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MID-STATE RECLAMATION PROJECT,
NEBRASKA

GOVERNMENT
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HEARING
BEFORE THE
SUBCOMMITTEE ON
IRRIGATION AND RECLAMATION
OF THE
COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
UNITED STATES SENATE
EIGHTY-SEVENTH CONGRESS
FIRST SESSION
ON
S. 970

A BILL TO AUTHORIZE THE SECRETARY OF THE INTERIOR
TO CONSTRUCT, OPERATE, AND MAINTAIN THE MID-STATE
RECLAMATION PROJECT, NEBRASKA, AND FOR OTHER
PURPOSES

MAY 25, 1961

Printed for the use of the
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CONTENTS

	Page
S. 970.....	1
Agency reports:.....	
Bureau of the Budget.....	3
Department of the Interior.....	2

STATEMENTS

Boenke, Edward, president, Grand Island (Nebr.) Chamber of Commerce.....	35
Bureau of Reclamation.....	11
Bureau of Sports and Fisheries.....	25
Butler, J. S., member, board of directors, Johnson Lakes Development, Inc.....	56
City of Grand Island, Nebr.....	34
Cunningham, Hon. Glenn, a Representative in Congress from the State of Nebraska.....	7
Curtis, Hon. Carl T., a U.S. Senator from the State of Nebraska.....	3
Dominy, Floyd E., Commissioner of Reclamation, Department of the Interior.....	9
Hehnke, William, president, Grand Island (Nebr.) Industrial Foundation, Inc.....	35
Holmburg, Arthur, Buffalo County, Sheldon, Nebr.....	54
Hruska, Hon. Roman L., a U.S. Senator from the State of Nebraska.....	6
Jones, Dan S., Jr., director, Nebraska Department of Water Resources.....	26
Johnson, Arthur C., president, Nebraska Mid-State Reclamation District.....	31
Lauritzen, Walter P., attorney for Mid-State Reclamation District.....	43
Martin, Hon. David T., a Representative in Congress from the State of Nebraska.....	8
Martin, John C., secretary-treasurer and manager, Grand Island Production Credit Association.....	51
Mettenbrink, Robert L., Grand Island, Hall County, Nebr.....	55
Pierce, Bill, irrigation engineer, Kearney, Buffalo County, Nebr.....	58
Schutz, Henry, supervisor, Merrick County Soil Conservation District and Merrick County Noxious Weed District.....	53
Welsh, William E., secretary-manager, National Reclamation Association.....	40

CORRESPONDENCE

Billesbach, Matt, president, Central City (Nebr.) Chamber of Commerce: Letter, dated May 18, 1961, to Senator Anderson.....	37
Bolin, Mark, Gibson, Nebr.: Letter, dated May 20, 1961, to Senator Anderson.....	43
Lundy, Ray E., city manager, city of Kearney, Nebr.: Letter, dated May 17, 1961, to Senator Anderson.....	37
Meyer, Adolph F., consulting and design engineer for mid-State project: Letter, dated April 25, 1958, to R. W. Beck & Associates.....	57
Morrison, Frank B., Governor of Nebraska: Letter to Subcommittee on Irrigation and Reclamation.....	26
Peterson, C. Petrus, executive director, Nebraska Reclamation Association: Letter, dated May 22, 1961, to Senator Anderson.....	5
Phelps, F. E., commissioner of utilities, city of Grand Island, Nebr.: Letter, dated May 17, 1961, to Senator Anderson, containing a statement.....	34
Reed, Eugene C., director, University of Nebraska Conservation and Survey Division: Letter, dated May 16, 1961, to Senator Anderson.....	32
St. John, S. S., president, Kearney (Nebr.) Chamber of Commerce: Letter, dated May 15, 1961, to Senator Anderson.....	38
Steen, M. O., director, Nebraska Game Forestation and Parks Commission: Telegram, dated May 22, 1961, to Senator Anderson.....	34

IV

CONTENTS

RESOLUTIONS

	Page
Nebraska Legislative Resolution 14.....	4
Nebraska Reclamation Association	
Resolution No. 4: Authorization and appropriations for continued reclamation program.....	41
Resolution No. 8: Basinwide development and financing.....	42
Resolution No. 10: Cooperation with Nebraska mid-State project....	6

MID-STATE RECLAMATION PROJECT, NEBRASKA

THURSDAY, MAY 25, 1961

U.S. SENATE,
SUBCOMMITTEE ON IRRIGATION AND RECLAMATION
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to call, at 10 a.m. in room 3110, Senate Office Building, Senator Quentin N. Burdick, presiding.

Present: Senators Quentin N. Burdick, North Dakota; J. J. Hickey, Wyoming; Gordon Allott, Colorado; Hiram L. Fong, Hawaii; and Jack Miller, Iowa.

Senator BURDICK. The subcommittee will be in order.

We have before us this morning consideration of S. 970 a bill to provide for the construction of the mid-State reclamation project, Nebraska, as a unit of the Missouri River Basin project.

(S. 970 and departmental reports thereon follow:)

[S. 970, 87th Cong., 1st sess.]

A BILL To authorize the Secretary of the Interior to construct, operate, and maintain the Mid-State reclamation project, Nebraska, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Secretary of the Interior is hereby authorized to construct, operate, and maintain in accordance with the Federal reclamation laws (Act of June 17, 1902 (32 Stat. 388), and Acts amendatory thereof or supplementary thereto) the Mid-State Federal reclamation project, Nebraska, for the principal purposes of furnishing a surface irrigation water supply for approximately one hundred and forty thousand acres of land, aiding in the replenishment of the groundwater supply of the area for domestic and agricultural use, controlling floods, conserving and developing fish and wildlife, and producing hydroelectric power. The principal works of the project shall consist of a diversion dam on the Platte River, a main supply canal, an interconnected reservoir system, hydroelectric power facilities, wasteways, pumps, drains, canals, laterals, distribution facilities, and related works, including, on a nonreimbursable basis, minimum basic recreational facilities.

SEC. 2. The Mid-State project shall be integrated, physically and financially, with the other Federal works in the Missouri River Basin constructed or authorized to be constructed under the comprehensive plans approved by section 9 of the Act of December 22, 1944 (58 Stat. 891), as amended and supplemented, and shall be a unit of the Missouri River Basin project therein approved and authorized, and the authorization for the appropriation of funds for the accomplishment of the works to be undertaken by the Secretary of the Interior under said authority shall extend to and include funds for the construction of the Mid-State project.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., May 24, 1961.

HON CLINTON P. ANDEBSON,
*Chairman, Committee on Interior and Insular Affairs,
U.S. Senate, Washington, D.C.*

DEAR SENATOR ANDEBSON: This responds to your request for the views of this Department on S. 970, a bill to authorize the Secretary of the Interior to construct, operate, and maintain the mid-State reclamation project, Nebraska, and for other purposes.

We recommend the enactment of this measure.

It is the purpose of S. 970 to include the Nebraska mid-State unit in the Missouri River Basin project so that the construction, operation and maintenance of the proposed mid-State development may be undertaken by this Department and be integrated, physically and financially, with the other Federal works of the Missouri River Basin project.

Our legislative reports to your committee dated April 24, 1959, and April 20, 1960, respectively, on S. 1529 and S. 2640, 86th Congress, previous proposals regarding the development, supported the construction of a multiple-purpose project to serve the lands within the boundaries of the Nebraska Mid-State Reclamation District. In those legislative reports and that of June 19, 1958, on S. 3297, 85th Congress, we commented in detail on the physical plan described in the mid-State project report, dated April 25, 1958, which was prepared for the district by consulting engineers employed by it.

Representatives of this Department have had opportunity over a period of years to confer with the district and its consulting engineers regarding the project plan, and our general agreement upon the physical plan of the project was confirmed by the testimony of the Department's witnesses in the hearing conducted by your committee during the second session of the 86th Congress on S. 2640.

Should the Congress enact legislation along the lines of S. 970, we would expect to construct the unit substantially in accordance with the physical plan in the project report, except as detailed studies in connection with the preparation of a definite plan report, which is to be undertaken after authorization, might indicate the desirability of making minor modifications in any of the project features.

There was attached as part of the legislative report on S. 2640, 86th Congress, dated April 20, 1960, a financial evaluation statement on the mid-State development as a proposed unit of the Missouri River Basin project. That document remains a current valid statement of project analysis and findings. Within the limitations of the basic data available, the same criteria were used in the statement as those which are normally used by the Bureau of Reclamation in the evaluation of the economic justification and financial feasibility of units of the Missouri River Basin project.

The total estimated cost of the project is \$81,467,000, which is the same as that reported in our letter on S. 2640, 86th Congress. Water user payments and conservancy district revenues will pay all operation, maintenance, and replacement costs. Within a 40-year period, \$30,763,800, or 59 percent, of the nearly \$52 million irrigation allocation will be repaid by the district. The balance of about \$21,200,000 would, in the event repayment arrangements with the water users are not extended beyond the end of the 40-year contract period, be recovered from basinwide power revenues.

As with all other irrigation units of the Missouri River Basin project, the repayment arrangements with the district will be reanalyzed when the 40-year repayment contract period ends.

As to the effect of authorization and construction of the mid-State unit on Missouri River Basin project power revenues, we offer this information:

The most recent economic analysis (December 1958) of the authorized Missouri River Basin project indicates that surplus power revenues will be available in sufficient amounts to retire this additional obligation. The study shows that the last power facility will be in operation by the year 2000 and that the commercial power investment will be paid out by the year 2022. Thereafter, some \$32 million annually of net power revenues will be available to assist in the repayment of the irrigation costs of the Missouri River Basin project units.

The Bureau of the Budget has advised that there is no objection to the presentation of this report from the standpoint of the administration's program.

Sincerely yours,

JAMES K. CARR,
Under Secretary of the Interior.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., May 24, 1961.

HON. CLINTON P. ANDERSON,
*Chairman, Committee on Interior and Insular Affairs,
U.S. Senate, Washington, D.C.*

MY DEAR MR. CHAIRMAN: This is in reply to your letter of February 17, 1961, requesting the views of the Bureau of the Budget on S. 970, a bill "To authorize the Secretary of the Interior to construct, operate, and maintain the mid-State reclamation project, Nebraska, and for other purposes."

The purpose of the bill is clearly stated in its title.

We note that the economic justification of the project is based on the inclusion of fish and wildlife and recreation benefits in excess of the specific costs incurred for these purposes. We also note that the proposed allocation of project costs to fish and wildlife exceeds the specific costs to be incurred for that purpose. In this connection, the President in his natural resources message instructed the Bureau of the Budget to reevaluate current standards for appraising the feasibility of water resources projects. A review of current standards is currently underway, pursuant to the President's instructions, and is scheduled for completion in June 1961. We would expect that, prior to a request for funds to initiate construction on the Nebraska mid-State project, the Secretary of the Interior would reallocate the costs of the project in accordance with the evaluation standards for water resources to be established following completion of this review.

Accordingly, the Bureau of the Budget would have no objection to the enactment of S. 970.

Sincerely yours,

PHILLIP S. HUGHES,
Assistant Director for Legislative Reference.

Senator BURDICK. This proposal has been before the committee since at least 1955, in various forms, finally being resolved into a strictly Bureau of Reclamation project by the introduction of S. 2640 in the 86th Congress.

Hearings were held on this measure on May 20, 1960, and I will include the transcript of those hearings as part of the record by reference.

Inasmuch as the subject has been thoroughly aired at previous hearings I would suggest that wherever possible testimony be submitted in the form of written statements. Oral testimony, to the extent possible, should be confined to new material that may have developed since last year.

The sponsors of the measure, Senators Curtis and Hruska, are present here today, and I welcome them and whatever testimony they desire to present at this time.

STATEMENT OF HON. CARL T. CURTIS, A U.S. SENATOR FROM THE STATE OF NEBRASKA

Senator CURTIS. Thank you, Mr. Chairman.

First, may I ask that should my colleague not be able to get here or any other of the delegation who may want to submit a statement, that they may do so.

Senator BURDICK. Without objection.

Senator CURTIS. The sponsors of the mid-State reclamation project and the members of the Nebraska delegation who appear this morning deeply appreciate the courtesy afforded by this committee.

We have met with this committee in years past to urge authorization of the mid-State project. Today we have expert witnesses who can afford this committee a detailed explanation of every aspect of the project, so I will confine my remarks to a general statement.

The mid-State project is well conceived and well engineered. Under Nebraska law its sponsors formed an irrigation district several years ago. As a result, the district has contributed very substantial amounts of its own money to the engineering development of this project. In my time in Congress I have never before sponsored the authorization of an irrigation development which has had the years of thorough study and preparation preceding this presentation today.

One of Nebraska's outstanding resources is its supply of ground water. To preserve it, we must be vigilant to hold runoff water and return a portion of it to this supply. Dr. E. C. Reed, director of the conservation and survey division of the University of Nebraska, and a nationally recognized water expert, recently reaffirmed this need in a speech before the faculty of our university school of agriculture. He pointed out that both protection and development of this resource make necessary the constant recharging of ground water by both natural and artificial means.

In this, the mid-State project is unique. Its geographical location and its system of reservoirs can contribute perhaps more to the recharging of our ground water than any system in our State.

A few weeks ago I asked the Bureau of Reclamation to tabulate for me the irrigation costs and percentage repaid by water users on 16 existing projects in Missouri Basin States. Average repayment by water users for irrigation costs on these 16 is 21.1 percent. Five of these 16 projects are in Nebraska and the average repayment of these 5 is 28.4 percent.

The bill before your committee today, if enacted, will provide a repayment by water users of 59.2 percent or almost 60 percent, of the irrigation costs of the mid-State project.

I will conclude my appearance so that more expert witnesses can testify in support of this authorization. I urge this committee to report favorably the authority for construction of the mid-State multipurpose project.

Mr. Chairman, I would like to have printed in the record a certified copy of Legislative Resolution No. 14 of the Nebraska Legislature, endorsing this project; also a letter from C. Petrus Peterson, executive director of the Nebraska Reclamation Association and former national president of the reclamation association, together with a resolution of the Nebraska Reclamation Association endorsing this project.

Senator BURDICK. Without objection, it is so ordered.

(The exhibits referred to follow :)

NEBRASKA LEGISLATIVE RESOLUTION 14

Whereas the Nebraska Legislature, in 1947 unanimously approved the Nebraska Reclamation Act which permitted the formation and organization of the 550,000-acre Nebraska Mid-State Reclamation District in Buffalo, Hall, and Merrick Counties, to further develop proposals of the multipurpose mid-State project to utilize a portion of the water of the Platte River, now flowing unused to the Gulf of Mexico, and

Whereas the greatest economic loss to our State each year is the water we still allow to escape either unused or just partially used, and

Whereas the multipurpose Nebraska mid-State reclamation project is designed to provide (1) surface irrigation for 140,000 acres of croplands, (2) replenishment and stabilization of the declining ground water supply of 5,200 irrigation wells and for cities, villages, and farms in the district area, (3) flood control protection, (4) production of hydroelectric power, (5) conservation of fish and wildlife, and (6) development of recreation facilities, all of which will be beneficial to the 60,000 citizens and future generations in the district area and contribute to further development of industry and stabilization of the economy of the State of Nebraska, and

Whereas there is now pending before the 87th Congress, Senate bill 970; H.R. 3957, H.R. 4337, and H.R. 4598, which provide for authorization of construction of the mid-State project by the Secretary of Interior, under Federal reclamation law, as a unit of the Missouri River Basin project; and

Whereas the State of Nebraska, through its legislature and officials, has continuously cooperated with and supported the mid-State project proposals and the construction of this development for the greater benefit of the citizens of Nebraska and the United States, and

Whereas legislation for this purpose has been introduced in the Congress of the United States each year since 1953: Now, therefore, be it

Resolved by the members of the Nebraska Legislature in 72d session assembled:

1. That the legislature memorializes the 87th Congress and the respective Interior Committees thereof to support the proposals of the Bureau of Reclamation for the \$81 million mid-State project and approve the above legislation for its authorization of construction.

2. That copies of this resolution, suitably engrossed, be transmitted by the clerk of the legislature to Hon. Clinton P. Anderson, chairman of the Senate Interior Subcommittee on Irrigation and Reclamation and Hon. Walter Rogers, chairman of the House Interior Subcommittee on Irrigation and Reclamation and to each Member from Nebraska in the Senate of the United States and in the House of Representatives of the United States.

DWIGHT W. BURNLEY,
President of the Legislature.

I, Hugo F. Srb, hereby certify that the foregoing is a true and correct copy of Legislative Resolution 14, which was passed by the Legislature of Nebraska in 72d regular session on the 24th day of March 1961.

HUGO F. SRB,
Clerk of the Legislature.

NEBRASKA RECLAMATION ASSOCIATION,
Lincoln, Nebr., May 22, 1961.

HON. CLINTON P. ANDERSON,
Senate Office Building, Washington, D.C.

DEAR SENATOR ANDERSON: I have requested Senator Carl Curtis to transmit to you and your committee, copy of the resolution of Nebraska Reclamation Association with reference to Nebraska Mid-State Reclamation District, adopted at our annual convention in 1960.

I am serving as Nebraska director on the board of directors of the National Reclamation Association and I also had the privilege of sponsoring the Nebraska Reclamation Act of 1947 which was enacted for the specific purpose of promoting the mid-State projects development.

This project has been pending for a number of years. I regard it as one of the most beneficial projects for our State. When in operation this district will do two important things: first, it will store water for irrigation purposes and secondly, it will be very beneficial in recharging our ground-water supply from which our pump irrigators are withdrawing large amounts annually. I cannot urge too strongly the importance of the project to our area.

With sincere personal regards, I am,

Yours truly,

C. PETRUS PETERSON,
Executive Director, Nebraska Reclamation Association.

NEBRASKA RECLAMATION ASSOCIATION

RESOLUTION No. 10—COOPERATION WITH NEBRASKA MID-STATE PROJECT

Whereas the primary purpose of the Nebraska Reclamation Association is to encourage, promote and support the conservation, utilization and development of the land and water resources of Nebraska and these United States, and

Whereas the Nebraska Mid-State Reclamation District, sponsor of the multipurpose mid-State project, has, since 1953, through legislation, sought the cooperation of Congress and the assistance of the U.S. Government and its agencies in the financing and the construction of the project on a local basis, and

Whereas hearings on the mid-State project proposals and legislation were held by the respective Interior Committees of Congress in Grand Island in 1955, and in Washington, D.C., in 1958 and 1959 without success, and

Whereas the district, by resolution of its board of directors in July 1959, petitioned the Congress to designate the mid-State project, and its proposals, as a unit and integral part, both physically and financially, of the Missouri River Basin project and to authorize the Secretary of Interior to construct the project under Federal reclamation laws, and

Whereas (1) H.R. 8985 and S. 2640 were introduced in Congress in September 1959 for this purpose, (2) the U.S. Bureau of Reclamation, in January 1960, completed its "Economic and Financial Evaluation Statement of the mid-State project," which the Secretary of Interior approved and transmitted to Congress in April 1960, and (3) on which, in May 1960, the House and Senate Interior Committees held hearings without completing action prior to the adjournment of the 86th Congress: now be it

Resolved, That the Nebraska Reclamation Association hereby urge the Congress, and all interested Federal agencies, to support the proposals of the Bureau of Reclamation, such being in conformity with present reclamation laws and policies, for the requirements of the Nebraska Mid-State Reclamation District and to expedite the approval of 1961 legislation for the authorization of construction of the multipurpose mid-State project, as proposed.

Senator BURDICK. Thank you, Senator.
Senator Hruska.

**STATEMENT OF HON. ROMAN L. HRUSKA, A U.S. SENATOR FROM
THE STATE OF NEBRASKA**

Senator HRUSKA. Mr. Chairman and members of this committee, it is my pleasure again this morning to appear before this committee on behalf of the mid-State reclamation project. I know that you are going to have a good deal of testimony on its technical aspects, on its engineering aspects. As this testimony unfolds, I am sure you will be impressed by the careful planning that has gone into this matter. There has been a very proper and suitable education and understanding gained by the people of that district. This was reflected by the very favorable vote in 1957, when the life of the district had to be renewed by popular election. There was a margin of about 5 to 1 in that election. During the years that it took to develop this project and plan it, over \$1 million was raised by these people for the purpose of making that work possible. The 1958 survey which was taken indicated and showed that owners of 113,000 acres of land signed letters of intent to obtain project water service.

The records show that there is enough gravity water supply for about 145,000. This is in addition to the feature of this project which will firm up the underground water supply for many well irrigators in that area. This is very important, because all of us know—and I do believe one of the fine features of this bill and this proposal—that it is taking timely steps by way of precaution to insure the continued

adequacy of the underground water supply. The engineering and the technical aspects of this project have not only been checked but they have been rechecked. They are carefully done. Again, in conclusion, I want to say that I do believe that this committee will be very impressed by the testimony which will be forthcoming from those who are acquainted with those aspects of the situation. I am glad to appear here as further evidence, Mr. Chairman, of the unanimity, the virtual unanimity, of the populace, there, of the leaders, and of the officials in my State and in this particular area in favor of this proposal.

Senator BURDICK. Thank you, Senator, for a fine statement.

Senator HRUSKA. Thank you.

Senator BURDICK. The next witness is Congressman Glenn Cunningham.

It is certainly a pleasure to welcome one of my old colleagues from the House Interior Committee to this side.

STATEMENT OF HON. GLENN CUNNINGHAM, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEBRASKA

Representative CUNNINGHAM. Thank, you, Mr. Chairman. You are very kind.

Mr. Chairman and members of the committee, I am a member of the Interior Committee on the other side. I am quite familiar with this project. I think of all of the projects I have listened to that it is one of the finest engineered projects we have had before our committee.

I want to reemphasize what Senator Hruska mentioned, the fact that these people that are concerned and interested in this project have, on their own initiative, taxed themselves over a million dollars to carry on the work, the preliminary work, that is necessary to bring this about. They have engaged their own engineers and their engineers have done an excellent job. The people out there are not looking for everything to come out of Washington. As I said, they did express their keen interest through the fact that they have spent over a million dollars of their own money in promoting this project. The important thing about this project is that in this three-county area there has been in the past a very fine underground water supply. Nebraska has been fortunate in that. But with the many irrigation wells which these people have erected and invested their money in, they have to have this project in order to replenish the underground water supply. That is the main concern of people interested in this project. With tremendous pumping of water through these wells, our engineers state that in the foreseeable future the underground supply might be depleted.

This would be ruinous to a huge productive area in the midcentral area of the State of Nebraska. So we do hope that you will give this serious consideration in view of the fact that we do believe it is a very worthwhile project and it is a very necessary project. The fact that these people have spent so much money of their own indicates that they are very seriously concerned about the problem.

As I said in my service in the same Interior Committee in the other body, I have never seen a project that has been as well handled and prepared and planned as this one.

We had the bill up last year over there, but there were some differences in the way the Mid-State proposal was presented in conformity with existing rules and regulations and matters of policy in the Bureau of Reclamation. Those things, to the best of my knowledge, have been resolved. This has been proposed as a part of the Missouri Basin project, and we think it is one of the finest things that could be done by the Federal Government to help this great productive area in Nebraska.

It is nonpartisan, nonpolitical. It has support from our present Governor, as it has received from every Governor in the past. These people have been working for this for many, many years. I think this ought to be the year when we will give them the go-ahead.

Thank you very much for your kindness.

Senator BURDICK. Congressman, if my recollection is correct, a number of years ago there was some impediment from State law preventing the shifting of water from one watershed to another.

Representative CUNNINGHAM. That has all been resolved, sir.

Senator BURDICK. That has all been resolved?

Representative CUNNINGHAM. Yes, sir. I might say that the surrounding States—and you will hear this in the testimony—the proper officials, the Governors, of the surrounding States, have endorsed this project, too.

Senator HICKEY. What resolved that? Was it court action?

Representative CUNNINGHAM. You had perhaps better ask the Mid-State people. They are better informed on that.

Senator HICKEY. Thank you.

Representative CUNNINGHAM. Thank you very much.

Senator BURDICK. The next witness is Congressman Weaver.

Congressman Weaver is not present so the next witness will be Congressman Martin.

STATEMENT OF HON. DAVID T. MARTIN, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF NEBRASKA

Representative MARTIN. I appreciate this opportunity of appearing before you distinguished gentlemen this morning. I have only a brief statement to present.

I am David Martin, Congressman from the Fourth District of Nebraska, in which area most of the Mid-State reclamation project is located. I am pleased to have the privilege of appearing before this Senate subcommittee of the Interior and Insular Affairs Committee on behalf of the Mid-State project, which is hearing the bill sponsored by Senators Carl Curtis and Roman Hruska.

My home is at Kearney, Nebr., in Buffalo County, which is located within the boundaries of this comprehensive multipurpose project, and for the past 15 years I have watched it grow into the project which is now before you. I have seen the growth in pump irrigation, through local initiative, from a mere several hundred installations to more than 5,000 active irrigation wells at the present time. Although central Nebraska is blessed with a substantial underground reservoir, our water supply is not unlimited and there is evidence of an overdraft on the existing supply.

Our people have known that there would be problems ahead and took the initiative in first organizing a local three-county conservation district with broad powers to develop a useful and much-needed multipurpose project that would provide flood control, ground water replenishment and stabilization, hydropower and a supply of water for surface supply irrigation. It soon developed that the project would also include important fish and wildlife and recreation benefits.

I am most proud that our people within the three counties of the district, Buffalo, my home county, Hall, and Merrick, have raised more than \$1 million in local contributions and ad valorem taxes with which they proceeded to develop a sound multipurpose project which has met the approval of the Bureau of Reclamation, the Corps of Engineers, and other interested Federal and State agencies. We are, therefore, able to offer for consideration by the Congress one of the best reclamation projects that has been brought to its present state of planning through local effort and at a minimum of expense to the Federal Government.

The technical details of the project will be discussed by technical witnesses who are present here today, and I therefore will not repeat what will be said later. I do know the people of my district and I can assure you that the same spirit of cooperation and initiative will prevail which permitted this group to bring to you for consideration this seasoned reclamation project. This group will accept whatever responsibility may be placed upon them by the Congress following the authorization and construction of this project.

I commend to you this project and these fine Nebraska people who today represent themselves to you as being fully willing to do their share in the repayment of a larger than normal share of the project costs. I am certain that you will find these project sponsors striving to give you competent and responsive answers to your questions as you seek out the merits of this project in this current hearing.

I recommend to you most sincerely your approval of this project.

Senator BURDICK. Thank you, Congressman.

Are there any questions?

If, not thank you.

Representative MARTIN. Thank you.

Senator BURDICK. The next witness is the Commissioner of Reclamation, Floyd E. Dominy.

STATEMENT OF FLOYD E. DOMINY, COMMISSIONER OF RECLAMATION, DEPARTMENT OF THE INTERIOR

Mr. DOMINY. I would also like to have Mr. Harley, my project manager from Grand Island, and Mr. James McBroom, of the Fish and Wildlife Service join me here for the departmental report.

In advance of starting my statement, I would like to comment on the question that you addressed to Congressman Cunningham here a moment ago, with regard to the Nebraska prohibition of moving water from one river basin to another.

The original plan for this central part of Nebraska would have involved a project much larger than the Mid-State project that is here before you now for consideration, and would have involved transfer of water from the Loup Basin to the Platte Basin. Because of the

prohibition in the Nebraska law which was not adjusted, that plan was abandoned and it has no influence on the plan here proposed.

Senator BURDICK. In other words, this project deals with only one watershed.

Mr. DOMINY. That is right. This project deals with the water originating in the Platte Basin and it is not in conflict in any way with the Nebraska statutes concerning transfer of water from one watershed to another.

Mr. Chairman, we welcome the privilege of appearing before your committee on behalf of S. 970 to include the Nebraska Mid-State project as a unit of the Missouri River Basin project. On May 20, 1960, I testified at the hearings on a similar bill, S. 2640, 86th Congress. My statement at that time included considerable information concerning the evolution of the plan of development, engineering costs, and the economic and financial determinations that had been made. Since there has been no need for revised studies, all of this testimony remains unchanged. However, I should like to comment further on two or three items.

The project plan we are supporting today is identical in physical makeup and the estimated cost remains unchanged from our earlier testimony. Construction price indexes for July 1958 and April 1961 for the types of works involved do not indicate any need to modify the earlier estimates. Likewise, there has not been a need for revised studies and there have been no new findings with respect to the benefits expected to accrue from the unit. Under these circumstances, the benefit-cost ratio for the unit remains unchanged at 1.40, and the costs are appropriately allocable as presented in the record of hearings on S. 2640 before this committee last year.

We have previously testified to the very gratifying cooperative spirit of the local people and the high degree of support which they have shown in advancing this proposal. Well over \$1 million of locally collected money has been expended by the Nebraska Mid-State Reclamation District in advancing the project to its present state. Further, the district continues to manifest its faith in the ultimate achievement of this undertaking by making funds available to the Bureau of Reclamation for advance planning activities. In fact, leadwork is now in progress using funds advanced by the district that could not otherwise be started at this time.

An assured water supply to the Platte River Valley in central Nebraska has long been recognized as essential to maintain the present economy and for the continued growth and prosperity of the area. Demands on the ground water aquifer are exceeding the practical limit of safe yield for irrigation and other uses. The proposed Mid-State project works would replenish and stabilize the ground water and make practical expanded water use in the area by the application of surface water for irrigation. Furthermore, the project would regulate ground water levels for all purposes by means of the integrated system of reservoirs, canals, laterals, district wells, drainage facilities, and floodways.

The interconnected foothill reservoirs and wildlife developments along the Platte River included in the plan would provide extensive fishing and waterfowl hunting opportunities in an area where they are now limited. This observation results from studies of the Fish

and Wildlife Service, whose representatives are present, and was concurred in by the Nebraska Game, Forestation, and Parks Commission. Further, many of the reservoirs and their shorelines, together with planned minimum basic facilities, will provide extensive recreation benefits.

In commenting on previous legislative bills concerning the Nebraska Mid-State project, the Department of the Army has called attention to provisions of Federal flood control law under which certain multiple-purpose floodways of the Nebraska Mid-State plan might be subject to cost sharing. The Bureau of Reclamation has recognized, and continues to recognize, that such treatment for levees and channels under flood control law is technically accurate.

However, discussions with personnel from the corps have demonstrated to the satisfaction of both agencies that there are many unusual aspects connected with the channel work on this project not met in the usual prototype floodway construction. These differences lead to the conclusion that in the case of the Nebraska Mid-State unit technical details of cost allocation for flood control and reimbursability can be resolved during the detailed cooperative studies of the Bureau of Reclamation and the Corps of Engineers. At such time as the final costs and benefits to be realized from these multiple-purpose features are known, a determination could be reached as to what portion, if any, of the flood control costs should be borne by the local interests.

It is worth noting in this connection that the physical plan for this project was developed by the district at district expense. Accordingly, a measure of cost sharing has already been achieved in advance of authorization. Under usual project investigation practice, the \$1 million-plus already expended by the district would have been financed by the Federal Government.

Since all project features and analyses are unchanged from the testimony previously offered, I would prefer, if it please the committee, to simply file my more detailed statement.

In conclusion, I would like to emphasize that we consider this to be a worthy project, completely feasible from an engineering and economic standpoint, and a sound investment for Federal funds. Therefore, I recommend enactment of S. 970.

My associates from the Department of the Interior are present and join me in readiness to supply answers to questions of detail or in clarification of any points in our statements.

(The formal statement of Mr. Dominy is as follows:)

STATEMENT OF THE COMMISSIONER OF RECLAMATION

Mr. Chairman and members of the committee, we are pleased to have the opportunity again to appear in support of legislation to include the Nebraska mid-State unit in the Missouri River Basin project. We last appeared in this regard on May 20, 1960, on the occasion of hearings on S. 2640, 86th Congress. At that time extensive testimony was offered concerning the evolution of the plan of development, engineering costs, and the economic and financial determinations that have been made. Since there has been no need for revised studies, all of this testimony remains unchanged.

An assured water supply to the Platte River Valley in central Nebraska has long been recognized as essential to maintain the current economy and for the continued growth and prosperity of that area. Our report on the Missouri River Basin project, Senate Document 191, 78th Congress, contemplated service to

the area included in the mid-State project. However, that plan was predicated in part upon the use of water to be imported from the Loup Rivers, which might have involved water-right difficulties inherent in interbasin transfers of water in Nebraska.

The Nebraska mid-State plan does not involve such transfers, but provides for an integrated and effective use of surface and ground waters available locally. If, in future years, the need for additional surface water supplies should become apparent and if the existing impediments to interbasin transfers of water should be clarified favorably or removed, the project works we are now considering could continue in use and be expanded to utilize imported water easily and economically.

The sponsors' original intention was to build the mid-State project entirely with their own funds, but they found that the costs of such a project would have been beyond their ability to finance. Therefore, they proposed that authorization be sought for a Federal Government loan for that portion of the cost which under a Federal project would be reimbursable, and grants for the non-reimbursable functions.

Bills to provide for such a Federal loan and for grants to the Nebraska mid-State project were introduced beginning in 1953. After such bills had been considered by two Congresses without enactment and since the proposed project plan embraces irrigation, flood control, hydroelectric power, recreation, and fish and wildlife, all prime purposes recognized in the multipurpose Missouri River Basin project, the sponsors decided to seek authorization as a unit of the Missouri River Basin project.

The plan as now proposed was developed by consultants to the district. Engineering cost estimates have been reviewed by the Bureau of Reclamation, and adjustments have been made in those areas of the engineering design where differences were noted. The total estimated cost is \$81,467,000. This is the same estimate presented to the committee last year based on July 1958 prices, and is approved as to adequacy by the Bureau of Reclamation and the private engineering consultants who performed the original work. At this point, we would like to observe that our construction price indexes for July 1958 and April 1961 for the type of works involved do not indicate any need to modify the earlier cost estimate.

Local sponsors have expended well over \$1 million of moneys collected by general solicitation and ad valorem tax levies on district lands in investigating this project, writing the report, and bringing it before the Congress. Most of the cooperative work of the Bureau of Reclamation has been, and continues to be, financed by the district. This is evidence of the outstanding local interest and active sponsorship of the project, and of itself vouches for the sincerity and good faith of the sponsors.

The plan would rescue a highly developed and growing agricultural area from its complete dependence on a ground water aquifer where demands thereon appear to have exceeded the practical limit of safe yield. It proposes to replenish and stabilize the ground waters and to expand the water use in the area by application of surface waters for irrigation and the careful regulation of the ground water levels for all purposes through a complex but integrated system of reservoirs, canals, laterals, district wells, drainage facilities, and floodways.

The water supply from surface and ground water sources to be developed by the project is adequate to furnish service directly to 140,000 acres and indirectly benefit an additional 163,000 acres of presently irrigated land within the total arable land resource of 363,000 acres within the district boundaries. Although the specific tracts to be served directly have not been delineated with precision, the irrigation experience within the district and sample area classification of lands representing about 15 percent of the available resource furnishes adequate assurance of sufficient high quality lands to afford an economical distribution system layout. It is anticipated that detailed land classification, farm budget analyses, distribution and drainage system designs, and other required studies will be conducted during postauthorization studies for preparation of the customary definite plan report. At that time we would develop more detailed estimates of operation, maintenance, and replacement expense and payment capacity so that the repayment ability of the irrigators would be known with more exactness.

The interconnected foothill reservoirs and wildlife developments along the Platte River included in the plan would provide extensive fishing and waterfowl hunting opportunities in an area where they are now limited. Further,

many of these reservoirs and their shorelines together with planned minimum basic facilities will provide extensive recreation benefits.

Collectively, the proposed multiple-purpose reservoirs, canals and floodways would furnish a high degree of flood protection to the district lands and property, and to other areas in the Platte River Valley. The Corps of Engineers, Department of the Army, has calculated the benefits which would be realized from this degree of flood protection, and those benefits were used as the basis for the allocation of project costs to this purpose.

The total construction cost of the project has been allocated to the several purposes by the procedures accepted and used by the Federal agencies concerned with water resource development. Costs of commercial hydroelectric power, although deferred, are reimbursable with interest, and the costs allocable to irrigation are reimbursable without interest. Costs allocable to flood control, fish and wildlife, and recreation are proposed to be nonreimbursable. The non-reimbursable costs aggregate \$28,354,000 after adjustment for district financed operation, maintenance, and replacement. This amount is subdivided to purposes in the amount of \$17,345,000 for flood control, \$10,846,000 for fish and wildlife, and \$163,000 for recreation.

Reimbursable construction costs consist of \$51,964,000 for irrigation and \$1,149,000 for deferred commercial power. The deferred commercial power allocation would be increased by \$43,000 for interest during construction to establish a total reimbursable obligation of \$53,156,000.

Over a period of 40 years, revenue from the irrigation water users and conservancy district could repay \$30,763,800 or 59 percent of the irrigation allocation of \$51,964,000. Thereafter, the balance, or \$21,200,200, would be repaid from Missouri River Basin project power revenues. The economic analysis of the Missouri River Basin project dated December 1958, copies of which were furnished this committee, indicated that starting in the year 2022, after all commercial power investments have been paid out, net power revenues, amounting to about \$32 million annually, will be available to assist in repaying the irrigation costs of all Missouri River Basin project units. Therefore, the balance of the irrigation allocation on the Nebraska mid-State unit after 40 years could be repaid using less than 1 year's net power revenues.

The Nebraska mid-State unit is a logical addition to the Missouri River Basin project. Its benefit-cost ratio is favorable, being greater than unity even under the most severe criteria, and the water users can and have expressed their willingness to pay a larger percentage of the irrigation allocation than most other Missouri River Basin project units.

Senator BURDICK. Over what period of years is this cost-benefit ratio based on?

Mr. DOMINY. The 1.40 to 1 is based on a 100-year period and includes both direct and indirect benefits. If you measure it only over a 50-year period and direct benefits only, the benefit-cost ratio is 1.06 to 1.

Senator BURDICK. How much of this project includes nonreimbursable items?

Mr. DOMINY. The fish and wildlife allocation as proposed is \$10,846,000, which is nonreimbursable; the flood control allocation is \$17,345,000, nonreimbursable; a small recreational allocation covering only the costs that will be expended for that purpose in the project plan of \$163,000 would be nonreimbursable. It is roughly \$28 million of the total cost that is nonreimbursable.

Senator FONG. What is the total cost?

Mr. DOMINY. \$81,467,000.

Senator FONG. And \$52 million allocated to irrigation?

Mr. DOMINY. Yes, sir, and that would be repaid. We have \$1,192,000 that is allocated to deferred commercial power. We propose to put penstocks in some of these dams so that if it is ultimately proven feasible for power installations it could be done at a minimum cost later.

Senator FONG. To the amount allocated to irrigation, you have \$30 million of the \$51 million that would be repaid in the period of 40 years.

Mr. DOMINY. Yes, sir. The irrigation water users will repay \$30.7 million. This would leave \$21.2 million of the irrigation allocation to be paid from the Missouri River Basin power revenues. That is less than 1 year of the power revenues from the Missouri River Basin under its full development.

Senator FONG. Why did you not use a 50-year amortization instead of 40 years?

Mr. DOMINY. It has been customary on the other projects that we have been building in the Missouri River Basin to proceed on a 40-year repayment period with the understanding that in the final pay-out analysis of the total project, that the water service contracts may be extended for a period of time beyond the 40 years to achieve full payout. Under the 1939 act we have two types of repayment contracts, Senator Fong, as you know. One is the 40-year, 9(d) repayment contract, which is usually associated with distribution system construction. And then we have a water service type contract, also limited to 40 years, but it can be renewed.

Senator FONG. With a 50-year contract there is more of a possibility that a greater portion will be repaid to the Federal Government?

Mr. DOMINY. It will all be repaid to the Federal Government, but more of it could be repaid by the water users, if the repayment by the irrigators were extended over 50 years rather than 40 years, if the same rates were to apply annually, yes, sir.

Senator FONG. Do you have any serious objection to increasing that to 50 years instead of 40 years?

Mr. DOMINY. Normally, on these projects established on an ability to pay principal, with the irrigator paying an annual charge that is within his ability to pay, and still permit him to operate a successful farming enterprise, the term of years is not too important. Being consistent with other Missouri River Basin units we have set it up on a 40-year proposal. If the Congress should desire that this one be set up on a 50-year proposal to reduce the amount of irrigation allocation that would be paid by power revenues, I don't believe that the mid-State district or its farmers would seriously oppose that adjustment to the proposal. But they will be on the stand here and you may inquire of them personally.

Senator FONG. What percentage of the cost is allocated to flood control expenses?

Mr. DOMINY. Well, you have \$17 million out of the \$81 million. It is about 21 percent.

Senator FONG. And to wildlife? What percentage would that be?

Mr. DOMINY. Thirteen percent, fish and wildlife.

Senator FONG. Could you tell us as to how these percentages were arrived at?

Mr. DOMINY. Mr. Harley, my project manager, has worked closely with the Corps of Engineers who actually determines the flood control benefits and assists us in the allocation. I would be glad to have him go into some detail on that, Senator Fong.

Mr. HARLEY. Senator Fong, the allocations were accomplished in accordance with the regular procedure followed by Federal agencies. They stemmed originally from the benefits determined for each of

these functions. When those were in the regular procedure for accomplishing allocations, we came up with the dollar answers and then determination of the percentages is the last computation.

Senator FONG. These figures were worked by the Nebraska people?

Mr. HARLEY. No. This allocation study was made by the Bureau of Reclamation, using the benefits provided by the Corps of Engineers, by the Fish and Wildlife Service, and by the Bureau in the case of irrigation, and by the National Park Service in the case of recreation. So they have all stemmed from the normal sources of Federal agencies which do this regularly.

Senator FONG. These percentages that are allocated here to flood control and to wildlife and recreation, how do they compare with other projects that have come before your reclamation department?

Mr. DOMINY. With respect to flood control, exactly the same standards of evaluation are used here as are used on the Corps projects or on other Bureau projects.

Senator ALLOTT. Mr. Dominy, you don't use exactly the same percentage on every project.

Mr. DOMINY. Not percentage, no, sir.

Senator ALLOTT. I think this is what the Senator is thinking in terms of, and I think your answer was misleading in that respect.

Mr. DOMINY. I intended to say that the percentages for this project were arrived at by using exactly the same methods of evaluation for determining the proportion that flood control is to the total cost, as are used on any other project. This might end up to be 80 percent flood control or 10 percent flood control. The same evaluations were followed as would be followed on any other project. Mr. McBroom is here to comment on the methods used in arriving at the Fish and Wildlife allocation.

Mr. McBROOM. Our function here, Senator Fong, was simply to evaluate the wildlife benefits in terms of dollars. We followed the same procedures as we do on other reclamation projects and on projects of the Corps of Engineers. Briefly and simply stated that is simply to measure, in dollars, the values derived from fishing and hunting which will be created by the construction of a project.

Senator FONG. Thank you.

Senator BURDICK. Mr. Dominy, if my recollection is correct, since the start of reclamation back in 1902, I think the average nonreimbursable items come to about 8 or 9 percent of a project. Here is a project that has over one-third in nonreimbursable items. Isn't that unusually high?

Mr. DOMINY. The average you referred to is substantially correct. Out of some \$4 billion invested by the Bureau of Reclamation projects, a little more than 90 percent of that is allocated to reimbursable functions. In later years we have been going, more and more, into the multiple-purpose project approaches and have deliberately built into our projects more and more of the total functions that can be served. So when we give you this 90 percent of what has been expended to date, a good bit of that was in connection with projects built in the early days that were allocated 100 percent to irrigation. These older projects were designed primarily for irrigation, without going in so much for the evaluation of flood control, fish and wildlife, recreation, and these other elements that Congress has included as being non-

reimbursable in the national interest. For instance, while our projects have always performed a great deal of good for recreation and fish and wildlife, they were not recognized as partners in a multiple-purpose development and we had no authority to allocate costs to those purposes. If we were to go back and reevaluate all our older projects, we would be able to support considerably higher allocations to these other functions. But we didn't have the authority at the time that a lot of those projects were built. Today we are coming up with projects with broader recognition of the full benefits to be gained from them, and a much more realistic allocation process, in accordance with the more recent enactments of Congress.

For instance, this fish and wildlife allocation, Mr. McBroom, would not have been possible until very recently under legislation enacted by the Congress, isn't that true?

Mr. McBROOM. That is true generally. I might point out that Congress enacted in 1958 an amendment to the Fish and Wildlife Coordination Act in which it stated, in section 1, that wildlife conservation shall receive equal consideration with other features of water resources programs. Certainly the project before you in this allocation is in line with that declaration of Congress.

Senator BURDICK. Twelve percent isn't quite equal to other aspects but it is quite high.

Mr. McBROOM. I meant to say receive equal consideration.

Senator ALLOTT. This doesn't mean, though, what you say, the way you say it. When Congress enacted that, they didn't mean the percentages would be equal. What they meant was that it was an element that should be considered equally.

Mr. McBROOM. That is exactly right.

Senator ALLOTT. Just as you consider power and irrigation. So let's don't get this off on the basis that we are going to have fish and wildlife written off to the extent of 33 $\frac{1}{3}$ percent and power written off to 33 $\frac{1}{3}$ percent and irrigation written off to 33 $\frac{1}{3}$ percent.

Mr. McBROOM. No, sir, there was no intention to imply that, Senator. I merely called attention to the fact that wildlife conservation would be considered equally with these other purposes in planning a project.

Senator ALLOTT. Can I ask this question: The whole cost of this project is \$81,467,000. Of this, almost \$52 million is allocated to irrigation.

Mr. DOMINY. Yes, sir.

Senator ALLOTT. Do I understand that only \$30 million of this is to be repaid?

Mr. DOMINY. No, sir; \$30.7 million of that \$51,964,000 would be repaid by the water users in their repayment contracts. The balance of the irrigation allocation would be returned from the Missouri River Basin power revenues after all of the power features of the Missouri River Basin had been paid back with interest.

Senator ALLOTT. Is this provided for in the Missouri River Basin setup, that this can be done?

Mr. DOMINY. Yes, sir. The 1944 Flood Control Act clearly established this basinwide concept for application of power revenues in aid of irrigation.

Senator ALLOTT. That is after the power features of the Missouri River Basin have been paid for?

Mr. DOMINY. Yes, sir, with interest.

Senator ALLOTT. This is similar to the arrangement in the upper Colorado River projects?

Mr. DOMINY. Right, sir, and similar to what we are doing in the Columbia Basin and other areas of the United States.

Senator HICKEY. Going back momentarily, Mr. Dominy, to the initial statements, did the bill that you testified for last year embrace a larger area where the conflict between the transfer of water from watersheds occurred?

Mr. DOMINY. No, sir. I think I had better go back a moment and give you a little history. In the 1944 Flood Control Act, all of the lands embraced within the present Mid-State project, plus a lot of other lands up on the Loup River, were listed for authorization as a large Missouri Basin unit in the central Nebraska area. We started some reconnaissance work to develop a broad plan involving not only these lands but the Loup Basin area as well. This was in conflict with the State statute which prohibited the movement of water from one river basin to another, and there was an effort made to change the statute to accommodate this larger proposal. This became somewhat controversial and failed. It was at this time that the Nebraska people in the Mid-State area organized their own conservancy district and started their plans strictly on the Platte so it would not conflict with the statute. We didn't do any more with our investigation until the Nebraska Mid-State and the private engineering firms that they had hired had completed the investigation and came up with a proposal which was submitted to Congress for a Federal loan and a grant for nonreimbursable flood control.

This was heard in Congress on that basis and the question was raised not only by the Bureau of the Budget but by the committees of Congress of "Why isn't this being done by the Bureau of Reclamation as a unit of the Missouri River, since it was in their plan originally and since it is no different, really, than the same work they are doing elsewhere in the Missouri River Basin?"

The Nebraska Mid-State District Board concurred. They had no objection whatsoever to its being included as a Missouri Basin unit and being treated the same as other Missouri Basin units. Then it was resubmitted last year. Now all of the engineering had been reviewed by the Bureau of Reclamation right along, because we were asked by Congress to review and comment on the adequacy of the engineering plan and the economic analysis that had originally been produced by these private engineering firms on contract with the Nebraska Mid-State Board. There was no problem to make the switch to a Missouri Basin unit, because we had been in it very closely, Mr. Harley and our Denver engineers had been working with them and checking their work regularly.

Senator HICKEY. What happened to the Loup River portion of the project?

Mr. DOMINY. That is being undertaken by separate proposals. We have the Sergeant unit completed; we have the Farwell unit under construction. We have the North Loup Basin plan completed, and it is in final stages of review now, preparatory to submitting it. So instead of doing it as one big project we are doing it by separate units and this is one of the large separate units of the original plan.

Senator HICKEY. I recall at the meeting of the interagency committee in Yellowstone last year, that there was considerable discussion—I think the then Governor Brooks talked with me—about your fish and wildlife portion of the project. There apparently was some controversy at that time as to how expansive it should be. Was there ever some conflict with regard to how expansive the fish and wildlife portion of the project should be?

Mr. McBROOM. I know of no conflict with the local interests or with the State of Nebraska with respect to this, Senator. The State of Nebraska and the local people are solidly in support of the fish and wildlife aspects of this program. The director of the Nebraska Game, Forestation, and Parks Commission has testified to that effect before committees of Congress. There was some question raised as to the size of the fish and wildlife allocations within the Federal Government, itself.

Senator HICKEY. There was a specific discussion at that time, that the Department, itself, probably recognizing the nonreimbursable aspect of the thing was the thing that drew the attention of the Bureau to the fish and wildlife aspect. Is that correct?

Mr. McBROOM. The Bureau of Reclamation?

Senator HICKEY. Yes.

Mr. McBROOM. No, sir. The Nebraska Mid-State Irrigation District asked our agency to make the analysis of the fish and wildlife aspects of this project in the same manner that we ordinarily would do on a Reclamation or a Corps of Engineers project, and we did so. We developed our estimate of annual benefits which I discussed a moment ago with Senator Fong on the same basis as any other project. Our evaluation of annual benefits, which are substantial here, was then turned over to the Bureau of Reclamation. As Mr. Harley has said, it was used along with the measure of annual benefits to flood control and irrigation in arriving at the allocation, again, in exactly the same manner as is customary for this type of project. Specifically, we had no knowledge of what the cost allocation would be on this project at the time we furnished those evaluated benefits to the Bureau of Reclamation for cost allocation purposes.

Senator HICKEY. Do you work that out by initially—after you once have the cost of the project—by then arriving at an economically feasible figure for the reimbursable portion and allocating the balance, in this instance, I believe, to fish and wildlife and some to flood control?

Mr. McBROOM. Senator, our sole function is to evaluate the fish and wildlife benefits. The cost allocation then is handled entirely by Reclamation. With your permission, I would like to refer that question to the Reclamation witness.

Mr. DOMINY. I would like to have Mr. Harley give you a review on how we take a multiple-purpose project and consider the various purposes and evaluations in arriving at a project evaluation.

Mr. HARLEY. Basically, our procedure recognizes that in the multiple-purpose projects that there are two types of features; for example, those which specifically serve a given function, such as a lateral which will certainly only serve irrigation, and the powerplant which will only serve power; a specific flood control capacity might only serve that function. In effect, what we do in arriving at these alloca-

tions is use the benefits that are computed as a ceiling of cost to be allocated to that function. We must also check to see if there is a cheaper alternate. We cannot allocate more than the cheapest way of solving this particular problem. Stated very simply, we take the costs of features and we first set aside those that serve only a specific function. Obviously, that function should absorb those.

Secondly, we take the joint features, such as the canal that delivers the water for more than one function, and we determine, in essence, the relationship of the benefits to the several purposes to determine how much joint costs each of those functions should bear. We then add the portion of the joint costs that each function should accept to the specific costs for that function and that gives us our total to be aside to that function. That is stated rather simply.

Senator HICKEY. Do you take into account the economic impact in the area on the cities and towns with relation to the attraction by the fish and wildlife of certain new sources of income and people coming into the area? Is that considered in your economic feasibility plan at all, or any part of it?

Mr. MCBROOM. Yes, sir. That is part of our method of evaluating the benefits to fish and wildlife.

Senator HICKEY. How do you do that?

Mr. MCBROOM. We determine how much more use for sports fishing and hunting would be made of the area with the project in terms of number of man-days annually. To this we assign an estimate of what the sportsmen would expend per day, and we multiply the increased use of man-days times the expenditures that we estimate will be made per man-days, resulting in the benefit figure. In this case, we have evaluated a benefit to fish and wildlife from this project of about \$380,000 annually. This figure was given to the Bureau of Reclamation, as I have said; so, also, the Corps of Engineers evaluated in terms of so much money annually, in terms of flood control benefits.

Senator HICKEY. The Corps of Engineers actually sets up your flood control benefits in the overall basin picture?

Mr. HARLEY. In this specific project they have made that analysis. For this particular set of conditions and these particular works, the benefits that would accrue as a result of their operation.

Senator FONG. No part of the \$10 million for wildlife and reclamation is reimbursable, is that correct?

Mr. HARLEY. That is correct.

Senator FONG. Last year, the Bureau of the Budget recommended that the expenditure for wildlife, that the allocation for wildlife and recreation, should be \$2 million. Here we have a figure of 10 million. Would you explain the difference between the \$10 million and \$2 million figures?

Mr. MCBROOM. Yes, sir. The Department of the Interior, Senator Fong, however, last year recommended the allocation for fish and wildlife that is before you now. The Budget Bureau suggested a \$2 million allocation. The \$2 million represents the cost of specific facilities which the project would include for fish and wildlife. It includes the acquisition of land and some other minor improvements, totaling \$2 million, which would not be spent if it were not for the fish and wildlife purpose. The difference between the \$2 million and the \$10 million, or roughly \$8,800,000, represents an allocation of

cost based on incidental benefits. The benefits will be there, from increased opportunities for fishing and hunting on the reservoir and other project works, even without specific expenditures for that purpose. Mr. Harley has related how annual benefits are used to compute cost allocations. The result, in this case was the total allocation of \$10,800,000, consisting of \$2 million for specific, planned fish and wildlife facilities, and \$8,800,000 on account of incidental benefits.

Mr. DOMINY. Mr. Chairman, I would like to expand that just to the extent, that should we pursue the allocation process here on fish and wildlife and limit the allocation only to the amount that was spent specifically for fish and wildlife, then we would not be, in my judgment, taking advantage of the authority and the intent of Congress in the Fish and Wildlife Coordination Act. We are right back to the same hurdle that we have been to for years. We create a benefit on these multiple-purpose reclamation projects and yet can't allocate to it. The burden has to be paid by the irrigator and the power user, even though the benefits are enjoyed by the general public in fishing, hunting, and recreational activities. We disagree with that philosophy. We think Congress disagrees with that philosophy, as shown when they passed the Fish and Wildlife Coordination Act of 1958.

Mr. McBROOM. Section 2(f) of the Fish and Wildlife Coordination Act specifically contemplates the allocation of the costs of joint use facilities to this purpose, over and above the specific costs.

Senator FONG. Have you any idea what the Bureau of the Budget is thinking about relative to this item?

Mr. DOMINY. To read the sentence in their report, dated May 24, reporting on this particular bill, they say "We also note that the proposed allocation of project costs to fish and wildlife exceeds the specific cost to be incurred for that purpose. In this connection, the President, in his natural resources message, instructed the Bureau of the Budget to reevaluate current standards for appraising the feasibility of water resource projects. A review of current standards is currently underway, pursuant to the President's instructions, and is scheduled for completion in June 1961. We would expect that prior to a request for funds to initiate construction of the Nebraska mid-State project, the Secretary of the Interior would reallocate the costs of the project in accordance with the evaluation standards for water resources to be established following completion of this review.

Accordingly, the Bureau of the Budget would have no objection to the enactment of Senate 970.

That means very clearly, I think, that this whole question is being reevaluated by the administration, and there will be some definite recommendations reached as to how all of the agencies in the natural resource development field would be expected to operate in making these allocations.

I might point out also that since the passage of this Fish and Wildlife Coordination Act, Congress has authorized the Norman project in Oklahoma and the Chaney division of the Wichita project, in Kansas, where allocations to fish and wildlife were made beyond the specific cost for those facilities. This again, I think, demonstrates that Congress did intend that we not be limited in our allocation process to a specific cost basis.

Senator FONG. Then another question: The Bureau of the Budget last year recommended a contribution by the local people of 30 percent of the flood control costs.

Mr. DOMINY. Yes, sir. We think that came about by a failure to recognize the true nature of some of the joint features of this project; in that certain floodways were considered strictly as floodways rather than an integral part of a system for collection and distribution of water for irrigation. We have since worked this out, we think, with the Corps of Engineers. As I pointed out in my statement, we believe that this can be worked out in the final process and that it will result in far less than 30 percent being considered for local contribution. It can be finally resolved in our final allocation process after the full costs are known.

I also pointed out that the district has already advanced more than a million dollars in the process of developing the project. This normally would have been Federal expenditures. So there has been some local cost-sharing already.

Senator FONG. And it will be also a local cost-sharing on the flood control project?

Mr. DOMINY. Yes, sir, to the extent that our standards on other similar projects and the corps standards on other similar projects indicate that such is proper, yes, sir.

Senator FONG. This project is going to irrigate quite a number of acres that are not being irrigated now and also will supplement the water supply of the well users. How are you going to be assured that the people that are now using wells will use this water?

Mr. DOMINY. I would like to have Mr. Harley comment on that, Senator Fong.

Mr. HARLEY. Senator Fong, we can think of the lands in this instance being of three types. First, the proposal is that 96,000 acres which are now irrigated from wells, private wells, will be placed under the project and receive project water supplies. Those are presently irrigated. An additional 163,000 acres, which are irrigated from wells, will continue to use those wells privately, but the indirect effect of the project will be to assist in recharging the ground water to sustain those levels. The third phase of the project proposal includes about 44,000 acres of land which is presently dry farmed, but which would be brought under project irrigation. This means in total that the project will service 140,000 acres, two-thirds of which are irrigated at the present time, and one-third of which are dry lands. The other 163,000 will remain in private operation but within the district.

Senator FONG. And all of these acreages will be bearing a part of the cost in amortizing this \$30 million?

Mr. HARLEY. Yes, sir, all these lands will be making a contribution to the project. That is, a financial contribution. Also all of the other tangible property in the district will be taxed and will also help repay the costs of the project.

Senator BURDICK. Mr. Harley, will the farm economy of the new lands change any? Will there be a change in the type of crops raised or anything?

Mr. HARLEY. Well, there are changes underway at the present time, Senator Burdick. Going back to the figures here, we can appreciate that two-thirds of the acreage that is going to be under the project is

merely a different type of water supply. These lands are irrigated now and they will be irrigated in the future. The other one-third are now producing dryland crops and they will produce irrigated crops. The other 163,000 acres are now in private irrigation, and will be continued so. We can assume that most of this irrigation will not change except the normal trends in crop production.

In this area, the University of Nebraska, and many others are advocating a diversion of acreage into certain new types of crops. For instance, this year about 15,000 acres in the Platte Valley—I would assume possibly two-thirds of it is in the Nebraska Mid-State area—are being placed in castor bean production. That is a new crop in the area. Another 10,000 acres are being devoted to soybeans. This year an increase of approximately 4,000 acres to 6,000 will occur in the sugarbeet production. Then there has been some rather extensive research and actual test-plot operation, and other activities of this type, with reference to vegetable production in the valley. That appears to be a very good possibility for this area and the acreage is expanding, though we are in the early stages of that. These are trends which are taking place in this particular area.

Senator BURDICK. What is raised in the areas you referred to as dry lands now?

Mr. HARLEY. Well, they raise a variety of crops, raise some wheat, some corn, dryland hay. Those would be the principal crops. There are a few dryland potatoes. As they change over to irrigation, irrigated agriculture, the wheat, based on experiences in other projects out there, will largely disappear from their pattern of crops. They will continue to raise corn, as they do now under dryland conditions. Our detailed studies on another project just north of and adjacent to this area, and which is now under construction, showed that the trend is to a heavier feeding operation. The farmers cut back on the corn acreage and alfalfa and other feeds for livestock tend to take the place of it. They also get into the specialty crops.

Senator BURDICK. In the history of irrigation there is generally a shift in dryland areas to a different type of farming, isn't there?

Mr. HARLEY. Yes, sir. This wheat would be a good illustration. It drops almost completely out of the cropping pattern.

Senator BURDICK. We are thinking of the billion and a half bushels we have in surplus and also of the corn surplus.

Mr. DOMINY. As a matter of fact, this is one of the big advantages to irrigation. There are many parts of the Great Plains country, as you well know, that grow wheat because this is about the only thing they can grow under dryland agriculture. But when a firm and an assured water supply is available, then they are permitted, through economics, to adjust to whatever crops are in demand, much more so than they can under dryland conditions.

Senator BURDICK. Mr. Commissioner, I agree with you completely. I just wanted the record to show it.

Mr. DOMINY. I know you agree with me.

Mr. HARLEY. These three counties have about 80,000 acres of wheat at the present time and 44,000 acres of new irrigation would do away with some portion of that when it is changed over, undoubtedly.

Senator BURDICK. Getting back to the flood control item, \$17 million is the total cost of the project.

Mr. DOMINY. There is 20 percent actually allocated to flood control.

Senator BURDICK. I suppose that would be the same.

Mr. DOMINY. \$17,345,000 actually allocated to flood control.

Senator BURDICK. In your statement, you state that there will be an adjustment of that figure where the local interests will share a portion of that cost.

Mr. DOMINY. Yes, sir. There was some discussion previously in the hearings as to a portion of the flood control being of the type normally requiring local participation. This is the element that I referred to in answering Senator Fong a moment ago. We think there is a much greater clarification now as to what is actually involved, and that under normal flood control procedures a very small part of this would normally be assigned for local participation and would be allocated as a reimbursable element. But we are satisfied from our discussions with the corps that this will be worked out very satisfactorily and that it will be fully consonant with the practice in dealing with flood control on other projects throughout the country.

Senator BURDICK. Senator Hickey?

Senator HICKEY. On the availability of water, this is all part of the North Platte River drainage system, I take it?

Mr. DOMINY. It is actually the Platte drainage after both the North Platte and South Platte have come together. All of this is east of North Platte where the two rivers come together.

Senator HICKEY. For the availability of water for the reservoirs that are included in your proposed Mid-State project map, do you rely for any of the water out of the Platte River or the delivery of water there from upstate?

Mr. HARLEY. Senator Hickey, you mentioned the North Platte River. For all practical purposes there is no water passing the State line from Wyoming into Nebraska in the North Platte River. It does in canals, but for all practical purposes not in the river. So the return flow from that is the water supply which re-creates the river farther downstream.

In that sense, you could say that it is not placing any demands on the direct flow of the North Platte River. The water rights of this district—they have already made application—are of more recent years than the 1940's. McConnaughey Reservoir, the large reservoir at the head of the Platte system in Nebraska has prior rights and, of course, this new project would not encroach upon or conflict with them.

Senator HICKEY. That is with regard to the criteria established in the Nebraska-Wyoming action that the Supreme Court partially decided?

Mr. HARLEY. Yes, sir.

Senator HICKEY. And with regard to that particular action, it is your opinion that the delivery of water as a result of that action to Nebraska is not relied upon at all for any part of this project?

Mr. HARLEY. No, sir.

Senator HICKEY. And the additional acreage which you have spoken of that would be available for cultivation would come about because of the actual storage of floodwaters that would occur in the State of Nebraska?

Mr. HARLEY. That is true.

Senator HICKEY. And which would make available more water in that area.

Mr. HARLEY. In the main, this project proposes to take the surplus water which is leaving the State now at its eastern boundaries, unused for irrigation. These are primarily fall, winter, and spring flows, and then the project will take the floodflows that you speak of, regulate them in surface reservoirs, and apply them in the area. Some portion enters into the ground as percolating water and becomes a supply for the wells.

Senator HICKEY. And the water that is delivered out of the North Platte is substantially used up for irrigation prior to the time that any part of it would become a part of the Platte River at this point?

Mr. DOMINY. Actually, Mr. Hickey, as I understand it, and Mr. Harley can check me here, about the only water in the Platte River, itself, that will be picked up and used by this project is that which is return flow that comes back into the river below any possible reuse on the other projects with earlier water rights.

Mr. HARLEY. That is correct.

Senator HICKEY. Is there an established criteria for the availability of water in this area? Have your studies developed from hydrographers and established criteria for the availability of water?

Mr. HARLEY. Yes, Senator Hickey. The water supply studies for this project were accomplished by a committee. The man who represented the State of Nebraska on that committee is here this morning, Dan Jones. I served on it from the Bureau. We had representatives of the district and representatives of the large irrigation projects already in existence. This committee jointly determined the waters which were available, over and above those committed in other rights, and that would be thus available for this new project.

Senator HICKEY. Did you arrive at an acre per footage of new water that will be available by virtue of this project?

Mr. HARLEY. The average delivery to the lands in this project upon which the proposal is based is an average of about 1.7 acre-feet per acre.

Senator HICKEY. And it is basically new water that you will trap by virtue of this project?

Mr. HARLEY. Yes, sir; it is all new water.

Mr. DOMINY. By building these works we can. Of course, that is how we arrived at the 140,000 acres in the final analysis, in developing the project plan; by a forecast of the water that could be made available if these works were put in place.

Senator BURDICK. Are there any other questions?

Mr. MCBROOM. Mr. Chairman, I also testified here on May 20, 1960, on this project. I brought with me today a short prepared statement but I do not believe it necessary to read it, since we covered this material in the testimony. If you wish it for the record, however, I would like to submit it.

Senator BURDICK. Without objection, it will be incorporated into the record.

(The statement referred to follows:)

STATEMENT BY THE BUREAU OF SPORT FISHERIES AND WILDLIFE

The mid-State reclamation project presents an outstanding opportunity to develop fish and wildlife resources for the benefit of the public. Its reservoirs would provide opportunities for sport fishing for a great number of people, including residents of Omaha and Lincoln, Nebr., and also of neighboring States. There is great need for this type of recreation in this area since opportunities for fishing are very limited at the present time.

Essential fish and wildlife features of the mid-State project plan include acquisition and development of an 11,000-acre Federal waterfowl refuge and a State-managed public shooting area along the Platte River which would utilize water supplied by the project, together with acquisition of 3,000 acres for waterfowl areas to be managed by the State on three of the project reservoirs. Additional fish and wildlife measures include location of canal inlets to furnish good fishing opportunities; design of pump intakes to permit installation of fishery management features; construction of fish attractors; selective clearing of reservoir sites; acquisition of adequate land adjoining reservoir sites to insure utilization of fish and wildlife resources; assignment of specified lands to the Nebraska Game, Forestation, and Parks Commission and the Bureau of Sport Fisheries and Wildlife for fish and wildlife management purposes; and such reasonable modification in project operations as may be recommended for fish and wildlife purposes by the Secretary of the Interior or the Nebraska Game, Forestation, and Parks Commission.

The Platte River is and always has been important to waterfowl and provides opportunity for waterfowl hunting. In recent years, the portion of the river near the project has been dry well into the hunting season with consequent decline in the number of waterfowl using the area in the fall. The mid-State project, by furnishing a permanent water supply in its reservoirs and attractive habitat for the birds, could be counted on to attract much larger numbers of waterfowl than frequent the area at the present time. Hunting opportunity would thus be greatly increased in the area. In addition to these locally accruing benefits, development of waterfowl habitat in the project would materially aid in maintaining the number of birds using the central flyway, which encompasses the block of States from Montana and the Dakotas, extending southward to Texas and New Mexico. More hunting would be provided in other States along the waterfowl migration routes as well as Nebraska.

The Bureau of Sport Fisheries and Wildlife has computed fish and wildlife benefits of the mid-State project at \$380,500 annually. This is considered a reasonable estimate of these benefits. In deriving this estimate, and the number of days of fishermen and hunter-use on which it is based, consideration was given to the possible effect of the segment of the new interstate highway along the Platte River in the project vicinity.

A total of \$1,500,000 has been included in the project costs for wildlife refuge land acquisition and initial development, and \$500,000 has been included in project costs for minor project modifications relating to fish and wildlife. Annual operation and maintenance costs of the project amount to \$7,500 for fish and wildlife features, including the water supply for waterfowl areas.

After initial development of the acquired lands for the national wildlife refuge and State-managed public shooting area, there would still be substantial but as yet undetermined development costs and annual operation and maintenance costs associated with these areas which would be borne by the Bureau of Sport Fisheries and Wildlife and the Nebraska Game, Forestation, and Parks Commission.

The mid-State reclamation project offers unusual opportunities for fish and wildlife improvement along with the other project purposes—irrigation, water supply, flood control, and hydroelectric power production.

The fish and wildlife development features of the project will be a most welcome advance in our efforts to meet the constantly increasing demand for outdoor recreational opportunities.

Senator BURDICK. Thank you, gentlemen.

Mr. DOMINY. Thank you, sir.

Senator BURDICK. The next witness is Dan S. Jones, Jr., director of water resources of the State of Nebraska.

STATEMENT OF DAN S. JONES, JR., DIRECTOR, NEBRASKA
DEPARTMENT OF WATER RESOURCES

Mr. JONES. Mr. Chairman, and members of the committee, in addition to my own statement, I have a letter from Gov. Frank D. Morrison, to be put into the record, and I would like to read that at this time.

Senator BURDICK. Without objection.

Mr. JONES. It is addressed to the Subcommittee on Irrigation and Reclamation [reads]:

I am advised by the directors of the Nebraska Mid-State Reclamation District that your committee will hold a hearing on May 25 on S. 970, which provides for the authorization of construction of the Mid-State project, Nebraska, by the Secretary of Interior, as a unit of the Missouri River Basin project under Federal reclamation laws. It is my understanding that the proposal of this project development, previously approved by the Secretary, was reviewed by your committee in 1960 in hearings on S. 2640. Accordingly, as Governor of Nebraska, I wish to join with other State officials, the Nebraska Legislature, the Nebraska Reclamation Association, officials of other irrigation and reclamation project organizations in the Platte River Valley in Nebraska, numerous municipal, civic, and farm organizations in the district, and its 60,000 citizens and elected directors who have supported the development of the multipurpose Mid-State project proposal for many years to invite your consideration and approval and that of the 87th Congress of S. 970.

I am sure that you are aware that in Nebraska, like other reclamation States in the West, our most important problem is the proper conservation and utilization of our water and land resources to improve and stabilize the economy of our citizens, present and future. The multipurpose Mid-State project is for that purpose, because it will utilize the portion of the winter and spring flows of the Platte River that now continue to go unused to the Gulf of Mexico.

The project's offriver reservoir system will have a storage capacity in excess of 600,000 feet and this water, when distributed over the area, will provide surface irrigation to dryland farms and replenish and stabilize ground water supply for over 5,000 irrigation wells in the district area of 550,000 acres of established farmlands. In addition, the dams and reservoirs will provide exceptional benefits from flood damage protection to a large agricultural area; second, fish and wildlife conservation and recreational development in east-central Nebraska, where such facilities are now limited and, third, provide for the production of hydroelectric power. As the records of the hearings on S. 2640 before your committee on May 20, 1960, will show, the citizens of the Mid-State area have demonstrated the need for this project and their support of it by forming themselves into a conservancy-type district under the laws of Nebraska.

In 1948 they voted by a 2-to-1 majority to approve a tax levy to provide funds for investigations and surveys. In 1957, at a special election, they voted by a majority of 5 to 1 to continue the district. Since 1943, more than \$1 million of local funds have been provided by the district for development activities without Federal or State aid.

Since 1954, Governors of Nebraska and other State officials have actively supported and cooperated with the Mid-State district in its efforts to obtain the assistance of the U.S. Government in the construction of this proposed development. The Mid-State project proposals conform with the laws of Nebraska and do not conflict with nor foreclose the development of other areas in Nebraska or elsewhere in the Missouri River Basin. Accordingly, each of the other nine States in the Missouri River Basin, through their Governors, in 1959 and 1960, cooperated with the Governor of Nebraska and the directors of the district in advising the Secretary of Interior and the respective Interior Committees of their support in the construction of the Mid-State project. Therefore, as Governor of Nebraska, I stress our need for this project and urge your committee as well as the Congress to act favorably on S. 970, which will authorize its construction as a unit of the Missouri River Basin project.

Respectfully,

FRANK B. MORRISON,
Governor of Nebraska.

Mr. JONES. I should like to proceed with my own statement at this time.

Senator BURDICK. You may proceed.

Mr. JONES. I am Dan S. Jones, Jr., director of the Nebraska Department of Water Resources. The principal functions of the department are the administration of the State's water laws and the carrying out of the State's stream gaging program. Our work involves the determination of rights to the use of the waters of the natural streams and the regulation of water use under those permits. The formation of various kinds of improvement districts, including reclamation districts, is under our jurisdiction. In addition, this department has been the agency designated by the Governor to cooperate with and consult with the various Federal agencies in developing irrigation, flood control, and other water resource project plans.

My appearance here today is in support of the Mid-State project bill, S. 970, to authorize the project as a unit of the Missouri Basin project. Over the past several years I have made appearances before your committee in support of this project when an effort was being made to obtain a loan and grant of Federal funds for construction by the Mid-State Reclamation District. The statements made on those occasions are reaffirmed at this time.

My current remarks are directed toward what I consider the more important aspects of the project. During the past 20 years I have been associated with the department of water resources as assistant director and then as director. In my official capacity I have been in close contact with the Mid-State organization since its inception in 1942 or 1943, and I handled the petition for formation of the Mid-State Reclamation District which was approved by the department in 1947.

As records of previous hearings will show the Mid-State Reclamation District has on file in the office of the department applications for permits to appropriate water from the Platte River for use on the project lands. The priorities established by such filings assure the project of adequate protection of the water rights necessary for its success. These applications have been pending since they were filed in 1943 and they will be approved when the applicant advises us that funds are available to start construction.

Their priorities will be retained no matter when they may be approved.

The development which will take place under this proposal is highly desirable. It will serve to further stabilize agriculture in a wide area by providing a reliable water supply to some 140,000 acres of highly productive land which is not now irrigated or only partially irrigated by an inadequate supply of ground water.

The water to be distributed through the proposed Mid-State canal system will effectively recharge the ground water which is now being depleted by pumping from some 5,800 irrigation wells and numerous municipal wells in the three counties constituting the Mid-State district. The combination of stream and well irrigation in the area should result in the optimum use of the water supply available to this large area in east-central Nebraska. Mr. E. C. Reed, State geologist and director of the conservation and survey division of the University of Nebraska is presenting a statement for your record

which contains a full discussion of this important function of the project.

I want to stress the fact that this Mid-State proposal is virtually noncontroversial within the State. The water which will be used on it is now passing out of the State unused and there is no other proposal for making beneficial use of it. The people residing within the Mid-State Reclamation District have twice voted overwhelmingly in favor of it. State organizations which are increased in the conservation and use of our water resources have consistently endorsed it.

There is no opportunity for interstate conflicts to arise with respect to the waters to be used on the project. The long existing South Platte River compact and the 1945 decree of the U.S. Supreme Court on the North Platte River govern in the apportionment of water among the States of Colorado, Wyoming, and Nebraska. The use of water from the Platte River on the Mid-State project could in no way effect the apportionments among the States under these instruments.

I might add that it will make no additional demand on water from the North Platte in Wyoming or the South Platte in Colorado.

Allowances for depletions as a result of irrigating the Mid-State area have been made in studies of the adequacy of the flows of the Missouri River and its tributaries to support the Missouri Basin project.

With those depletions in, the studies indicate that there is enough water remaining to do what is planned for the Missouri Basin project.

The waters of the Platte River Basin upstream from the mid-State project are now controlled and utilized to almost the maximum extent possible. The reservoirs and canal systems constructed by various types of districts on the South Platte in Colorado and Nebraska, the reservoirs and canal systems of the Bureau's North Platte, Kendrick and Glendo projects and those of local districts on the North Platte in Wyoming and Nebraska effectively control all but the most extreme floodflows of the basin.

The water supply available for Mid-State is mainly return flow from upstream uses, except for infrequent uncontrollable flows coming from the upper States and minor flows from local tributaries. However, the quality and quantity of the available flows are adequate for the project.

The Mid-State project would virtually round out the maximum use possible of the surface waters of the Platte River Basin for beneficial consumptive purposes, yet the return flows from the Mid-State project and unused flows of the river will provide a substantial supply of water downstream for possible municipal, industrial and other uses which are not foreseen at this time.

In conclusion, let me say again that the Mid-State project is widely supported in the State of Nebraska. It is a good project. I urge your favorable action on S. 970 and I hope that it may be advanced for action in this session of Congress.

Senator BURDICK. Thank you, Mr. Jones, for a fine statement.

Getting back to the letter that you introduced, signed by the Governor of your State, I notice, referring to the benefits, subsection 3, the production of hydroelectric power is mentioned. Is there a power installation?

Mr. JONES. There is some power intended. I understand initially it is not to be put in, but provision is to be made so that penstocks may be installed.

Senator BURDICK. Will the penstocks be put in the original construction, do you know?

Mr. JONES. I would have to defer to some engineers from the project. I am not up on that, sir.

Senator BURDICK. Is there someone in the room that can answer the question?

We will wait for another witness.

Those are all the questions I have, Mr. Jones.

Senator HICKEY. Mr. Jones, apparently you have made quite a study of the water rights. I notice in your statement that you have pretty conclusively stated what, in your opinion, the water rights of the people are. As Mr. Dominy was testifying, I was concerned with what I thought to be in the decision of the Supreme Court which you referred to.

I have this question: Under S. 970, would construction by the Federal Government involve any claim by the Federal Government to State or private water rights?

Mr. JONES. I don't believe so, if I understand what you mean by your question.

Senator HICKEY. Let me give you a little more background and perhaps it will better fill you in. On page 615 of 325 U.S. Reports, the Supreme Court in the opinion of the Court says this, and I presume it was the argument of the Government:

It is argued that if the right of the United States to these water rights is not recognized, its management of the Federal projects will be jeopardized.

That is, the management of the Federal Government of the Federal projects will be jeopardized if the rights of the United States to the water is not recognized.

You might want to look at it.

Mr. JONES. Senator, I think I can answer that. It is customary in our State, it has been in all the Bureau of Reclamation projects, that the Bureau files their applications for permits to appropriate water for the storage facilities, and the local districts get the water right for the direct flow. Both of them are acquired under the same rules and regulations and the United States takes their priority in the same order as any individual would take it in filing for rights in the State.

I don't believe that there is any other established rights that are in existence at this time that might be claimed by the United States in this type of project.

Is that what you have in mind?

Senator HICKEY. Yes. The question that arises in my mind is whether or not the Federal Government by constructing this project would preempt any State or private water-right claim that is now in existence.

Mr. JONES. I would say "No," very definitely. They take their rights in order of priority the same as others do.

Senator HICKEY. And you feel that there is no conflict by virtue of your State water law currently?

Mr. JONES. That is correct.

Senator HICKEY. And the fact that the Federal Government is coming in or will come in and build it, will cause no conflict in the rights of individuals, in Nebraska or other places that might be affected?

Mr. JONES. That is my feeling. I feel quite sure.

Senator HICKEY. I have one other question. You have spoken about the underground proposition. Apparently, one of the footnotes in this case, relying upon *Hyde v. The United States*, 263 U.S. 497, says:

The right of the United States as the storer and carrier is not necessarily exhausted when it delivers the water to grantees under its irrigation projects.

Thus, in *Hyde versus the United States*, the citations of which I have given, the right of the United States was held to extend to water which resulted from seepage from the irrigated lands under its project and which was not susceptible of private appropriation under local law.

The hearings last year indicate that Nebraska has no law controlling the number of wells that may be drilled. Theoretically, if the above is now the fact, that you have no law which requires that, isn't it possible that landowners not on the project might be able to drill and pump the water without participating in the cost repayment?

Mr. JONES. I suppose there is some possibility of that. However, the mid-State district covers practically the three counties where this is located, and everyone in there pays a mill levy, so to that extent they would be contributing to the project.

Senator HICKEY. The people from the Department in their testimony indicated that those benefiting from the wells as well as the irrigation would pay the costs allocable to irrigation. But under this local law situation, it is possible that some of the users of subterranean water might not be involved in the repayment.

Mr. JONES. Of course, the Reclamation District Act under which the district is organized provides that the district board may determine when somebody of that kind is benefiting, when he was in the district, and attach an additional levy because of that benefit. So there would be some payment. There might not be a complete payment but there would be some payment.

Senator HICKEY. You don't think there would be some merit in State legislation that could control the number of wells drilled in an area?

Mr. JONES. Yes, I am convinced that that would be good legislation in general. It would be good throughout the State.

Senator HICKEY. You have not gone into that?

Mr. JONES. No, we haven't.

Senator HICKEY. That is all, Mr. Chairman.

Senator BURDICK. Thank you very much.

Mr. JONES. Thank you.

Senator BURDICK. The next witness is Arthur C. Johnson, president of the Nebraska Mid-State Reclamation District.

**STATEMENT OF ARTHUR C. JOHNSON, PRESIDENT, NEBRASKA
MID-STATE RECLAMATION DISTRICT**

Mr. JOHNSON. Mr. Chairman and members of the committee, my name is Arthur C. Johnson, of Kearney, Nebr. As president of the Nebraska Mid-State Reclamation District, sponsor, since 1948, of our multipurpose mid-State project, and chairman of its elected board of directors, I appear here, in behalf of our district, to urge your committee and Congress to support and approve S. 970, which will authorize the construction of our project, by the Secretary of the Interior, as a unit of the Missouri River Basin project, which was approved by Congress under the Flood Control Act of 1944.

Our technical presentation here will be made by Walter P. Lauritsen, attorney for our district, assisted by D. B. McOstrich, our engineer, and W. E. Trommershausen, our consulting engineer. However, for the information of the committee, I want to make a brief statement about our reclamation district and the support given our development efforts since 1943 when the Mid-State plan was first conceived.

The Nebraska Mid-State Reclamation District in Buffalo, Hall, and Merrick Counties, organized under the 1947 Nebraska Reclamation Act, consists of 550,000 acres of established farmlands, on the north side of the Platte River, of which 430,000 acres are croplands and 120,000 acres are pasturelands. Of the croplands, approximately 300,000 acres are presently irrigated by 5,200 privately owned irrigation wells. The increase in the number of these wells since 1945 has been tremendous, resulting in an increase in irrigated croplands from 100,000 acres to 300,000 acres in the past 15 years. There are 130,000 acres of croplands not irrigated. Thus, it is obvious that landowners in our district have invested several million dollars in well installations and land leveling to obtain adequate water for sustained production of crops from year to year. This large investment must be protected. This increase in irrigated acreage has resulted in a lowering of ground water levels in our area.

You are aware, of course, that our district area in south-central Nebraska, and its 60,000 citizens represents a large and important segment of the Missouri River Basin and its contribution to the national economy. Under the Flood Control Act of 1944, developments in our district area were proposed by the Secretary of Interior and the Bureau of Reclamation. However, such proposals included the transfer of water from one river basin to another, which does not conform to Nebraska law. On the contrary, our Mid-State project proposals which have had the support and approval of the Secretary of Interior and the Bureau of Reclamation since 1958, fulfill our area requirements. Further, our project, when constructed, will not preclude or foreclose on any future developments in Nebraska or any other State in the Missouri River Basin.

We have sought the assistance and cooperation of the U.S. Government in the construction of our project, through legislation before the Congress since 1954. In that period we have had the wholehearted support of the Governors of Nebraska and other State officials, of other project organizations in Nebraska, and of the many municipal and civic organizations in the district.

Extensive local support by the citizens of our district is proven when, in 1948, upon our organization, and as required under the Nebraska Reclamation Act, voters of the district approved the tax levy powers of our board of directors by a vote of 2 to 1. Again, in 1957, at a special election, the voters approved the continuance of the district by a vote of 5½ to 1. City and town precincts voted 10 to 1 to approve and country precincts voted 3 to 1 in approval.

May I add the cities and towns pay the ad valorem taxes the same as the farmers in the district.

Extensive local support is further proven by the willingness of our citizens to voluntarily contribute \$180,000 between 1943 and 1948, to underwrite our Mid-State project development expense of engineering surveys and reports, and to provide over \$980,000 in tax funds since 1948 for such continuing expenses without financial aid from the State of Nebraska or the U.S. Government.

In addition, our district and our project proposals have been supported by each of the other nine States of the Missouri River Basin. In 1959 and again in 1960 each Governor provided a letter to the district supporting the construction of the Mid-State project. Those letters were presented to your committee in 1959 at hearings on S. 1529 and in 1960 at hearings on S. 2640. Since S. 970 is similar to the provisions of S. 2640, and in view of the favorable comments in 1960 from all other basin States, we were advised by the Interior Department and officials of the Interior Committee of Congress that this requirement of the law had been fulfilled in 1960 and similar letters in 1961 would not be necessary. We would appreciate it if each of those 1960 letters could be included in the record of this hearing.

Although all supporting statements for previous Mid-State project legislation are printed in the committee's record of the hearings on S. 1529 in 1959 and S. 2640 in 1960, for the convenience of the committee and its new members in particular, I wish to present the following attached statements from State officials and local organizations in 1961 which indicates their continuing interest and support, as I have mentioned previously: Hon. Frank B. Morrison, Governor of Nebraska; Dan S. Jones, director, Nebraska Department of Water Resources; E. C. Reed, director, Nebraska Department of Conservation and Survey; M. O. Steen, Director of the Nebraska Game, Forestation, and Parks Commission, city of Grand Island, Nebr.; Frank Phelps, utilities commissioner; Grand Island Chamber of Commerce; Grand Island Industries Foundation; Central City, Nebr., Chamber of Commerce; city of Kearney, Nebr.; and Kearney Chamber of Commerce.

Senator BURDICK. Without objection, these items will be included in the record.

(Statements referred to above follow:)

THE UNIVERSITY OF NEBRASKA,
CONSERVATION AND SURVEY DIVISION,
Lincoln, Nebr., May 16, 1961.

CHAIRMAN AND MEMBERS OF THE
INTERIOR SUBCOMMITTEE OF THE U.S. SENATE,
Washington, D.C.

GENTLEMEN: We wish to support the 1961 Mid-State project bill, S. 970, which authorizes construction of the Mid-State project as a Federal project included in the Missouri River Basin project.

The Mid-State project is essential to the complete development of the natural resources of the area and the maintenance of the agricultural economy under conditions of variable climate. The soils of this area are highly productive under conditions of adequate moisture and the topography is very favorable to the distribution and utilization of water for irrigation. The longtime average precipitation at Grand Island (centrally located) is 22.7 inches but, since 1930, has varied from 11.91 inches in 1940 to 28.37 inches in 1959, imposing conditions hazardous to maintaining agricultural production under dryland conditions.

The area is generally underlain by permeable sands and gravels that provide water for pump irrigation to a limited extent and this water source has been extensively developed by the local landowners at private expense. This use of ground water has contributed greatly to agricultural production stabilization but is now developed beyond reasonable expectations for maintaining the present withdrawals indefinitely unless another, independent water source can be developed for irrigation use and ground water recharge purposes.

About 60 water table observation wells are being measured periodically in Hall County (the central county of the Mid-State project) through the cooperative efforts of the Ground Water Branch of the U.S. Geological Survey and the Conservation and Survey Division of the University of Nebraska in order to determine the effect of pump irrigation on the ground water levels of the area. A number of these observation wells exhibit downward trends which seem to be permanent. In spite of 4 consecutive years of above or near normal precipitation the ground water level recovery has been much less than necessary to provide assurance for a continuing ground water supply. The fall 1960 measurements of these wells indicate that all but 31 percent of the observation wells measured in the county are below the median point between the highest and lowest measurements of record with the greatest decline being 6.68 feet below median. The actual decline in water levels since 1930 has been almost twice these amounts because the normal water table position may be near the highest levels measured in the observation wells.

The area of the Mid-State project is ideally constituted for joint surface and ground water irrigation development because of the effective ground water reservoir underlying the project. The ground water reservoir is available as a natural reservoir, not vulnerable to evaporation loss, for the storage of water during the availability of above normal supplies of surface water. The ground water reservoir can be called upon more heavily during periods of below normal surface water supply to provide facilities for a highly successful project.

Experience in Nebraska has demonstrated that one of the most effective and economical means of artificial ground water recharge is through irrigation with water diverted from streamflow and from reservoirs where floodflows are stored. This results because water diverted at high streamflow stage can be stored in reservoirs for use on the land when it is needed, and this water is transported through low-gradient canals to the irrigated land under favorable infiltration conditions. A large percentage of the canal losses in an irrigation distribution system percolates downward to recharge ground water, and this water is not lost but added to ground water storage.

Not many years ago it was believed that some irrigated lands should be served by water from streamflow sources, and other areas, where relatively large capacity irrigation wells could be secured, should be served by water from a ground water source. We now know that areas favorable to the development of irrigation from wells are highly susceptible to overdevelopment and that those areas using water from a combination of these two sources are the most satisfactory because they can continue to provide water indefinitely without depletion of this very important resource. The Mid-State Reclamation District project is the type that can accomplish this very important conservation purpose and the agricultural economy of the area can be permanently stabilized in this manner.

Sincerely yours,

EUGENE C. REED, *Director.*

LINCOLN, NEBR., *May 22, 1961.*

THE CHAIRMAN OF THE SENATE SUBCOMMITTEE
ON IRRIGATION AND RECLAMATION,
Senate Office Building, Washington D.C.:

We support and endorse S. 970, the Mid-State reclamation project bill as a highly meritorious project for recreation and wildlife conservation. For more complete statement see our testimony before the House Subcommittee on Irrigation and Reclamation of the 86th Congress. We urge your favorable consideration of S. 970.

M. O. STEEN,
Director, Nebraska Game Forestation and Parks Commission.

CITY OF GRAND ISLAND,
Grand Island, Nebr., May 17, 1961.

HON CLINTON P. ANDERSON,
*Chairman, Subcommittee on Irrigation and Reclamation,
Washington, D.C.*

DEAR MR. CHAIRMAN: We of the city of Grand Island, in support of S. 970, believe that the best information that can be submitted on behalf of the Nebraska Mid-State reclamation project, is the attached statement by Mr. C. W. Burdick, commissioner of utilities, who retired on December 1, 1960.

As a registered professional engineer and associated with the city of Grand Island since 1930, it is a privilege to reaffirm this statement of my predecessor.

Yours truly,

CITY LIGHT AND WATER OFFICE,
F. E. PHELPS,
Commissioner of Utilities.

STATEMENT OF CITY OF GRAND ISLAND

Prepared by C. W. Burdick, commissioner of public utilities. Mr. Burdick is a registered professional engineer. He has been employed by the city for 47 years and has held his present position since 1920. The city operates 17 wells for municipal use and 8 wells in connection with a steam-generating plant.

The city of Grand Island is the third largest in Nebraska. It is located in the central part of the State and immediately north of the Platte River in Hall County.

Grand Island obtains its public water supply from 17 wells, located in various places within and just beyond the city limits. The system is owned and operated by the municipality, and has been in existence since 1872.

The underground water supply in this immediate valley, of which Hall County is the center, depends for its supply and replenishment upon precipitation in the form of rain and snow, together with a slow movement of percolation from the northwestern part of the State, known as the Sand Hills; also, some percolation is supplied from the Platte River water flowing past Grand Island.

In addition to the wells operated by the city of Grand Island, there are those operated by five other smaller towns in Hall County for public water supply purposes. Also, there are, as of January 1, 1961, over 2,300 irrigation wells in Hall County, pumping from 500 to 1,000 gallons per minute per well throughout the crop-growing season. These irrigation wells for the most part have been installed during the past 7 to 10 years, and more are being installed each year.

The city of Grand Island, anticipating the results to its water supply because of the tremendous withdrawal of water from the shallow underground reservoir, authorized the installation of 54 observation wells in a cross section north and south, east and west, in a 6-mile radius around Grand Island. These wells were installed in 1936 for the purpose of keeping a record on the underground water table levels. Readings as to depth of water from ground level have been taken quarterly since the observation wells were installed. These records reveal a constant lowering of the underground water table—more pronounced over the past 9 years. The present general water table within the area of the city's observation wells is 17 feet below what it was in 1951.

The city of Grand Island, as well as many irrigators, have found it necessary to lower their pumps because of this condition. However, there are many places where the shallow supply can no longer be pumped economically.

From the writer's experience of more than 40 years of operating the city's water department, it is obvious that a greater amount of water is being withdrawn from the underground supply than is being replenished from all present sources; and, if not supplemented by surface water, will in a short time disappear unless drastically controlled.

The city of Grand Island has taken precautionary measures for the conservation of water by discouraging its use for air conditioning, unless recirculated or returned to the underground supply. Grand Island recently completed the construction of a new steam powerplant which was designed to return all condenser cooling water to the underground through two artificial lakes.

The officials of Grand Island, in view of the facts above, are very much alarmed over its future public water supply and the preservation of its present investments; precautionary measures within its power have been taken to conserve the present supply. The city has assisted in every way in supporting the Mid-State project. This project, when built, will store water, now passing Grand Island every year, on its course to the gulf, and conserve it for more useful purposes through the replenishment and stabilization between surface and underground water.

In conclusion, may I state that in my opinion the greatest single reason for the construction of Mid-State is the preserving of the large investments made by cities, towns, and agriculture located within the Mid-State area, which are dependent on water through the stabilization and replenishment to the ground water. Furthermore, the future of Nebraska, and the Mid-State area in particular, will be in a more favorable position to obtain its fair share of the Nation's increasing population and industrial expansion, since adequate water is the prime requisite for both.

STATEMENT OF EDWARD BOERNKE, PRESIDENT, GRAND ISLAND CHAMBER OF COMMERCE, GRAND ISLAND, NEBR., MAY 16, 1961

The Grand Island Chamber of Commerce, with a membership of over 900 business and professional people, having spent considerable amounts of time and money doing education, informational, and research work for the Nebraska mid-State reclamation project, heartily support this project.

The residents within the project area are in accord with the mid-State project. This was evidenced by a 5-to-1 vote in November 1957, in favor of continuing the project. In Grand Island itself, with a population of 25,000, the vote was 17 to 1 in favor of the project.

The mid-State board of directors have secured valid signatures of landowners representing over 113,000 acres by letters of intent. This is further proof, and an indication from the people within the project area, as to their interest and belief in this project.

We feel, the Nebraska mid-State project is truly an investment in this great Nation of ours, as well as the State of Nebraska. We are firmly convinced the project will greatly enhance the economic growth and development of this area.

Not only will this important project provide needed water supply and conservation, it will provide employment for the farm population that are seeking employment in other fields. This factor is caused by farm mechanization, which in turn reduces the rural population.

Irrigation, electrical power, flood control, fish and wildlife benefits, parks, and tourist attractions are worthwhile features of the project.

Officials and staff specialists of national food processing firms have continued interests in the area encompassed by the mid-State boundaries. They have watched with interest, our mid-State progress to secure the recharge of underground water and maintain an adequate reserve.

The mid-State project is an investment, in America, the cost of which will be repaid by the people in the project area over a period of years.

STATEMENT OF WILLIAM HEHNKE, PRESIDENT, GRAND ISLAND INDUSTRIAL FOUNDATION, INC., GRAND ISLAND, NEBR.

The people residing in the Nebraska mid-State reclamation project area have a good understanding of the project, its water conservation and other economical benefits, as well as the project's influence upon the future agriculture economy of this area, the State of Nebraska and the Nation.

A large majority of the populace, both rural and urban, living in the mid-State boundaries, have endeavored to express themselves in many ways. Two important factors are the vote of the people in sustaining the project, and the letters of intent by farmowners.

Late in 1957 the Grand Island Industrial Foundation, upon the request of several interested citizens, provided office facilities for an organization known as Citizens for Mid-State. This voluntary group of civic-minded people organized support for the Nebraska Mid-State Reclamation District at an election held on October 29, 1957. The election, which was for the purpose of determining whether or not the mid-State district should be continued, resulted in an overwhelming vote in favor of continuance of the district. Approximately 85 percent of the voters voted to continue the district, and in some precincts the vote was as high as 25 to 1 in favor of such continuance. The endorsements and resolutions in support of the mid-State project, which were passed by various boards, civic groups, clubs and organizations, were channeled through our office. Because of the fact that such documents were forthcoming, we feel you would be interested in having the names of the supporting organizations.

While the list includes many names, it does not include the name of all supporting organizations. However, it does provide a good cross section of our urban and rural citizens.

Platte Valley Pump Irrigators Association	Kearney Chamber of Commerce
Hall County Farm Bureau	Grand Island Chamber of Commerce
Kearney Agricultural Committee	Grand Island Cosmopolitan Club
Hall County Livestock Improvement Association	Grand Island Real Estate Board
Nebraska State Izaak Walton League	Brotherhood of Railway Clerks
Nebraska Reclamation Association	Grand Island Life Underwriters
Kearney Wildlife Club	Grand Island Industrial Foundation
Nebraska Society of Professional Engineers	Village Board of Trustees, Shelton
Nebraska State Game Commission	City Council of Kearney
Grand Island Federation of Labor	Wood River Lions Club
Business and Professional Women's Club, Kearney	Cairo Boosters Club
American Association of University Women, G.I.	Toastmasters Club, Grand Island
Grand Island Junior Chamber of Commerce	Kiwanis Club, Kearney
Shelton Lions Club	Gibbon Lions Club
Grand Island Rotary Club	Kearney Elks Club
Kearney Lions Club	Buffalo County Board of Supervisors
Grand Island Lions Club	City Council of Grand Island
	Kearney Eagles Club
	American Legion Club, Kearney
	Veterans of Foreign Wars, Kearney
	Shelton Junior Chamber of Commerce
	Kearney Cosmopolitan Club
	Kearney Rotary Club

The mid-State project will provide many economical advantages, but as this organization is familiar with the desires and needs of industry, we wish to point out the need for such a project. Not only for needed water conservation for the rural areas, but for the urban needs and requirements of commercial and industrial use.

Nebraska, because of farm mechanization and loss of farm population, must provide new and additional job opportunities for its people. The mid-State project will have a major and decisive effect upon prospective industrials who are insured of an adequate water supply should they locate in Nebraska. New jobs will be created during the actual construction of the project, and upon completion, new and additional job opportunities will present themselves throughout the area.

The people of this area have devoted much time and have given their financial support in perpetuating the mid-State project, and we now sincerely solicit favorable action by your committee.

CENTRAL CITY CHAMBER OF COMMERCE,
Central City, Nebr., May 18, 1961.

Re S. 970.

CHAIRMEN AND MEMBERS OF THE INTERIOR COMMITTEE,
U.S. Senate, Washington, D.C.

GENTLEMEN: The Central City Chamber of Commerce firmly supports the Nebraska Mid-State Reclamation District in its efforts toward construction of the Nebraska mid-State project. It is the hope of our organization, composed of business and professional men and farmers, that this project may become a reality as a result of the legislation now pending before the Congress.

Central City is a rural community. As the agriculture of the area suffers or prospers, so likewise does this city. Merrick County is progressive, agriculturally and otherwise. Our farmers utilize the most advanced farming practices with regard to fertilization, crop rotation, weed and insect control, etc. But nothing is more important to them or to the economy of the area than irrigation. This practice has made land which was at one time virtually worthless, among the most highly valued anywhere. Our farmers, and thus our community, cannot depend upon the vagaries of nature to supply the precious water necessary to crop production. Very rarely is there a summer when the irrigation wells are not in constant operation for more than a month. Without irrigation, all too often, there is no crop whatsoever. But this constant irrigation, in addition to providing good crops, has, as it must, another effect. The water table under our land is dropping. As more wells are drilled and more water pumped, the water table will drop further and further. Even now it is becoming necessary to drill deeper to reach the supply. Eventually, it may disappear altogether under certain lands.

It is deeply gratifying to us to know that positive action is being taken and that a solution is available to alleviate this danger. By the use of surface waters for irrigation, and the building up of the water table through the contemplated reservoir system, the present prosperity of this area may be continued.

However, even beyond this desirable, or rather necessary, accomplishment, there are additional benefits, any one of which standing alone would make the adoption of the project fully justifiable. The providing of power, the establishment of recreational and game refuge areas, and the flood control provisions, the need for the latter of which was so clearly demonstrated a year ago—all of these combine to make the Nebraska mid-State project at least one of the most vital pieces of legislation, as it relates to this area, ever to be introduced into the Congress of the United States.

Most respectfully yours,

MATT BILLESBACH, *President.*

CITY OF KEARNEY, NEBR.,
 OFFICE OF CITY MANAGER,
Kearney, Nebr., May 17, 1961.

Re S. 970.

Hon. CLINTON P. ANDERSON,
*Chairman, Senate Interior Subcommittee on Irrigation and Reclamation,
 Washington, D.C.*

DEAR MR. CHAIRMAN: My name is Ray E. Lundy. I have been city manager of Kearney, Nebr., for almost 8 years. Kearney is an agricultural and rapidly developing industrial city located toward the west end of the Nebraska mid-State district area and has a population presently estimated at 14,300 people.

A firm and dependable water supply for the agricultural area in the vicinity of our community becomes more important to all of us every day. Recently a large hybrid seed processing firm, the DeKalb Co., has finished the erection of a large plant to process seed raised in the area. The Rockwell Manufacturing Co. recently completed a large manufacturing plant east of our city to fabricate precision valves and controls. Nationally known vegetable and food-processing companies have grown sizable experimental plots of vegetables widely spaced in our area for the past 5 years to determine feasibility of a full-scale operation for the future. Most of these vegetables have been processed locally in their own experimental pilot plants. All of these companies benefit our city and agricultural area. All of them use water directly, or are dependent on a firm and dependable supply of water in the area to insure production of these agricultural crops for processing.

These industrial and agricultural plants help to balance our farm and city labor supply, make new jobs for our expanding population and in turn benefit not only our area, but the State and the Nation. These large installations also pay their fair share of taxes to support water development. Such plants require larger amounts of water than others for their operation. Too, the more varieties of crops that are grown in a given area, the more diversified will be the labor needed for those crops, and this, in turn, spaces the peak demands for labor and other services, so that supply can be more nearly balanced with demand.

Our city water supply comes from 15 shallow wells which draw water from the same underground supply which furnishes water for all of our agricultural crops in the area. We know from our own experience and records that this water is being drawn out faster than it is being replenished, and many additional wells are being installed each year. We have thousands of acre-feet of water passing through our area every year in the Platte River, as it flows out to the Gulf of Mexico. We should be using this water to help maintain a balanced supply for our underground reservoir. If this water can be diverted and stored in the proposed mid-State reservoir system and spread on our farms, a wide segment of the economy of the area will benefit greatly. The farmer will benefit from the water applied directly to his crops; the pump irrigator will benefit from the water that percolates to the reservoir below; the city and village water supplies will be more firm due to the recharge from surface irrigation. The trade area of the city of Kearney extends roughly 30 miles west of the mid-State district boundary, and about the same distance eastward into the district. This trade area has long been plagued by frequent damaging floods of Strever, Buffalo, Elm Creek, and Wood River. In addition to major damage to the highly developed farmlands and physical improvements in this trade area, these floods cause serious interruptions of communication and transportation services leading both to and from our city. The mid-State project plan of development is designed to prevent these flood damages from occurring in all of that portion of the Platte Valley north of the river which lies within the mid-State boundaries and extends some 30 miles to the west. Our primary interest in the mid-State project is in the benefits derived from a balanced underground water supply and adequate irrigation water for agricultural needs and flood protection, as I have already outlined. However, we cannot overlook the enormous and widespread benefits that will be derived from the family recreation facilities and hunting and fishing area provided by the numerous proposed lakes. All of the major lake areas will be from 7 to 20 miles from our community. Our people now have to drive 45 miles to reach the nearest lake of any size, and it has been long overcrowded. This mid-State development will provide ample recreational areas and facilities within a reasonable traveling distance and within reach of all who desire it.

I am told by those who have studied the recreational features in more detail that there are more than 200,000 people living within a radius of 50 miles of these lake areas. In addition, the cross-country travelers and vacationists traveling on U.S. Highway 30, which passes within a few miles of the lakes, can make good use of these recreational facilities.

In closing I want to say the people in our area cannot afford to let more time pass without utilizing all of our water resources. Recharge of the ground water in our area is imperative. In this all parties seem to be in agreement. Surface water will benefit those farmers who do not have a good well. A stabilized water supply for our area will help stabilize the farm income. Whether we are trying to manage the affairs of a city or the finances of a farming unit, the benefits are there, if we can get our water resources developed. The mid-State project plan, a presented to this committee, will, in my opinion, accomplish these basic objectives, and therefore, merits your full confidence.

(Signed) RAY E. LUNDY, *City Manager.*

KEARNEY CHAMBER OF COMMERCE, INC.,
Kearney, Nebr., May 15, 1961.

HON. CLINTON P. ANDERSON,
*Chairman, Senate Interior Committee,
Congress of the United States,
Washington, D.C.*

HON. CLINTON P. ANDERSON: I am writing you asking your kind consideration of Senate bill S. 970. Favorable consideration of this bill would be most helpful to the residents of Kearney and the people of Buffalo, Merrick, and

Hall Counties in south-central Nebraska. I have lived in this area most of my life and am acquainted with the economy of the area covered by the mid-State project. I am also familiar with the role that adequate water supply plays in the development of agriculture, industry, and our municipalities.

The people of Buffalo, Merrick, and Hall Counties in south-central Nebraska, being cognizant of the fact that ample water supply is beyond price and necessary for their very existence, caused to be organized in February 1948 the Nebraska Mid-State Reclamation District. The Reclamation Act was passed unanimously by the 1947 Nebraska State Legislature and the mid-State project was formed under its provisions. In 1957 the people of the district, reaffirming their desire for the conservation of water, approved by 84 percent of the vote, the continuance of the district, thereby again confirming their desire for the district and their willingness to be taxed for operation and maintenance costs.

The main purpose of the district now, as it was at its inception, is the conservation of surface water and the recharge of the underground supply of water. The economy of the district is predominantly agricultural and the agriculture is dependent upon water, the major part of which is supplied from irrigation wells. At the present time, Buffalo County has 1,627 wells, Hall County 2,190 wells, and Merrick County 1,505 wells, a total of 5,322 wells irrigating 312,400 acres. Since 1951 there has been a drop in the underground water level that has reached alarming proportions. Continued depletion of our underground supply could cause untold hardships and change a now productive area into submarginal lands. Agriculture is not the only segment of our economy that would be benefited by the recharge of the underground supply, as industry within the area is 100 percent dependent upon well water. The municipalities within the area also depend upon the underground supply and the depletion of this supply would be catastrophic to the area involved, the State of Nebraska and the Nation. The mid-State project is multipurpose and the No. 1 benefit is "recharge" of the underground water supply.

The No. 2 benefit is the irrigation that would be provided for 140,000 acres of irrigable land. This land would be highly productive if ample water was available and would readily lend itself to the production of vegetables as well as the basic crops of corn, alfalfa, and small grains. Not the least important is the irrigated pasture and the production of dairy products and beef.

U.S. Army Engineers have estimated past average annual flood damage in the mid-State area in excess of \$400,000. The flood-control features of the mid-State project would protect farmland from erosion, prevent the destruction of roads, bridges, communication and transportation facilities. I, therefore, list the No. 3 benefit as flood control. Flood control by the conservation of the water for beneficial purposes that otherwise would cause the damage.

The lakes and reservoirs filled with the water that would otherwise be wasted would provide recreational facilities for an estimated 200,000 people in the adjacent area. Recreation in the form of fishing, boating, and water sports has previously been denied these people.

I have omitted any reference to the production of hydroelectric power from the benefits that the mid-State project would provide, as I am not an engineer and therefore not qualified to speak on the subject. I do know, however, that industry is moving into this area and that industry must have power. The electric energy necessary to run the pumps on the 22,107 wells in the State is in itself tremendous.

I, therefore, ask your favorable consideration and a hasty passage of S. 970 for the following reasons:

- (1) The mid-State project will provide a much needed recharge of underground water.
- (2) The mid-State project will provide water for the irrigation of 140,000 acres of rich, fertile land.
- (3) The Mid-State project will provide much needed flood control.
- (4) Needed recreational facilities will be provided by the many lakes and reservoirs on the project.
- (5) The project can furnish needed electric power for the area and the State.

Sincerely,

S. S. ST. JOHN, *President.*

Mr. JOHNSON. In addition, we understand that our 1961 Nebraska Legislature has sent direct to the chairman of the committee its Resolution No. 14, which supports our proposals and legislation, as did its 1959 Resolution No. 27, filed with you at hearings on S. 1529.

For the further information of the committee, if appropriate, I wish to refer you to numerous other supporting statements of local individuals who, at their own expense, appeared at hearings on H.R. 10825 in 1958 and on H.R. 3662 in 1959, and of the other Nebraska project organizations, which are recorded in the prints of those hearings.

We hope members of this committee will recognize the importance and need of our mid-State project and for the future requirements of the citizens of our district area and for Nebraska. We want to utilize water that is now being wasted.

Our project proposals have the wholehearted support of the Secretary of the Interior, of our Nebraska Senators and Congressmen, as well as the regional, State and local support which I have indicated.

Our repayment of construction cost is substantial.

We are willing and ready to accept all responsibilities in the construction and operation of our project, as proposed by the Secretary of Interior and the Bureau of Reclamation. We urge this committee and the 87th Congress to approve S. 970. We deeply appreciate your past interest in our development problems and shall welcome your continued cooperation and assistance.

I believe that the letter of Mr. E. C. Reed has been mailed directly to the chairman of the full committee.

Senator BURDICK. At this time, without objection, the statement of William Welsh, secretary and manager of the National Reclamation Association, Washington, D.C., and a letter from Mark Bolin, of Gibbon, Nebr., will be received.

(Material referred to above follows:)

STATEMENT OF WILLIAM E. WELSH, SECRETARY-MANAGER, NATIONAL RECLAMATION ASSOCIATION, WASHINGTON, D.C.

My name is William E. Welsh. I am secretary-manager of the National Reclamation Association.

The board of directors of the National Reclamation Association have authorized me as secretary-manager to support reclamation projects either at the authorization or the appropriation stage, where the duly authorized agency of the affected State or States raises no objection, and where a request for such support is made by the sponsoring organization. The officers of the mid-State project have requested me to appear before your committee and state the position of our association with respect to this project.

The proposed mid-State project would provide irrigation water for an area of land now being farmed along the Platte River in south central Nebraska. This area was in the very center of the so-called dust bowl and had dust storms of the 1930's. It has also experienced a number of dry years recently.

The value of irrigation as a supplement to the natural rainfall has already been demonstrated in this area in a number of instances where individual farmers have put down irrigation wells. This type of irrigation has shown not only the fertility of the soil, but it has clearly demonstrated that this area can produce the finest crops year after year if sufficient water is made available. The area to be irrigated by this project has been short of water for quite a number of years and the farmers of that area have suffered materially.

The proposed mid-State reclamation project is actually a multipurpose project. Its benefits would include flood control, power development and recreation as well as irrigation. This project is designed to supply irrigation water to a total area of approximately 140,000 acres of land, of which 40,000 acres are presently dryland farming. However, in addition to that it will also recharge the ground water table, thereby indirectly benefiting a much greater area by making an adequate water supply available for irrigation by pumping.

The principal features of the project include a diversion dam, a main supply canal, a reservoir system, consisting of a series of 23 interconnecting ravine

reservoirs on the north side of the valley, formed through the construction of earth filled dams, four powerplant sites with approximately 60,000 kilowatts capacity, spillways, floodways, and a well-gravity irrigation distribution system.

Originally the sponsors of this project were endeavoring to get approval of the plan whereby a loan would be granted on a basis quite similar to that provided under the Small Reclamation Projects Act, however, during the past 2 years that plan has been abandoned and now the sponsors of the project are asking that this project be authorized and approved under the Federal reclamation law as a unit of the Missouri River Basin project.

I was advised a year ago that the project had been approved by the Governors of the 10 Missouri River Basin States.

Last January we mailed to each Member of Congress from the 17 Western States and also to each member of the Committee on Interior and Insular Affairs a copy of the resolutions which were adopted at our last annual meeting in Bakersfield, Calif. However, I am attaching to my statement two resolutions, which were adopted last fall and which would have a bearing upon this type of reclamation project. I would appreciate it therefore, if these resolutions could be included in the record as a part of my statement. They are Resolution No. 4, Authorization and Appropriations for Continued Reclamation Development, and Resolution No. 8, Basinwide Development and Financing. These resolutions indicate just how important the members of our reclamation association consider reclamation projects such as the mid-State project now pending before your committee.

This project is located in an area where exceptionally fine crops are raised in those few years when there is sufficient rainfall, thus indicating that it would be an exceptionally fine agricultural area if there was just sufficient dependable water supply available year after year. Under present conditions the area suffers periodically from severe water shortages. During the 1930's especially this area was extremely hard hit because of the severe droughts that occurred during that period.

This project is most urgently needed and would really be helpful not only to the immediate area but to the entire State and for that reason NRA is glad of this opportunity to endorse the project. We hope that your committee may give it early and favorable consideration.

RESOLUTION No. 4—AUTHORIZATION AND APPROPRIATIONS FOR CONTINUED RECLAMATION PROGRAM

Whereas water is the lifeblood of municipal, agricultural, and industrial existence; and the continuous conservation, development, and utilization of the water resources of the States of this Nation are necessary to the growth of the Nation; and

Whereas remaining undeveloped water supplies are limited in amount, erratic in availability, are located long distances from necessary points of use and require major storage for control; and

Whereas the reclamation States provide expanding markets for the Nation's goods and are absorbing a large share of the increase in population in the United States because of the location of needed and newly discovered raw materials in the area and the ever-present necessity for the decentralization of industry in the interest of national defense; and

Whereas the Federal Government, since its inception, has recognized its responsibility in the support of improvement resulting in public benefits, including the Reclamation Act of 1902 and subsequent legislation relating to the development and construction of major multipurpose water-use projects; and

Whereas such improvements and water-use projects must be carried forward in keeping with increasing national needs and on a feasible local and national economic basis; and

Whereas the development of basinwide projects for the full use of a water resource is a difficult, complicated, and time-consuming process often involving many States having common interests in interstate streams, requiring decades of effort; and

Whereas the magnitude and necessity for multiple use basinwide developments within the framework and limitations prescribed by interstate compacts and State laws require joint action by the States involved and the support of all reclamation States; and

Whereas greater public understanding and appreciation of local, regional and national benefits of the entire reclamation program are necessary: Now, therefore, be it

Resolved, That (1) The National Reclamation Association vigorously reaffirms its support of the basic principles of reclamation accepted as national policy for more than 50 years, namely—

(a) Use of Federal money without interest for the irrigation features;
 (a) Use of power revenues on a feasible economic basis to help pay reclamation costs, and

(c) The inherent right and obligation of the people of the reclamation States, with the assistance of the Federal Government, to develop fully their water and power resources in accordance with applicable interstate compacts and the water laws of the respective States, which are and should be binding on the United States in the development of water resources.

(2) The individual States, and especially the reclamation States through the directors of the National Reclamation Association, be urged to support vigorously and unanimously, a reclamation program designed to fully develop the land and water resources of the Nation within the limit of available water supplies.

(3) The officers of the National Reclamation Association inform the public of the basic facts and far-reaching benefits of present and proposed water resource development.

(4) The officers of the National Reclamation Association bring to the attention of the President and Congress the extent to which the national welfare and available expanding markets will be impaired and curtailed if the Federal reclamation program is not expanded.

(5) The officers of the National Reclamation Association bring to the attention of the President and Congress the ever-present need for authorization of new projects justifiable under the law which will develop, control, conserve, and utilize the water resources of the Nation to keep pace with its expanding population and improving standards of living.

RESOLUTION NO. 8—BASINWIDE DEVELOPMENT AND FINANCING

Whereas the complicated and costly multipurpose projects which are today essential to the fullest utilization of the West's limited water supplies, are making power a more and more important paying partner in reclamation development; and

Whereas the use of power revenues to aid the repayment of irrigation costs is almost as old as the Federal reclamation program; and

Whereas it is recognized that integrated and coordinated planning, development, operation and financing of federally constructed water development projects within a river or drainage basin and compact related area is the most economical, efficient and feasible method of developing the water resources of many river basins and compact related areas; now, therefore, be it

Resolved, That (1) The National Reclamation Association endorses the principle of integrated planning, development, operation and financing of Federal water development projects within a river or drainage basin and compact related areas, and the use of basinwide power and other revenues to aid irrigation development within the river or drainage basin and compact related areas.

(2) Integrated development and financing, within a river or drainage basin and compact related areas, should not abandon the principle that basinwide development should meet reasonable standards of economic feasibility.

(3) That the authorization of all Federal basinwide developments, including the use of basinwide accounting, shall be by act of the Congress.

(4) That in any legislation for integrated basinwide development and financing, consideration should be given to the repayment of obligations of both existing and new irrigation entities within a basin or compact related area.

(5) That in any event integrated development and financing should not be imposed on river basins and compact related areas or existing Federal or local projects without approval of the States involved and established organizations of local consumptive users of water that would be affected thereby.

GIBBON, NEBR., May 20, 1961.

HON. CLINTON P. ANDERSON,
U.S. Senator, State of New Mexico

DEAR SIR: The Nebraska mid-State project has always been opposed by farm folks in the district. Numbers of city voters have overwhelmed the farm people on this project.

Farm people are in opposition to this issue because:

(1) Land in the district is now over 85 percent irrigated.
(2) Project costs are far in excess of possible benefits, the estimated costs are \$84,000,000; this is 75 percent of the total valuation of all the property in the district. Seepage damage is not included in this estimate and could raise the total costs to well over the total valuation.

(3) This area is now in a high state of production from existing irrigation, the underground water level is stable, and there is no need for this project.

(4) Flood and erosion control has been introduced by the U.S. Soil Conservation Service, resulting in proof that with the extended use of this service we will be able to solve the flood and erosion problem.

I will thank you for bringing this before your committee on the mid-State proposal.

Sincerely,

MARK BOLIN.

P.S.: I am a 55-year resident of this county.

Senator BURDICK. Thank you very much.

Mr. JOHNSON. Thank you, Mr. Chairman.

Senator BURDICK. The next witness is Walter P. Lauritsen, an attorney for the district.

STATEMENT OF WALTER P. LAURITSEN, ATTORNEY FOR THE NEBRASKA MID-STATE RECLAMATION DISTRICT

Mr. LAURITSEN. Mr. Chairman and members, I am the attorney for the district and I feel I am speaking for about 60,000 citizens out there. We had a vote in 1957, as has been mentioned, and it was such a large vote that I feel I speak for more than the district. I have with me to answer any questions you might have, if I am unable to do so, Mr. Ray, who is vice president of the district and the head of the large engineering concern. Mr. Trommershausen, who has been before you on other occasions, connected with R. W. Beck Co., consulting engineers. Mr. Trommershausen, who prepared and did most of the basic work on the Mid-State plan. Also I have Mr. Darrell McOst-rich, the district engineer.

I find, Mr. Chairman, that when we work down to the last witness that practically everything that can be said has already been said. I would be most pleased to submit this statement and point up most briefly for you a little of the problem and what we would like to have in the way of solution, if that is acceptable to you, instead of taking 30 minutes of your time. I would try to take 5 or 10. Would that be your preference?

Senator BURDICK. The suggestion of counsel is greatly appreciated. Your statement will be received.

(The statement referred to follows:)

STATEMENT OF WALTER P. LAURITSEN, GRAND ISLAND, NEBR., ATTORNEY FOR THE NEBRASKA MID-STATE RECLAMATION DISTRICT

Mr. Chairman and members of the committee, my name is Walter P. Lauritsen of Grand Island, Nebr. I am the attorney for the Nebraska Mid-State Reclamation District. I speak for the district, and in view of the vote of the citizens of the district in 1957, I believe that I speak for an enormous majority of the approximately 60,000 citizens who comprise this district.

With me, and available to assist me in answering your questions, are L. E. Ray, vice president of the Mid-State District and an engineer who heads a large engineering firm, W. E. Trommershausen, a partner in the firm of R. W. Beck & Associates, consulting engineers, who has appeared before you previously and who supervised the preparation of the basic Mid-State project report which has been approved by the Bureau of Reclamation and the Secretary of the Interior, for your hearing on S. 2640; and Darrell B. McOstrich, local engineer for the Mid-State project.

HISTORY AND BACKGROUND

Hearings on this project have been conducted by this committee in 1960. The new members of this subcommittee would appreciate, I am sure, sufficient information to serve as a basis for a decision. For other members of this subcommittee who have heard the Mid-State proposals discussed in former years, our statement presents information current as of this date.

This project involves three counties in the lower central portion of Nebraska, all being within the valley of the Platte River. The district is approximately 100 miles long and 5 to 15 miles wide, and includes the cities of Grand Island, Kearney and Central City and towns of Riverdale, Gibbon, Shelton, Wood River, Cairo, Alda, Chapman, Archer, Clarks and Silver Creek. There are a total of 550,000 acres of farmlands within the district.

The project was conceived in 1943 and there has been sustained effort and progress since that date in our development activities. It was originally believed that the project could be handled by local financing and local construction; later, it was believed in 1954, that the project should be built and developed in accordance with the theory of a partnership between the district and the Federal Government. This theory was pursued until the small projects bill limited such projects to \$5 million. Subsequently, other partnership legislation was attempted in Congress but was dropped when it was found that too much new reclamation policy was involved (S. 1529 and H.R. 3662, 86th Cong., 1st sess.). After hearings in 1959, our board of directors requested that the project be built by the Bureau of Reclamation as part of the Missouri River Basin plan, and since that date the project has been reviewed and approved by that agency and the Department of Interior.

I appear to substantiate the need of the mid-State project, and to urge approval of your committee of S. 970.

This is a multiple-purpose project consisting of irrigation, flood control, fish and wildlife, recreation, and hydroelectric power features. As concerns irrigation, it will provide a water supply for surface application, and also provide replenishment and stabilization of ground waters throughout the project area in central Nebraska. Specifically, the project will make surface water available to 96,000 acres of land presently, but insecurely, irrigated from private wells and to 44,000 acres of land now under dryland farming. An additional 163,000 acres of presently irrigated land will benefit from the replenishment and stabilization of the ground water supply which are expected to remain under private pumping.

The 96,000 acres of land now being served by private wells, together with the 44,000 acres of dry-farmed land, will be subject to irrigation rates based upon the ability of the water user to pay, as currently computed by the Bureau of Reclamation for its other projects.

We understand that this hearing is specifically on S. 970, but that it is supplemental in the sense that statements made at the 1959 and 1960 hearings by State officials and many individuals and organizations from the mid-State area, will support and be considered a part of this hearing. The comprehensive statements made in previous hearings and shown in this subcommittee's records provide basic information and facts which apply to the bill now being heard. Those statements also fully describe the need for this project, the justification for its authorization and construction and the widespread local support it enjoys.

In July 1959 the directors of the district petitioned the Congress to consider authorization of the project as a unit of the Missouri River Basin project, and solicited the assistance, guidance and advice of the Secretary of the Interior to accomplish construction as a Federal project. S. 2640 was introduced by Senators Carl Curtis and Roman Hruska, and H.R. 8985 was introduced by Congressman Donald McGinley in the 1st session of the 86th Congress to accomplish this purpose.

At the request of your committee, the Secretary of the Interior, through the Bureau of Reclamation, initiated a review of the economics of the mid-State project in November 1959. In January 1960 the Department of the Interior issued its evaluation statement as a revision of the financial analysis of the 1958 mid-State report, and in support of the authorizing legislation. The report of Commissioner Floyd E. Dominy was approved by the Secretary of Interior, and together with supporting comments, was submitted to your committee on April 20, 1960. In his evaluation statement, the Commissioner found (p. 3):

"The basic plan for the mid-State project is the same as that contained in the mid-State project report dated April 1958."

The Commissioner found further that the physical plan for project works and their operation remained unchanged from the detailed explanations given this committee by the district's consulting engineers in April 1959. In his conclusions (p. 21) the Commissioner of Reclamation stated:

"The mid-State project report of 1958 and the evaluation in this statement adequately demonstrate project justification and feasibility for purposes of authorization as a unit of the Missouri River Basin project."

This evaluation statement was unanimously accepted and approved by the mid-State's board of directors on May 9, 1960.

DESCRIPTION OF THE DISTRICT

The Nebraska Mid-State Reclamation District is organized under the Nebraska Reclamation Act of 1947. The district was approved by the State of Nebraska and was organized in February 1948. The legality of the formation and organization, and the powers of its elected board of directors were upheld by unanimous decision of the Supreme Court of Nebraska in 1950. Under this act and prior to delivery of water from the project works, the district may levy a 1-mill ad valorem tax on all tangible property within the district; after delivery of water, the district may levy a 2-mill tax, and in instances of deficiencies or impending defaults in contract payments, may levy a third mill. The right of the district to make such levies was approved by the voters of the district in 1948 by a ratio of two-to-one. A tax levy of 1 mill or less has been made by the district for its purposes since 1948.

The assessed valuation of real and personal property in the district (under Nebraska law) has increased from approximately \$81 million in 1948 to over \$124 million in the 1960 levy. Under these levies the total collected by the district from 1948 to April 30, 1961, has been over \$980,000.

These funds, together with private subscriptions of individuals and business firms of \$180,000 from 1943 to 1948, show local contributions in excess of \$1,100,000.

Our economy is based on agricultural production and related activities. Croplands produce corn, small grains, sugarbeets, potatoes, soybeans, castorbeans, milo, alfalfa and other hay crops. Livestock feeding and dairying constitute primary farm operations, and the greater part of the corn produced annually is fed locally.

The mid-State project was initiated nearly 20 years ago when local people employed Adolph F. Meyer, nationally known hydraulic and consulting engineer, Minneapolis, Minn., to make a preliminary report on project plans. After initial surveys of sites and office studies, the first set of project plans was completed in March 1944. Revisions and adjustments have been made over intervening years to conform to Federal planning principles and to keep abreast of changing developments in the project area.

As now designed, the mid-State project will consist of (1) a diversion dam on the Platte River, (2) a 15-mile main supply canal, (3) a series of 23 interconnected reservoirs across ravines on the north side of the valley, with an aggregate storage capacity of over 600,000 acre-feet, (4) four potential hydroelectric powerplants, and (5) a distribution system and series of district wells for the irrigation of 140,000 acres of cropland. These facilities and their operation are fully described in the project report submitted previously to this committee. Collectively these facilities will provide as major benefits (1) irrigation, (2) replenishment and stabilization of the ground water supply for farms, cities, and industry, (3) flood control, (4) the production of hydroelectric power, (5) conservation of fish and wildlife, and (6) development of recreational facilities.

PROJECT BENEFITS

Irrigation

The mid-State project will supply surface irrigation water directly to 140,000 acres of cropland in the district, including 96,000 acres presently irrigated from wells and 44,000 acres of dry-farmed land.

Under the 1958 farm-to-farm survey the owners of 113,000 acres of land signed letters of intent to utilize project water service. Engineers have established that the water supply available from the Platte River for the mid-State project will be adequate for the acreage under consideration in the present proposal. The mid-State board is confident that contracts will be obtained for service to the entire 140,000 acres, for which water can be made available, once the project is authorized.

The Bureau of Reclamation report evaluates the total irrigation benefits of the mid-State project to be in excess of \$3 million annually.

Replenishment and stabilization of ground water supply

The number of irrigation wells in the district has increased from about 500 in 1930 to over 5,000 in 1961. One-fourth of all of the registered irrigation wells in the State of Nebraska are located within this three-county district. This accelerated and concentrated pumping has created critical conditions in many cases, particularly in the dry years of 1954-1956, and if allowed to continue without artificial replenishment, will have a serious economic effect on our present agricultural economy and could approach a calamity.

From figures secured by the district's engineer, together with information available and supplied through the local office of the Bureau of Reclamation, a chart has been prepared which graphically illustrates the point we attempt to make. The attached chart shows the cycles of precipitation for the district area, the water level of certain wells in the district, and the increase in acreage irrigated by well in the district. There is always a lag between precipitation and ground water levels, and it will be noted that as precipitation is up or down, a corresponding change will be found somewhat later in ground water levels. It will also be noted that lands under irrigation have trebled from 100,000 acres in 1945 to 300,000 acres in 1960. This large increase in irrigated acreage resulted in the 1950's in much more serious repercussions on the ground water levels than was true of the lesser acreages irrigated from the drought of the 1930's. For your record, we are pleased to submit copies of this chart which was prepared for mid-State by the Bureau of Reclamation under our employment agreement.

Operation of the Mid-State project and its distribution of surface water to croplands will replenish and stabilize ground water levels over the entire district area, benefiting all irrigators and domestic water users, including towns, cities, and industrial users. The restoration of ground water levels can be accomplished and the present economy sustained only if works are built to regulate and distribute the available waters of the Platte River.

These important and far-reaching benefits, resulting from ground water stabilization, are reflected in the evaluation statement of the Bureau of Reclamation as a part of total irrigation benefits.

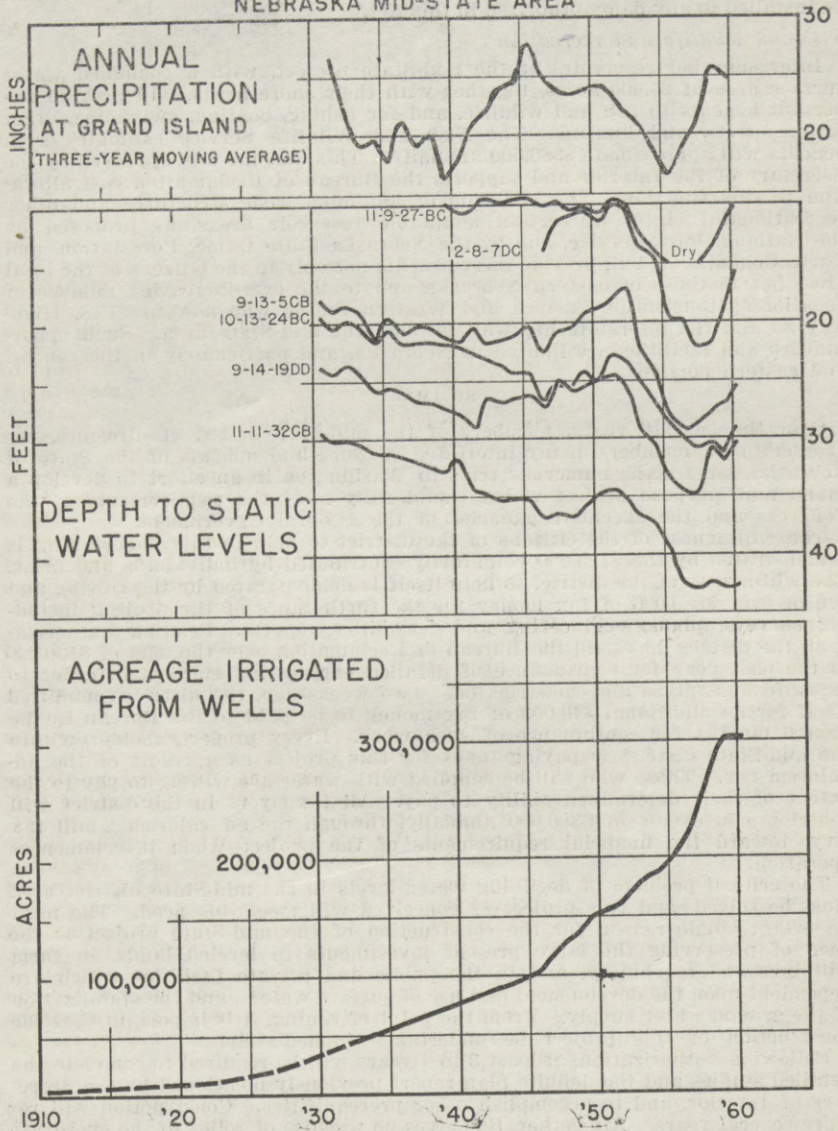
Following earlier historical floods and the disastrous 1947 flood of the tributaries of the Platte River in the mid-State area, which resulted in great damage within and outside of the district, both rural and urban, the mid-State board requested the Army Corps of Engineers to undertake studies concerning and annual flood control benefits which could be achieved by the construction and operation of the mid-State project. This problem was highlighted by the floods, less serious than previously mentioned of 1949, 1950, and 1951. As a result of these studies the Corps of Engineers determined that flood control benefits accruing from the proposed works of the district would be \$512,100 annually.

This figure was used by the Bureau of Reclamation in its cost allocation, and was approved by the Secretary of Interior.

Hydroelectric power

The project includes four proposed hydroelectric powerplants, with reversible pump turbines to insure the production of power, each installation to have a capacity of 16,800 kilowatts. The output from one of the powerplants will be used to meet the irrigation well-pumping requirements of the district and it will be an irrigation feature.

TRENDS - PRECIPITATION, DEPTH TO WATER AND WELL-IRRIGATED ACREAGE NEBRASKA MID-STATE AREA



Construction of the three remaining plants will be deferred pending development of further powerloads in Nebraska. However, since these three plants will have a capacity to produce in excess of 50,000 kilowatts and 160 million kilowatt-hours of power to be used for peaking requirements, it is prudent to include penstocks so as not to preclude the potential development of this resource. This is in compliance with section 10 of the Flood Control Act of 1946, which states " * * * And provided further, That penstocks and other similar facilities adapted to possible further use in the development of hydroelectric power shall be installed in any dam authorized in this Act."

Fish and wildlife and recreation

Interconnected reservoirs of the mid-State project, with a combined water surface area of 25,000 acres, together with their shore areas, will provide important benefits to fish and wildlife, and for fishing, boating, swimming, other water sports, and hunting. The Fish and Wildlife Service estimates such benefits will approximate \$380,500 annually. This amount was approved by the Secretary of the Interior and supports the Bureau of Reclamation cost allocation to this function. The inclusion of minimum basic structures and other recreational facilities at certain adaptable reservoir areas, as proposed by the National Park Service, and by the Nebraska State Game, Forestation, and Parks Commission, will provide these benefits not only to the citizens of the local area, but to those of eastern Nebraska and to the ever-increasing number of vacationing tourists of Eastern and Western States who now use U.S. Highway 30 and the interstate highway through the mid-State area. Such opportunities and facilities are limited in Nebraska, and particularly in the central and eastern portions.

SUMMARY

Over the past 16 years, members of the mid-State board of directors, the district's staff members, many interested citizens, and officials of the State of Nebraska, have made numerous trips to Washington in an effort to develop a sound multipurpose project which would fully meet the requirements of the Congress and the executive agencies of the Federal Government.

The willingness of the citizens of the district to help in this undertaking is demonstrated by the \$180,000 voluntarily contributed by individuals and firms. The willingness of the district to help itself is demonstrated by the raising and use of over \$980,000 of tax money for the furtherance of the project, including surveys, plans, engineering and feasibility reports. Pending authorization, the district has paid the Bureau of Reclamation over the sum of \$100,000 in the past year for continuance of detailed engineering surveys in order to expedite final plans and construction. Two weeks ago, the district committed itself for an additional \$40,000 of tax money to be paid to the Bureau in the next 6 months for continuance of such work. Every property holder within the mid-State district is paying taxes for this project as a result of the ad valorem tax. Those who will be supplied with water are willing to pay to the extent of their determined ability to pay. All taxpayers in the district will contribute in excess of \$300,000 annually, through the ad valorem 2-mill tax levy, toward the financial requirements of the project when it commences operation.

The critical problem of declining water levels in the mid-State district area must be solved, and this project as conceived will meet this need. The most important single reason for the construction of the mid-State project is the need of preserving the large present investments in leveled lands, in farm buildings and machinery, and in the public and private facilities which are dependent upon the development and use of surface waters, and the stabilization of the ground water supply. From the point of timing, it is important that the construction of this project be undertaken immediately.

Following authorization, at least 3 to 4 years will be required to complete the detailed studies and the definite plan report previously mentioned by the Secretary of Interior, and to accomplish other prerequisites. Construction will require several years. Altogether, this gives no promise of relief to the overdraft on the ground water reservoir short of early 1970's. With continued and even heavier pumping, and more rapid drawdown of the ground water supply, our situation will become even more critical. This project merits consideration as a program that can solve a problem on a planned basis rather than on an emergency or crash basis. We wish to forestall further losses and damage.

Nebraska, like other reclamation States in the West, does not receive suffi-

cient rainfall for adequate sustained crop production. At the present time, water flows past our area in the Platte River, which serves no useful purpose, on its course to the Gulf of Mexico. We have had filings on this water since 1943. We vitally need this water and have conceived the plan to conserve and utilize this water. This plan has been shown to be feasible. We have met all other known requirements and stand ready to accept our financial responsibility, as might be proposed by Congress, in the construction and operation of our project.

We have the support of the State of Nebraska, its Governor, and its officials. The Nebraska Legislature has at this session again passed a resolution of approval of the project and request for its construction. We have the support of our congressional delegation. We have the support of the citizens of the mid-State district. In Nebraska, districts such as the mid-State are placed on trial with relation to continuance, and the matter of the district's continuance was placed to a vote in 1957. The result was that 84.5 percent of the voters voted in favor of continuance. And we also have the full support and acceptance by the Bureau of Reclamation and the Department of the Interior of the basic plan.

The district assures the committee that it is willing to diligently continue its cooperation with the Federal agencies involved. The district stands ready to accept all responsibilities associated with development of the project under Federal reclamation law as a unit of the Missouri River Basin project.

We wish to thank the chairman and members of this committee for this opportunity to explain our needs and our proposals to meet those requirements.

We believe that all prerequisites for authorization have been accomplished. We request and urge that S. 970 have your favorable consideration and approval.

Mr. LAURITZEN. I will indicate that in 1930 there were 500 wells in this area. In 1960-61, there are something between 5,000 and 5,200, and the use of our ground water supply has been enormous. The major problem that this project seeks to cure is a stabilization of ground water supply. We have tried to make this as graphic for you as we possibly can. With information supplied by our own engineer and in cooperation with the Grand Island office of the Bureau of Reclamation, who are actually almost employed by us during this era—we paid them \$100,000 last year in order that their plans could continue and there would be no delay in the event of authorization.

Two weeks ago we authorized another payment of another \$40,000 within the next 6 months in order that in the event authorization could be secured, we could eliminate every delay we possibly could. I do not want to belabor this thing, but I would like to point out just a couple of things with regard to this. You will notice that first we are involved with annual precipitation, and then the depth of the static water level. Then the acreage under pump irrigation. I refer you to the chart in my prepared statement. This starts with 1930 and represents the serious drought of the 1930's, with which all of you would be familiar. There is always a timelag of a few years.

The timelag of several years nevertheless shows a drop in the irrigation wells. We have to, at the same time, place this in terms of the limited number of acres irrigated at this time. Then as we go up to 1945, there is a new peak and then a new drop. This gets down to about 17 inches per year as compared with a high of about 27 inches per year. Again, allowing the timelag, you can see this time the very pronounced and sharp drop in the water levels in the various wells, which is simply explained by the fact that we were up to 100,000 acres of irrigated land in 1945 and in a 15-year period of time we had trebled that where we now have 300,000 acres of land under pump irrigation. These six wells that we have taken are definitely represented to us as average wells. We didn't pick them in order

that they would have some dramatic effect on this chart. One well is in one county, another county has two, another county has three. So that it actually extends pretty much over the 100 miles length of the mid-State project. You will note on the one well, which is a shallow draft well, at one point it went dry. There has been some recovery on that in the meanwhile. In other words, this entire project is an effort to get on a planned basis rather than a crash or an emergency basis a thing which inevitably faces us. If you gentlemen were able to offer us authorization today, it would take another 3 or 4 years of engineering studies before there could be any chance of moving toward construction. Then when we arrived at that point, there couldn't possibly be water flowing for a number of more years.

So, if this project could move as of today, there wouldn't be water flowing to the district short of the early 1970's. When we know the draft that is made on that, there is a question as to whether even by 1960 we will not be beyond a dangerous spot. In other words, we have a critical situation there that we are attempting to correct as quickly as we can in a careful and a planned way. I would want to indicate that this district, and it has been belabored, I am sure, too much, have put in \$1,400,000 of money. We have done that willingly. Some of it has been on voluntary contributions. \$180,000 of it has just been contributions of individuals. The other \$980,000 is on an ad valorem tax. That means—well, in Grand Island and everywhere else, everyone who owns land, is paying on that tax and paying willingly. They voted it in. Under our project, one mill can be levied up to the time that water flows. After the water flows, two mills can be levied.

If we get into trouble, if there is a possibility of default at that time, we can levy a third mill. So throughout the life of this project not only will the water users be paying the limit of their determined ability, but every single person who owns property within the district will also be assisting with this matter.

There are so many things that I could say about this project and I would be delighted to go into it. I could summarize the matter that here is a possibility on using water on which we have had filings since 1943. The water goes past Grand Island, Kearney, Central City, and the other 10 towns involved in this district every day. It can be reclaimed but it is simply on its way to the Gulf of Mexico. We want to do this. We are willing to do anything we can. Questions came earlier as to what responsibility we would be able to take and would be willing to take. The answer is simply that we will accept any responsibility that the Congress determines should rightfully be ours.

The ability to pay has been determined and our people are willing to pay to that extent. We only have water for 140,000 acres of land, so we will have no problem in the use of that water. The problem may come down to the fact of who cannot have it, rather than who can have it. We have made no great effort on the matter and have letters of intent of 113,000 acres of land, so that the differences between that and 140,000 presents no problem at all. We are confident that firm contracts could be secured for far more than we could offer at any time. We do feel that we have done everything that we possibly can do to effect this thing. We now have the full approval of

the Bureau of Reclamation and the Department of the Interior. We know of no other requirement that is necessary to permit the authorization of this plan.

Unless you have questions, sir, I would be glad to elaborate further. But I think our intent was to save your time. Would you prefer to question some of my witnesses or myself, or will this suffice?

Senator BURDICK. I believe it will suffice. Thank you.

As you know, Counsel, we are taking notice of the hearing that was held on May 20, 1960, as part of the record.

Mr. LAURITSEN. We had assumed that that would be true and we want that to be true.

Senator BURDICK. Without objection I would like to put into the record a statement by John C. Martin, secretary-treasurer and manager of the Grand Island Production Credit Association of Grand Island, Nebr.; a statement by Henry D. Schutz, supervisor of the Merrick County Soil Conservation District and Merrick County Noxious Weed District, St. Libory, Merrick County, Nebr.; a statement of Arthur B. Holmburg, farmer in Buffalo County, Nebr.; a statement of Robert L. Mettenbrink, farmer and livestock feeder, Grand Island, Hall County, Nebr.; and a statement by J. S. Butler, member board of directors of Johnson Lakes Development, Inc., Cairo, Nebr. The statements were made during the 1958 hearings.

There was also presented for that record a letter from Adolph F. Meyer who, since 1943, has been consulting and design engineer for the mid-State project and also a statement of Bill Pierce, irrigation engineer for Kearney, Buffalo County, Nebr. These, too, will be included with the others.

(The statements referred to follow:)

[Re H.R. 10825, June 19-20, 1958]

STATEMENT OF JOHN C. MARTIN, SECRETARY-TREASURER AND MANAGER OF
GRAND ISLAND PRODUCTION CREDIT ASSOCIATION, GRAND ISLAND, NEBR.

Mr. MARTIN. In the 25 years that I have spent working closely with farmers in the area embraced by and adjacent to the Mid-State project, I have had an opportunity to see a tremendous change in methods, types of farming, and in general prosperity of farm people and in businesses whose lifeblood is the farmers' dollar. Most of these changes have taken place as a result of water—either too little or too much.

The last 16 of these years have been spent right in the middle of the area we are talking about. Four of these years as a teacher of vocational agriculture, followed by 4 years as a farm planner with the Soil Conservation Service, 1 year as a manager of a farm implement store, and the last 9 years as manager of the Grand Island Production Credit Association which serves all of the area included in the mid-State project as well as adjacent areas.

Production credit associations, as you no doubt are aware, are farmer-owned credit cooperatives which serve their members by furnishing short-term credit for production purposes and intermediate-term credit for investments of a capital nature that are necessary for the production of food and fiber.

Production-credit loans are made to farmers based on their credit needs and other credit factors, but most of all on their ability to repay the loan.

The development of irrigation has been one of the greatest stabilizing influences affecting this last credit factor that we in the credit field have ever witnessed in this transition area between the humid area to the east and the semiarid areas farther west.

Until irrigation had proved itself in this area, loans were made on the basis of the value of the livestock or other liquid collateral and very little consideration was given to the possibility of any repayment from crops.

The general feeling appeared to be that if moisture came in an abundant enough quantity to produce a crop, it would be accompanied by periods of severe storms that would dump 2, 3 or even 5 inches of rain in the period of a few hours and wash out or flood a good share of the crop that was depended upon.

With the development of irrigation and the accompanying improvement to the land in the way of leveling the land, providing proper drainage, the building of diversion dams and ditches, we now are able to depend upon a good crop either to be marketed as a cash crop or to be fed to livestock and marketed "on the hoof."

The same cannot be said of the adjacent nonirrigated areas. Here we still have to depend on livestock income to repay the loan. However, the situation in these dryland areas has also changed considerably in the last 20 years because of irrigation in the valley.

While these farmers still try to produce the feed they need for the livestock raised, they are in much better position to buy feed in drought years because of their close proximity to irrigated areas.

The drought of 1954, 1955, and 1956 would have resulted in an almost complete depletion of livestock foundation herds in these upland areas had it not been for the adequate feed grain and roughage supplies raised in the irrigated sections that lie within a reasonable distance from the hills.

Contrast this situation with the drought of the 1930's before irrigation was practiced in the valley. At that time the Government set up buying stations all over the area to buy drought cattle at \$15 to \$20 per head.

I also saw 100-pound hogs sell at sale barns for 25 cents to 50 cents per head—all because of a lack of feed and the great distance that available feed would have to be transported.

In short, the development of irrigation has tended to stabilize agriculture generally, both in the sections that are irrigated and the adjacent dryland areas.

Irrigation has brought about many other far-reaching results because of changes that this type of farming brought about. Prior to this era, moisture was the limiting factor as far as crop production was concerned.

With an adequate water supply available, fertility, disease and insect control, improved seeds and varieties of the various crops became increasingly important. This has resulted in a tremendous growth of "agribusiness" in this area.

In the area embraced by the Mid-State, there are no less than 3 dozen major suppliers of fertilizers, including 1 fertilizer manufacturing plant in Grand Island that employs 20 to 30 people.

Irrigation-equipment suppliers have sprung up in every town and hamlet from North Platte to Columbus. Suppliers of insecticides, herbicides, and hybrid seed furnish employment for untold numbers of men and women in this area.

All of the above developments have been a result of and depend upon a reliable source of irrigation water. However, the 3 years of drought prior to 1957, resulting in heavy pumping from the ground-water supply, has caused great concern to the people, both on the farm and in the city, because of the fear of the loss of this water supply.

Each year more and more irrigation wells have been installed. Until the past year, there has been no restrictions in Nebraska regarding the placing of the wells with respect to other well locations already established.

Excessive drawdown in one well began to affect the adjacent wells and at the last session of the Nebraska Legislature, a law was invoked establishing the minimum distance between wells.

However, the overall effect of all the wells has jeopardized not only the supply of water for irrigation but also the domestic and industrial supply of water for cities and towns in the area.

During my term as mayor of the city of Grand Island in 1954 and 1955, it was necessary to sink new wells to furnish the ever-increasing demand for water for city homes and industrial uses. With practically each new well came a deluge of protests from farmers and inhabitants of residential areas outside the city limits because the wells were affecting their water supplies.

The recharge from normal underground flow and precipitation was not fast enough to replace the water pumped from the underground reservoir.

Still another example of this lowering water table has become apparent in some parts of the Mid-State area. When the first wells were put down, they were anywhere from 30 to 50 feet deep. After more wells were sunk and drought conditions developed, it was necessary in case after case to go down another 40 to 60 feet to get adequate water.

This in turn "drained" the adjacent shallow wells, and it became a vicious cycle—each going deeper to get enough water.

If some method of supplying otherwise wasted surface water or a means of storing water to aid in the recharge of the ground water had been devised earlier, much of this difficulty could have been avoided.

The mid-State project will supply necessary surface water for irrigation to many of the lands in the Mid-State district and will do much to stabilize and replenish the ground-water level throughout the area.

There has been or will be others who will point out the danger of floodwaters in this area and how this danger can be averted. Suffice to say that I have seen floodwaters from Wood River and its tributaries cover an area several miles wide from Kearney to well east of Grand Island on at least two occasions in the last 20 years.

Another effect of irrigation and the resulting stabilization of agriculture has been the improvement in the standard of living of the farm people in central Nebraska.

One needs but to read the statistics to see how more and more young people are able to further their education by going on through high school and college. The farm homes are now on a par with city homes as regards to modern conveniences and comforts.

Our fine new schools and churches that have been built in these last 15 to 20 years witness to the benefits that have derived from water, the right amount at the right time.

The 75,000 or more people in the Mid-State area have much at stake, and all that we ask is that we be given some help to help ourselves.

Thank you.

STATEMENT OF HENRY D. SCHUTZ, SUPERVISOR OF MERRICK COUNTY SOIL CONSERVATION DISTRICT AND MERRICK COUNTY NOXIOUS WEED DISTRICT, ST. LIBORY, MERRICK COUNTY, NEBR.

Mr. SCHUTZ. My name is Henry D. Schutz. I own and operate three eighties 7 miles northwest of Chapman, Nebr. My home has been in this Merrick County community for over half a century, and is included in the Mid-State area, for which I am thankful.

The development of this project will assure us of the additional water needed to minimize the depletion of the underground water supply.

Until comparatively recent use of pump irrigation, the production on our farm was very uncertain and comparatively limited. We could count on only 2 to 3 tons of alfalfa per acre per year, whereas now 6 tons or more is not unusual.

Formerly, a large portion of the farm was devoted to wheat and other small grains because corn and specialty crops were subject to extreme damage during the usual summer drought period.

We used to be pleased with an average yield of 30 bushels of corn per acre, with some complete crop failures, where pump irrigation now enables us to triple that production as a usual thing. Adequate irrigation water stabilizes our feed-crop production.

You can see why we on the farm in the mid-State area are very much interested in having an assured supply of ditchwater and in arresting the present lowering of the water table.

Price levels of farm produce being what they are now, our buying and tax-paying ability would be extremely limited, even nonexistent, without this irrigation-water supply.

There is no question in my mind about the ultimate depletion of the present water supply if it is not supplemented some way. The rapid acceleration of irrigation development and the greatly increased pumping rate in the recent past has lowered the water table in the neighborhood of 6 feet in the past 6 years in my area.

Prairie Creek, which is close to my farm, in years gone by, was a small but flowing stream almost the year around, but is now without water except immediately after very heavy or continuing showers.

Irrigation development in the mid-State district will continue in the future due to the high value placed upon it by both landlords and operators. This growth will be limited only by the supply of water available.

In this region, the farmer without irrigation water is limited in his producing ability even beyond the point indicated by the average rainfall.

This is due to the extreme variation in rainfall between crop years as well as the rainfall pattern during the crop year. The farm operator does not get the full benefit of the occasional season of abundant moisture because he plants and fertilizes for the more usual season of limited rainfall.

His livestock enterprise is limited because he cannot be at all sure what his feed supply will be.

As agricultural technology develops further the importance of ample irrigation-water supplies will increase. This increasing know-how and the capital investment that goes with it greatly increase the stake that the farmer has in each crop or livestock enterprise.

The economic loss due to reduced buying power and taxpaying ability would be tragic if this high level of productive capacity is allowed to wither away.

I want to cite two examples in my community which illustrate the importance of trying to maintain an adequate water supply as an important factor in crop production:

The first is the case of my neighbor who has a dairy herd producing grade A milk for bottling purposes. The standards of purity and cleanliness have been going up and, I believe, rightly so.

He has reached the place where the investment in buildings and handling equipment amounts to a very sizable figure. It has become very specialized and costly so that it is not feasible to vary the size of the herd or the production very much.

The equipment and the manpower must be used at near maximum capacity to make the project economically feasible. In our climate where rainfall is very uncertain, it is extremely important that this neighbor of mine can minimize this uncertainty by the use of irrigation water to assure his feed supply at a reasonable cost.

The other example is a personal one. Just recently I have begun to produce certified hybrid sorghum seed in a small way. To produce high quality seed of this crop it is very important that the plant development proceed without interruption from the time it is planted to full maturity.

Drought periods will cause the sorghum plant to pause in its growth and then to continue when moisture is supplied by rain or irrigation. The drought period will cause seed heads to develop with differing stages of maturity, resulting in seed of inferior germinating qualities.

This fact has caused the Nebraska Crop Improvement Association, which sets up the standards, to practically insist on irrigation being available to production fields of this seed.

The above examples also illustrate the trend toward specialization in agriculture. This specialization and intensification of agriculture in my community is bound to be encouraged by the assurance of an increased and more stable supply of irrigation water. A higher and more stable level of economic activity and well-being for the whole region must follow.

I would not like to close, without expressing my concern about the needs for additional agricultural production that to my way of thinking are almost certain to develop in the not too distant future.

At present, while the world as a whole is definitely short of food supplies, most of us living on this continent seem to be swamped with farm produce. We are also consuming, perhaps squandering, other more nearly irreplaceable natural resources at a prodigal rate.

If the population of the world is to continue to grow we must inevitably, and perhaps soon, reach the place where we must increase our production and use of renewable resources such as agricultural produce. This may be not only for food and clothing, but for much wider use in industry.

Thank you for this opportunity.

STATEMENT OF ARTHUR B. HOLMBURG, FARMER IN BUFFALO COUNTY, SHELTON, NEBR.

Mr. HOLMBURG. My name is Arthur B. Holmburg of Shelton, Nebr. This is to say that I am a farmer, live on my own 120-acre farm 4½ miles southwest of Shelton, Nebr., and rent an additional 80 acres.

All of this land is under irrigation and is served with three pumps. My first well was put down in 1926 on another farm which is located 5 miles northwest of Shelton. The first well later went dry when the water table lowered, and

it had to be abandoned and a new well put in its place. This was in 1955 or 1956.

I was born on a farm near Wahoo, Nebr., lived there until about 1914, when I went to Howard County, Nebr., and from there to Buffalo County.

I have been a Buffalo County farm operator since 1920, raising cattle, hogs and feeding sheep. My land has been used for raising of alfalfa, beets, potatoes, and grain. In the course of farm operations, I have one hired man full time the year around.

For the year 1958, I am operating a 200-acre irrigated farm served with 3 wells and know something generally of the problems we have and do encounter with the water table, the present source of water for irrigation.

In 1936 there was a number of wells that used to throw 1,000 or more gallons per minute. Many farmers faced with this problem place a damper in the discharge pipe on their pump to prevent their well from going completely dry during pumping operations.

If the mid-State irrigation project is built, with the large reservoirs storing water for ditch irrigation, we feel sure our water table will raise, which would correct our troubles with water level in our irrigation wells.

In addition to my farming and feeding operations, I have been an auctioneer since 1925, and I have had contact with a lot of farmers up and down our Wood River Valley and the Platte Valley, and the story is pretty much the same in all of our area.

I have been a member of the Buffalo County Board since 1936 and had first-hand contact with damage done by floods from Wood River. For illustration, specifically in June of 1947, as chairman of the county board, as near as I can tell from records available and to my knowledge, this was one of the worst or highest floods we ever had on Wood River.

I have seen a lot of other floods along the Wood River which caused a lot of damage to farms, our county roads and bridges.

In 1947, Wood River got out of its banks about 2 miles west of Shelton. It completely covered U.S. Highway 30, and the Union Pacific main line railroad tracks, washing out sections of both, thus causing serious damage to these important means of transportation.

By the water going over Highway 30 and the Union Pacific main line tracks, it not only flooded a lot of good farmland, but it also flooded the south part of the town of Shelton, Nebr.

We had to sandbag Highway 30 on the west edge of Shelton turning the water back toward Wood River. If this had not been done, it would have flooded all of the business section of Shelton.

In this connection, the water goes out of Wood River banks west of Gibbon, Nebr., located about 6 miles west of Shelton, comes to a bridge on Highway 30 and under the Union Pacific Railroad bridge, and floods hundreds of acres of farmland and also floods the south part of Gibbon.

When the Wood River gets out of its banks, which we never know when it is going to happen, it causes a lot of damage to county roads and bridges. In 1947 alone it cost Buffalo County, a tremendous amount of money for repair and replacement of bridges and roads damaged by that flood. It also did a lot of damage to our farmland by erosion and by leaving a lot of debris lying on our good irrigation land.

If the Mid-State irrigation project is built, the water will be held back of the dams, thus reducing or eliminating flood damage, to say nothing of raising the underground water level.

Thank you.

STATEMENT OF ROBERT L. METTENBRINK, FARMER AND LIVESTOCK FEEDER, GRAND ISLAND, HALL COUNTY, NEBR.

Mr. METTENBRINK. My name is Robert Mettenbrink. My home is in Hall County, 4 miles north of Grand Island, right near Prairie Creek. I live on a farm owned by my father, that has been owned and operated by our family for over 70 years—first by my grandfather and then by my father, who is now 70 years old.

When I was young, Prairie Creek, which runs through our farm, always had water flowing in it the year around. In fact, we fished and swam in Prairie Creek.

Now Prairie Creek has a little water in it some years, but it is dry most of the time since the water level has been drawn down by so many irrigation wells.

In 1942 we started to irrigate. We installed 2 wells and now have 5. We have 300 acres out of the 720 acres that we can irrigate, all of which had to be leveled except about 35 acres.

The leveling cost was from \$30 to \$115 an acre. The crops that we grow are all consumed by livestock that we feed out. We also have to buy additional feed for our livestock, such as corn and commercial protein feed, which are surplus crops.

An irrigation project, such as the Mid-State, would not have a tendency to build up more surplus crops, because irrigation demands that livestock be raised on the farms to consume grains and forage, and for the man to keep the land fertile.

Commercial fertilizer alone isn't enough to keep the land in a fertile condition. It takes good, old barnyard manure to do the trick. With irrigation, you have to diversify the crops, and I think with a little education program there would be more irrigated pastures which would take surplus crops out of production. We are running stock cattle, preparatory to feeding, on irrigated pasture with grain supplementing the ration, and it pays off well.

The livestock industry fluctuates in price, with supply and demand being the controlling factor, but you will find that in times of drought, that disaster selling of foundation herds, due to a shortage of pastures and feed, adds to an already burdened supply of both livestock and surplus feed grains.

Mid-State would help correct this situation in Hall, Merrick, and Buffalo Counties because the farmers and feeders would run the normal amount of cattle, hogs, or sheep that the farm could carry.

With a stable supply of water to produce the crops needed to feed out the livestock they raise, the supply of livestock would remain much more constant, and more nearly geared to the demand. Livestock raising and feeding are the major sources of income to most of the people living in the mid-State area.

On January 1, 1956, there were cattle on farms in Hall County amounting to 46,930, in Buffalo County, 65,280 and in Merrick County, 46,290.

In addition, there are the dairy cattle, which adds another 19,850 head for the 3 counties. The hogs that were raised in the 3 counties also run into a large number.

There were 116,280 hogs raised to consume surplus crops, and sold for meat animals. The sheep industry also is not a small thing.

In this area there were 16,240 sheep fed out in Buffalo County, 14,110 in Hill County, and 4,520 in Merrick County, which is a total of 278,130 head of livestock that consumed surplus crops.

Over 10 million bushels of grain was fed to livestock in the 3 counties last year that otherwise would have gone into storage bins as surplus.

This 10 million bushels does not include all the additional grain which is fed each year to poultry, and poultry consume more grain per pound of gain than livestock.

The livestock business is one business that would be wrecked if our irrigation wells ceased to pump sufficient water for the crops needed to take care of this industry to produce meat for the dinner table.

Most farms in the dryland areas, without irrigation to fall back on, go into the soil bank, and if they do raise any corn or wheat, it goes into the Government storage bins because from one year to the next, it is a hit-and-miss proposition. The livestock raised in those areas does not amount to much. That is what could happen in Hall, Buffalo, and Merrick Counties if our wells go dry.

Thank you very much.

STATEMENT OF J. S. BUTLER, MEMBER, BOARD OF DIRECTORS OF JOHNSON LAKES DEVELOPMENT, INC., CAIRO, NEBR.

Mr. BUTLER. My name is J. S. Butler. I own and operate farms in Hall County, which are now irrigated by wells. In addition to my farm activities I am a member of the board of directors of the Johnson Lakes Development, Inc.

I have seen the area now covered by Johnson Lake, which is located 15 miles southwest of Lexington, Nebr., and is a part of the tricounty project, developed from a cow pasture, with no improvements other than a fence, to a lake area covering some 4.2 square miles with a shoreline of 18 miles.

Today we have 430 cabins located along the shoreline. We have two recreational areas developed by the State park commission, with provisions made for house trailer parking.

Many people owning cabins on this lake live a considerable distance from it. We have people from Iowa and Kansas, as well as the far corners of Nebraska, who spend their vacations and weekends at their cabins at Johnson Lake.

I live at Cairo, Nebr., which is 88 miles from my cabin at Johnson Lake.

Many people are concerned about the tax revenue lost from lands required for reservoirs. I have estimated the present value of the improvements on this lake and have compared it with the previous land value. The tax revenue derived from this area now far exceeds the tax collected from the previous cow pasture.

These statements are made to give you some idea as to the importance of lake areas to the people of Nebraska. The mid-State project, when completed, will have over 35 square miles of lake area and several hundred miles of shoreline.

No yardstick has yet been devised to evaluate what this would mean to Nebraska and her sister States.

These lakes will be near transcontinental U.S. Highway 30 and will also be near the new interstate highway and would provide attractive resting areas for the thousands of tourists that cross Nebraska each year.

Thank you.

MINNEAPOLIS, MINN., April 25, 1958.

Re Mid-State project report.

R. W. BECK & ASSOCIATES,
Columbus, Nebr.

GENTLEMEN: The comprehensive plan for the mid-State project as presented by you has my full approval. Moreover, I consider this project even better than is indicated by the benefit-cost analysis shown. While the estimated benefits of irrigation, flood control, fish and wildlife propagation, and recreation had to be estimated in round numbers, using current methods, such estimates, in my opinion, cannot fully measure the total benefits from this project. The ultimate intangible benefits could well outweigh the tangible benefits. Business opportunities and employment created, healthful recreation provided, surface waters conserved, ground water replenished and stabilized, hillside erosion and sediment production largely eliminated, and security provided from damaging floods will be impressive and far-reaching results of this project.

The proposed facilities for storing and distributing irrigation water are generously proportioned, and the life of the major structures, as designed, is well in excess of 100 years.

The proposed balanced surface and ground water supply is ideally suited to the project lands and results in a minimum capital cost per acre-foot of water provided, while at the same time reducing the requirements for open-ditch drainage.

I believe that by force of necessity many more pump-irrigated acres will call for ditch water from mid-State before a water balance is achieved in this area. In that kind of a competitive market the value of water would be relatively high and in my judgment, no difficulty will be experienced by the district in securing the necessary income to repay the irrigation loan.

During the past 15 years I have made a continuing study of the water supply available to the project and I feel confident that the supply, estimated available during the payout period, is conservative.

Reduced crop yields due to such infrequent deficiencies in water supply as are indicated in the report will be less serious than reduced yields due to hail and windstorms, to the ravages of insects and to unreasonably cold weather and frosts coupled with excessive fall rains. These are ever-present farming hazards.

As the power market changes during the coming years, the installation of hydroelectric equipment at the three commercial powersites will help supply the growing power needs and will provide additional income to mid-State. For that reason, the provisions added to the project so as not to preclude future power development, are both prudent and justified.

The project does not contemplate opening up large new areas of unimproved land that would require substantial expenditures for highways, railroads, utilities, stores, schools, churches, etc. The mid-State area already has these community requirements of modern living. Their existence insures that construc-

tion of the project will have an immediate beneficial impact on practically every phase of the economy, while at the same time providing a sound base for long-term economic expansion.

The annual budget for operation and maintenance given in the report will gainfully employ a substantial number of people. The living requirements of these employees and their families will give rise to other jobs, and an almost infinite variety of important, long-term, indirect benefits.

In conclusion, may I add that in my judgment, the most important single reason for the construction of the mid-State project is the need for preserving the large present investments in leveled lands; in farm buildings and machinery; and in the public and private facilities that are dependent upon water, through the replenishment and stabilization of the ground water supply. From the standpoint of timing, therefore, it is important that the construction of this project be undertaken at the earliest practicable date.

Very truly yours,

ADOLPH F. MEYER,

Consulting and Design Engineer for the Mid-State Project.

STATEMENT OF BILL PIERCE, IRRIGATION ENGINEER, KEARNEY, BUFFALO COUNTY, NEBR.

Agricultural extension engineer, irrigation and drainage, University of Nebraska; irrigation engineering specialist on Case-Wheeler reclamation projects; worked in 17 Western States, headquarters at Denver, Colo.; farm layouts, cost estimating, and new project development; zone engineer, Soil Conservation Service, Nebraska-Wyoming-Montana; past 13 years, Nebraska Irrigation Engineering, Inc., of Kearney (partnership), well and pump installation, land leveling, drainage, all types of irrigation and complete farm planning for irrigation or dryland operation by water-conserving practices.

The Nebraska Irrigation Engineering Co., located in Kearney, Nebr., works throughout the proposed Mid-State project area doing complete land development for irrigation. This consists of a complete engineering service, the drilling of irrigation wells, the installation of pumps, engines, electric motors, underground pipelines and natural-gas pipelines for irrigation power sources. The company also does a complete land-leveling service with large earth-moving equipment. They also install above-ground gated irrigation and spinkler systems for the irrigation of crops.

According to published records of the solid conservation districts of Hall, Buffalo, and Merrick Counties, over 60,000 acres of land has been leveled and 1,400 wells have been installed in the 3-county area in the last 5 years.

Irrigation development has made tremendous strides in the Mid-State area since 1940. This is directly reflected in land values. In 1940, land values for good arable land was approximately \$100 per acre. Since complete irrigation development, the value of well-developed land is up to \$600 per acre. In 1940 approximately 80 acres of the 160-acre farm could be irrigated in a haphazard manner. With complete development of the farm under irrigation, the production is probably four times as great as it was formerly.

This increased production has not come about without considerable cost to the individual farmer. Our records indicate the landowner's investment in wells, pumps, and land leveling per 160 acres will average throughout the area in which we have worked, approximately \$12,000. In some cases the expenditure would be as much as \$20,000. Within the Mid-State area there are approximately 1,000 farms so improved, representing a total of about \$12 million in land improvements.

Our ground water within the area is not inexhaustible, and in certain areas the water is being withdrawn faster than it is being replenished. The trend is toward the installation of more wells, which will be a further drain on the ground water supply. In some instances the 50-foot well has had to be replaced with a 200-foot well to obtain the necessary water to supply the farmer's needs. This, in turn, increases his cost of installation from a \$2,500 pumping installation to a \$6,000 installation to do the same job. If the water table continues to be lowered by the existing pumps, as well as the pumps that will be put

in in the future, the farmers could be in serious trouble, and their high investment per acre, as well as the high production, could be jeopardized.

With the construction of the Mid-State project with its reservoirs and canal systems, the water table will be maintained so that the pump irrigator will have an adequate water supply. There are also areas within the Mid-State project area where irrigation wells are unobtainable. These lands can be served by gravity irrigation from the distribution system of Mid-State. This land can be equally as productive as the land where there are irrigation wells, provided it can be served with irrigation water.

In some areas where they have pump irrigation, their water supply is inadequate. The supplemental water from the Mid-State project will furnish the water they need to adequately irrigate their crops.

Bankers within the area feel that on a well-developed irrigated farm the gross income is \$10,000 a year more than on comparable dryland farms.

Forward thinking people realize that water is one of the Nation's most valuable resources. The water should be used to advantage as many times as possible before it is wasted in our rivers. Water that is now bypassing the project area can be put to valuable use to stabilize the high-priced economy in this area.

Mr. LAURITSEN. At an earlier time you asked with regard to the matter of penstocks. We can supply that answer to you, if you have a desire for it to be answered.

Senator BURDICK. I see that Mr. Trommershausen is here and so is Mr. Dominy. I will ask the two gentlemen at this time this question: Is the testimony with regard to penstocks and the hydroelectric power association the same now as it was in the testimony given on May 20, 1960?

Mr. DOMINY. Yes, sir. We still proposed to place the penstocks in the facilities so that if ultimately the addition of power-producing units would prove feasible and desirable it could be accomplished much cheaper by having the penstocks in the original construction.

Senator BURDICK. Are there any questions?

Senator HICKEY. The only question I have is probably academic to counsel. Under this statement that I propounded before, contained in the dicta of this Nebraska-Wyoming case, is it your understanding that the water that will be trapped for this project will be basically Federal water?

Mr. LAURITSEN. We just don't have that in this case, Senator Hickey. That is not a problem or an issue that would be involved here. We have the filings on the water.

Senator HICKEY. That was my next question. Apparently these sources, the tributaries or creeks that will flow into the various dams proposed on here, have had the rights already satisfied by private users, is that correct?

Mr. LAURITSEN. That is right.

Senator HICKEY. And the property rights that will come after will be the property rights that will come from the surplus stored in the Federal works?

Mr. LAURITSEN. That is correct, sir.

Senator HICKEY. And they will be undoubtedly allocated by virtue of your State law? Are you proceeding to do that or is that the intent?

Mr. LAURITSEN. Well, they have been filed upon and they are involved only with the State law in this.

Am I not correct?

Mr. DOMINY. That is correct.

Senator HICKEY. And that is the 140,000 additional acres that filings have been made on?

Mr. LAURITSEN. Yes, sir.

Senator HICKEY. You mentioned that it would probably be a question, in your summary, of not how many but how many would have to be denied, rather than how many would use it.

Mr. LAURITSEN. I made that statement to indicate—there was a question in a previous hearing as to whether or not we would be able to dispose of this. You see, with over 300,000 acres now under pump irrigation and another 44,000 which are not under pump irrigation, the problem is not selling the service, the water; it is, rather, our not having as much water as we could use.

Senator HICKEY. As I understand your testimony now, the application for the use of the water has pretty much determined who is going to use it.

Mr. LAURITSEN. Well, we don't know. That is a problem that we have not fully and completely approached. We would like to believe that the 113,000 acres who have now signed letters of intent would have some priority. But the rest of the administration of the overall plan would necessarily depend upon its relationship to a central body. There will, of course, I suppose, be some areas somewhat separated from the body that will need to be served, and the district does plan on district wells. That may be the answer to the problem. Actually, our planning has not progressed to the place where we could give you an answer which is positive. That would be my opinion of the approach.

Senator HICKEY. Do I take it from your initial statement that at the present time the right of the United States to these specific waters is not recognized, that it is currently in the ownership of private property?

Mr. LAURITSEN. That is my opinion, sir.

Senator HICKEY. And for that reason you say that this problem of Federal ownership of water is not involved here?

Mr. LAURITSEN. I consider it not to be an issue.

Mr. DOMINY. I think that is definitely true in this case. None of the waters that would be impounded for project purposes under the mid-State project as proposed and being considered here by this committee would be waters flowing off of Federal lands other than that which had already been used on Federal projects and are back in the Platte River by reason of return flow at a point below that project where it would be practical and feasible to capture it and reuse it.

Senator HICKEY. On the other matter, I think your graph rather clearly shows the problem you have with limiting the number of wells. Do you anticipate additional wells over and above this rise?

Mr. LAURITSEN. No, sir. The land that will be supplied with surface water that is now under pump irrigation, which is a very sizable amount, those people will probably not continue to pump. Our well registration system does not offer the real control that we would like, with regard to numbers. That is just a problem involved with our State law. But it does not appear to me to particularly affect our mid-State, our three-area problem. In fact, we are probably fairly close to the point of saturation on numbers.

Mr. DOMINY. The economics of this will govern in the final analysis. The lands would be charged for it whether they took it or not, and it will be more advantageous for a man to accept and pay for the project water than to continue to pump with a declining water table.

Senator HICKEY. Thank you.

Senator CURTIS. I wish to thank the committee for permitting us to appear today.

Senator BURDICK. I will say, Senator Curtis, that we will hold the record open for a few days in case there are any statements your citizens are expected to file.

Senator CURTIS. I know of none. When I made my statement at the beginning of the hearing, I wasn't quite sure that Senator Hruska would be here. But he arrived at just that time. I would say that beyond a day or two we have no requests to submit any more information. If something comes up in the next day or two, we will let you know.

Senator BURDICK. Very well.

The hearing is concluded.

(Whereupon at 11:55 a.m., the hearing in the above matter was concluded.)



