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



**AUDIT OF
LOWER COLORADO RIVER BASIN
WATER RESOURCES DEVELOPMENT PROGRAM
BUREAU OF RECLAMATION
DEPARTMENT OF THE INTERIOR
FISCAL YEARS 1957-1959**



**BY
THE COMPTROLLER GENERAL OF THE UNITED STATES
NOVEMBER 1960**

745278/087953

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COMPTROLLER GENERAL OF THE UNITED STATES
WASHINGTON 25

B-114885

NOV 17 1960

Honorable Sam Rayburn
Speaker of the House of Representatives

Dear Mr. Speaker:

Herewith is our report on the audit of selected activities of the Bureau of Reclamation, Department of the Interior, in the lower Colorado River basin for the fiscal years 1957, 1958, and 1959.

The report includes comments on the power and water operations of the Bureau of Reclamation in the lower Colorado River basin, the status of repayment of the Federal investment in the Boulder Canyon Project and other projects, and other matters. The report also contains our recommendations to the Secretary of the Interior on establishing firm and reasonable allocations of construction costs of the Parker-Davis Project. A summary of the principal findings of our current audit is included in the forepart of this report. Also included in the forepart is a summary of the current status of the principal findings and recommendations in our prior report, in which we repeat our recommendations to the Secretary of the Interior relative to the establishment of policies for accounting and financial practices necessary to present fairly the financial position of and results from the Government's water resources operations.

This report is also being sent today to the President of the Senate. Copies are being sent to the President of the United States and to the Secretary of the Interior.

Sincerely yours,

A handwritten signature in cursive script, appearing to read "W. M. C. Rayburn".

Comptroller General
of the United States

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REPORT ON AUDIT
OF
LOWER COLORADO RIVER BASIN
WATER RESOURCES DEVELOPMENT PROGRAM
BUREAU OF RECLAMATION
DEPARTMENT OF THE INTERIOR
FISCAL YEARS 1957-1959

The General Accounting Office has made an audit of selected activities of the Bureau of Reclamation, Department of the Interior, in the lower Colorado River basin for the fiscal years 1957, 1958, and 1959. 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 58 of this report.

GENERAL COMMENTS

The lower Colorado River basin is designated as those parts of the States of Arizona, California, Nevada, New Mexico, and Utah within and from which waters naturally drain into the Colorado River system below Lee Ferry, Arizona. The Bureau of Reclamation has in operation or under construction projects in the lower Colorado River basin which include facilities for generation and transmission of hydroelectric power, regulation of water, protection against flood damage, delivery of water to irrigation works, and diversion of water for municipal consumption.

The principal Bureau of Reclamation project in the lower basin is the Hoover Dam and Power Plant at Black Canyon,

Arizona-Nevada. The major purposes of the project are generation of electrical energy, regulation of water for use in the lower basin, and prevention of flood damage. The Parker-Davis Project and the Yuma Project also include power features.

The hydroelectric power-generating facilities in operation or under construction by the Bureau of Reclamation in the lower Colorado River basin will have an ultimate installed capacity of 1,691,400 kilowatts, of which 1,596,400 kilowatts had been installed at June 30, 1959. During fiscal year 1959, the net electrical energy generated by these facilities totaled 5.9 billion kilowatt-hours.

In addition to power facilities, the Bureau has constructed irrigation works at the Gila, Yuma, Yuma Auxiliary, Salt River, and Palo Verde Diversion Projects and the All-American Canal System which was authorized as part of the Boulder Canyon Project.

The activities of the Bureau included in this report are carried out through its regional office located at Boulder City, Nevada, and project offices located at Boulder City, Nevada; Phoenix and Yuma, Arizona; and Needles, California.

Because of the lack of an approved firm construction cost allocation for the Parker-Davis Project and certain accounting deficiencies, summarized on page 59, it is our opinion that the financial statements on pages 61 through 67 do not present fairly or satisfactorily the financial position of the Bureau of Reclamation projects in the lower Colorado River basin at June 30, 1959, and the results of operations for the fiscal year then ended.

PRINCIPAL FINDINGS OF CURRENT AUDIT¹

The principal findings and recommendations of the current audit included in this report are summarized below.

1. Need for review of allocation of costs to the Mexican Water Treaty

The Bureau's allocation of Parker-Davis Project construction costs to the servicing of the Mexican Water Treaty was based on assumptions and conditions covered in a study made in 1947 which differ significantly from existing conditions. Consequently, the amount of interest-bearing plant investment does not appear to be reasonable and fairly determined. ✓
✓

We are recommending to the Secretary of the Interior that a review of the allocation of construction costs to the servicing of the Mexican Water Treaty be made, based on more up-to-date water flow information and current operational concepts, and that the allocation be adjusted to conform to currently anticipated conditions. ✓

The allocation of construction costs of the Parker-Davis Project to the servicing of the Mexican Water Treaty is discussed on pages 18 to 20 of this report.

2. Inconsistent method of allocating construction costs of the Parker-Davis Project to irrigation

The allocation of construction costs of the Parker-Davis Project to irrigation is based on ratios of total estimated electrical capacity of the irrigation pumps to the total capacity of the ✓

¹On April 7, 1960, we requested the Department of the Interior to comment on a draft of this report. Comments were received on June 9, 1960, and have been considered in the final preparation of this report.

various features of the project which will generate or transmit power to operate the pumps. However, the irrigation allocation percentage determined for Davis Dam and Reservoir has been applied against the total cost of Davis Dam and Reservoir, including costs allocated to control, regulate, and store water under the Mexican Water Treaty. Because these costs are unrelated to the cost of delivering power to irrigation pumps, we believe that the allocation to irrigation, an interest-free purpose, is too high. As a result, the interest accruing to the United States Treasury will be understated by about \$4,915,000 over a 50-year repayment period.

So that a determination may be made as to whether the interest accruing to the United States Treasury is properly recorded, we are recommending that the Secretary of the Interior review the basis for the allocation to irrigation and, if necessary, recompute the interest accruing to the United States Treasury.

The allocation of construction costs of the Parker-Davis Project to irrigation is discussed on pages 25 to 27 of this report.

3. Understatement of accrued interest on interest-bearing power investment of the Parker-Davis Project

The allocation of construction costs of the Parker-Davis Project to the interest-free irrigation purpose incorrectly included 13.8 percent of contributions for highway construction across Davis Dam, thereby understating interest accruing to the United States Treasury by approximately \$421,900 over a 50-year repayment period of the project. Although the allocation has been corrected for fiscal year 1960, the Bureau has not adjusted the financial records to account for about \$28,700 of additional interest accumulated

on the unrepaid balance of the interest-bearing power investment at June 30, 1959.

The understatement of accrued interest on the Parker-Davis Project is discussed on page 27 of this report.

4. Need for review of energy rate
charged Parker-Davis Project by Yuma Project

Surplus energy generated at the Bureau owned and operated Siphon Drop Power Plant of the Yuma Project is purchased by the Parker-Davis Project at the rate of 3.25 mills per kilowatt-hour, a rate that was established in 1943. Because no recent study of the reasonableness of this rate has been made, and since the surplus revenues from sale of power generated at the Siphon Drop Power Plant have been substantial and are credited to water users of the Yuma Project, we are recommending that the Secretary of the Interior initiate a study to determine whether the rate being charged to the Parker-Davis Project for energy generated at the Siphon Drop Power Plant is reasonable and fair under existing circumstances.

The energy rate charged by the Yuma Project is discussed on pages 44 and 45 of this report.

STATUS OF PRINCIPAL FINDINGS
AND RECOMMENDATIONS IN PRIOR REPORT

Our audit report to the Congress dated September 13, 1957, on the lower Colorado River basin for the fiscal year ended June 30, 1956, contained comments on a number of significant matters on which corrective action was needed together with our recommendations for corrective action. These findings and recommendations and their current status are summarized below.

1. Need for secretarial approval
of allocations of construction costs

The allocation of the estimated construction costs of the Parker-Davis Project is preliminary and tentative and has been made to serve the administrative needs of the Bureau of Reclamation. In our prior report, we pointed out that the existing allocation was not a firm allocation by the Secretary of the Interior that could be used as a basis for a review of the financial administration of the project.

The Administrative Assistant Secretary of the Interior by letter dated July 16, 1957, advised us that the bases for cost allocations at Parker-Davis Project had not changed from those in the original report on engineering feasibility and repayment, approved by Secretary Krug on February 10, 1948, and that the 1955 revisions of cost allocations for average rate and repayment study purposes were approved by the Acting Secretary of the Interior on August 22, 1956.

In view of the need for a study to restate the allocations to the servicing of the Mexican Water Treaty and to irrigation, as

indicated in our current audit (see pp. 18 through 20 and 25 through 27), we believe that, after the revised cost allocations have been made, they should be formally approved by the Secretary of the Interior as firm allocations.

2. Status of repayment of investment in Hoover Dam and Power Plant

A deficiency of about \$8,000,000 in net revenues available for repayment of the Federal investment in the dam and appurtenant works of the Hoover Dam and Power Plant, when compared with the cumulative scheduled repayment through May 31, 1956, was disclosed in our audit for fiscal year 1956. At May 31, 1959, this deficiency amounted to \$9,043,350. The Administrative Assistant Secretary of the Interior in a letter dated July 16, 1957, stated that, inasmuch as the Boulder Canyon Project Act, as amended, and the related General Regulations establish the procedures for determining the amount of revenues to be collected from the allottees to amortize the power investment in the project, no lag or deficit can exist as long as the law is being adhered to.

Comments on repayment of the Federal investment in Hoover Dam and Power Plant appear on pages 22 to 24 of this report.

3. Trespass occupancy of lands along the Colorado River

Our audit report for fiscal year 1956 contained comments on the trespassing along the Colorado River from Davis Dam to the International Boundary on Reclamation withdrawn lands and on the unauthorized diversion of water to these lands without reimbursement. We found that legal proceedings to evict these trespassers had been ineffective.

Bureau records indicate that approximately 28,800 acres of land are currently being irrigated by diversion of Colorado River water without contractual agreement with the Department of the Interior.

On June 8, 1959, the Secretary of the Interior referred the cases of four individuals and one company to the Attorney General of the United States for prosecution for willful trespass on the Colorado River lands in Arizona and California that have been withdrawn for reclamation purposes. By letter dated June 9, 1960, the Administrative Assistant Secretary of the Interior advised us that several of these suits had reached the filing stage and that the various aspects of this problem were being pursued in an energetic manner.

4. Need for review of rate components for provisions for replacements at Hoover Dam and Power Plant

Rate components for provisions for replacements of the dam and appurtenant works and the generating machinery and equipment of Hoover Dam and Power Plant are based on determinations and prices applicable in 1941. In our prior report, we recommended that a study be made to determine the adequacy of provisions for replacements and that rates be revised depending on the findings of the study so that the replacement component of power rates will be adequate to cover the costs of replacements.

A study of replacement practices at selected projects, including the Boulder Canyon Project, was completed by the Bureau in July 1958. The study indicates that replacement provisions have been generally overstated because many large items which were

considered replaceable only as a unit are actually, under the maintenance program, replaced by parts.

Because instructions implementing the results of this study have not been received by the Bureau's regional office, the office has continued to accumulate provisions for replacement on the same basis as that used in prior years. In a letter dated June 9, 1960, the Administrative Assistant Secretary of the Interior advised us that the Bureau of Reclamation was in the process of implementing the recommendations made in the July 1958 report on replacement practices.

5. Status of interchange credit for energy deliveries to Boulder Canyon Project by Parker-Davis Project

A storage credit computed in kilowatt-hours (kwh) for unreturned energy received through interchanges from the Parker-Davis Project by the Boulder Canyon Project is recorded in memorandum records but is not recorded in the formal accounts of either project. At June 30, 1956, the storage credit totaled about 575 million kwh. At June 30, 1959, the storage credit had been reduced to about 221 million kwh.

On March 1, 1958, the Bureau executed a contract, to expire on May 31, 1987, with the three Boulder Canyon Project allottees having rights to secondary energy. Briefly, this contract provides that (1) of the approximately 572 million kwh of interchange energy accumulated up to June 1, 1957, 522 million kwh will be considered "disputed energy" and 50 million kwh will be considered interchange energy, (2) one half of any energy generated in excess of the defined amount of firm energy in an operating year shall be

considered disputed energy, and (3) disputed energy will be sold to these allottees at the rate of 1-1/2 mills per kwh. Revenues from the sale of disputed energy under this contract shall accrue to the Parker-Davis Project at the rate of 1 mill per kwh and to the Boulder Canyon Project at the rate of 0.5 mill per kwh. No monetary value has been established for interchange energy which cannot be accumulated in excess of limitations specified in the contract. During the months of March, April, and May 1958, about 326 million kwh of disputed energy was sold leaving a balance in the disputed energy account on June 30, 1959, of about 196 million kwh.

In a letter to us dated June 9, 1960, relating to this report, the Administrative Assistant Secretary of the Interior stated that, in view of the Upper Basin power developments under construction and the scheduled early filling of storage reservoirs, it appeared more and more doubtful that any additional disputed energy would be generated prior to the initial closure at Glen Canyon in 1962 and that there may be no secondary energy generated at Hoover after commencement of storage at Glen Canyon. He also stated the belief that recording the contingent value of this energy on the books of account would presume a greater degree of assurance that it would ultimately be generated than could be determined at that time.

6. Accounting and financial policy

The financial statements included in this report present on a combined basis the assets and liabilities of the major activities of the Bureau of Reclamation within the lower Colorado River basin.

These financial statements have been prepared from the records of the Bureau. However, until construction cost allocations to power and nonpower purposes on the Parker-Davis Project are firm (see p. 6) and acceptable policies are established and applied by the Department of the Interior on depreciation on plant in service and interest on the Federal investment, financial statements cannot be presented that fairly show the financial position and the financial results of water and power operations.

The Bureau of Reclamation's policy is to record depreciation on plant in service as an element of cost of operations for only relatively minor items, such as facilities and equipment used during construction and transportation equipment. The Bureau also records a provision for replacement as an operating cost of electric power-generating projects; however, this provision generally covers only facilities and equipment that are estimated to be replaced within a 50-year period. Since a substantial portion of the costs of plant in service are related to facilities and equipment that will not be replaced within a 50-year period, the Bureau's provision for replacement is not an acceptable substitute for depreciation accounting on electric power-generating projects.

Interest on the Federal investment in electric power facilities is computed and recorded by the Bureau of Reclamation on various bases, depending largely on the provisions with respect to interest, if any, contained in the authorizing legislation for the project involved.

For projects where the authorizing legislation does not specifically require the repayment of interest as a cost of

operations, the Bureau's current policy is to record interest expense on the commercial electric power investment at the rate of 3 percent a year from the time commercial electric power facilities are placed in service. For certain, but not all of these projects, interest during construction at the rate of 3 percent a year is considered to be repayable; however, such interest is not recorded in the accounting records of the projects. In the lower Colorado River basin, interest during construction on the commercial power investment in the Parker-Davis Project is neither considered repayable nor recorded in the accounting records of the project.

Our fiscal year 1956 report included recommendations that the Secretary of the Interior establish financial policies and apply practices thereunder consistently on:

- a. Provisions for depreciation on plant in service and allocation of the provisions on multiple-purpose plant to purposes.
- b. Computation and recording of interest on the Federal investment in commercial power facilities.

We recommended also to the Secretary that schedules supplementing the financial statements be designed to show the status of repayment of the Federal investment, based on memorandum records for scheduled repayment or theoretical return of funds which would be sufficient to repay the Federal investment within the established repayment period.

The Administrative Assistant Secretary of the Interior in a letter dated July 16, 1957, advised us to the effect (1) that, since the service life of the Bureau's property is greatly in

excess of the 50-year fixed repayment period, depreciation accounting becomes meaningless, (2) that, in accordance with departmental policy, interest during construction is included in the accounts when required by law and in certain other instances, and (3) that for repayments under sections 9(c) and 9(e) of the Reclamation Project Act of 1939 there are no scheduled repayments; that the unrepaid balance is rescheduled each year for payment during the remaining years of the repayment period; and that, except for those contracts having fixed annual repayment, no schedule can be prepared for comparison with repayment made.

We do not agree with the Department on these matters. Our position on depreciation accounting, interest during construction, and schedules showing the status of repayment is briefly restated as follows:

- a. Depreciation is a material element of cost of Federal electric power operations. Therefore, full disclosure of the cost of electric power operations cannot be made unless depreciation costs are recorded. While repayment requirements are very important in rate making and other determinations, such requirements do not change the generally recognized accounting basis for determining the cost of electric power operations.
- b. Generally, the Government incurs interest costs from the time appropriated funds are converted to materials, supplies, equipment, or other forms of resources to be used in constructing a project. Therefore, for interest-bearing activities, interest during construction as well as interest during operations should be recorded in project accounting records. To obtain comparable financial data on Federal water resources projects, interest during construction on interest-bearing facilities should be recorded even though it has been administratively determined that such interest is not to be repaid to the United States Treasury.
- c. It is desirable for management purposes, as well as for the purpose of full disclosure of a project's status of repayment, to compare annual and cumulative actual repayment

performance with scheduled repayment requirements or theoretical return of funds which would be sufficient to repay the Federal investment within the established repayment period.

Because our current review disclosed continued unacceptable and inconsistent policies with respect to depreciation accounting and exclusion of interest during construction from the project's accounts and failure to establish statements comparing realized repayments of the Federal investment with scheduled repayments, we repeat our recommendations.¹

¹By letter dated June 9, 1960, the Administrative Assistant Secretary of the Interior advised us that the Department's views on these matters were the same as those previously furnished in commenting on other reports.

ALLOCATIONS OF

ESTIMATED TOTAL CONSTRUCTION COSTS TO PURPOSES¹

Allocations of estimated total construction and rehabilitation and betterment costs of projects constructed, and under construction, by the Bureau in the lower Colorado River basin are summarized as follows:

Project	Estimated total project costs (note a)	Allocation				
		Irrigation	Municipal water	Commercial power	Flood control	Other
Boulder Canyon:						
All-American Canal System	\$ 68,273,372	\$ 63,237,858	\$449,072	\$ -	\$ 4,586,442	\$ -
Hoover Dam and Power Plant	174,932,700	-	-	146,524,218	25,000,000	3,408,482
Colorado River Front Work and Levee System	10,090,424	-	-	-	10,090,424	-
Gila	62,976,597	62,482,494	-	-	-	494,103
Palo Verde Diversion	4,412,481	3,526,690	-	-	885,791	-
Parker-Davis	142,544,876	11,638,469	-	106,403,892	-	24,502,515
Salt River	36,077,508	36,077,508	-	-	-	-
Yuma	7,292,403	7,292,403	-	-	-	-
Yuma Auxiliary	1,142,102	1,142,102	-	-	-	-
Total	\$507,742,463	\$185,397,524	\$449,072	\$252,928,110	\$40,562,657	\$28,405,100
Percent of total	100.00	36.51	0.09	49.81	8.00	5.59

^aThe estimated total project costs used in the above schedule are based on the Bureau's cost estimates made during July, August, and September 1959. By letter dated June 9, 1960, the Administrative Assistant Secretary of the Interior advised us that the estimated total project costs of the All-American Canal System and the Gila and Parker-Davis Projects were \$68,361,516, \$63,162,695, and \$144,112,948, respectively. The differences between the amounts shown in the above tabulation and the amounts furnished by the Department result from the methods used in presenting certain costs and cost adjustments and have no significant effect on the allocations to project purposes and other data presented in this report.

Construction costs on the Colorado River Front Work and Levee System have been allocated to flood control and are nonreimbursable pursuant to the act of June 28, 1946 (60 Stat. 338), as amended. See pages 53 and 54 for comments on the activities of the Colorado River Front Work and Levee System.

The Gila, Palo Verde Diversion, Salt River, Yuma, and Yuma Auxiliary Projects have the primary purpose of providing water for irrigation requirements and, except for minor allocations to other purposes at the Palo Verde Diversion and Gila Projects, the construction costs have been allocated to irrigation.

The amount of \$885,791 allocated to flood control purposes on the Palo Verde Diversion Project is nonreimbursable by law and represents the construction cost of works to protect the lands of the Colorado River Indian Reservation. Construction costs of the

¹Our audit report to the Congress dated September 13, 1957, on the lower Colorado River basin, Bureau of Reclamation, for the fiscal year ended June 30, 1956, pages 11-16, contains a summary of authorizations for water resource development in the lower Colorado River basin. The details on these authorizations are not repeated in this report.

Gila Project totaling \$494,103 have been allocated to other purposes and consist of (1) the cost of project housing (\$121,258) repayable from sale and rental revenues and (2) the cost of a building and appurtenances (\$372,845) constructed by the Corps of Engineers for use by the Bureau of Reclamation, which is considered nonreimbursable by the Bureau.

ALLOCATION OF ESTIMATED TOTAL PROJECT COSTS
OF HOOVER DAM AND POWER PLANT

The total project costs, including interest during construction, of the Hoover Dam and Power Plant are estimated by the Bureau at \$174,932,700. Allocations of the estimated total project costs made by the Bureau as of June 30, 1959, based on specific acts of the Congress, are summarized as follows:

Flood control	\$ 25,000,000
Nonproject investments and ex- penditures	3,408,482
Commercial power	<u>146,524,218</u>
Total estimated project costs	<u>\$174,932,700</u>

Allocation of \$25,000,000 to flood control is based on section 2(b) of the Boulder Canyon Project Act (43 U.S.C. 617a(b)). The remaining costs were initially allocated by the Secretary of the Interior to commercial power; however, the Interior Department Appropriation Act, 1949 (62 Stat. 1112), provided that costs of Hoover Dam and Power Plant deemed to be nonproject costs were to be removed from the allocation to commercial power. Nonproject costs were the costs attributable to the Federal activities at Boulder City, Nevada, not directly related to the project, as defined in the Boulder Canyon Project Act (43 U.S.C. 617) or the Boulder Canyon Project Adjustment Act (43 U.S.C. 618), such as activities of the Bureau of Mines, the National Park Service, the Department of the Army, and the regional offices of the Bureau of Reclamation. At June 30, 1959, the Bureau had determined that through May 31, 1958, nonproject investments and expenditures amounted to \$3,353,253. In August 1959, an additional amount of \$55,229 for the operating year ended May 31, 1959, was determined to be nonproject investments and expenditures; however, this amount had not been recorded in the financial records of the project at June 30, 1959. Additional costs subsequently determined to be nonproject investments and expenditures will result in a reduction of the allocation to commercial power.

ALLOCATION OF ESTIMATED TOTAL PROJECT COSTS
OF PARKER-DAVIS PROJECT

The estimated total costs of the Parker-Davis Project, which includes the Parker Dam and Power Plant, the Davis Dam and Power Plant, and a high-voltage transmission system, are \$142,544,876 of which \$141,314,876 had been recorded to June 30, 1959. The tentative allocation of the estimated total project costs is as follows:

Contributions and nonreimbursables:	
Metropolitan Water District contributions for construction of Parker Dam	\$13,060,785
Highway construction at Davis Dam:	
State of Arizona	31,060
Public Roads Administration (Public Law 562, 79th Cong., 2d sess.)	872,395
Other contributions of property	<u>14,275</u>
Total	\$ 13,978,515
Reimbursable (interest free):	
Servicing of the Mexican Water Treaty Irrigation	10,524,000
	<u>11,638,469</u>
Total	22,162,469
Reimbursable (with interest):	
Allocation to commercial power	<u>106,403,892</u>
Estimated total project costs	<u>\$142,544,876</u>

The Metropolitan Water District of Southern California (MWD) provided funds for the construction of Parker Dam and Reservoir which is used as a forebay by MWD to pump water into its Colorado River aqueduct. Also, MWD shared, with the United States, in the cost of the power plant and related facilities at the dam. The allocation of \$13,060,785 represents the funds provided by MWD for construction of the Parker Dam and the reservoir, power plant, and related facilities.

Davis Dam, in addition to producing electrical energy, is used to control the release of water for delivery to Mexico as required by the Mexican Water Treaty of 1944. The allocation of costs totaling \$10,524,000 is based on the assumption that 29 percent of the storage capacity of the dam and reservoir is required to service the Mexican Water Treaty.

The allocation to irrigation of \$11,638,469 represents the proportionate share of the costs of facilities determined to be related to the generation and transmission of electrical energy required to operate irrigation pumps in the Yuma area.

Need for review of allocation of costs
to the Mexican Water Treaty

The Bureau's allocation of 29 percent of the construction cost of Davis Dam and Reservoir to the servicing of the Mexican Water Treaty was based on assumptions and conditions covered in a study made in 1947 which differ significantly from existing conditions. Consequently, the amount of interest-bearing plant investment does not appear to be reasonable and fairly determined. While costs allocated to the treaty are repayable from power revenues, such costs are considered interest free and are deducted from the total plant-in-service costs to determine the amount of interest-bearing investment. Accordingly, the allocation directly affects the interest accruing to the United States Treasury on the unrepaid investment in power facilities.

The allocation of 29 percent of the construction cost of Davis Dam and Reservoir was predicated on assumptions and conditions which differ from present conditions as follows:

1. Bridge Canyon Dam and Power Plant and the related structures--Bluff and Coconino Dams--were to be completed and in operation by 1958. The 1947 study included these dams in the storage and control of water flows. The Bridge Canyon Dam and Power Plant and the related structures have not been authorized for construction.
2. The downstream water requirements below Hoover Dam were estimated in the 1947 study to be about 6.8 million acre-feet in 1959 and about 8.5 million acre-feet in 1999; requirements are currently estimated at about 8.5 million acre-feet in 1962 and about 9.3 million acre-feet in 1970.
3. For the years 1952 through 1958, estimated inflow of water to Hoover Dam exceeded actual inflow measured at Grand Canyon by about 14 million acre-feet. In addition, the Bureau estimated the return riverflow from uses in the United States to range from 237,000 acre-feet in 1950 to 540,000 acre-feet in 1975. However, the actual return flow was 800,510 and 1,944,290 acre-feet for the years 1957 and 1958, respectively, and was in excess of 580,000 acre-feet for the 6-month period ended June 1959.
4. The 29 percent rate used in the allocation represents an average rate based on an estimated 33 percent priority use and a 25 percent relative use of storage facilities of Davis Dam and Reservoir required to control, regulate, and store water under the Mexican Water Treaty. Our review of the Mexican Water Treaty did not disclose any definite priority use of stored or flow water for the treaty requirements. However, the guaranteed annual delivery of water to Mexico will be reduced in the event of extraordinary drought or serious accident to the irrigation system in the United States in proportion to the reduction of water delivery to other downstream water users.

By letter dated June 9, 1960, the Administrative Assistant Secretary of the Interior advised us that the Department recognized that operations of Davis Dam and Reservoir to service the Mexican Water Treaty may be somewhat different from those anticipated in the 1947 feasibility study for the Davis Dam Project. The Administrative Assistant Secretary stated further that the present climate may contain as many uncertainties as to firm criteria as existed in 1947. The uncertainties relate to (1) bills introduced in the Congress during April 1960 which would make costs of servicing the Mexican Water Treaty nonreimbursable, (2) the effects, if any, on the use of Davis Dam and Reservoir of the construction and ultimate operation of Glen Canyon Dam and Reservoir, and (3) a pending decision on the water rights of the lower basin States which may have an important bearing on the nature of future developments immediately upstream from Lake Mead. Because of these uncertainties the Administrative Assistant Secretary expressed the belief that any review of the allocation of costs to the servicing of the Mexican Water Treaty should be deferred at least until the course of action on the important current developments is more firmly established.

We recognize that the uncertainties mentioned in the Administrative Assistant Secretary's letter may have an effect on the allocation of costs to the servicing of the Mexican Water Treaty. However, in view of the deficiencies in the current allocation, it does not seem prudent to wait an indefinite period before correcting these deficiencies.

Recommendation to the Secretary of the Interior

We recommend that, to assure that the interest-bearing portion of the Government's investment in the Parker-Davis Project is reasonable and is fairly determined, a review of the allocation of construction costs to the servicing of the Mexican Water Treaty be made, based on more up-to-date water flow information and current operational concepts, and that the allocation be adjusted to conform to currently anticipated conditions.

ALLOCATION OF ESTIMATED TOTAL PROJECT COSTS
OF ALL-AMERICAN CANAL SYSTEM

The total costs of constructing the All-American Canal System and appurtenant works, including the Coachella distribution system and protective works, amounted to \$61,786,132 at June 30, 1959, and are estimated to total \$68,273,372 upon completion.

The estimated total costs of the All-American Canal System have been allocated by the Bureau as follows:

Irrigation	\$63,237,858
Flood control	4,586,442
Municipal water	<u>449,072</u>
Estimated total project costs	<u>\$68,273,372</u>

The allocation to irrigation represents the costs of the storage and carriage system (\$39,053,950), the Coachella distribution system (\$16,780,679), Pilot Knob Mesa development (\$6,500,000), and investigations of abandoned projects and unprogramed work (\$903,229). The storage features of the Imperial Dam and desilting works are used jointly with the Gila Project, and a share of the costs of these features (\$1,605,734), as well as a share of the Imperial Dam operation and maintenance deficit (\$58,513), is allocated to the Gila Project.

By the act of June 26, 1947 (61 Stat. 183), the Congress severed distribution systems from their identity as structures appurtenant to the main All-American Canal. Based upon an opinion dated March 27, 1947, from the Solicitor of the Department of the Interior, the Secretary approved an allocation to flood control on July 21, 1947, under the provisions of the Reclamation Project Act of 1939 (43 U.S.C. 485) in the estimated amount of \$4,500,000. Actual costs presently allocated to flood control amount to \$4,586,442.

REPAYMENT OF REIMBURSABLE COSTS

REPAYMENT OF ADVANCES FROM UNITED STATES TREASURY
FOR CONSTRUCTION OF HOOVER DAM AND POWER PLANT

Financing of construction costs of the Hoover Dam and Power Plant was provided by means of advances from the United States Treasury on appropriations by the Congress to the Colorado River Dam Fund, a special fund established by the Boulder Canyon Project Act (43 U.S.C. 617a). Provisions for repayment of such advances to the United States Treasury are contained in the Boulder Canyon Project Adjustment Act (43 U.S.C. 618). These provisions require that the amounts advanced to the Colorado River Dam Fund, except for amounts allocated for flood control, be repaid within 50 years, with interest at 3 percent from revenues of the project. Reimbursable advances made before June 1, 1937, are to be fully repaid by May 31, 1987, and advances made on or after June 1, 1937, are to be repaid as follows: (1) repayment of advances for construction of the dam and appurtenant works is to be made within a 50-year period beginning June 1 of the year after the advance is made and (2) repayment of advances for construction of generating machinery and equipment is to be made within a 50-year period commencing the month after the facilities are placed in service. The requirement for repayment of advances to the United States Treasury was modified by the Interior Department Appropriation Act, 1949 (62 Stat. 1130), to eliminate certain investments and expenditures designated as nonproject.

The status of repayment of advances from the United States Treasury at June 30, 1959, is shown below.

	Advances to Colorado River Dam Fund	Interest	Total
Total advances	\$160,659,756	\$ -	\$160,659,756
Interest on advances	<u>-</u>	<u>76,701,012</u>	<u>76,701,012</u>
Total repayable advances and interest	<u>160,659,756</u>	<u>76,701,012</u>	<u>237,360,768</u>
Less:			
Repayment of advances and interest	28,592,861	76,441,730	105,034,591
Nonproject investments and expenditures	3,408,482 ^a	-	3,408,482
Donations through Department of Health, Education, and Welfare	<u>1,721</u>	<u>-</u>	<u>1,721</u>
Total deductions	<u>32,003,064</u>	<u>76,441,730</u>	<u>108,444,794</u>
Balance due U.S. Treasury at June 30, 1959	<u>\$128,656,692^b</u>	<u>\$ 259,282^c</u>	<u>\$128,915,974</u>

^aIncludes \$55,229 determined to be nonproject investments and expenditures during operating year 1959, but not recorded in the financial records at June 30, 1959.

^bIncludes \$25,000,000 allocated to flood control. The repayment of this amount has been deferred without interest until June 1, 1987, when disposition will be decided by the Congress.

^cRepresents June 1959 accrual of interest.

Status of repayment of power investment
at May 31, 1959

At May 31, 1959, the Government's power investment, including interest during construction, totaled \$139,355,882. For repayment purposes, this investment is classified as follows:

	<u>Total investment</u>	<u>Dam and appurtenant works</u>	<u>Generating machinery and equipment</u>
Repayment due by May 31, 1987	\$125,173,696	\$86,610,717	\$38,562,979
Repayment due after May 31, 1987	<u>14,182,186</u>	<u>4,444,932</u>	<u>9,737,254</u>
	<u>\$139,355,882</u>	<u>\$91,055,649</u>	<u>\$48,300,233</u>

Repayment of investment in generating machinery and equipment is being accomplished by inclusion of an "amortization component" in monthly generating charges to power allottees. The amortization component is based on an annuity with interest at 3 percent required to repay the investment in 50 years from the month after the facilities are placed in service. Generating charges are adjusted to actual costs and repayment requirements at the end of each operating year. At May 31, 1959, \$8,326,590 of the Government's investment in generating machinery and equipment had been repaid.

Repayment of investment in dam and appurtenant works is being accomplished principally from the net revenues from energy charges. Energy charges are based on an established quantity of energy as defined in the General Regulations promulgated by the Secretary of the Interior. When actual generation is less than the quantity defined in the regulations for a particular year, energy charges based on the original energy rates, together with other revenues, are likely to be insufficient to meet repayment requirements for the dam and appurtenant works. The General Regulations, however, provide for periodic adjustment of the energy rates to meet repayment requirements and, if necessary, a lump sum payment by each power allottee to cover any repayment deficiency existing at May 31, 1987.

The status of repayment of the investment in the dam and appurtenant works as of May 31, 1959, is summarized as follows:

Total scheduled repayment	\$23,076,014 ^a
Revenues available for repayment	<u>13,191,032</u>
Deficit at May 31, 1959	9,884,982
Less adjustments reducing amounts repay- able by May 31; 1987, as result of ex- cessive deficiency in firm power gen- eration in 1956 and 1957	<u>841,632</u>
Deficit to be recovered by May 31, 1987, through increased energy rates or lump sum payment by power allottees	<u>\$ 9,043,350</u>

^aScheduled repayment is based on the principal component of the annuity required to repay the annual investments (including interest during construction) allocated to the dam and appurtenant works during a 50-year period from the end of the operating year in which the investments were made. Certain interest and other adjustments recorded in the books at various dates were given retroactive effect in determining the investments for each year starting at May 31, 1937, as per the Bureau's "Determination of Energy Rates, Effective June 1, 1959."

Effective June 1, 1957, energy rates were adjusted to provide for the revenue deficiency of the 5-year adjustment period extending from June 1, 1952, through May 31, 1957.

Poor water conditions in future years could increase the existing deficiency and cause higher energy rates during the remaining repayment period. As noted previously, each power allottee will be required to make a lump-sum payment to cover any repayment deficiency existing at May 31, 1987, the end of the contract term.

REPAYMENT OF PARKER-DAVIS PROJECT COSTS
BY POWER REVENUES

The reimbursable portion of the construction costs of the Parker-Davis Project is to be repaid by revenues from contracts for the sale and transmission of electrical energy. The rates in these contracts are expected to recover (1) annual operation and maintenance expenses, including replacements during the repayment period, (2) the reimbursable portion of the construction costs, including costs allocated to irrigation and to the servicing of the Mexican Water Treaty, and (3) interest at 3 percent per year on the unrepaid balance of construction costs allocated to commercial power. See page 18 for the tentative allocation of total estimated project costs.

Net power revenues, after payment of annual operating costs for power operations, are applied to the repayment of interest and principal on the power investment. Bureau records show that at June 30, 1959, net revenues had been applied to pay the interest accruals totaling \$23,850,412 and to repay power plant costs of \$16,644,008. The records indicate that the power plant cost will be fully repaid within a 50-year period after installation. However, the methods followed by the Bureau in allocating construction costs to purposes, as discussed in the following two subsections, result in an understatement of interest accruing to the United States of about \$362,700 at June 30, 1959, and about \$5,336,900 over a 50-year repayment period.

Inconsistent method of allocating construction costs
of the Parker-Davis Project to irrigation

The allocation of construction costs of the Parker-Davis Project to irrigation is based on ratios of total estimated electrical capacity of the irrigation pumps to the total capacity of the various features of the project which will generate or transmit power to operate the pumps. However, the irrigation allocation percentage determined for the Davis Dam and Reservoir has been applied against the total cost of Davis Dam and Reservoir, including costs allocated to control, regulate, and store water under the Mexican Water Treaty. Because these costs are unrelated to the costs of delivering power to irrigation pumps, we believe that the allocation to irrigation, an interest-free purpose, is too high. As a result, interest accruing to the United States Treasury was understated by about \$334,000 at June 30, 1959, and will be understated by about \$4,915,000 over a 50-year repayment period.

Power is delivered by the project to various customers including water users in the Yuma area who use power to operate irrigation pumps. The allocation of the capacity of the power facilities required for irrigation pumping purposes to irrigation is on a basis of the ratios of total estimated electrical capacity of the irrigation pumps to the total capacity of each of the various facilities of the project which will generate or transmit power to operate

these pumps. In this manner, the Bureau determined that 13.8 percent of the rated capacity of Davis Dam and Power Plant was required for irrigation pumping purposes. However, the allocation percentage was applied to the total cost of the Davis Dam and Reservoir, including costs allocated for the control, regulation, and storage of water under the Mexican Water Treaty which are unrelated to power production or transmission.

Since the irrigation allocation represents an apportionment of the power investment between interest-free and interest-bearing power investment, we believe that costs allocated to irrigation should be based on an apportionment of the project cost allocated to the generation and transmission of power. Consequently, we believe that the amount of Davis Dam and Reservoir costs allocated to the servicing of the Mexican Water Treaty (\$10,524,000) should be excluded in the determination of the irrigation allocation and that the interest-bearing power investment should be increased by about \$1,452,000.

By letter dated June 9, 1960, the Administrative Assistant Secretary of the Interior, advised us that the Department of the Interior does not concur in the reasoning or conclusions reached pertaining to the allocation of Parker-Davis Project costs to irrigation. However, the Department offered no specific reasons for disagreement with our reasoning or conclusions. The Department advised further that, under recently introduced legislation relative to the allocation of costs of the Davis Dam and Reservoir to the servicing of the Mexican Water Treaty, the Secretary of the Interior will have the responsibility in due course to effect a firm allocation of Davis Dam and Reservoir costs. The Department stated that in such an eventuality the over-all allocation procedures utilized to assign costs to all functions, including irrigation, would be in accord with those prescribed for current use within the Department.

Testimony given in April 1959, relating to the Public Works Appropriations for 1960,¹ indicates that it is the Bureau's policy that costs allocated to irrigation pumping should be determined solely by an apportionment of the power investment. This stated Bureau policy has not been followed for the Parker-Davis Project.

Recommendation to the Secretary of the Interior

So that a determination may be made as to whether interest accruing to the United States Treasury is properly recorded, we recommend that the basis for the allocation to irrigation be reviewed

¹Hearings before the Subcommittee on Public Works, Committee on Appropriations, House of Representatives, Eighty-sixth Congress, first session, Part 2, page 383.

and, if necessary, that interest accruing to the United States Treasury be recomputed. This review should be coordinated with the review of the allocation to the servicing of the Mexican Water Treaty. (See p. 20.)

Understatement of accrued interest
on interest-bearing power investment
of the Parker-Davis Project

The allocation to the interest-free irrigation purpose of the Parker-Davis Project incorrectly included 13.8 percent of the contributions totaling \$903,455, made by the Public Roads Administration (name changed in 1949 to Bureau of Public Roads) and the State of Arizona for highway construction across the Davis Dam, thereby reducing interest accruing to the United States Treasury by about \$28,700 at June 30, 1959, and about \$421,900 over a 50-year repayment period. As a result of our review, the Bureau has corrected the allocation to irrigation for fiscal year 1960; however, the adjustment of about \$28,700 for additional interest accumulated to June 30, 1959, and chargeable to power has not been recorded in the financial records of the project.

By letter dated June 9, 1960, the Administrative Assistant Secretary of the Interior advised us that it had been project policy in previous years not to make retroactive adjustment to interest accruals. The belief was expressed that the interest accruals originally made and reported should not be retroactively adjusted for this one item. We believe that this matter should be given further consideration by the Department of the Interior in connection with the recommended review of the basis for allocation to irrigation and the recomputation of interest accruing to the United States Treasury for the Parker-Davis Project. (See p. 26.)

REPAYMENT OF FEDERAL INVESTMENT IN IRRIGATION

The probable repayment of construction costs allocated to irrigation in the lower Colorado River basin has been determined by the Bureau as follows:

Project	Estimated total project costs allocated to irrigation	Costs transferred between projects (note a)	Construction costs not recoverable under acts of the Congress	Other credits to irrigation construction costs	Total repayable construction costs allocated to irrigation	Repayable from		
						Contracts for repayment of costs	Sale of water and other revenues	Power revenues
All-American Canal	\$ 63,296,371 ^b	-\$1,664,247	\$ -	\$ 25,295	\$ 61,606,829	\$ 60,713,236	\$ 893,593 ^c	\$ -
Gila	62,436,729 ^d	1,208,157	6,019,938	86,752	57,598,196	57,404,192	194,004	-
Palo Verde Diversion	3,526,690	-	2,351,690	-	1,175,000	1,175,000	-	-
Parker-Davis	11,638,469	-	-	-	11,638,469	-	-	11,638,469
Salt River	36,077,508	-	-	3,260,816	32,816,692	32,816,692	-	-
Yuma	7,292,403	-1,649,725	383,738	456,905	4,802,035	4,761,358	19,095	21,582
Yuma Auxiliary	1,142,102	2,105,815	1,022,383	22,204	2,203,330	1,573,502	609,828	-
Total	\$185,470,272	\$ -	\$9,777,749^e	\$3,851,972	\$171,840,551	\$158,463,980	\$1,716,520	\$11,660,051

^aRepresents facilities constructed by one project for the sole or joint benefit or use of another project which assumes the repayment obligation.

^bIncludes the Gila Project's share of the Imperial Dam operation and maintenance deficit, amounting to \$58,513, which is assumed by the Gila Project for repayment.

^cRepresents principally revenues from the issue of permits for the removal of sand and gravel from Government-owned lands outside the present boundaries of irrigation districts.

^dIncludes a loss on excess stores of \$14,235.

^eGila Project, act of Jan. 28, 1956 (70 Stat. 5); Palo Verde Diversion Project, act of Aug. 31, 1954 (68 Stat. 1045); Yuma Project, act of Sept. 2, 1950 (64 Stat. 576); and Yuma Auxiliary Project, act of June 13, 1949 (63 Stat. 172).

Other credits to irrigation construction costs, totaling \$3,851,972, consist of contributions for project development and construction in the amount of \$162,506, an allocation to the Bureau of Indian Affairs of \$948,719 for the proportionate share (20 percent) of the construction costs of Bartlett Dam, and miscellaneous revenues totaling \$1,552,066 and power revenues totaling \$1,188,681 applied against construction costs to determine amounts of repayment obligations of water users.

Irrigation construction costs of \$158,463,980 repayable by water-right and construction cost repayment contracts, including costs of \$126,376,841 covered by contracts executed at June 30, 1959, are summarized by projects as follows:

Project	Total costs repayable by contracts	Estimated value of contracts not executed	Construction costs in excess of the value of repayment contracts, non-recoverable	Construction costs covered by repayment contracts
All-American Canal	\$ 60,713,236	\$ 6,500,000	\$3,260,680	\$ 50,952,556
Gila	57,404,192	14,389,753	48,063	42,966,376
Palo Verde Diversion	1,175,000	-	-	1,175,000
Salt River	32,816,692	7,424,506	382,097	25,010,089
Yuma	4,761,358	-	-	4,761,358
Yuma Auxiliary	1,593,502	82,040	-	1,511,462
Total	\$158,463,980	\$28,396,299	\$3,690,840	\$126,376,841

The estimated value of contracts not executed, totaling \$28,396,299, represents (1) Pilot Knob Mesa development of \$6,500,000 suspended indefinitely because of unavailability of water, (2) a drainage program on the Gila Project estimated to cost \$14,000,000 upon completion in 1963 and a share of the cost of the Gila Project common facilities allocated to the South Gila Valley unit in the amount of \$389,753, (3) Salt River rehabilitation and betterment work of \$7,424,506 to be completed in future years, and (4) water-right applications totaling \$82,040 not executed at June 30, 1959.

Construction costs in excess of the value of repayment contracts with All-American Canal facilities users totaling \$3,260,680 represent the costs incurred in the construction of the Coachella Valley County Water District distribution system in excess of the contract repayment obligation limitation of \$13,500,000. The courts have held that the Coachella Valley County Water District is not obligated to repay in excess of the contract limitation of \$13,500,000 even though construction costs exceeded the limitation.

The status of repayment of contracts totaling \$134,194,125 at June 30, 1959, represented by construction costs of \$126,376,841 and deferred irrigation operation and maintenance expenses, property transfers, and other charges in the aggregate amount of \$7,817,284 is summarized as follows:

Project	Amount of contracts			Matured installments	Unmatured installments
	Construction costs	Other charges	Total		
All-American Canal System:					
Imperial Irrigation Dist.	\$ 24,306,299	\$ 713,702	\$ 25,020,001	\$ 1,125,900	\$ 23,894,101
Coachella Valley County Water Dist.	26,646,257	312,305	26,958,562	623,099	26,335,463
Gila Project:					
North Gila Valley Irrigation Dist.	370,963	104,037 ^a	475,000	39,583	435,417
Wellton-Mohawk Irrigation and Drainage Dist.	37,371,891	4,628,109 ^a	42,000,000	-	42,000,000
Yuma Mesa Irrigation and Drainage Dist.	5,223,522	417,645	5,641,167	34,639	5,606,528
Palo Verde Diversion Project:					
Palo Verde Irrigation Dist.	1,175,000	-	1,175,000	35,250	1,139,750
Salt River Project:					
Salt River Valley Water Users' Assoc.	25,010,089	1,048,093	26,058,182	14,691,264	11,366,918
Yuma Project:					
Group A of Reservation Div.	993,072	1,688	994,760 ^b	936,756	58,004
Group B-1, Nonconsenters, Valley Div.	40,519	57	40,576 ^b	40,576	-
Yuma County Water Users' Assoc.	3,727,767	591,155	4,318,922	4,253,366	65,556
Yuma Auxiliary Project:					
Group B of First Mesa Div.	598,083	493	598,576 ^b	549,427	49,149
Unit B Irrigation and Drainage Dist.	913,379	-	913,379	63,428	849,951
Total	\$126,376,841 ^c	\$7,817,284	\$134,194,125	\$22,393,288	\$111,800,837

^aIncludes excess of repayment contract value over construction cost and other charges of \$57,516 for North Gila and \$3,807,070 for Wellton-Mohawk.

^bIndividual water-right application contracts.

^cIncludes Gila Project's share of the Imperial Dam operation and maintenance deficit of \$58,513.

Matured installments totaling \$22,393,288 include the amount of \$7,810 which had not been collected at June 30, 1959.

The value of the Wellton-Mohawk Irrigation and Drainage District contract of \$42,000,000 and of the North Gila Valley Irrigation District contract of \$475,000 represents the maximum contract obligations subject to reduction upon determination of repayable costs. Construction costs and other charges allocated to these districts at June 30, 1959, were \$38,192,930 and \$417,484, respectively.

Irrigation costs repayable from power revenues

Irrigation costs repayable from power revenues, totaling \$11,660,051, consist of (1) the allocation to irrigation of \$11,638,469 on the Parker-Davis Project, representing the proportionate share of investment in facilities needed to deliver energy to fulfill irrigation pumping requirements and (2) revenues totaling \$21,582 credited to the Reservation Division from the sale of energy generated at the Siphon Drop Power Plant of the Yuma Project. These revenues are reserved for repayment of construction costs not recoverable under supplemental construction repayment contracts with the water users on the Reservation Division. The power revenues credited to the Valley Division of the Yuma Project, totaling \$190,270, have been applied as a reduction of repayable costs in determining the amount of the construction repayment contract with the Yuma County Water Users' Association.

REPAYMENT OF FEDERAL INVESTMENT
IN MUNICIPAL WATER SUPPLY

Construction costs of the All-American Canal System allocated to municipal water supply are recoverable, without interest, under a contract with the city of San Diego, California. The status of repayment at June 30, 1959, is as follows:

Construction costs	\$449,072
Other charges	<u>16,629</u>
Total costs	465,701
Less contributions	<u>58</u>
Value of repayment contract	465,643
Deduct matured installments	<u>20,954</u>
Unmatured installments	<u>\$444,689</u>

POWER OPERATIONS IN THE LOWER COLORADO RIVER BASIN

Project authorizations in the lower Colorado River basin have provided for construction of hydroelectric power plants for generation of electric energy as a feature at the Hoover, Davis, and Parker Dams, and at the Yuma Project (Siphon Drop Power Plant). Although by law the power operation is generally subordinate to other purposes of multiple-purpose projects in the lower Colorado River basin, it is the major construction activity and is the major revenue-producing program. Operation of these plants is generally governed by the storage and release of water for other project purposes, with hydroelectric energy being a product derived from the water releases for the other purposes. The Bureau of Reclamation is responsible for the developing and marketing of Federal power in the lower Colorado River basin.

The hydroelectric power plant construction program in the lower Colorado River basin provides for ultimate installed capacity of 1,691,400 kilowatts at four plants. The program for power plant construction is complete except for installation of an additional generating unit at Hoover Dam.

GENERATING PLANTS IN OPERATION AND UNDER CONSTRUCTION

At June 30, 1959, 4 power plants with 29 generating units having an installed capacity of 1,596,400 kilowatts were in operation. These plants and the estimated construction costs allocable to power at June 30, 1959, are as follows:

Plant	Initial operation of first unit	Number of generating units	Installed capacity (kilowatts)	Estimated construction costs		
				Project total (note a)	Allocation to power Amount	Percent
Hoover	1936	18	1,249,800	\$174,932,700	\$146,524,218	83.8
Parker (note b)	1942	4	120,000	142,544,876	106,403,892 ^c	74.6
Davis (note b)	1951	5	225,000			
Siphon Drop (Yuma Project)	1926	2	1,600	7,292,403	475,044 ^d	6.5
Total		29	1,596,400	\$324,769,979	\$253,403,154	78.0

^aInterest during construction has been included only with Hoover costs. See pages 10 through 14 for comments on Bureau of Reclamation policies on interest during construction.

^bCost allocations for the individual plants were not available.

^cTentative allocation.

^dRepresents construction costs of certain power facilities allocated to irrigation.

During fiscal years 1957, 1958, and 1959, there were no generating units placed in service. The authorized power development provides for the installation of an additional generating unit at Hoover Dam having a capacity of 95,000 kilowatts. This unit is scheduled to commence operation in 1961 and will increase the installed capacity to 1,691,400 kilowatts, the ultimate installation planned for the projects in the lower Colorado River basin.

TRANSMISSION FACILITIES OF THE BUREAU OF RECLAMATION

The Bureau of Reclamation has constructed and operates and maintains transmission lines, switchyards, and substations for transmitting energy to load centers, as a feature of the Parker-Davis Project.

The power plants of the Parker-Davis Project and the Boulder Canyon and Yuma Projects are interconnected by the Parker-Davis transmission system. The transmission system functions chiefly for delivering energy to Bureau customers that include electric utilities and irrigation projects. In addition, the system transmits Federal and non-Federal generation for the account of the Arizona Power Authority and the Colorado River Commission of Nevada under wheeling and transmission agreements. In fiscal years 1958 and 1959, the wheeling revenue of the Parker-Davis Project amounted to \$1,491,188 and \$1,515,978, respectively.

The construction costs of Parker-Davis transmission facilities at June 30, 1959, are summarized as follows:

	<u>Total</u>	<u>Plant in service</u>	<u>Under construction</u>
Switchyards and substations	\$32,950,411	\$32,882,241	\$ 68,170
Transmission lines	22,474,266	22,474,266	-
Other transmission facilities	<u>3,211,435</u>	<u>2,909,141</u>	<u>302,294</u>
Total	<u>\$58,636,112</u>	<u>\$58,265,648</u>	<u>\$370,464</u>

The construction of the facilities of the project is substantially completed. The cost to complete the facilities proposed for future construction is estimated at \$1,230,000.

At June 30, 1959, the Parker-Davis Project transmission system consisted of 1,600 miles of transmission lines and 36 substations and switching stations. The capacity, number of lines, and circuit miles of transmission lines at June 30, 1959, are summarized, as follows:

Line voltage (kilovolts)	Number of <u>lines</u>	Circuit <u>miles</u>
230	6	448
161	8	584
115	8	398
69	3 ^a	105
34.5	7	59
Various (note b)	<u>10</u>	<u>6</u>
Total	<u>42</u>	<u>1,600</u>

^aIncludes 34.5 kv Siphon Drop-Boundary Transmission Line, rehabilitated at a cost of \$135,243. Operation and maintenance and repayment are included with the charges of the Parker-Davis Project.

^bUnder 2 miles in length.

Federal transmission facilities operated under the Yuma Project consist of a switching station. The construction cost amounted to about \$34,360.

MARKETING OPERATIONS AT HOOVER DAM AND POWER PLANT

The marketing of power at Hoover Dam is governed by the Boulder Canyon Project Adjustment Act (43 U.S.C. 618) which provides that operations, energy generation and distribution, and the repayment of costs and investment be based on an operating year extending from June 1 to May 31. Statistics and other information regarding marketing operations of the Hoover Power Plant presented in this report are therefore for operating years ending May 31.

Energy production and disposition

Power generated and exchanged, and disposition thereof, expressed in thousands of kilowatt-hours, for the operating year ended May 31, 1959, compared with the preceding year is summarized as follows:

	<u>Thousand kilowatt-hours</u>		
	<u>1959</u>	<u>1958</u>	<u>Decrease or increase (-)</u>
System input:			
Gross energy generated	4,184,330	5,093,874	909,544
Interchange energy from Parker-Davis Project	<u>216,749</u>	<u>154,144</u>	<u>-62,605</u>
Total	<u>4,401,079</u>	<u>5,248,018</u>	<u>846,939</u>
Distribution:			
Plant use	12,313	12,570	257
Interchange energy to Parker-Davis Project	205,660	515,714	310,054
System losses	34,724	38,746	4,022
Sales to allottees:			
Firm energy	4,146,040	4,154,800	8,760
Secondary energy	<u>2,342</u>	<u>526,188</u>	<u>523,846</u>
Total	<u>4,401,079</u>	<u>5,248,018</u>	<u>846,939</u>

Water conditions during operating years 1958 and 1959 enabled the project to generate sufficient energy to meet the firm energy requirements. In 1958, the project generated a significant amount of energy in excess of the firm requirements which was either sold as secondary energy or used to reduce the balance of net interchange energy due the Parker-Davis Project.

Power customers

Sales of electric energy are based generally on allocations fixed under contracts executed in accordance with the Boulder Canyon Project Adjustment Act. The firm energy defined in the act is

allocated initially to nine customers. The initial allotments and a comparison of the actual distribution of firm energy for the operating year 1959 with the actual distribution for the previous year are shown as follows:

Distribution of Hoover Dam Firm Energy
for the Operating Years ended May 31, 1959 and 1958
(Thousand Kilowatt-Hours)

Allottee	General Regulations entitlement (percent)	Year ended May 31, 1959				Year ended May 31, 1958		
		Basic allocation	Reduction for U.S. use	Reallo- cation of MWD unused energy	Actual energy distribution	Percent	Actual energy distribution	Percent
State of Arizona	17.6259	730,777	-	-	730,777	17.63	732,321	17.63
State of Nevada	17.6259	730,777	-	-	730,777	17.63	732,321	17.63
Metropolitan Water District of Southern California (MWD)	35.2517	1,461,550	-	-546,519	915,031	22.07	782,923	18.84
City of Burbank, Calif.	.5773	23,935	-	-	23,935	.58	23,986	.58
City of Glendale, Calif.	1.8475	76,598	-	-	76,598	1.85	76,760	1.85
City of Pasadena, Calif.	1.5847	65,702	-	-	65,702	1.58	65,841	1.58
City of Los Angeles, Calif.	17.5554	727,854	-19,879	276,724	984,699	23.75	1,083,252	26.07
Southern California Edison Co.	7.0503	292,308	-19,879	201,254	473,683	11.42	544,706	13.11
California Electric Power Co.	.8813	36,539	-	25,157	61,696	1.49	70,642	1.70
California-Pacific Utilities Co.	-	-	-	20,000	20,000	.48	1,184	.03
Citizen's Utilities Co.	-	-	-	23,384	23,384	.56	-	-
Boulder City and Dam Area	-	-	39,758	-	39,758	.96	40,864	.98
Total	100.0000	4,146,040	-	-	4,146,040	100.00	4,154,800	100.00

The Metropolitan Water District of Southern California is entitled to about 35.3 percent of the firm energy, for use only to pump water through the district-owned Colorado River Aqueduct. For this purpose MWD is permitted, under a contract with the United States, to divert up to 1,212,000 acre-feet of water from the river. MWD diverted only 599,393 acre-feet in 1959 and only 551,374 acre-feet in 1958 and therefore did not require its full energy entitlement. During the period of this report, and under contracts entered into pursuant to the General Regulation,¹ the city of Los Angeles, the Southern California Edison Company, and the California Electric Power Company have first rights to 55, 40, and 5 percent, respectively, of the quantities of MWD's unused energy remaining after the contractual obligations to Citizens Utilities Company and California-Pacific Utilities Company are met.

Energy needed by the United States at Boulder City or at other locations near Hoover Dam is reserved up to a maximum demand of 20,000 kilowatts. Energy so used is deducted equally from the allotment of the city of Los Angeles and the Southern California Edison Company in accordance with the General Regulations. Energy used to operate the dam and appurtenant works is classed as station losses and is excluded from available firm or secondary energy in the determination of rates and charges.

¹The General Regulations established procedures for marketing the electrical energy generated at Boulder Dam and are included as appendix A of our audit report to the Congress dated September 13, 1957, on the lower Colorado River basin, Bureau of Reclamation, for the fiscal year ended June 30, 1956.

MWD has the first right to all secondary energy for pumping water into its aqueduct. Such energy not used by MWD is allocated in the same manner as MWD's unused firm energy. There were 2,341,886 kilowatt-hours of secondary energy sold during operating year 1959 compared with 526,188,279 kilowatt-hours sold in 1958.

Charges for electric service

Energy rates and generating charges are established in accordance with the Boulder Canyon Project Adjustment Act and the General Regulations effective June 1, 1937. Generally, the costs relating to the dam and appurtenant works are to be recovered from revenues derived from the energy charges and sale of stored water, and the costs relating to the generating machinery and equipment are to be recovered from revenues derived from generating charges.

Energy charges

The allottees are billed monthly for energy deliveries at predetermined annual rates for firm or secondary energy. Rates for energy charges are designed to yield revenues which, together with revenues from the sale of stored water, will be sufficient to cover:

1. The 50-year annuity, with interest, for repayment of the investment (exclusive of \$25,000,000 allocated to flood control).
2. A 50-year replacement annuity for replaceable items.
3. The annual operation and maintenance expense.
4. The sum of \$600,000 annually for division between the States of Arizona and Nevada.
5. The sum of \$500,000 annually for payment to the Colorado River Development Fund.

In accordance with the General Regulations, energy rates are recomputed (1) annually to yield sufficient revenue to recover operation and maintenance expenses and other elements of cost estimated for the year as applicable to the dam and appurtenant works, as well as the difference between the estimated and actual costs of the preceding year, and (2) at the end of each 5-year period, beginning June 1, 1947, to adjust for the excess or deficiency of estimated revenues compared with revenues accrued during the 5-year period just completed.

The energy rates changed annually from 1942 to 1959. Initial rates and rates for the three latest years were as follows:

<u>Operating years</u>	<u>Energy rates</u>	
	<u>Firm</u>	<u>Secondary</u>
	(mills per kwh)	
1937-1942 (Initial rates)	1.163	0.340
1958	1.458	0.528
1959	1.466	0.533
1960	1.466	0.533

Secondary energy rates are computed annually by formula directly related to the firm energy rate. The firm rate effective in 1959 was 0.303 mills per kwh, or 26 percent, more than the initial firm rate, and the secondary rate was 0.193 mills per kwh, or 56 percent, more than the initial secondary rate.

A deficiency in generation of firm energy due to unfavorable water conditions affects the annual amortization annuity for the dam and appurtenant works. During the 5-year period ended May 31, 1957, the deficiency in firm energy generation was as follows:

<u>Operating year ending May 31</u>	<u>Firm energy</u>			<u>Percent of deficiency to defined firm energy</u>
	<u>Defined</u>	<u>Actual</u>	<u>Deficiency</u>	
	(thousand kilowatt-hours)			
1953	4,198,600	4,198,600	-	-
1954	4,189,840	4,189,840	-	-
1955	4,181,080	3,654,920	526,160	13
1956	4,172,320	2,609,500	1,562,820	37
1957	<u>4,163,560</u>	<u>2,614,940</u>	<u>1,548,620</u>	37
Total	<u>20,905,400</u>	<u>17,267,800</u>	<u>3,637,600</u>	17

The unfavorable water conditions during this 5-year period resulted in a 17 percent deficiency in firm energy generation. In 1956 and 1957, the deficiency in firm energy generation exceeded 30 percent; consequently, in accordance with General Regulations, the amount to be repaid by May 31, 1987, has been reduced by \$841,632. At May 31, 1959, cumulative deficiencies in firm energy generation totaled 12,513,600 thousand kwh, or 13.4 percent of defined firm energy.

To recover the deficiency in repayment due by May 31, 1987, the energy rate was increased, effective June 1, 1957, from 1.395 mills to 1.458 mills per kwh, or an increase of 4.5 percent over the 1957 rate. This adjustment is intended to recover approximately \$1,300,000 during the 5 years ending May 31, 1962.

Generating charges

Annual costs, including repayment of investment, relating to generating machinery and equipment are estimated by the Bureau and are paid by the allottees in equal monthly installments. The difference between estimated and actual costs is settled by lump-sum payment after the operating year. Billings to allottees cover the costs relating to generating machinery and equipment installed for the sole use of allottees and the allocated share of costs of jointly used generating machinery and equipment. The latter portion of the charge is determined on the basis of energy taken, both firm and secondary, with the minimum obligation of each allottee as the minimum considered, unless other agreement has been reached between allottees in accordance with article 18(e) of the General Regulations.

MARKETING OPERATIONS AT PARKER-DAVIS PROJECT

The power-marketing operations of the Parker-Davis Project are governed by reclamation laws and administrative policies promulgated pursuant to these laws. The energy is transmitted to the southern parts of California and Nevada and to central and southern Arizona.

Energy production and disposition

Energy generation and sales and other energy transactions of the Parker-Davis Project, expressed in thousand kilowatt-hours, for fiscal year 1959 compared with the preceding year are summarized as follows:

	<u>Fiscal year</u>		<u>Decrease or</u>
	<u>1959</u>	<u>1958</u>	<u>increase (-)</u>
(Thousand kilowatt-hours)			
System input:			
Gross generation	1,746,533	2,095,104	348,571
Purchased energy:			
Yuma Project	5,396	4,836	-560
Interchange energy:			
Yuma Project	-	60	60
Boulder Canyon Project	200,129	531,213	331,084
Other systems	3	33	30
Other energy received (note a)	3,189	3,573	384
Total system input	<u>1,955,250</u>	<u>2,634,819</u>	<u>679,569</u>
Less:			
Interdepartmental and other uses	4,339	4,261	-78
Interchange energy:			
Boulder Canyon Project	210,892	168,530	-42,362
Energy entitlement of the MWD (note b)	297,734	350,092	52,358
System losses	73,478	110,192	36,714
Parker Camp use	1,655	1,561	-94
Total deductions	<u>588,098</u>	<u>634,636</u>	<u>46,538</u>
Sales of electric energy	<u>1,367,152</u>	<u>2,000,183</u>	<u>633,031</u>

^aElectrical energy received from MWD for replacement energy equivalent to the energy that could have been generated for the Government from water diverted above the Parker Dam Power Plant for San Diego.

^bUnder a contract supplemented December 15, 1952, MWD is entitled to 50 percent, after station and other uses, of the energy generated at Parker Dam Power Plant. The input of 1,955,250 thousand kwh for fiscal year 1959 represents a decrease of 679,569 thousand kwh from fiscal year 1958. The decrease was largely attributable to reduced interchange energy from Boulder Canyon Project and reduced generation. Favorable water conditions in fiscal year 1958 resulted in increased water releases by Hoover Dam, which lies upstream from Davis Dam and Parker Dam; whereas, water releases in fiscal year 1959 represented a normal year. In fiscal year 1958 water releases totaled 11,986,800 acre-feet compared with 9,840,100 acre-feet released by Hoover Dam in fiscal year 1959, a decrease of 2,146,700 acre-feet or about 18 percent.

Customers served

The Reclamation Project Act of 1939 (43 U.S.C. 485h) provides that public bodies, cooperatives, and other nonprofit organizations be given preference and priority in the sale of energy from power plants operated by the Bureau of Reclamation. The preference requirements are met by giving priority to applications of preferred customers.

Sales of electric energy for fiscal years 1959 and 1958, expressed in dollars, thousand kilowatt-hours, and average rate per kilowatt-hour, for classes of customers, are presented in the following summary:

	1959			1958		
	Revenue	Thousand kilowatt-hours	Average rate per kwh (mills)	Revenue	Thousand kilowatt-hours	Average rate per kwh (mills)
Municipalities:						
City of Los Angeles	\$ -	-	-	\$ 179,177	179,177	1.00
State agencies:						
Arizona Power Authority	1,318,936	279,499	4.72	1,786,770	595,405	3.00
Colorado River Commission of Nevada	1,060,618	244,871	4.33	770,359	177,105	4.35
Imperial Irrigation Dist.	782,064	169,869	4.60	848,033	193,528	4.38
Salt River Valley Water User's Assoc.	381,184	151,623	2.51	426,453	178,102	2.39
Wellton-Mohawk Irrigation and Drainage Dist.	154,568	52,216	2.96	57,067	12,251	4.66
Yuma Irrigation Dist.	34,766	7,004	4.96	35,378	6,958	5.08
Yuma-Mesa Irrigation and Drainage Dist.	501	200	2.50	-	-	-
	<u>3,732,637</u>	<u>905,282</u>	4.12	<u>3,924,060</u>	<u>1,163,349</u>	3.37
Electric utilities:						
Arizona Public Service Co.	381,177	151,623	2.51	426,453	178,102	2.39
California Electric Power Co.	-	-	-	16,289	16,289	1.00
Southern California Edison Co.	-	-	-	130,310	130,310	1.00
Tucson Gas, Electric Light and Power Co.	379,858	76,523	4.96	416,079	86,767	4.80
	<u>761,035</u>	<u>228,146</u>	3.34	<u>989,131</u>	<u>411,468</u>	2.40
Federal agencies:						
Bureau of Indian Affairs:						
Colorado River Indian Reservation	29,095	13,418	2.17	26,075	11,592	2.25
San Carlos Project	280,643	58,798	4.77	256,405	50,945	5.03
Department of the Air Force	338,895	69,115	4.90	322,828	65,419	4.93
Department of the Army	61,370	12,508	4.91	45,186	8,813	5.13
National Park Service	3,341	575	5.81	2,439	431	5.66
	<u>713,344</u>	<u>154,414</u>	4.62	<u>652,933</u>	<u>137,200</u>	4.76
Commercial and industrial:						
Bagdad Copper Corp.	93,441	26,167	3.57	102,146	28,453	3.59
Projects not engaged in electric operations:						
Gila Project	127,920	51,168	2.50	196,806	78,722	2.50
Other sales:						
Camp and headquarters use	10,978	1,975	5.56	9,979	1,814	5.50
Total	<u>\$5,439,355</u>	<u>1,367,152</u>	3.98	<u>\$6,054,232</u>	<u>2,000,183</u>	3.03

Sales to State agencies during fiscal year 1959 accounted for 68 percent of the total sales revenues and 66 percent of the energy delivered, compared with 64 percent of the revenues and 58 percent of the energy delivered during fiscal year 1958. Sales to electric utilities during fiscal year 1959 accounted for 14 percent of the revenues and 16 percent of the energy delivered, compared with 16 percent of the revenues and 20 percent of the energy delivered during fiscal year 1958.

All customers except the Arizona Public Service Company and the Salt River Valley Water User's Association are allotted energy generated at Davis Dam. These two customers are allotted energy generated at Parker Dam, and each has contracted for 25 percent of the net annual generation. Rights to the other 50 percent of Parker Dam net generation belong to the Metropolitan Water District of Southern California. The power privileges of the Parker Dam and Power Plant were equally divided between MWD and the United States under provision of a contract dated February 10, 1933, which provided for the cooperative construction of Parker Dam from funds provided by MWD. The contract as amended stipulates that title to the power facilities will remain with the United States Government.

Charges for electric service

Under authority of the Reclamation Project Act of 1939, the Secretary of the Interior has the authority to establish rates for the sale of power.

The rates, by dams and customers, are presented in the following summary:

	<u>Rate</u>
Parker Dam:	
Customers:	
Arizona Public Service)	
Company)	\$6,250 per month demand charge
Salt River Valley Water)	and 1.9 mills per kwh
User's Association)	
Davis Dam:	
Customers:	
Bagdad Copper Corporation	75¢ a month per kw of demand plus 50,000 kwh at 4 mills, 100,000 kwh at 3 mills, and remainder at 2.25 mills
Bureau of Indian Affairs (Colorado River Indian Reservation)	\$300 monthly demand charge plus 1.9 mills per kwh
Gila Project	2.5 mills per kwh
All others	75¢ a month per kw of demand plus first 250 kwh times the demand at 3.5 mills per kwh; all over 250 kwh times the demand at 3 mills per kwh

The different rates for power sold by Parker Dam and Davis Dam resulted from independent operation of the dams prior to their consolidation under the act of May 28, 1954 (68 Stat. 143). The Parker Dam rates were established in 1940, and the Davis Dam rates were established in 1951. As a result customers served by the combined project receiving a similar class of service are charged under different rate structures. Either the Parker Dam contractors or the United States Government can terminate the contracts on December 13, 1962, by giving 2-year's prior notification.

We have been informed by Bureau officials that all Parker-Davis contracts will be terminated in 1962 and new rate schedules will be prepared for customers of the combined project.

Wheeling of energy

The Arizona Power Authority and the United States have an agreement for wheeling of energy which provides a significant amount of annual revenue for the Parker-Davis Project. A contract dated April 30, 1953, provides that the United States will deliver energy to the authority or to contractors designated by the authority. The contract provides for a charge of 1 mill per kilowatt-hour except that no charge is made for energy transmitted after charges totaling the following amounts have accrued in each of the years shown, beginning June 1 and ending May 31:

1954-55	\$1,200,000
1955-56	1,250,000
1956-57	1,300,000
1957-58	1,350,000
1958-59	1,400,000
thereafter	1,500,000

In fiscal years 1958 and 1959, wheeling revenue from the authority totaled \$1,375,389 and \$1,400,179, respectively, and the energy delivered by the United States for the authority totaled 1,694,655,507 kilowatt-hours in 1958 and 1,910,016,921 kilowatt-hours in 1959. The increase in wheeling activities was due to additional steam plant operations by customers of the project.

MARKETING OPERATIONS AT YUMA PROJECT

The Siphon Drop Power Plant is a feature of the Yuma Project and serves to meet the power needs for drainage pumping and other uses in connection with the irrigation activity. The entire plant capacity of 1,600 kilowatts is available for use by the irrigation interests which consumed 65 percent of the available energy in fiscal year 1959. In fiscal year 1959, a total of 34 percent of the energy generated was purchased by the Parker-Davis Project which paid an average rate of 3.25 mills per kilowatt-hour.

Energy production, disposition, and revenue

A summary of the generation, sales, and other transactions of the Yuma Project is presented in thousand kilowatt-hours, on a comparative basis for fiscal years 1958 and 1959, as follows:

	<u>Thousand kilowatt-hours</u>		
	<u>Fiscal year</u>		<u>Increase or decrease (-)</u>
	<u>1959</u>	<u>1958</u>	
System input:			
Gross generation	<u>16,056</u>	<u>15,896</u>	<u>160</u>
Total system input	<u>16,056</u>	<u>15,896</u>	<u>160</u>
Less:			
Plant use	54	50	4
Interchange energy to Parker-Davis Project	-	60	-60
Transmission and other losses	<u>240</u>	<u>237</u>	<u>3</u>
Total deductions	<u>294</u>	<u>347</u>	<u>-53</u>
Sales of electric energy	<u>15,762</u>	<u>15,549</u>	<u>213</u>

Power revenues totaled about \$47,800, expenses \$30,300, and excess of revenues over expenses \$17,500, for fiscal year 1959.

Need for review of energy rate charged Parker-Davis Project by Yuma Project

Surplus energy generated at the Bureau owned and operated Siphon Drop Power Plant of the Yuma Project is purchased by the Parker-Davis Project at the rate of 3.25 mills per kilowatt-hour, a rate that was established in 1943. No recent study has been made to determine whether the rate charged to the Parker-Davis Project is reasonable and fair under existing circumstances.

The Siphon Drop Power Plant was constructed by the Government primarily to meet irrigation pumping needs in the Yuma area. Initial operations commenced in 1926. Bureau records show that the original construction cost of the power plant totaled \$315,417, of

which \$284,816 has been repaid without interest by water users under contracts which provided for repayment over a 12-year period commencing in 1925. After deduction for (1) original construction costs not covered by repayment contracts, (2) subsequent capital costs, (3) out-of-pocket operation and maintenance expenses, and (4) certain other items, all remaining revenues have been credited to the water-users of the Yuma Project.

At June 30, 1959, accumulated revenues available for distribution to the credit of water users totaled \$691,733, of which \$672,162 had been distributed. In addition \$233,152 in power revenues was reserved for replacement and depreciation of the power plant which is operated entirely for the benefit of Yuma Project water users.

Through purchases of energy by the Parker-Davis Project, the Federal Government has, since fiscal year 1944, provided a significant portion of the power revenues of the Yuma Project and the resultant surplus revenues which accrue to Yuma Project water users. During fiscal years 1955 through 1959, the Parker-Davis Project purchased 38 percent of all energy sold by the Siphon Drop Power Plant. In payment for this surplus energy, at the rate of 3.25 mills per kilowatt-hour, the Parker-Davis Project provided 40 percent of all revenues from the sale of power. During the same period the principal water-user organization benefiting from surplus power revenues of the Siphon Drop Power Plant purchased 54 percent of all energy sold. In payment for the energy, at the rate of 2.5 mills per kilowatt-hour, this organization provided 44 percent of all revenues from the sale of power.

No recent study has been made to determine the reasonableness and fairness of the rate of 3.25 mills per kilowatt-hour currently being charged to the Parker-Davis Project. Since this rate was established some 17 years ago, and in view of the large amount of revenues that have accumulated to the credit of water users, we believe that a study should be made to determine whether the rate being charged to the Parker-Davis Project is reasonable and fair under existing circumstances.

Recommendation to the Secretary of the Interior

To determine whether the rate charged to the Parker-Davis Project is reasonable and fair under existing circumstances, we recommend that the Secretary of the Interior initiate a study of the rate being charged to the Parker-Davis Project for energy generated at the Siphon Drop Power Plant.

OPERATION AND MAINTENANCE OF BOULDER CITY, NEVADA

Boulder City, Nevada, was built on Government withdrawn land to serve the needs of personnel employed in constructing, operating, and maintaining the Boulder Canyon Project (Hoover Dam and Power Plant). After the major construction was completed, the community changed from a construction camp to a permanent community servicing residents employed by the Bureau and residents not connected with the project.

During the construction period and the early years of operations, the excess of expenses over revenues of the city was charged to project construction and operation costs. As the nature of the community changed, it was recognized that this procedure was not equitable, and so the Interior Department Appropriation Act, 1949 (62 Stat. 1130), provided that investments and expenditures for Federal activities not related to the construction, operation, or maintenance of the Boulder Canyon Project shall be deemed non-project investments and expenditures and shall apply to reduce the obligations of the Bureau to repay the United States for funds advanced. Accordingly, at June 30, 1959, the project had designated \$3,353,253 as the nonproject amount applied to reduce the repayment obligation. These nonproject costs consist of the investment in certain facilities of the city and the project and the excess of operation and maintenance costs over nonproject revenues from inception to May 31, 1958. An amount of \$55,229 determined to be nonproject costs for the operating year ended May 31, 1959, was not recorded in the financial records at June 30, 1959.

With the recognition that Boulder City was servicing the needs of other than the Boulder Canyon Project, the Secretary of the Interior stated that the ultimate objective was to establish Boulder City as a self-governing and self-supporting municipality incorporated under the laws of the State of Nevada. Effective July 1, 1952, the management, operations, and physical property of the city was separated from the Boulder Canyon Project and established under the direction of a city manager. The costs of operations of the city for fiscal year 1959 and cumulative from July 1, 1952, to June 30, 1959, are summarized as follows:

	Fiscal year <u>1959</u>	Cumulative from July 1, 1952 to <u>June 30, 1959</u>
Revenues:		
Rent from land, buildings, and other property	\$230,212	\$1,777,648
Sale of electric energy	213,275	1,535,210
Sale of water	104,943	590,061
Garbage disposal services	25,387	178,553
Other	<u>6,781</u>	<u>67,918</u>
Total revenues	<u>580,598</u>	<u>4,149,390</u>
Operation and maintenance expenses:		
Housing facilities	94,169	878,990
Electric system	84,146	730,782
City management	127,446	835,992
Water system	119,238	764,136
Streets and sidewalks	47,406	398,374
Police protection	85,982	519,320
Health and sanitation	49,171	297,438
Parks and parkways	46,662	272,345
Municipal buildings	44,932	185,333
Fire protection	5,261	38,025
Other	<u>-</u>	<u>19,086</u>
Total operation and maintenance expenses	<u>704,413</u>	<u>4,939,821</u>
Provision for replacement	<u>32,745</u>	<u>209,815</u>
Total revenue deductions	<u>737,158</u>	<u>5,149,636</u>
Excess of deductions over revenues	<u>\$156,560</u>	<u>\$1,000,246</u>

On September 2, 1958, the Congress enacted the Boulder City Act of 1958 (72 Stat. 1726) which provided for the disposal of certain Federal property in the Boulder City area and for assistance in the establishment of a municipality incorporated under the laws of the State of Nevada.

Progress in disposal of Federal property under the Boulder City Act of 1958

To facilitate the establishment of a municipal corporation under Nevada laws, the Secretary of the Interior issued rules and regulations on May 21, 1959 (43 CFR 414), relating to the disposal of Federal properties in Boulder City. The Regional Director, acting under the instructions contained in these regulations,

designated as available for sale 177 dwelling houses, duplex units, and structures, valued at \$1,174,600, which were not needed in connection with Federal activities or functions.

The persons eligible to purchase these properties were determined in accordance with the regulations. First priorities were given to persons who were employed by the Federal Government in or near Boulder City and who were tenants in the properties at the date of the offer of sale. Structures not sold under the first-priority grouping were to be offered for sale to persons eligible under second priorities which included persons employed by the Federal Government in or near Boulder City on the date of the offer to sell. At September 8, 1959, there were 24 dwelling houses, duplex units, and structures available for sale to persons having second priority, and the priority for purchase was to be established by drawing on September 10, 1959.

At September 8, 1959, 32 properties had been sold for cash, and the remaining properties were to be sold with notes to be secured by first mortgages. In accordance with the regulations, sufficient attempts to obtain local financing on reasonable terms had been made, but the attempts were unsuccessful and the failure was verified by the Regional Director. The Bureau is accepting, in lieu of local financing, notes secured by first mortgages and insured by the Federal Housing Authority in partial payment of sales. It is planned that the Bureau will administer the notes until their disposition is determined by the Secretary of the Interior.

On January 4, 1960, 29 years of Federal control over Boulder City, Nevada, ended when the Bureau of Reclamation turned the community over to the incorporated city for self-government under the laws of the State of Nevada.

WATER SERVICE PLANT CONSTRUCTION AND OPERATION

Construction of the irrigation facilities of the lower Colorado River basin has been substantially completed. These facilities consist primarily of diversion dams, desilting basins, pumping plants, conveyance canals, and distribution systems to control the flow of water on the Colorado River and to divert water for use by irrigators.

The costs of irrigation facilities in service at June 30, 1959, were as follows:

Project	Total	Plant in service		Cost of facilities not distributed
		Operated by Bureau	Operated jointly by Bureau and water users	
All-American Canal System:				
Imperial Dam and Desilting Works	\$ 9,977,900	\$ -	\$ 9,977,900	\$ -
All-American Canal and Drains	19,587,718	-	-	19,587,718
Coachella Canal	9,363,610	-	-	9,363,610
Coachella Valley Distribution System	16,504,010	-	-	16,504,010
General property	199,322	-	-	135,217
Plant abandoned	12,070	-	-	-
	<u>55,644,630</u>	<u>-</u>	<u>9,977,900</u>	<u>45,590,555</u>
Gila:				
Gila Desilting Basin	912,451	912,451	-	-
Gila Gravity Main Canal and Drainage System	3,131,666	3,131,666	-	-
Yuma Mesa Pumping Plants	870,177	870,177	-	-
Wellton-Mohawk Pumping Plant	4,150,175	-	-	4,150,175
Yuma Mesa A and B Canals	1,258,947	-	-	1,258,947
Yuma Mesa Division Distribution and Drainage System	3,069,374	4,637	-	3,064,737
Wellton-Mohawk Division features (excluding pumping plants)	30,040,279	-	-	30,040,279
General property	582,308	-	-	-
Share of rights to Laguna Dam	230,479	-	-	-
Plant abandoned	62,555	-	-	-
	<u>44,308,411</u>	<u>4,918,931</u>	<u>-</u>	<u>38,514,138</u>
Salt River:				
Roosevelt Dam and Appurtenant Works (excluding electric plant)	8,624,302	-	-	8,624,302
Bartlett Dam and Appurtenant Works (excluding electric plant)	7,186,763	-	-	7,186,763
	<u>15,811,065</u>	<u>-</u>	<u>-</u>	<u>15,811,065</u>
Palo Verde Division:				
Palo Verde Diversion Dam and Appurtenant Works	3,145,592	-	-	3,145,592
Reservation drain	381,098	-	-	381,098
	<u>3,526,690</u>	<u>-</u>	<u>-</u>	<u>3,526,690</u>
Yuma:				
Laguna Dam and Headworks	2,190,206	2,190,206	-	-
Yuma Main Canal and Protective Works	2,032,450	2,032,450	-	-
Distribution and drainage systems	2,421,536	-	2,421,536	-
General property	41,182	-	-	41,182
Farm unit development costs	29,482	-	-	29,482
Plant abandoned	116,741	-	-	-
	<u>6,831,597</u>	<u>4,222,656</u>	<u>2,421,536</u>	<u>187,405</u>
Yuma Auxiliary:				
Distribution system	934,567	934,567	-	-
Plant abandoned	207,535	-	-	-
	<u>1,142,102</u>	<u>934,567</u>	<u>-</u>	<u>207,535</u>
Total	\$127,264,495	\$10,076,154	\$12,399,436	\$103,442,448
				\$1,346,457

WATER SERVICE OPERATIONS OF THE BUREAU

The Bureau has retained the operation of the Imperial and Laguna Dams to control the diversion of water; the supervision and operation and maintenance of the works; and the delivery of water to Mexico, to the All-American Canal System, and to the Gila, Yuma, and Yuma Auxiliary Projects. The remaining facilities operated by the Bureau or operated jointly with the water users' associations are operated temporarily for the account of the water users and will ultimately be turned over to the water users' associations for operation and maintenance.

The policy of the Bureau is to transfer the responsibility for operation and maintenance of the completed facilities to the water users' associations. The completed facilities of the All-American Canal System have been turned over to the Imperial Irrigation District and the Coachella Valley County Water District for operation and maintenance. Construction of facilities on the Gila Project is not completed; however, the Wellton-Mohawk Irrigation and Drainage District and the Yuma Mesa Irrigation and Drainage District have assumed the responsibility for operation and maintenance of completed portions of their facilities. The Bureau has continued to operate the common features of the project and the Yuma Mesa Pumping Plant. The delivery of water to the distribution system of the Yuma Auxiliary Project is made from a connection with the Gila Project. Therefore, the Unit "B" Irrigation and Drainage District of the Yuma Auxiliary Project has been reluctant to assume the responsibilities for operation and maintenance of its distribution system until appropriate safeguards are provided concerning certain financial and physical problems relating to the common works operated and maintained by the Gila Project.

At June 30, 1959, the water users of the South Gila Valley Unit of the Gila Project had not contracted to repay the cost of carriage facilities allocated to the South Gila Valley Unit. The Bureau has scheduled, for fiscal year 1961, surveys and investigations of a distribution system to connect the South Gila Valley Unit to the carriage system of the Gila Project. The results of these studies may determine whether the South Gila Valley water users will agree to contract for repayment of the allocated share of common facilities and the proposed distribution system.

The water users of the Reservation Division of the Yuma Project, comprising lands owned by Indian and non-Indian settlers, have not formed a water users' organization. We were informed by regional office officials that enabling legislation is required as well as agreements between the Indian and non-Indian settlers before an organization can be formed. Continuing efforts are being made to influence these water users to organize and contract for repayment of the aggregate balances of unpaid individual repayment contracts. Until this is done, however, the Bureau will continue to operate certain facilities of the project.

WATER SERVICE OPERATIONS
FOR THE ACCOUNT OF THE WATER USERS

The operation and maintenance activities of the All-American Canal, Gila, Yuma, Yuma Auxiliary, and Imperial Dam Projects were consolidated as of July 1, 1957, into one operating entity identified as Yuma Projects operation and maintenance activities. Previously, the cost of operation and maintenance of these projects was included in the operating statements of the individual projects.

In fiscal year 1959, the Bureau operated the Imperial Dam of the All-American Canal, the Yuma Auxiliary Project, and parts of the Gila and Yuma Projects. Operations on the Gila and Yuma Projects resulted in excess of deductions over revenues totaling \$40,110 and \$37,024, respectively. Repayment of the deficits on the Gila Project is to be made during the 7th to 10th years of the development periods. At June 30, 1959, balances due from water users for operations were \$417,881, while balances due to water users were \$256,594, as follows:

<u>Project</u>	<u>Balances due to water users</u>	<u>Balances due from water users</u>	
		<u>Current</u>	<u>Deferred</u>
All-American Canal	\$ 33,520	\$ -	\$ -
Gila	82,523	30,813	387,068
Yuma	101,543	-	-
Yuma Auxiliary	<u>39,008</u>	<u>-</u>	<u>-</u>
Total	<u>\$256,594</u>	<u>\$30,813</u>	<u>\$387,068</u>

RIVER INVESTIGATIONS
AND SUPERVISION OF ACTIVITIES
AT IMPERIAL AND LAGUNA DAMS

Imperial Dam--the diversion structure for the All-American Canal and the Gila Gravity Main Canal--is located on the Colorado River, approximately 18 miles upstream from Yuma, Arizona. Laguna Dam--operated as an appurtenance of Imperial Dam--is 4 miles downstream from Imperial Dam.

Under terms of the March 1952 amendatory contract between the Bureau and the Imperial Irrigation District, operation and maintenance of the All-American Canal, together with the desilting works, headworks, and trashracks at Imperial Dam, were transferred to the district on May 1, 1952. Retained as reserved works at the dam were the sluice gates, sluiceway channel and overflow section, and Gila headworks. The sluice gates and sluiceway channel and overflow section are operated and maintained by the Bureau of Reclamation with funds advanced by all agencies and projects sharing in the use of the water diverted at Imperial Dam. The Gila headworks is operated and maintained by the Bureau of Reclamation for the Gila Project.

In addition to the care and operation of the reserved works, the Bureau has a continuing responsibility under the Mexican Water Treaty of 1944 and the All-American Canal amendatory contract dated March 4, 1952, between the Bureau of Reclamation and Imperial Irrigation District, to make investigations and analyses in the fields of hydrography and sedimentation, prepare master schedules of all diversions and regulatory river flow at Imperial and Laguna Dams, and supervise all phases of activity in connection with such operations.

COLORADO RIVER FRONT WORK AND LEVEE SYSTEM

The program of the Bureau for rectification, channelization, and other flood control works on the lower Colorado River includes channel dredging and channel levee construction and the construction of channel training and bank protection structures. These activities are not subject to the reimbursability provisions of reclamation law and are not considered reimbursable by the Bureau. At June 30, 1959, the estimated total costs for flood control works and for general property in service and under construction amounted to \$10,090,424. These costs are classified in the records of the Bureau as follows:

Carriage system in service:		
Land and land rights	\$	177,608
Structures and improvements		4,078,227
Dams and waterways		2,342,619
Pumps and prime movers		43,253
Miscellaneous equipment		2,521,657
Roads and trails		<u>646,060</u>
Total		\$ 9,809,424
Drainage facilities under construction:		
South Gila drainage facilities:		
Construction work in progress		107,747
Estimate to complete		<u>173,253</u>
Total		<u>281,000</u>
Total		<u>\$10,090,424</u>

The construction program on the South Gila Valley unit of the Gila Project was authorized under the act of May 1, 1958 (72 Stat. 101), amending the act of June 28, 1946 (60 Stat. 338). The work was necessary to protect the lands of the non-Federal reclamation project operated by the Yuma Irrigation District from the irrigation operations of the Gila Project.

Operation and maintenance expenses of the system for fiscal year 1959 and cumulative to June 30, 1959, are summarized as follows:

	Fiscal year <u>1959</u>	Cumulative to <u>June 30, 1959</u>
Operation and maintenance of carriage system	\$1,302,012	\$ 9,560,318
Maintenance of general property	134,851	215,923
Administrative and general expenses	188,467	1,509,437
Adjustments of cost for prior years	<u>46,674</u>	<u>129,130</u>
Total expenses	1,672,004	11,414,808
Less rentals of quarters and equipment and miscellaneous income	<u>13,609</u>	<u>122,611</u>
Net expenses	<u>\$1,658,395</u>	<u>\$11,292,197</u>

In fiscal year 1959, continued upstream channel dredging, sedimentation studies, investigations, and routine maintenance were carried out. Channelization studies of the river from the Palo Verde Diversion Dam to the Imperial Dam were in progress, and a draft of the report on the proposed channelization through Cibola Valley was being prepared.

To June 30, 1959, Mexico, through the United States Section of the International Boundary and Water Commission, has contributed \$630,665 to the Bureau pursuant to the Mexican Water Treaty of 1944, for the costs of construction and operation and maintenance of levees, interior drainage facilities, and other works necessary to protect lands within the United States against damage from floods that would result from construction and operation and maintenance of Morelos Diversion Dam. Final determination of the total amount of Mexico's contribution for the levee work has been under negotiations since 1953.

FINANCING OF CONSTRUCTION AND OPERATION AND MAINTENANCE
OF PROJECTS IN LOWER COLORADO RIVER BASIN

FINANCING OF CONSTRUCTION
AND OPERATION AND MAINTENANCE
OF BOULDER CANYON PROJECT

The Boulder Canyon Project Act (43 U.S.C. 617) established a special fund to be known as the Colorado River Dam Fund and the Secretary of the Treasury was authorized to make advances to the fund to construct the project. At June 30, 1959, advances for construction of the Hoover Dam and Power Plant totaled \$160,659,756. (See p. 22.)

The Boulder Canyon Project Adjustment Act (43 U.S.C. 618) provided that all receipts from the Hoover Dam and Power Plant be paid into the Colorado River Dam Fund and be used for repayment of advances made by the Treasury with interest, operation and maintenance expenses, and certain other costs. The disposition of receipts from Hoover Dam and Power Plant for fiscal year 1959 and from inception to June 30, 1959, was as follows:

	<u>Fiscal year</u> <u>1959</u>	<u>Cumulative to</u> <u>June 30, 1959</u>
Receipts:		
Collections of the Boulder Canyon Project (less refunds and appropriation transfers)	<u>\$8,541,642</u>	<u>\$159,302,513</u>
Payments:		
Interest paid on advances from U.S. Treasury	3,115,164	76,441,730
Repayment of advances from U.S. Treasury	2,284,836	28,592,861
Appropriated for operation and maintenance expenses, net	2,066,900	29,296,459
Annual payments of \$300,000 to each of the States of Arizona and Nevada	600,000	12,600,000
Transfers to special fund in the Treasury designated as the Colorado River Development Fund	<u>500,000</u>	<u>10,500,000</u>
Total	<u>8,566,900</u>	<u>157,431,050</u>
Balance of receipts for Colorado River Dam Fund	<u>\$ -25,258^a</u>	<u>\$ 1,871,463</u>

^aExcess of payments over receipts.

At June 30, 1959, the balance of receipts, totaling \$1,871,463, was unappropriated and was on deposit with the United States Treasury.

Under the provisions of the Boulder Canyon Project Act, construction costs of the All-American Canal System are also financed from advances to the Colorado River Dam Fund. At June 30, 1959, advances for the All-American Canal System totaled \$64,510,958.

The disposition of receipts from the All-American Canal System for fiscal year 1959 and from inception to June 30, 1959, was as follows:

	Fiscal year <u>1959</u>	Cumulative to June 30, <u>1959</u>
Collections of All-American Canal System	\$270,033	\$4,033,536
Repayments of advances made by Treasury	<u>200,000</u>	<u>3,952,000</u>
Balance of receipts for Colorado River Dam Fund, All-American Canal System	<u>\$ 70,033</u>	<u>\$ 81,536</u>

At June 30, 1959, the balance of receipts totaling \$81,536 was unappropriated and on deposit with the United States Treasury.

FINANCING OF CONSTRUCTION
AND OPERATION AND MAINTENANCE
OF OTHER PROJECTS IN LOWER COLORADO RIVER BASIN

Expenditures for construction and operation and maintenance of other projects in the lower Colorado River basin are financed in part by allotments of appropriations by the Congress. The allotments of appropriations for fiscal year 1959 and cumulative to June 30, 1959, are summarized as follows:

<u>Project</u>	<u>Fiscal year 1959</u>			<u>Cumulative to June 30, 1959</u>
	<u>Construction</u>	<u>Operation and maintenance</u>	<u>Total</u>	
Colorado River Front Work and Levee System	\$ 281,000	\$1,362,219	\$1,643,219	\$ 18,043,594
Gila	185,632	-	185,632	56,242,867
Palo Verde Diversion	-	-	-	5,547,904
Parker-Davis Salt River	671,000	2,266,679	2,266,679	159,810,036
Yuma	-	-	-	32,219,379
Yuma Auxiliary	-	-	-	19,327,142
Yuma Projects Operation and Maintenance (note a)	-	287,442	287,442	2,390,690
Total	1,137,632	3,916,340	5,053,972	296,165,423
Rescissions, lapses, transfers, and adjustments	<u>272,553</u>	<u>67,313</u>	<u>339,866</u>	<u>13,661,484^b</u>
Net allotments of appropriations	<u>\$ 865,079</u>	<u>\$3,849,027</u>	<u>\$4,714,106</u>	<u>\$282,503,939</u>

^aIncludes operation and maintenance of All-American Canal System.

^bThe total rescissions, lapses, transfers, and adjustments of \$13,661,484 comprise the amounts of \$7,185,115, \$2,673,856, and \$2,036,307 applicable to the Parker-Davis, Salt River, and Gila Projects, respectively, and \$1,766,206 applicable to the other projects.

Allotments for fiscal year 1959 were made from funds appropriated by the Congress in the Public Works Appropriation Act, 1959 (72 Stat. 1575), and the Second Supplemental Appropriation Act, 1959 (73 Stat. 57). The amounts appropriated for construction remain available until expended. Appropriations for operation and maintenance are available for obligation in the specific year only.

SCOPE OF AUDIT

Our audits at the regional and project offices of the Bureau of Reclamation having responsibility for water resources development projects in the lower Colorado River basin included reviews of activities and selected 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 Bureau and reviewed the policies for conformance with basic legislation.
3. We reviewed the procedures followed by employees of the Bureau to determine the effectiveness of the procedures.
4. We did not make a detailed audit, but we examined certain selected transactions for fiscal years 1957, 1958, and 1959 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 controls, including internal audits. The examinations of transactions were conducted at the Boulder City, Nevada (region 3), regional office and at the project offices in Boulder City, Nevada; Phoenix, Arizona; and Yuma, Arizona. The projects under audit were the Boulder Canyon (including All-American Canal System and Boulder City Municipality), Salt River, Palo Verde Diversion, Colorado River Front Work and Levee System, Parker-Davis, Yuma, Yuma Auxiliary, and Gila.

OPINION OF FINANCIAL STATEMENTS

The accompanying statement of assets and liabilities (schedule 1) and statements of power operations and nonpower operations (schedules 2 through 7) are based on the accounting records of the Bureau of Reclamation. These financial statements present on a combined basis the assets and liabilities and the results from operations of the Bureau of Reclamation projects in the lower Colorado River basin.

In our opinion, the accompanying financial statements do not present fairly the financial position at June 30, 1959, and the financial results of operations for the fiscal year then ended mainly because of the conditions set forth below, the full effect of which cannot now be determined.

1. Allocation of project construction costs to power and non-power purposes for the Parker-Davis Project has not been approved by the Secretary of the Interior as a firm allocation; until this is done, it will not be possible to make accurate assignment of provisions for depreciation and accruals of interest on the Federal investment to the several purposes, including power.
2. Interest during construction of the joint and exclusive facilities applicable to the power investment in Parker-Davis Project has not been computed or recorded in the accounts of the project. Interest during operations has not been properly computed and recorded in the accounts of the project.
3. Except for certain relatively minor items, such as construction service facilities and transportation equipment, provisions for depreciation of plant, property, and equipment in service are not recorded in the accounts of projects in the lower Colorado River basin.

FINANCIAL STATEMENTS

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
LOWER COLORADO RIVER BASIN

SCHEDULE 1

STATEMENT OF ASSETS AND LIABILITIES (note 1)
JUNE 30, 1959

	A S S E T S			L I A B I L I T I E S		
	Combined	Boulder Canyon Project	All other projects	Combined	Boulder Canyon Project	All other projects
PLANT, PROPERTY, AND EQUIPMENT:						
Completed works (note 2)	\$456,874,723	\$167,668,204	\$289,206,519	\$507,200,486	\$160,505,497	\$346,694,989
Construction work in progress	2,519,424	296,335	2,223,089	4,556,574	350,459	4,206,115
Service facilities, less allowances for de- preciation of \$351,634	208,926	-	208,926	99,345,009	76,701,012	22,643,997
Total plant, property, and equipment	459,603,073	167,964,539	291,638,534	611,102,069	237,556,968	373,545,101
INVESTMENT OF U.S. GOVERNMENT AND ACCUMULATED EXCESS OF REVENUES OVER DEDUCTIONS:						
Congressional appropriations, net (note 6)				226,328,651	105,034,591	121,294,060
Cost and property transfers, net (note 7)				10,787,628	3,354,974	7,432,654
Interest on the Federal investment (note 8)				11,627,603	-	11,627,603
				248,743,882	108,389,565	140,354,317
Less:				362,358,187	129,167,403	233,190,784
Funds returned to the U.S. Treasury (note 9)				-	-	-
Costs charged off under acts of the Congress (note 10)				41,821,633	25,136,473	16,685,160
Net costs of nonreimbursable programs (schedule 2)				38,501	-3,389,853	3,428,354
Net investment of U.S. Government				41,860,134	21,746,620	20,113,514
Excess of revenues over deductions (schedule 2):				404,218,321	150,914,023	253,304,298
Power				22,414,242	-	22,414,242
Nonoperating and miscellaneous				2,875,512	-	2,875,512
Net excess of revenues over deductions				25,289,754	-	25,289,754
REPAYMENTS FOR USE OF FACILITIES:						
Matured installments of fixed obligations (note 11)				1,829,404	1,299,239	530,165
Repayments realized from other sources (note 12)				256,594	-	256,594
Total repayments				2,085,998	1,299,239	786,759
CURRENT LIABILITIES:						
Accounts payable and other accrued and current liabilities				7,744,489	2,425,439	5,319,050
Due to water users from operation of facilities						
Total current liabilities				7,744,489	2,425,439	5,319,050
ADVANCE COLLECTIONS AND OTHER DEFERRED CREDITS (note 13)						
20,621,311				13,931,480		6,689,831
10,785,907				3,353,253		7,432,654
1,522,247				-		1,522,247
32,929,465				17,284,733		15,644,732
ALLOWANCES FOR REPLACEMENTS AND OTHER PURPOSES:						
Replacements within the repayment period (note 14)				14,144,364	278,239	13,866,125
Costs authorized to be charged off						
Depreciation on transportation and other equipment						
Total allowances				14,144,364	278,239	13,866,125
CONTRIBUTIONS IN AID OF PROJECT DEVELOPMENT AND CONSTRUCTION (note 15)						
Total liabilities and investment of U.S. Government	\$486,412,391	\$172,201,673	\$314,210,718	\$486,412,391	\$172,201,673	\$314,210,718

(-) Excess of deductions over revenues.

The notes on pages 68 through 78 are an integral part of this statement.

The opinion of the General Accounting Office on these financial statements appears on page 59.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION
LOWER COLORADO RIVER BASINSTATEMENT OF NET REVENUES AND NET COSTS OF OPERATIONS
FOR THE FISCAL YEAR 1959 AND CUMULATIVE TO JUNE 30, 1959

<u>Project</u>	Excess of revenues over deductions, fiscal year <u>1959</u>	Adjustments to or distribution of cumulative balances at <u>June 30, 1958</u>	Cumulative to June 30, <u>1959</u>
REIMBURSABLE PROGRAMS:			
Power:			
Boulder Canyon (schedule 3)	\$2,315,591	-\$143,221 ^a	\$25,136,473
Parker-Davis (schedule 4)	1,695,696	-	16,644,007
Yuma (schedule 5)	<u>17,532</u>	<u>-14,481^b</u>	<u>41,153</u>
	<u>4,028,819</u>	<u>-157,702</u>	<u>41,821,633</u>
Nonoperating and miscellaneous (schedule 6):			
All-American Canal System	22,755	-	279,324
Boulder Canyon (Hoover Dam and Power Plant)	22,440	-	-2,389,607
Boulder City Municipal Office	-156,560	20,262 ^c	-1,000,246
Gila	83,932	175	374,688
Salt River	3,734	-	1,169,806
Yuma	684	-	545,435
Yuma Auxiliary	<u>24,924</u>	<u>-16,897^d</u>	<u>1,059,101</u>
	<u>1,909</u>	<u>3,540</u>	<u>38,501</u>
Total	<u>\$4,030,728</u>	<u>-\$154,162</u>	<u>\$41,860,134</u>
NONREIMBURSABLE PROGRAMS:			
Colorado River Front Work and Levee System	-\$1,658,395	\$46,674	-\$11,292,197
All-American Canal System	-	-	-6,923
Gila	-1,514	-	-44,112
Yuma	-	-	-510
Yuma Projects Operation and Maintenance Activities	<u>-46,769</u>	<u>-</u>	<u>-283,861</u>
Total	<u>-\$1,706,678</u>	<u>\$46,674</u>	<u>-\$11,627,603</u>

(-) Excess of deductions over revenues.

^aConsists of adjustment of operating year 1958 generating charges (-\$143,534) and of replacement components (\$313).

^bDistribution of power revenues to facilities users.

^cAdjustment of operating year 1958 generating charges.

^dWarren Act construction component of water rental charge transferred to Gila Project (\$354) and cancellation of water-right applications (\$16,543).

The notes on pages 68 through 78 are an integral part of this statement.

The opinion of the General Accounting Office on these financial statements appears on page 59.

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
LOWER COLORADO RIVER BASIN

STATEMENT OF RESULTS OF POWER OPERATIONS, BOULDER CANYON PROJECT
FOR THE FISCAL YEARS 1959 AND 1958

	Fiscal year 1959			Fiscal year 1958		
	Thousand kilowatt-hours	Per kwh (mills)	Amount	Thousand kilowatt-hours	Per kwh (mills)	Amount
REVENUES:						
Sales of electric energy:						
Private electric utilities	561,571	2.86	\$ 1,607,940	870,900	2.14	\$ 1,863,373
State agencies	1,419,335	2.48	3,515,546	1,504,942	2.45	3,689,739
Municipal utilities	1,139,610	2.53	2,879,890	1,543,326	2.07	3,188,843
Public authorities	944,157	1.90	1,789,319	756,971	2.00	1,516,214
Project use and interproject sales	39,877	2.32	92,679	40,734	2.69	109,678
Total sales of electric energy	4,104,550	2.41	9,885,374	4,716,873	2.20	10,367,847
Rent and other revenues			177,489			321,485
Total operating revenues			10,062,863			10,689,332
DEDUCTIONS:						
Production expenses			1,690,994			1,718,617
Transmission expenses			208,634			217,524
Administrative and general expenses			502,696			542,199
Provision for replacement			690,827			692,368
Total operating revenue deductions			3,093,151			3,170,708
EXCESS OF OPERATING REVENUES OVER DEDUCTIONS			6,969,712			7,518,624
OTHER DEDUCTIONS:						
Interest expense			3,554,121			3,631,063
Payments to States and Colorado River Development Fund			1,100,000			1,099,997
Total other deductions			4,654,121			4,731,060
EXCESS OF REVENUES OVER DEDUCTIONS FOR POWER OPERATIONS			\$ 2,315,591			\$ 2,787,564

The notes on pages 68 through 78 are an integral part of this statement.

The opinion of the General Accounting Office on these financial statements appears on page 59.

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
LOWER COLORADO RIVER BASIN

STATEMENT OF RESULTS OF POWER OPERATIONS, PARKER-DAVIS PROJECT
FOR THE FISCAL YEARS 1959 AND 1958

	Fiscal year 1959			Fiscal year 1958		
	Thousand kilowatt-hours	Per kwh (mills)	Amount	Thousand kilowatt-hours	Per kwh (mills)	Amount
REVENUES:						
Sales of electric energy:						
Private utilities	228,146	3.34	\$ 761,035	411,468	2.40	\$ 989,132
State agencies	905,282	4.12	3,732,638	1,163,349	3.37	3,924,060
Public authorities	82,198	4.91	403,605	74,663	4.96	370,453
Commercial and industrial	26,167	3.57	93,442	28,453	3.59	102,146
Other Federal agencies	72,216	4.29	309,738	62,537	4.52	282,480
Project use and interproject sales	52,485	2.56	134,504	79,868	2.54	202,536
All other sales	658	6.68	4,393	179,845	1.02	183,425
Total sales of electric energy	<u>1,367,152</u>	<u>3.98</u>	5,439,355	<u>2,000,183</u>	<u>3.03</u>	6,054,232
Rents and other revenues			1,663,714			1,633,333
Total operating revenues			<u>7,103,069</u>			<u>7,687,565</u>
DEDUCTIONS:						
Production expenses			443,257			518,298
Purchased power			17,538			15,717
Transmission expenses			1,308,095			1,305,645
Customers' accounting and collecting expenses			20,600			25,019
Administrative and general expenses			333,009			343,080
Provisions for replacement and depreciation			<u>705,220</u>			<u>688,329</u>
Total operating revenue deductions			2,827,719			2,896,088
Credits to operations (note 16)			<u>123,578</u>			<u>134,721</u>
Net operating revenue deductions			2,704,141			2,761,367
EXCESS OF OPERATING REVENUES OVER DEDUCTIONS			<u>4,398,928</u>			<u>4,926,198</u>
OTHER DEDUCTIONS:						
Interest expense (net)			<u>2,703,232</u>			<u>2,756,919</u>
EXCESS OF REVENUES OVER DEDUCTIONS FOR POWER OPERATIONS			<u>\$1,695,696</u>			<u>\$2,169,279</u>

The notes on pages 68 through 78 are an integral part of this statement.

The opinion of the General Accounting Office on these financial statements appears on page 59.

DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
LOWER COLORADO RIVER BASIN

STATEMENT OF RESULTS OF POWER OPERATIONS, YUMA PROJECT
FOR THE FISCAL YEARS 1959 AND 1958

	<u>Fiscal year 1959</u>			<u>Fiscal year 1958</u>		
	<u>Thousand kilowatt- hours</u>	<u>Per kwh (mills)</u>	<u>Amount</u>	<u>Thousand kilowatt- hours</u>	<u>Per kwh (mills)</u>	<u>Amount</u>
REVENUES:						
Sales of electric energy:						
Public authorities	16	13.83	\$ 217	18	13.30	\$ 242
Commercial and industrial	10,256	2.88	29,588	10,597	2.93	31,007
Project use and interproject sales	5,450	3.26	17,747	4,882	3.06	15,905
All other sales	<u>41</u>	6.78	<u>276</u>	<u>52</u>	6.39	<u>331</u>
Total sales of electric energy	<u>15,763</u>	<u>3.03</u>	47,828	<u>15,549</u>	<u>3.05</u>	47,485
Rents and other revenues			-			<u>177</u>
Total operating revenues			<u>47,828</u>			<u>47,662</u>
DEDUCTIONS:						
Production expenses			18,125			14,631
Transmission expenses			381			62
Administrative and general expenses			9,390			5,344
Provision for replacement			<u>2,400</u>			<u>2,400</u>
Total operating revenue deductions			<u>30,296</u>			<u>22,437</u>
EXCESS OF REVENUES OVER DEDUCTIONS FOR POWER OPERATIONS			<u>\$17,532</u>			<u>\$25,225</u>

The notes on pages 68 through 78 are an integral part of this statement.

The opinion of the General Accounting Office on these financial statements appears on page 59.

D E P A R T M E N T O F T H E I N T E R I O R

BUREAU OF RECLAMATION
LOWER COLORADO RIVER BASIN

STATEMENT OF NONOPERATING AND MISCELLANEOUS INCOME (NET)
FOR THE FISCAL YEAR 1959

	<u>Total</u>	<u>Project</u>						
		<u>All- American Canal System</u>	<u>Boulder Canyon</u>	<u>Boulder City Municipal Office</u>	<u>Gila</u>	<u>Salt River</u>	<u>Yuma</u>	<u>Yuma Aux- iliary</u>
Rental of grazing and farming lands	\$ 1,232	\$ -	\$ -	\$ -	\$ -	\$1,112	\$120	\$ -
Interest and penalties	21,422	50	-	-	5,352	-	54	15,966
Rental of water	20,761	-	-	-	19,481	-	500	780
Sale of land	60,281	-	-	-	52,015	-	-	8,266
Nonutility operations	-134,120	-	22,440	-156,560	-	-	-	-
Miscellaneous	<u>32,333</u>	<u>22,705</u>	<u>-</u>	<u>-</u>	<u>7,084</u>	<u>2,622</u>	<u>10</u>	<u>-88</u>
Total	<u>\$ 1,909</u>	<u>\$22,755</u>	<u>\$22,440</u>	<u>-\$156,560</u>	<u>\$83,932</u>	<u>\$3,734</u>	<u>\$684</u>	<u>\$24,924</u>

(-) Excess of expense over income.

The notes on pages 68 through 78 are an integral part of this statement.

The opinion of the General Accounting Office on these financial statements appears on page 59.

D E P A R T M E N T O F T H E I N T E R I O R

BUREAU OF RECLAMATION
LOWER COLORADO RIVER BASIN

STATEMENT OF IRRIGATION OPERATION AND MAINTENANCE EXPENSES APPLIED TO THE ACCOUNTS OF WATER USERS
FOR THE FISCAL YEAR 1959

	Project				
	Combined	All-American Canal System	Gila	Yuma	Yuma Auxiliary
REVENUES:					
Rental of irrigation water	\$150,674	\$ -	\$ 19,820	\$130,854	\$ -
OPERATION AND MAINTENANCE EXPENSES:					
Storage system	54,245	31,112	17,566	4,730	837
Carriage system	222,829	-	188,585	21,936	12,308
Distribution system	204,633	-	52,300	120,015	32,318
Drainage system	18,471	-	8,624	9,225	622
Water users' accounting and collection expenses	20,681	-	13,314	3,368	3,999
Administrative and general expenses	119,633	9,375	59,216	34,484	16,558
Total operation and maintenance expenses	640,492	40,487	339,605	193,758	66,642
Less:					
Operation and maintenance expenses applied to advances by water users	412,684	40,487	279,675	25,880	66,642
Net operation and maintenance expenses	227,808	-	59,930	167,878	-
EXCESS OF DEDUCTIONS OVER REVENUES APPLIED TO ACCOUNTS OF WATER USERS	\$ 77,134	\$ -	\$ 40,110 ^a	\$ 37,024 ^b	\$ -

^aTransferred to amounts due from water users. (See p. 51.)

^bApplied against amounts due to water users. (See p. 51.)

The notes on pages 68 through 78 are an integral part of this statement.

The opinion of the General Accounting Office on these financial statements appears on page 59.

DEPARTMENT OF THE INTERIOR

BUREAU OF RECLAMATION

LOWER COLORADO RIVER BASIN

EXPLANATORY NOTES AND COMMENTS ON THE FINANCIAL STATEMENTS

1. Basis for preparation

The financial statements include the transactions of the operating projects located in the lower Colorado River basin, Bureau of Reclamation. Projects included in the financial statements are:

Boulder Canyon:

All-American Canal System

Hoover Dam and Power Plant

Boulder City Municipal Office

Colorado River Front Work and Levee System

Gila

Palo Verde Diversion

Parker-Davis

Salt River

Yuma

Yuma Auxiliary

Yuma Projects Operation and Maintenance Activities

The amounts shown for the Boulder Canyon Project consist of amounts for the Hoover Dam and Power Plant and the Boulder City Municipal Office. Amounts for the All-American Canal System are included with those for all other projects.

The statements of revenues and expenses for the power and water operations are based on accounts of the Bureau that are maintained for these operations. The accounts for power operations generally are maintained in accordance with the uniform system of accounts prescribed by the Federal Power Commission under the Federal Power Act (16 U.S.C. 825b) except for depreciation accounting and interest during construction which are commented upon on pages 10 to 14. The accounts for water operations of the projects in the Yuma, Arizona, area are maintained in one set of records referred to as Yuma Projects Operation and Maintenance Activities.

2. Completed works

Completed works are classified on the basis of functional use of the facilities, as follows:

Project	Total	Multiple- purpose	Irrigation	Electric	Flood control	Other physical property
Boulder Canyon Project:						
Boulder Canyon	\$161,921,590	\$ 94,471,955	\$ -	\$ 65,738,832	\$ -	\$1,710,803
Boulder City Municipal Office	<u>5,746,614</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>-</u>	<u>5,746,614</u>
	<u>167,668,204</u>	<u>94,471,955</u>	<u>-</u>	<u>65,738,832</u>	<u>-</u>	<u>7,457,417</u>
All other projects:						
All-American Canal System	60,672,461	40,838,665	16,504,010	-	3,329,786	-
Colorado River Front Work and Levee System	9,809,424	-	-	-	9,809,424	-
Gila	45,013,403	-	44,802,514	-	-	210,889
Parker-Davis	140,637,256	50,297,493	-	90,339,763	-	-
Salt River	20,077,508	5,079,212	10,731,853	4,266,443	-	-
Yuma	7,441,884	-	6,831,597	610,287	-	-
Yuma Auxiliary	1,142,102	-	1,142,102	-	-	-
Palo Verde Diversion	4,412,481	-	3,526,690	-	885,791	-
	<u>289,206,519</u>	<u>96,215,370</u>	<u>83,538,766</u>	<u>95,216,493</u>	<u>14,025,001</u>	<u>210,889</u>
Total	<u>\$456,874,723</u>	<u>\$190,687,325</u>	<u>\$83,538,766</u>	<u>\$160,955,325</u>	<u>\$14,025,001</u>	<u>\$7,668,306</u>

Completed works are stated generally at original costs to the Bureau of Reclamation.

Multiple-purpose plant is plant operated for the benefit of two or more purposes, such as irrigation and hydroelectric power. Under the Reclamation Project Act of 1939, as amended, and other acts, the Secretary of the Interior is responsible for allocating the construction costs of multiple-purpose projects constructed by the Bureau of Reclamation.

3. Deferred charges and unmatured receivables

Deferred charges consist of operation and maintenance expenses, other charges, and interest and penalties on delinquent installments of repayment contracts which have been included in the contractual repayment obligations of water users in the following amounts:

Project	Operation and maintenance expense	Other charges (note a)	Rehabilita- tion and betterment costs	Interest and penalties	Total
All-American Canal System	\$ 983,622	\$117,526	\$ -	\$ -	\$ 1,101,148
Gila	618,757	666,448	-	-	1,285,205
Salt River	115,994	160,249	8,465,198	771,850	9,513,291
Yuma	545,017	-	-	47,883	592,900
Yuma Auxiliary	<u>-</u>	<u>-</u>	<u>-</u>	<u>493</u>	<u>493</u>
Total	<u>\$2,263,390</u>	<u>\$944,223</u>	<u>\$8,465,198</u>	<u>\$820,226</u>	<u>\$12,493,037</u>

^aOther charges consist of property transfers to water users' organizations.

Unmatured receivables in the amount of \$2,574,703 consist of receivables not due for collection until future years.

4. Transitional development costs

Transitional development costs represent the expenses of farm unit settlement and development, classified as follows:

Reimbursable:

Gila Project		\$ 593,106
All-American Canal System		16,843

Nonreimbursable:

Gila Project (Yuma-Mesa Division):			
Development costs not covered by repayment contracts	\$1,127,954		
Development cost allocated to dust control	<u>1,058,020</u>		<u>2,185,974</u>

Total			<u>\$2,795,923</u>
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Portions of these costs for the Gila Project have been determined to be nonreimbursable under the provisions of the act of January 28, 1956 (70 Stat. 5); however, the amounts allocated as nonreimbursable are tentative. The balance of the costs is reimbursable and is part of the general repayment obligation of the irrigation districts.

5. Other deferred debits

Other deferred debits consist of project investigation costs, undistributed indirect expenses, and other costs, as follows:

<u>Project</u>	<u>Project investigations</u>	<u>Undis-tributed indirect expenses</u>	<u>Other costs</u>	<u>Total</u>
Boulder Canyon Project:				
Boulder Canyon	\$ -	\$2,643	\$456,811	\$ 459,454
Boulder City Municipal Office	<u>-</u>	<u>1,229</u>	<u>-</u>	<u>1,229</u>
	<u>-</u>	<u>3,872</u>	<u>456,811</u>	<u>460,683</u>
All other projects:				
All-American Canal System	1,038,314	-	-	1,038,314
Gila	185,610	-546	30	185,094
Parker-Davis	-	2,092	40,682	42,774
Yuma	<u>-</u>	<u>-</u>	<u>3</u>	<u>3</u>
	<u>1,223,924</u>	<u>1,546</u>	<u>40,715</u>	<u>1,266,185</u>
Total	<u>\$1,223,924</u>	<u>\$5,418</u>	<u>\$497,526</u>	<u>\$1,726,868</u>

Project investigation costs consist of costs of investigations of projects subsequently abandoned or currently deferred. Other costs include (1) \$455,433 representing the increase in the base for determination of generating charges on the Boulder Canyon Project to be reduced each year by the amount recovered through generating charges for the year and (2) \$32,663 representing surplus stores of the Parker-Davis Project.

6. Congressional appropriations, net

Allotments (net) by the Bureau of Reclamation of congressional appropriations for construction and operation and maintenance to projects in the lower Colorado River basin to June 30, 1959, have been as follows:

<u>Project</u>	<u>Allotments</u>
Boulder Canyon Project:	
Boulder Canyon	\$160,313,797
Boulder City Municipal Office	<u>191,700</u>
	<u>160,505,497</u>
All other projects:	
All-American Canal System	64,191,050
Colorado River Front Work and Levee System	17,581,774
Gila	54,206,560
Palo Verde Diversion	4,675,529
Parker-Davis	152,624,920
Salt River	29,545,524
Yuma	18,897,679
Yuma Auxiliary	2,388,142
Yuma Projects Operation and Maintenance	<u>2,583,811</u>
	<u>346,694,989</u>
Total	<u>\$507,200,486</u>

7. Cost and property transfers, net

Costs of equipment, materials and supplies, and services transferred to or from other projects within the Bureau or to or from other Federal agencies, with or without a transfer of funds, are recorded by the Bureau as a part of the investment of the United States Government. At June 30, 1959, these net transfers were as follows:

Project	Cumulative to June 30, 1959	Appropriation transfer warrants	Nonappropriation transfers		
			Other Bureau projects	Other agencies	Non- Federal
Boulder Canyon Project:					
Boulder Canyon	-\$6,005,239	\$ 350,459	-\$6,355,698 ^a	\$ -	\$ -
Boulder City Municipal Office	<u>6,355,698</u>	-	<u>6,355,698^a</u>	-	-
	<u>350,459</u>	<u>350,459</u>	-	-	-
All other projects:					
All-American Canal System	-2,559,262	319,907	121,491	-3,000,390	-270
Colorado River Front Work and Levee System	2,764,870	37,121	2,688,019 ^b	40,920	-1,190
Gila	175,388	-128,195	-109,121	421,272	-8,568
Palo Verde Diversion	237,417	-	231,327	6,769	-679
Parker-Davis	5,100,843	2,041,262	591,644	2,485,198 ^c	-17,261
Salt River	1,273,324	-	389,008	884,316	-
Yuma	-2,207,855	4,306	-2,211,701 ^b	-439	-21
Yuma Auxiliary	-41,898	-	-43,896	2,028	-30
Yuma Projects Operation and Maintenance	<u>-536,712</u>	-	<u>-596,674</u>	<u>59,962</u>	-
	<u>4,206,115</u>	<u>2,274,401</u>	<u>1,060,097</u>	<u>899,636</u>	<u>-28,019</u>
Total	<u>\$4,556,574</u>	<u>\$2,624,860</u>	<u>\$1,060,097</u>	<u>\$ 899,636</u>	<u>-\$28,019</u>

(-) Net transfers to other projects.

^aRepresents the investment in Boulder City transferred to the accounts of the Boulder City Municipal Office.

^bIncludes the transfer of costs and credits (\$2,793,532) relating to flood control plant pursuant to the act of September 2, 1950 (64 Stat. 576).

^cConsists of (1) certain Basic Magnesium Plant facilities (\$1,431,656) transferred from General Services Administration (War Assets Administration) pursuant to the Interior Department Appropriation Act, 1949 (62 Stat. 1112), (2) construction and maintenance of a bridge on Davis Dam and approach roads (\$872,395) by Public Roads Administration under terms of an agreement dated January 28, 1948, (3) construction of a school at Parker Dam (\$51,115) from Housing and Home Finance Agency funds, and (4) other transfers of cost and property (net) (\$130,031).

8. Interest on the Federal investment

Interest totaling \$99,345,009 on the Federal investment consists of interest on advances to the Colorado River Dam Fund in the amount of \$76,701,012 and interest accrued on investment in Parker-Davis Project power facilities in the amount of \$22,643,997.

Interest on advances to the Colorado River Dam Fund consists of interest during construction (\$8,339,306) and accrued interest on the power investment (\$68,361,706). Interest on replacement allowances is charged to expense.

The interest on advances to the Colorado River Dam Fund, including interest during construction, is recorded at the rate of 3 percent per year, compounded annually, in accordance with the repayment provisions of the Boulder Canyon Project Adjustment Act. The accrued interest on power investment of \$68,361,706 is the adjusted amount after deduction of \$455,433 for accumulated interest on investments and expenditures determined to be nonproject.

Interest accrued on the investment in Parker-Davis Project power facilities in the amount of \$22,643,997 consists of interest on commercial electric plant in the amount of \$23,850,412 less \$1,206,415 for interest on the replacement allowance.

Interest at the administratively set rate of 3 percent per year has been computed on the investment in commercial electric plant from the dates on which units were placed in revenue-producing service. However, interest during construction has not been recorded for the Parker-Davis Project.

Interest at the rate of 3 percent a year has been added by the Bureau to the yearend replacement allowance balances at the Parker-Davis Project on the theory that the replacement annuity factor takes into consideration that amounts credited to the allowance earn interest during the repayment period.

9. Funds returned to the United States Treasury

Funds returned to the United States Treasury are summarized as follows:

Project	Total	Reclamation Fund		Colorado River Dam Fund	Other funds
		Power revenues	Other		
Cumulative to June 30, 1959:					
Boulder Canyon Project	\$105,034,591	\$ -	\$ -	\$105,034,591	\$ -
All other projects:					
All-American Canal System	4,166,449	-	213,538	3,952,000	911
Colorado River Front Work and Levee System	42,981	-	40,580	-	2,401
Gila	3,384,617	-	3,381,260	-	3,357
Palo Verde Diversion	77,464	-	77,464	-	-
Parker-Davis	74,454,083	71,843,659	2,572,650	-	37,774
Salt River	19,821,788	1,732,513	18,088,765	-	510
Yuma	14,940,103	1,116,777	13,822,645	-	681
Yuma Auxiliary	2,889,982	-	2,889,982	-	-
Yuma Projects Operation and Maintenance	1,516,593	45,401	1,471,150	-	42
	<u>121,294,060</u>	<u>74,738,350</u>	<u>42,558,034</u>	<u>3,952,000</u>	<u>45,676</u>
Total	<u>\$226,328,651</u>	<u>\$74,738,350</u>	<u>\$42,558,034</u>	<u>\$108,986,591</u>	<u>\$45,676</u>
Fiscal year ended June 30, 1959:					
Boulder Canyon Project	\$ 5,400,000	\$ -	\$ -	\$ 5,400,000	\$ -
All other projects:					
All-American Canal System	218,144	-	18,144	200,000	-
Colorado River Front Work and Levee System	6,206	-	6,206	-	-
Gila	160,340	-	160,340	-	-
Palo Verde Diversion	33,513	-	33,513	-	-
Parker-Davis	6,996,433	6,965,624	30,809	-	-
Salt River	538,164	-	538,164	-	-
Yuma	23,462	13,356	10,106	-	-
Yuma Auxiliary	47,854	-	47,854	-	-
Yuma Projects Operation and Maintenance	150,815	14,570	136,245	-	-
	<u>8,174,931</u>	<u>6,993,550</u>	<u>981,381</u>	<u>200,000</u>	<u>-</u>
Total	<u>\$ 13,574,931</u>	<u>\$ 6,993,550</u>	<u>\$ 981,381</u>	<u>\$ 5,600,000</u>	<u>\$ -</u>

Collections credited to the Reclamation Fund, other than power revenues, consist principally of repayments of construction and operation and maintenance costs and of water rentals. Collections credited to the Colorado River Dam Fund represent the repayments of advances by the Treasury, including interest.

10. Costs charged off under acts of the Congress

Costs charged off under acts of the Congress are comprised of:

	Fiscal year <u>1959</u>	Cumulative to June 30, <u>1959</u>
Boulder Canyon Project:		
Construction and operation and maintenance costs of Boulder City, Nevada, determined to be nonproject investments and expenditures (note a)	\$102,931	\$ 3,353,253
Other	<u>458</u>	<u>1,721</u>
	<u>103,389</u>	<u>3,354,974</u>
Other projects:		
Gila Project (note b):		
Acreage eliminated by act of July 30, 1947 (61 Stat. 628)	-2,925	1,902,556
Dust control	-	1,058,820
Predevelopment costs not covered by repayment contracts	-575	1,127,954
Other costs of the Yuma Mesa Division not otherwise assumed by contracting entities	2,677	1,937,203
Yuma Project (note c):		
Construction costs in excess of the repayment obligation	-	383,738
Yuma Auxiliary Project (note d):		
Costs relating to lands severed from the project	<u>-</u>	<u>1,022,383</u>
	<u>-823</u>	<u>7,432,654</u>
Total	<u>\$102,566</u>	<u>\$10,787,628</u>

^aThe Interior Department Appropriation Act, 1949 (62 Stat. 1130), authorized the Bureau to determine the cost of investment in nonproject items as well as the expenditures in connection with these investments at the Boulder Canyon Project and to apply these costs as a reduction of the long-term obligation based on advances and readvances to the Colorado River Dam Fund. (See p. 17.) As of May 31, 1959, the nonproject investments and expenditures were determined by the Bureau as follows:

Nonproject investments	\$2,194,139
Interest adjustments	<u>94,711</u>
	<u>2,288,850</u>
Nonproject operation and maintenance:	
Nonproject revenues	4,059,312
Nonproject expenses	<u>-2,939,680</u>
	<u>1,119,632</u>
Total nonproject investments and expenditures	<u>\$3,408,482</u>

The financial records of the Boulder Canyon Project as of June 30, 1959, included nonproject investments and expenditures in the amount of \$3,353,253. The balance of \$55,229 representing the net change in operating year 1959 had not been recorded as of June 30, 1959.

^bWrite-off authorized by the act of January 28, 1956 (70 Stat. 5).

^cWrite-off authorized by the act of September 2, 1950 (64 Stat. 576).

^dWrite-off authorized by the act of June 13, 1949 (63 Stat. 172).

11. Matured installments of fixed obligations

Through long-term contracts, water users and water users' organizations have contracted to repay a large part of the Government's investment in irrigation and municipal water supply facilities. The status of these contracts is as follows:

<u>Project</u>	<u>Total</u>	<u>Unmatured</u>	<u>Matured</u>
All-American Canal System	\$ 52,444,206	\$ 50,674,253	\$ 1,769,953
Gila	48,116,167	48,041,945	74,222
Palo Verde Diversion	1,175,000	1,139,750	35,250
Salt River	26,058,182	11,366,918	14,691,264
Yuma	5,354,258	123,560	5,230,698
Yuma Auxiliary	<u>1,511,955</u>	<u>899,100</u>	<u>612,855</u>
Total	<u>\$134,659,768^a</u>	<u>\$112,245,526</u>	<u>\$22,414,242</u>

^aIncludes \$126,318,328 and \$449,014 construction and rehabilitation costs for irrigation and municipal water supply, respectively, and \$3,864,586 in excess of costs currently allocated for repayment. Also includes funded operation and maintenance expenses, property transferred to districts, and other expenses amounting to \$3,207,614 and interest and penalties amounting to \$820,226.

12. Repayments realized from other sources

The repayments realized from other sources consist of contributions, net power revenues, and miscellaneous receipts that have been considered as reductions in repayable construction costs in determining amounts of repayment contracts, as follows:

<u>Project</u>	<u>Contributions</u>	<u>Power revenues</u>	<u>Miscellaneous receipts</u>	<u>Total</u>
All-American Canal System	\$ 20,000	\$ -	\$ -	\$ 20,000
Gila	86,585	-	-	86,585
Salt River	-	998,411	1,313,686 ^a	2,312,097
Yuma	26,359	190,270	238,380	455,009
Yuma Auxiliary	<u>1,821</u>	<u>-</u>	<u>-</u>	<u>1,821</u>
Total	<u>\$134,765</u>	<u>\$1,188,681</u>	<u>\$1,552,066</u>	<u>\$2,875,512</u>

^aIncludes advance payments of \$1,193,379.

13. Advance collections and other deferred credits

Advance collections and other deferred credits are summarized as follows:

Boulder Canyon Project:	
Collections in advance on power charges	\$1,725,748
Other advance collections and deferred credits	<u>699,691</u>
	<u>2,425,439</u>
All other projects:	
Collections in advance on maturing installments for repayment of construction charges	1,068,829
Other advance collections and deferred credits	<u>4,250,221</u>
	<u>5,319,050</u>
Total	<u>\$7,744,489</u>

Under the General Regulations issued by the Secretary of the Interior in 1941, power allottees at the Hoover Dam could prepay future obligations for amortization and replacement of the investment in generating machinery. The advances for the allottees' obligations would be amortized as they become due, and interest would be credited for unamortized advances. The cities of Los Angeles, Glendale, and Pasadena, California, have prepaid the obligations for the repayment period of 50 years, and these prepayments were used by the project to repay advances for construction by the United States Government. The transactions relating to the advances are summarized as follows:

<u>Allottee</u>	<u>Original advance</u>	<u>Interest credited at 3 percent</u>	<u>Amortization of obligation</u>	<u>Balance June 30, 1959</u>
City of Los Angeles	\$8,506,302	\$2,189,725	\$ 9,635,218	\$1,060,809
City of Glendale	500,000	283,839	466,949	316,890
City of Pasadena	<u>490,000</u>	<u>261,504</u>	<u>403,455</u>	<u>348,049</u>
Total	<u>\$9,496,302</u>	<u>\$2,735,068</u>	<u>\$10,505,622</u>	<u>\$1,725,748</u>

Advance collections were used to retire advances by the United States Government drawing 3 percent interest, and the amortization of the advances takes the place of revenues that would be received and would be used to retire the Government's investment.

Advance billings and receipts and other deferred items, as well as amounts for which additional information is required to effect final disposition, are included in the other advance collections and deferred credits.

14. Replacements within the repayment period

The allowances for replacement apply only to power plant in service as follows:

Boulder Canyon Project	<u>\$13,931,480</u>
All other projects:	
Parker-Davis Project	6,652,540
Yuma Operation and Maintenance activities	<u>37,291</u>
	<u>6,689,831</u>
Total	<u>\$20,621,311</u>

The provisions for replacement are designed to provide for the amounts that will be written off from plant-in-service accounts as a result of the replacements during the repayment period.

15. Contributions in aid of project development and construction

Contributions in cash, property, or services for project development and construction are received from States, municipalities, associations, and individuals. The principal contributions received by the Bureau were as follows:

<u>Contributor</u>	<u>Total</u>	<u>Boulder Canyon Project</u>	<u>All other projects</u>
Metropolitan Water District of Southern California, for construction of Parker Dam and Reservoir	\$13,060,785	\$ -	\$13,060,785
United Mexican States, for construction of levees and water works in connection with the Colorado River Front Work and Levee System	630,665	-	630,665
Southern California Edison Company, for construction and modification of electrical plant at Boulder Canyon Project	<u>277,004</u>	<u>277,004</u>	<u>-</u>
	13,968,454	277,004	13,691,450
Others, for investigations, planning of project works, or construction	<u>175,910</u>	<u>1,235</u>	<u>174,675</u>
	<u>\$14,144,364</u>	<u>\$278,239</u>	<u>\$13,866,125</u>

16. Credits to operations of Parker-Davis Project

The credit to power operations of the Parker-Davis Project, amounting to \$123,578 for fiscal year 1959, represents the share of power plant operation and maintenance costs allocated to the

Metropolitan Water District of Southern California. Costs are allocated between the district and the United States in accordance with provisions of a contract dated April 7, 1939, as amended, for the construction and operation of the power plant.

APPENDIX

