

**FILE**

**AUDIT REPORT  
TO  
THE CONGRESS OF THE UNITED STATES**



**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  
FOR THE FISCAL YEAR ENDED JUNE 30, 1956**

**BY  
THE COMPTROLLER GENERAL OF THE UNITED STATES**

745225/087961

*March 17 1956*

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COMPTROLLER GENERAL OF THE UNITED STATES  
WASHINGTON 25

B-125031

RECD 1 6 1957

Honorable Sam Rayburn  
Speaker of the House of Representatives

Dear Mr. Speaker:

Herewith is a copy of 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, 1956. 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).

This report combines the power generating and marketing and other water resources programs of the Corps of Engineers and Southwestern Power Administration in the Arkansas, White, and Red River basins, including the Whitney Project. Circumstances which prompted the recommendations contained in our report to the Congress dated September 26, 1956, on the audit of the Arkansas, White, and Red River basins power system and related activities for fiscal year 1955 have not changed. In this report we are, therefore, repeating the recommendations in our previous report. Among these are (1) consideration by the Congress of matters having to do with allocations to power and nonpower purposes of construction costs of the projects and (2) recommendations to the Chief of Engineers and the Secretary of the Interior on establishing policies jointly for accounting and financial practices necessary to present fairly the financial position of and results from the Government's water resources operations.

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

Sincerely yours,

Comptroller General  
of the United States

Enclosure

REPORT ON 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  
FOR THE FISCAL YEAR ENDED JUNE 30, 1956

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.

GENERAL COMMENTS

The Arkansas, White, and Red River basins area constitutes about 282 thousand square miles in the southwest portion of the United States. The 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 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, however, has constructed three irrigation projects in the Arkansas and Red River basins, but these projects are not included in this report.

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.

The plans of improvement in the three basins contain many features of multiple- and single-purpose water resources development. At June 30, 1956, development in the Southwestern area consisted of 11 multiple-purpose projects including power and 20 reservoir projects serving principally the purpose of flood control in operation or under construction and 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 Federal power system in the Southwestern area is comprised of the 10 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. In addition to generation of hydroelectric energy, multiple-purpose projects of the Corps serve also the purposes of flood-damage prevention, aids to navigation, regulation of stream-flow, expansion of recreation, and other purposes. Expenditures have been made by the Corps for advance planning and design on five additional multiple-purpose projects including power in the Arkansas, White, and Red River basins and construction of one other multiple-purpose project has been authorized at June 30, 1956. The multiple-purpose projects including power within the Southwestern marketing area provide an ultimate installed capacity of 1,791,035 kilowatts, of which 501,000 kilowatts had been installed and 355,000 kilowatts were under construction at June 30, 1956. The power transmitting and marketing agency for this system is the Southwestern Power Administration, an agency in the Department of the Interior under the supervision of the Assistant Secretary for Water and Power Development.

Based on the annual power charges for interest on and amortization of the Government's investment in power and provisions for major replacements, as determined by the Corps of Engineers, and the actual operation and maintenance expenses recorded by the agencies for fiscal year 1956, additional revenues of about \$5,800,000 would have been needed to repay the Government's investment over a 50-year period.

On December 29, 1954, the Department of the Interior requested the Federal Power Commission to confirm and approve an increase in

rates to preference customers. Because of the changes in operations resulting from the reactivation of the lease contracts with the generating and transmission cooperatives, the Department requested the Commission to withhold action on the proposed new rate schedules before it so that the Department could make additional studies and prepare a revised schedule.

In January 1956 a bill (S.3338) was introduced in the Senate which would have provided for a moratorium on power rate increases for a period of 18 months after January 1, 1956, from rates in effect on February 27, 1956, for electric power and energy marketed by the Southwestern Power Administration to any public body or cooperative. On July 31, 1956, the bill was forwarded for Presidential signature and on August 9, 1956, the President disapproved the bill after sine die adjournment stating that the only purpose which the legislation could accomplish would be to prevent the Secretary of the Interior from fulfilling the obligations imposed upon him by section 5 of the Flood Control Act of 1944.

Revised rate schedules were proposed by the Department of the Interior in November 1956 which would increase rates to preference customers from 5.51 mills to 6.97 mills per kilowatt-hour at a 50 percent load factor. Revised rate schedules have been submitted also by the Department to the Federal Power Commission which would result in increased rates to the private utilities under existing contracts.

Because of the lack of firm construction cost allocations and certain accounting deficiencies, as summarized on page 78, it is our opinion that the financial statements on pages 80 through

115 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, as of June 30, 1956, 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 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 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 the power marketing agent in defined areas of the States of Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas. The Administration transmits and markets the 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.

STATUS OF RECOMMENDATIONS IN PRIOR REPORT  
AND OTHER COMMENTS

Our report to the Congress dated September 26, 1956, on the audit of the Arkansas, White, and Red River Basins Power System and Related Activities for the fiscal year 1955 included recommendations which are repeated in this report. These recommendations and other comments are summarized as follows:

1. Need for firm allocation of construction costs  
in multiple-purpose projects

Although the multiple-purpose projects including power in the Southwestern area have been in operation for several years, none of the construction cost allocations are firm. For most authorizations of multiple-purpose projects, where one agency is authorized to construct the project and another agency is authorized to market the products of the project, the agency ultimately responsible for making the allocation to purposes is not specifically designated. Moreover, the laws forming the basis for the Federal water resources programs do not provide policies or criteria to be applied in the allocation of the construction costs of multiple-purpose projects and establishment of rates for commercial power. The Corps of Engineers and the Department of the Interior have reached general agreement on allocation methods to be followed and have provided for an exchange of information and discussion at field locations and between staff members in Washington.

The interagency agreement, however, has not resulted in final or firm cost allocations that would permit a precise evaluation of the financial administration of the power projects in the Southwestern area.

We believe that the lack of policies and criteria to be applied in making allocations of construction costs and the existing confusion on responsibility for making these allocations should be resolved by legislative action. Accordingly, in our report dated September 26, 1956, on the Arkansas, White, and Red River Basins Power System and Related Activities, we recommended that the Congress provide policies and criteria to be applied for making allocations of construction costs of multiple-purpose projects, the results of which serve as the basis for establishing rates for commercial power. We recommended also that the Congress designate specifically the agency to make the allocation where one agency is authorized to construct the project and another agency is authorized to market the products of the project. The Congress may wish also to define the role of the Federal Power Commission in these allocations.

As an alternative to specific designation of the agency to make allocations of construction costs, we stated in the report dated September 26, 1956, that the Congress may wish to provide for a final allocation to purposes on projects including power to be made jointly by the Corps of Engineers, Department of the Interior, and the Federal Power Commission and reported to the Congress for review and approval. These allocations should be reported for approval about the time of initiating operations of the projects.

Our audit for fiscal year 1956 disclosed that the conditions relating to allocation of construction costs in multiple-purpose projects in the Southwestern area were virtually unchanged from

those observed in the fiscal year 1955 audit, and accordingly the recommendations in our previous report are repeated.<sup>1</sup>

Allocations of construction costs to purposes on the projects in the Southwestern area are discussed on pages 15 through 21 of this report.

2. Status of repayment of construction costs allocable to power

At June 30, 1956, eleven multiple-purpose projects including power in the Arkansas, White, and Red River basins, including the Whitney Project, were constructed or under construction. At none of the projects have the repayment requirements been established with sufficient finality to permit comparison of the repayment status with the requirements of section 5 of the Flood Control Act of 1944.

We believe that, until this determination is made, it is not possible to show accurately the status of repayment of the

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<sup>1</sup>As to the recommendation in this section, the Assistant Chief of Engineers for Civil Works, Corps of Engineers, stated in a letter dated February 4, 1957, that it was believed pertinent to note the accomplishments of Federal agencies toward resolution of these problems and to observe that, to the degree 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 in a letter dated February 7, 1957, stated that allocations of costs by one agency are undesirable, and to provide by law for the ultimate responsibility for making the allocation of costs by a single agency will be likely to raise new problems. Most particularly, if the costs are allocated by the Corps of Engineers without reference to the marketing considerations, the problem introduced may be in the future, as it has been in the past, an unrealistic estimate of the power benefits.

Government's investment in power facilities and a financial evaluation of operating results. Accordingly, in our report dated September 26, 1956, on the Arkansas, White, and Red River Basins Power System and Related Activities, we recommended that the Chief of Engineers and the Secretary of the Interior reach and execute agreements 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.

Our audit for fiscal year 1956 disclosed that conditions relating to the allocation of power receipts to generating projects has not changed; accordingly, the recommendation in our previous report is repeated.

Status of repayment of construction costs allocable to power on projects in the Southwestern area is discussed on pages 23 through 25.

3. Transactions associated with the agreements with generating and transmission cooperatives

In fiscal year 1956 contracts for the lease of electric transmission facilities and for the sale and exchange of electric energy and power were reactivated with certain generating and transmission cooperatives. For fiscal year 1956 cost of power purchased and rental of transmission facilities under the reactivated contracts exceeded the revenues received from the Government cooperatives by about \$1,758,000.

Proposed rate increases were submitted by the Department of the Interior to the Federal Power Commission for confirmation and approval in November 1956, but at February 15, 1957, these schedules had not been approved.

Transactions associated with these agreements are shown on pages 38 and 39, and integration with private utilities and generating and transmission cooperatives is discussed on pages 32 through 34 of this report.

4. Revenues paid over to states  
not charged to projects

Under the provisions of the Flood Control Act of 1941, as amended (33 U.S.C. 701c-3), 75 percent of the moneys received during any fiscal year on account of the leasing of lands acquired for flood control, navigation, and allied purposes are returned to the states in which the lands are located. The gross revenues are credited to the projects in the accounting records of the district offices of the Corps, but the payments to states are disbursed and recorded at the Office of the Chief, Washington, D.C.

We recommended in our report dated September 26, 1956, that the payments to the states of revenues from reservoir lands be recorded in the accounts of the projects at district offices.

Our audit for fiscal year 1956 disclosed that the procedures relating to accounting for revenues paid over to states have not changed; accordingly, the recommendation in our previous report is repeated.<sup>1</sup>

Revenues paid to states are discussed on pages 26 and 27 of this report.

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<sup>1</sup>In the letter dated February 4, 1957, the Assistant Chief of Engineers for Civil Works stated that their consideration of this matter had confirmed the need for these records and the establishment and maintenance of the additional accounts were being undertaken.

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

Under the accounting procedures of the Corps of Engineers, costs incurred in conducting preliminary investigations and surveys are not included as a part of the costs of the project, when built. To provide for an adequate disclosure of total project costs and to permit consideration of all proper costs for allocations to total construction costs to purposes, we recommended in our report dated September 26, 1956, that the Corps of Engineers include an appropriate share of these costs as costs of the project. Our audit for fiscal year 1956 disclosed that the accounting procedures relating to costs incurred in conducting preliminary investigations and surveys have not changed; accordingly, the recommendation in our previous report is repeated.

General investigations and advance planning programs of the Corps of Engineers are discussed on pages 65 through 68 of this report.

6. Accounting and financial policies

The financial statements included in this report show on a combined basis all the assets and liabilities of the multiple-purpose projects including power (including those under construction) of the Corps of Engineers in the Southwestern area river basins and the Southwestern Power Administration, the power marketing agent. The financial statements have been prepared from the records of the Corps of Engineers and the Southwestern Power Administration. However, until construction cost allocations to power and nonpower purposes are firm (see pp. 7 through 9) and the Corps

of Engineers and the Department of the Interior reach agreement on certain accounting and financial policies, financial statements cannot be presented that fairly show the financial position and financial results of operations of the Southwestern Power System and related activities.

We recommended in our report dated September 26, 1956, that the Chief of Engineers and the Secretary of the Interior jointly establish comparable policies and apply practice thereunder uniformly and consistently on:

- a. Allocations to power and nonpower purposes of joint costs and expenses of operating and maintaining multiple-purpose projects.
- b. Provisions for depreciation on plant in service, and allocation of the provision on multiple-purpose plant to purposes.
- c. Computation and recording of interest on the Federal investment in commercial power and municipal and industrial water-supply facilities.

The establishment jointly of comparable policies and effective application of them by each agency is necessary before financial statements can be presented which fairly show the Government's water resources operations.

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 of the other major accounting and financial policies, but decisions thereon have not been made by the

Department of the Interior. Accordingly, the establishment of comparable policies by the Corps of Engineers and the Department of the Interior remains virtually unchanged in status from that in the previous report; and the recommendation is repeated in this report.

We recommended also that statements be designed specifically to show the status of repayment of the Federal investment based on memorandum records for scheduled repayment requirements. This recommendation is also repeated in this report.<sup>1</sup>

Accounting and financial policies are discussed on pages 69 through 76 of this report.

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<sup>1</sup>In the letter dated February 4, 1957, the Assistant Chief of Engineers for Civil Works stated that the importance of developing uniform cost and financial accounting procedures is recognized, but it was premature to comment at this time on the specific recommendations as they were considered to be integral parts of the broader problem and also as questions to be resolved on the basis of interagency understandings. This letter stated also that, although there are procedures and details which had not been finally resolved to the extent necessary for precise accounting, the consequence of the items in question was relatively minor and information on activities of the Corps of Engineers was available to permit satisfactory analysis of assets, investments, repayments, and like matters to be made.

The Administrative Assistant Secretary of the Interior in the letter dated February 7, 1957, stated that these matters are receiving current consideration of the Interior Cost Allocation and Financial Practices Committee.

ALLOCATION OF ESTIMATED TOTAL CONSTRUCTION COSTS  
OF MULTIPLE-PURPOSE PROJECTS INCLUDING POWER

Allocations<sup>1</sup> made by the Corps of Engineers are on a tentative basis to serve the Corps' needs and do not represent an official allocation by the Chief of Engineers that can be used to base and to review the financial administration by the marketing agency and the Corps of Engineers.

Total cost allocations by the Corps to project purposes for the 11 multiple-purpose projects including power under construction or in operation in the Arkansas, White, and Red River basins, including the Whitney Project, are summarized as follows:

<u>Purpose</u>	<u>First cost</u>	<u>Interest during construction</u>	<u>Total</u>	
			<u>Amount</u>	<u>Percent</u>
Power	\$282,372,442	\$14,919,980	\$297,292,422	45
Flood control	240,640,761	13,628,579	254,269,340	38
Navigation	101,534,000	6,826,000	108,360,000	16
Streamflow regulation	2,727,700	230,300	2,958,000	(
Public use	1,237,900	33,200	1,271,100	( 1
Other	<u>492,796</u>	<u>13,878</u>	<u>506,674</u>	(
<b>Total</b>	<b><u>\$629,005,599</u></b>	<b><u>\$35,651,937</u></b>	<b><u>\$664,657,536</u></b>	<b><u>100</u></b>

For those projects completed or virtually complete and where the total cost is known with reasonable certainty, the tentative allocation is not expected to differ materially from the final allocation.

Costs allocated to public use represent costs for the construction of public park and recreation facilities in reservoir area. Costs of joint facilities, such as dams and reservoirs, have not been allocated to public use. These costs have been allocated to the primary project purposes of power, flood control, and navigation. The incremental--flood control basic--allocation method was used in allocating the construction costs of the Denison and Norfolk Projects. For all the other projects the separable costs--remaining benefits allocation method was used. Interest during construction is based on 2.5 percent per annum on the construction costs.

<sup>1</sup> See appendix B (pp. 124 through 127) for brief discussion on methods of allocation of estimated construction costs of multiple-purpose projects to power and nonpower purposes.

TENTATIVE ALLOCATION BY CORPS OF ENGINEERS  
OF TOTAL ESTIMATED CONSTRUCTION COSTS

Tentative allocations by the Corps' district offices of the total estimated construction costs of the 11 multiple-purpose projects including power are summarized as follows:

Project, document number, and Congress	Estimated first cost, original project	Estimated cost, June 30, 1956 (note a)			Allocation of estimated cost							
		Total	First cost	Interest during con- struction	Power		Flood control		Navigation		Other	
					First cost	Interest during con- struction	First cost	Interest during con- struction	First cost	Interest during con- struction	First cost	Interest during con- struction
<b>Arkansas River basin:</b>												
Fort Gibson (H. Doc. 107, 76th)	\$ 13,700,000	\$ 44,116,906	\$ 41,400,000	\$ 2,716,906	\$ 16,186,955	\$ 830,027	\$ 24,953,771	\$ 1,886,879	\$ -	\$ -	\$ 259,274 <sup>b</sup>	\$ -
Tenkiller Ferry (H. Doc. 758, 79th)	14,500,000	23,431,180	22,140,000	1,291,180	11,260,860	626,030	10,839,140	665,150	-	-	40,000 <sup>c</sup>	-
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 <sup>a</sup>	11,000 <sup>c</sup>
Dardanelle (H. Doc. 758, 79th)	45,080,800	101,695,000	94,600,000	7,095,000	44,870,000	3,365,000	-	-	49,730,000	3,730,000	-	-
<b>White River basin:</b>												
Bull Shoals (H. Doc. 917, 76th)	42,000,000	79,729,000	75,860,000	3,869,000	46,824,300	2,385,700	29,035,700	1,483,300	-	-	-	-
Norfolk (H. Doc. 290, 77th)	27,500,000	30,093,000	28,660,000	1,433,000	13,109,000	850,000	15,551,000	583,000	-	-	-	-
Table Rock (H. Doc. 917, 76th)	37,000,000	71,712,000	68,700,000	3,012,000	52,588,300	2,308,700	16,111,700	703,300	-	-	-	-
<b>Red River basin:</b>												
Blakely Mountain (H. Doc. 647, 78th)	11,080,000	33,102,000	30,800,000 <sup>d</sup>	2,302,000	23,196,000	1,822,000	7,604,000	480,000	-	-	981,622 <sup>e</sup>	36,078 <sup>e</sup>
Denison (H. Doc. 541, 75th)	54,000,000	62,127,550	59,926,599 <sup>d</sup>	2,200,951	19,199,227	674,023	39,745,750	1,490,850	-	-	-	-
Narrows (H. Doc. 837, 76th)	6,470,000	13,652,000	13,239,000	413,000	5,353,000	142,000	7,886,000	271,000	-	-	-	-
<b>Brazos River:</b>												
Whitney (H. Doc. 390, 76th)	10,150,000	43,877,900	40,680,000	3,197,900	7,688,300	403,000	30,254,200	2,564,600	-	-	2,737,500 <sup>f</sup>	230,300 <sup>f</sup>
<b>Total</b>	<b>\$315,875,800</b>	<b>\$664,657,536</b>	<b>\$629,005,599</b>	<b>\$35,651,937</b>	<b>\$282,372,442</b>	<b>\$14,919,980</b>	<b>\$240,640,761</b>	<b>\$13,628,579</b>	<b>\$101,534,000</b>	<b>\$6,826,000</b>	<b>\$4,458,396</b>	<b>\$277,378</b>

<sup>a</sup>Represents latest estimated costs on which revised allocations have been made by the Corps of Engineers. Dates of these allocations are as follows: Dardanelle, September 1955; Bull Shoals, Norfolk, and Whitney, December 1955; Table Rock, February 1956; Narrows, March 1956; Blakely Mountain, April 1956; Fort Gibson, Tenkiller Ferry, Eufaula, and Denison, May 1956.

<sup>b</sup>Represents allocations to purposes, as follows:

Public-use facilities	\$144,000
Contributed funds	115,274
<b>Total</b>	<b>\$259,274</b>

<sup>c</sup>Represents allocation to public-use facilities.

<sup>d</sup>Represents total cost allocated to purposes, table 7, Cost Allocation Studies, revised May 1, 1956. Total costs prior to June 30, 1955--\$60,090,573.

<sup>e</sup>Represents allocations to purposes, as follows:

Purpose	First cost	Interest during construction
Water supply	\$377,522	\$13,878
Recreation	604,100	22,200
<b>Total</b>	<b>\$981,622</b>	<b>\$36,078</b>

The amount for allocation to water supply was computed by capitalizing the annual revenues of \$13,800 at a factor to cover interest at 2.5 percent and amortization in 50 years.

<sup>f</sup>Represents allocations to purposes, as follows:

Purpose	First cost	Interest during construction
Streamflow regulation	\$2,727,700	\$230,300
Recreation	9,800	-
<b>Total</b>	<b>\$2,737,500</b>	<b>\$230,300</b>

RESPONSIBILITY FOR ALLOCATIONS OF CONSTRUCTION COSTS  
OF MULTIPLE-PURPOSE PROJECTS INCLUDING POWER  
IN THE ARKANSAS, WHITE, AND RED RIVER BASINS

For many of the multiple-purpose projects authorized in the several flood control and river and harbor acts for construction and operation by the Corps of Engineers, the agency responsible for allocating the construction and operating costs to the various purposes is not specifically stated.

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. The 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 the 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 looking toward their modernization. On December 22, 1955, the committee submitted a report<sup>1</sup> 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.

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<sup>1</sup>Water Resources Policy, a report by the Presidential Advisory Committee on Water Resources Policy, December 22, 1955.

Both the Corps of Engineers and the Department of the Interior consider interagency agreement as one solution for arriving at uniform practices and procedures. Interagency agreements are helpful and can minimize areas of difference for projects where policies and practices have not been firmly established by past action. However, the basic problem of final responsibility for making such allocation is not settled.

#### Matters for consideration by the Congress

Our previous report to the Congress dated September 26, 1956, on the audit of the Arkansas, White, and Red River Basins Power System and Related Activities, Corps of Engineers (Civil Functions), Department of the Army, and Southwestern Power Administration, Department of the Interior, for the fiscal year ended June 30, 1955, contained a matter for consideration by the Congress as follows:

"At the present time the Federal water resources program is based on a large number of laws that are administered by several agencies. These laws do not provide uniform policies or criteria that are fundamental in carrying out the programs.

"We believe that 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, we believe that the new legislation should also provide for (1) period for repayment of construction costs, (2) rates of interest, and (3) subsidies to nonpower purposes."

The situation which prompted the recommendation has not changed. We are, therefore, again recommending that Congress provide the policies and criteria to be applied for allocation of costs of multiple-purpose projects.

Our report contained also the following recommendation:

"Until definite allocations of the construction costs are made, it will not be possible to evaluate adequately the financial administration and results from operations of the Arkansas, White, and Red River Basin Projects. The construction costs allocated to power and the repayment requirements must be finally determined before power rates can be properly established in accordance with section 5 of the Flood Control Act of 1944.

"In our report dated December 31, 1954, to the Congress on the Southwestern Power Administration for the fiscal year 1954, we stated a belief that the basis for the differences which existed in the past was fundamental in character and should be resolved with finality by clarifying legislation. Accordingly, we repeated the recommendation in our previous report that the Congress designate specifically the agency to make the allocation of construction costs for projects either constructed or authorized for construction by the Corps of Engineers in the Arkansas, White, and Red River basins.

"By memorandum dated April 2, 1954, from the Assistant Secretary of the Interior to heads of Bureaus and Offices in the Department, it was stated that general agreement on allocation of costs of multiple-purpose projects had been reached with the Corps of Engineers and the Federal Power Commission. The Chief of Engineers stated substantially the same in a memorandum dated March 29, 1954, to division and district engineers.

"Apparently some disagreement still exists, because at June 30, 1955, and at the date of this report, there has been no tangible implementation of this agreement for purposes of the financial records. It is our belief that the conflicting contentions that have existed and the existing confusion on the responsibility for cost allocations can be resolved with finality only through legislative action. Accordingly, we recommend that the Congress designate specifically the agency to make the allocation of construction costs for multiple-purpose projects authorized for construction in the Arkansas, White, and Red River basins by the Corps of Engineers under the various flood control and river and harbor acts.

"We believe also that 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.

"As an alternative to specific designation of the agency to make these allocations of costs, the Congress may wish to provide for a final allocation of construction costs to purposes on projects including power to be made jointly by the Corps of Engineers, Department

of the Interior, and the Federal Power Commission and reported to the Congress for review and approval. These allocations should be reported for approval about the time of initiating operations of the project."

Although progress has been made in reaching allocations acceptable to both the Department of the Interior and Corps of Engineers of construction costs on multiple-purpose projects of joint interest, the basic problem of final responsibility for making such allocations is not settled.

## REPAYMENT OF CONSTRUCTION COSTS ALLOCATED

### TO REIMBURSABLE PURPOSES

Under the various flood control and river and harbor acts, the Corps of Engineers is responsible for constructing and operating facilities to provide navigation and flood control benefits. Tolls or operating charges are not collected from any vessel, dredge, or other watercraft for passing through any lock, canal, canalized river, or other work for the use and benefit of navigation belonging to the United States, except for the Panama Canal (33 U.S.C. 5). Direct assessments are not made against the beneficiaries for the flood control operations at reservoir projects. Accordingly, the navigation and flood control facilities of the Corps of Engineers are non-revenue-producing.

Flood control works constructed by the Corps of Engineers, other than reservoir projects, provide for local participation. Local participation has come to be accepted generally as (1) furnishing without cost to the United States all lands, easements, and rights-of-way, (2) operating and maintaining the works after completion, and (3) holding the United States free from any damages resulting from construction.

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 Secretary of the Interior. Southwestern Power Administration was designated by the Secretary of the Interior as the power marketing agent in the Southwestern area. 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.

Contracting for storage space in reservoirs for the purpose of providing a regulated water supply is authorized under legislation for specific counties and municipalities. An allocation of \$391,400 (including \$13,878 for interest during construction) has been made to water supply at the Denison Project.

Incidental revenues, principally rentals from grazing and farming of reservoir lands, are received by the Corps, but, in the financial statements accompanying this report, these revenues are applied as reductions of total expenses. (See pp. 26 and 27.)

STATUS OF REPAYMENT OF GOVERNMENT'S INVESTMENT  
IN POWER

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. Until allocations of construction costs are made and approved and agreements are executed between the Corps of Engineers and the Southwestern Power Administration for division of revenues, it will not be possible to make a precise evaluation of the financial results from power operations. The construction costs allocable to power and the repayment requirements must be firm before power rates can be properly established in accordance with the requirements of section 5 of the Flood Control Act of 1944.

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 interest rate.

Power revenues since operations began have been insufficient by about 10 million dollars to cover operating expenses and interest on the tentative allocations of costs to power investment. Accordingly, no funds have been available for repayment of the power investment of \$173,357,075 at June 30, 1956, representing \$150,550,422 in operating projects and \$22,806,653 in transmission facilities. The revenue deficiency, exclusive of provision for amortization to June 30, 1956, is summarized as follows:

Gross power revenues of the Southwestern Power Administration			\$33,441,767
	<u>Corps</u>	<u>SWPA</u>	
Accumulated operating expenses and interest	\$32,308,356	\$20,966,160	
Less accumulated depreciation	<u>7,078,255</u>	<u>2,652,031</u>	
Operating expenses and interest exclusive of depreciation	<u>25,230,101</u>	<u>18,314,129</u>	<u>43,544,230</u>
Revenue deficiency, exclusive of depreciation			<u>-\$10,102,463</u>

Generation of power in the Southwestern area began with the Norfolk Project in 1944 and the Denison Project in 1945. Initial generation started at the other projects in 1950 through October 1955 (Blakely Mountain Project). The date of initial generation of the projects is tabulated on page 29.

The amounts of the cumulative deficiency cannot be determined until firm allocations are made and agreements are reached between the Corps of Engineers and the Department of the Interior on scheduled repayments by projects.

The revenues reported by the Administration in fiscal year 1956, as for fiscal years 1953, 1954, and 1955, were not adequate to cover the cost of producing electric energy and to amortize the Government's investment in power facilities for the projects in operation. The following tabulation shows the results for fiscal year 1956.

Project	Annual power charges			Total
	Interest on and amortization of project investment to power (notes a and b)	Operation and ordinary maintenance (net) (note c)	Provision for major replacements (note a)	
Arkansas River basin:				
Fort Gibson	\$ 599,985	\$ 125,294	\$ 30,660	\$ 755,939
Tenkiller Ferry	419,110	84,233	19,150	522,493
White River basin:				
Bull Shoals	1,735,000	178,324	38,000	1,951,324
Norfolk	492,000	129,594	17,000	638,594
Red River basin:				
Blakely Mountain (note d)	661,500	131,928	18,720	812,148
Denison	700,690	164,657	21,060	886,407
Narrows	194,000	92,524	6,000	292,524
Brazos River:				
Whitney	<u>285,300</u>	<u>103,052</u>	<u>10,100</u>	<u>398,452</u>
Total	<u>\$5,087,585</u>	<u>\$1,009,606</u>	<u>\$160,690</u>	<u>6,257,881</u>
Deduct net income from operations reported by the Administration				<u>430,474</u>
Additional revenue necessary to cover the cost of producing electric energy and to amortize the Government's investment for projects in operation for the entire fiscal year 1956 except as stated in note d				<u>\$5,827,407</u>

<sup>a</sup>These amounts were obtained from the latest cost allocation reports prepared by the Corps of Engineers. Although the amounts shown are tentative and subject to revision, the amounts are considered by the Corps to be reasonable and as close to the final results as can be obtained at this time.

<sup>b</sup>These amounts represent the estimated annual charges at time of initial generation determined by the application of a factor of about 3.5 percent to the investment allocated to power to cover interest at 2.5 percent and amortization in 50 years. The annual amounts currently needed to recover the unamortized balance of the Federal investment in power over the remaining economic life of each project cannot be readily determined.

<sup>c</sup>These amounts represent actual net costs, exclusive of interest, provisions for depreciation, and rehabilitation expense, reported by the Corps of Engineers for fiscal year 1956.

<sup>d</sup>The Blakely Mountain Project was not in commercial operation until October 1, 1955. The amounts shown for annual power charges relating to interest and amortization and provision for major replacements have been adjusted accordingly.

Fiscal year 1956 revenues were insufficient in the amount of \$5,827,407 for repayment of the Government's investment over a 50-year period as tentatively established by the Corps through its cost allocations. In determining the annual amount required for amortization of the Government's investment over a 50-year period, the sinking-fund method of payment was used by the Corps with a 2.5 percent interest rate. 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 1956 was \$6,629,351. (See p. 36.) During fiscal year 1956 charges to power operations for interest and depreciation using the straight-line method of depreciation for generating projects totaled \$6,029,838. The amount of annual interest and amortization costs for these projects based on the sinking-fund method of payment totaled \$5,087,585.

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

Our report to the Congress dated September 26, 1956, on the audit of the Arkansas, White, and Red River Basins Power System and Related Activities, Corps of Engineers (Civil Functions), Department of the Army, and Southwestern Power Administration, Department of the Interior, for the fiscal year 1955 contained a recommendation as follows:

"To afford the basis for showing the status of repayment of the Government's investment, and a financial evaluation of operating results, we recommend 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."

The conditions which prompted the above recommendations have not changed. At June 30, 1956, eight of the multiple-purpose projects in the Arkansas, White, and Red River basins, including the Whitney Project, were in commercial operation, one since 1944. One project (Blakely Mountain) commenced commercial operation in October 1955, and three additional projects (Dardanelle, Eufaula, and Table Rock) were under construction. At none of the projects have the repayment requirements been established with sufficient finality to permit comparison of the repayment status with the requirements of section 5 of the Flood Control Act of 1944. To afford the basis for showing the status of repayment of the Government's investment in power facilities and to provide a financial evaluation of operating result, we again recommend that the agreements be reached and executed between the Corps of Engineers and the Southwestern Power Administration on the scheduled amount of receipts from the sale of power applicable to generating projects as a return of the reimbursable power costs of the projects.

## INCIDENTAL REVENUES OF THE CORPS OF ENGINEERS

Revenues are derived by the Corps of Engineers from reservoir projects, represented principally by rentals from the leasing of lands for farming and grazing purposes. Other revenues are derived from concessions and privileges in the project areas. The aggregate of these revenues is shown as reduction of expenses for operating and maintaining the facilities and as credits to construction costs. At the Denison, Fort Gibson, Tenkiller Ferry, and Whitney Projects, these revenues have been allocated as reductions of the expenses of nonpower programs, but, at the Bull Shoals, Norfolk, Blakely Mountain, and Narrows Projects, allocation has been made to power and nonpower purposes in the same ratio as the allocation of joint operation and maintenance expenses to these purposes.

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

Amounts derived principally from leasing of lands acquired for the 8 multiple-purpose and 14 single-purpose projects in operation in the Arkansas, White, and Red River basins, including the Whitney Project, cumulative to June 30, 1956, are summarized.

<u>Project</u>	Total revenues credited to <u>project</u>	Returnable to states ( <u>75 percent</u> )	Revenues retained ( <u>25 percent</u> )
Multiple-purpose:			
Arkansas River basin:			
Fort Gibson	\$ 626,658	\$ 469,993	\$156,665
Tenkiller Ferry	51,562	38,672	12,890
White River basin:			
Bull Shoals	307,708	230,781	76,927
Norfolk	180,550	135,413	45,137
Red River basin:			
Denison	958,122	718,592	239,530
Narrows	50,303	37,727	12,576
Blakely Mountain	49,424	37,068	12,356
Brazos River:			
Whitney	<u>164,374</u>	<u>123,281</u>	<u>41,093</u>
	2,388,701	1,791,527	597,174
Single-purpose flood control projects (14)			
	<u>582,232</u>	<u>436,674</u>	<u>145,558</u>
Total	<u>\$2,970,933<sup>a</sup></u>	<u>\$2,228,201</u>	<u>\$742,732</u>

<sup>a</sup>Represents balances in accounting records of respective Corps district offices at June 30, 1956, for the funds returned to the United States Treasury by the Corps of Engineers. Includes credits to operation and maintenance expense for land rentals subsequent to operation dates of projects and credits to construction costs for rental receipts during construction.

On the above basis the construction costs and the operation and maintenance costs, as now stated in the accounting records of the respective district offices, have been improperly reduced by \$2,228,201 to June 30, 1956.

Recommendation to the Chief of Engineers

The report to Congress dated September 26, 1956, on the audit of the Arkansas, White, and Red River Basins Power System and Related Activities, Corps of Engineers and Southwestern Power Administration, contained a recommendation, as follows:

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

The Assistant Chief of Engineers has stated that the importance of matters having to do with procedures to be followed in cost and financial accounting for projects with power have been recognized and efforts will be continued to resolve them as soon as practicable.

Our audit for fiscal year 1956 disclosed that the procedures relating to accounting for revenues paid over to states have not changed; accordingly, the recommendation in our previous report is repeated.

## 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 the power program is generally subordinate to other purposes of multiple-purpose projects, it 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. Section 5 of the Flood Control Act of 1944 provides for the delivery of the electric energy at the project site to the Secretary of the Interior for distribution and marketing. Southwestern Power Administration has been designated by the Secretary of the Interior as the power marketing agent for the projects in the Southwest area that includes the Arkansas, White, and Red River basins.

The authorized Federal hydroelectric power plant construction program in the Southwest area at June 30, 1956, is summarized, as follows:

	<u>Number of projects</u>	<u>Number of units</u>	<u>Installed capacity (kilowatts)</u>
Arkansas River basin	6	23	449,500
White River basin	5	21	820,000
Red River basin	4	12	307,500
Projects in other basins in SWPA service area	<u>2</u>	<u>4</u>	<u>75,000</u>
Total	<u>17</u>	<u>60</u>	<u>1,652,000</u>

Additional power features authorized for projects in the Southwest area but not included in the present plan of development are summarized, as follows:

	<u>Number of projects</u>	<u>Number of units</u>	<u>Installed capacity (kilowatts)</u>
Arkansas River basin	3	9	101,000
Projects in other basins in SWPA service area	<u>4</u>	<u>(a)</u>	<u>38,035</u>
Total	<u>7</u>	<u>9</u>	<u>139,035</u>

<sup>a</sup>Number and size of units have not been determined.

The above tabulation includes the Keystone Project in the Arkansas River basin which is under restudy to determine the feasibility of including power in the initial development.

**GENERATING PLANTS IN OPERATION  
AND UNDER CONSTRUCTION**

At June 30, 1956, eight power plants with 20 generating units having an installed capacity of 501,000 kilowatts were in operation, an increase of 75,000 kilowatts from the prior fiscal year represented by the Blakely Mountain Project which first began commercial operation in October 1955. These projects and the estimated construction costs allocable to power, including interest during construction, at June 30, 1956, 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	\$ 79,729,000	\$ 49,210,000	61.7
Denison	March 1945	2	70,000	62,127,550	19,873,250	32.0
Fort Gibson	March 1953	4	45,000	44,116,906	17,016,982	38.6
Norfolk	June 1944	2	70,000	30,093,000	13,959,000	46.4
Tenkiller Ferry	November 1953	2	34,000	23,431,180	11,880,890	50.7
Total interconnected system		14	379,000	239,497,636	111,946,122	46.7
Blakely Mountain	October 1955	2	75,000	33,102,000	25,018,000	75.6
Narrows	May 1950	2	17,000	13,652,000	5,495,000	40.3
Whitney	June 1953	2	30,000	43,877,900	8,091,300	18.4
Total separate projects		6	122,000	90,631,900	38,604,300	42.6
Total		20	501,000	\$330,129,536	\$150,550,422	45.6

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, 1956, were three projects with nine generating units having an installed capacity of 310,000 kilowatts. These plants and the estimated construction cost allocable to power, including interest during construction, at June 30, 1956, are summarized.

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	Percent
Table Rock	December 1958	2	100,000	\$ 71,712,000	\$ 54,897,000	76.6
Dardanelle	January 1964	4	120,000	101,695,000	48,235,000	47.4
Eufaula	June 1964	3	90,000	161,121,000	43,610,000	27.1
Total		9	310,000	\$334,528,000	\$146,742,000	43.9

The projected program for the Table Rock Project provides for four generating units with an ultimate capacity of 200,000 kilowatts. 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 over \$297,000,000 and an installed capacity of 811,000 kilowatts. Ultimate installed capacity will be 1,277,000 kilowatts. At June 30, 1956, one other project (McGee Bend) with two 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 by the United States.

The project was authorized by the Flood Control Act of 1941 (55 Stat. 638) which designated the Fort Gibson Reservoir, located on the Grand River, Oklahoma, as a unit in 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.

#### 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, 1956, with the exception of Narrows, Blakely Mountain, and Whitney Projects, were interconnected by the transmission network of Southwestern Power

Administration. Energy generated at the Narrows and Blakely Mountain Projects is delivered directly to a private utility company at the project sites and to other customers through redelivery over facilities of the company. Energy generated at the Whitney Project is sold to the Brazos Electric Power Cooperative, Inc., at the dam site.

At June 30, 1956, 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, 1956, in electric plant, principally transmission lines and substations, was \$23,589,221 compared with \$23,444,180 at June 30, 1955.

INTEGRATION WITH PRIVATE UTILITIES AND  
GENERATING AND TRANSMISSION COOPERATIVES

The Administration has integrated its electric system with certain private utility systems to obtain better utilization of the Government's hydroelectric capacity for the production of peaking power and to secure the maximum benefits from this power 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 1956 accounted for about 27 percent of the revenues and of the energy delivered, compared with about 25 percent of the revenues and 27 percent of the energy delivered for the fiscal year 1955. Purchases from private utilities and cooperatives totaled \$3,461,272 in fiscal year 1956 compared with \$1,180,528 for fiscal year 1955, represented by 713,427,231 and 229,134,000 kilowatt-hours, respectively.

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, on the grounds that appropriations for fiscal year 1954 had not been provided in the Interior Department Appropriation Act, 1954, from which the obligations or liability of the Government could be paid.

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 facilities under the agreements with the generating and transmission cooperatives, and as a result these contracts have been reactivated.

In conformity with instructions of the Appropriation Committees,<sup>1</sup> the Department of the Interior initiated negotiations for revision of the basic contracts to include:

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 SPA.

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<sup>1</sup>H. Repts. 747 and 1085 and S. Rept. 700, 84th Cong.

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 at the basic SPA 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. Western Farmers Electric Cooperative, executed November 20, 1956, effective July 15, 1955.
3. N.W. Electric Power Cooperative, Inc., executed October 23, 1956, effective July 15, 1955.
4. Central Electric Power Cooperative, executed October 22, 1956, effective July 15, 1955.

The amended contracts provide (1) for 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 cooperative on a net balance basis including payments by the Government to the cooperative 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 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 basic Administration's 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, (2) all direct operation and maintenance expense, including replacements, and that portion of administrative and overhead expenses assignable to the generating plant, (3) one-half mill (\$.0005) for each kilowatt-hour of energy delivered by the cooperative to the Government.

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 and a fuel cost of \$.125 per million BTU plus \$.00075. The 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 obligation 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 has 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 \$961,119. Claims from two other cooperatives have been filed with the Administration in the amount of \$957,486. The two remaining cooperatives with similar contracts have not filed 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, 1956.

The case pending at June 30, 1955, in a proceeding before the Public Service Commission of the State of Missouri by the Kansas City Power and Light Company and five other commercial electric utility companies against the N.W. Electric Power Cooperative, Inc., and the Administrator of the Southwestern Power Administration was dismissed for lack of jurisdiction on June 12, 1956. The plaintiffs had sought to require the cooperative to obtain a certificate of convenience and necessity for the construction and operation of its generating plant and transmission system in the State of Missouri and also to require the Administrator of SWPA to comply with the rules and regulations of the Public Service Commission with respect to the sale and transmission of electric power and energy in the State of Missouri.

## FINANCIAL RESULTS FROM POWER OPERATIONS

Financial results from power operations for the fiscal years 1956 and 1955, based on the accounts of the Corps and the Administration, are summarized as follows:

	Fiscal year		Increase
	1956	1955	
Operating revenues:			
Sales of electric energy	\$ 8,169,043	\$4,075,727	\$4,093,316
Other revenues	-	907	-907
Total operating revenues	8,169,043	4,076,634	4,092,409
Operating expenses:			
Purchased power	3,461,272	1,180,578	2,280,694
Operation and maintenance expenses:			
Generating projects	1,003,694	1,040,141	-36,447
Southwestern Power Administration	2,679,033	1,145,462	1,533,571
	7,143,999	3,366,181	3,777,818
Administrative, sales, and general expenses:			
Generating projects	78,194	104,942	-26,748
Southwestern Power Administration	352,908	373,069	-20,161
	431,102	478,011	-46,909
Depreciation:			
Generating projects	1,950,393	1,619,212	331,181
Southwestern Power Administration	643,661	513,747	129,914
	2,594,054	2,132,959	461,095
Total operating expenses	10,169,155	5,977,151	4,192,004
Net operating loss	2,000,112	1,900,517	99,595
Interest and other deductions:			
Interest on the Federal investment:			
Generating projects	4,079,445	3,435,202	644,243
Southwestern Power Administration	586,199	574,146	12,053
Total interest	4,665,644	4,009,348	656,296
Nonoperating expenses and income (net)	-36,405	40,848	-77,253
	4,629,239	4,050,196	579,043
Net loss for the fiscal year	\$ 6,629,351	\$5,950,713	\$ 678,638

Statements on the power operations in summary and by generating projects are included in schedules 3 and 6 through 13. (See pp. 82 and 85 through 92.) In the explanatory notes and comments on the financial statements (see pp. 93 through 118), comments are included on the results from power operations, based on the records of the Corps of Engineers and Southwestern Power Administration.

Of the \$4,093,316 increase in sales of electric energy, \$1,111,500 arises from increased sales to the Arkansas Power and Light Company under the Reynolds Metals Company contract and \$2,981,816 arises principally from sales under the reactivated generating and transmission contracts as discussed on pages 32 through 34.

The increase in purchased power and operation and maintenance expenses arises largely from reactivation of the generating and transmission contracts.

The increase in operations and transmission expenses of the Administration in the amount of \$1,533,571 is summarized as follows:

	<u>Fiscal year</u>		<u>Increase</u>
	<u>1956</u>	<u>1955</u>	
Transmission system operation	\$ 229,616	\$ 239,076	\$ -9,460
Maintenance of system	186,818	194,563	-7,745
Rental of transmission facilities	2,023,825	27,571	1,996,254
Transmission service charges	213,585	659,277	-445,692
Production expenses	<u>25,189</u>	<u>24,975</u>	<u>214</u>
<b>Total</b>	<b><u>\$2,679,033</u></b>	<b><u>\$1,145,462</u></b>	<b><u>\$1,533,571</u></b>

Included in the \$6,629,351 net loss from power operations for the fiscal year 1956 are \$1,950,393 depreciation expense and \$4,079,445 interest on the Federal investment charged to generating projects by the Corps. The allocations of these charges between power and nonpower purposes of multiple-purpose projects have been made by district offices of the Corps on the basis of tentative cost allocations. Agreement with the Administration on these cost allocations has not been reached. Until cost allocations are firm and the Corps of Engineers and the Department of the Interior reach agreement on certain accounting and financial policies, financial statements cannot be presented that fairly show the financial positions and financial results of operations of the Southwestern Power System. (See pp. 15 through 27 and 69 through 76.)

Transactions associated with the agreements  
with generating and transmission cooperatives

During the 1956 fiscal year, 90 percent of the power purchased and 98 percent of the related costs were associated with purchase from the Central Electric, N. W. Electric, and Western Farmers power cooperatives.

Revenues obtained from these cooperatives, cost of power purchased, and rental of transmission facilities for fiscal year 1956 are summarized from the report of progress 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	70,248	\$ 377,249	5.37
SHO-ME Power Corporation	154,688	808,634	5.23
Hermann, Missouri	1,929	10,635	5.51
	<u>226,865</u>	<u>1,196,518</u>	5.27
N. W. Electric Power Cooperative:			
N. W. Electric Power Cooperative	138,637	729,008	5.26
KAMO Electric Cooperative	107,770	582,903	5.41
Lamar, Missouri	6,360	35,186	5.53
Springfield, Missouri	78,461	418,366	5.33
	<u>331,228</u>	<u>1,765,463</u>	5.33
Western Farmers Electric Cooperative:			
Western Farmers Electric Cooperative	116,866	620,926	5.31
Altus Air Force Base, Oklahoma	2,632	13,828	5.25
Anadarko, Oklahoma	2,154	12,577	5.84
	<u>121,652</u>	<u>647,331</u>	5.32
Total revenue	<u>679,745</u>	<u>3,609,312</u>	5.31
Cost of purchased power:			
Central Electric Power Cooperative	116,093	693,176	5.97
N. W. Electric Power Cooperative	262,364	1,773,390	6.76
Western Farmers Electric Cooperative	202,075	900,545	4.46
	<u>580,532</u>	<u>3,367,111</u>	5.80
Rental of transmission facilities:			
Central Electric Power Cooperative:			
69 kv system (service to Central customers and Hermann, Missouri)	72,177	276,830	3.84
161 kv system (service to SHO-ME)	154,688	349,483	2.26
N. W. Electric Power Cooperative:			
69 kv system		No charge	
161 kv system (service to KAMO customers, Lamar, and Springfield)	192,591	358,936	1.86
Western Farmers Electric Cooperative:			
69 kv system (service to Western customers, Altus, and Anadarko)	121,652	585,592	4.81
KAMO Electric Cooperative:			
69 kv system (service to KAMO customers and Lamar)	114,130	429,590	3.76
		<u>2,000,431</u>	
Total power purchased and rental of transmission facilities		<u>5,367,542</u>	
Excess of cost of power purchased and rental of transmission facilities over revenues received		<u>\$1,758,230</u>	

The rental costs of transmission facilities include amortization of the cost of the lines of the cooperatives listed, plus interest, administrative and overhead costs allocated to the cost of operating such lines, and reimbursement of operations and maintenance expenses for the lines involved from July 15, 1955, to June 30, 1956, as follows:

Amortization and interest	\$1,445,419 <sup>a</sup>
Administrative and overhead expense	254,231
Operations and maintenance expense	<u>285,248</u>
	1,984,898
Wheeling expenses, July 1 to 15, 1955	<u>15,533</u>
Total	<u>\$2,000,431</u>

<sup>a</sup>Represents provision for repayment of plant investment over 27 years with interest at 2 per-cent compounded annually.

In addition to the above rentals, effective July 1, 1956, the Southwestern Power Administration has agreed to pay the SHO-ME Electric Power Corporation \$25,000 a month for a 1-year period for the use of transmission facilities between points of metering and delivery of energy sold to it by SWPA.

The tabulation on page 38 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, exclusive of the cost of energy delivered from other sources (delivered 679,745 kw, purchased 580,532 kw) 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 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 1956 compared with the fiscal year 1955 is summarized as follows:

	<u>Fiscal year 1956</u>		<u>Increase from preceding year</u>	
	<u>Thousand kilowatt-hours</u>	<u>Percent</u>	<u>Thousand kilowatt-hours</u>	<u>Percent</u>
Blakely Mountain (note 1)	66,132	4.0	66,132	100.0
Bull Shoals	386,641	24.4	145,524	60.4
Denison	196,989	12.4	56,670	40.4
Fort Gibson	74,757	4.7	4,058	5.7
Norfolk	105,510	6.7	81,765	344.4
Tenkiller Ferry	38,365	2.4	-15,582	-28.9
Narrows	21,158	1.3	-8,075	-27.6
Whitney	<u>48,588</u>	<u>3.2</u>	<u>18,505</u>	61.6
Total generation	938,140	59.1	348,997	59.2
Power purchased or exchanged	<u>649,722</u>	<u>40.9</u>	<u>420,588</u>	183.6
Total	<u>1,587,862</u>	<u>100.0</u>	<u>769,585</u>	94.1

<sup>1</sup>First unit went on the line in October 1955.

Although generation of energy increased by 348,997 thousand kilowatt-hours or 59.3 percent from the preceding year, unfavorable water conditions continued in the Southwest during fiscal year 1956 and deliveries of energy from the various projects remained substantially less than projected normals. Gross generation during fiscal year 1956 was 719,713 thousand kilowatt-hours less than the estimated average annual production, summarized as follows:

	Thousand kilowatt-hours		<u>Difference</u>
	Gross generation fiscal year <u>1956</u>	Estimated average annual <u>production</u>	
Projects in operation			
June 30, 1956, excluding Blakely Mountain Project	882,186	1,552,371	670,185
Blakely Mountain Project, 9 months	<u>67,472</u>	<u>117,000</u>	<u>49,528</u>
Total	<u>949,658</u>	<u>1,669,371</u>	<u>719,713</u>

Increased usage and the continued drought required an increase in power exchanged or purchased by the Administration of 420,588 thousand kilowatt-hours or 183.6 percent increase from the preceding year.

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. The supplemental agreement provided that delivery of energy by the Administration under 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 and 1956 the Administration returned 2,420 and 24,361 thousand kilowatt-hours, respectively, leaving a balance due the Oklahoma companies at June 30, 1956, of 3,065 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 or 1956.

A reconciliation of energy generated at the various projects with energy sold during fiscal year 1956 is shown in the following tabulation:

<u>Plant</u>	<u>Thousands of kilowatt-hours</u>		
	<u>Gross generation</u>	<u>Less station use</u>	<u>Net generation</u>
Blakely Mountain	67,472	1,340	66,132
Bull Shoals	390,197	3,556	386,641
Denison	199,044	2,055	196,989
Fort Gibson	75,890	1,133	74,757
Narrows	21,725	567	21,158
Norfolk	106,891	1,381	105,510
Tenkiller Ferry	38,924	559	38,365
Whitney	49,515	927	48,588
	<u>949,658</u>	<u>11,518</u>	938,140
Energy purchased or exchanged			<u>649,722</u>
			1,587,862
Less:			
Return of a portion of the energy received under the supplemental agreement to the Oklahoma companies contract which was deferred as to delivery as of June 30, 1955; revenues from sale of this power have been included in the Administration's account, but no liability was recorded for the deferred balance		24,361	
Line losses and meter discrepancies		<u>77,050</u>	<u>101,411</u>
			1,486,451
Add adjustment for differences between production and billing dates			<u>6,182</u>
Total energy sales			<u>1,492,633</u>

## CUSTOMERS SERVED

Sales of electric energy for the fiscal years 1956 and 1955 expressed in dollars, thousands of kilowatt-hours, and average rate per kwh by the various classes of customers are presented in the following summaries:

	1956			1955		
	Revenue	Thousand kilowatt-hours	Average rate per kwh (mills)	Revenue	Thousand kilowatt-hours	Average rate per kwh (mills)
<b>Electric utilities:</b>						
Arkansas Power and Light Company	\$1,883,342 <sup>a</sup>	369,073 <sup>a</sup>	5.10	\$ 768,869 <sup>b</sup>	165,279 <sup>b</sup>	4.65
Texas Power and Light Company	144,530	29,493	4.90	98,116	17,376	5.65
Public Service Company of Oklahoma and Oklahoma Gas and Electric Company	96,282	8,495	11.33	68,247	7,993	8.54
Southwestern Gas and Electric Company	78,860	6,281	12.51	78,414	9,605	8.16
	<u>2,203,014</u>	<u>413,342</u>	5.33	<u>1,013,646</u>	<u>200,253</u>	5.06
<b>REA Cooperatives:</b>						
SHO-ME Power Corporation	1,036,288	197,892	5.24	195,503	37,002	5.28
N.W. Electric Power Cooperative, Inc.	729,008	138,637	5.26	139,737	25,785	5.42
Western Farmers Electric Cooperative	620,926	116,866	5.31	-	-	-
KAMO Electric Cooperative, Inc.	582,903	107,770	5.41	326,490	61,069	5.35
Brazos Electric Power Cooperative, Inc.	574,425	74,264	7.73	166,013	48,110	3.45
Central Electric Power Cooperative	377,249	70,248	5.37	384,471	71,259	5.40
M & A Electric Power Cooperative	138,766	22,690	6.12	86,103	14,823	5.81
Deep East Texas Electric Cooperative, Inc.	129,466	24,306	5.33	108,573	20,617	5.27
Canadian Valley Electric Cooperative, Inc.	109,007	20,363	5.35	100,669	18,558	5.42
People's Electric Cooperative, Incorporated	104,568	19,422	5.38	91,622	16,588	5.52
Cooperatives with billings less than \$100,000 (13 for 1956 and 1955)	544,987	98,977	5.51	509,954	94,093	5.42
	<u>4,947,593</u>	<u>891,435</u>	5.55	<u>2,109,185</u>	<u>407,904</u>	5.17
<b>Municipalities:</b>						
Springfield, Missouri	418,366	78,461	5.33	347,522	62,131	5.59
Municipalities with billings less than \$100,000 (19 for 1956 and 1955)	393,046	71,360	5.51	353,184	64,331	5.49
	<u>811,412</u>	<u>149,821</u>	5.41	<u>700,706</u>	<u>126,462</u>	5.54
<b>Government agencies:</b>						
Fort Sill, Oklahoma	109,070	19,678	5.54	117,824	21,662	5.44
Government agencies with billings less than \$100,000 (4 for 1956 and 1955)	111,941	18,357	6.10	121,747	21,233	5.73
	<u>221,011</u>	<u>38,035</u>	5.81	<u>239,571</u>	<u>42,895</u>	5.58
Net adjustment to show year-end accruals	-13,987	-7,181	-	12,619	27,350	-
<b>Total sales</b>	<u>\$8,169,043</u>	<u>1,485,452</u>	5.50	<u>\$4,075,727</u>	<u>804,864</u>	5.06

<sup>a</sup>Of the total revenues and energy sold to the Arkansas Power and Light Company, \$1,880,369 and 366,695 thousand kilowatt-hours were from the Reynolds Metals Company contract. Revenues of \$2,973 and energy sales of 2,378 thousand kilowatt-hours were for test energy from the Blakely Mountain Project.

<sup>b</sup>Represents revenues and energy from the Reynolds Metals Company contract.

The increase in over-all average rates per kwh of revenues for fiscal year 1956 over that obtained for fiscal year 1955 of 0.44 mills is largely attributable to the average rate obtained from cooperatives, particularly from the Brazos Electric Power Cooperative, Inc., which takes the generation of the Whitney Project in addition to being served through the facilities of the Texas Power and Light Company. The rate obtained from Brazos for generation from the Whitney Project increased from 2.2 mills in fiscal year 1955 to 8.96 mills per kwh in fiscal year 1956 for energy deliveries of 29,718 and 49,214 thousand kilowatt-hours, respectively. An increase of production of primary energy for sale to

electric utilities, primarily under the Arkansas Power and Light Company aluminum contract, also contributed to the increase in over-all rate received.

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 1955 and 1956, and rates for energy sales differ in each. Of the total energy sales and revenue from electric utilities during fiscal year 1956, about 88 percent of the energy sales and 90 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 1956 are summarized as follows:

	Thousand kilowatt-hours			Energy sales	Revenues	Average rate per kwh (mills)
	Total energy delivered	Energy delivered to preferred customers for the Government	Energy purchased or exchanged retained by SWPA			
Arkansas Power and Light Company and Reynolds Metals Company	366,695	-	-	366,695	\$1,880,369	5.13
Public Service Company of Oklahoma and Oklahoma Gas and Electric Company	122,873 <sup>a</sup>	126,702	12,324	8,495	96,282	11.33
Southwestern Gas and Electric Company	21,218	23,026	8,088	6,281	78,860	12.56
Texas Power and Light Company	94,143	87,902	23,253	29,493	144,530	4.90
Blakely Mountain test	2,378	-	-	2,378	2,973	1.25
Total	<u>602,307</u>	<u>237,630</u>	<u>43,665</u>	<u>413,342</u>	<u>\$2,203,014</u>	<u>5.33</u>

<sup>a</sup>Total energy delivered includes 24,397 thousand kilowatt-hours of deferred energy under an amendatory contract.

Comments on contracts with the electric utilities follow.

Arkansas Power and Light Company and Reynolds Metals Company

Under provisions of the contract dated January 29, 1952, with the Arkansas Power and Light Company and Reynolds Metals Company, the utility company serves the power and energy requirements for the production of aluminum and related materials of the Reynolds Metals Company and the Government delivers to the utility company energy during periods of greatest demand. The contract provides that the Government furnish the power company 150,000 kilowatts of capacity and 2,400 kilowatt-hours of energy per kilowatt a year for a 30-year term. Basic rates for sales of energy range from an average of 5.2 mills during the first 10 years to 5.73 mills during the last 10 years of the contract term. Under provisions of a supplemental agreement dated April 25, 1952, the base rates are

subject to review and redetermination by the Secretary of the Interior beginning with the second 5-year period of the contract and each succeeding 5 years. This agreement permits sliding rate adjustments upward from 5.72 mills during the second 5 years of the contract to 6.37 mills for the last 5 years of the contract term. In addition to the commitment stated above, the contract provides for the sale of secondary energy to the power company at rates ranging from 1.25 mills during the first 5 years to 2 mills during the last 10 years of the contract term.

The Department of the Interior has stated that the existing rate specified in the above contract is not compensatory when compared to cost of service. Also, application of the proposed rate schedule for peaking service to the Aluminum Contract would return revenues necessary to recover the Federal investment as required by law. (See pp. 50 and 51.)

Arkansas Power and Light Company  
Blakely Mountain contract

Under provisions of a contract dated August 20, 1954, as amended on April 19, 1955, all energy production of the Blakely Mountain Project is delivered to the company at the project site. Terms of the contract provide that the company shall deliver to the Government at or near the Bull Shoals and the Norfolk Reservoir Projects a total of 136,000,000 kilowatt-hours per year in return for energy generated at the Blakely Mountain Project, which, based on engineering studies, is expected to be 122,000,000 kilowatt-hours of primary energy and an average of 28,000,000 kilowatt-hours of secondary energy. Thus the Government may receive more or less energy than the project generates.

The Administration has no transmission facilities available for the disposition of the energy generated at this project. The contract stipulates that the company will provide transmission and related facilities necessary to receive, transmit, and utilize the electric power and energy generated at the project.

The contract further provides that the engineering studies and estimates shall be reviewed by representatives of the Government and the company at the end of each 3-year period after the Blakely Mountain Dam is placed in commercial operation. After each review the Government shall redetermine its estimates of primary and secondary energy which can be produced at the project. If such redetermined estimates vary in amount by 3 percent or more from the previous estimates of the Government, the amount of electric energy which the company is obligated to furnish and deliver to the Government shall be increased or decreased by an accepted formula.

As of June 30, 1956, the Government had withdrawn from the company 21,855,000 kilowatt-hours more than generation at the project.

Public Service Company of Oklahoma  
and Oklahoma Gas and Electric Company

Under the provision of a contract dated July 13, 1950, referred to as the Oklahoma companies contract, the utility companies deliver to or for the account of the Government all the power and energy required to serve the customers of the Government in the service area of the electric utility companies. The Government in turn delivers peaking power to the companies at a rate of 1.65 kilowatts for each kilowatt of maximum firm power demand which the companies are obligated to deliver to preference customers of the Government. Under this arrangement, for each kilowatt of the Government's load for preference customers, the Government delivers to the companies 1.65 kilowatts times 200 hours, or 330 kilowatt-hours, each month. The term of the contract is 20 years, but after the initial 5-year period each party may terminate the contract by giving 3 years' written notice to the other party.

The companies pay a demand charge and compensate the Government for all energy received in excess of the quantity necessary to serve the needs of the Government's customers at the rate of 1.25 mills per kilowatt-hour. The contract further provides payment by the Government at the rate of 4 mills per kilowatt-hour for each kilowatt-hour withdrawn from the companies' system for service to the Government's customers in excess of the energy delivered by the Government under the basic arrangement. In addition to these rates for the purchase and sale of power and energy, the contract provides for a transmission charge of 1.25 mills per kilowatt-hour for each kilowatt-hour delivered by the companies over their facilities for the account of the Government. Provision is made also for review and redetermination of the rates at February 13, 1953, and every succeeding 3 years. (See pp. 50 and 51.)

Southwestern Gas and Electric Company

Power and energy from the Narrows Project, not required for the operation of the project, are sold to the Southwestern Gas and Electric Company subject to limitations on the maximum and minimum rate of generation or delivery. The contract dated December 27, 1950, provides that the company pay the Government \$207,000 a year, payable at the rate of \$17,250 a month. Under the contract the company is required to sell and to deliver to or for the account of the Government an amount of power not in excess of 5,000 kilowatts and such accompanying energy as may be required, at the rate of \$0.60 a month per kilowatt of billing demand and 4 mills per kilowatt-hour of energy delivered. The agreement also provides a charge of 1 mill for each kilowatt-hour not in excess of 1,000,000 kilowatt-hours per month delivered by the company for the Government's account to the rural electric cooperatives.

The contract has a term of 10 years but may be continued on a year-to-year basis thereafter at the option of the parties. In

addition, the contract provides for review and redetermination of the rates at February 13, 1953, and at the end of each 3-year period. (See pp. 50 and 51.)

#### Texas Power and Light Company

The agreement dated April 4, 1947, with the Texas Power and Light Company provides for the delivery of one half of the available primary and secondary energy generated at the Denison Project. For this energy, the contract provides that the company shall pay the Government \$52,000 a month, less the amounts for capacity and energy in excess of a stipulated quantity taken out of the company's system for delivery to the Government's preferred customers. The contract term is 20 years and may be terminated by the Government or the company by giving the other party 6 years' written notice. (See pp. 50 and 51.)

#### Service to preference customers

All preference customers of the Administration, with the exception of power sold from the Whitney Project to the Brazos Electric Power Cooperative, Inc., are served under rate schedule "A." This schedule provides a monthly demand charge of \$1.35 per kilowatt of billing demand, which charge includes the use of 200 kilowatt-hours for each kilowatt. The schedule provides also for an energy charge of 4 mills per kilowatt-hour for all additional kilowatt-hours.

The contract dated November 17, 1953, with the Brazos Electric Power Cooperative, Inc., provides for the sale to the Cooperative of the entire electric energy output of the Whitney Project not required in the operation of the project. Under this agreement the cooperative pays the Government a monthly amount of \$36,750 for 2,500,000 kilowatt-hours of primary energy and such available secondary energy as can be absorbed into the cooperative's system. Adjustments in the amount for failure to deliver energy scheduled by the cooperative are provided by the contract. The contract term is 35 years with provision for rate review and redeterminations each 5 years from the date of initial rate approval (December 23, 1954) by the Federal Power Commission.

Preference customers, other than the energy delivered to the Brazos Electric Power Cooperative, Inc., from the Whitney Project, received 1,030,077 thousand kilowatt-hours in fiscal year 1956 at an average rate of 5.37 mills per kwh compared with 547,544 thousand kilowatt-hours at an average rate of 5.45 mills per kwh in fiscal year 1955. Deliveries to the Brazos Electric Power Cooperative, Inc., from the Whitney Project, were 49,214 and 29,718 thousand kilowatt-hours, respectively, for the fiscal years 1956 and 1955, at average rates of 8.96 and 2.22 mills per kwh.

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. Tentative approval has been given by the Commission to the rate schedules now in use.

Preference customers

The existing rate schedule "A" under which preference customers are served was developed by the Department of the Interior in 1946 and approved by the Federal Power Commission on February 13, 1947, as an interim rate schedule to remain in effect until such time as further study and experience indicated the desirability for revision, but for not more than 6 years. From the expiration of the original approval until December 31, 1954, successive short extensions of the initial rate schedule were granted.

On December 29, 1954, the Federal Power Commission was requested by the Department of the Interior to confirm and approve an increase in rate schedule "A" from 5.51 mills per kilowatt-hour to 6.44 mills per kilowatt-hour, based on a 50 percent load factor, in order to accomplish repayment of the Federal investment. On January 5, 1955, the original rate schedules were extended until the Commission confirmed and approved the new rate schedules filed by the Administration.

Because of the changes in operations resulting from the re-activation of the lease contracts with the generating and transmission cooperatives (see p. 38), the Department of the Interior requested the Federal Power Commission to withhold action on the proposed new rate schedule before it so that the Department could make additional studies and prepare a revised schedule.

In January 1956 a bill was introduced in the Senate (S. 3338)<sup>1</sup> which would have provided for a moratorium on power rate increases for a period of 18 months after January 1, 1956, on power disposition from projects under Federal control.

In March 1956 the Department was prepared to propose specific revisions to rate proposals then before the Commission when the Senate Public Works Committee, jointly with three other committees of the Senate and the House, held hearings on the proposed rate increases. At the request of the committees the Department postponed action on the increase for 30 days.

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<sup>1</sup>H.R. 9664 and 9721, 84th Cong., contained provisions providing for a moratorium on power rate increases for power and energy marketed to any public body or cooperative. These bills were not reported out of committees.

The proposed rate increase was justified by the Department because (1) the estimated total construction cost rose 79 percent above the original estimate, (2) while dollarwise the allocation to power has increased 83.3 percent over the original Southwestern Power Administration estimate, the percentage of total cost allocated to power under the current estimate, 56 percent, approximated the same as the percentage prevailing at the time of authorization, 54.7 percent, and is only slightly higher than the percentage prevailing at the time of the filing of the original rate schedule "A," 47.4 percent, (3) of increase in annual operation and maintenance costs and (4) of reactivation of agreements with generating and transmission cooperatives that require the use of revenues to implement them.

Under this proposal the existing rate schedule "A" would be replaced with a two-part rate for capacity and energy, as follows:

Demand charge

\$1 per kilowatt of billing demand per month

Energy charge

3.5 mills per kilowatt-hour for first 150 hours of use  
6.0 mills per kilowatt-hour for use in excess of 150 hours  
of use

The proposed rates would average 7.71 mills per kilowatt-hour for customers at a 50 percent load factor, about a 40 percent increase.

On July 31, 1956, a bill (S. 3338) was forwarded for Presidential signature which would have provided for a moratorium on power rate increases for a period of 18 months after January 1, 1956, except for rates in effect on February 27, 1956, for electric power and energy marketed by the Southwestern Power Administration to any public body or cooperative. A second provision of the bill provided that the incremental method of cost allocation be used in determining project costs used in arriving at power rates.

The President disapproved the bill after sine die adjournment on August 9, 1956, stating that the only purpose which the legislation could accomplish would be to prevent the Secretary of the Interior from fulfilling the obligations imposed upon him by section 5 of the Flood Control Act of 1944, to establish rate schedules which will return sufficient revenue to amortize the investment in Federal multiple-purpose projects allocated to power, and to pay the necessary costs incurred in operating and maintaining power projects.

The Department of the Interior submitted a revised schedule "A" rate proposal to the Federal Power Commission on November 16, 1956, for approval, as follows:

Demand charge

\$1.60 per kilowatt of billing demand subject to a discount of

(a) \$0.10 per kilowatt of billing demand per month on the total monthly charge of firm 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.

(b) \$0.40 per kilowatt of billing demand per month on the total monthly charge for firm 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.

Energy charge

2 mills per kilowatt-hour for the first 150 kilowatt-hours per kilowatt of billing demand

3 mills per kilowatt-hour for the next 290 kilowatt-hours per kilowatt of billing demand

5 mills per kilowatt-hour for energy in excess of the first 440 kilowatt-hours per kilowatt of billing demand

The proposed rate will average 6.97 mills per kilowatt-hour for customers at a 50 percent load factor compared with 5.51 mills under rate schedule "A" presently used, an increase of about 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. Extensions have been granted to the Administration until the Commission has confirmed and approved the rate schedules now being filed by the Administration.

It is the intention of the Southwestern Power Administration to renegotiate the contracts with the private utilities to bring them in line with the proposed rate schedules. The Department of the Interior has stated that the rates in the contract with the Arkansas Power and Light Company-Reynolds Metals Company dated January 29, 1952, do not meet the requirements of section 5 of the Flood Control Act of 1944. Further, the Department has stated that if the Commission determines and confirms and approves applicability of proposed rate schedules for peaking power service under the above contract, the proposed rate schedules will 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 will be treated uniformly.

## 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 Dardanelle and Eufaula Projects in the Arkansas River basin are the only multiple-purpose projects constructed or under construction having navigation as a purpose. Four additional multiple-purpose projects in the Arkansas River basin with navigation as a purpose have been authorized. These are the Short Mountain, Keystone, and Ozark Projects on the Arkansas River and the Webbers Falls Project on the Verdigris River.

The following tabulation summarizes at June 30, 1956, the estimated construction cost allocable to navigation for projects in operation or under construction in the Arkansas, White, and Red River basins.

	<u>Allocation to navigation</u>
Arkansas River basin:	
Multiple-purpose project:	
Dardanelle (estimated total construction cost, \$101,695,000)	\$ 53,460,000
Eufaula (estimated total con- struction cost, \$161,121,000)	54,900,000
Single-purpose navigation and bank stabilization projects	<u>20,746,016</u>
	129,106,016
White River basin:	
Single-purpose navigation and bank stabilization projects	1,272,998
Red River basin:	
Single-purpose navigation and bank stabilization projects	<u>7,529,509</u>
Total estimated cost to navigation of projects in operation or under con- struction	<u>\$137,908,523</u>

As stated on page 15 of this report, existing cost allocations on the multiple-purpose projects are tentative; accordingly, the allocations in the above summary are 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:

<u>River</u>	<u>Location</u>	<u>Distance (miles)</u>	<u>Controlling depth</u>	<u>Authorized project depth (feet)</u>
Arkansas	Mouth to Wilsons Rock, Oklahoma	395	3 or more feet, 4 months; less than 3 feet, 8 months	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	<u>351</u>	Minimum depth 6.5 feet during low-water season	9
Total		<u>1,534</u>		

The Arkansas River projects will provide a 9-foot deep navigable channel beginning at Catoosa, Oklahoma, to the mouth of the Arkansas River, a distance of about 480 miles. The plan of improvement provides for a channel 150 feet wide on the Verdigris River and 250 feet wide 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 plan for the Arkansas River as authorized (60 Stat. 634; H. Doc. 758, 79th Cong.) provides for 15 navigation locks and dams, 3 navigation locks, a navigation dam, and 4 navigation and hydroelectric power dams at an estimated cost of \$797,700,000, as follows:

<u>Feature</u>	<u>River</u>	<u>Estimated cost</u>
<b>Main-stem reservoirs (multiple-purpose):</b>		
Webbers Falls Dam and Reservoir	Verdigris River	\$ 68,500,000
Short Mountain Dam and Reservoir	Arkansas River	95,500,000
Ozark Dam and Reservoir	do	50,900,000
Dardanelle Dam and Reservoir	do	<u>94,600,000</u>
		309,500,000
<b>Locks and dams:</b>		
Navigation locks, dams, dredging	Verdigris and Arkansas Rivers	402,000,000
<b>Bank stabilization and channel rectification</b>		
	Arkansas River	<u>86,200,000</u>
<b>Total</b>		<u>\$797,700,000</u>

At June 30, 1956, accrued expenditures for engineering and design work on the Dardanelle Dam and Reservoir Project amounted to \$505,666. Planning of other features of the over-all project has been suspended. Construction funds have been appropriated, however, for stabilization works at specific critical localities which will ultimately reduce the fund requirements for the over-all program in succeeding years. Total expenditures to June 30, 1956, amounted to \$20,165,062 for construction and \$253,331 for operation and maintenance.

The Overton-Red River Waterway includes the construction of nine locks, a pumping plant, and dredging at an estimated cost of \$93,500,000. Work on this project has been limited to advanced planning. Total expenditures to June 30, 1956, amounted to \$364,355.

The Ouachita and Black Rivers Project, modifying the existing project, includes the deepening of the Felsenthal Canal and dredging at an estimated cost of \$21,700,000. Work on this project amounting to \$50,000 has been limited to advance planning. At June 30, 1956, the cost of the existing project was \$5,298,619 for construction and \$10,975,677 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 1956 and cumulative to June 30, 1956, are summarized as follows:

<u>Basin</u>	<u>Fiscal year 1956</u>	<u>Cumulative to June 30, 1956</u>
Arkansas River	\$ 98,562	\$ 3,649,397
White River	-	4,715,075
Red River	<u>572,438</u>	<u>13,489,658</u>
Total	<u>\$671,000</u>	<u>\$21,854,130</u>

Statement of costs for operating and maintaining the navigation plant in the Arkansas, White, and Red River basins is included as schedule 5, page 84, of this report.

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

#### Benefits from operation of navigation facilities

Direct and indirect benefits stem from Corps single-purpose navigation and multiple-purpose projects.

Direct benefits to water-borne commerce will be obtained from main-stem, multiple-purpose projects through river-flow regulation.

Single-purpose projects aid navigation by providing a navigable channel for shipping on the Arkansas, White, and Red Rivers. Ton-nages 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 1953, 1954, and 1955, as follows:

Products	Arkansas River basin			White River basin			Red River basin		
	1953	1954	1955	1953	1954	1955	1953	1954	1955
Molasses	-	-	-	-	-	-	5,214	-	-
Fish and products, fresh	278	191	212	806	549	478	666	475	503
Seashells	-	-	-	337	649	713	-	-	100
Logs and pulpwood	11,485	1,224	8,813	48,725	28,063	25,685	76,732	61,958	47,621
Posts, poles, and piling	25	2,405	2,062	-	-	-	-	-	-
Other wood products	-	-	-	-	-	-	250	15	-
Clays, sand, gravel, crushed rock	500,997	428,013	722,475	205,505	158,300	122,400	67,240	600	4,873
Residual fuel oil	-	-	-	-	-	-	465,521	-	5,074
Manganese	-	-	-	-	-	-	7,378	-	-
Rolled, finished steel mill products	-	-	-	-	-	-	3,113	514	1,727
Construction, mining machinery, parts	675	740	150	1,400	600	360	10,105	6,132	3,387
Industrial machinery, parts	-	-	-	-	-	-	325	35	30
Industrial chemicals	-	-	-	-	-	-	74,260	83,602	85,951
Water	-	-	-	-	-	-	40	-	39
Waterway improvement materials	-	-	3,900	3,840	-	-	2,282	1,320	860
<b>Total</b>	<b>513,460</b>	<b>432,573</b>	<b>737,612</b>	<b>260,613</b>	<b>188,161</b>	<b>149,636</b>	<b>713,126</b>	<b>154,651</b>	<b>150,165</b>
Inbound	303	831	204	5,240	778	25	30,437	14,455	15,518
Outbound	12,160	1,229	8,898	7,568	6,450	2,237	599,087	91,441	89,811
Intrawaterway	500,997	430,513	728,570	247,805	180,933	147,374	83,602	48,755	44,836
<b>Total</b>	<b>513,460</b>	<b>432,573</b>	<b>737,612</b>	<b>260,613</b>	<b>188,161</b>	<b>149,636</b>	<b>713,126</b>	<b>154,651</b>	<b>150,165</b>
<b>Total ton-miles</b>	<b>2,079,475</b>	<b>958,259</b>	<b>2,723,216</b>	<b>4,108,989</b>	<b>2,776,544</b>	<b>1,770,618</b>	<b>23,268,683</b>	<b>23,661,342</b>	<b>26,450,403</b>
Average length of haul-miles	<u>4</u>	<u>2.2</u>	<u>3.7</u>	<u>15.7</u>	<u>14.8</u>	<u>11.8</u>	<u>32.6</u>	<u>153</u>	<u>176</u>

The average length of haul for all traffic on the Arkansas River in calendar year 1953 was 4 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. In House document 758, Seventy-ninth Congress (p. 58), the Corps estimated that water-borne commerce would expand to 9,015,000 tons annually after completion of the over-all project for the Arkansas River and tributaries project.

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 on the Cypress

Bayou and Waterway between Jefferson, Texas, and Shreveport, Louisiana, and on the Tensas River and Bayou Macon, Louisiana, was available for calendar years 1953 and 1954 but not for calendar year 1955. The statistics for 1953 and 1954 have not been included in the summary above as they are insignificant, nor have any statistics for the other navigable channels in the Red River basin been included for lack of any commerce being reported. 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 through two measures; one through reservoir storage and the other through 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. Small projects and emergency flood protection and other minor construction can be undertaken by the Corps without specific authority from Congress to the extent of a maximum sum for any single project of \$400,000.

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

Constructed or under construction	\$ 720,459,540
Advance planning status	<u>313,148,000</u>
Total	<u>\$1,033,607,540</u>

As stated on page 15 of this report, existing cost allocations of the multiple-purpose projects are 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:

<u>Projects</u>	Total estimated construction cost	Allocation of total estimate to flood control	
		<u>Amount</u>	<u>Percent</u>
Multiple-purpose (note a):			
Fort Gibson	\$ 44,116,906	\$ 26,840,650	61
Tenkiller Ferry	23,431,180	11,504,290	49
Eufaula	161,121,000	62,160,000	39
Bull Shoals	79,729,000	30,519,000	38
Norfolk	30,093,000	16,134,000	54
Table Rock	71,712,000	16,815,000	23
Blakely Mountain	33,102,000	8,084,000	24
Denison	62,127,550	41,236,600	66
Narrows	<u>13,652,000</u>	<u>8,157,000</u>	60
Total	519,084,636 <sup>b</sup>	221,450,540 <sup>c</sup>	43
Single-purpose flood control (20)	357,609,000	357,609,000	100
Levee and channel im- provements	<u>141,400,000</u>	<u>141,400,000</u>	100
Total	<u>\$1,018,093,636</u>	<u>\$720,459,540</u>	71

<sup>a</sup>Exclusive of the Whitney Project on the Brazos River, Texas. Total estimated construction cost of this project is \$43,877,900, of which \$32,818,800 has been allocated to flood control.

<sup>b</sup>Includes interest amounting to \$25,359,309.

<sup>c</sup>Includes interest amounting to \$11,063,979.

Estimated costs of Federal participation to cover costs of flood water storage at two state-owned dams are included in the above tabulation. Participation in the Markham Ferry Project (see p. 95), which is to be constructed by the Grand River Dam Authority, an Oklahoma State Conservation and Reclamation District, amounts to \$6,906,000 and in the Pensacola Project owned by the State of Oklahoma amounts to \$1,760,000 for a total of \$8,666,000.

Construction of 16 dams and reservoirs for flood control are completed and 4 are under construction.

#### COST OF FLOOD CONTROL OPERATIONS

Total 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 1956 and cumulative to June 30, 1956, are summarized as follows:

<u>Class</u>	<u>Fiscal year 1956</u>	<u>Cumulative to June 30, 1956</u>
Multiple-purpose projects (note a)	\$2,901,680	\$19,003,420
Single-purpose flood control projects	810,381	7,510,867
Other flood control operations including flood emergency measures, rehabilitation of dikes and levees, and costs of inactive projects	<u>833,111</u>	<u>23,546,292</u>
Total	<u>\$4,545,172</u>	<u>\$50,060,579</u>

<sup>a</sup>Exclusive of the Whitney Project

The tabulation includes charges for depreciation and interest on multiple-purpose (including power) projects in the amount of \$2,639,776 for fiscal year 1956. 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 except for the Fort Gibson, Tenkiller Ferry, and Denison Projects where interest is charged only to power investment. Included also are (1) credits for revenues received from reservoir lands in the amount of \$389,634 for fiscal year 1956, of which 75 percent are returnable to the states and (2) public-use facilities expense. The cumulative totals of these credits and pertinent expenses to 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 \$55,000,000 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.

## RECREATIONAL ACTIVITIES AT RESERVOIR

### PROJECTS OF CORPS OF ENGINEERS<sup>1</sup>

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 maintenance 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 are summarized as follows:

<u>Project</u>	<u>Estimated construction costs allocated to public use (note a)</u>
Fort Gibson	\$ 144,000
Tenkiller	40,000
Denison	626,300 <sup>b</sup>
Whitney	9,800
Eufaula	<u>451,000<sup>b</sup></u>
Total	<u>\$1,271,100</u>

<sup>a</sup>According to latest tentative cost allocation studies.

<sup>b</sup>Includes interest on construction funds.

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

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<sup>1</sup> 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."

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.

At four of the multiple-purpose projects in operation, Fort Gibson, Tenkiller Ferry, Denison, and Whitney, specific recreation operation costs incurred by the Corps are allocated specifically to recreation expense. At the four other multiple-purpose projects in operation, Bull Shoals, Norfolk, Blakely Mountain, and Narrows, such costs have been included as joint expenses. At the Bull Shoals, Blakely Mountain, and Narrows Projects, these costs were allocated to power and flood control on the separable costs--remaining benefits method. These costs at the Norfolk Project were allocated to power and flood control on the incremental method. Recreation costs for fiscal year 1956 are summarized as follows:

<u>Projects</u>	<u>Total recreation expense</u>	<u>Allocation</u>		
		<u>Power</u>	<u>Nonpower</u>	<u>Recreation</u>
<b>Multiple-purpose:</b>				
Fort Gibson (note a)	\$ 51,087	\$ -	\$ -	\$ 51,087
Tenkiller Ferry	21,754	870	1,102	19,782
Bull Shoals	33,250	15,295	17,955	-
Norfolk	25,612	10,245	15,367	-
Blakely Mountain	12,952	4,145	8,807	-
Denison (note a)	99,060	-	-	99,060
Narrows	10,457 <sup>b</sup>	2,287	8,170	-
Whitney	<u>18,363<sup>b</sup></u>	<u>109</u>	<u>389</u>	<u>17,865</u>
<b>Total</b>	<b>272,535</b>	<b><u>\$32,951</u></b>	<b><u>\$51,790</u></b>	<b><u>\$187,794</u></b>
<b>Single-purpose:</b>				
Flood control	<u>75,710</u>	(No allocations involved)		
<b>Total</b>	<b><u>\$348,245</u></b>			

<sup>a</sup>Allocated to joint expense in fiscal year 1955.

<sup>b</sup>Includes \$498 for fish and wildlife studies.

The amounts shown in the above tabulation do not include all costs of operation and maintenance of recreational and public-use facilities. All real estate management costs incurred in connection with the public-use program are not allocated to recreation. Real estate management expense for the Fort Gibson, Tenkiller Ferry, and Denison Projects is allocated to recreation expense, whereas for the other multiple-purpose projects it is considered a joint expense and distributed to power and flood control. Total

real estate management expense for fiscal year 1956 for the projects involved exceeded \$127,000. Road maintenance costs for all multiple-purpose projects, except Denison, are allocated to joint expense, which is distributed to power and flood control. At the Denison Project, 10 percent of these costs are charged directly to recreation and 90 percent are charged to joint expense. General administrative expense at the Denison Project is partially allocated to recreation expense directly, whereas for the other multiple-purpose projects it is considered a joint expense in entirety and distributed to power and flood control costs.

Until the Corps of Engineers applies a uniform procedure for all projects, the total costs of operating and maintaining recreational facilities cannot be readily ascertained.

GENERAL INVESTIGATIONS AND ADVANCE PLANNING PROGRAM  
OF CORPS OF ENGINEERS

Authority for Federal control over rivers and harbors had its origin in the commerce clause of the Constitution, and the Corps has conducted waterways investigations for navigation purposes under this authority since 1820. Subsequent acts of Congress have authorized examinations and surveys for regulation of rivers, development of rivers for all purposes that may be served thereby, and comprehensive investigations for entire river basins. Among these acts were the Flood Control Act of June 22, 1936 (49 Stat. 1570), which established a national flood control policy and authorized many projects on which examinations and surveys had been completed by the Corps, and the Flood Control Act of 1944 (33 U.S.C. 701-1), which set forth a number of policies having an important bearing on planning of civil works projects.

ARKANSAS-WHITE-RED BASINS INTER-AGENCY COMMITTEE

Section 205 of the Flood Control Act of 1950 (64 Stat. 180) authorized the development of comprehensive and integrated plans of improvement in the Arkansas, White, and Red River basins under the direction of the Corps of Engineers to be coordinated with the Department of the Interior, Department of Agriculture, Federal Power Commission, other appropriate Federal agencies, and with the eight states in the basins. The plans of 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. Federal projects in operation, under construction, authorized for construction, or projects authorized in the future were not to be altered, changed, restricted, delayed, retarded, or otherwise impeded or interfered with by authorization of the comprehensive investigation.

Based on the authorization in the Flood Control Act of 1950, the President directed the Departments of the Army, Agriculture, the Interior, and Commerce and the Federal Security Agency and Federal Power Commission to conduct the investigations on an inter-agency basis under the chairmanship of the Department of the Army. Pursuant to the President's letter the Federal Inter-Agency River Basin Committee established the Arkansas-White-Red Basins Inter-Agency Committee for the purpose of interchanging information and coordinating the activities of the participating Federal agencies and states in the investigation and preparation of a report.

Each agency obtained appropriations for its participation in the survey. Appropriations to the Corps of Engineers for its work were provided from funds for general investigations. Costs incurred by the Corps for its participation in performing the survey amounted to \$2,699,606 through June 30, 1956. These amounts are

included in the financial statements of this report to the extent that the costs are recorded in the accounts for the districts having projects in the Arkansas, White, and Red River basins.

The committee issued a report to the President in May 1956 which was submitted to the Congress in the following month. The report set forth a plan of development as a general guide to the future development of the resources of the area. The plan included projects formulated prior to the survey and projects not feasible under present standards but which may become feasible in future years and has taken into account private and local as well as Federal development.

## INVESTIGATION OF PROJECTS FOR AUTHORIZATION

Appropriations for general investigations provide funds for the collection and study of basic information on river and harbor, flood control, shore protection, and related programs and for authorized examinations, surveys, and studies to determine the advisability of recommending projects for construction.

Favorable preliminary examination reports result in surveys and survey-type reports. Unfavorable preliminary examination reports are submitted to the Congress and no further investigations are made. For those proposed projects which are considered feasible by the Corps, the survey reports are reviewed by the affected states, by other Federal agencies concerned, and by the Bureau of the Budget after which they are submitted to the Congress.

Projects recommended in survey reports are undertaken on authorization by the Congress. After authorization of the project, a definite project study is made and design memoranda are prepared which serve for developing engineering preconstruction plans and in the preparation of detailed plans and specifications. Funds for advance planning on authorized projects are provided under appropriations for construction.

Under Corps accounting procedures, costs incurred in conducting preliminary surveys and investigations are not included in total project costs. Distinction is also not made between projects having reimbursable purposes and those which are nonreimbursable for purposes of classifying costs of preliminary surveys and investigations.

In contrast with Corps procedures, project investigation costs and certain basin survey costs of the Bureau 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.

### Recommendation to the Chief of Engineers

Our report dated September 26, 1956, on the audit of the Arkansas, White, and Red River Basins Power System and Related Activities for the fiscal year ended June 30, 1955, contained a recommendation as follows:

"We believe that the costs incurred in investigating and surveying approved projects should be included as part of the total construction costs of the projects. We believe also that an appropriate share of the costs of basin surveys and investigations should be transferred to project costs upon authorization of a unit in the comprehensive plan of development. Costs incurred for investigations and surveys are as essential to the

construction of the project as are costs incurred for materials and labor. The expenditures for preliminary surveys and investigations to be included as a part of construction costs of the project, however, should not exceed the amount that may be reasonably determined to contribute directly and without duplication to the construction of the project.

"To provide for an adequate disclosure of total project costs and to permit consideration of all proper costs for allocations of total construction costs to purposes, we recommend that the Chief 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 construction of the project.

Project investigation costs and certain basin survey costs are transferred by the Bureau of Reclamation to construction work in progress when funds for construction of the project are appropriated. The investigation costs of the power marketing agencies of the Department of the Interior are treated similarly. The adoption of this recommendation by the Corps of Engineers will provide for a more adequate disclosure of construction costs for Corps projects, and bring about comparable policies and procedures on investigation costs between the several water resource 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. Our audit for fiscal year 1956 disclosed that procedures which prompted the above recommendation have not changed. 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. Accordingly, we urge that the above recommendation be adopted.

#### 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, 1956, costs classified as advance planning had been incurred by the Corps on 5 projects that include power as a purpose, 13 single-purpose reservoir projects, 3 local flood control protection works and 3 navigation projects as follows:

<u>Project and purpose</u>	<u>Basin</u>	<u>Fiscal year 1956</u>	<u>Cumulative to June 30, 1956</u>
<b>Multiple-purpose, including power:</b>			
Short Mountain, Oklahoma	Arkansas	\$ -	\$ 68,000
Webbers Falls, Oklahoma	Arkansas	-	55,000
Beaver, Arkansas	White	23,657	23,657
Greers Ferry, Arkansas	White	175,944	386,152
DeGray, Arkansas	Red	<u>69,012</u>	<u>69,012</u>
		<u>268,613</u>	<u>601,821</u>
<b>Flood control reservoir projects:</b>			
Elk City, Kansas	Arkansas	-	89,893
Keystone, Oklahoma	Arkansas	41,239	689,219
Markham Ferry, Oklahoma	Arkansas	2,607	503,655
Neodesha, Kansas	Arkansas	-	97,910
Optima, Oklahoma	Arkansas	-	168,068
Strawn, Kansas	Arkansas	23,181	288,181
Bell Foley, Arkansas	White	-	68,309
Lone Rock, Arkansas	White	-	130,652
Water Valley, Arkansas	White	-	414,011
Boswell, Oklahoma	Red	-	128,786
Hugo, Oklahoma	Red	-	60,000
Millwood, Arkansas	Red	256	204,819
Mooringsport, Louisiana and Texas	Red	-	<u>69,008</u>
		<u>67,283</u>	<u>2,912,511</u>
<b>Local flood control projects:</b>			
Enid, Oklahoma	Arkansas	3,378	3,378
Purgatoire River, Colorado	Arkansas	-	53,028
Calion, Arkansas	Red	<u>24,144</u>	<u>24,144</u>
		<u>27,522</u>	<u>80,550</u>
<b>Navigation projects:</b>			
Arkansas River and Tributaries, Arkansas and Oklahoma	Arkansas	-	284,727
Ouachita River and Tributaries, Arkansas and Louisiana	Red	50,000	50,000
Overton-Red River Waterway, Louisiana	Red	<u>174,592</u>	<u>364,355</u>
		<u>224,592</u>	<u>699,082</u>
<b>Total</b>		<u>\$588,010</u>	<u>\$4,293,964</u>

Total costs classified as advance engineering and design are summarized for the Arkansas, White, and Red River basins.

<u>Basin</u>	<u>Fiscal year 1956</u>	<u>Cumulative to June 30, 1956</u>
Arkansas	\$ 70,405	\$2,301,059
White	199,601	1,022,781
Red	<u>318,004</u>	<u>970,124</u>
Total	<u>\$588,010</u>	<u>\$4,293,964</u>

Funds were provided in fiscal year 1956 for initiating construction of the Eufaula and Dardanelle multiple-purpose projects including power and the Oologah flood control reservoir project. These projects were transferred from the advance planning stage to the construction stage of development. In fiscal year 1957 funds were provided for starting construction of Greers Ferry multiple-purpose project including power and the Keystone Project. Funds were also provided in fiscal year 1957 for initiating advance planning work on the Council Grove Project.

The act of July 6, 1954 (68 Stat. 450), authorized the construction of the Markham Ferry Project on the Grand River in Oklahoma by the Grand River Dam Authority, and instrumentality of the State of Oklahoma. This act authorized appropriations not to exceed \$6,500,000 as a monetary contribution by the United States for flood control storage in the Markham Ferry Project and authorized and directed the sale and conveyance to the Grand River Dam Authority of such lands or interest therein owned by the United States as may be necessary for the construction and operation and maintenance of the project. When completed by the Authority, the flood control storage in the reservoir will be operated as a unit in the comprehensive plan in the Arkansas River basin.

Planning money was provided in fiscal year 1957 for the Elk City flood control reservoir. Funds were provided also in fiscal year 1957 for continuation of planning work on the Overton-Red River Waterway and the Ouachita River and Tributaries navigation projects.

## 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, allocations to purposes of construction costs of multiple-purpose projects, 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 amounts for rentals and other services furnished without charge by General Services Administration and other Federal agencies, death and disability claims on account of Corps employees paid by the Bureau of Employees' Compensation, Department of Labor, and the amounts applicable to their operations of the cost of the Civil Service Retirement System. 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 the appropriation to the Corps for general expenses and are not distributed to construction, operation and maintenance, and other programs.

Provisions for accrued annual and sick 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. 63 through 68.)

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.

The Corps of Engineers and the Department of the Interior have not established comparable policies and practices for allocating to purposes the joint costs and expenses of operation and maintenance. 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, however, do not provide a basis for the allocation of depreciation expense for the annual depreciation for multiple-purpose projects.

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

The fairness of the amounts determined for results from operations is dependent upon the reasonableness of the allocation to purposes of costs and expenses. In our report dated September 26, 1956, on the audit of the Arkansas, White, and Red River Basins Power System and Related Activities for fiscal year 1955 (p. 83), we recommended that policies be adopted which would provide a sound and consistent basis for allocating joint costs and expenses as follows:

- "1. Allocation to power and nonpower purposes of provisions for depreciation on plant, property, and equipment common to more than one purpose on the basis of the capital cost allocation.
- "2. Limit the computation and recording of interest on investment to commercial power and municipal water supply purposes and charge the interest as a cost of operations on the basis of the capital cost allocation to these two purposes.
- "3. Allocation to purposes of current operation and maintenance expenses on the basis of 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. Until these matters are resolved by the respective agencies, agreement on comparable policies cannot be reached. Accordingly, we repeat the recommendation.

#### PROVISIONS FOR DEPRECIATION OF FACILITIES

Accounting procedures of the Corps of Engineers 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.

Transfers to plant in service are 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 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 provides that retroactive adjustments will not be made where completed construction has been transferred to plant in service and interest and depreciation computations have been entered in the accounts in accordance with prior instructions. At June 30, 1956, provisions by the Corps for depreciation on multiple-purpose projects including power in the Southwestern area had not been made properly, or on a consistent basis between the several projects.

As stated in Accounting Principles Memorandum No. 1 (section VIII on Property Accounting) issued by the Comptroller General on November 26, 1952, 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.

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.

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

The report dated September 26, 1956, on the audit of the Arkansas, White, and Red River Basins Power System and Related Activities for the fiscal year ended June 30, 1955, contained a recommendation (p. 86), as follows:

"To obtain comparable financial data on water programs, we recommend that the Chief of Engineers and the Secretary of the Interior establish jointly, and apply consistently, a policy on depreciation that will provide (1) recording in the books of account a cost of producing services and (2) the amounts attributable to reduction in service lives of plant, based on principles, as follows:

1. The computation of depreciation provisions under the straight-line method with a maximum service life of 100 years.
2. The application of the policy to depreciable plant in service, whether or not revenues are derived from rendering of the service.
3. The absorption, as depreciation or amortization, of costs of land and land rights (exclusive of acquisition costs in fee), canal excavations, excavation and grading of roads, relocations of existing facilities, and intangibles.
4. Joint facilities to be considered as plant in service in the ratio of installed capacity to total capacity based on a planned installation schedule of generators that are installed under an uninterrupted construction program of the

project. For certain projects, such as projects having substantial power storage benefits in addition to at-site generation, modifications may be required in this formula to obtain a proper determination of depreciation and interest expense.

5. The provision in the accounts for depreciation on plant in service not (and not to be) operated permanently by the Government.
6. Depreciation be computed from the first of the month succeeding the date the facilities are placed in service.
7. Adjustments be made for the deficient and unrecorded depreciation in the past, wherever the amounts are material and would have a significant effect in determining the results of operating and maintaining the facilities.
8. The presentation in the financial statements of the accumulated provisions for depreciation as a deduction from plant in service."

Certain of the principles relating to depreciation have been adopted by the Corps of Engineers for multiple-purpose projects including power. However, application has not been made properly or on a consistent basis between the several projects. (See p. 99.) Decision by the Department of the Interior on depreciation has not been reached. We have been informed that these matters are receiving current consideration by the Interior Cost Allocation and Financial Practices Committee.

Inasmuch as the policy on depreciation has not been adopted, or the policy has been incompletely or inadequately applied, the recommendation on depreciation is repeated in this report.

#### INTEREST ON THE FEDERAL INVESTMENT

The accounting procedures issued by the Corps of Engineers in fiscal year 1956 provide for recording interest at the rate of 2.5 percent on the net unrecovered Federal investment in multiple-purpose projects. Interest on the 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.

The instructions issued January 17, 1956, by the Corps provide that retroactive adjustments will not be made where completed construction has been transferred to plant in service and interest and depreciation 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.

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 has been used by the Administration. Under this method recognition is not given to repayment of the Federal investment. However, until such time as a definitive agreement is reached between the Corps and the Department of the Interior on the allocation of construction costs and application of revenues to the Government's investment, it will not be possible to revise the interest base with any degree of accuracy.

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

In our report dated September 26, 1956, on the audit of the Arkansas, White, and Red River Basins Power System and Related Activities for fiscal year ended June 30, 1955, we recommended (p. 90) that the Chief of Engineers and the Secretary of the Interior adopt a policy for recording interest on the Federal investment based on the following principles:

"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.

"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.

"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."

Although present accounting procedures of the Corps of Engineers incorporate certain of the principles stated above, computations by the Corps for interest on multiple-purpose projects including power in the Southwestern area have not been made for all cases under the revised criteria or on a basis consistent between the several projects. (See pp. 114 and 115.) We have been informed that these matters are receiving current consideration by the Interior Cost Allocation and Financial Practices Committee.

Since final decisions on the matter of interest on the Federal investment have not been reached, the recommendation thereon is repeated.

#### REPAYMENT OF THE GOVERNMENT'S INVESTMENT

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 the administratively determined repayment period.

Financing is a separate subject from cost accounting. The financial statements dealing with the determination of net income should not be used to show repayment information; nor should scheduled or actual repayments be construed as a cost of operation to be substituted for provisions for depreciation. Comparison of actual repayment history with scheduled or theoretical repayment requirements can better be obtained from memorandum records, although all financial or statistical data to the extent applicable should be obtained from the official accounting records.

#### Recommendation to the Chief of Engineers and the Secretary of the Interior

Our report dated September 26, 1956, on the audit of the Arkansas, White, and Red River Basins Power System and Related Activities for the fiscal year ended June 30, 1955, contained a recommendation (p. 91) as follows:

"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 that data on status or repayment of investment should be supplemental to financial statements based on accounting for costs. Accordingly, we recommend that the Corps of Engineers and the Department of the Interior design statements specifically for the purpose of showing clearly the status of repayment of capital investment and provide information for reviews and evaluations of rates."

Until such time as agreements are reached on the application of project revenues to the Government's investment, it will not be possible to show the status of repayment of the capital investment in power and provide information for reviews and evaluations of rates as contemplated in the above recommendation. We believe, however, when such agreements are reached that statements should be designed specifically to show the status of repayment of the Federal investment. Accordingly, the recommendation is repeated.

## 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 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.

## OPINION OF FINANCIAL STATEMENTS

The accompanying statement of assets and liabilities (schedule 1) and statement of power operations and nonpower operations (schedules 2 through 13) are based on the accounting records of the Corps of Engineers and the Southwestern Power Administration. These financial statements present on a combined basis all 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 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, 1956, 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. Allocations of project construction costs to power and nonpower purposes have not been finally resolved and, until allocations acceptable to both the Corps and the Administration are made, it will not be possible to make accurate assignment of provisions for depreciation, and accrual of interest on the Federal investment to the several purposes, including power.
2. Agreement has not been reached between the Corps of Engineers and the Department of the Interior 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.
3. A uniform policy has not been established by the Corps of Engineers and the Department of the Interior for computing interest on the Federal investment, and the district offices of the Corps have not been consistent or accurate in the computations of interest.
4. A uniform policy has not been established by the Corps of Engineers and the Department of the Interior for recording depreciation of plant, property, and equipment in service, and the district offices of the Corps have not been consistent or accurate in making provisions for depreciation.
5. Revenues received by the Corps of Engineers on account of leasing reservoir lands have not been reduced by the amounts paid or to be paid to states in lieu of taxes.

**FINANCIAL STATEMENTS**

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, 1956

<u>ASSETS</u>	<u>Combined</u>	<u>Corps of Engineers</u>	<u>Southwestern Power Ad- ministration</u>	<u>LIABILITIES</u>	<u>Combined</u>	<u>Corps of Engineers</u>	<u>Southwestern Power Ad- ministration</u>
<u>PLANT, PROPERTY, AND EQUIPMENT:</u>				<u>INVESTMENT OF U.S. GOVERNMENT AND ACCUMULATED EXCESS OF EXPENSES OVER INCOME:</u>			
Multiple-purpose projects in service and under construction, including interest during construction of \$19,010,603 (note 2)	\$350,921,645	\$350,921,645	•	Congressional appropriations, net (note 12)	\$748,489,963	\$714,717,918	\$33,772,045
Transmission lines, substations, and other electric plant in service, held for future use, and under construction (note 3)	23,594,095	-	23,594,095	Costs of property and services furnished by other Government agencies, net (note 13)	178,156	-33,067	211,223
	374,515,740	350,921,645	23,594,095	Interest on the Federal investment (note 14)	54,228,139	51,302,555	2,925,584
Less accumulated depreciation (note 4)	15,470,422	12,818,391	2,652,031	advances to the continuing fund (note 11)	7,238,032	-	7,238,032
	359,045,318	338,103,254	20,942,064	Total investment of U.S. Government	810,134,290	765,987,406	44,146,884
Single-purpose flood control reservoirs in service and under construction (note 5)	148,489,918	148,489,918	-	Less:			
Local protection projects, including levees, emergency bank protection, and clearing and snagging (note 6)	114,511,818	114,511,818	-	Funds returned to U.S. Treasury (note 15):			
Navigation projects in service or under construction, including emergency bank stabilization and channel rectification on the Arkansas River and tributaries (note 7)	29,548,524	29,548,524	-	Repayment of Federal investment in power program	27,616,538	344,384	27,272,154
Plant, property, and equipment--net	651,595,578	630,653,514	20,942,064	Repayment of Federal investment in nonpower programs	2,842,441	2,842,441	-
<u>ADVANCE PLANNING ON AUTHORIZED PROJECTS (note 8):</u>				Cumulative net costs of nonpower programs (schedule 2)	76,211,064	76,211,064	-
Multiple-purpose projects, including power	601,821	601,821	-	Total deductions	106,670,043	79,397,889	27,272,154
Single-purpose flood control reservoirs	2,912,511	2,912,511	-	Net investment of U.S. Government	703,464,247	686,589,517	16,874,730
Local protection projects	80,550	80,550	-	Less cumulative net loss from power operations (schedule 3)	10,864,055	32,308,356	-12,444,301
Navigation facilities projects	699,082	699,082	-	Total	683,600,192	654,281,161	29,319,031
Total plans and design costs	4,293,964	4,293,964	-	<u>CURRENT AND ACCRUED LIABILITIES:</u>			
<u>PRELIMINARY SURVEYS AND INVESTIGATIONS (note 9)</u>	6,966,177	6,950,965	15,212	Accounts payable	4,795,448	4,299,759	495,689
<u>CASH AND OTHER ASSETS:</u>				Employees' accrued leave (note 16)	121,102	-	121,102
Unexpended funds in U.S. Treasury (note 10)	20,123,032	17,177,173	2,945,859	Other current accrued liabilities	10,847	2,036	8,811
Special and trust funds on deposit (note 11)	4,654,314	-	4,654,314	Total current and accrued liabilities	4,927,397	4,301,795	625,602
Accounts receivable:				<u>CONTRIBUTIONS IN AID OF CONSTRUCTION (note 17)</u>	830,796	817,017	13,779
Power customers	697,093	-	697,093	<u>TOTAL LIABILITIES AND INVESTMENT OF U.S. GOVERNMENT</u>	\$689,358,385	\$652,399,973	\$29,958,412
Other	129,367	118,816	10,551				
Accrued utility revenue	290,729	-	290,729				
Materials and supplies	402,288	-	402,288				
Prepayments, advances, and other debits	205,843	205,541	302				
Total cash and other assets	26,502,666	17,501,530	9,001,136				
<u>TOTAL ASSETS</u>	\$689,358,385	\$659,399,973	\$29,958,412				

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 are an integral part of this schedule.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)ANDSOUTHWESTERN POWER ADMINISTRATIONARKANSAS, WHITE, AND RED RIVER BASINSWATER RESOURCES DEVELOPMENT PROGRAM (note 1)STATEMENT OF NET COSTS OF POWER AND NONPOWER OPERATIONSFOR THE FISCAL YEAR ENDED JUNE 30, 1956AND CUMULATIVE NET COSTS TO JUNE 30, 1956

	Cumulative to June 30, <u>1955</u>	Fiscal year <u>1956</u>	Cumulative to June 30, <u>1956</u>
<u>REVENUE-PRODUCING PROGRAM:</u>			
Power	<u>\$13,234,704</u>	<u>\$6,629,351</u>	<u>\$19,864,055</u>
<u>NON-REVENUE-PRODUCING PROGRAMS:</u>			
Flood control	\$47,669,976	\$5,528,934	\$53,198,910
Navigation	21,183,130	671,000	21,854,130
Recreation	754,695	187,794	942,489
Streamflow regulation	<u>90,547</u>	<u>124,988</u>	<u>215,535</u>
Total	<u>\$69,698,348</u>	<u>\$6,512,716</u>	<u>\$76,211,064</u>

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 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

STATEMENT SHOWING RESULTS FROM POWER OPERATIONS  
FOR THE FISCAL YEAR ENDED JUNE 30, 1956  
AND CUMULATIVE NET LOSS TO JUNE 30, 1956

	Combined	Southwestern Power Administra- tion	Corps of Engineers (Civil Functions)								
			Total	Fort Gibson	Tenkiller Ferry	Bull Shoals	Norfolk	Blakely Mountain	Denison	Narrows	Whitney
<b>OPERATING REVENUES (note 18):</b>											
Sales of electric energy	\$ 8,169,043	\$ 8,169,043	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Other revenues	-	-	-	-	-	-	-	-	-	-	-
<b>Total operating revenues</b>	<u>8,169,043</u>	<u>8,169,043</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>
<b>OPERATING EXPENSES:</b>											
Purchased power	3,461,272	3,461,272	-	-	-	-	-	-	-	-	-
Generation expenses:											
Specific power facilities	758,036	-	758,036	87,038	59,330	156,860	97,409	85,423	98,035	72,518	101,423
Joint facilities (note 19)	245,658	-	245,658	21,275	16,218	48,443	34,584	46,207	49,692	19,806	9,433
Transmission expenses	2,679,033	2,679,033	-	-	-	-	-	-	-	-	-
Supervision and administration (note 19)	431,102	352,908	78,194	16,750	12,083	12,221	8,381	3,510	17,630	2,208	5,411
Provision for depreciation (note 4)	2,594,054	643,661	1,950,393	257,650	207,810	547,149	184,951	250,800	246,268	87,000	168,765
<b>Total operating expenses</b>	<u>10,169,155</u>	<u>7,136,874</u>	<u>3,032,281</u>	<u>382,713</u>	<u>295,441</u>	<u>764,673</u>	<u>325,325</u>	<u>385,940</u>	<u>411,625</u>	<u>181,532</u>	<u>285,032</u>
<b>Excess of operating expenses over revenues</b>	<u>2,000,112</u>	<u>-1,032,169</u>	<u>3,032,281</u>	<u>382,713</u>	<u>295,441</u>	<u>764,673</u>	<u>325,325</u>	<u>385,940</u>	<u>411,625</u>	<u>181,532</u>	<u>285,032</u>
<b>INTEREST AND OTHER DEDUCTIONS:</b>											
Interest on the Federal Investment (note 14)	4,665,644	586,199	4,079,445	455,981	330,106	1,258,692	476,371	475,715	671,482	171,987	239,111
Nonoperating expenses (-income), net (note 20)	-36,405	15,496	-51,901	-	-	-35,875	-10,780	-3,212	-	-2,008	-26
<b>Total interest and other deductions</b>	<u>4,629,239</u>	<u>601,695</u>	<u>4,027,544</u>	<u>455,981</u>	<u>330,106</u>	<u>1,222,817</u>	<u>465,591</u>	<u>472,503</u>	<u>671,482</u>	<u>169,979</u>	<u>239,085</u>
<b>Net loss for fiscal year 1956</b>	<u>6,629,351</u>	<u>-430,474</u>	<u>7,059,825</u>	<u>838,694</u>	<u>625,547</u>	<u>1,987,490</u>	<u>790,916</u>	<u>858,443</u>	<u>1,083,107</u>	<u>351,511</u>	<u>524,117</u>
<b>Add cumulative net loss on power operations to June 30, 1955</b>	<u>13,425,531</u>	<u>-12,058,557</u>	<u>25,484,088</u>	<u>2,255,570</u>	<u>1,092,673</u>	<u>3,769,564</u>	<u>5,812,877</u>	<u>-</u>	<u>9,918,241</u>	<u>1,708,898</u>	<u>925,265</u>
<b>Prior year adjustments</b>	<u>-190,827</u>	<u>44,730</u>	<u>-235,557</u>	<u>103,000</u>	<u>154,854</u>	<u>71,932</u>	<u>214,681</u>	<u>-</u>	<u>-779,023</u>	<u>-684</u>	<u>-317</u>
<b>Cumulative net loss on power operations to June 30, 1956 (to schedule 1)</b>	<u>\$19,864,055</u>	<u>-\$12,444,301</u>	<u>\$32,308,356</u>	<u>\$3,198,264</u>	<u>\$1,873,074</u>	<u>\$5,828,986</u>	<u>\$6,818,474</u>	<u>\$858,443</u>	<u>\$10,222,325</u>	<u>\$2,059,725</u>	<u>\$1,449,065</u>

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 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 FLOOD CONTROL OPERATIONS

FOR THE FISCAL YEAR ENDED JUNE 30, 1956, AND CUMULATIVE NET COST TO JUNE 30, 1956

	Combined		Cumulative to June 30, 1956--by basin			
	Fiscal year 1956	Cumulative to June 30, 1956	Arkansas River	White River	Red River	Not identified as to basin
<b>CORPS OF ENGINEERS:</b>						
Multiple-purpose projects:						
Fort Gibson	\$ 219,708	\$ 892,463	\$ 892,463	\$ -	\$ -	\$ -
Tenkiller Ferry	140,035	453,118	453,118	-	-	-
Bull Shoals	1,051,698	5,050,909	-	5,050,909	-	-
Norfolk	565,163	6,089,158	-	6,089,158	-	-
Blakely Mountain	328,804	1,144,203	-	-	1,144,203	-
Denison	281,906	3,513,957	-	-	3,513,957	-
Narrows	314,366	1,859,612	-	-	1,859,612	-
	<u>2,901,680</u>	<u>19,003,420</u>	<u>1,345,581</u>	<u>11,140,067</u>	<u>6,517,772</u>	<u>-</u>
Flood control reservoir projects	<u>810,381</u>	<u>7,510,867</u>	<u>6,860,275</u>	<u>369,214</u>	<u>281,378</u>	<u>-</u>
Total	<u>3,712,061</u>	<u>26,514,287</u>	<u>8,205,856</u>	<u>11,509,281</u>	<u>6,799,150</u>	<u>-</u>
Local protection and other flood control operations:						
Operation and maintenance and repairs	561,204	9,050,965	4,946,299	454,249	3,650,417	-
Examinations, surveys, and hydrologic studies	-	1,921,484	-	-	-	1,921,484
Inspection of local flood control	4,158	22,275	-	-	-	22,275
Scheduling of flood control operations	5,937	8,434	-	-	-	8,434
Extraordinary operations--flood emergency measures and rehabilitation of dikes and levees damaged through floods	<u>261,812</u>	<u>12,543,134</u>	<u>903,592</u>	<u>-</u>	<u>4,142,634</u>	<u>7,496,908</u>
	<u>833,111</u>	<u>23,546,292</u>	<u>5,849,891</u>	<u>454,249</u>	<u>7,793,051</u>	<u>9,449,101</u>
Total	<u>4,545,172</u>	<u>50,060,579</u>	<u>\$14,055,747</u>	<u>\$11,963,530</u>	<u>\$14,592,201</u>	<u>\$9,449,101</u>
Whitney	<u>983,762</u>	<u>3,138,331</u>				
Total	<u>\$5,528,934</u>	<u>\$53,198,910</u>				

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 are an integral part of this schedule.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)ANDSOUTHWESTERN POWER ADMINISTRATIONARKANSAS, WHITE, AND RED RIVER BASINSWATER RESOURCES DEVELOPMENT PROGRAMSTATEMENT SHOWING NET COST OF NAVIGATION OPERATIONSFOR THE FISCAL YEAR ENDED JUNE 30, 1956,AND CUMULATIVE NET COST TO JUNE 30, 1956

	Fiscal year 1956	Cumulative to June 30, 1956
<u>ARKANSAS RIVER BASIN:</u>		
Navigation and bank stabilization:		
Mouth to Fort Smith, Arkansas	\$ 13,559	\$ 3,074,094
Wilsons Rock to Fort Smith, Arkansas	85,003	<u>93,135</u>
Total	98,562	3,167,229
Inactive--Arkansas River	-	<u>482,168</u>
Total Arkansas River basin	<u>98,562</u>	<u>3,649,397</u>
<u>WHITE RIVER BASIN:</u>		
Inactive projects:		
Black River, Arkansas and Missouri	-	658,222
Current River, Arkansas and Missouri	-	125,913
Upper White River, Arkansas	-	2,570,361
Lower White River, Arkansas	-	<u>1,360,579</u>
Total White River basin	-	<u>4,715,075</u>
<u>RED RIVER BASIN:</u>		
Navigation and bank stabilization:		
Cypress Bayou and Waterway between Jefferson, Texas, and Shreveport, Louisiana	44,946	389,006
Ouachita and Black Rivers, Arkansas and Louisiana	494,070	10,968,394
Red River below Fulton, Arkansas	<u>33,422</u>	<u>1,892,573</u>
Total	572,438	13,249,973
Inactive:		
Bayous D'Arbonne and Corney, Louisiana	-	37,804
Boeuf River, Louisiana	-	103,737
Saline River, Arkansas	-	12,792
Tensas River and Bayou Macon, Louisiana	-	<u>85,352</u>
Total Red River basin	<u>572,438</u>	<u>13,489,658</u>
Total	<u>\$671,000</u>	<u>\$21,854,130</u>

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 are an integral part of this schedule.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)ANDSOUTHWESTERN POWER ADMINISTRATIONARKANSAS, WHITE, AND RED RIVER BASINSWATER RESOURCES DEVELOPMENT PROGRAMSTATEMENT OF EXPENSES--FORT GIBSON PROJECT, OKLAHOMAFOR THE FISCAL YEAR ENDED JUNE 30, 1956

	<u>Total</u>	<u>Amounts allocated to</u>		
		<u>Power</u>	<u>Flood control</u>	<u>Recreation</u>
<u>OPERATION AND MAINTENANCE EXPENSES:</u>				
<u>Joint facilities (note 19):</u>				
Dams and reservoirs	\$ 14,905	\$ 6,925	\$ 7,980	\$ -
Service facilities	22,112	10,273	11,839	-
Recreational facilities	-	-	-	-
Condition and operation studies	8,775	4,077	4,698	-
Total joint facilities	45,792	21,275	24,517	-
<u>Specific power:</u>				
Electric generation--operation	36,671	36,671	-	-
Intake works--maintenance	972	972	-	-
Powerhouse and structure--maintenance	13,737	13,737	-	-
Power plant equipment--maintenance	35,658	35,658	-	-
Total specific power	87,038	87,038	-	-
<u>Specific flood control:</u>				
Dams and reservoirs	3,661	-	3,661	-
Condition and operation studies	2,457	-	2,457	-
Total specific flood control	6,118	-	6,118	-
<u>Specific recreation:</u>				
Dams and reservoirs	26,986	-	-	26,986
Fish and wildlife facilities	1,879	-	-	1,879
Recreational facilities	32,756	-	-	32,756
Total specific recreation	66,621	-	-	66,621
<u>SUPERVISION AND ADMINISTRATION (note 19)</u>	36,053	16,750	19,303	-
<u>PROVISION FOR DEPRECIATION (note 4)</u>	481,385	252,650	213,196	10,539
Total operating expenses	723,007	382,713	263,134	77,160
<u>INTEREST ON THE FEDERAL INVESTMENT (note 14)</u>	455,981	455,981	-	-
Total expenses	1,178,988	838,694	263,134	77,160
Less credits to operations and nonoperating income (note 20)	69,499	-	43,426	26,073
Net expenses	\$1,109,489	\$838,694	\$219,708	\$51,087

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 are an integral part of this schedule.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)

AND

SOUTHWESTERN POWER ADMINISTRATIONARKANSAS, WHITE, AND RED RIVER BASINSWATER RESOURCES DEVELOPMENT PROGRAMSTATEMENT OF EXPENSES--TENKILLER FERRY PROJECT, OKLAHOMAFOR THE FISCAL YEAR ENDED JUNE 30, 1956

	<u>Total</u>	<u>Amounts allocated to</u>		
		<u>Power</u>	<u>Flood control</u>	<u>Recreation</u>
<u>OPERATION AND MAINTENANCE EXPENSES:</u>				
<u>Joint facilities (note 19):</u>				
Dams and reservoirs	\$ 10,337	\$ 4,562	\$ 5,775	\$ -
Service facilities	19,559	8,631	10,928	-
Recreational facilities	1,972	870	1,102	-
Condition and operations studies	4,883	2,155	2,728	-
Total joint facilities	<u>36,751</u>	<u>16,218</u>	<u>20,533</u>	<u>-</u>
<u>Specific power:</u>				
Electric generation--operation	32,040	32,040	-	-
Intake works--maintenance	928	928	-	-
Powerhouse and structures--maintenance	7,300	7,300	-	-
Power plant equipment--maintenance and rehabilitation	19,062	19,062	-	-
Total specific power	<u>59,330</u>	<u>59,330</u>	<u>-</u>	<u>-</u>
<u>Specific flood control:</u>				
Dams and reservoirs	2,207	-	2,207	-
Condition and operations studies	2,000	-	2,000	-
Total specific flood control	<u>4,207</u>	<u>-</u>	<u>4,207</u>	<u>-</u>
<u>Specific recreation:</u>				
Dams and reservoirs	7,736	-	-	7,736
Recreational facilities	27,415	-	-	27,415
Total specific recreation	<u>35,151</u>	<u>-</u>	<u>-</u>	<u>35,151</u>
<u>SUPERVISION AND ADMINISTRATION (note 19)</u>	<u>27,379</u>	<u>12,083</u>	<u>15,296</u>	<u>-</u>
<u>PROVISION FOR DEPRECIATION (note 4)</u>	<u>315,880</u>	<u>207,810</u>	<u>105,929</u>	<u>2,141</u>
Total operating expenses	478,698	295,441	145,965	37,292
<u>INTEREST ON THE FEDERAL INVESTMENT (note 14)</u>	<u>330,106</u>	<u>330,106</u>	<u>-</u>	<u>-</u>
Total expenses	808,804	625,547	145,965	37,292
Less credits to operations and non-operating income (note 20)	<u>23,440</u>	<u>-</u>	<u>5,930</u>	<u>17,510</u>
Net expenses	<u>\$785,364</u>	<u>\$625,547</u>	<u>\$140,035</u>	<u>\$19,782</u>

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 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

STATEMENT OF EXPENSES--BULL SHOALS PROJECT, ARKANSAS

FOR THE FISCAL YEAR ENDED JUNE 30, 1956

		<u>Amounts allocated to</u>	
	<u>Total</u>	<u>Power</u>	<u>Flood control</u>
<u>OPERATION AND MAINTENANCE:</u>			
<u>Joint facilities (note 19):</u>			
Dams and reservoirs	\$ 34,663	\$ 15,945	\$ 18,718
Service facilities	14,539	6,688	7,851
Recreational facilities	33,250	15,295	17,955
Condition and operations studies	<u>22,858</u>	<u>10,515</u>	<u>12,343</u>
Total joint facilities	<u>105,310</u>	<u>48,443</u>	<u>56,867</u>
<u>Specific power:</u>			
Electric generation--operation	93,761	93,761	-
Intake works--maintenance	4,981	4,981	-
Powerhouse and structures--maintenance	8,184	8,184	-
Power plant equipment--maintenance	<u>49,934</u>	<u>49,934</u>	<u>-</u>
Total specific power	<u>156,860</u>	<u>156,860</u>	<u>-</u>
Specific flood control	<u>9,717</u>	<u>-</u>	<u>9,717</u>
<u>SUPERVISION AND ADMINISTRATION (note 19)</u>	<u>26,567</u>	<u>12,221</u>	<u>14,346</u>
<u>PROVISION FOR DEPRECIATION (note 4)</u>	<u>752,746</u>	<u>547,149</u>	<u>205,597</u>
Total operating expenses	1,051,200	764,673	286,527
<u>INTEREST ON THE FEDERAL INVESTMENT (note 14)</u>	<u>2,065,976</u>	<u>1,258,692</u>	<u>807,284</u>
Total expenses	3,117,176	2,023,365	1,093,811
Less credits to operations and non-operating income (note 20)	<u>77,988</u>	<u>35,875</u>	<u>42,113</u>
Net expenses	<u>\$3,039,188</u>	<u>\$1,987,490</u>	<u>\$1,051,698</u>

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 are an integral part of this schedule.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)ANDSOUTHWESTERN POWER ADMINISTRATION  
ARKANSAS, WHITE, AND RED RIVER BASINS  
WATER RESOURCES DEVELOPMENT PROGRAMSTATEMENT OF EXPENSES--NORFORK PROJECT, ARKANSASFOR THE FISCAL YEAR ENDED JUNE 30, 1956

	<u>Total</u>	<u>Amounts allocated to</u>	
		<u>Power</u>	<u>Flood control</u>
<u>OPERATION AND MAINTENANCE EXPENSES:</u>			
<u>Joint facilities (note 19):</u>			
Dams and reservoirs	\$ 27,816	\$ 11,126	\$ 16,690
Service facilities	14,843	5,937	8,906
Recreational facilities	25,612	10,245	15,367
Condition and operations studies	18,190	7,276	10,914
Total joint facilities	<u>86,461</u>	<u>34,584</u>	<u>51,877</u>
<u>Specific power:</u>			
Electric generation--operation	64,933	64,933	-
Intake works--maintenance	4,060	4,060	-
Powerhouse and structures--maintenance	5,151	5,151	-
Power plant equipment--maintenance	23,265	23,265	-
Total specific power	<u>97,409</u>	<u>97,409</u>	<u>-</u>
Specific flood control	4,428	-	4,428
<u>SUPERVISION AND ADMINISTRATION (note 19)</u>	<u>20,953</u>	<u>8,381</u>	<u>12,572</u>
<u>PROVISION FOR DEPRECIATION (note 4)</u>	<u>307,566</u>	<u>184,951</u>	<u>122,615</u>
Total operating expenses	516,817	325,325	191,492
<u>INTEREST ON THE FEDERAL INVESTMENT (note 14)</u>	<u>866,572</u>	<u>476,371</u>	<u>390,201</u>
Total expenses	1,383,389	801,696	581,693
Less credits to operations and nonoperating income (note 20)	<u>27,310</u>	<u>10,780</u>	<u>16,530</u>
Net expenses	<u>\$1,356,079</u>	<u>\$790,916</u>	<u>\$565,163</u>

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 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

STATEMENT OF EXPENSES--BLAKELY MOUNTAIN PROJECT, ARKANSAS  
FOR THE FISCAL YEAR ENDED JUNE 30, 1956

	<u>Total</u>	<u>Amounts allocated to</u>	
		<u>Power</u>	<u>Flood control</u>
<u>OPERATION AND MAINTENANCE EXPENSES:</u>			
<u>Joint facilities (note 19):</u>			
Dams and reservoirs	\$ 31,624	\$ 13,768	\$ 17,856
Service facilities	46,854	18,837	28,017
Recreational facilities	12,952	4,145	8,807
Condition and operations studies	<u>22,788</u>	<u>9,457</u>	<u>13,331</u>
Total joint facilities	<u>114,218</u>	<u>46,207</u>	<u>68,011</u>
<u>Specific power:</u>			
Electric generation--operation	69,289	69,289	-
Intake works--maintenance	1,100	1,100	-
Powerhouse and structures--maintenance	9,403	9,403	-
Power plant equipment--maintenance	<u>5,631</u>	<u>5,631</u>	<u>-</u>
Total specific power	<u>85,423</u>	<u>85,423</u>	<u>-</u>
<u>SUPERVISION AND ADMINISTRATION (note 19)</u>	<u>10,756</u>	<u>3,510</u>	<u>7,246</u>
<u>PROVISION FOR DEPRECIATION (note 4)</u>	<u>313,400</u>	<u>250,800</u>	<u>62,600</u>
Total operating expenses	523,797	385,940	137,857
<u>INTEREST ON THE FEDERAL INVESTMENT (note 14)</u>	<u>671,936</u>	<u>475,715</u>	<u>196,221</u>
Total expenses	1,195,733	861,655	334,078
Less credits to operations and non- operating income (note 20)	<u>8,486</u>	<u>3,212</u>	<u>5,274</u>
Net expense	<u>\$1,187,247</u>	<u>\$858,443</u>	<u>\$328,804</u>

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 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

STATEMENT OF EXPENSES--DENISON PROJECT, TEXAS AND OKLAHOMA

FOR THE FISCAL YEAR ENDED JUNE 30, 1956

	<u>Total</u>	<u>Amounts allocated to</u>		
		<u>Power</u>	<u>Flood control</u>	<u>Recreation</u>
<u>OPERATION AND MAINTENANCE EXPENSES:</u>				
<u>Joint facilities (note 19):</u>				
Dams and reservoirs	\$ 21,017	\$ 12,253	\$ 7,716	\$ 1,048
Service facilities	45,093	25,528	16,075	3,490
Recreational facilities	-	-	-	-
Condition and operations studies	19,410	11,911	7,499	-
Total joint facilities	<u>85,520</u>	<u>49,692</u>	<u>31,290</u>	<u>4,538</u>
<u>Specific power:</u>				
Electric generation--operation	55,007	55,007	-	-
Intake works--maintenance	1,142	1,142	-	-
Powerhouse and structures--maintenance	7,544	7,544	-	-
Power plant equipment--maintenance and rehabilitation	34,342	34,342	-	-
Total specific power	<u>98,035</u>	<u>98,035</u>	<u>-</u>	<u>-</u>
<u>Specific flood control:</u>				
Dams and reservoirs	41,283	-	41,283	-
Condition and operations studies	13,470	-	13,470	-
Total specific flood control	<u>54,753</u>	<u>-</u>	<u>54,753</u>	<u>-</u>
<u>Specific recreation:</u>				
Dams and reservoirs	29,475	-	-	29,475
Fish and wildlife facilities	1,674	-	-	1,674
Recreational facilities	56,392	-	-	56,392
Total specific recreation	<u>87,541</u>	<u>-</u>	<u>-</u>	<u>87,541</u>
<u>SUPERVISION AND ADMINISTRATION (note 19)</u>	<u>41,743</u>	<u>17,630</u>	<u>11,102</u>	<u>13,011</u>
<u>PROVISION FOR DEPRECIATION (note 4)</u>	<u>571,403</u>	<u>246,268</u>	<u>293,217</u>	<u>31,918</u>
Total operating expenses	938,995	411,625	390,362	137,008
<u>INTEREST ON THE FEDERAL INVESTMENT (note 14)</u>	<u>671,482</u>	<u>671,482</u>	<u>-</u>	<u>-</u>
Total expenses	1,610,477	1,083,107	390,362	137,008
Less credits to operations and non-operating income (note 20)	146,404	-	108,456	37,948
Net expenses	<u>\$1,464,073</u>	<u>\$1,083,107</u>	<u>\$281,906</u>	<u>\$ 99,060</u>

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 are an integral part of this schedule.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)ANDSOUTHWESTERN POWER ADMINISTRATIONARKANSAS, WHITE, AND RED RIVER BASINSWATER RESOURCES DEVELOPMENT PROGRAMSTATEMENT OF EXPENSES--NARROWS PROJECT, ARKANSASFOR THE FISCAL YEAR ENDED JUNE 30, 1956

	<u>Total</u>	<u>Amounts allocated to</u>	
		<u>Power</u>	<u>Flood control</u>
<b><u>OPERATION AND MAINTENANCE EXPENSES:</u></b>			
<u>Joint facilities (note 19):</u>			
Dams and reservoirs	\$ 25,114	\$ 5,494	\$ 19,620
Service facilities	38,070	8,328	29,742
Recreational facilities	10,457	2,287	8,170
Condition and operations studies	16,900	3,697	13,203
Total joint facilities	<u>90,541</u>	<u>19,806</u>	<u>70,735</u>
<u>Specific power:</u>			
Electric generation--operations	58,551	58,551	-
Intake works--maintenance	1,657	1,657	-
Powerhouse and structures--maintenance	4,950	4,950	-
Powerhouse equipment--maintenance	7,360	7,360	-
Total specific power	<u>72,518</u>	<u>72,518</u>	<u>-</u>
<b><u>SUPERVISION AND ADMINISTRATION (note 19)</u></b>	<u>10,093</u>	<u>2,208</u>	<u>7,885</u>
<b><u>PROVISION FOR DEPRECIATION (note 4)</u></b>	<u>147,456</u>	<u>87,000</u>	<u>60,456</u>
Total operating expenses	320,608	181,532	139,076
<b><u>INTEREST ON THE FEDERAL INVESTMENT (note 14)</u></b>	<u>354,447</u>	<u>171,987</u>	<u>182,460</u>
Total expenses	675,055	353,519	321,536
Less credits to operations and nonoperating income (note 20)	<u>9,178</u>	<u>2,008</u>	<u>7,170</u>
Net expense	<u>\$665,877</u>	<u>\$351,511</u>	<u>\$314,366</u>

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 are an integral part of this schedule.

CORPS OF ENGINEERS (CIVIL FUNCTIONS)ANDSOUTHWESTERN POWER ADMINISTRATIONARKANSAS, WHITE, AND RED RIVER BASINSWATER RESOURCES DEVELOPMENT PROGRAMSTATEMENT OF EXPENSES--WHITNEY PROJECT, TEXASFOR THE FISCAL YEAR ENDED JUNE 30, 1956

	<u>Total</u>	<u>Amount allocated to</u>			
		<u>Power</u>	<u>Flood control</u>	<u>Recreation</u>	<u>Stream-flow regulation</u>
<u>OPERATION AND MAINTENANCE EXPENSES:</u>					
<u>Joint facilities (note 19):</u>					
Dams and reservoirs	\$ 13,483	\$ 2,943	\$ 9,321	\$ -	\$ 1,219
Service facilities	21,742	4,746	15,030	-	1,966
Recreational facilities	498	109	344	-	45
Condition and operations studies	7,489	1,635	5,177	-	677
<u>Total joint facilities</u>	<u>43,212</u>	<u>9,433</u>	<u>29,872</u>	<u>-</u>	<u>3,907</u>
<u>Specific power:</u>					
Electric generation--operation	44,414	44,414	-	-	-
Intake works--maintenance	395	395	-	-	-
Powerhouse and structures--maintenance	15,697	15,697	-	-	-
Power plant equipment--maintenance and rehabilitation	40,917	40,917	-	-	-
<u>Total specific power</u>	<u>101,423</u>	<u>101,423</u>	<u>-</u>	<u>-</u>	<u>-</u>
<u>Specific flood control:</u>					
Dams and reservoirs	9,893	-	9,893	-	-
Condition and operations studies	6,231	-	6,231	-	-
<u>Total specific flood control</u>	<u>16,124</u>	<u>-</u>	<u>16,124</u>	<u>-</u>	<u>-</u>
<u>Specific recreation facilities</u>	<u>15,218</u>	<u>-</u>	<u>-</u>	<u>15,218</u>	<u>-</u>
<u>SUPERVISION AND ADMINISTRATION (note 19)</u>	<u>24,787</u>	<u>5,411</u>	<u>17,135</u>	<u>-</u>	<u>2,241</u>
<u>PROVISION FOR DEPRECIATION (note 4)</u>	<u>410,839</u>	<u>168,765</u>	<u>220,416</u>	<u>1,836</u>	<u>19,822</u>
<u>Total operating expenses</u>	<u>611,603</u>	<u>285,032</u>	<u>283,547</u>	<u>17,054</u>	<u>25,970</u>
<u>INTEREST ON THE FEDERAL INVESTMENT (note 14)</u>	<u>1,096,145</u>	<u>239,111</u>	<u>757,205</u>	<u>811</u>	<u>99,018</u>
<u>Total expenses</u>	<u>1,707,748</u>	<u>524,143</u>	<u>1,040,752</u>	<u>17,865</u>	<u>124,988</u>
Less credits to operations and non-operating income (note 20)	57,016	26	56,990	-	-
<u>Net expenses</u>	<u>\$1,650,732</u>	<u>\$524,117</u>	<u>\$ 983,762</u>	<u>\$17,865</u>	<u>\$124,988</u>

The accompanying explanatory notes and comments to financial statements on pages 93 through 118 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

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.

Projects included in the financial statements and status at June 30, 1956, are as follows:

Arkansas River basin:

Multiple-purpose including power:

Fort Gibson, Oklahoma	In operation
Tenkiller Ferry, Oklahoma	do
Dardanelle, Arkansas	Under construction
Eufaula, Oklahoma	do
Short Mountain, Oklahoma	Advance planning
Webbers Falls, Oklahoma	do

Flood control reservoirs:

Blue Mountain, Arkansas	In operation
Canton, Oklahoma	do
Conchas, New Mexico	do
Fall River, Kansas	do
Fort Supply, Oklahoma	do
Great Salt Plains, Oklahoma	do
Heyburn, Oklahoma	do
Hulah, Oklahoma	do
John Martin, Colorado	do
Nimrod, Arkansas	do
Pensacola, Oklahoma	do
Wister, Oklahoma	do
Oologah, Oklahoma	Under construction
Toronto, Kansas	do
Keystone, Oklahoma	Advance planning

Arkansas River basin:	
Flood control reservoirs (continued):	
Markham Ferry, Oklahoma	To be constructed by Grand River Dam Authority
Elk City, Kansas	Awaiting appropria- tion of funds
Neodesha, Kansas	To be restudied
Optima, Oklahoma	do
Strawn, Oklahoma	Advance planning
Other flood control projects:	
Levees, channel improvements, and floodwalls in Arkansas, Colorado, Kansas, New Mexico, and Oklahoma	Various
Navigation project:	
Arkansas River and tributaries, Arkansas and Oklahoma	Emergency bank and channel work
 White River basin:	
Multiple-purpose including power:	
Bull Shoals, Arkansas	In operation
Norfolk, Arkansas	do
Table Rock, Missouri	Under construction
Greers Ferry, Arkansas	Advance planning
Beaver, Arkansas	do
Flood control reservoirs:	
Clearwater, Missouri	In operation
Bell Foley, Arkansas	Advance planning
Lone Rock, Arkansas	do
Water Valley, Arkansas	do
Other flood control projects:	
Levees, channel improvements, and floodwalls in Arkansas and Missouri	Various
Navigation projects:	
White River, Arkansas	In operation
Black River, Arkansas and Missouri	do
Current River, Arkansas	do
 Red River basin:	
Multiple-purpose including power:	
Blakely Mountain, Arkansas	In operation
Denison, Texas and Oklahoma	do
Narrows, Arkansas	do
DeGray, Arkansas	Under restudy
Flood control reservoirs:	
Altus-Lugert, Oklahoma	In operation
Bayou Bodcau, Louisiana	do
Wallace Lake, Louisiana	do

Red River basin:

Flood control reservoirs (continued):

Ferrell's Bridge, Texas	Under construction
Texarkana, Texas	do
Millwood, Arkansas	Advance planning
Boswell, Oklahoma	Awaiting construction funds

Hugo, Oklahoma	do
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Mooringsport, Louisiana and Texas	Deferred
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Other flood control projects:

Levees, channel improvements, and floodwalls in Arkansas, Louisiana, and Texas	Various
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Navigation projects:

Cypress Bayou and Waterway between Jefferson, Texas, and Shreveport, Louisiana	In operation
Red River below Fulton, Arkansas	do

Ouachita and Black Rivers, Arkansas and Louisiana	In operation and advance planning
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Overton-Red River Waterway, Louisiana	Advance planning
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Bayou D'Arbonne and Corney, Louisiana	In operation
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Boeuf River, Louisiana	do
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Saline River, Arkansas	Abandonment recommended
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Tensas River and Bayou Macon, Louisiana	do
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Brazos River:

Multiple-purpose including power: Whitney, Texas	In operation
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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 as 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.

Red River basin:

Flood control reservoirs (continued):

Ferrell's Bridge, Texas	Under construction
Texarkana, Texas	do
Millwood, Arkansas	Advance planning
Boswell, Oklahoma	Awaiting construction funds
Hugo, Oklahoma	do
Mooringsport, Louisiana and Texas	Deferred

Other flood control projects:

Levees, channel improvements, and floodwalls in Arkansas, Louisiana, and Texas	Various
--	---------

Navigation projects:

Cypress Bayou and Waterway between Jefferson, Texas, and Shreveport, Louisiana	In operation
Red River below Fulton, Arkansas	do
Ouachita and Black Rivers, Arkansas and Louisiana	In operation and advance planning
Overton-Red River Waterway, Louisiana	Advance planning
Bayou D'Arbonne and Corney, Louisiana	In operation
Boeuf River, Louisiana	do
Saline River, Arkansas	Abandonment recommended
Tensas River and Bayou Macon, Louisiana	do

Brazos River:

Multiple-purpose including power: Whitney, Texas	In operation
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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 as 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.

Accounting procedures of the Corps of Engineers provide that district offices shall record in their accounts the total funds collected by other Government agencies for return to the United States Treasury for the account of the Corps on the basis of agreements between the Corps and the agencies concerned. Agreement has not been reached between the Corps and the Southwestern Power Administration on the allocation of power revenues to projects. However, power revenues have been recorded by the Vicksburg District through June 30, 1956, for the Narrows Project based on contract provisions. Because agreement has not been reached between the Southwestern Power Administration and the Corps of Engineers on the allocation of revenues to projects, the statement of expenses for the Narrows Project has been adjusted to exclude amounts recorded by the district as revenues. All such revenues have been shown as revenues of the Southwestern Power Administration.

In addition to the above enumerated projects, the Bureau of Reclamation has constructed three projects in the Arkansas River basin. These projects, the estimated construction costs, and the allocation of the estimated construction costs are summarized.

<u>Project and state</u>	<u>Date of original authorization</u>	<u>Estimated cost of original project</u>	<u>Estimated construction costs of project</u>
W. C. Austin, Oklahoma	June 28, 1938	\$ 5,600,000	\$12,686,165
Tucumcari, New Mexico	August 2, 1937	8,155,000	16,149,182
Vermejo, New Mexico	September 27, 1950	<u>2,679,000</u>	<u>2,816,183</u>
Total		<u>\$16,434,000</u>	<u>\$31,651,530</u>

Allocation of Estimated Construction Costs

	<u>Irrigation</u>	<u>Municipal water supply</u>	<u>Flood control</u>	<u>Fish and wildlife conservation</u>
	\$10,476,165	\$1,080,000	\$1,130,000	\$ -
	16,149,182	-	-	-
	<u>2,563,183</u>	<u>-</u>	<u>55,000</u>	<u>198,000</u>
Total	<u>\$29,188,530</u>	<u>\$1,080,000</u>	<u>\$1,185,000</u>	<u>\$198,000</u>

The project construction costs allocated to irrigation and municipal water-supply purposes are reimbursable to the United States Government. However, of the \$29,188,530 allocated to irrigation for the three projects, \$18,996,502 is nonrecoverable as a result of limitations placed by the Congress on repayments.

Water for the Tucumcari Project is supplied from the Conchas Reservoir which was constructed and is operated by the Corps. The Corps contributed \$1,130,000 for the construction of flood control features in the W. C. Austin Project (Lugert-Altus flood control reservoir).

## 2. Multiple-purpose projects

Accumulative costs of multiple-purpose projects including power are classified in the accounting records of the Corps of Engineers, as follows:

<u>Basin and project</u>	<u>Total</u>	<u>Plant in service</u>	<u>Construction work in progress</u>	<u>Undistributed interest during construction</u>
Arkansas River basin:				
Fort Gibson Tenkiller Ferry	\$ 43,642,704	\$ 43,642,704	\$ -	\$ -
Eufaula	23,470,247	23,470,247	-	-
Dardanelle	1,300,095	-	1,300,095	-
	545,290	-	500,666	44,624
	<u>68,958,336</u>	<u>67,112,951</u>	<u>1,800,761</u>	<u>44,624</u>
White River basin:				
Bull Shoals	79,798,350	79,816,806	-18,456	-
Norfork	30,120,366	30,102,889	17,477	-
Table Rock	20,326,172	-	19,629,006	697,166
	<u>130,244,888</u>	<u>109,919,695</u>	<u>19,628,027</u>	<u>697,166</u>
Red River basin:				
Blakely Mountain	33,040,533	19,670,043	11,068,502	2,301,988
Denison	61,849,925	61,849,554	371	-
Narrows	13,191,230	13,191,230	-	-
	<u>108,081,688</u>	<u>94,710,827</u>	<u>11,068,873</u>	<u>2,301,988</u>
Brazos River: Whitney	43,636,733	43,625,810	10,923	-
<b>Total</b>	<b><u>\$350,921,645</u></b>	<b><u>\$315,369,283</u></b>	<b><u>\$32,508,584</u></b>	<b><u>\$3,043,778</u></b>

Interest during construction has been recorded in the total amount of \$19,010,603, of which \$15,966,825 has been distributed to plant-in-service accounts and \$3,043,778 has not been distributed. (See note 14, p. 114.)

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

Multiple-purpose plant is plant constructed and operated for the benefit of two or more purposes, such as hydroelectric power and flood control or navigation. Allocations to purposes of construction costs of completed plant were not final or firm at the date of this report.

The total construction cost of the 11 multiple-purpose projects included in the above tabulation is estimated by the Corps of Engineers at \$629,005,599.

3. Transmission lines, substations, and other electric plant

Accumulative costs of transmission lines, substations, and other electric plant are classified from accounting records of the Southwestern Power Administration, as follows:

Utility plant in service	\$22,806,653
Construction work in progress	782,569
Other property	<u>4,873</u>
Total	<u>\$23,594,095</u>

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. 74.)

Amounts for plant in service and construction work in progress are stated at cost to the Southwestern Power Administration except for a small amount of property transferred to the Administration.

The greater part of the total plant consists of transmission lines (\$13,940,404) and substations (\$8,108,702). During fiscal year 1956 property of \$1,490,574 held for future use was transferred to utility plant in service.

#### 4. Accumulated depreciation

Depreciation has been provided to June 30, 1956, by the Corps of Engineers on multiple-purpose projects in operation, as follows:

<u>Basin and project</u>	<u>Total</u>	<u>Allocation</u>	
		<u>Power</u>	<u>Nonpower</u>
Arkansas River basin:			
Fort Gibson	\$ 1,421,476	\$ 763,061	\$ 658,415
Tenkiller Ferry	<u>806,295</u>	<u>531,655</u>	<u>274,640</u>
	<u>2,227,771</u>	<u>1,294,716</u>	<u>933,055</u>
White River basin:			
Bull Shoals	2,255,728	1,638,028	617,700
Norfolk	<u>2,072,141</u>	<u>1,220,596</u>	<u>851,545</u>
	<u>4,327,869</u>	<u>2,858,624</u>	<u>1,469,245</u>
Red River basin:			
Blakely Mountain	464,683	250,800	213,883
Denison	3,818,334	1,658,305	2,160,029
Narrows	<u>884,736</u>	<u>522,000</u>	<u>362,736</u>
	<u>5,167,753</u>	<u>2,431,105</u>	<u>2,736,648</u>
Brazos River:			
Whitney	<u>1,094,998</u>	<u>493,810</u>	<u>601,188</u>
Total	<u>\$12,818,391</u>	<u>\$7,078,255</u>	<u>\$5,740,136</u>

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. An estimated salvage value of 10 percent of cost has been deducted in determining the base for depreciation on the Bull Shoals and Norfolk Projects.

The initial date for depreciation of facilities has not been on the same basis in all cases. At the Denison, Bull Shoals, and Norfolk 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, 1956, on the electric plant of the Southwestern Power Administration comprised:

Transmission plant	\$2,458,595
General plant	<u>193,436</u>
Total	<u>\$2,652,031</u>

During fiscal year 1956 the Administration charged operations \$643,661 for depreciation and amortization, represented by provision on transmission plant, \$625,276, and general plant, \$18,385.

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.

## 5. Flood control reservoirs

Accumulative costs of flood control reservoirs are classified in the accounting records of the Corps of Engineers, as follows:

<u>Basin and project</u>	<u>Total</u>	<u>Plant in service</u>	<u>Construction work in progress</u>	<u>Abandoned and retired</u>
Arkansas River basin:				
John Martin	\$ 15,137,899	\$ 15,126,377	\$ -	\$11,522
Conchas	15,488,908	15,488,908	-	-
Fall River	10,457,133	10,450,504	-	6,629
Toronto	2,236,414	278,224	1,958,190	-
Fort Supply	7,477,649	7,477,649	-	-
Canton	10,327,575	10,327,575	-	-
Great Salt Plains	4,598,631	4,598,631	-	-
Hulah	10,922,684	10,922,684	-	-
Heyburn	2,374,100	2,374,100	-	-
Oologah	894,144	60,131	834,013	-
Wister	10,430,525	10,430,525	-	-
Blue Mountain	4,822,193	4,819,493	-	2,700
Nimrod	3,772,420	3,772,420	-	-
Pensacola	52,126	52,126	-	-
Undistributed cost of plans for Optima, Fort Supply, and Great Salt Plains	74,989	74,989	-	-
	<u>99,067,390</u>	<u>96,254,336</u>	<u>2,792,203</u>	<u>20,851</u>
White River basin:				
Clearwater	<u>9,720,028</u>	<u>9,720,028</u>	<u>-</u>	<u>-</u>
Red River basin:				
Altus-Lugert	1,130,000	1,130,000	-	-
Bayou Bodcau	4,075,014	4,075,014	-	-
Wallace Lake	1,202,206	1,151,322	50,884	-
Ferrells Bridge	3,494,925	593,084	2,901,841	-
Texarkana Reservoir, Sulphur	<u>29,800,355</u>	<u>7,722,880</u>	<u>22,077,475</u>	<u>-</u>
	<u>39,702,500</u>	<u>14,672,300</u>	<u>25,030,200</u>	<u>-</u>
Total	<u>\$148,489,918</u>	<u>\$120,646,664</u>	<u>\$27,822,403</u>	<u>\$20,851</u>

## 6. Local protection projects

Accumulative costs of local protection projects are classified in the accounting records of the Corps of Engineers, as follows:

	<u>Total</u>	<u>Arkansas River</u>	<u>Basin White River</u>	<u>Red River</u>
Plant in service:				
Local protection flood control projects specifically authorized by Congress	\$ 42,907,537	\$26,651,865	\$ 1,529,731	\$14,725,941
Small flood control projects not specifically authorized by Congress	377,543	130,678	-	246,865
Local protection emergency bank protection	916,741	472,024	38,908	405,809
Local protection clearing and snagging	895,500	73,909	73,927	747,664
Mississippi River tributary improvements	<u>58,088,986</u>	<u>17,924,242</u>	<u>9,949,986</u>	<u>30,214,758</u>
Total plant in service	103,186,307	45,252,718	11,592,552	46,341,037
Construction work in progress	10,499,276	7,142,870	328,116	3,028,290
Abandoned and retired: Eudora Floodway	<u>826,235</u>	-	-	<u>826,235</u>
Total	<u>\$114,511,818</u>	<u>\$52,395,588</u>	<u>\$11,920,668</u>	<u>\$50,195,562</u>

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.

## 7. Navigation projects

Accumulative costs of the navigation projects are classified in the accounting records of the Corps of Engineers, as follows:

<u>Basin and project</u>	<u>Total</u>	<u>Plant in service</u>	<u>Construction work in progress</u>	<u>Abandoned and retired</u>
Arkansas River basin:				
Arkansas River and tributaries (emergency bank stabilization and channel rectification)	\$20,746,017	\$ 8,644,192	\$11,487,570	\$ 614,255
White River basin:				
Black River	80,000	-	-	80,000
Current River	17,000	-	-	17,000
Lower White River	362,801	25,000	-	337,801
Upper White River	<u>813,197</u>	<u>813,197</u>	<u>-</u>	<u>-</u>
Total	<u>1,272,998</u>	<u>838,197</u>	<u>-</u>	<u>434,801</u>
Red River basin:				
Bayou D'Arbonne and Corney	19,000	19,000	-	-
Boeuf River	30,000	30,000	-	-
Cypress Bayou and Waterway	202,817	202,817	-	-
Ouachita and Black Rivers	5,248,619	5,248,619	-	-
Red River below Fulton, Arkansas	1,963,806	1,963,806	-	-
Saline River	26,900	26,900	-	-
Tensas River and Bayou Macon	<u>38,367</u>	<u>38,367</u>	<u>-</u>	<u>-</u>
Total	<u>7,529,509</u>	<u>7,529,509</u>	<u>-</u>	<u>-</u>
Total	<u>\$29,548,524</u>	<u>\$17,011,898</u>	<u>\$11,487,570</u>	<u>\$1,049,056</u>

## 8. Advance planning on authorized projects

Costs totaling \$4,293,964 for plans and designs in advance of an initial allocation of funds for construction at June 30, 1956, consist of:

<u>Project and purpose</u>	<u>Total</u>	<u>Basin</u>		
		<u>Arkansas River</u>	<u>White River</u>	<u>Red River</u>
<b>Multiple-purpose including power:</b>				
Webbers Falls	\$ 55,000	\$ 55,000	\$ -	\$ -
Short Mountain	68,000	68,000	-	-
Beaver	23,657	-	23,657	-
Greers Ferry	386,152	-	386,152	-
DeGray	69,012	-	-	69,012
	<u>601,821</u>	<u>123,000</u>	<u>409,809</u>	<u>69,012</u>
<b>Single-purpose flood control:</b>				
Elk City	89,893	89,893	-	-
Keystone	689,219	689,219	-	-
Markham Ferry	503,655	503,655	-	-
Neodesha	97,910	97,910	-	-
Optima	168,068	168,068	-	-
Strawn	288,181	288,181	-	-
Bell Foley	68,309	-	68,309	-
Lone Rock	130,652	-	130,652	-
Water Valley	414,011	-	414,011	-
Boswell	128,786	-	-	128,786
Hugo	60,000	-	-	60,000
Millwood	204,819	-	-	204,819
Mooringsport	69,008	-	-	69,008
	<u>2,912,511</u>	<u>1,836,926</u>	<u>612,972</u>	<u>462,613</u>
<b>Local protection flood control:</b>				
Enid, Oklahoma	3,378	3,378	-	-
Purgatoire River, Colorado	53,028	53,028	-	-
Callon, Arkansas	24,144	-	-	24,144
	<u>80,550</u>	<u>56,406</u>	<u>-</u>	<u>24,144</u>
<b>Single-purpose navigation:</b>				
Arkansas River and tributaries	284,727	284,727	-	-
Ouachita River and tributaries	50,000	-	-	50,000
Overton-Red River Waterway	364,355	-	-	364,355
	<u>699,082</u>	<u>284,727</u>	<u>-</u>	<u>414,355</u>
<b>Total</b>	<b><u>\$4,293,964</u></b>	<b><u>\$2,301,059</u></b>	<b><u>\$1,022,781</u></b>	<b><u>\$970,124</u></b>

These amounts are represented principally by engineering studies and investigations preliminary to preparation of contract plans and specifications that have been paid from construction funds.

The Corps has expended \$503,655 on the Markham Ferry Reservoir Project in the Arkansas River basin for engineering studies, investigations, and land preliminary to preparation of contract

plans and specifications. Construction of this project by Grand River Dam Authority was authorized by the act of July 6, 1954 (68 Stat. 450), and the Federal Power Commission issued a license to the Authority on June 22, 1955.

Under the Public Works Appropriation Act, 1957 (70 Stat. 480), funds were provided to the Corps of Engineers for initiating construction of the Greers Ferry, Keystone, and Calion Projects and navigation work on the Arkansas River and tributaries in Arkansas and Oklahoma. Additional planning funds were provided in fiscal year 1957 for the Beaver, DeGray, Elk City, Strawn, Overton-Red River Waterway Projects and for navigation on the Ouachita and Black Rivers in Arkansas and Louisiana. The remaining projects were in a deferred or inactive status.

### 9. Preliminary surveys and investigations

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

<u>District office</u>	<u>Total</u>	<u>Arkansas River basin</u>	<u>White River basin</u>	<u>Red River basin</u>	<u>Not identified by basin (note a)</u>
Albuquerque	\$ 464,252	\$ 48,174	\$ -	\$ -	\$ 416,078
Little Rock	3,310,651	1,635,710	1,240,437	91	434,413
Memphis	68,280	-	-	-	68,280
New Orleans	126,272	-	-	29,009	97,263
Tulsa	2,775,694	811,995	-	468,788	1,494,911
Vicksburg	<u>205,816</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>205,816</u>
Total	<u>\$6,950,965</u>	<u>\$2,495,879</u>	<u>\$1,240,437</u>	<u>\$497,888</u>	<u>\$2,716,761</u>

<sup>a</sup> Includes Arkansas-White-Red Basins Inter-Agency Committee expense.

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.

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. (See pp. 63 and 64.) The costs of the Corps of Engineers for their participation in this committee are classified in the accounts as follows:

Preliminary surveys and investigations:

Albuquerque District	\$ 416,078
Little Rock District	300,638
Memphis District	68,280
New Orleans District	97,263
Tulsa District	1,467,612
Vicksburg District	<u>205,816</u>

Total 2,555,687

Nonreimbursable costs:

New Orleans District	<u>143,919</u>
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Total \$2,699,606

SWPA survey and investigation costs of \$15,212 at June 30, 1956, were incurred for payroll and traveling expenses in connection with proposed projects and system engineering on contracts with private utilities.

## 10. Unexpended funds in United States Treasury

Unexpended funds in accounts with the United States Treasury and with disbursing officers at June 30, 1956, are classified as follows:

	<u>Cash balances</u>	<u>Available for</u>			<u>Not available</u>
		<u>Payment of liabilities</u>	<u>Liquidation of obligations</u>	<u>Obligation</u>	
<b>Corps of Engineers:</b>					
Flood control:					
Construction	\$15,964,742	\$3,832,866	\$9,504,890	\$2,626,986	\$ -
Operation and main- tenance	251,085	98,550	51,506	101,029	-
Mississippi River and tributaries	900,479	367,040	431,827	101,612	-
Preliminary surveys and investigations	11,512	1,156	117	10,239	-
Contributed funds	49,158	-	-	49,158	-
General expenses	197	147	-	-	50
Total	<u>\$17,177,173</u>	<u>\$4,299,759</u>	<u>\$9,988,340</u>	<u>\$2,889,024</u>	<u>\$ 50</u>
<b>Southwestern Power Adminis- tration:</b>					
Construction	\$ 1,185,062	\$ 21,414	\$ 111,539	\$1,052,109	\$ -
Operation and mainte- nance	255,272	5,501	1,285	-	248,486
Continuing fund	1,497,015	468,774	-	300,000	728,241
Special deposits for payment of specific liabilities	8,510	8,510	-	-	-
Total	<u>\$ 2,945,859</u>	<u>\$ 504,199</u>	<u>\$ 112,824</u>	<u>\$1,352,109</u>	<u>\$976,727</u>

Funds appropriated to the Corps of Engineers (Civil Functions) for flood control--Mississippi River and tributaries, preliminary surveys and investigation, 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.

Tentative project allotments have been made by the Corps of Engineers to the projects, listed below, in the Arkansas, White,

and Red River basins, including the Whitney Project, from the Public Works Appropriation Act, 1957 (70 Stat. 479), as follows:

<u>Project and basin</u>	<u>Total</u>	<u>Con- struction</u>	<u>Operation and maintenance</u>	<u>Other</u>
Multiple-purpose including power:				
Dardanelle, Arkansas	\$ 650,000	\$ 650,000	\$ -	\$ -
Eufaula, Arkansas	1,250,000	1,250,000	-	-
Fort Gibson, Arkansas	292,903	-97	293,000	-
Keystone, Arkansas	1,500,000	1,500,000	-	-
Tenkiller Ferry, Arkansas	170,000	-	170,000	-
Beaver, White	250,000	250,000	-	-
Bull Shoals, White	250,600	-31,400	282,000	-
Greers Ferry, White	750,000	750,000	-	-
Norfolk, White	208,000	-	208,000	-
Table Rock, White	12,750,000	12,750,000	-	-
Blakely Mountain, Red	200,000	-	200,000	-
DeGray, Red	20,000	20,000	-	-
Denison, Red	1,467,000	1,050,000	417,000	-
Narrows, Red	165,000	-	165,000	-
Flood control reservoirs (25), various	16,406,000	15,557,000	849,000	-
Other flood control:				
Local protection	4,364,822	4,344,322	20,500	-
Emergency operations	148,500	-	148,500	-
Mississippi River tributary improvements	2,926,500	2,830,000	96,500	-
Navigation	3,782,000	3,267,000	515,000	-
General investigations:				
Flood control	118,900	-	-	118,900
Navigation	10,000	-	-	10,000
<b>Total</b>	<b>\$47,680,225</b>	<b>\$44,186,825</b>	<b>\$3,364,500</b>	<b>\$128,900</b>

For the fiscal year 1957 the Public Works Appropriation Act, 1957 (70 Stat. 474), provided \$1,000,000 for operation and maintenance to the Southwestern Power Administration.

#### 11. The continuing fund

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. 825-1), to be derived from receipts for sale of electric energy. This fund may be used to defray emergency expenses and to insure continuous operation (Interior Department Appropriation Act, 1952; 65 Stat. 248) and for purchase of power and rentals of transmission facilities as might be approved in annual appropriation acts.

The Public Works Appropriation Act, 1956 (69 Stat. 356), authorized expenditures from the continuing fund of \$6,000,000 for

the purchase of power and rental of facilities. As a result of this action the Administration retained receipts totaling \$7,863,690 in fiscal year 1956 and made no transfer to the General Fund Receipt Account in the United States Treasury. Of the receipts retained, \$6,000,000 was transferred to the continuing fund and the balance of \$1,863,690 remained in the Special and Trust Funds on Deposit account which totaled \$4,654,314 at June 30, 1956. Expenditures from the continuing fund during fiscal year 1956 totaled \$4,802,985.

At June 30, 1956, receipts from sale of electric energy transferred to the continuing fund were represented by:

Purchase of power and rentals for the use of transmission facilities during fiscal year 1956	\$4,802,985
Purchase of power and service charges during fiscal years 1952, 1953, and 1954	859,266
Expenses to insure continuous operations	78,766
Unexpended balance	<u>1,497,015</u>
<b>Total</b>	<b><u>\$7,238,032</u></b>

The Public Works Appropriation Act, 1957 (70 Stat. 475), authorized expenditures from the continuing fund of \$6,400,000 for all costs in connection with the purchase of power and rentals of transmission facilities.

## 12. 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, single-purpose flood control projects, local protection projects, and navigation facilities in the Arkansas, White, and Red River basins, including the Whitney Project, to June 30, 1956, have been as follows:

Projects	Total	Construction	Operation and maintenance	Mississippi River and tributaries	General investigations	Other
Multiple-purpose including power and basin:						
Eufaula, Arkansas	\$ 1,402,633	\$ 1,400,102	\$ -	\$ -	\$ 2,531	\$ -
Dardanelle, Arkansas	701,003	701,003	-	-	-	-
Fort Gibson, Arkansas	42,451,195	41,063,139	1,388,056	-	-	-
Short Mountain, Arkansas (note a)	55,000	55,000	-	-	-	-
Tenkiller Ferry, Arkansas	22,761,184	22,115,205	633,415	-	12,564	-
Webbers Falls, Arkansas (note a)	68,000	68,000	-	-	-	-
Beaver, White (note a)	25,000	25,000	-	-	-	-
Bull Shoals, White	76,843,501	75,638,400	1,205,101	-	-	-
Greers Ferry, White	395,208	395,208	-	-	-	-
Norfolk, White	31,120,435	28,590,635	2,529,800	-	-	-
Table Rock, White	20,651,006	20,651,006	-	-	-	-
Blakely Mountain, Red	31,227,791	30,849,999	377,792	-	-	-
DeGray, Red (note a)	70,000	70,000	-	-	-	-
Denison, Red	65,071,057	60,114,512	4,523,006	433,539	-	-
Narrows, Red	13,763,400	12,641,000	1,122,400	-	-	-
Whitney, Brazos River	41,094,982	40,414,899	680,083	-	-	-
Flood control reservoirs	165,174,533	157,022,821	8,129,678	-	22,034	-
Other flood control works	148,654,832	57,548,251	8,939,605	72,100,643	9,700,444 <sup>b</sup>	365,889 <sup>c</sup>
Navigation	53,187,158	31,320,068	21,867,090	-	-	-
<b>Total</b>	<b>\$714,717,918</b>	<b>\$580,684,248</b>	<b>\$51,396,026</b>	<b>\$72,534,182</b>	<b>\$9,737,573</b>	<b>\$365,889</b>

Summary	Total	Arkansas	White	Red	Not identified by basin
Multiple-purpose projects	\$306,606,413	\$ 67,439,015	\$129,035,150	\$110,132,248	\$ -
Flood control reservoirs projects	165,174,533	110,287,781	10,794,755	44,091,997	-
Other flood control projects	148,654,832	62,643,842	12,272,508	58,580,489	15,157,993
Navigation projects	53,187,158	25,751,086	5,991,752	21,444,320	-
<b>Total Arkansas, White, and Red River basins</b>	<b>673,622,936</b>	<b>\$266,121,724</b>	<b>\$158,094,165</b>	<b>\$234,249,054</b>	<b>\$15,157,993</b>
Whitney Project, Brazos River	41,094,982				
<b>Total</b>	<b>\$714,717,918</b>				

<sup>a</sup>Advance planning.

<sup>b</sup>Includes \$2,702,433 allotted for Arkansas-White-Red Basins Inter-Agency Committee investigation.

<sup>c</sup>Includes general expense and working fund allotments.

Amounts for Dardanelle, Short Mountain, Webbers Falls, Greers Ferry, and Beaver 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, 1956 (69 Stat. 360), were made by the Chief of Engineers to multiple-purpose projects in the Arkansas, White, and Red River basins, including the Whitney Project, as follows:

<u>Project and basin</u>	<u>Total</u>	<u>Construc- tion</u>	<u>Operation and mainte- nance</u>	<u>Other</u>
Multiple-purpose includ- ing power:				
Dardanelle	\$ 450,000	\$ 450,000	\$ -	\$ -
Eufaula	450,000	450,000	-	-
Fort Gibson	235,139	-15,361	250,500	-
Tenkiller Ferry	156,800	-10,200	167,000	-
Beaver	25,000	25,000	-	-
Bull Shoals	109,000	-173,300	282,300	-
Greers Ferry	185,000	185,000	-	-
Norfork	159,036	-46,364	205,400	-
Table Rock	13,000,000	13,000,000	-	-
Blakely Mountain	255,000	50,000	205,000	-
DeGray	70,000	70,000	-	-
Denison	381,012	16,512	364,500	-
Narrows	166,200	-	166,200	-
Flood control reser- voirs (23)	12,951,796	12,022,836	928,960	-
Other flood control:				
Local protection	5,539,464	5,539,464	-	-
Emergency operations	190,267	34,100	156,167	-
Flood control res- ervoir operations	6,000	-	6,000	-
Mississippi River tributary improve- ments	3,030,900	2,830,000	200,900	-
Navigation	5,008,860	4,487,000	521,860	-
General investigations:				
Flood control	37,100	-	-	37,100
Navigation	200	-	-	200
<b>Total</b>	<b>\$42,406,774</b>	<b>\$38,914,687</b>	<b>\$3,454,787</b>	<b>\$37,300</b>

Appropriations by the Congress to the Southwestern Power Admin-  
istration 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, 1956, are as  
follows:

Construction	\$27,120,000
Operation and maintenance	<u>10,006,712</u>
Total appropriations	37,126,712
Less rescinded and lapsed appropriations and appropriation transfers	<u>3,354,667</u>
Total	<u>\$33,772,045</u>

The Public Works Appropriation Act, 1956 (69 Stat. 356), included an appropriation of \$1,250,000 to Southwestern Power Administration for operation and maintenance.

Congressional appropriations (net) in the financial statements of the Arkansas, White, and Red River basins water resources development program at June 30, 1956, are classified as to status, as follows:

	Total	Corps of Engineers	Southwestern Power Administration
<b>Construction funds:</b>			
Unallotted	\$ 1,052,109	\$ -	\$ 1,052,109
Unobligated	2,626,986	2,626,986	-
Unliquidated	9,637,843	9,504,890	132,953
Expended	<u>592,267,480</u>	<u>568,552,372</u>	<u>23,715,108</u>
Total	<u>605,584,418</u>	<u>580,684,248</u>	<u>24,900,170</u>
<b>Operation and maintenance funds:</b>			
Unallotted	17,445	-	17,445
Unobligated	331,885	100,844	231,041
Unliquidated	58,477	51,691	6,786
Expended	<u>59,860,094</u>	<u>51,243,491</u>	<u>8,616,603</u>
Total	<u>60,267,901</u>	<u>51,396,026</u>	<u>8,871,875</u>
<b>Mississippi River and tributaries funds:</b>			
Unobligated	101,612	101,612	-
Unliquidated	431,827	431,827	-
Expended	<u>72,000,743</u>	<u>72,000,743</u>	-
Total	<u>72,534,182</u>	<u>72,534,182</u>	-
<b>General investigations funds:</b>			
Unobligated	10,239	10,239	-
Unliquidated	117	117	-
Expended	<u>9,727,217</u>	<u>9,727,217</u>	-
Total	<u>9,737,573</u>	<u>9,737,573</u>	-
<b>Other:</b>			
Unobligated	50	50	-
Unliquidated	-	-	-
Expended	<u>365,839</u>	<u>365,839</u>	-
Total	<u>365,889</u>	<u>365,889</u>	-
<b>Total</b>	<u>\$748,489,963</u>	<u>\$714,717,918</u>	<u>\$33,772,045</u>

Except for the operation and maintenance appropriation to the Southwestern Power Administration, congressional appropriations to the Corps of Engineers (Civil Functions) and the Southwestern Power Administration are available until expended.

### 13. 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 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, 1956, these transfers were as follows:

Corps of Engineers:		
Denison	-\$163,673	
Fort Gibson	-22,710	
Bull Shoals	91,284	
Blue Mountain	51,144	
Other, net	<u>10,888</u>	\$-33,067
Southwestern Power Administration		<u>211,223</u>
Total		<u>\$178,156</u>

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 Denison Project is represented by the transfer of the Denison-Payne transmission line to Southwestern Power Administration in 1952 but not recorded in the accounts of the Corps until fiscal year 1956.

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.

### 14. Interest on the Federal investment

Amounts recorded by the Corps of Engineers as interest on the Federal investment at June 30, 1956, have been allocated as follows:

<u>Basin and project</u>	<u>Total</u>	<u>Interest during construction</u>	<u>Interest charged to operations</u>		
			<u>Together</u>	<u>Power program</u>	<u>Nonpower programs</u>
Arkansas River basin:					
Fort Gibson	\$ 4,705,994	\$ 2,871,517	\$ 1,834,477	\$ 1,834,477	\$ -
Tenkiller Ferry	2,399,909	1,359,094	1,040,815	1,040,815	-
Dardanelle	44,624	44,624	-	-	-
White River basin:					
Bull Shoals	12,126,184	4,398,000	7,728,184	3,546,279	4,181,905
Norfolk	10,017,904	1,530,000	8,487,904	4,089,936	4,397,968
Table Rock	697,166	697,166	-	-	-
Red River basin:					
Blakely Mountain	3,481,226	2,301,988	1,179,238	475,715	703,523
Denison	8,750,951	1,982,628	6,768,323	6,768,323	-
Narrows	2,513,072	507,000	2,006,072	866,987	1,139,085
Brazos River:					
Whitney	<u>6,565,525</u>	<u>3,318,586</u>	<u>3,246,939</u>	<u>629,955</u>	<u>2,616,984</u>
Total	<u>\$51,302,555</u>	<u>\$19,010,603</u>	<u>\$32,291,952</u>	<u>\$19,252,487</u>	<u>\$13,039,465</u>

The computations by the Corps of Engineers of interest during construction are based on 2.5 percent interest on accrued expenditures charged to construction accounts, compounded annually at Fort Gibson, Tenkiller Ferry, Bull Shoals, Norfolk, Denison, Narrows, and Whitney Projects. Interest computations for Dardanelle, Table Rock, and Blakely Mountain are based on simple interest.

Interest charged to expenses at June 30, 1956, was computed at 2.5 percent of the total unrepaid Federal investment in the Bull Shoals, Norfolk, Blakely Mountain, Narrows, and Whitney Projects. Interest was computed only on the unrepaid Federal investment allocated to power in the Fort Gibson, Tenkiller Ferry, and Denison Projects. Power revenues have not been recorded by the Corps in determining the unrepaid balance of the Federal investment.

Interest of \$2,925,584 at June 30, 1956, 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 (\$586,199 in fiscal year 1956) has been charged to operations, although a portion is applicable to construction work in progress and should have been charged to that account as interest during construction.

#### 15. Funds returned to United States Treasury

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

<u>Project</u>	<u>Total</u>	<u>Repayment of Federal investment in</u>	
		<u>Power program</u>	<u>Nonpower programs</u>
Fort Gibson	\$ 626,658	\$ -	\$ 626,658
Tenkiller Ferry	51,562	-	51,562
Bull Shoals	508,820	251,644	257,176
Norfolk	180,550	72,112	108,438
Table Rock	3,133	2,214	919
Blakely Mountain	49,424	4,028	45,396 <sup>a</sup>
Denison	958,122	-	958,122
Narrows	50,303	14,386	35,917
Whitney	164,374	-	164,374
Single-purpose flood control	583,661	-	583,661
Navigation projects	<u>10,218</u>	<u>-</u>	<u>10,218</u>
<b>Total</b>	<b><u>\$3,186,825</u></b>	<b><u>\$344,384</u></b>	<b><u>\$2,842,441</u></b>

<sup>a</sup>Includes \$25,504 from sale of housing project which was prorated to specific power and joint facility construction items.

The amounts in the tabulation above consist principally of receipts from leasing of reservoir areas for farming and grazing purposes and the sale of equipment and facilities declared excess to project needs.

Amounts paid over to states of 75 percent of receipts derived from leasing at reservoir areas under the provisions of the Flood Control Act of 1941, as amended (33 U.S.C. 701c-3), have not been allocated to projects. The payments to states are disbursed and recorded at the Office of the Chief, Washington, D.C.

Receipts from the transmission and sale of electric energy by the Southwestern Power Administration are required to be deposited in 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 account, 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, 1956, amounted to \$27,272,154 and represented:

Funds covered into United States Treasury as miscellaneous receipts	\$20,034,122
Receipts transferred to the continuing fund	<u>7,238,032</u>
<b>Total</b>	<b><u>\$27,272,154</u></b>

At June 30, 1956, the Administration had \$4,654,314 in special and trust funds on deposit for transfer to the continuing fund in fiscal year 1957 to be used for purchase of power and rentals of transmission facilities.

16. Employees' accrued leave

The Corps of Engineers and the Administration include in property costs and operating expenses provision for accrued annual and sick leave of employees. At 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 the fund.

17. 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, 1956, the Corps of Engineers had received cash contributions for the following projects:

<u>Project</u>	<u>Amount</u>
Arkansas River basin:	
Fountaine Que Bouille River, Colorado	\$242,000
Bridge near Manzarola, Colorado	1,500
Bridge near Florence, Colorado	1,000
Fort Gibson, Oklahoma	115,274
Tenkiller Ferry, Oklahoma	946
Levees, May County, Oklahoma	19,645
Levees, Fort Smith, Arkansas	<u>8,604</u>
Total	<u>388,969</u>
White River basin:	
Levees, Newport, Arkansas	<u>4,450</u>
Red River basin:	
Ouachita River levees, Louisiana	130,589
Levees, Bawcomville, Louisiana	84,441
Levees, Farelly Lake	13,410
Levees, Jonesville, Louisiana	100,000
Levees, Little Bayou Boeuf	26,000
Red River below Denison Dam, Oklahoma	20,000
South bank, Red River, Louisiana	33,173
Grand Ecore, Louisiana	5,747
Garland City, Louisiana	<u>10,238</u>
Total	<u>423,598</u>
Total	<u>\$817,017</u>

18. Allocation of revenue from power operations

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

## 19. 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 Norfolk Projects. At the Denison and Norfolk Projects, the allocations to purposes were made on the basis of the incremental cost--flood control basic--method.

## 20. Nonoperating revenues

Rentals from leases of reservoir lands and other nonoperating revenues have been allocated solely to nonpower programs at the Denison, Fort Gibson, Tenkiller Ferry, and Whitney Projects. At the Blakely Mountain, Bull Shoals, Norfolk, and Narrows 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.

Under the provisions of the Flood Control Act of 1941, as amended (33 U.S.C. 701c-3), 75 percent of the moneys received during any fiscal year on account of lands acquired for flood control, navigation, and allied purposes are to be returned 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, Washington, D.C.

**APPENDIXES**

AUTHORIZATIONS FOR WATER RESOURCES PROGRAMSIN ARKANSAS, WHITE, AND RED RIVER BASINSINITIAL 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, 1956.

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 Reservoir 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, 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, 1956, the only such multiple-purpose project including power in operation was the Whitney Project 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 Norfolk 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 cessation of hostilities in World War II, the Pensacola Dam was returned to the control of the State of Oklahoma.

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.<sup>1</sup> In addition, the incremental-cost method<sup>2</sup> 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<sup>3</sup> 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.

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<sup>1</sup>(Footnotes 1, 2, and 3 on following page.)

<sup>1</sup>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.

<sup>2</sup>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.

<sup>3</sup>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 is 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.

