise and publicize the port and its facilities and appear before rate making authorities to represent the interests of the port.

The subject of this Bill—Seaway financing—is vital to the Port Authority's ability to fully utilize legislation under which it operates. For example, since 1955 a major port improvement program has taken place in Toledo. Federal, local government and private capital totaling more than \$40 million has been spent in providing facilities which are largely dependent on the Seaway. The citizens of Lucas County have three times voted real estate and personal property taxes on themselves for the purpose of major capital improvements in port facilities and to provide operating funds for the Port Authority.

Perhaps the Port of Toledo's stake in the Seaway can best be illustrated by comparing cargo statistics for the year 1959, the first year of the Seaway, with 1966. Total cargo increased from slightly under 34 million tons to 44 millions tons. Total overseas cargo increased from approximately 140,000 tons to 1,855,000 tons. Major increases in the general cargo and bulk cargo fields have been experienced, particularly in handling of overseas grain shipments. Since the opening of the Seaway, Toledo has become one of the major grain ports in the United States.

Putting the Seaway on a sounder financial basis, therefore, is an absolute necessity from our standpoint, and this legislation will do much to stabilize this basis. It will have one other major effect of incalculable value to the Great Lakes ports and to the midwestern states . . . it will remove once and for all the fallacious stigma constantly expounded by our opponents that the Seaway is a failure!

It's time we proclaimed loud and clear that the Seaway is, in fact, a very real success—with cargo totals now running ahead of original predictions. Its economic contribution to the Midwest economy is unquestionable. In Toledo alone, the value of waterborne cargo exceeded \$130,000,000 last year. But this success is tenuous . . . all it will take to reverse the tide is for an increase in tolls to be made on the Seaway, or for a few more "lockage charges" to be imposed on the Welland.

Unless our Government in discussions with Canada acts promptly, by 1971 the Welland "charges" will total \$1,600 for a round trip passage. On the average, this will amount to more than 10% increase in vessel costs of the Seaway system, and the Midwest ports will have gradually been dealt a major body blow . . . lockage charges.

There are those who say we don't need this legislation . . . that the Seaway is meeting expenses. This may appear to be so on the surface, but only last year the combined efforts of the Great Lakes Senators were necessary to prevent a heavy toll increase. Who knows what will happen three years from now! There is every indication that even at the present traffic levels, due to compounding indebtedness and operational expenses, tolls will have to be raised again within three years. Moreover, operational expenses will continue to increase despite the best efforts of the Seaway Corporation (who to date have been successful in keeping such costs down). Under present legislation major toll increases are inevitable.

Now a word as to user charges. We are categorically opposed to all such charges. However, even the stoutest proponents of user charges would be hard put to say that the tolls required to pay costs of operation, a 3.61% cumulative dividend on the capital stock, and payments in lieu of taxes, would constitute free use. This user charge would still be far greater than any collected on any other public waterway in the United States.

What about progress? Is the Seaway to be forever financially tied to its present level . . . so that it will be gradually outmoded? Can we ever forge ahead? This legislation must be passed so that consideration can be given to the future . . . not the past.

The Seaway is rapidly reaching saturation. Twinning the present locks will be required in the early 1970's. These must be at least 1200 ft. long to match the Poe lock, and a lot wider and deeper to handle bigger ocean ships. Lake interests all agree . . . but what is the Administration's position? Are engineering plans and estimates being made? As we see it, the policy responsibility for progress lies with the Seaway Corporation and the Department of Transportation. This bill will free them to concentrate on the task ahead. We must be directing all of our efforts toward a bigger and more modern Seaway.

In summary, the Toledo-Lucas County Port Authority urges the Congress to enact S. 1455 because it is a necessary step in removing the constant pressure upon the Great Lakes ports and the Seaway for higher tolls. It will give the Seaway the financial stability absolutely necessary for it to be ultimately recognized as the successful artery of commerce it really is. Finally, it will enable all of us to look ahead to the future growth of the Seaway . . . not to its decline. It will enable all of us to turn our attention to progress and stop the constant expenditure of our collective energies in combating unnecessary charges based upon facts long since ancient history.

STATEMENT ON S. 2131 BY D. W. OBERLIN, MANAGER OF TRADE DEVELOPMENT,
TOLEDO-LUCAS COUNTY PORT AUTHORITY

My name is David W. Oberlin. I am Manager of Trade Development of the Toledo-Lucas County Port Authority. I am appearing today to speak in favor of S. 2131, a bill to authorize the rehabilitation of navigational locks of the St. Lawrence Seaway.

The Toledo-Lucas County Port Authority is a public body responsible to all of our area citizens for the development of the Port of Toledo. Ours is the responsibility to build, promote, advertise and publicize our port, in fact, to represent the port in all aspects affecting the public's interest.

It is self-evident that the Port of Toledo and all the other Great Lakes ports are dependent upon a sound and efficiently operated St. Lawrence Seaway. For the Seaway system to be shut down for a prolonged period is unthinkable. It would be catastrophic. In Toledo alone, the annual loss to the economy accruing from waterborne commerce would exceed \$140,000,000. Collectively, the loss to all ports would be staggering.

The Eisenhower lock is, of course, an integral part of this Seaway system. We understand that the concrete in this lock has deteriorated to the point where immediate repairs must be made, and that the estimated cost of these repairs is about \$13 million. If the Seaway is to continue to operate efficiently next year, repairs must begin as soon as possible upon the close of navigation, in order that there be no curtailment in next year's operation.

No thinking person could argue that the deterioration with which the Corporation is faced is the result of normal wear and tear. It is rather an abnormal situation resulting in an extraordinary expense which does not lend itself to the usual financial treatment. To repair this structure out of available Seaway funds would require tolls to be raised so high as to result in non-use of the Seaway, the same end-result as would occur if the locks are not promptly repaired.

The modernization, replacement and repair of navigational structures in our navigable streams has historically been done by Congressional appropriation. We believe this repair should be handled in a similar fashion.

The Toledo-Lucas County Port Authority supports S. 2131. We urge the Congress to immediately enact this legislation so that funds are available for the prompt repair of the Eisenhower lock. We cannot emphasize too strongly the fact that the economy of the entire midwestern region will be adversely affected if the vital repairs to this lock are not made promptly.

Senator BAYH. Mr. Thomas D. Wilcox, attorney at law, Great Lakes Task Force, and Great Lakes Terminal Association.

STATEMENT OF THOMAS D. WILCOX, COUNSEL, GREAT LAKES
TASK FORCE AND GREAT LAKES TERMINAL ASSOCIATION

Mr. WILCOX. It is a pleasure to appear before you this morning, Mr. Chairman.

Senator BAYH. Good to have you, sir.

Mr. WILCOX. My name is Thomas D. Wilcox. I am attorney and counsel for the Great Lakes Task Force. The Great Lakes Task Force is an amalgamation of associations, and is composed of the Great Lakes Commission—Colonel Goodsell testified earlier this morning—organized by eight States in 1955 by an interstate compact; Council of Lake Erie Ports, an association of all interests on Lake Erie concerned with waterborne commerce, including banks, stevedores, chambers of commerce, et cetera; the International Association of Great Lakes Ports, an association of 15 American and five Canadian public port authorities on the Great Lakes; The Great Lakes Terminal Association, of which I am also counsel, which is an association of 26 public and private marine terminal owners and/or operators; the U.S. Great Lakes Shipping Association, an association of over 30 foreign and U.S.-flag regular steamship lines and steamship agents serving the Great Lakes and all major world ports.

The task force represents the consolidation of all interests in the Great Lakes devoted to the rational utilization and promotion of the St. Lawrence Seaway system—and we like to think of it as a system—and its economic benefits to the several States surrounding the Great Lakes.

All of the members of the constituent associations which comprise the task force are engaged in the foreign commerce of the United States via the St. Lawrence Seaway system, and the key to their economic success is the St. Lawrence Seaway. The two bills now before this committee are essential to the well-being and future of the St. Lawrence Seaway, and though different in approach and in response to different problems are in fact inseparable. Both bills must be enacted and implemented promptly if the St. Lawrence Seaway and those who depend upon it are to continue in existence.

Of critical importance at the present moment is the obvious deterioration of the Eisenhower lock of the seaway, caused by inadequate initial construction. The cost of repairing the Eisenhower lock is the subject of some debate, but whichever figure is used the cost is significant. S. 2131 would authorize the expenditure of funds necessary to correct the initial construction deficiency of the Eisenhower lock, and would charge such expenditures against the general treasury rather than against the toll income of the seaway.

In our opinion the intent of S. 2131 is the only fair and reasonable solution to this problem, and it would be absolutely unfair to require the users of the St. Lawrence Seaway to pay for repairs caused by inadequate initial construction and planning. Accordingly, the Great Lakes Task Force and all of its constituent members strongly support enactment of S. 2131, as was stated in our report to the Great Lakes Conference of Senators, which report appears in the Congressional Record of August 11, 1967, on pages S. 11391-11393.

The second bill before this committee, S. 1455, would if enacted reorganize the financial obligations of the seaway authority by conversion of the present bond obligations into capital stock, and would

place the cost of maintenance of the seaway on the general treasury. The purpose of this bill is directly related to and compatible with S. 2131 insofar as the allocation of maintenance costs is concerned.

The Great Lakes Task Force believes that to the present date the St. Lawrence Seaway Development Corporation has been unduly charged with an almost impossible burden, and that Congress should rectify the situation by the immediate enactment of S. 1455. The task force and its constituent members so testified in the 89th Congress, when this committee concerned itself with similar legislation, and our position was repeated in the task force report to the Great Lakes Conference of Senators, which report I have previously mentioned.

In our opinion the problems which these two bills attempt to cure are symptomatic and do not necessarily reach the core of the St. Lawrence Seaway problem. As stated in our report to the conference of Senators, which report we will gladly furnish to this committee if desired, the entire future of the St. Lawrence Seaway requires meaningful study and negotiations with the Government of Canada. In particular, a proposed toll increase was narrowly averted last year, for which there was much rejoicing or, I should say, a sign of relief. This was short-lived, however, since early this year the Canadian Government reimposed a lockage charge on the Welland Canal which connects Lake Ontario with Lake Erie. While the Welland Canal lies wholly within Canada, and the United States has no voice in the operation, the Welland Canal constitutes a vital portion of the St. Lawrence Seaway system which links the Great Lakes with the Atlantic Ocean, and thus every port in the world.

We strongly urge that the Congress not satisfy itself simply with the enactment of the two bills now before it, but that this committee and every other committee of Congress prevail upon the executive department to undertake meaningful negotiations with the Government of Canada, in order to arrive at an economic development program for the St. Lawrence Seaway system to the advantage of both of these great trading countries. The Great Lakes Task Force and all of its members, either individually or collectively, are prepared to offer any assistance they can in this regard.

Senator BAYH. I thank you very much, Mr. Wilcox.

Are you, as counsel for the task force expansion familiar with the matter of rail service to Great Lakes ports?

I would like to pose two questions, and then you may deal with them individually or collectively.

One, do the railroads now provide adequate rail facilities to the port terminal facilities?

Two, if they do, or if they don't, is it logical to assume that the growth of industries utilizing the facilities of the seaway east and west could indeed result in additional rail transportation north and south from those terminals?

Mr. WILCOX. Well, in answer to the first part of your question, the physical facilities provided by the railroads that serve the Great Lakes ports are adequate, but one of the problems we have is the rate structures of the railroads. In particular is the provision in the Interstate Commerce Act, the so-called section 22 rates, by which the railroads may quote on a moment's notice reduced rates for U.S. Government or State or local municipality cargo.

There is no meaningful section 22 rate for this type of cargo which would move to or from the Great Lakes ports.

The second problem is every port area in the country——
 Senator BAYH. Section 22 rates are restricted then to what type of cargo?

Mr. WILCOX. State and Federal Government cargo.

Senator BAYH. Yes, but I suppose they could offer this same rate to ports on the lake, could they not?

Mr. WILCOX. It applies throughout the country. The statutory authority is there for it to be used for any port area but most of the cargo which originates in the midwest for export is a relatively short haul from factory to port.

I am advised the railroads make more money shipping it from a longer distance, say from Milwaukee to Baltimore, than from Milwaukee to Milwaukee.

Senator BAYH. That does make sense, doesn't it?

Mr. WILCOX. Yes; from their standpoint it does.

Senator BAYH. You could make the same comparison with the short haul versus long haul waterway cargo, could you not?

Mr. WILCOX. Yes. The second problem is that there are no export-import rates or shipside rates depending how you add it. These are the rates the railroad or truck lines will quote from point of origin to shipside a single factor rate. This is a rate from point of origin to the port and then the accessorial charges are included in the inland rate. This is not available to the Great Lakes ports.

Senator BAYH. Who is responsible for that?

Mr. WILCOX. This again is a railroad and shipper problem. The shipper usually has to request a specific rate reduction. I must say in all fairness to the railroads that in several instances where a particular commodity appears it could move in substantial volume through the Great Lakes ports after prolonged negotiation, many of the railroads have reduced their rate to make the Great Lakes ports more competitive than the east coast rates. But this is something that has to be done with each particular commodity as it comes up. This has not been done voluntarily.

One of the real problems, sir, is that the Great Lakes ports are sort of like a "new boy in town." The traditional shipping patterns were established before the seaway was constructed and the railroads, trucklines and the others are used to shipping in the east coast, west coast or gulf coast. In 1959 the St. Lawrence Seaway was available. We now not only have to fight the competitive advantages or disadvantages of geography but we also have to educate the shippers and the railroads and other people involved to try to dissuade them from adhering to shipping practices which they put into effect long before the seaway was in existence.

So we have basically an educational program and many of the port directors have done outstanding work in this area. Particularly, as you mentioned earlier, Mr. Purdey in Toledo and also Mr. Brockel in Milwaukee.

I know from personal experience that there are shippers in the Milwaukee area and other areas in the Midwest who never would have exported or their exports were substantially increased simply because people like Mr. Brockel went to them and said the seaway is here and Milwaukee is here, it is a substantial benefit for you to engage in export commerce.

After years of education and telling these people where the agriculture department office is in Minneapolis, new exports did flow because of the seaway.

Senator BAYH. Do you have specific examples of some of these businesses that would not be in Milwaukee or other Lake port areas had it not been for the seaway?

Mr. WILCOX. I think Mr. Brockel could give you more information on that if you so desired. There is one miller in Milwaukee who may have exported a little bit before the seaway, but after education by Mr. Brockel and others his export did increase.

Senator BAYH. I think it would be interesting.

What we are interested in is additional growth, additional cargo in the Milwaukee area.

Does that complete your testimony?

Mr. WILCOX. Yes, sir.

Senator BAYH. Thank you very much. We certainly appreciate your being with us, Mr. Wilcox.

Governor Otto Kerner of Illinois has written to Senator Young, chairman of the Subcommittee on Flood Control, in which he suggests that his State will be represented.

The staff informs me that Mr. John C. Guillou has submitted a statement on behalf of Governor Kerner.

(The statement is as follows:)

STATEMENT OF JOHN C. GUILLON, CHIEF WATERWAY ENGINEER, STATE OF ILLINOIS

Mr. Chairman and Members of the Committee: My name is John C. Guillou and I am Chief Waterway Engineer for the State of Illinois. I appear before you this afternoon representing the Honorable Otto Kerner, Governor of the State of Illinois.

Our understanding of S. 2131 is that it would appropriate approximately thirteen million dollars to the Saint Lawrence Seaway Development Corporation for completion of repairs, over a period of years, to the Eisenhower Lock.

We are aware that the Eisenhower Lock has experienced maintenance problems in addition to the normal wear and damage caused by vessel traffic. As early as April 1962 difficulty was encountered in the concrete sill of the lower miter-gate. It is now our understanding that the engineers for the Corporation believe that concrete deterioration, and cracking, have progressed to the point that major repairs are required.

Unfortunate as the accelerated maintenance program may be, the State of Illinois strongly supports the appropriation of S. 2131 in the belief such work is essential to continued safe and dependable operation of the Eisenhower Lock. Illinois is acutely aware of the threat to Seaway traffic that is posed by the present questionable condition of parts of the Eisenhower Lock. We support S. 2131 as the best means for expediting the necessary repair work.

Since 1959, Illinois industry and agriculture have become increasingly accustomed to the benefits of the Saint Lawrence Seaway. Our import and export business, particularly the latter, have grown dramatically due to our improved access to foreign markets.

Very substantial investments, of both public and private funds, have been devoted to terminal and transfer facilities at the Port of Chicago and at Waukegan. A forced shutdown of the Seaway at this time would disrupt a growing trade which is still in its infancy. This would not only cause immediate, if temporary, economic loss to Illinois, to the other Great Lakes States, and to the Canadian provinces, but it would also greatly impair future growth of traffic through the Seaway. World commerce is only now adjusting to the great advantages of the Saint Lawrence Seaway.

We urge this Sub-committee, and the Committee on Public Works of the Ninetieth Congress, to report favorably on S. 2131. We respectfully suggest that the Congress and the President of the United States pass the measure into law so that work may be initiated during the coming winter season.

Thank you, Mr. Chairman and Members of the Committee. If there are any questions, I will be pleased to respond.

Senator BAYH. Is Mr. G. E. Stallcop, executive vice president, Northwest Terminal Elevator Association, Minneapolis, Minn., here?

The staff informs me that his statement is available. It will appear in the record at this point.

(The statement is as follows:)

STATEMENT OF GILBERT E. STALLCOP, EXECUTIVE VICE PRESIDENT, NORTHWEST
TERMINAL ELEVATOR ASSOCIATION

The Northwest Terminal Elevator Association is an association of eighteen owners and operators of grain terminals in Minneapolis-St. Paul and Duluth, Minnesota, and Superior, Wisconsin. The membership, which markets grain from several upper midwest states, includes the leading Great Lakes grain shippers.

The Association supports S. 1455.

Nearly a year ago we applauded sponsorship and prompt hearing of similar legislation to provide for more conservative capitalization of the St. Lawrence Seaway Development Corporation. Although our legislative objectives were not attained at that time, in retrospect we realize that the hearing stimulated public dialogue and awareness of the Seaway's financial plight that subsequently led to a four-year moratorium on toll increases.

We again commend the Subcommittee on Flood Control, Rivers and Harbors for its instrumental role in achieving that important intermediate objective.

Last year we pointed out that the inadequacy of existing Seaway financing had been apparent to the grain industry for many years. At that time, we urged the Subcommittee to analyze sources of industry concern and alternative methods of solving the Seaway's financial impasse. S. 1455 is one alternative. Financial experts and academicians better qualified than we may advance others. We respectfully urge that all be given thorough consideration.

Increased transportation costs that sooner or later would be required if the 1954 Act is not amended would not reflect the special competitive character of bulk agricultural commodities, but would jeopardize investments in facilities and vessels, would discourage maximum use of the St. Lawrence Seaway by agricultural shippers and would retard expansion of agricultural exports from the Great Lakes. A more equitable method of financing is necessary because the statutory obligations of the Corporation are clearly burdensome and unrealistic. Current indebtedness only confirms this judgment.

What is needed is a policy determination by the Subcommittee and the Congress that the 1954 Act was based upon excessively optimistic traffic projections, that increased shipping costs are imprudent, and that a viable alternative for financing must be found.

We believe S. 1455 is a reasonable solution to these problems, and we respectfully urge that the Subcommittee recommend its prompt passage.

Senator BAYH. Mr. Carl Lessing, Vice President, Chicago Board of Trade.

Mr. Lessing, we appreciate your being with us.

STATEMENT OF CARL LESSING, VICE PRESIDENT, TRANSPORTA-
TION, CHICAGO BOARD OF TRADE

Mr. LESSING. I appreciate the opportunity to come before you, Senator.

Senator BAYH. Mr. Lessing, I want to thank you for sending me a copy of the remarks that you made before the Midwest Business Administration Association, entitled "Almost a Decade of St. Lawrence Seaway—A Supplementary View," which is a good synopsis of your thoughts on the St. Lawrence Seaway.

Mr. LESSING. I intended to place most of that in the record today with a few supplementary remarks, if I may.

Senator BAYH. Very fine. Handle it in any way you see fit.

Mr. LESSING. My name is Carl J. Lessing and I am vice president, transportation, of the Board of Trade of the City of Chicago. The Chicago Board of Trade is the world's largest grain market. The St. Lawrence Seaway is an important medium of transportation beyond our marketplace and we are vitally concerned with all matters which affect our ability to utilize it.

We are here today in support of S. 1455.

The economic benefits the St. Lawrence Seaway has generated for the United States have already repaid what we have spent on the cost of its construction. This might appear to be a wild, reckless statement, but this can be documented by any economic researcher.

Consider, if you will, only its effects upon the agricultural economy of this country. These have been dramatic and far reaching.

Agricultural economists have described the American agricultural economy as a livestock economy. That is to say that our major agricultural efforts are directed toward growing animal feeds. The American people eat relatively stable amounts of grain or grain products—rather, we feed our grains to livestock and poultry and in turn we utilize meats or milk products as a major portion of our diet.

As the standard of living increases throughout the world, it is anticipated that other countries will increase their consumption of animal protein. Indeed, this is already taking place in the European countries where the consumption of meat and poultry is rapidly rising.

Two of the principal feed ingredients used to maintain the animal population are corn and soybeans, commodities which are produced so very efficiently in the very area into which the seaway penetrates and serves. Soybeans and corn are our greatest agricultural dollar earners. In this respect it is easy to see why the State of Illinois is the No. 1 State in the exportation of agricultural commodities, for we are the Nation's top soybean-producing State and next to the top in corn production.

The seaway's influence on the movement of these two commodities in world commerce has been phenomenal to say the least. It can truly be said that the economic benefits derived from the seaway have allowed our grains to be more competitive in the world markets, and it has been a major reason why approximately one out of every 5 acres of our grain production is exported.

Of course, vast tonnages of grain have moved directly via the seaway, and this has resulted in remarkable changes in the grain flow patterns. Just for an example, during the 1966 navigation season, 40 vessels carrying over 9 million bushels of corn and soybeans went forward from Chicago via direct sailings to Japan. This is an amazing phenomenon when you consider that the sailing distance from Chicago to Yokohama is nearly 12,000 nautical miles involving a transit time of approximately 45 days one way. It is also worth noting that nearly all of the oats exported from this country move from the Duluth-Superior ports, quite a contrast from just 10 years ago.

However, of equal, if not of more importance, is the influence of seaway competition on the inland transportation grain rate structures from the production areas to both the tidewater and seaway ports.

As you know, the seaway was substantially completed and opened for business in April of 1959. I say substantially completed, for many of the connecting channels and harbors did not have the seaway drafts at the outset. In fact, we in Chicago did not have our so-called

deep water until June of last year when the dredging of the Calumet River connecting channel was completed into our major harbor facilities.

Just prior to the opening of the seaway, in March of 1959, the Traffic Executive Association—Eastern Railroads issued a rate proposal to reduce export rates on grain from origins in Illinois, Indiana, Ohio, and Michigan to the North Atlantic ports.

The reductions were proposed for the express purpose of meeting seaway competition, and they were sizable.

I would like to digress at this particular point. I was at a transportation forum the second year the seaway was opened and there was on that program Mr. Art Baylis who was then the vice president of the New York Central Railroad and he publicly announced that, "We don't like the seaway," and that he could not fill the seaway with rocks but he would make doggone sure that the seaway would not be filled with traffic and he would institute rate studies and rate proposals to draw traffic away from the seaway.

Senator BAYH. Who was this?

Mr. LESSING. This was Mr. Art Baylis who at that time was the vice president of traffic of the New York Central Railroad system.

Senator BAYH. When did he make the statement?

Mr. LESSING. This was about the second year the seaway was opened.

Continuing with my statement: For example, from central Illinois the corn rate was reduced from 50 cents a hundredweight to 37 cents a hundredweight; soybeans from 72 cents a hundredweight to 38 cents a hundredweight. These rates became effective on June 18, 1959.

In 1964, the same rate bureau submitted a second proposal on behalf of the eastern railroads, this time suggesting to again lower grain export rates, except soybeans, from origins in Indiana, Michigan, and Ohio to the eastern seaports. The rates suggested were for both single and multiple-carload shipments.

This second major seaway-compelled change became effective on September 25, 1964. Representative of the reductions from Indiana was the corn rate from Indianapolis to Baltimore which became 30 cents for single cars, and a low of 24 cents per hundredweight for multiple-carload shipments. In comparison the preseaway rate on this grain from this origin was 46 cents per hundredweight. On the basis of 55 tons per car—once again distressing, 55 tons is a conservative amount that you can place into a boxcar. I would say that our average loadings into a boxcar of grain range upward from about 115,000 to around 120,000 pounds and now we have new equipment which will hold 100 tons, these so-called Big John hopper cars. But on the basis of 55 tons per car the per car savings resulting from these competitive rate reductions from this origin ranged from \$176 to \$242.

As originally published, these rates were applicable only during the period of open navigation, but this restriction has since been removed.

The effect of these two extensive rate changes created a serious problem for Chicago as a new seaport entity in world commerce. This was brought about by the refusal of the rail carriers to publish lower rates to Chicago. As a result, we found the export rates from Indiana origins barely 100 miles from Chicago to be higher to Chicago than to the North Atlantic ports for as much as seven times the distance.

The eastern rail carriers ignored our requests for equitable rate treatment and we were forced to file a formal complaint with the Commission. Only then was some relief obtained.

Senator BAYH. Are you satisfied with the relief?

Mr. LESSING. No, sir; because there have been more changes, more reductions, since that time. On that particular score I have personally been working in the field of freight rate litigation. I probably have done more in this particular field of rate negotiation and litigation perhaps than any other person in the country.

I have been personally working on one particular problem since 1959, and we will file briefs in Federal District Court in Chicago this week on this one particular rate problem just to determine what the rights of the seaports are vis-a-vis the gulf and tidewater ports.

This has been a tremendous, tremendous problem for us in Chicago, and, of course, that must extend to the other ports on the Great Lakes as well.

Back to my statement: With this example in mind, I would suggest that anyone should think twice before advocating complete economic freedom from regulation for the railroads. The age of railroad rate discriminatory practices is not yet over, and without the assist of the regulatory restraints, we could never have torn down this artificial rate barrier.

The seasonal grain rates did not constitute the end of the eastern railroads' seaway-competitive grain rate publications. Just 1 year later, this time effective October 10, 1965, they published trainload grain rates from Chicago and other specific origins in Illinois, Indiana, and Ohio to the North Atlantic ports. From Chicago the new trainload rate became 20 cents per hundredweight in shipper-furnished jumbo hopper cars, and 21 cents per hundredweight in carrier-furnished equipment.

At the present time the shipper or grain exporter has a variety of rates to the eastern seaboard depending upon the color and condition of the freight car and the direction the wind is blowing. This is literally true.

When the recent proposition to increase seaway tolls was made the subject of a public hearing before the St. Lawrence Seaway Development Corporation in June of 1966, I had occasion to present a statement on behalf of the Chicago Board of Trade. In that statement I said:

For the seven year period 1959 through 1965, the equivalent of 585,254 carloads of grain were exported through the North Atlantic Ports from Portland, Maine to Norfolk, Virginia.

Even at a conservative savings estimate of 100 dollars per car, the Seaway has already saved for the American public a minimum of 58.5 million dollars in transportation charges on grain exported through these Atlantic Ports.

But rate reductions have not been confined solely for the account of those rail carriers whose lines roughly parallel the course of the seaway. Not to be undone, the gulf-oriented rail carriers have made comparable reductions from Illinois and Iowa to the gulf ports. In this respect, since 1959 and continuing to date we have seen a host of proposals promulgated not only by the railroads but also by the shipper and gulf ports users advocating lower freight charges to allegedly permit them to compete with seaway-directed traffic.

Perhaps the most unusual of the seaway-induced competitive rate schedules is the so-called inverse export rate structure on wheat

which applies from origins in Montana and North and South Dakota to the Northwest Pacific coast ports. Here the rates were so constructed that the farther away the origin is from the port, the lower the rate became. For example, a 90-percent rate applied from Wolfpoint, Mont., to the Northwest Pacific ports whereas a 70-cent rate applied from Minot, N. Dak. A justification for this was given by the railroad as follows:

Wheat now moving for export from North Dakota and South Dakota to Lake Superior and Gulf and Atlantic Ports had a benefit of export rates that are progressively lower from points near to Minneapolis and Duluth. This pattern is reflected in the rates now proposed to the Pacific Northwest Ports.

Earlier I remarked that the seaway had caused substantial changes in the grain flow patterns. Another of the more prominent of these is the significant increase in the trucking of grain to the seaway ports.

Here in Chicago we have always utilized water transportation beyond the marketplace to a considerable extent—and once again I will digress to say in the year 1900 we had approximately 130 million bushels go from Chicago by water and we have not reached that point since. There is still a tremendous potential for our particular marketplace.

Going back to the statement: Here in Chicago we have always utilized water transportation beyond the marketplace to a considerable extent, although in recent times we have been primarily rail oriented. Even our delivery rules for our future contracts require that certain railroad rate applications be guaranteed. This fits into the highly complex domestic grain and grain product rate scheme together with the attendant rail in-transit privileges and other services.

On the other hand, water forwarded grain requires none of the elaborate rail services—only the cheapest form of transportation into the port which in many instances is via truck.

In the preseaway year, 1958, trucks accounted for slightly less than 20 million bushels of our receipts. This mode of transportation has shown remarkable growth each year since 1958, accounting for well in excess of 60 million bushels for each of the years 1965 and 1966. Over 80,000 truckloads have reached this market in each of these 2 years.

I again digress and say that a great deal of this truck grain is coming from your State into our marketplace.

Certain of the rail carriers serving Chicago, such as the Chicago & North Western Railway Co., serve this and various other lake ports but do not serve the tidewater ports except through a connecting carrier or carriers. This implies that on movements to tidewater ports they divide the revenue with the other carrier or carriers. In most instances the single-line haul gives them more net revenue than a division of a joint-line haul.

This factor together with the tremendous increase in competitive truck grain traffic has caused significant reductions in rail freight rates not only to the seaport of Chicago but to the other lake ports as well, and I refer here specifically to ports such as Milwaukee and the Duluth-Superior Ports.

Two examples will illustrate this point. In 1958 the rate on corn from Des Moines, Iowa to Chicago was 42 cents per hundredweight. The current export corn rate to Chicago from this origin is 27 cents per hundredweight and there is a railroad proposal pending to reduce this 27-cent rate to as low as 19 cents per hundredweight for multiple-

car shipments. The rate on corn from Decatur, Ill., to Chicago for movement beyond via water is now 16.5 cents per hundredweight which is lower than it was 20 years ago.

Senator BAYH. That is rail, right?

Mr. LESSING. Yes.

Senator BAYH. To Chicago.

Mr. LESSING. Yes.

Senator BAYH. For shipment by water?

Mr. LESSING. Yes, sir.

Senator BAYH. Which tends to be a different pattern than has been followed. At least it appears there that the railroads are cooperating to make the rates lower to ship out of Chicago.

Mr. LESSING. We have had a fair measure of success within the last 3 or 4 years of getting reduced export rail rates on grain, not on soybeans, into our marketplace. However, when you measure the service provided say from a point like Decatur to Chicago for the rate which is charged with the measure of service from Decatur down to the gulf ports, for example, for the service involved our rates are still on a very high level and that is one of the things in this litigation that we have been trying to establish.

In other words, we feel in Chicago that we are entitled to the benefits of location. From the great soybean and corn production area in Illinois, for example, the average distance to Chicago amounts to around 172 miles, to the gulf ports it is four or five times that. We don't get mile-for-mile export rates to Chicago compared to the gulf or to the North Atlantic ports, and that is one of the problems in litigation that we are trying to have corrected right now.

Back to my testimony: My preceding remarks were directed primarily to the changes which have occurred in rates over the past 8 or 9 years for whole grains. Comparable reductions, but not to the same degree, have been accorded for the products of corn, wheat and soybeans when moving into the export markets.

The St. Lawrence Seaway, controversial as it is and has been, is truly a national asset. We need offer no apologies for its existence—only more people to document and to hail its magnificent contributions to this Nation's well-being.

There are a few additional remarks I would like to make at this time. The navigation season for 1966 insofar as grain is concerned for Chicago was miserable. It is even more miserable this year and this is due in part to two major things. One, the exportation of corn which is our great commodity that we are interested in in the Chicago area. Exportation of corn into world markets has been tremendously reduced. I think our exportation of corn is off in a range of 100 to 150 million bushels over a comparable period of a year ago. The exportation of wheat is off perhaps 100 million bushels from the comparable period a year ago. These statistics are available, I have them in my office and if you so desire I can furnish them.

Second, we have had within the past year a unique situation; and that is, we have a surplus of shipping equipment, transportation equipment, not only rail equipment but also barge equipment over the inland waterway transportation system. In fact, in the 20-some years that I have been in the grain transportation field, either in the rail side or industry and now in a trade association, this past wheat harvest season was the first one I can recall where we have not had a cry

of car shortage. The surplus equipment on the inland waterway system has been so great that it is common knowledge that the bargelines moving under an exempt status have quoted rates 30 percent below their published bargelines rates.

For example, from Minneapolis down to the gulf you can move any of the grains for probably less than 20 cents a hundredweight today. This is toll free, toll-free transportation.

Now the measure of competition on the St. Lawrence Seaway is roughly this: The ocean freight charges from the lower St. Lawrence River, Quebec City to Baie Comeau, to ports in Amsterdam, Rotterdam, United Kingdom range, the ocean transportation rates from the St. Lawrence River ports is roughly comparable to the ocean transportation rates beyond the gulf ports such as New Orleans. These move up and down depending on supply and demand. The competition that the St. Lawrence Seaway faces then is the cost of inland transportation from the grain production area either to the lower St. Lawrence Seaway ports or to the gulf ports for export.

When you have low-cost, toll-free transportation on the Mississippi River, this produces a tremendous pressure on the movement of grain over the St. Lawrence Seaway. I am not at all as optimistic as some of these projections for the movement of commodities in the future over the St. Lawrence Seaway, particularly as affects the transportation of grain, because this is tremendous competition.

I intended to be before this committee yesterday to hear some of the other testimony but I had to moderate a transportation forum down in Springfield, Ill., dealing with a new form of transportation or a new form of rates for transportation now being proposed by the Illinois Central Railroad's so-called rent-a-train service where they for big shippers will literally rent a train for the shipper's exclusive use over their tracks. The shipper will deposit yearly \$700,000 if he uses his own equipment, or leased equipment, or a million dollars if he uses the railroad's equipment and he can run his traffic up and down, just as much traffic as he can physically handle using the railroad facilities. The only additional charge that the shipper has is a cent and a half per ton mile—no, one and a half mills per ton mile for the loaded movement. What this means really is that in large volumes, these volumes will be in trainloads of from 85—no, it will be even greater than that, it will be around 8,600 tons to 11,500 tons in a single trainload, contemplating 60 and 70 trips a year, say, from central Illinois to the gulf, reduced transportation charges down to about 15 cents a hundredweight from central Illinois—Decatur, Champaign, in that area—where the freight rates now are 20 cents a hundredweight. These are significant changes. In other words, this has been designed by the Illinois Central to meet the competition of water movement over the Illinois and Mississippi River systems. It has the effect of moving the Illinois-Mississippi waterway system farther toward Indiana within the State of Illinois.

This again poses tremendous competitive pressures for the seaway. And this toll problem, people think that the St. Lawrence Seaway can pay its way through tolls or that you can maintain the status quo on this toll situation for this traffic. I speak for grain because it is my subject, this traffic is not wedded to the seaway by a long shot.

Senator BAYH. Could you explore something a bit further? You mentioned that corn was off 150 million.

Mr. LESSING. Yes. That is the exportation from the United States; yes, for the past year versus the previous 12 months.

Senator BAYH. Is that in the seaway area?

Mr. LESSING. No, that is for the entire United States. We have had a tremendous decline in both corn and wheat exports and we can go to the Department of Agriculture, Department of Commerce, either one has the statistics.

Senator BAYH. I thought you were relating these declines to the fact that you had talked about the toll free inland routes up and down the Mississippi.

Mr. LESSING. I said that we had a miserable shipping season from Chicago last year and we are having a more miserable shipping season this year. It is explained in part by two points, one the general decline in grain exports which affects not only our port but all ports in the country and the second was the surplus of equipment which has depressed the rates on the Mississippi River which has a tendency to pull grain away from the St. Lawrence Seaway.

Senator BAYH. I would imagine that the grain shippers in New Orleans and New York and Baltimore might have the same complaint about having a miserable year.

Mr. LESSING. There is no question about it, and I don't mean to imply they don't have that complaint. This is one for all ports, not just for the Port of Chicago, except with this low cost transportation through the gulf ports they have been a little better situated.

Senator BAYH. Isn't it rather amazing, that at this very time when we have a significant decrease in exportation of grain that the total tonnage in the seaway has continued to go up?

Mr. LESSING. Yes; it is, and it shows that we do have a growth pattern in other commodities. I have made no detailed study to determine where those detailed patterns are. Perhaps there is testimony. I did not sit through the sessions, as I have said. But grain from the lake ports to my knowledge, and certainly from Chicago, is way down from the 1965 season.

Senator BAYH. You are not against innovations or improved methods of transportation that one particular segment of the transportation industry might come up with are you?

The Rent-a-Train System might be this type of ingenious idea that gives the ultimate user a better deal, gives the farmer more profit. What we should really concern ourselves with is that if we are going to have Rent-a-Train or any other kind of rates quoted that they ought to be consistent, they should not discriminate and provide one rate to an eastern port or to a southern port and a different rate to the Great Lakes Seaway.

Mr. LESSING. I agree with you 100 percent on that. I have often been quoted insofar as our marketplace is concerned, saying I don't care how the grain comes into the marketplace, come in in wheelbarrows and go out in washtubs as far as I am concerned, so we get the grain moving. My statement is intended to be factual to show what has been brought about.

Senator BAYH. Yes, sir; I appreciate that.

Mr. LESSING. And the seaway has certainly been one of the great innovators, if you please, in reduced cost of rail transportation.

Senator BAYH. You recall, I am sure, the recent battle that we had over raising the toll at the time the St. Lawrence Seaway Develop-

ment Corporation prepared a report for the Secretary of Commerce advocating increased seaway tolls. I would like to quote a couple of paragraphs from the report and get your thoughts, as an expert in this area.

On page 9, subsection (b) of section 4:

The movement of grain is highly sensitive to transportation costs but tolls are a minor part of total transportation. A 25 percent increase in tolls, for example, would amount to less than one-third cent per bushel. Some marginal traffic would be lost but most of this cargo would not be affected.

Mr. LESSING. I don't agree with that statement. On the board of trade we trade in units of eighth of a cent a bushel and we will tell you up there that somebody will sell his grandmother for an eighth of a cent a bushel.

Grain trading is perhaps the most competitive form of trade that the world knows and just minor changes in costs can shift grain from one form of transportation or from one particular area to another. This goes on all day long.

Senator BAYH. It seems to me that this report, prepared by Mr. McCann, is evidence that the Seaway Corporation ought to get a grain expert on their staff. You don't need to comment on that.

Mr. LESSING. No; I will comment on it because it is a very valid point to make.

Too often we have people who do research in an area who are not completely familiar with the area that they are dealing with and they won't come to us who work in this all day long. The Canadians did; their people were down to see us and got a lot of information but as I recall that report was made by Stanford. We saw no one in Chicago.

I will say this, and I don't mean to be immodest. In our particular department I think we know more about a movement of grain, grain freight rates, than any other single department in the entire country, barring none. I can write a book on grain transportation, in fact I am tempted to do so.

Senator BAYH. I hope you will send me a copy of it when it is finished.

Mr. LESSING. We have ability to check grain rates from any point in the United States to any other point in the United States and we probably have the largest railroad tariff file outside the Interstate Commerce Commission, and that goes back to the turn of the century for historical work. We will take a back seat to no one insofar as grain transportation is concerned.

Senator BAYH. It seems to me we have sort of an unintentional half truth.

Mr. LESSING. Yes, I don't think it was deliberate but they didn't go ar enough.

Senator BAYH. What the Stanford report says could be true insofar as 25 percent increase in tolls would amount to less than one-third of a cent per bushel but that is a significant increase.

Mr. LESSING. Yes.

Senator BAYH. Then (c), that same section:

Because of the concentration of grain harvest in the fall, an extension of the season into December would have more than proportional effect on total grain shipments. An earlier opening, however, would add little to grain movements.

Could you give us your thoughts on that?

Mr. LESSING. Extension of the shipping season is basically what they are talking about.

In the fall of the year when you do have the harvest there is always a problem of where to store that particular grain. For example, corn is now being picked by so-called corn combines in Illinois, perhaps 60 percent. You have a tremendous flood of grain into a marketplace or into terminal storage in a very, very short time, in a matter of weeks. In the Midwest, Chicago particularly, or in Illinois or Indiana the corn harvest is right on the heels of the soybean harvest and our storage facilities become glutted. With the extended season we would have ability to unplug those storage facilities; in other words, move that grain forward, move it out of our Midwest facilities into the world commerce and then again refill our storage facilities.

Senator BAYH. This extension in the fall, then, would really have greater impact than opening earlier in the spring?

Mr. LESSING. Yes, and I think from a practical standpoint you have better weather conditions or better conditions to extend it in the fall than to try to anticipate ice problems in the springtime.

Senator BAYH. In other words, you think it might be easier to keep it from freezing than to unfreeze it once it is frozen?

Mr. LESSING. Yes; that is right.

Senator BAYH. Very fine. Thank you very much, Mr. Lessing. It has been a real education and we are glad to have your thoughts. We appreciate very much your cooperating with the committee.

Mr. LESSING. I have an hour and a half lecture on this if you would like to hear it.

Senator BAYH. I would like to hear it sometime.

I was in hopes that Senator Phil Hart of Michigan could get to the hearing today. It is now obvious that he is tied up in other business before the Senate so I shall place his statement in the record at this point, together with others that have been received.

(The insertions are as follows:)

STATEMENT OF HON. PHILIP A. HART, A U.S. SENATOR FROM THE STATE OF MICHIGAN

Mr. Chairman and Members of the Committee: Testifying here today is a welcome experience. Not only are Senate bills S. 1455 and S. 2131 important in themselves, but they also give us the opportunity to evaluate the needs of this waterway.

The Great Lakes Region is one of the greatest areas of production—both agricultural and manufacturing—ever developed here or elsewhere in the world.

A few paragraphs in the brochure published by the Seaway Corporation describe the magnitude of the region and its water highway:

"The St. Lawrence Seaway—a network of navigable waters comprised of the river and five vast lakes and consisting of some 9500 square miles of waterway—provides access to important cities on either side of the international waterway, thus serving the industrial and agricultural heartland of North America.

"This continental core, extending over 1,285,000 square miles, including the North-Central section of the United States and parts of four Canadian provinces, sustains a population of almost 61 million people. It has been described as both an industrial center and as the breadbasket of the continent.

"The Mid-continent—more so than any other region in either nation—has been deeply involved in international trade for many years, providing impetus for the development and expansion of ports along its 8,300 mile shoreline. It is through these ports that ever-increasing tonnages of bulk and general cargoes—grain, iron ore, coal and manufactured goods—pour into the commerce of the hemisphere and the world. Each year more ships move more goods—exports and imports—into and out of this vast region, through the St. Lawrence Seaway, transforming lakeshore and riverside cities into bustling inland seaports."

Our job here in the Congress of the United States, Mr. Chairman, is to make this remarkable waterway an even more valuable tool for this great section of our continent and, in so doing, for the whole continent.

We can help by eliminating the petty parsimony that strangles the activities of the Corporation. After all, how much money are we talking about in S. 1455 which simply seeks to change the capitalization of the Seaway Corporation? The amount is minor—it is meager. Other navigational project requests make these sums look like loose change.

After all, the entire Seaway cost a total of \$140 million in funds of the United States and twice that amount in Canada. To date, the Seaway, on our side of the border, has fallen less than \$10 million behind in repaying its obligations. May I ask, Mr. Chairman, how many times have you and I heard requests for such relatively small amounts? I am not trying to be flip, Mr. Chairman. You and I agree, of course, that every dollar spent by the United States government must be allocated with care.

But it must be admitted that we are becoming accustomed to hearing of canals that cost billions. The term million is fast disappearing from the vocabulary of those who seek federal funds. Figures like \$140 million, the total cost of the Seaway, unfortunately no longer are staggering.

It is only half in jest that I add that we may eventually spend more on studying and investigating the Seaway than we spent in building it.

Add to this, the amazing fact that the Seaway Corporation has paid the Treasury \$25 million since 1959. But, of course, the people who would like the Seaway simply to disappear, scoff at this statistic. They stress that the \$25 million figure does not even cover the interest charges.

That, sadly, is true. The Seaway may repay itself over and over again—unlike any other navigational project in these United States—and still remain up to its ears in debt. Yes, even though the Corporation pays its own way, covering all its operating, administrative and maintenance costs, plus returning millions of dollars to the Treasury every year—despite all this, it still remains in debt.

Opponents of the Seaway and proponents both agree that the waterway should be placed on a sound financial footing. Only the methods vary. Opponents would like to see the waterway raise its tolls so that it is, in a very businesslike way, priced out of competition and existence. Those of us who recognize the value of the Seaway and its tremendous potential, seek other, more sensible methods of refinancing.

I shudder at the inequitable treatment of this important segment of our economy. It was forcefully brought home to me recently when we found that the Bureau of the Budget withheld \$30 thousand that was approved by Congress to study means of keeping the Seaway route open longer each year. Indeed, I said \$30 thousand. Not million. Not billion. \$30 thousand for a project that would add untold wealth to the Heartland of America and add greatly to the transportation network of our entire nation.

It seems so simple to me to resolve the problems of the Seaway for the benefit of all of us. Let's find ways of keeping it open all year. As time goes by, our country will need every additional form of transportation service we can get. In pre-Seaway days, the Great Lakes Region was strangled by unfair transportation rates. The Seaway helped establish guidelines that have made it possible to ship Great Lakes farm goods and manufactured articles to other parts of the world at a reasonable rate. But as world trade expands, we will need a full-time Seaway. And we will need a bigger Seaway.

Today, we are here to take a small, faltering step in helping our Seaway. We are here to eliminate a bottleneck in Seaway financing. It should be easy to accomplish and its benefits should be obvious.

However, it reminds me of a story told by the colorful Mayor of New York in the 1940's, Fiorello LaGuardia. He told of staying into the very late hours of the night in his office. A porter, who recently arrived in this country and spoke broken English, came into the Mayor's office. "You are here too late," he told the Mayor in his heavy accent. "You should go home." The Mayor looked up from his papers. "Angelo," he said, "it's this report. Everything is okay except this paragraph right here. This comma in this sentence upsets all my plans." The porter looked over the Mayor's shoulder. He took his cleaning rag and rubbed out the offending comma.

Mayor LaGuardia looked at Angelo in amazement. "Why didn't I think of that," he said. "That solves just about everything."

In a way, that is why we are here—to wipe out the comma, the minor strait-jacket, the financial jargon that is strangling the Seaway Corporation. By simple reorganization, fully in accord with the official policy that the Seaway must repay its debt, we can place the organization in a sound position. The legerdemain is simply to issue capital stock and the problem is about solved. The government

still gets repaid. The Corporation is saved from the harrassment of financial demons, and we can get on with our business of getting more value from the Seaway. Bookkeeping is all right in its place, but we must never allow it to become an end in itself. This legislation is straightforward in its logic.

This Committee is also considering another proposal. That is S. 2131. This bill would authorize payment of the necessary rehabilitation work at Eisenhower Lock.

It is with great satisfaction that I learn that this legislation has the full backing of the Administration. Support of this legislation may lead to other agreeable surprises regarding the St. Lawrence Seaway.

When Alan Boyd was Undersecretary of Commerce for Transportation, and the Commerce Committee was considering his confirmation as Secretary of Transportation, we were able to exchange ideas and views on the Seaway. Because he has such an immense job involving so many large projects, some of us feared he might overlook the little Seaway that only cost \$140 million. It was soon apparent that Mr. Boyd had a definite interest in the success of the Seaway and a great knowledge of the waterway.

There are many Michigan men working with the Secretary in the new Department. Two are very good friends of mine. John Sweeney, the capable Assistant Secretary for Public Affairs, and Joe McCann, the Administrator of the Seaway. I know that they have joined with the Secretary in forming an excellent team and I think the Seaway is in excellent hands.

We are pleased and thankful that the Secretary helped keep tolls stable. This was a major step in assuring the continued expansion of Seaway traffic in the competitive transportation world.

In addition, at this point, Secretary Boyd agrees that the Great Lakes deserve delivery of a Seaway in good repair.

As we in Michigan are constantly reminded, there is a great deal of emphasis today on warranties. Everytime automobiles are called back for repair, there is a surge of publicity.

I believe the Seaway was delivered to the people of our nation with a binding warranty. If this waterway must be called in for repair, it is not for the consumer to pay the charges, but for the manufacturer.

In this case, the government is the manufacturer who somehow managed to build a lock in need of \$13 million of repair. Mr. Boyd and Mr. McCann, in their wisdom, have taken the only logical approach to this problem. Senate bill, S. 2131 must be passed. There is no other equitable way.

To include the costs in the toll base would make a fiasco out of the waterway's already difficult financial picture. It would serve no purpose at all. Opponents of the Seaway would find no satisfaction in opposing this legislation. To do so would simply bankrupt the Corporation and end all attempts at seeking to have the debt repaid through tolls. Financial integrity would no longer apply. The Great Lakes promise to repay the cost of the waterway through tolls would be abrogated.

Let us understand that we are here, not to bury the Seaway in red tape, red ink and miasmal financial procedures, but to liberate it and to provide it the opportunity of operating on sound business principles.

The time given me to present my views, Mr. Chairman, is deeply appreciated and I am most happy to offer my support to both Senate bills under study here.

Thank you very much.

STATEMENT OF HON. ROBERT P. GRIFFIN, A U.S. SENATOR FROM THE STATE OF MICHIGAN

Mr. Chairman, as one of the original co-sponsors of S. 3698 in the 89th Congress and of S. 1455 in this Congress, I am grateful for this opportunity to present a statement urging the Subcommittee's favorable consideration of legislation to provide for the refinancing of the St. Lawrence Seaway Development Corporation.

The need for this legislation has been clearly demonstrated by the inability of the Seaway Corporation to meet its burdensome financial obligations and by the continuing threat of a future increase in Seaway tolls, designed to improve the Corporation's financial position.

Mr. Chairman, the Great Lakes Conference of Senators, and the States they represent, achieved a significant victory on March 14 of this year, when the United States and Canada agreed to a moratorium on any Seaway toll increase for a period of four years. This was a most welcome development. However, the spectre of a toll

increase in the future has not yet been laid to rest. Needless to say, an increase in Seaway tolls, which would undoubtedly be accompanied by a reduction in Seaway traffic, would deliver a damaging economic uppercut to the State of Michigan and indeed to the entire Upper Midwest region.

While there are other proposals which would help to alleviate the economic problems of the Seaway Corporation, such as extending the period in which the Corporation must repay its capital debt, S. 1455 is the legislation immediately before us. The bill is designed to put the Seaway Corporation on a sound financial footing. In addition, it should forestall the need for any future toll increase. These are admirable objectives, and I support them.

Mr. Chairman, under the St. Lawrence Seaway Act of 1954, as amended, the St. Lawrence Seaway Development Corporation was authorized to borrow up to \$140 million to finance construction of the Seaway. The principal and interest were to be repaid within 50 years. Furthermore, the Seaway Corporation was required to pay the expenses of operation and maintenance of the Seaway. Unfortunately, this was the first time that any U.S. waterway was financed with repayment requirements and that no provision was made for federal payment of expenses of maintenance.

Although Seaway traffic has increased dramatically in recent years, the Seaway is not yet functioning at expected capacity. 1966 was the first year in which actual tonnage exceeded earlier traffic projections. Tolls have intentionally been set high, but the Seaway Corporation is still not able to meet its staggering financial obligations. In 1965, the Corporation showed a loss of \$1,970,000—and this despite the fact that no capital repayment was made.

It is obvious that relief must be obtained if the Seaway is expected to attract much-needed traffic.

S. 1455 offers a reasonable solution. It has three main provisions:

First, the bill would convert the present capital debt and accrued interest of the Seaway Corporation into capital stock, which would be held by the U.S. Treasury. This means that the Federal Government would be acquiring an owner's interest in the Seaway. From this ownership, the Treasury would receive a financial return in the form of dividend payments amounting to 3.61 percent, or approximately \$5,116,000 annually. At present traffic rates, the financial return to the Treasury over the next 45 years would amount to about \$230 million.

Second, the bill would provide that the cost of Seaway maintenance be borne by the Federal Government. Federal appropriations to cover maintenance costs would be relatively modest. In 1965, these costs totaled only \$593,000.

Third, and finally, the bill would provide that tolls be calculated on the basis of capacity traffic in order to cover expenses of operation, payments in lieu of taxes, interest on any Corporation obligations, and payment of the 3.61 per cent dividend on capital stock.

Mr. Chairman, there are six major Michigan ports through which commodities move via the Seaway: Detroit, Muskegon, Monroe, Port Huron, Saginaw River and South Haven. Total exports from these ports via the Seaway in 1966 amounted to 284,503 tons and total imports to 1,210,474 tons. In dollar figures, 1966 exports from Michigan came to \$127,900,000 and imports to \$192,138,000.

As these figures indicate, the Seaway provides a vital link between Michigan and other world ports. At a time when our national policy is aimed at increasing exports, it would be very unfortunate to reduce Michigan's Seaway access to world markets by hiking tolls. The cost of a toll increase could run into the millions of dollars—a cost which could only be reflected in the prices of Michigan's farm, mine and manufactured products shipped overseas via the St. Lawrence.

The most tangible assistance the Federal Government could give to Michigan producers in their efforts to penetrate foreign markets is a reduction of Seaway tolls and their ultimate elimination. This assistance would allow Michigan producers to offer better prices abroad and would achieve the increased exports the Nation sorely needs for an improvement in its balance of international payments.

Mr. Chairman, S. 1455, the pending bill, offers an opportunity for the Federal Government to bring financial stability to the Seaway Corporation and to stimulate the economy of Michigan and other Midwest states through increased trade. I urge your favorable consideration of this measure as a means of giving the Nation's fourth seacoast the recognition and equitable treatment it deserves.

SEAWAY PORT AUTHORITY OF DULUTH,
Duluth, Minn., August 16, 1967.

HON. STEPHEN M. YOUNG,
Chairman, Subcommittee on Flood Control—Rivers and Harbors,
U.S. Senate, Committee on Public Works,
Washington, D.C.

MY DEAR SENATOR: This is in reference to your letter of August 11, 1967, wherein you give me the privilege to testify on the provisions of S. 1455 and S. 2131, both having to do with the St. Lawrence Seaway project.

It is with sincere regret that I cannot accept the invitation. This decision stems from a review of the matter by the duly appointed Commissioners of this Authority, motivated by my resignation as Port Director effective the close of the present shipping season.

Had I been authorized to appear, my position with respect to the provisions of S. 1455 would be substantially the same as contained in my testimony before the Subcommittee on Flood Control—Rivers and Harbors, of the Committee on Public Works, U.S. Senate, September 20-21, 1966, on behalf of Senate File S. 3698, copy of testimony being enclosed.

With respect to the provisions of S. 2131, I would have taken the position that the need to rehabilitate a lock, or locks, in the American sector of the St. Lawrence Seaway, is the direct result of negligence on the part of a Federal agency, therefore a responsibility of the Federal Government. To assess the cost of rehabilitation against the St. Lawrence Seaway Development Corporation would, in my consideration, be unjustified. Unquestionably such costs would be reflected in users' tolls, thereby placing a financial burden on innocent parties who had no voice or control over the conditions that brought about the need for rehabilitation.

If these remarks could be made a part of the record, I would be ever grateful to you.

With kindest regards, remain
Sincerely yours,

ROBERT T. SMITH,
Port Director.

TESTIMONY OF ROBERT T. SMITH FOR AND ON BEHALF OF S. 3698

My name is Robert T. Smith. I am the Port Director for the Port of Duluth, Minnesota, residing in the City of Duluth. I appear in support of Bill S. 3698 and recommend its adoption by the United States Congress. The bill, if adopted, will stabilize user toll charges on the St. Lawrence Seaway and provide an opportunity to prove its economic value by experience, without the harassment to which it is now subjected in this direction. The uncertainties of toll charges create "wait and see" attitudes on the part of prospective users and a cautious approach to greater use by present users, with the same effect on port improvements. Until this uncertainty is removed, waterborne traffic will not increase to the extent of its capabilities. Progress in this direction will continue at a slow pace.

With advance copies of this testimony I attach as Exhibit A copy of my presentation to the Tolls Committee Hearing held in Chicago on June 8, 1966. In summary of this document, we find:

1. Traffic projections were accurate to the point of under-estimation. Failure to materialize can be traced to apathy on the part of many importers/exporters towards using the waterway; resistance by American flag vessel operators in providing scheduled services; railroads reducing rates to their favorite East and Gulf coast ports without proportionate reductions to lake ports; opposition of certain government agencies to the Seaway, specifically the Department of Defense; indiscriminate use of Section 22 by all, and continuous harassment by organized groups on the Eastern seaboard.

2. Supporters, in desperation, accepted any condition in order to have the Seaway approved. They apparently lacked the experience to cope with the old "pros" who opposed the Seaway's construction.

3. Opponents seized upon this to minimize the project's effectiveness. They encouraged undersized locks and shallow channel depths.

4. Opponents demanded self-liquidation through user tolls and added to the financial burden cost of navigation aids, maintenance, depreciation and payments in lieu of taxes.

5. Opponents' cunning became obvious when they recommended a 5-year review of toll collections. They knew the Seaway Bill did not authorize deepening of connecting and harbor channels, and until such authorization was made, the Seaway merely connected Lake Ontario with the St. Lawrence River.

6. Opponents unduly concerned Congress with their predictions of economic disruption within their port districts. Those who expressed gloom and doom the loudest have spent millions of dollars for port improvements and each year since the Seaway opened they gloat over their tonnage increases.

7. Opponents succeeded in convincing Congress that the Seaway was comparable to the Panama and Suez Canals where user tolls were assessed. Supporters, in accepting this fallacy, once more showed their eagerness to have the Seaway under any condition, or lack of practical experience to dispute this erroneous fact.

Many errors have been made that cannot be rectified by Congress at this time. There is one however that can, through the adoption of provisions of S. 3698. By holding tolls at their present level, one error, an important one, is eliminated.

The Seaway, despite its many problems, disappointments and harassment has been a benefactor to the economy of the North Central tier of states. It has been a major factor in Duluth and Superior being unclassified as distressed areas. It has exposed a vast area of some 540,000 square miles to the benefit of foreign trade. (See Exhibit B) Its benefits react beyond the imagination of the average man. It reaches as far away as Alaska by reducing the travel distance with the great trading centers of Continental Europe by some 3,100 miles. This is made possible by using the Alcan Highway to connect with the ocean carriers at Duluth. This and many other advantages will one day soon make the Great Lakes-St. Lawrence Seaway the world's greatest concentrated trade center. It will greatly enhance the opportunities of industrial development in areas now devoted almost exclusively to agriculture, and this applies to our good neighbors in Canada as well. However, all benefits now enjoyed and predicted could be delayed, if not lost, by an increase in the present toll structure. To retard the review date is not the answer; we need positive assurance there will be no increase in tolls if we are to meet with continued success in our traffic promotional activities.

EXHIBIT A

BEFORE THE ST. LAWRENCE SEAWAY DEVELOPMENT CORPORATION, CHICAGO, ILL., JUNE 8, 1966, IN THE MATTER OF THE PROPOSED INCREASE OF TOLLS ON THE ST. LAWRENCE SEAWAY

STATEMENT OF ROBERT T. SMITH, PORT DIRECTOR, SEAWAY PORT AUTHORITY OF DULUTH, DULUTH, MINN.

My name is Robert T. Smith. I am the Port Director for the Port of Duluth, Minnesota. The views here expressed are presented with the full knowledge and approval of the commissioners for the Seaway Port Authority of Duluth. The authority is a body politic and corporate, an agency of the state of Minnesota. The commissioners, seven in number, all business and professional men, are directed by law to promote the general welfare of our port district, and of the port as a whole; to endeavor to increase the volume of the commerce thereof; to promote the efficient, safe and economical handling of such commerce, and to provide or promote adequate docks and related facilities for the purpose. As the Port Director, I am their chief executive officer.

The assessment of user tolls for the St. Lawrence Seaway has been a controversial matter since public hearings were first held on the Wiley-Dondero Bill. This bill, when enacted in 1954, became known as "Public Law 358." Three

schools of thought have prevailed since the demand for tolls originated; one, *moderate*; one, *excessive*; and one, *no tolls*. A review of the evidence presented at the public hearings on this bill indicates to me that those favoring moderate tolls were sincere in their belief that a concession in this direction must be made if the Seaway was to be authorized. Those demanding excessive tolls, all opponents of the Seaway, were apprehensive of the harmful effects of traffic diversion from their ports. Those favoring a toll-free waterway were guided in their thinking by the many waterway systems in our nation that provide free usage. No one can deny that, at the time, there was merit to each of the three schools of thought.

Over sixteen years have passed since opponents and proponents first expressed their views on the essentiality of the Seaway, and the liquidation of cost of construction, maintenance and operation through assessment of user tolls. Of this period, there has been experienced seven years of usage, affording an opportunity to compare the first opinions of the three groups with the practical results of the Seaway's performance to date.

MODERATE TOLLS GROUP

Much credit must be given to this group, as without their faith in the potential economies of the Seaway, the Wiley-Dondero Bill might have been lost in committee. Their predictions of Seaway tonnages were conservative, but accurate for the purpose. I fear however they were misled in accepting as an argument for tolls, a comparison with the Panama and Suez Canals. The Suez Canal is used primarily as a shortcut for world shipping and, to a lesser extent, so is the Panama Canal. Cargoes carried are of little or no value to the economy of the controlling nations. Every vessel entering the Seaway leaves by the same gate and their cargoes are of great value to the economy of the Lakes' regions, both in U.S.A. and Canada. They accepted a five-year review of toll structures when they had no assurance of when the 27-foot channel would be provided in the connecting channels and port harbors. It is my understanding the 27-foot channel for Chicago's Cal-Sag area was not available until this shipping season (1966).

They erred in their judgment of time required by industry to change old habits in practices of shipping, as at this date many continue to use coastal ports regardless of additional cost of transportation. They failed to consider the possibility of eastern and southern railroads drastically reducing rates to ports served by them on the Atlantic and Gulf coasts, thus diverting to those ports business which would have moved over the Seaway through Great Lakes' ports. They ignored statements of representatives of American Flag vessel operators to the effect that they would not use the Seaway, with the resultant loss of certain government-controlled traffic. All these omissions and oversights either stemmed from lack of experience or a desire to have the Seaway at any cost.

HIGH TOLLS GROUP

This group, consisting mainly of Eastern and Gulf coast port representatives and Eastern and Southern railroads, was also opposed to construction of the Seaway, under any condition. Witnesses for port interests testified at congressional hearings on the Wiley-Dondero Bill that if the Seaway was built it would be disastrous to their ports in the way of unemployment, defaults in payment of outstanding bond issues and other predictions of "doom and gloom." How much of this was believed by Congress is undeterminable, but it is reasonable to believe it had an effect on members of Congress from their areas. When the Seaway bill

was approved by Congress and signed into law by the President, did those ports commence entrenchment?

On the contrary, many announced multi-million dollar port improvements. As a matter of fact, the voters of the State of Louisiana approved a \$50 million bond issue to build a new seaport at Baton Rouge. Moreover, since 1959 when the Seaway opened, major Atlantic and Gulf coast ports have consistently reported new records of tonnage movements and they continue to expand and improve their facilities.

NO TOLLS GROUP

This group, growing in size and importance, is motivated by the waterway projects authorized since the enactment of Public Law 358 which are toll-free. To mention a few, there are: the New Orleans Ship Canal, the Arkansas River Project to make Tulsa a port, and the Trinity River Project to benefit Dallas and Fort Worth. In order for the Corps of Engineers to approve these projects, the benefit cost ratio must be no less than one-to-one; this, I understand, is the formula for economic justification of waterway projects.

The group further feels that since authorization of the Seaway project, there has been a considerable change in government policy as it applies to economic growth of our nation. Federal grants are made and other assistance given to under-developed areas, education, the elderly, indigents, and areas in need of industry diversification and public facilities to encourage economic growth. The group believes that had this new concept of national progress existed when the Seaway was authorized, there is every reason to believe it would have been considered in the same vein. Proof of this may be in the economic value of the Seaway, connecting channels and harbor channel deepenings to the "Twin Ports" of Duluth, Minnesota and Superior, Wisconsin.

From 1959 shipping season through the 1965 season, a total of 19,524,697 tons (2,000 lbs.) of foreign trade moved through the port of Duluth-Superior. By applying an accepted formula on the value of foreign trade to a port district, we find that this traffic poured \$85,801,604.00 into the economy of the area. It is estimated over \$200 million in transportation costs were saved by industries involved in the movement of this traffic. It should be noted that Duluth-Superior harbor channel improvements since 1959 cost \$5,328,813.00. It must further be noted that during this period domestic waterborne traffic alone totaled 246,953,869 tons.

If one were to proportion the total cost of the Seaway and connecting channel improvements against each port, both American and Canadian, then add their respective harbor channel improvement costs and compare the benefits as we have, it would prove beyond reasonable doubt the economic value of the total project. It is my sincere opinion that no other federal waterway system can justify its economic value, in relation to costs, to the same extent as that of the Great Lakes-St. Lawrence Waterway Route.

Another factor, which significantly justifies the Seaway, is its economic impact on a large segment of a heretofore landlocked section of our nation. Statistics, based on actual performance, prove the Seaway system of navigation has been instrumental in exposing a tremendous area to the full benefits of foreign trade. The area covers some 540,000 square miles and contains in full or in part the states of Michigan (Upper Peninsula), Wisconsin, Iowa, Minnesota, North Dakota, South Dakota, Nebraska, Kansas, Montana, Wyoming and Colorado. The area known as the "North Central Tier of States" is about an equal distance as between the Atlantic, Gulf and Pacific coastal ports. The high cost of inland transportation had minimized and, in some instances, prevented their participation in foreign trade.

The economy of much of this vast landlocked area depends on agriculture. It is referred to as the *bread basket of the nation*, but since the Seaway opened, it also is becoming the *bread basket of the world*. As mechanization replaces farm labor to meet heavy demands for foodstuffs at reasonable prices, employment must be found for those affected. The need, therefore, to encourage diversified industry becomes greater and greater. Industrialization in this area serves another purpose, that of national defense. Certainly, no one can deny that in this era of threat by atomic destruction, better protection can be obtained in this area than closer to seaboard. While Duluth-Superior looks upon the area as its hinterland, we recognize that other Lake ports, such as Green Bay, Milwaukee, Kenosha and Chicago, also participate in the handling of its foreign trade. A review of the type commodities the area produces in foreign trade in all ports mentioned, clearly indicates a trend toward industrialization.

It must be noted that the federal government, through the Department of Agriculture and the Department of Defense, purchases tremendous quantities of farm products and manufactured articles in this and other areas that move through Seaway ports. This traffic is subject to tolls that our government pays either directly or indirectly, and any increase in the present toll structure will be an added burden to all taxpayers. There is a strange paradox:

The federal government demands reimbursement of construction costs while contributing handsomely to the means of payment. Equally strange is the fact that 72% of their payments go towards amortizing Canada's investment in their portion of the Seaway. I am merely referring to this as a fact and not as an objection, as for many years to come, we in the U.S.A. will reap the greatest benefits of the Seaway; moreover, it reflects their greater participation in Seaway construction costs. It does, however, add to merits of the need for a review by Congress and Parliament on the justice of tolls.

While I have stressed the importance of the Seaway to the economy of the north-central tier of states, one must recognize that benefits are received by the entire Lakes' region. By reason of reduced barge and rail rates, Gulf ports have participated in a large measure in the handling of foreign trade generated in the north-central states' region and, to a lesser extent, so have Pacific and Atlantic coast ports, by reason of reduced rail and truck rates. The question is: If the cost of transportation via the Seaway is increased through higher tolls, will the barge, rail and truck rates to other coastal areas be increased proportionately? I believe they will. Proof of the Seaway's value to the hinterland of Duluth-Superior was disclosed by the United States Department of Commerce in a statistical release dated January 15, 1965. The release, covering the period of 1960 through 1963, showed North Dakota had increased its foreign trade 46%, South Dakota 35%, Minnesota 32% and Wisconsin 30%. The release further reported an average increase in foreign trade of 14% to forty-eight of the fifty states; only Washington and New Hampshire failed to show improvement.

It is my considered opinion, after reviewing the testimony of witnesses who appeared before the subcommittee of the Committee on Foreign Relations, United States Senate, Committee on Public Works, House of Representatives, and voluminous material all on the subject of the St. Lawrence Seaway and the matter of tolls thereof, that there is reasonable doubt as to the justice of assessing tolls. Fears of economic disaster expressed by opponents of Seaway construction have failed to materialize after seven years of operation. Even though their fears have been proven groundless, they continue their harassment by demanding higher tolls. Is it not reasonable to assume Congress was influenced by expressed fears of regional economic disruption when they decided that Seaway costs be amortized by assessment of user tolls? I think so.

Now therefore, I suggest that the Saint Lawrence Seaway Development Corporation request Congress to completely review the matter of tolls, and until such time as Congress has completed its findings and renders a decision thereon, that the present level of tolls be maintained and a moratorium declared on interest assessments against the balance due.

BUFFALO, N.Y., September 1, 1967.

HON. STEPHEN M. YOUNG,
Chairman, Senate Public Works Subcommittee on Flood Control—Rivers and Harbors,
Washington, D.C.

HONORABLE SIR: The undersigned supports other grain exchanges in respectfully recommending passage of S. 1455.

BRUNO J. TASCH,
President, Corn Exchange of Buffalo.

TRANSPORTATION ASSOCIATION OF AMERICA,
Washington, D.C., September 7, 1967.

HON. STEPHEN M. YOUNG,
Chairman, Senate Subcommittee on Flood Control—Rivers and Harbors,
Washington, D.C.

DEAR CHAIRMAN YOUNG: On behalf of the Board of Directors of the Transportation Association of America, I should like to express opposition to S. 1455, the bill now under consideration by your subcommittee which would refinance the St. Lawrence Seaway Corporation. TAA, for the record, is a national transportation policy organization made up of users, investors, and carriers of all modes who work collectively to help develop and maintain sound policies in the transport field, with major emphasis on the need to maintain the strongest possible national transportation system under private enterprise principles.

TAA has continued, throughout the life of the St. Lawrence Seaway, to support the private enterprise principles applied to it by the statutes authorizing its construction and operation. More specifically, we favor the requirements that the Seaway be self-supporting in terms of costs of operation and maintenance, amortization of capital investment, and interest on the unamortized investment.

The changes proposed by S. 1455 would, in several respects, be in direct conflict with these "self-supporting" principles. For example, it would relieve the Seaway Corporation from having to amortize the capital investment and from having to pay maintenance costs, the latter to come directly out of Treasury funds.

We urge, therefore, that the Seaway not be refinanced, as proposed by S. 1455, and that the St. Lawrence Seaway Corporation continue to consider, on a periodic basis, necessary adjustments in the toll levels on the Seaway to assure that the present statutory principles of self-sufficiency through reimbursement from users of publicly provided transport facilities are carried out.

The broad policy on which TAA bases its position, which favors the principle of transport user charges to reimburse the Government for the users' fair share of the costs of building, operating, and maintaining publicly provided transport facilities, was supported by seven (User, Investor, Air, Freight Forwarder, Highway, Pipe Line, and Railroad) of the eight permanent advisory panels to the TAA Board that comprise the Association's 250-member Cooperative Project. The only opposition came from our Domestic Water Carrier Panel.

We request that this letter be made a part of the official transcript of these hearings.

Sincerely,

HAROLD F. HAMMOND, *President.*

NEW YORK CHAMBER OF COMMERCE,
New York, N.Y., August 21, 1967.

SENATE COMMITTEE ON PUBLIC WORKS,
Senate Office Building,
Washington, D.C.

To the Senate Committee on Public Works:
(Attention: Mr. Van, Subcommittee on Flood Control).

This Chamber is deeply concerned with the implication of the following Bills S. 1455 and S. 2131 pertaining to the St. Lawrence Seaway.

S. 1455 would provide a direct subsidy to Seaway users to be paid for by the taxpayers in general, which is contrary to the existing legislation which provides that the Seaway is to be financed on a self-supporting and self-amortizing basis.

We believe that it would be inappropriate to alter the existing financial structure of United States investment in the Seaway.

Regarding S. 2131 which would provide for an appropriation of up to \$13,100,000 to rehabilitate the locks and structure of the Eisenhower Locks. These locks are completely in United States territory so that we are responsible for their maintenance.

The financing of this maintenance, however, should not be done by direct appropriations rather than out of the St. Lawrence Seaway Development Corporation funds. This additional legislation merely would increase the taxpayers share of supporting the Seaway. The needed rehabilitation should be financed by increasing the capital invested in the Seaway to be repaid in the same manner as provided for in the existing legislation as regards the initial investment, that is, out of Seaway income.

In conclusion, this Chamber wishes to go on record as opposing passage of both S. 1455 and S. 2131.

Sincerely,

JOHN T. GWYNNE, *Secretary.*

NEW YORK-NEW JERSEY COMMITTEE
FOR A SELF-SUPPORTING SEAWAY,
New York, N.Y., August 21, 1967.

HON. JENNINGS RANDOLPH,
*Chairman, Senate Committee on Public Works,
Washington, D.C.*

DEAR SENATOR RANDOLPH: It has been brought to our attention that on August 29th your Committee will hold hearings on Senate bills 1455 and 2131. On behalf of this Committee, we desire to express our emphatic disapproval of both of these bills and request that this disapproval be recorded in the proceedings of the said hearing.

Senate bill 1455, introduced by Senator Mondale, is similar to a bill which was introduced in the last Congress which this Committee disapproved. To recommend, as does S. 1455, that the outstanding bonds issued for the construction of the St. Lawrence Seaway should be converted into capital stock would be a complete repudiation of the action taken by Congress in 1954 when, with the approval of the Seaway advocates, is provided it should be self-supporting and that tolls should be levied in an amount to pay all charges, including interest, in a fifty-year period. Since the cumulative dividends on a 3.61 per cent basis would be payable only when and as if earned, this bill would eliminate repayment of the original investment by the government of \$142 million and would provide no guarantee of dividends or interest on the original investment.

We believe this proposal is unworthy of consideration, that it is contrary to every accepted principle of economics, and that it is a clear-cut attempt on the part of midwest shippers and organizations to renege on their 1954 promises that the Seaway would be self-supporting on a toll-paying basis. We cannot believe that the Congress of the United States would agree to the adoption of such a proposal and thereby subsidize Seaway users at the expense of American taxpayers and competing forms of transportation.

S. 2131, introduced by Senator Bayh, which calls for the direct appropriation by Congress of \$13,100,000 to rehabilitate the Eisenhower Locks is equally objectionable. This is clearly a matter of maintenance and the 1954 legislation provided that maintenance, interest and amortization should be paid out of tolls income. On the basis of such legislation, it is inconceivable that American taxpayers should be forced to add another \$13 million to the original investment of \$142 million—none of which has been repaid since the Seaway has been in operation.

On behalf of the organizations represented in this Committee, we respectfully urge with all of the emphasis at our command that these two bills be disapproved.

Respectfully yours,

JAMES W. DANAHY, *Chairman.*

THE PORT OF NEW YORK AUTHORITY,
New York, N.Y., August 21, 1967.

HON. STEPHEN M. YOUNG,
Chairman, Subcommittee on Flood Control, Rivers and Harbors, Committee on Public Works, Senate Office Building, Washington, D.C.

MY DEAR SENATOR: The Port of New York Authority wishes to record its strong opposition to S. 1455 and S. 2131, which will be the subject of hearings by your Subcommittee on Tuesday, August 29. We wish to endorse the statement of the North Atlantic Ports Association which will be presented to you at those hearings.

Our basic objection to S. 1455 is that it would contravene the basic requirement for a self-supporting Seaway, which was the cornerstone of the legislation which authorized United States participation in the construction and operation of the Seaway. The idea of refinancing the Seaway appears to us to be in direct conflict with optimistic statements made by representatives of various Seaway interests at public hearings in both Ottawa and Chicago last year on the question of raising the tolls to the effect that the Seaway's financial position was rapidly improving to the point where higher tolls were unnecessary.

Our opposition to S. 2131 centers on the same basic point. We feel that the major repairs, which appear to be needed, must be handled as an additional capital expense which, like the original investment, should be repaid to the United States Government from Seaway revenue.

I would appreciate your recording our opposition to these bills as a part of the minutes of your hearings later this month.

Sincerely,

AUSTIN J. TOBIN,
Executive Director.

U.S. SENATE,
Washington, D.C., September 15, 1967.

HON. STEPHEN M. YOUNG,
*Chairman, Subcommittee on Flood Control—Rivers and Harbors,
Senate Office Building, Washington, D.C.*

DEAR MR. CHAIRMAN: Although I did not have a chance to appear personally before your Subcommittee in support of S. 1455, Senator Mondale's proposal to refinance the costs of the Saint Lawrence Seaway Development Corporation, I would like to go on record as completely in favor of this legislation as a co-sponsor of the bill.

S. 1455 is a very modest proposal. It would not force the American taxpayer to pay Seaway expenses, although the Seaway is the only waterway project in the United States that pays its own way. It would not result in a toll reduction. It would simply place the Seaway on a more equitable footing with virtually every other transportation system in the United States, which has received substantial Federal subsidization.

A look at the costs of financing the Seaway under existing legislation in comparison with the charges that would be made were the Mondale bill to pass indicate how extremely reasonable the bill is. In 1965, for example, the cost was \$8,341,386. Under the Mondale proposal this figure would have been reduced to \$6,169,211. This minor reduction would have made the difference between a \$1.9 million deficit and a \$100,000 toll surplus in 1965.

By not passing this legislation the Congress will simply be putting off the day of reckoning when accumulating deficits force a toll increase that could well result in a drastic cutback in Seaway traffic. Congress should act now if it is to act in the best interests of the Seaway and the American people.

I would greatly appreciate your thoughtfulness in making this letter a part of the hearing record on S. 1455.

Sincerely,

WILLIAM PROXMIER, U.S.S.

Senator BAYH. We will close the hearings now. I would like to remind those who may have missed it, that in my original statement, which is included in the record, I pointed out that the record is open until the 15th of September for anyone who wants to share their expertise with the committee.

We will be in adjournment.

(Whereupon, at 12:30 p.m., the committee was recessed subject to call.)