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TO CONSTRUCT, OPERATE, AND MAINTAIN
THE KANOPOLIS UNIT OF THE PICK-
SLOAN MISSOURI BASIN PROGRAM,
KANSAS

GOVERNMENT

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DOCUMENTS

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HEARING

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KANSAS STATE UNIVERSITY BEFORE THE

SUBCOMMITTEE ON

ENERGY RESEARCH AND WATER RESOURCES

OF THE

COMMITTEE ON

INTERIOR AND INSULAR AFFAIRS

UNITED STATES SENATE

NINETY-FOURTH CONGRESS

SECOND SESSION

ON

S. 1821

A BILL TO AUTHORIZE THE SECRETARY OF THE INTERIOR
TO CONSTRUCT, OPERATE, AND MAINTAIN THE KANOP-
OLIS UNIT OF THE PICK-SLOAN MISSOURI BASIN PRO-
GRAM, KANSAS, AND FOR OTHER PURPOSES

MAY 6, 1976



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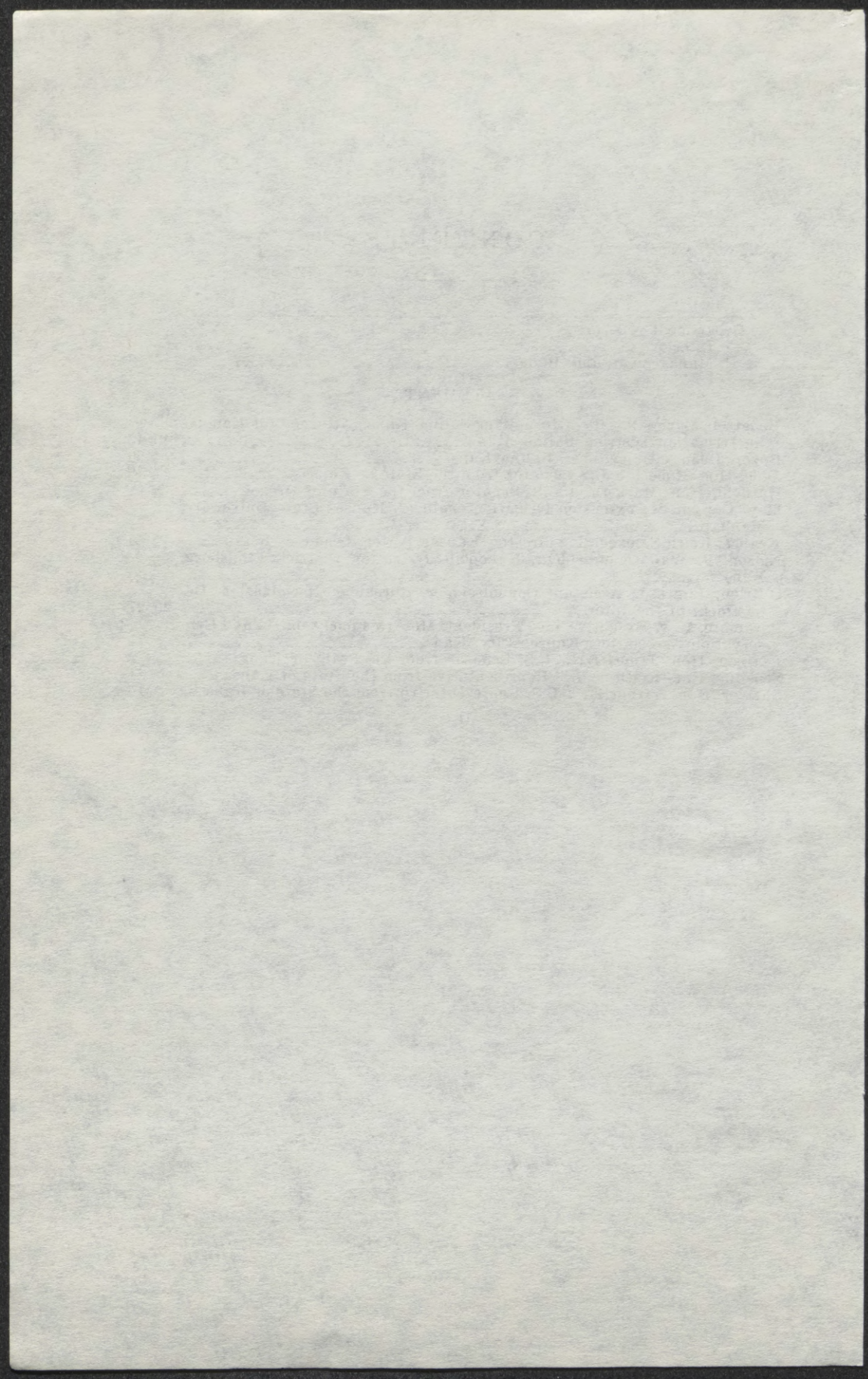
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**TO CONSTRUCT, OPERATE, AND MAINTAIN THE
KANOPOLIS UNIT OF THE PICK-SLOAN MISSOURI
BASIN PROGRAM, KANSAS**

THURSDAY, MAY 6, 1976

**U.S. SENATE,
SUBCOMMITTEE ON ENERGY RESEARCH AND
WATER RESOURCES, OF THE COMMITTEE
ON INTERIOR AND INSULAR AFFAIRS,
*Washington, D.C.***

The subcommittee met, pursuant to notice, at 10:25 a.m. in room 3110, Dirksen Office Building, Hon. Mark Hatfield presiding.

Present: Senator Hatfield.

Also present: Russell R. Brown, professional staff member.

**OPENING STATEMENT OF HON. MARK O. HATFIELD, A U.S. SENATOR
FROM THE STATE OF OREGON**

Senator HATFIELD. Good morning. Sorry to be a little bit late. Please have a chair.

The purpose of this hearing before the Energy Research and Water Resources Subcommittee is to take testimony on S. 1821, a bill introduced by Senator Dole, which would authorize construction of the Kanopolis unit of the Pick-Sloan Missouri basin program.

The proposed Kanopolis unit is located along the Smoky River in central Kansas, about 15 miles southwest of Salina. The legislation would authorize structural and operational modification of the existing Corps of Engineers Kanopolis Dam to provide a municipal and industrial water supply for the city of Salina—an irrigation supply for 20,000 acres, fishery and recreational benefits.

A companion bill, H.R. 7044, has been introduced in the House and the House Interior Committee held hearings on the measure on April 26.

The text of S. 1821 and the departmental reports on the legislation will appear in the record at this point.

[S. 1821 and departmental reports follow:]

94TH CONGRESS
1ST SESSION

S. 1821

IN THE SENATE OF THE UNITED STATES

MAY 22, 1975

Mr. DOLE introduced the following bill; which was read twice and referred to the Committee on Interior and Insular Affairs

A BILL

To authorize the Secretary of the Interior to construct, operate, and maintain the Kanopolis unit of the Pick-Sloan Missouri Basin program, Kansas, and for other purposes.

1 *Be it enacted by the Senate and House of Representa-*
 2 *tives of the United States of America in Congress assembled,*
 3 That, the Kanopolis unit, heretofore authorized as an inte-
 4 gral part of the Pick-Sloan Missouri Basin program by the
 5 Act of December 22, 1944 (58 Stat. 887, 891), is hereby
 6 reauthorized as part of that project. The construction, opera-
 7 tion, and maintenance of the Kanopolis unit for the purposes
 8 of providing irrigation water for approximately twenty thou-
 9 sand acres of land, municipal and industrial water supply,
 10 fish and wildlife conservation and development, public out-

1 door recreation and other purposes shall be prosecuted by
2 the Secretary of the Interior in accordance with the Federal
3 reclamation laws (Act of June 17, 1902; 32 Stat. 388, and
4 Acts amendatory thereof or supplementary thereto). The
5 principal features of the Kanopolis unit shall include the
6 modification of the existing Kanopolis Dam and Lake, an
7 irrigation diversion structure, the Kanopolis North and South
8 Canals, laterals, drains and necessary facilities to effect the
9 aforesaid purposes of the unit.

10 SEC. 2. The conservation and development of the fish
11 and wildlife resources and the enhancement of recreation
12 opportunities in connection with the Kanopolis unit shall
13 be in accordance with the Federal Water Project Recreation
14 Act (79 Stat. 213) as amended.

15 SEC. 3. The Kanopolis unit shall be integrated physi-
16 cally and financially with the other Federal works con-
17 structed under the comprehensive plan approved by section
18 9 of the Flood Control Act of December 22, 1944 (58 Stat.
19 887, 891), as amended and supplemented. Repayment con-
20 tracts for the return of construction costs allocated to irriga-
21 tion will be based on the irrigator's ability to repay as
22 determined by the Secretary of the Interior, and the terms
23 of such contracts shall not exceed 50 years following the
24 permissible development period.

1 SEC. 4. For a period of ten years from the date of enact-
2 ment of this Act, no water from the unit authorized by this
3 Act shall be delivered to any water user for the production
4 on newly irrigated lands of any basic agricultural commod-
5 ity, as defined in the Agricultural Act of 1949, or any
6 amendment thereof, if the total supply of such commodity
7 for the marketing year in which the bulk of the crop would
8 normally be marketed is in excess of the normal supply as
9 defined in section 301 (b) (10) of the Agricultural Adjust-
10 ment Act of 1938 (52 Stat. 31, 41), as amended, unless the
11 Secretary of Agriculture calls for an increase in production
12 of such commodity in the interest of national security.

13 SEC. 5. The interest rate used for computing interest
14 during construction and interest on the unpaid balance of
15 the reimbursable costs of the Kanopolis unit shall be de-
16 termined by the Secretary of the Treasury, as of the begin-
17 ning of the fiscal year in which construction of the unit is
18 commenced, on the basis of the computed average interest
19 rate payable by the Treasury upon its outstanding market-
20 able public obligations which are neither due nor callable
21 for fifteen years from date of issue.

22 SEC. 6. There is hereby authorized to be appropriated
23 for construction of the Kanopolis unit the sum of \$42,000,000
24 (January 1975 price levels) plus or minus such amounts,

1 if any, as may be justified by reason of changes in construc-
2 tion costs as indicated by engineering cost indexes applicable
3 to the types of construction involved and, in addition thereto,
4 such sums as may be required for operation and maintenance
5 of the works of said area.



United States Department of the Interior

OFFICE OF THE SECRETARY
WASHINGTON, D.C. 20240

MAY 5 - 1976

Dear Mr. Chairman:

This responds to your request for the views of this Department with respect to a bill, S. 1821 "To authorize the Secretary of the Interior to construct, operate, and maintain the Kanopolis Unit of the Pick-Sloan Missouri Basin Program, Kansas, and for other purposes." The potential Kanopolis Unit would be located along the Smoky Hill River in Ellsworth, McPherson, and Saline Counties in central Kansas.

The Department is opposed to consideration of the proposed bill at this time and recommends that the Committee defer further consideration of the bill until the feasibility study has been reviewed and approved as required by law.

The proposed feasibility report of the Commissioner of the Bureau of Reclamation concerning the Kanopolis Unit is at this time undergoing a 30 day review by Interior agencies. Once this review is completed and the comments accommodated, the feasibility report will be submitted to the Secretary of the Interior for his consideration and adoption as his proposed report, and the proposed report will then be circulated to Federal, State, and local agencies for the 90 day review required by law.

The feasibility study on which the report is based considers several alternatives, including a no development plan, a plan that emphasizes National Economic Development (NED) objectives, a plan that emphasizes Environmental Quality (EQ) objectives and a combination plan that emphasizes both NED and EQ objectives.

Under the no development alternative the economy of the area would continue to be based primarily on nonirrigated farming. The extent and viability of future growth in the area would depend on future hydrologic conditions or the development of some other alternative water supply by the local agencies.

The NED alternative would furnish water for municipal and industrial use by the city of Salina, Kansas, and the State of Kansas; water for irrigation of 20,000 acres of land; and water for fishery flows in



the Smoky Hill River. Present levels of flood protection and recreation would continue to be furnished by the existing Kanopolis Dam and Lake.

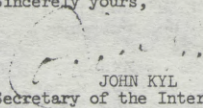
The EQ alternative would provide water for increased fishery flows and environmental quality flows in the Smoky Hill River. In addition, Federal lands adjacent to Kanopolis Lake would be managed for wildlife habitat enhancement. There would be 350 acres of land acquired for wildlife habitat, 150 acres of land would be acquired for environmental preservation, and measures would be taken to increase the inactive storage and enhance the Kanopolis Lake fishery and recreation. Present levels of flood protection would continue to be furnished by the existing Kanopolis Dam and Lake.

The combination NED and EQ alternative would provide all of the functions to both the NED and EQ alternatives except for the environmental quality flows of the EQ alternative.

We will be able to comment on the costs and benefits of the various alternatives and the merits of this legislation when the study process has been completed. We recommend that no further action be taken on the bill until that time.

The Office of Management and Budget has advised that there is no objection to the presentation of this report from the standpoint of the Administration's program.

Sincerely yours,


JOHN KYL
Assistant Secretary of the Interior

Honorable Henry M. Jackson
Chairman, Committee on
Interior and Insular Affairs
United States Senate
Washington, D. C.

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

June 18, 1976

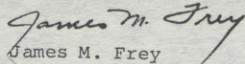
Honorable Henry M. Jackson
Chairman, Committee on Interior
and Insular Affairs
United States Senate
3106 New Senate Office Building
Washington, D.C. 20510

Dear Mr. Chairman:

This is in response to your request for the views of the Office of Management and Budget on S. 1821, a bill "To authorize the Secretary of the Interior to construct, operate, and maintain the Kanopolis unit of the Pick-Sloan Missouri Basin program, Kansas, and for other purposes.

The Office of Management and Budget concurs in the views expressed in the reports of the Department of the Army and the Department of the Interior and, accordingly, also recommends against enactment of S. 1821.

Sincerely yours,


James M. Frey
Assistant Director for
Legislative Reference

Senator HATFIELD. I have statements from Senator Pearson, and Congressman Sebelius and Shriver, which I will insert in the record at this point.

[The statements follow:]

STATEMENT OF HON. JAMES B. PEARSON, A U.S. SENATOR FROM THE STATE OF KANSAS

KANOPOLIS IRRIGATION DISTRICT

Since 1962 the Kanopolis Irrigation District has been waiting for authorization to provide water to irrigate some 20,000 acres in the Smoky Hill River Valley.

Today, Mr. Chairman, you will be receiving testimony in support of legislation to reauthorize this project. I am in strong support of this legislation and believe that the benefits of irrigation coupled with the increased municipal and industrial water supply will be of considerable value to Kansas.

The Kansas municipalities of Salina and McPherson (combined population of 50,000) have made a formal request for the additional water supply created by the district. But more crucial to Kansas is the economic benefit derived from the irrigation district.

It is estimated by the Kansas Water Resources Board that the net farm income in the Kanopolis Irrigation District will be increased by more than \$2.5 million annually and that for every dollar spent on irrigation farming in Kansas six dollars in regional and state benefits are realized.

As you may know, Mr. Chairman, this unit was authorized for construction in the 1942 and 1946 Flood Control Acts but as a result of Public Law 88-442 is required to be reauthorized.

This particular irrigation district would be a tremendous benefit to those farmers trying to produce our nation's food and would prove to be a stabilizing factor to the community through a reduction in the effect of drought and floods. It would also help meet the pressing demands for recreational areas, fish and wildlife development and the overall improvement of the environment.

Mr. Chairman, I would urge this Committee to give this legislation favorable consideration and by so doing give these Kansas communities the benefit of an expanded water development program.

KEITH G. SEBELIUS
1ST DISTRICT, KANSAS

COUNTIES:

BARBER
BARTON
BETHUNE
CLARK
CLAY
CLOUD
COMANCHE
DECATUR
EDWARDS
ELLIS
ELLSWORTH
FINNEY
FORD
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HASKELL
HODGEMAN
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KEARNY
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SCOTT
SEWARD
SHERIDAN
SHERMAN
SMITH
STAFFORD
STANTON
STEVENS
THOMAS
TREGG
WALLACE
WASHINGTON
WICHITA

Congress of the United States

House of Representatives

Washington, D.C. 20515

May 6, 1976

The Honorable Frank Church
Chairman
Subcommittee on Energy Research
and Water Resources
Suite 3106, Dirksen Bldg.
Washington, D. C. 20515

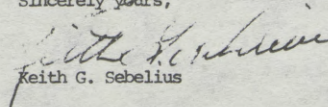
Dear Mr. Chairman:

I regret I was unable to personally attend recent hearings by the Subcommittee on Energy Research and Water Resources relative to H.R. 7044, a bill to authorize construction, operation and maintenance of the Kanopolis Unit of the Pick-Sloan Missouri Basin program, Kansas.

It would be most appreciated if the enclosed statement relative to this proposal would be included in the hearing record. I wish to also take this opportunity to express my appreciation of your efforts and those of the Ranking Minority Member, Senator Mark Hatfield, in scheduling hearings on what I consider to be a water resource proposal of major importance to my district and the State of Kansas.

With every best personal wish,

Sincerely yours,


Keith G. Sebelius

KGS:nr

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C. PATRICK ROBERTS
ADMINISTRATIVE ASSISTANT

MELVIN E. THOMPSON
LEGISLATIVE ASSISTANT

AGRICULTURE COMMITTEE

SUBCOMMITTEES:
LIVESTOCK AND GRAINS
(RANKING MINORITY MEMBER)
FAMILY FARMS AND RURAL DEVELOPMENT

INTERIOR AND INSULAR
AFFAIRS COMMITTEE

SUBCOMMITTEES:
NATIONAL PARKS AND RECREATION
(RANKING MINORITY MEMBER)
MINES AND MINING

STATEMENT BY CONGRESSMENT KEITH G. SEBELIUS, 1st District, Kansas
SUBCOMMITTEE ON ENERGY RESEARCH AND WATER RESOURCES

To be submitted for the hearing record a statement on H.R. 7044, a bill to authorize construction, operation and maintenance of the Kanopolis Unit of the Pick-Sloan Missouri Basin program, Kansas.

May 6, 1976

Mr. Chairman, I appreciate the opportunity to submit a statement relative to H.R. 7044, a proposal that regretfully has been in a state of limbo for nearly 30 years.

The Kanopolis Dam and Reservoir was authorized as a flood control facility in June of 1938. Since the completion of the facility and authorization for construction of the Kanopolis Unit by the Flood Control Act of 1944 and 1946, action on this proposal has been met by delay after delay. By 1960, a definitive plan report was completed, however, construction was postponed due to pending settlement of litigation concerning the formation of the irrigation district. Legal formation of the district was completed in 1966. Progress was, unfortunately, interrupted by another hurdle in Public Law 88-442 which became law 2 years prior to the 1966 district formation. Under Public Law 88-442, all units of the Pick-Sloan Missouri Basin program not under construction as of the date of that act were required to be authorized by Congress. Feasibility studies were subsequently authorized in September of 1966. Since that time, extensive environmental and feasibility investigations have been constructed. A thorough evaluation of the present and projected problems and needs of the area were made and alternatives examined. After 30 years of effort to get this proposal underway, Mr. Chairman, we have indeed reached the final critical step in the authorization of the Kanopolis Unit.

While I defer to the expertise of the Bureau of Reclamation and local officials of the district on technical aspects of the plan, I would like to briefly point out those elements I believe to be important to the general economic climate of the area.

The most pressing need of this area, with a doubt is the dependence of central Kansas citizens upon water for their livelihood. Agriculture and its allied industries form the economic backbone of this three-county area. The major source of income comes from the production of wheat, grain sorghum, alfalfa and corn. The chief industry is understandably the processing of agricultural products. Retail trade in the area is dependent upon the economic stability of those engaged in farming and related industries. This plan will enhance agricultural stability and, consequently, the overall economic stability of the area by reducing crop production fluctuations that occur as a result of widely varying annual rainfall. The drought conditions the area is now experiencing is an excellent example of the need for this plan to be implemented as soon as possible.

page 2 -Congressman Keith G. Sebelius
HR 7044 - May 6, 1976

Another aspect of considerable importance is the plan's impact on the Salina municipal water supply. At present, 70 per cent of Salina's water supply is obtained from the Smokey Hill River. The Kanopolis Unit is crucial in assuring the City of Salina a safe and guaranteed supply of water to meet their projected normal water usage.

Obviously, I have been able to highlight only those elements critical to the economic and social growth of the three-county area included in the plan. The need for construction of the Kanopolis Unit is acute. Surely, after 30 years, we can ill-afford to wait any longer to see accomplished what has been needed and proposed as far back as 1944.

The efforts of the Chairman of the Subcommittee on Energy Research and Water Resources and that of the other members of the Subcommittee in behalf of this project will be greatly appreciated.

GARNER E. SHRIVER
4TH DISTRICT, KANSAS

ROOM 2209
RAYBURN HOUSE OFFICE BUILDING

LESTER ROSEN
ADMINISTRATIVE ASSISTANT

MEMBER:
COMMITTEE ON BUDGET
COMMITTEE ON APPROPRIATIONS

SUBCOMMITTEES:
LABOR-HEALTH, EDUCATION, AND WELFARE
FOREIGN OPERATIONS

Congress of the United States
House of Representatives
Washington, D.C. 20515

May 6, 1976

The Honorable Frank Church
Chairman
Subcommittee on Energy Research
and Water Resources
Committee on Interior and Insular Affairs
United States Senate
Washington, D.C

Dear Mr. Chairman:

I am herewith submitting a statement in support of S. 1821, a bill to authorize the Bureau of Reclamation to construct the Kanopolis Irrigation United in Kansas. I wish to express my appreciation for your providing the opportunity for hearings on May 6 and I would appreciate my statement made a part of the hearings record.

This is a project which has been long delayed but is much needed and has strong local support. I am hopeful that your Subcommittee will take favorable action.

With appreciation, I am,

Sincerely,

Garner E. Shriver

Garner E. Shriver
Member of Congress

GES/hwc

STATEMENT OF U.S. REP. GARNER E. SHRIVER, OF KANSAS, ON KANOPOLIS
IRRIGATION UNIT BEFORE SUBCOMMITTEE ON ENERGY RESEARCH AND WATER
RESOURCES, COMMITTEE ON INTERIOR, UNITED STATES SENATE.

May 6, 1976

Mr. Chairman and Members of the Subcommittee:

I wish to express my strong support of S. 1821 which would authorize the Bureau of Reclamation to construct the Kanopolis Irrigation Unit in Kansas. I am the co-sponsor with Congressman Keith Sebelius of similar legislation in the House, and on April 26th we had hearings before the Subcommittee on Water and Power Resources in the House.

The time has come to move forward on this project which has strong local support. It is a project which has been subjected to numerous bureaucratic roadblocks and delays. It almost has been studied to death.

The Kanopolis project would have been completed long ago had it not been for litigation involved which was resolved in favor of the Irrigation District more than 10 years ago.

The construction of this Unit would provide benefits of irrigation for 20,000 acres of project lands and it would furnish water for industrial use for the City of Salina and the State of Kansas.

The Governor of Kansas and the Kansas Water Resources Board also are strongly supportive of action now.

Those of us from States where agriculture is predominant in the economy, fully recognize the importance of getting the most out of the land. The Kansas farmer has demonstrated time and again his genius for producing food not only for American families but for people around the world. But water and weather often are deterrents---as well as blessings---to good crops.

If we are to sustain the farmer's ability to produce for future generations, irrigation projects such as Kanopolis must be built to enable him to develop greater production on the acreage available.

It is my understanding the Bureau of Reclamation has projected later construction costs which are somewhat less than originally estimated in the feasibility study. However, the total investment cost involved in the construction of the Kanopolis Unit, based on October 1975 prices, was \$40,231,700 including the depreciated value of existing facilities and interest during construction.

It is estimated that annual benefits totaling \$8,214,200 would accrue from construction and operation of the Kanopolis Unit over the 100-year project life.

Mr. Chairman, we all recognize the tremendous demands upon our Federal Treasury. But here is a project which will result in increased agricultural production in the years ahead, create jobs, stimulate rural development, and a significant portion of the federal investment will be reimbursed by the users.

I have the opportunity of serving as ranking member on the

House Foreign Operations Appropriations Subcommittee which handles our foreign assistance funding. Time and again we are asked to approve grants and loans for public works projects in foreign countries. For some reason, they are not subject to the same careful justification processes, the long feasibility investigations, and the bureaucratic controls imposed upon our own projects here at home.

I think it is time to move on Kanopolis; to end the long delay; to cut the red tape. Today your Subcommittee has an opportunity to breathe life into the Kanopolis Irrigation project which can mean so much to the economy of Kansas and to the agricultural health of our Nation. I urge favorable action on S. 1821.

###

Senator HATFIELD. We are very happy to welcome you to this committee, Senator Robert Dole, the author of the bill, and we'll be pleased to hear from you at this time.

STATEMENT OF HON. ROBERT DOLE, A U.S. SENATOR FROM THE STATE OF KANSAS

Senator DOLE. Thank you, Mr. Chairman.

First, I want to thank the chairman for his courtesy in arranging these hearings. They're very important to this project, and we certainly appreciate it.

I also want to indicate, as you have, that Senator Pearson fully supports the project, as do other members of the Kansas delegation. We hope that we can have some success.

We've been working on this project for over a decade. Hopefully this year we can see some end to this effort, and some real progress.

Mr. Chairman, I would ask permission that my entire statement be made a part of the record, and I'd like to take just a couple of minutes to highlight what I think are important issues.

Mr. Larry Bengtson of Salina is here to testify on behalf of the Kanopolis project. He is the attorney for the city of Salina and for the irrigation district, and is certainly well qualified to speak on the value of this program for both municipal water supply and for agricultural irrigation purposes.

He has brought with him, I understand, endorsements from Kansas Governor Robert Bennett and the State Water Resources Board, as well as additional statements of support by a number of local officials and residents of the area.

I might add—not that it makes any great difference—except Larry's been successful and I went into politics—we both graduated from the same law school about the same time, and so it's a real pleasure to have Larry appearing before this committee.

I want to take this opportunity to reiterate support for S. 1821, which would authorize the Secretary of the Interior—as the chairman has indicated—to construct, operate, and maintain the Kanopolis unit of the Pick-Sloan Missouri basin program. That bill is identical to H.R. 7044, introduced jointly by Congressman Keith Sebelius and Congressman Garner Shriver, which was the subject of companion hearings before the House Interior Committee last month.

As indicated, Senator Pearson strongly supports the project, as does Congressman Skubitz, members of the Kansas delegation.

The irrigation project is expected to provide an important water supply for some 20,000 acres of land immediately below the existing Kanopolis Reservoir, which was constructed in 1948. Currently, this valuable grain and cattle land is watered by undependable ground water and riverflow sources.

Indications are that the unit would also prove to be a significant source of municipal and industrial water supply for surrounding communities, including Salina and McPherson, and that it would have a favorable impact on wildlife habitation in the area.

The principal threat to this project is and has been for some time, delay. I and several of my colleagues in the Kansas delegation have supported this project for a little more than a decade. I did so when I was a Member of the House, and continued the effort here in the Senate.

And, of course, we have been disappointed to see the necessary authorization repeatedly postponed.

But there are encouraging signs, and this hearing is certainly one of those encouraging signs, that approval may be actually forthcoming during this session of Congress.

The Bureau of Reclamation and the Army Corps of Engineers worked closely together preparing a feasibility report and proposed draft environmental statement, which are now being reviewed by appropriate Federal agencies here in Washington.

We've been advised that this review should be completed by about the end of May.

Subsequently, according to established procedures under the multi-disciplinary planning system, the report and statement must be reviewed by interested State and local officials before final approval of the authorization is submitted by the Interior Department to Congress. We are hoping that this procedure can be expedited in the 94th Congress, if they are to have an opportunity for approval prior to adjournment.

We hope that the maximum 90-day period provided for review by State and local interests may be kept to a minimum.

Mr. Chairman, I would emphasize to the subcommittee the important job-producing and food-producing impact of this irrigation project—it is situated in the heart of our Nation's cattle and wheat country. Farms in the area promise to provide important food supplies for the Nation in the years ahead.

Preliminary studies indicate this unit will have valuable potential as a source of water for these supplies, and it is estimated that the net farm income in the irrigation district will be increased by more than \$2.5-million annually as a result of this project.

I thank you for this opportunity to once again express my support for this project, and to express the support of Senator Pearson and other members of the Kansas delegation.

[The prepared statement of Senator Dole follows:]

STATEMENT OF HON. ROBERT DOLE, A U.S. SENATOR FROM THE STATE OF KANSAS

Mr. Chairman, I am pleased to appear this morning to speak on behalf of the Kanopolis Irrigation unit, and to introduce our witness from Salina, Kansas.

Let me first say to my good friend, Senator Mark Hatfield of Oregon, that I especially appreciate his willingness to chair these hearings this morning. Senate hearings are an essential part of the congressional authorization process for all water resource projects proposed by the Bureau of Reclamations, and we certainly hope to get the Kanopolis project approved yet this year. This session will facilitate that effort.

Mr. Larry Bengtson of Salina is here to testify in support of the Kanopolis project. He is the attorney for the city of Salina and for the irrigation district, and is certainly well qualified to speak on the value of this program for both municipal water supply and for agricultural irrigation purposes. I understand he has brought with him endorsements of the Kanopolis unit provided by Kansas Governor Robert Bennett and by the State water resources board, as well as additional statements of support by a number of local officials and residents of the area.

I might add that Larry and I graduated at the same time from Washburn Law School in Topeka, and it is a real pleasure to be his fellow advocate for the Kanopolis irrigation project here this morning.

I want to take this opportunity to reiterate support for reauthorization of the Kanopolis Irrigation District in Kansas. Almost one year ago today, I introduced Senate bill S. 1821, to authorize the Secretary of the Interior to construct, operate, and maintain the Kanopolis unit of the Pick-Sloan Missouri basin pro-

gram. That bill is identical to H.R. 7044, introduced jointly by Congressmen Keith Sebelius and Garner Shriver, which was the subject of companion hearings before the House Interior Committee last month. It is my understanding that Congressman Joe Skubitz and Senator James Pearson are also supportive of this effort, and it is encouraging to see such a show of unity among the Kansas congressional delegation in support of this valuable and worthwhile irrigation project.

VALUABLE PROJECT

The Kanopolis irrigation proposal is expected to provide an important water supply for some 20,000 acres of land immediately below the existing Kanopolis reservoir, which was constructed in 1948. Currently, this valuable grain and cattle land is watered by undependable ground water and river-flow sources. Indications are that the unit would also prove to be a significant source of municipal and industrial water supply for surrounding communities, including Salina and McPherson, and that it would have a favorable impact on wildlife habitation in the area.

It is my understanding that, in weighing the relative benefits and costs of this proposed irrigation project, the Bureau of Reclamations has computed a "B/C ratio" of 2.9/1, which is exceptionally favorable by most project standards. In fact, the Bureau has advised that annual benefits for the project would exceed estimated annual costs by some \$5,390,200. Just as significant, from a cost perspective, is the fact that future water users in the Kanopolis Irrigation District would be able to repay approximately 78 percent of the total project construction cost of \$26,530,000. This factor is especially reassuring at a time when sincere efforts are being made to place restraints on Federal expenditures in Washington. I am convinced, therefore, of the economic justification for, and the soundness of, the Kanopolis project.

NEED TO EXPEDITE APPROVAL

The principal threat to the Kanopolis irrigation project is, and has been for some time, the simple factor of delay. I and several of my colleagues in the Kansas delegation have supported this project for more than a decade, and we have been disappointed to see the necessary authorization repeatedly postponed.

Fortunately, there are encouraging signs—not the least of which are these subcommittee hearings—that approval may actually be forthcoming during this session of Congress. The Bureau of Reclamation and the Army Corps of Engineers have worked closely together in preparing a feasibility report and proposed draft environmental statement which are now being reviewed by appropriate Federal agencies here in Washington. We have been advised that this review should be completed by about the end of May.

Subsequently, according to established procedures under the multi-disciplinary planning system (MOP), that report and statement must be reviewed by interested State and local officials before final approval of the authorization is submitted by the Interior Department to Congress. Clearly, this procedure must be expedited if the 94th Congress is to have an opportunity to give its approval prior to adjournment. Consequently, I am hopeful that the maximum 90-day period provided for review by State and local interests may be kept to a minimum. In view of the support for the project which has already been registered by the Governor of Kansas, by the Kansas congressional delegation, and by the Kansas Water Resources Board, I would think that the necessary State and local review of the Bureau's report could be done in short order. That will give us a reasonable chance to get the necessary authorization through the legislative mill here on Capitol Hill before Congress adjourns this year.

LITTLE THREAT TO WILDLIFE

The anticipated loss of some surrounding areas of wildlife habitat would, I understand, be partially compensated for through agreements with the Corps of Engineers for the Kansas Forestry, Fish and Game Commission to manage certain Federal lands within the reservoir rights-of-way for wildlife purposes. Also, acquisition of an additional 350 acres of private land within the reservoir rights-of-way is under consideration. The Fish and Wildlife Service has itself advised that there is no indication that development of this project would modify or destroy any endangered species' habitat.

CONCERNS ANSWERED

I am aware of earlier concern among some area residents that development of irrigation facilities would affect the level of Kanopolis reservoir to such an extent that flood control and recreational functions might be impaired. The Department of the Interior has discounted such fears, however, pointing out that a portion of the flood control responsibility could be easily transferred to the existing Cedar Bluff reservoir upstream on the Smoky Hill River. The Bureau also indicates that Kanopolis reservoir should not be subject to drawdown conditions sufficient to harm recreational opportunities. Both of these factors should be watched carefully, I believe, as development of the unit proceeds.

In addition, an analysis of the possible effects on water quality has been coordinated with the Environmental Protection Agency. The EPA has determined that the operation for a municipal and industrial water supply and the return flows from the irrigated land would not pose any significant water quality problems in the Smoky Hill River basin. Careful monitoring should insure the safety of the water quality.

CONCLUSION

In closing, I want to emphasize to this subcommittee the important job-producing and food-producing impact of this irrigation project. Situated in the heart of our Nation's cattle and wheat country, farms in the area promise to provide important food supplies for the Nation in the years ahead. Preliminary studies indicate that this unit will have valuable potential as a source of water for these supplies and it is estimated that the net farm income in the irrigation district will be increased by more than \$2.5 million annually as a result of this project.

I am confident that the members of the Senate Interior Committee will see fit to favorably recommend this project for inclusion in the omnibus water resources legislation, and I intend to continue my efforts to gain the necessary support for this authorization in the Senate.

Thank you for this opportunity to once again express my support for the Kanopolis irrigation unit in Kansas.

Senator HATFIELD. Thank you very much, Senator, for your very careful and comprehensive analysis of the project. I appreciate the way you have set it forth, via the route of various interest groups which would naturally have some view on this—wildlife, irrigation, recreation, and others.

We do have this morning, as you know, a representative of the Bureau of Reclamation to testify, as well as a person from the State.

We'll proceed at this time, and if we have other questions that arise in the future, we'll get back to you. Thank you very much, Senator Dole.

Senator DOLE. Thank you.

Senator HATFIELD. At this time I'd like to invite Mr. James O'Brien, Assistant Commissioner, to come up here.

**STATEMENT OF JAMES J. O'BRIEN, ASSISTANT COMMISSIONER,
BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR**

Mr. O'BRIEN. Thank you, Mr. Chairman.

If you don't mind, I brought to the table with me Mr. James Ellingboe, who is the Chief, Division of Planning, in our Washington office; and Mr. Robert Lanky, who is our regional planning officer in Denver, Colo., and is the man who put together this report. Also with me is Mr. Dave Flipse, our Assistant Chief, Division of Planning; and Mr. Wiley, our reports coordinator for the Missouri River basin.

Mr. Chairman, in the interest of time I will summarize our written statement and submit the full text for the record.

Mr. Chairman and members of the subcommittee, we are appearing here today to offer the Department of the Interior's views on S. 1821,

a measure to authorize the Kanopolis unit, Pick-Sloan Missouri basin program in Kansas.

As stated in the Department's recent letter to the committee the Department is opposed to consideration of the proposed bill at this time and recommends that the committee defer further consideration until the feasibility report on the unit has been reviewed and approved.

The Kanopolis unit feasibility report and the proposed draft environmental statement are presently being reviewed within the Department. In order to be as responsive to the committee as possible, the remainder of our testimony constitutes an overview of the information we have developed concerning the unit. The information is based on the regional director's feasibility report and proposed draft environmental statement completed during February of this year.

A multidisciplinary planning (MOP) team of Federal, State, and local interests was formed in 1973 to conduct the investigations and issue a report. It was done in accordance with the Water Resources Council's "Principles and Standards for Planning Water and Related Land Resources."

It included a total evaluation of the present and projected problems and needs of the area and identified alternative opportunities to meet those needs. From the alternatives, those considered most viable by the planning team were selected for further study.

We have alternative plans that address primarily no development, national economic development, environmental quality, and a combination of the national economic development and environmental quality plan. All those plans are laid out in the regional director's February 1976, feasibility report, which has been submitted to this committee and to the members of the Kansas congressional delegation.

I would like to stress at this point, however, that none of the plans for this project propose construction of a new reservoir. The project would utilize the existing Kanopolis Reservoir, which was authorized for construction by the Corps of Engineers in 1938, and which was completed in 1948.

The display map outlines the study area, and outlines one of the alternative plans, the combined plan, that our report addressed primarily.

Kanopolis Dam and Lake were originally constructed solely to provide single-purpose flood control. However, since the construction it has also provided significant fish and wildlife and recreation benefits to the residents of the area, and to transients who travel through that portion of Kansas for various reasons.

One important element took place in 1949, shortly after the Kanopolis Reservoir was completed. At that time the Bureau of Reclamation was authorized to construct Cedar Bluff Reservoir, about 150 miles upstream from Kanopolis; and the Corps of Engineers and our Bureau agreed that there was a tremendous opportunity for enhancing the flood control potential of the entire Smoky Hill River, by providing in Cedar Bluff Reservoir some alternative flood control storage space in lieu of the space that had been allocated in Kanopolis Reservoir.

We therefore executed an agreement providing for 192,000 acre-feet of storage at Cedar Bluff Reservoir to be utilized for flood control purposes in exchange for which the Corps of Engineers agreed to provide 162,500 acre-feet of storage in Kanopolis Lake for conservation purposes. That exchange is what, in fact, makes possible the development of the irrigation supply for the Kanopolis unit.

The plan would provide facilities and water supply for the irrigation of 20,000 acres of land lying adjacent to the Smoky Hill River below the dam; provide a 20,000 acre-foot water supply for the municipality of Salina, and 5,000 acre-feet of additional municipal and industrial water supply for which the State of Kansas proposes to contract, similar to a number of other contracts that it has executed for storage space at the Corps of Engineers' reservoir.

It would also provide for fisheries and maintenance of fish habitat downstream from Kanopolis Reservoir, and provide the maintenance of 15 cubic feet per second below the dam and a minimum of 40 cubic feet per second at Salina in the Smoky Hill River.

Irrigation water would be delivered from immediately below the dam via two canals, one traversing the north side of the river for a distance of about 30 miles, and one traversing the southern side of the river for a distance of about 12 miles.

The land shown in the yellow section of the map is land that would receive a water supply for about 16,500 acres. It would all be served by gravity.

The lands that you see shown in green encompass, as shown in the map, about 8,000 acres of land. Those lands cannot be serviced by gravity, but the local people would sign up for water. They would be included within the irrigation district, and they would provide their own pumping facilities to pump out of the canal and up to those lands. About 3,500 acres of those 8,000 acres could be served by the project.

The present crops grown in the area to be irrigated, primarily wheat and grain sorghums, produce approximately 50 bushels of sorghum per acre and about 30 bushels of wheat.

With the project, it is expected that these cropping patterns would change to primarily corn, and provide a base for livestock production in that area. It's anticipated that with irrigation, corn production would average 188 bushels per acre.

There is practically no excess land problem in the district—it's a very minor one. At the present time there are, as I understand, nine people in the project area owning more than 320 acres that are allowable for service under the existing reclamation laws for a man and his wife.

The land classification is excellent. There are about 4,500 acres of class 1 land; about 7,600 acres are class 2; and about 4,400 acres are class 3. The remaining 3,500 acres are class 4, and those are the higher lands that are shown in green. The reason they have been classified class 4 is because it will be necessary to pump up to them. With the installation of pumps, most of those lands would be as productive as the class 1 and 2 lands.

There is a considerable fish and wildlife habitat potential here. There would be a change in the character of about 5,000 acres of land that are now utilized around the reservoir for wildlife and recreation purposes. With the project, that land would be inundated more often than it is at the present time, and would modify the existing habitat to some

extent. To mitigate that loss, we propose the acquisition of a 350-acre wildlife tract. It is a privately owned holding within the Federal lands, presently not farmed and completely surrounded by existing Federal lands.

Downstream from the reservoir is a 150-acre unique area and the multiple objective planning team proposed that that land be acquired and that the cost thereof be nonreimbursable.

The total investment cost of the project would be about \$40,231,700. However, the total construction cost is about \$26,530,000, based on January 1975 prices. That does not include the discounted value of the existing facilities, which amounts to about \$10,900,000 which is utilized for the purpose of this project.

Interest during construction would be about \$2,824,300.

Included in that cost also is \$220,000 for Archeological and Historical Preservation Act costs; and \$130,000 for settlers assistance.

The cost of modifying the dam to provide the utilization of the water supply for irrigation is about \$7,250,000. The annual equivalent cost of the project based on an interest rate of $6\frac{1}{8}$ percent and a 100-year period of analysis is computed to be \$2,824,000 including annual operation, maintenance, and replacement costs of \$353,400. The total annual equivalent benefits are estimated to be \$8,214,200. Those benefits derive from flood control, municipal and industrial water supply, irrigation, and fish and wildlife. The total annual benefits would exceed the estimated annual costs by over \$5 million per year.

The irrigation costs for this project would be repaid without interest within 50 years after completion of the 10-year development period. Municipal and industrial water supply costs would be repaid with interest in accordance with the Water Supply Act of 1958.

As I said earlier, the costs of the acquisition of the 150-acre environmental tract are proposed to be nonreimbursable.

The water users, the irrigators themselves, in the Kanopolis Irrigation District would repay about \$20 million of the irrigation allocation, which is about 78 percent of the total. That is one of the highest repayments that we have encountered on any project within the Pick-Sloan Missouri basin program.

The average annual payment capacity of those irrigable lands has been estimated at about \$40.44 an acre. We would deduct a contingency and incentive allowance of about \$10 per acre, and there would be an average annual water charge of about \$30 an acre; \$10 of that would be operation and maintenance cost; \$20 per acre would go to amortization of the capital investment.

If you desire, I could discuss the alternatives. They are all spelled out in my statement, and—

Senator HATFIELD. That's not necessary.

Mr. O'BRIEN. I'd be happy to answer any questions.

Senator HATFIELD. Thank you very much for your excellent testimony. You obviously know this project very well. You didn't even have to look at your testimony—

Mr. O'BRIEN. Thank you very much.

Senator HATFIELD [continuing]. Your written testimony.

Mr. O'Brien, in the economic analysis prepared by the Bureau, I understand about \$11 million of the cost of the original Corps of Engineers were included.

Mr. O'BRIEN. That is correct, sir.

Senator HATFIELD. Now this is money already spent; is that correct?

Mr. O'BRIEN. That's right.

Senator HATFIELD. What would be the benefit/cost ratio of the project based solely on the cost which would occur as the result of, or incorporated in, Senate bill 1821?

Mr. O'BRIEN. The benefit/cost ratio, including those sunk costs, is about 2.9 to 1. If we remove those sunk costs, it would go to about 3.5.

Senator HATFIELD. You were talking about 78 percent payoff in another aspect of that. That's one of the highest payoff ratios I have heard.

Mr. O'BRIEN. We don't often encounter one like this, sir.

Senator HATFIELD. I realize that the Department is recommending deferral of this project, as represented by Senate bill 1821—at least for this time.

I would like to have, for the benefit of the committee, though, any suggestions the Bureau may have for perfect amendments to Senate bill 1821. And I would like to ask for that for the record, so that if you want to prepare some response to that question we will receive it for the record.

Mr. O'BRIEN. Yes, Mr. Chairman. There are a number of perfecting amendments that we would like to see incorporated in the legislation. We'll be happy to provide that for the record.

[Subsequent to the hearing the following information was received for the record:]

SUGGESTED AMENDMENTS TO S. 1821

1. Page 2, line 1, following the word "recreation", insert "environmental preservation,".

2. Page 2, line 2, following the word "Interior", insert "in collaboration with the Secretary of the Army acting through the Chief of Engineers".

3. Page 2, line 24, add new language at the end of the section as follows:

"Repayment contracts for the return of costs allocated to municipal and industrial water supply shall be under the jurisdiction of the Secretary of the Army, and such contracts shall be prerequisite to the initiation of construction of facilities authorized by this act. Costs allocated to environmental preservation shall be nonreimbursable and nonreturnable under Federal Reclamation law."

4. Page 3, line 21, following Section 5, add a new Section 6, as follows—and renumber succeeding sections:

"Sec. 6. The provisions of the third sentence of Section 46 of the Act of May 25, 1926 (44 Stat. 649,650), and any other similar provisions of Federal Reclamation laws as applied to the Kanopolis Unit, Pick-Sloan Missouri Basin program, are hereby modified to provide that lands held in a single ownership which may be eligible to receive water from, through, or by means of unit works shall be limited to one hundred and sixty acres of Class I land or the equivalent thereof in other land classes as determined by the Secretary of the Interior."

5. Page 3, line 21, delete existing Section 6 and substitute the following:

"Sec. 7. There is hereby authorized to be appropriated for fiscal year 1978 and thereafter for construction of the Kanopolis unit the sum of \$30,900,000 (January 1976 price levels) plus or minus such amounts, if any, as may be justified by reason of changes in construction costs as indicated by engineering cost indexes applicable to the types of construction involved. Of the funds authorized to be appropriated by this Section the Secretary of the Interior shall transfer to the Secretary of the Army all except those required for postauthorization planning, design, and construction of the single use irrigation facilities of the unit, and the Secretary of the Army shall utilize such transferred funds for implementation of all other aspects of the authorized unit. There are also authorized to be appropriated such sums as may be required for operation and maintenance of the works of said unit."

Senator HATFIELD. Now, as I understand it, the report on the Kanopolis unit is undergoing a 30-day review period within the Department; is that correct?

Mr. O'BRIEN. That is correct, sir.

Senator HATFIELD. Now, when did that 30-day period, 30-day review period, begin?

Mr. O'BRIEN. It began on April 5 of this year and expired, in effect, yesterday.

Senator HATFIELD. So that's completed then?

Mr. O'BRIEN. It has been completed, but we have not received all of the comments that we would like to receive from some of the departmental agencies. We are trying to expedite, at the present time, the submission of those comments by those agencies.

In effect what I'm saying is they haven't responded within the 30-day period, so we're starting to "bug" them—excuse the phrase.

Senator HATFIELD. What's your estimate now?

Mr. O'BRIEN. I would hope we would be able to have that review within the Department completed within about 30 days.

Senator HATFIELD. Another 30 days?

Mr. O'BRIEN. Yes, sir.

Senator HATFIELD. Now you will then ask for comments, or receive comments, from other agencies—

Mr. O'BRIEN. Yes.

Senator HATFIELD. As the next step?

Mr. O'BRIEN. That is what I anticipate happening in about 30 days. We then send the report out for review by States in the Missouri River basin and by all of the other Federal agencies.

Senator HATFIELD. I see. In other words, the two steps would be completed within 30 days?

Mr. O'BRIEN. That's what I would hope, sir.

Senator HATFIELD. I see.

Then, as I understand it, the subsequent step would be a 90-day period for review by the States and other Federal agencies to examine the report?

Mr. O'BRIEN. Yes. That's what we would hope would be initiated in about 30 days.

Senator HATFIELD. What is the procedure after the completion of that 90-day period?

Mr. O'BRIEN. After we receive the reports from the other Federal agencies and from the States of the Missouri River basin, we would then accommodate those comments to the best of our ability and submit the Secretary's report to the President, through the Office of Management and Budget, to determine whether that report is in conformance with the President's program; and if we get concurrence from the Office of Management and Budget that it is indeed in conformance with the President's program, then we would transmit it to the Congress for whatever action the Congress may take to dispose of our report.

Senator HATFIELD. You really don't have to wait for that report from OMB, do you? I mean you pretty well know now what it will be—

Mr. O'BRIEN. Well, the history of the Congress in recent years is that it has acted on projects without awaiting that conformance.

Senator HATFIELD. Mr. O'Brien, just for curiosity, when was the last time that a feasibility report was sent to the Congress when the Bureau was able to testify in favor of the authorizing legislation?

Mr. O'BRIEN. 1972. We had three projects.

Senator HATFIELD. 1972. That's 4 years.

Mr. O'BRIEN. Yes.

Senator HATFIELD. While I was sort of being semifacetious, we can pretty well anticipate what the OMB's report will be.

Well, you have made a very excellent statement today, and I appreciate your assistance in this hearing. We will look forward to hearing from you at the end of these various periods, as these reports and studies are available.

Mr. O'BRIEN. Thank you very much, Mr. Chairman.

Senator HATFIELD. Thank you very much, each of you.

[The prepared statement of Mr. O'Brien follows:]

Statement of James J. O'Brien, Assistant Commissioner - Resource Planning, Bureau of Reclamation, Representing the Department of the Interior, before the Subcommittee on Energy Research and Water Resources, Committee on Interior and Insular Affairs, United States Senate, on S. 1821 to authorize the Secretary of the Interior to construct, operate, and maintain the Kanopolis Unit, Smoky Hill Division, Pick-Sloan Missouri Basin Program, Kansas, and for other purposes.

May 6, 1976

Mr. Chairman and members of the subcommittee, we are appearing here today to offer the Department of the Interior's views on S. 1821, a measure to authorize the Kanopolis Unit, Pick-Sloan Missouri Basin Program in Kansas.

As stated in the Department's recent letter to the committee the Department is opposed to consideration of the proposed bill at this time and recommends that the committee defer further consideration until the feasibility report on the unit has been reviewed and approved.

The Kanopolis Unit feasibility report and the proposed draft environmental statement are presently being reviewed within the Department. In order to be as responsive to the committee as possible, the remainder of our testimony constitutes an overview of the information we have developed concerning the unit. The information is based on the Regional Director's feasibility report and proposed draft environmental statement completed during February of this year.

A multidisciplinary planning (MOP) team of Federal, State, and local interests was formed in 1973 to conduct the investigations, and a public involvement program was initiated to obtain input from interested citizens and special interest groups in accordance with the Water Resources Council's "Principles and Standards for Planning Water and Related Land Resources." An evaluation of the present and projected problems and needs of the area was made and alternative opportunities to meet these needs were defined. From these alternatives, those considered most viable by the planning team were selected for further study. Alternatives addressing no development, national economic development (NED), environmental quality (EQ), and a combination NED and EQ development were formulated, and evaluations of the trade-offs among the plans were made. The various plans are presented in the Regional Director's February 1976 Feasibility Report which is under review within the Department.

I will discuss in some detail the combination NED and EQ plan and then point out the differences between that plan and other alternatives considered.

At the outset, I would like to stress that no plan proposes a new reservoir. The resources of an existing reservoir will be utilized.

The display map outlines the study area and one of the alternative development plans.

The Kanopolis Unit lies in the Smoky Hill River Valley in central Kansas, in Ellsworth, McPherson, and Saline Counties. The existing Kanopolis Dam and Lake, completed by the Corps of Engineers in 1948, would be the storage facility for the potential unit.

Kanopolis Dam and Lake were constructed to provide single-purpose flood control. These facilities also have and presently provide significant fish and wildlife and recreation benefits in addition to flood control benefits.

In 1949, under then existing legislation, the Corps of Engineers and the Bureau of Reclamation agreed that 162,500 acre-feet of storage in Kanopolis Lake would be utilized at some future date for irrigation, municipal and industrial water supply, and other conservation purposes. This agreement was made possible by the inclusion of 191,860 acre-feet of flood control storage capacity in the Bureau's now existing upstream Cedar Bluff Reservoir. Modification of the existing Kanopolis Dam and outlet works to allow utilization of the 162,500 acre-feet of conservation storage would not result in any increase in the maximum water surface elevation or total area subject to inundation.

The potential Kanopolis Unit under the combined NED-EQ plan would furnish water for municipal and industrial use by the city of Salina and the State of Kansas, would provide water and additional project

works for the irrigation of 20,000 acres of valley lands, and would provide fishery flows in the Smoky Hill River below the dam. In addition, the unit would provide for the conservation of fish and wildlife habitat and environmental and archeological preservation to meet the ever-increasing needs in the vicinity. Flood protection and fish and wildlife and recreation benefits would continue to be furnished at Kanopolis Lake.

The city of Salina is interested in obtaining 20,000-acre-feet of water annually from Kanopolis Lake. That water is the least expensive source available and along with its existing sources would be adequate to meet the city's projected needs beyond the year 2010. The Kansas Water Resources Board has indicated that the State of Kansas would contract for an additional 5,000 acre-feet of municipal and industrial water.

Water supplied to the city of Salina and the State of Kansas for municipal and industrial purposes would be released from the reservoir to the Smoky Hill River through the outlet works of the dam. It would be the responsibility of the contractors to divert, treat, and distribute those municipal and industrial waters.

Irrigation water would be diverted immediately below the dam into conveyance and distribution facilities to be built as part of the unit. Of the 20,000 acres of lands to be irrigated, 16,500 acres within the

Kanopolis Irrigation District would be served by gravity and an additional 3,500 acres to be added to the district would be served by private canalside pumps. The average annual irrigation water supply yield is estimated to be 29,200 acre-feet at the dam. The irrigation facilities to be constructed would include 42.5 miles of open canals, 61.5 miles of open laterals, 15.2 miles of closed pipe laterals, 8.7 miles of surface drains, 8 miles of subsurface drains, and 25 drainage wells.

The majority of the valley lands that would be irrigated are currently nonirrigated farming operations. Wheat and grain sorghums are the major nonirrigated crops produced. Presently, the grain sorghum production averages about 50 bushels per acre and wheat production averages about 30 bushels per acre.

Corn would probably dominate the cropping pattern after irrigation and would provide a stable food supply for local livestock.

With a reliable water supply, yields are projected to average about 188 bushels of corn per acre by the year 2010.

There were 220 landowners within the unit when the irrigation district was formed, of which only one owned more than the 320 irrigable acres permissible by man and wife under the excess-land limitation provisions of Reclamation law. More recent district tax records indicate that there are 224 landowners with 9 owning more than 320 acres of irrigable lands.

Of the 20,000 acres of irrigable lands that would be served by the combined plan 4,498 acres are class 1, 7,630 acres are class 2, 4,372 acres are class 3, and the remaining 3,500 acres are class 4. These class 4 lands have productive capability similar to classes 1, and 2. However, they were placed in the lower class because low lift pumps would be required to lift the water to the elevation of the land.

Utilization of the conservation pool in Kanopolis Lake would result in the reduction in the terrestrial wildlife habitat available in the Kanopolis Unit and displacement of some wildlife that have become established since the dam and reservoir were created.

The increased use and activities associated with the irrigation of project lands also would cause a reduction in the overall population of wildlife species living in the project area.

The loss of approximately 5,000 acres of wildlife habitat would be partially compensated for through agreements with the Corps of Engineers for the Kansas Forestry, Fish and Game Commission to manage certain Federal lands within the reservoir rights-of-way for wildlife purposes.

Additional mitigation for this loss would be accomplished by the acquisition of 350 acres of private land within the reservoir rights-of-way. This land is surrounded by federally owned lands and would become a part of the lands to be managed by the Kansas Forestry, Fish and Game Commission.

Lands utilized as State parks or as Corps of Engineers public recreation areas would be excluded from the State's wildlife management program.

In addition, the open canals and laterals would provide habitat for wildlife, and a 150-acre tract in an old oxbow of the Smoky Hill River below the dam would be acquired in order to protect and preserve the ecological resources of the area in accordance with the environmental quality objective of the plan.

The presently undeveloped Federal reservoir lands not used for recreation or operation and the additional lands acquired for habitat mitigation would be managed by the Kansas Forestry, Fish and Game Commission through a license agreement with the Corps. If the unit is authorized, provision should be included in the authorizing legislation to allow implementation of plans for wildlife management. The Kansas Forestry, Fish and Game Commission would also manage the environmental preservation area to be acquired along the Smoky Hill River downstream from the dam.

The Fish and Wildlife Service has recommended that the unit maintain fishery flows of 15 cubic feet per second (ft³/s) through the stilling basin below Kanopolis Lake and 40ft³/s in the Smoky Hill River at Salina. These flows would mitigate the loss of up to 12 miles of stream fishery habitat in the Smoky Hill River and its tributaries due to more frequent inundation by Kanopolis Lake. These flow requirements also would provide maintenance of the integrity of the aquatic ecosystem

below Kanopolis Lake to the mouth of the Smoky Hill River. Storage is required to provide these fishery flows and is included in the combined plan.

The Fish and Wildlife Service states in its January 20, 1976, memorandum that there is no indication that project development would modify or destroy any endangered species habitat.

An analysis of the possible effects on water quality has been coordinated with the Environmental Protection Agency (EPA). It has been determined that the operation for municipal and industrial water supply and the return flows from the irrigated lands would not pose significant water quality problems in the Smoky Hill River Basin. Monitoring the quality of the water of both the Smoky Hill River and the Kanopolis Lake has been recommended by the EPA.

The \$40,231,700 total investment cost consists of three components. The total project cost is \$26,530,000, the discounted value of the existing facilities is \$10,877,400, and interest during construction is \$2,824,300.

The total project construction cost for the combined plan, estimated to be \$26,530,000, consists of \$26,180,000 for construction costs, \$220,000 for Archeological and Historical Preservation Act costs, and \$130,000 for Settlers Assistance. The construction cost includes the cost for modification of the dam and lake totaling \$7,250,000, the

irrigation distribution system and drainage and service facilities totaling \$18,140,000, fish and wildlife facilities totaling \$590,000, and the acquisition of environmental preservation lands totaling \$200,000.

The annual equivalent cost based on an interest rate of 6-1/8 percent and a 100-year period of analysis is computed to be \$2,824,000. This includes \$353,400 for operation, maintenance and replacement of unit facilities.

The total annual equivalent benefits are estimated to be \$8,214,200. These consist of \$4,253,000 for flood control, \$1,292,500 for municipal and industrial water supply, \$2,520,700 for irrigation, and \$148,000 for fish and wildlife. The annual benefits would exceed the estimated annual costs by \$5,390,200.

The estimated installation costs of \$40,231,700 which includes the discounted value of the existing structure and interest during construction, have been allocated as follows: flood control, \$8,248,100; municipal and industrial water supply, \$4,298,600; irrigation, \$27,145,000; fish and wildlife, \$112,000; and environmental preservation, \$428,000.

The irrigation costs would be repaid without interest within 50 years after completion of a 10-year development period. The municipal and industrial water supply costs would be repaid with interest in accordance with the Water Supply Act of 1958. Costs allocated to

environmental preservation, which include archeological and historical costs, were proposed to be nonreimbursable under the combined plan.

Water users in the Kanopolis Irrigation District would be able to repay \$19,850,000, or about 78 percent of the irrigation allocation. The Kanopolis Irrigation District is an entity, organized pursuant to Kansas law, and is qualified to contract with the United States for repayment of capital and the operation, maintenance, and replacement costs allocated to irrigation.

The remaining reimbursable costs allocated to irrigation (\$5,455,900) would be repaid from power revenues of the Pick-Sloan Missouri Basin Program. The report, "Financial Position, Missouri River Basin Project, December 1963," and the "Customer Brochure, Proposed Power Rate Adjustment, Pick-Sloan Missouri Basin Program, September 1975," demonstrate that power revenues will be available to repay the cost within 50 years following the permissible development period.

Average annual payment capacity of irrigable lands in the Kanopolis Unit has been estimated to be \$40.44. Deduction of a contingency and incentive allowance of \$10.11 per acre would result in an average annual water charge of \$30.33 per acre. Further deduction of operation, maintenance, and replacement costs estimated to be \$10.48 per acre would result in \$19.85 per acre available for amortization of the costs allocated to irrigation.

That concludes our discussion of the combined plan. Now I will discuss other alternatives and how they differ from the combined plan.

The no development alternative anticipates more or less a continuation of the present conditions. There would, however, be additional demands on the limited water resources as landowners attempt to expand irrigated agriculture and the city develops alternative sources of M&I water. This is the least costly of the plans in terms of present capital investment but would not meet the areas perceived needs or prevent existing environmental conditions from further deterioration. These would have to depend on development of alternate plans by local agencies.

The EQ alternative differs from the combination plan in four major areas. Irrigation and M&I water supply are not a part of that plan. A larger minimum pool in the reservoir and higher minimum flows would be provided. An increase in reservoir conservation storage of 95,800 acre-feet, consisting of 55,200 acre-feet of inactive storage and 40,600 acre-feet of conservation storage, is included in this plan. The total construction cost for this plan would be \$2,340,000 and annual operating costs would be \$180,000. The annual benefits exceed the annual costs of this alternative by \$3,284,800.

The differences between the NED alternative and the combined plan are in the environmental quality component. The NED plan does not propose extensive lake area management or acquisition of mitigation or environmental preservation areas. The total construction cost for this plan would be \$25,740,000 and annual operating costs would be \$346,400. The annual benefits exceed the annual costs of this alternative by \$5,379,000.

It should be noted that the combined plan and all of the alternatives involving development have an excess of benefits over costs.

An environmental impact statement has not been filed for the unit. A proposed draft environmental statement prepared in February 1976 is currently undergoing review in the Department, and a draft environmental statement is scheduled for filing with the Council on Environmental Quality before June 30, 1976. The statement indicates that the quality of the human environment would be enhanced by the provision of a supplemental municipal and industrial water supply for the city of Salina and the surrounding area and the conversion of 20,000 acres of nonirrigated and marginally irrigated lands into a viable irrigated agricultural community with new economic and social opportunities. The reservoir fishery could be enhanced and the effects on wildlife habitat would be partially compensated by implementation of the recommendations of the Fish and Wildlife Service.

Implementation of the Kanopolis Unit would involve both the Bureau of Reclamation and Corps of Engineers. The Corps responsibility for implementation would concern all work connected with modification of the dam and lake including relocation of recreational facilities, raising of necessary roadbeds, slope protection, tower and outlet channel modifications, and acquisition of the 350-acre wildlife mitigation area. This work would be accomplished by the Corps with funds

transferred from the Bureau of Reclamation.

Mr. Chairman, that concludes our statement, and we would be happy to answer any questions that the committee might have.

Senator HATFIELD. Larry Bengtson.

STATEMENT OF LARRY O. BENGTSON, CITY ATTORNEY FOR SALINA, KANS., ATTORNEY FOR KANOPOLIS IRRIGATION DISTRICT, SALINA, KANS.

Mr. BENGTSON. Mr. Chairman—

Senator HATFIELD. Your entire statement will be placed in the record—all eight pages. And if you would just sort of highlight them for us, or summarize it, I would appreciate it.

Mr. BENGTSON. I will do so.

Mr. Chairman, as Senator Dole has indicated, I do appear here today in a dual capacity, as both the attorney for the city of Salina, Kans.; and the Kanopolis Irrigation District.

Last week representatives of the city and the district were back here with me before the House committee, but due to circumstances were unable to attend today.

However, they have requested that I do express their gratitude to you for holding this committee hearing and giving me an opportunity to appear.

As you are aware, the general nature of this district, its location—I will not go into that—however, I do wish to state for the record that if and when this project is authorized by Congress the Kanopolis Irrigation District is a legal entity. It is ready, willing and able to enter into any and all contracts with the Bureau for the construction of this district.

The city of Salina, Kans., is prepared to enter into such contracts as may be necessary for the industrial water supply.

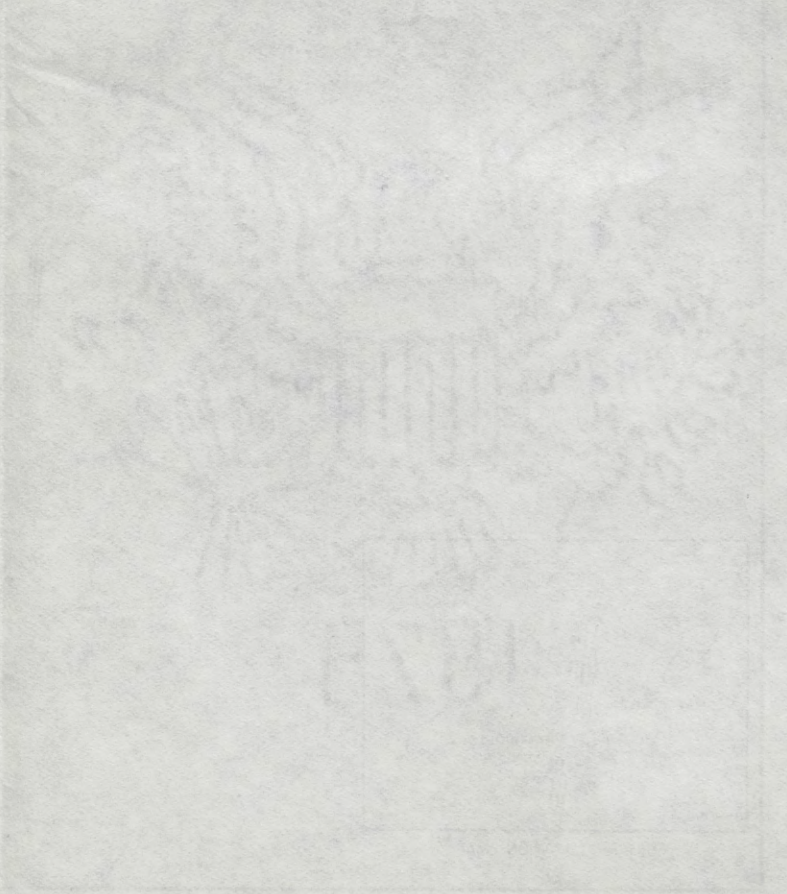
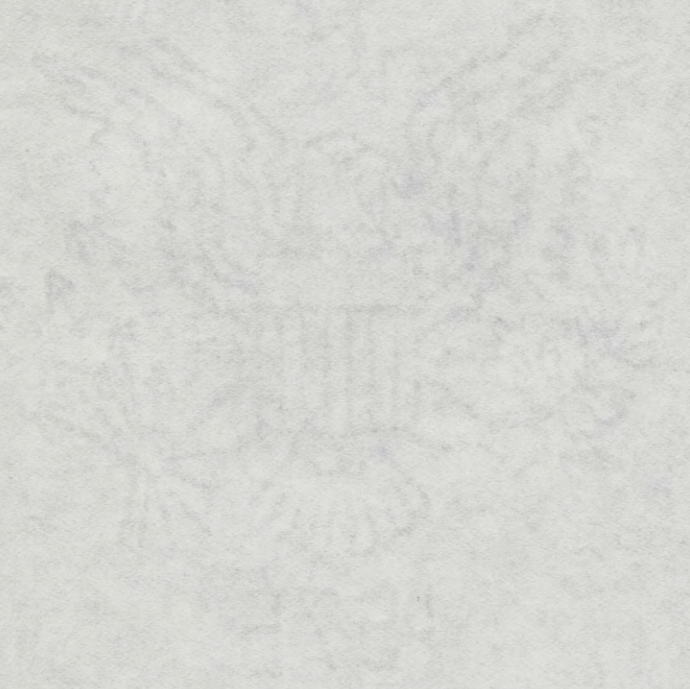
I would like to point out that we think that this Kanopolis unit is very unique in a few respects. We think the fact the Kanopolis Reservoir is in existence at this time, that the 21,000 acres of land which were required for its construction already are in Federal ownership, that to construct an irrigation district in which the unpleasant task of possibly acquiring this number of acres from one group of land-owners for the benefit of another is certainly an unpleasant task. This we do not have.

It also has the distinction of lessening the cost of the project considerably. I'm sure normally a conflict exists between the rural and urban communities as to the available water. This project is a co-operative effort between the urban and rural residents of this area, and actually one is dependent upon the other. Increased income to the farmers in this area from the irrigation would definitely have a pronounced effect upon our economy.

We in Salina and central Kansas in the past year have experienced a real growth in industrial expansion. This has caused a severe drain upon our available water supplies, and at the present time the city of Salina has, in engineering studies in the report as to possible future water supplies that will last it for the next 30 years—the Kanopolis project is the most feasible, practical place to acquire this municipal and industrial water.

If the Kanopolis unit is not authorized, water storage for municipal-industrial purposes from Kanopolis Dam cannot be secured. There is





a definite need for irrigation in this area. Right now we have approximately 3,600-3,700 acres of land under irrigation within the project.

However, basically this is from wells which are unreliable. It's from the flow of the Smoky Hill River, which at times becomes practically nonexistent.

Under the present arrangements, the Corps of Engineers is only obligated to release from Kanopolis those waters which flow into the reservoir. During periods of extreme drought, the flow of the river becomes practically nonexistent.

With the establishing of this district, the flow of the river would definitely be increased, and it will enhance the environmental aspects down the river.

Kanopolis irrigation project has been studied and reviewed by the Board of Water Resources in the State of Kansas as in conformity with the plan.

I have with me today, and request permission to file the same, a statement made by Mr. Keith S. Krause, director of the Kansas Board of Water Resources. I would like to just briefly read the first paragraph of his statement, and with permission file the entire statement. But his statement is this:

This statement is for the purpose of indicating the Kansas Water Resources Board's support for the proposed changes in the Kanopolis Reservoir Project to include irrigation, municipal and industrial water supply and fish and wildlife functions. The Kanopolis Reservoir Project is a part of the State Water Plan (Kansas Statutes Annotated, Chapter 82a-938), including the new functions being considered by the Congress. Projects can only become a part of the State Water Plan by acts of the Kansas Legislature; thus, if a project is a part of the State Plan, it carries with it the general endorsement of the State.

I have a letter of transmittal, submitted by the Honorable Robert F. Bennett, Governor of the State of Kansas, in which he states as follows:

"Gentlemen: Attached is a statement prepared by the Kansas Water Resources Board in support of the authorization bill for proposed changes in the Kanopolis Reservoir Project. I have read the statement. I approve it and I urge your favorable consideration of the authorization bill. Very sincerely, Robert F. Bennett, Governor," State of Kansas.

I would like permission to file—

Senator HATFIELD. They will be incorporated in the record.

Mr. BENGSTON. Thank you. I also have with me today the endorsements of several national associations, State associations, and various individuals, and I would like permission from the chairman to file these statements to become a part of the record.

Senator HATFIELD. They will be received.

[The prepared statement of Mr. Bengtson and the additional statements and communications follow:]

Statement by: L. O. Bengtson
City Attorney for Salina, Kansas
Attorney for Kanopolis
Irrigation District
Salina, Kansas

To: Subcommittee on Energy Research and Water Resources, Senate Committee
on Interior and Insular Affairs

Reference: H.R. 7044, Authorization of Kanopolis Unit, Pick-Sloane Missouri
Basin Program

I appear here today in the dual capacity as attorney for the Kanopolis Irrigation District and as the City Attorney of Salina, Kansas. Last week the Vice-Mayor and the City Engineer of Salina, Kansas, and the chairman and Secretary of the Kanopolis Irrigation District appeared with me before the Subcommittee of Water and Power Resources of the House Committee on Interior; however, due to various circumstances they are unable to be present here today. They have requested that I express their appreciation for holding this hearing and giving me an opportunity to appear before you in support of the Kanopolis Irrigation Project.

I would like to give you a general picture of the Kanopolis Irrigation Project and the reasons why we feel it is so vital to the growth and development of both agriculture and industry in central Kansas.

The Kanopolis Irrigation District consists of approximately 16,500 acres of irrigable land located in the central Kansas counties of Ellsworth, McPherson and Saline. In addition to the land within the district itself there are approximately 7,000 acres of land adjacent to the project which could be irrigated by canal side pumps. The District was formed in 1966 pursuant to Article 7 of Chapter 42 of the Kansas Statutes Annotated. In order to form this district it was necessary that a majority of the owners of irrigable land within the area request its formation by the Chief Engineer of the Division of Water Resources of the State Board of Agriculture of Kansas.

We think that the Kanopolis Irrigation Project is very unique in many respects and eliminates many of the objectionable features of some irrigation projects. In this area we would site the following:

(1). Minimum of Land Acquisition. The Kanopolis Dam is already in existence as a flood control facility. At the time of its construction the Corps of Engineers acquired approximately 21,000 acres of land for this purpose. I am sure that a primary objection to any irrigation project is the necessity of condemning several thousand acres of land from one group of land owners for the benefit of another group of land owners who will receive benefits from the project. Under the recommended plan for Kanopolis it would be necessary to acquire very little land. We feel that the opportunity to implement an irrigation project without the unpleasant task of taking several thousands of acres of land out of production is a distinct advantage.

(2). Reduced Cost. In addition to being distasteful, land acquisition is very expensive. We recognize the fact that some modifications to the Kanopolis dam will be necessary, however, the cost will be negligible when compared to the present day costs of constructing a storage facility having a capacity for 160,000 acre feet of water.

(3). Urban and Rural Cooperation. I am sure that in many proposed irrigation projects there is a conflict between the irrigator and the urban water user for the available water supply. The proposed Kanopolis project has a plan for the use of the available water supply which is compatible and acceptable both to the irrigator and the cities within and adjacent to the project area. In fact, the approval of the Kanopolis project is essential in order to provide storage space for municipal and industrial water for the cities near the project. The payment by the cities for this water storage will be beneficial to the irrigators in reducing the project cost and makes the project even more feasible.

I assume that one of the prime questions in your minds would be: "Do

the landowners within the project area and the people in the adjacent area support the project?"

In order to form the Kanopolis Irrigation District it would necessary for a majority of the owners of irrigable land within the district boundaries to sign a petition requesting its organization. Many landowners who are not within the district boundaries but who own irrigable land adjacent thereto which is capable of receiving water from canal side pumps, have also expressed strong support for the project. The support of these landowners within and adjacent to the district has been increasing during the past ten years. Short periods of drought in our area since the formation of the district have solidified the feeling of the entire community as to the necessity of this project. To say that there is no opposition to the district would be an incorrect statement. There is always some opposition to change in farming operations; however, the opposition to the Kanopolis project is minor and based primarily on the fact that irrigation in the area is now being accomplished from the Smoky Hill River and wells. The fallacy of this thinking is covered by Mr. DeLynn Hay of Kansas State University in his statement which he submitted to the House Committee and which I would like permission to file with you today.

Another questions you might have may be: "Is there an actual need for the Kanopolis Irrigation Project?"

(1). Adequate water supply is essential for any successful irrigation project. The need for an adequate and constant water supply is essential for successful irrigation. At the present time approximately 3,600 acres within the district are under irrigation from wells and the flow from the Smoky Hill River. Neither the river or wells can provide an adequate water supply for the area. Only the formation of an irrigation district can assure an adequate water supply for all the irrigable land in the area. The use of water in Kansas is based upon water rights with the

oldest water filings having the highest priorities. In the past, during extended dry periods the flow of the Smoky Hill River has been practically non-existent and many of the irrigation wells have failed. During these drought periods when water is most vitally needed many irrigators find themselves without an adequate water supply. Even in years of above average rainfall we experience periods of several days or weeks when no rainfall occurs. If this occurs during certain critical periods of plant development an entire crop can be lost. Authorization of the Kanopolis Project is the only way to assure that every farmer within the district (not just a fortunate few) will have an adequate supply of water when it is critically needed.

(2). Adequate municipal and industrial water supply is essential for the development of the entire area. The City of Salina and other towns within and adjacent to the district are critically in need of additional water sources for municipal and industrial purposes. Without the organization and construction of the Kanopolis Irrigation Project these storage facilities for municipal and industrial water will not be available in the Kanopolis Dam. If the Kanopolis Dam storage facility is not available the cost to Salina and other cities in acquiring adequate municipal and industrial water will be greatly increased. During the past few years central Kansas has experienced a considerable growth in industry and as the result the available municipal and industrial water supply is being depleted. Unless an adequate water supply becomes available for municipal and industrial purposes the economic growth of this central Kansas area will be seriously impaired.

(3). Conservation of Energy. Even if an adequate water supply were available to the irrigators the use of pumps to produce water is costly and consumes an enormous amount of energy which could and should be conserved. Our country now has a real energy crisis and this is one area where energy

could be conserved. The formation of the district would eliminate the use of energy consuming pumps by the irrigators within the district.

(4). Maximum Utilization of Land. Proper irrigation allows the utilization of the land to its maximum potential. Every year thousands of acres of land are being taken out of cultivation and production for highway and residential developments. In order to compensate for this loss of acreage we must use the available productive land so that it will produce to its maximum potential. The land in the Smoky Hill River Valley is some of the finest land in our country. With the use of improved farming practices and given an adequate water supply the potential for food production within the Kanopolis project is tremendous. Using this land to its maximum potential will produce additional food for a hungry world and result in lower food costs for our own consumers here in America.

(5). Increase in Number of Farms. Irrigation will result in smaller farms in the area and give many of the youth of our community an opportunity to farm. We now have many young people who desire the opportunity to farm but are not able to do so now because of the unavailability of land. Under dry land farming conditions the size of the farms in our area has been constantly increasing and the opportunity for our young farmer to commence operation is virtually non-existent. Under the recommended plan for the Kanopolis project the size of the farm would be limited to 160 acres of irrigable land, which would result in land becoming available for a new group of farmers.

(6). Diversification of Crops. Irrigation in the area will result in a diversification of the crops produced in this area. Without irrigation about the only crop in the area is wheat. With an adequate supply of water this area can produce a wider variety of crops which are more profitable to the farmer. As you will notice in Mr. Hay's statement crops such as corn and milo are four to five times more profitable to the farmer than wheat.

Crop diversification will enhance the prosperity of not only the farmer but the entire area.

(7). Stabilization of Economy. Irrigation will stabilize the economy of this entire central Kansas area. Central Kansas is a rural community and its prosperity is directly related to the prosperity of the farmer within the area. Under dry land farming conditions the farmer is dependent on the weather conditions and in periods of drought not only the farmer but the economy of the entire area suffers. The formation of the irrigation district will virtually guarantee an annual crop to the farmers, thereby stabilizing the economy of the entire area.

(8). Environmental Aspect. At the present time the Corps of Engineers is only obligated to release from the Kanopolis Dam the same amount of water which flows into the reservoir. During periods of drought the flow into the reservoir is negligible and consequently the release of water made by the Corps of Engineers for down stream flow is severely limited. As the result of the limited release of water from the Kanopolis Dam and the use of water for irrigation purposes along the stream, the flow of the Smoky Hill River at times is virtually non-existent. When this occurs the fish and wildlife in and along the river are endangered. The recommended plan for the Kanopolis project includes the storage of 34,500 acre feet of water for environmental purposes. With this water available for release in periods of low flow in the Smoky Hill River and coupled with the elimination of down stream irrigation use, the fish and wildlife environment in the Smoky Hill River below the Kanopolis Dam should be greatly enhanced.

The Kanopolis Irrigation Project has been studied and reviewed by the Board of Water Resources of the State of Kansas and is in conformity with the plan for water use and conservation as adopted by the State of Kansas.

I have with me today a report made by Mr. Keith Krause, Director of the Board of Water Resources of the State of Kansas in which he strongly recom-

mends the approval of this project. I also have with me a letter from the Honorable Robert Bennett, Governor of the State of Kansas, in which he indicates his support for this project. Mr. Krause would have been here today to present his report in person but due to a prior commitment he was unable to do so. I request permission to file the statement of Mr. Krause and Governor Bennett's endorsement thereof with you today.

Other agencies and associations which have endorsed the project are as follows:

Kansas Irrigation and Water Resources Association

National Water Resources Association

Mo-Ark Basin Flood Control and Reclamation Association

The following individuals, organizations and businesses within and adjacent to the proposed Kanopolis Irrigation District have indicated their support of the project:

Carl Oakleaf, Chairman of the Board of Directors of
County Commissioners, McPherson County, Kansas

Lindsborg Chamber of Commerce

Farmers State Bank of Lindsborg, Kansas

Farmers Union Elevator Company of Lindsborg, Kansas

Colonial Savings and Loan Association of Lindsborg, Kansas

Salina Chamber of Commerce

Irva Brandt, Lindsborg, Kansas

As I earlier indicated, the Mayor of the City of Salina and the Chairman of the Kanopolis Irrigation District were unable to be present today. With your permission I would like to file with you their statements.

In summation I would like to again emphasize the fact that the authorization and construction of the Kanopolis unit will utilize an existing facility and will in no wise jeopardize its flood control purpose. The project will have the dual purpose of providing an adequate water supply for the land-

owners within the area who desire to irrigate their land so that it can be utilized to its maximum potential and also will provide an adequate supply of municipal and industrial water for the cities in the area. With this combination of forces at work it will assure a prosperous economy for both the rural and urban areas of central Kansas. We urge your favorable recommendation of this Kanopolis Irrigation Project at this time, subject to a favorable review of the feasibility report on the unit.

STATE OF KANSAS



OFFICE OF THE GOVERNOR
State Capitol
Topeka

ROBERT F. BENNETT
Governor

May 3, 1976

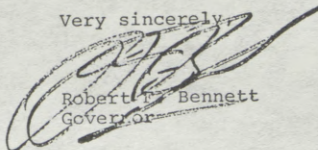
Subcommittee on Energy Research and
Water Resources
United States Senate
Washington, D.C.

Gentlemen:

Attached is a statement prepared by the Kansas Water Resources Board in support of the authorization bill for proposed changes in the Kanopolis Reservoir project.

I have read the statement; I approve it and I urge your favorable consideration of the authorization bill.

Very sincerely,


Robert F. Bennett
Governor

RFB:jl

attachment

Statement Before the
Subcommittee on Energy Research
and Water Resources
of the
Committee on Interior and Insular Affairs
U.S. Senate
May 6, 1976

by

Keith S. Krause
Executive Director
Kansas Water Resources Board

Statement Before the
Subcommittee on Energy Research
and Water Resources
of the
Committee on Interior and Insular Affairs
U.S. Senate
May 6, 1976

Mr. Chairman and Members of the Committee:

This statement is for the purpose of indicating the Kansas Water Resources Board's support for the proposed changes in the Kanopolis Reservoir project to include irrigation, municipal, and industrial water supply and fish and wildlife functions. The Kanopolis Reservoir project is a part of the State Water Plan (K.S.A. 82a-938), including the new functions being considered by the Congress. Projects can only become a part of the State Water Plan by acts of the Kansas Legislature, thus, if a project is a part of the State Plan, it carries with it the general endorsement of the state.

The proposed authorization would permit 20,000 acres of land in the Smoky Hill River Valley to be served with an irrigation water supply, thus substantially increasing its productivity. The Smoky Hill River Valley is very fertile but its present productivity is subject to the vagaries of Kansas rainfall. Some irrigation is presently practiced in the proposed irrigation area but it is not dependable. When water is needed the most, the river may be dry.

It is estimated that the net farm income in the irrigation district will be increased by more than \$2½ million annually as a result of this project. We have found that each dollar spent on irrigation farming in Kansas, produces nearly \$6 worth of regional and state benefits.

The irrigation water to be stored in Kanopolis Reservoir will be utilized by the Kanopolis Irrigation District. That district was organized in 1962 and has been awaiting the day when it can begin to function as planned. The district has been organized under and in accordance with Kansas Statutes.

Its application for water rights has been recently extended for another five years by the Division of Water Resources, State Board of Agriculture. We hope that within this extension period, water will become available to the proposed users.

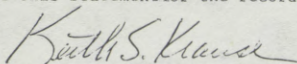
The reallocation of storage in Kanopolis Reservoir will provide a substantially improved municipal water supply for Salina and other surrounding communities. Salina and McPherson, Kansas, with a combined population of 50,000 have formally expressed a need for a supplemental water supply from Kanopolis Reservoir. In addition, streamflow in the Smoky Hill River would be provided in the interest of fisheries.

A decision is under consideration at this time as to whether or not the Water Resources Board will purchase the municipal and industrial water supply storage for resale to the surrounding communities, or whether the local communities will provide the necessary assurances. Such a decision may be made in the next 90 days. The Kansas Water Resources Board has the necessary authority under state statute to make such a commitment to the U.S. Government. The Board has already executed seven such contracts and, with the expiration of the 10-year interest-free period, has begun repaying the U.S. Government for costs incurred in providing municipal and industrial storage in four of the seven. If the Water Resources Board contracts with the U.S. Government to repay the cost of conservation storage, water rights are conveyed automatically to the ultimate purchasers.

The analysis of this project was carried out under the Principles and Standards promulgated by the U.S. Water Resources Council and included direct participation by the Kansas Water Resources Board and several other state agencies including the State Agricultural Extension Service and its rural sociologists. Public involvement was encouraged.

The Kansas Water Resources Board is concerned about the proposed addition of 350 acres of land to be purchased as a mitigation measure on the recommendation of the Fish and Wildlife Service. The cost of this will have to be borne by the irrigation and municipal and industrial water purchasers. The mitigation was not proposed during the project evaluation period but was brought in after the analysis was completed. The Kansas Water Resources Board feels that mitigation in this instance is unwarranted and the added cost is not justified.

The opportunity to present this statement is greatly appreciated. With the Chairman's permission, we submit this statement for the record. Thank you.


Keith S. Krause

Statement by: F. Wallace Nelson
President of the Kanopolis
Irrigation District
Lindsborg, Kansas

To: Subcommittee on Energy Research and Water Resources, Senate Committee
on Interior and Insular Affairs

Reference: H.R. 7044, Authorization of Kanopolis Unit, Pick-Sloane Missouri
Basin Program

Mr. Chairman and members of the committee. My name is F. Wallace Nelson and I live at Lindsborg, Kansas. I have been a life-long resident of this community where I have owned and operated my own farm.

I have been actively engaged in the planning and organization of the Kanopolis Irrigation Project for the past twenty years. In the mid 1950's I served on a planning commission which made the initial studies and formulated plans for the proposed Kanopolis Irrigation District. I assisted other farmers in the area in circulating a petition for the formation of the Kanopolis Irrigation District. More than fifty percent of the owners of irrigable land within the proposed Kanopolis Irrigation District signed petitions requesting the formation of the irrigation district which were submitted to the chief engineer of the Division of Water Resources of the State Board of Agriculture of the State of Kansas who approved the formation of the district.

I have been a member of the Board of Directors of the Kanopolis Irrigation District since its formation and have been Chairman of the Board for about the past five years. The Board of Directors has actively functioned since the district was formed. After the district had been legally organized we were all surprised to discover that while we were in the process of organizing the district Congress had passed legislation which required us to have the district reauthorized. All of the studies have now been completed for reauthorization and we appear here today to request that you give favor-

(2)

able consideration to HR 7044 co-sponsored by Congressmen Sebelius and Shriver. I have worked for this project for approximately twenty years and if it is authorized and constructed I will feel that it was time well spent.

Prior to 1956 I was a dry land farmer, but I have been irrigating from wells for approximately the last twenty years. As an irrigator I am well aware of the potential of the land in the Smoky Hill Valley if given proper amounts of water at the proper time. Without the availability of irrigation water wheat is about the only crop which can consistently be successfully raised in the area. Using this prime land for wheat production is not using the land to its maximum potential. I would like to give you some approximate figures from my experience as to what irrigation means to the farmer.

I think that the average wheat yield in Saline County is approximately 30-35 bushels per acre. Assuming a price of \$3.50 (which is considerably more than the present price) would mean a gross income of \$105-\$123 per acre. I would estimate that the average cost of production of an acre of wheat is in the vicinity of \$60, which would mean a net return of \$45-\$63 per acre from wheat. Since I have been irrigating I have been able to plant milo and corn on the irrigated land. On the average I have raised approximately 100-125 bushels per acre of milo which at \$4 per 100 weight gives me a gross per acre return of approximately \$270. The cost to produce milo is about \$50 per acre, which means that I am able to net approximately \$219 per acre from milo. On the acreage planted to corn I normally am assured of a yield of approximately 125 bushels per acre and at \$2.50 per bushel I can gross approximately \$313 per acre on land planted to corn. The cost to produce corn would be about \$100 per acre, making a net yield from corn of approximately \$213 per acre. As you can see from the above figures, by irrigation I have been able to increase my net return from about \$55 per acre to over \$200 per acre.

(3)

In central Kansas we have an average rainfall of approximately 27" per year. During the past twenty years when I have been irrigating we have had several years in which the rainfall has been less than normal and we have also had many years in which the rainfall has exceeded the normal amount; however, even in those years in which the rainfall has exceeded the normal amount it was necessary that I use my irrigation system. Even in years where the rainfall was above normal there were periods when we had no rain for two or three weeks. In the production of corn and milo there are very critical periods in which the crop must have moisture. Lack of moisture for ten days during a critical period of plant development can mean the difference between success and failure of the entire crop. With an adequate supply of water we are practically guaranteed a crop in our area. Irrigation is the best insurance policy that a farmer can buy.

In the proposed Kanopolis project I think that there are approximately 3,600 acres presently under irrigation from wells and the Smoky Hill River. I am one of the very fortunate landowners who either has access to the Smoky Hill River or blessed with adequate wells. As indicated, we do have 16,500 acres of land in the proposed Kanopolis Irrigation District which is suitable for irrigation. In addition we have approximately 7,000 acres which is immediately adjacent to the district which is suitable for irrigation and could, through contracts with the district, secure water from the canal by use of canal side pumps. At the present time we are actually utilizing only approximately 15% of the irrigable land in the area. The formation of the Kanopolis Irrigation District will make available to all farmers desiring to irrigate an adequate water supply and will not limit the benefits from irrigation to a few of us who are fortunate enough to have wells or access to the Smoky Hill River. In periods of extreme drought many of the present irrigators have discovered that their wells are not adequate and unable to produce sufficient water for their needs.

(4)

The formation of the Kanopolis Irrigation District will stabilize the economy of the Smoky Hill Valley. Irrigation requires a greater labor force than dry land farming and this should create additional employment for our people in the community, especially high school and college students who now must migrate from the community during the summer months to find employment. The formation of this Kanopolis Irrigation District would upgrade the living standards and quality of life in our entire area.

I can assure you that the vast majority of the landowners within the Smoky Hill Valley area and the proposed Kanopolis Irrigation District are in favor of this project. They are well aware of the fact that the construction of the project will cost a considerable amount of money and that they will be required to repay their share of the project. The landowners know the benefits they will derive from the irrigation project through the increased productivity of their land and that they will be able to repay the cost of construction and they are ready and willing to do so. All we ask is that you gentlemen authorize the construction of the Kanopolis Irrigation Project so that they can have an adequate supply of water available and be able to use our land to its maximum potential.

We appreciate the opportunity to appear before you today and urge your favorable consideration of HR 7044.

HOUSE OF REPRESENTATIVES
COMMITTEE ON INTERIOR
SUBCOMMITTEE ON WATER AND POWER RESOURCES

RE: HEARING ON H.R. 7044

BY: DEAN BOYER, CITY ENGINEER, SALINA, KANSAS

THE CITY OF SALINA BECAME CONCERNED WITH PLANNING FOR FUTURE SOURCES OF MUNICIPAL WATER SUPPLY DURING A PERIOD OF DROUGHT IN THE EARLY 1950'S. IN 1954, THE CITY'S WELL FIELD WAS DEPLETED TO THE POINT WHERE IT WAS NECESSARY TO CONSTRUCT FACILITIES TO UTILIZE SURFACE WATER FROM THE SMOKY HILL RIVER.

IN 1957, 1968 AND 1972 THE CITY HAD ENGINEERING STUDIES CONDUCTED TO ATTEMPT TO LOCATE AND IDENTIFY POSSIBLE SOURCES OF AN ADEQUATE WATER SUPPLY FOR MUNICIPAL AND INDUSTRIAL USES. ALSO, STATE AND FEDERAL AGENCIES HAVE CONDUCTED STUDIES DURING AND SUBSEQUENT TO THESE TIMES.

SOURCES OF WATER INVESTIGATED WERE POSSIBLE ADDITIONAL GROUND WATER SOURCES, SURFACE IMPOUNDMENT ON GYPSUM CREEK, SURFACE IMPOUNDMENT ON DRY CREEK, THE SALINE RIVER, KIRWIN RESERVOIR, SOLOMON RIVER, REPUBLICAN RIVER, MILFORD RESERVOIR, SMOKY HILL RIVER AND KANOPOLIS.

MOST STUDIES HAVE INDICATED THAT THE MOST ECONOMIC SOURCE OF A DEPENDABLE SUPPLY WOULD BE KANOPOLIS RESERVOIR, SUPPLEMENTED BY GROUND WATER FOR TEMPERATURE CONTROL.

USE OF AN IMPOUNDED WATER SUPPLY IN KANOPOLIS WOULD ELIMINATE MANY

HOUSE OF REPRESENTATIVES
COMMITTEE ON INTERIOR
SUB COMMITTEE ON WATER AND POWER RESOURCES
PAGE 2

VARIABLES FOUND TO EXIST IN THE GROUND WATER AQUIFERS OF THE SMOKY HILL VALLEY AND THE SMOKY HILL RIVER SUPPLY.

BOTH THE GROUND WATER AND THE SMOKY HILL RIVER HAVE A HIGH DEGREE OF FLUCTUATION FROM WET YEARS TO DROUGHT YEARS. THE SMOKY HILL RIVER HAS AN AVERAGE YEARLY FLOW THAT COULD SUSTAIN A CITY OF APPROXIMATELY 800,000 PEOPLE WITH DOMESTIC WATER SUPPLY, BUT IN JULY OF 1963 IT WOULD HAVE BARELY SUSTAINED A CITY OF 3,000 PEOPLE.

THE KANOPOLIS UNIT PROJECT WOULD HAVE AN IMPORTANT EFFECT ON THE QUALITY AS WELL AS THE QUANTITY OF AVAILABLE WATER SUPPLY, DURING DROUGHT PERIODS, BY DILUTING THE HIGHER MINERAL CONTENT OF THE SMOKY HILL RIVER DURING LOW FLOWS.

THE ENGINEERING STUDIES HAVE PROJECTED AN ANNUAL PEAK DEMAND FOR SALINA OF 25,000 ACRE FEET IN THE YEAR 2010. WE WOULD LIKE TO HAVE A MINIMUM OF 75% OF THIS DEMAND SUPPLIED BY SURFACE WATER FROM KANOPOLIS.

THE PRESENT COST OF TREATING WATER FROM THE WELL FIELD IS 140% OF THE COST OF TREATING WATER FROM THE SMOKY HILL RIVER.

IN CONSIDERATION OF THE ABOVE, WE WOULD ASK YOU TO GIVE FAVORABLE CONSIDERATION TO AUTHORIZING CONSTRUCTION OF THE KANOPOLIS IRRIGATION UNIT PROJECT.

April 26, 1976

Statement Summary by: DeLynn R. Hay
Extension Irrigation Engineer
Kansas State University
Manhattan, Kansas

To: Subcommittee on Water and Power Resources, House Committee on Interior

Reference: HR 7044, Authorization of Kanopolis Unit, Pick-Sloan Missouri Basin Program

Mr. Chairman and members of the committee, my name is DeLynn Hay. I am an Extension Irrigation Engineer with Kansas State University in Manhattan, Kansas. I have been in my present position from January 1975 to the present. From October, 1971 to January 1975, I served as an Area Extension Irrigation Engineer with Kansas State University located in Northwest Kansas at Colby, Kansas.

At the request of Representative Keith Sebelius, 1st District, Kansas, I have prepared a statement with reference to HR 7044, a bill to authorize the construction, operation, and maintenance of the Kanopolis Unit of the Pick-Sloan Missouri Basin Program, Kansas. I have submitted the statement to you and have prepared a summary of that statement.

Mr. Chairman, with your permission, I will present a summary of my statement at this time.

Kansas presently has an estimated 2,800,000-2,900,000 acres of irrigated land. Approximately 100,000 acres of this land is irrigated from surface water supplies, with the remainder being irrigated with groundwater. The depletion of groundwater resources has been identified as a major long-term water supply problem in Kansas.

Irrigation in Kansas is important economically to the individual farmers, but it also has a positive economic impact on local communities as well as influencing the economic well being of the entire state. Irrigation in the Kanopolis Unit can increase crop production and provide for less variation in crop yields as a result of variations in rainfall. Irrigation will help to stabilize crop production and will increase farm income. The increased farm income stimulates further economic growth in the local communities.

In my statement, I have provided information illustrating the variation of rainfall within the Kanopolis area. The distribution of rainfall during the growing season is unpredictable in Kansas and low dryland crop yields can result even in years with high total annual precipitation.

I have made economic comparisons of dryland crops and irrigated crops in the Kanopolis Unit area using Kansas State Board of Agriculture and USDA Statistical Reporting Service crop yields for the counties in the Kanopolis Unit and costs reported in the Kansas State University Extension Agricultural Economics example budgets. For continuous dryland wheat the average yield (1970-1974) was 33.5 bushels per acre with net returns (\$3.50) per bushel to the farmer ranging from \$29.40 per acre to a loss of \$4.30 per acre with two cost levels. The average yield of dryland sorghum (1970-1974) was 49.4 bushels per acre with net returns (\$4.00 per hundred) to the farmer of \$11.75. The irrigated corn yields (1973-1975) in the three county area have averaged 103 bushels per acre. Using the costs for gravity irrigation with groundwater and corn price at \$2.50 per bushel, the resulting net return is \$34.82 per acre. Irrigated corn production with farm average yields of 120-135 bushels per acre are achievable with good producer management and current technology. Yield increases and greater economic returns are made possible with irrigation.

The Bureau of Reclamation Feasibility Report recommends a water charge of \$32.22 for 15 inches of water per acre for the Kanopolis Unit (or \$2.15 per acre inch). The majority of the groundwater used in Kansas for irrigation is probably currently costing in the range of \$0.75-\$2.00 per acre inch (including investment and pumping costs). With increasing energy costs, the cost of groundwater in the state and the surface water in the Kanopolis Unit should be at comparable levels during the repayment period. It should be noted that only small amounts of energy will be required to deliver water in the Kanopolis Unit. The majority of the delivery will be made using gravity.

The water supply for the Kanopolis Unit is an existing supply and will be provided by changing the operation of Kanopolis Lake. The supply will be replenished

by surface water runoff. This is compared to the majority of the irrigated land in Kansas that is being irrigated with a depleting groundwater supply.

In summary, I feel that a review of the Kanopolis Unit authorization should consider the following:

1. Irrigation in the Unit will provide economic benefits to the producers, the communities, the State of Kansas, and the United States.
2. Irrigation in the Unit will stabilize crop production as compared to variable production under dryland conditions.
3. Irrigation in the Unit will increase farmer incomes which, in turn, will strengthen the total economy of the area.
4. The water supply for the Kanopolis Unit is an existing, stable long-range water supply as compared to depleting groundwater supplies in Kansas.
5. The water supply for the Kanopolis Unit will require a low energy input as compared to groundwater supplies.
6. Groundwater supplies are not available in the area for the same level of development as would be provided by the Kanopolis Unit.

April 26, 1976

Statement by: DeLynn R. Hay
Extension Irrigation Engineer
Kansas State University
Manhattan, Kansas

To: Subcommittee on Water and Power Resources, House Committee on Interior

Reference: HR 7044, Authorization of Kanopolis Unit, Pick-Sloan Missouri Basin Program

At the request of Representative Keith G. Sebelius, 1st District, Kansas, the following information is submitted with reference to HR 7044, a bill to authorize the construction, operation, and maintenance of the Kanopolis Unit of the Pick-Sloan Missouri Basin Program, Kansas.

Kansas presently has an estimated 2,800,000-2,900,000 acres of irrigated land. Approximately 72,000 acres are irrigated with surface water in Bureau of Reclamation projects. An additional 28,000-30,000 acres are irrigated with surface water from streams and small reservoirs, giving a total acreage of approximately 100,000 acres irrigated with surface water supplies. The vast majority of the water used for irrigation in Kansas is provided from groundwater supplies. In the majority of the groundwater irrigated area, the groundwater is being used in greater quantities than it is being replaced by natural recharge. The depletion of the groundwater resources in Kansas has been identified as a major long-term water supply problem of the State.

Irrigation in Kansas is important economically to the individual farmers, but it also has an important positive economic impact on local communities as well as influencing the economic well being of the entire state. Direct effects of irrigation include increased crop yields, increased land values, and increased gross income to the farmer. Irrigation increases the costs of production, but the increased production combined with wise management result in increased producer net income. Irrigation also has a positive economic impact on those businesses that provide input supplies such as irrigation equipment, farm machinery, seed, and fertilizer suppliers. Positive effects will also be noted by the transportation sector and product processing enterprises. Finance and service facilities such as insurance,

banking, and legal services must also be available to support the increased business activity generated by irrigation. Retailers of products and services used in the home, education, recreation, health services, governmental activities and the rest of the activities associated with community development all feel the impact of irrigation. The direct economic benefits of irrigation are local, but the total impact influences many levels of the economy.

The Kansas Water Resources Board in 1968 reported on a study in Southwest Kansas considering the impact of irrigation on state tax receipts. From this study, it was estimated that an additional dollar of gross farm income due to irrigation provided a five dollar increase of income within the state. From tax records, it was determined that each additional dollar of income results in \$0.06 in income and sales tax receipts to the state. For the area studied, the state received approximately \$10 for each acre-foot of water used. If irrigation would have been stopped the year of the study, it was estimated that farm income in the six county area would have decreased by \$26 million and tax revenue to the state decreased about \$8 million. This study indicates the economic importance of irrigation to the State of Kansas.

Irrigation in the Kanopolis Unit can increase crop production and provide for less variation in crop yields as a result of variations in rainfall. Irrigation will provide for greater farmer security and often will enable the family farms to expand without additional land because irrigation farming is more intensive and produces higher income.

A review of precipitation records for the period of 1961-1975 at Kanopolis Dam shows an average annual precipitation of 26.91 inches. The annual precipitation ranged from 16.57 to 47.08 inches during this period with six years having above average and nine years having below average precipitation. At the City of Lindsborg for the period of 1961-1974 the average annual precipitation is 30.73 inches with a range of 18.16 to 50.71 inches. During this period, Lindsborg had six years with above average precipitation and eight years have been below average. The distribution

of rainfall is an important factor in crop production. Rainfall distribution in Kansas is unpredictable and can be erratic during the crop growing season causing crop yield reductions even though annual precipitation may be average or greater. As a result of the variations in total precipitation and distribution of the precipitation during the year, dryland crop production is variable. Irrigation to provide a stable reliable water supply for crop needs would stabilize crop production in the Kanopolis Unit.

The major dryland crops grown in the area of the Kanopolis Unit are wheat and grain sorghum. The average yield of dryland continuous wheat for the period 1970-1974 in Ellsworth, McPherson, and Saline Counties is 33.5 bushels per acre (yield data in this statement are from the Kansas State Board of Agriculture and the USDA Statistical Reporting Service). The average yield for the three counties during period ranged from 25.1 to 39.4 bushels per acre. Using the average of 33.5 bushels/acre and a price of \$3.50 per bushel gives a gross return of \$117.25 per acre. A Kansas State University (KSU) Extension Agricultural Economics example budget for continuous dryland wheat shows total costs of \$87.85 and \$121.55 per acre for yield levels of 32 and 40 bushels per acre, respectively. Using total costs of \$87.85 per acre gives a net return of \$29.40 per acre for dryland continuous wheat production. If costs are at the \$121.55 per acre level, a loss of \$4.30 would be incurred.

The average yield of dryland grain sorghum for the period 1970-1974 in Ellsworth, McPherson, and Saline Counties was 49.4 bushels per acre. The annual average for production in the three counties during the period ranged from 34.2 to 58.1 bushels per acre. Assuming a return of \$2.25 per bushel (\$4.00 per hundred pounds) the gross return at the average yield of 49.4 bushels per acre would be \$111.15 per acre. The KSU example budget shows total costs of \$99.40 and \$130.90 for yield levels of 60 and 80 bushels per acre, respectively. With total costs of \$99.40, the net return to the producer would be \$11.75 per acre.

The range in yields of dryland wheat and grain sorghum during the short period of 1970-1974 illustrates the variability and risks of dryland grain production in Kansas.

Corn would most likely be the dominant crop if an irrigation water supply is provided in the Kanopolis Unit. Some corn, both irrigated and dryland, is now grown in the area. Irrigated corn acreage in McPherson and Saline counties in the period 1973-1975 has ranged from 7,890 to 10,070 acres. The average yield of irrigated corn in McPherson and Saline Counties for this period was 103 bushels per acre. The acreage of dryland corn in McPherson and Saline Counties during the period 1973-1975 has ranged from 1400 to 2310 acres. The average yield for dryland corn in McPherson and Saline Counties for this period was 49 bushels per acre. The yield response provided by irrigation comparing the average yields is 54 bushels per acre. Irrigated corn acreages in the Bureau of Reclamation projects in Kansas during the period 1972-1975 ranged from 39,340 acres to 48,007 acres with an average yield of 110.3 bushels per acre for the period. Average yield in 1975 for irrigated corn production in Kansas was 103.9 bushels per acre with county average irrigated corn yields ranging from 86.6 to 139.7 bushels per acre.

Considering dryland corn production of 49 bushels per acre and assuming a price of \$2.50 per bushel, the gross return would be \$122.50 per acre. The KSU example budgets for dryland corn show total costs per acre of \$105.25, \$137.35, and \$159.75 for yield levels of 60, 85 and 110 bushels per acre respectively. With costs of \$105.25, the net return for dryland corn would be \$17.25 per acre. If costs are at \$137.35 level, the net return would be -\$14.85 or a loss to the producer. Because of the risk of economic loss due to costs of production and variability of yield, little dryland corn will be grown in the area of the Kanopolis Unit.

For irrigated corn in Western Kansas, the KSU example budget shows total costs of \$222.68 per acre (gravity irrigation with groundwater). With production of 103 bushels per acre and a price of \$2.50 per bushel, the gross return would be \$257.50 per acre resulting in a net return of \$34.82 per acre.

Irrigated corn production with farm average yields of 120-135 bushels per acre are easily achievable with good producer management and current technology. If yields of 130 bushels per acre are obtained and the corn price is \$2.50 per bushel,

the gross return would be \$325.00 per acre. With costs of \$222.68 per acre, the net return would be \$102.32 per acre.

The above discussion illustrates the yield increases and greater economic returns that are made possible by irrigation. The greater net returns will provide direct benefits to the producer as well as the indirect benefits generated in the area. The costs and returns of crop production are constantly changing as yields vary, costs of production vary, and the prices received for the product change. Irrigated crop production in Kansas, however, has historically provided economic benefits to the producer. Through new technology and improved management, it should be possible to continue to increase crop yields under irrigation. The returns will be determined by the economic factors.

Surface water supplies such as would be used in the Kanopolis Unit will require little or no energy for irrigation use. Most of the water will flow by gravity from the Kanopolis Reservoir to the point of use, thus requiring no energy input. The irrigation water that must be pumped will be lifted only small distances resulting in low energy input. Groundwater irrigation in Kansas is faced with increasing energy costs and decreased availability of energy sources. This will not be a major problem for the Kanopolis Unit.

The costs of irrigation water from groundwater sources is quite variable in Kansas. The factors that affect the current cost of water for irrigation in Kansas are the cost of energy, type of irrigation system, pumping rate, pumping lift, and total amount of water applied. Costs for irrigation water from groundwater sources in Kansas will likely range from \$0.50 to \$2.75 per acre inch. The majority of irrigation water is probably in the \$0.75 to \$2.00 per acre inch range. These costs would include investment costs for the pumping plant and the pumping costs. On a Kansas State University Irrigation Demonstration Farm in Northwest Kansas the cost for irrigation water has been \$1.73 per acre inch for the period 1972-1975. Water on the Demonstration Farm was supplied from two wells, one equipped with a natural gas power unit and the other with a diesel power unit. These costs will increase

as the cost of energy increases. The Bureau of Reclamation repayment analyses for the Kanopolis Unit recommend a water charge of \$2.15 per acre inch with delivery of 15 acre inches of water. This should be comparable to the cost of using groundwater in Kansas during the repayment period although groundwater costs will be greatly affected by changes in energy costs. Energy costs will have little affect on the costs of delivering surface water.

The Kanopolis Unit water supply will come from an existing water supply, construction of a water storage facility is not necessary. The Bureau of Reclamation Feasibility Report in a simulated operation of Kanopolis Lake showed irrigation water shortages in only 4 years when using 47 years of historical flow data. It is important to note that the Kanopolis Unit water supply is a supply that is recharged. This is compared to groundwater supplies in Kansas that receive only a small amount of recharge. For this reason, surface water development is important to Kansas because at some point in the future much of the irrigated acreage using groundwater will revert to dryland agricultural production due to depleted groundwater supplies.

The supply of groundwater in the Kanopolis Unit area is limited. The groundwater aquifer is shallow and has limited thickness, but in some locations will yield 500-1000 GPM which will provide adequate water for irrigation development. Some irrigation development has taken place using groundwater. The water table levels have fluctuated with pumping and recharge from rainfall. The lowering of the water table would be increased with concentrations of irrigation wells. Declines in water levels and resulting decreased pumping rates often take place in similar aquifers during the growing season. These declines limit the acreage that can be irrigated. There are natural and manmade sources of salts in the area which can enter the groundwater supply. These salts can make the groundwater unsuitable for irrigation.

Irrigation development using groundwater is not possible on the same level as would be possible with the Kanopolis Unit. The groundwater supply is limited and quality of the water is a potential problem in some areas. Heavy irrigation development using groundwater in the Kanopolis Unit area would cause large

fluctuations in groundwater levels and lower base flows in the Smoky Hill River. This groundwater development could have adverse affects on other water uses in the area. The limited irrigation development possible with groundwater will not provide the magnitude of economic benefits that would accrue from the greater acreage in the Kanopolis Unit.

Some irrigation development has taken place and additional development could be made using streambank pumping units on the Smoky Hill River. This development, however, is limited to land adjacent to river. In addition, operation of the Kanopolis Lake may cause fluctuations in the river flow which will affect the water supply available and the setting of pumping plants. The authorization of the Kanopolis Unit would mean the operation of Kanopolis Lake would specifically consider the irrigation needs of the unit.

In summary, I feel that a review of the Kanopolis Unit authorization should consider the following:

1. Irrigation in the area will provide economic benefits to the producers, the area, the State of Kansas, and the United States.
2. Irrigation in the Unit will stabilize crop production as compared to variable production under dryland conditions.
3. Irrigation in the Unit will increase farmer incomes which will strengthen the total economy of the area.
4. The water supply for the Kanopolis Unit is an existing, stable, long-range water supply as compared to depleting groundwater supplies in Kansas.
5. The water supply for the Kanopolis Unit will require a low energy input as compared to groundwater supplies for irrigation.
6. Groundwater supplies are not available in the area for the same level of development as would be provided by the Kanopolis Unit.

STATEMENT BY: Lew Paramore
 Executive Vice President
 Mo-Ark Flood Control and Conservation Association
 Box 1160
 Kansas City, Kansas 66117

TO: Subcommittee on Water and Power Resources, House
 Committee on Interior

REFERENCE: HR 7044, Authorization of Kanopolis Unit, Pick-Sloan
 Missouri Basin Program

The organization which I represent is composed of some forty local associations throughout Kansas and Missouri. Our organization is dedicated to the development of the water resources in Mid-America. The combined membership of our districts is in the excess of 15,000.

At our annual meeting in September, 1975, our organization went on record as approving and recommending early authorization and construction of the Kanopolis Irrigation project. In our judgement this is a very sound capital investment and will be beneficial not only to Mid-America, but to the entire world by making it possible to produce more food and fiber to help feed our nation and the world. I was very much impressed with your interest in this project, and on behalf of the officers and members of our organization, I want to urge you and the members of your committee to recommend authorization of the Kanopolis Irrigation project at the earliest possible date. We are now in a period that is being called an "Energy Crises". It is our sincere hope that through leadership such as yours, steps will be taken to prevent us facing in the future a water crises, which would be far more serious than the current energy crises.

Thank you for the permission of letting me file this statement and we look forward to the early authorization of the Kanopolis project.

Respectfully Submitted,

Lew Paramore
 Lew Paramore

KANSAS IRRIGATION AND WATER RESOURCES ASSOCIATION

1204 GIVENS ROAD, MANHATTAN, KANSAS 66502

April 16, 1976

TO WHOM IT MAY CONCERN

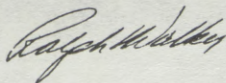
SUBJECT: Kanopolis Irrigation District

I certify that the attached resolutions were adopted by the Kansas Irrigation and Water Resources Association at its 1975 Annual Meeting on December 4, 1975 at Garden City, Kansas.

Resolution 75-5 titled "Kanopolis Irrigation District" indicates the support of the Kansas Irrigation and Water Resources Association for early authorization and construction of water delivery facilities for the Kanopolis Irrigation District.

The Kansas Irrigation and Water Resources Association is an association of seven irrigation districts and 12 local irrigation associations in the State of Kansas.

RALPH WALKER
President



(75-5) KANOPOLIS IRRIGATION DISTRICT

Whereas storage space for 162,000 acre-feet of water has been allocated in Kanopolis Reservoir for conservation use; and

Whereas the Kanopolis Irrigation District has been organized for the purpose of utilizing this storage; and

Whereas further delay in the construction of a water delivery system to serve the 20,000 acres of land in the project means a continuing annual loss of millions of dollars of income to Kansas,

BE IT THEREFORE RESOLVED that the United States Bureau of Reclamation and all associated agencies complete the necessary review of the Multiple Objective Planning Study so that the construction of the project can proceed as soon as possible.

BE IT FURTHER RESOLVED that the Kansas Congressional Delegation provide the leadership to provide the congressional action required to complete early authorization and construction of this project.

(75-6) PROPOSED KENDALL RESERVOIR

Whereas studies and re-studies have been made on the feasibility of the proposed Kendall Reservoir on the Arkansas River in Western Kansas; and

Whereas surface water supplies are needed for irrigation and other uses in Southwest Kansas particularly to augment existing supplies of groundwater which are becoming scarce and limited; and

Whereas uncertain water quality appears to be the limiting factor in an otherwise economically feasible project,

BE IT THEREFORE RESOLVED that the Kansas Water Resources Board and U. S. Army Corps of Engineers conduct a comprehensive study of the feasibility of a reservoir on the Arkansas River in Western Kansas; a part of this study should pay special attention to water quality especially when the surface water is used conjunctively with ground water.

(75-7) KANSAS STATE UNIVERSITY APPROPRIATION

Whereas agriculture is the major industry of the State of Kansas; and

Whereas there are continuing needs for improving the efficiency of production and marketing of Kansas crops and livestock; and

Whereas the Kansas Agricultural Experiment Station and Cooperative Extension Service of Kansas State University provide the research and dissemination of research information,

BE IT THEREFORE RESOLVED that the State of Kansas provide funds as requested by Kansas State University for capital improvements, meeting priority research needs, and improved county extension agents' salaries.

Salina Area Chamber of Commerce

The Voice of Business



Telephone 913 827-9301
P. O. Box 596 • 115 West Iron
SALINA, KANSAS 67401

April 23, 1976

Sub-Committee on Water and Power Resources
House of Representatives
Washington, D.C. 20510

Gentlemen:

The Salina Area Chamber of Commerce has asked Mr. Dean Boyer, city engineer for Salina, Kansas, to present the Chamber of Commerce's position on the Kanopolis Unit Project.

The necessity of an assured adequate water supply for the future growth and development of Salina and surrounding areas is of vital importance.

Salina is a growing community, and water, at the present, is being used at an alarming rate. To insure our continued growth and prosperity, we must be assured of an adequate water supply. If the water supply in the area should dwindle, we would have to have economical, as well as practical, means of obtaining water. The Kanopolis Unit Project appears to be the most economical and practical means of obtaining such a water supply to assure our future.

The Salina Area Chamber of Commerce sincerely hopes you take all these aspects into consideration when considering the Kanopolis Unit Project.

Thank you for your valuable time.

Cordially,

Jim Geisendorf
President

SALINA AREA CHAMBER OF COMMERCE

JG/pm



Front Door to Lindsborg



CHAMBER OF COMMERCE

(913) 227-3706

P. O. Box 191

Lindsborg, Kansas 67456

LITTLE SWEDEN . . . U. S. A.

15 April 1976

Subcommittee on Water and Power Resources
 Committee on Interior
 House Office Building
 Washington, D. C.

Gentlemen;

The Chamber of Commerce of Lindsborg, Kansas recommends your favorable consideration of the proposed Kanopolis Irrigation District. It will greatly increase the stability and future development of our agricultural community, the benefits of which will reach much beyond the boundaries of the district itself. The development of this district will stabilize the economy of the existing businesses as well as attract new investment in agriculture related businesses; this being so very important for the existence of communities such as ours.

Again, we ask for your sincere and favorable consideration for approval of this district that would so greatly benefit Lindsborg and the surrounding area.

Sincerely,

President

Lindsborg, Kansas
April 23, 1976

Subcommittee On Water and Power Resources
Committee on Interior
Room 1324 Longworth House Office Building
Washington D.C. 20515

Dear Honorable Committee Members

I am a farmer in the "Smoky Valley" below the "Kanopolis Reservoir" also I am Chairman of the "Board Of County Commissioners" of Mepherson, ~~Kan~~ County.

I am very much interested in the future of our "Smoky Valley" with the " Proposed Kanopolis Irrigation Project" will serve.

It will help so very much to preserve a stable economy and also our valley with a underground water level which I am sure will be beneficial to all concerned.

I understand the feasibility studies have been completed again for the "kanopolis Irrigation Project" and that it has been deemed economically feasible.

This Project was this far along several years ago when a Opposition Law Suit caused too much time delay and time ran out for the Project to be acted upon by Wasington Offices within the correct time schedules.

In my opinion that postponment and time consumed to complete a new feasibility study was a very costly one for our project as costs will be so very much higher now. But I believe inflation will continue and a move foward with "The Kanopolis Irrigation Project" would be our best interests as future costs surly continue to rise.

Im near retirement age so this Project will not directly benefit me but would most assuredly be a great thing for future Generations and assure adequate water for irrigation to mainain good crop production for the needs of a growing population all over the World.

I believe we need to do everything we can to improve our potential for food production. More land is being taken out of production to fulfill othrr needs so therefor we need to intensify our Aggricultural capabilities by projects such as this.

Carl V. Oakleaf



FARMERS UNION ELEVATOR CO.

Box 351

LINDSBORG, KANSAS 67456

Phones: Elevator 227-2161 — Service Station 227-3715 — Locker Dept. 227-2191

BRIDGEPORT: Assaria 667-3391

FALUN: Salomonsborg 511

April 15, 1976

Subcommittee on Water and Power Resources
Committee on Interior
House Office Building
Washington, D. C.

Gentlemen,

As general manager of the Farmers Union Elevator Company, Lindsborg, Kansas, I ask for your favorable consideration of the approval of the Kanopolis Irrigation District.

The development of this district would reduce the uncertainty of agricultural production in this area, which is now quite dependent upon erratic rainfall patterns. This uncertainty restrains further development of the agri-business segment of our local economy, which in turn has the same effect upon the total economy of the area.

The more intensified production insured by such a district, will also provide opportunities more conducive to keeping the farm youth we have on the farm.

Please give this your sincere consideration.

Respectfully,

Charles E. Johnson
Manager

GRAIN — FERTILIZER — FEED — SEEDS — GASOLINE — OIL — PROPANE
SLAUGHTERING PLANT — COLD STORAGE LOCKERS — FARM SUPPLIES

COLONIAL SAVINGS & LOAN ASSOCIATION
200 North Main
Lindsborg, Kansas 67456

The Honorable Garner E. Shriver
Representative, Fourth District
House of Representatives
2209 Rayburn House Office Building
Washington, D. C. 20515

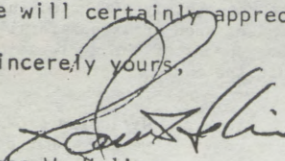
Dear Congressman Shriver:

Just a note to advise you of our keen interest in furthering the proposed construction of the Kanapolis Irrigation District. We firmly believe this would have a definite positive economic impact on our community.

With the growing needs of additional production of agricultural products, this would seem to be an excellent way to further yields over many thousands of acres.

We will certainly appreciate your support in this matter.

Sincerely yours,



John W. Heline
Senior Vice President

JWH:df

Mrs. Robert F. Brandt
601 North Third Street
Lindsborg, Kansas 67456

April 21, 1976

To Whom It May Concern:

Even though I am presently irrigating farm land in the Kanopolis Irrigation District, I would like to see the Bureau of Reclamation and Corps of Engineers complete the Kanopolis project so that irrigation and City/industrial usage can be added to the benefits derived from this water resource.

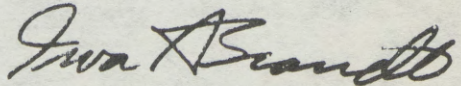
This should have been done long ago before inflation caused the cost:benefit ratio to deteriorate.

We should proceed before we have the same situation in this area as is developing in Western Kansas where the water table is dropping and well water that should be saved for human consumption is being used for irrigation.

No doubt there will be some farmers in this area opposed to the project because of the cost and difficulty in dealing with government bureaucracies and I do not contend these factors are not real problems. However, while no one can predict the future, the undersigned is betting that the food:population ratio or supply/demand factors are changing so that - without government interference - farmers prices will rise (they will have to if there are going to be any farmers); the irrigation cost will not seem so out of line and we will need all the food we can produce.

Your favorable consideration of the Kanopolis project would be appreciated by myself and your grandchildren.

Sincerely,

A handwritten signature in dark ink, appearing to read "Iva F. Brandt". The signature is fluid and cursive, with the first name "Iva" being more prominent than the last name "Brandt".

(Mrs. R. F. Brandt)

FARMERS' STATE BANK

POST OFFICE BOX 231

LINDSBORG, KANSAS, 67456

April 14, 1976

Subcommittee on Water And Power Resources
Committee On Interior
Room 1324, Longworth House Office Building
Washington, D. C. 20515

Dear Honorable Committee Members:

As you know, land and labor are both limited and expensive. And, as such, they have been overshadowed in importance by three inputs—capital, management and technology. Capital requirements of the average American farm are increasing. It is obvious that most of our farmers cannot themselves finance their own operations. They have to turn to sources of credit. It's an ironic cycle, - credit is necessary if the American farmer is to maintain or increase his efficiency. But, because the use of credit increases his operating costs, it is even more imperative that his operation be efficient - to offset the increased costs credit brings to farm operations.

Management is second in importance. In simple terms, management means making the right decisions at the right times. The emphasis on management has brought a new generation of farmers. They are more educated and better informed.

The third major input is technology. Combined with the farmers land, labor, capital and management, "technology" will play a more important role in the amazing productive capacity of our farmers. Technology is the result of research efforts by our universities and colleges, agricultural companies and farmers themselves. As our world population continues to increase, the land area available for production of food and fiber continues to decline. More space is required to satisfy our increasing population. And more people mean greater demands for more food. The way to increased food and fiber supplies, then, is not through increased acreage, but through greater production on the acreage that is available. This is technology at work. We must create a way for our land and water to be preserved with such projects as the construction of facilities

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Page 2

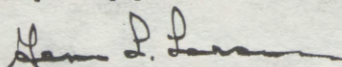
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April 14, 1976

Subcommittee on Water And Power Resources
Committee on Interior
Room 1324, Longworth House Office Building
Washington, D. C. 20515'

for the Kanopolis Irrigation Unit here in Kansas. Our Kansas farmers, if given the opportunity, can combine the inputs of land, labor, capital, management and technology and produce the food and fibre for the generations to come.

Very truly yours,



Gene L. Larson
President

GLL:mp

cc: Honorable Garner E. Schriver

BOARD OF PUBLIC UTILITIES

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Box 650 Phone 316-241-0661

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MAURICE P. LINDEN, SECRETARY-CONTROLLER

May
6
1976

Senator Robert J. Dole
4213 Dirksen Senate Office Building
Washington, D. C. 20510

Attention: Mr. Bob Downen

Re: Kanopolis Reservoir
Pick-Sloane Missouri Basin Plan

Dear Mr. Downen:

Please address the interest of the City of McPherson and the neighboring community to the needs of a renewable water supply in the Kanopolis Reservoir.

Presently the four counties of McPherson, Harvey, Reno and Sedgwick obtain much of their potable water from the Equus Beds. With the ever pressing needs for more food, the demands of irrigation on this water supply is growing at a substantial rate. Approximately 332,000 people live in the area of the Equus Beds, but the Cities of Wichita and McPherson must look to renewable sources in the near future.

The Board of Public Utilities of the City of McPherson has applied to the Water Resources Board of Kansas for an allocation of 5000 acre feet per year from the Kanopolis Reservoir.

We have also applied for consideration of an allocation from the Marion Reservoir, however that water is of less desirable quality due to the sulfate content.

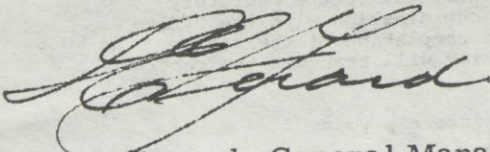
The McPherson community, possibly the Cities of Lindsborg, Hillsboro and Marion will ultimately require water from a reservoir.

Senator Robert J. Dole
Attention: Mr. Bob Downen
May 6, 1976
Page 2

Please know of our needs and speak for our interest.

We appreciate your efforts in this matter.

BOARD OF PUBLIC UTILITIES

A handwritten signature in dark ink, appearing to read "Don Gerard", with a stylized, flowing script.

Don Gerard, General Manager

DG:cw

cc: Mr. Emerson Linn
Senator James B. Pearson's office
5313 Dirksen Office Building
Washington, D. C. 20510

DAEN-GCJ

17 MAY 1976

Honorable Henry M. Jackson
Chairman, Committee on Interior
and Insular Affairs
United States Senate

Dear Mr. Chairman:

This is in reply to your letter dated 3 May 1976, to Lieutenant General W. C. Gribble, Jr., Chief of Engineers requesting the views of the Corps of Engineers on S. 1821, 94th Congress, a bill "To authorize the Secretary of the Interior to construct operate, and maintain the Kanopolis unit of the Pick-Sloan Missouri Basin program, Kansas, and for other purposes."

Your request is receiving our immediate attention, and a report will be prepared for transmittal to the Secretary of the Army for his review and coordination with the Office of Management and Budget. Upon completion of the review process, the Secretary of the Army will transmit the report to your Committee.

Sincerely yours,

(Signed)

ERNEST GRAVES
Major General, USA
Director of Civil Works

Mr. BENGTON. In summation, I would like to again emphasize the fact that the authorization and construction of the Kanopolis unit will utilize an existing facility and will in no wise jeopardize its flood control purpose.

The project will have the dual purpose of providing an adequate water supply for the landowners within the area who desire to irrigate their land so that it can be utilized to its maximum potential; and will also provide an adequate water supply for municipal and industrial purposes.

With this combination of forces at work, it will assure a prosperous economy for both the rural and urban areas of central Kansas. We urge your favorable recommendation of this Kanopolis irrigation project at this time, subject to a favorable review of the final feasibility report.

Thank you.

Senator HATFIELD. Thank you very much, Mr. Bengtson. You've been very helpful with your testimony this morning.

For the record, I would like to ask you, concerning a question that was raised I believe in the early sixties, as to whether or not the Kanopolis irrigation district had actually been properly constituted under Kansas State law.

Has that issue been solved?

Mr. BENGTON. Yes; it has. The chief engineer of the Board of Water Resources authorized the project. It was challenged on the grounds that there were insufficient signatures to the project. This project was bogged down in the courts for approximately 3 years, and the Kansas courts have now determined that the project—that the district was legally formed and organized.

Since 1965, when the litigation was completed, the district has been functioning as a legal unit.

Senator HATFIELD. Thank you very much.

Do we have any other witnesses that wish to be heard?

[No response.]

Senator HATFIELD. If not, I want to thank each of you again for your contribution to this hearing this morning.

The hearing will be adjourned.

[Whereupon, at 11:55 a.m., the hearing was adjourned.]

