REPORT TO THE CONGRESS OF THE UNITED STATES

AUDIT OF ARKANSAS, WHITE, AND RED RIVER BASINS WATER RESOURCES DEVELOPMENT PROGRAM CORPS OF ENGINEERS (CIVIL FUNCTIONS) DEPARTMENT OF THE ARMY AND SOUTHWESTERN POWER ADMINISTRATION DEPARTMENT OF THE INTERIOR

FISCAL YEAR 1957

BY

THE COMPTROLLER GENERAL OF THE UNITED STATES

AUGUST 1958

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON 25

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B-125031

Honorable Sam Rayburn
Speaker of the House of Representatives

Dear Mr. Speaker:

Herewith is our report on the audit of the activities of the Corps of Engineers (Civil Functions), Department of the Army, and the Southwestern Power Administration, Department of the Interior, in the Arkansas, White, and Red River basins, including the Whitney Project, Texas, for the fiscal year ended June 30, 1957.

Our prior year reports to the Congress on Federal water resources development programs in the Arkansas, White, and Red River basins contained matters for consideration by the Congress on allocations of construction costs to power and other purposes and recommendations to the Secretary of the Interior and the Chief of Engineers on accounting and financial practices. During fiscal year 1958, the Department of the Interior and the Corps of Engineers reached agreement on cost allocations for the eight multiple-purpose projects including power that are in operation in the Southwest and for certain projects in other areas. A summation of the status of this and other prior year findings is included in this report.

A copy of this report is being sent today to the President of the Senate.

Sincerely yours,

Joseph Campbell

Comptroller General
of the United States

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SOUTHWESTERN POWER ADMINISTRATION

DEPARTMENT OF THE INTERIOR

FISCAL YEAR 1957

The General Accounting Office has made an audit of the activities of the CORPS OF ENGINEERS (Civil Functions), Department of the Army, and the SOUTHWESTERN POWER ADMINISTRATION, Department of the Interior, in the Arkansas, White, and Red River basins, including the Whitney Project, Texas. This audit was made pursuant to the Budget and Accounting Act, 1921 (31 U.S.C. 53), and the Accounting and Auditing Act of 1950 (31 U.S.C. 67). The scope of the audit work performed is described on page 77 of this report.

Federal development of the water resources in the Arkansas, White, and Red River basins has been undertaken principally by the Corps of Engineers. Southwestern Power Administration markets the energy generated at hydroelectric power plants at these Corps projects. In part the hydroelectric plants and the transmission system are operated as an integrated power system. This operating arrangement makes the financial reporting on a combined basis appropriate and desirable.

GENERAL COMMENTS

The Arkansas, White, and Red River basins area constitutes about 282,000 square miles in the southwest portion of the United States. These three major rivers and their tributaries drain approximately one eleventh of the land area of the United States, including all of Oklahoma and parts of Colorado, New Mexico, Kansas, Texas, Missouri, Arkansas, and Louisiana. Water resources development has been under way in the 3 basins for about 150 years.

Public and private development of the water resources of the Arkansas, White, and Red River basins contains many features for flood control, navigation, irrigation, generation of hydroelectric power, expansion of recreational facilities, improvement of fish and wildlife habitat, and municipal and industrial water supply. Generally, water resources development by the Federal Government in these basins has been undertaken by the Corps of Engineers, Department of the Army. The Bureau of Reclamation, Department of the Interior, however, has constructed three irrigation projects in the Arkansas and Red River basins, but these projects are not included in this report except for brief comments in the notes to the financial statements on pages 89 and 90.

General comprehensive plans of improvement in the Arkansas and White River basins and specific projects in the Red River basin have been authorized to be carried out by the Corps of Engineers. Other projects and local protection works authorized for construction by the Corps are considered a part of the basin development and are included in this report.

At June 30, 1957, development in the southwestern area consisted of 12 multiple-purpose projects including power in operation or under construction, 21 reservoir projects in operation or under construction serving principally the purpose of flood control, and various navigation and flood control protection works. Total cost of the Arkansas, White, and Red River basins development for projects completed, under construction, and authorized is estimated to be in excess of 2 billion dollars.

The hydroelectric power generating facilities of the Federal power system in the southwestern area are comprised of the 11 multiple-purpose projects in operation or under construction by the Corps of Engineers in the Arkansas, White, and Red River basins and one project, the Whitney, on the Brazos River in Texas. Expenditures have been made by the Corps for advance planning and design on three additional multiple-purpose projects including power in the Arkansas, White, and Red River basins, at June 30, 1957. These 15 multiple-purpose projects including power within the southwestern marketing area provide an ultimate installed capacity of 1,579,000 kilowatts, of which 501,000 kilowatts had been installed and 506,000 kilowatts were under construction at June 30, 1957. The power transmitting and marketing agency for this system is the Southwestern Power Administration (SWPA), an agency in the Department of the Interior under the supervision of the Assistant Secretary for Water and Power Development.

Based on repayment schedules prepared by the General Accounting Office from costs shown by SWPA and costs and tentative cost allocations of the Corps, fiscal year 1957 revenues were

insufficient by about $7,647,000 to repay the Government investment over a 50-year period. The cumulative deficiency at June 30, 1957, was about $26,257,000. (See pp. 15 to 22.)

Revised rate schedules were approved by the Federal Power Commission (FPC) in August 1957 which increased rates to preference customers from 5.51 mills to 6.97 mills per kilowatt-hour at a 50 percent load factor. Revised rates and charges for sales to, and exchanges of energy with, private electric utilities were submitted by the Department to the Federal Power Commission and approved in September and November 1957. The revised schedules result in increased rates to the private utilities.

Because of certain accounting deficiencies, as summarized on pages 78 and 79, the financial statements on pages 81 through 103, in our opinion, do not present fairly or satisfactorily the financial position for the power and nonpower operations of the Corps of Engineers (Civil Functions) and the Southwestern Power Administration in the Arkansas, White, and Red River basins, at June 30, 1957, and the results of these operations for the fiscal year ended on that date.

The activities of the Corps of Engineers in the Arkansas, White, and Red River basins are carried out by district offices at Albuquerque, New Mexico, Tulsa, Oklahoma, and Little Rock, Arkansas, in the Southwestern Division, headquartered at Dallas, Texas, and the district offices at Memphis, Tennessee, Vicksburg, Mississippi,

and New Orleans, Louisiana, in the Lower Mississippi Valley Division headquartered at Vicksburg. The district office at Fort Worth, Texas, in the Southwestern Division carries out the activities of the Corps at the Whitney Project. The district offices of the Corps are operating offices headed by Army engineer officers, as district engineers, and generally carry out both military and civil works activities within defined areas under the general direction of division engineers. For civil works activities, divisions generally encompass one or more river basins or drainage areas. The division engineers are responsible to the Chief of Engineers, who, with his staff, is located at Washington, D.C.

Southwestern Power Administration was created by the Secretary of the Interior on September 1, 1943, to sell and dispose of electric energy generated at certain Federal projects in the Southwest. Under the provisions of section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), the Secretary of the Interior was designated the marketing agent for surplus energy generated at all reservoir projects under the control of the Corps of Engineers, Department of the Army. Southwestern Power Administration was in turn designated as the agency to market available surplus electric power and energy generated at the Corps projects that are in operation in the Arkansas, White, and Red River basins and the Whitney Project on the Brazos River in Texas.

The management of the Administration is vested in an Administrator appointed by the Secretary of the Interior. The headquarters office is located at Tulsa, Oklahoma.

PRINCIPAL FINDING OF CURRENT AUDIT

Transactions associated with the agreements with generating and transmission cooperatives

Contracts for the lease of electric transmission facilities and for the sale and exchange of electric energy with certain generating and transmission (G and T) cooperatives were reactivated in fiscal year 1956 and continued in fiscal year 1957. For fiscal year 1957, cost of power purchased and rental of transmission facilities under the reactivated contracts exceeded the revenues received from the cooperatives by about $1,745,000. In fiscal year 1956, the excess of the cost of power purchased and rental of transmission facilities over the revenues received from these cooperatives was about $1,758,000. The Federal Power Commission effective August 9, 1957, approved rate increases of about 27 percent (from an average of 5.51 mills to 6.97 mills per kwh) to all preference customers (including G and T cooperatives). The full effect of these rate increases on transactions with the cooperatives was not known at the time of our audit.

Transactions associated with these agreements are discussed on pages 51 and 52. Integration of the Government electrical system with that of private utilities and generating and transmission cooperatives is discussed on pages 45 to 49.

STATUS OF PRINCIPAL RECOMMENDATIONS IN PRIOR REPORTS

Our audit report to the Congress dated March 19, 1957, on Arkansas, White, and Red River Basins, Water Resources Development Program, Corps of Engineers (Civil Functions) and Southwestern Power Administration for the fiscal year ended June 30, 1956, and other prior year reports contained comments on a number of significant matters on which corrective action was needed. These findings and recommendations, and their current status, are summarized below.

1. Need for firm allocations of construction costs of multiple-purpose projects and responsibility for allocations

Although the multiple-purpose projects including power in the southwestern area have been in operation for several years, none of the construction cost allocations were firm at June 30, 1957. At the time of our audit, the most recent tentative cost allocations by the Corps to project purposes for the 12 multiple-purpose projects including power under construction or in operation in the Arkansas, White, and Red River basins, including the Whitney Project, were as follows:

Purpose	First cost	Interest during construction	Total Amount	Total Percent
Power	$320,963,893	$16,841,840	$337,805,733	47
Flood control	259,085,457	14,544,416	273,629,873	38
Navigation	95,874,000	5,851,000	101,725,000	14
Streamflow regulation	2,769,000	234,400	3,003,400)	
Public use	1,405,974	33,200	1,439,174)	1
Other	512,169	14,150	526,319)	
Total	$680,610,493	$37,519,006	$718,129,499	100

See appendix C, page 125, for tentative allocations by project.

Firm allocations of costs are necessary because the Federal investment in power, which is based on the allocations, is recoverable through sales of power.

Section 5 of the Flood Control Act of 1944 provides for delivery to the Secretary of the Interior of the energy generated at reservoir projects under the control of the Department of the Army, not required in the operation of such projects, for disposal of such power under rate schedules to become effective upon confirmation and approval by the Federal Power Commission. These rate schedules are to recover the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years. This section does not specify the agency responsible for allocating the construction and operating costs to be recovered by the power revenues. In the absence of specific designation of the agency responsible for making cost allocations and the methods to be used, a jurisdictional difference developed between the Department of the Interior and the Corps of Engineers as to the agency responsible for making allocations of the construction costs of multiple-purpose projects that include power as a purpose.

In recent years efforts have been made by the various agencies affected by the Federal water resources development program to establish uniform policies and criteria. Significant were the May 1950 report of the Subcommittee on Benefits and Costs to the Federal Inter-Agency River Basin Committee and Bureau of the Budget Circular No. A-47, December 31, 1952. In March 1954 the

Corps of Engineers, the Federal Power Commission, and the Department of the Interior came to general agreement on cost allocation methods and the concept of field-level cooperation. In May 1954 the President appointed a Cabinet Committee on Water Resources Policy to undertake a comprehensive review of Federal policies and programs in the field of water resources. On December 22, 1955, the committee submitted a report[1] to the President who in turn submitted it to the Congress on January 17, 1956. No recommendation was made as to the agency to be responsible for cost allocations.

In our prior year reports on water resources development in the Arkansas, White, and Red River basins and in other basins, we commented upon the lack of agreement between the agencies on cost allocations, length of repayment period, and other matters. In those reports we noted that the programs are based on a large number of laws administered by several agencies and that these laws did not provide uniform policies or criteria that are fundamental in carrying out the programs. We suggested that the Congress may wish to consider providing uniform policies and criteria because we believed that:

a. The water resources program could be more effectively administered if the Congress provided policies and criteria to be applied for allocation of costs of multiple-purpose projects, the results of which serve as the basis for establishing rates for commercial power. In addition to establishing policies and criteria for cost allocations,

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[1]Water Resources Policy, a report by the Presidential Advisory Committee on Water Resources Policy, December 22, 1955.

the new legislation should provide for (1) period for repayment of construction costs, (2) rates of interest, and (3) subsidies to nonpower purposes.[1]

b. Until firm allocations of the construction costs are made, it would not be possible to evaluate adequately the financial administration and results from operations of multiple-purpose projects. The construction costs allocated to power and the repayment requirements must be finally determined before power rates could be properly established in accordance with section 5 of the Flood Control Act of 1944. Also, the conflicting contentions that have existed and the existing confusion on the responsibility for cost allocations could be resolved with finality only through legislative action. Accordingly, we recommended that the Congress designate specifically the agency to make or to review and approve the allocation of construction costs for multiple-purpose projects authorized for construction by the Corps of Engineers under the various flood control and river and harbor acts.

c. The Congress may wish to clarify the role of the Federal Power Commission to approve allocations of construction costs and rate schedules for sale of power from Federal power installations. Rate schedules for sale of power from projects of the Corps of Engineers are subject to review and approval by the Commission; however, authorizations for only a few projects specifically designate the Commission to make the allocations. The FPC has not been specifically designated as the allocating agency for any of the projects included in this report.

In October 1957, at the request of the Chief of Engineers, a work group comprised of representatives of the Department of the Interior, the Corps of Engineers, the Federal Power Commission, and the General Accounting Office was formed for the purpose of reaching agreement on allocations of costs, maintenance of cost accounts, pay-out schedules, assignment of revenues to projects,

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[1]The period for repayment of construction costs and interest rates are closely related to our comments on "Status of repayment of Government investment allocated to power" pp. 15 to 22 of this report and "Interest on the Federal investment" pp. 36 to 38 of this report.

depreciation accounting, and other matters on which differences existed. Eighteen meetings of the group had been held as of April 30, 1958.

In a letter dated December 13, 1957, to the Assistant Secretary of the Interior, the Chief of Engineers stated that allocation discussions by the interagency work group had progressed sufficiently to indicate that it was improbable that full agreement on all details of the allocations could be expected in the near future. The letter further stated that, because allocations for certain projects in the Southeast and the Southwest were reasonably firm, and because of the need for firm cost records, the Corps was proceeding to establish cost records for these projects on a firm basis using the latest allocations prepared by the Corps of Engineers. Included in the list of projects furnished with that letter were the eight multiple-purpose projects in operation in the Arkansas, White, and Red River basins at June 30, 1957.[1]

In a letter dated January 17, 1958, the Assistant Secretary of the Interior responded, noting that the information in the Chief of Engineer's letter was substantially consistent with previous cost allocation agreements and understandings. The Assistant Secretary also stated that, if significant changes in project

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[1]Allocations of costs on four of these projects, Bull Shoals, Tenkiller Ferry, Blakely Mountain, and Whitney, differ from those shown in this report because of revisions made by the Corps of Engineers subsequent to the conclusion of our audit work. The revisions resulted in increases in allocations of first costs to power of $2,785,000 at Bull Shoals, $47,970 at Tenkiller Ferry, $237,000 at Blakely Mountain, and $308,600 at Whitney.

purposes or methods of operation were to occur, necessary adjustments in costs could be made at that time. Interior officials informed us in March 1958 that the Department was in agreement with the Corps on allocations covered by the December 13, 1957, letter of the Chief of Engineers and that these allocations could be considered as firm.

In a letter dated March 25, 1958, relating to this report, the Assistant Chief of Engineers for Civil Works referred to the accomplishments of the Federal agencies toward resolution of the problems of cost allocations and agency responsibility for these allocations, and he observed that, to the extent that agreement on basic principles and methods of allocation is achieved, the matter of agency responsibility for allocations becomes of less importance. The Administrative Assistant Secretary of the Interior expressed similar views in a letter dated February 27, 1958. The Administrative Assistant Secretary stated a belief that the March 1954 agreement on principles minimizes the jurisdictional dispute that existed in the past, and he noted that Bureau of the Budget Circular A-47 provides that the constructing agency will be responsible for preparing the allocation and other agencies having responsibilities, such as power marketing agencies, shall be afforded full opportunity to make their views known in the determination of the cost allocation. It is the opinion of the Department of the Interior that satisfactory allocations will be obtained under these principles.

Both the Department of the Interior and the Corps of Engineers are to be commended for the progress made to date in interagency discussions and on agreements reached on allocations on certain projects. Because agreement has been reached on allocations of costs of projects in operation in the Arkansas, White, and Red River basins and on certain projects in other areas, the recommendation in our prior year reports in this respect no longer applies to these projects. We remain of the opinion, however, that congressional action would be desirable because such action will provide uniform policies and criteria for application to Federal water resources programs undertaken in the future by the Corps of Engineers and the Department of the Interior.

2. Status of repayment of Government investment allocated to power

In our report to the Congress dated March 19, 1957, pages 23 to 25, we discussed the repayment of construction costs allocated to reimbursable purposes.

Electric energy generated at reservoir projects of the Corps of Engineers in the Arkansas, White, and Red River basins not needed in the operations at the projects is transmitted and marketed by the Southwestern Power Administration. Disposition of the energy is made under section 5 of the Flood Control Act of 1944, which provides that rate schedules shall be drawn having regard to the recovery (upon the basis of the application of such rate schedules to the capacity of the electric facilities of the projects) of the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years. A 50-year period has been generally adopted by the Corps of Engineers and the Department of the Interior for project amortization, and the interest and amortization charges used by the Corps are based on such a repayment period. The Corps also, in the absence of specific requirements of law, uses a 2.5 percent annual interest rate.

At June 30, 1957, 12 multiple-purpose projects including power in the Arkansas, White, and Red River basins, including the Whitney Project, were constructed or under construction. (See p. 42 for projects and dates of initial operation.) The repayment requirements at these projects had not been established with sufficient finality to permit precise comparison of the repayment

status with the requirements of section 5 of the Flood Control Act of 1944. Moreover, financial and statistical data on reimbursable operations issued by the Corps of Engineers and Southwestern Power Administration do not disclose clearly the actual repayment of investment of the United States Government from the funds derived from the operations in relation to the scheduled repayment, or theoretical return of funds which would be sufficient to repay the Federal investment within an administratively determined repayment period.

Based on repayment schedules prepared by the General Accounting Office from costs shown by SWPA and costs and tentative cost allocations of the Corps, fiscal year 1957 revenues were insufficient in the amount of $7,646,912 for repayment of the Government investment over a 50-year period for projects on which power is marketed by SWPA. The cumulative deficiency for these projects at June 30, 1957, was $26,256,901. In determining the annual amount required for amortization of the Government's investment over a 50-year period, we used the sinking-fund method of payment with a 2.5 percent annual interest rate.

The fiscal year 1957 and cumulative status of repayment of Federal investment in commercial power as computed by GAO for projects on which power is marketed by SWPA is summarized:

	Fiscal year 1957	Cumulative to June 30, 1957
Gross power revenues, Southwestern Power Administration	$ 8,756,290	$42,198,057
Less operating expenses and interest (excluding depreciation):		
Southwestern Power Administration	8,484,420	26,484,256
Corps of Engineers	5,527,310	30,784,370
Total expenses	14,011,730	57,268,626
Revenue deficiency, exclusive of depreciation	5,255,440	15,070,569
Scheduled repayment of capital investment	2,391,472	11,186,332
Deficiency in repayment of operating expenses (excluding depreciation), interest, and capital investment	$ 7,646,912	$26,256,901

Based on straight-line depreciation accounting in which the capital cost is written off to expense over the estimated service life of the asset, the net loss from power operations in fiscal year 1957 was $7,949,070. (See p. 83.)

A detailed presentation by projects of investment allocated to commercial power, expenses, and scheduled repayment is shown in appendix D. A discussion on recent increases in power rates appears on pages 57 to 61. The scheduled repayment shown in appendix D was computed by the General Accounting Office and provides, on a sinking-fund basis, for recovery of investment in each project, including the cost of major replacements, in the 50-year period after operations begin. Interest on the Government's unamortized investment in power has been included as an expense of operation in determining the deficiency in repayment. The Corps'

investment allocated to power being amortized totaled $146,319,733 and was obtained from the most recent cost allocation studies available at the time of our audit on projects in operation at June 30, 1957. The project investments allocated to power are subject to revision but were considered by the Corps to be reasonable and the best obtainable at that time. The SWPA investment of $24,191,270 is represented by the total transmission facilities in service at the end of fiscal year 1956 plus interest during construction as shown in SWPA's Repayment and Average Rate Determination Study, October 1956.

In appendix D, separate repayment schedules are shown for Narrows and Whitney dam projects because they are physically operated as isolated projects and the Department of the Interior considers them separately from the integrated system and from each other for rate and repayment purposes.

Power revenues were applied first to the repayment of combined SWPA and Corps operation and maintenance and interest expenses because agreement has not been reached between the Corps of Engineers and the Southwestern Power Administration on the division of receipts from sale of power to the respective generating projects and the marketing agent. Because power revenues have been insufficient by about $15,000,000 to cover operating expenses (excluding depreciation) and interest on the unamortized power investment, no funds have been available for repayment of the capital investment in power through June 30, 1957.

In a letter to us dated February 27, 1958, relating to this report the Administrative Assistant Secretary of the Interior stated that the Department believes that the analysis prepared by the General Accounting Office is not complete and does not accurately present the basis for repayment of the Federal investment allocated to power. The letter further stated that (1) a check of the financial operation such as this to test the adequacy of the over-all rate level should be carried through the complete repayment period which is 66 years for the integrated system, (2) repayment at a 50-year rate does not necessarily imply the requirement to show repayment at the end of each selected period of, say, a fiscal year, (3) consistent with accepted repayment practice for Federal projects, Interior, while maintaining repayment at a 50-year rate, has shown operation of the system for a 66-year period thereby making use of power revenues from early projects to assist in the repayment of costs for projects that have been added to the system at a later date, (4) the 16-year extension for operation of early projects is considered reasonable for this study, and (5) Interior has based the rate schedules and special rates in the various contracts for sale of energy on the repayment and average rate analysis sent with the November 1956 request to FPC, which is considered to be adequate.

The Administrative Assistant Secretary also stated that Interior believes that scheduled repayment need not necessarily be on a straight-line basis because factors affecting sales revenues, such as available water and the class of energy produced, are not

necessarily identical each year. Requests for approval of rates have been on the basis that the rates are adequate to produce repayment at a 50-year rate, but the Department considers it impracticable to establish rates that necessarily return all costs on a current basis.

As has been stated in our prior year reports, we believe that the Department of the Interior and the Corps of Engineers should design schedules that show clearly the status of repayment. In the absence of such schedules, the General Accounting Office schedule was prepared. Its purpose is to show the current (June 30, 1957) status of repayment based on the information available at the time of our audit. To attempt to show the adequacy of the over-all rate through the complete repayment period, as Interior has stated should be done, would be outside the scope and purpose of this schedule, and the subject matter with which it is concerned, and would involve numerous estimates of future expenses and revenues and of the factors affecting these amounts. The comments by Interior that recovery of all costs currently is not necessarily required and that scheduled repayment need not be on a straight-line basis do not alter the desirability of determining and disclosing the current status of repayment.

The Assistant Chief of Engineers, in a letter dated March 25, 1958, concurred in our recommendations shown on page 22 but pointed out that, before the recommendations can be effected, matters now under consideration by the interagency work group, formed in October 1957, must be resolved. The letter also stated that the scheduled amount of receipts to be credited to projects should be

based on agreement among the agencies, that development of basic principles and accounting procedures which must precede such agreements is one of the objectives of the interagency work group, and that draft pro forma pay-out schedules have been prepared by the Corps of Engineers and presented to the work group for consideration.

Until such time as agreements are reached on the allocation of revenues to projects and the application of project revenues to the Government's investment, it will not be possible to show by project the status of repayment of the capital investment in power and provide information for reviews and evaluations of rates as contemplated in our prior year recommendations. Our audit for fiscal year 1957 disclosed that conditions relating to the allocation of power receipts to generating projects have not been resolved; accordingly, the recommendation in our previous reports is repeated.

Our report to the Congress dated March 19, 1957 (pp. 75 and 76), and prior reports also commented upon the desirability of preparing schedules, supplemental to the financial statements, showing the status of repayment of capital investment. We believe that scheduled repayments of the investment of the United States Government in relation to the actual repayments from funds derived from operations should be disclosed to readers of the financial statements. We believe also that data on status of repayment of investment should be supplemental to financial statements which are based on accounting costs. Accordingly, we are repeating our recommendation.

Recommendations to the Chief of Engineers and the Secretary of the Interior

To afford the basis for showing precisely the status of repayment of the Government's investment and a financial evaluation of operating results and to provide information for reviews and evaluations of rates, we recommend:

1. That agreements be reached and executed between the Corps of Engineers and Southwestern Power Administration on the scheduled amount of receipts from sale of power allocable to generating projects as a return of the reimbursable power costs of the projects.

2. That the Corps of Engineers and the Department of the Interior design schedules, that are supplemental to the financial statements, showing the status of repayment of the Government's investment.

3. Payments to states from leasing revenues

Revenues are derived by the Corps of Engineers from reservoir projects, principally from the leasing of lands for farming and grazing purposes. The aggregate of these revenues is shown as reduction of expenses for operating and maintaining the facilities and as credits to construction costs.

Under the provisions of the Flood Control Act of 1941, as amended (33 U.S.C. 701c-3), 75 percent of the moneys received and deposited into the Treasury of the United States during any fiscal year on account of the leasing of lands acquired for flood control, navigation, and allied purposes is to be paid to the state in which the lands are located. The amounts paid to the states are not entered in the accounting records at the district offices but are disbursed and recorded at the Office of the Chief of Engineers, Washington, D.C.

Corps records for fiscal year 1957 show revenues of $504,043 from leasing of lands acquired for 8 multiple-purpose projects including power, 15 flood control projects, and 2 navigation projects in the Arkansas, White, and Red River basins, including the Whitney Project. Of this amount, 75 percent or $378,032 is payable to the states. At June 30, 1957, a total of $3,335,639 of such revenues had been received, of which $2,501,729 had been paid or is payable to the states.

Because amounts paid to states are not recorded at the projects, operation and maintenance costs, as now stated in the accounting records of the respective district offices, have been improperly reduced by $378,032 for fiscal year 1957 and $2,501,729 to June 30, 1957.

In our report dated March 19, 1957 (page 27), we recommended that the payments to states from revenues for leasing reservoir lands be recorded in the accounts of the projects at district offices. Our audit for fiscal year 1957 disclosed that the procedures relating to accounting for payments to states from leasing revenues have not changed; accordingly, the recommendation in our previous report is repeated.

Recommendation to the Chief of Engineers[1]

> To show properly the cost of operating and maintaining reservoir projects, and to provide for the recovery of all proper costs in producing power, we recommend that the payments made or to be made to states from revenues for leasing reservoir lands under the provisions of the Flood Control Act of 1941, as amended, be recorded in the accounts of the projects at district offices.

4. Costs incurred by Corps of Engineers in preliminary investigations and surveys not included in project costs

Under Corps accounting procedures, costs incurred in conducting preliminary investigations and surveys of proposed projects to determine the advisability of their construction are not included in total project costs. Also, distinction is not made between projects having reimbursable purposes and those which are nonreimbursable for purposes of classifying costs of preliminary investigations and surveys. In contrast with Corps procedures, project investigation costs and certain basin survey costs of the Bureau

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[1] In a letter dated March 25, 1958, relating to this report, the Assistant Chief of Engineers for Civil Works stated that the Chief of Engineers concurs in this recommendation and that steps are being taken to revise the Corps of Engineers' accounting procedures accordingly.

of Reclamation are transferred to construction work in progress when funds for construction of Bureau projects are appropriated. The investigation costs of the power marketing agencies of the Department of the Interior are treated similarly.

At June 30, 1957, the Corps of Engineers had expended $14,924,141 for preliminary investigations and surveys in the Arkansas, White and Red River basins. None of these costs had been charged to projects under construction or in operation. Of the total, $391,487 was classified in Corps' records as preliminary investigations and surveys; the remaining $14,532,654 had been transferred to nonreimbursable costs.

Costs incurred for investigations and surveys are as essential to the construction of a project as are costs incurred for materials and labor. Accordingly, all costs incurred in investigating and surveying approved projects, and an appropriate share of the costs of basin investigations and surveys, should be transferred to project costs upon authorization for construction of a unit in the comprehensive plan of development. The costs so classified, however, should not exceed the amount that may be reasonably determined to contribute directly and without duplication to the construction of the project.

In our audit report dated March 19, 1957, pages 65 to 66, we discussed this matter and made certain recommendations to the Chief of Engineers. The recommendations were made because, to the extent that costs incurred for preliminary surveys and investigations which contribute directly and without duplication to the construction of the project are excluded from total project costs, the

Federal investment for projects in operation and under construction is understated. Also, the adoption of the recommendations would bring about comparable policies and procedures between the several water resources development agencies. In a letter dated July 3, 1956, the Assistant Chief of Engineers for Civil Works stated that the importance of this matter was recognized and efforts would be continued to resolve it as soon as practicable.

The House Committee on Appropriations stated in its report on the Public Works Appropriation Bill for the fiscal year 1958 (Report No. 552 on H.R. 8090, subsequently enacted as Public Law 85-167, 71 Stat. 416) that total cost figures for projects should include general investigation costs as well as those for advance engineering and design and for actual construction and directed that budget tables and justifications for project costs were to reflect these additional costs thereafter. In this connection, the Senate Committee on Appropriations in its report on House bill 8090 (Report No. 609, p. 19) stated that "The Committee is wholeheartedly in agreement with the principle set forth in the House report. However, *** /the/ committee does not see any advantage in including such costs in project estimates submitted for budgetary considerations of the Congress since they have a negligible effect upon project economics."

Our audit for fiscal year 1957 disclosed that the procedures which prompted the recommendations made in our audit report dated March 19, 1957, have not changed. Accordingly, the recommendations in our prior report are repeated.

Recommendations to the Chief of Engineers[1]

To provide for adequate disclosure of total project costs and consideration of all proper costs for allocations of total construction costs to purposes, we recommend that the Corps of Engineers:

1. Allocate an appropriate share of the costs of basin investigations to projects or units authorized for construction.

2. Classify the costs of surveys and investigations of authorized projects as construction costs at the time the projects are programed for construction, limited to the amounts that may be reasonably determined to contribute directly and without duplication to the constuction of the project.

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[1] In letter dated March 25, 1958, relating to this report, the Assistant Chief of Engineers for Civil Works expressed general concurrence with our recommendation and stated that steps are currently being taken to revise the Corps of Engineers accounting procedures accordingly.

5. Allocation to power and nonpower purposes of joint costs and expenses of operations

Costs and expenses of operating and maintaining multiple-purpose projects consist of amounts that can be identified directly to a specific purpose and amounts that are common to all purposes served by the project. The operating and maintenance expenses that can be identified to specific purposes are charged directly to those purposes, and the expenses common to all purposes require allocation. Costs and expenses common to purposes served by a multiple-purpose project requiring allocation are:

1. Depreciation and interest on investment in plant, property, and equipment jointly useful to the several purposes.

2. Operation and maintenance expenses common to all purposes, such as supervision and administration, camp expenses, reservoir operations, and similar activities.

In our prior year reports, we noted that the Corps of Engineers and the Department of the Interior had not established comparable policies and practices for allocating to purposes the joint costs and expenses of operation and maintenance. In these reports we recommended to the Secretary of the Interior and the Chief of Engineers that a sound and consistent policy be adopted which will provide for (1) the allocation of depreciation of joint facilities on the basis of capital cost allocations, (2) computing and recording interest on the investment in commercial power and municipal water supply and charging the interest as a cost of operations based on the capital cost allocations to these two purposes, and (3) the allocation of current operation and maintenance expenses on the basis of the current use of the facilities.

This recommendation has been adopted in part by the Corps of Engineers, but decisions thereon by the Department of the Interior have not been made. The Corps Programming and Accounting Manual provides that actual operation and ordinary maintenance expenses will be allocated to functions served in a manner consistent with the basic allocation. This manual provision refers to letters of instruction which provide the basis and guides for district offices in making allocations of an applicable share of the operation and maintenance costs that are common to all functions to power and nonpower purposes. Accounting instructions do not provide a basis for the allocation of depreciation and interest expense that are common to all the purposes of the project.

In fiscal year 1957, Corps of Engineers allocations of joint costs and expenses for the eight multiple-purpose projects including power in operation at June 30, 1957, in the southwestern area were generally related to capital cost allocation studies for these projects. The allocations were not always consistent between projects because varying sources of information in the project studies were used in arriving at allocation percentages.

In a letter dated March 25, 1958, relating to this report, the Assistant Chief of Engineers for Civil Works stated that each of the parts of the recommendation made in our prior year reports is affected by the development of interagency understandings and that Corps practices are considered tentative until such time as the broader problems are resolved.

Since the Corps of Engineers is now allocating joint costs and expenses in the southwestern area projects generally on a

sound basis, we are not repeating our prior recommendation in this report. However, because the fairness of the amounts determined for results from operations is dependent upon the reasonableness of the allocation to purposes of costs and expenses, agreement on this matter by the Corps of Engineers and the Department of the Interior, as a matter of joint policy, needs to be reached.

6. Provisions for depreciation of facilities

Pursuant to the powers conferred by the Federal Power Act, the Federal Power Commission adopted a system of accounts entitled "Uniform System of Accounts Prescribed for Public Utilities and Licensees Subject to the Provisions of the Federal Power Act." One of the more important rules and regulations contained therein refers to depreciation and provides that "each utility shall record as at the end of each month the estimated amount of depreciation accrued during that month on depreciable electric plant."

By specific provision of Congress, the agencies of the United States engaged in the generation and sale of electric energy are subject to the uniform system of accounts and the rules and regulations contained therein, insofar as power distributed to the public is concerned. The language of the applicable legislation states:

> "All agencies of the United States engaged in the generation and sale of electric energy for ultimate distribution to the public shall be subject, as to all facilities used for such generation and sale, and as to the electric energy sold by such agency, to the provisions of sections 825 and 825a of this title, so far as may be practicable, and shall comply with the provisions of such sections and with the rules and regulations of the Commission thereunder to the same extent as may be required in the case of a public utility." (16 U.S.C. 825b)

As stated in Accounting Principles Memorandum No. 1 (section VIII on Property Accounting) issued by the Comptroller General on November 26, 1952 (now the General Accounting Office Policy and Procedures Manual, 2 GAO 1270.60), agencies which carry on public utility activities should control all fixed assets through their accounts with appropriate provisions for depreciation. Depreciation should be recorded as a part of the process of

determining the cost of carrying out the various functions or purposes, regardless of the method employed in financing the activity. Accounting Principles Memorandum No. 3, issued by the Comptroller General October 18, 1957 (now 2 GAO 1282.60b), states that:

> "Depreciation of fixed assets should be recorded when a regular determination of the cost of all resources consumed in performing work or carrying out an activity is needed.
>
> * * * * *
>
> "The more complete cost data produced by accounting for depreciation will be especially useful in agencies and activities where fixed assets constitute a substantial portion of the resources used for program purposes, such as *** construction, public utilities, *** and similar activities."

Certain assets, such as land and land rights, exclusive of fee acquisition, excavation and grading of roads, relocation of existing facilities, and intangibles, are not depreciable in the normal sense. Their usefulness, however, is contingent on the life of the projects, and for this reason some form of amortization should be recognized in the accounts.

In our prior year reports on water resources development in the Arkansas, White, and Red River basins and in other basins, we recommended to the Chief of Engineers and the Secretary of the Interior that, in order to obtain comparable financial data on water resource programs, they establish jointly, and apply consistently, a policy on depreciation that will provide for recording in the books of account (1) a cost of producing services and (2) the amounts attributable to reductions in the service life of components of plant.

Accounting procedures of the Corps of Engineers now provide for depreciation of multiple-purpose projects including power at rates based on the estimated service lives of the depreciable assets included in the plant-in-service account. The straight-line method of depreciation is prescribed for use, and rates are applied to the cost of the multiple-purpose plant in service. The Corps accounting procedures do not prescribe depreciation on the flood control and navigation projects which do not include power as a purpose.

Corps instructions state that transfers to plant in service are to be made for specific features, subfeatures, or units serving a project purpose, plus the related portion of joint facilities, including interest during construction, on the basis of completion to the point of actual availability to serve the project purpose. In the case of power development at multiple-purpose projects, transfers to plant in service are to be made on the basis of each generating unit scheduled initially as part of a continuing construction schedule. The in-service date for plant in service is considered as the first of the month following the availability to serve the project purposes.

The instructions in the Programming and Accounting Manual of the Corps provide that retroactive adjustments for depreciation will not be made where completed construction has been transferred to plant in service and depreciation computations have been entered in the accounts in accordance with prior instructions.

In the Arkansas, White, and Red River basins, depreciation of the multiple-purpose projects in operation has been computed by

the Corps of Engineers on the straight-line method, with service lives based on engineering studies, except that no item of property has been assigned a service life in excess of 100 years. Costs of land, land rights, relocations, and clearing were not included in the base for computing depreciation. Prior to fiscal year 1957, an estimated salvage value of 10 percent of cost had been deducted in determining the base for depreciation on the Bull Shoals and Norfork Projects. Although this procedure was changed, no adjustment was recorded for salvage value considered in prior years in computing depreciation. The initial date for depreciation of facilities has not been on the same basis in all instances. At some projects, depreciation commenced on the date the final generator came into service. At other projects, depreciation commenced at a date between the placing in service of the first and last generators representing about the average in-service date for the individual project.

Most of the principles relating to depreciation that were recommended in our prior year reports have been adopted for multiple-purpose projects including power by the Corps of Engineers. We were informed in March 1958 that instructions concerning depreciation or amortization of land and land rights, relocations, and clearing costs will be issued shortly and that certain of the other principles are still under consideration. Accordingly, we are not repeating our recommendation to the Chief of Engineers in these respects. We believe, however, that prescribed procedures should require retroactive adjustments for deficient and unrecorded depreciation wherever the amounts are material and

would have a significant effect on the results of operating and maintaining the facilities.

The Southwestern Power Administration charges operations for depreciation and amortization of transmission plant and general plant. The Administration has made no provision for depreciation or amortization on land and land rights, clearing land and rights-of-way, and roads and trails.

Decision by the Department of the Interior on depreciation as a matter of policy has not been reached, and depreciation is not generally recorded on water resources projects constructed by the Department. To obtain comparable financial data on Federal water resources programs,our prior recommendation continues to be applicable, namely, that the Secretary of the Interior establish, and apply consistently, a policy on depreciation which will provide for recording in the books of account (1) the cost of producing services and (2) the amounts attributable to reductions in the service life of components of plant. One of the matters being considered by the interagency work group formed in October 1957 is the application of consistent policies on depreciation to water resources projects.

7. Interest on the Federal investment

In our prior year reports to the Congress on water resources development in the Arkansas, White, and Red River basins and in other river basins, we stated that interest on the Federal investment was not uniformly provided on water resources projects constructed by the Corps of Engineers and by agencies within the Department of the Interior. Because the assumptions on which interest was computed and applied differed between and within agencies, we recommended to the Chief of Engineers and the Secretary of the Interior that a policy for recording interest on the Federal investment be adopted based on the following principles:

a. The interest cost for each year should be determined on the net Federal investment in the project applicable to power or municipal water supply purposes at the beginning of the year and on the accrued Federal expenditures, plus transfers of property from other Federal agencies, less any funds returned to the United States Treasury, for the fiscal year. Computations of interest should be based on the average monthly expenditures plus property transfers for the month, less any funds returned to the Treasury. During the construction period, interest should not be computed on a compound basis.

b. The rate of interest should be based on the long-term borrowing rate for several years and determined in consultation with the Secretary of the Treasury, unless otherwise provided by law.

c. Interest applicable to the investment in facilities to the "in service" dates should be charged to construction costs as interest during construction; and interest cost thereafter should be classified as an operating expense.

The accounting procedures issued by the Corps of Engineers in fiscal year 1957 provide for recording interest at the rate of 2.5 percent a year on the net unrecovered Federal investment in multiple-purpose projects. The rate of 2.5 percent a year was

supplied by the Bureau of the Budget in implementation of section 15 of Bureau of the Budget Circular A-47. This section provides for interest rates based on the average rate of interest payable by the Treasury on long-term borrowings. Corps procedures provide that interest on the Federal investment is to be computed during the construction period on all accumulated costs, excluding previous interest costs, and recorded as a part of the construction costs. During the operation of the project, the basis for computation of interest will be the unrecovered investment in the project, and the interest will be charged as an expense of operations. Interest during construction ceases and interest during operations commences at the first of the month following the availability of the facilities to serve the project purpose.

Instructions issued July 1, 1956, by the Corps provide that retroactive adjustments will not be made where completed construction has been transferred to plant in service and interest computations have been entered in the accounts in accordance with prior instructions. These prior instructions provided for compounding annually interest during construction and for considering the power facilities, including applicable joint facilities, in service at the time the first generator is placed in commercial operation. The Corps does not compute and record interest on the Federal investment in single-purpose projects or for multiple-purpose projects that do not have reimbursable purposes.

Although computations by the Corps for interest on multiple-purpose projects, including power in the southwestern area, have not been made in all cases under the revised criteria or on a

basis consistent between the several projects (see note 10, pp. 98 and 99), the present accounting procedures of the Corps of Engineers do include substantially all of the principles recited. For this reason, we are not repeating our prior year recommendation to the Chief of Engineers in this respect. However, we believe that Corps procedures should require that adjustments be made in the books of account for prior interest computations that are deficient under present criteria, wherever such adjustments would be material in amount. Until such time as agreements are reached between the Corps and the Department of the Interior on the allocation of revenues to projects and the application of project revenues to the Government's investment, however, it will not be possible to revise the interest charges with any degree of accuracy.

The accounting procedures of Southwestern Power Administration provide for recording interest at an administratively determined rate on total expenditures at the end of each year as shown in the plant-in-service and construction-work-in-progress accounts. A rate of 2.5 percent a year has been used by the Administration. Recognition is not given by the Administration to repayment of the Federal investment; neither has any portion of the interest computed been capitalized as interest during construction.

For the purpose of obtaining consistency and comparability of financial data on commercial power and municipal water supply operations of the Department of the Interior and the Corps of Engineers, a common policy for recording interest on the Federal investment should be adopted by both agencies. This matter is also under consideration by the interagency work group formed in October 1957.

SOURCE AND APPLICATION OF FUNDS AND RESOURCES

Appropriations by the Congress for construction in the Arkansas, White and Red River basins, including the Whitney Project, totaled $42,385,150 for the fiscal year ended June 30, 1957. Funds provided for operation and maintenance amounted to $5,218,051 for the same period. The following schedule summarizes the source and application of funds and resources for the fiscal year ended June 30, 1957.

	Combined	Corps of Engineers	Southwestern Power Administration
Source of funds:			
Appropriations by the Congress (notes a and b):			
Construction	$42,385,150	$42,385,150	$ -
Operation and maintenance	5,218,051	4,253,009	965,042
Preliminary surveys	166,530	166,530	-
General expense	9,150	9,150	-
Transfers of cost and property	1,479,919	1,300,595	179,324
Revenues from:			
Power customers	8,754,109	-	8,754,109[a]
Lease of lands and other	758,831	755,332	3,499
Contributed funds	1,660	-	1,660
Total funds received	58,773,400	48,869,766	9,903,634
Application of funds:			
Additions to plant, property, and equipment, net	42,400,588	41,845,399	555,189
Advance planning and design	812,564	812,564	-
Preliminary surveys	135,408	135,408	-
Operation and maintenance:			
Power	9,003,963	1,152,827	7,851,136[a]
Other	2,975,856	2,975,856	-
Funds returned to U.S. Treasury:			
Power	14,988	-	14,988
Other	702,039	702,039	-
Funds returned to contributors	28,263	28,263	-
Total funds applied	56,073,669	47,652,356	8,421,313
Increase in net working assets (note b)	$ 2,699,731	$ 1,217,410	$1,482,321

[a]Of the revenues from power customers, $6,400,000 was appropriated by the Congress for use by SWPA for the purchase of power and rental of transmission facilities. Fiscal year 1957 expenditures for these purposes totaled $4,906,977. The application of the power revenues for power purchases and rental of transmission facilities is included in Operation and maintenance--Power, SWPA.

[b]Unexpended balances of prior year appropriations have been considered in arriving at the net change in working assets.

The above schedule excludes costs of preliminary surveys and investigation incurred in prior years but written off in 1957, interest, and provisions for depreciation from the expenditures for construction and operation and maintenance. Included in the amount shown as "Transfers of cost and property" is $1,406,241 representing contractor's earnings on the Table Rock Project in excess of the amount available for expenditure at June 30, 1957. The contractor was paid for this work after June 30, 1957, from funds appropriated under the Public Works Appropriation Act, 1958 (71 Stat. 416, 417).

Comments on the construction and operation of electric, navigation, and flood control plant are included in the succeeding sections of this report.

ELECTRIC PLANT CONSTRUCTION AND OPERATION

Project authorizations to the Corps of Engineers have provided for construction of hydroelectric power plants for generation of electric energy as a feature at many reservoir projects. Although by law it is generally subordinate to other purposes of multiple-purpose projects, the power program has developed into a major activity in many instances from a construction and operating point of view, and it is the only major revenue-producing program.

The authorized Federal hydroelectric power plant construction program in the southwestern area at June 30, 1957, is summarized, as follows:

	Number of projects	Number of units	Installed capacity (kilowatts)
Arkansas River basin	5	19	421,500
White River basin	5	21	820,000
Red River basin	4	12	307,500
Projects in other basins in SWPA service area	2	4	75,000
Total	16	56	1,624,000

Additional power features not included in the present plan of development have been authorized for 3 projects in the Arkansas River basin. These additional features would provide 9 generating units at a total capacity of 101,000 kilowatts. However, the power features on 2 of these projects, Oolagah and Keystone, having a total installed capacity of 84,000 kilowatts have been determined by the Corps to be not feasible at the present time.

GENERATING PLANTS IN OPERATION AND UNDER CONSTRUCTION

At June 30, 1957, 8 power plants with 20 generating units having an installed capacity of 501,000 kilowatts were in operation. These projects and the estimated construction costs, including interest during construction, allocated to power at June 30, 1957, are:

Project	Initial operation of first unit	Number of generating units	Installed capacity (kilowatts)	Construction costs including interest		
				Total	Allocated to power Amount	Percent
Bull Shoals	September 1952	4	160,000	$ 79,040,000	$ 45,858,000	58.0
Denison	March 1945	2	70,000	62,127,550	19,873,250	32.0
Fort Gibson	March 1953	4	45,000	43,926,524	16,959,191	38.6
Norfork	June 1944	2	70,000	30,039,000	13,910,000	46.3
Tenkiller Ferry	November 1953	2	34,000	23,401,525	11,731,692	50.1
Blakely Mountain	September 1955	2	75,000	33,135,000	24,766,000	74.7
Total, interconnected system		16	454,000	271,669,599	133,098,133	49.0
Narrows	May 1950	2	17,000	13,104,000	5,496,000	41.9
Whitney	June 1953	2	30,000	43,865,900	7,725,600	17.6
Total, separate projects		4	47,000	56,969,900	13,221,600	23.2
Total		20	501,000	$328,639,499	$146,319,733	44.5

The ultimate planned development for the above projects provides for an additional 12 generating units with installed capacity of 366,000 kilowatts for a total of 32 generating units having installed capacity of 867,000 kilowatts.

Under construction at June 30, 1957, were 4 projects with 14 generating units having an installed capacity of 506,000 kilowatts. These plants and the estimated construction cost allocable to power, including interest during construction, at June 30, 1957, are summarized as follows:

Project	Estimated initial operation of first unit	Number of generating units	Installed capacity under present development (kilowatts)	Construction costs including interest		
				Total	Allocated to power Amount	Percent
Table Rock	December 1958	4	200,000	$ 73,477,000	$ 57,624,000	78.4
Dardanelle	January 1964	4	120,000	100,513,000	53,688,000	53.4
Eufaula	March 1964	3	90,000	161,121,000	43,610,000	27.1
Greers Ferry	April 1963	3	96,000	54,379,000	36,564,000	67.2
Total		14	506,000	$389,490,000	$191,486,000	49.2

When the present construction on these projects is completed, the Corps will have an estimated power investment in the Arkansas, White, and Red River basins, including the Whitney Project, of about $338,000,000 and an installed capacity of 1,007,000 kilowatts. Ultimate installed capacity will be 1,373,000 kilowatts. At June 30, 1957, 1 other project (McGee Bend) with 2 units having an installed capacity of 45,000 kilowatts was under construction in the marketing service area of Southwestern Power Administration. This project is located on the Angelina River, Texas, and has not been included in the accompanying financial statements.

Litigation affecting generating plants

On May 28, 1956, the Grand River Dam Authority, an Oklahoma State Conservation and Reclamation District, filed a petition in the United States Court of Claims for alleged damages resulting from the construction of the Fort Gibson Project on the Grand River, Oklahoma, by the United States.

The project was authorized by the Flood Control Act of 1941 (55 Stat. 638) which modified the comprehensive plan for flood control and hydroelectric power development in the Arkansas River basin. Construction started in May 1946 and was completed September 1953 at an estimated cost of $44,117,000 (May 1956).

The Authority bases its claim upon the 5th and 10th amendments to the Constitution of the United States and asserts that it, by virtue of the act creating the Grand River Dam Authority, became vested with exclusive franchise, right, and privilege to the waters of the Grand River within the State of Oklahoma. The Authority alleges also that the United States, acting through the Secretary of the Army, constructed Fort Gibson Dam and Reservoir and by such act deprived the Authority of the right to use waters of the Grand River and that the United States has from March 1953 produced electric power and energy without the consent and approval of the Authority, all to the detriment of the Authority.

The Authority claims damages in the amount of $10,000,000 plus 6 percent interest from March 30, 1953. Hearings were held in the Court of Claims, Tulsa, Oklahoma, in January 1958, to determine whether the Government is liable to the Authority. The Court has not yet ruled on the matter.

TRANSMISSION NETWORK OF SOUTHWESTERN POWER ADMINISTRATION

The Southwestern Power Administration, as marketing agent, constructs, operates, and maintains transmission lines and substations for transmitting the energy from the projects to load centers. All projects in operation at June 30, 1957, with the exception of the Narrows and Whitney Projects were interconnected by the transmission network of Southwestern Power Administration. Energy generated at the Narrows Project is delivered directly to a private utility company at the project site and to other customers through delivery over facilities of the company. Energy generated at the Whitney Project is sold to the Brazos Electric Power Cooperative, Inc., at the dam site.

The electrical facilities at Blakely Mountain are not directly connected to the integrated system. The Administration considers the project as part of the interconnected system because the output of the project is delivered into the system of the Arkansas Power and Light Company and related quantities of electric power and energy are delivered by that company to the

interconnected system of the Administration for disposal to its customers.

At June 30, 1957, the Administration was operating 1,004 circuit miles of electric transmission lines and 18 substations and switching stations, representing no change from the prior year. The investment by the Administration at June 30, 1957, in electric plant, principally transmission lines and substations, was $24,016,980, compared with $23,589,221 at June 30, 1956.

INTEGRATION WITH PRIVATE UTILITIES AND GENERATING AND TRANSMISSION COOPERATIVES

The Administration has integrated its electric system with certain private utility systems in the area to obtain better utilization of the Government's hydroelectric capacity for the production of peaking capacity[1] and to secure the maximum benefits from this capacity. To accomplish this purpose, the Administration has entered into agreements with the companies for the purchase, sale, and delivery of electric power. Under the terms of the contracts, the companies deliver to the Administration the service necessary to supply designated preferred customers (cooperatives, municipalities, and Government agencies). Sales by the Administration to electric utilities for the fiscal year 1957 accounted for about 23 percent of the revenues and 31 percent of the energy delivered, compared with about 27 percent of the revenues and of the energy delivered for the fiscal year 1956. Purchases from private utilities and cooperatives totaled $3,665,819 in fiscal year 1957, compared with $3,461,272 for fiscal year 1956, represented by 627,881,496 and 630,905,265 kilowatt-hours, respectively.[2]

In 1949 and 1950, the Southwestern Power Administration entered into lease option contracts with several generation and transmission cooperatives. These contracts provided for the sale and exchange of energy and the lease and operation of the cooperatives' transmission system by the Administration for a period of 40 years with an option to purchase by the Administration. The provisions of these contracts relating to the lease and operation of the transmission facilities became inoperative as of July 1, 1953, because funds for this purpose had not been provided in the Interior Department Appropriation Act, 1954.

Under title II of the Public Works Appropriation Act, 1956 (69 Stat. 356), expenditures of $6,000,000 from the continuing fund were authorized for the purchase of power and rental of transmission facilities. As a result, the agreements with the generating and transmission cooperatives were reactivated.

In conformity with instructions of the Appropriation Committees,[3] the Department of the Interior initiated negotiations for revision of the basic contracts to include:

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[1] Generating capacity made available to assist a customer in meeting that portion of peak load which is above base load.

[2] The kilowatt-hour purchases represent amounts shown on the financial records and differ from those shown on page 53 because of year end adjustments.

[3] H. Repts. 747 and 1085 and S. Rept. 700, 84th Cong.

1. Deletion of the provisions giving the Southwestern Power Administration an option to purchase the transmission facilities of the G and T cooperatives.

2. Permission for the G and T cooperatives to operate and maintain their own transmission lines under lease to SWPA.

3. Provision for settlements between the Administration and the cooperatives on a net balance basis.

4. Provision for delivery of power and energy to the load centers of all G and T contracting systems, if practical, at the basic SWPA rate.

Amendatory contracts have been executed with the cooperatives on the above basis as follows:

1. KAMO Electric Cooperative, Inc., executed September 4, 1956, effective July 15, 1955.

2. Central Electric Power Cooperative, executed October 22, 1956, effective July 15, 1955.

3. N.W. Electric Power Cooperative, Inc., executed October 23, 1956, effective July 15, 1955.

4. Western Farmers Electric Cooperative, executed November 20, 1956, effective July 15, 1955.

The amended contracts provide for (1) lease by the Government of the capacity of the cooperatives' transmission facilities for a period of 40 years, until July 1, 1995, without option to purchase by the Government, (2) reimbursement by the Government for the cooperatives' expenditures for operation and maintenance of transmission facilities, and that portion of the cooperatives' reasonable administrative and overhead expenses appropriately assignable to such facilities, (3) settlement of accounts between the Administration and the cooperatives on a net balance basis including payments by the Government to the cooperatives as compensation for the lease of transmission facilities (the payments include such amounts as are necessary to amortize during the period of the cooperatives' REA loans the actual cost of the transmission lines including interest which the cooperatives are required to pay to the Rural Electrification Administration on account of funds advanced by REA for the construction of the present facilities and actually applied to that purpose), and (4) delivery of power and energy to the load centers of the G and T contracting system at the Administration's basic rate.

Simultaneously with amendatory contracts for lease of transmission facilities, and with coinciding effective dates and terms, the Administration also entered into amendatory contracts

involving output from steam generating plants of the Central Electric Power Cooperative, N.W. Electric Power Cooperative, Inc., and Western Farmers Electric Cooperative.

The contract with Central provides that the Government shall pay to the cooperative each month, as compensation for the right to receive the electric output of the generating plant, an amount equal to the sum of (1) the amount necessary to amortize during the period of the cooperatives' REA loans the actual cost of the generating plant to the cooperative, including the interest on the REA loans, and (2) all direct operation and maintenance expense, including replacements, and that portion of administrative and overhead expenses assignable to the generating plant.

The contract with the N.W. Electric Power Cooperative, Inc., provides that (1) the Government shall not schedule less than 11,750,000 kilowatt-hours during any monthly billing period, (2) payment to the cooperatives shall be computed in accordance with a prescribed formula which provides for a base of $150,000 a month, and (3) beginning July 1960, and at the end of each subsequent 5-year period, the parties shall review and redetermine actual generation cost, other than fuel and payments in connection with the amortization of the actual cost of the generating plant, of generating energy sold to the Government during the preceding 12-month period, and after each such review and redetermination the said sum of $150,000 for each month of the succeeding 5 years shall be increased or decreased to reflect the percentage increase or decrease between such redetermined actual cost per month and the actual average cost per month of such operation during the year 1955. The contract further provides that on and after the date of repayment of the REA loan, granted to finance the construction of the generating plant, the said sum of $150,000 shall be reduced by an amount equal to the payments to REA in connection with such loan.

The contract with Western Farmers Electric Cooperative provides (1) that the monthly rate shall be 4.2 mills per kilowatt-hour for energy sold to the Government (2) a minimum annual charge of $945,000 based on production of 225,000,000 kilowatt-hours, and (3) that upon written request by the cooperative, but not oftener than once in every 5 years, the rate for energy sold to the Government may be reviewed and redetermined. The basis for the new rate will be the average actual generation cost per kilowatt-hour during the preceding calendar year of energy sold and delivered to the Government by the cooperative during such year, computed on the basis of an 85 percent annual load factor[1] and a fuel cost of $0.125 per million B.T.U. plus $0.00075. The

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[1]The ratio of the average load over a designated period to the peak load occurring in that period.

new rate shall not become effective unless and until it is approved by the Secretary of the Interior and the Administrator, Rural Electrification Administration.

Litigation arising out of lease-purchase contracts

Under loan agreements with several federated rural electric cooperatives, the Rural Electrification Administration financed the construction of steam and diesel generating plants and related transmission systems in the Southwest. These cooperatives in turn entered into agreements with Southwestern Power Administration which provided for the sale and exchange of energy and the lease and operation of the cooperatives' transmission system for a period of 40 years with an option to purchase by the Administration. At July 1, 1953, the Administration was operating 572 miles of transmission lines and 21 substations under these agreements, but upon enactment of the Interior Department Appropriation Act, 1954 (67 Stat. 262), approved July 31, 1953, the Administration withdrew from these operations and negotiated interim contracts with the cooperatives.

Litigation was initiated by the Central Electric Power Cooperative against the Secretary of the Interior and the Administrator, Southwestern Power Administration, to obtain a summary judgment to direct that the defendants not refuse or fail to carry out the terms of the contracts with the cooperative for the reason that Congress had failed to or refused to appropriate funds for the fiscal year 1954 out of which the obligations incurred under the contracts could be legally paid. Summary judgment was granted in the lower court but was reversed on appeal on April 7, 1955. The reversal was not on the merits of the case but was, in effect, on the basis of lack of jurisdiction.

The claims and counterclaims of Central Electric Power Cooperative and Southwestern Power Administration as to whether the funds made available to the Administration in its continuing fund for fiscal year 1954 were available for payment of obligations arising out of the lease-purchase contracts with the cooperative were submitted to the General Accounting Office on December 3, 1954, for settlement. The Comptroller General concluded that the funds were available to implement the lease-purchase contracts. It was the view of the Comptroller General (B-122254, November 8, 1956) that the Congress intended the $1,200,000 to be available from the continuing fund during the fiscal year 1954 for all costs in connection with the purchase of electric power and energy and rentals for the use of transmission facilities.

The claim of the Central Electric Power Cooperative amounts to $960,770. Claims from two other cooperatives have been filed with the Administration in the amount of $1,332,201. The two remaining cooperatives with similar contracts have stated that they will not file any claims. Under a proposed arrangement, settlement of these claims would be on the basis of the amounts that

would have accrued to the claimants monthly under the contracts to the extent of available funds. These claims had not been recognized in the financial statements by the Administration at June 30, 1957.

The Public Works Appropriation Act, 1958 (71 Stat. 423), approved August 26, 1957, provided "*** that the unexpended balance made available from the continuing fund for the fiscal years 1954 (67 Stat. 262) and 1956 (69 Stat. 356) shall be available to liquidate claims payable for the fiscal year 1954 under lease-purchase contracts with generating and transmission cooperatives as certified by the Comptroller General of the United States ***."

FINANCIAL RESULTS FROM POWER OPERATIONS

Financial results from power operations for the fiscal years 1957 and 1956, based on the accounts of the Corps and Administration, are summarized as follows:

	Fiscal year 1957	Fiscal year 1956	Increase
Operating revenues:			
Sales of electric energy	$ 8,754,109	$ 8,169,043	$ 585,066
Other revenues	2,181	-	2,181
Total operating revenues	8,756,290	8,169,043	587,247
Operating expenses:			
Purchased power	3,665,819	3,461,272	204,547
Operation and maintenance expenses:			
Generating projects	1,073,117	1,003,694	69,423
Southwestern Power Administration	3,822,408	2,679,033	1,143,375
	8,561,344	7,143,999	1,417,345
Administrative, sales, and general expenses:			
Generating projects	79,710	78,194	1,516
Southwestern Power Administration	408,003	352,908	55,095
	487,713	431,102	56,611
Depreciation:			
Generating projects	2,030,714	1,950,393	80,321
Southwestern Power Administration	662,916	643,661	19,255
	2,693,630	2,594,054	99,576
Total operating expenses	11,742,687	10,169,155	1,573,532
Net operating loss	2,986,397	2,000,112	986,285
Interest and other deductions:			
Interest on the Federal investment:			
Generating projects	4,441,460	4,079,445	362,015
Southwestern Power Administration	589,508	586,199	3,309
Total interest	5,030,968	4,665,644	365,324
Nonoperating expenses and income, net	-68,295	-36,405	-31,890
	4,962,673	4,629,239	333,434
Net loss for the fiscal year	$ 7,949,070	$ 6,629,351	$1,319,719

Schedule 3 presents a statement by projects of the results of power operations for fiscal year 1957 and cumulative net loss to June 30, 1957.

Transactions associated with the agreements with generating and transmission cooperatives

During the 1957 fiscal year, 86 percent of the power purchased and 95 percent of the related costs were associated with purchases from the Central Electric, N. W. Electric, and Western Farmers Electric power cooperatives.

Revenues obtained from these cooperatives, cost of power purchased, and rental of transmission facilities for fiscal year 1957 are summarized from the power marketing report of the Administration as follows:

	Thousand kilowatt-hours	Amount	Average rate (mills per kwh)
Revenue from customers served through systems of:			
Central Electric Power Cooperative:			
Central Electric Power Cooperative	70,912	$ 388,279	5.48
SHO-ME Power Corporation	218,535	1,164,540	5.33
Hermann, Missouri	2,345	13,094	5.58
Fulton, Missouri	442	2,896	6.55
	292,234	1,568,809	5.37
N. W. Electric Power Cooperative, Inc.:			
N. W. Electric Power Cooperative, Inc.	159,812	842,972	5.27
KAMO Electric Cooperative, Inc.	121,059	661,499	5.46
Lamar, Missouri	7,286	39,440	5.41
Springfield, Missouri	122,508	473,624	3.87
	410,665	2,017,535	4.91
Western Farmers Electric Cooperative:			
Western Farmers Electric Cooperative	147,153	802,592	5.45
Altus Air Force Base, Oklahoma	2,778	14,410	5.19
Anadarko, Oklahoma	2,451	12,525	5.11
	152,382	829,527	5.44
Total revenue	855,281	4,415,871	5.16
Cost of purchased power:			
Central Electric Power Cooperative	93,898	656,209	6.99
N. W. Electric Power Cooperative, Inc.	236,512	1,774,981	7.50
Western Farmers Electric Cooperative	182,969	1,043,644	5.70
	513,379	3,474,834	6.77
Rental of transmission facilities:			
Central Electric Power Cooperative:			
69-kv system (service to Central customers, Hermann and Fulton)	73,699	358,135	4.86
161-kv system (service to SHO-ME)	218,535	379,340	1.74
N. W. Electric Power Cooperative, Inc.:			
161-kv system (service to KAMO customers, Lamar, and Springfield)	250,853	619,383	2.47
Western Farmers Electric Cooperative:			
69-kv system (service to Western customers, Altus, and Anadarko)	152,382	778,870	5.11
KAMO Electric Cooperative, Inc.:			
69-kv system (service to KAMO customers and Lamar)	128,345	551,051	4.29
		2,686,779	
Total power purchased and rental of transmission facilities		6,161,613	
Excess of cost of power purchased and rental of transmission facilities over revenues received		$1,745,742	

The tabulation above shows that the cost of power purchased and rental of transmission facilities under the contracts with the generating and transmission cooperatives exceeds the revenues from these cooperatives. The costs shown are exclusive of the cost of energy delivered from other sources (delivered 855,281,000 kwh, purchased 513,379,000 kwh) and any part of the SWPA marketing expenses. However, the tabulation is not designed to show the results of operations with these cooperatives. We have not attempted to compute the other costs involved.

ENERGY PRODUCTION AND DELIVERIES

The net electric energy made available to the Administration by the Corps from generating projects, and power purchased or exchanged, expressed in thousands of kilowatt-hours, for the fiscal year 1957 and the increase over fiscal year 1956 are summarized as follows:

	Fiscal year 1957		Increase from preceding year	
	Thousand kilowatt-hours	Percent	Thousand kilowatt-hours	Percent
Blakely Mountain (note a)	118,570	6.0	52,438	79.3
Bull Shoals	651,472	33.2	264,831	68.5
Denison	144,502	7.4	-52,487	-26.6
Fort Gibson	72,590	3.7	-2,167	-2.9
Norfork	204,285	10.4	98,775	93.6
Tenkiller Ferry	61,891	3.2	23,526	61.3
Narrows	39,821	2.0	18,663	88.2
Whitney	71,152	3.6	22,564	46.4
Net generation	1,364,283	69.5	426,143	45.4
Power purchased or exchanged	599,389	30.5	-50,333	-7.7
Total	1,963,672	100.0	375,810	23.7

[a]First units went on the line in September 1955.

Although generation of energy increased by 375,810 thousand kilowatt-hours, or 23.7 percent, from the preceding year, unfavorable water conditions continued in the Southwest during most of fiscal year 1957 and deliveries of energy from the various projects remained substantially less than projected normals. Gross generation during fiscal year 1957 was 303,808 thousand kilowatt-hours less than the estimated average annual production, summarized as follows:

	Thousand kilowatt-hours		
	Gross generation fiscal year 1957	Estimated average annual production	Difference
Projects in operation June 30, 1957	1,375,663	1,679,471	303,808

Under the terms of a supplemental agreement to an existing contract with the Oklahoma Gas and Electric Company and the Public Service Company of Oklahoma, the Administration, during 1955,

received 29,846 thousand kilowatt-hours of electric energy. This energy was in addition to the power purchased or exchanged with these companies. The supplemental agreement provided that delivery of energy by the Administration under the existing Oklahoma contract could be deferred and delivered to the companies at a future date, subject to limitations of the Government's available hydroelectric generation capacity and obligations under certain other existing contracts. The agreement provided also that the deferred energy must be delivered within a period of 4 years after the dates of deferment, or the Government (subject to appropriation by the Congress) would pay to the companies an amount equal to 7 mills per kilowatt-hour for the undelivered deferred energy. By this arrangement, the Administration continued to meet contract commitments to customers served through the Oklahoma companies' contracts during 1955 and other obligations. During fiscal years 1955, 1956, and 1957, the Administration returned 29,098 thousand kilowatt-hours, leaving a balance due the Oklahoma companies at June 30, 1957, of 748 thousand kilowatt-hours.

The Administration included the revenue from the sale of this power in its accounts during 1955; however, no liability was recorded for any amount due the Oklahoma companies at June 30, 1955, 1956, or 1957.

Energy generated, purchased, and exchanged at the various projects in 1957 totaled 1,963,672 megawatt-hours (mwh). Energy sold during fiscal year 1957 totaled 1,875,876 mwh. The difference of 87,796 mwh is accounted for by station use, line losses, and adjustments for differences between production and billing dates.

CUSTOMERS SERVED

Sales of electric energy for the fiscal years 1957 and 1956 expressed in dollars, thousands of kilowatt-hours, and average rate per kwh by the various classes of customers are presented in the following summary:

	Fiscal year 1957			Fiscal year 1956		
	Revenue	Thousand kilowatt-hours	Average rate per kwh (mills)	Revenue	Thousand kilowatt-hours	Average rate per kwh (mills)
Electric utilities:						
Arkansas Power and Light Co.	$1,717,176[a]	473,141[a]	3.63	$1,883,342[a]	369,073[a]	5.10
Texas Power and Light Co.	106,323	49,363	2.15	144,530	29,493	4.90
Public Service Company of Oklahoma and Oklahoma Gas and Electric Co.	115,382	30,427	3.79	96,282	8,495	11.33
Southwestern Gas and Electric Co.	77,905	24,040	3.24	78,860	6,281	12.56
	2,016,786	576,971	3.50	2,203,014	413,342	5.33
REA cooperatives:						
SHO-ME Power Corporation	1,183,612	222,116	5.33	1,036,288	197,892	5.24
N.W. Electric Power Cooperative, Inc.	842,972	159,812	5.27	729,008	138,637	5.26
Western Farmers Electric Cooperative	802,592	147,153	5.45	620,926	116,866	5.31
KAMO Electric Cooperative, Inc.	661,499	121,059	5.46	582,903	107,770	5.41
Brazos Electric Power Cooperative, Inc.	515,339	97,381	5.29	574,425	74,264	7.73
Central Electric Power Cooperative	388,279	70,912	5.48	377,249	70,248	5.37
M&A Electric Power Cooperative	182,181	36,602	4.98	138,766	22,690	6.12
Deep East Texas Electric Cooperative, Inc.	151,695	28,528	5.32	129,466	24,306	5.33
People's Electric Cooperative, Inc.	120,141	22,046	5.45	104,568	19,422	5.38
Canadian Valley Electric Cooperative, Inc.	114,305	21,338	5.36	109,007	20,363	5.35
Cooperatives with billings less than $100,000 (14 for 1957 and 13 for 1956)	613,626	123,114	4.98	544,987	98,977	5.51
	5,576,241	1,050,061	5.31	4,947,593	891,435	5.55
Municipalities:						
Springfield, Missouri	473,624	122,508	3.87	418,366	78,461	5.33
Municipalities with billings less than $100,000 (21 for 1957 and 19 for 1956)	482,985	88,745	5.44	393,046	71,360	5.51
	956,609	211,253	4.53	811,412	149,821	5.42
Government agencies:						
Fort Sill, Oklahoma	112,648	20,572	5.48	109,070	19,678	5.54
Government agencies with billings less than $100,000 (4 for 1957 and 1956)	109,665	17,019	6.44	111,941	18,357	6.10
	222,313	37,591	5.91	221,011	38,035	5.81
Net adjustment to show year-end accruals	-17,840	1,277	-	-13,987	-7,181	-
Total sales	$8,754,109	1,877,153	4.66	$8,169,043	1,485,452	5.50

[a]Total revenues and energy sold to the Arkansas Power and Light Company during 1957 were from the Reynolds Metals Company contract. For 1956, revenues from this source were $1,880,369 and energy sold was 366,695 thousand kilowatt-hours; the balance of the revenues and energy sold was for test energy from the Blakely Mountain Project.

The decrease of 0.84 mills in over-all average rates per kwh of revenues for fiscal year 1957 under that obtained for fiscal year 1956 is largely attributable to the average rate obtained from private utilities which decreased from 5.33 mills for 1956 to 3.50 mills for 1957, a decline of 1.83 mills. The average rate

obtained from all other classes of customers except Government agencies also declined during fiscal year 1957. The over-all decline resulted primarily from the greater volume of sales of dump energy generation necessitated by the drawdown of flood control storage pools at the various projects.

Sales to private utilities

Sales of energy to the electric utilities are covered by individual contracts. There were four such contracts with five electric utilities during fiscal years 1956 and 1957, and rates for energy sales differ in each. Of the total energy sales and revenue from electric utilities during fiscal year 1957, about 82 percent of the energy sales and 85 percent of the revenues were from the Arkansas Power and Light Company.

Energy deliveries and sales, revenues, and average rate per kwh under the contracts for the fiscal year 1957 are summarized as follows:

	Thousand kilowatt-hours					
	Total energy delivered	Less energy delivered to preferred customers for the Government	Energy purchased or exchanged and retained by SWPA	Energy sales	Revenues	Average rate per kwh (mills)
Arkansas Power and Light Co. and Reynolds Metals Co.	473,141	-	-	473,141	$1,717,176	3.63
Public Service Company of Oklahoma and Oklahoma Gas and Electric Co.	162,521[a]	141,907	9,813	30,427	115,382	3.79
Southwestern Gas and Electric Co.	39,503	23,187	7,724	24,040	77,905	3.24
Texas Power and Light Co.	116,492	97,125	29,996	49,363	106,323	2.15
Total	791,657	262,219	47,533	576,971	$2,016,786	3.50

[a]Total energy delivered includes 2,317 thousand kilowatt-hours of deferred energy under an amendatory contract.

Our audit report to the Congress dated March 19, 1957, on the Arkansas, White, and Red River basins water resources development program for fiscal year 1956 included comments on provisions of contracts with the electric utilities on pages 44 through 47. Changes in these contracts since our previous report are commented on in the following section of this report.

APPROVAL OF RATE SCHEDULES BY FEDERAL POWER COMMISSION

Section 5 of the Flood Control Act of 1944 requires confirmation and approval of rate schedules by the Federal Power Commission. The Commission has approved rate schedules applicable to preference customers and the private utilities.

Preference customers

All preference customers of the Administration except the Brazos Electric Power Cooperative, Inc., the purchaser of Whitney Project power, were served under rate schedule "A" during fiscal year 1957. On August 9, 1957, the Federal Power Commission approved new rate schedules superseding the previously used rate schedule "A". The new rate schedules provide different rates for varying types of service rendered. A summary of the new rate schedules follows:

Type of service	Demand charge	Energy charge
Firm power (monthly rates)	$1.60 per kilowatt of billing demand	$0.002 per kilowatt-hour for the first 150 kilowatt-hours per kilowatt of billing demand. $0.003 per kilowatt-hour for the next 290 kilowatt-hours per kilowatt of billing demand. $0.005 per kilowatt-hour for energy in excess of the first 440 kilowatt-hours per kilowatt of billing demand.
Peaking power (monthly rates)	$1.60 per kilowatt of billing demand	$0.002 per kilowatt-hour for the first 150 kilowatt-hours per kilowatt of billing demand. $0.003 per kilowatt-hour for the next 50 kilowatt-hours per kilowatt of billing demand.
Excess energy	None	$0.0015 per kilowatt-hour.
Interruptible capacity	$0.045 per kilowatt per day	None

The rate schedules for firm power and peaking power provide adjustments for conditions of service as follows:

1. A discount of $0.10 per kilowatt of billing demand per month will be allowed on the total monthly charge for firm power service and peaking power service if delivery of power and energy is made from the 69-kv, 138-kv or 161-kv transmission facilities owned or leased by the Government and if transformation and substation facilities are required at the point of delivery and are furnished by the power customer at no cost to the Government.

2. A discount of $0.40 per kilowatt of billing demand per month will be allowed on the total monthly charge for firm power service and for peaking power service if delivery of power and energy is made from, and at the voltage of, the 138-kv or the 161-kv transmission facilities owned or leased by the Government, or at low or intermediate voltages from substations directly connected to such transmission facilities, and if the Government is thereby relieved of additional transmission costs.

In addition, the peaking rate schedule limits deliveries to a maximum of 2,400 kilowatt-hours per kilowatt of contract demand per fiscal year.

The new rate schedules will average 6.97 mills per kilowatt-hour for customers at a 50 percent load factor compared with 5.51 mills under the previously used rate schedule "A", an increase of 27 percent.

Private utilities

Sales and exchanges of energy to and with the electric utilities are covered by individual contracts with special conditions, rates, and charges that have been confirmed and approved by the Federal Power Commission. All schedules with the exception of two contracts with a private utility (Arkansas Power and Light Company-Reynolds Metals Company and Arkansas Power and Light Company-Blakely Mountain Project electric exchange agreement) were subject to review and reapproval not later than February 13, 1953.

On September 11, 1957, the Commission approved a new rate schedule applicable to the Texas Power and Light Company contract. The revised rates so approved are as follows:

Payments by the company:

Capacity charge--$1.20 per kilowatt per month of contract demand of 35,000 kilowatts. $0.045 per kilowatt per day for each kilowatt in excess of contract demand not used in delivery of secondary energy.

Energy charge--$0.002 per kilowatt-hour for each kilowatt-hour of primary energy scheduled and received during any month. $0.0015 per kilowatt-hour for each kilowatt-hour of secondary energy scheduled and received during any month.

Payments by the Government:

Capacity charge--$1.60 per kilowatt per month of maximum demand.

Energy charge--$0.002 per kilowatt-hour for the first 150 kilowatt-hours per kilowatt per month of maximum demand delivered to customers of the Government during any month, $0.003

per kilowatt-hour for the next 215 kilowatt-hours per kilowatt per month of maximum demand, and $0.005 per kilowatt-hour for all in excess of 365 kilowatt-hours per kilowatt of maximum demand.

In addition, until the third unit at the Denison Dam is installed and ready for commercial operation, the Government is obligated to credit the company with $0.003 per kilowatt-hour for the difference between the amount of energy delivered and 70,000,000 kilowatt-hours during any year in which the company does not receive 70,000,000 kilowatt-hours of primary energy. After the third unit is installed, the credit to the company shall be $0.008 per kilowatt-hour.

The new rate schedule also provides for settlement of accounts between the company and the Government on a net balance basis. The amendment further provides for mandatory reviews of the rates and compensation at the end of each 5-year period and for discretionary rate reviews at any time upon the written request of either party.

The contractual agreement between the company and the Government terminates on July 1, 1977.

On November 18, 1957, the Federal Power Commission approved a new rate schedule for the initial sale of electric power and energy in a proposed agreement with Southwestern Gas and Electric Company and a revised rate schedule applicable to the contract with Public Service Company of Oklahoma and Oklahoma Gas and Electric Company. The approved schedules provide as follows:

Southwestern Gas and Electric Company:

Payment by the company:

Capacity charge--$1.20 per kilowatt per month.

Energy charge--$0.002 per kilowatt-hour for each kilowatt-hour scheduled and received during the month.

Excess hydroelectric energy charge--$0.0015 per kilowatt-hour for each kilowatt-hour scheduled and received during the month.

Payments by the Government:

Capacity charge--$1.65 per kilowatt per month of the greater of either the maximum sum of the nonsimultaneous maximum 30-minute integrated demands, established during any month of the elapsed period of the agreement, at all points of delivery to the Government or for its account, or the total power which the company is obligated to deliver to the Government.

Energy charge--$0.003 per kilowatt-hour for each kilowatt-hour delivered to or for the account of the Government.

In addition, the Government shall, at the end of each contract year compensate the company for each $0.01 increase in the average cost of fuel in the company's thermal generating plant during such year above the base cost of $0.08 per million B.T.U., an amount equal to $0.00014 per kilowatt-hour for the difference between the number of kilowatt-hours delivered by the company to the Government or for its account and the number of kilowatt-hours (exclusive of excess hydroelectric energy purchased and received by the company) delivered by SWPA to the company during the year.

Public Service Company of Oklahoma and
Oklahoma Gas and Electric Company:

Payments by the companies:

Capacity charge--$1.20 per kilowatt per month.

Energy charge--$0.002 per kilowatt-hour for each kilowatt-hour scheduled and received during each month.

Excess capacity charge--$0.0045 per kilowatt per day for each kilowatt scheduled and received during any month.

Accompanying energy charge--$0.002 per kilowatt-hour for each kilowatt-hour scheduled and received during each month.

Excess energy charge--$0.0015 per kilowatt-hour for each kilowatt-hour scheduled and received during the month.

Payments by the Government:

Capacity charge--$1.60 per kilowatt per month of the greater of either the sum of the maximum 30-minute integrated demands at each point of delivery to the Government during the past 12 months or the total power which the companies are obligated to deliver to the Government.

Energy charge--$0.0035 per kilowatt-hour for each kilowatt-hour delivered to the Government and/or for its account during the month.

Off peak energy charge--$0.00365 per kilowatt-hour for each kilowatt-hour delivered to the Government.

In justifying the proposed rate schedules for preference customers which were subsequently approved (see p. 57), the Department of the Interior stated that the rates in the contract with the Arkansas Power and Light Company-Reynolds Metals Company dated January 29, 1952, did not meet the requirements of section 5 of the Flood Control Act of 1944. Further, the Department stated that if

the Commission determined and confirmed and approved the applicability of the proposed rate schedule for peaking power service under the above contract, the proposed rate schedules would be applied to sales under the Arkansas Power and Light Company-Reynolds Metals Company contract in order that the customers in the Southwestern Power Administration marketing area would be treated uniformly.

In its order dated August 9, 1957, confirming and approving the proposed preference customer rate schedules, the Federal Power Commission stated that the actual application of rate schedules to the sale of electric power was a function and responsibility delegated to the Secretary of the Interior and over which it (FPC) had no authority or jurisdiction.[1]

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[1] In the letter of February 27, 1958, the Department of the Interior advised us that it is currently exploring with the Department of Justice whether there is a basis for adjudication of the legal issues respecting this matter.

POWER BENEFITS

Power benefits for Corps projects are based on at-site unit values supplied by the Federal Power Commission. Unit values are assigned to capacity and energy and are generally based on the cost of capacity and energy from the most economical alternative source, usually privately financed, modern, efficient, steam-electric plants. In some cases where the cost of the alternative power is prohibitive, the FPC estimates the value of the proposed project's power to the user, and this value is used for power benefits in lieu of values based on alternative costs. Power benefits on Arkansas, White, and Red River basins projects are based on alternative costs.

Bureau of the Budget Circular No. A-47, December 31, 1952, provides that, in addition to comparing total benefits of the project with total economic costs, the evaluation report proposing authorization should show separately the particular benefits and economic costs attributable to each purpose of the program or project. This circular also states that inclusion in a project of any purpose will, except in unusual cases, be considered only if the benefits attributable to a particular purpose are greater than the economic costs of including that purpose in the project. The "economic costs of including a purpose" are considered to be the incremental costs of the purpose, that is, the difference between the cost of the project including the given purpose and the cost of the project with the given purpose omitted, rather than the cost allocation determined by the separable costs--remaining benefits method or other cost allocation method actually used.

Authorization of the seven power projects in operation in the Arkansas, White, and Red River basins and the Whitney Project at June 30, 1957, preceded the issuance of Bureau of the Budget Circular No. A-47. However, comparisons of power benefits and tentative allocations of costs to power are included in the cost allocation studies prepared by the Corps. Power benefits and costs shown in the most recent allocation studies available at the time of our audit for projects in operation at June 30, 1957, are as follows:

Project	Annual power benefits	Annual power costs	Benefit-cost ratio
Fort Gibson	$1,115,000	$1,107,737[a]	1.007:1
Tenkiller Ferry	689,000	725,687[a]	0.949:1
Bull Shoals	2,553,000	2,398,000[a]	1.06:1
Norfork	1,348,000	906,100[a]	1.49:1
Blakely Mountain	1,558,000	1,454,000[a]	1.07:1
Denison	1,583,520	958,350[b]	1.652:1
	1,583,520	1,241,850[a]	1.275:1
Narrows	323,000	365,000[a]	0.88:1
Whitney	518,100	540,600[a]	0.96:1

[a]Annual costs include taxes foregone.

[b]Annual costs exclude taxes foregone.

The computation of power benefits has been a matter of discussion and consideration by the Corps of Engineers, the Department of the Interior, and the Federal Power Commission, and some aspects of the subject have not yet been resolved. Our audits to date of Arkansas, White, and Red River basins projects have not included a detailed review of power benefits. SWPA officials informed us that a favorable power benefit-cost ratio does not necessarily mean that the Federal investment in power can be recovered through sales of power because economic power benefits, with which costs are compared in arriving at the ratio, may be in excess of anticipated revenues from the sale of power. The Corps obtains information on anticipated power revenues from the marketing agency for comparison with power costs and determination of financial feasibility.

NAVIGATION PLANT CONSTRUCTION AND OPERATION

The first projects on the Arkansas, White, and Red Rivers related to navigation and were concerned principally with removing snags, obstructions, boulders, and reefs; cutting sand bars; and constructing small dams at some shoals. Improvement of these rivers for navigation has remained a prime purpose in the development of the Arkansas, White, and Red River basins. These improvements are obtained principally through construction and operation and maintenance by the Corps of Engineers of single-purpose navigation projects. The Oologah, Dardanelle, Eufaula, and Keystone Projects in the Arkansas River basin are the only multiple-purpose projects under construction which include navigation as a purpose. Three additional multiple-purpose projects in the Arkansas River basin which include navigation as a purpose have been authorized. These are the Short Mountain, the Ozark, and the Webbers Falls Projects on the Arkansas River. Power has been deferred at the Keystone, Ozark, and Webbers Falls Projects.

The following tabulation summarizes at June 30, 1957, available data on the estimated construction cost allocable to navigation for projects in operation or under construction in the Arkansas, White, and Red River basins.

	Allocation to navigation
Arkansas River basin (note a):	
Multiple-purpose projects:	
Dardanelle (estimated total construction cost, $100,513,000)	$ 46,825,000
Eufaula (estimated total construction cost, $161,121,000)	54,900,000
Keystone (estimated first cost, $137,000,000) (note b)	78,260,400
Single-purpose navigation and bank stabilization projects	23,649,610
	203,635,010
White River basin:	
Single-purpose navigation and bank stabilization projects	1,272,998
Red River basin:	
Single-purpose navigation and bank stabilization projects	7,579,510
Total estimated cost to navigation of projects in operation or under construction	$212,487,518[a]

[a] Recent studies by the Corps show also that about $7,900,000 of costs of the Oologah Project (estimated first cost $36,200,000) will be allocable to navigation.

[b] Does not include power which has been deferred.

At June 30, 1957, existing cost allocations on the multiple-purpose projects were tentative; accordingly, the allocations in the above summary are approximate and subject to revision.

The Arkansas, White, and Red River basins navigation and bank stabilization projects are in various stages of completion. The distance and controlling depth of the active projects are as follows:

River	Location	Distance (miles)	Controlling depth	Authorized project depth (feet)
Arkansas	Mouth to confluence with Verdigris and Verdigris River to Catoosa, Oklahoma	460	Mouth to Fort Smith, Arkansas: 3 or more feet, 4 months; less than 3 feet, 8 months. Upstream from Fort Smith: no dependable depth.	9
White	Mouth to Batesville	302	4.5 feet or more, 8 months; less than 4.5 feet, 4 months (169 miles); 4 feet (96 miles); 2.5 feet minimum (37 miles)	4.5 feet from mouth to Newport, Arkansas (258 miles)
	Batesville to Guion	29	4 feet	4
Red	Junction of Old and Atchafalaya Rivers to Fulton, Arkansas	457	Mouth of Red River to mouth of Black River, .9 feet; mouth of Black River to Alexandria, Louisiana, 4 feet; Alexandria to Shreveport, Louisiana, less than 2 feet	9 feet to mile 25
Ouachita and Black	Mouth of Black River to Camden, Arkansas	351	Minimum depth 6.5 feet during low-water season	9

The Arkansas River project will provide a 9-foot-deep navigable channel from Catoosa, Oklahoma, on the Verdigris River to the Mississippi River, a distance of about 460 miles. The plan of improvement provides for a channel with bottom widths of 150 feet on the Verdigris River and 250 feet on the Arkansas River. The Red River projects consist of the Overton-Red River Waterway and the Ouachita and Black Rivers. The Overton-Red River Waterway will provide a navigable channel 9 feet deep and 100 feet wide from Shreveport, Louisiana, to the mouth of the Red River, a distance of about 205 miles. The project on the Ouachita and Black Rivers will provide a channel 9 feet deep and 100 feet wide from Camden, Arkansas, on the Ouachita River to the mouth of the Black River, a distance of 350 miles.

The Overton-Red River Waterway includes the construction of nine locks and a pumping plant and dredging at an estimated cost of $96,800,000. Work on this project has been limited to advanced planning. Total expenditures to June 30, 1957, amounted to $420,402.

The Ouachita and Black Rivers Project, modifying the existing project, includes the deepening of the Felsenthal Canal and dredging at an estimated cost of $14,100,000. Work on this

modification of the project amounting to $116,623 has been limited to advance planning. At June 30, 1957, the cost of the existing project was $5,248,619 for construction and $11,445,688 for operation and maintenance.

COST OF NAVIGATION OPERATIONS

Total costs incurred by the Corps of Engineers for operating and maintaining navigation plant in the Arkansas, White, and Red River basins during fiscal year 1957 and cumulative to June 30, 1957, are summarized as follows:

Basin	Fiscal year 1957	Cumulative to June 30, 1957
Arkansas River	$ 60,469	$ 3,709,866
White River	-300	4,718,608
Red River	708,117	14,197,775
Total	$768,286	$22,626,249

Statements of costs for operating and maintaining the navigation plant in the Arkansas, White, and Red River basins are included as schedule 5 of this report.

Depreciation and interest on the Federal investment in single-purpose navigation projects are not recorded by the Corps.

TONNAGES OF COMMERCIAL WATERWAY TRAFFIC

Tonnages of commercial waterway traffic on the Arkansas River from Fort Smith, Arkansas, to the mouth; on the White River from Guion, Arkansas, to the mouth; on the Red River below Fulton, Arkansas, and on the Ouachita and Black Rivers from Camden, Arkansas, to the mouth of the Red River are shown for calendar years 1956, 1955, and 1954, as follows:

Products	Traffic in tons								
	Arkansas River basin			White River basin			Red River basin		
	1956	1955	1954	1956	1955	1954	1956	1955	1954
Fish and products, fresh	30	212	191	220	478	549	540	503	475
Seashells	-	-	-	869	713	649	2,025	100	-
Logs and pulpwood	10,950	8,813	1,224	34,067	25,685	28,063	58,930	47,621	61,958
Posts, poles, and piling	1,150	2,062	2,405	-	-	-	229	-	-
Other wood products	-	-	-	-	-	-	-	-	15
Sulphur	-	-	-	-	-	-	27,177	-	-
Clays, sand, gravel, and crushed rock	589,183	722,475	428,013	136,889	122,400	158,300	13,614	4,873	600
Residual fuel oil	-	-	-	-	-	-	-	5,074	-
Rolled, finished steel mill products	-	-	-	-	-	-	100	1,727	514
Construction, mining machinery, parts	650	150	740	425	360	600	3,823	3,387	6,132
Industrial machinery, parts	-	-	-	-	-	-	195	30	35
Industrial chemicals	-	-	-	-	-	-	93,055	85,951	83,602
Nitrogenous fertilizer	-	-	-	-	-	-	887	-	-
Commodities, not elsewhere classified	-	-	-	-	-	-	45	-	-
Water	-	-	-	-	-	-	-	39	-
Waterway improvement materials	-	3,900	-	-	-	-	450	860	1,320
Total	601,963	737,612	432,573	172,470	149,636	188,161	201,070	150,165	154,651
Inbound	114	204	831	-	25	778	45,346	15,518	14,455
Outbound	10,975	8,838	1,229	514	2,237	6,450	97,173	89,811	91,441
Intrawaterway	590,874	728,570	430,513	171,956	147,374	180,933	58,551	44,836	48,755
Total	601,963	737,612	432,573	172,470	149,636	188,161	201,070	150,165	154,651
Total ton-miles	1,698,907	2,723,216	958,259	2,345,521	1,770,618	2,776,544	33,516,742	26,450,403	23,661,342
Average length of haul-miles	2.8	3.7	2.2	13	11.8	14.8	167	176	153

The average length of haul for all traffic on the Arkansas River in calendar year 1956 was 2.8 miles and the commerce consisted principally of local traffic in the vicinity of Dardanelle, Little Rock, and Pine Bluff, Arkansas, and from Cummin, Arkansas, to the mouth for a distance of 75 miles.

Water-borne commerce in the White River basin consisted principally of traffic on the White River with occasional movements of logs on the Black River near its mouth. No commerce has been reported on the Black River since 1948 and on the Current River since 1934.

Water-borne commerce in the Red River basin is reported on the Red River below Fulton, Arkansas, and on the Ouachita and Black Rivers, Arkansas and Louisiana. Commerce data on the

Cypress Bayou and Waterway between Jefferson, Texas, and Shreveport, Louisiana, were available for calendar years 1954 and 1956 but not for calendar year 1955. Data on commerce on the Tensas River and Bayou Macon, Louisiana, were available for calendar year 1954 but not for calendar years 1955 and 1956. The statistics for these waterways have not been included in the summary above. Statistics for the other navigable channels in the Red River basin have not been included because they were not available. Commerce on the Red River generally is confined to the reach extending from the mouth of the Ouachita and Black Rivers to the mouth of the Red River. Interchange of traffic between the Mississippi River and the Ouachita and Black Rivers account for practically all of this traffic.

FLOOD CONTROL PLANT CONSTRUCTION AND OPERATION

Flood control projects in the Arkansas, White, and Red River basins are designed to combat floods by means of reservoir storage and by channel improvement and levee construction.

Both multiple-purpose and single-purpose flood control projects have been built by the Corps of Engineers for the temporary storage of flood waters. In addition, the Corps controls the releases of water from privately owned reservoirs within the basin. Levee construction and channel improvement are designed to increase the capacity of waterways in order to control overflow from discharging flood waters. Construction of channel and levee flood control projects by the Federal Government, which is the responsibility of the Corps, can be in conjunction with reservoir projects or can be independent works. The more important works are specifically authorized by Congress. Under certain conditions, small projects and emergency flood protection and other minor construction may be undertaken by the Corps without specific authority from Congress to the extent of a maximum sum for any single project of $400,000 and a maximum of $10,000,000 in any one fiscal year.

Estimated construction costs for flood control programs in the Arkansas, White, and Red River basins are classified as follows:

Constructed or under construction	$ 733,409,720
Advance planning status	344,172,500
Total	$1,077,582,220

At June 30, 1957, existing cost allocations of the multiple-purpose projects were tentative; accordingly, allocations in the foregoing summary are subject to revision.

Estimated construction costs for multiple- and single-purpose projects constructed or under construction and allocated to flood control purposes are as follows:

Projects	Total estimated construction cost	Allocation of total estimate to flood control	
		Amount	Percent
Multiple-purpose (note a):			
Fort Gibson	$ 43,926,524	$ 26,664,920	61
Tenkiller Ferry	23,401,525	11,628,253	50
Eufaula	161,121,000	62,160,000	39
Bull Shoals	79,040,000	33,182,000	42
Norfork	30,039,000	16,129,000	54
Table Rock	73,477,000	15,853,000	22
Greers Ferry	54,379,000	17,815,000	33
Blakely Mountain	33,135,000	8,369,000	25
Denison	62,127,550	41,236,600	66
Narrows	13,104,000	7,608,000	58
Total	573,750,599[b]	240,645,773[c]	42
Single-purpose flood control (21)	344,964,712	344,964,712	100
Levee and channel improvements	147,799,235	147,799,235	100
Total	$1,066,514,546	$733,409,720	69

[a]Exclusive of the Whitney Project on the Brazos River, Texas. Total estimated construction cost of this project is $43,865,900 of which $32,984,100 has been allocated to flood control.

[b]Includes interest amounting to $28,408,106.

[c]Includes interest amounting to $11,959,916.

Estimated costs of Federal participation to cover costs of flood water storage at the Pensacola Project, owned by the State of Oklahoma, totaling $1,760,000 are included in the above tabulation. Federal participation in the Markham Ferry Project, which is now in the advance planning stage (see p. 89) and which is to be constructed by the Grand River Dam Authority, an Oklahoma State Conservation and Reclamation District, amounts to $6,906,000.

Construction of 16 dams and reservoirs for flood control is completed, and 5 are under construction.

COST OF FLOOD CONTROL OPERATIONS

Costs of operating and maintaining the facilities for flood damage prevention and public use in the Arkansas, White, and Red River basins, during fiscal year 1957 and cumulative to June 30, 1957, are summarized as follows:

Class	Fiscal year 1957	Cumulative to June 30, 1957
Multiple-purpose projects including power (note a)	$ 5,298,294	$42,434,768
Flood control reservoir projects	584,514	8,063,481
Other flood control operations including flood emergency measures, rehabilitation of dikes and levees, and cost of inactive projects	6,838,982	31,546,102
Total	$12,721,790	$82,044,351

[a]Exclusive of the Whitney Project.

The tabulation includes charges for depreciation and interest on multiple-purpose (including power) projects in the amount of $5,084,803 for fiscal year 1957. Depreciation and interest on Federal investment are not computed on the investment by the Corps in projects that do not include power as a purpose. The tabulation also includes $6,274,700 charged off in 1957 to local protection and other flood control operations; this amount represented the cost of preliminary surveys and investigations incurred prior to fiscal year 1957. (See note 6, p. 92.) Included also are (1) credits for revenues received from reservoir lands in the amount of $256,812 for fiscal year 1957, of which 75 percent are returnable to the states and (2) public-use facilities expense at Bull Shoals, Norfork, Blakely Mountain, and Narrows Projects. The cumulative totals of these credits and expenses by purposes are not readily available.

BENEFITS FROM OPERATION OF FLOOD CONTROL PLANT

Annual benefits from operation of flood control facilities generally consist of reduction of damage to agricultural and industrial properties, increased use or value of land that has been drained or protected from floods, and reduction in damages that would be caused by interruption of business. Other intangible benefits, such as prevention of loss of life, are realized from the protection afforded by the operation of flood control facilities.

Studies prepared by the Corps show that flood control benefits from the projects completed or authorized for construction in the Arkansas, White, and Red River basins are estimated to be about $66,600,000 annually. Federal participation in flood control improvements is generally confined to those projects where tangible benefits exceed the estimated costs. The benefits claimed by the Corps for a benefit-cost ratio are based on damages to property that are preventable. These benefits were not reviewed or evaluated by us during this audit.

During April, May, and June 1957 the Southwest suffered a flood which ranks as one of the six most destructive floods in the United States since 1900. A special subcommittee to the Committee on Public Works issued a report[1] dated June 29, 1957, showing that estimated damages of $125,500,000 resulted from this flood. The estimated damages in the Arkansas, White, and Red River basins included in the report furnished to the subcommittee by the Corps of Engineers are reported as follows:

Arkansas River basin	$38,000,000
White River basin	6,000,000
Red River basin	11,000,000
Total	$55,000,000

The report also contains statistics as to the amount of the estimated damages prevented by existing works and the estimated damages that could have been prevented by authorized works. According to these estimates, the existing works prevented $35,000,000 of damages and an additional $19,000,000 could have been prevented by authorized works.

The following summary shows the estimated damages and reduction in damages resulting from existing works:

River basin	Estimated damages		
	Without existing projects	Experienced	Prevented by existing works
Arkansas	$58,000,000	$38,000,000	$20,000,000
White	13,000,000	6,000,000	7,000,000
Red	19,000,000	11,000,000	8,000,000
Total	$90,000,000	$55,000,000	$35,000,000

[1]The Southwest Flood of 1957--Report of the Special Subcommittee to Inspect Flooded Areas in Southwestern United States to the Committee on Public Works, House of Representatives. House Committee Print No. 4, 85th Cong., 1st sess.

RECREATIONAL ACTIVITIES AT RESERVOIR PROJECTS OF CORPS OF ENGINEERS[1]

Authority by the Corps of Engineers to undertake recreational programs at reservoir projects under the control of the Department of the Army is included in the Flood Control Act of 1944, as amended (16 U.S.C. 460d). This act permits construction and operation and maintenance of such facilities by the Corps. The act also authorizes construction and operation and maintenance of these facilities by others through the lease of lands under terms deemed reasonable by the Secretary of the Army.

Policies under this authority have been established by the Corps that result in construction, operation and maintenance, and administration by the Corps of free public-use facilities and in development of (1) recreational facilities by civic and nonprofit organizations and state and local governmental agencies, (2) commercial facilities by concessioners, and (3) homesites and club sites by individuals and groups. The Corps' activities are financed from construction and operation and maintenace funds.

Tentative allocations of estimated construction costs to public use for multiple-purpose projects in operation and under construction in the Arkansas, White, and Red River basins totaled $1,439,174. (See appendix C.) These allocations are represented by facilities provided in excess of the minimum basic facilities installed for protection of the project area and accommodation of the visiting public. The costs of such minimum facilities are included in the costs allocated to the major project functions.

Construction costs allocated to public use are not reimbursable; however, revenues are derived from privately developed concessions and other recreational facilities.

For fiscal year 1957, operation and maintenance expenses identifiable as recreation expense totaled $417,393. Because of differing methods of charging and allocating expenses at various projects, $158,161 of these expenses was distributed to purposes other than recreation. In addition, the $417,393 does not include all costs of operating and maintaining recreational facilities because some of the projects do not allocate to recreation all applicable expenses of real estate management, road maintenance, or general administration.

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[1]See audit report to the Congress dated October 17, 1956, on "Review of Operation, Maintenance, and Administration of Recreational Facilities at Reservoir Projects, Corps of Engineers (Civil Functions), Department of the Army, January 1956."

Until the Corps of Engineers establishes a uniform procedure at all projects for allocating these costs to purposes, the total costs of operating and maintaining recreational facilities cannot be readily ascertained.

ACCOUNTING AND FINANCIAL POLICY

The accounting systems in use by the Corps of Engineers (Civil Functions) and the Southwestern Power Administration are based on recognized accounting principles with the accounts for power operations maintained to the extent practicable in accordance with the uniform system of accounts prescribed for public utilities by the Federal Power Commission under the Federal Power Act (16 U.S.C. 825-b).

The systems of both the Corps and the Administration are based on accrual accounting and distinguish between capital and revenue expenditures. Because the accounting systems have many similarities, comparable financial data for meaningful consolidated financial statements of assets and liabilities and results from operations can be obtained. Before the accounting records can show financial data with reasonable accuracy, however, policy decisions that are comparable and consistent between the agencies must be reached on cost-accounting practices, interest on Federal investment in commercial power facilities, and depreciation on plant in service.

General agreement has been reached between the Corps of Engineers, Department of the Interior, and the Federal Power Commission, and concurred in by the General Accounting Office, on the use of simple interest during construction and the proportionate method of accounting for the operation of joint facilities on multiple-purpose projects. The Corps of Engineers has reached decisions on certain other major accounting and financial policies, but decisions have not been made thereon by the Department of the Interior.

COST-ACCOUNTING PRACTICES

The Corps of Engineers does not bear the costs applicable to its activities of administrative and other services rendered by other Federal agencies not assignable to projects pursuant to law or administrative policy. These services include (1) amounts for rentals and other services furnished without charge by General Services Administration and other Federal agencies, (2) death and disability claims on account of Corps employees paid by the Bureau of Employees' Compensation, Department of Labor, and (3) prior to July 1957, the Government's contribution to the Civil Service Retirement System applicable to Corps employees. Similarly, except for the inclusion of rentals on space furnished without charge by the General Services Administration, it is not the policy of Southwestern Power Administration to include in its accounts amounts for administrative and other services rendered by other Federal agencies without charge.

The costs of the Office of the Chief of Engineers and of division offices are paid from appropriations to the Corps for general expenses and are not distributed to construction, operation and maintenance, and other programs.

Provisions for accrued annual leave of employees are included in property costs and operating expenses by the Corps of Engineers and Southwestern Power Administration.

Expenditures for preliminary surveys and investigations are included in project costs by the Southwestern Power Administration but not by the Corps of Engineers. (See pp. 24 to 27.)

PROBLEMS REQUIRING RESOLUTION

In our current and prior audits, we noted certain inconsistencies and problems involving accounting and financial policy. Our comments and recommendations on these matters are included in this report under "Status of Principal Recommendations in Prior Reports" (pp. 15 to 22, and 28 to 38). The subjects covered are:

1. Allocation to power and nonpower purposes of joint costs and expenses of operation.

2. Provisions for depreciation of facilities.

3. Interest on the Federal investment.

4. Status of repayment of the Government's investment allocated to power.

SCOPE OF AUDIT

Our audit in the district offices of the Corps of Engineers having responsibility for water resources development programs in the Arkansas, White, and Red River basins, and of the Southwestern Power Administration, included reviews of activities and selective examinations of financial transactions in the following manner:

1. We reviewed the basic laws authorizing the activities, and the pertinent legislative history, to ascertain the purposes of the activities and their intended scope.

2. We ascertained the policies adopted by the Corps and the Administration and reviewed the policies for conformance with basic legislation.

3. We reviewed the procedures followed by employees of the Corps and the Administration to determine the effectiveness of the procedures.

4. We did not make a detailed audit, but we examined selected transactions to the extent we deemed appropriate for the purposes of this report. Our examination was made with due regard for the nature and volume of transactions and the effectiveness of internal control. We made our examination at Southwestern Power Administration, Tulsa, Oklahoma, and at district offices of the Corps of Engineers located at Little Rock, Arkansas, New Orleans, Louisiana, Tulsa, Oklahoma, and Vicksburg, Mississippi. For the projects administered by the district offices located at Albuquerque, New Mexico, Fort Worth, Texas, and Memphis, Tennessee, our examination was limited to a review of the data submitted by these district offices for inclusion in this report.

OPINION OF FINANCIAL STATEMENTS

The accompanying statement of assets and liabilities (schedule 1), statements of power operations and nonpower operations (schedules 2 through 6), and statement of project costs and accumulated depreciation (schedule 7) are based on the accounting records of the Corps of Engineers and the Southwestern Power Administration. These financial statements present on a combined basis the assets and liabilities of the water resources development programs of the Corps of Engineers in the Arkansas, White, and Red River basins, including the Whitney Project, and of the Southwestern Power Administration, the power marketing agent. Because of changes in the accounting systems in use and programs extending from 1832, it is not possible to ascertain precisely the amounts expended in early years or whether such amounts have been included in the records of the Corps of Engineers.

In our opinion, the accompanying financial statements do not present fairly the financial position at June 30, 1957, and the financial results of operations for the fiscal year then ended, mainly for the conditions set forth below, the full effect of which cannot now be determined.

1. A uniform policy has not been established by the Department of the Interior and the Corps of Engineers for computing interest on the Federal investment. The Southwestern Power Administration computes interest on the cost of electric plant in service and under construction at the end of the preceding fiscal year. Recognition is not given by the Administration to amounts repaid on the Federal investment, and none of the interest computed has been capitalized as interest during construction. The district offices of the Corps have not been consistent in the computations of interest; also, the amount of interest on the unrepaid Federal investment is inaccurate because revenues from the sale of power are not recorded by the Corps. The interest charges cannot be revised with any degree of accuracy until agreements are reached between the Department of the Interior and the Corps of Engineers on the allocation of revenues to projects and the application of project revenues to the Government's investment.

2. A uniform policy has not been established by the Department of the Interior and the Corps of Engineers for recording depreciation of plant, property, and equipment in service. The Southwestern Power Administration has made no provision for depreciation of land and land rights, clearing land and rights-of-way, and roads and trails. The district offices of the Corps have not been consistent in making provisions for depreciation; costs of land, land rights, relocations, and clearing have not been included

in the base for computing depreciation; retroactive adjustments for prior year deficient or unrecorded depreciation are not made even though the amounts involved may be significant.

3. Agreement has not been reached between the Department of the Interior and the Corps of Engineers on allocation of annual joint operation and maintenance expenses to power and nonpower purposes. These allocations have been made by the Corps on the basis of the ratios of investment for each purpose to the total investment as determined by the district engineers.

4. Revenues received by the Corps of Engineers from the leasing of reservoir lands are treated as reductions of project operating expenses but have not been reduced by the amounts paid or payable to states in lieu of taxes.

SCHEDULES

CORPS OF ENGINEERS (CIVIL FUNCTIONS)

AND

SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM (note 1)

STATEMENT OF ASSETS AND LIABILITIES

JUNE 30, 1957

ASSETS	Combined	Corps of Engineers	Southwestern Power Administration
PLANT, PROPERTY, AND EQUIPMENT:			
Multiple-purpose projects in service and under construction, including interest during construction of $19,910,494 (schedule 7)	$369,900,682	$369,900,682	$ -
Transmission lines, substations, and other electric plant in service, held for future use, and under construction (schedule 7)	24,021,853	-	24,021,853
	393,922,535	369,900,682	24,021,853
Less accumulated depreciation (schedule 7)	19,651,754	16,284,226	3,367,528
	374,270,781	353,616,456	20,654,325
Flood control reservoirs in service and under construction (schedule 7)	162,626,310	162,626,310	-
Local protection projects, including levees, emergency bank protection, and clearing and snagging (schedule 7)	123,135,918	123,135,918	-
Navigation projects in service or under construction, including emergency bank stabilization and channel rectification on the Arkansas River and tributaries (schedule 7)	32,502,118	32,502,118	-
Plant, property, and equipment, net	692,535,127	671,880,802	20,654,325
ADVANCE PLANNING ON AUTHORIZED PROJECTS (schedule 7):			
Multiple-purpose projects, including power	362,820	362,820	-
Flood control reservoirs	2,569,984	2,569,984	-
Local protection projects	142,590	142,590	-
Navigation facilities projects	920,116	920,116	-
Total plans and design costs	3,995,510	3,995,510	-
PRELIMINARY SURVEYS AND INVESTIGATIONS (note 6)	407,518	391,487	16,031
CASH AND OTHER ASSETS:			
Unexpended funds in U.S. Treasury (note 7)	23,746,346	19,208,303	4,538,043
Special and trust funds on deposit (note 8)	4,703,687	-	4,703,687
Accounts receivable:			
Power customers	739,247	-	739,247
Other	24,677	20,779	3,898
Accrued utility revenue	55,018	-	55,018
Materials and supplies	445,783	-	445,783
Prepayments, advances, and other debits	288,293	293,303	-5,010
Total cash and other assets	30,003,051	19,522,385	10,480,666
TOTAL ASSETS	$726,941,206	$695,790,184	$31,151,022

LIABILITIES	Combined	Corps of Engineers	Southwestern Power Administration
INVESTMENT OF U.S. GOVERNMENT AND ACCUMULATED EXCESS OF EXPENSES OVER INCOME:			
Congressional appropriations, net (note 8):			
From general funds of the Treasury	$797,806,181	$763,069,094	$34,737,087
From receipts from the sale of power	13,638,032		13,638,032
Costs of property and services furnished by other Government agencies and others, net (note 9)	1,604,498	1,283,427	321,071
Interest on the Federal investment (note 10)	83,103,917	79,588,825	3,515,092
Total investment of U.S. Government	896,152,628	843,941,346	52,211,282
Less:			
Funds returned to U.S. Treasury (note 11):			
Repayment of Federal investment in power program	34,161,713	474,571	33,687,142
Repayment of Federal investment in nonpower programs	3,414,573	3,414,573	-
Cumulative net costs of nonpower programs (schedule 2)	110,747,020	110,747,020	-
Total deductions	148,323,306	114,636,164	33,687,142
	747,829,322	729,305,182	18,524,140
Less cumulative net loss from power operations (schedule 3)	27,798,482	39,889,007	-12,090,525
Net investment of U.S. Government	720,030,840	689,416,175	30,614,665
CURRENT AND ACCRUED LIABILITIES:			
Accounts payable	5,327,539	4,952,393	375,146
Employees' accrued leave (note 12)	118,023	-	118,023
Other current accrued liabilities	31,447	3,698	27,749
Total current and accrued liabilities	5,447,009	4,956,091	520,918
CONTRIBUTIONS IN AID OF CONSTRUCTION (note 13)	1,433,357	1,417,918	15,439
TOTAL LIABILITIES AND INVESTMENT OF U.S. GOVERNMENT	$726,941,206	$695,790,184	$31,151,022

The accompanying explanatory notes and comments to financial statements on pages 89 through 103 are an integral part of this schedule.

SCHEDULE 1

CORPS OF ENGINEERS (CIVIL FUNCTIONS)

AND

SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM (note 1)

STATEMENT OF NET COSTS OF POWER AND NONPOWER OPERATIONS

FOR THE FISCAL YEAR ENDED JUNE 30, 1957

AND CUMULATIVE NET COSTS TO JUNE 30, 1957

	Cumulative to June 30, 1956	Fiscal year 1957	Prior year adjustments (note 14)	Cumulative to June 30, 1957
REVENUE-PRODUCING PROGRAM:				
Power (schedule 3)	$19,864,055	$ 7,949,070	$ -14,643	$ 27,798,482
NON REVENUE-PRODUCING PROGRAMS:				
Flood control	$53,198,910	$13,726,519	$19,197,389	$ 86,122,818
Navigation	21,854,130	768,286	3,833	22,626,249
Recreation	942,489	259,232	383,693	1,585,414
Streamflow regulation	215,535	118,546	78,458	412,539
Total	$76,211,064	$14,872,583	$19,663,373	$110,747,020

The accompanying explanatory notes and comments to financial statements on pages 89 through 103 are an integral part of this schedule.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)

AND

SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM (note 1)

STATEMENT SHOWING RESULTS FROM POWER OPERATIONS

FOR THE FISCAL YEAR ENDED JUNE 30, 1957

AND CUMULATIVE NET LOSS TO JUNE 30, 1957

	Combined	Southwestern Power Administration	Corps of Engineers (Civil Functions) Total	Fort Gibson	Tenkiller Ferry	Bull Shoals	Norfolk	Blakely Mountain	Denison	Narrows	Whitney
OPERATING REVENUE (note 15):											
Sales of electric energy	$ 8,754,109	$ 8,754,109	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Other revenues	2,181	2,181									
Total operating revenues	8,756,290	8,756,290	-	-	-	-	-	-	-	-	-
OPERATING EXPENSES:											
Purchased power	3,665,819	3,665,819	-	-	-	-	-	-	-	-	-
Generation expense:											
Specific power facilities	817,349	-	817,349	85,552	59,016	153,713	124,434	80,645	147,342	72,243	94,404
Joint facilities (note 16)	255,768	-	255,768	26,067	16,775	46,247	25,163	60,851	51,842	20,923	7,900
Transmission expense	3,822,408	3,822,408	-	-	-	-	-	-	-	-	-
Supervision and administration (note 16)	487,713	408,003	79,710	17,156	10,907	14,605	9,167	-	21,630	-	6,245
Provision for depreciation (note 3)	2,693,630	662,916	2,030,714	257,726	208,027	547,469	207,197	334,400	246,268	86,278	143,349
Total operating expenses	11,742,687	8,559,146	3,183,541	386,501	294,725	762,034	365,961	475,896	467,082	179,444	251,898
Excess of operating expenses over revenues	2,986,397	-197,144	3,183,541	386,501	294,725	762,034	365,961	475,896	467,082	179,444	251,898
INTEREST AND OTHER DEDUCTIONS:											
Interest on the Federal Investment (note 10)	5,030,968	589,508	4,441,460	453,744	332,836	1,299,190	490,522	634,323	820,688	176,950	233,207
Nonoperating expense (-income), net (note 11)	-68,295	-1,318	-66,977	-	-	-38,369	-12,255	-4,032	-	-1,808	-10,513
Total interest and other deductions	4,962,673	588,190	4,374,483	453,744	332,836	1,260,821	478,267	630,291	820,688	175,142	222,694
Net loss for fiscal year 1957	7,949,070	391,046	7,558,024	840,245	627,561	2,022,855	844,228	1,106,187	1,287,770	354,586	474,592
CUMULATIVE NET LOSS ON POWER OPERATIONS TO JUNE 30, 1956	19,864,055	-12,444,301	32,308,356	3,198,264	1,873,074	5,828,986	6,818,474	858,443	10,222,325	2,059,725	1,449,065
PRIOR YEAR ADJUSTMENTS (note 14)	-14,643	-37,270	22,627	-1,750	-1,036	1,516	-3,304	-	70,956	-5,929	-37,826
CUMULATIVE NET LOSS ON POWER OPERATIONS TO JUNE 30, 1957 (to schedule 1)	$27,798,482	-$12,090,525	$39,889,007	$4,036,759	$2,499,599	$7,853,357	$7,659,398	$1,964,630	$11,581,051	$2,408,382	$1,885,831

The accompanying explanatory notes and comments to financial statements on pages 89 through 103 are an integral part of this schedule.

SCHEDULE 3

CORPS OF ENGINEERS (CIVIL FUNCTIONS)

AND

SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM (note 1)

STATEMENT SHOWING NET COST OF FLOOD CONTROL OPERATIONS

FOR THE FISCAL YEAR ENDED JUNE 30, 1957, AND CUMULATIVE NET COST TO JUNE 30, 1957

	Combined			Cumulative to June 30, 1957--by basin			
	Fiscal year 1957	Prior year adjustments (note 14)	Cumulative to June 30, 1957	Arkansas River	White River	Red River	Not identified as to basin
CORPS OF ENGINEERS:							
Multiple-purpose projects including power:							
Fort Gibson	$ 893,973	$ 3,019,830	$ 4,806,266	$ 4,806,266	$ -	$ -	$ -
Tenkiller Ferry	414,936	931,845	1,799,899	1,799,899	-	-	-
Bull Shoals	1,134,624	-1,516	6,184,017	-	6,184,017	-	-
Norfork	570,482	3,304	6,662,944	-	6,662,944	-	-
Blakely Mountain	325,946	-282	1,469,867	-	-	1,469,867	-
Denison	1,650,577	14,185,616	19,350,150	-	-	19,350,150	-
Narrows	307,756	-5,743	2,161,625	-	-	2,161,625	-
	5,298,294	18,133,054	42,434,768	6,606,165	12,846,961	22,981,642	-
Flood control reservoir projects	584,514	-31,900	8,063,481	7,251,757	406,091	405,633	-
Total	5,882,808	18,101,154	50,498,249	13,857,922	13,253,052	23,387,275	-
Local protection and other flood control operations:							
Operations and maintenance and repairs	358,715	-270,147	9,139,533	4,667,639	607,787	3,864,107	-
Examinations, surveys and hydrologic studies (note 6)	3,272,272	498,885	5,836,560	1,288,285	67,779	35,248	4,445,248
Inspection of local flood control	3,850	-989	25,136	-	18,000	-	7,136
Scheduling of flood control operations	3,437	-	11,871	-	-	-	11,871
Extraordinary operations--flood emergency measures and rehabilitation of dikes and levees damaged through floods (note 6)	3,200,708	933,079	16,533,002	2,660,790	2,100,314	4,155,074	7,616,824
	6,838,982	1,160,828	31,546,102	8,616,714	2,793,880	8,054,429	12,081,079
Total	12,721,790	19,261,982	82,044,351	$22,474,636	$16,046,932	$31,441,704	$12,081,079
Whitney	1,004,729	-64,593	4,078,467				
	$13,726,519	$19,197,389	$86,122,818				

The accompanying explanatory notes and comments to financial statements on pages 89 through 103 are an integral part of this schedule.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)

AND

SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM (note 1)

STATEMENT SHOWING NET COST OF NAVIGATION OPERATIONS

FOR THE FISCAL YEAR ENDED JUNE 30, 1957

AND CUMULATIVE NET COST TO JUNE 30, 1957

	Fiscal year 1957	Prior year adjustments (note 14)	Cumulative to June 30, 1957
ARKANSAS RIVER BASIN:			
Navigation and bank stabilization:			
Mouth to Fort Smith, Ark.	$ 2,200	$ -	$ 3,076,294
Wilsons Rock to Fort Smith, Ark.	58,269	-	151,404
Total	60,469	-	3,227,698
Inactive--Arkansas River	-	-	482,168
Total Arkansas River basin	60,469	-	3,709,866
WHITE RIVER BASIN:			
Inactive:			
Black River, Ark. and Mo.	-	-	658,222
Current River, Ark. and Mo.	-	-	125,913
Upper White River, Ark.	-300	3,833	2,573,894
Lower White River, Ark.	-	-	1,360,579
Total White River basin	-300	3,833	4,718,608
RED RIVER BASIN:			
Navigation and bank stabilization:			
Cypress Bayou and Waterway between Jefferson, Tex. and Shreveport, La.	-	-	389,006
Ouachita and Black Rivers, Ark. and La.	677,264	-	11,645,658
Red River below Fulton, Ark.	30,853	-	1,923,426
Total	708,117	-	13,958,090
Inactive:			
Bayous D'Arbonne and Corney, La.	-	-	37,804
Boeuf River, La.	-	-	103,737
Saline River, Ark.	-	-	12,792
Tensas River and Bayou Macon, La.	-	-	85,352
Total Red River basin	708,117	-	14,197,775
Total	$768,286	$3,833	$22,626,249

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CORPS OF ENGINEERS (CIVIL FUNCTIONS)

AND

SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM (note 1)

STATEMENT OF EXPENSES--MULTIPLE-PURPOSE PROJECTS

FOR THE FISCAL YEAR ENDED JUNE 30, 1957

Project and purpose	Net expense	Joint facilities (note 16)	Specific costs	Supervision and administrative (note 16)	Provision for depreciation (note 3)	Interest on the Federal investment (note 10)	Credits to operations and non-operating income (note 11)
FORT GIBSON:							
Power	$ 840,245	$ 26,067	$ 85,552	$ 17,156	$ 257,726	$ 453,744	$ -
Flood control	893,973	30,039	12,767	19,770	215,065	678,146	61,814
Recreation	56,545	-	72,771	-	13,076	3,049	32,351
Total	1,790,763	56,106	171,090	36,926	485,867	1,134,939	94,165
TENKILLER FERRY:							
Power	627,561	16,775	59,016	10,907	208,027	332,836	-
Flood control	414,936	21,237	4,380	13,809	105,949	280,225	10,664
Recreation	20,977	-	34,688	-	3,137	1,408	18,256
Total	1,063,474	38,012	98,084	24,716	317,113	614,469	28,920
BULL SHOALS:							
Power	2,022,855	46,247	153,713	14,605	547,469	1,299,190	38,369
Flood control	1,134,624	54,994	2,266	17,487	310,198	795,618	45,939
Total	3,157,479	101,241	155,979	32,092	857,667	2,094,808	84,308
NORFORK:							
Power	844,228	25,163	124,434	9,167	207,197	490,522	12,255
Flood control	570,482	44,733	2,016	16,296	139,659	389,564	21,786
Total	1,414,710	69,896	126,450	25,463	346,856	880,086	34,041
BLAKELY MOUNTAIN:							
Power	1,106,187	60,851	80,645	-	334,400	634,323	4,032
Flood control	325,946	65,890	-	-	62,600	202,832	5,376
Total	1,432,133	126,741	80,645	-	397,000	837,155	9,408
DENISON:							
Power	1,287,770	51,842	147,342	21,630	246,268	820,688	-
Flood control	1,650,577	39,475	34,403	16,470	293,221	1,371,782	104,774
Recreation	153,757	3,909	106,737	20,416	31,918	34,047	43,270
Total	3,092,104	95,226	288,482	58,516	571,407	2,226,517	148,044
NARROWS:							
Power	354,586	20,923	72,243	-	86,278	176,950	1,808
Flood control	307,756	74,271	-	-	59,605	180,339	6,459
Total	662,342	95,194	72,243	-	145,883	357,289	8,267
WHITNEY:							
Power	474,592	7,900	94,404	6,245	143,349	233,207	10,513
Flood control	1,004,729	25,986	23,383	20,539	202,378	767,022	34,579
Recreation	27,953	-	19,071	-	5,940	2,942	-
Streamflow regulation	118,546	3,364	-	2,659	17,713	99,286	4,476
Total	1,625,820	37,250	136,858	29,443	369,380	1,102,457	49,568
TOTAL FOR ALL MULTIPLE-PURPOSE PROJECTS:							
Power (schedule 3)	7,558,024	255,768	817,349	79,710	2,030,714	4,441,460	66,977
Flood control (schedule 4)	6,303,023	356,625	79,215	104,371	1,388,675	4,665,528	291,391
Recreation (schedule 2)	259,232	3,909	233,267	20,416	54,071	41,446	93,877
Streamflow regulation (schedule 2)	118,546	3,364	-	2,659	17,713	99,286	4,476
Total	$14,238,825	$619,666	$1,129,831	$207,156	$3,491,173	$9,247,720	$456,721

The accompanying explanatory notes and comments to financial statements on pages 89 through 103 are an integral part of this schedule.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)
AND
SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM (note 1)

STATEMENT SHOWING PROJECTS, COSTS, AND ACCUMULATED DEPRECIATION

TO JUNE 30, 1957

Project and basin	Project plan	Plant, property, and equipment (note 2)						Accumulated depreciation (note 3)			Advance planning on authorized projects (note 5)
		Total	Plant in service	Construction work in progress	Retirement work in progress	Undistributed interest during construction	Abandoned and retired	Total	Allocated to Power	Allocated to Nonpower	
CORPS OF ENGINEERS:											
Multiple-purpose projects including power:											
Arkansas River basin:											
Fort Gibson	H. Doc. 107, 76th	$ 43,645,097	$ 43,642,697	$ -	$ 2,400	$ -	$ -	$ 1,907,344	$ 1,020,788	$ 886,556	$ -
Tenkiller Ferry	House Committee (FC) Doc. 1, 75th, and H. Doc. 758, 79th	23,471,807	23,470,329	-	1,478	-	-	1,123,408	739,682	383,726	-
Dardanelle	H. Doc. 758, 79th	1,022,856	-	960,392	-	62,464	-	-	-	-	-
Eufaula	H. Doc. 758, 79th	2,561,743	-	2,324,422	-	237,321	-	-	-	-	-
Short Mountain	H. Doc. 758, 79th	-	-	-	-	-	-	-	-	-	68,000
		70,701,503	67,113,026	3,284,814	3,878	299,785	-	3,030,752	1,760,470	1,270,282	68,000
White River basin:											
Bull Shoals	H. Doc. 917, 76th	79,424,195	79,399,979	24,216	-	-	-	3,113,395	2,185,499	927,896	-
Norfork	H. Doc. 290, 77th	30,022,997	30,019,726	729	2,542	-	-	2,403,097	1,411,896	991,201	-
Greers Ferry	House Committee (FC) Doc. 1, 75th and H. Doc. 499, 83d	1,083,598	-	1,015,176	-	68,422	-	-	-	-	-
Table Rock	H. Doc. 917, 76th	36,706,754	-	35,325,250	-	1,381,504	-	-	-	-	-
Beaver	H. Doc. 499, 83d	-	-	-	-	-	-	-	-	-	205,045
		147,237,544	109,419,705	36,365,371	2,542	1,449,926	-	5,516,492	3,597,395	1,919,097	205,045
Red River basin:											
Blakely Mountain	H. Doc. 647, 78th	33,058,852	33,071,139	-12,287	-	-	-	861,683	585,200	276,483	-
Denison	H. Doc. 541, 75th	62,111,031	61,849,554	255,984	2,288	3,205	-	4,389,741	1,904,572	2,485,169	-
Narrows	H. Doc. 837, 76th	13,097,203	13,097,203	-	-	-	-	1,021,181	603,946	417,235	-
DeGray	S. Doc. 117, 81st	-	-	-	-	-	-	-	-	-	89,775
		108,267,086	108,017,896	243,697	2,288	3,205	-	6,272,605	3,093,718	3,178,887	89,775
Brazos River:											
Whitney	H. Doc. 390, 76th	43,694,549	43,683,508	11,041	-	-	-	1,464,377	637,159	827,218	-
Total multiple-purpose projects including power		369,900,682	328,234,135	39,904,923	8,708	1,752,916	-	16,284,226	9,088,742	7,195,484	362,820
Flood control reservoirs:											
Arkansas River basin:											
Blue Mountain	House Committee (FC) Doc. 1, 75th	4,822,193	4,819,493	-	-	-	2,700	-	-	-	-
Canton	H. Doc. 569, 75th	10,327,575	10,327,575	-	-	-	-	-	-	-	-
Conchas	H. Doc. 308, 74th	15,488,909	15,488,909	-	-	-	-	-	-	-	-
Fall River	H. Doc. 440, 76th	10,457,133	10,450,504	-	-	-	6,629	-	-	-	-
Fort Supply	H. Doc. 308, 74th	7,505,677	7,505,677	-	-	-	-	-	-	-	-
Great Salt Plains	H. Doc. 308, 74th	4,626,270	4,626,270	-	-	-	-	-	-	-	-
Heyburn	H. Doc. 290, 80th	2,374,100	2,374,100	-	-	-	-	-	-	-	-
Hulah	H. Doc. 308, 74th	10,922,684	10,922,684	-	-	-	-	-	-	-	-
John Martin	H. Doc. 308, 74th	15,137,899	15,126,377	-	-	-	11,522	-	-	-	-
Nimrod	House Committee (FC) Doc. 1, 75th	3,772,420	3,772,420	-	-	-	-	-	-	-	-
Pensacola	H. Doc. 107, 76th	52,126	52,126	-	-	-	-	-	-	-	-
Wister	House Committee (FC) Doc. 1, 75th	10,430,525	10,430,525	-	-	-	-	-	-	-	-
Keystone	S. Doc. 107, 81st	1,744,321	-	1,744,321	-	-	-	-	-	-	-
Oologah	House Committee (FC) Doc. 1, 75th, and H. Doc. 758, 79th	2,729,291	60,131	2,669,160	-	-	-	-	-	-	-
Toronto	H. Doc. 440, 76th	6,282,573	278,223	6,004,350	-	-	-	-	-	-	-
Strawn	H. Doc. 442, 80th	-	-	-	-	-	-	-	-	-	342,404
Neodesha	H. Doc. 440, 76th	-	-	-	-	-	-	-	-	-	97,910
Markham Ferry	H. Doc. 107, 76th	-	-	-	-	-	-	-	-	-	503,655
Council Grove	H. Doc. 442, 80th	-	-	-	-	-	-	-	-	-	42,802
Optima	H. Doc. 308, 74th	-	-	-	-	-	-	-	-	-	187,389
Elk City	H. Doc. 440, 76th	-	-	-	-	-	-	-	-	-	156,631
		106,673,696	96,235,014	10,417,831	-	-	20,851	-	-	-	1,330,791
White River basin:											
Clearwater	House Committee (FC) Doc. 1, 75th	9,720,028	9,713,370	-	-	-	6,658	-	-	-	-
Lone Rock	House Committee (FC) Doc. 1, 75th	-	-	-	-	-	-	-	-	-	130,652
Water Valley	House Committee (FC) Doc. 1, 75th	-	-	-	-	-	-	-	-	-	414,011
Bell Foley	House Committee (FC) Doc. 1, 75th	-	-	-	-	-	-	-	-	-	68,309
		9,720,028	9,713,370	-	-	-	6,658	-	-	-	612,972

CORPS OF ENGINEERS (CIVIL FUNCTIONS)
AND
SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM (note 1)

STATEMENT SHOWING PROJECTS, COSTS, AND ACCUMULATED DEPRECIATION (continued)

TO JUNE 30, 1957

Project and basin	Project plan	Plant, property, and equipment (note 2) Total	Plant in service	Construction work in progress	Retirement work in progress	Undistributed interest during construction	Abandoned and retired	Accumulated depreciation (note 3) Total	Allocated to Power	Allocated to Nonpower	Advance planning on authorized projects (note 5)
Red River basin:											
Altus-Lugert	H. Doc. 541, 75th	$ 1,130,000	$ 1,130,000	$ -	$ -	$ -	$ -	$ -	$ -	$ -	$ -
Bayou Bodcau	H. Doc. 378, 74th	4,075,014	4,075,014	-	-	-	-	-	-	-	-
Wallace Lake	H. Doc. 378, 74th	1,202,913	1,202,913	-	-	-	-	-	-	-	-
Ferrells Bridge	H. Doc. 602, 79th	8,001,806	1,033,662	6,968,144	-	-	-	-	-	-	-
Texarkana	H. Doc. 602, 79th	31,822,853	16,428,954	15,393,899	-	-	-	-	-	-	-
Boswell	H. Doc. 602, 79th	-	-	-	-	-	-	-	-	-	128,786
Cooper	H. Doc. 488, 83d	-	-	-	-	-	-	-	-	-	111,638
Hugo	H. Doc. 602, 79th	-	-	-	-	-	-	-	-	-	60,000
Millwood	H. Doc. 602, 79th	-	-	-	-	-	-	-	-	-	204,817
Mooringsport	H. Doc. 602, 79th	-	-	-	-	-	-	-	-	-	103,780
Murfreesboro	S. Doc. 117, 81st	-	-	-	-	-	-	-	-	-	17,200
		46,232,586	23,870,543	22,362,043	-	-	-	-	-	-	626,221
Total flood control reservoirs		162,626,310	129,818,927	32,779,874	-	-	27,509	-	-	-	2,569,984
Local protection works (note 4):											
Arkansas River basin	Various	57,983,173	46,659,245	11,323,928	-	-	-	-	-	-	101,304
White River basin	"	12,385,348	12,038,269	347,079	-	-	-	-	-	-	-
Red River basin	"	52,767,397	48,675,982	3,265,179	-	-	826,236	-	-	-	41,286
Total local protection works		123,135,918	107,373,496	14,936,186	-	-	826,236	-	-	-	142,590
Navigation:											
Arkansas River basin:											
Arkansas River and tributaries	H. Doc. 758, 79th	23,649,611	9,588,772	13,446,584	-	-	614,255	-	-	-	328,091
Webbers Falls Reservoir	H. Doc. 758, 79th	-	-	-	-	-	-	-	-	-	55,000
		23,649,611	9,588,772	13,446,584	-	-	614,255	-	-	-	383,091
White River basin:											
Black River	(note a)	80,000	-	-	-	-	80,000	-	-	-	-
Current River	(note b)	17,000	-	-	-	-	17,000	-	-	-	-
Lower White River	(note c)	362,801	25,000	-	-	-	337,801	-	-	-	-
Upper White River	(note d)	813,197	813,197	-	-	-	-	-	-	-	-
		1,272,998	838,197	-	-	-	434,801	-	-	-	-
Red River basin:											
Bayou D'Arbonne and Corney	S. Ex. Doc. 69, 48th	19,000	19,000	-	-	-	-	-	-	-	-
Boeuf River	(note e)	30,000	30,000	-	-	-	-	-	-	-	-
Cypress Bayou and Waterway	(note f)	252,817	252,817	-	-	-	-	-	-	-	-
Ouachita and Black Rivers	(note a)	5,248,619	5,248,619	-	-	-	-	-	-	-	116,623
Red River below Fulton, Arkansas	(note g)	1,963,806	1,963,806	-	-	-	-	-	-	-	-
Saline River	H. Doc. 1212, 60th	26,900	26,900	-	-	-	-	-	-	-	-
Tensas River and Bayou Macon	(note h)	38,367	38,367	-	-	-	-	-	-	-	-
Overton-Red River Waterway	H. Doc. 320, 80th	-	-	-	-	-	-	-	-	-	420,402
		7,579,509	7,579,509	-	-	-	-	-	-	-	537,025
Total navigation		32,502,118	18,006,478	13,446,584	-	-	1,049,056	-	-	-	920,116
Total, Corps of Engineers		688,165,028	583,433,036	101,067,567	8,708	1,752,916	1,902,801	16,284,226	9,088,742	7,195,484	3,995,510
SOUTHWESTERN POWER ADMINISTRATION:											
Utility plant in service		24,016,980	23,293,711	771,636	-48,367	-	-	3,367,528	3,367,528	-	-
Other property		4,873	4,873	-	-	-	-	-	-	-	-
Total, Southwestern Power Administration		24,021,853	23,298,584	771,636	-48,367	-	-	3,367,528	3,367,528	-	-
TOTAL		$712,186,881	$606,731,620	$101,839,203	-$39,659	$1,752,916	$1,902,801	$19,651,754	$12,456,270	$7,195,484	$3,995,510

[a] Various, beginning with Rivers and Harbor Act of March 3, 1871

[b] Rivers and Harbor Act of August 18, 1894

[c] Annual Report, Chief of Engineers, 1893, page 2112

[d] Rivers and Harbor Act of July 13, 1892

[e] Removal of snags, etc.: H. Ex. Doc. 38, 46th; closing of outlets: H. Ex. Doc. 99, 48th

[f] Open channel work: Annual Report, Chief of Engineers, 1872, page 572; construction of dam: H. Doc. 220, 60th

[g] Various, beginning with Rivers and Harbor Act of August 2, 1882

[h] Removal of snags, etc.: H. Ex. Doc. 38, 46th; dredging of channel: H. Doc. 38, 67th

CORPS OF ENGINEERS (CIVIL FUNCTIONS)

AND

SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM

EXPLANATORY NOTES AND COMMENTS ON THE FINANCIAL STATEMENTS

1. Basis of preparation

The financial statements include the transactions recorded by the Corps of Engineers (Civil Functions) for the water resources development program in the Arkansas, White, and Red River basins and of the power marketing agent, the Southwestern Power Administration, an agency in the Department of the Interior. Also included in the financial statements are the transactions of the Whitney Project, on the Brazos River, Texas, as the energy generated at this project is marketed by the Southwestern Power Administration. Schedule 7 lists the projects included.

The financial statements also include transactions resulting from emergency flood control operations, scheduling of flood control operations, and examinations, surveys, and hydrologic studies which in part are not identifiable as to basin.

Expenditures have been made by the Corps of Engineers for advance planning and for acquisition of land at the Pensacola and Markham Ferry Projects and are included in this report under flood control projects. The Grand River Dam Authority, an Oklahoma State Conservation and Reclamation District, constructed and is operating the Pensacola Project and is authorized to construct the Markham Ferry Project for flood control and hydroelectric power. Flood control storage in the Pensacola Project is operated by the Grand River Dam Authority under the direction of the Corps of Engineers. When completed, the flood control storage of the Markham Ferry Project will be operated as a unit in the comprehensive plan for flood control in the Arkansas River basin.

Expenditures have been made by the Corps of Engineers for advance planning of the Webbers Falls Project which is included in this report as a navigation reservoir since the power feature, originally authorized with navigation, has been deferred.

The Bureau of Reclamation has constructed three projects in the Arkansas River basin. Except for the Corps' contribution of $1,130,000 for the construction of flood control features in the W. C. Austin Project (Altus-Lugert flood control reservoir), the costs of these projects are not included in the financial statements at June 30, 1957. These projects, the estimated construction

costs, and the allocation of the estimated construction costs were noted in our previous report to the Congress dated March 19, 1957 (p. 96), and are again summarized below:

Project data	Project and state: W. C. Austin, Oklahoma	Tucumcari, New Mexico	Vermejo, New Mexico
Date of original authorization	June 28, 1938	Aug. 2, 1937	Sept. 27, 1950
Estimated cost of original project	$ 5,600,000	$ 8,155,000	$2,679,000
Estimated construction costs of project	$12,686,165	$16,149,182	$2,816,183
Allocation of estimated construction costs:			
Irrigation	$10,036,811	$15,474,082	$2,490,680
Municipal water supply	1,080,000	-	-
Flood control	1,130,000	-	55,000
Fish and wildlife conservation	-	-	198,000
Total	$12,246,811	$15,474,082	$2,743,680

The project construction costs allocated to irrigation and municipal water supply purposes are reimbursable to the United States Government. However, of the total amount allocated to irrigation ($28,001,573) for the three projects, $18,969,396 is nonrecoverable as a result of limitations placed by the Congress on repayments.

2. Plant in service and construction work in progress

Amounts for plant in service and construction work in progress are stated at cost to the Corps of Engineers and Southwestern Power Administration or at appraised value for property transferred.

None of the interest on investment by the United States Government in the Southwestern Power Administration has been charged to plant, property, and equipment accounts as interest during construction; all has been charged to operations. (See p. 99)

3. Accumulated depreciation

Depreciation of the multiple-purpose projects in operation by the Corps of Engineers in the Arkansas, White, and Red River basins has been computed on the straight-line method, with service lives

based on engineering studies, except that no item of property has been assigned a service life in excess of 100 years. Costs of land, land rights, relocations, and clearing are not included in the base for computing depreciation. Prior to fiscal year 1957, an estimated salvage value of 10 percent of cost had been deducted in determining the base for depreciation on the Bull Shoals and Norfork Projects. Although this procedure was changed, no adjustment was recorded for salvage value considered in prior years in computing depreciation.

The initial date for depreciation of facilities has not been on the same basis in all cases. At the Denison, Bull Shoals, and Norfork Projects, depreciation commenced on the date the final generator came into service. For the other projects, depreciation commenced at a date between the placing in service of the first and last generators representing about the average in-service date for the individual project.

The provision for depreciation on joint facilities has been allocated to power and nonpower purposes in the same proportion as the related property costs.

Accumulated depreciation at June 30, 1957, on the electric plant of the Southwestern Power Administration comprised:

Transmission plant	$3,154,713
General plant	212,815
Total	$3,367,528

During fiscal year 1957, the Administration charged operations $662,916 for depreciation and amortization, represented by provision on transmission plant, $643,809, and general plant, $19,107.

The Administration has made no provisions for depreciation or amortization on land and land rights, clearing land and rights-of-way, and roads and trails.

4. Local protection projects--Mississippi River and tributaries

Expenditures from appropriations for flood control--Mississippi River and tributaries--have been made at the following locations:

Arkansas River--From Hopedale, Arkansas (mile 24), to Pine Bluff, Arkansas (mile 97). Work consists principally of pile dikes, board revetments, rock dikes, and riprap. North and south bank levees extending 60 miles along the north bank between Tucker and Gillett, Arkansas, and 86 miles along the south bank below Pine Bluff, Arkansas.

White River --Backwater levee system along the east bank. Local protection work at DeValls Bluff and Des Arc, Arkansas, and a levee from Augusta to Clarendon, Arkansas.

Red River --South bank and backwater levees and drainage structures. Other improvements at Jonesville and Bawcomville, Louisiana, and in the Boeuf and Tensas Basins, Arkansas and Louisiana.

5. Advance planning on authorized projects

The Corps prepares designs of features, firm estimates of costs, and construction schedules in advance of actual construction of authorized projects. Costs relating to these activities are identified with the project and are included in total costs.

At June 30, 1957, costs totaling $3,995,510 classified as advance planning had been incurred by the Corps on 3 projects that presently include power as a purpose, 15 reservoir projects, 7 local flood control protection works, and 4 navigation projects. In fiscal year 1957, the Corps expended $744,465 for advance planning.

Funds were provided in fiscal year 1958 for initiating construction of the Walnut Bayou, Arkansas, local flood control project.

Planning money was provided in fiscal year 1958 for the following projects:

Arkansas River and tributaries--bank stabilization
DeGray Reservoir
Ouachita and Black Rivers
Beaver Reservoir
Council Grove Reservoir
Elk City Reservoir
Strawn Reservoir
Enid, Oklahoma, local protection

6. Preliminary surveys and investigations

Cumulative costs of preliminary surveys and investigations are shown in the records of the Corps of Engineers as follows:

District office	In progress				Completed and charged to non-reimbursable costs
		Basin			
	Total	Arkansas River	White River	Red River	
Albuquerque	$ 11,451	$11,451	$ -	$ -	$ 867,728
Little Rock	5,783	2,515	3,268	-	3,682,312
Memphis	52,204	-	52,204	-	1,452,806
New Orleans	69,070	-	-	69,070	3,879,798
Tulsa	47,163	15,022	-	32,141	4,650,010
	185,671	$28,988	$55,472	$101,211	$14,532,654
Vicksburg	205,816[a]				
Total	$391,487				

[a]Arkansas-White-Red Basins Inter-Agency Committee expense. Not identified by basin.

Under Corps accounting procedures, the costs incurred in making preliminary surveys and investigations are not included in the final cost of the project; accordingly, the above tabulation includes costs incurred in connection with many of the multiple-purpose and single-purpose dams and reservoirs in the accompanying financial statements.

During fiscal year 1957, the Corps accounting procedure in connection with the recording of preliminary surveys and investigations costs was changed from retaining such costs in the in-progress account pending final disposition of the project to writing off the costs to nonreimbursable costs as soon as all costs for a survey have been incurred. During fiscal year 1957, costs totaling $135,400 were incurred by the Corps for preliminary surveys and investigations. Of this amount, $27,800 was written off to nonreimbursable costs. In addition to this amount, the Corps wrote off to nonreimbursable costs, during 1957, $6,274,700 incurred prior to fiscal year 1957. These amounts have been included in schedule 4 as "local protection and other flood control operations" incurred during fiscal year 1957.

The Corps of Engineers was represented on the Arkansas-White-Red Basins Inter-Agency Committee formed for the purpose of developing and integrating the plans for the improvement of the Arkansas, White, and Red River basins. The costs of the Corps of Engineers for their participation in this committee are classified in the accounts as follows:

Preliminary surveys and investigations:	
Vicksburg District	$ 205,816
Nonreimbursable costs:	
Albuquerque District	416,100
Little Rock District	300,638
Memphis District	68,280
New Orleans District	241,182
Tulsa District	1,463,663
	2,489,863
Total	$2,695,679

SWPA preliminary survey and investigation costs of $16,031 at June 30, 1957, were incurred in connection with system engineering surveys.

7. Unexpended funds in United States Treasury

Unexpended funds in accounts with the United States Treasury and with disbursing officers at June 30, 1957, are classified as follows:

	Cash balances	Available for Liquidation of obligations: Payment of liabilities	Available for Liquidation of obligations: Obligation	Not available
Corps of Engineers:				
Construction	$17,251,723	$4,652,398	$5,799,399	$6,799,926	$ -
Operation and maintenance	533,577	133,782	139,289	260,506	
Mississippi River and tributaries	1,397,174	160,900	547,747	688,527	-
Preliminary surveys and investigations	23,070	3,400	261	19,409	-
Contributed funds	1,597	1,597	-	-	-
General expense	1,162	316	-	-	.846
Total	$19,208,303	$4,952,393	$6,486,696	$7,768,368	$ 846
Southwestern Power Administration:					
Construction	$ 810,976	$ 4,076	$ 336,495	$ 470,405	$ -
Operation and maintenance	345,274	6,763	2,369	-	336,142
Continuing fund	3,354,478	364,440	-	300,000	2,690,038[a]
Special deposits for payment of specific liabilities	27,315	27,315	-	-	-
Total	$ 4,538,043	$ 402,594	$ 338,864	$ 770,405	$3,026,180

[a]The amount of $2,690,038 is not available for current operating expenses. However, these funds are available to pay claims arising under certain prior year contracts with generating and transmission cooperatives. (See pp. 48 and 49.)

Funds appropriated to the Corps of Engineers (Civil Functions) for flood control--Mississippi River and tributaries, preliminary surveys and investigations, construction, operation and maintenance, and contributed funds are available until expended. General expense funds are available for obligation only in the year

appropriated. Funds appropriated to the Southwestern Power Administration for construction are available until expended, but, for operation and maintenance, the funds may be obligated only in the year for which the funds are appropriated.

The continuing fund in the United States Treasury for Southwestern Power Administration is derived from receipts for sale of electric energy. This fund is comprised of (1) $300,000 which is available for obligation for emergency expenses without limitation and (2) such amounts as may be appropriated by the Congress for purchase of power and rentals of transmission facilities. These amounts are available for obligation only in the year for which appropriated but remain available until all obligations incurred are liquidated.

8. Congressional appropriations, net

Allotments (net) by the Corps of Engineers of congressional appropriations for construction and operation and maintenance to multiple-purpose projects including power, flood control projects, local protection projects, and navigation facilities in the Arkansas, White, and Red River basins, including the Whitney Project, to June 30, 1957, have been as follows:

	Total	Construction	Operation and maintenance	Mississippi River and tributaries	General investigations	General expenses
Multiple-purpose projects, including power, and basin:						
Dardanelle, Arkansas	$ 1,225,003	$ 1,225,003	$ -	$ -	$ -	$ -
Eufaula, Arkansas	2,687,633	2,685,101	-	-	2,532	-
Fort Gibson, Arkansas	42,728,491	41,070,035	1,658,456	-	-	-
Short Mountain, Arkansas (note a)	68,000	68,000	-	-	-	-
Tenkiller Ferry, Arkansas	22,922,084	22,115,205	794,315	-	12,564	-
Beaver, White (note a)	275,000	275,000	-	-	-	-
Bull Shoals, White	76,710,601	75,222,000	1,488,601	-	-	-
Greers Ferry, White	1,145,208	1,145,208	-	-	-	-
Norfork, White	31,332,000	28,593,400	2,738,600	-	-	-
Table Rock, White	35,314,006	35,314,006	-	-	-	-
Blakely Mountain, Red	31,436,692	30,851,400	585,292	-	-	-
DeGray, Red (note a)	90,000	90,000	-	-	-	-
Denison, Red	66,634,458	61,659,052	4,975,406	-	-	-
Narrows, Red	13,930,900	12,641,000	1,289,900	-	-	-
Whitney, Brazos River	41,277,638	40,385,555	892,083	-	-	-
Flood control reservoirs	180,198,509	171,191,226	8,975,779	-	31,504	-
Other flood control works	157,826,713	60,645,807	9,502,033	77,505,640	9,894,325[b]	278,908
Navigation	57,266,158	34,636,156	22,630,002	-	-	-
	$763,069,094	$619,813,154	$55,530,467	$77,505,640	$9,940,925	$278,908

Summary	Total	Arkansas	White	Red	Not identified by basin
Multiple-purpose projects	$326,500,076	$ 69,631,211	$144,776,815	$112,092,050	$ -
Flood control reservoir projects	180,198,509	119,801,820	10,851,656	49,545,033	-
Other flood control projects	157,826,713	66,647,414	14,194,768	61,419,744	15,564,787
Navigation projects	57,266,158	28,898,987	5,991,752	22,375,419	-
Total Arkansas, White, and Red River basins	721,791,456	$284,979,432	$175,814,991	$245,432,246	$15,564,787
Whitney Project, Brazos River	41,277,638				
Total	$763,069,094				

[a]Advance planning.

[b]Includes $2,742,661 allotted for Arkansas-White-Red Basins Inter-Agency Committee investigation.

Amounts for Short Mountain, Beaver, and DeGray Projects were expended principally for engineering studies and investigations preliminary to preparation of contract plans and specifications in advance of actual construction.

Amounts provided by the Congress for preliminary surveys and investigations from appropriations for general investigations are included in the above tabulation, but such costs do not become a part of the cost of the projects when constructed.

Allotments, net of revocations, from appropriations to the Corps of Engineers in the Public Works Appropriation Act, 1957 (70 Stat. 474, 479), were made by the Chief of Engineers to projects in the Arkansas, White, and Red River basins, including the Whitney Project, as follows:

Project and purpose	Total	Construction	Operation and maintenance	Other
Multiple-purpose including power:				
Dardanelle	$ 524,000	$ 524,000	$ -	$ -
Eufaula	1,285,000	1,285,000	-	-
Fort Gibson	277,296	6,896	270,400	-
Tenkiller Ferry	160,900	-	160,900	-
Beaver	250,000	250,000	-	-
Bull Shoals	-132,900	-416,400	283,500	-
Greers Ferry	750,000	750,000	-	-
Norfork	211,565	2,765	208,800	-
Table Rock	14,663,000	14,663,000	-	-
Blakely Mountain	208,900	1,400	207,500	-
DeGray	20,000	20,000	-	-
Denison	1,563,400	1,111,000	452,400	-
Narrows	167,500	-	167,500	-
Whitney	182,655	-29,345	212,000	-
Flood control reservoirs (27)	15,013,800	14,167,700	846,100	-
Other flood control:				
Local protection	4,097,425	3,916,179	181,246	-
Emergency operations	306,601	-4,045	310,646	-
Flood control reservoir operations	4,400	-	4,400	-
Mississippi River tributary improvements	3,080,617	2,865,000	215,617	-
Navigation	4,004,000	3,272,000	732,000	-
General and special investigations:				
Flood control	175,680	-	-	175,680
Total	$46,813,839	$42,385,150	$4,253,009	$175,680

Appropriations by the Congress to the Southwestern Power Administration from general funds of the Treasury for the transmission and marketing of energy generated from multiple-purpose projects in Arkansas, White, and Red River basins, including the Whitney Project, to June 30, 1957, are as follows:

Construction	$27,120,000
Operation and maintenance	11,006,712
Total appropriations	38,126,712
Less rescinded and lapsed appropriations and appropriation transfers	3,389,625
Total	$34,737,087

The Public Works Appropriation Act, 1957 (70 Stat. 474), included an appropriation of $1,000,000 to Southwestern Power Administration for operation and maintenance.

In addition to the above amounts, a continuing fund of $300,000 in the United States Treasury for Southwestern Power Administration was authorized by the First Supplemental National Defense Appropriation Act, 1944 (57 Stat. 611, 621), and the Interior Department Appropriation Act, 1950 (16 U.S.C. 825s-1), to be derived from receipts for sale of electric energy. This fund was established to defray emergency expenses necessary to insure continuous operation and for the purchase of power and rentals of transmission facilities. The Interior Department Appropriation Act, 1952 (65 Stat. 248), limited expenditures for the purchase of the power and rental of transmission facilities to amounts approved in annual appropriation acts.

The Public Works Appropriation Act, 1957, authorized $6,400,000 to be available for expenditure from the continuing fund in fiscal year 1957 for the purchase of power and rental of facilities. The Administration retained power receipts totaling $6,449,373 in fiscal year 1957 and made no transfer to the General Fund Receipt Account in the United States Treasury. Of the receipts retained, $6,400,000 was transferred to the continuing fund and the balance of $49,373 remained in the Special and Trust Funds on Deposit account which totaled $4,703,687 at June 30, 1957. Expenditures from the continuing fund during fiscal year 1957 totaled $4,906,977.

At June 30, 1957, receipts from sale of electric energy transferred to the continuing fund were applied as follows:

Purchase of power and rentals for the use of transmission facilities:	
To June 30, 1956	$ 5,662,251
Fiscal year 1957	4,906,977
Expenses to insure continuous operations	78,766
Unexpended balance	2,990,038
Total	$13,638,032

9. Cost and property transfers, net

Costs of equipment, materials and supplies, and services transferred to or from other projects within the Corps or other Federal or state agencies and private individuals without a transfer of funds are recorded by the Corps and the Administration as part of the investment of the United States Government.

At June 30, 1957, these transfers were as follows:

Corps of Engineers:		
Table Rock	$1,406,088	
Denison	-163,673	
Bull Shoals	91,284	
Norfork	-83,265	
Blue Mountain	51,144	
Fort Gibson	-22,710	
Whitney	-5,743	
Other	10,302	$1,283,427
Southwestern Power Administration		321,071
Total		$1,604,498

Amounts included in the above tabulation relating to the Corps represent the excess of the cost of materials and supplies furnished by the projects without a transfer of funds. The amount shown for the Table Rock Project represents contractor's earnings in excess of the amount available for expenditure at June 30, 1957. The contractor had continued construction work at his own risk after being notified that funds for fiscal year 1957 construction work at Table Rock had been exhausted in May 1957. The contractor was paid for this work after June 30, 1957, from funds appropriated under the Public Works Appropriation Act, 1958 (71 Stat. 416, 417). The amount shown for the Denison Project is represented by the transfer of the Denison-Payne transmission line to Southwestern Power Administration in 1952.

The balance shown for the Southwestern Power Administration includes the transfer of the Denison-Payne transmission line, rents for space paid by the General Services Administration, and these amounts reduced by transfers from the Administration to Federal and state agencies.

10. Interest on the Federal investment

Amounts recorded by the Corps of Engineers as interest on the Federal investment at June 30, 1957, have been allocated as follows:

Basin and project	Total	Interest during construction	Interest charged to operations		
			Together	Power program	Nonpower programs
Arkansas River basin:					
Fort Gibson	$ 8,876,438	$ 2,871,517	$ 6,004,921	$ 2,288,220	$ 3,716,701
Tenkiller Ferry	3,952,449	1,359,175	2,593,274	1,373,715	1,219,559
Dardanelle	62,463	62,463	-	-	-
Eufaula	237,321	237,321	-	-	-
White River basin:					
Bull Shoals	14,220,992	4,398,000	9,822,992	4,845,469	4,977,523
Norfork	10,897,991	1,530,000	9,367,991	4,580,458	4,787,533
Greers Ferry	68,422	68,422	-	-	-
Table Rock	1,381,505	1,381,505	-	-	-
Red River basin:					
Blakely Mountain	4,301,092	2,284,699	2,016,393	1,110,038	906,355
Denison	25,148,070	1,985,833	23,162,237	7,661,527	15,500,710
Narrows	2,774,100	412,973	2,361,127	1,042,340	1,318,787
Brazos River:					
Whitney	7,667,982	3,318,586	4,349,396	863,162	3,486,234
Total	$79,588,825	$19,910,494	$59,678,331	$23,764,929	$35,913,402

Interest during construction, in the total amount of $19,910,494, has been distributed to plant in service in the amount of $18,157,578, and $1,752,916 has not been distributed.

The computations by the Corps of Engineers of interest during construction are based on 2.5 percent interest on accumulated costs charged to construction accounts on an accrual basis, compounded annually at Fort Gibson, Tenkiller Ferry, Bull Shoals, Norfork, Denison, Narrows, and Whitney Projects. Interest computations for Greers Ferry, Dardanelle, Table Rock, Eufaula, and Blakely Mountain are based on simple interest.

Interest charged to expenses at June 30, 1957, was computed at 2.5 percent of the total unrepaid Federal investment at all projects. Power revenues have not been recorded by the Corps in determining the unrepaid balance of the Federal investment.

Interest of $3,515,092 at June 30, 1957, on the Federal investment in the Southwestern Power Administration represents the annual computations at 2.5 percent on the costs of electric plant in service and under construction at the end of the preceding fiscal year. The entire amount in fiscal year 1957 ($589,508), has been charged to operations, although a portion is applicable to construction work in progress and should have been capitalized as interest during construction. SWPA procedures do not provide for capitalizing interest during construction.

11. Funds returned to United States Treasury

Funds returned to the United States Treasury on the records of the Corps of Engineers are as follows:

Project	Total	Repayment of Federal investment in: Power program	Repayment of Federal investment in: Nonpower programs
Multiple-purpose, including power:			
Fort Gibson	$ 719,873	$ -	$ 719,873
Tenkiller Ferry	74,938	-	74,938
Bull Shoals	588,130	297,294	290,836
Norfork	201,934	79,816	122,118
Table Rock	3,133	2,200	933
Blakely Mountain	62,972[a]	34,707	28,265
Denison	1,104,722	-	1,104,722
Narrows	58,411	16,159	42,252
Whitney	214,868	44,395	170,473
Flood control projects	847,819	-	847,819
Navigation projects	12,344	-	12,344
	$3,889,144	$474,571	$3,414,573

[a]Includes $33,546 received from sale of housing project.

Rentals from leases of reservoir lands and other nonoperating revenues have been allocated solely to nonpower programs at the Denison, Fort Gibson, and Tenkiller Ferry Projects. At the Blakely Mountain, Bull Shoals, Norfork, Narrows, and Whitney Projects, these revenues have been allocated to power and nonpower programs in the same ratio as the allocation of joint operation and maintenance expenses to these programs.

Included in the above totals is $3,335,639 representing receipts from leasing lands acquired for flood control and navigation projects. Under the provisions of section 7 of the Flood Control Act of 1941, as amended (33 U.S.C. 701c-3), 75 percent of all revenues so derived are required to be returned to the state in which the leased lands are located. No provision has been made in the accounts of the Corps to allocate to the various projects the $2,501,729 payable to the states under this act. The amounts paid to the states are not entered in the accounting records at the district offices but are disbursed and recorded at the Office of the Chief of Engineers, Washington, D.C.

Receipts from the transmission and sale of electric energy by the Southwestern Power Administration are required to be deposited into the United States Treasury by section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s). These receipts are deposited into a special Treasury receipts accounts, and periodically, as requested by the Administration, the funds are transferred by the Treasury from this account to miscellaneous receipts.

Total deposits in the Treasury by the Administration to June 30, 1957, amounted to $33,687,142 and represented:

Funds covered into the United States Treasury as miscellaneous receipts	$20,049,110
Receipts transferred to the continuing funds	13,638,032
Total	$33,687,142

At June 30, 1957, the Administration had $4,703,687 in special and trust funds on deposit for transfer to the continuing fund in fiscal year 1958 to be used for purchase of power and rentals of transmission facilities. The difference at June 30, 1957, between (1) the sum of deposits in the Treasury and special and trust funds on deposit and (2) total power revenues as reported on the schedule showing status of repayment is made up of accrued revenues and accounts receivable not converted into cash, and power sales to generating and transmission cooperatives paid for by offset against power purchases and transmission facility rentals.

12. Employees' accrued leave

The Corps of Engineers and the Administration include in property costs and operating expenses provision for accrued annual leave of employees. For the Corps of Engineers, payments are made by the projects for the accrued leave to the revolving fund, and the liability to employees is shown in the records of that fund.

13. Contributions in aid of construction

Contributions in cash are received from states and local interests for betterments and construction costs of projects. At June 30, 1957, the Corps of Engineers had received cash contributions for the following projects:

Project	Amount
Arkansas River basin:	
Fountaine Que Bouille River, Colorado	$ 242,000
Bridge near Manzanola, Colorado	1,500
Levees, Farelly Lake Levee District, Arkansas	13,410
Bridge near Florence, Colorado	1,000
Fort Gibson, Oklahoma	134,918
Tenkiller Ferry, Oklahoma	946
Levees, Fort Smith, Arkansas	8,604
	402,378
White River basin:	
Levees, Newport, Arkansas	4,450
Levees, Woodruff, Monroe, and Prairie Counties, Arkansas	7,521
	11,971
Red River basin:	
Levees, Saline Point, Louisiana	15,365
Ouachita River levees, Louisiana	130,589
Lower Red River, Louisiana	7,756
Levees, Bawcomville, Louisiana	84,441
Bank protection, Moncla Bridge, Louisiana	67,671
Cypress Bayou and Waterway, Louisiana	50,000
Levees, Jonesville, Louisiana	114,797
Natchitoches Parish, Louisiana	250,000
Enlargement of Little Bayou Boeuf River, Arkansas	26,000
Bayou Pierre, vicinity Shreveport	87,244
Red River below Denison Dam, Oklahoma	20,000
Bank protection, Coushatta, Louisiana	45,138
Levees near Moncla, Louisiana	40,552
Red River near Garland, Arkansas	59,763
Grand Ecore, Louisiana	4,253
	1,003,569
Total	$1,417,918

14. Prior year adjustments

During fiscal year 1957, adjustments were made in the accounts of the Corps of Engineers and Southwestern Power Administration which affected the preceding fiscal years. These adjustments are summarized as follows:

Nature of adjustments	Total	Power	Flood control	Navigation	Recreation	Streamflow regulation
Corps of Engineers:						
Prior year reallocations:						
Operation expenses	$ -	$-4,111	$ -21,452	$ -	$ 20,729	$ 4,834
Nonoperating income and credits to operation	-	-35,529	49,572	-	-	-14,043
Interest expense	-	-	-75,326	-	1,746	73,580
Depreciation expense	-	-	-15,600	-	1,513	14,087
Prior year adjustments:						
Operating expense	481,060	-4,383	485,443	-	-	-
Interest expense	18,138,660	70,982	17,707,973	-	359,705	-
Depreciation expense	-9,438	-4,332	-5,106	-	-	-
Reclassification of costs	-	-	-3,833	3,833	-	-
Projects included in basin in 1957, but excluded in 1956	1,076,642	-	1,076,642	-	-	-
Projects included in 1956, but excluded in 1957	-924	-	-924	-	-	-
	19,686,000	22,627	19,197,389	3,833	383,693	78,458
Southwestern Power Administration:						
Prior year adjustments:						
Operating expense	-3,102	-3,102	-	-	-	-
Depreciation expense	4,069	4,069	-	-	-	-
Refunds received	-44,958	-44,958	-	-	-	-
Plant retirement	6,721	6,721	-	-	-	-
	-37,270	-37,270	-	-	-	-
Total	$19,648,730	-$14,643	$19,197,389	$3,833	$383,693	$78,458

Prior to July 1, 1956, the Tulsa District, Corps of Engineers, did not compute interest on construction costs allocated to nonpower programs. During the fiscal year ended June 30, 1957, the District recorded the interest on the nonpower programs applicable to prior periods which accounted for the substantial adjustment shown above.

The other adjustments resulted from redistributions necessitated by new cost allocation studies and correction of prior year errors.

15. Allocation of revenue from power operations

An allocation of revenues from power operations to the generating projects has not been made because agreement between the Corps of Engineers and Southwestern Power Administration for an allocation of the revenues has not been reached.

16. Allocation of joint expenses

Expenses by the Corps of Engineers for operating and maintaining joint facilities and for supervision and administrative expenses have been allocated to power and nonpower purposes based on the separable costs--remaining benefits method, except at the Denison and Norfork Projects. At the Denison and Norfork Projects, the allocations to purposes were made on the basis of the incremental cost--flood control basic--method.

APPENDIXES

AUTHORIZATIONS FOR WATER RESOURCES PROGRAMS IN ARKANSAS, WHITE, AND RED RIVER BASINS

INITIAL AUTHORIZATIONS FOR WATER RESOURCES DEVELOPMENT IN ARKANSAS, WHITE, AND RED RIVER BASINS

The first projects for improvements on the Arkansas, White, and Red Rivers related to navigation and were concerned principally with removing snags, obstructions, boulders, and reefs; cutting sand bars; and constructing small dams at some shoals. Some of this work was initiated as early as 1832. During the latter part of the 19th century, more permanent improvements that contemplated channels of certain widths and depths were authorized and were carried out to facilitate navigation. Beginning about 1900, lock-and-dam projects were authorized to provide slack water for navigation.

By section 3 of the act of March 3, 1925 (43 Stat. 1190), the Corps of Engineers and the Federal Power Commission jointly were directed to prepare and submit to Congress estimates of the cost of making examinations, surveys, and other investigations of navigable streams and their tributaries whereon power development appeared feasible and practicable. The purpose of this work was to formulate general plans for the most effective improvement of such streams for navigation in combination with the development of potential water power, the control of floods, and the needs of irrigation. In 1926 the report was submitted and printed in House Document 308, Sixty-ninth Congress. The act of May 15, 1928 (45 Stat. 534), directed the Corps of Engineers to prepare and submit to the Congress projects for flood control on tributary streams of the Mississippi River which were subject to destructive floods. These enactments formed the basis for subsequent authorization of comprehensive plans for development in the Arkansas, White, and Red River basins, as well as a number of local flood-protection and other projects.

AUTHORIZATION OF GENERAL COMPREHENSIVE PLAN FOR FLOOD CONTROL AND OTHER PURPOSES IN THE ARKANSAS RIVER BASIN

In the Flood Control Act of 1938 (52 Stat. 1215), the Congress authorized a general comprehensive plan in the Arkansas River basin for flood control and other purposes as set forth in Flood Control Committee Document Numbered 1, Seventy-fifth Congress, with such modifications as in the discretion of the Secretary of War and the Chief of Engineers may be advisable. This plan provided for 13 reservoirs, including 6 reservoirs authorized by the Flood Control Act of 1936 (49 Stat. 1570). The authorization in the 1936 act was based on the comprehensive report on the development of the Arkansas River prepared by the Corps of Engineers and transmitted to the

Congress in 1935 (H. Doc. 308, 74th Cong.). In addition to the six reservoirs, the 1936 authorization included levees, floodways, and channel improvements for the protection of cities, towns, and rural areas. The 1936 act also authorized a number of preliminary examinations and surveys for flood control at various locations on the Arkansas, White, and Red Rivers and tributaries.

The Flood Control Act of 1941 (55 Stat. 638) modified the comprehensive plan to include three reservoirs in the Grand (Neosho) River basin in Oklahoma and Missouri and in the Verdigris River basin in Kansas, in accordance with recommendations of the Chief of Engineers in House Documents 107 and 440, Seventy-sixth Congress, respectively. In the River and Harbor Act of 1946 (60 Stat. 634), the multiple-purpose plan in the interest of navigation, flood control, power, and incidental benefits for the Arkansas River and tributaries, Arkansas and Oklahoma, recommended in the report of the Chief of Engineers dated September 20, 1945, and letter of the Chief of Engineers dated March 19, 1946, was approved.

Modifications in the general comprehensive plan for flood control and other purposes for the Arkansas River basin and in the multiple-purpose plan for the Arkansas River and tributaries, Arkansas and Oklahoma, were approved in the Flood Control Act of 1946 (60 Stat. 641), the River and Harbor and Flood Control Act of 1948 (62 Stat. 1171), and the Flood Control Act of 1950 (64 Stat. 170). These acts and the River and Harbor and Flood Control Act of 1954 (68 Stat. 1248) also authorized projects, including multiple-purpose storage reservoirs, in the Arkansas River basin that are not part of the comprehensive plan but supplement the other flood control improvements in the basin.

The Grand River Dam Authority, an Oklahoma State Conservation and Reclamation District, constructed and is operating the Pensacola Project and has been authorized (68 Stat. 450) to construct the Markham Ferry Project. Both projects were initially authorized in the modification of the comprehensive plan under the Flood Control Act of 1941.

AUTHORIZATION OF GENERAL COMPREHENSIVE PLAN FOR FLOOD CONTROL AND OTHER PURPOSES IN THE WHITE RIVER BASIN

Flood Control Committee Document Numbered 1, Seventy-fifth Congress, also described a general comprehensive plan for flood control and other purposes in the White River basin. This plan was approved in the Flood Control Act of 1938 (52 Stat. 1215) with such modifications as in the discretion of the Secretary of War and the Chief of Engineers may be desirable. The six reservoirs in the comprehensive plan were increased to nine by the modifications approved in the Flood Control Act of 1941 (55 Stat. 638)

and the River and Harbor and Flood Control Act of 1954 (68 Stat. 1248). These acts also authorized a number of local flood protection works.

To carry out the construction under the comprehensive plan in the White River basin, authorizations for appropriations totaling $169,000,000 have been made in various flood control acts to June 30, 1957.

AUTHORIZATION OF MULTIPLE-PURPOSE PROJECTS ON THE RED RIVER AND TRIBUTARIES

Authorizations by the Congress of multiple-purpose projects for flood control and other purposes on the Red River and tributaries include Denison Reservoir on the Red River (Flood Control Act of 1938, 52 Stat. 1215, H. Doc. 541, 75th Cong.), Narrows Reservoir on the Little Missouri River (Flood Control Act of 1941, 55 Stat. 638, H. Doc. 837, 76th Cong.), and Blakely Mountain Dam on the Ouachita River (Flood Control Act of 1944, 58 Stat. 887, H. Doc. 647, 78th Cong.). The River and Harbor Act of 1950 (64 Stat. 163) approved the comprehensive plan of improvement for flood control, power production, and other purposes for the Ouachita River and tributaries including the DeGray multiple-purpose reservoir on the Caddo River. In addition, the various river and harbor and flood control acts have included authorizations for local flood protection and other projects.

AUTHORIZATION OF MISSISSIPPI RIVER AND TRIBUTARIES FLOOD CONTROL WORKS

The project for the control of floods of the Mississippi River and tributaries was recommended by the Chief of Engineers to the Secretary of the Army on December 1, 1927 (H. Doc. 90, 70th Cong.), and was adopted and authorized by Congress on May 15, 1928 (33 U.S.C. 702a). The various river and harbor and flood control acts since that date have included funds for the purpose of construction of flood control works and repair and the restoration and maintenance of flood control projects threatened or destroyed by flood in the Arkansas, White, and Red River basins.

AUTHORIZATION OF COMPREHENSIVE SURVEY IN THE ARKANSAS, WHITE, AND RED RIVER BASINS

Under the provisions of section 205 of the Flood Control Act of 1950 (64 Stat. 180), the development of comprehensive and integrated plans of improvement in the Arkansas, White, and Red River basins was authorized to be carried out by the Corps of Engineers and to be coordinated with the Department of the Interior, the Department of Agriculture, the Federal Power Commission, and other appropriate Federal agencies and with the states. The plans for improvement were to encompass navigation, flood control, domestic

and municipal water supplies, reclamation and irrigation, development and utilization of hydroelectric power, conservation of soil, forest and fish and wildlife resources including consideration of recreational uses, salinity and sediment control, and pollution abatement.

AUTHORIZATION OF WHITNEY PROJECT ON BRAZOS RIVER, TEXAS

Power generated at Federal multiple-purpose projects in the Southwestern area outside the Arkansas, White, and Red River basins is also marketed by Southwestern Power Administration. At June 30, 1957, the only such multiple-purpose project including power in operation was the Whitney Reservoir on the Brazos River. This project was authorized in the Flood Control Act of 1941 (55 Stat. 638) for flood control and power development based on recommendations by the Chief of Engineers printed in House Document 390, Seventy-sixth Congress.

CREATION OF SOUTHWESTERN POWER ADMINISTRATION FOR DISPOSITION OF POWER NOT NEEDED BY THE CORPS OF ENGINEERS IN THE OPERATION OF PROJECTS

The functions of the Southwestern Power Administration originated in 1941 when the Federal Works Administrator took over the construction and operation of the Pensacola Dam located on the Grand River in Oklahoma. This dam was being constructed by the State of Oklahoma, and the purpose of the taking over was to speed completion. On June 19, 1943, the Federal Works Administrator was authorized by Executive Order 9353 to sell and dispose of the electric energy generated at the Norfork Dam Project located in Arkansas. This project was then under construction by the Corps of Engineers.

On July 30, 1943, the Secretary of the Interior was authorized by Executive Order 9366 to sell and dispose of excess electric energy generated at the Denison Dam Project located in Oklahoma and Texas, then under construction by the Corps of Engineers. Executive Order 9373 dated August 30, 1943, transferred to the Secretary of the Interior all the functions, powers, and duties vested in the Federal Works Administrator by Executive Order 9353 of June 19, 1943.

On September 1, 1943, the Southwestern Power Administration was created by the Secretary of the Interior to carry out the functions and duties assigned to him by the above Executive orders.

Pursuant to provisions of section 5 of the Flood Control Act of 1944, the Secretary of the Interior became the marketing agent for electric power and energy generated at all reservoir projects under the control of the Corps of Engineers not needed in the operation of the projects. The Secretary designated Southwestern

Power Administration as the marketing agent for power generated at all reservoir projects under control of the Corps of Engineers in the area comprising the States of Arkansas and Louisiana, that part of the States of Kansas and Missouri lying south of the Missouri River basin and east of the 98th meridian, and that part of the States of Texas and Oklahoma lying east of the 99th meridian and north of the San Antonio River basin. After the cessation of hostilities in World War II, the Pensacola Dam was returned to the control of the State of Oklahoma.

The order designating the Southwestern Power Administration marketing area described above was revoked by the Secretary of the Interior by order No. 2771 dated October 8, 1954. The latter order designated the Administration as the agency to market surplus electric power and energy generated at nine projects (eight of which are now in operation and one of which, Table Rock, was under construction at June 30, 1957) without reference to specific area. The projects are Blakely Mountain, Denison, Narrows, Norfork, Bull Shoals, Table Rock, Fort Gibson, Tenkiller Ferry, and Whitney.

METHODS OF ALLOCATION OF ESTIMATED CONSTRUCTION COSTS OF MULTIPLE-PURPOSE PROJECTS TO POWER AND NONPOWER PURPOSES

The allocation of construction costs of multiple-purpose projects to purposes is the division of the costs into amounts considered equitable to charge to each of the project purposes. These allocations are important because the charges to beneficiaries for certain services of the project are determined on the basis of the costs incurred. The rates for sale of power, or lease of power privileges, are intended to include interest on the construction costs allocated to the purpose. The fairness in the reporting on financial policies and administration, and on the financial results of operations, is dependent upon the reasonableness of the allocations.

Construction costs of projects for more than a single purpose include joint and specific costs. Joint construction costs include costs of facilities useful for more than a single purpose (e.g., multiple-purpose dams and reservoirs) and must therefore be allocated to the several purposes. Specific construction costs are costs of facilities serving a single purpose (e.g., power plants and irrigation canals) and can therefore be allocated directly to that purpose.

In the past, the several agencies of the Federal Government having water resources development responsibilities have used various methods for allocating joint costs of multiple-purpose projects. The most common are the (1) benefits, (2) alternative-justifiable-expenditure, (3) use-of-facilities, and (4) priority-of-use methods.[1] In addition, the incremental-cost method[2] has been used on certain projects in the Southwestern area for determining costs allocable to power. The Subcommittee on Benefits and Costs prepared a report (May 1950) to the Federal Inter-Agency River Basin Committee entitled "Proposed Practices for Economic Analysis of River Basin Projects" (commonly referred to as "The Green Book") recommending the separable costs--remaining benefits method[3] of cost allocation. This method has the objective of an equitable distribution of costs among the purposes served by preventing costs allocated to any purpose from exceeding corresponding benefits, by requiring each purpose to carry at least its separable cost, and, within these maximum and minimum limits, by providing for proportional sharing of the savings resulting from multiple-purpose development.

(Footnotes 1, 2, and 3 on following page)

[1]Benefits method--Based on excess of benefits over specific costs. Joint costs are allocated in the ratio of such excess benefits for each purpose to total such excess benefits for all purposes.

Alternative-justifiable-expenditure method--Based on excess of (1) cost of single-purpose projects (providing benefits equivalent to those of a multiple-purpose structure) or (2) benefits, whichever is lower, over specific costs. Joint costs are allocated in the ratio of such excess costs (or benefits) for each purpose to the total such excess costs (or benefits) for all purposes.

Use-of-facilities method--Based on various measurements of the physical use of the facilities, such as capacity of reservoir or quantity of water released. Joint costs are allocated in the ratio of use for each purpose to total for all purposes.

Priority-of-use method--Based on priority of use of the facilities by purposes. The benefits method or the alternative-justifiable-expenditure method, whichever is lower, is used to determine that part of the joint costs to be assigned to the purpose having top priority of use of the facilities. Remaining joint costs are similarly assigned to each purpose in order of its priority of use of the facilities until all joint costs are allocated.

[2]Incremental-cost method--Based on the difference in the cost of a multiple-purpose project and cost of the project with a given purpose omitted.

[3]The separable costs--remaining benefits method of cost allocation differs from the generally recognized benefits method in that the amounts of benefits used as a basis for the allocation in the separable costs--remaining benefits method are limited by the costs of available single-purpose alternative projects. In this respect it resembles closely the alternative-justifiable-expenditure method except that the concept of specific costs for each purpose is replaced by the concept of separable costs for each purpose.

Separable cost for each project purpose of a multiple-purpose project is the difference between the total cost of the multiple-purpose project and the cost of such project with the purpose omitted. Separable costs include more than the direct and specific costs of physically identifiable facilities serving only one purpose. Separable costs include also the added costs of increased size of structure and changes in design for a particular purpose from that required for all other purposes of the project, such as the cost of increasing the storage capacity of a reservoir.

(End of footnotes)

On December 31, 1952, Circular No. A-47 relating to water resources projects was issued by the Bureau of the Budget. This circular provides certain standards and procedures for use in reviewing proposed water resources project reports and budget estimates to initiate construction of such projects. The Bureau of the Budget recognized the absence of uniform standards and procedures in many of the problems related to water resources development and expressed the hope that the circular would encourage the adoption of uniform standards and procedures as a better basis for evaluating the merits of proposed projects. On allocation of costs of multiple-purpose projects, the circular provides:

> "The costs of facilities or features of a program or project used jointly by more than one purpose of water resource development shall be allocated among the purposes served in such a way that each purpose will share equitably in the savings resulting from combining the purposes in a multiple-purpose development."

The circular, however, did not suggest or require the use of any specific method of allocation.

By memorandum dated April 2, 1954, to heads of Bureaus and Offices in the Department of the Interior, the Assistant Secretary of the Interior stated that general agreement on cost allocation of multiple-purpose projects had been reached with the Corps of Engineers and the Federal Power Commission. Similarly on March 29, 1954, the Chief of Engineers issued a release to division and district engineers and other interested parties within the Corps of Engineers that contained a similar statement. These communications described acceptable methods for allocation of costs of multiple-purpose projects as:

1. Separable costs--remaining benefits.

2. Alternative justifiable expenditure.

3. Use of facilities.

The separable costs--remaining benefits method was described as preferable for general application. The alternative-justifiable-expenditure method was considered to be acceptable where the necessary basic data to determine separable costs were not available and the time and expense required to obtain the data were not warranted. The use-of-facilities method was considered to be acceptable where the use of facilities is clearly determinable on a comparable basis and where the method would be consistent with the basis of project formulation and authorization. The costs of a multiple-purpose project are to be allocated among the purposes served under each method in such a manner that each purpose will share equitably in the savings resulting from combining the purposes in a multiple-purpose development.

The Presidential Advisory Committee on Water Resources Policy in a report dated December 22, 1955, entitled Water Resources Policy stated that it was important that uniform standards be used by all agencies for allocating costs of multiple-purpose projects. The committee, consisting of the Secretary of Agriculture, the Secretary of Defense, and the Secretary of the Interior, endorsed for general use the separable costs--remaining benefits method as previously adopted by Federal agencies. The Committee stated that costs represented by expenditures to mitigate damages to existing resources and facilities should be equitably allocated among the project purposes.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)

AND

SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM

TENTATIVE ALLOCATION OF ESTIMATED TOTAL CONSTRUCTION COSTS

OF MULTIPLE-PURPOSE PROJECTS INCLUDING POWER

IN OPERATION OR UNDER CONSTRUCTION AT JUNE 30, 1957

Project, document number, and Congress	Estimated first cost, original project	Estimated cost (note a)			Allocation of estimated cost							
					Power		Flood control		Navigation		Other	
		Total	First cost	Interest during construction	First cost	Interest during construction	First cost	Interest during construction	First cost	Interest during construction	First cost	Interest during construction
ARKANSAS RIVER BASIN:												
Fort Gibson (H. Doc. 107, 76th)	$ 13,700,000	$ 43,926,524	$ 41,197,961	$ 2,728,563	$ 16,102,336	$ 856,855	$ 24,793,212	$ 1,871,708	$ -	$ -	$ 302,413[c]	$ -
Tenkiller Ferry (House Committee (F.C.) Doc. 1, 75th and H. Doc. 758, 79th)	14,500,000	23,401,525	22,115,205	1,286,320	11,112,430	619,262	10,961,195	667,058	-	-	41,580[d]	-
Eufaula (H. Doc. 758, 79th)	54,395,000	161,121,000	153,000,000	8,121,000	42,096,500	1,513,500	58,659,500	3,500,500	51,804,000	3,096,000	440,000[d]	11,000[d]
Dardanelle (H. Doc. 758, 79th)	45,080,800	100,513,000	94,600,000	5,913,000	50,530,000	3,158,000	-	-	44,070,000	2,755,000	-	-
WHITE RIVER BASIN:												
Bull Shoals (H. Doc. 917, 76th)	42,000,000	79,040,000	75,260,000	3,780,000	43,687,000	2,171,000	31,573,000	1,609,000	-	-	-	-
Norfork (H. Doc. 290, 77th)	27,500,000	30,039,000	28,602,000	1,437,000	13,056,000	854,000	15,546,000	583,000	-	-	-	-
Table Rock (H. Doc. 917, 76th)	37,000,000	73,477,000	69,600,000	3,877,000	54,471,800	3,152,200	15,128,200	724,800	-	-	-	-
Greers Ferry (H. Com. Doc. 1, 75th & H. Doc. 499, 83d)	47,230,000[b]	54,379,000	52,100,000	2,279,000	35,032,000	1,532,000	17,068,000	747,000	-	-	-	-
RED RIVER BASIN:												
Blakely Mountain (H. Doc. 647, 78th)	11,080,000	33,135,000	30,850,000	2,285,000	22,976,000	1,790,000	7,874,000	495,000	-	-	-	-
Denison (H. Doc. 541, 75th)	54,000,000	62,127,550	59,926,327	2,201,223	19,199,227	674,023	39,745,750	1,490,850	-	-	981,350[e]	36,350[e]
Narrows (H. Doc. 837, 76th)	6,470,000	13,104,000	12,691,000	413,000	5,354,000	142,000	7,337,000	271,000	-	-	-	-
BRAZOS RIVER:												
Whitney (H. Doc. 390, 76th)	10,150,000	43,865,900	40,668,000	3,197,900	7,346,600	379,000	30,399,600	2,584,500	-	-	2,921,800[f]	234,400[f]
Total	$363,105,800	$718,129,499	$680,610,493	$37,519,006	$320,963,893	$16,841,840	$259,085,457	$14,544,416	$95,874,000	$5,851,000	$4,687,143	$281,750

[a]Represents latest estimated costs on which revised allocations had been made by the Corps of Engineers at the time of our audit. Dates of these allocations are as follows: Eufaula, May 1956; Dardanelle, October 1956; Greers Ferry, January 1957; Bull Shoals, Norfork, Table Rock and Whitney, June 1957; Fort Gibson, Tenkiller Ferry, Blakely Mountain, Denison and Narrows, July 1957.

[b]Estimated cost shown in H. Doc. 499, 83d Congress.

[c]Represents allocations to purposes, as follows:

Public-use facilities	$167,494
Contributed funds	134,919
Total	$302,413

[d]Represents allocation to public-use facilities.

[e]Represents allocations to purposes, as follows:

Purpose	First cost	Interest during construction
Water supply	$377,250	$14,150
Recreation	604,100	22,200
Total	$981,350	$36,350

[f]Represents allocations to purposes, as follows:

Purpose	First cost	Interest during construction
Streamflow regulation	$2,769,000	$234,400
Recreation	152,800	-
Total	$2,921,800	$234,400

CORPS OF ENGINEERS (CIVIL FUNCTIONS)

AND

SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM

STATEMENT OF INVESTMENT AND REPAYMENT OF INVESTMENT IN COMMERCIAL POWER PROGRAM (see note) FOR WHITNEY DAM, NARROWS DAM, AND INTEGRATED SYSTEM FOR FISCAL YEAR 1957 AND CUMULATIVE TO JUNE 30, 1957

	Whitney Dam		Narrows Dam		Integrated system	
Investment allocated to commercial power	$7,725,600		$5,496,000		$157,289,403	
	Cumulative to June 30, 1957	Fiscal year 1957	Cumulative to June 30, 1957	Fiscal year 1957	Cumulative to June 30, 1957	Fiscal year 1957
Gross power revenues, SWPA	$ 910,953	$379,000	$2,031,649	$333,219	$39,255,455	$ 8,044,071
Less accumulated operating expenses and interest:						
Operation and maintenance expense, exclusive of depreciation--CORPS	385,510	98,036	762,096	91,358	5,871,835	896,456
--SWPA	26,528	15,471	852,476	149,743	22,090,160	7,729,698
Interest charged to operations	863,162	233,207	1,042,340	176,950	25,374,519	4,620,811
	1,275,200	346,714	2,656,912	418,051	53,336,514	13,246,965
Revenue deficiency (+ excess) excluding depreciation	364,247	+32,286	625,263	84,832	14,081,059	5,202,894
Scheduled repayment of capital investment at June 30, 1957	370,611	96,112	458,750	72,047	10,356,971	2,223,313
Deficiency in repayment of operating expenses (excluding depreciation), interest, and capital investment	$ 734,858	$ 63,826	$1,084,013	$156,879	$24,438,030	$ 7,426,207

See note on page 2.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)

AND

SOUTHWESTERN POWER ADMINISTRATION

ARKANSAS, WHITE, AND RED RIVER BASINS

WATER RESOURCES DEVELOPMENT PROGRAM

STATEMENT OF INVESTMENT AND REPAYMENT OF INVESTMENT

IN COMMERCIAL POWER PROGRAM (see note)

FOR WHITNEY DAM, NARROWS DAM, AND INTEGRATED SYSTEM

FOR FISCAL YEAR 1957 AND CUMULATIVE TO JUNE 30, 1957

	Combined integrated system	Southwestern Power Administration	Integrated system						
				Corps of Engineers (Civil Functions)					
			Total	Fort Gibson	Tenkiller Ferry	Bull Shoals	Norfork	Blakely Mountain	Denison
Investment allocated to commercial power	$157,289,403	$24,191,270	$133,098,133	$16,959,191	$11,731,692	$45,858,000	$13,910,000	$24,766,000	$19,873,250
	Cumulative to June 30, 1957	Fiscal year 1957							
Gross power revenues, SWPA	$39,255,455	$ 8,044,071							
Less accumulated operating expenses and interest:									
Operation and maintenance expense, exclusive of depreciation--CORPS	5,871,835	896,456	$ -	$ -	$ 5,871,835	$ 896,456	$ 727,751	$128,775	$ 386,203	$ 86,698	$ 822,391	$ 176,196	$1,651,147	$146,509	$ 269,392	$137,464	$2,014,951	$ 220,814
--SWPA	22,090,160	7,729,698	22,090,160	7,729,698														
Interest charged to operations	25,374,519	4,620,811	3,515,092	589,508	21,859,427	4,031,303	2,288,221	453,744	1,373,714	332,836	4,845,469	1,299,190	4,580,458	490,522	1,110,038	634,323	7,661,527	820,688
	53,336,514	13,246,965	$25,605,252	$8,319,206	$27,731,262	$4,927,759	$3,015,972	$582,519	$1,759,917	$419,534	$5,667,860	$1,475,386	$6,231,605	$637,031	$1,379,430	$771,787	$9,676,478	$1,041,502
Revenue deficiency (+ excess) excluding depreciation	14,081,059	5,202,894																
Scheduled repayment of capital investment at June 30, 1957	10,356,971	2,223,313	$ 2,091,708	$ 543,479	$ 8,265,263	$1,679,834	$ 868,937	$220,842	$ 510,403	$148,541	$2,116,339	$ 547,634	$1,762,601	$198,785	$ 468,064	$282,686	$2,538,919	$ 281,346
Deficiency in repayment of operating expenses (excluding depreciation), interest, and capital investment	$24,438,030	$ 7,426,207																

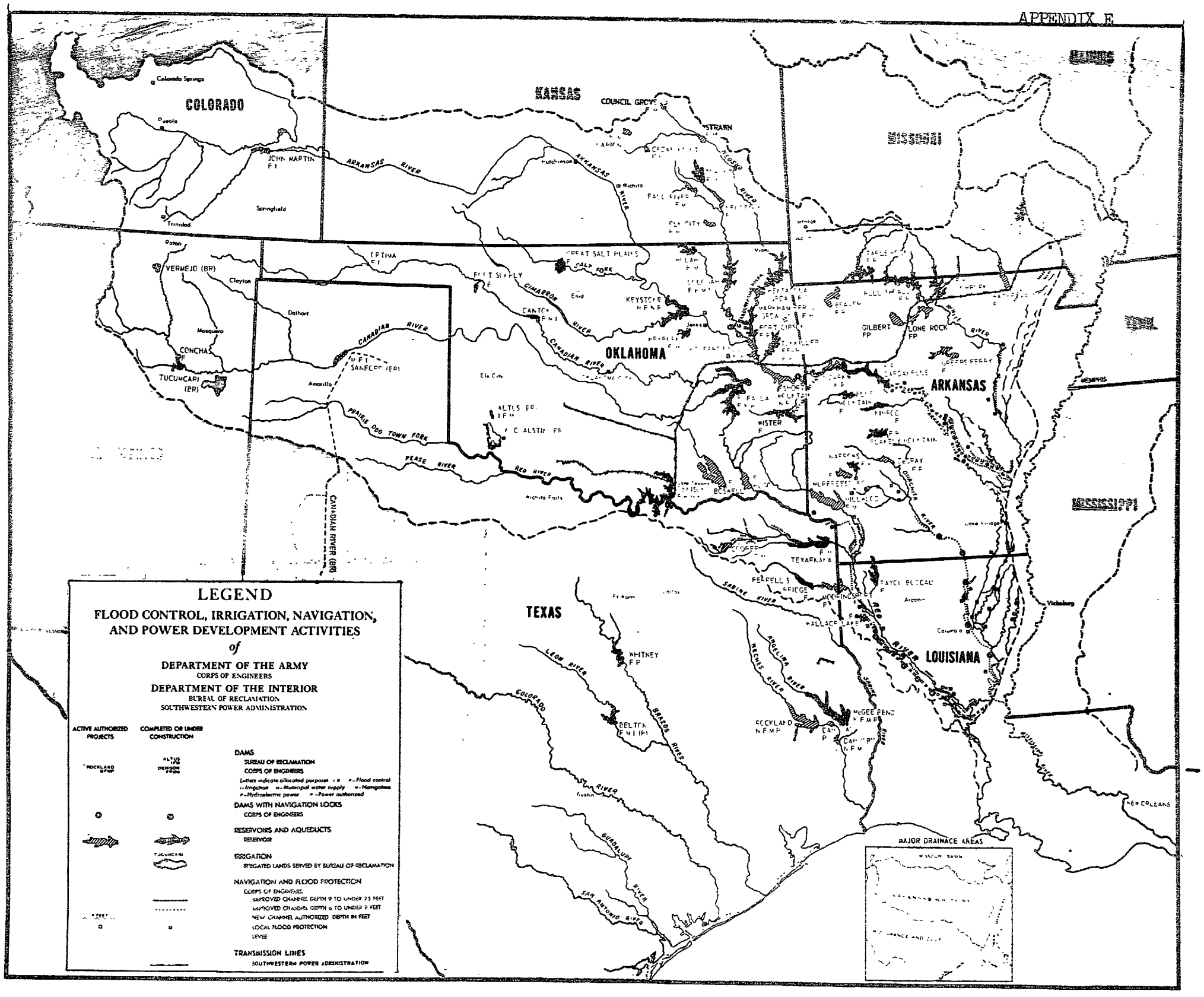
Note: Interior treats the Narrows Dam and Whitney Dam projects as independent units since they are physically operated as isolated projects and have been considered separately from the other projects and from each other for rate and repayment purposes. For these reasons, they are shown separately in the repayment schedules above. The combined deficit in repayment for all projects for which SWPA is the marketing agent is as follows:

	Cumulative to June 30, 1957	Fiscal year 1957
Integrated system	$24,438,030	$7,426,207
Whitney Dam	734,858	63,826
Narrows Dam	1,084,013	156,879
	$26,256,901	$7,646,912

The Corps of Engineers investment allocated to commercial power is the most recent tentative allocation of estimated total construction costs, including interest during construction by the Corps of Engineers for projects in operation at June 30, 1957. The Southwestern Power Administration investment in transmission facilities in service is based on actual costs through June 30, 1956, plus interest during construction, and was computed by the Administration for use in making a repayment and average rate determination study in October 1956.

In determining the annual amounts required for amortization of the Government investment over a 50-year period, the sinking fund method with a 2.5 percent annual interest rate was used. This method provides for recovery of investment, including the cost of major replacements, in the 50-year period after operations begin.

Amortization of the Corps of Engineers investment in each generating unit commenced in the fiscal year in which operations began. Amortization of the Southwestern Power Administration investment commenced in the fiscal year after each item of plant was placed in service.



LEGEND

FLOOD CONTROL, IRRIGATION, NAVIGATION, AND POWER DEVELOPMENT ACTIVITIES *of*

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
SOUTHWESTERN POWER ADMINISTRATION

ACTIVE AUTHORIZED PROJECTS — COMPLETED OR UNDER CONSTRUCTION

DAMS
BUREAU OF RECLAMATION
CORPS OF ENGINEERS
Letters indicate allocated purposes : c - Flood control; i - Irrigation; u - Municipal water supply; n - Navigation; h - Hydroelectric power; p - Power authorized

DAMS WITH NAVIGATION LOCKS
CORPS OF ENGINEERS

RESERVOIRS AND AQUEDUCTS
RESERVOIR

IRRIGATION
IRRIGATED LANDS SERVED BY BUREAU OF RECLAMATION

NAVIGATION AND FLOOD PROTECTION
CORPS OF ENGINEERS
IMPROVED CHANNEL, DEPTH 9 TO UNDER 25 FEET
IMPROVED CHANNEL, DEPTH 6 TO UNDER 9 FEET
NEW CHANNEL AUTHORIZED, DEPTH IN FEET
LOCAL FLOOD PROTECTION
LEVEE

TRANSMISSION LINES
SOUTHWESTERN POWER ADMINISTRATION