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NINTH ANNUAL REPORT

OF THE

**UPPER COLORADO
RIVER COMMISSION**

TO THE

PRESIDENT

OF THE UNITED STATES

AND THE

GOVERNORS

**OF THE UPPER COLORADO
RIVER BASIN STATES**



FOR THE PERIOD

APRIL 8, 1957 to MARCH 1, 1958

NINTH ANNUAL REPORT
OF THE
UPPER COLORADO
RIVER COMMISSION
TO THE
PRESIDENT
OF THE UNITED STATES
AND THE
GOVERNORS
OF THE UPPER COLORADO
RIVER BASIN STATES



FOR THE PERIOD
APRIL 8, 1957 to MARCH 1, 1958

IVAL V. GOSLIN
ENGINEER - SECRETARY

UPPER COLORADO RIVER BASIN

COLORADO RIVER STORAGE PROJECT AND PARTICIPATING PROJECTS

UPPER COLORADO RIVER COMMISSION

Public Law 485, 84th Congress



UPPER COLORADO RIVER COMMISSION
748 North Avenue
Grand Junction, Colorado

March 25, 1958

Mr. President:

The Ninth Annual Report of the Upper Colorado River Commission, as required by Article VIII(d) (13) of the Upper Colorado River Basin Compact, is enclosed.

The budget of the Commission is attached as Appendix A.

Respectfully yours,

|s| Ival V. Goslin

Ival V. Goslin
Engineer-Secretary

The President
The White House
Washington 25, D. C.

Enclosure

d

UPPER COLORADO RIVER COMMISSION
748 North Avenue
Grand Junction, Colorado

March 25, 1958

Dear Governor McFarland:

In accordance with Article VIII(d) (13) of the Upper Colorado River Basin Compact, we are pleased to submit the Ninth Annual Report of the Upper Colorado River Commission.

The budget of the Commission is attached as Appendix A.

Sincerely yours,

|s| Ival V. Goslin

Ival V. Goslin
Engineer-Secretary

Honorable Ernest W. McFarland
Governor, State of Arizona
Capitol Building
Phoenix, Arizona

Enclosure

d

UPPER COLORADO RIVER COMMISSION
748 North Avenue
Grand Junction, Colorado

March 25, 1958

Dear Governor McNichols:

In accordance with Article VIII(d) (13) of the Upper Colorado River Basin Compact, we are pleased to submit the Ninth Annual Report of the Upper Colorado River Commission.

The budget of the Commission is attached as Appendix A.

Sincerely yours,

|s| Ival V. Goslin

Ival V. Goslin
Engineer-Secretary

Honorable Stephen L. R. McNichols
Governor, State of Colorado
Capitol Building
Denver, Colorado

Enclosure

d

UPPER COLORADO RIVER COMMISSION
748 North Avenue
Grand Junction, Colorado

March 25, 1958

Dear Governor Mechem:

In accordance with Article VIII(d) (13) of the Upper Colorado River Basin Compact, we are pleased to submit the Ninth Annual Report of the Upper Colorado River Commission.

The budget of the Commission is attached as Appendix A.

Sincerely yours,

|s| Ival V. Goslin

Ival V. Goslin
Engineer-Secretary

Honorable Edwin L. Mechem
Governor, State of New Mexico
Capitol Building
Santa Fe, New Mexico

Enclosure

d

UPPER COLORADO RIVER COMMISSION
748 North Avenue
Grand Junction, Colorado

March 25, 1958

Dear Governor Clyde:

In accordance with Article VIII(d) (13) of the Upper Colorado River Basin Compact, we are pleased to submit the Ninth Annual Report of the Upper Colorado River Commission.

The budget of the Commission is attached as Appendix A.

Sincerely yours,

|s| Ival V. Goslin

Ival V. Goslin
Engineer-Secretary

Honorable George D. Clyde
Governor, State of Utah
Capitol Building
Salt Lake City, Utah

Enclosure

d

UPPER COLORADO RIVER COMMISSION
748 North Avenue
Grand Junction, Colorado

March 25, 1958

Dear Governor Simpson:

In accordance with Article VIII(d) (13) of the Upper Colorado River Basin Compact, we are pleased to submit the Ninth Annual Report of the Upper Colorado River Commission.

The budget of the Commission is attached as Appendix A.

Sincerely yours,

|s| Ival V. Goslin

Ival V. Goslin
Engineer-Secretary

Honorable Milward L. Simpson
Governor, State of Wyoming
Capitol Building
Cheyenne, Wyoming

Enclosure

d

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NINTH ANNUAL REPORT
UPPER COLORADO RIVER COMMISSION
March 1, 1958

I. INTRODUCTION - SUMMARY

This Annual Report covers the activities of the Commission for the preceding year. It includes, among other things, the following:

Membership of the Commission, its Committees, Advisers, and staff;

Roster of meetings of the Commission;

Brief discussion of the activities of the Commission;

Brief description of the Storage Units and participating projects and of the status of their construction or investigations;

Appendices containing:

Fiscal data, such as: budget, balance sheet, statements of revenue and expense, etc.;

List of construction contract awards for Units of the Colorado River Storage Project;

First Annual Report of Secretary of the Interior on financial status of Colorado River Storage Project and participating projects;

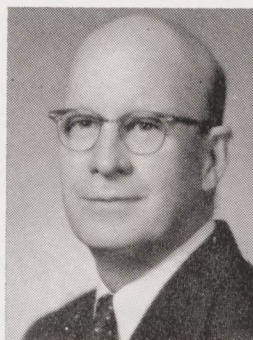
List of gaging stations used by the Commission and transmountain diversions from the Upper Colorado River Basin.

For information pertaining to the activities of the Upper Colorado River Commission prior to March 6, 1957, the reader is referred to the Commission's Eighth Annual Report of March 7, 1957. In order that a more nearly recent account of the Commission's activities may be gained, this report includes the period to March 1, 1958.

II. COMMISSION



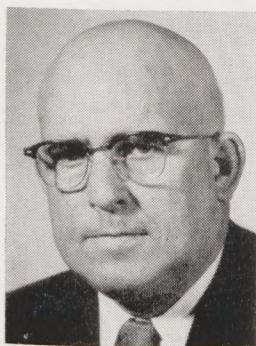
Edwin C. Johnson
Commissioner for
Colorado



John H. Bliss
Commissioner for
New Mexico



Robert J. Newell
Chairman
Commissioner for
United States



George D. Clyde
Vice-Chairman
Commissioner for
Utah



Paul A. Rechard
Commissioner for
Wyoming

III. COMMITTEES

The Committees of the Commission convened when required during the year.

Committees and their membership, at the time of writing this report, are as follows (the Chairman and the Secretary are ex-officio members of all committees, Article V(4) of By-Laws):

STANDING COMMITTEES

Engineering Committee

| | |
|-----------------------|------------------|
| J. R. Riter, Chairman | David P. Hale |
| John H. Bliss | H. T. Person |
| Royce J. Tipton | Paul A. Rechard |
| Frank C. Merriell | Earl Lloyd |
| Ivan C. Crawford | G. B. Keesee |
| Jay R. Bingham | Wayne D. Criddle |
| Stephen E. Reynolds | |

Legal Committee

| | |
|--------------------------------|------------------|
| E. R. Callister, Jr., Chairman | Felix L. Sparks |
| J. Stuart McMaster | Laurence Davis |
| Irwin S. Moise | Thomas O. Miller |
| (Alt., Claud Mann) | |

Budget Committee

| | |
|-------------------------|------------------|
| John H. Bliss, Chairman | J. R. Riter |
| Ivan C. Crawford | Norman W. Barlow |
| | Jay R. Bingham |

SPECIAL COMMITTEES

Finance Committee

| | |
|----------------------------|------------------|
| Norman W. Barlow, Chairman | Wayne D. Criddle |
| I. J. Coury | Dan Hunter |

Education and Information Committee

| | |
|----------------------------|-----------------|
| Edwin C. Johnson, Chairman | Paul A. Rechard |
| John H. Bliss | Jay R. Bingham |

IV. ADVISERS TO COMMISSIONERS

The following individuals contributed greatly of their time and efforts as advisers to their respective Commissioners:

UNITED STATES OF AMERICA

Legal

J. Stuart McMaster, Field Solicitor
U. S. Department of the Interior
Salt Lake City, Utah

Laurence Davis, Assistant General Counsel
The Navajo Tribe
Window Rock, Arizona

James D. Geissinger, Regional Solicitor
U. S. Department of the Interior
Denver, Colorado

Engineering

J. R. Riter, Chief Development Engineer
Bureau of Reclamation
Denver, Colorado

G. B. Keesee, Area Irrigation Engineer
Bureau of Indian Affairs
Gallup, New Mexico

COLORADO

Legal

Felix L. Sparks, Legal Counsel
Colorado Water Conservation Board
Delta, Colorado

Engineering

Royce J. Tipton, Consultant
Colorado Water Conservation Board
Denver, Colorado

Ivan C. Crawford, Director
Colorado Water Conservation Board
Denver, Colorado

Frank C. Merriell, Consulting Engineer
Grand Junction, Colorado

NEW MEXICO

Legal

Irwin S. Moise, Attorney-at-Law
Albuquerque, New Mexico

Claud S. Mann
Special Assistant Attorney General
Albuquerque, New Mexico

Engineering

Stephen E. Reynolds, State Engineer
Santa Fe, New Mexico

David P. Hale, Engineer
New Mexico Interstate Stream Commission
Santa Fe, New Mexico

UTAH

Legal

E. R. Callister, Jr., Attorney General
Salt Lake City, Utah

Engineering

Jay R. Bingham, Director
Utah Water and Power Board
Salt Lake City, Utah

Wayne D. Criddle, State Engineer
Salt Lake City, Utah

WYOMING

Legal

Thomas O. Miller, Attorney General
Cheyenne, Wyoming

Howard Black, Deputy Attorney General
Cheyenne, Wyoming

Engineering

Earl Lloyd, Deputy State Engineer
Cheyenne, Wyoming

H. T. Person, Dean of School of Engineering
University of Wyoming
Laramie, Wyoming

Alternates in absence of Commissioner

Joe L. Budd
Big Piney, Wyoming

Norman W. Barlow
Cora, Wyoming



V. STAFF

Members of the staff of the Upper Colorado River Commission, at the time of compiling this report, are:

Ival V. Goslin, Engineer-Secretary

Mrs. Dixie S. Duncan, Administrative Assistant, February 4, 1957-January 31, 1958

Mrs. Dorothy Dye, Administrative Assistant, February 1, 1958

Barney L. Whatley, Treasurer

Richard T. Counley, Assistant Treasurer

Mrs. Lois P. Crowder, Official Reporter



VI. MEETINGS OF THE COMMISSION

During the period March 7, 1957 to March 1, 1958, the Commission met five times as follows:

| | | |
|----------------|--------------------|--|
| Meeting No. 52 | March 18, 1957 | Regular Meeting Boise, Idaho |
| Meeting No. 53 | April 23, 1957 | Adjourned Regular Meeting Denver, Colorado |
| Meeting No. 54 | September 16, 1957 | Annual Meeting Boise, Idaho |
| Meeting No. 55 | September 25, 1957 | Adjourned Annual Meeting Santa Fe, New Mexico |
| Meeting No. 56 | December 20, 1957 | Special Meeting Cheyenne, Wyoming |



VII. ACTIVITIES OF THE COMMISSION

Within the scope and limitations of Article I (a) of the Upper Colorado River Basin Compact "... to secure the expeditious agricultural and industrial development of the Upper Basin, the storage of water ..." and under the powers conferred upon the Commission by Article VIII(d) pertaining to making studies of water supplies of the Colorado River and its tributaries and the power to "... do all things necessary, proper or convenient in the performance of its duties . . . , either independently or in cooperation with any state or federal agency," the principal activities of the Commission have consisted of: (A) an education and information program designed to aid in securing appropriations of funds by the U. S. Congress for the construction of the Colorado River Storage Project and participating projects that have been authorized for construction (P. L. 485, 84th Congress); and, (B) a modified program of hydrologic research on methods for applying the Inflow-Outflow Theory of measuring stream depletions in the Upper Colorado River Basin.

A. EDUCATION - INFORMATION

The Upper Colorado River Commission has directed its efforts toward promoting interstate cooperation, harmony, and united efforts; developing an understanding in other sections of the United States of the problems of the Upper Colorado River Basin; and the creation of a favorable attitude on the part of Congress toward the development of the industrial and agricultural resources of the Upper Colorado River Basin.

The Commission has continued to cooperate with members of the Congressional delegations from the Upper Colorado River Basin States and with officials of the Department of the Interior and the Bureau of Reclamation in seeking appropriations of funds by the Congress for the construction of the Storage Units and participating projects authorized for construction in Public Law 485, as well as funds for the investigations of additional participating projects that are given priority in planning in the authorizing Act. As part of this cooperation the Commission's Engineer-Secretary has been stationed in Washington, D. C., at intermittent periods acting as liaison between the Congress and States and various departments of government, supplying information, arranging and taking part in Congressional hearings, and providing other assistance requested.

The brochure and pamphlet entitled "The Colorado River Storage Project" have been revised to reflect changes to be made in the construction of proposed projects as the result of additional investigations and planning. Both of these publications are based upon the authorizing Act, P. L. 485. They illustrate and explain the major features in the initial phase of the Upper Colorado River Basin development.

The Commission's Relief Model of the Upper Colorado River Basin and adjacent areas has been displayed in the State Capitol of Wyoming in Cheyenne and in the State Office Building in Denver.

The Commissioners of our respective states and our staff have continued to actively urge the Department of the Interior and the Bureau of Reclamation to proceed with investigations of additional participating irrigation projects and with the completion of definite plan reports for certification by the Secretary of the Interior of the Curecanti Storage Unit on the Gunnison River in western Colorado.

The Upper Colorado River Commission is continuing the policy of cooperation with water organizations in all parts of the nation that have similar or mutual problems related to the orderly and progressive development of natural resources.

A new Special Committee on Education and Information has been created for the purpose of studying and recommending activities of the Commission in the categories indicated by this committee's name. For membership of this committee see page 3.

During the past year the organization known as the Upper Colorado River Grass Roots, Inc., was dissolved. Upon dissolution its officers presented its remaining assets, including \$12,607.92, to the Commission to be used to promote the development of the Upper Colorado River Basin.

Acknowledgments

The Commission especially wishes to recognize the difficult and able work of Members of the U. S. Congress, and the efforts and cooperation of the Governors of Colorado, New Mexico, Utah and Wyoming who have contributed so much to the development of the water and land resources of the Upper Basin of the Colorado River.

The Commission acknowledges with appreciation the assistance it has received from agencies of the Executive Branch of the Federal Government, the Department of the Interior, the Bureau of Reclamation, the Office of Indian Affairs, the U. S. Geological Survey, and the Department of Agriculture.

B. ENGINEERING - HYDROLOGY

Due to the pressure of other business and the lack of personnel the engineering-hydrological phases of the Commission's program have remained at a reduced level. Some technical studies were made by one engineer on a part-time schedule. No new formal engineering reports have been submitted to the Commission. Several inter-office progress reports on special problems were transmitted to the Engineer-Secretary.

The Commission is continuing the collection, assembling, and analyzing of hydrographic records pertaining to the Colorado River Basin.

Numerous project reports on proposed water-development projects compiled by various Federal agencies have been studied and analyzed.

Evaporation Stations

The Commission has approved the location of evaporation stations, now installed and in operation, for the purposes of studying pre-reservoir conditions and evaporation losses at:

Page, Arizona; Mexican Hat, Utah; Hite, Utah; Moab, Utah; and Greenriver, Utah, for Glen Canyon Reservoir;

Farmington, New Mexico, and Arboles, Colorado, for Navajo Reservoir;

Green River, Wyoming; Manila, Utah; and Flaming Gorge, Utah, for Flaming Gorge Reservoir.

Locations for evaporation stations have not been finally selected for the Curecanti Storage Unit. It has been recommended that consideration be given to the establishment of stations at Gunnison, Colorado, or Cimarron, Colorado. It is recognized that determination of precise locations for evaporation recording equipment may need to be deferred until decision has been made regarding the locations of the dams of the Curecanti Storage Unit.

The Commission has further recommended that the existing evaporation station at Farson, Wyoming, be reviewed to assure that consistent records will be secured; that a station should be re-established at Vernal, Utah; and that studies should be made of the possibilities of locating additional evaporation recording stations in the vicinity of Lyman, Wyoming; Emery County, Utah; and Paonia, Colorado, for the purpose of studying pre-project conditions and evaporation losses from the three participating projects involved.

Stream Gaging Stations

Considerable attention is being given by the Commission to the problem of stream gaging stations that would be inundated by authorized reservoirs of the Storage Units and participating projects and the possible need for additional stations for the operation of the Storage Project. The Flaming Gorge Reservoir, when full, would inundate the gaging stations at Henrys Fork at Linwood, Utah, Blacks Fork near Green River, Wyoming, and Green River near Greendale, Utah. The stations on Henrys Fork and Blacks Fork will be moved upstream in order to locate them above the high water line of the reservoir. As soon as construction has proceeded at Flaming Gorge damsite to permit access to the reservoir, the Green River near Greendale, Utah, station will be moved downstream below the damsite. The gaging station at Green River, Wyoming, is expected to remain in operation, being located above the high water line of the Flaming Gorge Reservoir.

The selection of the locations of some gaging stations for operating purposes at the Curecanti Storage Unit will have to be deferred until it has been determined where the dams to be included in this Unit will be located. Consideration is being given to the possibility of constructing a gaging station on the Gunnison River close to the high water line of the upper reservoir site. Existing gaging stations on Tomichi Creek at Gunnison, Colorado, and on the Gunnison River near Gunnison, Colorado, will continue to be operated at their present locations. It has been agreed that

stations on the Gunnison River at the head of the Gunnison tunnel and on the diversions through the Gunnison tunnel should continue to be operated.

The gaging station on the San Juan River at Rosa, New Mexico, will need to be moved upstream to a location above the high water line of the Navajo Reservoir. A station will need to be established on the Piedra River and existing stations on Spring Creek at LaBoca, Colorado, and on the Pine River at LaBoca, Colorado, may need to be relocated. The problem of whether the gaging station on the San Juan River near Archuleta, New Mexico, will need to be moved to a location closer to the Navajo Dam because of inflows from large tributary washes in the area is to be further investigated.

The Glen Canyon Reservoir will flood the station at Hite, Utah, on the Colorado River. Studies will be made of the relationships of stream flow at the Hite station with those of the stations on the Colorado River near Cisco, Utah, and the Green River at Greenriver, Utah, before final decision is made regarding the necessity for a new gaging station to replace the one at Hite, Utah. Analyses will be made of the relationship between the combined discharges of the Green River at Greenriver, Utah, the Colorado River near Cisco, Utah, and the San Juan River near Bluff, Utah, with the discharge of the Colorado River at Lee Ferry. Previous studies will be submitted by considering also the discharge records for the San Rafael River, the Fremont River and the Escalante River. The primary purpose of these studies will be to establish the relationship between the inflow stations and the outflow station at Lee Ferry for pre-reservoir conditions.

Forecasts of Stream Flow

Forecasts of water supply have not been made by the Engineering Department, nor have any findings of fact pertaining to water deliveries or stream depletions been made. Forecasts of stream flow made by various other agencies are to be found in the files of the Commission.

VIII. Colorado River Storage Project and Participating Projects

A. Appropriations of Funds

The President's budget message to the First Session of the 85th Congress on January 16, 1957 recommended an appropriation of \$25,142,000 to the Upper Colorado River Basin Fund for the 1958 fiscal year for construction and advanced planning of the Colorado River Storage Project and participating projects. This sum was subsequently appropriated by the Congress and earmarked as follows:

| | |
|-----------------------------|--------------|
| Glen Canyon Storage Unit | \$17,300,000 |
| Flaming Gorge Storage Unit | 4,800,000 |
| Navajo Storage Unit | 1,800,000 |
| Advanced Planning | 1,142,000 |
| Transmission lines division | 100,000 |
| | <hr/> |
| | \$25,142,000 |

With the unused carry-over funds from 1957 there was a total of \$27,540,858 available for activities in the 1958 fiscal year. The Bureau of the Budget did not recommend, and the Congress did not appropriate, monies for the initiation of construction of any participating projects in fiscal 1958, in spite of the pleas of project sponsors and testimony of witnesses before Appropriations Committees that the Paonia Project in Colorado and the Vernal Unit of the Central Utah Project had complied with all preparatory requirements and were ready for construction.

It was determined early in the 1958 fiscal year that the prime contractor constructing Glen Canyon Dam would be able to maintain an economic rate of construction and earn about \$10 million more than the appropriated amount. For this reason the Second Session of the 85th Congress has been asked to make a supplemental appropriation for the 1958 fiscal year of \$10 million for construction at Glen Canyon Dam and Reservoir.



Glen Canyon Dam as it will appear when completed

Glen Canyon Dam as it will appear when completed.

The President's budget message on January 13, 1958 to the Second Session of the 85th Congress recommended an appropriation to the Upper Colorado River Basin Fund of \$38,425,000. Of this sum, \$35,000,000 are designated for Glen Canyon Dam; \$2,500,000 for Flaming Gorge Dam; \$205,000 for transmission lines; and \$720,000 for advanced planning. There was no recommendation for construction funds for Navajo Dam. There was a proposal in the budget request that \$1,500,000 of the unobligated funds appropriated for fiscal 1958 for the Navajo Storage Unit be transferred to the Flaming Gorge Unit.

As in the previous year, there was no recommendation by the Bureau of the Budget for funds for initiating construction of the Paonia Project in Colorado and the Vernal Unit of the Central Utah Project in Utah during fiscal year 1959. The people of the Upper Colorado River Basin continue to hope that Congress will remedy this situation this year by providing funds in order that construction of irrigation facilities can proceed as expeditiously as possible.

Appendix C of this report consists of a tabulation of construction contract awards made by the U. S. Bureau of Reclamation for Units of the Colorado River Storage Project, and a list of construction contracts scheduled for bidding during the period February-June, 1958.

B. Fiscal Data

Section 6 of the Act authorizing the construction and operation of the Colorado River Storage Project and participating projects (Acts of April 11, 1956, 70 Stat. 105) stipulates that on January 1 of each year the Secretary of the Interior shall report to the Congress for the previous fiscal year upon the status of the revenues from, and the cost of constructing, operating, and maintaining the Colorado River Storage Project and participating projects. Appendix D of this report consists of the FIRST ANNUAL REPORT, COLORADO RIVER STORAGE PROJECT AND PARTICIPATING PROJECTS of the Secretary of the Interior to the Congress of the United States.

C. Authorized Storage Units

(Information relative to Storage Units and participating projects has been obtained from reports on investigations and activities of the U. S. Bureau of Reclamation, Department of the Interior.)

Of major importance to the Upper Colorado River Basin States is the fact that the construction of four Storage Units of the Colorado River Storage Project and the eleven participating projects was authorized in Section 1 of Public Law 485. The four authorized Storage Units are Glen Canyon, Flaming Gorge, Navajo and Curecanti. Combined they will provide about 34,670,000 acre-feet of reservoir capacity, and about 1,167,000 kilowatts of installed generating capacity.

1. Glen Canyon Unit

The Glen Canyon Dam and Reservoir will comprise the key Storage Unit and will be the largest of the initial four. It will provide about 80% of both the storage and generating capacity and will be roughly comparable in size to Hoover Dam and Lake Mead. The concrete gravity-arch dam located in northern Arizona on the Colorado River, 12.4 miles downstream from the Utah-Arizona state line, and 15.3 miles upstream from Lees Ferry will extend 573 feet above the river. It will be a little lower than Hoover Dam and will be the second highest dam in the United States. The reservoir will have a capacity of 28 million acre-feet and will extend 186 miles upstream on the Colorado River, and 71 miles up the San Juan River. The power house, which will be located at the toe of the dam, will have eight generating units with a total installed capacity of 900,000 kilowatts.

Construction Activities

Construction at Glen Canyon damsite has advanced along several lines during the past year. Highlight of the year was the April 29, 1957 award of the prime contract to Merritt-Chapman and Scott Corporation of New York for \$107,955,122. The prime contractor has established offices, warehouses, trailer housing, dormitories, mess halls, a commissary, a temporary water supply, and is preparing to furnish electricity to the City of Page. The prime contractor has also started the spillway excavation, excavation for the dam, highline erection, and has completed a suspension footbridge across the canyon. Excavation of the left diversion

tunnel and powerplant service road is being carried on under sub-contracts.

During the year the 25-mile Bitter Springs access highway was essentially completed. This highway has been built to the standards of a primary highway with Arizona paying 10% of the cost. The State of Utah has completed 40 miles of a required 57 miles that will help to link the right abutment of the dam with Kanab, Utah. The new 57 miles of highway begins 9 miles east of Kanab at the end of the existing State Highway No. 136 and ends at the Utah-Arizona state line. The remaining 9 miles of road from the Utah-Arizona line was built and oiled by the Bureau of Reclamation as a temporary road. It is expected that the State of Arizona will construct this remaining link to primary standards when the Colorado River Bridge is completed.

Satisfactory progress was made on this bridge during 1957 by the contractor Kiewit-Judson Pacific Murphy Company. The bridge abutments were completed and the skewbacks were nearing completion. Fabrication of the steel for the bridge is in process and it is expected that steel will be shipped to the bridge site and heavy steel rigging begun in March, 1958. Completion is scheduled for February, 1959.

The right diversion tunnel was holed through in November, 1957 and it is expected that final cleanup will be completed early in 1958.

Some \$6 1/3 million in contracts have been awarded for construction of community facilities for Page, Arizona. These contracts include streets, water and sewer distribution systems, sewage treatment plant and a water supply system that will pump water from the Colorado River. A contract was also awarded for the construction of 200 permanent three-bedroom homes to house Government personnel. A portion of the City of Page has been set aside for use by the prime contractor to establish housing or other buildings that will be used during the construction period.

2. Flaming Gorge Unit

The Flaming Gorge Dam and Reservoir will be located on the Green River in northeastern Utah, 40 miles north of Vernal, Utah,

and 32 miles downstream from the Utah-Wyoming state line. The dam will be a concrete thin-arch structure rising 445 feet above the river. The reservoir will have a capacity of 3,930,000 acre-feet and will extend upstream 94 miles, nearly to the town of Green River, Wyoming. The power plant will have an installed generating capacity of 108,000 kilowatts.

Construction Activities

Activity during 1957 has centered on construction of access roads and community facilities.

The temporary access road for the Flaming Gorge community and the damsite connects with a paved highway at Linwood, Utah, which is located about 45 miles south of Green River, Wyoming, the nearest railhead. In January, 1957 a contract for a 7.6-mile section of the access road and a temporary pile bridge over the Green River was awarded to the Wangsgaard Construction Company. This same contractor is now working on an additional 7.8-mile section of the access road, part of which will be permanent highway. The second section is scheduled for completion by June, 1958. A contract to be awarded during 1958 will complete the access road to the left abutment of the dam.

Construction of facilities for the Flaming Gorge community was initiated in July, 1957 with the award of a \$2.6 million contract to the Witt Construction Company of Provo, Utah. This contract includes the building of streets, water, sewage, and electrical distribution systems, sewage disposal plant, and 80 permanent and temporary houses for Government workers. Domestic water will be pumped from the Green River and treated. Other contracts have been awarded for a temporary office, warehouse, and garages. A grade school is being constructed in the townsite area by the Daggett County School Board.

It is planned to award a contract for the diversion tunnel in 1958. However, because of a budgetary limitation on construction funds, award of the prime contract for construction of the dam and power plant will be deferred.

3. Navajo Unit

The Navajo Dam will be located in northwestern New Mexico on the San Juan River, 34 miles east of Farmington, and 3½

miles downstream from the confluence of Los Pinos and San Juan Rivers. The dam will be of rolled earth-fill embankment type. The original plan included a reservoir with a capacity of 1,450,000 acre-feet. More recent studies, however, indicate a reservoir size of 1,700,000 acre-feet with an active capacity of 1,028,000 acre-feet. After a joint study of the optimum capacity of the reservoir by the State of New Mexico and the Bureau of Reclamation, the Interstate Stream Commission of the State recommended that a 1,700,000 acre-foot reservoir be constructed. Sediment accumulation in the reservoir will be heavy and will amount to 330,000 acre-feet over a 100-year period, much of the sediment being deposited in the inactive section of the reservoir. This reservoir will be used to regulate the flows of the San Juan River for the potential Navajo Indian Irrigation Project near Farmington, the San Juan-Chama Project on the eastern side of the mountains, and perhaps for the small authorized Hammond Project. A part of the water made available to the Navajo Irrigation Project also may be used for industrial and municipal purposes. A small amount of flood protection to downstream developments and some recreational facilities will also be provided.

Construction Activities

Construction activities during 1957 was based on a program that would have permitted the award of a prime contract about April, 1958. A \$260,000 contract was awarded on October 24 for construction of streets, utilities, and 15 temporary residences for a temporary Government camp about five miles downstream from the damsite. Preconstruction work has included procurement of design data and exploratory drilling of the damsite and borrow areas.

On January 24, 1958 the State of New Mexico let a contract for the construction of an access road to the proposed Navajo Dam at a cost of \$481,442.85. The Bureau of Reclamation has agreed to spend \$400,000 towards the cost of this road with the State of New Mexico paying the balance.

Budgetary limitations on construction funds for projects in the new-start category, as outlined in the President's budget message to Congress, will now delay the award of a prime contract on Navajo Dam.

4. Curecanti Unit

The Curecanti Storage Unit will be located on the Gunnison River in western Colorado, upstream from the Black Canyon National Monument and downstream from the town of Gunnison. In order to prevent damage to property near the town, the authorizing legislation provides that Curecanti Dam shall be constructed to a height to store not less than 940,000 acre-feet of water, or to create a reservoir of such greater capacity as can be obtained by a high water line located at 7,520 feet above sea level. Construction will not be commenced until further engineering and economic studies have been made and until the Secretary of the Interior has certified to the Congress and the President that the Curecanti Unit is economically justifiable.

Studies show that a favorable plan would include a series of several dams, reservoirs, and power plants along the 35-mile river section. These power plants would have an installed generating capacity of about 159,000 kilowatts and would develop about 939 feet of static power head. The Curecanti Reservoir, the highest upstream of the series, would be formed by Blue Mesa Dam, located 30 miles downstream from Gunnison. This dam, about 350 feet high, would create a reservoir with a capacity of about 940,000 acre-feet at a high water elevation of 7,520 feet. This reservoir would provide seasonal regulation for a power plant at Blue Mesa Dam and for power plants at other dams in the 15-mile reach of river downstream. Detailed planning investigations of the Curecanti Unit should be completed in the near future.

Construction Activities

Investigations of the Curecanti Storage Unit are being conducted from the Upper Colorado River office in Salt Lake City, Utah. One immediate problem is to determine whether a single high dam at Morrow Point, or a lower dam there, in combination with another dam upstream at the Blue Mesa site, should be used to develop the power head above Morrow Point. Cost estimates for alternatives are now being prepared by the Bureau of Reclamation. A special report to meet the requirements for Secretarial Certification under the authorizing Act is to be prepared by January, 1959.

D. Initially Authorized Participating Projects

Of the eleven participating projects authorized by Public Law 485, five are in Colorado, one is in New Mexico, two are in Utah, and three are located in Wyoming. Participating projects are those which will consume water of the Upper Colorado River System for irrigation, municipal, and industrial purposes, and which will participate in the use of revenues in the Basin Fund to help repay the costs of irrigation features beyond the ability of the water users to repay.

It has been impossible for the Bureau of Reclamation to undertake work simultaneously on all eleven participating projects because of the large amount of investigational work needed to firm the development plans and to make cost estimates and repayment studies. Therefore, the Bureau has sought the advice of officials of each State and on their recommendations has selected specific projects on which to concentrate its work in order to get construction underway on three or four of the participating projects as soon as possible.

At the date of this report none of the participating projects or divisions thereof authorized for construction by Public Law 485 are under construction. The President's Budget Request to the 2d Session of the 85th Congress did not contain a recommendation for the appropriation of construction funds for any of the participating irrigation projects; although two, as noted below, have been ready for construction since mid-1957. As a result of the "no new starts" policy initiated by the Bureau of the Budget for fiscal 1959 it is impossible to predict when construction of participating projects will commence.

A brief description of each of the authorized participating projects and the present status of its investigations follow:

1. Authorized Colorado Participating Projects

a. Paonia Project

This project is located near Paonia and Hotchkiss in west-central Colorado on the North Fork of the Gunnison River. The Paonia Reservoir will be constructed to a capacity of 21,000 acre-feet. The Fire Mountain Canal will be completed, enlarged, and

extended to distribute the project water. By these means, the irrigation water supply will be improved for an additional 13,070 acres of irrigated land and a full water supply provided for about 2,230 acres of new land. Fish and wildlife values in the area will be enhanced, and flood damages will be decreased.

The Paonia Project was found to be feasible by the Secretary of the Interior, March 16, 1939. It was recommended for construction (equivalent to authorization) by the President on March 18, 1939. The project was re-authorized by the Act of June 25, 1947 (16 Stat. 181). The continuance of construction was again re-authorized as one of the participating projects of the Colorado River Storage Project Act of April 11, 1956 (70 Stat. 105).

As a result of the re-authorization in 1947 the Congress appropriated \$3,030,000 for construction. About ten years ago the North Fork Water Conservancy District signed a repayment contract under which the Bureau of Reclamation enlarged and extended the Fire Mountain Canal at a cost of approximately \$2 million. The Paonia Dam and Reservoir, which are in the current authorization, would provide the water necessary to supplement the low stream flows that occur each year.

The advanced planning for this project has been completed. The Definite Plan Report (May, 1957) of the Bureau of Reclamation and the Report of the Reappraisal of the Direct Agricultural Benefits and Project Impacts of the Department of Agriculture (April, 1957) have been approved by the respective Department Secretaries and transmitted to the Bureau of the Budget. It has been determined that the present repayment contract with the water users can be amended to include costs of additional project features.

Construction of this project can be resumed as soon as funds are provided by the Congress.

b. Florida Project

The Florida Project is located in southwestern Colorado, southeast of Durango in the Florida River Valley and on Florida Mesa. Its principal features include the construction of Lemon Dam on the Florida River with a reservoir capacity of 23,300 acre-feet, enlargement of the Florida Farmers Ditch, and the construction of a new diversion dam. The laterals will be constructed to

6,300 acres of project lands. Drainage facilities will also be built. Flood control and fish and wildlife values will be improved. The project includes 6,300 acres of new land and 12,650 acres of presently irrigated land needing a supplemental water supply. Investigational work needed for a Definite Plan Report has included the taking of project land topography. Topographic surveys of the Lemon Reservoir site have been taken and about 50% of the project lands have been classified in detail.

Completion of a Definite Plan Report is scheduled for 1959. Construction could begin thereafter as soon as construction monies are appropriated.

c. Smith Fork Project

The Smith Fork Project is located in Delta County, along the Smith Fork of the Gunnison River near Crawford, Colorado. Its principal features will include the construction of Crawford Dam and Reservoir on Iron Creek, capacity 14,000 acre-feet, a diversion from Smith Fork Dam on Smith Fork with head works on a sluiceway, a Smith Fork Feeder Canal 2 3/4 miles from the diversion dam and Crawford Reservoir, and 6.6 miles of canals to project lands. The acreage to be irrigated contains 2,270 acres of new land in the vicinity of Crawford, Colorado, and 8,160 acres of land presently irrigated but needing a supplemental supply of water.

The people of the area have formed a conservancy district for entering into a repayment contract with the Federal Government.

Present scheduling calls for a Definite Plan Report in 1958. Construction could commence as soon thereafter as construction funds are available.

d. Pine River Project Extension

This project involves an extension to be made to the existing Pine River Project in southwestern Colorado and northwestern New Mexico on Pine River about 20 miles east of Durango, Colorado. This extension will provide water from the existing Vallecito Reservoir for the irrigation of about 15,150 acres of irrigable land, of which about 1,940 acres are within the Pine River Indian

Irrigation Project. The project will involve an enlargement and extension of eight major canals and ditches diverting from Pine River, a new diversion dam, and several small distribution laterals. Of the acreage irrigated, 14,520 acres of new land are in Colorado and 630 acres in New Mexico. Completion of the Definite Plan Report is scheduled for 1959.

e. Silt Project

An improved water supply for more than 5,400 acres of partially irrigated land, and a full supply for about 1,900 acres of new land will be provided by construction of the Silt Project between Rifle and Elk Creeks in west-central Colorado. Construction features will include the Rifle Gap Reservoir of 10,000 acre-feet capacity, a pumping plant, diversion dam and feeder canal, rehabilitation of existing works and construction of laterals and drains.

2. Authorized New Mexico Participating Projects

a. Hammond Project

The Hammond Project is located in northwestern New Mexico along the southern bank of the San Juan River and opposite the towns of Blanco, Bloomfield, and Farmington. The project will provide irrigation water for 3,900 acres, of which 3,180 acres are not now irrigated. The remaining 720 acres are now irrigated by pumping water from the San Juan River. The pumps will be abandoned when project water becomes available.

The project works will consist of the Hammond Diversion Dam on the San Juan River, the main gravity canal, a hydraulic-turbine-driven pumping plant, three main laterals, distribution laterals, and a drainage system.

Completion of a Definite Plan Report is now scheduled for some time in 1958. Construction could begin immediately thereafter if Congress authorizes the appropriation of funds.

3. Authorized Utah Participating Projects

a. Emery County Project

The Emery County Project would provide supplemental water for 20,450 acres of land and a full supply for 3,630 acres in Emery County in east-central Utah near the towns of Huntington, Castle Dale, and Orangeville. Principal construction features would include the Joes Valley Dam and Reservoir which would impound 57,000 acre-feet of water on Cottonwood Creek, the Swasey Diversion Dam located ten miles downstream from Joes Valley, and the 17-mile Cottonwood-Huntington Canal heading at the Swasey Diversion Dam. Canals, laterals and drains would be constructed as required.

b. Central Utah Project (Initial Phase)

The Central Utah Project (initial phase) would intercept streams draining the southern slope of the Uinta Mountains in the Colorado River Basin and would convey the water by gravity flow through the Wasatch Mountains to the Bonneville Basin for power generation, irrigation, municipal and industrial use, and other purposes in central Utah. Water conservation for irrigation, municipal use, and other purposes would also be accomplished in Utah's Uinta Basin, a part of the Colorado River Basin. Supplemental water would be furnished for 131,840 acres and a full supply for 28,540 acres not presently irrigated. Municipal and industrial water averaging 48,800 acre-feet annually would be provided, and power averaging 373,000,000 kilowatt-hours annually would be generated at project plants with installed capacities totaling 61,000 kilowatts.

The potential Strawberry Aqueduct would intercept flows of Rock Creek and other Uinta Mountain streams west of Rock Creek and convey the water to the existing Strawberry Reservoir which would be enlarged by the construction of Soldier Creek Dam below the present dam. The reservoir water would be released through an enlargement of the present tunnel to the headwaters of Spanish Fork River in the Bonneville Basin. In descending Spanish Fork Canyon, the water would flow through a series of power plants before being consumptively used in the central Utah area. Through various exchanges and by the construction of the required facilities, the water would be made available to an area extending from Salt Lake City south 75 miles to Nephi.

New project works that would develop water for use in the Uinta Basin would include Hanna Reservoir on the North Fork of Duchesne River, Starvation Reservoir on Strawberry River with a feeder canal from the Duchesne River, Upalco Reservoir offstream from Lake Fork River, Stanaker Reservoir with a feeder canal from Ashley Creek, and Tyzack Reservoir on Brush Creek.

The Vernal Unit of this project has been given a high priority. The advanced planning on the Vernal Unit has been completed. The Definite Plan Report (May, 1957) of the Bureau of Reclamation and the Report of the Reappraisal of the Direct Agricultural Benefits and Project Impacts of the Department of Agriculture (April, 1957) have been approved by the respective Department Secretaries and transmitted to the Bureau of the Budget.

The proper type of conservancy district for executing a repayment contract with the Federal Government has been organized by the people of the area.

Construction of the Vernal Unit could be initiated as soon as funds are provided by the Congress.

4. Authorized Wyoming Participating Projects

a. La Barge Project

The La Barge Project is in the Green River Basin in Lincoln and Sublette Counties. The project lands are situated between South Piney Creek and La Barge Creek along the west side of the Green River in a narrow strip about 30 miles long with an average width of $1\frac{1}{2}$ miles. The irrigation of 7,970 acres of arable dry lands is contemplated.

As presently planned, this project would involve a direct flow diversion from the Green River. Water would be carried in the 39-mile long Green River Canal to serve the project area. The canal heading would be about 6 miles east of Big Piney, Wyoming, and would be placed low enough in the west bank of the river to eliminate the need for a diversion dam as previously planned. Distribution laterals and drains will be constructed as needed.

Completion of a Definite Plan Report is now scheduled for 1961. Construction could commence as soon as funds are appropriated by the Congress. This small project could be completed in two to three years after the start of construction.

b. Lyman Project

Supplemental irrigation water amounting to an average of 32,500 acre-feet annually would be provided for 40,600 acres of land along Blacks Fork of the Green River near Lyman, Wyoming. A dam would be constructed at the Bridger site on Willow Creek, creating a reservoir with a total capacity of 43,000 acre-feet. Surplus flows of Blacks Fork and its tributary, West Fork of Smiths Fork, would be conveyed to the reservoir by separate feeder canals. About $7\frac{1}{2}$ miles of the Willow Creek channel below the reservoir would be enlarged, and three canals would be constructed to divert flows from the enlarged channel. Existing canal systems would be improved and extended as necessary, in addition to construction of new drains.

Miscellaneous investigations are proceeding on the Lyman Project. The completion of a Definite Plan Report is now scheduled for 1961. Construction could begin thereafter as soon as the money is made available. With the exception of the drainage facilities a period of four or five years will be required for construction.

c. Seedskadee Project

The Seedskadee Project would provide for the irrigation of approximately 60,720 acres of dry arable land along both sides of the Green River in an area extending from 14 to 50 miles northwest of Green River, Wyoming. Original plans call for the diversion by the Seedskadee Diversion Dam of water directly from the Green River. The project works would include a diversion dam and a system of canals and laterals with two hydraulic-driven pumps and a drainage system. Modification of the plan to include storage at the Fontenelle Dam site on the Green River, located four miles upstream from project lands, may be found desirable during the definite plan stage of the investigations.

In the modified plan, canals would divert water directly from Fontenelle Reservoir on each side of the river. The reservoir would

be constructed to a capacity of 370,000 acre-feet of which 275,000 acre-feet would be dead storage. With the reservoir a larger irrigable area of farm units (61,900 acres) would be served with smaller annual water shortages than with the direct diversion plan.

Potential fish and wildlife and recreational developments have been cooperatively studied by the National Park Service and Fish and Wildlife Service. One proposal has been to create a large bird refuge in conjunction with the Seedskadee Project.

Current studies seem to favor the modified plan with storage created by Fontenelle Dam. Detailed studies are proceeding on this plan.

The Seedskadee Project has been given first priority in Wyoming. Completion of a Definite Plan Report by the Bureau of Reclamation is scheduled for 1958. Construction could begin as soon as this report is completed and construction funds are appropriated by the Congress. Eight years will be required to construct project features excepting the drainage system.



E. Projects Having Priority for Planning Under Public Law 485, 84th Congress, 2d Session

In carrying out further investigations of projects under Federal Reclamation Laws in the Upper Colorado River Basin, the Secretary of the Interior is directed to give priority to completion of planning reports on twenty-five projects. Brief descriptions of these projects are to be found in the Commission's Eighth Annual Report.

The Bureau of Reclamation, so far as limited funds and personnel will permit, is continuing its studies on these projects. Considerable progress in investigations has been accomplished during the past year. Two projects, the **Navajo Indian Irrigation Project** and the **San Juan-Chama Project**, had supplemental feasibility reports completed during 1957, and authorizing legislation has been drafted for introduction in the Congress. Other projects in the priority-of-planning category are in various stages of detailed planning for feasibility reports or preliminary studies for reconnaissance reports.

A complete list of these projects given priority for planning status by P. L. 485, the Colorado River Storage Project Act, follows:

COLORADO

Juniper Project (not classified in legislation—its status as either a Storage Unit or participating project will be determined by the type of development planned.)

Participating Projects

| | |
|-----------------|--|
| Parshall | Dallas Creek |
| Bluestone | Yellow Jacket |
| Troublesome | Fruitland Mesa |
| Rabbit Ear | Bostwick Park |
| Eagle Divide | Dolores |
| Battlement Mesa | Animas-La Plata |
| Tomichi Creek | West Divide |
| East River | San Miguel |
| Ohio Creek | Savery-Pot Hook (partly in Wyoming) |
| Grand Mesa | Fruit Growers Dam Project Extension |

NEW MEXICO

Participating Projects

Navajo Indian Irrigation

San Juan-Chama

UTAH

Participating Project

Gooseberry

WYOMING

Participating Projects

Sublette

Savery-Pot Hook (partly in Colorado)



IX. GOVERNORS' CONFERENCES

On September 24, 1957 Governor McNichols of Colorado, Governor Mechem of New Mexico, Governor Clyde of Utah, and Governor Simpson of Wyoming met in a two-day session with members of the Upper Colorado River Commission, their advisers and the Commission staff in Santa Fe, New Mexico, for the purpose of discussing problems related to the development of water and land resources of mutual interest to the four Upper Division States of the Colorado River Basin.

In response to an invitation from the Assistant Secretary of the Interior in charge of Water and Power, Mr. Fred G. Aandahl, our Governors and Commissioners met in Washington, D. C., on October 24, 1957, with officials of the Department of the Interior and the Governors of Arizona, California and Nevada to discuss procedures for the filling of Glen Canyon Reservoir.

The meeting on October 24 was followed by another meeting of the same type for the same purpose in Las Vegas, Nevada, on December 4 and 5, 1957.

Our four Governors are to be commended for their unanimity of agreement and action on fundamental issues involved in the expeditious industrial and agricultural development of the Upper Colorado River Basin and for their intense interest in and support of the Upper Colorado River Commission.



X. LEGAL

At the present time the organization of the Upper Colorado River Commission does not include a legal department. The Legal Committee is composed of legal advisers to the Commissioners from the respective States. The legal adviser to a Commissioner from a given State is employed by and is responsible to that State. The Chairman, who is a representative of the Federal Government, has his own legal advisers whose services are furnished by the United States. In some instances the legal adviser to a Commissioner is the Attorney General of his State. In other cases the legal adviser is a special attorney employed by the State. Therefore, the personnel of the Legal Committee of the Upper Colorado River Commission changes from time to time. In the past, this plan has worked very well; although the Commission at various times has considered the advisability of establishing a legal section to act for the Commission.

In accordance with the By-Laws of the Commission the Chairman and the Engineer-Secretary are ex-officio members of the Legal Committee.

During the past year the members of the Legal Committee have worked in close cooperation with one another in keeping in touch with litigation pending in the Supreme Court between Arizona and California involving the use of waters of the Colorado River. They have also kept the members of the Commission informed concerning important aspects of this history-making lawsuit.

The Chairman of the Legal Committee on several occasions has suggested to the Commission that there are certain issues being raised in *Arizona v. California*, or certain contentions made by the parties thereto which should be closely studied by the Commission and the Legal Departments of its member-States.

There were only a few problems that required formal action of the Legal Committee since the date of the last Annual Report.

XI. FINDINGS OF FACT

No findings of fact pursuant to Article VIII of the Upper Colorado River Basin Compact have been made by the Upper Colorado River Commission. No part of this Annual Report, or the information contained herein, is to be construed as findings of fact by the Commission.



APPENDIX A

BUDGET

Fiscal Year Ending June 30, 1959

PERSONAL SERVICES

| | | |
|-------------------------|-------------|-------------|
| Administrative Salaries | \$17,000.00 | |
| Engineering Salaries | 22,500.00 | |
| Clerk-Stenographer | 3,000.00 | \$42,500.00 |

CURRENT EXPENSE

| | | |
|--|----------|-----------|
| Social Security | 500.00 | |
| Rent and Janitor service | 3,355.00 | |
| Assistant Treasurer | 300.00 | |
| Accounting, Legal Services, Reporting | 2,800.00 | |
| Telephone and Telegraph | 1,200.00 | |
| Insurance and Bond Premiums | 850.00 | |
| Printing | 1,900.00 | |
| Engineering Services, aerial photos, maps, etc. | 3,500.00 | |
| Miscellaneous | 825.00 | 15,230.00 |

CAPITAL OUTLAY 700.00

INFORMATION 7,500.00

TRAVEL 6,500.00

OFFICE SUPPLIES AND POSTAGE 2,570.00

TOTAL ESTIMATED EXPENSE

Fiscal Year July 1, 1958, through June 30, 1959 \$75,000.00

APPENDIX B

REPORT OF EXAMINATION
UPPER COLORADO RIVER COMMISSION
GRAND JUNCTION, COLORADO
June 30, 1957

Appendix B (Cont'd)

DALBY & McNULTY
Certified Public Accountants
First National Bank Building
Grand Junction, Colorado
September 17, 1957

Water E. Dalby, C.P.A.
John E. McNulty, C.P.A.

Upper Colorado River Commission
Grand Junction, Colorado

We have examined the balance sheets of the General Fund and the Property and Equipment Fund of the Upper Colorado River Commission as of June 30, 1957, and the related statement of revenue and expense for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances.

In our opinion, the accompanying balance sheets and revenue and expense statement present fairly the financial position of the Upper Colorado River Commission at June 30, 1957, and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied on a basis consistent with that of the preceding year.

|s| Dalby & McNulty

Certified Public Accountants

Appendix B (Cont'd)

BALANCE SHEET—GENERAL FUND

UPPER COLORADO RIVER COMMISSION

June 30, 1957

ASSETS

CASH

| | | |
|-----------------------|-----------|-------------|
| Office cash fund | \$ 25.00 | |
| Demand deposit—Note C | 51,594.35 | \$51,619.35 |
| | <hr/> | |

ACCOUNTS RECEIVABLE—

| | | |
|------------------------|--|-------|
| Employees' payroll tax | | 10.78 |
|------------------------|--|-------|

RETURABLE DEPOSIT—

| | | |
|------------------|--|--------|
| United Air Lines | | 425.00 |
|------------------|--|--------|

| | | |
|-----------------------------|--|--------|
| PREPAID RENT—Monte Building | | 193.60 |
|-----------------------------|--|--------|

| | | |
|-------------------|--|--------|
| PREPAID INSURANCE | | 120.00 |
|-------------------|--|--------|

| | | |
|------------------|--|-------|
| PREPAID SUPPLIES | | 98.00 |
| | | <hr/> |

\$52,466.73

LIABILITIES, RESERVE AND FUND BALANCE

| | | |
|-------------------------|--|-------------|
| ACCOUNTS PAYABLE—Note A | | \$ 1,303.67 |
|-------------------------|--|-------------|

| | | |
|-----------------------------|--|-------|
| SOCIAL SECURITY TAX PAYABLE | | 21.56 |
|-----------------------------|--|-------|

| | | |
|---|--|----------|
| RESERVE—Assessments received in advance from State of New Mexico | | 8,437.50 |
|---|--|----------|

UNAPPROPRIATED FUND BALANCE

| | | |
|--------------------------------|-------------|--|
| Balance at July 1, 1956—Note C | \$24,290.12 | |
|--------------------------------|-------------|--|

| | | |
|--|-----------|-----------|
| Add—Excess of revenues over expenditures for the fiscal year ended June 30, 1957 | 18,413.88 | 42,704.00 |
| | <hr/> | <hr/> |

\$52,466.73

Note — The accompanying notes to financial statements are an integral part of this statement.

Appendix B (Cont'd)

BALANCE SHEET—PROPERTY AND EQUIPMENT FUND

UPPER COLORADO RIVER COMMISSION

June 30, 1957

PROPERTY AND EQUIPMENT (at Cost)

| | |
|-----------------------------------|-------------|
| Furniture and fixtures | \$ 8,178.25 |
| Automobile | 3,311.89 |
| Engineering equipment | 1,533.65 |
| Motion picture film | 2.00 |
| Upper Colorado basin relief model | 5,937.77 |
| | <hr/> |
| | \$18,963.56 |
| | <hr/> <hr/> |

FUND BALANCE

| | |
|--|------------------------|
| Investment in property and equip- ment July 1, 1956 | \$17,545.50 |
| Transactions for fiscal year ended June 30, 1957: | |
| Additions | \$4,141.84 |
| Retirements | 2,723.78 1,418.06 |
| | <hr/> |
| Investment in property and equip- ment at June 30, 1957 | \$18,963.56 |
| | <hr/> |
| | \$18,963.56 |
| | <hr/> <hr/> |

Note — The accompanying notes to financial statements are an integral part of this statement.

Appendix B (Cont'd)

STATEMENT OF REVENUE AND EXPENSE

UPPER COLORADO RIVER COMMISSION

For the fiscal year ended June 30, 1957

| | Budget Amount (As Revised) May 31, 1957 | Actual Amount | Actual Amount Over-Under* |
|--|---|--------------------|---------------------------------|
| REVENUE | | | |
| Assessments—Note B | \$74,625.20 | \$73,730.14 | \$ 895.06* |
| State of Colorado assess- ment deficit for year 1956 to be paid in year 1957—Note B | 336.54 | —0— | 336.54* |
| Miscellaneous revenues | —0— | 132.80 | 132.80 |
| Sale of equipment | —0— | 85.00 | 85.00 |
| TOTAL REVENUE | \$74,961.74 | \$73,947.94 | \$ 1,013.80* |
| EXPENSE | | | |
| Personal services: | | | |
| Administrative salaries | \$16,500.00 | \$16,499.94 | \$.06* |
| Engineering salaries | 18,900.00 | 6,640.00 | 12,260.00* |
| Clerical salaries | 3,000.00 | 2,757.88 | 242.12* |
| FICA tax | 500.00 | 384.27 | 115.73* |
| | <u>\$38,900.00</u> | <u>\$26,282.09</u> | <u>\$12,617.91*</u> |
| Capital outlay: | | | |
| Automobile | \$ 2,500.00 | \$ 2,253.00 | \$ 247.00* |
| Furniture and fixtures | 1,200.00 | 844.37 | 355.63* |
| | <u>\$ 3,700.00</u> | <u>\$ 3,097.37</u> | <u>\$ 602.63*</u> |
| Office supplies and postage | | | |
| Grand Junction office | \$ 2,000.00 | \$ 1,859.27 | \$ 140.73* |
| Information and education: | | | |
| Advertising agency retainer | \$ 4,800.00 | \$ —0— | \$ 4,800.00* |
| Exhibits | 500.00 | 154.08 | 345.92* |
| Publications | 5,000.00 | 4,283.16 | 716.84* |
| Public relations | 700.00 | 769.04 | 69.04 |
| | <u>\$11,000.00</u> | <u>\$ 5,206.28</u> | <u>\$ 5,793.72*</u> |
| Travel | \$ 7,500.00 | \$ 4,654.62 | \$ 2,845.38* |

Appendix B (Cont'd)

STATEMENT OF REVENUE AND EXPENSE (continued)

UPPER COLORADO RIVER COMMISSION

For the fiscal year ended June 30, 1957

| | Budget Amount (As Revised) May 31, 1957 | Actual Amount | Actual Amount Over-Under* |
|--|---|---------------------------|----------------------------------|
| EXPENSE (Cont'd) | | | |
| Current expenses: | | | |
| Assistant treasurer | \$ 300.00 | \$ 300.00 | \$ —0— |
| Janitor | 480.00 | 480.00 | —0— |
| Rent Grand Junction office | 2,874.00 | 2,552.70 | 321.30* |
| Legal services | 500.00 | —0— | 500.00* |
| Reporting | 1,800.00 | 453.45 | 1,346.55* |
| Telephone and telegraph | 1,200.00 | 1,283.01 | 83.01 |
| Insurance and bond premium | 850.00 | 561.75 | 288.25* |
| Accounting | 500.00 | 440.00 | 60.00* |
| Printing office forms | 400.00 | 234.20 | 165.80* |
| Printing annual report | 2,100.00 | 2,213.85 | 113.85 |
| Engineering service supplies | 400.00 | 15.40 | 384.60* |
| Miscellaneous | 457.74 | 401.87 | 55.87* |
| | <u>\$11,861.74</u> | <u>\$ 8,936.23</u> | <u>\$ 2,925.51*</u> |
| TOTAL EXPENSES | <u><u>\$74,961.74</u></u> | <u><u>\$50,035.86</u></u> | <u><u>\$24,925.88*</u></u> |
| EXCESS OF GROSS REVENUE OVER ACTUAL EXPENSE | | \$23,912.08 | <u><u>\$23,912.08</u></u> |

Appendix B (Cont'd)

STATEMENT OF REVENUE AND EXPENSE (continued)

UPPER COLORADO RIVER COMMISSION

For the fiscal year ended June 30, 1957

| | Budget Amount (As Revised) May 31, 1957 | Actual Amount | Actual Amount Over-Under* |
|--|---|------------------|---------------------------------|
| EXPENSE (Cont'd) | | | |
| REFUND OF ASSESSMENTS—NOTE B: | | | |
| State of Colorado | | \$ 2,971.97 | |
| State of New Mexico | | 719.25 | |
| State of Utah | | 1,470.44 | |
| Upper Colorado River Commission for deficiency in assessment payment from State of Colorado for fiscal year ended June 30, 1956 | | 336.54 | |
| | | \$ 5,498.20 | |
| EXCESS OF NET REVENUE OVER ACTUAL EXPENSE | | \$18,413.88 | |

Note — The accompanying notes to financial statements are an integral part of this statement.

Appendix B (Cont'd)

NOTES TO FINANCIAL STATEMENTS

UPPER COLORADO RIVER COMMISSION

June 30, 1957

Note A—At June 30, 1957, unrecorded liability of the Commission to its full-time employees for accrued annual leave pay amounted to \$528.78. According to Commission policy (effective January 1, 1957) each employee is expected to take annual leave of 16 days each calendar year (not necessarily consecutively) during which period of time regular salary payments are continued. The unused portions of annual leave are not carried forward from year to year.

Note B—The State of Wyoming underpaid its assessment for fiscal year ended June 30, 1957, in the amount of \$895.06 and the State of Colorado also underpaid its assessment for the fiscal year ended June 30, 1956, in the amount of \$336.54. The Commission, on October 2, 1956, approved pro rata refunds to the three states which had fully paid the assessments for this fiscal year and the amount of refund due the State of Colorado was reduced by the amount of the deficiency in its assessment payment for the preceding year. The net amount of assessment paid by each state for the fiscal year, after giving effect to the amounts refunded follows:

| State | Per cent of Total | Net Assessment Paid |
|------------|----------------------|---------------------------|
| Colorado | 51.75 | \$35,310.03 |
| Wyoming | 14.00 | 9,552.47 |
| New Mexico | 11.25 | 7,676.09 |
| Utah | 23.00 | 15,693.35 |
| TOTAL | 100.00 | \$68,231.94 |

Appendix B (Cont'd)

NOTES TO FINANCIAL STATEMENTS

UPPER COLORADO RIVER COMMISSION

June 30, 1957

Note C—The balance sheet and statement of revenue and expense do not give effect to that portion of the budget for fiscal year ended June 30, 1957, which proposes that—“any carry-over from the fiscal year ended June 30, 1956, would be used to purchase an auto for \$2,500.00; and that the balance of such carry-over would be placed in a building fund or emergency fund.” Since the Commission, on February 28, 1957, revised its budget for the fiscal year to include a \$2,500.00 appropriation for an auto by transfer of such funds from the amount originally appropriated for Engineers’ salaries, and since the Commission made no further definitive provisions to establish a building or emergency fund, we assume that the Commission did not adopt the proposal referred to in this budget. If the Commission intended to establish a building or emergency fund, the amount of \$20,072.31 should be transferred from unappropriated fund balance to such fund and the proceeds used to purchase short-term United States Government securities, as directed in the proposal. The amount of \$20,072.31 is computed as follows:

| | |
|---|-------------|
| Excess of revenues over expenditures for the fiscal year ended June 30, 1956—as shown by audit report | \$22,572.21 |
| Less appropriation for purchase of auto | 2,500.00 |
| | <hr/> |
| Balance of carry-over from fiscal year ended June 30, 1956 | \$20,072.31 |
| | <hr/> <hr/> |

Appendix B (Cont'd)

SUPPLEMENTARY DATA

CASH RECEIPTS AND DISBURSEMENTS

UPPER COLORADO RIVER COMMISSION

For the fiscal year ended June 30, 1957

| | | | |
|--|-------------|-----------|--------------|
| Balance of cash and demand deposit at July 1, 1956 | | | \$ 23,512.38 |
| Cash receipts: | | | |
| Assessments | \$73,730.14 | | |
| State of New Mexico assess- ment for fiscal year ended June 30, 1957, received prior to June 30, 1957 | 8,437.50 | | |
| State of New Mexico assess- ment refund | 719.25 | | |
| Miscellaneous revenues | 132.80 | | |
| Sale of property and equip- ment | 85.00 | 83,104.69 | |
| | | | \$106,617.07 |
| Cash disbursements: | | | |
| Personal services | \$26,271.31 | | |
| Travel | 4,207.51 | | |
| Current expense | 9,062.42 | | |
| Capital outlay | 3,097.37 | | |
| Information | 5,058.77 | | |
| Office supplies | 1,915.38 | | |
| Expenses of fiscal year ended June 30, 1956, not paid until after July 1, 1956 | 223.30 | | |
| Refund of assessments: | | | |
| State of Colorado | \$2,971.97 | | |
| State of New Mexico | 719.25 | | |
| State of Utah | 1,470.44 | 5,161.66 | 54,997.72 |
| Balance of cash and demand deposit at June 30, 1957 | | | \$ 51,619.35 |

Appendix B (Cont'd)

INSURANCE COVERAGE

UPPER COLORADO RIVER COMMISSION

June 30, 1957

| | <u>Type of Coverage</u> | <u>Amount of Coverage</u> |
|------------------------|-----------------------------------|---------------------------|
| Furniture and fixtures | Fire and comprehensive | \$7,500.00 |
| Automobile | Comprehensive | Actual Cash Value |
| | Collision and upset | \$100.00 |
| | Bodily injury and property damage | \$50/100,000/5 |
| Treasurer | Fidelity bond | \$40,000.00 |
| Assistant treasurer | Fidelity bond | \$40,000.00 |
| Employees | Workmen's | |
| | compensation | Various |



APPENDIX C
CONSTRUCTION CONTRACT AWARDS
for
Units of Colorado River Storage Project
(Through January, 1958)

| Feature, Schedule or Description of the Work | Spec. No. | Name of Contractor | Low Bid | Engineer's Estimate | Date of Award | Scheduled Completion Date |
|--|--------------|--|--------------|------------------------|---------------------|---------------------------------|
| GLEN CANYON UNIT | | | | | | |
| Earthwork and Culverts, Access Highway, Station 158+67.7 to Station 400+00 (High- way along east side of the Colorado River) | DC-4730 | Strong Co. Springville, Utah | \$ 1,156,244 | \$ 1,014,633 | 9-21-56 | 7-1-57 |
| Exploratory Drilling and Water Testing at Glen Canyon Dam Site | 400C-63 | Cannon Diamond Drilling Co., Compton, Calif. | 148,185 | 172,820 | 8-14-56 | 12-27-56 |
| Glen Canyon Dam Right Diversion Tunnel | DC-4747 | Mountain States Const. Co., Denver, Colorado | 2,452,340 | 3,845,100 | 10-1-56 | 12-26-57 |
| Earthwork and Culverts, Access Highway, Station 400+00 to Station 1497+50 and Waterholes Canyon Bridge | DC-4756 | W. W. Clyde & Co. Springville, Utah | 1,011,819 | 832,663 | 10-20-56 | 7-3-57 |
| Completion of Gravel Surfacing, Arizona- Utah State Line to Glen Canyon Dam Site and Wahweap Creek Road | 400C-68 | Ford-Fielding, Inc. Provo, Utah | 36,801 | 83,220 | 11-8-56 | 2-7-57 |
| Colorado River Bridge, Glen Canyon Dam | DC-4800 | Kiewit-Judson Pacific Murphy, 4322 Eastshore Drive, Emoryville, Calif. | 4,139,277 | 2,944,750 | 1-21-57 | 12-17-59 6-17-59 |
| <div>Entire bridge, exclusive of painting below concrete bridge deck</div> | | | | | | |

Appendix C (Cont'd)
CONSTRUCTION CONTRACT AWARDS
for
Units of Colorado River Storage Project
(Through January, 1958)

| Feature, Schedule or Description of the Work | Spec. No. | Name of Contractor | Low Bid | Engineer's Estimate | Date of Award | Scheduled Completion Date |
|---|--------------|---|---------------|------------------------|---------------------|---------------------------------|
| GLEN CANYON UNIT (Cont'd) | | | | | | |
| Glen Canyon Dam and Powerplant, Prime Contract | DC-4825 | Merritt-Chapman & Scott Corp., New York, N. Y. | \$107,955,122 | \$135,608,170 | 4-29-57 | 3-6-64 |
| Water Tank and Reservoir | DC-4865 | Pittsburg-Des Moines Steel Co., Santa Clara, California | 189,190 | 274,000 | 5-13-57 | 4-3-58 |
| Surfacing, Guardrail, Access Highway and Airstrip | DC-4887 | Alexander Const. Co. Minneapolis, Minn. | 1,517,412 | 1,911,956 | 5-28-57 | 11-27-57 |
| Surfacing West Road and Vista Point | 400C-83 | W. W. Clyde & Co. Springville, Utah | 58,453 | 55,936 | 6-13-57 | 10-12-57 |
| Temporary Parking Area on Left Bank | 400C-98 | W. W. Clyde & Co. Springville, Utah | 55,705 | 43,800 | 11-15-57 | 4-15-58 |
| Streets, Water Distribution, and Sewage Systems | DC-4896 | W. W. Clyde & Co. Springville, Utah | 1,331,470 | 1,640,617 | 7-25-57 | 9-1-58 |
| Sewage Treatment Plant | DC-4912 | W. W. Clyde & Co. Springville, Utah | 221,445 | 206,197 | 8-8-57 | 3-5-58 |
| Laboratory, Municipal Building, and Warehouse | DC-4924 | Security Construction Co. Salt Lake City, Utah | 358,708 | 429,362 | 8-22-57 | 3-12-58 |
| Water Supply System | DC-4933 | Southern Engineering and Construction Co., Long Beach, Calif. | 1,059,157 | 869,547 | 9-10-57 | 11-27-58 |
| Two-hundred Permanent Residences | DC-4989 | Page City Construction Long Beach, Calif. | 3,157,580 | 4,093,000 | 12-10-57 | |

Appendix C (Cont'd)
CONSTRUCTION CONTRACT AWARDS
 for
Units of Colorado River Storage Project
(Through January, 1958)

| Feature, Schedule or Description of the Work | Spec. No. | Name of Contractor | Low Bid | Engineer's Estimate | Date of Award | Scheduled Completion Date |
|---|--------------|---|-------------|------------------------|---------------------|---------------------------------|
| FLAMING GORGE | | | | | | |
| Streets, Utilities, and Residences for Flam- ing Gorge Community | DC-4779 | Witt Construction Co. Provo, Utah | \$2,678,031 | \$2,522,293 | 7-25-57 | 2-25-59 |
| Earthwork, Structures, and Surfacing of Access Road | DC-4900 | Wangsgaard Construction Co., Logan, Utah | 504,642 | 457,439 | 6-27-57 | 6-25-58 |
| Temporary Office and Warehouse Buildings | 400C-89 | Bethers and Stoker Salt Lake City, Utah | 47,028 | 51,610 | 8-22-57 | 1-23-58 |
| Prefabricated Metal Garages | 400C-91 | Dean R. Mayberry Ogden, Utah | 59,793 | 73,275 | 9-18-57 | 1-28-58 |
| NAVAJO | | | | | | |
| Streets, Utilities, and 15 Residences | DC-4914 | Oehring Construction Co. Omaha, Nebraska | 260,190 | 282,265 | 10-24-57 | 6-28-58 |

Appendix C (Cont'd)

COLORADO RIVER STORAGE PROJECT

Construction Contracts Scheduled for Bidding February—June, 1958

GLEN CANYON UNIT

1. 3,000,000 barrels of cement—Furnishing at the dam site, bulk cement for the construction of Glen Canyon Dam and powerplant.
2. 250,000 tons of Pozzolan—Furnishing at the dam site, pozzolan for use in the construction of Glen Canyon Dam and powerplant.
3. Penstocks—Furnishing steel and fabrication of penstocks for Glen Canyon powerplant.
4. Airstrip lighting—Furnishing and installing lights for the airstrip at Page, Arizona.
5. Soil stabilization and landscaping—Hauling topsoil and planting landscape materials for the residences at Page, Arizona.
6. Mobile radio system—Furnishing and installing radio equipment in vehicles and administration building.

FLAMING GORGE UNIT

1. Diversion tunnel—Excavating 1,200 foot-long, 23-foot diameter, lined right abutment diversion tunnel at the Flaming Gorge Dam site.
2. Permanent access road—Constructing third of three portions of access road to the left abutment of Flaming Gorge Dam.
3. Pumping plant and storage tank—Constructing a pumping plant and water storage tank to supply culinary water to Flaming Gorge community.
4. Garage and fire station—Constructing a garage and fire station for use in the Flaming Gorge community.
5. Laboratory, grading, and street surfacing—Constructing a concrete testing laboratory and completion of grading and street surfacing in the administrative area.

APPENDIX D

(Note: The following report was taken from Senate Document No. 77, 85th Congress, 2d Session. It was prepared by the Secretary of the Interior and submitted to both Houses of Congress to show the financial status of the Colorado River Storage Project as of June 30, 1957)

FIRST ANNUAL REPORT, COLORADO RIVER STORAGE PROJECT AND PARTICIPATING PROJECTS

Introduction

On April 11, 1956, legislation authorizing construction of the Colorado River storage project and participating projects was signed into law (70 Stat. 105) by the President. The act initiated an extensive program for the development of water resources in the upper Colorado River Basin. Authorized for construction were 4 initial units of the Colorado River storage project on the Colorado River or its larger tributaries, primarily for river regulation and power production, and 11 participating projects for irrigation and other related purposes. Construction of the Curecanti unit, 1 of the 4 authorized units, is not to be undertaken until the Secretary of the Interior has certified to the Congress and to the President that, in his judgment, the benefits of such unit will exceed its costs.

Section 6 of the act stipulates that on January 1 of each year the Secretary shall report to Congress for the previous fiscal year—

1. Status of revenues from, and
2. Cost of, constructing, operating, and maintaining the Colorado River storage project and participating projects (hereinafter referred to as the project).

The report is to be prepared so as to reflect accurately the

3. Federal investment allocated at that time to power, to irrigation, and to other purposes;
4. Progress of return and repayment thereon; and
5. Estimated rate of progress, year by year, in accomplishing full repayment.

Appendix D (Cont'd)

During the first fiscal year of the project, which ended June 30, 1957, activities were confined to initiation of construction on 3 of the 4 storage units and continuation of investigations on the Curecanti storage unit and the 11 participating projects authorized for construction by the act.

This report deals primarily with the status to June 30, 1957, of the cost of construction and of investigations related thereto or financed from project funds, as required to be reported under item 2 above. The statements under each of the other matters required to be reported upon will be expanded in future annual reports as the activities pertaining to them progress.

1. Status of Revenues

Nonoperating revenues amounting to \$1,443 arising from grazing leases accrued to the project during fiscal year 1957. However, there were no revenues from water rental, water sales, or from sales of electric energy during the period. For this reason no statement of revenues accompanies this first annual report.

2. Cost of Constructing, Operating and Maintaining the Project

The attached "Balance sheet, June 30, 1957, exhibit A" presents the financial position of the project at that date.

Costs to June 30, 1957, of constructing the project are identified as follows:

| <i>Particulars</i> | <i>Amount</i> |
|---|---------------|
| Direct costs: Construction work in progress | \$8,394,711 |
| Unapplied costs: | |
| Investigation costs | 1,282,719 |
| Construction service facilities | 1,205,420 |
| Materials and supplies | 24,400 |
| Prepayment and advances | 72,091 |
| Other charges and work in progress | 18,575 |
| Total | 10,997,916 |

Through June 30, 1957, no costs had been incurred with respect to operating and maintaining the project.

Appendix D (Cont'd)

3. Allocation of Federal Investment

No formal allocations to the several purposes served by the project have been made of the cost to June 30, 1957, as reflected in construction work in progress accounts. This is in accordance with the provisions of section 6 of Public Law 485 which states that upon completion of each unit, participating project or separable feature thereof, the Secretary shall allocate the total costs of constructing said unit, project or feature to the various purposes authorized in the act or authorized under reclamation law.

4. Progress of Return and Repayment of Federal Investment

As indicated in the forepart of this report the fiscal year 1957 marked the inception of construction on the project and no income producing facilities were in an operational status. Hence, there is no progress to report on the return and repayment of the Federal investment.

5. Estimated Rate of Project Repayment Year by Year

During the first fiscal year of the project, no storage unit, participating project, or separable feature thereof had been completed. Therefore, at June 30, 1957, cost allocations of the Federal investment to the several purposes served by the project, as prescribed by section 6 of the act, had not been made. Accordingly, no estimated rate of progress of return and repayment, year by year, of the investment to be so allocated, is included in this annual report.

Appendix D (Cont'd)

EXHIBIT A.—Balance sheet, June 30, 1957

ASSETS

| | |
|---|-------------|
| Plant: Construction work in progress..... | \$8,394,711 |
| Construction service facilities..... | 1,205,420 |
| Investigation costs..... | 1,282,719 |

Current assets:

Cash and fund balances with U. S. Treasury:

| | |
|-------------------------------|-------------|
| Operating funds (note 1)..... | \$5,320,870 |
| Special deposit funds..... | 289,747 |
| | <hr/> |
| | 5,610,617 |

Accounts receivable:

| | |
|--------------------------------------|-----------|
| Government agencies..... | 20,300 |
| Other | 293,181 |
| Material and supplies..... | 24,400 |
| Prepayments and advances (note 2) .. | 72,091 |
| | <hr/> |
| | 6,020,589 |

Other assets:

| | |
|--------------------------------------|----------------------------|
| Undistributed and deferred charges.. | 18,425 |
| Other work in progress..... | 150 |
| | <hr/> |
| | 18,575 |
| | <hr/> |
| Total | <u><u>\$16,922,014</u></u> |

Appendix D (Cont'd)

LIABILITIES

Net investment:

United States:

Congressional appropriations_____ \$13,600,000

Transfers of property and serv-
ices _____ 1,508,090

Interest accrued on plant under
construction _____ 75,273

15,183,363

Non-Federal: Contributions in aid
of project development and con-
struction _____ 843,772

16,027,135

Current liabilities:

Accrued liabilities_____ 289,706

Accounts payable:

Government agencies_____ 67,392

Other _____ 536,336

893,434

Other deferred credits_____ 1,445

Total _____ \$16,922,014

Appendix D (Cont'd)

The accompanying notes are an integral part of this exhibit.

Note 1. Operating funds:

| | |
|---|------------------|
| Cash and fund balances available for payment of outstanding obligations and accounts payable | \$3,765,393 |
| Unobligated balances | 1,555,477 |
| Total | <u>5,320,870</u> |

Note 2. Prepayments and advances, includes advances to other Bureau of Reclamation activities aggregating \$66,720. The components of such advances, as reflected on the records of such other Bureau entities, namely:

Fund balance with U. S. Treasury \$219,742

Accounts receivable:

| | | |
|---------|---------------|----------------|
| Other | \$56,292 | |
| Project | 13,903 | |
| | <u>70,195</u> | |
| | | <u>289,937</u> |

Less accounts payable:

| | | |
|---------|----------------|---------------|
| Other | 219,153 | |
| Project | 4,064 | |
| | <u>223,217</u> | |
| Total | | <u>66,720</u> |

have not been consolidated with or eliminated from the related components of the project for purposes of this balance sheet.

APPENDIX E

UPPER COLORADO RIVER COMMISSION

Key Gaging Stations

Derived from reports of U. S. Geological Survey and others.

| No. (1) | Streams (2) | Drainage Area Sq. Miles (3) | Discharge during Water Year in 1,000 acre-ft. Units | | |
|------------|--|-----------------------------------|--|-------------|-------------|
| | | | 1955 (4) | 1956 (5) | 1957 (6) |
| 1. | Colorado River near Grand Lake, Colorado | 103.0 | 33.3 | 50.9 | 91.5 |
| 2. | Arapaho Creek at Monarch Lake Outlet, Colorado | 47.1 | 50.5 | 59.1 | |
| 3. | Fraser River near Winter Park, Colorado | 27.6 | 5.0 | 7.1 | 31.6 |
| 4. | Vasquez Creek near Win- ter Park, Colorado | 27.8 | 3.1 | 7.6 | 15.8 |
| 5. | St. Louis Creek near Fraser, Colorado | 33.0 | 19.0 | 15.5 | 24.6 |
| 6. | Ranch Creek near Fraser, Colorado | 19.9 | 2.9 | 4.4 | |
| 7. | Colorado River at Hot Sulphur Springs, Colo. | 782.0 | 103.1 | 142.3 | 282.7 |
| 8. | Williams River near Leal, Colorado | 89.5 | 44.3 | 59.0 | 90.4 |
| 9. | Troublesome Creek near Troublesome, Colorado ¹ | 178.0 | 18.5 | 36.5 | |
| 10. | Blue River at Dillon, Colorado | 129.0 | 54.5 | 70.4 | 102.2 |
| 11. | Snake River near Montezuma, Colorado | 59.0 | 36.3 | 51.4 | 67.1 |
| 12. | Tenmile Creek at Dillon, Colorado | 113.0 | 56.6 | 86.2 | 115.6 |

¹ Discontinued.

Appendix E (Cont'd)

| No. (1) | Streams (2) | Drainage Area Sq. Miles (3) | Discharge during Water Year in 1,000 acre-ft. Units | | |
|------------|---|-----------------------------------|--|---------------|---------------|
| | | | 1955 (4) | 1956 (5) | 1957 (6) |
| | | | | (Provisional) | (Provisional) |
| 13. | Eagle River at Red Cliff, Colorado | 72.2 | 16.7 | 26.0 | |
| 14. | Eagle River below Gypsum, Colorado | 957.0 | 292.3 | 391.6 | |
| 15. | Colorado River at Glen- wood Springs, Colorado | 4,560.0 | 1,026.0 | 1,469.0 | |
| 16. | Roaring Fork at Aspen, Colorado | 109.0 | 43.5 | 43.8 | |
| 17. | Crystal River near Redstone, Colorado | 225.0 | 213.2 | 202.6 | |
| 18. | Roaring Fork at Glen- wood Springs, Colo. | 1,460.0 | 660.8 | 717.4 | |
| 19. | Colorado River near Cameo, Colorado | 8,060.0 | 1,976.0 | 2,416.0 | |
| 20. | Plateau Creek near Cameo, Colorado | 604.0 | 93.0 | 69.8 | |
| 21. | Taylor River at Almont, Colorado | 440.0 | 177.4 | 224.4 | |
| 22. | East River at Almont Colorado | 295.0 | 175.8 | 203.6 | |
| 23. | Gunnison River near Gunnison, Colorado | 1,010.0 | 362.6 | 452.1 | |
| 24. | Tomichi Creek at Gunnison, Colorado | 1,020.0 | 58.6 | 83.1 | |
| 25. | Gunnison River below Gunnison Tunnel, Colo. | 3,980.0 | 401.4 | 574.7 | |
| 26. | North Fork Gunnison River near Somerset, Colo. | 521.0 | 239.8 | 245.6 | |
| 27. | Uncompahgre River at Colona, Colorado | 437.0 | 119.0 | 118.0 | |

Appendix E (Cont'd)

| No. (1) | Streams (2) | Drainage Area Sq. Miles (3) | Discharge during Water Year in 1,000 acre-ft. Units | | |
|------------|--|-----------------------------------|--|-------------|-------------|
| | | | 1955 (4) | 1956 (5) | 1957 (6) |
| 28. | Gunnison River near Grand Junction, Colo. | 8,020.0 | 1,032.0 | 1,113.0 | |
| 29. | Colorado River near Colorado-Utah State line | 17,900.0 | 2,903.0 | 3,345.0 | |
| 30. | Dolores River at Dolores, Colorado | 556.0 | 203.0 | 197.2 | |
| 31. | San Miguel River near Placerville, Colorado | 308.0 | 127.0 | 115.1 | |
| 32. | Dolores River near Cisco, Utah | | 360.0 | 269.7 | |
| 33. | Colorado River near Cisco, Utah | 24,100.0 | 3,241.0 | 3,604.0 | |
| 34. | Green River at Warren Bridge near Daniel, Wyo. | 468.0 | 292.9 | 482.1 | |
| 35. | Pine Creek above Fremont Lake, Wyoming | 69.5 | 102.2 | 155.2 | |
| 36. | Boulder Creek below Boulder Lake, Wyoming | 130.0 | 116.7 | 160.3 | |
| 37. | North Piney Creek near Mason, Wyoming | 58.0 | 28.5 | 56.8 | |
| 38. | Fontenelle Creek near Herschler Ranch near Fontenelle, Wyoming | 152.0 | 37.4 | 66.4 | |
| 39. | Big Sandy Creek at Leckie Ranch near Big Sandy, Wyoming | 94.0 | 46.8 | 64.8 | |
| 40. | Green River near Green River, Wyoming | 10,000.0 | 836.0 | 1,600.0 | |
| 41. | Blacks Fork near Millburne, Wyoming | 156.0 | 86.3 | 122.2 | |

Appendix E (Cont'd)

| No. (1) | Streams (2) | Drainage Area Sq. Miles (3) | Discharge during Water Year in 1,000 acre-ft. Units | | |
|------------|--|-----------------------------------|--|------------------------------|------------------------------|
| | | | (Provisional) 1955 (4) | (Provisional) 1956 (5) | (Provisional) 1957 (6) |
| 42. | East Fork of Smith Fork near Robertson, Wyoming | 53.0 | 21.4 | 29.9 | |
| 43. | West Fork of Smith Fork near Robertson, Wyoming | 37.2 | 9.3 | 15.2 | |
| 44. | Hams Fork near Frontier, Wyoming | 298.0 | 69.2 | 121.6 | |
| 45. | Blacks Fork near Green River, Wyoming | 3,670.0 | 88.1 | 217.0 | |
| 46. | Green River near Linwood, Utah | 14,300.0 | 932.5 | 1,853.0 | |
| 47. | Henrys Fork near Lonetree, Wyoming | 56.0 | 19.4 | 21.3 | |
| 48. | Middle Fork Beaver Creek near Lonetree, Wyoming | 28.0 | 11.1 | 10.9 | |
| 49. | East Fork Beaver Creek near Lonetree, Wyoming | 8.2 | 4.4 | 4.6 | |
| 50. | West Fork Beaver Creek near Lonetree, Wyoming | 23.0 | 8.0 | 8.1 | |
| 51. | Burnt Fork near Burnt Fork, Wyoming | 52.8 | 15.2 | 15.3 | |
| 52. | Henrys Fork at Linwood, Utah | 531.0 | 21.1 | 31.1 | |
| 53. | Sheep Creek Upper Canal near Manila, Utah | | 4.0 | 4.0 | |
| 54. | Sheep Creek Lower Canal near Manila, Utah | | 12.4 | 11.6 | |
| 55. | Sheep Creek near Manila, Utah | 45.9 | 2.0 | 2.2 | |
| 56. | Sheep Creek at mouth near Manila, Utah | 111.0 | 8.3 | 7.9 | |

Appendix E (Cont'd)

| No. (1) | Streams (2) | Drainage Area Sq. Miles (3) | Discharge during Water Year in 1,000 acre-ft. Units | | |
|------------|---|-----------------------------------|--|-------------|-------------|
| | | | 1955 (4) | 1956 (5) | 1957 (6) |
| 57. | Carter Creek near Manila, Utah ² | 19.0 | | | |
| 58. | Carter Creek at mouth near Manila, Utah ² | 110.0 | 18.2 | | |
| 59. | Green River near Greendale, Utah | | 1,002.0 | 1,895.0 | 1,932.0 |
| 60. | Yampa River at Steam- boat Springs, Colorado | 604.0 | 241.6 | 309.1 | 535.8 |
| 61. | Elk River at Clark, Colorado | 206.0 | 186.8 | 237.6 | 316.2 |
| 62. | Yampa River near Maybell, Colorado | 3,410.0 | 772.6 | 1,033.0 | |
| 63. | Little Snake River near Slater, Colorado | 285.0 | 114.6 | 173.6 | 229.6 |
| 64. | Slater Fork near Slater, Colorado | 161.0 | 40.2 | 50.5 | 77.7 |
| 65. | Savery Creek near Savery, Wyoming | 330.0 | 42.5 | 58.1 | 95.3 |
| 66. | Little Snake River near Dixon, Wyoming | 988.0 | 215.7 | 303.4 | 457.8 |
| 67. | Little Snake River near Lily, Colorado | 3,730.0 | 233.2 | 410.9 | |
| 68. | Green River near Jensen, Utah | | 2,074.0 | 3,404.0 | 4,402.0 |
| 69. | Brush Creek near Vernal, Utah | 82.0 | 14.4 | 16.4 | |
| 70. | Brush Creek near Jensen, Utah | 255.0 | 4.7 | 4.9 | |

² Discontinued.

Appendix E (Cont'd)

| No. (1) | Streams (2) | Drainage Area Sq. Miles (3) | Discharge during Water Year in 1,000 acre-ft. Units | | |
|------------|---|-----------------------------------|--|---------------------------|---------------------------|
| | | | 1955 (4) | (Provisional) 1956 (5) | (Provisional) 1957 (6) |
| 71. | Ashley Creek near Vernal, Utah | 101.0 | 49.5 | 58.3 | |
| 72. | Ashley Creek at Sign of the Maine near Vernal, Utah | 241.0 | 52.4 | 69.7 | |
| 73. | Ashley Creek near Jensen, Utah | 386.0 | 15.6 | 18.4 | |
| 74. | Duchesne River near Tabiona, Utah | 352.0 | 92.2 | 129.3 | 140.8 |
| 75. | Strawberry River at Duchesne, Utah | 1,040.0 | 72.2 | 88.5 | 108.9 |
| 76. | Duchesne River at Myton, Utah | 2,750.0 | 185.4 | 251.9 | 273.5 |
| 77. | Uinta River near Neola, Utah | 181.0 | 96.6 | 111.8 | |
| 78. | Whiterocks River near Whiterocks, Utah | 115.0 | 60.3 | 67.2 | |
| 79. | Duchesne River near Randlett, Utah | 3,920.0 | 247.6 | 313.5 | 398.7 |
| 80. | White River at Buford, Colorado | 240.0 | 174.7 | 211.6 | |
| 81. | South Fork White River at Buford, Colorado | 170.0 | 153.8 | 166.2 | |
| 82. | White River near Meeker, Colorado | 762.0 | 344.5 | 394.1 | |
| 83. | White River near Watson, Utah | 4,020.0 | 388.0 | 419.2 | |
| 84. | Green River near Ouray, Utah ^{3,4} | | 2,818.0 | | 5,595.0 |

³ Discontinued September 30, 1955.

⁴ Re-established in 1957 water year.

Appendix E (Cont'd)

| No. (1) | Streams (2) | Drainage Area Sq. Miles (3) | Discharge during Water Year in 1,000 acre-ft. Units | | |
|------------|---|-----------------------------------|--|-------------|-------------|
| | | | 1955 (4) | 1956 (5) | 1957 (6) |
| 85. | Willow Creek near Ouray, Utah ³ | 967.0 | 10.7 | | |
| 86. | Minnie Maud Creek near Myton, Utah ^{3,4} | 30.0 | 1.3 | | |
| 87. | Price River near Heiner, Utah | 455.0 | 59.0 | 61.5 | |
| 88. | Price River at Woodside, Utah | 1,500.0 | 44.4 | 24.6 | |
| 89. | Green River at Greenriver, Utah | 40,600.0 | 2,839.0 | 4,056.0 | |
| 90. | Cottonwood Creek near Orangeville, Utah | 200.0 | 43.2 | 48.7 | 5,507.0 |
| 91. | San Rafael River near Greenriver, Utah | 1,690.0 | 31.8 | 34.2 | |
| 92. | Dirty Devil River near Hite, Utah | | 53.0 | 37.1 | |
| 93. | Colorado River at Hite, Utah | 76,600.0 | 6,238.0 | 7,694.0 | |
| 94. | Escalante River near Escalante, Utah ⁵ | 315.0 | 2.4 | | |
| 95. | Escalante River at mouth near Escalante, Utah ⁵ | 2,010.0 | 64.5 | | |
| 96. | San Juan River at Pagosa Springs, Colorado | 298.0 | 153.3 | 180.3 | |
| 97. | Rio Blanco River near Pagosa Springs, Colorado | 58.0 | 37.8 | 45.1 | |
| 98. | Navajo River at Edith, Colorado | 165.0 | 56.3 | 63.4 | |
| 99. | San Juan River at Rosa, New Mexico | 1,990.0 | 434.5 | 464.7 | |

⁵ Discontinued September 30, 1955.

Appendix E (Cont'd)

| No. (1) | Streams (2) | Drainage Area Sq. Miles (3) | Discharge during Water Year in 1,000 acre-ft. Units | | |
|------------|--|-----------------------------------|--|-------------|---------------|
| | | | (Provisional) | | (Provisional) |
| | | | 1955 (4) | 1956 (5) | 1957 (6) |
| 100. | Los Pinos River near Bayfield, Colorado | 284.0 | 192.2 | 199.6 | |
| 101. | Los Pinos River at Ignacio, Colorado | 448.0 | 57.8 | 44.7 | |
| 102. | Los Pinos River at LaBoca, Colorado ⁶ | 510.0 | 80.4 | 70.0 | |
| 103. | Spring Creek at LaBoca, Colorado ⁶ | 58.0 | 22.4 | 21.2 | |
| 104. | Martinez Ditch near Archuleta, New Mexico ⁷ | | | 2.0 | |
| 105. | San Juan River near Archuleta, New Mexico | | | 558.0 | |
| 106. | Citizens Ditch (Bloomfield Canal) near Turley, New Mexico diverting water around Blanco gage | | 74.2 | 66.0 | |
| 107. | San Juan River near Bloomfield, New Mexico | 5,410.0 | | 553.2 | |
| 108. | Animas River at Durango, Colorado | 692.0 | 409.7 | 378.6 | |
| 109. | Florida River near Durango, Colorado | 96.0 | 42.4 | 35.9 | |
| 110. | Animas River near Cedar Hill, New Mexico | 1,090.0 | 464.0 | 431.1 | |
| 111. | Animas River at Farmington, New Mexico | 1,360.0 | 412.5 | 365.1 | |
| 112. | San Juan River at Farmington, New Mexico | 7,240.0 | 915.7 | 874.4 | 2,404.5 |

⁶ Add Spring Creek to Los Pinos River at LaBoca to give flow at Colorado-New Mexico State line.

⁷ Discontinued June 30, 1957.

Appendix E (Cont'd)

| No. (1) | Streams (2) | Drainage Area Sq. Miles (3) | Discharge during Water Year in 1,000 acre-ft. Units | | |
|------------|--|-----------------------------------|--|-------------|-------------|
| | | | 1955 (4) | 1956 (5) | 1957 (6) |
| 113. | LaPlata River at Hesperus, Colorado | 37.0 | 20.3 | 20.1 | |
| 114. | LaPlata River at Colorado- New Mexico State line | 331.0 | 9.4 | 8.4 | |
| 115. | LaPlata River near Farm- ington, New Mexico | 583.0 | 4.3 | 0.4 | |
| 116. | San Juan River at Shiprock, New Mexico | 12,900.0 | 956.4 | 860.1 | |
| 117. | Mancos River near Towaoc, Colorado | 550.0 | 14.2 | 8.3 | |
| 118. | McElmo Creek near Colo.-Utah State line | 350.0 | 26.5 | 20.2 | |
| 119. | San Juan River near Bluff, Utah | 23,000.0 | 988.5 | 861.6 | 2,586.0 |
| 120. | Colorado River at Lees Ferry, Arizona | 107,900.0 | 7,290.0 | 8,740.0 | 17,330.0 |
| 121. | Paria River at Lees Ferry, Arizona | 1,570.0 | 17.7 | 9.9 | 16.5 |
| 122. | Colorado River at Lee Ferry, Arizona ^s | 109,470.0 | 7,307.0 | 8,750.0 | 17,350.0 |

^sLee Ferry one mile downstream from the mouth of the Paria River is the 1922 "Compact Point," and the discharge at this point is taken as the sum of Nos. 120 and 121.

APPENDIX F

TRANSMOUNTAIN DIVERSIONS IN COLORADO

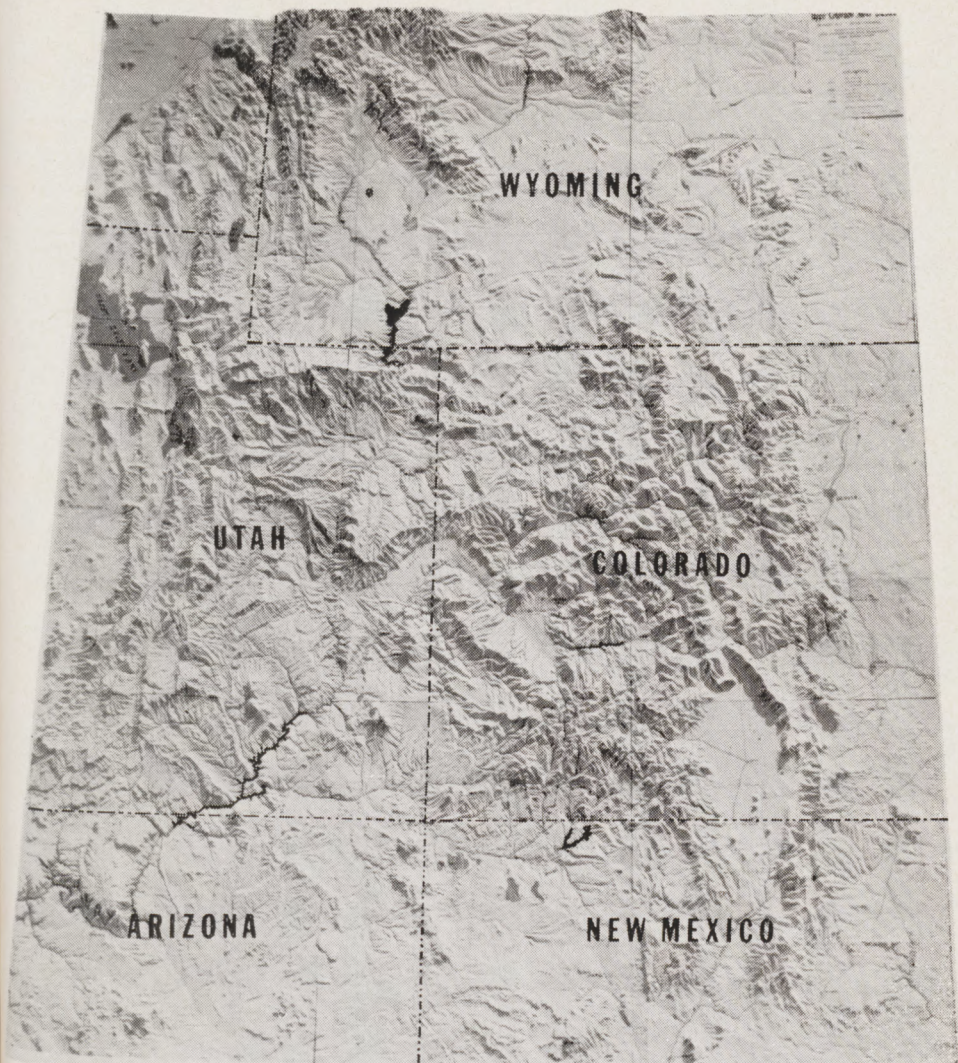
| Diversion | Location | Year | |
|--|------------------------------|---------------------|---------|
| | | 1956 | 1957 |
| | | Acre-feet | |
| | | Provisional Records | |
| Alva B. Adams Tunnel (East Portal) | Shadow Mountain Reservoir | 210,700 | 195,200 |
| Berthoud Pass Ditch | Fraser River Tribs. | 396 | 568 |
| Eureka Ditch | Tonahutu Creek | 52 | 124 |
| Grand River Ditch | Colorado River Tribs. | 20,470 | 16,060 |
| Moffat Tunnel (East Portal) | | 53,430 | 48,180 |
| Independence Pass Tunnel (Twin Lakes Tunnel) | Roaring Fork Tribs. | 36,440 | 32,730 |
| Williams Fork Tunnel (Jones Pass) | Williams River | 8,880 | 4,540 |
| Boreas Pass Ditch | Blue River | 260 | 475 |
| Hoosier Pass Tunnel | Blue River | 9,290 | 7,110 |
| Columbine Ditch | Tenmile Creek Tribs. | 1,390 | 1,110 |
| Fremont Pass Ditch | Tenmile Creek | none | 0 |
| Ewing Ditch | Eagle River | 1,100 | 1,360 |
| Wurtz Ditch | Eagle River | 2,590 | 2,640 |
| Busk-Ivanhoe Tunnel | Fryingpan River | 4,400 | 5,510 |
| Larkspur Ditch | Tomichi Creek | 35 | 0 |
| Tabor Ditch | Gunnison River | 167 | 788 |
| Fuchs Ditch | N. Fork Los Pinos River | 941 | 1,265 |
| Raber-Lohr Ditch | Los Pinos River | 2,630 | 2,680 |
| Treasure Pass Ditch | San Juan River | 128 | 0 |
| Squaw Pass Ditch | San Juan River | 177 | 0 |
| Piedra Ditch | San Juan River | 84 | 0 |

APPENDIX G

TRANSMOUNTAIN DIVERSIONS IN UTAH

| Diversion | Location | Year | |
|---|--------------------------------|---------------------|------|
| | | 1956 | 1957 |
| | | Acre-feet | |
| | | Provisional Records | |
| Ephraim Tunnel | near Ephraim | 3,520 | |
| Reeder Ditch | near Spring City | 474 | |
| Twin Creek Tunnel | near Mt. Pleasant | 121 | |
| Horseshoe Tunnel | near Ephraim | 492 | |
| Cedar Creek Tunnel | near Spring City | 237 | |
| Spring City Tunnel | near Spring City | 1,890 | |
| Fairview Ditch | near Fairview | 1,540 | |
| Candland Ditch | near Mt. Pleasant | 155 | |
| Black Canyon Ditch | near Spring City | 254 | |
| Larsen Tunnel | near Ephraim | 913 | |
| Madsen Ditch | near Ephraim | 104 | |
| John August Ditch | near Ephraim | 183 | |
| Coal Fork Ditch | near Mt. Pleasant | 206 | |
| Hobble Creek Ditch | near Heber | 1,260 | |
| Strawberry River and Willow Creek Ditches | Strawberry River, Willow Creek | 2,350 | |
| Strawberry Tunnel | Strawberry River | 74,060 | |
| Tropic and East Fork Canal | near Tropic | 934 | |
| Duchesne Tunnel near Kamas, Utah | North Fork Duchesne River | 31,890 | |

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The relief model of the Upper Colorado River Basin, pictured above, was constructed by the Upper Colorado River Commission in cooperation with the Babson Institute of Business Administration. This model shows the topographic features of the area and indicates location of major units of the Colorado River Storage Project and Participating Projects. It is used by the Commission in work connected with administration of Upper Basin activities and is available at times for display at conventions and other public events.

The Upper Colorado River Commission

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