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VARIOUS RIVER AND HARBOR BILLS AND ST. LAWRENCE SEAWAY DEICING

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HEARINGS

BEFORE THE

SENATE COMMITTEE ON RIVERS AND HARBORS

OF THE

HOUSE COMMITTEE ON PUBLIC WORKS

OF THE HOUSE OF REPRESENTATIVES

EIGHTY-EIGHTH CONGRESS

FIRST SESSION

ON

H.R. 5244

TO MODIFY THE PROJECT ON THE MISSISSIPPI RIVER AT MUSCATINE, IOWA, TO PERMIT THE USE OF CERTAIN PROPERTY FOR PUBLIC PARK PURPOSES

S. 453

TO CHANGE THE NAME OF THE MEMPHIS LOCK AND DAM ON THE TOMBIGBEE RIVER NEAR ALICEVILLE, ALA.

H.R. 6001

TO AUTHORIZE THE CONVEYANCE TO THE WAUKEGAN PORT DISTRICT, ILLINOIS, OF CERTAIN REAL PROPERTY OF THE UNITED STATES

H.R. 7769

AUTHORIZING THE STATE OF RHODE ISLAND OR ITS INSTRUMENTALITY TO MAINTAIN, REPAIR, AND OPERATE THE BRIDGE ACROSS MOUNT HOPE BAY SUBJECT TO THE TERMS AND CONDITIONS OF THE ACT APPROVED MARCH 23, 1906

S. 530 and H.R. 2123

TO PROVIDE FOR AN INVESTIGATION AND STUDY OF MEANS OF MAKING THE GREAT LAKES AND THE ST. LAWRENCE SEAWAY AVAILABLE FOR NAVIGATION DURING THE ENTIRE YEAR

SEPTEMBER 17 AND 19, 1963

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VARIOUS RIVER AND HARBOR BILLS

TUESDAY, SEPTEMBER 17, 1963

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON RIVERS AND HARBORS
OF THE COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The subcommittee met at 10 a.m., pursuant to call, in room 1302, Longworth Building, Hon. John A. Blatnik (chairman of the subcommittee) presiding.

Mr. BLATNIK. The Subcommittee on Rivers and Harbors of the Committee on Public Works will please come to order.

We are hearing explanations on several bills from their authors, and several survey resolutions. We shall begin with the bills, the first one H.R. 5244, by our colleague and member of the committee, Mr. Schwengel, of Iowa.

Mr. Schwengel is most anxious to have the committee consider the bill. He has discussed it with the chairman. He is unable to be here this morning due to an operation. He is back in Iowa. We have Mr. Mark Gurnee, of the Civil Works Division of the Office of Chief of Engineers. Mr. Gurnee, would you please identify yourself and give us a summary explanation of what the bill provides for?

(H.R. 5244 follows:)

[H.R. 5244, 88TH Cong., 1st sess.]

A BILL To modify the project on the Mississippi River at Muscatine, Iowa, to permit the use of certain property for public park purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the project on the Mississippi River at Muscatine, Iowa, authorized in section 101 of the Rivers and Harbors Act, 1950, is hereby modified to provide—

(a) that in addition to all other purposes set forth in House Document 733, Eightieth Congress, to which local interests agreed to put the real property described in section 2 of this Act, such property may be used by the city of Muscatine, Iowa, for public park and recreation purposes;

(b) that local interests shall only be required to furnish for said project such commercial harbor facilities as the local governmental body charged with the control and supervision of the public lands described in section 2 of this Act shall deem necessary or advisable to meet the public demand for commercial harbor facilities.

SEC. 2. The real property referred to in the first section of this Act is a tract of land situated in the county of Muscatine, State of Iowa, being part of the original town of Muscatine, located in the southwest quarter section 36, township 77 north, range 2 west, of the fifth principal meridian, more particularly described as follows:

Beginning at the intersection of the extension of the westerly line of Orange Street of said original town of Muscatine and the southerly right-of-way line of the Chicago, Rock Island, and Pacific Railroad; thence southeasterly along said westerly line of Orange Street extended to a point 265 feet from the southeasterly corner of block 16 of said original town of Muscatine; thence northeasterly to a point on the extension of the easterly line of said Orange

Street, 265 feet from the southwesterly corner of block 17; then continuing southeasterly along said easterly line of said Orange Street extended a distance of 450 feet, more or less, to the harbor line established by the United States Government at the city of Muscatine, Iowa; thence northeasterly and upstream along said harbor line to a point on the extension of the northeasterly line of lot 3, block 19, of the original town of Muscatine, Iowa; thence northwesterly along said line to the southerly right-of-way line of the Chicago, Rock Island, and Pacific Railroad; thence southwesterly along said right-of-way line to the point of beginning; containing 10 acres, more or less.

STATEMENT OF MARK GURNEE, CIVIL WORKS DIVISION, OFFICE, CHIEF OF ENGINEERS

Mr. GURNEE. Mr. Chairman, H.R. 5244 by Mr. Schwengel proposes that certain lands in the Muscatine, Iowa, navigation project be available for development by the city for public park purposes. The original authorization for this project provided that the lands in question be reserved for the development of an industrial and port facility in connection with the commercial navigation aspects of the project.

This particular type of navigation has not developed. Consequently, the lands for the present are not required for the purpose intended by the original authorization. The Department of the Army has no objection to modification of the authorization to permit these lands to be used by the city for park purposes. The Department of the Army has suggested some minor modifications in its report on this bill dated July 19, 1963.

Mr. BLATNIK. Mr. Gurnee, the amount of land involved here is 10 acres or less. Am I correct?

Mr. GURNEE. That is correct, sir.

Mr. BLATNIK. Are there any questions?

Mr. McFALL. Mr. Chairman?

Mr. BLATNIK. Mr. McFall.

Mr. McFALL. Mr. Gurnee, just generally how does this land lie with reference to the whole project?

Mr. GURNEE. I have a small map here. May I advance and show it to you, sir?

Mr. McFALL. Yes. Why don't you come up here in front.

Mr. GURNEE. It is the portion labeled as an industrial site. You will note there is an adjacent city park that they wish to expand into this area.

Mr. McFALL. Would you stand and describe so that it goes into the record?

Mr. GURNEE. The project at Muscatine originally provided both for small boat navigation and commercial navigation. The particular industrial site located immediately adjacent to the industrial part of the harbor was intended for development of the collateral port and industrial facilities that would go with the commercial navigation. This commercial navigation, as I said earlier, has not developed so there has been no need for the city to meet its project requirements of developing this area for these purposes.

The city wishes to develop this as a park to tie in with their adjacent city recreational park. It is to this that the Department of the Army has no objection. If and as commercial navigation does develop here, it would be a simple matter to convert this back to the original industrial use.

Mr. McFALL. Is that what the bill intends? Is that what the bill says?

Mr. GURNEE. The bill gives permission to the city to use these lands for park purposes.

Mr. BLATNIK. Who owns the lands now?

Mr. GURNEE. The lands are owned by the city.

Mr. BLATNIK. And they were set aside by a previous law or agreement with the Government for an industrial harbor development?

Mr. GURNEE. That is correct.

Mr. BLATNIK. And the need for such harbor facilities, dockage, or warehouses, whatever it may be, has not materialized, so at this time the city wishes to use that as parkland, to be part of the parkland which is adjacent; is that correct?

Mr. GURNEE. That is correct, sir.

Mr. BLATNIK. In the future, should harbor facilities, buildings or whatnot, be necessary, then this land would revert back to the purpose for which it was originally intended; is that correct?

Mr. GURNEE. That could be done; yes, sir.

Mr. McFALL. Would it require further legislation or is it part of this legislation?

Mr. BLATNIK. I am sure it would.

Mr. Gurnee, can you answer that?

Mr. GURNEE. Whether it would require further legislation would depend on whether or not the city did it voluntarily. The city could do this voluntarily. It would be in the interest of the city, you understand, sir, if commercial navigation did subsequently develop, to use this land for the purpose originally intended; that is, commercial purposes.

Mr. RYAN. Mr. Chairman?

Mr. BLATNIK. Mr. Ryan.

Mr. RYAN. How many acres are involved in this land?

Mr. GURNEE. There are less than 10 acres [6.1 acres].

Mr. RYAN. Part of it is on the waterfront?

Mr. GURNEE. Yes, sir; you will note the small-boat harbor and the industrial harbor. The industrial navigation has never developed in this part. So this land which is reserved in the original project for development by the city, and the project requires that the city develop this as necessary for port and industrial facilities, has not been developed.

Mr. RYAN. And it is adjacent to a city park?

Mr. GURNEE. Yes, sir; that land is owned by the city, sir. The legislation is to permit the city to use this land for park purposes rather than industrial and public port purposes which were the requirements of the authorized navigation project.

Mr. BLATNIK. Mr. Gurnee, does the Corps of Engineers recommend some language changes in the bill?

Mr. GURNEE. Yes; we did, sir.

Mr. BLATNIK. Are those explained?

Mr. GURNEE. They are in our report dated July 19, sir.

Mr. McFALL. Could you outline them for us?

Mr. BLATNIK. Do you have a copy of the report? Could you read those recommended changes?

Mr. GURNEE. The changes which have been proposed by the Secretary of the Army are to modify lines 3 through 8 of page 2. In the

original bill, these lines provided that the local governmental body charged with the control and supervision of the public lands described in section 2 of the act shall be required only as deemed necessary or advisable to meet the public demand for commercial harbor facilities.

That language as originally proposed left it up to the local governmental body as to whether or not the demand for public navigational facilities or commercial facilities would be met.

Our modification, in effect, provides that local interests still will have to maintain adequate terminal and transfer facilities open to all on equal terms if there is a need for it. There is no need at present. So what this has the effect of doing, the modification which we propose, is to leave it up to the Corps of Engineers as to whether the project will be continued contingent upon proper local cooperation. The bill as written relieved local responsibilities of all responsibility on their own option.

Mr. McFALL. In other words, it is the option now of the corps to determine what the need is rather than the local governmental body?

Mr. GURNEE. It would be, under our proposal; yes, sir.

Mr. McFALL. The bill as written, Mr. Gurnee, as you pointed out in this section which you are describing now, does relieve the local government of all their obligations under the previous legislation, and they would only have to bear their share of the responsibility in their own discretion.

Mr. GURNEE. Yes; it gives them the option of making that determination.

Mr. McFALL. And your proposed amendment would give that discretion to the representative of the Federal Government, the Corps of Engineers, to determine whether or not such development might be necessary.

Mr. GURNEE. Yes, sir.

The second amendment which we have proposed is merely a more precise definition of the harbor line. The proposal that we have ties it into a line which is shown on the project authorizing document, whereas the language in the act is general.

The third amendment merely is a reference to the second. It has no substance in itself.

Mr. BLATNIK. Mr. Enfield, do you have any comments on these proposed amendments?

Mr. ENFIELD. Mr. Schwengel talked to me last Friday, prior to his departure for Iowa in connection with his wife's surgery, and advised that he has gone over these amendments very carefully, has discussed them with the local interests involved in the project, and the amendments are entirely satisfactory to him.

Mr. BLATNIK. Are there any further questions?

S. 453

Mr. Gurnee, the next bill will be S. 453—and we are skipping one for the committee's information—by Senators Hill and Sparkman, to change the name of the Memphis lock and dam on the Tombigbee River near Aliceville, Ala., to Aliceville lock and dam.

This was S. 453 and passed the Senate June 20, 1963.

(S. 453 follows:)

[S. 453, 88th Cong., 1st sess.]

AN ACT To change the name of the Memphis lock and dam on the Tombigbee River near Aliceville, Alabama

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Memphis lock and dam near Aliceville, Alabama, on the Tombigbee River shall hereafter be known and designated as the Aliceville lock and dam. Any law, regulation, map, document, record, or other paper of the United States in which such lock and dam are referred to shall be held to refer to such lock and dam as the Aliceville lock and dam.

Passed the Senate June 20, 1963.

Attest:

FELTON M. JOHNSTON, *Secretary.*

Mr. BLATNIK. Mr. Gurnee, will you please give us a summary of the bill?

Mr. GURNEE. This bill proposes to change the name of the Memphis lock and dam on the Tombigbee River near Aliceville to the Aliceville lock and dam. The lock and dam in question is a lock and dam which is proposed to be built under the authorized Tennessee Tombigbee project. Under normal procedures, the names of corps projects are considered to have the force of law if they are so designated in the project document. Any change in this name we consider to require congressional action.

The purpose here is to change the name from a presently non-existing community name, the former town of Memphis, to the nearest community of any size, Aliceville. The Corps of Engineers has no objection to this proposed change.

Mr. BLATNIK. Are there any questions?

Mr. RYAN of Michigan. Mr. Gurnee, asks us the reason for the change in the bill. Would you repeat that, about going to a community of any size adjacent to the lock, being Aliceville? Is that correct?

Mr. GURNEE. That is correct, sir. The original name was premised on a small community near the vicinity of the project that has since ceased to exist. Where the town of Memphis used to be it is now entirely rural land with only one small local store. The town of Aliceville is a short distance away and is the nearest recognized community in the area. It has also been suggested that the name "Memphis" is confusing in its connotation with the great city of Memphis, Tenn.

Mr. BLATNIK. It is quite a distance away, isn't it? Give us an approximate idea of where the Memphis lock and dam near Aliceville, Ala., is, compared to Memphis, Tenn.

Mr. GURNEE. I am sorry I can't give the number of miles, but it seems to be about 220 miles to the southeast of the city of Memphis.

It has no relation at all to the city of Memphis, Tenn. The town from which it was originally named was on the Tombigbee River, a very small community.

Mr. BLATNIK. Are there any further questions?

We skipped the bill just above on our list because Mr. Earl Dominick was not here.

I understand, Mr. Gurnee, You will explain H.R. 7769 and H.R. 7781, identical bills sponsored by our colleagues Mr. Fogarty and Mr. St Germain of Rhode Island, and identical bill S. 1936 offered

by Senators Pell and Pastore, of Rhode Island, which passed the Senate on August 28, 1963.

This bill authorizes the State of Rhode Island or its instrumentality to maintain, repair and operate the bridge across Mount Hope Bay, subject to the terms and conditions of the act approved March 23, 1906.

(H.R. 7769 follows and is identical with H.R. 7781 and S. 1936:)

[H.R. 7769, 88th Cong., 1st sess.]

A BILL Authorizing the State of Rhode Island or its instrumentality to maintain, repair, and operate the bridge across Mount Hope Bay subject to the terms and conditions of the Act approved March 23, 1906

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Act entitled "An Act granting the consent of Congress to the Mount Hope Bridge Company, its successors and assigns, to construct, maintain, and operate a bridge across Mount Hope Bay between the towns of Bristol and Portsmouth, in Rhode Island", approved March 3, 1927 (44 Stat. 1391), is amended by striking out section 3 and inserting in lieu thereof the following new section:

"SEC. 3. If and when title to such bridge shall become vested in the State of Rhode Island or the Rhode Island Turnpike and Bridge Authority, an instrumentality of said State, the maintenance, repair, and operation of such bridge shall thereafter be governed by the laws of the State of Rhode Island applicable to such bridge, subject, however, to the terms and conditions of the Act entitled 'An Act to regulate the construction of bridges over navigable waters,' approved March 23, 1906."

Mr. BLATNIK. Can you give us a summary of the bill, H.R. 7781?

Mr. GURNEE. Yes, Mr. Chairman. The purpose of these bills has already been stated by the chairman. The bridge in question, of course, is across a navigable waterway. There has been one change in the bills as originally introduced and incorporated in section 3, which was made at our suggestion and which retains the authority of the Department of the Army and the Corps of Engineers to review toll charges if they prove to be a problem.

There is no requirement for the control of tolls otherwise under the 1946 Bridge Act because this is entirely an intrastate bridge. This bridge is located entirely within the State of Rhode Island. The Department of the Army has no objection to the enactment of these bills.

Mr. BLATNIK. We checked with the Bureau of Roads. Mr. Brennan, for the record, and for the committee's information, will give us a summary report on the position of the Bureau of Roads.

Mr. BRENNAN. Mr. Chairman, we sent this bill for comment to the Department of the Army and to the Bureau of Public Roads. The letter from the Bureau of Public Roads is favorable to the bill. I called yesterday on representatives of the legislative counsel's office in the Bureau of Public Roads, and they said they would call back if they wanted to have anyone here to testify. They pointed out, as we also know, it is not on the Federal-aid highway system, so there is no direct interest that the Bureau of Public Roads has. They did not call back, so presumably they are not concerned with having anyone here to testify.

Mr. McFALL. Mr. Chairman?

Mr. BLATNIK. Mr. McFall.

Mr. McFALL. May I address a few questions? I am mystified. How do we get jurisdiction of this bill? It is not an interstate bridge. It is completely an intrastate bridge in Rhode Island. It is not on the Federal highway system. Is it because it is over navigable waters? How do we get our connection with this bridge?

Mr. GURNEE. There was an act passed on March 3, 1927, which authorized the Mount Hope Bridge Co., which is incorporated in the State of Rhode Island, to construct, maintain, and operate this bridge in accordance with the act of Congress approved March 23, 1906, pertaining to the construction of bridges over navigable waters. Among other things, the 1906 act provides to the Federal Government a measure of control over the tolls that are charged. It provides that if the tolls are repressive, and if local people who are affected by the tolls register complaints, that those tolls will be reviewed under the procedures set forth in the 1906 act by the Department of the Army.

This act, of course, does provide for the continuance of that authority.

Mr. McFALL. Then all we are doing by this bill is saying that this law that Congress set up in 1927 for the operation of this bridge is modified to permit the State of Rhode Island to take over this bridge from this private corporation, and it will thus become a State bridge, and we will thus be rid of this so-called Federal responsibility? Is that what we are doing?

Mr. GURNEE. No; I don't think so, sir. The Mount Hope Bridge Co. and the State of Rhode Island, in effect, are the same instrumentality, in the sense that the State will be assuming responsibility for the bridge.

Mr. McFALL. Then why is it necessary to put in section 3 which says if and when the title shall become vested in the State of Rhode Island, then the laws of the State of Rhode Island shall govern this bridge?

Mr. GURNEE. Section 3, as I said earlier, sir, provides for the review of tolls if these tolls become repressive and if there is a local demand for the review of tolls. It provides for a review of tolls by the Federal Government.

Mr. McFALL. Do you say that is what section 3 provides?

Mr. GURNEE. Yes.

Mr. McFALL. Do I have the wrong copy of the bill? I have Mr. St Germain's bill.

Mr. BLATNIK. H.R. 7781.

Mr. McFALL. I don't see anything about tolls in there. It says when such bridge shall become vested in the State of Rhode Island.

Mr. GURNEE. It says shall be governed by the laws of the State of Rhode Island, subject, however, to the terms and conditions of the March 1906 act. It is this review of tolls that is inherent in the 1906 act, the review of tolls by the Federal Government.

Mr. FALLON. Does it just relieve the Federal Government from reviewing the tolls?

Mr. GURNEE. No, sir; it provides that the Federal Government will review the tolls, rather than relieve them of it. It provides a means whereby the Federal Government can and will review the tolls if there is an objection on the part of the local users under repressive tolls.

Mr. McFALL. Is there precedent for this sort of thing? I always thought that when a bridge was built within a State the Federal Government didn't have anything to do with it.

Mr. GURNEE. Well, that is one of the significant things here. This is an intrastate bridge and it is over navigable waters, of course, and this does provide that we will exercise that review on demand or on request.

Mr. McFALL. Is this state of affairs, shall we say, in the State of California, in the bridge over the San Francisco Bay? Does the Federal Government have anything to say about that bridge?

Mr. GURNEE. Yes, sir. That would also come under the 1906 act. If, for example, the owner of a bridge charged \$10 per vehicle in tolls, and the user of the bridge would have recourse only through local channels, this provision of the law provides a way whereby a review can be made by the Federal Government of those tolls.

Mr. McFALL. And that is because it is over navigable waters, is that correct?

Mr. GURNEE. That is correct.

Mr. RYAN. Can you tell me the length of this bridge, roughly?

Mr. GURNEE. The bridge is a two-lane suspension bridge, 5,000 feet long, with a center span 1,200 feet in length.

Mr. RYAN. Have you any idea of the amount of the tolls at the present time?

Mr. GURNEE. Toll is 25 cents, one-way, with a commutation toll of 10 cents.

Mr. RYAN. You said if any local body is interested and makes a protest. What is the nature of the local body?

Mr. GURNEE. Any individual or local body can protest the tolls. The 1906 act then provides that the Secretary of the Army will set up a commission to review those tolls. We do not have the authority to reset the tolls or to revise the tolls.

Mr. RYAN. Can individual users do it?

Mr. GURNEE. Individual users can do it, yes, sir.

Mr. FALLON. Mr. Gurnee, do you know whether in the act that provided for the construction of the bridge if there was an amortization date put in the bill?

Mr. GURNEE. Are you referring, sir, to the original authorization of the Mount Hope Bridge in 1927?

Mr. FALLON. Yes, the original authorization for the construction of the bridge usually, as I recall in the past, when an application or a bill was introduced for a toll bridge over a navigable stream, had a time limit set of either 20 years or 30 years, or the date of amortization, whichever came first.

Mr. GURNEE. Law provides if State takes over, amortization will be 25 years from the time of takeover.

Mr. FALLON. The reason I say that is that on the San Francisco bridge, we had before us several years ago a matter in which we extended the date of amortization so that another bridge could be built, a toll bridge. Had we not at that time extended the date of amortization, you would have had one free bridge and one toll bridge.

Mr. McFALL. Will the gentleman yield? I understand there are two different bridge acts here. I don't know whether the record ought to be cluttered up with discussion for my information. However, I understand there are two bridge acts, the 1906 bridge act and the 1946 bridge act, and there are different provisions in each one. In the 1946 bridge act the Federal Government is concerned with tolls when it is an interstate bridge, and the 1906 makes no distinction as to whether it is an intrastate bridge. Will you have any comments, Mr. Gurnee, on the difference between these two acts?

Mr. GURNEE. Yes, sir. This bears out the same point to which Mr. Fallon was referring. The 1946 act does apply only to inter-

state bridges and that does provide for the timing under which the cost of the bridge will be amortized. The 1946 act does provide that toll bridges should be made generally toll free in 30 years. This is an intrastate bridge and, as such, the Federal Government is not concerned with if or when the bridge tolls are amortized. The 1946 act would not apply to this bridge.

That is one reason, of course, for the desirability of having the 1906 clearly applicable in order to permit users to have a recourse in the event the tolls are repressive.

Mr. BLATNIK. I think that explains the difference between the two acts. I think it is clear to the members of the committee.

Mr. GURNEE, I am still not clear as to why it is necessary to have this bill if the Mount Hope Bridge Co. is an instrumentality or a licensee of the State of Rhode Island. Tell us in summary why this bill is necessary, authorizing the State or instrumentality to maintain, repair, and operate this bridge across Mount Hope Bay.

Mr. GURNEE. Sir, this is a bridge over navigable waters, and there is also this toll aspect which I have already mentioned.

Mr. BLATNIK. Is Mount Hope Bridge Co. an instrumentality of the State or a corporate body created by the State authority?

Mr. GURNEE. It is incorporated in the State of Rhode Island. The Mount Hope Bridge Co. is incorporated in the State of Rhode Island.

Mr. QUILLEN. Will the gentleman yield?

Mr. BLATNIK. You still haven't answered my question: Why does it require an act of Congress, then, to permit the State to maintain, repair, and operate the bridge?

Mr. GURNEE. The law requires that there has to be a Federal law for the construction, operation, and maintenance of toll bridges over navigable waters of the United States.

Mr. BLATNIK. The original act of Congress of March 3, 1927, permitted the State of Rhode Island, through the Mount Hope Bridge Co., to construct and maintain and operate the bridge. Therefore, to revert this authority back to the State requires an act of Congress; is that correct?

Mr. GURNEE. Yes, sir.

Mr. HENDERSON. Mr. Gurnee, has the Army ever exercised the review of tolls under the 1906 act?

Mr. GURNEE. Yes, sir, they have.

Mr. HENDERSON. Could you cite a specific instance?

Mr. GURNEE. The most recent instance of which I know was a bridge at Presidio, Tex., between the State of Texas and Mexico. In this case there was also an international dispute as to the ownership of the bridge and the tolls that were being charged. It happened that in this instance both countries were imposing charges at each end of the bridge. The charges were grossly inconsistent. We did review in that case the tolls, and the result of our review was a reduction in toll charges.

Mr. HENDERSON. Could you cite an instance where you have an intrastate bridge? Have you ever exercised that authority on a bridge that would be an intrastate bridge under the 1906 act?

Mr. GURNEE. I don't recall any such instance, sir. May I refer to one of my assistants?

There have been none in recent years, and we don't recall any.

Mr. HENDERSON. That is all, Mr. Chairman.

Mr. BLATNIK. If there are no further questions, Mr. Gurnee, that covers the bills for which you are responsible for explanations.

(The following was furnished for insertion:)

STATEMENT OF HON. FERNAND J. ST GERMAIN, MEMBER OF CONGRESS, FIRST DISTRICT, RHODE ISLAND

Mr. Chairman and members of the Subcommittee on Rivers and Harbors, I wish to thank the subcommittee for their consideration this morning of H.R. 7781, H.R. 7769, and S. 1936.

The need for this legislation is briefly this: the Rhode Island Turnpike & Bridge Authority desires to build and maintain a bridge from the western shore of the island town of Jamestown to the city of Newport in the eastern part of Narragansett Bay in Rhode Island. To assist in the financing of this proposed bridge, the turnpike authority wishes to continue tolls on the Mount Hope Bay Bridge at the present rate of 25 cents per vehicle or 10 cents per vehicle on a commuters rate one way. The bonds on the Mount Hope Bridge are due to be retired on November 1st of this year.

The Mount Hope Bridge is a connector between the towns of Bristol, R.I., on the western side of Narragansett Bay, and Portsmouth, R.I., which is situated at the northern tip of Aquidneck Island. The city of Newport is located on the southern tip of Aquidneck Island. A second bridge, the Jamestown Bridge, extends from the eastern shore of the town of Jamestown to the town of North Kingstown on the western shore of Narragansett Bay.

The act of March 3, 1927 (44 Stat. 1391) authorized the Mount Hope Bridge Co., a corporation of the State of Rhode Island, its successors and assigns, to construct, maintain, and operate a bridge across Mount Hope Bay between the towns of Bristol and Portsmouth, RI, in accordance with the act of Congress approved March 23, 1906 (34 Stat. 84), pertaining to the construction of bridges over navigable waters.

H.R. 7781, H.R. 7769, and S. 1936 amend the act of March 3, 1927, by providing that upon title in the bridge being vested in the Rhode Island Turnpike & Bridge Authority, the authority shall be authorized to fix, charge, and collect tolls for the use of the bridge and apply the tolls in accordance with chapter 12 of title 24, General Laws of Rhode Island, as amended, and to combine the bridge for financing purposes with any other bridge financed by the authority.

In 1955 there came into creation the Rhode Island Turnpike & Bridge Authority which included among its properties the Mount Hope Bridge. Stipulated in the act was the requirement that no tolls could be charged after the year 1980 even though the Mount Hope Bridge will become debt free in November 1963.

In May of 1963 the Rhode Island General Assembly amended the Turnpike Authority Act permitting extension of tolls on Mount Hope Bridge after the present bonds are retired. These tolls will be used, not only to pay for bonds for the construction of the Newport-Jamestown Bridge, but also to presently pay for maintenance, repair, and operation of the Mount Hope Bridge and for engineering and other preliminary expenses of the proposed Newport-Jamestown Bridge prior to the issuance of bonds for its construction. The general assembly also permitted the authority to lease the Newport-Jamestown Bridge and the Mount Hope Bridge to the State of Rhode Island on annual basis only at a rental sufficient to satisfy requirements for the construction of the Newport-Jamestown Bridge.

It is the intent of the turnpike authority to continue the existing tolls on the Mount Hope Bay Bridge at the same rate. The continuation of these moderate tolls makes possible the financial feasibility of the construction of a Newport-to-Jamestown bridge. The revenues from the Mount Hope Bridge approximate \$400,000 a year. Without combining income from the two facilities, this project would be financially impossible.

If this proposed bridge is not constructed, the only passage across Narragansett Bay to the western part of the State, and to Connecticut and New York, will be the continuation of the present Newport-Jamestown Ferry. This ferry, understandably, cannot cope with the ever-increasing volume of automobile traffic, especially at peak periods during spring, summer, and fall. Since this is a ferry service, it must operate on a schedule basis. This results in a great inconvenience. It also operates at an approximate deficit of \$250,000 a year. Beyond this the

lack of a bridge will prevent proper economic development of the southern part of the State of Rhode Island because of the inaccessibility to the island of Aquidneck from the west.

Passage of this bill now will make possible sufficient time for the necessary preliminary engineering and test borings that need to be accomplished in reasonably good weather. I earnestly urge the subcommittee to act favorably on this measure this morning. Thank you.

Mr. BLATNIK. We have one bill left, the bill H.R. 6001, by Mr. McClory, to authorize the conveyance to the Waukegan Port District, Illinois, certain real property of the United States.

(H.R. 6001 follows:)

[H.R. 6001, 88th Cong., 1st sess.]

A BILL To authorize the conveyance to the Waukegan Port District, Illinois, of certain real property of the United States

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Army is authorized and directed to convey to the Waukegan Port District, Illinois, without monetary consideration, all of the right, title, and interest of the United States in and to the real property described in section 2 of this Act, subject to the condition that such port district will maintain the existing steel sheet pile bulkhead in such condition as to prevent the escape of material into the harbor, and that such property will be used for public harbor purposes. If such real property shall ever cease to be used for such purposes, all the right, title, and interest to such property shall revert to the United States, which shall have the immediate right to entry thereon.

SEC. 2. The real property referred to in the first section of this Act is more particularly described as follows:

That part of fractional section 22, township 45 north, range 12 east of the third principal meridian, described as follows: Beginning at a point 181.5 feet north of the one-half section line of said section 22, and 1,131.5 feet, more or less, east of the west line of said section 22, which point is on the westerly line of the pier or dock forming the east side of Waukegan Harbor, thence due east 100 feet, thence due south 375 feet, more or less, to the southwest face of pier or dock, thence north approximately 42 degrees west 146 feet, more or less, along the face of said dock to its junction with north and south dock, thence north 262 feet, more or less, along face of said dock, to the point of beginning, situated in the county of Lake and State of Illinois, excepting therefrom that part thereof, now submerged, lying west of the existing steel sheet pile bulkhead now forming the east side of Waukegan Harbor, which part was heretofore cut away by the United States for the purpose of widening and improving Waukegan Harbor for the benefit of navigation passing to and from docks in slip numbered 1 and along the inner basin to the north.

Mr. BLATNIK. Mr. McClory, do you wish to make a presentation in behalf of your bill?

STATEMENT OF HON. ROBERT McCLORY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF ILLINOIS

Mr. McCLORY. Thank you, Mr. Chairman, and members of the Subcommittee on Rivers and Harbors.

This bill involves a small parcel of land in the Waukegan Harbor, which is located in my district, Waukegan being the principal port on Lake Michigan in the 12th Congressional District and the principal port between the city of Chicago and the city of Milwaukee on the westerly shore of Lake Michigan.

In 1953, I believe it was, the Illinois State Legislature created the Waukegan Port District, and they have initiated some developments of the port as a result of the establishment of this district. Back in 1929 a parcel of land was conveyed by the State of Illinois to the

Federal Government in connection with the harbor and the harbor entrance at Waukegan, and part of that land still remains available for the development by the port district.

While this land was conveyed to the United States without consideration, and there have been some improvements made, it is requested now that this land be conveyed back to the port district which has jurisdiction of all of the surrounding land. That is what this measure involves.

We do have reports from the U.S. Corps of Engineers of the Army, and I know Mr. Loney Hart is here, who can testify with regard to the U.S. Corps of Engineers' attitude on this legislation.

I strongly urge the committee to recommend the bill favorably because it will enable the port district to carry out some plans for development of the harbor which will be done under the combined effort of private enterprise, the port district, the State of Illinois, the city of Waukegan, and, we hope, some participation by the Federal Government.

Thank your very much. I will be happy to answer any questions if you have any, but I think probably your questions can be better directed to Mr. Hart.

I might say that the Army has suggested an amendment to the bill. Mr. BLATNIK. What page is that on?

Mr. McCLODY. It is on page 1, lines 9 and 10, and would strike out the words commencing with "in such condition" down to the word "harbor" in line 10, and substitute in lieu of those words the following words: "in good condition for the protection of passing navigation of the escape of material into the harbor."

I see no objection to that amendment, and would suggest that if the Army wants that amendment, that the committee adopt such an amendment as a committee amendment.

Mr. BLATNIK. It merely clarifies the wording to make assurances that navigation would be protected from any materials allowed to drift—debris and so forth.

Mr. McCLODY. The purpose of the harbor development is to have more navigation, so I don't see anything that isn't consistent in that. I would not have any objection to the amendment.

Mr. BLATNIK. Thank you, Mr. McCloidy.

Mr. McCLODY. Thank you, sir.

Mr. BLATNIK. We have Mr. Loney Hart, the Real Estate Division, Office, Chief of Engineers, to give a further technical explanation and answer any questions that the committee may have.

STATEMENT OF LONEY HART, REAL ESTATE DIVISION, OFFICE, CHIEF OF ENGINEERS

Mr. HART. I am Loney W. Hart, Chief of the Real Estate Legislative Services Office, Office, Chief of Engineers. The Department's views have been presented to the chairman of this committee by letter dated September 13, 1963. I am very sorry, but you probably have not had too much opportunity to read it. I have a brief, prepared statement, which will summarize these views, that I would like to present, if I may.

Mr. BLATNIK. Would you proceed, Mr. Hart?

Mr. HART. The purpose of the bill is to direct the Secretary of the Army to convey to the Waukegan Port District, Illinois, without monetary consideration, all right, title, and interest of the United States in certain real property in Lake County, Ill., on condition that the port district will maintain the existing steel sheet pile bulkheads and subject to a further condition that title shall revert to the United States if the property ceases to be used for public harbor purposes.

Construction of a harbor at Waukegan, Ill., was authorized by the Rivers and Harbors Act of June 14, 1880 (21 Stat. 180, 192). In compliance with a requirement that the site and a free right-of-way to all points of the harbor be transferred to the United States free of cost as a prerequisite to construction of the harbor, the city of Waukegan, by deed dated August 24, 1880, donated to the United States approximately 5.2 acres of land along the west shore of Lake Michigan. As a result of the construction, an additional land area was formed through accretion.

Part of this accreted area was conveyed to the city of Waukegan in 1926, for a consideration of \$1,000 and on condition that the city would obtain from the State of Illinois a conveyance to the United States of another parcel of land in the harbor area. In fulfillment of this condition, the State of Illinois conveyed the designated parcel of land containing approximately 0.73 of an acre to the United States on August 30, 1929. Since that time however, approximately 23 percent of the area which the State conveyed to the United States has been cut away for harbor improvement. The remaining portion of this parcel, now containing approximately 0.53 of an acre, is the land described in section 2 of H.R. 6001. The area contains no improvement or facilities except two steel sheet pile bulkheads which were constructed by the United States in 1950 and 1956.

In recent years a port district has been formed in Waukegan which has taken over responsibilities for harbor development which were previously carried out by the city. In order to permit the port district to function officially, the city of Waukegan has transferred certain properties and lands to the district.

There is no need for Federal retention for project purposes, of the land involved in this bill, except for maintenance of the steel sheet pile bulkheads which form the easterly side of the harbor inner basin. Since the Waukegan Port District is willing to relieve the Government of the responsibility for maintaining the bulkheads and will utilize the land for public harbor purposes, the Department of the Army has no objection to the enactment of this bill.

The Department of the Army does, however, recommend a minor language change to assure that the bulkhead maintenance will be adequate, and language for this purpose was furnished in the report submitted to your committee by the Secretary of the Army. I have just referred to that report.

The enactment of this measure will not involve the expenditure of any Department of the Army funds.

The Bureau of the Budget advises that, from the standpoint of the administration's program, there is no objection to the presentation of this report for the consideration of the committee.

This concludes my statement, Mr. Chairman, and I shall be happy to answer any questions you may have on this matter.

Mr. BLATNIK. Am I correct, Mr. Hart, the amount of land is about a half acre?

Mr. HART. Yes, sir; it is. It is sort of a half moon shaped tract of land that just goes around the edge of the inner harbor as it makes a turn. We originally needed it for cutting away and enlarging the channel. Now the primary use is simply to maintain these bulkheads.

Mr. BLATNIK. And the Waukegan Port District, which now replaces the functions of the city of Waukegan, now is willing to relieve the Government of the responsibility for further maintenance of the bulkheads, and they will proceed to utilize this land for public harbor purposes; is that correct?

Mr. HART. This is correct, sir.

Mr. BLATNIK. Your explanation is very clear and is a good explanation.

Are there any questions?

Mr. McFALL. No questions.

Mr. BLATNIK. There are no questions.

Thank you, Mr. Hart.

Mr. FALLON. Mr. Chairman?

Mr. BLATNIK. Mr. Fallon.

Mr. FALLON. I understand additional language is offered so that there will be adequate maintenance of these bulkheads; is that correct?

Mr. HART. Yes, sir; that is correct.

Mr. FALLON. What do you mean by adequate maintenance?

Mr. HART. Of course, the word "adequate," sir, I recognize is a matter of judgment. However, we felt that our primary concern is the protection of navigation interests, and if we had not put this in, perhaps they might maintain the bulkheads for their particular use and navigation might suffer. So we felt that wherever we used the word "adequate" or "reasonable" it permits flexibility and judgment, and I think the corps could quickly judge whether or not navigation in this respect could suffer.

Mr. FALLON. Did you say a court?

Mr. HART. No sir; I said corps, meaning the Corps of Engineers.

Mr. FALLON. After this land is conveyed to this authority, and the corps decides that the maintenance is not adequate, how do you enforce the language of the bill?

Mr. HART. Well, sir, I could only surmise, but I would assume the deed of conveyance will contain specific conditions and requirements, among which will be a reverter provision that if they fail to comply with these requirements, either by adequately maintaining the bulkheads for navigation or should they seek to change the use in any way from public harbor purposes, I think we would have a legal right to come in and exercise the right of reverter.

Mr. FALLON. That is the answer I wanted for the record.

Mr. HART. Thank you, sir.

Mr. BLATNIK. Thank you, Mr. Hart.

If there is no objection, may the committee consider these four bills before us individually? We will begin with H.R. 5244 by Mr. Schwengel. Mr. Schwengel accepts the clarifying amendments recommended by the corps. A motion would be in order that the amendments be incorporated into Mr. Schwengel's bill. A motion will be in order for the adoption of H.R. 5244, as amended.

Mr. McFALL. I so move, Mr. Chairman.

Mr. RYAN. Seconded.

Mr. BLATNIK. It has been moved and seconded. All those in favor signify by saying aye; opposed, no.

The motion is so carried.

Next we will consider the bills by Mr. St Germain, H.R. 7881, and Mr. Fogarty, H.R. 7769, who have expressed a very strong interest in speedy action on this bill, and the identical bill passed in the Senate, known as S. 1936, by Senators Pell and Pastore, passed by the Senate on August 28, 1963. A motion is in order for the adoption of S. 1936.

Mr. RYAN. I will so move.

Mr. McFALL. Second.

Mr. BLATNIK. Those in favor signify by saying aye; opposed, no. The motion is carried.

Next is the consideration of S. 453, by Senators Hill and Sparkman, to change the name of the Memphis lock and dam on the Tombigbee River, near Aliceville, Ala., to Aliceville lock and dam. If there is no objection, a motion is in order for its adoption.

Mr. FALLON. I move its adoption, Mr. Chairman.

Mr. RYAN. I second the motion.

Mr. BLATNIK. Those in favor signify by saying aye; opposed, no. The motion is adopted.

H.R. 6001, by Mr. McClory, to authorize the conveyance to the Waukegan Port District, Illinois, of certain real property of the United States. A motion will be now in order for the adoption of H.R. 6001 with the inclusion of the clarifying language or amendment recommended by the corps.

Mr. FALLON. I so move, Mr. Chairman.

Mr. QUILLEN. I second it.

Mr. BLATNIK. A motion has been made and seconded that the bill be adopted. Those in favor signify by saying aye; opposed, no.

The motion is carried.

NAVIGATION RESOLUTIONS

Mr. BLATNIK. We have a list of navigation survey resolutions and two beach erosion resolutions. These are simple in the sense that they are of clear-cut importance to the areas involved.

Mr. Brennan, will you give us a summary of each one of the navigation resolutions?

Begin with Document No. 1220 by Mr. Ellsworth.

Mr. BRENNAN. The first one, Mr. Chairman, is a proposed investigation of a navigation improvement from Kansas City connecting with the present navigation channel of the Missouri River, up the Kansas River, to the vicinity of Lawrence. This will require a rather extensive study because the channel cannot be kept open to a navigable depth, even with the development of the presently proposed upstream dams. So there will have to be dredging and possibly the construction of locks and dams.

However, the corps feels that there is sufficient possibility of traffic developing to warrant a study to the extent of the \$26,000 which they recommend.

Mr. BLATNIK. It is recommended and approved by the corps and there is no objection by the Bureau of the Budget?

Mr. BRENNAN. Well, sir, these do not go through the Bureau of the Budget. They just come directly. We send the request for the

resolution to the Corps of Engineers, and they reply to the chairman directly. In fact, General Graham usually writes a letter to the chairman of the committee, reflecting the views of the Chief of Engineers.

Mr. AUCHINCLOSS. Is that true of each one of these projects?

Mr. BRENNAN. That is correct, sir.

Mr. AUCHINCLOSS. Mr. Chairman, I would like to suggest for the consideration of the committee that we consider these projects en bloc, with the understanding that they have to pass in a proper way. Each one is not a large amount of money. If it is in order, Mr. Chairman, I would like to so move.

Mr. BLATNIK. The motion is in order. We have nine projects, of which two are at no cost. The total project costs for all nine of the survey resolutions is \$124,000, approximately \$14,000 each. The motion is in order.

Mr. RYAN. May I ask a question before you put forth the motion? Are these strictly for studies or actual construction?

Mr. BRENNAN. These are strictly for studies.

Mr. BLATNIK. Mr. Auchincloss.

Mr. AUCHINCLOSS. I make such a motion, that we consider all of these projects en bloc. I move that they be adopted.

Mr. FALLON. And the two beach erosion projects?

Mr. BLATNIK. No, the nine navigation projects.

Mr. RYAN. I will second it.

Mr. BLATNIK. The motion has been made and seconded that the nine navigation projects be considered en bloc.

The reporter will list them according to docket number, sponsor, name of the survey resolution or project, and the cost as the committee members have them before them.

All those in favor of adoption will say aye; opposed? The motion is carried and the resolutions are adopted.

(The list follows:)

Docu- ment No.	Sponsor	Name	Cost
1220	Mr. Ellsworth.....	Kansas River between Lawrence, Kans., and Kansas City, Kans.	\$26,000
1246	Mr. Smith of Virginia.....	Bonum Creek, Va.	10,000
1311	do.....	Neabsco Creek, Prince William County, Va.	12,500
1313	Mr. Miller of New York.....	Wilson Harbor, N.Y.	19,000
1315	Mr. Bonner.....	Oregon Inlet, N.C. (Wanchese and Manteo Chan- nels)	10
1322	Mr. Lankford.....	Little Magothy River, Md.	10,000
1328	Mr. Keith.....	New Bedford Harbor, Mass.	10
1332	Mr. Ostertag.....	Braddock Bay State Park, N.Y.	30,000
1333	Mr. Morton.....	Wells Cove, Kent Island, Md.	17,000
	Total.....		124,500

¹ Can be combined with outstanding authority at no increase in cost.

NOTE.—Number of projects, 9.

BEACH EROSION RESOLUTIONS

Mr. BLATNIK. We have two beach erosion projects on a separate sheet of paper. Document No. 1330 is by Mr. Tuten for St. Simons Island, Jekyll Island, and Sea Island, Ga., with the survey cost at \$85,000.

Mr. Brennan?

Mr. BRENNAN. There is already authority existing for a beach erosion study of St. Simons Island and Sea Island, but there are three islands in that vicinity. Jekyll Island is not included. That lies in Mr. Tuten's district, and the same problems exist on Sea Island and St. Simons Island as exist on Jekyll Island.

For that reason, he wants to have Jekyll Island included in the overall study. There will be no increase in cost for St. Simons or for Sea Island. The cost of \$85,000 is for Jekyll Island alone.

Mr. AUCHINCLOSS. May I ask a question? Jekyll Island at one time was privately owned. Is it now owned by the State?

Mr. BRENNAN. Yes, sir.

Mr. AUCHINCLOSS. Are the other islands privately owned?

Mr. BRENNAN. Yes, sir. Sea Island is privately owned and St. Simons. There are a number of ownerships there, but as far as I know, none of them have any substantial portion of State ownership.

Mr. AUCHINCLOSS. Is there a precedent for such action?

Mr. BRENNAN. Yes, sir, under the beach erosion law as it now stands, as it was amended in 1962, it was liberalized, as you will recall, to provide that under certain conditions privately owned beaches which were open to public use or which affected areas that could be developed for conservation purposes could be a project in which the Federal Government could participate. That represents a change.

In the next project, Grand Isle, the reason for this request is based on that very point, that at the time the original study was made, the beach erosion law did not permit the Federal Government to do anything about privately owned lands. But since that time, the present legislation has permitted the Government to study and recommend participation in certain privately owned beaches if they are open to the public.

Mr. RYAN. About how large are these islands or what is the nature of them? Are there people living there?

Mr. BRENNAN. Yes, sir. Sea Island is a very famous resort. They have a beautiful hotel. I have never been there, however.

Mr. McFALL. And Jekyll Island, too?

Mr. BRENNAN. They are all inhabited; yes, sir.

Mr. RYAN. Are these for private business improvements?

Mr. BRENNAN. Partly, sir. We are merely authorizing the same study that has been made in other cases all the way from Maine to Florida and across the gulf coast and the west coast for the possibility of protecting the beaches where serious erosion problems exist, assuming that all of the criteria are met, which would be determined by the study.

Mr. RYAN. Who sets that criteria? Does the Corps of Engineers?

Mr. BRENNAN. The Congress has set the criteria. They are administered by the Corps of Engineers. There must be a degree of public use, the benefits must be in excess of the cost, and there must be a protection of public property. For example, where a beach is privately owned it may protect a public highway and the prevention of damage to the public highway requires protection of the beach. That is the kind of thing that would permit them to make a favorable recommendation.

Then it is up to this committee to judge whether or not the project should be authorized.

Mr. RYAN. It is strictly not a beach-saving project, but there is something else to be protected?

Mr. BRENNAN. There may be some spots along the shoreline of these three islands where there are such roads, but primarily it is, from my knowledge of the area, a matter of protecting publicly used beaches. Of course, this is the point of the study. If it turns out that there is not sufficient public use, then the project would not be recommended by the Corps of Engineers.

Mr. BLATNIK. This is a standard procedure, Mr. Ryan, a standard practice for the beach erosion board to make such surveys.

If there are no further questions, can we go to Document No. 1331, by Mr. Boggs, for Grand Isle, La.?

Mr. FALLON. Is this public or private?

Mr. BRENNAN. Grand Isle is privately owned. There is some State ownership there. A study was made back in 1957 and it was unfavorable on the basis of the existing law at that time which did not permit the Federal Government to enter into the protection of privately owned beaches, even though they might be used 100 percent by the public.

Since that time, in 1958, and again last year in 1962, legislation has been passed which liberalizes that general concept. Where they are privately owned, and where they are publicly used, and there are no restrictions to the use, then the Congress has said that the Federal Government can participate in such a project, assuming, again, that the benefits are in excess of the cost.

Mr. BLATNIK. If there are no further questions, a motion is in order for the adoption of the beach erosion resolutions.

Mr. McFALL. I so move.

Mr. AUCHINCLOSS. I second.

Mr. BLATNIK. Those in favor signify by saying aye; opposed, no.

The motion is carried, and the beach erosion resolutions are adopted.

The Chair thanks the members for their fine attendance. We will meet again tomorrow morning in executive session, at 10 o'clock.

The subcommittee is adjourned.

(Whereupon, at 11:10 a.m., the subcommittee adjourned until 10 a.m., Wednesday, September 18, 1963.)

ST. LAWRENCE SEAWAY DEICING

THURSDAY, SEPTEMBER 19, 1963

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON RIVERS AND HARBORS
OF THE COMMITTEE ON PUBLIC WORKS,
Washington, D.C.

The subcommittee met at 10:10 a.m., pursuant to notice, in room 1302, Longworth Building, Hon. John A. Blatnik (chairman of the subcommittee) presiding.

Mr. BLATNIK. The Rivers and Harbors Subcommittee of the Committee on Public Works will please come to order. This is a hearing on several identical bills. The recorder will list them. There are nine bills, list them by H.R. number and author. The title of all of these bills is to provide for an investigation and study of means of making the Great Lakes and the St. Lawrence Seaway available for navigation during the entire year.

H.R. 481, by Mr. Feighan, and similar bills, H.R. 637, by Mr. Lesinski, H.R. 1020, by Mr. Ashley, H.R. 1037, by Mr. Brademas, H.R. 1077, by Mrs. Griffiths, H.R. 1117, by Mr. Reuss, H.R. 1125, by Mr. Rostenkowski, H.R. 1980, by Mr. Vanik, and H.R. 2123, by Mr. Blatnik.

We also have before us S. 530, a similar bill, with one technical difference, introduced in the Senate by Senators Proxmire, Humphrey, and Nelson. It passed the Senate on June 25, 1963. The hearings will be on all of these bills, but the emphasis, of course, will be on the Senate bill, it having passed that body first.

(S. 530 and H.R. 2123 are as follows:)

[S. 530, 88th Cong., 1st sess.]

A BILL To provide for an investigation and study of means of making the Great Lakes and the Saint Lawrence Seaway available for navigation during the entire year

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in view of the fact that the winter ice blockade of the Great Lakes and the Saint Lawrence Seaway is one of the most serious obstacles to the economic advancement of our country, particularly the Midwestern United States, and thereby presents a hindrance to our national defense, the Chief of Engineers, Department of the Army, under the direction of the Secretary of the Army, shall make a full and complete investigation and study of waterway deicing systems, including a review of any previous pertinent reports by the Department of the Army, any available information from any of the other departments of the Government, and waterway deicing methods in use by private concerns and foreign governments, for the purpose of determining the practicability, means, and economic justification for providing year-round navigation on the Great Lakes (including connecting channels and harbors) and the Saint Lawrence Seaway by eliminating ice conditions to the extent necessary. The Chief of Engineers may submit such interim reports to the President and the Congress with respect to such investigation and study at such time or times as he deems advisable, and shall submit to the President and the Congress, not later than January 1, 1964, his final report of the results of such investigation and study, together with his recommendations, including his recommendations for such legislation and administrative actions as he may deem advisable.

SEC. 2. There are authorized to be appropriated such amounts as may be necessary to carry out the provisions of this Act.

[H.R. 2123, 88th Cong., 1st sess.]

A BILL To provide for an investigation and study of means of making the Great Lakes and the Saint Lawrence Seaway available for navigation during the entire year

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That in view of the fact that the winter ice blockade of the Great Lakes and the Saint Lawrence Seaway is one of the most serious obstacles to the economic advancement of our country, particularly the Midwestern United States, and thereby presents a hindrance to our national defense, the Chief of Engineers, Department of the Army, under the direction of the Secretary of the Army, shall make a full and complete investigation and study of waterway deicing systems, including a review of any previous pertinent reports by the Department of the Army, any available information from any of the other departments of the Government, and waterway deicing methods in use by private concerns and foreign governments, for the purpose of determining the practicability, means, and economic justification for providing year-round navigation on the Great Lakes (including connecting channels and harbors) and the Saint Lawrence Seaway by eliminating ice conditions to the extent necessary. The Chief of Engineers may submit such interim reports to the President and the Congress with respect to such investigation and study at such time or times as he deems advisable, and shall submit to the President and the Congress, not later than January 1, 1964, his final report of the results of such investigation and study, together with his recommendations, including his recommendations for such legislation and administrative actions as he may deem advisable.

Sec. 2. There are authorized to be appropriated such amounts as may be necessary to carry out the provisions of this Act.

Mr. BLATNIK. The witness is Mr. Franklin Snyder, Civil Works Division, Office of the Chief of Engineers. He is the Assistant Chief of the Hydrology and Hydraulics Branch of the Engineering Division. He is accompanied by Mr. John Anderson of the Civil Works Division of the Office of the Chief of Engineers.

Mr. Snyder and Mr. Anderson, will you please take the witness chair?

Mr. Snyder, will you proceed to quickly summarize the bill and what it does regarding the proposed study?

**STATEMENT OF FRANKLIN SNYDER, CIVIL WORKS DIVISION,
OFFICE, CHIEF OF ENGINEERS; ACCOMPANIED BY JOHN
ANDERSON, CIVIL WORKS DIVISION, OFFICE, CHIEF OF EN-
GINEERS**

Mr. SNYDER. Mr. Chairman and members of the committee, the bill proposes to authorize a study which will have the objective of accumulating and analyzing all available information with the view of determining the means and the economic justification for providing year-round navigation on the Great Lakes including connecting channels and harbors and the St. Lawrence Seaway.

A certain amount of the background information is contained in the letter of the Department of the Army to the Committee on Public Works. With your permission, I will read that letter.

Mr. BLATNIK. Will you please read it, Mr. Snyder?

Mr. SNYDER. It is dated April 26, 1963.

HON. CHARLES A. BUCKLEY,
*Chairman, Committee on Public Works,
House of Representatives.*

DEAR MR. CHAIRMAN: Reference is made to your request for the views of the Department of the Army with respect to H.R. 2123, 88th Congress, a bill to provide for an investigation and study of means of making the Great Lakes and the St. Lawrence Seaway available for navigation during the entire year.

This bill would authorize the Chief of Engineers, under the direction of the Secretary of the Army, to make a full and complete investigation and study with the view of determining the means and economic justification for providing year-round navigation on the Great Lakes (including connecting channels and harbors) and the St. Lawrence Seaway through elimination of ice conditions.

The Great Lakes system comprises the five great bodies of fresh water—Lakes Superior, Huron, Michigan, Erie, and Ontario—which, with their connecting channels, form a chain extending halfway across the North American Continent. These lakes and their tributaries above Ogdensburg, N.Y., drain an area of approximately 298,000 square miles and constitute the major portion of the St. Lawrence River Basin. The Great Lakes and their connecting channels have a total water surface area of about 95,000 square miles of which about 60,950 square miles are in the United States. The distance from Duluth at the western end of Lake Superior to Ogdensburg on the St. Lawrence River is 1,216 miles. Navigation on the Great Lakes and their connecting channels is closed from about mid-December until early April as a result of ice conditions.

Due to the widespread interest in maintaining winter navigation through the Great Lakes-St. Lawrence system and in view of the need to develop competent information on this subject, the Department of the Army would interpose no objection to enactment of H.R. 2123.

The bill calls for submission of final report to Congress by January 1, 1964. It will take about 2 years to complete and submit a report after funds are appropriated. Accordingly, it is recommended that the last sentence of section 1 of H.R. 2123 be revised to read as follows:

"The Chief of Engineers may submit such interim reports as may be deemed advisable, and shall submit his final report, together with his recommendations for such legislation and administrative actions as he may deem advisable, not later than two years after funds are made available for the study."

The estimated cost of compiling and evaluating available data and making a report on year-round navigation on the Great Lakes and St. Lawrence Seaway system is \$50,000. Such a report may point to the need for further, more detailed studies, the cost of which cannot be determined at this time.

The Bureau of the Budget advises that, from the standpoint of the administration's program, there is no objection to the presentation of this report for the consideration of the committee.

Sincerely yours,

STEPHEN AILES,
Acting Secretary of the Army.

In this connection I think it would be well to present the pertinent comments of the Bureau of the Budget on this bill. The last two paragraphs of their letter dated April 19, 1963, read as follows:

During past Congresses, various agencies in the executive branch have reported on similar bills. Past and current agency reports indicate that, under natural winter conditions in the Great Lakes-St. Lawrence Seaway area, year-round navigation would be impractical. We note that the latest agency reports on S. 530 and on an identical bill, H.R. 2123, stress the magnitude of the problem and none reveals awareness of any recent technological advances which would render the project physically or financially feasible. These reports offer no objection to enactment of the bills but suggest no basis for optimism as to the success of the proposed study.

As we are not cognizant of any known technological progress in applicable fields related to the subject since the proposal was last considered, and in the absence of any realistic hope for positive accomplishment, the Bureau of the Budget does not recommend enactment of S. 530.

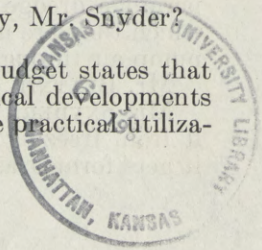
Sincerely yours,

PHILLIP S. HUGHES,
Assistant Director for Legislative Reference.

Mr. BLATNIK. Do you have any further testimony, Mr. Snyder?

Mr. SNYDER. No further prepared testimony.

Mr. BLATNIK. The letter of the Bureau of the Budget states that in essence they are not cognizant of any technological developments or applications of any technological advances for the practical utilization of such proposal.



I have read articles on operations in Norway, Sweden, or both, in which air tubes in the water are used to raise the warmer water from the bottom up to the surface to melt the ice and keep an open channel. Are any such operations in use in any other countries?

Mr. SNYDER. The most common procedure is commonly called air bubbling, and this has been used on a more or less small scale for several years. However, in recent years there has been an increased use of these procedures, primarily I believe because of the availability of new developments and equipment and techniques rather than any technological breakthrough.

But the availability of cheap power and modern equipment has made this application feasible in a number of cases. However, it should be recognized that these applications have all been with respect to keeping relatively small areas of water ice free. With that restriction, they have been quite successful.

Mr. BLATNIK. You tell us you have seen new equipment. What is this new equipment?

Mr. SNYDER. Well, the matter of submersible motors. One procedure is to have submersible motors which operate under water and pump water up. That is a slight variation, it is not in the category of air bubbling. But in connection with the air bubbling, better compressors are available now and more efficient sources—for instance, the United Aircraft Corp. made some studies based on their jet engines for supplying air for bubbling at the bottom of deep waters. They dropped the idea temporarily because their jet engine was so powerful and it could pump so much that the friction loss in the connecting pipes would be too great. So they dropped it.

I understand now that they are considering development of smaller jet engines and they are again interested in the matter of air bubbling and keeping large bodies of water open.

Mr. BLATNIK. Do they use plastic pipe? I have heard that it has been tried, where a rather expensive plastic tubing or pipe has been used, perforated with holes with a constant stream of air bubbles bubbling up to the surface.

Mr. SNYDER. That is correct.

Mr. BLATNIK. Who has used that technique and how has it worked?

Mr. SNYDER. There is some work which has been done in the Arctic by the military people. There are several companies interested in making the equipment, of course. The one at Thule in Greenland—it does not say what kind of pipe they used—they merely say they used perforated pipe at that location. There is a series of equipment made under the term of "Aqua Therm" units. Those are the ones that have been used at McMurdo Sound in the Antarctic also, in Sweden.

At another location, Port Radium in Canada, Northwest Territory, on Great Bear Lake, they keep ice which is normally 5 feet thick there, open during the winter months by air bubbling in order to permit a dredge to operate the year-round in recovering ore tailings which they are now processing. In that case it specifically says they pump air through perforated plastic pipe.

Mr. BLATNIK. You mean they melt 5 feet of ice, 60 inches?

Mr. SNYDER. Yes; they melt it and keep it from refreezing or keep it from freezing initially, either one. But it will melt the ice after it gets formed as well as keeping it from freezing to begin with.

Mr. BLATNIK. Earlier you mentioned rather small distances were kept free of ice. How long is this channel?

Mr. SNYDER. The dredge did not have to navigate any great distance. It just had to maneuver in a small area so naturally the hole would have to be larger than the dredge. I presume at least it would be an area a hundred feet in diameter.

Some of these other examples point out, in New Jersey they keep one of their marinas, they call it a 425-foot boat basin, they keep this free from ice during the wintertime. It is a \$55,000 installation.

The air bubbling has been used for a long time in connection with the operation of dams in cold country. Here it is a case of just keeping a few feet of water ice free at the face of the dam so as to be sure to be able to operate the gates during the wintertime, if necessary.

Mr. BLATNIK. Are there any other questions?

Mr. CRAMER. How practical would any of these methods you suggest, air bubbling, Aqua Therm, or otherwise, prove in relation to a body of water the size of this St. Lawrence Seaway, which is 1,216 miles long, 95,000 square miles?

Mr. SNYDER. I imagine this is one of the questions which will be the object of this preliminary investigation. No one would be able to be very specific on a matter such as that without rather thorough consideration.

Mr. CRAMER. Is there some way we could pipe up some of that good Florida sunshine? But I guess that is not practical.

Mr. SNYDER. In the Great Lakes because of the water temperatures in the wintertime there is plenty of—I believe this is safe to say, without investigation—there is plenty of warm water at the bottom that could provide the energy to keep a channel open. But on the Great Lakes there are a lot of other problems.

In other words, there are ice floes 20 or 30 feet high above the surface of the water level. These floes drift around in reaction to the wind and current forces. Even though you might melt a channel temporarily, the wind might close it up faster than you could melt it. There certainly are a lot of problems involved in a system like the Great Lakes and St. Lawrence.

Mr. CRAMER. Obviously it would have its limitations then. That is, from what is known presently about ice melting, it has its limitations in relation to the intensity of the cold and the size of the area involved, is that right?

Mr. SNYDER. To the extent investigated and applied so far, that is correct.

Mr. CRAMER. Do you contemplate that the \$50,000 proposed in this study will be it, or do you think that will be insufficient funds to to the study?

Mr. SNYDER. That should be sufficient to accumulate the information and make a rather brief analysis of the feasibility of further studies. It certainly would not constitute the studies with which such a system would be put in effect.

Mr. CRAMER. This is in effect like a preliminary study. You would contemplate, if it showed any adequate hope of success, that there would be a request for additional funds, that it would require additional funds to carry the study further?

Mr. SNYDER. That is right.

Mr. CRAMER. Is there any way of knowing what the final cost of this might be?

Mr. SNYDER. I don't believe so, no.

Mr. CRAMER. It would be rather substantial, would it not?

Mr. SNYDER. With reference to further studies or with reference to actually designing and installing such system?

Mr. CRAMER. Let us take the first point, further study.

Mr. SNYDER. It would certainly not be in the same magnitude of \$50,000 to make a thorough study of the installation.

Mr. CRAMER. What do you estimate would be necessary, a quarter of a million dollars, or what?

Mr. SNYDER. Apparently there has been no estimate made of any such.

Mr. CRAMER. Customarily the Army Engineers reports indicate they have adequate personnel available in the area to accomplish the objective of the survey. Have you that personnel available in this area to make this study or available in the corps?

Mr. SNYDER. In connection with approved studies, there is already some increase in personnel in this particular office. That would be adequate.

Mr. CRAMER. It is quite obvious, on the second point, if a feasible method were found, the cost of that would be of quite large magnitude, would it not?

Mr. SNYDER. It certainly would. I would think an index to that, though, would be an estimate of what the value would be. In other words, if the cost were much beyond the economic value, it would not be feasible. It would have to be within that range.

Mr. CRAMER. Do you consider this as properly within the jurisdiction of the Army engineers? That is a rather unique project. Is this within the Chief of Engineers' authority?

Mr. SNYDER. We do consider it certainly within their responsibilities. The lake survey already has routine studies of this sort of thing on the Great Lakes.

Mr. CRAMER. Is there any reason for asking the limiting of applicability, thinking of the prospects of possible passage and the interests that might be involved, to other areas of the country that have similar problems and who would obviously get the benefit of such study? Is there any reason for limiting the scope of the bill to the Great Lakes and the St. Lawrence Seaway?

Let me predicate that by asking, aren't there other northern harbors or areas that have similar problems?

Mr. SNYDER. There certainly are, and the results of this study would certainly be equally useful as far as general information would be concerned in any area where they have ice.

Mr. CRAMER. Then let me ask you the question I started to ask. Do you see any reason for limiting the applicability of the study to the St. Lawrence Seaway and the Great Lakes?

Mr. SNYDER. Not necessarily, although in some cases it might be well to concentrate, particularly on a preliminary effort. There is some value in having a rather particular objective in mind in having a preliminary study rather than having it too widespread. The situation would be slightly different in each location. Whether or not this would affect the adequacy or the success of this study is a matter of judgment.

Mr. CRAMER. Do you know now of any practical approach to this problem? Have you any knowledge of what might appear to be a practical approach to this problem even relating only to the Great Lakes and the St. Lawrence Seaway area? Is there anything that offers real hope to the solution of the problem of which you have knowledge that would justify the Congress passing this legislation?

Mr. SNYDER. I made reference to a study which was made by United Aircraft Research Laboratories. With no checking whatever as to their initial study, they indicated that the economics were just slightly marginal. Of course, they evaluated only saving in shipping costs. If you could have a project that is slightly marginal, considering only shipping cost saving, that would indicate of course you had a pretty good project considering intangibles.

However, I have a feeling that they probably did not adequately evaluate the difficulty of keeping these channels opened after they once had been formed.

Mr. CRAMER. What type of project is that? What system did they use?

Mr. SNYDER. This would have been the air bubbling system using 50,000 horsepower jet engine. That was the engine that was too big for the job.

Mr. CRAMER. Do you honestly believe that has sufficient application to this problem presented in this study to justify this authorization?

Mr. SNYDER. Certainly from the technical viewpoint it would seem to me that there have been sufficient developments to make it worthwhile to investigate the feasibility of such applications. Perhaps if it does not turn out to be successful or seem feasible for bodies as large as the Great Lakes, it might be more feasible for smaller areas. But from the technical viewpoint, without consideration of the economic impact on other programs, why it certainly would be a worthwhile study.

Mr. CRAMER. Then you differ with the Bureau of the Budget?

Mr. SNYDER. No; I don't believe so. They state that there are no technological advances. I believe I said that that was quite true. The air bubbling has been known for many years. It would be primarily, though, through the technological advancement in application of power and other mechanical equipment to the problem. That is really the only difference between us.

Mr. CRAMER. In the Bureau letter they refer to "any known technological progress in applicable fields related to the subject since the proposal was last considered." When was it last considered?

Mr. SNYDER. There has been a bill similar to this before the Congress I believe 1 or 2 years before this. If that is what they are referring to, it does not have too much significance.

Mr. CRAMER. What I am trying to get at. What is meant by "since the proposal was last considered"? Does that mean since it was last considered by you people, the Bureau of the Budget, by Congress, or by whom?

Mr. SNYDER. I am afraid I cannot answer that question.

Mr. CRAMER. That is all, Mr. Chairman.

Mr. BLATNIK. Mr. Snyder, although the entire length of the St. Lawrence and Great Lakes channel runs over 2,000 miles, the actual mileage with regard to this problem is less. We are not con-

sidering of melting the ice over a 2,000 mile stretch of navigable waters or ice?

Mr. SNYDER. The restrictive channels which would be a definite problem, where air bubbling as such would not be perhaps the most successful procedure, constitutes about 390 miles. The rest of the distance is in deep waters of the Great Lakes.

Mr. BLATNIK. For most of the winter the harbors freeze over and the constricted channel areas would freeze, but the main body of the Great Lakes is kept open in spite of the ice floes; is that not true?

Mr. SNYDER. In most years there are larger areas of open water. But the floating ice is definitely a problem. Lake Erie being the shallowest lake, cools off the most in the fall and it has been reported that Lake Erie has been completely frozen over from shore to shore. This is a rare occurrence.

Mr. BLATNIK. It is a rare occurrence?

Mr. SNYDER. Yes.

Mr. BLATNIK. The main problem is to keep at least the major harbors open so that the oceangoing vessels can get in and out and keep the channel areas open. Furthermore, it may turn out that it is not feasible or practical to try to keep these channels open all winter. It would be desirable if you could extend it even a short period of, let us say, 2 months, when the winter freeze first comes in, keeping them open longer. In short, what I am getting at, you reduce your freeze part of the season by 25 percent. Can you give us some idea what that would mean in terms of navigation? What is the tonnage approximately as a rough measure, carried over the Great Lakes network in 8 navigation months in a normal season?

Mr. ANDERSON. The lakewise traffic in 1961 was 137 million tons. Total Lakewise and foreign traffic was 194 million tons.

Mr. BLATNIK. 137 million tons?

Mr. ANDERSON. That is a low year. In 1953 it was 188 million tons lakewise and with foreign amounted to 243 million tons.

Mr. BLATNIK. What was the figure in 1953?

Mr. ANDERSON. 188 million lakewise and 243 million tons total.

Mr. BLATNIK. What is the total tonnage that moves in and out of the largest port in America or North American Continent, such as New York City?

Mr. ANDERSON. New York City Harbor commerce in 1961 was 145 million tons.

Mr. BLATNIK. It takes them 12 months to do it?

Mr. ANDERSON. Yes.

Mr. BLATNIK. This is occurring in about 8½ months?

Mr. ANDERSON. Yes, sir.

Mr. BLATNIK. If you could extend the navigation period by another 2 months, you would have possibly as high as 40 to 60 million tons of additional waterborne commerce moving; is that true?

Mr. SNYDER. Yes, sir; if it were available for the moving.

Mr. BLATNIK. The Chair would also like to point out in all of these studies there are many factors we do not know. Nothing has been developed previously which would solve the immediate problems. Otherwise we would not need these feasibility studies and all these survey resolutions. You only know by trying to find out. You get all the information available at the moment and do experimental work beyond.

The cost of \$50,000, the chairman may remind the committee, is about average for relatively small survey resolutions requiring an act of Congress. We have approved survey resolutions over and over again, \$150,000, \$200,000, \$250,000 to \$300,000 just for specific projects in a given area, none of them encompassing a large area such as this navigation network of the St. Lawrence Seaway and the Great Lakes.

Cold water normally is heavier than warm water; is that not true, and it settles to the bottom. I think the members might be interested that when it really gets cold in the wintertime, the cold water in the bottom is warm enough to melt the ice on the surface. Can you give a brief technological explanation of that phenomenon?

Mr. SNYDER. The water increases in density down to a temperature of 39.2° F. That is the key. As the temperature cools below 39.2, the density becomes less again so that as the surface water cools—in the summertime, of course, it heats up and the surface water is quite a bit higher than the lower water, the so-called stratification takes place. In the fall as it begins to cool, the surface water cools and by agitation from the wind, and in fact as it cools, it dives a little bit and it gradually works down until the whole profile to the bottom becomes the same temperature, around 39.2.

In other words, the surface can't get below 39.2 very much until the whole body of water is cooled to 39.2. From then on, as further cooling of the surface takes place, the water at the top cools below 39.2.

As the surface goes below 39.2 it becomes lighter, and by that process it stays on top. So the top gradually cools down below the 39.2 and it stays on top. The water below the surface cools a little bit, too, but it tends to stay several degrees, at least in the Great Lakes, at great depths, several degrees warmer than the surface water.

Mr. BLATNIK. In short, in the summer months the water at the bottom is cooler than the water at the top of the lake. As the temperatures drop in the wintertime the water at the bottom is actually warmer than the water at the top, which, when reaching 32° or the freezing point, becomes solid form or ice, therefore floats. The bubbles of air help get the current of warm water coming up to keep the cooler water warmed up and thereby melts the ice. Is that briefly the process?

Mr. SNYDER. That is correct.

Mr. McLOSKEY. Have private shippers and companies made any studies to your knowledge with respect to this problem?

Mr. SNYDER. I have no knowledge of studies that they have made. I do know in some special cases private interests do keep some waterways open. But as to studies that have been made, I don't have knowledge of that.

Mr. McLOSKEY. The point I am getting at is that while it is true the flow of commerce would probably help all of us, at the same time the ones who would benefit the most would be the companies themselves; is that not true?

Mr. SNYDER. It seems so.

Mr. McLOSKEY. Has there been any indication that if this thing is feasible at all that they would be willing to spend some money, themselves, to study this? What I am getting at is, what brought this about?

Mr. SNYDER. It seems that it is just another feature of navigation which the Federal Government has chosen to date to support.

Mr. McLosKEY. Of course, you have stated that the Bureau of the Budget is opposed to this.

Mr. SNYDER. The letter of the Secretary of the Army states that: the Bureau of the Budget advises that from the standpoint of the administration's program there is no objection to the submission of this report for the consideration of the committee.

Mr. McLosKEY. I don't believe I have understood these figures. You made reference to some small boat harbor, I think you said an area of about 500 square feet, or an area comparable to that would cost about \$55,000 to keep this open. Is that correct?

Mr. SNYDER. Yes. The measure of the size was given in terms of space for 425 boats. It was not square feet.

Mr. McLosKEY. How large an area was this? Do you have any idea how large an area this was?

Mr. SNYDER. We don't have figures, of course. But just estimating what areas it might take, it would depend on the size of the boats, but it would seem to be from 10 to 20 acres.

Mr. BLATNIK. Are there any other questions?

Mr. McLosKEY. The lakes are closed from about the middle of December to the middle of April?

Mr. SNYDER. That is correct. That is, navigation is closed during that period.

Mr. McLosKEY. Approximately 4 months; is that right?

Mr. SNYDER. Yes.

Mr. McLosKEY. Thank you.

Mr. RYAN. Mr. Chairman.

Mr. BLATNIK. Mr. Ryan.

Mr. RYAN. Mr. Snyder, I would like to ask you a few questions, too. Before, you mentioned the air bubble system used in Sweden has been used for a number of years. Can you explain that system a little bit, how they operate it there? Do they use it over a sizable body of water or is it just around the docks?

Mr. SNYDER. The method of application would be the same. It would be a matter of a compressor forcing compressed air down through pipes fixed to the bottom of the body of water. I think most of the earlier applications were made definitely in restricted areas such as that of keeping the ice from freezing near gates or dams or keeping small channels open around structures. I do not have the details of the Swedish reference here. The reference is to the use on Sweden's great Lake Malar. Only by inference it would seem that that would be more than just a small area.

Mr. RYAN. To your knowledge, is that a sizable body of water?

Mr. SNYDER. The lake itself, I believe, is a sizable body.

Mr. RYAN. Is that connected with another body of water, the same as we have with Lake Erie being a part of the St. Lawrence Seaway?

Mr. SNYDER. I don't know the connecting system.

Mr. RYAN. Do they also use a combination possibly of vessels called icebreakers together with that in order to keep this ice free?

Mr. SNYDER. I don't know about the Swedish application. Certainly it would seem to be that any engineering project of this sort, it would certainly seem logical that icebreakers might be a necessary part of the system. Although on the Great Lakes the icebreakers

are available now, because of the large amount of floating ice, the ice closes in behind the breakers so fast that——

Mr. RYAN. On large bodies of water like Detroit River and Lake St. Clair, which are a half mile wide and 30 miles long, could an ice-breaker do the job there by going back and forth?

Mr. SNYDER. Theoretically they could. I don't think there is any question they could break the ice, but whether the amount of ice flowing in from the lakes would make an insurmountable problem or not, I don't know. However, the Canadians open the St. Lawrence between Quebec City and Montreal each year, as soon as the peak of the winter season is over, they start two or three icebreakers up from the lower section, and they gradually break the channel and float it out to the sea.

They may get half way up and the cold spell in the winter comes along and freezes in behind them. They just go back and start over again.

Mr. RYAN. Do they keep navigation flowing there?

Mr. SNYDER. No, but they open it much earlier than it would be otherwise.

They don't keep it going the full year. As soon as the extreme temperatures are over, they immediately start breaking the channel open. This is for several reasons. Not only for navigation, but also to relieve the matter of ice jams. In other words, when the ice goes out, they have some severe flood problems at times in Montreal. So the icebreaking makes it earlier for the ocean ships to arrive at Montreal. It also reduces their icejamming and flood problem.

Mr. RYAN. It would seem more feasible if this freezing season could be shortened a great deal by possibly the use of a combination of ice-breaker and technological methods.

Mr. SNYDER. I don't think there is any question that it would be a simpler and probably more feasible operation to extend the season rather than to keep it open the year around.

Mr. RYAN. As a matter of fact, some of our ports including Detroit are busier than the ports of New York and other eastern ports.

Some of these ports are busier there than some of the other ports. If that season could be shortened when the ice freezes, that would be an economic benefit to the whole country.

Mr. BLATNIK. Are there any other questions?

Mr. CLAUSEN. Mr. Chairman.

Mr. BLATNIK. Mr. Clausen.

Mr. CLAUSEN. For the edification of some of us from California who are not faced with this problem, can you tell me what the thickness of the ice actually is?

Mr. SNYDER. In the connecting channels, it is up to 2, 3, and 4 feet thick. Of course, out in the lakes themselves, because of the action of the wind, the photographs show that it piles up in floes 20 or 30 feet, sort of like icebergs, 20 or 30 feet above the surface of the water, and that deep below the water. But the solid ice would be a matter of several feet or more.

Mr. CLAUSEN. To your knowledge, has Canada entered into any study of this type?

Mr. SNYDER. Yes. Of course, that is a natural place for it. I don't know about the studies, but they do have the application of air bubbling in the Canadian area.

Mr. CLAUSEN. Would this information be available to us?

Mr. SNYDER. I think so. I don't know why not. The lake survey particularly, we have joint committees with the Canadians. On the study of the St. Lawrence Seaway there is a difficulty if you have two different sets of basic data. So we have coordinating committees working continuously with the Canadian authorities on all sorts of basic data.

Mr. CLAUSEN. Have you checked this out to find out whether or not they have conducted a similar study and whether or not we would be duplicating what they have done?

Mr. SNYDER. I have not. I don't believe it has been done. I know they have made some studies of the St. Lawrence portion of the river. There I believe they studied primarily the keeping of the channel open just by applying heat, in other words, melting it.

Mr. CLAUSEN. Would it be practical to give consideration to a joint study? If it is going to accrue to their benefit, would it be practical for us to be recommending a joint study between the two governments?

Mr. SNYDER. The ordinary body for heading such a study as that, of course, is the International Joint Commission. They deal with any international boundary problems. Of course, this is not necessarily a problem. So whether it should be directed to those channels or not I don't know. Certainly at some stage, whether it is desirable in the preliminary study or not, certainly at some stage, if anything like this ever becomes feasible, it would have to be international in scope.

Mr. CLAUSEN. Actually then, it is your view that in this preliminary study that is now being considered that it would be in our best interest to conduct this study on our own and give consideration to participation in more detail in a latter study?

Mr. SNYDER. I think so. There would still be cooperation on it, regardless of the formal status. There would be still our comparable Canadian group who would know that the study was going on because we would be asking for information. Certainly if they had any ideas, they would be welcome. I don't believe, so far as the success of the study is concerned, that it would make any difference to the preliminary study.

Mr. CLAUSEN. Thank you, Mr. Chairman.

Mr. BLATNIK. Mr. Auchincloss.

Mr. AUCHINCLOSS. I would like to ask this question, Mr. Snyder: You estimate how it would cost \$50,000 to carry on this survey. That is correct, is it not?

Mr. SNYDER. Yes.

Mr. AUCHINCLOSS. Is there any chance of your coming back for \$50,000 more?

Mr. SNYDER. Mr. Anderson says that one thing would be if there were escalation in salaries or something like that. I believe it is safe to say that under existing conditions \$50,000 is supposed to accomplish the objectives of this study, which is merely to collect information and assess its value and make recommendations.

Mr. AUCHINCLOSS. As I understand from what you have said, you think it is remote, that you would not ask for any additional funds for the survey.

Mr. SNYDER. For this specific item; that is correct.

Mr. AUCHINCLOSS. Thank you.

Mr. CRAMER. I think you indicated further that in the event there was sufficient feasibility indicated by the preliminary study that the cost of a further survey would be quite substantial in comparison to this \$50,000.

Mr. SNYDER. I believe that is correct.

Mr. CRAMER. It obviously would have to be.

Mr. SNYDER. Yes, sir.

Mr. CRAMER. Of course, there is no way of estimating what the cost of the actual project would be, although it would be substantially greater than your final survey cost.

Mr. SNYDER. That is correct.

Mr. CRAMER. As I see it, one of the fundamental questions that will have to be decided by the subcommittee and the full committee is the basic question of the undertaking, even through a preliminary survey, the concept that it is the responsibility of the Federal Government for deicing our navigable streams. That is a very interesting question. I have been a member of the committee for 9 years, and it is one of new impression. It is the first time I ever recall a matter of this nature having been brought up. That is the reason I asked the questions I did.

Mr. BLATNIK. If there are no further questions, we have one of our colleagues and coauthors of the bill, Mr. Ashley, of Ohio.

Mr. Snyder and Mr. Anderson, will you stand by for just a few more minutes in case we have any followup questions from the committee members.

We welcome our close friend and able colleague.

STATEMENT OF HON. THOMAS L. ASHLEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OHIO

Mr. ASHLEY. Thank you, Mr. Chairman.

Mr. Chairman, I very much appreciate the opportunity of appearing before this distinguished committee in behalf of a bill which, as I am sure you recall, I introduced nearly 4 years ago. Mr. Chairman, I am here as an unashamed exponent of the St. Lawrence Seaway. I consider its advent, which, as you gentlemen know, opened the world's largest inland waterway to ocean traffic and gave us a new fourth coastline, one of the great chapters in the story of world transportation.

The chairman had a great deal to do with the enactment and the advent of the St. Lawrence Seaway, as did this committee. As I say, I think it is a perfectly remarkable story.

I think before we get down to this specific piece of legislation that it might be interesting just to review what has happened since the advent of the seaway. You can't imagine the economic activity which has been generated throughout the Midwest because of the seaway unless you come to a city such as Toledo, Duluth, or Minneapolis. It is incredible.

We have a port authority that came into being after the seaway was constructed. The State legislature passed enabling legislation and the city of Toledo set up a port authority which is probably as dynamic and vigorous as any in the world. It is a world port authority in many respects. Ten months of the year this port authority has

representatives in other countries of the world, developing commerce, developing exports. This is happening not just in Toledo, Ohio, but in Cleveland, Detroit, Chicago, and throughout the entire Great Lakes area. It is an exciting and dynamic thing which has happened to the heartland of America as a result of the St. Lawrence Seaway.

If we are having balance-of-payments problems, as we are, these problems would be significantly greater were it not for the economic activities that the seaway has generated. There have been problems with the seaway. I think it is understood by you gentlemen on this committee what they have been. Principally, of course, they have been the connecting channels. The idea of the seaway was to have a 27-foot channel from the mouth of the St. Lawrence to Duluth. We have 27 feet in most places, but not all. Going through Detroit, connecting Lake Erie with Lake Michigan, there is bedrock that is 22 feet, not 27. It does not do you any good to have 27 feet on the other side of Detroit. So this has been one of the problems.

It is all well and good to have 27 feet, but it is not the whole answer unless you have ports such as Toledo that also have 27-foot channels. We are now getting harbors of seaway depth. Each year the tonnage becomes greater. Each year the number of foreign-flag ships and the number of U.S.-flag ships that call at the port of Toledo goes up. Each year our tonnage goes up, bulk cargo of every kind imaginable.

This is the story of what has happened, but there is a problem, and here we get to the heart of this bill. The further problem, of course, is that we are trying to do a year's work in 8 months because the shipping season on the Great Lakes is 8 months and not 12. Gentlemen, just imagine what would happen if it proved feasible to open up shipping on the Great Lakes on a 12-months basis.

Now, the Federal Government, of course, has authorized projects such as in Toledo on the basis of a cost-benefit ratio, I am talking of a harbor-deepening project, 1.75 to 1. It is a good ratio. That is on the basis of 8 months' shipping in a year's time. If the season were extended to 12 months, it is perfectly clear what would happen to the benefit side of the ratio in all of these projects, the myriad projects that have won approval on their own merits in the years past on the basis of the 8-month shipping season.

Some questions, Mr. Chairman, have been asked with respect to Canada. I think, Mr. Clausen asked one.

Mr. CLAUSEN. Yes.

Mr. ASHLEY. This might be of particular interest to you: The Canadians have been living with the same problem as we Americans on our side of the Great Lakes. They have approached the problem and gotten some results. I think that this will be of interest.

I have a communication, which it might be well, Mr. Chairman, with your permission, to have inserted in the record. It is from the Industrial and Trade Bureau of Greater Quebec on the subject of winter navigation. The letter points out what has been done by the port of Quebec in this regard. They have approached it largely by getting reinforced ships and simply keeping a channel open. We are speaking now between Quebec City and the ports of the Gulf of St. Lawrence on the north shore.

Here is what is interesting. The tonnage of goods handled in the port of Quebec during last winter represents an increase of 372 percent as compared with 1957-58. This is as a direct result of winter

navigation. In the winter of 1957-58 the tonnage was 141,000; in 1958-59, and this is when they began to get in Scandinavian ships to keep their channels open, it went to 233,000. In 1960 it was 429,000. In 1961-62 it was 526,000, an increase of 372 percent over those years. This is evidence that the Canadians are facing this problem and they are doing something for it and it is paying off.

I think the communication which accompanies the letter is of interest. It is on this very subject. I think it might be of interest and might be appropriately a part of the record, Mr. Chairman.

Mr. BLATNIK. We would like to keep it in the files without duplicating the whole thing in the proceedings. We will keep it for the information of the committee.

Mr. ASHLEY. Mr. Chairman, this is essentially all that I have in the way of a statement. I might just conclude by saying that the country has an investment of \$140 million in the St. Lawrence Seaway. This \$140 million is being repaid by tolls. It has been said that the tolls should be raised because repayment is not fast enough. I would submit to this committee that certainly it is worth \$50,000 to find out if repayment can't be faster, not by raising tolls but by extending the shipping season from 8 months to 12 months.

Mr. BLATNIK. We ship iron ore from the upper Lakes down to the ports of Toledo and Buffalo. The investment is much larger than the \$140 million when you take the whole Great Lakes complex. You take the channel deepening and the harbor improvements. I would estimate that within the last 10 or 12 years there is a Federal investment of one-third of a billion dollars in that whole waterway navigation system, the largest inland waterway in the world.

Mr. ASHLEY. Not all that by any means, Mr. Chairman, is governmental.

Mr. BLATNIK. You have your local, municipal projects.

Mr. ASHLEY. We have tens of millions of dollars of new construction along our waterfront in Toledo as a result of the seaway.

Mr. BLATNIK. We thank the gentleman very much.

Mr. CRAMER. Assuming the project were proved feasible, and I think it has been testified to pretty clearly that the cost of a deicing program, although you can't fix the figure, would be quite substantial, you mentioned existing tolls, do you think the cost of deicing could be borne by the users by increasing tolls? Do you think the Federal Government should pay the bill? Do you think Canada should share? What is your thought concerning the financing of the project?

Mr. ASHLEY. I think that the Federal Government under the Constitution has a responsibility with respect to interstate commerce and navigable waterways. Certainly, historically it has maintained channels and communications. This is for the welfare and benefit of the economy of the entire country. Of course, I am more liberal in these matters than some. I think that the benefits are sufficiently widespread that they could be absorbed, the cost could be absorbed as well as the benefits, by the entire citizenry.

Mr. CRAMER. As I understand it, the present waterway was financed two-thirds by Canada and one-third by the United States, and the \$140 million is being amortized by tolls. Is that correct?

Mr. ASHLEY. That is right.

Mr. CRAMER. Then the project itself is paid for through amortization by tolls. Is there any reason why a long-range plan for making

it usable for 12 instead of 8 months should not be paid for in the same method?

Mr. ASHLEY. No, I think this might well be considered part of the seaway.

Mr. CRAMER. If it is then, is there any reason to deviate from the previous method of paying for it?

Mr. ASHLEY. I must say, Mr. Cramer, that there is a question of whether this would be part of the seaway or whether this would be simply an aid to navigation. If it is part of the seaway, then perhaps you are right, it should be financed in the same fashion through tolls. If it is to be regarded as an aid to navigation, then it would seem to me that it should be paid for accordingly.

Mr. CRAMER. Canada pays two-thirds of the share of the initial project. Do you think Canada should be consulted with regard to the cost-sharing of this project?

Mr. ASHLEY. I am sure that if the undertaking proves feasible, that there would be consultation and cooperation.

Mr. CRAMER. I did not raise the question, and perhaps unfortunately, with the Corps of Engineers, but I think it would be well to find out whether there would be a cooperative effort made with Canada in trying to solve this problem.

Mr. ASHLEY. Of course, the first question and the one we are concerned with in this legislation, is simply the question of feasibility. This is a question for the United States to determine in the first instance before we get to the question of whether or not we would want to join with Canada.

Mr. CLAUSEN. I believe that was the question I asked of the previous witness.

Mr. BLATNIK. I thank the gentleman.

We have another colleague, also from Ohio, the distinguished Congressman from Cleveland, Mr. Michael Feighan. Mr. Feighan, we welcome you to the committee.

Mr. FEIGHAN. Thank you.

STATEMENT OF HON. MICHAEL A. FEIGHAN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF OHIO

Mr. FEIGHAN. Thank you, Mr. Chairman and members of the committee. I will be very brief. I just wish to state that I agree with the statements made by the previous speaker, our colleague from Ohio. I urge you to approve the bill or one similar to mine, H.R. 481, to provide for a study of the feasibility of making the Great Lakes and the St. Lawrence Seaway navigable during the winter.

I understand, and I believe you do too, that it probably would afford the United States an economic gain and create greater employment by increased trade in the event navigation could be continued during the winter months. Since this is just a study, I think it is advisable to determine whether or not the project would be feasible economically.

I hope the committee will look favorably upon this request.

Mr. BLATNIK. I appreciate the expression of strong support by the gentleman. The Chair knows well that over a period of the many, many years we have been here the strong and active support Mr. Feighan has always given to the further development and utilization of the great navigational bodies of water. We appreciate your appearance, Mr. Feighan.

You have, of course, permission to revise and extend your remarks.

Mr. FEIGHAN. Thank you.

Mr. BLATNIK. At this point, I will give unanimous consent to other members who have asked permission to extend their remarks. We have communications by Mr. Reuss and by Mr. Vanik and others, and Mr. Rostenkowski and other members have also asked permission, which has been extended.

(The communications follow:)

TESTIMONY OF HON. DAN ROSTENKOWSKI, OF ILLINOIS

Mr. Chairman and members of this subcommittee I greatly appreciate this opportunity to appear before you in support of my bill, H.R. 1125, and other similar legislation, which provides for an investigation and study of means of making the Great Lakes and the St. Lawrence Seaway available for navigation during the entire year. The bill directs the Chief of Engineers, Department of the Army, under the direction of the Secretary of the Army, to make a full and complete investigation and study of waterway deicing systems, for the purpose of determining the practicability, means, and economic justification for providing year-round navigation on the Great Lakes, including connecting channels and harbors, and the St. Lawrence Seaway by eliminating ice conditions to the extent necessary.

With the opening of the St. Lawrence Seaway we have exposed the interior of our United States to direct contact with the trade centers of the world. This move accentuates the progress in economic advancement for our Nation and the free nations of the world. Through the establishment of inner ports in the great cities of the Midwest, export-import trade with other nations will take on a new meaning. By providing a direct route of shipping from the interior of the United States to all points of the globe, we can realize a reduction in transportation costs of shipping merchandise and staple commodities. These savings could be passed on to the consumer making goods for sale more attractive, thereby increasing the turnover of merchandise, which in turn invigorates the economy of the land. It will help to increase employment, thereby making our Nation and its citizenry and the citizenry of the free world more self-sustaining. This reaction will assure future generations of better opportunities for themselves in making their way through life.

However, to gain full benefits from this progressive move we must provide for year-round entry to the inner ports. To operate on a seasonable basis only detracts from the potential that can be realized from a constant flow of movement. It is for this reason that we must attack the problem of icing conditions on the Great Lakes during the winter months so that free movement can be maintained without interruption.

Considering the vast expanse of water involved it may appear to be an insurmountable task. However, this same problem faced the Scandinavian countries and they have been successful in coping with it. It is true that their problems were confined to smaller areas of water which is easier to control, but it proves that it is not an impossible task.

The way to attack it is through an investigation and study as proposed by the legislation now being considered. The Corps of Engineers has proven ability to undertake this study. I am confident that a solution can be found to make the Great Lakes and the St. Lawrence Seaway available for navigation during the entire year. We should not delay any longer in solving this problem, therefore I request that favorable consideration be given to the legislation before you.

STATEMENT OF REPRESENTATIVE HENRY S. REUSS OF WISCONSIN

Mr. Chairman, I appreciate the opportunity afforded me to present my views to this committee. As the sponsor of an identical bill, H.R. 1117, I am here to urge passage of H.R. 2123 to provide for a study of making the Great Lakes and the St. Lawrence Seaway available for year-round navigation.

In view of the long distances involved, any proposal to keep the Great Lakes and the seaway open during the 4 to 4½ months when they would be closed by ice undoubtedly faces great difficulties. But the reward for success would also be very great.

Navigation on the Great Lakes and in the seaway is already of great importance to the economics of the contiguous States. Deicing the channels would obviously increase the capacity of that water system by half, allowing it to realize its full potential. The increase in use of the system would surely increase by more than 50 percent, thereby conferring a wide variety of added economic benefits on the Great Lakes States. As it is now, some shippers are deterred from using Great Lakes ports by the dislocations that are frequently caused by the necessity of shifting to other routes for a third of the year. In addition, costly port facilities stand idle during the ice season and special efforts are required to maintain relationships between shippers, ports and service companies.

The continuous availability of the Great Lakes system would, of course, also make a contribution to the national defense.

A study to compile accurate and detailed information on the problem may point the way to the development of the new, economical techniques that will be needed to eventually garner the enormous benefits of deicing the Great Lakes and the seaway. The proposed investment of \$50,000 is well worthwhile.

STATEMENT OF CONGRESSMAN CHARLES A. VANIK OF OHIO

Mr. Chairman, I want to take this opportunity to support legislation to provide for an investigation and study of means of making the Great Lakes and the St. Lawrence Seaway available for navigation during the entire year. I support H.R. 2123, which is exactly similar to H.R. 1980 which I introduced earlier this year.

Although the Great Lakes and their tributaries have a total water surface area of about 95,000 square miles, of which 60,950 square miles are in the United States, the total distance of navigable water from Duluth to the St. Lawrence is only 1,216 miles. A considerable portion of this trade route is already open throughout the winter, particularly the deepwater sections.

Lake Michigan is open throughout the winter—the Chesapeake & Ohio Railroad operates a train ferry all winter on Lake Michigan between Ludington, Mich., and Milwaukee, Wis., and Manitowac, Wis., to Kewaunee, Wis. It is my understanding that these railroad ferries have operated for many years and have never suspended service because of ice or inclement weather.

If all-year navigation is possible on Lake Michigan, there is reason to believe that navigation can be extended to the other Great Lakes, particularly since they have been substantially ice-free during certain mild winters.

The shallower waters of Lake Erie, which freeze over more rapidly, constitute the principal bottleneck to winter shipping throughout the Great Lakes. The basis problem of year-round navigation consists in maintaining ice-free channels in this lake and its harbors. Although the Great Lakes' navigation routes from the St. Lawrence to Duluth or Chicago total approximately 1,216 miles, the problem of ice-restricted channels should be reduced to some 300 to 400 miles of channel, principally in Lake Erie and the St. Lawrence River west of Montreal.

In May 1962, Admiral H. Thiele, Coast Guard engineer in chief, reported on a thorough study of weather conditions, ice formation, icebreaking potentialities ship design, and other considerations relating to year-round shipping on the Great Lakes. The admiral's report pointed out that the Great Lakes' open water navigation extends from April 15 to December 15, that relatively few commercial vessels, during the 4 months of winter, ply the lakes and the connecting channels and that no traffic moves along the St. Lawrence Seaway. "The situation exists," he said, "not because navigation is impossible within the present state of the art, but because of tradition, economic requirements, and the lack of modern equipment to cope with the ice problem." The admiral pointed out that ice thickness may reach 50 inches in some areas. In most, however, it ranges only from 6 to 18 inches. He further pointed out that, during the winter of 1958-59 the Coast

Guard's aircraft, surface vessels, and shore stations made a complete survey of ice formation and breakup.

During the last 15 years, according to Admiral Thiele, the Coast Guard cutter *Mackinaw* has been able to plow thorough all ice barriers. This cannot be done by the customary lake freighters, however, with their shallow draft and blunt bows. Admiral Thiele recommended the following solutions:

"More consistent and thorough ice reporting system.

"Larger fleet of icebreakers to be of service over the entire lake area.

"Change in design of Great Lakes ships 'to permit all-year operation without excessive damage and uneconomically overpowered propulsion plants.'

"Improved navigation system to provide guidance in unbuoyed channels.

"Compressed air bubbler systems to prevent ice formation in locks and dock areas.

"Deicing devices on all mechanical equipment ashore and on ships.

"Ice diversion jetties and changes in some channels in the Soo-Whitefish Bay area and along the St. Lawrence Bay."

It seems to me, Mr. Chairman, that the survey proposed by this legislation would serve a tremendous economic benefit to the Great Lakes region and to the entire country. The interruption in Great Lakes' commerce resulting from a suspension of shipping is difficult to calculate. The fact that this commerce must be suspended or diverted during the 4-month period of closing detracts from the suitability of Great Lakes' commerce throughout the year and favors those lanes of commerce and those ports which are not confronted with this problem. The St. Lawrence Seaway and the Great Lakes must be made navigable throughout the year in order to utilize the full potential or existing resources.

I urge a favorable report on this legislation and commend the chairman and this committee for considering this legislation.

Mr. BLATNIK. The Chair would like to hold a 2- or 3-minute executive session. So will the witnesses and press people leave the room?

We appreciate your presence this morning.

(Whereupon, at 11:20 a.m., the subcommittee proceeded to executive session.)

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