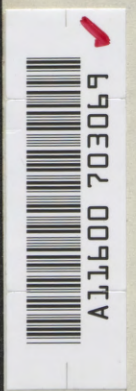
MANSON UNIT, CHELAN DIVISION, WASHINGTON



HEARING

BEFORE THE

SUBCOMMITTEE ON IRRIGATION AND RECLAMATION

OF THE

COMMITTEE ON INTERIOR AND INSULAR AFFAIRS UNITED STATES SENATE

EIGHTY-EIGHTH CONGRESS

SECOND SESSION

ON

S. 2533

A BILL TO AUTHORIZE THE SECRETARY OF THE INTERIOR TO CONSTRUCT, OPERATE, AND MAINTAIN THE MANSON UNIT, CHELAN DIVISION, CHIEF JOSEPH DAM PROJECT, WASHINGTON, AND FOR OTHER PURPOSES

MARCH 17, 1964

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MANSON UNIT, CHELAN DIVISION, WASHINGTON

TUESDAY, MARCH 17, 1964

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

The subcommittee met, pursuant to notice, at 9:30 a.m., in room 3110, New Senate Office Building, Senator Henry M. Jackson presiding.

Present: Senators Jackson, Burdick, and Jordan.

Also present: Jerry T. Verkler, staff director; Stewart French, chief counsel; Roy M. Whitacre, professional staff member; Richard Andrews, minority counsel, and Robert Bendt, professional staff member.

Senator JACKSON. The committee will come to order. The Irrigation and Reclamation Subcommittee has before it this morning two bills which have been approved by the Secretary of the Interior and the Bureau of the Budget.

The first measure, S. 2533, authorizes the Secretary of the Interior to construct, operate, and maintain the Manson unit, Chelan division, Chief Joseph Dam project, Washington, and for other purposes.

S. 2533 and the Department report relating to S. 2533 will be included in the record at this point.

(S.2533 and the report referred to is as follows:)

[S. 2533, 88th Cong., 2d sess.]

A BILL To authorize the Secretary of the Interior to construct, operate, and maintain the Manson unit, Chelan division, Chief Joseph Dam project, Washington, 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 supplying irrigation water for approximately five thousand eight hundred acres of land, undertaking the rehabilitation and betterment of works serving a major portion of these lands, conservation and development of fish and wildlife resources, area redevelopment, and enhancement of recreation opportunities, the Secretary of the Interior is authorized to construct, operate, and maintain the Manson unit, Chelan division, Chief Joseph Dam project, Washington, in accordance with the Federal reclamation laws (Act of June 17, 1902, 32 Stat. 388, and Acts amendatory thereof or supplementary thereto). The principal works of the unit shall consist of dams and related works for enlargement of Antilon Lake storage, related canals, conduits, and distribution systems, and works incidental to the rehabilitation of the existing irrigation system.

SEC. 2. Irrigation repayment contracts shall provide for repayment of the obligation assumed thereunder with respect to any contract unit over a period of not more than fifty years exclusive of any development period authorized by law. Construction costs allocated to irrigation beyond the ability of the irrigators to repay, and operation, maintenance, and replacement costs during the development period which the Secretary finds it proper to fund because they are beyond the ability of the irrigators to repay within the repayment and development periods shall be returned to the Reclamation Fund within such periods from revenues derived by the Secretary from the disposition of power

marketed through the Bonneville Power Administration. Power and energy required for irrigation water pumping for the Manson unit shall be made available by the Secretary from the Federal Columbia River power system at charges determined by the Secretary.

SEC. 3. The Secretary is authorized, as a part of the Manson unit, to construct, operate, and maintain or otherwise provide for basic public outdoor recreation facilities, to acquire or otherwise to include within the unit area such adjacent lands or interests therein as are necessary for present or future public recreation use, to assign water and reservoir capacity to recreation and to provide for public use and enjoyment of unit lands, facilities, and water areas in a manner coordinated with the other project purposes. The Secretary may transfer jurisdiction over unit lands and facilities thereon within or adjacent to the Wenatchee National Forest to the Secretary of Agriculture for recreation and other national forest system purposes. Upon transfer such lands shall become national forest lands: *Provided*, That the lands and waters within the flow lines of the reservoir or otherwise needed or used for the operation of the unit for other purposes shall continue to be administered by the Secretary of the Interior to the extent he determines to be necessary for such operation. The costs of the undertakings described in this section, including costs of investigation, planning, Federal operation and maintenance, and an appropriate share of joint costs of the unit, shall be nonreimbursable.

SEC. 4. The Secretary is authorized, if the Manson unit is located in whole or in part in an eligible area as defined in the Public Works Acceleration Act (76 Stat. 541), to recognize redevelopment as a function of the unit, to evaluate the benefits of the unit in relieving persistent unemployment or underemployment, and to allocate costs to the redevelopment function as appropriate, which costs shall be nonreimbursable.

SEC. 5. Costs of means and measures to prevent loss of and damage to fish and wildlife resources shall be considered as project costs and allocated as may be appropriate among other project functions.

SEC. 6. There are hereby authorized to be appropriated for construction of the new works involved in the Manson unit, $12,400,000 (October 1959 prices), plus or minus such amounts, if any, as may be required by reason of changes in the cost of construction work of the types involved therein as shown by engineering cost indexes and, in addition thereto, such sums as may be required to operate and maintain said unit.

EXECUTIVE OFFICE OF THE PRESIDENT,
BUREAU OF THE BUDGET,
Washington, D.C., March 16, 1964.

Hon. HENRY M. JACKSON,
Chairman, Committee on Interior and Insular Affairs,
U.S. Senate, Washington, D.C.

DEAR MR. CHAIRMAN: This is in response to your request of February 24, 1964, for the views of the Bureau of the Budget on S. 2533, a bill to authorize the Secretary of the Interior to construct, operate, and maintain the Manson unit, Chelan division, Chief Joseph Dam project, Washington, and for other purposes.

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

The Department of the Interior, in a report being submitted to your committee, recommends enactment of the bill with certain perfecting amendments. Accordingly, the Bureau of the Budget would have no objection to enactment of S. 2533, if amended as proposed by the Secretary of the Interior.

Sincerely yours,

PHILLIP S. HUGHES,
Assistant Director for Legislative Reference.

U.S. DEPARTMENT OF THE INTERIOR,
OFFICE OF THE SECRETARY,
Washington, D.C., March 16, 1964.

Hon. HENRY M. JACKSON,
Chairman, Committee on Interior and Insular Affairs,
U.S. Senate, Washington, D.C.

DEAR SENATOR JACKSON: This responds to your request for the views of this Department on S. 2533, a bill to authorize the Secretary of the Interior to construct, operate, and maintain the Manson unit, Chelan division, Chief Joseph Dam project, Washington, and for other purposes.

We recommend enactment of the bill with two technical amendments set out below.

The Manson unit, Chelan division, Chief Joseph Dam project, is located in Chelan County in central Washington. By climate, topography, and soils the area is especially well suited to the production of apples under sprinkler irrigation. The lands in the unit area that are now irrigated are devoted almost exclusively to apple production, and they have a successful history of such use running back over more than 50 years. The existing irrigation system is a composite of several privately financed developments which have been enlarged and improved over the years. The capacity of these facilities for water collection, storage, and delivery is no longer adequate. Also, they are aging; consequently, failures are frequent, and maintenance is difficult and expensive. To accomplish necessary overhaul, rehabilitation, and enlargement is beyond the financial capacity of the Chelan County Reclamation District.

The Bureau of Reclamation plan of development for the unit area would embrace the following activities: rehabilitation and enlargement of the 20-mile system for collection of water from the watersheds of seven creeks in the mountain region adjacent to the unit; enlargement of the storage reservoir, Antilon Lake, from 2,500 to 9,000 acre-feet by construction of one dam and enlargement of another; and rehabilitation and extension of the distribution system to continue service to 3,965 acres now irrigated, and to bring a full supply of irrigation water to an additional 1,525 acres of irrigable lands now receiving a partial supply, or being dry farmed. An additional 280 acres of land with established water rights, some in Indian trust status, and some which would not be considered irrigable under reclamation standards, will continue to receive their water entitlements. A total of 5,770 acres will be served with irrigation water through the unit.

Through expansion of irrigated acreage the basis will be laid to develop 78 new irrigated farms on lands that are excellent for apple orchards. We expect that new farm units would be developed for apple production. Rehabilitation of the existing system will permit uninterrupted service to continue on an economical basis to the existing farm units in the area, thus materially contributing to the economic stability of the county, which has been designated a rural redevelopment area under the Area Redevelopment Act. The economic merits of this unit are indicated by the extremely high benefit-cost ratio of 6.6 to 1.

Because Chelan County is a rural redevelopment area, the benefits which would accrue to area redevelopment for construction of the project have been evaluated in the planning, and costs have been allocated to that function on a nonreimbursable basis in accordance with provisions of the Area Redevelopment Act and the executive directive contained in Senate Document 97, 87th Congress. Precedent for the application of these procedures to a water resource development may be found in the Rivers and Harbors Act of 1962 (76 Stat. 1173), authorizing the Rend Lake Reservoir, Ill., and Noyo Harbor, Calif., developments in which costs were allocated to area redevelopment on a nonreturnable basis. Section 4 of the bill treats of these matters consistently with the unit feasibility report, with the exception of a reference to the Public Works Acceleration Act.

Since the criteria of the Area Redevelopment Act and not the Public Works Acceleration Act were used in establishing eligibility of the area for including area redevelopment as a project purpose, the appropriate reference in the bill would be to the Area Redevelopment Act. To accomplish this the words "an eligible area as defined in the Public Works Acceleration Act (76 Stat. 541)" should be deleted from lines 23 and 24, on page 3, and the words "a redevelopment area as defined in the Area Redevelopment Act (75 Stat. 47)" substituted.

Construction of the unit is expected to cost $12,363,000. This cost is allocated among the purposes of the unit as follows:

Irrigation	$10,503,000
Area Redevelopment	1,739,000
Recreation and fish and wildlife enhancement	121,000
Total	12,363,000

Of these costs, the allocations to area redevelopment and recreation and fish and wildlife enhancement would be nonreimbursable. Costs of mitigation of project-occasioned damage to fish and wildlife resources have been treated as a project cost and distributed among other project functions in accordance with principles of the Administration's proposed Federal Water Project Recreation Act, which was transmitted to the Congress on November 2, 1963. Section 5 of the bill authorizes this.

Of the $10,503,000 allocated to irrigation, which would be reimbursable without interest, the water users would repay $6,483,800. The balance of $4,019,200, which is beyond their ability to repay, would be returned to the Reclamation fund from revenues derived from power marketed through the Bonneville Power Administration.

Because orchards are slow to come into production the farmers whose lands are not now in orchards will require a 10-year development period for their farms before they begin to repay irrigation construction costs. In fact, their revenues will be so low that they will not have the financial capacity to bear the entire costs of operation and maintenance during the development period. For that reason it is proposed to fund some $67,000, of operation and maintenance costs during the development period as an irrigation cost item for repayment during the ensuing 50-year repayment period. This practice has been followed in other similar situations, such as on the Greater Wenatchee division of the Chief Joseph Dam project (act of May 5, 1958 (72 Stat. 104)). Landowners whose lands are already in orchards will be permitted a 3-year development to adjust their operations to the new project conditions.

Section 2 of the bill provides for funding these operations and maintenance costs as well as establishing a 50-year repayment period, providing for financial assistance from power revenues and reserving irrigation pumping power. However, the section does this in terms that are not entirely clear.

To provide for the funding of irrigation operation, maintenance and replacement costs during the development period which are beyond the ability of the irrigators to repay during that period, the second sentence of section 2 should be deleted and the following substituted:

"Construction costs allocated to irrigation beyond the ability of the irrigators to repay during the repayment period shall be returned to the reclamation fund from revenues derived by the Secretary from the disposition of power marketed through the Bonneville Power Administration. The term 'construction costs' as used herein shall include any irrigation operation, maintenance, and replacement costs during the development period which the Secretary finds it proper to fund because they are beyond the ability of the irrigators to pay during that period."

Certain of the lands needed for the unit are national forests lands which, although administered by the Wenatchee National Forest, are within the proclaimed boundaries of the Okanogan National Forest. To make applicable the requirement of the administration's proposed Federal Water Project Recreation Act that water resource project lands within the exterior boundaries of a national forest shall be administered by the Secretary of Agriculture for recreation and other national forest system purposes, and to insure that acquired lands within the boundaries of the Okanogan National Forest shall be transferred to the Secretary of Agriculture and become national forests lands, the sentence beginning at line 8, page 3, and the words "Upon such transfer such lands shall

become national forests lands" in lines 12 and 13, page 3, should be deleted and the following substituted:

"The Secretary shall transfer lands acquired for the unit within exterior national forest boundaries to the Secretary of Agriculture for administration as national forest, and jurisdiction of national forests lands within the unit shall remain with the Secretary of Agriculture for recreation and other national forest system purposes: *Provided*, That the lands and waters within the flow lines of any reservoir or otherwise needed or used for the operation of the project for other purposes shall continue to be administered by the Secretary of the Interior to the extent he determines to be necessary for such operation."

Enclosed are the statements concerning estimated personnel and other requirements 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 out the administration's program.

Sincerely yours,

KENNETH HOLUM,
Assistant Secretary of the Interior.

Enclosure.

CHELAN DIVISION, CHIEF JOSEPH DAM PROJECT, WASHINGTON

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 Congress

	1st year	2d year	3d year	4th year	5th year
Estimated additional man-years of civilian employment:					
Administrative services: Clerical	None	3	3	3	3
Substantive (program): Engineering aids and technicians	None	5	6	6	5
Total estimated additional man-years	None	7.5	9.0	9.0	6.2
Total estimated man-years of civilian employment	None	29.3	42.8	45.0	30.8
Estimated expenditures:					
Personal services	(1)	$194,750	$294,644	$309,830	$214,374
All other		$584,250	$2,650,356	$4,877,170	$1,779,626
Total estimated expenditures	$136,000	$779,000	$2,945,000	$5,187,000	$1,994,000

[1] General Investigation expenses.

Senator JACKSON. The Manson unit contains 5,770 irrigable acres of rolling hillsides and terraces along the north shore of Lake Chelan. The unit lands are devoted almost exclusively to apple orchards which have had a profitable history of production since private irrigation systems began serving the area in 1908. The area is served by a patchwork collection and distribution system consisting mainly of wood-stave pipes and flumes that have been in use for as long as 35 years. These would be rehabilitated and enlarged under the plan, with the entire collection system being replaced by buried mortar-lined and coated steel pipe.

The storage system would be enlarged by increasing the capacity of the Antilon Reservoir from 2,500 acre-feet to 9,000 acre-feet by constructing a new dam at the upper end of the reservoir and by enlarging the Antilon Lake Dam at the lower end of the reservoir.

The benefit-cost ratio is an unusually high one, 6.6 to 1.

In view of the fact that the Senate convenes at 11 o'clock this morning, I would suggest that the witnesses file their statements for the record and summarize the pertinent matter. The report of the Department has been included in the record pertaining to S. 2533.

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We will proceed with S. 2533. Mr. W. I. Palmer, Acting Assistant Commissioner, Bureau of Reclamation is here—if you will come forward—and Mr. Nelson and Mr. Lee and any others you wish to have from the Department. We are glad to have you this morning. As far as any statements you wish to present, if you would just file them and then go ahead in your own way to summarize and hit the high points of the project we can save some time. We do not want to omit anything, but we do wish to complete, if we can, the hearing on both projects by 11 o'clock. It is not mandatory, but it is our hope. Will you proceed, then, Mr. Palmer?

STATEMENT OF W. I. PALMER, ACTING ASSISTANT COMMISSIONER, BUREAU OF RECLAMATION; ACCOMPANIED BY H. T. NELSON, REGIONAL DIRECTOR AT BOISE; AND J. KARL LEE, ASSISTANT CHIEF, DIVISION OF PROJECT DEVELOPMENT

Mr. PALMER. Thank you, Mr. Chairman, consonant with your wish I will file a statement for the record and will attempt to summarize. First of all let me tell you it is a pleasure to be here in support of this project, which we consider to be a very, very good one. Two weeks ago today we were here on the Whitestone Coulee unit of the project which also is a very excellent proposal.

Senator JACKSON. All of this is part of the Chief Joseph project?

Mr. PALMER. All of this is part of the Chief Joseph project. Now, because of this reason I do not think a prolonged hearing on this is particularly necessary because the facts surrounding this project are well known to the committee.

This project has been before the committee specifically in the authorization of the Foster Creek division, which was on July 27, 1954; again on May 5, 1958, on the Greater Wenatchee division; 1962 on the Oroville-Tonasket unit, and lastly 2 weeks ago today on the Whitestone Coulee. So we think the committee is already fairly well acquainted with the project.

Now, there are a number of things that we think are worthy of noting. One is that this unit does not involve the production of any crop surpluses. It is essentially an apple economy and the crops that will be grown are readily marketed through established facilities.

Secondly, this project has no problem of acreage limitation. All of the lands are eligible to receive water. As a matter of fact, the average size of the farm unit is about 20 acres. And actually it aids in the question of surplus crop production because about 700 acres of wheat now produced under dry-farm culture will be withdrawn from that use and converted to irrigated apple land. And, as Senator Jackson pointed out, this is an unusually good project in terms of benefit-cost ratio, the ratio being 6.6 to 1.

It is also an unusually good project in that the percentage of total project cost being repaid directly by the irrigators—the repayment amounts to $6,483,000—calls for very high repayments on the part of the water users. Class 1 land is being required to pay $36 an acre, class 2 $23 an acre or a weighted average of $32 an acre.

There are three items that should be identified for the committee, the first one being that because this is apple land and it requires the input of large amounts of money to get an apple orchard into full production,

we are recommending a total of $67,000 of operation and maintenance cost in excess of the water users' ability to pay during the early years to be funded as construction costs. Now, this is not a new suggestion. This is frequently done in situations of this kind.

Secondly, this project, consonant with the Area Redevelopment Act of 1961 and Senate Document 97, proposes an allocation of $1,739,000 to area redevelopment.

And the last point that I think would be of some interest to the committee is that Indian trust lands are involved and will be served by the project.

Now, I think the committee would also like to know that the irrigation district is organized. The new lands have been petitioned in. The water users have evidenced a willingness to pay. We recommend the project to the committee as being a fine example of meritorious and well-justified reclamation development.

I have Mr. Harold Nelson, our regional director from Boise here and if the committee desires he would be glad to step to the map and describe the project.

Senator JACKSON. Fine. Why don't you do that, Mr. Nelson, and go through it step by step. Explain the existing project and what this will do.

Mr. NELSON. Mr. Chairman and members of the committee, my name is Harold Nelson, regional director at Boise, Idaho. Essentially, this project involves the rehabilitation of an old system that has been in use since 1908 and, secondly, the expansion of the system to give us a larger operating base. The collection system involves 20 miles of a combination of wood stave pipelines and open canal to tap some seven creeks about 20 miles along the shores of Lake Chelan. It is very rugged country. It is proposed to replace this 20-mile collection system with the very latest design in steel, concrete-coated and wrapped pipe, and also replace two siphons on Poison and Mitchell Creeks with very high heads, up to 700 feet of head, with the very latest design of pretensioned concrete pipe, sized from 45 to about 33 inches in diameter and the sizes of the collection system range from about 20 inches at the uppermost point at an elevation of about 4,300 feet, down to about 45 inches where the collection system enters a tunnel into an existing small reservoir called Antilon Reservoir. That would be enlarged, because of the ability to collect more water, from 2,500 to 9,000 acre-feet, by the construction of two earth dikes.

Then, on the lower end of Antilon Lake the existing distribution system, which now consists of partly open canal and partly wood-stave pipe, very badly deteriorated, will be replaced by asbestos and concrete and steel pipe in the form of three different systems which will go down through about 50 miles of pipelines to be replaced to serve the new lands. The west high lateral would be serving largely existing areas, and they also receive some water from the existing Wapato Lake, and that system will be rehabilitated also.

I wish to point out that this project before you for authorization just contemplates the replacement of the large size pipe beyond the ability of the district to handle, and the district itself will replace some 25 or 30 miles of smaller size pipe. The question may be asked why is this system being used instead of pumping out of the lake.

That would involve a pumping lift of about 1,200 feet and the annual operation and maintenance and cost would be beyond their ability to handle.

The annual assessment this year for this district runs about $40 an acre just to stay in business, which is the highest we know of. I believe that completes my summary of the project plan.

Senator JACKSON. As I understand it the Manson unit contains currently 5,770 acres.

Mr. NELSON. Yes, sir.

Senator JACKSON. Would there be any additional acreage brought in?

Mr. NELSON. The 1,440 acres that you see in the yellow area here [indicating], represents new lands that are available for development. This will have the advantage of giving this district a larger base upon which to spread their fixed charges.

Senator JACKSON. So the 5,770 acres includes the 1,400-odd acres.

Mr. NELSON. Yes, sir.

Senator JACKSON. Increase of new land.

Mr. NELSON. Yes, sir.

Senator JACKSON. New land that would be available for irrigation. Any questions, Senator Jordan?

Senator JORDAN. Is the present irrigation system that serves the area paid for, Mr. Palmer or Mr. Nelson?

Mr. NELSON. Yes, the district has had a very rough financial history. In the thirties they had to float about $300,000 worth of bonds. They have succeeded in making their bond payment except that they have not been able to keep up with the replacement of some of these high head siphons. I believe there are pictures that illustrate the rough terrain in which they have to operate, and it is getting to the point now where their annual costs are just about all they can stand and if they have a major failure they are going to be in serious trouble.

Senator JORDAN. But there will not be any holdover debt assumed by this?

Mr. NELSON. No, sir.

Senator JACKSON. What is the cost per acre now?

Mr. NELSON. The cost?

Senator JACKSON. The operating cost.

Mr. NELSON. The assessment?

Senator JACKSON. Yes.

Mr. NELSON. It is $40 an acre this year.

Senator JACKSON. Which is the highest in the State?

Mr. NELSON. Yes, sir.

Senator JACKSON. What will it be when rehabilitated and expanded?

Mr. NELSON. Class 1 land, $36.23; class 2 land, $23. The weighted average is $32, of which about $9 will go for operating and maintenance cost rather than the $40 now being collected. I might say that the $40 figure is a good indicator of how difficult it is for these fellows to operate because the system is run down and it is a high-cost system. It would be replaced with a system that would be much easier and much more susceptible to reasonable operation and maintenance costs, and hence the reduction in total cost.

Senator JACKSON. The $40 per acre now is all for operation and maintenance, it has nothing to do with——

Mr. NELSON. Yes, sir.

Senator JACKSON (continuing). Has nothing to do with amortization?

Mr. NELSON. Plus what is put in for capital and replacement as they go along.

Senator JACKSON. They have been charged to operation and maintenance?

Mr. NELSON. That is correct, sir.

Senator JACKSON. Rather than to long-term debt or amortization?

Mr. PALMER. That is correct, sir.

Senator JACKSON. Senator Jordan, did you have any further questions?

Senator JORDAN. Thank you, Mr. Chairman. Mr. Palmer, I believe you said that some $67,000 of operation and maintenance would be funded. I did not understand for how long a time operation and maintenance would be funded.

Mr. PALMER. Well, this goes in as a construction charge and then would be paid back as part of the annual payments against construction account.

Senator JORDAN. A single charge of $67,000?

Mr. PALMER. Well, no, sir. This is an estimate of how much it would amount to over the development period.

Senator JORDAN. Yes.

Mr. PALMER. Before they would become fully paying.

Mr. NELSON. The first 10 years.

Mr. PALMER. I might add, this is largely associated with the yellow lands or the new lands as shown on the map.

Senator JORDAN. The new lands that will be seeded to small trees.

Mr. PALMER. That is right.

Senator JORDAN. Until they get into bearing.

Mr. PALMER. That is right, sir.

Senator JORDAN. Then it will not be an annual charge; it will be a total charge?

Mr. PALMER. An estimated total of $67,000. It is a relatively minor amount but we wanted to make the record clear that we were proposing a funding of part of the operation and maintenance.

Senator JORDAN. And you have done this before, have you, on other projects?

Mr. PALMER. That is correct.

Senator JORDAN. Yes.

Mr. PALMER. Now, the $67,000 will be accumulated on the basis of annual assessments but it is just the deficit between what the water users can pay and what we estimate the bill will be, and it will be picked up as a construction cost item.

Now, Senator Jackson, you inquired a moment ago as to the breakdown of the acreage. There are 3,965 acres now being farmed in the area now under irrigation. The new lands now dry-farmed will be 1,405 acres, and there are 120 acres there that——

Senator JACKSON. Would you repeat those figures again?

Mr. PALMER. There are 3,965 acres of new land.

Senator JACKSON. That is new land?

Mr. PALMER. That is old land, excuse me, sir.

Senator JACKSON. Yes.

Mr. PALMER. Old land.

Senator JACKSON. That is mostly or all orchards?

Mr. PALMER. Virtually all orchard.

Senator JACKSON. Yes.

Mr. PALMER. There are 1,405 acres of dry lands not now irrigated, lands to be irrigated.

Senator JACKSON. Yes.

Mr. PALMER. And 120 acres now with inadequate water supply.

Senator JACKSON. That would be supplemental.

Mr. PALMER. Supplemental. Which makes 5,490 acres as the lands that would figure into the repayment equation. Additionally there are 95 acres of class 6 land which would continue to get water even though by our rating it is nonirrigable, but lands with established water rights and maybe crop-growing and they would be allowed to continue to farm but would not pay on the construction installment. They would pay operation and maintenance charges. And there are 185 acres of Indian trust lands.

Senator JACKSON. How many acres?

Mr. PALMER. Indian trust lands total 185 acres. That totals 280 acres that will receive water against the payment of operation and maintenance charges for a total of 5,770 acres.

Senator JACKSON. The Indian trust land is all leased out, isn't it?

Mr. PALMER. It is largely leased.

Mr. NELSON. Some of the lands, when they straighten out the title, they will attempt to sell so it will go into production, and if they do there is capacity in the system, and they will pay the same as the other lands.

Senator JACKSON. What is the present situation now?

Mr. NELSON. That and—originally the entire project area was Indian land on an individual ownership basis. In order for the first company to function back in the early 1900's they made an agreement that they would convey water for a flat charge of $2 an acre for the right to cross certain of the Indian lands and that right has been respected up to this time except for the fact that very few of the lands have availed themselves of that opportunity, and the assessment has not been paid. The lands have not taken water, so they are generally lying idle except for the figure that Mr. Palmer quoted that is being irrigated. But it is expected that they will all be converted to a higher use and come under the project. But they will receive water under that original agreement as long as they wish to retain their present status.

Senator JACKSON. Senator Burdick?

Senator BURDICK. Yes. Mr. Palmer, I would say that this project has one of the highest cost-benefit ratios that I have seen in a long time.

Mr. PALMER. That is correct, Senator. We consider it to be a very good project also from the other aspects under consideration, such as percentage of repayment and the fact that it produces no crops that are now considered in surplus, and actually will contribute by removing dry-farm wheat land and putting it into apples——

Senator BURDICK. There is no surplus of apples?

Mr. PALMER. We have not heard of any. When I go down to the store and see what I have to pay for western Delicious apples, I don't think there is a surplus.

Senator BURDICK. The apple crop is not price-supported, is it?

Senator JACKSON. No, it is not a price-supported crop, but the apple farmers are having some problems on price. Maybe what you are paying for them in the store would not show that, but to the producers there is a problem.

Senator BURDICK. Well, the irrigation features are paid apparently 60 percent by irrigators or water users and about 40 percent by power revenues, right?

Mr. PALMER. That is correct.

Senator BURDICK. And the $121,000 for wildlife enhancement falls within the formula of legislation now pending in the House as being nonreimbursable?

Mr. PALMER. Yes; H.R. 9032.

Senator BURDICK. Now, will you explain this one item of $1,739,000 for area redevelopment?

Mr. PALMER. Yes, I would be glad to, Senator. This is consonant with the Area Redevelopment Act of 1961, section 24, I believe, and with Senate Document No. 97. Now, Senate Document No. 97 prescribes the rules that would be used in measuring the merits of the project, the benefits-to-cost calculation. I would like to have Mr. Lee explain for the committee the items that went into this allocation.

Senator BURDICK. This I remember is not reimbursable.

Mr. PALMER. This would be nonreimbursable under the provisions of Senate Document No. 97 and the Area Redevelopment Act.

Mr. LEE. Well, the people in the region made an analysis of the present unemployment in skilled, semiskilled and common labor that is normally employed on construction of a project of this type. With this as a basis they then made an analysis of the employment opportunities that would be afforded by this project to put such people to work in connection with this particular development, and they estimated that a certain amount of labor would find employment in construction. They also estimated that a certain amount of labor would find employment in operation and maintenance, and they used this latter figure for 20 years. Then on the basis of the increased employment of people who are now unemployed in this area in construction and in operation and maintenance for 20 years they developed an annual average equivalent increase in income to people who would be otherwise unemployed in the area.

This was used in the analysis. This approach was used in the absence of specific advice from the Department of Commerce on their recommendations for procedures to be used. Since that time the Department of Commerce has completed the development of such procedures in a preliminary manner. A report setting forth recommended procedures for computing ARA benefits has now been printed and we have copies of it. By comparing our procedure and their procedure we find we have come up with a very conservative evaluation of the benefit that would accrue to unemployed labor in that area. The Department of Commerce has so advised us in its comments upon this analysis.

Senator BURDICK. I would ask one of you gentlemen if this is one of the projects which has been integrated with the ARA program?

Mr. PALMER. I think the first one we brought to this body was the Whitestone Coulee unit, which is located in the same county and has the same unemployment problem.

Senator JACKSON. Well, it is an adjoining county.

Mr. PALMER. Yes; not the same county.

Senator JACKSON. Okanogan County.

Mr. PALMER. Yes.

Senator JACKSON. But both countries are in the same category all the way from the Canadian line to Wenatchee.

Mr. PALMER. The Whitestone Coulee unit was the first one considered by this committee. Also, the Nebraska Mid-State project contained an allocation to area redevelopment. Now, Senator, I anticipated that you might be wondering why Garrison did not. The reason it did not, I was going to volunteer, is that by the time we got the new map we were already through with the Senate side of the hearings and pretty well through with the House side, and so we never reran the allocation but there would be some area redevelopment available to Garrison if the Congress develops legislation.

Senator BURDICK. Off the record.

(Discussion off the record.)

Mr. PALMER. We all agree it is an excellent project.

Senator BURDICK. That is all. Thank you.

Senator JACKSON. Do you make provision in the award of the contract that they are to use local labor in keeping with the problem of unemployment in the area?

Mr. PALMER. The construction contract is being let on a competitive bid basis. We try to get the best possible price. Now, the common labor in all probability will be drawn from the local area, and this is why all common labor and some skilled labor has been computed in this estimate. We assume that the contractor will bring with him his supervisory people.

Senator JACKSON. I understand that, but I was thinking of the building-trades men, the craftsmen and the common laborers.

Mr. NELSON. Most contractors, Senator, and in fact I think virtually all of them do use union labor and they will have to go under their labor-management contracts to the local hiring hall. So that will automatically result in skilled construction workers being drawn from the nearest union hall, which would be the local area.

Mr. LEE. There are two other ways, Senator Jackson, in which area redevelopment is given preference in our operations. The first one is through the Buy American Act. If we are receiving bids from a foreign manufacturer and if we have an alternative bid from an American manufacturer and he is located within a distressed area, then the American manufacturer is given a certain number of points preference in considering the competition between the two bidders.

It is also a requirement when we put out bids for supplies. If there are bidders on supplies that come from depressed areas they also will be given preference in the decision on the contract. Now, we have considered—actually we have not gone so far yet, I just checked this the other day—requiring in an area of this type that the contractor actually employ unemployed labor in the area. We have thought some about this, to some extent. I don't believe we have to do it, though, because as long as he is employing labor from the general area he

tends to make other positions available just by displacement of people from other positions.

Senator JACKSON. Well, I just wanted to ask this question to clarify the record in case anything develops later as to the employment of local people. Sometimes they bring in, from outside of the area concerned, certain skilled laborers that are not available locally. That is understandable. But there are times when we receive complaints about contractors who will bring in union labor in each instance but from an area outside of the section that should be benefited.

Senator BURDICK. But, Mr. Chairman, isn't the whole thrust of the ARA approach to provide employment for the local people?

Senator JACKSON. That is right.

Mr. LEE. In this respect this project complies.

Senator JACKSON. I hope the Bureau will watch it closely, consistent with, of course, getting the lowest possible bid.

Mr. LEE. As you well know, over the years there have been many heavy construction projects in the Pacific Northwest and there is a vast reservoir of skilled labor there, skilled and semiskilled, for this type of work, and that labor would be available that is now unemployed for this construction.

Senator BURDICK. No more questions.

Senator JACKSON. Senator Jordan?

Senator JORDAN. Thank you, Mr. Chairman. This number of acres, this figure—is it 5,770?

Mr. PALMER. That is the total acreage of the unit service areas.

Senator JORDAN. I was trying to arrive at a cost per acre that the users will pay back and it seems to me, if I am looking at the right figures here, that it will be in the neighborhood of $1,150 an acre. Is that approximately correct?

Mr. NELSON. That is correct.

Senator JORDAN. Is that high for orchard land or is average or is it low?

Mr. NELSON. I believe that that is average for orchard land. The lands when developed will be worth from $2,500 to $4,000 an acre, and we want to remember that the landowner must put in a substantial investment of his own.

Senator JORDAN. Yes. That is right.

Mr. NELSON. And in this case he must supply his own sprinkler system, and after—I should have mentioned earlier that the water would be available at sprinkler pressure, 25 pounds at all the turnouts, so that with the amount of water available to them, they just about have to use sprinklers. And that is about an average investment, I would say, yes, sir.

Senator JORDAN. Because of the unusually high cost-to-benefit ratio, I would be interested in seeing how that was developed. Will that be available to us, how you have computed that?

Mr. NELSON. Yes, sir.

Mr PALMER. We will be glad to supply that.

Mr. NELSON. I might point one thing out, that that large benefit is not available so much to the orchardist as it is to the other segments of the economy. Apples, for instance, require a great deal of processing, they require a great deal of packing, they require a great deal of marketing. They require refrigeration, they require storage

and transportation, and so on, so that the orchardist is not the beneficiary of the bulk of that benefit ratio.

Senator JORDAN. Because I have but little knowledge of this type of industry, I would like to see how you developed that—I do not mean at this time, but for the record.

Senator JACKSON. You will provide a breakdown for the record, then?

Mr. PALMER. Yes. Mr. Chairman, actually it is printed on page 52 of the report that is available to this committee on the Chief Joseph Dam project, the Chelan Division Report.

Senator JACKSON. All right. We will include at this point in the record the breakdown from the Bureau report, starting on page 52 and running through——

Mr. PALMER. Well, Mr. Chairman, it would be page 51 through 54.

Senator JACKSON. Those pages 51 through 54 will be included at this point in the record.

Senator JORDAN. Thank you.

(The material referred to is as follows:)

FINANCIAL SUMMARY

The Manson unit has economic justification. Benefits accruing from development would exceed associated costs by a ratio of 7.15 to 1 over a 100-year period of analysis. Water users can repay approximately 50 percent of all reimbursable costs over a 50-year repayment period.

UNIT FORMULATION

The project plan was formulated to provide the optimum scale of development consistent with the physical resources, needs, and desires of the irrigation district.

Two plans of development have been studied. Both plans would serve the same area with the only differences being the source of water and method of getting the water to the area. The plan considered most desirable from an economic standpoint provides for the rehabilitation and enlargement of the present collection system. The other plan, less desirable from an economic standpoint, provides for abandoning the present collection system and pumping all water directly from Lake Chelan. This alternative plan is discussed in part VIII of this report.

ECONOMIC JUSTIFICATION

Economic justification is based on a comparison of benefits to associated costs. Benefits anticipated from project development will result primarily from irrigation, with an additional benefit from recreation. No benefits will result from flood control or fish and wildlife enhancement as a result of project development.

BENEFITS

Benefits from construction of the Manson unit in accordance with the suggested plan of development are estimated at $2,981,000 annually. The derivation of these estimates is explained below.

Irrigation benefits

Irrigation benefits are defined as the increase in value of production and service resulting from water made available through unit development. These benefits are of three kinds—direct, indirect, and public.

The increase in agricultural production and saving in farm costs resulting from unit development (less alternative earnings) have been designated as direct benefits.

Processing and marketing of the increased agricultural production, the increased business activity from greater purchase of goods and services, together

with improvement in community facilities through greater tax support and the development of new farming opportunities, account for the indirect and public benefits.

The increased values were established through use of farm budgets for the same representative farms used in deriving estimates of payment capacity.

Estimated unadjusted irrigation benefits at full development of the Manson unit are as follow:

Direct benefits:	
Increased net farm income	$1,438,448
Less alternative earnings on new farms	354,445
Total	1,084,003
Indirect benefits:	
Benefits from increased marketing	1,009,061
Benefits from increased local sales	586,802
Total	1,595,863
Public benefits:	
Improved community facilities	103,318
New farming opportunities	354,445
Total	457,763
Total irrigation benefits	3,137,629

Summary of irrigation benefits.—Estimated net irrigation benefits at full development of the Manson unit, adjusted to allow for an average 5-year development period, amount to $2,968,200 annually for a 100-year period of analysis.

Recreation benefits

The National Park Service has estimated that annual recreational benefits of $12,800 will result from project development. Development would consist of picnic tables, camping area, boat docks, access road, and acquiring 50 acres of land to assure full recreation development at the reservoir.

Fish and wildlife benefits

No enhancement of the fish and wildlife resource of the area will result from the project as planned. Fish screens on the Antilon Reservoir outlet are provided by the project to protect the existing fishery resource.

Flood control benefits

No flood control benefits would result from development of the project as planned.

Total annual benefits

Annual net benefits anticipated from development of the Manson unit are summarized in the following tabulation for a 100-year period of analysis:

Kind of benefit	
Direct benefits:	
Irrigation	$1,025,500
Recreation	12,800
Subtotal	1,038,300
Indirect benefits: Irrigation	1,942,700
Unit total	2,981,000

FEDERAL PROJECT COSTS ASSOCIATED WITH BENEFITS

Annual Federal project costs associated with the benefits are estimated at $417,100 over the estimated 100-year useful life of the reconstructed facilities for the Manson unit. Project construction costs were converted to annual equivalent sums based upon an interest rate of 2⅝ percent. The derivation of Federal project costs based on a 100-year period of analysis is shown in table 11.

BENEFIT-COST RATIOS

The ratio of benefits to costs for the direct and total benefits is shown in the following tabulation for a 100-year period of analysis:

Direct benefits	$1,038,300
Annual costs	$417,100
Ratio	2.49 to 1
Total benefits	$2,981,000
Annual costs	$417,100
Ratio	7.15 to 1

TABLE 11.—*Summary of Federal project costs, Chief Joseph Dam project, Washington, Chelan division, Manson unit*

Federal investment costs:	
Total unit cost [1]	$12,384,000
Less funded operating costs	88,000
Less investigation costs	202,000
Plus interest during construction [2]	511,400
Net Federal investment	12,605,400
Annual equivalent Federal investment [3]	352,200
Annual operating costs [4]	64,900
Total annual equivalent costs	417,100

[1] Includes $86,000 for fish screens and $48,000 for basic recreational facilities.
[2] Calculated at 2⅝ percent interest.
[3] Based on $11,504,400 for the full period of analysis, $48,000 for 25 years, life of the recreation facilities, and $1,053,000 construction cost discounted for 10-year delay in construction.
[4] See table 12 and plans and estimates part for schedule of annual operating costs.

Senator JACKSON. If there are no further questions I will direct that the prepared statement be printed at this point.

(The statement referred to follows:)

PREPARED STATEMENT OF W. I. PALMER, ACTING ASSISTANT COMMISSIONER, FOR THE BUREAU OF RECLAMATION

Mr. Chairman, we are pleased to present for your consideration today our plan of development for the Manson unit, Chelan Division, Chief Joseph Dam project, Washington, which was described in detail in our feasibility report. On February 17, 1964, Assistant Secretary Holum sent the Department's feasibility report to the Congress, and it has been ordered printed as House Document No. 232, 88th Congress.

This committee and the Congress are well aware of the general background of the Chief Joseph Dam project, as it has been discussed in hearings in connection with four previous authorizations: Foster Creek Division, Greater Wenatchee Division, Oroville-Tonasket unit, and, most recently on March 3, 1964, in connection with S. 2447, Whitestone Coulee unit.

This is an unusually meritorious proposal, being designed to improve and enlarge an existing irrigation water collection and distribution system of the Lake Chelan Reclamation District which was built many years ago by the local people and now needs rehabilitation and modernizing to an extent beyond their financial capabilities. Irrigation in this area dates back to 1908 when the first irrigation district was formed.

The Manson unit lands are situated on the north shore of Lake Chelan in north central Washington, comprising an 11-mile by 4-mile area of terraces and rolling hillsides. The area is ideally suited to apple production by topography, soils, climate, and other factors. The presently irrigated lands encompass 3,965 acres, almost exclusively devoted to this crop, which is now the mainstay of the local economy.

Improvements in the district's system and extensions to the water collection system have been made from time to time, more or less on an emergency or patchwork basis. Accordingly, some portions of the system are in good condition and still have years of useful life expectancy, and other portions are antiquated, poorly designed and inadequate in capacity. Our plan is designed to use as much

as possible of the existing facilities and to put the entire system in such condition as to insure long trouble-free operation under an adequate operation, maintenance, and replacement program.

Under the plan of development an additional 1,405 acres of presently dry lands and 120 acres with only a partial water supply, would be devoted to irrigated apple orchards. Certain Indian-owned lands and class 6 lands with an existing water right would continue to receive their water entitlement, although they would not be subject to construction cost assessments.

There are no lands on the Manson unit which would be affected by the acreage limitation provisions of reclamation law.

The existing facilities consist of a gravity-flow collection system which diverts water from seven mountain streams into a small regulating reservoir—the Antilon Reservoir. The water is released as required into a closed-pipe distribution system which provides water under adequate gravity pressure to permit sprinklers to be used. When the gravity water supply is inadequate to meet the requirements, water is pumped from Lake Chelan and Wapato Lake to supplement the supply.

We propose to use the same plan of service, but to replace the existing canals, pipes, siphons, and flumes, as required, by mortar-lined and coated steel pipe of adequate capacity. The existing Antilon Reservoir would be enlarged by constructing a small new earth dam on Antilon Creek and by raising the existing Antilon Lake Dam, thereby increasing the active capacity from 2,500 acre-feet to 9,000 acre-feet. The reservoir would have a surface area of 180 acres at normal operating level. About 48 miles of the closed pipe distribution system mains would be replaced and enlarged. No pumping will be required under normal operating conditions.

The Antilon Reservoir would provide limited opportunities for fish and wildlife enhancement and recreation development. The plan of development includes fish screens on the outlet of the Reservoir, the acquisition of land adjacent to the reservoir for access for fishermen and recreation use, minimum public use recreation facilities and the transfer of such lands and facilities to the Forest Service for operation as part of the Wenatchee National Forest. These plans have been closely coordinated with the interested agencies of the State and Federal Governments and with the Lake Chelan Reclamation District. As the lands are now in district or public ownership, their acquisition for these purposes will be without cost to the unit.

Based on criteria set forth in the Area Redevelopment Act of 1961, Chelan County has been designed as a redevelopment area. Employment in the county would be directly affected by the construction and operation of the unit, and it would put to work many of the skilled and semiskilled workers on the unemployment rolls of the county, as well as many unskilled workers.

Annual benefits of the unit have been estimated with the assistance of the agencies directly involved, as follows:

Irrigation	$2,949,400
Recreation	5,585
Fish and wildlife	3,750
Area redevelopment	77,500
Total	**3,036,235**

Construction costs of the Manson unit have been estimated, at prices as of October 1959, to be $12,296,000. Because the returns from new apple orchards are slow to develop and the costs of establishing such orchards are high, it is proposed that the portion of the operating costs which the water users establishing new orchards are unable to repay during the 10-year deveolpment period ($67,000) be funded and considered a part of the construction cost, making a total project cost of $12,363,000.

This total project cost is tentatively allocated as follows: irrigation, $10,503,000; recreation and fish and wildlife enhancement, $121,000; area redevelopment, $1,739,000. The irrigation cost is reimbursable without interest under reclamation law and the costs allocated to fish and wildlife enhancement are nonreimbursable under existing law. We recommend the other costs be nonreimbursable. The nonreimbursable allocation to recreation and fish and wildlife

would be less than the limitation proposed under the administration's policy as set forth in H.R. 9032, 88th Congress.

The Lake Chelan Reclamation District is a functioning water users organization now operating the facilities of the Manson unit. This district has taken the necessary steps to adjust its boundaries and has indicated its willingness to contract for repayment of construction costs in accordance with the plan we have proposed. Our report has been reviewed by officials of the State of Washington, and of the interested Federal agencies. We have received strong endorsement of the plan from the Governor of Washington and other reviewers. The Bureau of the Budget advised that there was no objection to the submission of the report to the Congress.

The annual benefits exceed the annual equivalent costs in the ratio of 6.6 to 1, demonstrating the very favorable economic justification for the unit.

Over a repayment period of 50 years, the water users would be able to repay $6,483,800 of the irrigation allocation. The remaining $4,019,200, would be returned from revenues derived by the Secretary of the Interior from the disposition of power marketed by the Bonneville Power Administration. All existing obligations of the BPA will be repaid by the year 2022, 50 years after the last major powerplant now authorized goes into production. Financial assistance to the Manson unit will not be required until after that date, when more than adequate revenues will be available for that purpose.

Investigations and preparation of the report on the Manson unit were done under special authority of the Chief Joseph Dam Project Act (Public Law 577, 82d Cong.), which provided for financial assistance to be derived from revenues of the Chief Joseph Joseph Dam powerplant. Previous developments constructed under this program have been the Foster Creek and Greater Wenatchee Divisions and the Oroville-Tonasket unit.

You will recall that Assistant Secretary Holum, in the course of hearings on authorization of the Lower Teton Division and Whitestone Coulee unit, discused at some length the Bonneville Power Administration's financial situation and the availability of revenues in aid of irrigation. Under current accounting procedures for the Federal Columbia River power system, all financial assistance to irrigation is to be derived from pooled system revenues from the coordinated power system, generally, similar to procedures which have long been in use in the Central Valley and Missouri River Basin projects. The bill, S. 2533, under consideration, provides for this form of financial assistance.

The minor amendments proposed in our legislative report are for purposes of clarification and correction only. We earnestly recommend this committee's favorable action on S. 2533. We will be pleased to provide any further information you may desire.

Additional Statement Supplied by the Bureau of Reclamation

We feel it desirable to have on the record a statement as to the reasons for the somewhat different benefit, cost allocation, and financial assistance data which were presented in the proposed feasibility report, in the Secretary's final feasibility report, and today, in our testimony and in the Department's report on the bill.

These changes have been due to three major factors; first, the interest rates which result from the prescribed formulas to be used for computation of benefits have changed each year that this project has been under study, being first 2⅝ percent, then 2⅞ percent, and finally 3 percent; second, new methods and procedures to determine the monetary benefits, the allocation of costs, and the reimbursability of costs allocated to recreation and fish and wildlife have been, and still are being developed in the executive and legislative branches, and, third, the passage of the Area Redevelopment Act and the designation of Chelan County as a "redevelopment area" under criteria set forth in that act has caused an important change in the economic and financial analyses.

The following tabulation and the footnotes demonstrate the effect of these changes.

Summary of changes resulting from reanalyses, Chief Joseph Dam project, Washington, Chelan division

Item	Feasibility report, July 1962 [1]	Reanalysis, April 1963 [2]	Current reanalysis, January 1964 [3]
Cost allocation:			
Construction costs:			
Irrigation	[4] $12,113,500	[5] $10,420,500	[5] $10,503,000
Recreation and fish and wildlife enhancement	184,500	120,800	121,000
Fish and wildlife (mitigation)	86,000	86,000	[6] 0
Area redevelopment		[7] 1,735,700	[7] 1,739,000
Total	12,384,000	12,363,000	12,363,000
Annual operating costs:			
Irrigation	58,900	50,340	50,830
Recreation and fish and wildlife enhancement	5,600	3,610	3,610
Fish and wildlife (mitigation)	400	400	0
Area redevelopment		8,440	8,470
Total	[8] 64,900	[8] 62,790	[8] 62,910
Benefits:			
Irrigation	2,968,200	2,955,630	2,949,400
Recreation	12,800	5,585	5,585
Fish and wildlife		3,750	3,750
Area redevelopment		75,000	77,500
Total	2,981,000	3,039,965	3,036,235
Annual equivalent Federal costs	$417,100	$441,090	$456,910
Benefit-cost ratio	7.2 to 1	6.9 to 1	6.6 to 1
Repayment:			
Total reimbursable costs	$12,113,500	$10,420,500	$10,503,000
Repaid by water users	6,069,340	6,501,900	6,483,810
Financial assistance required	6,044,160	3,918,600	4,019,190
Percent repayment by water users	50	62	62

[1] Based on 2⅝-percent interest rate.
[2] Based on 2⅞-percent interest rate.
[3] Based on 3-percent interest rate.
[4] Includes $88,000 funded operating costs.
[5] Includes $67,000 funded operating costs.
[6] Fish and wildlife mitigation costs allocated to other functions as proposed in H.R. 9032.
[7] Costs allocated to area redevelopment nonreimbursable.
[8] Annual equivalent over 100-year period of analysis.

Senator JACKSON. The Chair has received two letters for inclusion in the record. One is from Mr. Ray H. Bumgarner, president of the board of directors of the Lake Chelan Reclamation District. The other is from C. F. Uhlhorn, secretary-manager of the Lake Chelan Reclamation District. Without objection they will be included in the hearing record at this point.

(The letters are as follows:)

LAKE CHELAN RECLAMATION DISTRICT,
Manson, Wash., March 9, 1964.

Senator HENRY M. JACKSON,
Chairman, Interior and Insular Affairs Committee,
Senate Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: I am very interested in S. 2533, the measure to authorize construction of the Chelan Division of Chief Joseph Dam project.

The project would rehabilitate the present system and adds some 1,500 acres.

Our area produces apples of the highest quality and the greatest quantity per acre. The survival of the fruit industry in our area depends upon the supply of water through irrigation. With a large portion of our present water

system in dire need of repair, we have hardly been able to hold our own. There is no reserve for an emergency or to rehabilitate our system, yet we are paying the highest cost per acre in the State. So, as you can see, something must be done for the survival of our district.

Yours truly,

RAY H. BUMGARNER,
President, Board of Directors.

LAKE CHELAN RECLAMATION DISTRICT,
Manson, Wash., March 10, 1964.

Reference S. 2533.

Senator HENRY M. JACKSON,
Chairman, Interior and Insular Affairs Committee,
Senate Office Building, Washington, D.C.

DEAR MR. CHAIRMAN: I have worked with the Lake Chelan Reclamation District for the past 7 years. During the past 5 years I have been the district's secretary and manager.

In this position I am possibly best qualified to know all the angles relating to the district's problems. By "all the angles" is meant the condition of the physical plant, the administrative problems at hand and the financial aspects of coping with these.

Because of this knowledge it is my firm conviction that the interests of and for the good of the district in the long pull ahead, the Manson unit, Chelan Division of the Chief Joseph Dam project will be best served through the passage of the proposed project report.

Very sincerely yours,

C. F. UHLHORN, *Secretary-Manager.*

Senator JACKSON. If there is no further business concerning S. 2533 we will turn to other business.

(Whereupon the subcommittee proceeded to discussion of other matters.)

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