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AFFAIRS

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DIXIE PROJECT, UTAH

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MAIN
READING ROOM

**HEARINGS
BEFORE THE
SUBCOMMITTEE ON
IRRIGATION AND RECLAMATION
OF THE
COMMITTEE ON
INTERIOR AND INSULAR AFFAIRS
HOUSE OF REPRESENTATIVES
EIGHTY-EIGHTH CONGRESS
FIRST AND SECOND SESSIONS
ON
H.R. 3279, H.R. 4178, and S. 26**

**BILLS TO AUTHORIZE THE SECRETARY OF THE INTERIOR
TO CONSTRUCT, OPERATE, AND MAINTAIN THE DIXIE
PROJECT, UTAH, AND FOR OTHER PURPOSES**

OCTOBER 2, 1963—ST. GEORGE, UTAH
JUNE 22, 1964—WASHINGTON, D.C.

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CONTENTS

	Page
Hearings held—	
October 2, 1963, St. George, Utah-----	1
June 22, 1964, Washington, D.C.-----	53
Text of—	
H.R. 3279-----	53
S. 26-----	55
Report of—	
Department of the Interior, June 19, 1964-----	56
Statements by—	
Members of Congress:	
Bennett, Hon. Wallace F., a U.S. Senator from the State of Utah-----	7, 69
Burton, Hon. Laurence J., a U.S. Representative from the State of Utah-----	2, 60
Lloyd, Hon. Sherman P., a U.S. Representative from the State of Utah-----	6, 73
Moss, Hon. Frank E., a U.S. Senator from the State of Utah-----	63
Departmental witnesses:	
Dominy, Floyd E., Commissioner, Bureau of Reclamation, Department of the Interior-----	90
Holum, Kenneth, Assistant Secretary of the Interior for Water and Power-----	80
McCarthy, Daniel V., Chief, Division of Project Development, Bureau of Reclamation, Department of the Interior-----	90
Mosely, John J., supervisory park planner, southwest region, National Park Service, Department of the Interior-----	45
Oberhansley, Frank, superintendent, Zion National Park, National Park Service, Department of the Interior-----	44
Pelham, H. E., regional project development engineer, region 3, Bureau of Reclamation-----	90
West, A. B., regional director, region 3, Bureau of Reclamation-----	14, 90
Public witnesses:	
Andrus, Blaine, president, Chamber of Commerce, St. George, Utah-----	35
Barlocker, Hon. William A., mayor, St. George, Utah, and president, Dixie Project & Development Association-----	32, 115
Bingham, Jay R., executive director, Utah Water and Power Board-----	26, 109
Bruhn, Arthur F., president, Dixie College, and member, Utah State Park and Recreation Commission, St. George, Utah-----	36
Clyde, Hon. George D., Governor, State of Utah-----	11
Cox, Malin, president, Washington County Farm Bureau, St. George, Utah, representing Utah State Farm Bureau-----	37
Criddle, Wayne D., State engineer, State of Utah-----	29, 106
Foremaster, Phillip Lang, Washington County attorney-----	47
Fry, Claude, president, Canal Co.-----	38
Graff, E. J., Hurricane, Utah-----	40
Hafen, Hon. Orval, Utah State senator-----	22
Hanson, Earl A., vice president and division manager, Southern Utah Division, California-Pacific Utilities Co.-----	41
Harvey, Leo P., president, Utah Association of Soil Conservation Districts, Pleasant Grove, Utah-----	32
Iverson, Wallace, president, Washington & St. George Canal Co.-----	39
Jolly, Mills, executive secretary, Cedar City Chamber of Commerce, Cedar City, Utah-----	45
Jones, Preston L. chairman, Utah Water and Power Board-----	125

Statements by—Continued**Public witnesses—Continued**

	Page
Larson, Mrs. Wesley P., president, League of Women Voters, Cedar City, Utah-----	50
Parkinson, Ken J., commissioner, St. George Utilities, St. George, Utah-----	42
Seegmiller, George H., chairman, Dixie Soil Conservation District-----	40
Smutz, Ray, secretary, Virgin River Distribution-----	48
Snow, J. C., treasurer, Conservancy District-----	46
Squire, Hon. Loren, Utah State representative-----	23
Wallace, Harold, president, Utah Water Users Association-----	31
Wilson, Wayne, Washington County commissioner and member of the Utah Water and Power Board-----	48, 121
Yardley, Wallace D., vice chairman, Utah Water and Power Board-----	25
Communications received for the record from—	
Cedar City Chamber of Commerce, resolution dated October 2, 1963-----	49
Cedar City Chamber of Commerce, telegram dated June 22, 1964-----	131
Cedar City Council, resolution dated April 18, 1963-----	112
Clyde, Hon. George D., Governor, State of Utah, letter dated June 18, 1964, to the Honorable Wayne N. Aspinall, chairman, House Committee on Interior and Insular Affairs-----	78
Colorado River Development Association of 21 Counties, resolution dated April 30, 1963-----	111
Iron County Board of County Commissioners, resolution dated April 8, 1963-----	113
Moss, Hon. Frank E., a U.S. Senator from the State of Utah-----	11
National Reclamation Association, William E. Welsh, executive director-----	131
Salt Lake City Chamber of Commerce, resolution dated May 6, 1963-----	113
Utah Association of Soil Conservation Districts, letter dated May 1, 1963-----	112
Utah Farmers Union, Douglas Simpson, president-----	51
Utah Highway Commission, excerpt from minutes of meeting of March 6, 1964-----	79
Utah Water and Power Board, resolution dated June 19, 1964-----	126
Utah Water Users Association, letter dated April 8, 1963-----	112

DIXIE PROJECT, UTAH

WEDNESDAY, OCTOBER 2, 1963

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON IRRIGATION AND RECLAMATION,
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,

St. George, Utah.

The subcommittee met, pursuant to notice, at 7:30 p.m., in the Fine Arts Auditorium, Dixie College, Hon. Walter Rogers (chairman of the subcommittee) presiding.

Mr. ROGERS. The Subcommittee on Irrigation and Reclamation, the Committee on Interior and Insular Affairs, on behalf of representatives of the United States will come to order for the consideration of H.R. 3279, a bill to authorize the Secretary of the Interior, to construct, operate, and maintain the Dixie project of Utah and for other purposes.

Let the Chair say this: At this time, we have, I think, 32 witnesses, and I am sure there will be other statements offered for inclusion in the record. We are going to move along as speedily as possible, and at this time the Chair will ask unanimous consent for the inclusion in the record of H.R. 3279 to be followed by proper reference to the report of the Dixie project filed under date of March 21, 1963, by the Secretary of the Interior; and at this time the Chair will recognize the Honorable Laurence J. Burton, Congressman, from the State of Utah, who will introduce the members of this committee to his constituents in this area. Mr. Burton.

Mr. BURTON. Thank you, Mr. Chairman. It is with a great deal of pleasure that I introduce my colleagues in the House of Representatives to my constituents of Washington County. We are all honored, Mr. Chairman to have you and the other members of the committee here. First of all, ladies and gentlemen, I'd like you to meet Mr. Walter Rogers, a Democrat, from Texas, who is serving his seventh term in the House of Representatives. He's a distinguished gentleman who heads the House Interior Subcommittee on Irrigation and Reclamation, and he is a good friend of reclamation and a real champion in the House. We are very honored, Mr. Chairman, to have you here tonight with us presiding over these hearings. At your direction I have prepared the list of witnesses which you have before you. Now, sitting to my right is the ranking Republican Member of the House from Colorado, Judge Edgar Chenoweth, our neighbor to the east, and he is serving his 11th term in the House. We are pleased to have you here, Judge. You will enjoy his wit that sparkles from time to time in the proceedings. To the right of the chairman is our good friend Compton White, Democrat from the State of Idaho, where they, of course, have similar problems to ours, and we are happy to have you here, Mr. White. To my left is the Honorable Joseph Skubitz who is

a Republican Member of the House, from Kansas, and we are also honored to have him here. Sitting with the committee at the end of the table, but without the privileges of the committee, is Representative Lloyd, of the Second District of Utah, who has come down here to demonstrate his support and his interest in this project. He has also introduced a bill similar to the one now before the committee. Next to Congressman Lloyd is our own beloved Gov. George D. Clyde who has been a champion of this project for many years. And next to Governor Clyde is the senior Senator Wallace F. Bennett who is here likewise to demonstrate his great support and interest in the project, and who is sponsor of the Dixie bill in the Senate. We have received a communication from Senator Moss, and business in Washington prevents his being here. So, this is the delegation, and I suppose it is the largest congressional delegation that has ever been in Dixie. I think there are enough members here, Mr. Chairman, that we could almost have a quorum call, if you will back me up.

Mr. ROGERS. Thank you, Mr. Burton, and let the Chair say that the committee is very pleased to have the opportunity to come to this great State of Utah, and especially this section of the State, and we look forward to the testimony that will be presented this evening. Mr. Burton, if you have any statement to make on the project, we will recognize you.

STATEMENT OF LAURENCE J. BURTON, A U.S. REPRESENTATIVE FROM THE STATE OF UTAH

Mr. BURTON. Thank you, Mr. Chairman. I think the chairman and members of this committee know of my support for this Dixie bill. As a matter of fact, when I was elected to Congress I decided that the Dixie bill would be the first bill that I would introduce in the House, and it was, and has my unqualified support.

Mr. Chairman and members of the committee, I appreciate the opportunity of appearing before you to testify in support of what I have long considered one of the most significant and important reclamation projects proposed for the State of Utah. Not only would this project be important to southwestern Utah, it would have many indirect benefits to the entire Nation. The proposed project will be located in the southwestern portion of the State of Utah in an area commonly known and referred to as Utah's Dixie.

Gentlemen, this area and the country with which you will be concerned in your discussion of this project is not an ordinary one, and the people who settled and developed Dixie were not ordinary people.

As you recall, Utah was settled by the Mormon pioneers as they traveled west seeking refuge from persecution and mob violence. They settled in the desolate territory which was to become known as the Territory or State of Deseret, and later the State of Utah. Needless to say, many of those early pioneers must have been bitterly disappointed when they emerged from the mountains on the east of the Salt Lake Valley and stood on the hill surveying the desert, to hear Brigham Young say, "This is the place"; and he instructed them to settle there, build their homes, and till the soil.

Even at the time the Mormons came into the Great Salt Lake Valley, this area referred to as Dixie was of considerable importance. Fremont

used the Old Spanish Trail in 1843 and 1844; Father Escalante in 1776; and Jedediah Strong Smith in the early 1800's passed that way in his expedition. The gold seekers from the East used it as a thoroughfare in their trek to the gold fields of California. Brigham Young, the great colonizer, recognized the advantages of settling this area, and certainly paramount among these advantages was the opportunity for the Mormons to become a self-sufficient people. Brigham Young was convinced that the climate and fertile soil made possible the growing of cotton, figs, sugarcane, tobacco, and other semitropical agricultural products; and even raising silkworms, making their own cloth, and becoming a highly self-sufficient community.

One of the first settlements of any significance in Dixie was the Indian mission on the Santa Clara River near the present city of Santa Clara. The mission was established in the winter of 1854 by some of the hardiest of the Mormon missionary settlers. In a few years, the settlement showed great promise. In early accounts of a visit to the area by Brigham Young and other church leaders, records show that the settlement consisted of some 30 houses, and approximately 250 acres under cultivation, with flourishing orchards of apples, peaches, apricots, nectarines, plums, figs, grapes, and a promising crop of cotton. There were even cooperative farming arrangements with the Indians. But in the winter of 1862 came the rains and a flash flood of the Santa Clara, like a "thief at night," to completely wipe out the settlement with its crops, orchards, and homes. These courageous people stayed on to rebuild their farms and orchards, suffering from food shortages, sickness, disease, and other setbacks. History tells us that just 2 years later this same Santa Clara River that overflowed its banks and wiped them out, dried up in midseason, leaving the crops and orchards to burn up in the heat of the summer sun.

In the meantime, Brigham Young had determined that the settlement in Dixie had not grown and flourished as it should, and during a church conference in Salt Lake City he called over 300 men on a mission to Dixie to grow cotton and develop the area. Nearly 250 of those called responded and left their homes and farms in the Salt Lake Valley and journeyed to Dixie to start all over again. Most of these people settled in St. George, which is now a thriving community in Dixie, and is today the county seat of Washington County. One of the first, and certainly one of the most important, problems of these people was getting water from the Virgin and Santa Clara Rivers onto the land to quench the thirst of their crops and orchards. And just as important as securing water was the problem of controlling the rivers so that they would not again be wiped out by floods.

A review of the history of this area will reveal that these people endured great hardship over extended periods of time. They built dams on the Virgin and Santa Clara Rivers, only to have them washed out by the raging torrents, sometimes twice in 1 year. They dug canals and tunnels, only to have them filled with mud and debris. They suffered droughts, but these sturdy people faced the hardships and resolved their problems the best they could. The only certainty in their lives was uncertainty itself. They had good years and bad years, and these ups and downs were expressed in a song written by Charles L. Walker, which he called "St. George and the Drag-On," which they

sang to Brigham Young when he visited from Salt Lake City. The song included the following verses:

Oh, what a desert place was this
 When first the Mormons found it ;
 They said no white man here could live
 And Indians prowled around it.
 They said the land it was no good,
 And the water was no gooder,
 And the bare idea of living here
 Was enough to make one shudder.

Chorus :

Mesquite, soaproot, prickly-pears and briars,
 St. George ere long will be a place that every one admires.
 Now green lucerne in verdant spots
 Bedecks our thriving city,
 And vines and fruit trees grace our lots
 With flowers sweet and pretty,
 Where once the grass in single blades
 Grew a mile apart in distance,
 And it kept the crickets on the go,
 To pick up their subsistence.

The sun it is scorching hot,
 It makes the water siz, Sir,
 And the reason why it is so hot,
 Is just because it is, Sir.
 The wind like fury here does blow,
 That when we plant or sow, Sir.
 We place one foot upon the seed,
 And hold it till it grows, Sir.

Dixie had great potential, and these settlers knew it, but there were some real problems involved. They knew these problems well. They worked and sacrificed and adapted themselves, and they gradually tamed the elements to a point where they could survive and provide for themselves and their families. In more recent times it has been asked, "What do you grow in Dixie?" The answer is "Men and women."

Gentlemen, here we are, 100 years later, and some of the most basic problems of this area have not been resolved. There is still a shortage of water; there is still a threat of floods and drought; there is a shortage of electrical energy, and hence a shortage of employment opportunities. This is truly unfortunate, because Dixie is not an ordinary area. It is a delightful garden spot, with beautiful scenery, fertile soil, and a most desirable climate. Brigham Young often left the cold, wet winter climate of Salt Lake City to spend the winter months in Dixie. Those who live in Dixie claim that this is where the summer sun spends the winter. With the benefits that will be derived from the Dixie project, this area will become one of the most desirable and sought after places in the Nation. A wonderful opportunity is before us, and those acquainted with the area can realize this fully. I appear here this morning to tell you these things and to request your support and authorization for the Dixie project.

The Bureau of Reclamation will testify, I am sure, that the project has engineering feasibility, that it is economically justified, and that a large percentage of the cost of the project will be repaid by those who reap the direct benefits, such as water and electric power. The citizens of this area are not asking for a Government handout; they fought this problem alone for several generations. They are asking for Gov-

ernment assistance in the form of a loan to develop this area for the benefit of the entire Nation.

I have prepared a short summary of this proposed project, including the location, the purposes, the benefits to be derived, together with the cost and economic problems. I request permission, Mr. Chairman, to include this in the record.

DIXIE PROJECT SUMMARY

The land and location to be served directly by the Dixie project are in southwestern Utah, principally in Washington and Iron Counties, in the vicinity of the Virgin and Santa Clara Rivers. The surrounding area will also receive many direct benefits that will naturally arise from this bonanza to Washington and adjacent counties in Utah, Nevada, and Arizona.

The purposes of the project are fivefold:

1. To provide adequate water to 11,615 acres of land not now under irrigation; supplemental irrigation water to 9,445 acres of presently developed land; 5,000 acre-feet of water to the city of St. George annually for domestic purposes (this water will be supplied from the Virgin City Reservoir); and 8,000 acre-feet annually to Cedar City for domestic purposes pursuant to existing agreement.
2. Provide adequate drainage on land now with too high a water table and with an excessive collection of surface water.
3. Control floods and prevent drought.
4. Provide the needed electrical energy in the southwestern corner of Utah.
5. Provide a substantial increase in fisheries benefits, and some increase in wildlife benefits, together with an unlimited potential in the field of recreation.

Aside from the water needs and water storage facilities, which are considered to be the primary needs of the project area, a shortage of electric power at reasonable rates presents a problem in connection with both expansion of existing industrial operations and also in bringing new industry into the area. This, in turn, is reflected in the overall employment opportunities, a lack of which have been largely responsible for an almost static population in Washington County for the past 20 years.

Under present plans, three powerplants will be constructed in the Dixie project. To fulfill these needs, the three plants will be located as follows:

1. The Virgin powerplant, to be located on the south bank of the Virgin River immediately below the Virgin City Dam.
2. The Bench Lake powerplant, to be located on the main canal at the foot of the Bench Lake escarpment.
3. The Warner powerplant, to be located along the main canal at the foot of the Warner Ridge near the site of the present diversion dam, from the St. George and Washington Canal.

As a general rule, the economic justification of constructing a Bureau of Reclamation project is determined by making a comparison of the benefits which will accrue from the services provided with the cost of constructing the project features. The benefit-cost ratio of the Dixie project has been computed by the Bureau of Reclamation to be 2.1 to

1.0 for a hundred year period of analysis, or, in more specific language, the project will produce economic benefits in double the value of the costs involved in construction, when measured over a long period of time.

The costs are divided into two categories: reimbursable costs, which include irrigation power and municipal water; and nonreimbursable costs, which include flood control, fish and wildlife, and recreation. The reimbursable costs will be repaid to the Federal Government within 50 years, plus appropriate development periods after completion of each project feature.

The nonreimbursable costs, conversant with long-established policy, will be repaid to the Government but will be absorbed in the public interest.

After the initial expenditure by the Federal Government, the State or local agencies will meet the annual costs associated with reimbursable functions of the project.

The total cost of the project is \$44,867,800; and the construction period is approximately 5 years. During this period, many job opportunities will be provided for the residents of Washington County and the surrounding area.

The Dixie project is of the utmost importance to Utah, and particularly to the southwestern part of the State. It has been determined by all agencies concerned that the project has engineering feasibility, that the project is economically justified, that the reimbursable costs can be repaid within the standard 50-year repayment period, and that construction of the project would be a forward step in the comprehensive development of the Colorado River Basin, and in the conservation and utilization of the lands and water resources of the entire West.

This project is of major interest to the State of Utah and, therefore, of major interest to me; and I have pledged my full and untiring support to the project.

Mr. ROGERS. Thank you, Representative Burton. The Chair will recognize the Honorable Sherman P. Lloyd, Member of Congress from Utah, for such testimony as he desires to make.

**STATEMENT OF SHERMAN P. LLOYD, A U.S. REPRESENTATIVE FROM
THE STATE OF UTAH**

Mr. LLOYD. Thank you, Mr. Chairman. May I say with the other Congressman from the district of the State of Utah how pleased I am that so many members of the subcommittee would come to St. George, Utah, taking their time to perform this very important responsibility. I would like to thank you on behalf of my constituency for this courtesy and this evidence of your desire to learn the facts of the need of this area of the State. I would also like to say that while there are two congressional districts in the State of Utah we do not consider ourselves segmented. We feel we are operating as a unit. So far as the reclamation project is concerned, it is my honest belief that whenever a true reclamation project is proposed such as the Dixie project that it is not a pork barrel project which benefits only the area in which it is geographically located; it benefits not only the entire area, but all of the people of the United States. I personally would feel very gratified and satisfied to vote —in behalf of a reclamation project in the State far removed of

Utah if it had the basic fundamental soundness which the Dixie project has. I would also like to point out the local efforts which have been made. This is a State like other States in this country that believes in local effort. This county has agreed to levy a 5-mill tax upon the property owners of the county as their local effort.

The State of Utah has appropriated over the years something like \$7 million to the Utah Water & Power Board for the development of small reclamational projects, but this is the type of project which is beyond the scope of the local citizenry and of the State to develop. Without prolonging this, I would like to say that about only 10 percent of this project is supposed to be paid back for fish and wildlife and recreational purposes. Senator Allott, of Colorado, testified before the Senate subcommittee of this project that 20 to 21 percent was normal. Only about 70,000 acre-feet per year will be taken out of the Virgin River for this project, and since there is 10 million acre-feet going annually into Lake Mead, this means that less than one-tenth of 1 percent of the annual flow of the water of Lake Mead would be involved. Mr. Chairman and gentlemen of the committee, I appreciate this courtesy, this opportunity to add my support which is indicative of the unanimous support of the people of this State, and I am happy to be here and add this statement.

Mr. ROGERS. Thank you, Mr. Lloyd.

The Chair will now recognize the Honorable Wallace F. Bennett, U.S. Senator from the State of Utah. Senator Bennett.

Senator BENNETT. Thank you, Mr. Chairman.

STATEMENT OF WALLACE F. BENNETT, A U.S. SENATOR FROM THE STATE OF UTAH

Mr. BENNETT. Mr. Chairman, it is indeed a privilege and it gives me great pleasure to be here today in Utah's Dixie to voice my complete and enthusiastic support of the proposed Dixie project.

This is the third hearing to be held on the Dixie project. It is also the first by the House of Representatives and as such serves as another vital step in fulfillment of a 100-year-old dream of the residents of this area.

As many times as I have visited this region I continue each time to be newly amazed and awed at the spectacular colors, the rugged formations, and the vastness of the land.

Parley P. Pratt, viewing the landscape for the first time as leader of a scouting party sent by Brigham Young for the purpose of determining sites for future towns, stood at the rim of the basin bounding the north, no doubt feeling this same sense of amazement and awe. In the record he described the unique terrain and in one particularly significant passage said:

The great Wasatch Range * * * here terminates in several abrupt promontories, the country southward opening to the view for at least 80 miles, and showing no signs of water or fertility * * *.

I needn't remind anyone here of the great pioneer history of the settling of Utah's Dixie and the initiation of irrigation to open up the croplands and the fruit orchards that are here today. However, water has always been and continues to be the major factor which has limited development of the full potential of the great southern Utah

area. That is why I have thrown my full support behind the Dixie project—a project which will benefit both Washington County and Cedar City.

Since hearings were conducted in Washington, D.C., on May 7 and here in St. George on May 17 by the Senate Irrigation and Reclamation Subcommittee, several significant events have occurred which have a bearing on the proposed Dixie project. First and foremost, it gave us all great pleasure when the Senate Interior Subcommittee on Irrigation and Reclamation on July 31 favorably reported the Dixie project. However, since that time the bill has remained before the full Senate Interior Committee with no action taken to consider the legislation for its report to the floor of the Senate. I have written a letter to the chairman of the committee, Senator Henry Jackson, urging that action be scheduled without further delay.

Also of great significance was the Department of Interior issuance on August 26 of a report on the Pacific Southwest water plan. Unfortunately, the announcement by Secretary of the Interior Stewart L. Udall implied that he intends to link the vital Dixie reclamation project in Utah with the \$1.9 billion Lower Colorado River Basin projects. This, of course, has serious implications. It will probably take years to get this mammoth, controversial project through Congress.

By linking the Dixie project with the vast lower basin developments, Secretary Udall has made Dixie a hostage. This step will make it even more difficult to obtain congressional approval of Dixie separately, particularly in the House of Representatives.

I fervently hope that in these additional hearings being conducted by the House Interior Committee with the able assistance of our own Congressman, Laurence J. Burton, we may be able to stress the urgency of the Dixie project and its importance to the economy and future well-being of southern Utah. We also need to emphasize the fallacy of the ill-advised attempt of the Kennedy administration to make the Dixie project a hostage of the Lower Colorado River Basin bill.

It is a well-known fact the projects included in the overall Lower Colorado River Basin legislation have been the subject of long litigation between the States of Arizona and California over rights to the waters of the Colorado River. The Supreme Court, on June 3, 1963, announced its opinion in the case of *Arizona v. California, et al.* This opinion appears to clear the way for the Lower Colorado River Basin developments, though California has filed an appeal to the decision and will oppose bitterly the legislation in Congress.

However, Utah's only use of water within the lower basin is from the Virgin and the Santa Clara tributaries—the right to which the Court did not adjudicate. Accordingly, Utah's right to expand its present lower basin tributary uses is not limited by the Court's decision, and likewise should not be included in the package of legislation for the Lower Colorado River Basin. The Virgin River is a captive stream and not an issue in the *Arizona v. California* decision. It should be developed and considered on its merits alone, and the time for action is now, not a year or several years from now.

Another significant event which may have a bearing on this vital project is that the Department of Interior will soon send to Congress proposed legislation establishing a formula for the determination of

nonreimbursable items in reclamation projects. These are for recreation, fish and wildlife, and flood control.

The estimated figures listed for the Dixie project in this field are \$1,563,000 for fish and wildlife; \$2,883,000 for recreation; and \$152,000 for flood control.

There is no set procedure today for determination of nonreimbursable items and each reclamation project has been considered separately. The proposed Interior Department bill would establish a formula.

This is important to the Dixie project because of House Interior Committee feeling that future reclamation projects should have the nonreimbursable item portions completely spelled out before approval will be given. The new bill from the Interior Department would hopefully clear this hurdle.

Generally those are the new events which have occurred and which may effect the Dixie development. I have endorsed the proposed plan of development without reservation. I had the privilege of introducing the first Dixie project bill, offered after the Bureau of Reclamation had completed its restudy of this meritorious project. The bill was S. 14 of the 87th Congress, which was introduced January 5, 1961. Senator Moss and the others in the Utah congressional delegation introduced similar bills.

I call this to your attention to highlight my strong support for the Dixie project. The people of Utah are united in their earnest desire to see the Dixie project built after being under study by the Bureau of Reclamation since at least 1918. It was only World War II which blocked much earlier construction of the project at a cost that would have been but a relatively small fraction of the burdens which the people of Utah's Dixie are willing to undertake today so that the project may become a reality.

Just as the people of the State are united, so, too, is the Utah congressional delegation. Thus, on January 9, I directed a letter to my junior colleague from Utah, Senator Moss, inviting him to join in sponsoring the Dixie project. He chose instead to introduce his own bill, S. 26. So that I would be clearly on record in support of the project I introduced my bill, S. 655, and, of course, Congressmen Laurence Burton and Sherman Lloyd introduced their Dixie bills in the House.

The bills introduced by Senator Moss and myself were essentially the same, except for one provision in my bill which called attention to the already existing contractual arrangement under which the Cedar City area would receive 8,000 acre-feet annually. This language was designed to protect fully the interests of the people of Cedar City. When the Kolob Dam and Reservoir was constructed by the Kolob Reservoir & Storage Association in Washington County in 1956, it was agreed that Cedar City would construct works for the diversion of up to 8,000 acre-feet of water from tributaries of the Virgin River for municipal use. It should be noted that Cedar City agreed to reimburse the project for power revenue losses resulting from this diversion.

In my testimony before the Senate subcommittee in Washington on May 7, I stated that it would be equally satisfactory to me for the subcommittee either to have Senator Moss' bill amended to add this clause or to approve my bill, whichever the committee desired. I was

especially pleased on July 31, when the subcommittee favorably reported and did include my Cedar City amendment.

Of course, the major benefits of the project will accrue to Washington County, in which it is located. By regulation of flows of the Virgin River and its tributary, the Santa Clara River, the project would provide supplemental irrigation water to 9,445 acres of presently developed land and a full water supply for 11,615 acres of new land. In addition, the city of St. George would be provided with 5,000 acre-feet of water annually for municipal and industrial purposes. Construction of three powerplants, as proposed in the project plan, would produce about 44,500,000 kilowatt-hours of firm electric energy and about 1,900,000 kilowatt-hours of secondary energy for sale annually. In addition, minor flood control benefits would result, as would fish and wildlife and recreation benefits.

Water storage facilities are considered to be the primary need of the Dixie project area. Development of such facilities would provide for the conservation and orderly release of water that is now wasted. The resulting supply of stored water would serve as the foundation for a revitalized and modernized agricultural development, and to permit local industry and population growth.

The proposed Dixie project will be divided into two divisions. The first is the Hurricane division, along the Virgin River. It would consist of the Virgin City Dam, Reservoir, and powerplant, the Hurricane division main canal, and the Bench Lake and Warner powerplants. The second is the Santa Clara division, which will consist of the Lower Gunlock Dam and Reservoir and rehabilitation of an existing canal. The total cost of the project is now estimated to be \$44,822,000.

Utah's Dixie has experienced years of serious drought, and the water situation is even now critical. Unless the Dixie project is built, there appears to be no possibility that additional water supplies can be developed. The future of the entire area is dependent upon Congressional approval and construction of the Dixie project.

That is why the local people have agreed to impose an almost unprecedentedly high tax to repay their share of the project costs. This 5-mill ad valorem tax contrasts with the usual levy of from 1 to 2 mills for other reclamation projects.

The local people have further demonstrated their complete cooperation by forming a local conservancy district which, based upon the high tax levy, will repay 76 percent of the irrigation costs. In order to complete repayment, the Dixie bill provides for allocating the remainder to power revenues that will arise from Lower Colorado Basin dams, since the Virgin River is a lower basin stream. This same principle is used in connection with the Colorado River storage project, which established a formal basin account. Moreover, it is my understanding that some 15 additional Western reclamation projects have utilized the same principle without establishing a basin account.

In conclusion, I again voice my wholehearted support of the Dixie project and urge its prompt and favorable approval. It has been determined by all agencies concerned that the project has engineering feasibility; that it is economically justified; that the reimbursable costs can be repaid within the standard 50-year repayment period; and that construction would be a forward step in the conservation and

utilization of the lands and water resources of the entire region. We are meeting here today in an area which fully demonstrates the need and importance of long-term cyclical water storage and conservation. The time for action is now.

I thank you, Mr. Chairman, for the privilege of appearing here today.

Mr. ROGERS. Thank you, Senator Bennett. Now, let the Chair make this observation at this time. Senator Moss expressed to me his very deep regrets that he could not be present tonight and handed me a letter that he asked me to read to the meeting which I wish to proceed to do now. It is a very short letter and will not take but a moment.

Hon. WALTER ROGERS,

Chairman, Subcommittee on Irrigation and Reclamation, Committee on Interior and Insular Affairs, House of Representatives, Washington, D.C.

DEAR WALT: I wish to express my gratitude to you and to Chairman Aspinall for acceding to the requests which I and other Utahans have made that public hearings be held on the Dixie project this year.

In May, it was my pleasure to conduct public hearings of the Senate Interior Subcommittee on Irrigation and Reclamation on my bill to authorize the project. Those hearings were held both in Washington and in St. George. The bill is moving on schedule through the Senate.

This is the first year of congressional consideration of the Dixie project, and I believe we can be most encouraged at the progress that is being made on the legislation.

For over 100 years now the residents of this area have sought to harness and turn on to their arid lands the precious waters of the Virgin and Santa Clara Rivers. The legislation you are considering has been a dream for 45 years—an urgent objective for 15.

The Dixie project has overwhelming support in southern Utah. By voting to obligate their lands to repay the cost of the project, the residents have demonstrated their willingness to assume, in full, all repayment obligations.

The citizens of Washington County are making energetic efforts to build their economy through local initiative. They have recently brought substantial industry into the area.

Improving and stabilizing the water supply—which the Dixie project will do—should greatly assist them in these endeavors.

I again pledge my wholehearted efforts to advance the Dixie project, and my desire to cooperate in any way I can with you, Mr. Chairman, and the members of your subcommittee.

Very sincerely yours,

FRANK E. MOSS, U.S. Senator.

And this letter will be included in the record at this point. The Chair will now recognize the Honorable George D. Clyde, Governor of the State of Utah. Governor Clyde.

STATEMENT OF HON. GEORGE D. CLYDE, GOVERNOR OF THE STATE OF UTAH

Governor CLYDE. Thank you, Mr. Chairman, members of the committee, first let me again reaffirm my welcome on behalf of the people of the State of Utah to you committee members for coming out here to sit in this very important aspect of our country. I had the opportunity of flying down today with the chairman, Congressman Rogers, and Congressman Chenoweth, and I took them over the head waters of the Virgin River so that they could see where this water comes from which is the life blood of this community. My interest and knowledge of this project is not limited to my terms as Governor. My first experience on water and agricultural problems in Washington and Iron

Counties was in 1919, and again in 1925 when detailed studies were made in this general area. Then again in 1935 I personally directed the water supply studies in Washington County and personally walked over many of the canal lines and visited the diversion points and checked out the reservoir site which would be involved in the development of this area. I have participated in and/or directed studies of this region and the Dixie project in particular for more than 40 years, and I am familiar with the water supply and the hydrography of this region, the climate, its arable land, its irrigation companies, its water users and velocities. I am familiar with its economy, its potential development, its scenic wonders and its people and full development of its resources is dependent on water supply and on the electrical energy which comes from the falling water. Both of these will be provided by the Dixie project, its construction. The Dixie project is self-liquidating as has been pointed out, with some help from the power revenues.

The local conservation district has gone five times as far as any other conservation district that I know of in authorizing a tax of 5 mills to help pay the cost of this project, and that indicates the intense belief and local support of the people. The users of the water will pay according to their ability, which is a sound economic principle. The increased water supply and power will attract industry. Supplemental water will bring in new land, provide for municipal water, attract tourists, the total of which means opportunity for the use of this land. The Dixie project is ready to go after more than 40 years of investigation. It is an integral part of the southwest water plan which encompasses in the end the total and complete consumptive use of water resources of this great southwest. It can be built now. The plans are ready. Arizona, Nevada, and Utah are agreed principally on the plan. Total users of the water of the Virgin River in Utah, Arizona, and Nevada will not substantially reduce the flow in Colorado below Lee Ferry, because little of that flow, relatively little, gets there now, because free vegetation gets much of it, and as Mr. Lloyd has pointed out, only a very small percentage of the total flow of the Colorado is involved in the Virgin River, anyway. There is no justifiable reason why the Dixie project should not be given appropriation in the fiscal year 1965.

Mr. Chairman, I am gratified that you and members of your committee have found it possible to come to Utah. It means much to me, and to the people of southern Utah, that you have in the best democratic fashion brought the legislative arm of government to the people.

We are keenly appreciative of your visit for yet another reason: the subject of your hearings, the Dixie project, is a necessary and vital element of our future in this section, and in the entire State. I can think of nothing more appropriate than for you to hear the voices of these hardworking, sincere and perseverent people, and to meet them in their natural setting—this colorful and rich land.

We all take great pride, Mr. Chairman, that one of our Utah Congressmen has been made a member of your important committee. As you may know Congressman Laurence Burton served me and the people of this State as my right-hand man before his election to Congress. I know you have learned to appreciate him, as all those who work with him do.

May I suggest that you men who serve on this important committee may never fully realize the importance of your work. The work of this committee in studying and reporting to the Congress on reclamation projects has wrought great good to this State, to the West and to the Nation. In a large measure you hold the destiny of this people in your hand, and our future is largely what you will it to be.

We believe in reclamation not only for what it does for our arid lands, but as a sound national investment. I would like to point out that there is in this State further justification for reclamation. I refer to the fact that in Utah the area under Federal ownership is on the order of 72 percent. In order that you may more fully comprehend this I would like to point out the federally owned lands in Utah total 61,140 square miles. Thus, the federally owned area in the State of Utah is only slightly less than the total area of all of the New England States—Connecticut, Rhode Island, Massachusetts, Vermont, New Hampshire, and Maine—whose combined areas are 66,608 square miles. Or expressing it another way, the federally owned lands in the State of Utah exceed in area the entire State of Michigan. This large Federal ownership limits revenues normally available to the State of Utah. The U.S. Government, on the other hand, realizes considerable income from the Federal lands within the borders of Utah. The Congress has wisely provided that a certain percentage of the revenues from public lands be credited to the reclamation fund. These accretions to the reclamation fund from the sale of public lands and the proceeds from the Oil Leasing Act from the State of Utah amounted to a total of \$3,892,000 for the fiscal year 1959, and the total, including preceding years to June 30, 1959, is \$32,918,000.

We now ask your favorable consideration of the Dixie project. You will hear from these people their hopes and aspirations, which stretch back over a considerable period of time. Over the years I have taken a keen personal interest in the development of our water resources. I had my first personal contact with this proposed project nearly 45 years ago, in 1919, and I have followed it closely over the intervening years. I know what it means to the people of an area rich in potential but held back by the lack of usable water. Effective development of water originating in this geographical region, and to which we feel fully entitled, would open a new era in this important part of our State. Since development is possible only through implementation of the Dixie project.

The State of Utah has, with its own resources, given considerable assistance to water development in the area of the Dixie project. The proposed project would utilize water which originates in the State of Utah. The Governors and appropriate State officials in Arizona and Nevada have given considerable study and consideration to the effects of this development on water users of the Virgin River. I present this project to you with the full support of the State of Utah and the assurance that it is uncontested by our neighboring States directly involved.

In 1953 the Utah State Legislature anticipated the events that are taking place today. The legislators realized the need for and the value of water in this part of the State, and in framing and ratifying the Water Conservancy District Act provided that in this one area of the State an ad valorem tax of 5 mills could be levied in place of

the usual 1 mill. This action of the State further evidences our faith in the ability and integrity of the people of Washington County.

I am proud of the harmony that has accompanied the planning of this project. We are able to tell you that because of the vision of the leaders of Iron County and the statesmanship of members of the Utah Water & Power Board that a potential conflict over the waters of Virgin River system has been averted and a signed agreement now in full force and effect will not only protect the interest of each of the counties but has a built-in provision whereby both areas benefit from the Dixie project.

Much study is being given at the moment to the Southwest water plan recently announced by Secretary of the Interior Udall. This plan as you know also contemplates the authorization of the Dixie project. I consider this of sufficient importance that I have asked the Governors of the Upper Basin States to meet with me and give this proposal our careful consideration. I would urge your further consideration of the Dixie project so that, either as a separately authorized project or in the event of favorable action on the Southwest water plan, it may move ahead at the earliest possible moment.

I have appreciated your interest in our Dixie project, as shown by your coming to this area. I can assure you that this project has my full recommendation and the complete support of the agencies of State government, as will be indicated here as representatives are given opportunity to testify.

Thank you very much, Mr. Chairman.

Mr. ROGERS. Thank you, Governor Clyde. The Chair will now recognize Mr. A. B. West, regional director of the U.S. Bureau of Reclamation. Mr. West, if you will come forward and be recognized by the Chair.

STATEMENT OF A. B. WEST, REGIONAL DIRECTOR, BUREAU OF RECLAMATION

Mr. WEST. Mr. Chairman, I am A. B. West, regional director of region 3 of the Bureau of Reclamation, under whose direction the recent report on the Dixie project was completed. Our planning report on this proposed project was transmitted to Congress on March 18, 1963, and was printed as House Document No. 86.

I am pleased to be here to describe briefly the features of the project. The Dixie project would be a multiple-purpose development located within the Virgin River Basin in southwestern Utah. It is one of the projects included for development in phase I of the Secretary of Interior's Pacific Southwest water plan. It would include the functions of irrigation, hydroelectric power, flood control, municipal and industrial water supply, recreation, and fish and wildlife enhancement. Physically the project would consist of the Hurricane division and the Santa Clara division, the salient features of which will be briefly described and pointed out.

In the Hurricane division, the Virgin City Dam and Reservoir, located on the Virgin River, would provide a total storage capacity of 246,000 acre-feet. Of this total, 66,000 acre-feet would be conservation storage for agricultural and municipal uses, and for power generation. The remaining 180,000 acre-feet would be allocated for sedi-

ment storage, for incidental flood control, and for the generation of power. The Virgin powerplant located at the Virgin City Dam would have an installed capacity of 5,600 kilowatts.

The Hurricane division main canal would have a total length of about 26 miles including Hurricane and Warner Tunnels, the combined length of which would be slightly over 4 miles. The Hurricane Canal would deliver a firm supply of water to 7,885 acres of presently irrigated lands and some 9,250 acres of new lands located in the Hurricane, Bench Lake, Berry Springs Flat, Warner Valley, Fort Pierce Wash, and Washington Fields areas. It would also supply water for operation of Bench Lake and Warner powerplants at drops along the canal. These powerplants would have a combined installed capacity of 7,600 kilowatts.

The plan of development also includes provision for up to 5,000 acre-feet of water for municipal and industrial uses for the city of St. George, Utah.

In the Santa Clara division, the lower Gunlock Dam and Reservoir, located on the Santa Clara River, would provide a total storage capacity at normal water surface elevation of 23,745 acre-feet, of which approximately 10,000 acre-feet would be for sediment storage and flood control. A minimum pool of 500 acre-feet would be maintained for fish and wildlife and recreation purposes. The Santa Clara division does not include any provision for the generation of power.

The conservation storage in lower Gunlock Reservoir would provide a firm water supply to irrigate 1,560 acres of presently irrigated land, and to irrigate 2,365 acres of new land located in the Santa Clara and Ivins Bench areas. The existing St. George and Santa Clara Bench irrigation canal would be enlarged, extended, and completely rehabilitated.

The 9,445 acres of presently irrigated land in both divisions now possess natural flow water rights. Water rights for the 11,615 acres of new land and for municipal and industrial uses would be established under Utah State law. The Bureau of Reclamation has been assured by Utah that necessary water rights will be granted to permit conservation of both natural and flood discharges for project uses.

The water supply for the Dixie project would be obtained from the Virgin River and a tributary, the Santa Clara River, both of which are tributaries of Lake Mead and the lower Colorado River. The average annual discharge of the Virgin River at Littlefield, downstream from the project boundaries, under present conditions is about 178,000 acre-feet per year. Under Dixie project conditions, the estimated discharge would be about 117,000 acre-feet, or an increase in net depletion of the stream of about 61,000 acre-feet. Included in the depletion is a proposed transmountain diversion from the basin of about 8,000 acre-feet annually to provide municipal water to Cedar City and vicinity in an adjacent drainage basin. The remaining flow in the stream is sufficient in quantity to meet the existing downstream irrigation requirements in Arizona and Nevada.

Dixie project operations would result in some increase in salinity in the waters available for downstream use. However, the legislation and the project plan contemplate that this water will be of suitable quality for irrigation purposes and that the economy of the downstream areas will not be adversely affected by the project operations.

Continuing careful studies will be made of the water quality under project operations and if any adverse effects become evident, they will be mitigated by appropriate measures. These measures could be the desalination of all or part of the highly saline waters of the mineral springs which issue in the stream bed of the Virgin River near the town of LaVerkin and which contribute a substantial part of the salt to the stream flow, or by other means. In the event that feasible physical methods of handling the problem could not be found, downstream irrigators could be indemnified if damage from project operation occurred. An allowance of \$2 million has been made in the project cost estimate for this item.

Good sport fishing is not found under present conditions in either the Virgin or Santa Clara Rivers within the project area. Development of the Virgin City and lower Gunlock Reservoirs would result in a substantial increase in sport fishing values and, under project conditions, game bird habitat would be expanded through creation of water areas and the increased acreage under irrigation. The Bureau of Sport Fisheries and Wildlife estimates the net annual increase in fish and wildlife benefits incident to development of the Dixie project would be about \$78,000.

Development of Virgin City Reservoir and lower Gunlock Reservoir would increase the recreational potential of the general area by providing opportunity for boating, swimming, water skiing, fishing, and related activities.

Recreation potentials of both Virgin City Reservoir and lower Gunlock Reservoir have been studied and evaluated by the National Park Service. The studies indicate that because of its proximity to major highways and Zion National Park, Virgin City Reservoir would become an important regional recreational center. Recommended recreational development at Virgin City Reservoir would include access roads, parking areas, and utilities, in addition to boat launching, camping, picnicking, and swimming facilities. The estimated total Federal costs for these facilities would be \$455,700. Additional recreational facilities including lodging not appropriate for Federal construction would cost an estimated \$370,000.

Because of its more isolated location and smaller size the lower Gunlock Reservoir would be largely restricted to local recreational use. The recommended basic recreation development in this area is estimated to cost about \$243,700.

The estimated total annual recreation benefits for the Dixie project would be \$190,300. The lower Gunlock Reservoir operation would provide an average of \$7,100 in flood control benefits each year. While the Virgin City Reservoir would also provide incidental flood control benefits, they would be small and have not been evaluated. The annual benefits of providing additional municipal and industrial water supplies have been estimated to total \$160,700. Taking into consideration the annual power benefits of \$342,000 and the annual irrigation benefits (\$3,271,600) the total project benefits would amount to \$4,049,700 annually.

The total estimated cost for development of the Dixie project is \$44,822,000, based on October 1960 prices. Of this amount \$44,577,000 is allocated to project purposes and \$245,000 is nonreimbursable investigation costs contributed by the Colorado River Development Fund and the State of Utah. There would be little change in this

cost if it were indexed to reflect current prices. Based on the April 1963 revised economic and financial analysis using 2 $\frac{1}{8}$ percent interest and other current procedures, project costs are allocated among the various functions as follows: irrigation, \$30,635,000; power, \$6,826,000; municipal and industrial water, \$2,518,000; flood control, \$152,000; fish and wildlife, \$1,563,000; and recreation, \$2,883,000. The foregoing costs were determined by using the "separable costs-remaining benefit" method of allocation.

The total estimated annual operation maintenance, and replacement costs of \$319,900 would be allocated among the project functions as follows: irrigation, \$174,500; power, \$74,200; municipal and industrial water, \$5,000; flood control, \$300; fish and wildlife, \$3,100; and recreation, \$62,800.

The cost allocated to irrigation would be reimbursable without interest in accordance with reclamation law. Reclamation law also provides that costs allocated to flood control and fish and wildlife are to be nonreimbursable and nonreturnable. Virgin City Reservoir would produce the majority of the recreation benefits of the project, and because of its close proximity to Zion National Park would have both regional and national significance for recreation purposes. Therefore, it is recommended that the costs of the project allocated to recreation be made nonreimbursable and nonreturnable.

The repayment analysis indicates that the reimbursable costs allocated to power can be repaid with interest in 50 years and that the reimbursable costs allocated to municipal and industrial water can be repaid with interest in a 50-year period, with allowance for a 10-year interest-free deferment period as provided by the Water Supply Act of 1958. For the Dixie project this would amount to interest deferment for three-fifths of the cost of the municipal and industrial water. The irrigators in a 50-year period, which in the case of the new lands would commence after a 10-year development period, with the assistance of a 5-mill conservancy district tax would repay \$22,440,000 or about 73 percent of the Federal investment allocated to irrigation. The percentage would amount to 76 taking into consideration the fact that the ad valorem tax could continue for 60 years. At the end of the 60-year period, if revenues from all project sources have been applied toward project repayment \$3,232,440 would remain to be repaid from revenues derived from the sale of power from Federal projects in the Lower Colorado River Basin.

The Washington County Water Conservancy District was officially formed on February 6, 1963, by action of the district court at St. George, Utah. The district has power to tax and to enter into a repayment contract with the United States.

The Dixie project has engineering feasibility, and its development is economically justified in the sense that a 100-year period of analysis reflects a total benefit-cost ratio of 2.3 to 1. Thank you, Mr. Chairman.

Mr. ROGERS. Thank you, Mr. West. I have just one question, Mr. West. In determining your repayment of power, what price did you use for the power?

Mr. WEST. The price on power is 6.9 mills.

Mr. ROGERS. Now, do you know the cost of competitive power in this area?

Mr. WEST. It is very close to that, Mr. Chairman. Glen Canyon delivered here is going to run about 7 mills.

Mr. ROGERS. What about steam power?

Mr. WEST. Steam power, I'm sure, would be a good deal higher, so this is well within the range of acceptability.

Mr. ROGERS. Now, let me ask you this: What do you mean by a good deal higher?

Mr. WEST. 13 mills.

Mr. ROGERS. 13 mills.

Mr. WEST. A small plant located on streams that are not as efficient.

Mr. ROGERS. Why did you use 6.9?

Mr. WEST. Well, we felt first that it would be in a competitive area, and it is the amount that we'll repay to the power features in 50 years.

Mr. ROGERS. But, if you used a little higher price it would repay it quicker; wouldn't it, Mr. West?

Mr. WEST. Yes; it would.

Mr. ROGERS. Any other subcommittee members have any questions?

Mr. BURTON. Mr. Chairman.

Mr. ROGERS. Mr. Burton.

Mr. BURTON. Mr. West, has the Bureau of Reclamation approved so far, or thus far, any reclamation projects that are pending before Congress that have a higher economic feasibility of ratio than 2.3 to 1?

Mr. WEST. I can't answer that question categorically, but I would say 2.3 to 1 would range very high. It would be among the highest.

Mr. BURTON. Most of them that I have had experience with has been admittedly a short period of time involved and been considerably lower than this feasibility ratio.

Mr. WEST. It is a very favorable ratio.

Mr. BURTON. Thank you, Mr. Chairman.

Mr. ROGERS. Any other subcommittee members—Mr. Chenoweth.

Mr. CHENOWETH. I am glad to see Mr. West again and I want to thank him for the many courtesies which he extended when Mrs. Chenoweth and I visited Hoover Dam a couple of years ago. Just one or two questions, Mr. West. How long has the Bureau been working on this project?

Mr. WEST. Well, sir, from the very first time included in a basin-wide survey, since 1918, and as was commented earlier this evening in the last 15 years intensively. This is the first time it has arrived at this stage in presentation to the Congress.

Mr. CHENOWETH. The Bureau has been giving the project intensive study for the past 15 years.

Mr. WEST. That is right.

Mr. CHENOWETH. What has taken so long to prepare a feasible project such as you are presenting to us here tonight?

Mr. WEST. Principally the fact that it does not fully repay the cost allocated to irrigation, and in the last two analyses that were made the gap was much wider than it is now; payment capacities having increased, and in our last feasibility—

Mr. CHENOWETH. What capacity has increased?

Mr. WEST. Payment, agricultural payment capacities have increased in the area. The agricultural is on a better footing than it has been. That is true, I think, of nearly all irrigated area advances in fertilizer techniques; economic procedures have made a better situation.

Mr. CHENOWETH. Would you say this development has been the determining factor in converting this into a feasible project?

Mr. WEST. Yes; and in addition to that, of course, this is the only area in all of reclamation that does not have an affirmative arrangement for aid to irrigation from power, and Hoover Dam, as you know, is authorized under the Board of Canyon Project Act and the Board of Canyon Adjustment Act, and there is no opportunity for the use of those revenues as there is, for instance, in Grand Coulee Dam to aid irrigation. Consequently, all of our projects in region 3 have had to be 100 percent reimbursable before they could get very far. Where power revenue is available it's been much easier.

Mr. CHENOWETH. Is this going to be firm power?

Mr. WEST. Yes; it will be primarily firm power.

Mr. CHENOWETH. You have had a dry year, I believe, in this area this year; is that correct?

Mr. WEST. On the Colorado River watershed generally; yes, sir.

Mr. CHENOWETH. The drought extended generally over the West, and in a year like this you would have difficulty providing firm power.

Mr. WEST. There might have been some diminution, yes; in this year, but with normal storage and holdover capacity it would be pretty well ironed out.

Mr. CHENOWETH. How much of the water storage each year would be used for irrigation? Will it be a large holdover, or will you require most of the water each year?

Mr. WEST. Well, the reservoir itself is not very large and it would require a good deal of it.

Mr. CHENOWETH. In other words, you wouldn't carry very much over from year to year?

Mr. WEST. Not a great deal. The maximum carryover period would be about 10 years. What volume would that be?

Mr. PELMAN. Oh, we have an average flow of, in the order of 140,000 acre-feet and an annual release of—in the order of 85,000 acre-feet, so there would be some holdover year by year from the wet years to the carryover in the dry years.

Mr. CHENOWETH. The allocation to irrigation would be repaid over what period?

Mr. WEST. We figured this on a 50-year repayment period, with the maximum, of course, permitted ordinarily.

Mr. CHENOWETH. That is with the aid of the power revenue?

Mr. WEST. Yes, sir.

Mr. CHENOWETH. And what are you going to do about the balance?

Mr. WEST. The balance that I mentioned, something in the neighborhood of \$3 million, would have to be repaid by revenues from other power projects in the region under the Secretary of the Interior's Southwest water plan. For instance, those revenues would come from Rich Canyon powerplant and Marble, and when paid out, from Hoover, Parker, and Davis.

Mr. CHENOWETH. In other words, this project would participate generally in the power revenues from these other major power projects?

Mr. WEST. It is a part of the Southwest water plan as recently promulgated by the Secretary.

Mr. WHITE. This plan is not in effect as yet.

Mr. WEST. No, sir; it is not.

Mr. CHENOWETH. I think that is all, Mr. Chairman. Thank you very much.

Mr. ROGERS. Mr. White?

Mr. WHITE. One question I'd like to ask in addition: Your total benefit-cost ratio 2.3 to 1 is based on a 100-year period. Do you not also calculate these on 50-year periods?

Mr. WEST. Yes, we do.

Mr. BARLOCKER. 2.1 to 1.

Mr. ROGERS. Mr. Skubitz?

Mr. SKUBITZ. On page 1 of your statement you make this statement:

In the Hurricane division, the Virgin City Dam and Reservoir, located on the Virgin River, would provide a total storage capacity of 246,000 acre-feet. Of this total, 86,000 acre-feet would be conservation storage for agricultural and municipal uses, and for power generation. The remaining 180,000 acre-feet would be allocated for sediment storage.

Isn't that rather high for sediment storage?

Mr. WEST. It is a large proportion of the total capacity.

Mr. SKUBITZ. It is over 70 percent.

Mr. WEST. But, it is required in this case to carry us throughout the payoff period.

Mr. SKUBITZ. What is the usual amount set aside for sediment, about what percent?

Mr. WEST. Well, it varies, of course, depending on the nature of the streams that carry the water into the reservoir. Mr. Pelman, do you have a—

Mr. PELMAN. Well, in this particular southwest area sediment contribution is unusually high, and in many of our reservoirs we have a large proportion of the capacity dedicated to sediment.

Mr. SKUBITZ. I have one other question. What are the principal crops that grow in this area?

Mr. WEST. Principal crops are alfalfa combined with dairy and fruits and nuts. Fruit and nuts are grown, and vegetables.

Mr. SKUBITZ. Is there a considerable amount of seed grain grown in this area?

Mr. WEST. No, not a great deal, only enough seed grains that would be actually consumed here in the area. This is part of the milksheds for the Las Vegas area. Dairy cattle are fed and milk is transported.

Mr. SKUBITZ. Would there be any products produced that we now have a surplus supply?

Mr. WEST. No, sir, we do not think there would be any appreciable contribution at all to the crops that are in surplus.

Mr. SKUBITZ. That's all, Mr. Chairman.

Mr. ROGERS. Mr. West, one more question. How much would you have to raise the price of power for this project to be a self-sustaining project without contribution being required from our project?

Mr. WEST. Not a great deal, Mr. Chairman.

Mr. PELMAN. I don't believe we have a figure for that, but it would be a very slight amount.

Mr. WEST. I would say less than a mill.

Mr. ROGERS. Thank you very much, Mr. West.

Mr. CHENOWETH. Mr. Chairman, I have a question.

Mr. ROGERS. Mr. Chenoweth.

Mr. CHENOWETH. I am intrigued by this name Dixie in connection with this project. Now, could you explain just why you use the term "Dixie"?

Mr. WEST. Yes, sir, it is my understanding that the term "Dixie" came into being during the Civil War when, of course, the production of cotton was brought to a halt in the South and the northern areas had no supply of cotton. This is in the southern part of the State, has a very long growing period, and the Mormon leaders in cooperation with the U.S. Government introduced cotton as a major crop, and this area did grow, I understand, a considerable amount of cotton for use in the Civil War period. Governor Clyde, am I right?

Governor CLYDE. They didn't grow very much. It was not a successful operation. The cotton mission was not successful because transportation difficulty was so high.

Mr. WEST. Let us say, then, the intention was good, and this being an area with a long growing season has been associated with the South in Dixie.

Mr. CHENOWETH. My distinguished colleague from Utah, who so ably represents this district, I think, has some observations on the subject.

Mr. BURTON. Well, I have always been told that Brigham Young wanted to set up a self-sufficient economy, and in Carbon County he established a coal mission and in Cedar City an iron mission, and this is the only part of Utah that could grow cotton, and this was the cotton mission. The idea was that it was to supply the fabric for the pioneer society, and hence the word "Dixie."

Mr. CHENOWETH. Isn't it unusual, Mr. West, to designate a project by the term "Dixie"? I have never heard of a "Yankee" project. I wonder whether the term "Dixie" is used to perhaps solicit the votes of some of our southern colleagues. Just why do you use the name "Dixie"? Ordinarily, don't you name a project after the river or stream involved? Isn't that what you normally do?

Mr. WEST. Well, frequently we do. I think, however, we have called this a Dixie project because it has always been known as that. I think from the time we first began investigating, it was referred to as Dixie. That's about the best answer I can get for you, Mr. Chenoweth.

Mr. CHENOWETH. Does the word Dixie apply to anything else in this area?

Mr. WEST. I believe the institution where we are holding the hearing is named "Dixie College."

Mr. CHENOWETH. Dixie College. I assume this area is below the Mason-Dixon Line. That's all, Mr. Chairman. Thank you very much.

Mr. ROGER. Let the Chair make this observation, if he wasn't a southerner he would not permit the outburst. Do you have a question?

Mr. SKUBITZ. I have a copy of the Secretary's report, and I'd like to read from page 96 of that report. It says:

Livestock feeds are the major crops grown in the project area and occupy about three-fourths of the present irrigated acreage.

Now, what crops does the Secretary refer to—what livestock feed?

Mr. WEST. A great deal of it is alfalfa.

Mr. SKUBITZ. Thank you.

Mr. ROGERS. Do you have a question, Mr. White?

Mr. WHITE. I have one question I'd like to ask my colleague from Utah. I hope that during this term of Congress I won't see a bill introduced to change the name of this project to the Bennett project?

Mr. BURTON. It won't be introduced by this Congressman.

Mr. ROGERS. Thank you very much, Mr. West.

Mr. WEST. Thank you, Mr. Chairman.

Mr. ROGERS. Our next witness is Senator Orval Hafen, senator for the State of Utah. Senator Hafen, come forward, please.

STATEMENT OF ORVAL HAFEN, UTAH STATE SENATOR

Mr. HAFEN. Chairman Rogers and members of the subcommittee, my name is Orval Hafen. I am a member of the Utah State Senate representing Washington County in which the Dixie project is located. I am the first resident of the area to testify here tonight, and so on behalf of the local people I want to welcome you. As has been said, I believe this is the first time in the history of our community that a group of Congressmen have honored us with their presence here in an official hearing. We deeply appreciate the fact that you came so far when you're so busy to investigate the feasibility of a project which is so dear to our hearts.

Control of the waters of the Santa Clara Creek and the Virgin River has been a problem during the entire hundred years that white-men have lived here. A month after Santa Clara was settled, in the dead of winter, a flood washed out the settlement and forced the people to move. For more than 30 years efforts to keep a dam in the Virgin River so we could water our crops seemed fruitless, and without water we could not live.

I notice that most of you committee members live west of the Mississippi River and so you can appreciate perhaps more than those who live east of the "father of waters" that water is the most precious resource on earth. Out here in the West, the extent to which we conserve it and utilize it determines the extent of our growth and development.

A group of witnesses here tonight will tell you why they consider the Dixie project vital to our area. I do not want to anticipate their testimony. Tomorrow morning we will take you to the damsite on the Santa Clara and on the Virgin and you will get a picture better than we can paint tonight of just what this project means to us.

We have worked for more than 40 years to bring the project to this point. We cannot bring it to fruition with our own limited resources. We are not asking for charity or handouts. We want only to share in the great reclamation policy of this Nation, and that is to get help for a project that is too big for us, and to repay to the Federal Government every dime of the reimbursable costs. I have spent some time reading the project development report which the

Bureau of Reclamation made to the Secretary of the Interior. I am sure if you are not now familiar with the report that you will become familiar with it and other information as this project is considered.

Tonight you will get only a representative sampling of how the people of this area feel about the project. I can say conscientiously that I do not know of anyone in this area who is opposed to the project. The feeling is unanimous as nearly as I can interpret it, that the project is vital and necessary to our growth, and that we are willing to do all that has been asked of us and all that will be asked of us to make it a reality.

We are greatly heartened by the fact that the Governor of the State of Utah, who is a water expert in his own right, our entire congressional delegation, our State engineer, the Utah Water & Power Board, and other men and agencies are united and unanimous in their support of this project.

We appreciate the fact that the Bureau of Reclamation and the Secretary of the Interior consider the project feasible and desirable.

But we have gotten the project to the point where we can go no further without the favorable action of your committee. So far as we are aware, there is no valid reason why this project cannot take its place along with other reclamation projects in the Nation and be a part of the program which has so profusely demonstrated its worth.

I feel confident that these witnesses tonight and what you will see tomorrow will create a favorable impression on you.

Most of you may be familiar with the fact that when Brigham Young led his people into the Salt Lake Valley in 1847 he gazed out from his sickbed and said, "This is the place." We feel that he was not talking just about Salt Lake Valley, but of this whole area. He and the men he sent to colonize this valley felt that this was the place, also, however desolate and forbidding it must have been. We descendants of those stalwart pioneers feel the same way. We feel that this is the choice land and that it can make unique contributions to the welfare and well-being of our Nation. We feel there is a great destiny in store for this beautiful, cut up, arid land. But we cannot realize that destiny without water.

In the "Book of Proverbs" we read, "Where there is no vision, the people perish." We vision many great and wonderful things which can be accomplished only by carrying on this Dixie project. We most sincerely believe that the time has come when something must be done about it, and that here, tonight, is the best opportunity we have ever had to convince you to take the next vital step toward completion of the project. So, let me say again we greatly appreciate the courtesy you have extended to us, and we are most thankful to have you here.

Mr. ROGERS. Thank you, Senator. Our next witness will be Mr. Loren Squire, State representative. Mr. Squire, will you come forward and be recognized by the Chair?

STATEMENT OF LOREN SQUIRE, STATE REPRESENTATIVE

Mr. SQUIRE. Mr. Chairman, members of the committee, it is indeed a pleasure to have you here. We are glad to have Congressman Burton on your committee as we feel he has a personal interest in this project and we hope a lot of influence on you.

I have represented this county in the House of Representatives in the State legislature for the past 6 years. I want to report to you that all the people of Utah want the Dixie project. If my memory serves me right, both houses of the Utah Legislature at the last session unanimously passed a joint resolution, concurred in by the Governor, urging Congress to cooperate in building this great project.

I came from central Utah in 1918 and made my home in La Verkin just under the present site of the proposed dam. At that early time people were talking about building a dam in the Virgin River.

Two or three years ago when Vice President Johnson visited Utah, he spoke in Salt Lake City and I heard him say:

I have just flown across the United States from the East to Utah. East of the Rocky Mountains the fields and lands are green with growing vegetation, while here in the arid West the valleys are dry and I am convinced that we must build dams in our rivers to hold the floodwaters in storage to be used to make the West prosper and grow.

We are growing rapidly in population but our present land is all in use and our young people have to leave to find homes.

I am past president, and at present, secretary and treasurer of La Verkin Bench Canal Co. situated just under the proposed dam. I know our needs and can see a future of many happy family homes on small acreage if this water is stored and electrical power made available to promote small industries. We have a wonderful semitropical climate that never costs us a cent. I would like to stress the fact that any additional land put under cultivation in this area will not be used to grow agricultural products that are now being grown in excess of our needs, such as corn, wheat, cotton, tobacco, etc.

It is hard for anyone to realize the great potential of the recreation possibilities of the lake so formed by backing up this river. Situated at the door of the famous Zion National Park with our mild sunshine winters it will become the winter playground for people living within several hundred miles. Fishing, boating, water skiing, and green golf courses on its banks for winter play.

Now I don't usually talk about my family, but in order to show you of the high productivity of this soil, I will use my experience to put over the point.

I married a Dixie girl here in 1918 and we purchased a home and 7 acres of land and started to raise cane. I mean literally as we made many gallons of Dixie molasses at that time. Along with raising cane we also raised a large family. We had seven sons in a row. I usually finish this statement by saying that now each one of those seven sons have two sisters, anyway we reared this family of nine children on this 7-acre farm and we have sent all nine of them here to Dixie College. Our youngest and last just enrolled last week. When the boys became large enough to run the farm I worked for the State of Utah as a highway patrolman for 25 years to supplement our cash needs. Stop and think when those 9 children were at home along with my wife, made 10, so I had to supply 30 meals every day before I got my 3. This 7-acre farm provided most all of these meals. We grew all the fruit and vegetables we needed, enough hay to feed a couple of cows that kept us in milk and butter. A flock of chickens to provide our poultry needs and a couple hogs and a beef or two to supply our meat. All I needed to purchase was salt, pepper, and sugar from the store, a few bags of potatoes from northern potato growers and the flour for our

bread. I purchased flour by the ton then and paid for it from receipts of fruit and produce sold off the farm.

Now to give you an idea of the high productivity of this land. On May 20 of this year I picked my first Dixie cherries and from that day until next New Year's, I can pick food from my trees any day. On June 3 of this year I picked my first ripe peaches and with the 10 or 11 varieties of peaches I grow, I can pick ripe peaches from the trees every day from June 3 until now and for the next 20 or 30 days. Throughout 5 months I can have fresh peaches and cream. Now the proof in the pudding is in the eating so I would like to present to this committee this basket of peaches I picked this morning off my trees. There are some plums there also. I would also like to present to you this basket of almond nuts just harvested off my trees. On June 6 of this year I picked my first ripe tomatoes out of my garden and we have had ripe tomatoes out of this garden daily until now and will continue to have until Thanksgiving and often until Christmas. We start our pecan nut harvest about Thanksgiving time. In fact I never gathered my last year's pecan crop until March of this year, after I came back from the legislature. So we have at least 7 months out of the year as months of harvest.

I am sure a family of six could have a home and grow all the fruits and vegetables needed for their use on 1 acre of land under the Dixie project.

Now, gentlemen, I hope we have convinced you that the Dixie project doesn't cost, it pays. It is figured to pay back its cost in 50 years, but that does not include the thousands of dollars paid in taxes on the new land and homes to support this county, this State and this Government. Taxes will go on being paid long after the cost of this project is paid for. The Dixie project will more than double our productive land and the number of homes and families.

We hope you as a committee can go back to Washington and convince Congress of this wise investment in the Dixie project. When you retire, gentlemen, we invite you to come and make your home in this wonderful country, which is rich in milk and honey. I thank you.

Mr. ROGERS. Thank you, Representative Squire, for your statement and also for your gift to the committee. Our next witness is Mr. Wallace D. Yardley, vice chairman, Utah Water & Power Board. Mr. Yardley if you will come forward, you can be recognized.

STATEMENT OF WALLACE D. YARDLEY, VICE CHAIRMAN, UTAH WATER & POWER BOARD

Mr. YARDLEY. Mr. Chairman, by name is Wallace D. Yardley. I am a resident of Beaver County, a neighboring county north of the Dixie project area. I also have the honor of serving as vice chairman of the Utah Water & Power Board. I am here representing the board in the absence of our chairman, Dr. P. L. Jones. Dr. Jones has asked me to express his regrets for not being able to be present here today.

Utah is honored, and I would add my personal appreciation to you for your thoughtfulness and interest that brings you to southern Utah.

As a lifelong resident of southern Utah, I am familiar with the struggle and heartbreak that accompanies an effort to mature crops in this dry and erratic climate. Our pioneer ancestors before us put forth great effort in developing the water supplies of this area. By no means do we regard our effort as being futile, but we are certain that this project is the only real answer to the water problems of Dixie.

I have been associated with the Utah Water & Power Board since its inception in 1947, and you will find that the board has, from its beginning, worked for the authorization of the Dixie project.

The board has made water rights applications for this project. You have the assurance that at the appropriate time these filings will be assigned by the Utah Water & Power Board to the United States.

In conclusion I would like to read a resolution unanimously approved by the Utah Water & Power Board:

Whereas the Utah Water & Power Board has the duty and responsibility to make plans, studies, and investigations to insure maximum development of water and power resources of the State of Utah; and

Whereas Utah is entitled to an equitable portion of the water of the Virgin River system, a tributary of the lower Colorado River, and the Dixie project provides the only means by which this water can be placed to beneficial use in Utah; and

Whereas this project would be of substantial benefit to the State of Utah and, while the residents of this area have diligently sought to perfect this project, it is of such magnitude that Federal assistance is required to accomplish this development; and

Whereas the construction of the Dixie project on the Virgin River would result not only in benefits from irrigation, power, recreation, and flood control in the Virgin River basin, but would also benefit the Lower Colorado River Basin as a whole as a silt control project; and

Whereas this board has on various occasions adopted resolutions favoring the development of this project: Now, therefore, be it

Resolved, That the Utah Water & Power Board reaffirms its previous position in support of the development of the water of the Virgin River and the construction of the Dixie project; and be it further

Resolved, That this board pledges its full support to assist in whatever form appropriate to accomplish the complete development of this project; and be it further

Resolved, That the Irrigation and Reclamation Subcommittee of the House Interior and Insular Affairs Committee be and is hereby urged to favorably consider the Dixie project as outlined in the most current Bureau of Reclamation report, and recommend its authorization and early funding by Congress; and be it further

Resolved, That a copy of this resolution be transmitted to the chairman of the Irrigation and Reclamation Subcommittee of the House Interior and Insular Affairs Committee, Utah congressional delegation, and Vice President of the United States.

Thank you, Mr. Chairman, for the opportunity of appearing before your committee.

Mr. ROGERS. Thank you, Mr. Yardley, for your testimony. Our next witness is Mr. Jay R. Bingham, executive director of the Utah Water & Power Board. Mr. Bingham, if you will come forward and be recognized.

STATEMENT OF JAY R. BINGHAM, EXECUTIVE DIRECTOR, UTAH WATER & POWER BOARD

Mr. BINGHAM. Chairman Rogers, members of the committee, Governor Clyde, and Mr. Bennett.

Mr. Chairman, my name is Jay R. Bingham. I appear before your important committee as an official representative of the State of Utah.

The Utah Water & Power Board, of which I am executive director, is the agency of State government charged with promoting the development of the State's water resources.

Today we appear here to ask your favorable action on legislation that would authorize the Dixie project and provide that funds raised in part from revenues from Federal lands would be invested in development of a potentially rich area now stunted by an erratic and meager water supply.

We believe the principle of using "surplus" or unassigned power revenues to complement other sources of revenue to repay reclamation costs is well established in the Central Valley of California, the Missouri, the Upper Colorado and Columbia Basins. The future development of the West will require an even broader application of this principle which we support.

Can there be a sounder approach than harnessing the revenue producing capability of power from falling water to assist in bringing water to thirsty acres?

We do not come idly here to court your favor; we come here because we have a great need, a project beyond our means. May I present to the committee a publication summarizing the efforts of the State in financing small water conservation projects. I call this to your attention for two purposes: First, to demonstrate that we are making a significant State and local effort to develop our water resources; secondly, to give you proof of the integrity of our people and the repayment ability provided by bringing together good land, resourceful people and water.

This folder tabulates pertinent information about State-assisted projects. In summary, 201 projects have been constructed as of June 20, 1962. The total cost of these projects is \$10.75 million. The State has advanced \$7.1 million for the construction of these projects. The total appropriation to the board since 1947 has been \$4 million. An additional \$2 million reimbursable loan was made to the board from fund balances of the State. The revolving nature of the fund is indicated by the fact that the board has been able to invest \$7.1 million in the program. The projects have reached, both on full supply and supplemental supply basis 526,000 acres of crop land. It is interesting to note that this represents 37 percent of the total cultivated area of the State.

The program is responsible for providing, either by water yield from reservoirs or water supplies saved or created by projects each year, 256,000 acre-feet of water.

I would like to add that we extended ourselves and have constructed without Federal reclamation assistance, the Woodruff Narrows Dam on the upper Bear River. We made this effort in order that you might be more inclined to give special consideration to the Dixie project, which is beyond our ability to finance.

You will find tabulated in the accomplishments folder eight projects constructed in Washington County with State assistance. All of these compliment the proposed Dixie project. The Kolob Reservoir is, in fact, an integral part of the project since it provides storage regulation that will permit transbasin diversion of water to Iron County.

Among other things you probably have some concern over the ability of the Dixie project water users to repay the costs allocated to irrigation. The experience of the board is of significance here. The

Kolob Dam, a Utah Water and Power Board project, on one of the high tributaries of the Virgin River, has been in operation for 7 years. The Baker Reservoir on the Santa Clara has been in operation for 11 years. Both of these State-assisted projects serve lands that come under the project. All repayments have been made and the per acre-foot costs of water have in most years been higher than contemplated by the project.

In this water short area it is inevitable that there would be keen competition for all available sources of water. However, through the patient efforts of the Utah Water and Power Board and the cooperative attitude of Iron County and Washington County interests, an agreement has been reached which removes intrastate controversy over water rights for the Dixie project.

This agreement, executed by officials of the two counties and authenticated by the Utah Water and Power Board, provides that when the Dixie project is built the entire water supply available by natural flow at the Kolob Reservoir, and, as may be later augmented by a feeder canal from Crystal Creek, will be available to Cedar City and vicinity. The agreement further provides that Cedar City shall pay to the Dixie project the annual loss of power revenue to the Dixie project occasioned by the transbasin diversion of water to Cedar City.

Water rights for the Dixie project, held in trust by the Utah Water and Power Board for the development, further recognize the terms of the agreement. The U.S. Bureau of Reclamation's project development report gives further recognition to the amicable solution worked out at the local level.

In conclusion let me again stress the need for the Dixie project by citing the willingness of the Washington County interests to obligate themselves for a 5 mill ad valorem tax to supplement water sales. The expenditure by State and local interest of \$720,000 for small water conservation projects in the area will compliment the proposed Dixie project. Over \$67,000 has been expended by the State of Utah in protecting and defending its rights in the lower basin.

Extensive discussions have been held with the States of Arizona and Nevada relative to the effects of this project. We believe that the proposed Dixie project will improve conditions on the lower reaches of the Virgin River and this project and other developments can proceed in a cooperative and mutually beneficial manner. Thank you, Mr. Chairman.

Mr. ROGERS. Thank you, Mr. Bingham. Mr. Bingham, I think Mr. Burton has a question he wants to ask you.

Mr. BURTON. Mr. Bingham, I commend you on an excellent presentation—it was outstanding. And thank you for these documents you have given the committee, because they will help us. Mr. Bingham, I have had two members of this committee, off the record, ask me if the cost of water connected with this project would not be too high. In other words, the purchase price of water that you would buy from the Dixie—isn't this too much to pay for water to put on this land? It appears to me that you are the logical person in view of your long experience with the State-financed water projects to comment on that, and I'm sure it will help the record if you can give these members some guidance.

Mr. BINGHAM. Thank you, Congressman Burton. Generally the experience of the board has been that where you have good land and

people with integrity it is hard to really place a value on water. Of course, there is some economic limit in the event it would be helpful to the committee and to demonstrate this in this particular area. I would submit that in 1961 the water users under the Baker Reservoir—this is on the Santa Clara unit—above the lower Gunlock Reservoir proposal project, paid \$6.71 per acre-foot for the water derived. In that same year the water users under the Kolob Reservoir paid \$13.55 for supplemental water furnished by that reservoir. I think these figures would document what I have said in general about the ability to repay these costs if water can be provided.

Mr. BURTON. Thank you.

Mr. ROGERS. Thank you, Mr. Bingham. Mr. Skubitz wants to ask you a question.

Mr. SKUBITZ. Mr. Bingham, are there any objections to this project by people who are living downstream and in adjoining States?

Mr. BINGHAM. No, sir, the project has the support of the downstream States, notably Arizona and Nevada. Governor Clyde, I think, 3 years ago, met with the Governors of our two sister States, and there was an agreement at that level.

Mr. BURTON. I think, Mr. Bingham, the gentleman is referring to objections that downstream water users have to the salinity problem which will be created by the LaVerkin Springs. If you will direct yourself to that point, I think that's what he wants to know.

Mr. BINGHAM. Could I suggest, Congressman, that Mr. Criddle, who I believe will be heard from by this committee perhaps has some direct testimony on this subject and would be the appropriate person to answer that?

Mr. BURTON. Fine.

Mr. ROGERS. Thank you, Mr. Bingham. Our next witness is Mr. Wayne D. Criddle, the State engineer. Mr. Criddle, if you will come forward, we will recognize you.

STATEMENT OF WAYNE D. CRIDDLE, STATE ENGINEER OF UTAH

Mr. CRIDDLE. Mr. Chairman, my name is Wayne D. Criddle. I was asked by Gov. George D. Clyde to appear before your committee as an official representative of the State of Utah. The office of the State engineer, of which I am in charge, is responsible for administering the waters of the State and for studying the extent and availability of the water resources as necessary in such administration.

I should like to briefly review for you the rights and existing uses of water in Utah's portion of the Virgin River Basin and possible effects of the proposed Dixie project on the quantity and quality of the water in the river as it leaves Utah and flows into Arizona and into Lake Mead.

Other witnesses already have or will discuss the physical and financial features of the project, the needs of the local people for this development, and the benefits to the people in the project area, the region, State, and Nation.

As most southwest rivers, the Virgin is an erratic and flooding stream. Much of the annual flow comes heavily laden with silt particularly that resulting from heavy summer storms. After the river breaks out of the deep eroded canyons above Hurricane the gradient lessens and the river fans out over a wide flood plain. Canal diver-

sions from this section of the river are practically impossible. Periodic flooding causes shifting of the river bed and supports dense stands of phreatophytes, particularly salt cedars and willows. A few miles below St. George, Utah, the river again enters a canyon section and emerges just east of Littlefield, Ariz. From this point to where it discharges into Lake Mead, a distance of some 40 miles, there is an almost continuous band containing many acres of dense phreatophytes with the low flow river channel meandering back and forth through them, always supplying the water to keep them luxuriantly green. The heavier floods flush out sand and silt accumulations and "irrigate" the many acres of nonbeneficial vegetation. Because of the heavy movement of silt down the river, with some being deposited at one point and some eroded from another, and with the wide variation in flow, it is impractical to attempt to control the unregulated river into any single channel and to prevent waste of water.

With the Dixie project, the major destructive and wasteful floods on the river will be controlled. The Virgin Dam, with 180,000 of its 246,000 acre-feet capacity (or 73 percent) dedicated to silt storage and incidental flood control, will control the river below it. Of the 24,000 acre-feet storage capacity proposed for the lower Gunlock Dam on the Santa Clara River, 10,000 acre-feet (42 percent of the total storage) is to be reserved for silt storage and flood control. Combined, the two project reservoirs will stop a large part of the silt now going into Lake Mead. They will also stop much of the flooding along the entire lower reaches of the Virgin River in Utah, Arizona, and Nevada. But, most important, a large portion of that water now consumed nonbeneficially will be available for beneficial uses of man. Before the construction of Hoover Dam, only limited use could be made of the uncontrolled waters of the Colorado River, flood damage was high, and wastes of water was inevitable. On a smaller scale, but still far too large for individual people or communities to handle, is the necessary Virgin River control. And not only Utah will benefit from this project, Arizona and Nevada both stand to gain materially from this "river control" project. Those who will be benefiting most directly—irrigation and municipal users—will be paying most of the costs, and this seems proper. But the benefits to others down the river through flood control, water salvage potentials, silt removal, and better regulated streamflow should not be overlooked.

There are undoubtedly those who will strongly oppose this development on the basis that Utah has no right to increase her uses of Virgin River water, that the Colorado River Basin is already overappropriated for existing and approved projects, that further hydrological studies are essential to good planning, and so forth. In rebuttal, I must say that few new reclamation projects will be built in the United States in the future if reasonable and sound developments can be stopped politically. There are few unbuilt projects that will not find strong opposition from some source. And if the Dixie project, with its highly favorable benefit-cost ratio, cannot proceed, many others that are far less needed and far less economical in terms of new water development, will probably be forever stopped. The State of Utah believes that she has the right to a reasonable part of the waters which come from her lands. Proper filings for construction of the Dixie project are in the name of the Utah Water & Power Board and are in good standing under the laws of the State of Utah.

But of real national significance is the fact that without this or some alternative similar development, there simply is no way to stop the great amount of wasteful use of water along and in the channel of the Virgin River. Vegetation, estimated to cover many acres of river bottom channel, and evaporation will continue to waste this precious commodity without river control. The U.S. Government and the people of our Southwestern States are expending large sums of money to eradicate phreatophyte use of water. This needed Dixie project, when built, will automatically include salvage from these water wasters.

I appreciate this opportunity to appear before you and I hope you will favorably consider this project which is so badly needed by the people of Utah and which will be of benefit to many people below the project area.

Now, in regard to the comment that was referred to me, the question was the salinity problem, is not an artificial creation by this project. The salinity is already in the water. There will be some concentration, there is no question, but there is also some better regulation provided for the people below. There is also some money set up within the project to take care of some kind of relief which is not yet foreseen, as far as I know. But, whether there is or whether there is not, there are many benefits to this project. There is no artificial increase in the salinity, it is simply a natural prospective phenomena on any of the streams in the United States where there is consumptive use along the stream. I thank you.

Mr. ROGERS. Thank you, Mr. Bingham. Do you have a question, Mr. Skubitz?

Mr. SKUBITZ. One question. How much money has been set aside?

Mr. CRIDDLE. I don't have the figure, but I am informed it is about \$2 million.

Mr. SKUBITZ. Will that be paid back by the users?

Mr. CRIDDLE. Yes, that is included in the project costs.

Mr. ROGERS. Thank you very much, Mr. Criddle, for your testimony. Let the Chair make this observation. Now, we know you are all for this project. We appreciate your applause of these witnesses, but I think in the interest of time if we hurry along without it it will be very helpful, and we will just assume that after each one testifies that you are for him. Our next witness is Mr. Leo P. Harvey, president of the Utah Association of Soil Conservation Districts—no, Mr. Harold Wallace, I'm sorry. I skipped over Mr. Wallace here inadvertently, president of the Utah Water Users Association. Mr. Wallace.

STATEMENT OF HAROLD WALLACE, PRESIDENT OF THE UTAH WATER USERS ASSOCIATION

Mr. WALLACE. Mr. Chairman, I had no idea that I would be called upon to make any remarks here this evening. I was invited here; I came to listen. However, as president of the Utah Water Users Association I wish to state that the Utah Water Users Association includes all of the counties of the State of Utah. It also includes the principal industries of the State of Utah both north and south end. It also includes the canal companies, the irrigation companies, and many other private interests as members of the Utah Water Users Association. For a number of years the Utah Water Users Associa-

tion has gone on record as favoring this project. September 17 last, our Water Users met in the Utah State capital and unanimously passed the motion that the Utah Water Users go on record as favoring, and that its officers take any steps possible to assist the people at Washington and Iron Counties and Beaver County to get this project into progress and into an accomplished project, and therefore I wish to state that the Utah Water Users Association, being a State organization, favors the Dixie project and urges its earliest commencement. I thank you.

Mr. ROGERS. Thank you, Mr. Wallace, for your testimony. Our next witness is Mr. Leo P. Harvey, president of the Utah Association of Soil Conservation Districts. Mr. Harvey, if you will come forward and be recognized.

STATEMENT OF LEO P. HARVEY, PRESIDENT OF THE UTAH ASSOCIATION OF SOIL CONSERVATION DISTRICTS

Mr. HARVEY. Mr. Chairman, my name is Leo P. Harvey. I am a farmer and fruitgrower from Pleasant Grove, Utah. My main efforts have been spent in farming and working for water conservation and development. Presently I have the honor to serve as president of the Utah Association of Soil Conservation Districts and to serve with Mr. Yardley as vice chairman of the Utah Water & Power Board.

I can assure you from firsthand experience that the Federal Government will be repaid directly for its investment on the Dixie project. In addition, indirect benefits resulting from a stabilizing of the economy will flow to the Federal Treasury.

The Soil Conservation Districts Association of Utah heartily support the Dixie project. The districts, through their activities, have proven the productivity of these lands and demonstrated the integrity of the people. The entire program of the soil conservation districts will compliment this larger development, and we urge your favorable consideration of this project.

Thank you, Mr. Chairman, for the opportunity of appearing before your committee.

Mr. ROGERS. Thank you, Mr. Harvey, for your testimony on this subject. Our next witness is the honorable mayor of the city of St. George, Mr. William A. Barlocker. Mayor.

STATEMENT OF WILLIAM A. BARLOCKER, MAYOR OF ST. GEORGE, UTAH

Mr. BARLOCKER. Chairman Rogers, Governor Clyde, Senator Bennett, Congressman Burton and other congressional Members, and members of this committee, my name is William A. Barlocker, president of the Dixie Project & Development Association and mayor of St. George. May I officially welcome all of you to our fine city. If there is anything that we can do to make your stay here more pleasant or to expedite the proceedings of this hearing, please feel free to call on us. It is a personal privilege, really, to have you here so that you know that I am not a resident of Washington, D.C. I would like to read a bit from this magazine for just a moment to clear up this

Dixie problem. Here's a magazine printed in 1911 which talks about Dixie and the Dixie project, so I believe it's been known ever since the beginning, 1861, as the Dixie Cotton Mission, and, therefore, we do have a little Dixie blood in us. I would also like to quote from this magazine:

The Virgin River irrigation project is the most extensive reclamation scheme undertaken in the State of Utah.

These are quotations taken from this book from the Honorable William Spry, the Honorable Governor at that time when he was down here on a trip in 1909:

Application has been made to the State engineer for the necessary water rights, and careful estimates, based upon Government records and other reliable data so the water supply is ample to serve all the lands sought to be reclaimed. This project will depend upon storage lake water supply. The main reservoir will be located on the natural channel of the Virgin River, the site of the dam being near the boundary—near the center boundary line between Washington and Kane Counties.

They were a little more optimistic in those days, gentlemen. They estimate the project will irrigate 100,000 acres, and it goes on, if any of you would care to read it you may do so.

Our association has mothered this great project and is primarily responsible for the local and multi-State support which it has received.

Before going further into my testimony, Mr. Chairman, I would like to commend you and the other dignitaries here for the help you are giving us in furthering the aims of the people of southern Utah.

I have here a copy of a magazine which was printed in 1911 by a group of businessmen from southern Utah, recognizing the possibility of the controlled flow of the Virgin River; and at this point I would like to read a paragraph from that magazine.

As you know, the first feasibility report of this project was written, I believe, around 1918, and in our current feasibility report it has been proven economically sound with the benefits exceeding costs by a ratio of 2.1 to 1.

Local support for the Dixie project has been very enthusiastic. We have now completed the creation of a new conservancy district and a permanent board has been appointed by the district judge. The conservancy would also provide for a maximum tax levy of 5 mills, and as you know, this is a much larger tax imposed upon the county for a conservancy district than in most reclamation projects. In spite of this, over 90 percent of the people available in Washington County signed to support the maximum 5-mill levy; and this includes people on the outskirts of our county, consisting of around 20 percent of our population who will not receive any direct benefits from the project.

Just prior to 1941, the first complete Dixie project report was issued and the people of Washington County were solicited for a conservancy district. Unfortunately, pressures of World War II forced postponement of the project and the conservancy district was never completed.

The Dixie project as proposed by the Bureau of Reclamation in their report of 1961, proposes that Dixie be a multipurpose water resource development on the Virgin River and Santa Clara Creek by regulation of flows of the Virgin River and its tributaries. The proj-

ect would provide supplemental water for 9,445 acres of presently developed land and a full water supply for 11,615 acres of new land. May I mention at this time, that only about 1 percent of the crops in this area are in the surplus or subsidized category.

The city of St. George would also be provided with 5,000 acre-feet of water annually for municipal and industrial purposes. The construction of three powerplants, as proposed in the project plan, would produce about 44,500,000 kilowatt-hours of firm electric energy and about 1,900,000 kilowatt-hours of secondary energy for sale to residents of the area. Numerous flood control benefits would result which would extend the life of the Hoover Dam to the south because of the sediment control. These reservoirs would also create year-round recreational facilities which would be of great value in developing the area. We believe that the benefits from wildlife and recreation would be much greater than the costs set up in the project. It has been estimated that the total benefits from wildlife and recreation would amount to around \$80,000 annually.

Washington County, where the project is to be located, is the poorest county in the State of Utah; and as such, we are eagerly looking for new ways to bring industry into the area and broaden our economic base and to create jobs for our young people. The people of this county have actively worked for this development for over 25 years, and we feel that we have been patient in waiting for formal approval from our friends in Washington.

We are happy to be informed that the *California v. Arizona* lawsuit has been handed down by the courts of this land in our favor. However, may I point out that even though we are a tributary of the Colorado River, the amount of water attributed to it only amounts to 0.076 percent of the total waters of the Colorado River.

In summary, Mr. Chairman, let me say that the people of Utah and Washington and Iron Counties are in desperate need of the Dixie project. Their economy, and in fact their future livelihood and continued growth, depends upon its development. The Bureau of Reclamation has given the Dixie project high priority and considers it to be one of the most economically feasible projects in the country. As I am sure you are aware, certain rights are under contract from the Kolob Reservoir to the people of Iron County; and I assure you that they also will be very pleased to have this project brought to a successful conclusion.

In my hurriedness to begin, I forgot to state my name. And for the record, I am Mayor William A. Barlocker, president of the Dixie project.

Mr. ROGERS. Thank you, Mr. Mayor. Do we have any questions?

Mr. WHITE. Mr. Chairman.

Mr. ROGERS. Mr. White.

Mr. WHITE. Mr. Mayor, in Congress at the present time there is considerable criticism of projects that have a high allocation to recreation and fish and wildlife. I will not say this is universal, but there have been certain segments of the Congress that this criticism has been voiced from. There is also before our committee at the present time a bill to provide for a land and water conservation fund. The land and water conservation fund would provide for a

fee to be charged at a reservoir such as this, should this proposed legislation be enacted into law, and several people favoring projects such as this have indicated their support of this land and water conservation fund bill to put the reclamation and fish and wildlife allocation in a better light. Would you care to comment what you think the local opinion might be here with respect to such a fee of \$7 a year being charged for any user of this reservoir?

Mr. BARLOCKER. I don't think that there will be any question about them going along with anything to get the project, within reason.

Mr. WHITE. Well, then, you would consider that fee to be within reason?

Mr. BARLOCKER. I would consider it being in reason. I question whether or not it would have to be that high, from the standpoint that we run approximately 200,000 cars a year, I believe, through Zion National Park, and they charge \$1 a car.

Mr. WHITE. Well, this would include all of the reservoirs in the United States, it wouldn't be just for this particular one.

Mr. BARLOCKER. This is for all the reservoirs?

Mr. WHITE. The entire United States.

Mr. BARLOCKER. I see nothing wrong with it.

Mr. WHITE. Thank you.

Mr. ROGERS. Thank you, Mr. Mayor for your testimony. Our next witness is Mr. Blaine Andrus, president of the St. George Chamber of Commerce. Mr. Andrus.

STATEMENT OF BLAINE ANDRUS, PRESIDENT, ST. GEORGE CHAMBER OF COMMERCE

Mr. ANDRUS. Mr. Chairman, my name is Blaine Andrus, and I am the president of the St. George Chamber of Commerce, and if you recall the story I told at the dinner this evening, I believe I missed the room entirely I was hunting for. I am indeed frightened.

As president of the St. George Chamber of Commerce I should like to express a few viewpoints and comments that have come to the attention of the chamber.

In the past year we have had an average of 12 inquiries per week from people stopping at chamber offices concerning being able to buy a home and settle here in St. George. Most of these people need jobs to provide for their families. Our Dixie climate attracts them.

We have recently been fortunate enough to have the Hawthorne Manufacturing Co. locate here. This will help, but we need more of these companies if we are going to be able to: First, keep our young people here, and provide a means for them to make a living; second, we need more industry to be able to invite these 624 families (for that is how many have stopped and made inquiries this past year) to make St. George their home. Our best product is our young men and young women and we are sorry to admit that we export almost our entire crop each year.

Without the water and power the Dixie project would supply we are very limited in our future growth. We solicit your support in making the Dixie project a reality.

I thank you for this opportunity to report, Mr. Chairman.

Mr. ROGERS. Thank you, Mr. Andrus, for your testimony. Mr. Arthur Bruhn, president of the Dixie College. Mr. Bruhn, if you will come forward we will recognize you.

Mr. BURTON. Mr. Chairman, may I also add for the benefit of my colleagues that aside from being a distinguished educator, president of the college, President Bruhn will speak tonight in the capacity as a member of the Utah State Park and Recreation Commission, of which he has been a longtime member.

STATEMENT OF ARTHUR F. BRUHN, MEMBER OF THE UTAH STATE PARK AND RECREATION COMMISSION, PRESIDENT OF DIXIE COLLEGE

Mr. BRUHN. Mr. Chairman, Governor Clyde, and members of the committee, welcome to the arid campus of Dixie College. I only wish it were daytime so you could see two things, how badly we need the water and the courage of our young people as they wade through dust inches deep to get to their classes.

One of Utah's greatest undeveloped resources is its scenery. With more and more leisure time virtually forced on the American citizen by virtue of automation, the matter of intelligent use of such leisure becomes both a matter of social concern as well as a tremendous economic opportunity for those who can provide facilities for satisfying this need. The consistent annual increase in people who come to look at the glories of southern Utah is indeed heartening. Yet their stay is often brief. They look and leave because there is little else to do.

On any manmade lake where water is left year round deep enough to sustain a thriving fish population, the recreation values are a significant plus to be considered in estimating the total value of the project. But when the body of water lies in the front door of a magnificent scenic area like Zion Canyon, the values are enhanced to an even greater degree. The lake that will accumulate behind the dam at Hurricane, a positive asset in its own right, will attract a greater population to the park. Moreover, they will come earlier in the year, stay later, and stay longer—to boat, to fish, to water ski, and to see the famous temples and towers from a new and exciting viewpoint.

The faculty and students at Dixie College are also vigorous in their support of the Dixie project. It will afford rich fields of opportunity for experimentally minded biologists and geologists. It will provide for clean and wholesome recreation. It will foster a substantial economic boom which will make possible the expansion of our educational and cultural offering to our people.

And finally, we believe that the values of the Dixie project are not entirely financial, as worthy and real as such values are. But just as surely as man does not live by bread alone, the placid waters of a violent stream conquered and reclaimed will bring to the visitor and native alike opportunities for rest, for inspiration, and for precious moments to renew their kinship with water, earth, and sky so essential for troubled men in a troubled world. Thank you.

Mr. ROGERS. Thank you, Mr. Bruhn. Our next witness is Mr. Malin Cox representing the Utah Farm Bureau of Crops.

STATEMENT OF MALIN COX, PRESIDENT, WASHINGTON COUNTY FARM BUREAU

Mr. Cox. Mr. Chairman, Governor Clyde, members of the committee, I am Malin Cox of St. George, Utah, president of Washington County Farm Bureau and member of the Board of Directors of the Utah State Farm Bureau, and tonight it is my privilege to represent the Utah State Farm Bureau. I would like to state our position on reclamation: New highways and roads, industrial expansion, subdivisions, and urban developments take more farmland out of production each year than reclamation replaces.

Statistics tell us by about 1975 to 1980 we will have all the population in the United States that we can feed on the farming lands that we now possess.

Farm Bureau stands wholeheartedly in support of the Dixie project. We think this is a most worthy project. It will increase the opportunity, the income, and the wealth immensely; in fact it is vital to the future growth of Washington County.

On the other hand the Virgin River is not too important to Lake Mead. Wilson McConkie, a Government employee, whose business it is to measure the water in the streams in this part of the State, tells me that in the 5 years he has been here the river has gone dry each summer and for about 4 months no water runs out of the State. The State line is only about 10 percent of the distance it must run to reach the lake.

I would like to speak as a farmer. For 40 years I have farmed and raised livestock in Washington County. We live in a country beset with drought, sometimes of long duration. If you want to break a farmer's heart, force him to watch his crops burn up and his livestock die from the lack of moisture.

The Virgin River and its tributaries, including the Santa Clara River, is the only known source where we can materially increase our water supply.

I wish I had time to tell you of the pioneers, how year after year the river went on the rampage and washed out the dams, filled the ditches with mud and debris, and washed away the farmland.

Wearily they turned to the pick and shovel, team and scraper, and cleaned up the mess, rebuilt the dams and got the water to their crops before they burned up. Then came talk of the Dixie project, and for more years than I like to think of our hopes and fears have ebbed and flowed.

A number of years ago I attended a meeting in St. George. The Governor of our State was there, the State engineer was there, the head of the water and power board, and many others, including the Federal officers from the Reclamation office in Boulder City, Nev.

I heard the Reclamation officers say that for the first time they could report the project as economically feasible. My dream became a hope.

The western concept, and I think the correct concept of water is, Put it to a beneficial use or lose it. Each year that the Virgin River water runs out of Utah our chances of utilizing it decrease.

As farmers, as livestockmen we stand before you tonight not hat in hand begging, but asking for what we believe are our rights. We believe that the water of the Virgin River belongs here in Wash-

ington County, and if the Congress of the United States will vote the funds to build this project, they will be in time duly repaid, and they will bring health and happiness to this community, and when, as the statisticians tell us, we have reached the point where we have difficulty feeding the people of our Nation, you will find this little group of people sitting down here in Washington County producing abundantly, as you can see and exporting to those who need it. I might mention one other thing, the crops that we raise here, practically all of them are not in surplus at this time. About the only one that is is feed grain, and we consume all of the feed grain that we raise, and we import hundreds of tons into Washington County to take care of our poultry and our livestock. I thank you.

Mr. ROGERS. Thank you, Mr. Cox, for your testimony. Our next witness is Mr. Claude Fry, president of the Canal Co. Mr. Fry, if you will come forward we will recognize you.

STATEMENT OF CLAUDE FRY, PRESIDENT OF THE CANAL CO.

Mr. FRY. Chairman Rogers, Governor Clyde, distinguished legislators, members of Washington County, we are honored with such a distinguished group of people. Your presence here makes our hearts hope for the Dixie project. The feasibility of this project has been ably given by Mr. West and his colleagues. The amount of land that would be under cultivation, new land and the amount of land that all will have supplemental waters has been told, and I know we want to get some sleep tonight, so I'm going to turn to my statement of the last hearing and read just a little of it. I realize that the more that is given the less the people will work for themselves, and the more their poverty increases. We are not asking for something for nothing. This project is out of our reach, we can't build it alone with our meager funds from Washington County, and it has been proven to be feasible, that we are willing to pay it back. Washington County is an arid area. Water is the lifeblood of Dixie. Water is necessary to prevent an exodus so the people won't be forced to leave their homes and crowd to the metropolitan areas. Because of the lack of water our young people have been forced to leave Washington County to find work. They have gone to Los Angeles and Las Vegas by the hundreds, though many of them would rather stay here. Help us to help ourselves develop this area and make a pleasant feasible place to live where the climate is ideal.

In Washington County lies Zion National Forest and Dixie State Park which are fast becoming popular recreational areas. With the addition of skiing, boating, and fishing, Washington County will become one of the most famous playground areas in America. It is located in a setting of red hills and unique colors. The crops that will be raised here will not swell our supply of subsidized crops. The crops will be gardening, fruit raising, semitropical grains, almonds, figs, pomegranates, and so forth. The electrical power that the Dixie project will produce will develop this area industrially. The Hawthorn Manufacturing Co. is here now and is expanding. The Dixie project is feasible as has been shown. The culmination of the Dixie project will be a blessing to the people of Washington County, of the State

of Utah, and the United States. The OK of this project will be an achievement, Chairman Rogers, or Congressman Burton, that your committee will be able to point to with pride. We solicit your support and help. I thank you.

Mr. ROGERS. Thank you, Mr. Fry, for your testimony. Our next witness Mr. Wallace Iverson, president of the Washington & St. George Canal Co. Mr. Iverson.

Mr. BURTON. Mr. Chairman.

Mr. ROGERS. Mr. Burton.

Mr. BURTON. Ladies and gentlemen, when I handed this list of witnesses to the chairman tonight, and it is quite a long one, as you can see, he asked which witnesses were in opposition. I said well, we couldn't find any in opposition, and we can't; and I think you can judge from the expressions tonight that people of Utah are pretty strongly behind this, but I would like to say to those who remain on the list, and there are still a dozen, it would help us greatly, I think, if you could just present a brief statement, a résumé of what's in your testimony and then give a copy to the clerk here and it will be shown in the record as though it were read in full. Thank you, Mr. Chairman.

Mr. ROGERS. Mr. Iverson.

STATEMENT OF WALLACE IVERSON, PRESIDENT OF THE WASHINGTON & ST. GEORGE CANAL CO.

Mr. IVERSON. Thank you, Mr. Burton and you spoke that just at the right time. I didn't know my name was on the list. Mr. Chairman and Governor Clyde and distinguished gentlemen, I appreciate this opportunity of saying a few words, and they will be a few. We are all in harmony with what's been said, I am sure, and I don't know as there's any need of saying a lot about it. I am president of the largest agricultural irrigation company on the Virgin River, and the prayers of these gentlemen, farmers that are in that area, have been for this Dixie project. I heard President Eisenhower say at one time that prayer multiplies a strength of each individual and brings within the scope of his capability almost any conceivable objective. The objective, of course, is the Dixie project, and we appreciate very much your attendance here. I was in San Diego, Calif., with the water users of the Lower Colorado Water Basin, and we had a representative there from here to represent the Dixie project. After all the speeches had been given, he was permitted to speak, and it seemed as most of them went to sleep. It seemed that we were between the lower project and the upper project of the Colorado Basin, and we were in no man's land. Whichever place we went to a meeting we were more or less considered not much of a project. But, tonight it gives us pleasure to be represented here by you gentlemen. It gives us courage and hope we have never had before, and we want to thank you for being here. I thank you.

Mr. ROGERS. Thank you, sir, for your testimony and your comments. Our next witness is Mr. George Seegmiller, chairman of the Dixie Soil Conservation District. Mr. Seegmiller, if you will come forward and be recognized.

STATEMENT OF GEORGE H. SEEGMILLER, CHAIRMAN, DIXIE SOIL CONSERVATION DISTRICT

Mr. SEEGMILLER. Mr. Chairman, Governor Clyde, and distinguished gentlemen, it is my pleasure to be representing the Dixie Soil Conservation District of this area. I feel we have accomplished very much in this work. We are anxious and willing to do our part. We are looking forward to the time we can get in on the Dixie project as one of our assistance to the farmers, and we are sure we have the know-how and we are going to help them as much as we can.

I should like to speak to you for a moment on behalf of the Dixie Soil Conservation District.

We, too, feel the Dixie project is an absolute must for development of the resources of southwestern Utah and we are supporting it all the way.

We have been successfully dealing with soil and water conservation problems for a good many years as is evidenced by the large number of worthwhile projects we have already completed in the area. We have the experience, the know-how, the interest and enthusiasm, and the willingness to put our best efforts into helping farmers whose land will be affected by the Dixie project. We are eagerly looking forward to helping these operators develop their property to its full potential.

The Lord has created southwestern Utah as a favored spot for man to enjoy, both for its wonderful climate and for the magnificence of its scenery. Now, under the Dixie project, we have the opportunity to add to this favored spot by building two dams and creating two beautiful lakes. This would be a fourfold conservation project.

First, it would enable us to furnish irrigation water for many acres of semitropical fruit and vegetable crops which are in great demand in the marketplaces throughout our country.

Second, it would serve as a flood control on the Virgin River and would extend the life of Lake Mead by many years by holding back countless tons of silt which would otherwise be deposited into the lake each year.

Third, it would provide an outstanding spot for water recreation and sport.

Fourth, it would provide electricity for the area.

Again, I would like to say that we feel the Dixie project is a sound project, one that is financially feasible, and one that we support 100 percent. We assure you that we will do everything in our power to see it through to completion. Thank you.

Mr. ROGERS. Thank you, Mr. Seegmiller. Mr. E. J. Graff, will you come forward and be recognized.

STATEMENT OF E. J. GRAFF, FARMER AND BUSINESSMAN, HURRICANE, UTAH

Mr. GRAFF. My name is E. J. Graff, I am a farmer and businessman from Hurricane. I think I am the first one up here that hasn't had an official name of some kind.

Mr. Chairman, we are grateful and pleased that these representatives of our Federal and State Governments have come to our coun-

try to learn more of the Dixie project, and get the feeling of our people for it. You asked me to testify if I am for or against this project. I can say that I am definitely for it. And I feel sure were this question asked those in the audience, they would all speak with one voice and say, "We want the Dixie project," and a similar response would come from our whole county.

You men seeing our beautiful lovely valley can understand what this big supply of new water, coming to us in a regular, dependable, uniform flow will do. It will give us flood control, power, new recreation and beauty, new small farms, new homes, new life, new hope, new economic stability and prosperity. New growth that will feed upon itself and multiply until it will look like a new land.

For 100 years now, our people have watched, waited, and longed for the day when they could capture and hold this winter and spring run-off, these raging floods which have meant only waste and destruction, and harness them to beneficial use. They have always felt this water was made for them, belonged to them; it came from their own nearby hills, mountains, and fields. Yes, we know others need water, and we want them to have it, but they have other possible sources, but this is our one and only possibility. Take it away, and we are lost.

Costwise, in the long long pull, our Government will stand to profit from this investment, for while the direct cost is being repaid, there is a steady return in the way of increased taxes coming back from this newly created wealth. A thrifty Jewish father said to his son, "Spend your money for something you will have tomorrow." This project will be something of tomorrow and tomorrow for hundreds of years.

Thank you.

Mr. ROGERS. Thank you, Mr. Graff. Mr. Earl Hanson, will you come forward and be recognized?

STATEMENT OF EARL A. HANSON, VICE PRESIDENT AND DIVISION MANAGER, CALIFORNIA-PACIFIC UTILITIES CO., SOUTHERN UTAH DIVISION

Mr. HANSON. Mr. Chairman and members of the committee, our company serves electric power to all of Iron and Washington County, serving all of the customers other than those served by municipal systems of St. George and Parowan and the Esclante Valley REA Cooperative.

California-Pacific Utilities Co. strongly favors the construction of the Dixie project. The level of economic activity that can be expected in this area is limited by the availability of water. Water to be made available by the project is badly needed for municipal, industrial, and agricultural use. We strongly supported the Upper Colorado project and we would call attention to our cooperation in that program by making our facilities available to the Bureau of Reclamation in transmitting project power to preference customers, thus saving the Bureau from heavy expenses in duplicate transmission lines.

We again offer our facilities to the Bureau of Reclamation in wheeling Dixie project power to preference customers to save the Bureau from substantial sums for transmission lines that may be installed for substantially lower costs by our company because we would be utilizing in a large part transmission facilities already installed or to be installed in the near future.

Our company will also offer to purchase from the Bureau, all power production from the Dixie project that will not be used by preference customers in the southwestern Utah area. To make this possible we strongly urge that the Dixie project bill provide for regional preference rather than normal preference. Our company then can save the Bureau the expense of wheeling costs that would be incurred in wheeling project power to remote locations. We believe that it is only right that our company should be given an opportunity to purchase this excess power rather than have it transmitted out of the area. We are the largest property taxpayer in Washington County; thereby we will be the taxpayer giving the Dixie project the greatest amount of tax support through the Washington County Conservancy District. Also, our customers in Washington County will be supporting the Dixie project through their conservancy district taxes. We believe their power supplier should not be discriminated against by being denied the privilege of purchasing Dixie project power.

A 138-kilovolt transmission line which was completed in 1960 connects our company with Utah Power & Light Co. at the Iron-Beaver County line. This line was needed to supplement the capacity of our existing generation facilities and makes it possible for us to serve all power requirements on our system, and upon completion of a 69-kilovolt line to St. George next year, to be able to transmit the full requirements of St. George from the Colorado River storage project. St. George has received an allocation of Flaming Gorge power to be available this month and our company has entered into an agreement to transmit this allotted power to St. George.

We respectfully urge that the Dixie project make provisions for cooperation between our company and the Bureau, similar to the cooperative agreement that has been worked out for the Colorado River storage project. The use of our existing and future facilities and the market we offer for the sale of power from the Dixie project I am sure will enhance the Dixie project substantially.

Thank you.

Mr. ROGERS. Thank you, sir. Mr. Ken J. Parkinson. I believe you are St. George utilities commissioner, are you not, Mr. Parkinson?

STATEMENT OF KEN J. PARKINSON, ST. GEORGE CITY UTILITIES COMMISSIONER

Mr. PARKINSON. I am, Mr. Chairman, I am Ken Parkinson, the manager of the electrical department of St. George City. I didn't know until I arrived here tonight that I would be expected to testify, and I have not made any preparation. I do have with me a copy of the testimony that was made at the Senate subcommittee hearing last spring, and with your permission I will read it. It is rather short and it won't take too much time. I believe if you will bear with me it is of enough interest that I would like to read it.

Mr. ROGERS. Let me make this observation at this time. We have a telegram addressed to Congressman Laurence J. Burton:

The St. George Utilities Commission will be represented at the Dixie project hearing to be held October 2 at St. George, Utah. Thanks for your invitation and reminder.

Regards,

KEN PARKINSON,
Manager of the Electrical Department.

So, you are here representing the city utility commission, are you not?

Mr. PARKINSON. Yes.

Mr. ROGERS. You may proceed with your testimony at this point.

Mr. PARKINSON. A statement of St. George Utility Commission to the U.S. Senate Subcommittee on Irrigation and Reclamation. St. George, Utah, May 17, 1963. Mr. Chairman and members of the committee, this is testimony, I might add, that was to be made by Mr. Matthew M. Bentley of the St. George Utility Commission at that time.

I am thankful for this opportunity to make a statement to you on behalf of the Dixie project.

As you are no doubt aware, the Bureau of Reclamation report on the Dixie project contains a statement whereby the city of St. George has agreed to purchase the entire output of electric power from the Dixie project.

A copy of the city's letter covering this agreement is here attached and reads as follows:

REGIONAL DIRECTOR,
Bureau of Reclamation, Region 3,
Boulder City, Nev.

DEAR SIRS: In a recent meeting with Mr. Pelham and Mr. Legler of Bureau of Reclamation, Boulder City office, the question was raised regarding the marketing of Dixie project power and considering the possibility of obtaining Colorado River storage power at a lesser rate.

The city of St. George, realizing the need for both CRSP power and the Dixie project power, does hereby agree to purchase all the Bureau power from the Dixie project which is made available for their own use or for their disposal at 6.9 mills, regardless of the price at which CRSP power is made available in this area.

The city of St. George is firmly convinced that an interconnection between the CRSP and the Dixie project is very vital and will be to the advantage of each.

We appreciate the personal interest of the Boulder City office in our behalf.
Respectfully,

ST. GEORGE CITY COUNCIL,
By WILLIAM A. BARLOCKER, *Mayor.*
ST. GEORGE UTILITY COMMISSION,
By M. M. BENTLEY, *Chairman.*

This decision was made after due consideration on the part of St. George City with the intent of underwriting or guaranteeing the required income to the United States, from the sale of the Dixie project power.

Although the city of St. George has been allotted power from the Colorado River storage project and soon will contract with the United States to receive this allotment of power, we believe future power requirements will be sufficient to absorb the power from the Dixie project, and St. George now reaffirms their agreement to guarantee the required income to the United States from the sale of Dixie project power.

It is not the desire or the intent of St. George City to obtain exclusive possession of the power from the project, or to suggest any restrictions or limitations on the marketing of such power.

It is the intent of the city to assure this committee and the Congress, that if the Dixie project is constructed that the power produced can and will be marketed at the rate set forth in the project report.

However, we do suggest that consideration be given to the United States through the Bureau of Reclamation, contracting with the city of St. George to operate the project powerplants and systems.

Our company will also offer to purchase from the Bureau, all power production from the Dixie project that will not be used by preference customers in the southwestern Utah area. To make this possible we strongly urge that the Dixie project bill provide for regional preference rather than normal preference. Our company then can save the Bureau the expense of wheeling costs that would be incurred in wheeling project power to remote locations. We believe that it is only right that our company should be given an opportunity to purchase this excess power rather than have it transmitted out of the area. We are the largest property taxpayer in Washington County; thereby we will be the taxpayer giving the Dixie project the greatest amount of tax support through the Washington County Conservancy District. Also, our customers in Washington County will be supporting the Dixie project through their conservancy district taxes. We believe their power supplier should not be discriminated against by being denied the privilege of purchasing Dixie project power.

A 138-kilovolt transmission line which was completed in 1960 connects our company with Utah Power & Light Co. at the Iron-Beaver County line. This line was needed to supplement the capacity of our existing generation facilities and makes it possible for us to serve all power requirements on our system, and upon completion of a 69-kilovolt line to St. George next year, to be able to transmit the full requirements of St. George from the Colorado River storage project. St. George has received an allocation of Flaming Gorge power to be available this month and our company has entered into an agreement to transmit this allotted power to St. George.

We respectfully urge that the Dixie project make provisions for cooperation between our company and the Bureau, similar to the cooperative agreement that has been worked out for the Colorado River storage project. The use of our existing and future facilities and the market we offer for the sale of power from the Dixie project I am sure will enhance the Dixie project substantially.

Thank you.

Mr. ROGERS. Thank you, sir. Mr. Ken J. Parkinson. I believe you are St. George utilities commissioner, are you not, Mr. Parkinson?

STATEMENT OF KEN J. PARKINSON, ST. GEORGE CITY UTILITIES COMMISSIONER

Mr. PARKINSON. I am, Mr. Chairman, I am Ken Parkinson, the manager of the electrical department of St. George City. I didn't know until I arrived here tonight that I would be expected to testify, and I have not made any preparation. I do have with me a copy of the testimony that was made at the Senate subcommittee hearing last spring, and with your permission I will read it. It is rather short and it won't take too much time. I believe if you will bear with me it is of enough interest that I would like to read it.

Mr. ROGERS. Let me make this observation at this time. We have a telegram addressed to Congressman Laurence J. Burton:

The St. George Utilities Commission will be represented at the Dixie project hearing to be held October 2 at St. George, Utah. Thanks for your invitation and reminder.

Regards,

KEN PARKINSON,
Manager of the Electrical Department.

So, you are here representing the city utility commission, are you not?
Mr. PARKINSON. Yes.

Mr. ROGERS. You may proceed with your testimony at this point.

Mr. PARKINSON. A statement of St. George Utility Commission to the U.S. Senate Subcommittee on Irrigation and Reclamation. St. George, Utah, May 17, 1963. Mr. Chairman and members of the committee, this is testimony, I might add, that was to be made by Mr. Matthew M. Bentley of the St. George Utility Commission at that time.

I am thankful for this opportunity to make a statement to you on behalf of the Dixie project.

As you are no doubt aware, the Bureau of Reclamation report on the Dixie project contains a statement whereby the city of St. George has agreed to purchase the entire output of electric power from the Dixie project.

A copy of the city's letter covering this agreement is here attached and reads as follows:

REGIONAL DIRECTOR,
Bureau of Reclamation, Region 3,
Boulder City, Nev.

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The city of St. George, realizing the need for both CRSP power and the Dixie project power, does hereby agree to purchase all the Bureau power from the Dixie project which is made available for their own use or for their disposal at 6.9 mills, regardless of the price at which CRSP power is made available in this area.

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It is the intent of the city to assure this committee and the Congress, that if the Dixie project is constructed that the power produced can and will be marketed at the rate set forth in the project report.

However, we do suggest that consideration be given to the United States through the Bureau of Reclamation, contracting with the city of St. George to operate the project powerplants and systems.

We believe there could be some reduction in the project operating costs through the close coordination of the St. George City power system and the project power system. Thank you.

Mr. ROGERS. Thank you, Mr. Parkinson.

Mr. BURTON. Chairman.

Mr. ROGERS. Mr. Burton.

Mr. BURTON. I would just like to say to Mr. Parkinson that for someone who didn't know he was going to make a statement that was pretty good.

Mr. ROGERS. Mr. Frank Oberhansley, Superintendent of Zion National Park. Mr. Oberhansley.

STATEMENT OF FRANK OBERHANSLEY, SUPERINTENDENT OF ZION NATIONAL PARK

Mr. OBERHANSLEY. Mr. Chairman, members of the committee, Governor Clyde, Senator Bennett, I have a statement here which was prepared by Supervisory Park Planner John Moseley of the Southwest region, which I will present for the record.

I submit for your consideration and the record a statement presented before the Subcommittee on Irrigation and Reclamation of the Committee of Interior and Insular Affairs of the Senate, May 7, 1963, by John J. Moseley, Supervisory Park Planner, National Park Service. This statement appraises the recreation aspects of the Dixie project with conclusions and recommendations developed as a result of a study of the proposed project.

Living in close proximity to the proposed project I should like to present my personal opinion of the recreation potential of the Virgin City portion of the project and the relation it would have to Zion National Park. As of October 1, 1963, 614,432 visitors, representing every State in the Union and many visitors from other countries have enjoyed the scenic, scientific, and inspirational values of Zion National Park during the current calendar year to date.

This compares with 552,946 visitors counted over the same period in 1962 or an increase of 61,486, which represents an increase of approximately 12 percent. We shall probably end the travel year with well over 700,000 visitors for the 1963 calendar year, an all-time record. We feel certain this trend will continue and because of its unique relation to Zion the Virgin City project will further stimulate travel and people from everywhere will associate the project with the grandeur of Zion. In this sense the Virgin City Reservoir will have more than local or regional significance. It will then become necessary to carefully plan and develop recreational facilities on the project to relieve the pressure on Zion before the saturation point is reached. This development should include good access roads from the main highway, circulation roads, modern campgrounds, launching ramps, docking facilities, concession and other facilities required for the convenience of visitors. It will tend to increase visitor use on a year long basis for there is no finer climate anywhere than we are blessed with in this unbelievably beautiful portion of southern Utah. From a recreation point of view the Dixie project is urgently needed. Money expended on the project is not really spent at all. It is money wisely invested on which this and future generations will reap rich dividends far beyond the original investment.

Mr. ROGERS. Our next witness is John J. Moseley, National Park Service. Mr. Moseley.

**STATEMENT OF JOHN J. MOSELEY, SUPERVISORY PARK PLANNER,
NATIONAL PARK SERVICE**

Mr. MOSELEY. Mr. Chairman and members of the committee, I am John J. Moseley, Supervisory Park Planner in charge of Reservoir Recreation Planning, in the Southwest Region of the National Park Service, Department of the Interior.

My statement concerns an appraisal of the outdoor recreation aspects of the two water storage features of the Bureau of Reclamation's Dixie project, with conclusions and recommendations which have been developed as a result of this study.

The Virgin City Reservoir, larger of the two improvements, would be located in a very scenic setting on the Virgin River, 26 miles northeast of St. George, Utah. The upper end of the improvement would be within a quarter of a mile of the south boundary of Zion National Park. The spectacular, multicolored standstone cliffs which rise over 4,000 feet in the park and the equally scenic Kolob Plateau, would form part of the reservoir's backdrop to the northeast and north.

During the height of the recreation season, the surface acreage of the Virgin City Reservoir, according to Bureau of Reclamation data, would vary from an average high pool of 3,000 acres to a low pool surface area of 2,480 acres. Such latitude is considered to be quite satisfactory for recreation purposes.

It is the opinion of the National Park Service that the Virgin City Reservoir would offer overall recreation opportunities of State and possibly regional significance. The reservoir because of its proximity to Zion National Park, should receive considerable tourist use and should assist in the mitigation of damage to Zion National Park, brought about by heavy camping use.

Basic recreation facility development is recommended at three shoreline locations. The principal site is located on the north side of the reservoir near the confluence of North Creek and the Virgin River and would be accessible by way of Utah State Highway No. 15. Recreation facilities recommended here would make provision for camping, picnicking, and boating. It is anticipated that the major use at this site would be by visitors to Zion National Park. Because of difficult topography on the south side of the reservoir, a public use access road is not recommended. Mineral development at this site is recommended, however, which would make this shoreline attractive for visitors arriving at the site by boat. In the dam vicinity, on the south side of the reservoir, a public use development is recommended that would take advantage of an existing low standard road. The development of this site for camping, picnicking, and boating would tend to disperse public use and at the same time take advantage of possible road development required for other project purposes.

The cost of land acquisition which would be in addition to lands acquired for other project purposes, is estimated at \$7,500. Purchase of this land would, it is believed, provide realization of the Virgin City Reservoir's optimum present and future outdoor recreation potential.

We believe there could be some reduction in the project operating costs through the close coordination of the St. George City power system and the project power system. Thank you.

Mr. ROGERS. Thank you, Mr. Parkinson.

Mr. BURTON. Chairman.

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The cost of land acquisition which would be in addition to lands acquired for other project purposes, is estimated at \$7,500. Purchase of this land would, it is believed, provide realization of the Virgin City Reservoir's optimum present and future outdoor recreation potential.

The total Federal development costs for providing basic recreation facilities in anticipation of visitation estimated to total 150,000 visitor-days annually at the Virgin City Reservoir, has been estimated at \$455,700.

The Lower Gunlock Reservoir would be a relatively small impoundment of 483 surface acres, located on the Santa Clara River, approximately 25 miles west of the Virgin City Reservoir site. The reservoir would be situated in a narrow, colorful valley flanked by steep, broken hills and would be accessible from U.S. Highway No. 91 which comes within 5 miles of the site. As compared to the Virgin City Reservoir, this impoundment would not be as easily reached nor would its operating plan be as attractive for outdoor recreation use. For these reasons, only one small site is recommended for the estimated 20,000 visitor-days of public use which would be primarily of local origin. The cost of developing public use facilities commensurate with anticipated needs; at the Lower Gunlock Reservoir, is estimated at \$243,700. I thank you.

Mr. ROGERS. Our next witness is J. C. Snow, treasurer of the conservancy district and representing the St. George City. Mr. Snow.

STATEMENT OF J. C. SNOW, TREASURER OF CONSERVANCY DISTRICT

Mr. Snow. Thank you. Chairman Rogers, ladies and gentlemen, we are indeed happy to have you come to our county to investigate our Dixie project, to see the need for it and to hear for yourselves how important this project is to the growth and development of Washington County and the cities and towns in the county.

The Virgin River and the Santa Clara Creek are the only sources of water that we have access to, and both of these sources tend to dry up in the early part of the summer. But there is, as a general rule, quite a lot of runoff water in the winter and spring and quite a bit of floodwater that would be enough to fill our needs if it could all be stored and released as we needed it.

As a group of us were up at the site of the proposed dam a few days ago, we were viewing the dam that diverts the water into the Hurricane Canal and also viewing the canal itself. Someone made the statement that if we today had the courage and the ambition that our pioneer forefathers had, we would take the equipment that we now have and would go ahead and build this dam without asking the Government to loan us the money. But I guess, unfortunately, we do not have that kind of courage and ambition nowadays, so we are asking the Government to help us out.

Our forefathers gave their very lives to conquer and develop this dry arid section of the State of Utah. Now it is our desire, our duty, to protect and continue to develop the only supply of lifegiving water left in our area capable of supplying our vital needs; namely, the waters of the Virgin River and the Santa Clara Creek as programmed under the Dixie project. St. George and Washington County can only continue to grow if and when the Dixie project becomes a reality. The city of St. George is dependent on this supply for its future municipal water and the farmers of Washington County are looking to this supply to augment their present meager water supply for raising crops.

The farmers of Washington County are now farming with only a small percentage of the water necessary to produce and mature their crops. Only half of our tillable land is now in production because of the lack of sufficient water. It should also be noted that the crops grown in this area, or that would be grown in this area, would be crops that are not surplus crops and would not receive subsidy payments.

It is my sincere belief that this project is a feasible project and that over the period of the repayment that the project will not be an expense to the Federal Government but that it will repay the original investment with interest in addition to giving this county the necessary raw material, water, which is the lifeblood needed to continue its growth and development in the future.

To supplement that testimony I'd like to emphasize two points just a little that have been made here tonight. Having had the duty of supervising the rationing program of water in the city of St. George a few years ago, I'm quite aware of the fact that there is nothing more important to any area than the water. Without it we can't grow and we are now practically to the limit of what we can do until something of this nature takes place. The other thing I would like to mention is that many of our people have had to leave. We talk about farming, and one of the best crops we raise in this area is the people we raise here, and up to date most of them have had to be exported to someone else to use. I feel that this development of the Dixie project is the last great hope that we have, and that until this is completed, our growth here is almost stopped. In fact, the period of the last few years the growth of Washington County, and the growth of St. George has been very meager, and even at that it has been one of the best that has been shown in this southern end of the State. I am sure that this project will do the thing that we need. Thank you.

Mr. ROGERS. Thank you, sir. Mr. Lang Foremaster, Washington County attorney will be our next witness. Mr. Foremaster.

STATEMENT OF PHILLIP LANG FOREMASTER, WASHINGTON COUNTY ATTORNEY

Mr. FOREMASTER. Mr. Chairman, I am Phillip Lang Foremaster, Washington County attorney and secretary of the Dixie Project Association. You have heard statements from several groups tonight, different organizations, and I think there is one group you have not heard from and it is very important, that is the young people of this area. And while I am not presuming to be their spokesman, I'd like to say a word from their point of view. Most of the young people leave Washington County. The reason being that they are faced with the hard economic fact of life with earning a living for themselves and their families. Some of them returned, and we make a living. I think, by and large, that you will find that young people here are aggressive, intelligent, and ambitious as any group anywhere you'll find, but they need opportunity, and they need opportunity to develop themselves and grow economically and build themselves. Our growth here is limited by lack of water mainly. We have the resources here, but they are undeveloped. It is our hope that the Dixie project will be enacted, therefore, insuring our economic development, not only for myself and the people in my same generation, but for generations to follow us, and I think I can say this without any qualifications, that the people of

the United States and their Government will never regret any money that's spent on the Dixie project. Thank you.

Mr. ROGERS. Thank you, Mr. Foremaster. Mr. Ray Smutz, secretary of the Virgin River Distribution.

STATEMENT OF RAY SMUTZ, SECRETARY OF THE VIRGIN RIVER DISTRIBUTION

Mr. SMUTZ. Mr. Chairman, and members of the committee and State officials, I speak as a farmer who would draw supplemental water under this project. By nature agriculture is pretty hazardous under modern economic conditions even when all of the natural resources are present, but when water is absent it is doubly difficult. I'm sure that you recognize, as do all of the rest of us, the advantages and the desirability of rural living and the kind of people who come from rural areas. The Department of Agriculture is very much concerned with it, and there is rural area development programing, and they spend considerable money promoting this. This is an opportunity to establish a great deal of rural area development in one project, and it will all be reimbursed. May I further say one comment in regard to the saline water condition that has been mentioned earlier. We have been using that saline water ever since we have been irrigating here and we are still in business, and there have been times during the low water season when it has constituted 25 to 30 percent of our total supply. Thank you.

Mr. ROGERS. Thank you, Mr. Smutz. Mr. Wayne Wilson, Washington County Commission.

STATEMENT OF WAYNE WILSON, WASHINGTON COUNTY COMMISSION

Mr. WILSON. Mr. Chairman Rogers, Governor Clyde, and delegation, I don't know whether pecans are surplus or not. I hope they are not, but along with Mr. Squires' peaches and almonds, I brought a new crop to show you some of the things that we have here, and there's a sack of pecans for you people to have and enjoy while you are staying here. Just a statement relative to some of the conditions that happen to us here in Washington County, because we are unable to have water sufficient for our crops. There's plenty of water, but it is the regulation of it. This year on our irrigation system we were cut to one-half stream at one-half time. We had planted and prepared for a full water supply. After that full water supply was diminished to a half time and half stream, you know what happened to the rest of our crops. I've been mainly interested and been growing fruit most of my life. A lot of times when the water supply would get low we would get inch and a quarter peaches which would bring us a dollar. If we could have got $2\frac{1}{4}$ inches, we could have gotten \$2 $\frac{1}{2}$ where there would have been a little profit. One extra turn of water on that crop would have made the difference, with a dam like that which has been proposed. That difference will come to us in our fruit growing. The amount of imports that we make of grain into Washington County with the part that we are now irrigating and working with, with the other coming in, we will import many more hundreds of tons of outside grain to supplement us for what we need for the area

and the type of agriculture that we are now working in. There also is another reason why we call it the Dixie project. It is the Virgin River, and you wouldn't want to do with the Virgin River what we are talking of with the Dixie project. Thank you.

Mr. ROGERS. Thank you, Mr. Wilson, for your testimony and for your pecans. Mr. Mills Jolly, executive secretary of the Cedar City Chamber of Commerce. Mr. Jolly.

Mr. BURTON. Mr. Chairman.

Mr. ROGERS. Mr. Burton.

Mr. BURTON. It is my understanding Mr. Jolly is appearing in his own behalf but also representing Mr. Gardiner, of Cedar City, and Mr. Arnold Anderson who is president of the Cedar City Chamber of Commerce. Am I correct?

Mr. JOLLY. Correct. I'd like to excuse our mayor. He is one of these ranchers, and I understand he is out hauling water to his cattle now.

Mr. ROGERS. Mr. Jolly, the Chair will recognize you in all three capacities.

STATEMENT OF MILLS JOLLY, EXECUTIVE SECRETARY, CEDAR CITY CHAMBER OF COMMERCE

Mr. JOLLY. Thank you. And also I am a Yankee. I'm from up north here at Iron County. However, we are 100 percent behind this Dixie project, because we feel definitely that this is going to be a tremendous asset to the overall area of southern Utah, and as many of us mentioned here tonight, we feel that this will be the playground of Western United States; and we feel this will play a big part in it. I won't take any more time, but, however, we have a resolution and I will just leave it here. Mr. Wilson was going to present this from the five-county area, which again they are 100 percent behind the Dixie project, and this consists of Iron County, Beaver County, Kane County, and Washington County, and also we have a resolution here from the members of the chamber of commerce. So, I will leave these. And with that we thank you and hope you can see it deemable to pass on this.

(The resolution referred to follows:)

RESOLUTION PASSED BY THE BOARD OF DIRECTORS OF THE CEDAR CITY CHAMBER OF COMMERCE, OCTOBER 2, 1963

Whereas the Dixie project will generate electric power in excess of the requirements of preference customers in southwestern Utah; and

Whereas the transmission of Dixie project power to preference customers at remote locations from southwestern Utah would be costly to the Bureau of Reclamation thus having an adverse effect on the rate of payoff of the project; and

Whereas it is likely that the price of Dixie project power will be below the wholesale market price of power in the southwestern Utah area; and

Whereas nonpreference customers in Iron and Washington Counties are served by California-Pacific Utilities Co.; and

Whereas this company is willing to purchase all Dixie project power not required by power suppliers with preference status: Therefore be it

Resolved, That Congress be urged to provide for area rather than normal preference in the Dixie project bill so that all power generated by the project may be marketed in southwestern Utah.

Whereas the electrical generating capacity of the Dixie project will exceed the requirements of preference customers in southwestern Utah; and

Whereas nonpreference customers in southwestern Utah will, along with preference customers, support the Dixie project by the payment of conservancy district taxes; and

Whereas the normal application of Bureau of Reclamation preference policy would result in added transmission expense to the Bureau in marketing Dixie project power outside of southwestern Utah: Therefore be it

Resolved, That the Five-County Organization go on record as favoring regional rather than normal preference for the electric output of the Dixie project with the allocation of power to applicants to be made first to preference customers of southwestern Utah, next to nonpreference customers of southwestern Utah and next, if any additional capacity remains, to preference customers in Utah outside of the southwestern region of the State; and be it further

Resolved, That this resolution be sent to the Secretary of Interior and the Utah delegation in Congress with the request that this recommended regional preference policy be included in Dixie project Senate and House bills for which hearings are scheduled to start soon in Congress.

Unanimous passed by Five-County Organization, April 5, 1963, at Cedar City, Utah.

Mr. ROGERS. Thank you, Mr. Jolly, and without objection those resolutions will be included in the record as part of your statement. Now, we have a reference here of the witness list from the Cedar City League of Women Voters. Do we have someone here to represent them?

STATEMENT OF MRS. WESLEY P. LARSON, PRESIDENT OF CEDAR CITY LEAGUE OF WOMEN VOTERS

Mrs. LARSON. Mr. Chairman and committee members, my name is Mrs. Wesley Larson of the Cedar City League of Women Voters of Iron County. We feel that the immediate economic future of southwest Utah depends on the conservation and intelligent use of our water, and we feel that the proposed Dixie project will accomplish this.

For several years the League of Women Voters of Cedar City has studied water resources and feel that comprehensive planning, development, and water management on a regional basis are essential.

Coordinated planning is needed, but development should meet the particular needs of the region, which we feel the proposed Dixie project would accomplish in this area.

The league believes cost sharing by local, State, National, and private interests in relation to benefits received and ability to pay is essential.

The immediate economic future of southwest Utah depends on the conservation and intelligent use of our water resources.

Thank you.

Mr. ROGERS. This is the case where the ladies have the last word. Let the Chair say at this time: We are very grateful for those of you who have come out here tonight and brought us all of this testimony and stayed so late. I do think, though, that in all fairness it ought to be pointed out that these projects are not matters that can be worked out in just a matter of a few days. I don't want anyone expecting this project to start tomorrow. I have seen some of these projects that have been fought through Congress for 40 years. I personally hope it doesn't take that long for the Dixie project, but I did want to warn everyone that a project going through the Congress of the United States has a long, hard trip and there are many people from all sections of this country who are very jealous of the Federal Treasury, and they look at these projects with a very wary eye.

And, so, we hope that you will bear with the committee and be patient so that this matter is handled in due and orderly process. I might also point out there are a number of other projects, reclamation projects that people have been working on for a number of years that do have some priority, in many instances, over new projects, and the Dixie project is in effect a new project; that has just been finished insofar as the termination of feasibility is concerned. So, don't be impatient if work is not started within the next few weeks. It's been nice to have the subcommittee here, and I want to commend you people for the manner in which this meeting has been handled and worked out, and I want to recognize you right now for the applause that you withheld for the many witnesses that testified that you remained silent. You may now applaud. The mayor advises me that he has received a telegram from the Farm Bureau Federation of Farmers—Farmers Union that he desires to have inserted in the record, and without objection that will be inserted in the record at the appropriate place. Is there any further business to come before the committee?

Mr. BURTON. Mr. Chairman.

Mr. ROGERS. Mr. Burton.

Mr. BURTON. If I may receive recognition for about 1 minute, I committed a grievous error when I was introducing the members of the official party and omitted the man on our full Interior Committee who does all the work, and we are happy to have him with us, Sid McFarland, who is staff director of the full Interior Committee. The last item I want to take up, Mr. Chairman, I want to advise my constituents of the great efforts that the members of this committee have extended to be with you and with me today. I know exactly what it is, because I took the same airplane out several days ago from Washington. They had to get up at about 5 o'clock in order to get packed, get breakfast and get into the Capital at 7 o'clock so that they could make it up to Baltimore at 8 to get on an 8:15 airplane to come to Salt Lake at 12:30 to be here at 4, and I would like to advise you all now that by their time, Washington is 3 hours ahead of us, and there it is for them, it is 2 o'clock in the morning and it will be nearly 3 before they get to bed and they had breakfast at 7. I hope you will say thanks with a little hand applause.

Mr. ROGERS. If there is no further business to come before the subcommittee this evening, the subcommittee will stand adjourned subject to further call of the Chair.

There is a telegram received from the Utah Farmer's Union which indicates that they wholeheartedly support the entire Utah congressional delegation in their support for the Dixie project and urgently request early congressional approval of these dams for Washington and Iron Counties. It is signed by Douglas Simpson, president.



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DIXIE PROJECT, UTAH

MONDAY, JUNE 22, 1964

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON IRRIGATION AND RECLAMATION
OF THE COMMITTEE ON INTERIOR AND INSULAR AFFAIRS,
Washington, D.C.

The subcommittee met, pursuant to notice, at 9:45 a.m., room 1324, Longworth Building, Hon. Walter Rogers (chairman) presiding.

Mr. ROGERS. The Subcommittee on Irrigation and Reclamation will come to order for further consideration of H.R. 3279 by Mr. Burton of Utah; H.R. 4178 by Mr. Lloyd of Utah, and S. 26, to authorize the Secretary of the Interior to construct, operate, and maintain the Dixie project, Utah, and for other purposes.

S. 26 passed the Senate on October 30, 1963, and a field hearing was held at St. George, Utah, on October 2, 1963.

The bills referred to and the subject of the hearings by the subcommittee on H.R. 3279 by Mr. Burton of Utah with proper reference being made to the other measures will be made a part of the record.

(The bills follow with the reports:)

[H.R. 3279, 88th Cong., 1st sess.]

A BILL To authorize the Secretary of the Interior to construct, operate, and maintain the Dixie project, Utah, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, for the purposes of developing the water resources of the Virgin and Santa Clara Rivers, including the furnishing of municipal and industrial water supplies, the making available to Cedar City, Utah, and vicinity eight thousand acre-feet of water annually from the Kolob Reservoir pursuant to an agreement entered into between such city and the constructing agencies of Kolob Dam and Reservoir, which provided that such city was to have all the water from Kolob Reservoir to export for use in the Cedar City area after completion of the Dixie project, the furnishing of an irrigation water supply to approximately twenty-one thousand acres of land, the control of floods, the generation and sale of electric energy, the conservation and development of fish and wildlife resources, and the enhancement of recreation opportunities, the Secretary of the Interior is authorized to construct, operate, and maintain the Dixie project, Utah. The project shall consist of the Virgin City Dam and Reservoir, tunnels, canals, siphons, pumping plants, and other works necessary to serve irrigated and irrigable lands along and adjacent to the Virgin River; a dam on the Santa Clara River near Gunlock, Utah, and other works necessary to serve irrigated and irrigable lands along and adjacent to the Santa Clara River and on Ivins Beach; and hydroelectric plants and transmission facilities at the Virgin City Dam and at such other points as are desirable.

Sec. 2. The project shall include such measures for the disposition of saline waters of La Verkin Springs as are necessary in the opinion of the Secretary to insure the delivery of water at downstream points along the Virgin River for water users in the States of Arizona and Nevada of suitable quality for

irrigation, or provision shall be made to indemnify such water users for any impairment of water quality for irrigation purposes directly attributable to Dixie project operations.

SEC. 3. In constructing, operating, and maintaining the works authorized by this Act, the Secretary shall be governed by the Federal reclamation laws (Act of June 17, 1902 (32 Stat. 388), and Acts amendatory thereof or supplementary thereto), except as is otherwise provided in this Act.

SEC. 4. Construction of the project shall not be commenced until there shall be established a conservancy district or similar organization with such powers as may be required by the Secretary, these to include powers to tax both real and personal property within the boundary of the district and to enter into contracts with the United States for the repayment of reimbursable costs.

SEC. 5. The interest rate to be used for purposes of computing interest during construction and interest on the unpaid balance of those portions of the reimbursable costs which are properly allocable to commercial power development and municipal and industrial water supply shall be determined by the Secretary of the Treasury, as of the beginning of the fiscal year in which this bill is enacted, on the basis of the computed average interest rate payable by the Treasury upon its outstanding marketable public obligations, which are neither due nor callable for redemption for fifteen years from date of issue. If the interest rate so computed is not a multiple of one-eighth of 1 per centum, the rate of interest to be used for these purposes shall be the multiple of one-eighth of 1 per centum next lower than the rate so computed. The portions of the costs which are allocable to commercial power development and to municipal and industrial water supply shall be repaid over a period of fifty years with interest at the rate determined in accordance with this section. The portion of the costs which is properly allocable to irrigation and which is beyond the water users' ability to repay in fifty years plus a ten-year development period shall be returned to the reclamation fund within such period from revenues derived by the Secretary of the Interior from the disposition of power marketed from Federal projects in the Lower Colorado River Basin.

SEC. 6. (a) The Secretary of the Interior is authorized as a part of the Dixie project to construct, operate, and maintain public recreation facilities including access roads, to acquire or to withdraw from entry or other disposition under the public land laws such adjacent lands or interests therein as are necessary for present and future public recreation use, and to provide for public use and enjoyment of the same and of the water areas of the project in a manner consistent with the other project purposes. The Secretary is authorized to enter into agreements with State or local public agencies or other public entities for the operation, maintenance, or additional development of project lands or facilities or to dispose of project lands or facilities to State or local agencies or other public entities by lease, transfer, exchange, or conveyance, upon such terms and conditions as will best promote their development and operation in the public interest for recreation purposes. The costs of the undertakings described in this section, including costs of investigation, planning, operation, and maintenance and an appropriate share of the joint costs of the Dixie project, shall be nonreimbursable.

(b) The Secretary may make such reasonable provision in connection with the Dixie project as, upon further study in accordance with section 2 of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661, 662), he finds to be required for the conservation and development of fish and wildlife. An appropriate portion of the cost of the development shall be allocated as provided in said Act and it, together with the Federal operation and maintenance costs allocated to this function, shall be nonreimbursable and non-returnable under the reclamation laws.

SEC. 7. The use of all water diverted for this project from the Colorado River system shall be subject to and controlled by the Colorado River compact, the Boulder Canyon Project Act (45 Stat. 1057; 43 U.S.C. 617t), and the Mexican Water Treaty (Treaty Series 994) (59 Stat. 1219).

SEC. 8. There is hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such sums as may be required to carry out the purposes of this Act.

[S. 26, 88th Cong., 1st sess.]

AN ACT To authorize the Secretary of the Interior to construct, operate, and maintain the Dixie project, Utah, and for other purposes

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled. That for the purposes of developing the water resources of the Virgin and Santa Clara Rivers, including the furnishing of municipal and industrial water supplies, the furnishing of an irrigation water supply to approximately twenty-one thousand acres of land, the control of floods, the generation and sale of electric energy, the conservation and development of fish and wildlife resources, and the enhancement of recreation opportunities, the Secretary of the Interior is authorized to construct, operate, and maintain the Dixie project, Utah. The project shall consist of the Virgin City Dam and Reservoir, tunnels, canals, siphons, pumping plants, and other works necessary to serve irrigated and irrigable lands along and adjacent to the Virgin River; a dam on the Santa Clara River near Gunlock, Utah, and other works necessary to serve irrigated and irrigable lands along and adjacent to the Santa Clara River and on Ivins Bench; and hydroelectric plants and transmission facilities at the Virgin City Dam and at such other points as are desirable. The Dixie project shall be coordinated with the Cedar City water development program which includes the diversion of the waters of Crystal Creek into the Kolob Reservoir, and after completion of the Dixie project said waters of Crystal Creek and of the natural watershed of said Kolob Reservoir shall be exported for use of Cedar City and Iron County, Utah, on the 26th day of August 1953, with Kolob Reservoir and Storage Association, Incorporated, and Washington County, Utah.

SEC. 2. The project shall include such measures for the disposition of saline waters of La Verkin Springs as are necessary in the opinion of the Secretary to insure the delivery of water at downstream points along the Virgin River for water users in the States of Arizona and Nevada of suitable quality for irrigation, or provision shall be made to indemnify such water users for any impairment of water quality for irrigation purposes directly attributable to Dixie project operations.

SEC. 3. In constructing, operating, and maintaining the works authorized by this Act, the Secretary shall be governed by the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto), except as is otherwise provided in this Act.

SEC. 4. Construction of the project shall not be commenced until there shall be established a conservancy district or similar organization with such powers as may be required by the Secretary, these to include powers to tax both real and personal property within the boundary of the district and to enter into contracts with the United States for the repayment of reimbursable costs.

SEC. 5. The interest rate to be used for purposes of computing interest during construction and interest on the unpaid balance of those portions of the reimbursable costs which are properly allocable to commercial power development and municipal and industrial water supply shall be determined by the Secretary of the Treasury, as of the beginning of the fiscal year in which this bill is enacted, on the basis of the computed average interest rate payable by the Treasury upon its outstanding marketable public obligations, which are neither due nor callable for redemption for fifteen years from date of issue. If the interest rate so computed is not a multiple of one-eighth of 1 per centum, the rate of interest to be used for these purposes shall be the multiple of one-eighth of 1 per centum next lower than the rate so computed. The portions of the costs which are allocable to commercial power development and to municipal and industrial water supply shall be repaid over a period of fifty years with interest at the rate determined in accordance with this section. The portion of the costs which is properly allocable to irrigation and which is beyond the water users' ability to repay in fifty years plus a ten-year development period but not to exceed \$3,500,000 shall be returned to the reclamation fund within such period from revenues derived by the Secretary of the Interior from the disposition of power marketed from Federal projects in the Lower Colorado River Basin.

SEC. 6. The Secretary of the Interior is authorized as a part of the Dixie project to construct, operate, and maintain public recreation facilities including access roads, to acquire or to withdraw from entry or other disposition under the public land laws such adjacent lands or interests therein as are necessary for present and future public recreation use, and to provide for public use and enjoyment of the same and of the water areas of the project but these undertakings shall be coordinated with the other project purposes. The Secretary is authorized to enter into agreements with State or local public agencies or other public entities for the operation, maintenance, or additional development of project lands or facilities or to dispose of project lands or facilities to State or local agencies or other public entities by lease, transfer, exchange or conveyance, upon such terms and conditions as will best promote their development and operation in the public interest for recreation purposes. The costs of the undertakings described in this section, including costs of investigation, planning, operation, and maintenance and an appropriate share of the joint costs of the Dixie project, shall be nonreimbursable.

SEC. 7. (a) The use of all water diverted for this project from the Colorado River system shall be subject to and controlled by the Colorado River compact, the Boulder Canyon Project Act (45 Stat. 1057; 43 U.S.C. 617t), and the Mexican Water Treaty (Treaty Series 994) (59 Stat. 1219).

(b) In the operation and maintenance of all facilities under the jurisdiction and supervision of the Secretary of the Interior authorized by this Act, the Secretary of the Interior is directed to comply with the applicable provisions of the Colorado River compact, the Upper Colorado River Basin compact, the Boulder Canyon Project Act, the Boulder Canyon Project Adjustment Act, the Colorado River Storage Project Act (and any contract lawfully entered into by the United States under any of said Acts), the treaty with the United Mexican States, and the operating principles, and to comply with the laws of the State of Utah, relating to the control, appropriation, use, and distribution of water therein. In the event of the failure of the Secretary of the Interior to so comply, any State of the Colorado River Basin may maintain an action in the Supreme Court of the United States to enforce the provisions of this section and consent is given to the joinder of the United States as a party in such suits, as a defendant or otherwise.

SEC. 8. There is hereby authorized to be appropriated, out of any moneys in the Treasury not otherwise appropriated, such sums as may be required to carry out the purposes of this Act.

Passed the Senate October 30 (legislative day, October 22), 1963.

Attest:

FELTON M. JOHNSTON.
Secretary.

DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY.
Washington, D.C., June 19, 1964.

Hon. WAYNE N. ASPINALL,
Chairman, Committee on Interior and Insular Affairs,
House of Representatives, Washington, D.C.

DEAR MR. ASPINALL: This responds to your request for the views of the Department of the Interior on H.R. 3279 and H.R. 4178, identical bills to authorize the Secretary of the Interior to construct, operate, and maintain the Dixie project, Utah, and for other purposes.

We would not object to enactment of either of the above bills if amended as suggested hereafter.

The Dixie project area is in the Virgin River Basin in southwestern Utah. The Virgin River rises in Utah and flows through parts of Arizona and Nevada before joining the Colorado River at the northern arm of Lake Mead. The Dixie project would conserve and regulate the flows of the Virgin River and its tributary, the Santa Clara. Flood flows of these rivers are now largely wasted.

An adequate and predictable water supply for irrigation is a paramount necessity to stabilize and revitalize the agricultural economy of the region and support municipal and industrial growth.

The Dixie project is multipurpose in character. It would provide irrigation water for 21,060 acres of land, of which 9,445 acres would receive supplemental water, and 11,615 acres would receive a new irrigation water supply. A municipi-

pal and industrial water supply would be provided for the city of St. George, Utah. Electric energy for project use and commerical sale would be produced. Benefits to fish and wildlife enhancement and recreation would accrue, and operation of the project would produce flood control benefits.

The project would be constructed as two divisions, Hurricane and Santa Clara. The two divisions are contiguous and closely related through the economic needs of the area, although each has its own water supply and their project works would not be physically connected. The principal project facilities of the Hurricane division would be the Virgin City dam, reservoir, and powerplant, the Bench Lake and Warner powerplants, and the Hurricane division main canal.

In the Santa Clara division the Lower Gunlock Dam and Reservoir would be constructed, and an existing canal would be rehabilitated and extended. Distribution and drainage systems would be constructed on both divisions.

Both of the bills before your committee would authorize the Dixie project on the basis that the costs allocated to irrigation, but beyond the ability of the water users to repay in 50 years plus a 10-year development period, would be returned to the reclamation fund from revenues derived from the disposition of power marketed from other Federal projects in the Lower Colorado River Basin.

This provision appears in the bills because our studies to date have indicated that financial assistance from a source outside the project would be required to repay the costs allocated to irrigation within 60 years (50 years following a 10-year development period). For example, the Department's planning report on the Dixie project (H. Doc. 86, 88th Cong.) indicates the cost of the project to be \$44,623,000, with \$31,411,000 allocated to irrigation. Using revenues only from the Dixie project it would require 65 years to repay the costs allocated to irrigation, and to achieve repayment in 60 years would require outside financial assistance of \$3,754,822. Our planning report suggested that the required financial assistance be derived from power revenues of Federal projects in the Lower Colorado River Basin.

A reanalysis of the project incorporating the precepts of "Policies, Standards, and Procedures in the Formulation, Evaluation, and Review of Plans for Use and Development of Water and Related Land Resources" (S. Doc. 97, 87th Cong.) was submitted to the Senate Committee on Interior and Insular Affairs in May 1963. This reanalysis resulted in a decrease in estimated project costs of \$46,000 to \$44,577,000 and in the irrigation allocation of \$776,000 to \$30,635,000. Even with the diminished allocation to irrigation, financial assistance in the amount of \$3,232,440 from an out-of-project source was contemplated to repay the costs allocated to irrigation within 50 years plus a 10-year development period.

As you are aware, this Department has recently released a Pacific Southwest water plan to accomplish development of that region's water resources on a regional basis. A key feature of the plan is a regional development fund, which would operate similarly to the Upper Colorado River Basin fund.

On the basis of its location in the Lower Colorado River Basin, and because—as proposed for development in the Department's planning report of March 18, 1963 (H. Doc. 86, 88th Cong.)—the Dixie project would require out-of-project financial assistance to assure repayment of the costs allocated to irrigation within the time limit established in current policy, the Dixie project was included as a unit of our Southwest water plan proposal. We would prefer to see the project authorized as a constituent element of a regionwide development.

Against this must be set the intense and virtually unanimous desire on the part of Utahans that the Dixie project go forward without delay. The city of St. George is on record as willing to contract for the municipal and industrial water supply and the electric energy that the project would develop. In anticipation of the project's authorization the Washington County Water Conservancy District was formed over a year ago to serve as the general administrative and repayment contracting agency for the project.

We have consulted with representatives of the State and local organizations who have been attempting to achieve a reformulation of the project on a financially self-sustaining basis in order to overcome objections to the provision of financial assistance from out-of-project sources. This reformulation of the project plan involves assumption by the State of Utah of \$1,904,000 of project costs attributable to relocating State Highway 15 around the Virgin City Reservoir site, and making upward adjustments in the power and municipal water rates to produce more revenues which can be used to repay costs allocated to irrigation.

We have restudied the project on the foregoing basis and find that full repayment of all project costs within the time limits customarily imposed for each function as a matter of policy could be achieved using revenues from the Dixie project alone.

We would not oppose authorization of the Dixie project as a financially self-contained unit. We believe the authorizing legislation should not preclude incorporation of the project into a regional water resource development plan on an equitable basis. These bills would not do so.

A summary of our restudy of the project as a financially self-contained unit follows:

I. COSTS

Total cost of the project would be \$44,577,000 as estimated in our May 1963 reanalysis (planning report, \$44,623,000). With assumption of \$1,904,000 in highway relocation costs by the State of Utah, the net Federal cost would be \$42,673,000.

II. Allocation of costs

	1964 allocation	Planning report allocation
Reimbursable:		
Irrigation.....	\$30,182,000	\$31,411,000
Power.....	6,573,000	7,675,000
Municipal and industrial.....	2,474,000	2,609,000
Subtotal.....	39,229,000	41,695,000
Nonreimbursable:		
Recreation.....	1,808,000	745,000
Fish and wildlife enhancement.....	1,494,000	2,016,000
Flood control.....	142,000	167,000
Subtotal.....	3,444,000	2,928,000
Total Federal cost.....	42,673,000	44,623,000
Highway relocation (paid by State of Utah).....	1,904,000	
Total project cost.....	1 44,577,000	44,623,000

¹ Per May 1963 reanalysis.

III. PLAN FOR REPAYMENT

1. Costs allocated to flood control would be nonreimbursable in accordance with reclamation law. Costs allocated to fish and wildlife enhancement and recreation are within the limits specified in the administration's proposed Federal Water Project Recreation Act (H.R. 9032) and were assumed to be nonreimbursable. An amendment to the bill to produce that result, and otherwise to bring the bill into conformity with H.R. 9032 is proposed later in this report.

2. Costs allocated to commercial power would be repaid, with interest at the rate specified in the bill, within 41 years at a firm energy power rate of 7.15 mills per kilowatt-hour.

3. Costs allocated to municipal and industrial water would be repaid, with interest at the rate specified in the bill, within 50 years, by selling such water at a rate of \$22.21 per acre-foot.

4. The costs allocated to irrigation would be repaid as follows:

(a) Presently irrigated lands would be assessed construction charges for a 50-year period commencing the first year of project operation; this is estimated to produce \$4,465,000.

(b) Newly irrigated project lands would be assessed construction charges for a 50-year period commencing after a 10-year development period; revenues from this source are estimated at \$13,425,000.

(c) An ad valorem tax of 5 mills would be assessed against all real and personal property within the conservancy district for 60 years; this is estimated to produce revenues of \$5,635,000.

(d) Surplus revenues from the sale of Dixie project commercial power would become available for application to irrigation repayment starting in the 41st year of project operations, after the costs allocated to power had been repaid; this is estimated to yield revenues of \$5,648,000 over the remaining 19 years of the irrigation repayment period.

(e) After repayment of costs allocated to municipal and industrial water in the 50th year of project operation, revenues would also become available from that source to provide financial assistance the remainder of the repayment period for irrigation; these revenues are expected to total \$1,059,000 over the 10-year period that they would be available.

Total project-generated revenues from all sources which could be applied to repayment of the irrigation allocation under the foregoing analysis would be \$30,232,000, which is \$50,000 more than the allocation to irrigation of \$30,182,000.

IV. BENEFITS AND COSTS

Our restudy of the project as a financially self-contained unit evaluated total annual benefits at \$3,992,800 compared to the former evaluation of \$3,313,200. Annual operation and maintenance costs are now estimated at \$319,600 compared to the previous estimate of \$297,000.

Listed below are the revised benefits by functions compared with those presented in the Department's planning report.

	Revised annual benefits	Planning report annual benefits
Irrigation:		
Direct	\$1,547,500	\$903,400
Indirect and public	1,711,600	1,564,100
Power	342,000	342,000
Municipal and industrial water:		
St. George	130,800	111,400
Cedar City	35,500	35,500
Flood control	7,200	6,800
Fish and wildlife	78,000	78,000
Recreation	140,200	272,000
Total, benefits	3,992,800	3,313,200
Total, direct benefits	2,281,200	1,749,100

Using total benefits and an interest rate of 3 percent, the revised benefit-cost ratio for the Dixie project would be 22 to 1 over a 100-year period of analysis.

All the bills pending before your committee contain language in section 1 to incorporate into the act by reference an agreement made among local water users' organizations under which Cedar City, Utah, would be entitled to use certain waters impounded in Kolob Reservoir after completion of the Dixie project. We have no objection to this provision as it appears in any of the bills.

We recommend that the language authorizing development of the project for recreation purposes, and making the costs associated with recreation and fish and wildlife enhancement nonreimbursable be changed to conform with that of the proposed Federal Water Project Recreation Act. To accomplish this, section 6 should be deleted in its entirety and the following substituted:

"Sec. 6. The Secretary is authorized in connection with the project to construct, operate, and maintain or otherwise provide for the basic public outdoor recreation facilities, to acquire or otherwise to include within the project area such adjacent lands or interests therein as are necessary for present or future public recreation use, to allocate water and reservoir capacity to recreation, and to provide for the public use and enjoyment of project lands, facilities and water areas in a manner coordinated with other project purposes. The Secretary is authorized to enter into agreements with Federal agencies or State or local public bodies for the operation, maintenance, and additional development of project lands or facilities, or to dispose of project lands or facilities to Federal agencies, or State or local public bodies by lease, transfer, conveyance or exchange, upon such terms and conditions as will best promote the development and operation of such lands or facilities in the public interest for recreation purposes. The costs of the aforesaid undertakings, and the costs of the project allocated to fish and wildlife enhancement, including costs of investigation, planning, Federal operation and maintenance, and an appropriate share of joint costs of the project, shall be nonreimbursable. Nothing herein shall limit the authority of the Secretary granted by existing provisions of law relating to recreation development of water resource projects, or disposition of public lands for recreational purposes."

Enclosed are statements concerning estimated personnel and other requirements for the project as required by Public Law 801, 84th Congress.

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

D. OTIS BEASLEY,
Assistant Secretary of the Interior.

Dixie project, Utah (estimated additional man-years of civilian employment and expenditures for the first 5 years of proposed new or expanded programs, as required by Public Law 801, 84th Cong.).

	1st year	2d year	3d year	4th year	5th year
Estimated additional man-years of civilian employment:					
Administrative services:					
Fiscal.....	2	4	5	5	5
Clerical.....	5	10	18	18	16
Total administrative services.....	7	14	23	23	21
Substantive (program):					
Engineers.....	8	12	22	24	21
Engineering aids.....	15	24	55	53	40
Total substantive.....	23	36	77	77	61
Total estimated additional man-years of civilian employment.....	30	50	100	100	82
Estimated additional expenditures:					
Personal services.....	\$200,000	\$325,000	\$648,000	\$662,000	\$528,000
All other.....	164,000	4,875,000	13,532,000	13,948,000	7,974,000
Total estimated additional expenditures.....	364,000	5,200,000	14,180,000	14,610,000	8,500,000

Mr. ROGERS. The Chair at this time will recognize the gentleman from Utah, Mr. Burton, for a statement if he desires.

Mr. BURTON. Mr. Chairman, I have a prepared statement I will not take the time to read but I would like to ask unanimous consent that it be inserted in the record at this point.

Mr. ROGERS. Without objection, it is so ordered, and the statement will be included in the record the same as if read in full.

(The statement follows.)

STATEMENT OF REPRESENTATIVE LAURENCE J. BURTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF UTAH

Mr. BURTON. Mr. Chairman, fellow members of the Subcommittee on Irrigation and Reclamation, I am proud to appear before you today in support of what I have long considered one of the most significant and important reclamation projects proposed for the State of Utah.

There will appear before you today experts on the engineering and financing of this project, and on its feasibility. I shall not attempt to go into these matters which are properly left to them, but shall take you with me, if you will, into some of the background of this project and the people who settled and developed Dixie.

They were not ordinary people. They had been sent to this southwestern part of the area which was to become known as the Territory or State of Deseret, and later the State of Utah, by Brigham Young, the great colonizer. He recognized the importance of settling this area. It was known to him from reports of Fremont who used the

old Spanish Trail in 1843 and 1844, and Father Escalante and Jedediah Smith who had passed through the area in their expeditions. The gold seekers from the East utilized it in their trek to the gold fields of California. Brigham Young knew that the climate and fertile soil provided an opportunity for the settlers there to become a self-sufficient people.

One of the first settlements of any significance in Dixie was the Indian mission on the Santa Clara River near the present city of Santa Clara. The mission was established in the winter of 1854 by some of the hardest of the Mormon missionary settlers. In a few years, the settlement showed great promise. In early accounts of a visit to the area by Brigham Young, testimony was produced that the settlement consisted of some 30 houses, and approximately 250 acres under cultivation, with flourishing orchards of apples, peaches, apricots, nectarines, plums, figs, grapes, and a promising crop of cotton. There were even cooperative farming arrangements with the Indians. But in the winter of 1862 came the rains and a flash flood of the Santa Clara, like a "thief in the night" to completely wipe out the settlement with its crops, orchards, and homes. These determined people stayed on to rebuild their farms and orchards, suffering from food shortages, sickness, disease, and other setbacks. History tells us that just 2 years later this same Santa Clara River that overflowed its banks and wiped them out, dried up in midseason, leaving the crops and orchards to burn up in the heat of the summer sun.

In the meantime, Brigham Young had determined that the settlement in Dixie had not grown and flourished as it should, and called over 300 men on a mission to Dixie to grow cotton and develop the area. Nearly 250 of those called responded and left their homes and farms in the Salt Lake Valley and journeyed to Dixie. Most of these people settled in St. George, which is today the county seat of Washington County. One of the first, certainly one of the most important, problems of these people was getting water from the Virgin and Santa Clara Rivers onto the land to quench the thirst of their crops and orchards. And just as important as securing water was the problem of controlling the rivers so that they would not again be wiped out by floods.

A review of the history of this area will reveal that these people endured great hardship over extended periods of time. They built dams on the Virgin and Santa Clara Rivers, only to have them washed out by the raging torrents, sometimes twice in 1 year. They dug canals and tunnels, only to have them filled with mud and debris. They suffered droughts, but these courageous pioneers faced the hardships and resolved their problems the best they could. The only certainty was uncertainty itself.

Dixie had great potential, and these settlers knew it, but there were some real problems involved. They knew these problems well. They worked and sacrificed and adapted themselves to a point where they could survive and provide for themselves and their families.

But, gentlemen, here we are, a hundred years later, and some of the most basic problems of this area have not been resolved. There is still a shortage of water; there is still a threat of floods and drought; there is a shortage of electrical energy, and a shortage of employment opportunities. This truly is unfortunate, because Dixie is not an ordinary

Enclosed are statements concerning estimated personnel and other requirements for the project as required by Public Law 801, 84th Congress.

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

Sincerely yours,

D. OTIS BEASLEY,
Assistant Secretary of the Interior.

Dixie project, Utah (estimated additional man-years of civilian employment and expenditures for the first 5 years of proposed new or expanded programs, as required by Public Law 801, 84th Cong.)

	1st year	2d year	3d year	4th year	5th year
Estimated additional man-years of civilian employment:					
Administrative services:					
Fiscal.....	2	4	5	5	5
Clerical.....	5	10	18	18	16
Total administrative services.....	7	14	23	23	21
Substantive (program):					
Engineers.....	8	12	22	24	21
Engineering aids.....	15	24	55	53	40
Total substantive.....	23	36	77	77	61
Total estimated additional man-years of civilian employment.....	30	50	100	100	82
Estimated additional expenditures:					
Personal services.....	\$200,000	\$325,000	\$648,000	\$662,000	\$526,000
All other.....	164,000	4,875,000	13,532,000	13,948,000	7,974,000
Total estimated additional expenditures.....	364,000	5,200,000	14,180,000	14,610,000	8,500,000

Mr. ROGERS. The Chair at this time will recognize the gentleman from Utah, Mr. Burton, for a statement if he desires.

Mr. BURTON. Mr. Chairman, I have a prepared statement I will not take the time to read but I would like to ask unanimous consent that it be inserted in the record at this point.

Mr. ROGERS. Without objection, it is so ordered, and the statement will be included in the record the same as if read in full.

(The statement follows:)

STATEMENT OF REPRESENTATIVE LAURENCE J. BURTON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF UTAH

Mr. BURTON. Mr. Chairman, fellow members of the Subcommittee on Irrigation and Reclamation, I am proud to appear before you today in support of what I have long considered one of the most significant and important reclamation projects proposed for the State of Utah.

There will appear before you today experts on the engineering and financing of this project, and on its feasibility. I shall not attempt to go into these matters which are properly left to them, but shall take you with me, if you will, into some of the background of this project and the people who settled and developed Dixie.

They were not ordinary people. They had been sent to this southwestern part of the area which was to become known as the Territory or State of Deseret, and later the State of Utah, by Brigham Young, the great colonizer. He recognized the importance of settling this area. It was known to him from reports of Fremont who used the

STATEMENT OF SENATOR FRANK E. MOSS OF UTAH

Senator Moss. Thank you, Mr. Chairman and Chairman Aspinall and Congressman Burton.

I want to express my appreciation to the chairman of the subcommittee and the chairman of the full committee for scheduling this hearing today on the Dixie project.

No project was ever more earnestly sought by the people of the State and area it will benefit; no project was ever more universally supported.

The people of Washington County, which we in Utah call our Dixie because its warm, mild climate allowed us at one time to raise cotton there, have been trying to harness the waters of the Virgin and Santa Clara Rivers ever since the area was settled by the Mormon pioneers in 1852. Again and again they built diversion structures and irrigation ditches only to have them washed out by heavy, silt-laden waters and have their crops and the adjacent farmlands flooded over.

The people of Dixie began to plan and work for a reclamation project of the scope called for in this legislation at least 50 years ago. It has been an immediate and urgent goal for at least 25 years.

Congress has been precluded from considering the Dixie project because it was enmeshed in the Arizona-California controversy over the allocation of the waters of the Colorado River. The Virgin River empties into the Colorado, and even though it contributes less than 1 percent of the flow of the mighty Colorado, no action could be taken on Dixie until the present controversy was settled. As you will remember, the Supreme Court made a final decision on the Colorado River water only about a year ago. I brought my bill to authorize Dixie before the Senate Irrigation and Reclamation Subcommittee shortly afterward. Hearings were held both in Washington and in St. George, Utah. Thereafter, the bill was reported favorably by the Senate Interior Committee, in October, and passed on voice vote the same month. So Dixie could hardly be placed in the category of a highly controversial bill.

I will not take the time of this subcommittee to discuss the vital statistics of the project, or to detail the unique and courageous history of the people in Utah's Dixie who will be benefited so greatly by the passage of the bill. I am sure representatives of the Bureau of Reclamation and my colleagues from Utah in the House will do this for you. I would like, however, to ask that some of my earlier statements on the Dixie project be made a part of the record of the hearings, and be printed at the conclusion of this statement.

Mr. ROGERS. Without objection, it is so ordered.

(The material referred to follows:)

STATEMENT OF SENATOR FRANK E. MOSS, DEMOCRAT, OF UTAH, ON THE FLOOR OF THE SENATE, WASHINGTON, D.C., MAY 8, 1963

Subject: The Dixie project, Utah.

Mr. President, yesterday the Subcommittee on Irrigation and Reclamation opened public hearings on my bill to authorize a \$45 million reclamation project proposed for southwestern Utah, the Dixie project.

The opening of congressional consideration of the Dixie project brings closer to fulfillment a dream of almost 25 years for the citizens of my State who reside in Washington County and surrounding areas.

So significant is this water storage development to this colorful region that I ask your indulgence while I make a brief statement on the history of this land known as Utah's Dixie.

The story of the Dixie cotton mission is one of the most fascinating in all the pioneer history of Utah. In its memory, and as a souvenir of the opening of hearings on the Dixie project, I am sending to each of the Members of the Senate one of these miniature bales of cotton. And I am presenting the Members a copy of a publication of the Utah Historical Society, "Utah's Dixie, the Cotton Mission." Most of this material was compiled or written by a distinguished author of Utah's Dixie, Juanita Brooks.

Now, let me assure my colleagues of the South that Utah's Dixie is not to have another go at cotton culture. That was tried, with limited success, in the latter part of the last century. The lands to be irrigated by the Dixie project will not grow cotton. What they will do is nourish the area's economy—thus making it a better customer for cotton as well as many other products.

Today, the capital of Washington County, St. George, is a tourist oasis on the principal highway which spans mountain and desert between central Utah and southern California.

It is the site of the first completed Mormon Temple in Utah, and the location of Dixie College. It accommodates the numerous visitors who come to view the massive scenery of Zion National Park.

Before the arrival of the Mormons in 1850, however, only a few white men had ever seen this land. Two of these were the Spanish padres, Father Escalante and Father Dominguez, who were on the Virgin River in October of 1776 on their journey to find a land route from Santa Fe, N. Mex., to Monterey, Calif.

When the Mormons came to the West, they intended to establish a settlement in which they could build Zion in peace. They aimed to make their community self-sustaining. They expected to produce all their own necessities of food, clothing, and shelter.

With this in mind, Brigham Young planted colonies wherever there was water, and sometimes very little water; he fostered production of food, fiber, and metals; he brought in machinery for all the basic trades.

As early as 1850 it was proposed at the general conference of the church in Salt Lake City that a settlement be formed "at the junction of the Rio Virgin and the Santa Clara Creek, where grapes, cotton, figs, raisins, and so forth, can be raised."

I digress to say that—112 years later—the principal works of the Dixie project will be dams built on the Virgin and the Santa Clara Rivers.

To continue—it was 1854 before a Washington County pioneer named Jacob Hardy returned from a trip north bringing about a quart of cottonseed tied to his belt, the gift of Sister Nancy Anderson, a Mormon convert from Tennessee.

The seed was carefully planted on a small piece of virgin land. It produced beyond belief, and when the first pods exploded into a handful of snowy fluff, they were sent to Brother Brigham and put on display in his Salt Lake City office.

Other families were sent to pioneer the land. By 1860, there were in Washington County eight small settlements. In 1861, Brigham Young inspected the region.

The outbreak of the Civil War gave impetus to the plan for southern Utah colonization, for with the supply from the Southern States cut off, Utah desperately needed to produce cotton for cloth.

Preceding the October semiannual conference of the church in 1861, articles in the Deseret News extolled the possibilities of Utah's Dixie and encouraged all the saints who could to move in that direction. And, at conference, a list of 300 names, all heads of families, was read with the announcement that they had been selected to go south on a "cotton mission." Besides farmers they included blacksmiths, coopers, carpenters, and two surveyors, as well as the practitioners of many other trades.

The cotton harvest of 1863 produced full bins for the settlements, plus 74,000 pounds that were hauled back to the Mississippi River.

By 1870, the Washington cotton factory for weaving cotton cloth was the largest west of the Mississippi, and, in 1871, the Rio Virgin Manufacturing Co. was organized with capital stock of \$100,000.

But the close of the Civil War and the coming of the railroad had changed economic conditions. Utah's Dixie could not compete with the large cottonfields and the mills of the Southern States. Cotton business limped along until 1910.

Then the factory was closed, bringing an end to the Dixie cotton mission, a unique page in the colorful history of the American frontier.

The greatest need of the modern West is for water to nourish an expanding population for our cities, for industry, for fruit orchards, and garden plots. Utah's Dixie never again will grow cotton, but we do need water for our growing population. The Dixie project—which I hope to see the 88th Congress authorize—will take a long step in putting the waters of the Virgin River Basin to maximum beneficial use.

[From the Congressional Record, Oct. 30, 1963]

DIXIE PROJECT, UTAH

Mr. Moss. Mr. President, few moments in my years in the U.S. Senate have given me greater satisfaction than this one. The bill before the Senate, which I introduced, and on which it was my privilege as chairman of the Senate Subcommittee on Irrigation and Reclamation to conduct hearings, authorizes the Secretary of the Interior to construct, operate, and maintain the Dixie reclamation project in Washington County, Utah.

The Dixie project is relatively small as reclamation projects go. Multiple-purpose in conception, it will assure supplemental and full irrigation water supply to about 21,000 acres in the county, and will supply municipal and industrial water to the city of St. George, the county seat. It will also generate badly needed hydroelectric energy, will tame downstream floods, and will establish attractive recreation areas. Its total cost will be about \$45 million—most of which will be paid back to the Government, with interest—and it has been calculated that the benefits from the project will exceed the costs by a ratio of 2 to 1.

These "vital statistics" may make it seem that the Dixie project is just like any other sound reclamation project—better perhaps than most because of its excellent benefits-to-cost ratio—but important mainly because its enactment will represent another transaction in the West's most important business—that of conserving and making the best possible use of precious and scarce water resources.

But back of these dull-sounding statistics on Dixie lies one of the most dramatic episodes of the settlement of the West. The people of Utah's Dixie are no ordinary people. They are the descendants of some of the hardiest and most resourceful pioneers the West has ever known. Their forebears went into the southern Utah wilderness at the direction of Brigham Young, and under the most heartbreaking circumstances developed a half-dozen self-sufficient communities. Their story has become a legend celebrated in stories and verse.

The Dixie Cotton Mission, as it was called, was established in the winter of 1854. The first settlement was on the banks of the Santa Clara, one of the streams which the Dixie project will now harness, and settlements then spread to the Virgin River, the larger of the two streams involved. By cooperative effort the pioneers built diversion structures on the two rivers, and irrigated the lush green river bottoms to grow cotton, figs, sugarcane, tobacco, and other tropical agricultural products. They even experimented in the cultivation of silk-worms so they could make silk as well as cotton cloth.

Their accomplishments were won against the greatest of odds. Again and again the diversion structures built with such sweat and toil on the Santa Clara and the Virgin were washed out, and again and again the carefully tilled farmlands were strewn with mud and boulders. Lesser souls would have been daunted, but the hardy people of this southwestern area of Utah stayed on to rebuild and build again. They suffered greatly from food shortages, sickness, disease, and other setbacks. After decades of effort, permanent diversion dams were finally constructed, and the silt laden waters of the two rivers brought under some restraint, but never over the whole long century since the cotton mission was founded have the waters of the Santa Clara and the Virgin Rivers been put to full and beneficial use.

That is what my bill before us here today would do. It would—at long last—make it possible for this arid and colorful area to realize its full potential. The project has been needed for a hundred years, has been a dream for over 50, and an objective actively and fervently sought for 25.

Hearings were held on it in St. George, and again in Washington, D.C. It was almost unanimously supported—by officials of the State of Utah, and by businessmen and farmers and citizens, and even schoolchildren of the area. And it came out of the Senate Interior and Insular Affairs Committee by unanimous vote.

The area the Dixie project will serve is a delightful garden spot. It has spectacular semidesert scenery, a mild winter climate, and the proximity of Zion National Park and other scenic wonders to make it a growing tourist center. The water from the project will place both its farms and towns on a firmer foundation. Let me hasten to interpose here, in case some of my colleagues from the South might be concerned lest Utah's Dixie should try to compete with the Southland's Dixie in cotton cultivation, that there is no danger. Utah's Dixie gave up cotton cultivation shortly after the Civil War, and is now concerned with fruitgrowing, cattle feeding, and turkey raising and processing—to name a few of the most important agricultural pursuits. In fact, St. George is the center of one of the largest turkey operations in the country.

I feel I can say without reservation that the problems which have held up consideration of the Dixie project for so many years have now all been successfully solved. The Virgin River is a tributary to the Colorado River, its small flow entering at Lake Mead, above the Hoover Dam. It is therefore a part of the Lower Colorado River Basin, as defined in the Colorado River compact. My bill provides that the use of all water diverted for the Dixie project from the Colorado River system shall be subject to and controlled by the Colorado River compact, the Boulder Canyon project and the Mexican Water Treaty.

The amount of water actually contributed to the Colorado by the Virgin and its tributary, the Santa Clara, is less than 1 percent of the flow of the mighty Colorado, so we are actually talking about an infinitesimal amount of water. But the terms of the water treaties in effect are being adhered to, and there is no problem in this respect.

The bill provides that the portion of the costs which is properly allocable to irrigation and beyond the ability of the water users to pay in 50 years, plus a 10-year development period, shall be returned to the reclamation fund by revenues derived from the disposition of power in the Federal projects in the lower basin. A committee amendment limited the amount that can be used to \$3½ million; the Bureau of Reclamation indicated that only about \$3,230,000 will be needed.

Funds are included in the project cost to work out a small saline water problem, and agreements have been reached with the State of Utah on the road problems.

Even the shadow cast over the project by the long controversy between California and Arizona over the division of the waters of the Colorado River has been completely lifted by the refusal last week of the U.S. Supreme Court to review its earlier decision. Of course, as I have pointed out, the Dixie project never would have any substantial effect on the amount of water available for division between these two lower basin States—the less than 1 percent the Virgin contributes to the Colorado River's flow is too small to be any real point of controversy. But could anyone have ever wanted to raise this question to hold up Dixie, the time has now passed.

Mr. President, enactment of S. 26 will mean the rehabilitation and rebirth of Utah's Dixie. The project it will authorize will have a great impact on both the economy and spirits of the people of this remarkable section of Utah. I trust it will pass the Senate today without further delay.

Senator Moss. The point I want to stress here today is that the Dixie project is long past due, and to ask that this subcommittee consider it with an open mind, and take action on it as quickly as possible. It has been estimated that the total annual benefits from the project will be about \$4 million. Since the total costs of the project are only about \$45 million—relatively modest as reclamation projects go—and most of the money will be repaid with interest, the benefits to be attained are high. But the important point is this—every year we delay in authorizing and constructing the Dixie project, we are denying the people of this country, and primarily the people of St. George and Washington County, of \$4 million which could be pouring in their economic mainstream.

Washington County and its people seriously need the boost this Dixie project will give them. They will be most grateful to this

subcommittee for taking action on it, and to the full committee for moving the bill to the floor at the earliest possible date. In fact, I suspect the day the Dixie bill is signed into law will be a public holiday in southern Utah.

The area involved is an unforgettable one, with beautiful scenery, fertile soil, and a desirable climate. But it is very short of water—both for irrigating its fertile soil and for municipal use. And the area is faced every year with devastating floods and the waste of precious water. With the control and development of the streams of both the Virgin and the Santa Clara, Washington County can move toward its full potential.

I hope most sincerely that legislation to authorize the Dixie reclamation project can be cleared promptly by this committee, and passed by the House of Representatives in this session of the Congress. It is a sound and worthy project.

Mr. ROGERS. Senator, do I understand correctly what you want to include in the record are the two attachments to your statement?

Senator Moss. That is correct, sir. These are statements that were made by me on the Senate side when this same project was considered over there.

Mr. ASPINALL. Reserving the right to object.

Mr. ROGERS. The gentleman from Colorado.

Mr. ASPINALL. The rules of courtesy between the two bodies are involved and I would like to know why in the world you want the statement you already have in the Congressional Record printed in these hearings?

Senator Moss. The only reason, really, is to make this record here complete. I would not insist on it at all and if the chairman thinks it is duplication, all right. However, I wanted to make as brief a statement as possible here this morning to permit hearing the number of witnesses you have who are here to testify. Therefore, I did not want to reiterate many of the things I said before on the project.

Mr. ASPINALL. Do you make that as a part of your statement just as you made it when you were on the floor of the Senate?

Senator Moss. Yes.

Mr. ASPINALL. Is that right?

Senator Moss. Yes, sir.

Mr. ASPINALL. As a rule we are different from you Members on the other side of the Hill. We do not permit material like that to go into our record.

I withdraw my objection.

Mr. ROGERS. Without objection, the two attachments to the Senator's statement are included as a part of his statement in the record.

Are there any other questions, Mr. Aspinall?

Mr. ASPINALL. Yes.

I want the record to be clear with respect to cotton growing in this area—do I understand there is a likelihood of cotton being produced on some of the lands that may be irrigated by the waters of this project?

Senator Moss. No, sir; there is none at all.

No cotton would be produced. In the early days, in the time of the Civil War, when cotton was a very precious commodity, a cotton mis-

sion went to Dixie and grew cotton in southern Utah and even at that early time the cotton produced there was not really competitive. There has not been any planted or produced for 80 years or longer.

Mr. ASPINALL. Is it your understanding there will not be any cotton or crops grown which are in surplus at the present time?

Senator Moss. Definitely so, sir.

There will not be any surplus crops.

Mr. ASPINALL. That is why I wanted to set the record straight.

In S. 26 which came over here on October 30, 1963, in section 5 there is a provision that the cost of construction which is beyond the ability of the users to repay shall be repaid within 50 years from revenues derived by the Secretary of the Interior from the disposition of power from Federal projects in the Lower Colorado River Basin?

Senator Moss. Yes, sir.

Mr. ASPINALL. The Governor has sent a letter to this committee this morning via the gentleman from Utah, Mr. Burton, in which it is stated that the amount necessary to relocate the highway and take care of the highway improvement will be accepted by the State of Utah so that there would be no necessity for tying this project in with the problematical Lower Colorado River Basin fund. What is your position in this respect?

Senator Moss. Well, I would be glad to take that amendment, also, in order to get the project. I think what this does is that it underlines the great urgency that there is in Utah for approval of the project to the point that the Governor and other officials of the State are willing to have the State assume a cost here that normally would be charged against the project; to wit, relocation of the road, rather than have the project held up any longer while the propriety of charging this against revenues and the lower basin was discussed.

In the hearings in the Senate and conversations surrounding those hearings, we discussed this very, very thoroughly. There was a degree of controversy on it and resistance although the Senate ultimately decided that the proper thing to do would be to draw on those revenues beginning in about 1989 when there will be a considerable surplus in order to build this additional project, sort of a participating project in the lower basin.

Because there is controversy and because this might delay the authorization of the project, the State of Utah is willing to recede from that position if that be necessary in order to get the project approved and to undertake out of State revenues to relocate the highway.

Mr. ASPINALL. You suggest controversy and a degree of uncertainty and is not that the important thing in this particular matter. You know the trouble we are having with the Eden project at the present time where our great friend from Wyoming saw fit to tie a project to an action to take place in the future? You know the difficulties involved there, and do you think there is any degree of certainty about tying this to the Lower Colorado River Basin fund in definite language that is used here?

Senator Moss. I think there is a less degree of uncertainty here. I think the lower basin fund is inevitable and I think it is certainly going to come.

My original draft of the bill tied it specifically to Hoover Dam revenues because the payout in Hoover Dam will come in 1989 and at that point there will be a considerable surplus.

In the course of the discussion in the committee and with amendments adopted, the language was broadened to make revenues from the lower basin, rather than just tying it specifically to Hoover Dam. That was acceptable, but, as I say, we are perfectly willing to forgo that in order to get away from these questions of controversy.

Mr. ASPINALL. That is all, Mr. Chairman.

Mr. ROGERS. Mr. Burton?

Mr. BURTON. I have no questions except to say that I am happy to welcome my colleague from Utah before the committee.

Thank you, Mr. Chairman.

Mr. ROGERS. Mr. Johnson?

Mr. JOHNSON. I have no questions.

Mr. ROGERS. Mr. Duncan?

Mr. DUNCAN. No questions, but it is good to see the Senator.

Senator MOSS. Thank you.

Mr. ROGERS. Mr. White?

Mr. WHITE. No questions, but I do want to welcome the Senator.

Mr. ROGERS. Mr. Gill?

Mr. GILL. No questions.

Mr. ROGERS. Thank you very much, Senator.

Senator MOSS. Thank you, Mr. Chairman. I appreciate this very much.

Mr. ROGERS. The next witness scheduled is the Honorable Wallace F. Bennett, a U.S. Senator from the State of Utah.

Senator Bennett, it is good to have you before the subcommittee.

STATEMENT OF SENATOR WALLACE F. BENNETT FROM UTAH

Senator BENNETT. Mr. Chairman, I enjoyed the privilege of being with you in the Dixie country last year, and it is good to be with you here on your home base.

Mr. Chairman, I have a statement which I should like to submit for the record.

I realize that you have a good many witnesses and rather than take the committee's time, I ask that it may be submitted and appear in the record as though read.

Mr. ROGERS. Without objection, your statement will be included in the record the same as if read in full, Senator.

You may proceed to make such supplemental statements as you desire.

(The statement of Senator Bennett follows:)

STATEMENT BY SENATOR WALLACE F. BENNETT

THE DIXIE PROJECT—URGENTLY NEEDED

Mr. Chairman, I appreciate the opportunity to appear before this distinguished committee today. It gives me great pleasure to voice once again my complete and enthusiastic support of the Dixie project bill. I have supported the project ever since I arrived in the Senate in 1951—first to secure funds for the Bureau of Reclamation's investigation and then after the completion of the study to offer the first Dixie project bill which was S. 14 in the 87th Congress. Senate passage of the bill last October marked a significant milestone for Dixie. I hope the House may hurry the Dixie project along to final action this year.

The story of the Dixie cotton mission is one of the most fascinating in Utah's history. In 1861, 300 wagons loaded with families and their provisions were sent by Utah's first leader, Brigham Young, to colonize the area and to plant and raise cotton for the State in a valiant effort to become self-sustaining. The

cotton industry was short lived, however; and today Utah's Dixie is unique for the varieties of fruits and nuts and farm produce which can be grown there when water is available.

The early colonizers initiated an irrigation system which opened up these crop-lands and fruit orchards. However, without river control and storage, it was then and still is today impossible to divert a plentiful supply of water from the rivers and streams in this arid region.

The Dixie project will someday stand as a monument to the courage, heart-break, faith, and determination that marked the long fight of the early settlers to establish a foothold in Dixie. These pioneers exerted back-breaking efforts, year after year, to dam the Virgin and Santa Clara Rivers, to plant crops and irrigate the fields, only to have these irrigation facilities washed out by floods and the crops wither.

In modern days, southern Utah has suffered from severe drought condition for well over a decade. Yet, the watershed of the Virgin River is subject periodically to torrential rainstorms which have resulted in devastating damage to farms and homes as well as a tremendous loss of precious water. These drought and flood conditions dramatically demonstrate the need for a large, centralized program to control the Virgin River and its tributary, the Santa Clara, and to bring the two rivers into full production.

Time is of the essence. The towns of southern Utah are undergoing a period of transition and reappraisal. Already modern interstate highways are bypassing communities whose lack of water and many natural resources have forced them to lean heavily on the tourist trade. The Dixie project would bring to the area the assurance of plentiful water, electric power, recreation resources, and other values that will serve as the foundation for a revitalized and modernized agricultural development and will permit local industry and population growth.

Unless the Dixie project is built, there appears to be no possibility that additional water supplies can be developed. The future of the entire area is dependent upon congressional approval and construction of the Dixie project.

PROJECT BENEFITS

The Dixie project is a proposed multiple-purpose water resource development in the Virgin River Basin in southwestern Utah. By regulation of flows of the Virgin River and its tributary, the Santa Clara River, the project would provide supplemental irrigation water to 9,455 acres of presently developed land and a full water supply for 11,615 acres of new land. The city of St. George would be provided with 5,000 acre-feet of water annually for municipal and industrial purposes. Construction of three powerplants would produce about 44,500,000 kilowatt-hours of firm electric energy and about 1,900,000 kilowatt-hours of secondary energy for sale annually. In addition, minor flood control benefits would result, as would fish and wildlife and recreation benefits.

Water storage facilities are considered to be the primary need of the Dixie project area. Development of such facilities would provide for the conservation and orderly release of water that is now wasted in floods. The project also will permit the conservation of those portions of normal flows which are in excess of immediate requirements for irrigation and other purposes.

The major benefits of the project of course will accrue to Washington County, in which the main facilities will be located.

Cedar City, in Iron County, will also be benefitted through my amendment in the Senate-passed bill which points out the already-existing contractual arrangement under which the Cedar City area would receive 8,000 acre-feet of water annually. This language was written so that Cedar City's citizens would be fully protected. When the Kolob Dam and Reservoir was constructed by the Kolob Reservoir and Storage in Washington County in 1956, it was agreed that Cedar City would construct works for the diversion of up to 8,000 acre-feet of water from tributaries of the Virgin River for municipal use. It should be noted that Cedar City agreed to reimburse the project for power revenue losses resulting from this diversion.

The Dixie project bills introduced in the 88th Congress by Senator Moss and myself were essentially the same, except for a provision in my bill relating to the Cedar City agreement. In my testimony before the Senate Irrigation and Reclamation Subcommittee, I said it would be equally satisfactory to me for the subcommittee either to have Senator Moss' bill amended to add this clause or to approve my bill, whichever the committee desired. I was pleased, therefore, when the committee agreed to include my Cedar City amendment in S. 26.

LOCAL PEOPLE UNITED

During the course of the previous hearings on the Dixie project, it has been repeatedly illustrated that the people of Utah are united in their earnest desire to see the Dixie project built after its having been under study by the Bureau of Reclamation since at least 1918. It was only World War II which blocked much earlier construction of the project at a cost that would have been but a relatively small fraction of the burdens which the people of Utah's Dixie are willing to undertake today so that the project may become a reality.

In fact, the local people have agreed to impose an almost unprecedented tax burden to repay their share of the project costs. This 5-mill ad valorem tax contrasts with the usual levy of from 1 to 2 mills for other reclamation projects.

PROJECT REPAYMENT

The local people have further demonstrated their complete cooperation by forming a local conservancy district which, based upon the high tax levy, will repay 76 percent of the irrigation costs. In order to complete repayment, the Dixie bill provides for allocating the remainder to power revenues that will arise from Lower Colorado Basin dams, since the Virgin River is a lower basin stream. This same principle is used in connection with the Colorado River storage project, which established a formal basin account. Moreover, it is my understanding that some 15 additional western reclamation projects have utilized the same principle without establishing a basin account.

The lower basin has had the benefit of Utah's water for many years, through the use of which it has been able to generate power to help in the repayment of lower basin project costs. It is logical and fair that we should expect some financial assistance from Hoover Dam power revenues to help pay out the Dixie project.

DIXIE PROJECT STANDS ON OWN MERITS

An obstacle in the way of constructing the Dixie project until recently is its location in the Lower Colorado River Basin. The U.S. Supreme Court's decision on the California-Arizona litigation over lower basin waters has lifted this previous questionable status. Moreover, the master appointed by the Supreme Court held that tributary streams such as the Virgin and the Santa Clara were not an issue in the lower basin dispute. Accordingly, Utah's right to expand its present lower basin tributary uses is clear. The Dixie project should not be included in any package legislation for the Lower Colorado River Basin. The Virgin River is a captive stream. It should be considered and developed on its merits alone, and the time for action is now, not a year or several years from now. I cannot stress too vigorously the urgency of the Dixie project and its importance to the economy and future well-being of southern Utah.

UEGE PROMPT APPROVAL

In conclusion, Mr. President, I again voice my wholehearted backing of the Dixie project and urge its favorable approval. It has been determined by all agencies concerned that the project has engineering feasibility, that it is economically justified, that the reimbursable cost can be repaid within the standard 50-year repayment period, and that construction would be a forward step in the conservation and utilization of the lands and water resources of the entire region.

The passage of this bill would fill a vital niche in this arid region of the State and of the country.

Thank you.

Senator BENNETT. Mr. Chairman, I think all I have to say is in an attempt to underscore what my friend, Mr. Burton, said at the beginning; within the State of Utah there is no fundamental disagreement as to the value of this project, not only to the Dixie country but to the Iron County which lies to the north of it and which will also benefit somewhat if this project can be approved. It will represent the fulfillment of a dream for the people in that country who have held that dream almost since they got down there.

Mr. ROGERS. Mr. Aspinall?

Mr. ASPINALL. Senator Bennett, you stated there is no controversy in the State itself, but is there any controversy with any of your neighboring States that you know of?

Senator BENNETT. That is the problem of this committee to determine.

Mr. ASPINALL. I thought maybe you would give us a little bit of advice.

Senator BENNETT. My advice is to pass the bill as quickly as possible so that if there should be any latent controversy, it will not have an opportunity to appear.

Mr. ASPINALL. As far as you know, there is no announced opposition at the present time; is that right?

Senator BENNETT. As far as I know.

Mr. ASPINALL. You heard the question I asked the junior Senator from Utah about accepting a little additional responsibility in order to get away from this indecisiveness as far as repayment is concerned. Are you favorable to the action that Governor Clyde has suggested and which he is willing to follow in speaking for the State?

Senator BENNETT. I certainly am. I can understand why the Governor and the people of the State might have hoped up to this point that such action would not be necessary but rather than jeopardize the project, certainly the State should accept this additional responsibility.

Mr. ASPINALL. That is all, Mr. Chairman.

Mr. ROGERS. Mr. Burton?

Mr. BURTON. No questions, Mr. Chairman.

Senator Bennett, it is good to have you here in support of this project.

Senator BENNETT. Thank you.

Mr. BURTON. And to hear your statement.

Senator BENNETT. The first time I ran for office, now 14-odd years ago, on the first trip I made into this part of the country, I was taken in a jeep up into the mountains and shown what they hoped would some day be the site of the Dixie project. It has been alive all those years very definitely.

Mr. ROGERS. Mr. Haley?

Mr. HALEY. Mr. Chairman, I reserve my time.

Mr. ROGERS. Mr. Johnson?

Mr. JOHNSON. No questions other than to say that most of our projects are on the books for about 25 years before they become realities.

Senator BENNETT. I am sure this one had been there long before I came along. I am just making the point that greeted me when I first came into political life.

Mr. ROGERS. Mr. Duncan?

Mr. DUNCAN. If this project were approved, it would remove the only major political issue in Utah that you have had for the last 14 years? You will have to find something else to run on?

Senator BENNETT. No; I would not like to leave the impression generated originally by my two colleagues who preceded me that there are no other political issues.

I think in this particular area this project is outside the political arena.

Mr. DUNCAN. Forgive me; I was being facetious. That is all.

Senator BENNETT. I led with my chin.

Mr. ROGERS. Mr. White?

Mr. WHITE. I would like to welcome the Senator here and say that I happened to be with him at the Dixie project inspection and hearings last winter. I was very much impressed by them.

Mr. ROGERS. Mr. Gill?

Mr. GILL. No questions.

Mr. ROGERS. Thank you so much, Senator.

Senator BENNETT. Thank you.

Mr. ROGERS. Thank you for your presentation.

Our next witness scheduled this morning is our colleague, Congressman Sherman Lloyd, a Member of Congress from the State of Utah and the author of H.R. 4178.

It is good to have you before the subcommittee, Mr. Lloyd.

STATEMENT OF HON. SHERMAN P. LLOYD, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF UTAH

Mr. LLOYD. Thank you, Mr. Chairman and gentlemen of the committee. I will make a brief statement.

It was a pleasure to go along with my colleague, Congressman Burton, from the State of Utah, when this subcommittee was in the St. George vicinity in October of 1963.

Inasmuch as the physical and financial details of this project are already a matter of record, my testimony will be brief in support of other witnesses.

Mr. Chairman and members of the committee, I am pleased to appear before you once again to speak for a project that meets all economic criteria and which is badly needed to develop the resources of southwestern Utah.

The Dixie project is, as you know, in even sounder condition than the last time you considered it. The State of Utah has given its formal notice that it will underwrite highway relocation costs of some \$1,904,000.

Proposed power and water rates have been increased, in agreement with the affected parties.

The net result of these changes is to bring the payback period within 50 years and to eliminate any need for tapping funds from other projects.

Rather than taking any funds from Hoover Dam, this project will be a major benefit to the lower basin interests. Dams and reservoirs on the Virgin and Santa Clara Rivers proposed in this project will materially reduce the silt working its way downstream into Lake Mead. Downstream users will be protected from the too much or too little waterflows characteristic of rivers in this area.

Of the \$42,673,000 estimated construction costs, all but \$3,444,000 will be reimbursed by the beneficiaries. Of the nonreimbursable costs, \$1,808,000 is allocated to recreation, \$1,494,000 to fish and wildlife, \$142,000 to flood control.

Irrigation users will pay back \$30,182,000; power users, \$6,573,000 and municipal and industrial water users will pay \$2,474,000. I think it's important to consider that after 41 years, power revenues will be available for contribution to the irrigation share and that municipal and industrial water rate payers will be contributing for that purpose after 50 years.

I would like to call to your attention a fact that might not be readily apparent in examining the project itself. Its reservoirs, available for water sports, will be just a few miles off from Interstate 15. That highway, in turn, connects to Interstate 70, a little way to the north.

The result is that this freeway system will be carrying a large part of the traffic between the Los Angeles and Chicago metropolitan regions. There will be, in addition, the traffic generated by the Lake Powell Recreation Area, Bryce Canyon and Zion National Parks and, hopefully, Canyonlands National Park, now before another subcommittee of the Interior Committee.

The resulting demands for power, for water and for outdoor recreation will be—cannot help but be—greatly expanded. If anything, the forecast demands and repayment estimates are overly conservative because they tend to reflect internal conditions and not such external factors as the Interstate Highway System.

This is not a flaw in the planning, but another reason why the economic base of this area should be reinforced by the Dixie project.

Thank you for your consideration.

Mr. ROGERS. Thank you, Mr. Lloyd.

Mr. Aspinall, do you have any questions?

Mr. ASPINALL. Just to say to our colleague that we have never had a project where they have been overly conservative relative to repayment.

What makes you think this project is figured on a basis that is overly conservative?

Mr. LLOYD. I have pointed out the new interstate highways, Mr. Chairman, and the added demands for industrial power and culinary power for the area. It would seem to me in my analysis of the project, with the great potential for the development of that great region down there that the demands for power and water certainly will meet the conservative estimates made here.

Mr. ASPINALL. Not power from this project?

Mr. LLOYD. Well, the public demands down there.

Mr. ASPINALL. Yes, but this project has a very small powerplant and the repayment ability figured upon the use of all of this power at the time it is available and at a stated rate of charge, there cannot be anything more than that?

Mr. LLOYD. I understand the power payback, I think, is something in the neighborhood of \$6 million out of \$42 million.

What I mean to emphasize is the fact that this is an area in which the user potential is certainly adequate and will be growing. I would like to emphasize the fact that the power repayment of approximately \$6 million is certainly a safe estimate.

Mr. ASPINALL. I can see where there might be an increase in funds derived from the industrial water users providing your optimistic outlook becomes a reality, but as far as the payments to be obtained

from the irrigation users and power, it seems to me they are so fixed that any question of being overly conservative was perhaps a little difficult for me to understand.

However, I will not belabor the question.

Mr. ROGERS. Mr. Burton?

Mr. BURTON. Mr. Chairman, I would like to compliment my colleague from Utah for an excellent statement; also acknowledge his good help in all of our endeavors in the House to bring the Dixie project this far.

Thank you.

Mr. ROGERS. Mr. Haley?

Mr. HALEY. Thank you, Mr. Chairman.

I, too, want to welcome my colleague here this morning.

I note in this project a very, very small amount for flood control and there is practically none, as a matter of fact, only \$142,000. The big reimbursable cost will be paid by irrigation users.

What crops do they grow here, or will they grow here? What kind of crops?

Mr. LLOYD. I think fruit and vegetables, Mr. Haley, will be the substantial crops in that area.

Mr. HALEY. Is this a part of the State where you have a good bit of erosion and filling of reservoirs by reason of the looseness of the soil, or something like that?

Mr. LLOYD. I would not be an expert witness on that. I think, as a general statement, that is valid.

Mr. HALEY. I think that is all, Mr. Chairman.

Mr. ROGERS. Mr. Johnson?

Mr. JOHNSON. No questions.

Mr. ROGERS. Mr. Udall?

Mr. UDALL. I want to welcome our colleague here and thank him for his statement. I have been interested in this Dixie project, not only during the time I have been in Congress, but previously. My ancestors were partly responsible for helping settle this very beautiful and very interesting part of your State.

Mr. LLOYD. If I could interrupt you there, Mr. Udall, it was my pleasure to visit in Pike Springs about a month ago in his general area, and there I saw a picture of your grandfather who was one of the pioneers who settled this desolate area.

Mr. UDALL. I thank the gentleman for that compliment and I hope I can do a little bit of what my grandfather did for that area by supporting this legislation.

I am concerned about one question that I wanted to raise.

At one time, I know we discussed with Mr. Burton and some of the representatives from that area, the possibility of including this project in the southwest regional planning we discussed.

Have the people in that area and the members of the Utah delegation decided the best procedure is to go ahead with Dixie as a separate project and to exclude it from any regional planning?

Mr. LLOYD. Mr. Udall, I think this particular project has been in Mr. Burton's district and I prefer to yield to him to answer that question, if you do not mind.

Mr. BURTON. Would the gentleman yield?

Mr. UDALL. Yes.

Mr. BURTON. There has not been any particular decision, I will say to my colleague from Arizona, to put the Dixie project in the water plan you referred to or leave it out. As my colleague from Arizona knows, the Dixie project has been before this committee and before the Senate committee for a number of years. The fact that in Utah we are trying to forge ahead with it now on its own, certainly does not mean or imply opposition to the water plan the gentleman is interested in.

I think the Dixie project has worked its natural course and it is before us today and we hope that we can have your support.

Mr. UDALL. I think when the roll is called up yonder, that I will be found in support of this legislation or something very similar to it.

I did notice in the report of the Department dated June 19, 1964 which is before all of us, it is suggested whether this legislation is passed and authorized in Dixie as a separate project or whether it is placed as a part of a regional plan, perhaps the financing should be on a regional basis and even if this is authorized separately, provision should be made so that it could be put into the regional plan for financing, if and when that larger project is authorized.

Mr. BURTON. Would you yield to me further?

Mr. UDALL. Indeed.

Mr. BURTON. I think that we would certainly have no objection at all to that, and I am aware of these possibilities.

I want my colleague to know that I am sure that when the roll is called up yonder, he will find me in support of his own aspirations as far as water is concerned.

Mr. HALEY. Would the gentleman yield?

Mr. UDALL. Yes.

Mr. HALEY. There might be some doubt in some people's minds as to which way both of you gentlemen are going.

Mr. UDALL. I am sure there is no doubt about where the gentlemen from Florida is going because of the clean life he has led and the high moral standards he has observed throughout his life. There is no question in the mind of anyone about the awards that await him.

Mr. ASPINALL. If my colleague would yield to me, let me say he always has a delightful answer and I think this perhaps would be the appropriate place for him to explain why his grandfather left this beautiful place with so much potential.

Mr. UDALL. As far as I can determine he was called to a much finer and greener area, with a great potential; namely, northeastern Arizona.

I would only say in closing that it is my own impression that regional planning is the way to solve most of these water problems in our area. The chairman of the full committee has certainly taken the lead and I think the people of Utah have seen the benefits in the Upper Basin project that can come from pooling resources of an entire area to the benefit of all of the people in the area. I am hopeful that we can work this thing out so that both Dixie and projects we need, lower down on the Colorado, can help each other.

I thank the witness.

Mr. ROGERS. Mr. Duncan?

Mr. DUNCAN. No questions.

Mr. ROGERS. Mr. White?

Mr. WHITE. I just would like to comment on both Mr. Burton's and Mr. Udall's comments. I hope they will both be with us for some time and I hope we do not have to wait until this "up yonder" roll is called before we can vote favorably for these two particular projects.

Mr. Lloyd, are you familiar with the land classifications, the lands to be irrigated under this project?

Mr. LLOYD. We have technical witnesses from Utah here, Mr. White.

Mr. WHITE. I wanted to ask you.

Mr. LLOYD. Not thoroughly.

Mr. WHITE. Then I will wait for the technical witnesses.

One point that I think should be made here is that after the time the field hearings were held, and in concert with the gentleman from Florida's question as to the crops to be raised in the area, you indicated fruits, nuts, vegetables, and so forth. They are the main products?

Mr. LLOYD. I would say they would be among the products.

Mr. WHITE. I remember there is quite a bit of forage, alfalfa seed, and other crops.

Mr. LLOYD. That is correct.

Mr. WHITE. I think the point was made at the field hearings that most of the crops raised in this particular area would not be crops that are now supported. Those arguments would not apply to this project, such as contributing to the surplus situation in the United States. Am I correct in that assumption?

Mr. LLOYD. Yes, that is a matter of record.

I might say my own view on this is that when we look at food supplies we must look ahead to decades, rather than years, however.

Mr. WHITE. I think the point should be made that the presented prospect would be—

Mr. LLOYD. The immediate prospect is that it would not increase the surplus crops of this country.

Mr. WHITE. I have no further questions.

Mr. GILL. Congressman, in your statement you say that the dams and reservoir in this project will materially reduce the silt working its way downstream to Lake Meade. In general, what proportion of Lake Meade is contributed by this particular water system, and affected by this project?

Mr. BURTON of Utah. Will my colleague yield to me at this point?

Mr. GILL. Surely.

Mr. BURTON of Utah. It is my understanding that less than one-half of 1 percent of the intake into Lake Meade comes from this river, and part of the reason is that it is long and arid, and the river bottom is covered by phreatophytes. The runoff comes in a rush. If it can be captured farther upstream, much of the water can be utilized, or put to beneficial use. If it is allowed to run its course, as it is running now, it contributes very little to anybody.

Mr. GILL. Is this contribution during one period of the year or is it spread over a fairly long period of time?

Mr. BURTON of Utah. It is a continuously flowing river, but the main runoff we are trying to capture occurs in the spring of the year.

Mr. GILL. Most of your one-half of 1 percent is in the spring?

Mr. BURTON of Utah. Yes, sir.

Mr. WHITE. Would the gentleman yield at that point?

Mr. GILL. Yes.

Mr. WHITE. I do not remember exact figures, but I was told at the time we were standing by the damsite above, that the amount of silt carried by this stream was very high. It contributes a considerable volume of solids going into Lake Meade. It is very high for the amount of water.

Mr. GILL. Thank you.

Mr. LLOYD. This is a practical effort to make maximum beneficial use of some of the tributaries in the Colorado River.

Mr. ROGERS. Thank you, Mr. Lloyd, for your statements and answers to the questions.

The Chair recognizes the gentleman from Colorado, Mr. Aspinall, for a unanimous consent request.

Mr. ASPINALL. Mr. Chairman, I ask unanimous consent that the letter under date of June 18, 1964, from Gov. George D. Clyde, of Utah, addressed to the chairman of the full committee, relative to the matter of the highway construction and the payment therefor, be made a part of the record at this point.

Mr. ROGERS. Is there objection?

The Chair hears none, and the letter will be included as part of the record at this point.

(The letter follows:)

STATE OF UTAH,
Salt Lake City, June 18, 1964.

Hon. WAYNE N. ASPINALL,
Chairman, House Committee on Interior and Insular Affairs, New House Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: I am writing in connection with the forthcoming hearings before your committee on the Dixie project, and I respectfully request that this statement be made a part of the hearing record.

The official position of the State of Utah in support of the Dixie project is well known and will be reaffirmed at the hearings by our State engineer, Wayne D. Criddle, and by Jay R. Bingham, director of the Utah Water & Power Board, who plan to appear in person. I shall not reiterate it in detail in this statement, but shall confine my remarks to certain specific relating to the ability of the Dixie project to stand on its own feet, financially speaking, without requiring support from Hoover Dam power revenues or any other outside reclamation project.

The Utah State Highway Department has agreed that the department will assume full responsibility for the relocation of Highway U-15. I enclose a copy of a portion of the minutes of the March 6, 1964, meeting of the Utah State Highway Commission, reaffirming its willingness to assume this responsibility, this position having previously been placed on record at the Commission's meeting on September 11, 1961.

The Washington County Water Conservancy District has already acted to authorize its board to levy a 5-mill ad valorem tax in support of the Dixie project when the project goes into construction.

I am advised that the city of St. George, Utah, which will be the principal preference customer for power from the Dixie project, has agreed to a price of 7.15 mills per kilowatt-hour, rather than the originally proposed price of 6.9 mills. It should be noted that the power customers and the water-user beneficiaries of the Dixie project are essentially the same people, which would indicate that such an agreement was reached with a full understanding of values and benefits and that the agreement should be permanently satisfactory.

In view of these special points—the highway department's assumption of responsibility for relocation of U-15, the levying of a 5 mill ad valorem tax by the water conservancy district, and the acceptance of a 7.15 mill price for project power—it is my considered opinion that the Dixie project will be economically feasible without financial support from outside sources.

Utah urges that the Dixie project be authorized at the earliest possible time, and that consideration of this project, by the full Insular and Interior Affairs Committee and by the Congress, not be delayed in order to make this project a part of any other reclamation project or plan.

Yours sincerely,

GEORGE D. CLYDE, Governor.

EXCERPT FROM MINUTES OF OFFICIAL MEETING OF UTAH STATE HIGHWAY COMMISSION OF MARCH 6, 1964

A motion was then made by Commissioner Smirl, seconded by Commissioner Bagley, and unanimously passed:

"That we reaffirm our position as before, that we will proceed with reconstruction of Highway U-15 to an alignment which will clear the proposed reservoir site, as a Federal-aid highway project, so that it will not interfere with the cost of the reclamation project, providing other avenues of obtaining Federal funds are not available."

Mr. BURTON of Utah. A parliamentary inquiry, Mr. Chairman: I have available, if the full committee deems it advisable, copies of the two pages, which is a copy of the road commission minutes, certifying the road commission would accept this cost. If the chairman of the full committee desires, I can make this available for insertion in the record, following the letter of the Governor.

Mr. ASPINALL. I would be willing to accept it as a part of my request.

Mr. ROGERS. Is there objection to the amended request?

Mr. HALEY. I reserve the right to object, Mr. Chairman. The gentleman's request was to include in the records the minutes?

Mr. BURTON of Utah. That portion of the minutes in which the Utah State Road Commission approved the relocation of the road, and agreed to accept the relocation costs, themselves.

Mr. HALEY. I withdraw my reservation.

Mr. ROGERS. Is there objection?

The Chair hears no objection. The instruments referred to in the amended request will be included in the record at this point.

(The minutes follow:)

Director Burton said that the problem, as we previously explained in our former action, was that the revenues of the reclamation project are very close to the justification of the project. He said, however, that there remains a small difference which is represented by approximately the cost of the relocation of the highway, and if the State is willing to assume the relocation charges of the highway which are not chargeable to the project, providing the revenues to the project cannot support them, then the feeling is that we should be able at this next session of the Congress to get approval of this project, which then becomes self-liquidating and is then merely a matter of governmental credit, and no governmental contribution. Director Burton said that we have, therefore, been asked to see if we were still in agreement with our previous decision in supporting the project to the extent of assuming the relocation of U-15 in this area.

Director Burton made the observation that we have purposely not improved or upgrade this highway, which is seriously deficient both as to alignment and width, until the Congress acts upon the reclamation project. He said that due to the heavy volume of traffic using U-15 in visiting Zion National Park, this highway will need some improvement in any event; and secondly, it is an eligible highway for Federal aid programing. He stated that inasmuch as it will be sometime before this is required, our program can be adjusted to take care of some stage improvement in this relocation.

Commissioner Smirl said that this project has been considered in the hearings that have been held in the senate, and at the senate hearing held in St. George we indicated that we would support this project, and he felt there was no reason

to change our previous decision. He pointed out that this project will mean a great deal to the economy of the State, and he did not think that the State road commission should delay the project in any way.

Chairman Balch said that this road would have been rebuilt prior to this time if it had not been for this project, and this is a necessary improvement not caused by the reservoir project.

A motion was then made by Commissioner Smirl, seconded by Commissioner Bagley, and unanimously passed:

"That we reaffirm our position as before, that we will proceed with reconstruction of Highway U-15 to an alignment which will clear the proposed reservoir site, as a Federal-aid highway project, so that it will not interfere with the cost of the reclamation project, providing other avenues of obtaining Federal funds are not available."

DIXIE RECLAMATION PROJECT—RELOCATION OF U-15

Director Burton said "that in order to insure the people who are presently working on a congressional level to acquire approval of the Dixie reclamation project it is necessary to reaffirm our previous action of September 11, 1961, that we still stand ready to assist the State in acquiring this project by assuming the relocation of the highway, which must be done in any event."

MR. ROGERS. Our next witness this morning is Mr. Kenneth Holum, Assistant Secretary of the Interior for Water and Power.

STATEMENT OF KENNETH HOLUM, ASSISTANT SECRETARY OF THE INTERIOR FOR WATER AND POWER

MR. HOLUM. Thank you, Mr. Chairman and members of the committee, for 25 years the Bureau of Reclamation has been investigating the opportunity for developing the water resources of southwestern Utah and its Virgin and Santa Clara Rivers. I am happy to have the opportunity to appear before this committee this morning and make a brief statement in support of legislation to authorize construction of the Dixie project.

The distinguished members of the delegation from Utah and the members of this committee have already made it abundantly clear that water is the most precious resource in the Southwestern part of the United States, both in Utah and the other States of that region. It is hardly necessary for me to amplify the urgency of moving ahead in water resources development in this important part of our country, I leave to Mr. Dominy and others the job of presenting the project in detail, and the economic analysis of the project.

I want very briefly to indicate on the Department's behalf the need for moving ahead on this excellent project. This area of the country is one where the water is a most precious resource.

The Dixie project, as we will present it to you this morning, is a multipurpose project in a very real sense of the word, providing a fine opportunity to put the waters of this particular region of Utah to beneficial consumption use. The project we will be presenting to you provides, first of all, for full service agricultural water to 11,615 acres, and supplemental service to 9,445 acres of valuable agricultural land that now has irrigation water available to it, but not in adequate supply.

We are talking, then, in terms of an agricultural water project in the amount of 21,060 acres total. The project will also develop 5,000 acre-feet of municipal and industrial water for the city of St. George,

Utah, and by exchange, arrangements have been worked out in the region, to make available 8,000 acre-feet of industrial water annually to Cedar City.

The project has three small powerplants, two with 5,600 kilowatts and one with a rated capacity of 2,000 kilowatts.

The project develops a small amount of flood control and a very small portion of the total cost of the project has been allocated to flood control. It does develop valuable recreational, fish, and wildlife benefits in the region.

We presented this project to the Senate committee in 1963. We found at that time that something in excess of \$3 million of project costs were above the ability of the local entities to repay, on the basis of established reclamation law and policy—in the case of agricultural water, 50 years plus a 10-year development period. As far as power costs are concerned, the repayment period is 50 years with interest, and the same for municipal and industrial water.

We proposed at that time that the necessary additional revenues, some \$3 million above and beyond the ability of the local people to pay, as we saw it at that time, be returned to the Treasury of the United States, either from surplus power revenues at the Hoover Dam powerplant after amortization, or from a Pacific Southwest development fund, which might be authorized by the Congress in accordance with a plan proposed and being developed by the Department of the Interior.

Since that time, the people of Utah, as has already been noted, have indicated a willingness to assume the full financial responsibility for the repayment of the cost in accordance with the reclamation law, of the projects we are discussing here this morning.

In the first place, the total Federal cost of the project has been reduced in the amount of \$1,904,000 by the offer of the State of Utah to assume the responsibility for highway relocation. That normally would be a project cost. So that instead of a total Federal cost of \$44,822,000, the total Federal cost would be \$42,918,000.

The restudy of the appropriate charges for municipal and industrial water result in a municipal-industrial water rate of \$22.21 an acre-foot, instead of \$22.12 an acre-foot, as we had computed it when we presented it to the Senate committee in 1963.

The city of St. George has indicated its willingness to contract for all of the power output of the three comparatively small powerplants. We had originally indicated the cost of this power at 6.9 mills per kilowatt-hour. They have now indicated a willingness to pay 7.15 mills per kilowatt-hour for the power produced at the powerplant.

With all these things taken into account, the reduced Federal cost because of the State of Utah's willingness to pay for highway relocation, the slight increase in municipal and industrial water rates and the, again, comparatively small increase in power rates, we now find that it is possible to meet the financial requirements in accordance with reclamation law and policy for the Dixie project within the permissible period established by law.

We find that at the end of the repayment period, on the basis of these calculations, a surplus of revenues exists in the amount of \$50,000.

We still think that it is important that we move ahead as rapidly as possible with a regional program for the Pacific Southwest. We think that it is appropriate and necessary that a regional development plan be authorized and constructed as soon as possible.

The Congress now has an opportunity to authorize the Dixie project either as an individual, self-supporting unit, or as a unit of the Pacific Southwest development program.

In any event, it would seem appropriate to us that if the Dixie project is authorized and constructed prior to the authorization of a Pacific Southwest development program and the creation of a Southwest development fund, that some provision be made so this unit may eventually become a part of a Pacific Southwest development program.

This is an excellent reclamation project, in accordance with reclamation law and policy. We are here this morning to express the hope on the part of the Department of the Interior and the administration that we may be able to move ahead with development of the water resources of southwestern Utah, and that we can soon move ahead with the development of water resources for the entire region.

Thank you, Mr. Chairman.

Mr. ROGERS. Thank you, Mr. Holum.

Did you want your written statement printed in the record?

Mr. HOLUM. I would be very happy to have it available to the committee.

Mr. ROGERS. Without objection, it will be included, together with your supplemental remarks.

(The statement follows.)

STATEMENT OF ASSISTANT SECRETARY OF THE INTERIOR KENNETH HOLUM ON PROPOSED LEGISLATION TO AUTHORIZE THE DIXIE PROJECT, UTAH

Mr. Chairman, the authorization and construction of the Dixie project has long been a cherished objective of the people of Washington County, Utah, and the State of Utah. Investigation of this project by the Bureau of Reclamation began in 1940, almost 25 years ago. The project is urgently needed; it is economically sound and financially feasible. I welcome, therefore, the opportunity to be here today to indicate the support of the Department of the Interior for this worthwhile project.

The Dixie project is a potential multiple-purpose water resource development in the Virgin River Basin in southwestern Utah which can make an important contribution to the economic welfare of this area. Its construction would permit regulation of the Virgin River and its tributary, the Santa Clara River, to provide for the irrigation of approximately 21,000 acres of land and to provide a municipal and industrial water supply to the city of St. George. Electric energy for project use and commercial sale would be produced. Benefits to fish and wildlife and recreation also would accrue. In addition, minor flood-control benefits would result from operation of the project. Following development of the project and pursuant to an August 26, 1953, agreement among local government and water users' organizations, Cedar City, Utah, would construct works for the diversion of up to 8,000 acre-feet of water from tributaries of the Virgin River for municipal use. Cedar City has agreed to reimburse the project for any loss of power revenues caused by such diversions.

Despite the fact that the project has a benefit-cost ratio of 2.2 to 1, we have not previously requested authorization because we have not been able to show project repayment as required under reclamation law. In recent years, however, several developments have occurred that have enhanced the project's financial feasibility.

Municipal and industrial water supply for the city of St. George has become an important area need, and revenues from the sale of municipal and industrial water can be used to assist in the repayment of irrigation costs. The State of

Utah has agreed to finance the relocation of Highway U-15 at the Virgin City Reservoir site, thus relieving the project of a cost of about \$2 million. Present policies pertaining to fish and wildlife and recreation permit a moderate writeoff of project costs for these purposes. As a result, by adjusting power and municipal and industrial water rates within acceptable limits, repayment of all reimbursable costs within allowable repayment periods can now be demonstrated.

The Department of the Interior has recently released its report on the Pacific Southwest water plan. We believe that the ultimate solution to the water resource problems of the Pacific Southwest must be found in a regional approach. The Dixie project was included as an integral part of the Pacific Southwest water plan. It was so included, first, because the water problems of the Dixie project area are part of the overall water problems facing the Pacific Southwest. Secondly, the Dixie project would benefit from participation in the development fund proposed as a key feature of the Pacific Southwest water plan.

Because of the close interrelationship of all of the water problems of the Pacific Southwest, we would greatly prefer to see the Dixie project authorized as a part of a regional plan. With the assumption of added financial burdens by the State and the project water and power users, however, the project can be shown to be self-supporting financially, and, therefore, we would not object to authorization of the Dixie project as an independent undertaking. We do believe, however, that should the Dixie project be so authorized prior to authorization of a regional plan, provision should be made for its later incorporation in the Pacific Southwest water plan or any other regional plan that may be adopted in order that the project may receive the advantages that would result from its participation in a basin development fund.

In our planning report submitted to the Congress on March 18, 1963, the repayment analysis indicated that all of the \$41,895,000 reimbursable project construction costs except \$3.7 million could be repaid from project revenues within a 60-year repayment period, which included 50 years plus a 10-year development period. We note that financial assistance for repayment of irrigation costs could be obtained from Hoover Dam revenues after the year 1987 or from other sources. We noted also that without such financial assistance, the total reimbursable project costs could be repaid by the 65th year of project operation.

Since that time, in accordance with the suggestion of the distinguished chairman of this committee, we reexamined the Dixie project repayment situation to determine if it would be possible to achieve full repayment of reimbursable costs from project sources. The decision of the State of Utah to finance the relocation of Highway U-15 has been one factor in improving the project's financial outlook. By increasing the rate for municipal and industrial water supply from \$22.12 per acre-foot to \$22.21 per acre-foot and by increasing the rate for firm energy from 6.9 to 7.15 mills per kilowatt-hour, sufficient additional revenues would be realized to make the Dixie project financially self-sufficient. All reimbursable project costs could be returned from project revenues without financial assistance from sources outside the project.

Project interests have indicated that they would accept this financial arrangement and would enter into the necessary water and power repayment contracts. Accordingly, we support authorization of the Dixie project on this basis, although, as I previously indicated, we would much prefer to see the project authorized as part of a unified regional development. Commissioner Dominy and members of his staff, together with representatives of other Bureaus of the Department of the Interior, are here today to present more detailed information and to discuss other aspects of the proposed Dixie project.

Mr. ROGERS. Mr. Aspinall, any questions?

Mr. ASPINALL. Mr. Secretary, there is no reason why, if later on the regional development program in the lower basin should become a reality, that this project, at least, could not be tied in in some practical way as far as operation and maintenance is concerned, with the lower basin regional plan, is that right?

Mr. HOLUM. I know of none, Mr. Chairman.

Mr. ASPINALL. At the present time there is no possible way of tying it in with any plan unless we would follow the same procedure that was followed in regard to the Eden project?

Mr. HOLUM. There is no Pacific Southwest development fund at this time. That is right, Mr. Chairman.

Mr. ASPINALL. It is just as much of a dream, if not more of a dream, as the Upper Colorado River Storage Act was at the time Senator O'Mahoney and those associated with him brought the Eden project into existence?

Mr. HOLUM. Mr. Chairman, you are completely correct. It is a dream. I hope the dream will be brought to fruition in the very near future.

Mr. ASPINALL. Are you satisfied that the studies that have been made on this project are sufficiently firm so that we can rely upon the question of the availability of water, the delivery of water for the rates suggested, and the slight increase in costs for water can be contemplated?

The reason I ask this is that we have just considered a small non-reclamation project in this area, authorized under the Water Resources Act of the thirties, and I want to be sure there is no comparison, as far as these projects are concerned.

Mr. HOLUM. Mr. Chairman, I think it would be most appropriate to ask the spokesman for the Bureau of Reclamation to verify this. My office has looked into it. We think that a very careful study has been made. We recognize, however, that the margins are very close, and at the end of the 60-year period, the anticipated surplus is 50,000, and I certainly agree we have to proceed with a great deal of care as to financial management.

Mr. ASPINALL. Relative to this increase in price for the water, in order to make this project pay out, provide for its repayment within 50 years, you have increased the cost of municipal water from 7 cents per thousand gallons to a little over 7 cents per thousand gallons; is that correct?

Mr. HOLUM. I would assume so, Mr. Chairman. I have the figures in acre-feet, from 22.12 an acre-foot to—

Mr. ASPINALL. I think my figures are fairly accurate. And that you have increased power from 6.9 to 7.15, which is an increase of twenty-four one-hundredths of a mill.

Are you satisfied that when it comes time to have a contract executed and signed, that the users of these two particular benefits from this project will be willing to sign for the necessary 50-year payout period?

Mr. HOLUM. We have been assured that they will, Mr. Chairman. I am sure the committee will have an opportunity to discuss this same question with spokesmen for the city of St. George and the conservancy district who have the principal responsibility for repayment, here. I think it will be incumbent upon us to make certain that they are willing to assume these financial responsibilities.

Mr. ASPINALL. What you are saying is that there will be no moneys asked for construction of this project until the contracts have been executed, is that correct?

Mr. HOLUM. I think that would be proper procedure, Mr. Chairman.

Mr. ROGERS. Mr. Chenoweth.

Mr. CHENOWETH. Mr. Secretary, you propose this as a separate project and not necessarily a part of the regional plan? You referred to that in your statement, did you not?

Mr. HOLUM. We would hope very much that the dream of the Pacific Southwest regional development plan will be realized in a very short period of time. In the meantime the people of Utah, the people of the area and the people of the State have made it possible to move ahead on this project, as an individual, self-supporting project and I think that provision merits consideration by Congress.

Mr. CHENOWETH. This project has been pending a long time?

Mr. HOLUM. Yes, it has.

Mr. CHENOWETH. At first I understand it was not a feasible contract, is that correct?

Mr. HOLUM. I am sorry—

Mr. CHENOWETH. It was not a feasible project in the beginning?

Mr. HOLUM. When we presented the project to the Senate committee a little over a year ago, it required financial assistance from some source outside of the project to the amount of slightly over \$3 million. The local people have now agreed to increase water and power rates in the State of Utah and have agreed to make financial contribution in the amount of \$1.9 million, so we now have a project that meets all of the requirements.

Mr. CHENOWETH. There is a great deal of enthusiasm on the part of the local people for this project.

Mr. HOLUM. I think it is fair to say the local enthusiasm is unique. The conservancy district has agreed to an ad valorem tax in the amount of 5 mills. It would meet the local interest in many ways and particularly in the pocketbook.

Mr. CHENOWETH. I understand that the financial problem has been worked out? That the local contribution will be sufficient to make this a feasible project?

Mr. HOLUM. Yes.

Mr. CHENOWETH. So you can go ahead with construction?

Mr. HOLUM. Yes.

Mr. ROGERS. Would the gentleman yield to me?

Mr. CHENOWETH. Yes.

Mr. ROGERS. Mr. Holum, did you say \$22 an acre-foot for municipal and industrial water?

Mr. HOLUM. \$22.21.

Mr. ROGERS. That comes out to around 7 cents a thousand gallons.

Mr. HOLUM. Yes.

Mr. ROGERS. Is that at the reservoir or at the city gate?

Mr. HOLUM. It is in the project. The city has to refine it, purify it, and get it to the city.

Mr. ROGERS. What are they paying for water out there, now?

Mr. HOLUM. We will supply that information, Mr. Chairman.

Mr. CHENOWETH. I believe that is all, Mr. Chairman. Thank you very much.

Mr. ROGERS. Mr. Haley—

Mr. HALEY. Mr. Secretary, page 2 of your statement, you say several developments have occurred out there recently that make this project financially feasible. What are those developments?

Mr. HOLUM. Well, the developments, Congressman, are four; first, is the offer of the State of Utah to contribute the \$1,900,000 required for highway relocation; second, is the slight increase in municipal and industrial water rates; third, is the increase in power rates; and fourth,

a small, but it should be noted significant, contribution that has been made to the financial feasibility of the project by the application of the standards relating to reimbursability of recreation, fish and wildlife, as set out in H.R. 9032.

Mr. HALEY. In other words, Mr. Secretary, this project would not have been feasible had you not put recreation and wildlife as non-reimbursable items.

Mr. HOLUM. When we are talking about feasibility, what we are really talking about is the ability of the local people to repay the project in accordance with reclamation law. It seems to me it is only proper to assign the same standards for recreation, fish and wildlife to this project we are assigning to all others of the country. Within that context the change in policy as it relates to recreation has helped to make this project financially feasible.

Mr. ASPINALL. If my colleague will yield.

Mr. HALEY. I yield.

Mr. ASPINALL. To get the record straight as far as the Department is concerned, the amendment which is proposed in the departmental report and the computations which you made are in conformance with provisions of H.R. 9032, which is presently before the House; is that not correct?

Mr. HOLUM. That is correct, Mr. Chairman.

Mr. ASPINALL. This procedure is more conservative than what the Army Engineers have been following for some time?

Mr. HOLUM. That is correct. Actually, the application of these standards from H.R. 9032 to this project have resulted in an increase in the allocation to recreation from \$745,000 to \$1,800,000, and a decrease in the allocations to fish and wildlife enhancement from \$2,016,000 to \$1,494,000.

Mr. HALEY. Mr. Secretary, what if H.R. 9032 does not pass?

Mr. HOLUM. Mr. Congressman, if H.R. 9032 does not pass—and I certainly hope that it does—the United States will continue to be without standards that apply to recreation, fish, and wildlife reimbursability equally to all agencies. I hope very much that it does pass. I suppose an alternative to the passing of the organic act—H.R. 9032's acceptance by the Congress—the principles will be accepted in project authorization.

Mr. HALEY. I do not infer that I am against 9032. I am just wondering, if H.R. 9032 does not pass, you probably would not have a feasible project.

Mr. HOLUM. Frankly, Congressman, I do not know exactly what the procedures will be in the future if H.R. 9032 does not pass, but I would hope that we do develop Government-wide standards in this important area.

Mr. ASPINALL. If my colleague will yield at that point—

Mr. HALEY. I yield.

Mr. ASPINALL. H.R. 9032 does not affect the economic feasibility of this project. It is a question of repayment. If other projects throughout the United States, such as those that were in the Flood Control Act of 1962, received benefits for recreation, fish and wildlife, that they do under that project and under that program, certainly a more conservative formula as now proposed for all reclamation projects as well as all other water resources projects should not make

this project become either economically unjustified or become financially infeasible. That is the gist of the H.R. 9032 provision.

Mr. HALEY. Mr. Secretary, where is the municipal water coming from now and what is the cost of it? Do you know?

Mr. HOLUM. I think I will have to ask the Reclamation people to answer that question, either now or when they appear in a few minutes.

Where does the water supply come from now?

Mr. PELHAM. They get it mostly from springs. I haven't got the figures, but they get it mostly from springs, back in the mountains.

Mr. HALEY. Where is the power coming from now?

Mr. HOLUM. The city of St. George, as I understand it, generates its own electricity from diesel plants, and it may be that they buy a little power from companies in the area. I am not sure but I am confident that people from St. George can supplement that answer. St. George has a municipal utility.

Mr. HALEY. Mr. Chairman, when the representatives of St. George are before the committee, I would like to have an answer to that question.

Mr. ROGERS. If the gentleman will yield, some of the officials are sitting in the audience and I am sure they can testify to that point.

Mr. HALEY. Now, Mr. Secretary, when you prepared, or when your Department prepared your report to this committee, on June 19, did you have the benefit of the letter of June 18, 1964, from the Governor of the State of Utah before you?

Mr. HOLUM. The willingness of the State of Utah to assume this responsibility for highway relocation was taken into account in the report.

Mr. HALEY. It made a pretty quick trip to Washington. One document is June 14 and the other is June 18.

In the meeting of the Utah State Highway Commission of March 6, 1964, a motion was made by Commissioner Smirl, seconded by Commissioner Bagley, and unanimously passed, and I will read it and I will ask Mr. Burton if this is the document he submitted for the record. It is as follows:

That we reaffirm our position as before, that we will proceed with reconstruction of Highway U-15 to an alignment which will clear the proposed reservoir site, as a Federal-aid highway project, so that it will not interfere with the cost of the reclamation project, providing other avenues of obtaining Federal funds are not available.

May I ask the gentleman if that is the document he is relying on to obtain assistance—is that the document that you are relying on, insofar as the highway department is concerned, for the construction of this road?

Mr. BURTON. Will the gentleman yield to me?

Mr. HALEY. Yes.

Mr. BURTON. That is the motion I have and wanted inserted in the record following the Governor's letter.

Mr. HALEY. I do not think this resolution says anything other than if you can get some Federal aid for the project, they will build it. I do not see where this is a binding obligation on the part of the State highway department.

Now, the Governor, of course, goes a little further in his letter, but after all, Governors come and go. I do not see in this resolution, Mr.

Burton, where the Utah Highway Department has done anything other than say, "All right, we will build the road if you will give us Federal aid to build it."

Mr. BURTON. Will the gentleman yield to me?

Mr. HALEY. Yes.

Mr. BURTON. I do not think there is any question about the good faith involved—and I know the gentleman did not mean to imply that, at all—but the Governor is speaking for the State and while it is true, they do come and go, he has gone on record quite forcefully in a letter to the chairman of the committee and I cannot conceive of any circumstances under which the offer of the State to relocate the road at their own cost would be altered.

I would also say to my good friend from Florida, if you read carefully the minutes preceding the passage of the motion which you have read into the record, again you understand better what the road commission is trying to do and it was for that reason that I asked the chairman to have these minutes inserted following the Governor's letter.

Finally, let me call your attention again to the motion that you read to us. It says:

"We" reaffirm our position as before.

We will proceed with reconstruction of Highway U-15 out of funds that will be programmed.

Prior to the passage of this motion, the relocation costs were going to be assigned to the project.

Mr. HALEY. May I ask the gentleman what are "we" reaffirming? If the language is not tighter than the language in this resolution, "we" are not reaffirming anything.

Mr. BURTON. Let me say this, I am so positive about my ground on this that if there is serious question in the gentleman's mind as to what the motion means, if you would care to suggest to me some language that you think would be more clear, I would not be surprised but what we could get the highway commission to adopt the gentleman's language.

Mr. HALEY. I think I could get some language that would certainly be more specific than the language that we have here.

Mr. BURTON. I would be happy to receive it, sir.

Mr. HALEY. If "we" are reaffirming a position, I would like to know what "we" are reaffirming because this resolution does not mean anything. They say they will build a road if they can get some Federal aid to build it. They are not beginning, under this resolution, to do anything, as I see it.

Mr. HOLTMAN. Mr. Congressman, I would not presume to speak for the State of Utah. I think that they should speak for themselves and make their position as clear as possible and satisfy the requirements of this committee.

Certainly I can understand that under traditional reclamation policy that if funds were available under reclamation policy to relocate this highway, that Utah would like to have the same treatment as other States and projects; however, their offer is to make this project self-sustaining and to finance the relocation of this road. The Department of Commerce speaking through the Bureau of Public Roads, in their comment on the project, has said that Federal funds will not be

available to assist in the relocation of this road up to present standards. If they want to improve it, that is a different matter.

Mr. HALEY. You can understand my concern, can you not, here, Mr. Secretary? These people are saying, "We reaffirm," and "We reaffirm if we can get Federal funds."

After all, this is one of the things that goes into the making of a feasible project. Now, if the State of Utah is going to build a road, and that makes a feasible project that is perfectly all right, but I think that you should have some firm commitment from the State highway department and not let "we" depend on Federal funds to make a project where feasibility is doubtful, using the general taxpayers' funds or other funds to relocate a road that I presume is already a good road.

Mr. Holum, how does this 7.15 mills per kilowatt-hour compare with the cost of electrical energy in that part of the country, do you know?

Mr. HOLUM. I am told that the power that the city of St. George is generating for itself with the present equipment it has costs 13 mills, so it would be a substantial reduction over the cost of the present power supply available to this particular municipal utility. On the other hand, it is only appropriate to note that this is comparatively expensive power at 7.15 mills per kilowatt-hour; it is higher than we ordinarily recover from reclamation power and it is higher than the cost of modern and efficient generation.

Mr. HALEY. Let me ask you this. Are there any other sources of power that this community could tap, rather than the generation of their own power or the building of this powerplant by the Federal Government?

Mr. HOLUM. The power from the Colorado River storage project, the Glen Canyon Dam particularly, is becoming available in this part of the country.

Mr. HALEY. So the power needs actually might be well satisfied without the construction of this project, is that right?

Mr. HOLUM. I think, again, Congressman, that I should let the local people speak to this question but I think what we have here is another indication of the enthusiastic local interest in support of this project, a willingness on the part of all of the entities in the area to give it the financial support required in order to make it possible.

Mr. HALEY. They may be enthusiastic now, but when they begin to pay this high rate for municipal water, they might not be so enthusiastic in the future. Is that a possibility? They are going to have the highest power rate in that part of the country, isn't that right?

Mr. HOLUM. Perhaps not the highest power rate in that area of the country, but their rate for wholesale power will be high and I think it is appropriate that the members of the committee and responsible administrators in the Department of the Interior make certain these revenues are available before this project goes forward. That is correct.

Mr. HALEY. That is all, Mr. Chairman.

Mr. ROGERS. Mr. Skubitz.

Mr. SKUBITZ. Mr. Secretary, I am happy to hear you say that in your opinion this project is now economically sound and feasible.

I visited this area as a member of the subcommittee. We sat, as I recall, from 7 in the evening until after midnight listening to witnesses. Not bankers, not chamber of commerce people, but people who work the soil. Frankly, I have never met a finer group of people or a more sincere group of people. I am hopeful that this committee will give this project careful and sympathetic study. These people are willing to make sacrifices in order that this project might be realized. I want to assure the folks from that area, as one member of this committee I intend to give it every consideration.

Mr. HOLUM. Congressman, I haven't had the opportunity to visit the region and meet the fine people who live there, but I share your enthusiasm for it and I am very happy that ways have been found, and the local people have demonstrated keen interest in the project.

Mr. SKUBITZ. Mr. Secretary, may I say you will never meet a finer group of people. They remind me of the people in Kansas.

Mr. ROGERS. Mr. Johnson.

Mr. JOHNSON. I just want to welcome the Secretary here. I see by the statement that this has been under study since 1940 and 25 years of consideration has been had.

I want to say, as far as the project is concerned, it meets all of the criteria, I certainly think this is the way our money should be spent on all reclamation projects that are as good as this one.

Mr. HOLUM. While the Department of the Interior is equally enthusiastic about the Auburn-Folsom project—

Mr. JOHNSON. There are so many of them flying around that I just want to make sure that those who don't have 25 years of consideration aren't moving ahead too fast.

Mr. HOLUM. We hope so.

Mr. BURTON of Utah. Mr. Holum, I thank you for an excellent statement and we appreciate the cooperation you are giving us on this project. That is all, Mr. Chairman.

Mr. ROGERS. Mr. Udall.

Mr. UDALL. No questions.

Mr. ROGERS. Thank you very much, Mr. Secretary, for your testimony.

STATEMENT OF FLOYD E. DOMINY, COMMISSIONER, ACCOMPANIED BY DANIEL V. McCARTHY, CHIEF, DIVISION OF PROJECT DEVELOPMENT; H. E. PELHAM, REGIONAL PROJECT DEVELOPMENT ENGINEER, REGION 3; AND A. B. WEST, REGIONAL DIRECTOR, REGION 3

Mr. ROGERS. The next witness scheduled is Mr. Floyd E. Dominy, Commissioner of Reclamation.

Mr. DOMINY. Mr. Chairman and members of the committee, if I may put my prepared statement in the record as though read in full, I will then just refer to those parts of it that are not repetitious of the questioning that has preceded my testimony, if that pleases you.

Mr. ROGERS. The statement will be included in the record the same in fact as though read in full and you may discuss it as you desire.

(Mr. Dominy's prepared statement follows:)

Mr. Chairman, the investigation of the Dixie project over the past 24 years has been characterized by the patience, perseverance, and cooperative attitude of the concerned local and State interests. Our investigations have always indicated the Dixie project to be a sound economic undertaking, but due to accident of physical location we have had difficulty in demonstrating the required repayment of reimbursable project costs. Had the Dixie project been located in any basin of the West where a basin account or other means of financial assistance to irrigation from basin powerplants has been available as a matter of policy, I am confident that it would have been authorized and constructed long ago.

As Mr. Holom has just indicated, this repayment hurdle has now been cleared. It is with particular pleasure, therefore, that I appear before you in support of the Dixie project.

I also would prefer to see the Dixie project authorized as part of a regional development plan such as our Pacific Southwest water plan. The overriding water problems of the Pacific Southwest are regional in nature and cannot be resolved satisfactorily by separating them for independent treatment.

The Dixie project, however, would have only a very minor effect on the water supplies of the Lower Colorado River basin. In view of the fact that the prospective water and power users have indicated willingness to assume the financial burdens necessary to full repayment of reimbursable project costs, and in view of their long wait, I do not believe they should be denied action that will make the Dixie project a reality at the earliest possible time.

Should the Dixie project be authorized as an independent project, prior to the authorization of a regional plan, I believe that it should not be precluded from later enjoying the benefits from participating in a regional development program, especially as relates to a basin development fund.

The Dixie project would be a multipurpose development that, through storage of the flows of the Virgin River and of its tributary, the Santa Clara River, would provide for supplemental irrigation water to 9,445 acres of presently developed land and for a full irrigation water supply to 11,615 acres of presently dry land. It would also provide for the production of electric energy; furnish municipal and industrial water supplies; conserve fish and wildlife resources; and provide recreation, flood control, and sediment control.

The existing supply of water, practically all of which is obtained by direct diversion, is undependable as well as inadequate for the arable lands within the project area. Provision of 246,000 acre-feet of storage space at the Virgin City Reservoir on the Virgin River and 23,745 acre-feet at the lower Gunlock site on the Santa Clara River would provide the needed regulation.

The Hurricane division of the project, embracing the Virgin City Dam and Reservoir, would include all of the project's hydroelectric features, with a total installed generating capacity of 13,200 kilowatts and an irrigation distribution system to serve 17,135 acres of land. It would also provide a municipal and industrial water supply to the city of St. George. Recreation facilities would be constructed at the Virgin City Reservoir, which would be immediately downstream from Zion National Park.

The Santa Clara division, including the Lower Gunlock Dam and Reservoir, would furnish irrigation water to 3,925 acres of land and would provide flood control, fish and wildlife and recreation benefits.

In our feasibility investigation, we made sufficient studies and computations to be sure that, with the Dixie project constructed, the quality of the water for downstream use, although somewhat impaired by project operation, still would be suitable for the irrigation of the salt-tolerant crops now grown in the area. We propose as a part of the advance planning following authorization of the project to thoroughly investigate physical solutions to the water quality problem. Possible solutions would include evaporation of all or part of the flows of the highly mineralized La Verkin Springs, or possibly saline water conversion. A sum of \$2 million is included in the project cost estimate to provide a physical solution to this problem. If none is devised, that amount is ample to compensate downstream interests for damages that might occur following development of the Dixie project.

The total cost of the Dixie project is now estimated at \$42,918,000, which includes \$239,500 of nonreimbursable investigation costs from the Colorado River development fund and \$5,500 contributed by the State of Utah. The principal portion of the decrease from that presented in our planning report (\$44,868,000) results from the elimination of the highway relocation costs (\$1,904,000). It is now planned that the State of Utah will assume the costs of relocating State Highway 15 at the Virgin City Reservoir site as a State contribution.

The allocation of construction costs among the various project purposes has been revised as required to take account of the reduced total and of the revised estimate of annual project benefits. Excluding the \$245,000 of nonreimbursable and contributed investigation costs, the remaining \$42,673,000 is allocated among the various project functions as follows: Irrigation, \$30,182,000; power, \$6,573,000; municipal and industrial water supply, \$2,474,000; flood control, \$142,000; fish and wildlife, \$1,494,000; and recreation, \$1,808,000.

As provided by the proposed legislation, the costs allocated to recreation and fish and wildlife enhancement would be nonreimbursable and nonreturnable, consistent with the administration's policies and procedures set forth in H.R. 9032, 88th Congress. Costs allocated to flood control would be nonreimbursable under reclamation law.

The costs allocated to power and municipal and industrial water supply, including interest during construction, would be returned with interest. The investment costs allocated to power would be repaid in 41 years and the cost allocated to municipal and industrial water supply would be repaid in 50 years. Such repayment would require rates of 7.15 mills per kilowatt-hour for firm energy and \$22.21 per acre-foot for municipal and industrial water as compared with rates of 6.9 mills per kilowatt-hour and \$22.12 per acre-foot as presented in our planning report. Local and State interests have indicated their acceptance of such rates.

The costs allocated to irrigation would be reimbursable without interest within a 50-year period plus a 10-year development period. The project revenues obtained from the sale of irrigation water for new lands would amount to \$268,500 per year and from servicing presently irrigated lands would amount to \$89,300 annually. In addition, ad valorem taxes varying from \$64,500 to \$117,000 annually would be applied to repay the irrigation costs. Surplus revenues from the sale of power and municipal and industrial water, following repayment of the investment costs, would be used to assist in the repayment of irrigation costs within the overall 60-year payout period.

The Washington County Water Conservancy District has been formed as the agency empowered to contract with the United States and to assume responsibility for operation and maintenance of the project. The city of St. George has indicated its willingness to contract for the municipal and industrial water supply and for the electric energy produced by the project.

Attached to this statement is a tabulation indicating how repayment of reimbursable costs would be accomplished with the Dixie project operating as an independent development.

The annual benefits have been computed to total \$3,992,800 including irrigation benefits of \$3,259,100 and power benefits of \$342,000. Benefits due to municipal and industrial water would total \$166,300 annually and flood control, fish and wildlife, and recreation would result in \$7,200, \$78,000, and \$140,200 worth of benefits annually.

A comparison of the benefits with the costs indicates that the project is economically justified, as the benefit-cost ratio is 2.2 to 1. The benefit-cost ratio computed under former policies and procedures as shown in our planning report, which was prepared in 1961, is 2.1 to 1.

The Dixie project is a worthy and urgently needed water resource proposal. The support for the project, at the State and local level, is overwhelmingly favorable as evidenced not only by statements made at previous hearings but also by concrete evidence of willingness to provide repayment and other funds as required to make the project financially feasible.

The authorization and construction of the Dixie project, preferably as part of an overall regional development program, would be in the best traditions of the reclamation program.

DIXIE PROJECT, UTAH

Repayment of reimbursable costs with project operating as an independent development

	Planning report (H. Doc. 86, 88th Cong.)	1964 analysis
Allocation of construction costs:		
Reimbursable:		
Irrigation.....	\$31,411,000	\$30,182,000
Power.....	7,675,000	6,573,000
Municipal and industrial water.....	2,609,000	2,474,000
Total, reimbursable.....	41,695,000	39,229,000
Nonreimbursable:		
Flood control.....	167,000	142,000
Fish and wildlife.....	2,016,000	1,494,000
Recreation.....	745,000	1,808,000
Total, nonreimbursable.....	2,928,000	3,444,000
Total project cost.....	44,623,000	42,673,000
Repayment of reimbursable costs:		
Irrigation:		
Irrigators, old lands.....	5,352,000	4,465,000
Irrigators, new lands.....	13,420,000	13,425,000
Conservancy district ad valorem tax.....	5,635,000	5,635,000
Irrigation assistance from power revenues.....	2,811,482	5,648,000
Irrigation assistance from municipal and industrial water sales.....	437,696	1,059,000
Irrigation assistance from nonproject sources.....	3,754,822	(50,000)
Surplus power and municipal and industrial revenues.....		
Total, irrigation allocation.....	31,411,000	30,182,000
Power:		
Allocated construction cost.....	7,675,000	6,573,000
Interest during construction.....	290,000	286,000
Total.....	\$ 7,965,000	\$ 6,859,000
Municipal and industrial water supply:		
Allocated construction cost.....	2,609,000	2,474,000
Interest during construction.....	128,000	132,000
Total.....	\$ 2,737,000	\$ 2,606,000

¹ Specific costs of fish and wildlife and recreation facilities would total \$715,000. This amount plus \$5,570,000 of the \$30,465,000 construction cost for joint facilities would result in a maximum of \$6,285,000 that could be made nonreimbursable under the procedures in H. R. 9032. In comparison, the amount allocated to the 2 functions would total \$3,302,000.

² To be repaid with interest.

Mr. DOMINY. I would like to make the first point that in this 24-year period the project has been under review, it has always been considered economically and practically feasible. The only problem has been repayment under reclamation law. Had there been a basin account principle as we have in the Missouri Basin or the Upper Colorado Basin, this project, I am sure, would have been placed in construction long ago.

The Dixie project is truly a multiple-purpose project as has been pointed out, here. It has flood control, municipal and industrial water benefits, irrigation, recreation, and fish and wildlife.

The existing supply of water, practically all of which is obtained now by direct diversion, is undependable as well as inadequate for the

arable lands that are readily available in these valleys. The provision of 246,000 acre-feet of storage space at the Virgin City Reservoir on the Virgin River, and 23,745 acre-feet at the lower Gunlock site on the Santa Clara River would provide needed regulation. As a matter of fact, these structures will completely control the available water supplies we have determined are there from our hydrologic studies over a quarter of a century or more.

The Hurricane division of the project, embracing the Virgin City Dam and Reservoir, would include all of the project's hydroelectric features, with a total installed generating capacity of 13,200 kilowatts and an irrigation distribution system to serve 17,135 acres of land. It would also provide a municipal and industrial water supply to the city of St. George. Recreation facilities would be constructed at the Virgin City Reservoir, which would be immediately downstream from Zion National Park.

The Santa Clara division, including the Lower Gunlock Dam and Reservoir, would furnish irrigation water to 3,925 acres of land and would provide flood control, fish and wildlife, and recreation benefits.

In our feasibility investigation, we made sufficient studies and computations to be sure that, with the Dixie project constructed, the quality of the water for downstream use, although somewhat impaired by project operation, still would be suitable for the irrigation of the salt-tolerant crops now grown in the area. We propose as a part of the advance planning following authorization of the project to thoroughly investigate physical solutions to the water quality problem. Possible solutions would include evaporation of all or part of the flows of the highly mineralized La Verkin Springs, or possibly saline water conversion. A sum of \$2 million is included in the project cost estimate to provide a physical solution to this problem.

We know this is a sufficient estimate because as a maximum solution we could retire the lands now being irrigated lower down if the salt problem were acute, for less than \$2 million—

Mr. ROGERS. You say \$2 million—

Mr. DOMINY. We have \$2 million in our project estimate—the total estimate that is before the committee for the project cost, for solving this salt problem.

Mr. ROGERS. What method is going to be used?

Mr. DOMINY. We don't know. It may be that we can evaporate a part or all of the flow from the La Verkin Springs, which comes in below the dam, and which is the chief contributor to the salt problem in the river.

Now, presently, the water is being used for irrigation lower down for salt-tolerant crops and the spring flows they divert frequently in heavy amounts flush out the salts that accumulate.

Now, with project operation, past practices of heavy diversions in the spring will no longer be possible on the same scale because we will be storing some of those waters. Consequently the average salt content of the water being used for irrigation farther down in the Virgin River system may be higher than it has been without the project.

That is why we recognize there may be a problem. We may have to do something like evaporating part of this salt or possibly putting in a salt water conversion plant. I merely say that the \$2 million is such

a liberal estimate of the cost that even if we determine to retire the lands now being irrigated by that water lower down we could do it for less than \$2 million.

Mr. ROGERS. How many acres are involved?

Mr. DOMINY. About 3,200 acres of land.

Mr. ROGERS. What is the salt content out of this water out of the springs?

Mr. WEST. Approximately 9,600 parts per million.

Mr. DOMINY. This is very saline spring, as you can see. It depends on what portion of the water is made up of the flow from this spring as to how tough the problem is farther down. We actually think that with the return flow and regulation in the river that these 3,200 acres will be able to irrigate and get by.

Mr. ROGERS. Where is that spring located on the map?

Mr. DOMINY. It is just below the reservoir on the Virgin. The total cost of the Dixie project is now estimated at \$42,918,000, which includes \$239,500 of nonreimbursable investigation costs from the Colorado River development fund and \$5,500 contributed by the State of Utah. The principal portion of the decrease from that presented in our planning report (\$44,868,000) results from the elimination of the highway relocation costs (\$1,904,000). It is now planned that the State of Utah will assume the costs of relocating State Highway 15 at the Virgin City Reservoir site as a State contribution.

Mr. ROGERS. Mr. Dominy, if you will excuse me a minute right at that point about the highway, as I understand it, the State of Utah has agreed to absorb or accept the cost involving some \$1,940,000 with regard to the highway. The question arose a few moments ago about Federal participation in this highway through the Federal purchase of roads. I think the record ought to be clear on it. It is my understanding that if the funds provided by the Federal Bureau of Roads were used for a road of this type, it simply means that other roads in the State that would have been built by those funds simply have to be gone by; is that correct?

Mr. DOMINY. That is exactly right. The chairman has it exactly correct. The State of Utah has road funds allotted to it on the formula established by Congress. If they choose to use those in relocating this road it means that they pass up using them on some other road in the State, and as I understand it they expect to build this wholly from State funds because they are planning a road program of a magnitude, including this item, greater than the Federal aid would contemplate.

Mr. UDALL. Will the chairman yield?

Mr. ROGERS. I will be happy to.

Mr. UDALL. Would someone indicate on the map where the road is we refer to? Is this the one that goes through the middle of the proposed reservoir?

Mr. DOMINY. Yes, sir. This is the proposed relocation.

Mr. PELHAM. The present road runs right through the center, almost, of the proposed reservoir. The relocated road will come around the edge here.

Mr. BURTON. Mr. Chairman.

Mr. ROGERS. Mr. Burton.

Mr. BURTON. Inasmuch as you have raised the question again on this road, let me respond briefly to a comment made by the gentleman from Florida about what it was that the road commission was reaffirming. One of the reasons I asked permission of the full committee to have the minutes inserted was because it has explained it here. If you will permit me, Mr. Chairman, to quote, the director of the State highway says:

In order to assure the people presently working on a congressional level, to acquire approval of the Dixie reclamation project, it is necessary to reaffirm our previous action of September 11, 1961, that we still stand ready to assist in acquiring the project by assuming the relocation of the highway which must be done in any event.

They had taken a position that they would stand the cost, and as the chairman here has pointed out, if this money is used to relocate this highway, money that is programed for some other project is going to have to be used, so this is the position that the road commission was reaffirming. This information, together with the resolution and a copy of these minutes, was given by me to the chairman of the sub-committee and the chairman of the full committee. At the request of the chairman of the full committee, we contacted the Governor, because he thought, and I think very properly so, that he wanted in the record a full, complete statement by a responsible person who is authorized not only to speak for the State road commission, but also for the State of Utah, and so I hope that when my colleague from Florida rereads the record and sees what this is, any objection that he might have to the language, as to what we are reaffirming, where is the money coming from, et cetera, will be cleared up.

I thank the chairman for yielding.

Mr. DOMINY. I think one other thing ought to be said about the road to complete the record on this point, I have a letter addressed to me dated April 17, 1962, from Paul F. Royster, Director of Operations for the Bureau of Public Roads, replying to our request for a review of the project planned and the pertinent part of the letter reads as follows:

Since the State of Utah has agreed to relocate this road as a condition precedent to the obtaining of the reclamation project, Federal aid highway funds cannot participate in the financing of the relocation of the highway to the standards the Bureau of Reclamation would ordinarily use if cost of relocation was being paid from project funds. Federal aid highway funds can, of course, participate in the cost of further improvements that the State might wish to incorporate into the work.

In other words, if they raise it to a higher standard in the relocation, than its present standard in its present location, they could use Federal aid money to that extent if they wanted to allocate money otherwise available to the State; otherwise it will have to be a contribution by the State.

Mr. ROGERS. Mr. Udall?

Mr. UDALL. This is probably very basic. I want to make sure I understand the situation. In a typical case where a Bureau of Reclamation reservoir is built, part of the project to relocate the road is paid for out of the project funds and must be repaid from project revenue?

Mr. DOMINY. That is correct.

Mr. UDALL. This is a complete departure from that process in that the relocation of that road is not involved under this arrangement in the project funds?

Mr. DOMINY. That is correct. It is further complicated by the fact that Congress also passed an act in 1962 that when certain conditions exist we can relocate it to a standard higher than the existing road on a nonreimbursable basis, but in this case both of those are being passed up and the State is assuming it as a nonproject cost in order to aid the feasibility and repayment of the project.

The costs allocated on this project are: \$30,182,000 to irrigation, \$6,573,000 to power, \$2,474,000 to municipal and industrial, \$142,000 to flood control, \$1,494,000 to fish and wildlife, and \$1,808,000 to recreation.

Mr. ROGERS. With regard to the irrigation, how many acres would be subject to irrigation?

Mr. DOMINY. There are 9,445 acres of presently irrigated lands that would receive an improved water supply with much better regulation of late season water particularly and there are 11,615 acres of land not now irrigated at all that, because of the aridity of the area is unproductive, except for very sparse grazing. Of those lands, you will be interested in knowing, 3,716 acres are Federal land, 35 acres Indian, 363 are State, and 7,501 are in private ownership.

Mr. ROGERS. Have soil tests been made on this?

Mr. DOMINY. Yes, indeed. I am very pleased to tell you that of all the projects we have brought before you, the soil type here is extremely good. I will give it to you by percentages: 48 percent of the lands that I have talked about, both presently irrigated and proposed, is in class I; 46 percent in class II, and only 5 percent in class III, and 1 or 2 percent in what we call class IV that would be irrigable with drainage, so this is a very excellent project from the standpoint of soil types and irrigation utilization.

As Mr. Holum pointed out, the investment costs allocated to power would be repaid in 41 years and the cost allocated to municipal and industrial water supply would be repaid in 50 years. Such repayment would require rates of 7.15 mills per kilowatt-hour for firm energy and \$22.21 per acre-foot for municipal and industrial water as compared with rates of 6.9 mills per kilowatt-hour and \$22.12 per acre-foot as presented in our planning report. Local and State interests have indicated their acceptance of such rates.

Mr. ROGERS. This is not high. It seems to me unusually low.

Mr. DOMINY. This is pretty low.

Mr. ROGERS. It is between 7 and 8 cents a thousand.

Mr. DOMINY. Yes; between 7 and 8 cents a thousand gallons for untreated water, canal side.

The city comes to the canal and picks it up. They pay distribution systems, treatment.

Mr. ROGERS. That is for the canal side, not the reservoir.

Mr. DOMINY. That is right, canal side.

Mr. ROGERS. What is the water on the Canadian side? What is this averaging out?

Mr. DOMINY. Your water on the Canadian runs between 13 and 22 cents a thousand gallons, delivered to the edge of the city. Your costs of the pipeline and pumping plants are included in your water rate.

Mr. ROGERS. That is untreated?

Mr. DOMINY. That is untreated, too. The city has to pick it up, treat it and put it in its own distribution system.

Mr. ROGERS. There are not many cities in the United States that get water below 15 cents a thousand gallons anywhere.

Mr. DOMINY. As a rule of thumb, the cities figure 10 cents a thousand gallons, \$33 an acre-foot. That is about what they are shooting for as a rule of thumb. If they can do that or better—

Mr. ROGERS. Why wouldn't this be figured on an average rather than the figure of \$22? Why should those people there in a situation of this kind, where you are getting the \$30 million interest-free account for some 20,000 acres of land, be allowed to buy cheaper utility, municipal, and industrial water than other people?

Mr. DOMINY. The way we arrived at this figure, we had two things in mind. This rate pays the municipal industrial water allocation with interest in 50 years, and this rate corresponds with what they pay now from other sources of water, including treatment and distribution and everything, so this is not a subsidy in any way as I see it because they are going to have to pay this amount for raw water in the canal.

Mr. ROGERS. What you are doing is figuring out the amount of water that would be allocated to municipal and industrial on a dollar and cents basis and then divide it up over a 50-year period. Why wouldn't it be better to reverse that and determine what the average cost of water is so that the people would participate, like other people all over the country, and figure out how much they would pay if they paid on the average basis and then just make that reduction in the overall cost of the program. It seems to me it would be much more simple.

Mr. DOMINY. Of course, we have been setting our municipal and industrial water rate in recent years on the policy of payout in 50 years with interest. Any charge above that, of course, is available then for aid to the irrigation, the same as the surplus power revenue is available for aid to irrigation.

Mr. ROGERS. Yes; I understand that is true. What I am talking about is this: When you make your breakdowns, irrigation, municipal, industrial, recreation, fish and wildlife, flood control, you do that first. Why wouldn't it be better to determine what the municipal and industrial water sales would bring in before you make your other divisions?

Mr. DOMINY. Well, in other words, approach it from what the traffic will bear point of view.

Mr. ROGERS. That is exactly right; not what the traffic will bear—water is worth what it costs when you need it, but from what the other people throughout the United States are having to pay. That seems to be one of the arguments that comes out so often in these reclamation projects. For instance, I do not know what St. George is paying for raw water now, I do not know what Cedar City is paying but I do know what they are paying in other sections. I mean even east of the Mississippi River. They are paying pretty substantially more for water, raw water, than 7 cents a thousand gallons.

Mr. DOMINY. I think it would be of interest, along this line of questioning, to get a little more detail on this. We will be glad to give you a further statement comparing this with the Canadian River project. We compare always, in municipal and industrial water, what the

cost would be for the next alternate, just as we did the Canadian River. We admit this is fairly high cost water, but the alternate that they would have had to go to if they did not get it from that source would be even more costly; in this case we took into account where the city would have to go if they did not get it from the project and what those costs would be in arriving at this \$22.21 figure, exactly as we did before.

Mr. ROGERS. Do you know what they are paying for raw water now?

Mr. DOMINY. I am told that their water bill runs about this now, but I do not know whether that is raw or treated. The mayor is here. He will testify later. I am sure he will be glad to give you some additional information.

One other thing of interest to the committee here is the Conservancy District Act that applies to this project is a special act and permits a 5-mill levy. This is a much heavier assessment than is usually allowed in legislation covering services and authorizations, and the conservancy district has been formed. It is ready to do business with us as soon as the project is authorized.

The annual benefits to this project are such that the benefit-cost ratio is extremely good.

This project measures out under the established allocation process at 2.2 to 1.

In summary, gentlemen, here is a good multiple-purpose project in an area that is exporting one thing that no country can afford to export, and that is its trained young people, for lack of opportunity. This area, if it is going to expand, has to put its water to work. This project will permit these people, in cooperation with the Federal Government, to develop a potential of land and water that is laying there not fully used. I strongly recommend it to the committee.

Mr. ROGERS. Mr. Dominy, with regard to the irrigation, the \$30 million allocated to irrigation, have you made a breakdown as to the per acre investment?

Mr. DOMINY. Yes; that is a little over \$1,400 per acre.

Mr. ROGERS. How is that paid back? What is your schedule of pay-back? Does it run much larger later on?

Mr. DOMINY. No, sir; well, at least we have not written the final contract.

Mr. ROGERS. I understand.

Mr. DOMINY. We have not proposed to stagger the payments. We have had some problems when we do this. Sometimes we get away with it, but as soon as the first increment of increase comes around we find problems.

I admit that this is a high cost project and it is a high cost project to the farmer. Under this proposed schedule of payment, the new lands are going to pay about \$22 an acre for both construction and O. & M. assessments; that is, combined.

Mr. ROGERS. \$22 a year.

Mr. DOMINY. \$22 an acre per year. That is going to figure out at about \$10 an acre-foot. This is a real rugged payment and the existing irrigated lands for supplemental supply will be charged about \$10 an acre above what they are already paying for amortizing their distribution systems and their existing O. & M., et cetera.

These are high charges. They are the kind of charges that very few irrigation farmers would want to undertake, but these people do want to. They are family farms. They operate pretty largely with family labor, and they are willing to tighten their belts and sign a contract to pay at these rates, because they want this project so badly.

I hope that we do get authorization to include this project in a basin account as part of a southwest water plan.

Mr. ROGERS. Now, if one was included in such plan what would be your position if provision was made for these power revenues in that basin plan to be utilized for the payment of interest on the agricultural on this project, as well as other projects, before any of that money was used for anything else?

Mr. DOMINY. I do not understand your reference to the payment of interest. Under present reclamation law there is no interest on the allocation to irrigation.

Mr. ROGERS. I understand that. You are changing it.

Mr. DOMINY. You propose to have the power revenues used first to pay the equivalent of an interest charge on the irrigation allocation?

Mr. ROGERS. To make my position very clear, I think this: I think that you can call it subsidy, you can call it anything you would like, but the interest-free money that is being furnished by the U.S. Government for irrigation and reclamation, for irrigation in general areas constitutes a grant or subsidy to that particular area, and I am doing some thinking on the possibility of working out a situation that if these power revenues are going to be used to pick up part of the tab, that they certainly ought to be utilized to pick up part of the tab, or pick up the tab further insofar as interest costs on the irrigation, before they are utilized for other purposes that involve other grants and other subsidies.

Mr. BURTON. Will the chairman yield?

Mr. ROGERS. I will be happy to.

Mr. BURTON. When you say these power revenues, you do not mean just those in that particular area.

Mr. ROGERS. No.

Mr. BURTON. If the chairman had such proposal it would apply to the whole Nation?

Mr. ROGERS. That would depend upon whether or not they wanted to continue the basin account theory, whether or not you wanted each basin to stand on its own or whether or not you wanted to use this as an overall revenue receipt. That is something else. There is no need to waste time with that here now.

Mr. DOMINY. Well, of course I have repeatedly said and I will say it again, that I look to Congress to decide the policies under which we will operate and if an adjustment in reclamation law of that magnitude were to be undertaken, of course we would plan and pay out our projects in accordance with the revised law.

The interest-free feature of reclamation has been so widely accepted, for 62 years, that it had not occurred to me that there was consideration for abandoning it, although I recognize that the reason the chairman brings this matter up is because we are loading a sizable percentage of projecting costs onto power revenues for reimbursement in many cases. It is not true in the instant case. This project pays

back \$849 of the average \$1,433 an acre from the irrigators themselves under the proposed payment plan, which is a tremendous contribution from the landowners and the agriculturalists themselves, and \$317 per acre of the cost would come back from surplus revenues of power, municipal and industrial water, and \$267 from conservancy district.

Mr. ROGERS. That \$317 includes interest.

Mr. DOMINY. Yes.

Mr. ROGERS. If you are talking about \$800, if that included interest it would be substantially more than that.

Mr. DOMINY. Excuse me. The \$17 I talk about here does not include interest. That is of the irrigation allocation. Power is repaid with interest, and then the M. & I. is repaid with interest.

Mr. ROGERS. I see what you mean.

Mr. DOMINY. The part of the irrigation allocation they are picking up is not charged interest. This is your proposal.

Mr. ROGERS. If they were charged for both in the \$400 it would be substantially more.

Mr. DOMINY. In this case if you were to apply the theory you are discussing I would assume you would still have the \$849 interest-free, that the farmer himself paid back.

Mr. ROGERS. Not necessarily.

Mr. DOMINY. You would go so far as to put all of it interest-bearing but let power revenues help pick up the burden of interest?

Mr. ROGERS. If you are going to let power revenues do it. There isn't any reason to reinvest money coming in from power revenues and other marginal projects when you have not paid interest on part of the projects that have already been completed. It may be a fallacy but I think it is something that ought to be gone into because there is a sizable argument arising.

Mr. DOMINY. I would hope if Congress decides to revise reclamation law along these lines, that you would always permit the part that is paid by the landowner himself to be interest-free. In other words, if the 20 percent of the project cost is paid by the farmer, and 80 percent by power, that 20 percent always should be interest-free.

Mr. ROGERS. I cannot see what difference that makes to him. He is not going to pay it and neither are we. But there are changes going on all the time. I was reading some of the reapportionment cases this morning the Supreme Court just decided that they have been going along on for 65 or 75 years. Now they come out with members running at large.

(Discussion off the record.)

Mr. ROGERS. Mr. Dominy, in the payout schedule, how much of the available water is allocated for use by municipal and industrial?

Mr. DOMINY. 5,000 acre-feet of the yield, annual yield.

Mr. ROGERS. What is the annual yield?

Mr. DOMINY. There is 105,000 acre-feet of annual yield and of this, 5,000 is dedicated to municipal industrial water.

Mr. ROGERS. Now the balance is allocated primarily to irrigation?

Mr. DOMINY. That is right.

Mr. ROGERS. Let me ask you this: Would it be possible, if industry built up in that area because they got cheaper water, that you could give them more water?

Mr. DOMINY. I expect you would have to do it by retiring some of the irrigation and this might be desirable if industry was a greater contributor to the total economy of the area. For example, in your own State of Texas there has been some retirement of irrigated land around the city of El Paso because municipal and industrial water is of greater importance and there was no other way to get it; so, the city has actually retired agricultural land in order to acquire water rights.

Mr. ROGERS. Do we have here the breakdown of the different costs, the cost of the Virgin City Reservoir, the Gunlock Reservoir and the distribution system?

Mr. DOMINY. Yes. We can give you that.

Mr. ROGERS. Mr. McFarland says we have it. I wanted to be sure.

Mr. CHENOWETH.

Mr. CHENOWETH. Mr. Commissioner, we are always happy to have you before this committee. You have presented a very persuasive and convincing statement.

(Discussion off the record.)

Mr. CHENOWETH. I get the impression you would prefer to put this project in the regional development plan.

Mr. DOMINY. This is the Department's recommendation. It has always been that we need a Pacific Southwest water project, patterned after the upper Colorado storage project. On the other hand, all of our reports and all of my testimony and the testimony of the Secretary fully endorse the Dixie project as a fully supportable project, standing on its own feet. We urge, however, that if the Congress acts now provision be made in the authorizing act that it could be added to the basin project if a basin project ultimately passes.

I, for one, would certainly hope that we would have the authority to include this project into a basin account so that if we run into problems with the rates as high as these for agricultural payments that some additional power revenue assistance might some day be available to this project.

Mr. CHENOWETH. You mentioned in your statement that "Had the Dixie project been located in any basin of the West where a basin account or other means of financial assistance to irrigation from basin powerplants has been available as a matter of policy, I am confident that it would have been authorized and constructed long ago."

What do you mean by that statement?

Mr. DOMINY. I mean we would have had power revenue assistance and we could have put the rates cheaper than we have here and gotten support for the project much quicker.

Mr. CHENOWETH. Do you want to leave the impression with the committee that without that assistance then the project is not feasible?

Mr. DOMINY. No, sir. I want to emphasize that the power rate here of 7.15 mills, and the irrigation repayment rates are extremely high. They are in the maximum range of feasibility. In other words, the fact that the State picked up \$2 million, which was in the project cost, demonstrates that we had had trouble finding a way to repay.

Mr. CHENOWETH. The State paid for the highway relocation.

Mr. DOMINY. Highway relocation. It has taken all of these things to get this project to where it would meet the repayment tests of

reclamation law and practice. It has always been feasible from an economic benefit-cost ratio point of view.

Mr. CHENOWETH. Is the principal interest in the project from the present irrigators for supplemental water, or to develop new land?

Mr. DOMINY. They are badly in need of supplemental water. As a matter of fact, the economy of this whole area has been deteriorating. If it were not for the tourist trade, if they had to depend entirely on the agricultural base, which is what established the community originally it would have deteriorated quite seriously. The tourist trade you know has expanded tremendously since World War II, and this area enjoys a location in a very beautiful desert with some pretty high mountains close by, and two national parks of international prominence, as well as on a major route down to the Southwest.

Mr. CHENOWETH. I was very favorably impressed with the need for supplemental water for their presently irrigated land now under irrigation.

Mr. DOMINY. But the real impetus behind any project are the people that are there now and they recognize that to hold their young people at home they have got to give them broader opportunities; they have got to develop their land and water resources.

Mr. ROGERS. Will the gentleman yield?

Mr. DOMINY. Yes, sir.

Mr. ROGERS. Suppose those young people do not want to stay home?

Mr. DOMINY. They will stay home if they have an opportunity to grow and develop there, at least more of them will than are staying now.

Mr. CHENOWETH. Off the record.

(Discussion off the record).

Mr. CHENOWETH. That is all, Mr. Dominy. Thank you very much.

Mr. ROGERS. Mr. Skubitz?

Mr. SKUBITZ. Mr. Dominy, I want to congratulate you for an excellent statement. I am inclined to agree with you when you say while the payment costs are high here these people are willing to tighten their belts and go ahead with the project. That is just the feeling I got. I think they are willing to make extra sacrifices in order to see this dream come true.

Mr. ROGERS. Mr. Burton?

Mr. BURTON. Thank you, Mr. Chairman.

Mr. Commissioner, isn't it true that the economic cost-benefit ratio on the Dixie project is exceptionally good?

Mr. DOMINY. Yes, 2.2 to 1 is an exceptionally good benefit-cost ratio.

Mr. BURTON. And in terms of other proposed projects wouldn't you say it was probably excellent?

Mr. DOMINY. Yes.

Mr. BURTON. So that no one is going to get up on the floor, if we get this to the floor and read your words back, and try to read words back that aren't there, I want to get this crystal clear on the record, which is that nothing you said about the proposed southwestern water development program and the role that the Dixie project might play in this at some future day is to be construed as hoping that the Dixie project is delayed until the water plan is presented. Am I correct in that?



Mr. DOMINY. Yes, you are correct. I made it abundantly clear that this project will stand on its own feet as presented. It is a fully justified undertaking as an individual project authorization. The Secretary and the Department have also proposed that it be part of a southwest water plan, so we therefore go the other step and say if Congress wishes to push it through immediately as a separate undertaking, that in the authorizing legislation it provide the opportunity for it to be incorporated into a southwest water plan later if such a plan is enacted by Congress.

Mr. BURTON. I have discussed this southwest water plan on many occasions with my friend from Arizona and certainly have no objection to it. As a matter of fact, I can see many beneficial things, but I always said to him in relation to our discussions with the Dixie project, or this water plan, that "Let's not say that we are never going to have the Dixie until we get the southwestern water plan," because, of course, this is an opinion and nobody can anticipate what Congress will do but in my opinion and I am sure in the view of the Commissioner we are liable to get one before we get the other.

For that reason I do not want to see them tied together.

Mr. Commissioner, may I commend you on your excellent statement and say that you have demonstrated an intimate knowledge of this area and this project. I certainly thank you for that.

Mr. DOMINY. I have enjoyed my work because I have traveled for the last 30 years in the 17 Western States and as a western man, this has been a real challenge to me to continue to work with western areas.

I want to say one thing more on the power areas. Our studies indicate that by 1970 this area will need at least 20,000 kilowatts of capacity more than they have presently. We have allotted about 6,000 kilowatts of power from the Colorado storage project and the power-plant embodied here would make up the balance, so we think that the power features of the project are fully justified and ought to be included. One of them has a very fine drop of over 400 feet.

Mr. BURTON. I have no further questions.

Mr. ROGERS. Mr. McFarland?

Mr. MCFARLAND. The Virgin River is an interstate stream, Mr. Dominy, but as I understand it, there is no formal compact?

Mr. DOMINY. There is no formal compact. The States of Utah, Arizona and Nevada—their various water commissions, State engineers, et cetera, have had several meetings and there is sort of a gentleman's agreement among them as to the projects that the three States will endorse for the three-State area.

Mr. MCFARLAND. And so far as you know the State of Nevada has no objection to this Dixie project as proposed here?

Mr. DOMINY. My understanding is that both Arizona and Nevada are fully in accord with this development, that it meets with the agreement that they have pretty well worked out among themselves.

Mr. MCFARLAND. I was just reading through Nevada's views and some mention of language that should go in the bill. Is that this language? Do they refer to the language on this La Verkin Springs? Is that what they are referring to? Is that in Nevada?

Mr. McCARTHY. They are referring to the general split of water in the Virgin River Basin.

Mr. MFARLAND. They take the position additional language should be in the bill?

Mr. McCARTHY. In the formal comments on our report they suggested it might be desirable to provide language in the bill to preserve the informal agreement as to water rights.

Mr. DOMINY. Yes. The States agreement that they have worked out on the division of waters.

For instance, the added depletion over present use, they had proposed to split that about 69 percent for Utah, 7 percent for Arizona, and 24 percent for Nevada. Apparently this is what they have reference to, that they would like to have in the bill some recital of the understanding on use of water that has been pretty well agreed to without benefit of formal compact.

Mr. MFARLAND. That is all.

Mr. ROGERS. Mr. Dominy, there is one further question with regard to page 4 of your statement, with regard to the figures \$239,500 from the Colorado River Development Fund and \$5,500 from the State of Utah. Those are not included in the cost of this project insofar as being reimbursable by project?

Mr. DOMINY. That is correct. We list them in our total costs because they have been part of the charges against the project, but it is not in the allocation of cost for reimbursement, that is correct, sir.

Mr. ROGERS. Thank you very much.

The subcommittee will stand in recess until 2 p.m.

(Whereupon, at 12 o'clock noon, the subcommittee was recessed to reconvene at 2 p.m., the same day.)

Mr. ROGERS. The Subcommittee on Irrigation and Reclamation will come to order for further consideration of pending business.

Our first witness this afternoon is Mr. Wayne D. Criddle, Utah State engineer; and Mr. Jay R. Bingham, director of the Utah Water and Power Board.

Mr. BURTON of Utah. Mr. Criddle is here to represent the Governor, and Mr. Bingham is here representing their own board. They are here in separate capacities.

Mr. ROGERS. We will hear Mr. Criddle first.

STATEMENT OF WAYNE D. CRIDDLE, UTAH STATE ENGINEER

Mr. CRIDDLE. Mr. Chairman, I have a prepared statement which I will not read, if it may be inserted into the record.

I would like to make several comments following this.

Mr. ROGERS. Very well.

(The prepared statement follows:)

STATEMENT OF WAYNE D. CRIDDLE, STATE ENGINEER OF UTAH

My name is Wayne D. Criddle. I was asked by Gov. George D. Clyde to appear before your committee as an official representative of the State of Utah. He sends his sincere regrets at being unable to appear before you today. The office of the State engineer, of which I am in charge, is responsible for administering the waters of the State and for studying the extent and availability of the water resources as necessary in their administration.

I should like to review briefly for you the existing uses of water in Utah's portion of the Virgin River Basin and possible effects of the proposed Dixie project on the quantity and quality of the water in the river as it leaves Utah and flows into Arizona and on into Lake Mead.

Others have already or will discuss the physical and financial features of the project, the needs of the local people for this development and the benefits to the people in the project area, the region, State, and Nation.

As most southwest rivers, the Virgin is an erratic and flooding stream. Much of the annual flow comes heavily laden with silt particularly that resulting from heavy summer storms.

After the river breaks out of the deep eroded canyons above Hurricane, Utah, the gradient lessens and the river fans out over a wide flood plain. Canal diversions from this section of the river are practically impossible.

Periodic flooding causes shifting of the river bed and supports dense stands of phreatophytes, particularly salt cedars and willows, resulting in considerable nonbeneficial use of water.

A few miles below St. George, Utah, the river again enters a canyon section and emerges just east of Littlefield, Ariz. From this point to where it discharges into Lake Mead, a distance of some 40 miles, there is an almost continuous area containing many acres of dense phreatophytes with the low flow river channel meandering back and forth through them supplying the water to keep them luxuriantly green.

The heavier floods flush out sand and silt accumulations and "irrigate" the many acres of nonbeneficial vegetation. Because of the heavy movement of silt down the river, with some being deposited at one point and some eroded from another, and with the wide variation in flow it is impractical to attempt to control the unregulated river into any single channel and to prevent waste of water.

The Dixie project will provide for control of destructive and wasteful floods and for silt storage and necessary regulation and distribution of water to the land to be irrigated. The Virgin Reservoir has a capacity of 246,000 acre-feet. Seventy-three percent of this capacity will be dedicated to silt storage and flood control.

Of the 24,000 acre-feet storage capacity proposed for the Lower Gunlock Dam on the Santa Clara River, 10,000 acre-feet—42 percent of the total storage—is to be reserved for silt storage and flood control.

Combined, the two project reservoirs will stop a large part of the silt now going into Lake Mead. They will also stop much of the flooding along the entire lower reaches of the Virgin River in Utah, Arizona, and Nevada.

But, most important, a large portion of that water now consumed nonbeneficially will be available for beneficial uses of man.

Before the construction of Hoover Dam only limited use could be made of the uncontrolled Colorado River waters, flood damage was high, and wastes of water were inevitable.

On a smaller scale, but still far too large for individual people or communities to handle, is the control and use of the Virgin River water. Utah will benefit greatly from this project, but Arizona and Nevada both stand to gain substantially along the Virgin River from the flood and silt control provided by the Dixie project.

Those who will be benefiting most directly—irrigation and municipal users—in Utah will be paying most of the costs and this seems proper. But the benefits to others down the river through flood control, water salvage potentials, silt removal, and better regulated streamflow, should not be overlooked.

There are those who oppose this development on the basis that Utah has no right to increase her uses of Virgin River water, that the Colorado River Basin is already overappropriated for existing and approved projects, that further hydrological studies are essential to good planning, et cetera. However, I believe that few new reclamation projects will be built in the United States in the future if reasonable and sound developments can be stopped by political opposition.

There are few if any unbuilt projects that will not find strong opposition from some source, and if the Dixie project, with its highly favorable benefit-cost ratio (2.3 to 1) cannot proceed, many others that are far less needed and far less economical in terms of new water development, will probably be for-

ever stopped. The State of Utah believes that she has the right to a reasonable part of the waters which originate in the Virgin River drainage in Utah.

Of real national significance is the fact that without this, or some alternative development, there simply is no way to stop the great losses of water to non-beneficial uses along and in the channel of the Virgin River. Natural vegetation covering many acres of river bottom channel, and evaporation will continue to waste this precious commodity if the river remains uncontrolled.

The U.S. Government and the people of Arizona, New Mexico, California, and other Western States are expending large sums of money to eradicate non-beneficial water loving plants. The Dixie project, when built, will automatically reduce or eliminate water waste by such vegetation.

The Virgin River is a small contributor to the lower Colorado River system. Historically, it is estimated to discharge some 180,000 acre-feet past the Littlefield, Ariz., gaging station. The Dixie project, which is so important to the people of Utah and which is so economically feasible, will reduce the flow at Littlefield to about 113,000 acre-feet. This represents a net loss of 67,000 acre-feet. The net effect of the Dixie project on the flow into Lake Mead will be much less than 67,000 acre-feet because of the elimination of considerable water loving vegetation and flooding downstream from Littlefield, Ariz.

We, in Utah, believe this to be a good project. It will do much to relieve the water shortage in the southwest corner of our State. It will also benefit our neighbors in Arizona and Nevada downstream. It will benefit the entire Lower Colorado River Basin by reducing silt movement into Lake Mead. The Dixie project will consume only a relatively small proportion of the total waters of the Virgin River that arise in Utah and it will make possible the salvage of considerable water now wasting to nonbeneficial uses.

Mr. CRIDDLE. I was asked by Governor Clyde to appear before your committee as an official representative of the State of Utah. He sends his sincere regrets at being unable to appear before you today.

There are several points which I would like to make from this statement which we have prepared. First, of course, the State of Utah officially has gone on record many times supporting this project. I think it has the undivided support of the entire State of Utah.

Another thing which we would like to call to your attention is the benefits to the area as a whole and to this national product of water resource, which this project will have.

Only through the construction of storage reservoirs and prevention of flooding and silting-up of the river channel can some of this water be salvaged from nonbeneficial use. We feel this has benefits directly to the State of Utah and indirectly for the users downstream, and indirectly for the Nation, because it is salvaging water from a non-beneficial use, making it a beneficial use.

We realize this project has been long in the offing. We urge you to give it your favorable consideration.

Mr. ROGERS. Thank you, Mr. Criddle.

Without objection your written statement will be included in the record as though read in full, and your supplemental remarks will follow.

Are there any questions, Mr. Johnson?

Mr. JOHNSON. No questions.

Mr. ROGERS. Mr. Skubitz?

Mr. SKUBITZ. No questions.

Mr. ROGERS. Mr. White?

Mr. WHITE. No questions.

Mr. ROGERS. Mr. Burton?

Mr. BURTON. On page 2, paragraph 3 of your statement, you point out:

The Dixie project will provide for control of destructive and wasteful floods and for silt storage and necessary regulations and distribution of water to the land to be irrigated. The Virgin Reservoir has a capacity of 246,000 acre-feet. Seventy-three percent of this capacity will be dedicated to silt storage and flood control.

Someone will sooner or later ask us if that is not inordinately high, and I would like to have you answer that question, as long as you are here.

Mr. CRIDDLE. Yes, that is very high, but this will give the reservoir a life adequate to pay out and make it economical.

This silt which will be retained here is largely silt which would go on down and into Lake Mead if it were not captured at this point.

Mr. BURTON. That is all I have, Mr. Chairman.

Mr. ROGERS. Mr. McFarland has a question.

Mr. McFARLAND. Have you examined the amendments the Senate added to this legislation?

Mr. CRIDDLE. Which ones, specifically?

Mr. McFARLAND. The amendment which says:

In the operation and maintenance of the project, the Secretary of the Interior will comply with applicable provisions of the laws of the State of Utah.

Mr. CRIDDLE. Yes.

Mr. McFARLAND. What does that mean?

Mr. CRIDDLE. That the reservoir will be constructed with water rights obtained under the State of Utah. Water rights are available for the construction of this reservoir.

Mr. McFARLAND. That is in general reclamation law, isn't it?

Mr. CRIDDLE. Yes.

Mr. McFARLAND. Section 8?

Mr. CRIDDLE. Yes.

Mr. McFARLAND. Do you think that is necessary, to put that in here?

Mr. CRIDDLE. I don't see that it is essential. I agree with you that it is under the general reclamation law.

Mr. McFARLAND. That is all.

Mr. ROGERS. Have you any questions, Mr. Duncan?

Mr. DUNCAN. No questions.

Mr. ROGERS. Thank you very much, Mr. Cridle. You might just wait here, because there may be some questions come up.

Mr. Bingham, you may proceed.

STATEMENT OF JAY R. BINGHAM, DIRECTOR OF THE UTAH WATER AND POWER BOARD

Mr. BINGHAM. Thank you, Mr. Chairman. I want to begin by expressing our appreciation for the time you have allotted to us to come here in support of this project.

As has been stated, I do have a prepared statement which might be inserted in the record, and I will make a few comments.

Mr. ROGERS. Without objection, Mr. Bingham, your statement will be included in the record the same as if read in full.

Do you desire to include the resolution attached to your statement as a part of your statement?

Mr. BINGHAM. Yes, sir; I do.

Mr. ROGERS. And also the letter addressed to you from the Utah Water Users Association?

Mr. BINGHAM. Mr. Chairman, with regard to those, I would leave that to your discretion. Perhaps those could just be placed in your file, and not lengthen the record.

Mr. ROGERS. Without objection, the letters attached to the statement of Mr. Bingham will be included in the file and be considered for inclusion in the record, if the Chair and the ranking minority member think it wise to do so.

You may proceed, Mr. Bingham.
(The statement follows:)

STATEMENT BY JAY R. BINGHAM, EXECUTIVE DIRECTOR, UTAH
WATER & POWER BOARD

Mr. Chairman, my name is Jay R. Bingham. I appear before your important committee as an official representative of the State of Utah. The Utah Water & Power Board, of which I am executive director, is the agency of State government charged with promoting the development of the State's water resources.

I wish to acknowledge the great contribution reclamation development has made to the economy of the Nation and to my State. These projects have provided a regenerating cycle of water development and economic stability.

The efforts made by our local citizens and the program of water conservation financed by State funds are made more effective by reason of the Federal reclamation program. I am sure that the members of this committee would view this complementary activity of Federal, State, and local interests as the most desirable means of meeting our resource development needs.

The Utah Water & Power Board has long felt that the early authorization of the Dixie project is of the utmost importance. In an effort to expedite your favorable consideration, we have urged that the State of Utah relocate highway U-15 around the proposed Virgin City Reservoir without cost to the Dixie project.

We are pleased that the Utah State Department of Highways have in the interest of bringing this project into reality sooner, agreed by official action, to this proposal. Gov. George D. Clyde also has concurred and given official State assurance that the road will be relocated without financial assistance from a basin account or other outside revenues. To restate this proposal, we now ask for authorization on the basis of full repayment of allocated reimbursable costs.

I am sure you will give due consideration to this special effort by the State of Utah.

This arrangement for construction of the road by the State will not result in added Federal costs. To illustrate, Utah's allocation of Federal funds to assist in construction of secondary roads is determined by population and other factors not affected by this arrangement. The backlog of needed secondary road construction is so large the ~~Federal~~ allocation does not begin to satisfy the demand. It is

ore likely that U-15 would be relocated without any Federal ing funds. But even if the Federal funds for secondary roads used in this instance, they would come from a fixed State alloca-

board concurs with the decision of the local interests that any ed additional revenue necessary to make the project self-sustain- secured through an increase in project power rates rather than rease in municipal and domestic water rates. In general the people would pay in either event but it is believed that the burden would be spread more equitably if it were applied to ver rate.

go the members of this committee to authorize the Dixie project iately for the following reasons:

1. The project will serve an area of great need.
2. The project has an outstanding benefit-cost ratio, 2.3 to 1.
3. Repayment of reimbursable costs will be made without assistance from a basin account or other outside revenues.
4. An official, legally responsible entity, "Washington County ater Conservancy District" is already organized to contract for e repayment of project costs.
5. Significant regional and national benefits will result from e Dixie project.

urther support of the foregoing, I am attaching the following ions and statements from organizations representing project ewide interests:

- (a) Resolution, Colorado River Development Association of Counties.
- (b) Utah Water Users Association.
- (c) Utah Association of Soil Conservation Districts.
- (d) Cedar City Corp.
- (e) Board of County Commissioners, Iron County.
- (f) Salt Lake City Chamber of Commerce.

RESOLUTION

as the Colorado River Development Association of 21 Counties repre- e counties of, Carbon, Daggett, Duchesne, Emery, Garfield, Grand, Iron, ane, Millard, Plute, Salt Lake, San Juan, Sanpete, Sevier, Tooele, Uintah, asatch, Washington, and Wayne; and

as the major purpose of the association is the promotion of the develop- the water resources of the State of Utah; and

as the Dixie project is the only means of developing Utah's share of er Colorado River; and

as the Dixie project would greatly benefit the economy of southern ow, therefore, be it

ed, That the Colorado River Development Association of 21 Counties, ; the plan of development proposed by the Dixie project and strongly vorable consideration of authorizing legislation by the Committee on and Insular Affairs and the Members of Congress; be it further

ed, That the secretary be directed by the executive committee to forward lution to the Utah Water & Power Board for presentation to the Utah onal delegation, appropriate committees of the Congress, and other d and influential persons.

this 30th day of April, 1963.

COLORADO RIVER DEVELOPMENT ASSOCIATION
OF TWENTY-ONE COUNTIES,
L. Y. SIDDOWAY, *Secretary.*

SALT LAKE CITY, UTAH, April 8, 1963.

Mr. JAY R. BINGHAM,
Executive Director, Utah Water & Power Board of the State of Utah, Salt Lake City, Utah

DEAR MR. BINGHAM: Pursuant to your request of April 4, 1963, the entire executive committee of the Utah Waters Users Association and its legal adviser, Mr. F. Gerald Irvine, met to discuss the authorizing legislation now pending in Congress for the Dixie project and I am directed by the board to advise you that the Utah Water Users Association did again consider the Dixie project report of October 1961. The report has been considered by the Water Users on previous occasions and has been wholeheartedly endorsed.

The executive committee reviewed the report and the previous endorsement by the Water Users and have reviewed the memorandum prepared by the Utah Water & Power Board dated April 12, 1962, from Ray H. Zenger, engineer, to Jay R. Bingham, director. The Water Users, in their various meetings throughout the year, have expressed endorsement of the report and, therefore, the executive board of the Utah Water Users Association, at its meeting held on April 6, 1963, in Salt Lake City, Utah, did wholeheartedly endorse the Dixie project report and did concur with the board of directors of the Utah Water Users Association and the water users' organizations in the State in urging Utah Water & Power Board and the congressional Representatives from the State of Utah to use all of their influence to secure the adoption of the Dixie project.

The Utah Water Users Association has made a careful study of the urgent need of additional water in the Dixie area of the State of Utah, including possible better use of the existing water resources and there is found to be a real need for the development of both the Virgin and Santa Clara divisions which can be developed in such a manner as to take advantage of the allocation made to the State of Utah under the Colorado River compact.

I am further directed to advise you that the Utah Water Users Association will lend you every cooperation in securing the adoption of the Dixie project.

UTAH WATER USERS ASSOCIATION,
 By F. GERALD IRVINE, Legal Adviser,
 By T. W. JENSEN, Secretary.

UTAH ASSOCIATION OF SOIL CONSERVATION DISTRICTS,
Pleasant Grove, Utah, May 1, 1963.

JAY BINGHAM,
*Executive Director, Utah Water and Power Board,
 Salt Lake City, Utah*

DEAR JAY: The directors of the Utah Association of Soil Conservation Districts are in favor of the Dixie project in southwestern Utah.

In this section of the State, local soil conservation districts have had an active conservation program and have a high percentage of water conservation measures, such as land leveling and ditch lining, completed.

The area has a favorable climate but a great need for additional water. Crops grown in this area are not crops in surplus. The Dixie project would be very beneficial in improving the economy of this portion of the State.

We heartily support this project.
 Sincerely yours,

LEO P. HARVEY, President.

CEDAR CITY CORP.,
Cedar City, Utah, April 22, 1963.

Mr. JAY BINGHAM,
*Utah Water and Power Board,
 Salt Lake City, Utah*

DEAR MR. BINGHAM: At the regular meeting of the Cedar City Council, held April 18, 1963, the following resolution was passed unanimously.

"RESOLUTION

"Be it resolved by the Cedar City Council of Cedar City, Utah, in regular meeting assembled at Cedar City, Utah, this 18th day of April 1963, That this council go on record as favoring and urging the Utah State Water and Power

Board, to use their influence and to work for the passage of a bill recently introduced in the U.S. Senate by Senator Frank E. Moss and for a bill recently introduced in the House of Representatives by Representative Lawrence Burton, which bills, if passed, would authorize the construction of the Dixie water project in Washington County, Utah.

"We of the Cedar City Corp. feel that the Dixie project has great beneficial possibilities for southern Utah and that it will benefit the entire State."

Very sincerely,

KUMEN S. GARDNER, *Mayor.*

IRON COUNTY, PAROWAN, UTAH, April 16, 1963.

At the regular meeting of the board of county commissioners held on Monday, April 8, 1963, the following resolution was introduced by Commissioner Ivan M. Matheson, who moved its adoption. The motion was seconded by Commissioner Frank Milne and on being put to a vote, passed unanimously.

"RESOLUTION

"Be it resolved by the Board of County Commissioners of Iron County, Utah, in regular meeting assembled at Parowan, Utah, this 8th day of April A.D. 1963, That this board go on record as favoring and urging the Utah State Water and Power Board, to use their influence and to work for the passage of a bill recently introduced in the U.S. Senate by Senator Frank E. Moss and for a bill recently introduced in the House of Representatives by Representative Lawrence Burton, which bills if passed would authorize the construction of the Dixie water project in Washington County, Utah.

"We wish to point out to the Utah Water and Power Board and to the Federal Department of Reclamation that the authorization of the Dixie project and its final construction, will bring much development and progress, not only in Washington County but will result in the allocation of additional water for Iron County through agreements and arrangements that have been made between owners of water rights in the area.

"Be it further resolved, That a copy of this resolution be sent to Jay Birmingham, executive director of the Utah Water and Power Board for his use at hearings he will participate in, being held in Washington, D.C., during the month of May 1963."

KEITH SMITH,
FRANK MILNE,
IVAN M. MATHESON,
Board of County Commissioners.

Attest:

W. CLAIR ROWLEY, *County Clerk.*

RESOLUTION OF SALT LAKE CITY CHAMBER OF COMMERCE, SALT LAKE CITY, UTAH,
MAY 6, 1963

Whereas the U.S. Bureau of Reclamation has prepared and submitted a report for the construction of the Dixie project on the Virgin River in Utah; and Whereas said project constitutes the only way in which Utah can utilize its share of the waters of the Colorado River as a lower basin State: Now, therefore, be it

Resolved by the Board of Governors of the Salt Lake City Chamber of Commerce, That it be recorded as approving said project and its construction at the earliest possible time.

GUS P. BACKMAN, *Executive Secretary.*

Mr. BINGHAM. Mr. Chairman, as stated, I represent the Utah Water & Power Board, as the staff member. Mr. Criddle is a member of our board. We are fortunate today in having the chairman of our board present, who is prepared to present his views to the committee, as well as our board member who is not only a resident in the project area, but is an active farmer in the area, and I am sure his views would be of interest to the committee members here today.

I would state simply that the board has, in the interests of this project and in working in cooperation with the Bureau of Reclamation, greatly appreciated the attitude of the regional director, Mr. West and his staff, in seeking a solution to this long-awaited project. We have been the principal State agency seeking to bring the State highway department and other State officials to the point of accepting the full cost of relocating the road. I would simply in this regard, affirm what you stated yourself, Mr. Chairman, that this is a bona fide offer of the State of Utah by its responsible officials, and that there is no way that this could conceivably bring about added Federal costs. This will be dollars from the State to build this facility.

I would simply point out, Mr. Chairman, that this project is one that will serve an area where there is a critical need, and I am sure as the impressions have been given here today that we have dedicated people living there and their integrity is, I think, the best assurance that this project not only will work, but that the Federal investment will be paid back.

We feel that the benefit-to-cost ratio speaks for itself as to feasibility from an economic standpoint, and the project is certainly something that you will weigh carefully in your deliberations. This is, I am sure, one of the few projects we can arrange to have stand on its own feet with regard to repayment.

You have already been reminded that the entity with which the United States can deal is already in existence, so there will be no delay or uncertainty in the minds of the committee whether the local people will include this necessary step, because it is already an accomplished fact.

The point of cost of domestic or municipal water was under discussion this morning. May I offer two observations, here: First, the city of St. George, looking to the future, and also with the hope of improving the feasibility of the project, has agreed to purchase 5,000 acre-feet of water from the project. The costs that were discussed this morning are exclusive of any finishing or treating costs, and in addition the city will, until its requirements develop, they will be paying for a larger block of water in all probability than they will use. And in addition, this is the same area that has obligated itself for a 5-mill ad valorem tax, which falls on the same people, again. So I think any comparison with charges in other areas should take consideration of these facts.

Mr. Chairman, unless there are questions, I think that would conclude the pertinent part of my statement.

Mr. ROGERS. Mr. Johnson, have you any questions?

Mr. JOHNSON. No questions.

Mr. ROGERS. Mr. Skubitz?

Mr. SKUBITZ. I want to compliment the gentleman on his statement.

I notice that he says the project has an outstanding benefit-cost ratio of 2.3 to 1. I have been trying to think of a project with any better cost ratio.

Mr. ROGERS. I don't know whether we have heard of any better than that. We have heard some advertised better than that.

Mr. SKUBITZ. That is all, Mr. Chairman.

Mr. ROGERS. Mr. Duncan?

Mr. DUNCAN. No questions.

Mr. ROGERS. Mr. Burton?

Mr. BURTON of Utah. No questions.

Mr. ROGERS. Mr. White?

Mr. WHITE. No questions.

Mr. ROGERS. Thank you very much gentlemen, for your presentation.

Our next witness is Mr. William Barlocker, president of the Dixie Project & Development Co., St. George, Utah.

STATEMENT OF WILLIAM BARLOCKER, PRESIDENT, DIXIE PROJECT & DEVELOPMENT CO., ST. GEORGE, UTAH

Mr. BARLOCKER. Chairman Rogers, it is a pleasure to be here with you, today.

May I say, we were very pleased with the subcommittee which came into the area last fall and held the field hearings. I have a prepared statement here today, which I will not take time to read, but I would like to insert it in the record.

Mr. ROGERS. Without objection, Mr. Barlocker, your statement will be included in the record as if read in full, and you may discuss such matters as you desire.

(The statement follows:)

STATEMENT OF WILLIAM BARLOCKER, PRESIDENT OF THE DIXIE PROJECT & DEVELOPMENT ASSOCIATION

Mr. Chairman, members of the committee, my name is William A. Barlocker, president of the Dixie Project & Development Association. Our association has mothered this project and is primarily responsible for the local and multi-State support which it has received.

On behalf of the people of St. George, Utah, the largest community in the Dixie area, and the people of Washington County, where the project will be located, I wish to commend the members of this committee for the part they are playing in helping the people of southern Utah.

As you know, the Dixie project has been considered feasible, and has been in the recommendations of the overall planning of the Interior Department for the past 55 years. Just prior to 1941 the first Dixie project report was issued by the Bureau of Reclamation. At that time our water conservancy district was established and we were looking forward, with great expectation, to coming before this committee and having our project approved by the Congress. Unfortunately, the pressures of World War II forced postponement of the project.

The Dixie project, as proposed by the Bureau of Reclamation in their report of 1961, proposes that Dixie be a "multiple-purpose, water-resource development in the Virgin River Basin in southwestern Utah. By regulation of flows of the Virgin River and its tributary, the Santa Clara River, the project would provide supplemental irrigation water to 9,445 acres of presently developed land and a full water supply for 11,615 acres of new land. The city of St. George would be provided with 5,000 acre-feet of water annually for municipal and

industrial purposes. Construction of three powerplants as proposed in the project plan would produce about 44,500,000 kilowatt-hours of firm electric energy and about 1,900,000 kilowatt-hours of secondary energy for sale to residents in the area. In addition, minor flood control benefits would result, as would fish and wildlife and recreation benefits.

"Water storage facilities are considered to be the primary need of the Dixie project area. Development of such facilities will provide for the conservation and orderly release of water that is now wasted. A supply of stored water would serve as the foundation upon which to base a revitalized and modernized agricultural development. Such a supply is also essential if any substantial increase in local industry and population growth is to be achieved and maintained."

The general economy in my county is based primarily on agriculture, including range livestock and irrigation farming. This has traditionally been our main source of income since the Dixie area was settled over 100 years ago.

The Dixie project will consist of two divisions, the Hurricane division, which will develop the water and land resources along the Virgin River, and the Santa Clara division, which will develop these resources along the Santa Clara River. When the project is completed it will furnish 7,885 acres with supplemental water from the Hurricane division, and 1,560 acres from the Santa Clara division. None of the crops grown in any of the areas to be irrigated with these supplemental waters fall under the Government's agricultural subsidy program. This means that this will allow the farmers of Washington County to increase their crop production, thereby stimulating the economy, at no additional expense to the Government or the taxpayers.

Washington County where the project is to be located, is the poorest county in the State. As such, we are eagerly looking for new ways to bring industry into the area, thus broadening our economic base. However, the water resources of our area are inadequate to take care of the increasing population, let alone serve as an inducement to industry. Development of water storage facilities will enable the conservation and orderly release of water that is now largely wasted as flood discharges, and will also permit the conservation of those portions of normal flows which are in excess of the immediate requirements of irrigation and other uses. Control of these problems and overall regulation of the rivers are the areas which will be solved with the construction of the proposed Virgin City and Lower Gunlock Reservoirs of the Dixie project.

We have a definite need for a program including canal lining, land leveling, adequate headgates, check and related structures which will accomplish a further reduction of water losses, improvement in the irrigation practices, and control of our drainage problems.

In reference to the power to be generated from the dam, the City Council of the City of St. George in session last week confirmed an agreement to purchase all of the energy which would be available from the Dixie project powerplants at a rate of 7.15 mills. If the committee would like to have a copy of these minutes I would be happy to forward them.

Local support for the Dixie project has, as I mentioned prior in my statement, been active for more than 25 years. Since the original conservancy districts were set up in 1941, far too much time had elapsed for them to still be of legal significance. Therefore, we have now completed creation of a new conservancy district which provides for a tax levy of 5 mills. As you know, this is almost double the average mill levy imposed upon a county for a conservancy district. In spite of this, over 90 percent of the people available in Washington County voted in support of the mill levy.

Mr. Chairman, although the Virgin River is an interstate tributary, it nonetheless is classified as a captive stream. When the project is completed it will hold back only 0.076 percent of the total waters of the Colorado River.

In summary, Mr. Chairman, let me say that the people of Utah are in desperate need of the Dixie project. Their economy and, in fact, their very lives and continual growth, depends upon its development and thus upon your actions.

The Bureau of Reclamation has given the Dixie project highest priority and considers it to be "one of the most economically feasible projects." In southern Utah there is no more urgent problem on the lips of our citizens than water development. The Southwestern United States abounds with countless resources. The very heart of this area may, in years to come, become America's great treasure chest. Unfortunately, it will never reach that ultimate goal unless we are granted that basic commodity—water.

On behalf of the people who nurtured this project for so many years, the Dixie Project & Development Association, I respectfully but urgently request your wholehearted endorsement of this bill.

Mr. BARLOCKER. I would like to open myself for questions, rather than to make any statement.

I am here officially as the mayor of St. George, president of the Dixie Project Association, and chairman of the conservancy district set up by the district judge of Utah.

I might mention the cost of water that was brought up this morning.

The city of St. George now uses approximately 3,000 acre-feet of water. We are buying under this contract, 5,000. There will be water there we will not use until the time comes that we can utilize that water. Our present costs are only about 78 cents per thousand gallons, amortized on a 20-year basis.

Mr. ROGERS. Where do you get this water?

Mr. BARLOCKER. This water is all spring water and does not have to be treated, except 1 point per million chlorination.

Mr. ROGERS. You own your own waterworks in the city of St. George?

Mr. BARLOCKER. Yes, sir, we have our own water, but I might point out that the entire county is sitting on what is known as the Hurricane Fault. It is made up of volcanic rock and gyp. Consequently we have never been able to get any wells in the area for supplemental water and we are to the maximum at this point with the springs in the immediate area, so that if we are to grow and to have additional water, it must come from a new source, and we are hoping that this is our source of supply.

Now we will be able to get the water after being treated on the basis of about 118. This is only because we already have a bond on the city of \$500,000, which has provided a 20-inch line which will carry approximately 6.5 second-feet of water, and is in the general direction of the canal to be constructed under the Dixie project.

Now, we expect to set up a diversion point closest to this pipeline in the canal where we would purify the water used from the Dixie project. We would not go clear to the dam for the water. This would run into another \$2.75 million. By taking it out of the canal at the point of diversion suitable, we could possibly get it on an amortization basis of about 118, which would be over and above what we are paying now but our only source of supply.

Mr. ROGERS. Is any change made for the use of the canal?

Mr. BARLOCKER. I don't believe there are any allotments made on that. Perhaps Mr. West could answer that.

Mr. ROGERS. Mr. West, is there any distribution cost charge from the reservoir to the city?

Mr. WEST. Yes. A part of the facilities will carry the M. & I. water from the storage in the Virgin City Reservoir. It has been allocated to M. & I. costs.

Mr. ROGERS. Do you know what percentage that is?

Mr. WEST. I don't have the figures here, Mr. Chairman. It would be relatively small.

Mr. ROGERS. Do you have the amount of money involved?

Mr. WEST. We would be happy to supply it for the record.
(The information requested follows:)

There are no project structures which would be constructed solely to provide municipal and industrial water supplies. Water for these purposes would be stored in, and conveyed through, common project works with delivery at canal-side to facilities to be provided by the city of St. George. Of the total allocable project cost of \$42,673,000, separate costs of \$14,244,000 have been identified as being necessary for specific project purposes other than the provision of municipal and industrial water supply. The remaining "joint costs" of the project, \$28,429,000, have been allocated among the several project purposes. Municipal and industrial water supply was allocated \$2,474,000 or 8.7 percent of the joint costs. On this basis, \$968,000 would represent the municipal and industrial water supply share of the cost of the Hurricane main canal, through which water would be delivered to the facilities of the city.

Mr. ROGERS. Mr. Johnson, have you any questions?

Mr. JOHNSON. Yes, Mr. Chairman.

Mr. Barlocker, how large a city is St. George?

Mr. BARLOCKER. About 6,000 people.

Mr. JOHNSON. In your statement here, you state there will be a certain amount of power produced and the power facilities will consist of three small powerplants?

Mr. BARLOCKER. That is correct.

Mr. JOHNSON. The city counsel anticipates buying this power from the Bureau of Reclamation?

Mr. BARLOCKER. Yes; we have already signed a contract some months ago on the basis of 6.9 mills. However, since we recomputed these figures and want to get it on a full payout basis, the city council

met last week and authorized me to negotiate a new contract on the basis of 7.15.

Mr. JOHNSON. The Bureau will deliver this power to the city?

Mr. BARLOCKER. Under the program I believe they deliver it to a point outside of the city, and which point I am not aware of, but it is fairly close to the city limits.

Mr. JOHNSON. They have their own transmission grid between their three powerplants?

Mr. BARLOCKER. Yes, sir.

Mr. JOHNSON. They bring it in and offer it to the city at—

Mr. BARLOCKER. 7.15 mills per kilowatt, and you see—

Mr. JOHNSON. You agree to take it all into your system?

Mr. BARLOCKER. That is correct. We are using at the present time about 3,500 kilowatts, which we are generating with diesel power. We have purchased power from private companies in the past, and they also purchase from us, because their heavy load is in the summertime, when ours is the smallest, and so we exchange power very frequently with the California-Pacific Power Co., out of Cedar City.

Out of the programs already through Congress—particularly I am speaking now of the Blake-Powell potential electricity and the power generated at Flaming Gorge—under the proposal at that time, we were to get a 138 kilovolt-watts line into St. George. They finally brought in a 69. We have no reason to believe we will not be able to utilize all of the power that we can get from this particular dam, because it is limited.

Mr. JOHNSON. The Bureau will deliver to you at what voltage? How is it coming to you? Over what size line?

Mr. BARLOCKER. It is coming now on a 69 kilovolt-watts.

Mr. JOHNSON. Will this be part of the same grid?

Mr. BARLOCKER. It will be another line. The lines we would build on the Virgin River would be from the southeasterly direction from the city. This powerline comes in from the north.

Mr. JOHNSON. You now have 69,000 service into St. George?

Mr. BARLOCKER. Yes.

Mr. JOHNSON. This will be a separate service?

Mr. BARLOCKER. Yes, sir.

Mr. JOHNSON. From the Dixie project?

Mr. BARLOCKER. Yes, sir; the costs are so close we would have to of course, utilize the power in our own vicinity than to purchase the other power, and there is a waiting list, as I understand it, for the other power, so it won't make any difference to them. We are primarily buying the power to make this project possible and with the few tenths of a mill difference in price we are not too concerned about it. Our cost for producing electricity at the moment is slightly over 13 mills.

Mr. JOHNSON. That is all, Mr. Chairman.

Mr. ROGERS. Mr. Skubitz.

Mr. SKUBITZ. Mayor Barlocker, does any of the land used for crops now fall under the Government subsidy program?

Mr. BARLOCKER. There is less than 1 percent in my calculations. I believe our largest cash crop at the moment, which was not mentioned this morning, is sugarbeet seed. We raise all of the seed that is used by the sugar growers, the sugarbeet growers, in the intermountain West, at St. George, and it is one of our main cash crops.

Mr. ROGERS. Mr. Duncan.

Mr. DUNCAN. Your statement indicates Washington County is the poorest county in the State of Utah, is that correct?

Mr. BARLOCKER. Yes, sir.

Mr. DUNCAN. Has it been designated as a distressed area, with eligibility following, for an accelerated public works program?

Mr. BARLOCKER. No, sir; at one time, a year ago, a group of us were instrumental in getting industry into the area, which took care of our employment situation, and at the time we were taken back off. We now have a subsidiary there of Sears, Roebuck, manufacturing many goods, which has taken care of our unemployment situation, sir.

Mr. DUNCAN. There are no area redevelopment funds included in this project, to make it feasible?

Mr. BARLOCKER. No, sir; it is a complete repayment.

Mr. DUNCAN. That is all.

Mr. JOHNSON. Mr. Burton—

Mr. BURTON of Utah. Mr. Mayor, it is nice to have you come back and help us with this. There were some questions raised this morning, and I think you have pretty well straightened them out, but let's make sure. The fact that St. George City would be getting 1,000 gallons of water for 7 or 8 cents was mentioned. You pointed out this was raw water that you have to treat, and you are now consuming 3,000 acre-feet a year, supplying it through your own system, and under the terms of this contract you will be buying 5,000 additional acre-feet, which is going to give you a supply of 8,000 acre-feet, is that correct?

Mr. BARLOCKER. That is correct.

Mr. BURTON of Utah. And in order to provide, in a farsighted way, for what we both hope is going to be some great growth down there in the next generation or two—that is No. 1, and No. 2, in order to help make this project feasible, what you are doing in fact is contracting for 5,000 acre-feet of water, which you cannot consume, today.

Mr. BARLOCKER. By the time the project is completed we will probably need about 25 percent of that 5,000 acre-feet of water immediately. Our projection is about a 20-year program, to utilize the complete 8,000 acre-feet. At that time, then, I think we would have to revert to the suggestion made this morning that we may have to retire some land and purchase additional water.

Mr. BURTON of Utah. Thank you, Mr. Mayor.

That is all, Mr. Chairman.

Mr. JOHNSON. Are there any further questions?

If not, we want to thank you, Mr. Mayor, for your statement and your appearance here, today.

We have as our next witness Mr. Wayne Wilson, Washington County Commissioner and member of the Utah Water and Power Board.

STATEMENT OF WAYNE WILSON, WASHINGTON COUNTY COMMISSIONER AND MEMBER OF THE UTAH WATER AND POWER BOARD

Mr. Wilson. As county commissioner, I want to express our appreciation to you for your coming into our county and having your first hearings or first part of the hearing, and hearing the people directly benefited and people who are using the water, getting their testimony into the record.

I have a prepared statement, and in order not to take up your time, I wish to present it for the record.

Mr. Rogers. Mr. Wilson, your prepared statement will appear in the record as if read, and you may comment on it in any way you wish.

The folder will be included in our files.

Mr. Wilson. Yes.

(The statement follows:)

**STATEMENT BY WAYNE WILSON, COUNTY COMMISSIONER OF
WASHINGTON COUNTY**

Mr. Chairman, my name is Wayne Wilson. I appear before your committee as a member of the Utah Water and Power Board and as a county commissioner from Washington County. In 1959 when a vacancy occurred on the Utah Water and Power Board, I was selected by the Governor in order that this important but water-short area and the beneficiaries of the planned Dixie project could be represented on the board. I also own and operate a large farm in the area to be served by the Dixie project. I feel that I can speak with firsthand knowledge of the problems of this area and of the importance to us of the Dixie project.

This is a project which the people of Washington County have dreamed of and worked toward for many years. I personally have worked toward it for over 30 years, and am still working on it. We have water and fertile land that can grow valuable and needed crops if a firm and regulated water supply is available.

Equally important is the need for municipal and industrial water for the rapidly growing St. George and other Washington County communities and for Cedar City in Iron County. At present the inadequate water supply is limiting the growth of these communities. St. George and other communities in Washington County are increasingly being called upon to provide facilities and services for tourists and visitors to Zions National Park, Bryce Canyon, and the other important recreational areas in southwestern Utah. The recreational potential of the Dixie project is, of course, planned for development by the National Park Service to supplement the recreational facilities available in Zions National Park. Development of the Glen Canyon National Recreational Area will add to the demands upon us and the opportunities for economic growth. If our communities are to grow and provide services to these visitors and employment op-

portunities for our children, we must have additional water. The Dixie project is essential to the future of our area.

We do not come idly here to court your favor; we come here because we have a great need, a project beyond our means. May I present to the committee a publication summarizing the efforts of the State in financing small water conservation projects—I call this to your attention for two purposes: First, to demonstrate that we are making a significant State and local effort to develop our water resources; second, to give you proof of the integrity of our people and the repayment ability provided by bringing together good land, resourceful people, and water. This folder tabulates pertinent information about State-assisted projects. It shows that to June 30, 1962, 201 projects, some small and some of substantial size, have been constructed under this program of State assistance. Since that time an additional 27 projects have been assisted under this program. The total cost of these projects is \$13.43 million of which the State has advanced \$8.4 million for their construction. Project sponsors, themselves, have provided the balance. The projects, when completed, will serve 601,000 acres of cropland, principally to supplement lands inadequately served with a water supply.

This program is responsible for providing either by water yield from reservoirs or water supply saved or created by projects each year, over 285,000 acre-feet of water.

We feel that this is a demonstration of the importance which the State of Utah places upon water development and of our desire to deal with our problems within the limits of our financial capabilities.

I would like to add that we extended ourselves and have constructed without Federal reclamation assistance, the Woodruff Narrows Dam on the upper Bear River. This is a project which had been under investigation by the Bureau of Reclamation and on which a report leading to authorization was nearly completed by the Bureau. We made the effort to construct this project in order to minimize our request for Federal assistance and in order that we could more readily request funds for the Dixie project which is beyond our ability to finance.

You will find tabulated in the accomplishments folder, eight projects constructed in Washington County with State assistance. These projects have a total cost of \$720,000 of which the State contributed \$454,000. All of these complement the proposed Dixie project. One of these, the Kolob Reservoir, is, in fact, an integral part of the Dixie project since it provides storage regulation that will permit transbasin diversion of water to Iron County. This project could have been included as a part of the Dixie project but the State of Utah chose to accomplish as much as possible with its own resources.

In closing let me say that I don't know of another group of people who would do a better job of husbanding and managing their water supplies than the people of Washington County. We will make good use of it in every respect.

Mr. WILSON. I would just like to make a statement relative to the cost that was mentioned per acre-foot, that it seemed to be, according to the bureau, excessive. According to the farmers in the area, we, at the present time, don't feel that it is excessive. We have had higher assessments than that levied on us many times, to prepare our canals

and to build back after floods and storms, getting water back onto our crops.

Another thing, our storage facilities are inadequate. We have none. At the present time we are watering with a very short supply of irrigation water. If we can have a full supply, knowing that what we plant we will be able to harvest, the extra we will pay will be very minor, to the benefits that we will get.

Mr. JOHNSON. You are saying, in effect, then, that the proposed cost for irrigation water per acre-foot doesn't bother you because at the present time you are probably spending more money and getting a very inadequate supply of water?

Mr. WILSON. That is right.

Mr. DUNCAN. Are you a farmer?

Mr. WILSON. Yes, sir; I am a farmer.

Mr. DUNCAN. What do you raise?

Mr. WILSON. The day before I left I was picking cherries and apricots. Then I have other types of fruit. I raise sugarbeets, alfalfa, and silage.

Mr. DUNCAN. I noticed in some of the statements that I was reviewing here that you have a saltcedar problem on these rivers—phreatophytes.

There is some suggestion that these phreatophytes will somehow be eliminated and reduce the lost flow into Lake Mead. Does a part of this project include clearing of these saltcedars, these nonproductive plants?

Mr. WILSON. I think it will come mostly by diversion of the water. The water will be diverted to ground that will be irrigated and will not go into the present stream, where they are using the water.

Mr. DUNCAN. The storage of the water in these reservoirs and the use for productive purposes will so reduce the flow below the dams that there will be a smaller quantity of water available to these saltcedars; is that right?

Mr. WILSON. That's right.

Mr. DUNCAN. There is no plan in your area to destroy them?

Mr. WILSON. If there is any destruction of them, it will be to utilize the ground for better purposes, and they will not have the interference, then, of high and uncontrolled floodwater.

Mr. DUNCAN. That is all.

Mr. ROGERS. Mr. Skubitz?

Mr. SKUBITZ. I have no questions, Mr. Chairman, except that I want to welcome Mr. Wilson here. It is good to have you with us.

Mr. WILSON. Thank you.

Mr. JOHNSON (presiding). Mr. White.

Mr. WHITE. Mr. Wilson, you have indicated you grow sugarbeets.

Mr. WILSON. Sugarbeet seeds.

Mr. WHITE. Are there any sugarbeets raised in your area for sugar production?

Mr. WILSON. No.

Mr. WHITE. It is not contemplated under this project that any acreage would be utilized for the production of sugarbeets?

Mr. WILSON. No.

If I may, I would like to make one more statement, relative to our 5-mill tax, sir. I was on a committee to go with people to secure signatures. When we go into the areas that had no chance at all of using any of the water, getting any of the direct benefits, they were just as enthusiastic to sign and to commit themselves on this 5-mill tax as were the individuals who came under the project.

Mr. JOHNSON. That is very good. I have large areas in my district who are not so happy when they do that.

Mr. BURTON of California.

Mr. BURTON of California. You just mentioned this 5-mill tax. I assume this is the tax levied by the water conservation district?

Mr. WILSON. Yes.

Mr. BURTON of California. You have such a district formed and operating, and it is a going concern?

Mr. WILSON. Yes.

Mr. BURTON of California. There is no question, then, that is established and can operate?

Mr. WILSON. The conservancy district is formed, recognized, and filed, and the judge has set up the members of the conservancy district.

Mr. BURTON of California. There are those who are concerned about the cost of this water, and one of the reasons they are concerned is because there is a feeling that you might not be able to pay it back. Suppose this project offered one or two more waterings a year? What does this mean to you, economically, as a farmer? What is this going to do for your income?

Mr. WILSON. At a fruit farmer, many times I have had a crop nearly ready to harvest, and then have no water coming into our system. We would be dried up, and I couldn't get a decent crop. I run a fruit-grading machine, and if all of my fruit goes over the 2-inch grade, I about get enough to pay for picking and shipping.

Mr. BURTON of California. When you say 2 inches, you mean what?

Mr. WILSON. If I can get 2½-inch—one good irrigation will make 2½ out of it, and it will give me at least 25 cents more per box, and 25 cents more is profit, where otherwise I am just barely making expenses.

Mr. BURTON of California. In other words, with the benefits of this project, you feel that you might have some income that you could spend for something other than water?

Mr. WILSON. That is correct.

Mr. BURTON of California. I have one other area I would like to explore with you. Do you think that the people down in St. George and Washington County are going to hold together on this thing and cooperate, or will you have some people trying to pull out? Can you give us some evidence—for instance, the Hurricane Canal, if I can lead my witness here a little bit, indicate the kind of people we have down there.

Mr. WILSON. The Hurricane Canal is a very unique canal. It is built on the side of a cliff, coming from the Virgin River. It took them many, many years to build it, and today if we get a heavy cloudburst, it fills the canal up. More than once we have spent from \$20 to \$30 per share in a year to get the water back in our system, and get it onto our grounds. We are not going to give up when we have some good, clean water to irrigate with, and know that we have a supply

for the extra that we pay. Actually, in that area, we will get water cheaper than we are getting it today.

Mr. BURTON of California. So for 100 years you have kept this canal operating and have maintained it at an overly high cost.

What would this cost mean in a given year, where you had a cloud-burst or disaster, on a per share basis? An acre participating in the Hurricane Canal.

Mr. WILSON. A share represents the water from 1 acre.

Mr. BURTON of California. In other words, it runs as high as \$30 an acre some years to keep the canal operating after you have done this?

Mr. WILSON. Yes.

Mr. BURTON of California. Are you going to need to keep operating the canal after you get the Dixie project? In other words, will you try to run the canal and pay for \$22 water?

Mr. WILSON. The project will eliminate all of the canal that is in the canyon.

Mr. BURTON of California. That is all, Mr. Chairman.

Mr. JOHNSON. Off the record.

(Discussion off the record.)

Mr. JOHNSON. We wish you well out there in the project.

Mr. WILSON. Thank you.

Mr. JOHNSON. The last witness is Mr. Preston L. Jones, chairman of the board of the Utah Water & Power Board. Mr. Jones.

STATEMENT OF PRESTON L. JONES, CHAIRMAN, UTAH WATER & POWER BOARD

Mr. JONES. Mr. Chairman, members of the committee, I have a prepared statement here which I will not take the time to read in its entirety.

Mr. JOHNSON. Mr. Jones, your statement will appear in the record in full as if read.

(The statement follows:)

Mr. JONES. Mr. Chairman, for the purposes of the record, I am Preston L. Jones, chairman of the Utah Water & Power Board. The Utah Water & Power Board is an official agency of the State of Utah and is charged by statute, among other things, with the responsibility of promoting water development. The board is a bipartisan organization, there being seven members from each of the two major political parties. The State engineer constitutes the 15th member of the board. The appointments to the board represent every section of the State.

The board has been aware of the acute need for water and has since its early inception recognized the Dixie project as a necessary element in the comprehensive development of the State's water resources. The board has taken the lead in this water short area in resolving local controversies and in this connection has assisted the two counties competing for this water source in reaching an amicable agreement that will permit future development. This agreement was concluded when the board was under the chairmanship of the late William R. Wallace and provides that a State-financed project, the Kolob Reser-

voir, would, in fact, be a part of the Dixie project plan. While no project works are contemplated outside of Washington County, it is provided that the water stored in the now existing Kolob Reservoir located on the upper headwaters of the Virgin River will upon completion of the Dixie project be made available to Cedar City and other interests in Iron County. We now see the wisdom of this agreement since it will provide additional water to Cedar City and also unifies Iron County support for the Dixie project now being proposed in the Washington County area.

I am attaching for your reference the full text of the agreement, dated August 25, 1953, by the interests in Iron and Washington Counties.

In addition the Utah Water & Power Board holds water right filings which provide for the construction of the Dixie project. These filings, Nos. 9127, 11929, and 34030 have priorities dating back as early as 1922—many years before any development on the lower Colorado. These filings are held by the board in trust for this project and will at the appropriate time be transferred to the United States in order that the project can fully comply with State water law and provide the United States with the title to valid water rights for the project.

The Utah Water & Power Board as an agency of the State of Utah has expended in excess of \$71,000 in defending the rights of this project. The State became an intervenor in the litigation between Arizona and California over the use of water in the lower Colorado.

On behalf of the board, I urge your special consideration of the many merits of this project. Desperately needed domestic water for Cedar City and St. George will be supplied by the Dixie project.

The project will stabilize agriculture and will provide a recreation facility adjacent to Zion National Park, one of our great national attractions. Having just visited Lake Powell, another reclamation lake now forming behind Glen Canyon Dam, I am in a better position to appraise recreational values that the Dixie project will create. The lake this project will make on the Virgin River will complement the natural beauties of the area, improve recreational facilities and enhance Zion National Park.

In conclusion, I should like to leave with you a resolution passed by the Utah Water & Power Board and to emphasize that the board gives its full support to the project.

RESOLUTION OF UTAH WATER & POWER BOARD, SALT LAKE CITY, UTAH,
JUNE 19, 1964

Whereas the Utah Water & Power Board has the duty and responsibility to make plans, studies, and investigations to insure maximum development of water and power resources of the State of Utah; and

Whereas Utah is entitled to an equitable portion of the water of the Virgin River system, a tributary of the lower Colorado River, and the Dixie project provides the only means by which this water can be placed to beneficial use in Utah; and

Whereas this project would be of substantial benefit to the State of Utah and, while the residents of this area have diligently sought to perfect this project, it is of such magnitude that Federal assistance is required to accomplish this development; and

Whereas the construction of the Dixie project on the Virgin River would result not only in benefits from irrigation, power, recreation, and flood control in the Virgin River Basin, but would also benefit the Lower Colorado River Basin as a whole as a silt control project; and

Whereas this board has on various occasions adopted resolutions favoring the development of this project: Now, therefore, be it

Resolved, That the Utah Water & Power Board reaffirms its previous position in support of the development of the waters of the Virgin River and the construction of the Dixie project; and be it further

Resolved, That the Irrigation and Reclamation Subcommittee of the House Interior and Insular Affairs Committee be and is hereby urged to favorably consider the Dixie project on the basis of full repayment of allocated reimbursable costs without financial assistance from a basin account or other outside revenue, and recommend its authorization and early funding by Congress.

CERTIFICATE

I certify that the foregoing is a true and accurate copy of a resolution adopted by the Utah Water & Power Board on June 19, 1964.

JAY R. BINGHAM,
Executive Director.

AGREEMENT

This agreement made and entered into as of the 26th day of August 1953 by and between Cedar City, a municipal corporation, and Iron County, parties of the first part and Kolob Reservoir and Storage Association, Inc., a corporation, and Washington County, parties of the second part.

WITNESSETH:

Whereas an agreement has been reached for development of the water resources in Washington and Iron Counties; and

Whereas it is deemed desirable to have said agreement formally executed by the parties hereto;

Now, therefore, inconsideration of the mutual promises and agreements herein contained, the parties hereto agree to follow:

1. To cooperate in getting reported releases by Commissioner of Bureau of Reclamation and the Secretary of the Interior so that the same may be referred back to Utah.

2. To cooperate to obtain \$20,000 from the board of examiners for the use of the Utah Water and Power Board, \$10,000 of which will be used to make a survey as to the feasibility of the Kolob site for water for Cedar City and vicinity, Cedar City and vicinity to pay any additional for this survey if required, \$10,000 to be used to study and locate an additional or substitute reservoir of equal desirability either for Hurricane and Washington County or Cedar City and vicinity.

3. Water and power board shall assign 5,000 acre-feet of the early priority filings to Kolob project and is to utilize the Kolob site storage filing.

4. Hurricane and Washington County shall immediately build the Kolob Dam.

5. Hurricane and Washington County shall have the use of all the water the Kolob Dam for 5 years commencing with 1954.

6. After 5 years, if the Dixie project has not been completed, and provided further that no additional or substitute reservoir as hereinabove referred to has been completed, then and in that event, Cedar City and vicinity shall have two-fifths of the water of the Kolob site and the balance shall be utilized by Hurricane and Washington County.

7. If an equally desirable site has been obtained for Cedar City and vicinity in accordance herewith, Cedar City and vicinity will, after construction of the reservoir thereon, relinquish all of its right, title, and interest in the Kolob site to Hurricane and Washington County. On the other hand, if an equally desirable site shall be obtain for Hurricane and Washington County in accordance herewith, then after a reservoir has been constructed thereon, Hurricane and Washington County will relinquish all of its right, title, and interest in the Kolob site to Cedar City and vicinity.

8. After 5 years, if Cedar City and vicinity is using two-fifths of the water of the Kolob site in accordance with paragraph 6 hereof, then Cedar City and vicinity will pay two-fifths of the fair value of the Kolob Dam and the land utilized for that purpose as of the date of construction, deducting therefrom the depreciation property allowable between construction and the time the dam is first utilized by Cedar City.

9. After completion of the Dixie project or after acceptance by Hurricane and Washington County of a substitute reservoir in accordance with the foregoing, Cedar City, and vicinity shall have all of the water from the Kolob site and shall pay the remaining three-fifths of the fair value of the dam and land upon which is it situated as of the date of construction, after deducting fair

depreciation from the date of construction to the date Hurricane and Washington County ceases to use the same.

10. After completion of the Dixie project, Cedar City and vicinity shall have all of the water from Kolob site unless a substitute reservoir has been accepted by Cedar City as hereinabove provided, and shall pay to the Dixie project, the annual loss of power revenue to the Dixie project. All payments by Cedar City shall be made annually but not in advance.

11. Cedar City and vicinity shall cooperate with Washington County in promoting the Dixie project and supply supporting data to justify the project, including the necessity for the development of any part of said project for the use of Cedar City and vicinity. It is specifically understood that Cedar City and vicinity and Hurricane and vicinity (Washington County) shall assist each other in obtaining an additional site or substitute site as hereinabove set out and in the event it should be determined that Cedar City and vicinity should have a reservoir site in Navajo Lake, it is understood that Cedar City will reimburse the Washington County Water User's Association for the expenditures made in the construction of the dike in said lake, reasonable depreciation to be deducted from the original cost.

It is further agreed that the initial and immediate steps for procedure in agreement with the Utah Water and Power Board be as follows:

(a) Water and power board to begin immediately to make investigation of engineering feasibility and cost of Kolob Reservoir (1) capacity; (2) water supply; (3) damsite, etc.

(b) Water and power board to assign such filings as are necessary to fill Kolob Reservoir up to capacity of 5,000 acre-feet. (This agreed to by Washington County interests, Dixie project, and U.S. Bureau of Reclamation.)

(c) Water and power board to authorize construction of Kolob Reservoir if found feasible and approved by State engineer.

(d) Water and power board to make engineering and cost investigation of conveyance channel to bring water from Kolob Reservoir site to Cedar City if site proves feasible.

(e) Water and power board to begin immediately to negotiate an agreement between Cedar City, U.S. Geological Survey, water and power board to cover an investigation of Navajo Lake as to (1) capacity; (2) water supply; (3) disposition of water from lake. Investigation is to proceed as soon as possible after agreement is signed. George Clyde is to discuss with U.S. Geological Survey and advise Cedar City.

(f) Water and power board to make other alternate investigations of possible water supply for Cedar City if necessary.

Witness the execution of this instrument as of the day first hereinabove written.

CEDAR CITY, a Municipal Corporation,
By _____
Mayor.

Attest:

City Clerk.

IRON COUNTY,
By _____
Chairman, Board of County Commissioners.

Attest:

County Clerk.

KOLOB RESERVOIR AND STORAGE
ASSOCIATION, INC.
By _____
President.

Attest:

Secretary.

WASHINGTON COUNTY,
By _____
Chairman, Board of County Commissioners.

Attest:

County Clerk.

STATE OF UTAH,
County of Iron, ss:

On the 26th day of August A.D. 1953, L. V. Broadbent, M.D., being duly sworn upon oath, deposes and says that he is the major of Cedar City, Utah, and that the above and foregoing instrument was duly executed by him for and on behalf of Cedar City, a municipal corporation, by authority of a resolution of the city commission.

Notary Public, County Clerk.

Residing at Parawon, Iron County, Utah.

STATE OF UTAH,
County of Iron, ss:

On the 26th day of August A.D. 1953, Warren H. Bullock, being duly sworn upon oath deposes and says that he is county commissioner of Iron County, Utah, and that the above and foregoing instrument was duly executed by him for and on behalf of Iron County, by authority of a resolution of the county commission.

Notary Public, County Clerk.

Residing at Iron County, Parawon, Utah.

STATE OF UTAH,
County of Washington, ss:

On the 26th day of August A.D. 1953, personally appeared before me _____ and _____ who being by me duly sworn did say, each for himself, that he, the said _____ is the president, and he, the said _____ is the secretary of Kolob Reservoir & Storage Association, Inc., and that within the foregoing instrument was signed in behalf of said corporation by authority of a resolution of its board of directors and said _____ and _____ each duly acknowledged to me that said corporation executed the same and that the seal affixed is the seal of said corporation.

LILLIAN A. COX, Notary Public,

Residing at St. George, Utah.

STATE OF UTAH,
County of Washington, ss:

On the 26th day of August A.D. 1953, _____, being duly sworn upon oath deposes and says that he is the chairman of the Board of County Commissioners of Washington County, Utah, and that the above and foregoing instrument was duly executed by him for and on behalf of Washington County by authority of a resolution of the board of county commissioners.

LILLIAN A. COX, Notary Public.

Residing at St. George, Utah.

Mr. JONES. I would like to comment on three points: First, the Utah Water and Power Board is set up by the legislature and it is bipartisan. It represents every geographical area of the State and it also represents every use of water, every use to which water is put: Municipal, industrial, irrigation, recreation, fish and wildlife, and so forth.

Members of our board and our staff will qualify to speak on any of these and represent any of these issues.

The board has unanimously—we have a resolution attached—has unanimously gone on record and we have studied this proposition for 17 years since the inception of the board, and after studying this proposition thoroughly, from the interests of the overall picture of the State, we have unanimously gone on record supporting this project as being in the best interests of the State.

The board at present holds the filings for the water which would provide for the construction of the Dixie project. These filings, Nos.

9127, 11929, and 34030, have priorities dating back to 1922, before any development on the Colorado took place.

These filings, held by the board, will, at the appropriate time, be transferred to the United States in order that the project can be fully in compliance with the State water law and provide the United States with title to valid water rights for the project.

I might say that at one time there was controversy about this project, primarily over the filing and rights on the south side of Kolob Mountain. This involved the town of Cedar City, Utah, and Washington County. As you know, Cedar City is sort of a gateway to the national parks area, as well as St. George, Zion, Cedar Bryce, Grand Canyon, and so forth, and Cedar City has been in desperate need of water. It has no place to go. They have explored practically every possibility for water, including Navajo Lake and other places and they have had no place to go except that they work out an agreement with Washington County in this Dixie project, and I have this agreement attached to my statement which I have made reference to.

These controversies have been settled. Cedar City is in full support of this project and would certainly like to see it go forward, as would the rest of the State.

Mr. JOHNSON. Mr. Jones, without objection, your resolution and the agreement that was reached between Cedar City and Washington County will be made a part of the record, also.

Your board must have been a very effective board to have solved all of these power problems of this project before coming to this committee. I am amazed to see the city has already entered into a contract to take all of the power from this project without opposition of the private power companies. It means that the agreement has been made and signed.

I congratulate you for working out the power problem.

Mr. BARLOCKER. Would you yield, Mr. Chairman?

Mr. JOHNSON. Yes.

Mr. BARLOCKER. At that point I would like to point out that at the field hearing held by the Senate in St. George; the private power companies concerned made a statement in support of the project.

Mr. JOHNSON. Mr. Duncan?

Mr. DUNCAN. No questions.

Mr. SKUBITZ. No questions.

Mr. WHITE. No questions.

Mr. BURTON. No questions.

Mr. JOHNSON. Any questions of counsel?

(No response.)

Mr. JOHNSON. Mr. Rogers? Any questions?

Mr. ROGERS. No questions.

Mr. JOHNSON. Thank you for your testimony, Mr. Jones.

Mr. BURTON of Utah. Mr. Chairman, I would like to inform the chairman and the members of this committee that tomorrow our people from Utah will deliver to your office a little bag of apricots that were grown on Mr. Wilson's farm. They won't cost you anything. They will be the most delicious things you have ever eaten and as you eat them, I want you to cogitate on that extra quarter of an inch we will have when we get the Dixie project.

Mr. JOHNSON. Bringing up the matter here before Mr. Wilson, I see it is paying off.

Mr. DUNCAN. Will the gentleman yield?

Mr. BURTON. Yes.

(Discussion off the record.)

Mr. JOHNSON. If there is no objection, the telegram from the Cedar City Chamber of Commerce will be inserted in the record at this point. Also, the statement of the National Reclamation Association, prepared by William E. Welsh, executive director, will be inserted at this point. Hearing no objection it is so ordered.

If there are no further witnesses to come before the committee, the committee will adjourn subject to the call of the Chair.

(The telegram and statement referred to follow:)

CEDAR CITY, UTAH, June 22, 1964.

Representative WALTER ROGERS,
Chairman, House Subcommittee on Irrigation and Reclamation,
Washington, D.C.:

Passing of Dixie project vital to economy of southern Utah water and power, the lifeline of our progress. Appreciate support in favor of this project.

JACK HAYES,
President, Cedar City Chamber of Commerce.

STATEMENT RE LEGISLATION TO AUTHORIZE THE DIXIE PROJECT, UTAH, BY WILLIAM E. WELSH, EXECUTIVE DIRECTOR, NATIONAL RECLAMATION ASSOCIATION, WASHINGTON, D.C.

Mr. name is William E. Welsh. I am executive director of the National Reclamation Association.

My purpose in appearing before the committee today is to support the so-called Dixie project on behalf of the board of directors of the National Reclamation Association.

The Dixie project, as proposed, is a multipurpose development in southwestern Utah which would provide water for irrigation, industry, municipalities, power, flood control, fish and wildlife, and recreation benefits. The proposed project area is in the Virgin River Basin, a part of the Lower Colorado River Basin. It would provide an irrigation water supply for 9,445 acres of lands that are presently irrigated but with an inadequate flow of water, and a full irrigation water supply to presently dry lands of approximately 11,600 acres. The existing supply of water, most of which is obtained from direct diversion, is both unependable and inadequate for the arable lands of the project.

The proposed project calls for the construction of the Virgin City Dam and Reservoir in the Hurricane division which would include a total installed power generating capacity of 13,200 kilowatts. This division would also serve 17,000 acres of land with an irrigation supply of water. It would also provide municipal and industrial water supply to the city of St. George. The Santa Clara division, including the lower Gunlock Dam and Reservoir, would furnish irrigation water to a little less than 4,000 acres of land and would provide flood control, fish and wildlife, and recreation benefits.

The total cost of the project is estimated to be about \$42,600,000 which is to be allocated among the various project functions, including irrigation, \$30,180,000; power, \$6,573,000; municipal and industrial water supply, \$2,474,000; flood control, \$142,000; fish and wildlife, \$1,494,000; and recreation, \$1,800,000.

The recreation and fish and wildlife enhancement would be nonreimbursable and nonreturnable in accordance with the provisions of H.R. 9082 as reported to the Congress. The costs allocated to irrigation would be reimbursable without interest within a 50-year period. Surplus revenues from the sale of power and municipal and industrial water, following the repayment of investment costs, would be used to assist in the repayment of the irrigation costs.

This project would be located in a very sparsely settled area of the State and such development as proposed herein would be a tremendous boost to the economy and to the future development and settlement of the entire area.

It is with pleasure that I submit this statement in support of the Dixie project in Utah on behalf of the National Reclamation Association.

I wish to express my appreciation to this committee for its continued interest in our reclamation projects of the West.

(Whereupon, at 2:50 p.m., the subcommittee adjourned.)

