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## FOURTEENTH ANNUAL REPORT

OF THE

# Upper Colorado River Commission



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SALT LAKE CITY, UTAH  
SEPTEMBER 30, 1962

**FOURTEENTH ANNUAL REPORT**  
**OF THE**  
**Upper Colorado**  
**River Commission**



**SALT LAKE CITY, UTAH**  
**SEPTEMBER 30, 1962**

**IVAL V. GOSLIN**  
**Executive Director**



# UPPER COLORADO RIVER BASIN

## COLORADO RIVER STORAGE PROJECT AND PARTICIPATING PROJECTS

UPPER COLORADO RIVER COMMISSION

Public Law 485, 84th Congress



# THEY COLLECTED THE JAPANESE

CONSIDERING THE STRANGE FACTS

AND THE FACTS OF THE CASE

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## UPPER COLORADO RIVER COMMISSION

355 South Fourth East Street

Salt Lake City 11, Utah

January 2, 1963

Mr. President:

The Fourteenth 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 included in this report as Appendix B.

This report has also been transmitted to the Governor of each State signatory to the Upper Colorado River Basin Compact.

Respectfully yours,

Ival V. Goslin  
Executive Director

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

Enclosure

hiw



UPPER COLORADO RIVER COMMISSION

REPORT OF THE COMMISSION

FOR THE YEAR 1907

PRESENTED TO THE

COMMISSIONERS

The following report of the Upper Colorado River Commission is submitted to the Board of Directors of the United States Reclamation Service, Department of the Interior, for their consideration and approval.

The report of the Commission is divided into two parts, the first of which contains a general statement of the work of the Commission during the year 1907.

The second part of the report contains a detailed statement of the work of the Commission during the year 1907, and is divided into two parts, the first of which contains a general statement of the work of the Commission during the year 1907.

Respectfully yours,

*W. J. Davis*

W. J. Davis  
Executive Director

W. J. Davis  
Executive Director

W. J. Davis

W. J. Davis



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# I. Preface

Article VIII (d) (13) of the Upper Colorado River Basin Compact requires the Upper Colorado River Commission to "make and transmit annually to the Governors of the signatory States and the President of the United States of America, with the estimated budget, a report covering the activities of the Commission for the preceding water year."

Article VIII (1) of the By-Laws of the Commission specifies that "the Commission shall make and transmit annually on or before April 1 to the Governors of the states signatory to the Upper Colorado River Basin Compact and to the President of the United States a report covering the activities of the Commission for the water year ending the preceding September 30."

This Fourteenth Annual Report of the Upper Colorado River Commission has been compiled pursuant to the above directives.

This Annual Report 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 discussion 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.

- Fifth Annual Report of Secretary of the Interior on financial status of Colorado River Storage Project and participating projects.

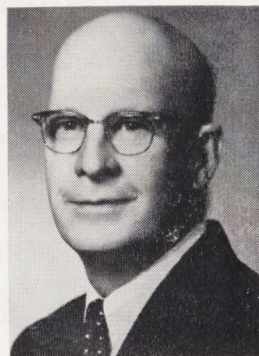




## II. Commission



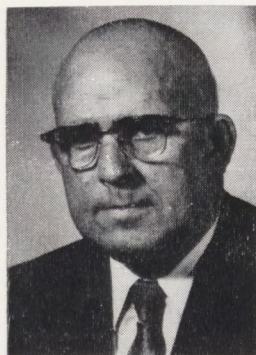
**Edwin C. Johnson**  
Commissioner for  
Colorado



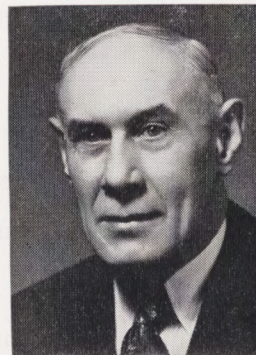
**John H. Bliss**  
Commissioner for  
New Mexico



**Robert J. Newell**  
Chairman  
Commissioner for  
United States



**George D. Clyde**  
Vice-Chairman  
Commissioner for  
Utah



**Earl Lloyd**  
Commissioner for  
Wyoming

### III. Committees

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

Committees and their membership, at the date of 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

|                          |                  |
|--------------------------|------------------|
| Ival V. Goslin, Chairman | H. T. Person     |
| R. M. Gildersleeve       | Earl Lloyd       |
| L. R. Kuiper             | Jay R. Bingham   |
| Stephen E. Reynolds      | Wayne D. Criddle |
| David P. Hale            |                  |

##### Legal Committee

|                           |                  |
|---------------------------|------------------|
| Felix L. Sparks, Chairman | Norman B. Gray   |
| Raphael J. Moses          | Bard Ferrall     |
| J. Stuart McMaster        | A. Pratt Kesler  |
| Dudley Cornell            | Dallin W. Jensen |
| Claud S. Mann             |                  |

##### Budget Committee

|                         |                  |
|-------------------------|------------------|
| John H. Bliss, Chairman | Norman W. Barlow |
| Felix L. Sparks         | Jay R. Bingham   |

#### SPECIAL COMMITTEES

##### Finance Committee

|                            |                  |
|----------------------------|------------------|
| Norman W. Barlow, Chairman | Wayne D. Criddle |
| I. J. Coury                | Felix L. Sparks  |

##### Education and Information Committee

|                            |                |
|----------------------------|----------------|
| Edwin C. Johnson, Chairman | Earl Lloyd     |
| John H. Bliss              | Jay R. Bingham |



## IV. Advisers to Commissioners

The following individuals served 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

#### Engineering

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

G. B. Keesee, Supervisory General Engineer  
Bureau of Indian Affairs  
Department of the Interior  
Washington, D.C.

### COLORADO

#### Legal

Felix L. Sparks, Director  
Department of Natural Resources  
Denver, Colorado

Raphael J. Moses, Counsel  
Colorado Water Conservation Board  
Boulder, Colorado



## Engineering

R. M. Gildersleeve, Deputy Director  
Colorado Water Conservation Board  
Denver, Colorado

Leonard R. Kuiper, Acting Director  
Colorado Water Conservation Board  
Denver, Colorado

L. N. McClellan, Consulting Engineer  
Denver, Colorado

## NEW MEXICO

### Legal

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

Dudley Cornell  
Special Assistant Attorney General  
Albuquerque, New Mexico

Thomas O. Olson  
Special Assistant Attorney General  
Santa Fe, 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

### General

I. J. Coury, Chairman  
New Mexico Interstate Stream Commission  
Farmington, New Mexico

## UTAH

### Legal

E. R. Callister, Jr., Justice, Utah State Supreme Court  
Salt Lake City, Utah

A. Pratt Kesler, Attorney General  
Salt Lake City, Utah

Dallin W. Jensen, Assistant Attorney General  
Salt Lake City, Utah

### Engineering

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

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

## WYOMING

### Legal

Norman B. Gray, Attorney General  
Cheyenne, Wyoming

Bard Ferrall, Attorney-at-Law  
Cheyenne, Wyoming

### Engineering

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

E. J. Van Camp, Director of Water Resources  
Wyoming Natural Resource Board  
Cheyenne, Wyoming

### Assistant Commissioners

Joe L. Budd  
Big Piney, Wyoming

Norman W. Barlow  
Cora, Wyoming

## **V. Staff of Upper Colorado River Commission**

Ival V. Goslin, Executive Director

Paul A. Rechard, Principal Hydraulic Engineer

Paul L. Billhymer, General Counsel

Mrs. Hanna I. Wetmore, Administrative Secretary

I. J. Coury, Treasurer

Richard T. Counley, Assistant Treasurer

Mrs. Lois P. Crowder, Official Reporter



## VI. Meetings of the Commission

During the Water Year ended September 30, 1962 the Commission met seven times as follows:

|                  |                    |   |
|------------------|--------------------|---|
| Meeting No. 75   | October 6, 1961    | Adjourned Annual Meeting<br>Albuquerque, New Mexico |
| Meeting No. 76   | November 7, 1961   | Special Meeting<br>Denver, Colorado                 |
| Meeting No. 77   | February 6, 1962   | Special Meeting<br>Salt Lake City, Utah             |
| Meeting No. 78   | February 28, 1962  | Adjourned Special Meeting<br>Denver, Colorado       |
| Meeting No. 79   | March 19, 1962     | Regular Meeting<br>Boise, Idaho                     |
| *Meeting No. 80  | August 8, 1962     | Adjourned Regular Meeting<br>Vernal, Utah           |
| **Meeting No. 81 | September 17, 1962 | Annual Meeting<br>Durango, Colorado                 |

---

\*On August 9th following the meeting at Vernal, Utah the Commission, its staff, and advisers made a field inspection of the Vernal Unit of the Central Utah Project and the Flaming Gorge Storage Unit. See picture on following page.

\*\*On September 17th, after the Annual Meeting at Durango, the Commission, its staff, and advisers toured the project area of the proposed Animas-LaPlata Project in Colorado and New Mexico.





*U. S. Bureau of Reclamation Photo*

Upper Colorado River Commission on Inspection Tour of Flaming Gorge Dam. From left to right: Ival V. Goslin, Executive Director; Robert J. Newell, Chairman; Edwin C. Johnson, Colorado; George D. Clyde, Utah; John H. Bliss, New Mexico; and Earl Lloyd 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) research and studies of an engineering and hydrologic nature of various phases of the water resources of the Colorado River Basin; (B) collection and compilation of documents for a legal department library relating to the utilization of waters of the Colorado River System for domestic, industrial, agricultural purposes and the generation of hydroelectric power, and legal analysis of associated problems; and, (C) an education and information program designed to aid in securing appropriations of funds by the United States Congress for the construction, planning and investigation of various Units and projects of the Colorado River Storage Project and participating projects that were authorized for construction in Public Law 485, 84th Congress, and to secure the authorization by Congress of the construction of additional Storage Units and participating irrigation projects as the essential investigations and planning are completed.

### A. ENGINEERING — HYDROLOGY

Because the Colorado River Storage Project is a water resources development plan of the Upper Colorado River Basin, the Upper Colorado River Commission has determined that the active participation in investigations, studies and plans related to the present and future construction and operation of water-regulating, water-diversion, power-generating, water-utilization facilities is both necessary and expedient. The Commission has a primary duty to the four Upper Division States to do all things necessary both to protect the interests of its member States in the water resources of the Colorado River and to aid in seeing that those resources are developed in the best and most expeditious manner possible. In recognition of this responsibility, the Staff and the Engineering Committee have been actively engaged during the past year in making many hydrologic and engineering studies relative to the utilization and distribution of the water resources of the Upper Colorado River Basin.



## Filling of Upper Basin Storage Units

On April 4, 1962 the Commissioner of Reclamation, Floyd E. Dominy, forwarded to Mr. R. J. Newell, Chairman of the Upper Colorado River Commission, a copy of the "General Principles to Govern, and Operating Criteria for Glen Canyon Reservoir (Lake Powell) and Lake Mead During the Lake Powell Filling Period" which were approved by the Secretary of the Interior on April 2, 1962.

At the same time copies of the "general principles" of reservoir filling criteria were transmitted by the Commissioner of Reclamation to the seven Governors of the Colorado River Basin States. The Governors were requested to comment on a suggestion to use the Colorado River Development Fund to directly purchase replacement energy or to reimburse the Upper Colorado River Basin Fund for money used from that Fund to purchase replacement energy for diminutions in hydroelectric generation at Hoover Dam caused by the filling and operation of the dams and reservoirs of the Colorado River Storage Project.

An "Additional Regulation No. 1 to the General Regulations For Generation and Sale of Power in Accordance With the Boulder Canyon Project Adjustment Act" was attached to the reservoir filling criteria. This Additional Regulation No. 1 is to provide for reimbursement of the Upper Colorado River Basin Fund after June 1, 1987 for money expended therefrom on account of allowances for diminutions in generation at Hoover Dam during the filling period of the Colorado River Storage Project reservoirs. (See Appendix D.) In accordance with Article 27 of the "General Regulations" copies of the Additional Regulation No. 1 and the reservoir filling criteria were sent by the Department of the Interior to the contractors for power generated at Hoover Dam with the request that they submit their comments on the proposed regulation within 30 days.

The Engineering Committee of the Upper Colorado River Commission has acted as a coordinating body for its four member States in the study and discussion of various proposals of "general principles" or reservoir filling criteria. The Bureau of Reclamation did not request opinions or comments from the Upper Colorado River Commission concerning the promulgated filling criteria. Therefore, the Commission took no official action with respect to the problem.

The "General Principles" including the Additional Regulation No. 1 were published in the Federal Register on July 19, 1962. A copy of the "General Principles" is attached to this report as Appendix D. The Department of the Interior included a line item



in the presentation to the House Public Works Subcommittee of the Appropriations Committee for \$875,000 to be used to purchase energy to make up any diminution in power generation at Hoover Dam during Fiscal Year 1963.

When the Commission learned of this item in the Department's budget request it was too late to present testimony before the Subcommittee which held hearings on the matter. In an effort to establish a legislative history upon which to base future action, if necessary, the Commission adopted a motion requesting each State Commissioner to ask the members of their respective Congressional Delegations to "protest the use of Upper Colorado River Basin Fund monies or energy from Upper Basin projects for the purpose of supplying so-called power deficiencies at Hoover Dam during the filling period unless the appropriations legislation provides that the Upper Colorado River Basin Fund be reimbursed to the full extent that it will be depleted by virtue of such procedures."

Congressman Wayne N. Aspinall of Colorado, Chairman of the House Committee on Interior and Insular Affairs, in response to the request, asked Congressman Cannon, Chairman of the House Appropriations Committee, during the debate on the Appropriations bill in the House of Representatives on August 16, 1962:

"... Since this is the first time that funds appropriated for the Upper Colorado River Basin fund have been earmarked for the purchase of replacement power I want to make it absolutely clear that the principles and criteria approved by the Secretary also provide that the Upper Colorado River Basin fund be reimbursed from Hoover Dam power revenues, beginning with June 1, 1987, to the full extent that it will be depleted by virtue of such procedure, and to ask the chairman of the Committee if this is his understanding regarding this matter.

"Mr. Cannon: I may say to the gentleman from Colorado that this is our understanding and that under existing conditions and so long as the situation obtains, the schedule indicated by the gentleman will be followed."

## Participating Projects

### Central Utah Project

Several special problems have been encountered in the process of planning the Congressionally authorized initial phase of the Central Utah Project. In an attempt to resolve these problems a Duchesne

River Area Study Committee was formed. Serving on this committee are the following representatives:

**Upper Colorado River Commission**

Paul A. Rechard, Chairman

**Bureau of Indian Affairs**

James W. Chamberlin

Frederic H. Varnum

**Ute Indian Tribe**

R. O. Curry

Elbert L. Decker

**Utah Water and Power Board**

Daniel F. Lawrence

**Bureau of Reclamation**

Palmer B. DeLong

John J. Hedderman

**Non-Indian Land Owners — Duchesne River Area**

Leo Haueter

The Committee finished its report in April, 1962. A synopsis of the report, as prepared by the committee, is as follows:

“The Duchesne River Area Study Committee has completed its review of the land and water resources of the Duchesne River and its tributaries involved in the Central Utah Project Initial Phase, Bonneville Unit. The Committee studies included the following activities.

Review of basic water supply records and correlations.

Inventory of land and water rights.

Determination of diversion requirements and return flow patterns.

Appraisal of water quality at various points along the Duchesne River.

Preparation of simulated operation studies to appraise the probable water use in the Duchesne River area without the Central Utah Project and the potential use with the project.

“The studies show that the Indian lands now irrigated or recommended by the Committee for irrigation development concurrently with the initial phase of the Central Utah Project, do not



need supplemental water because of a superior water right and an adequate direct flow supply. Non-Indian lands in the Duchesne River area, depending on the priority of individual water rights, need a supplemental supply especially in the latter part of the irrigation season. The Bonneville Unit can be developed to provide a minimum economic diversion to the Bonneville Basin and, if desired by the beneficiaries, a reasonably adequate supply for irrigable lands with a water right in the Duchesne River area.

"The Committee recommends:

(1) That the Indians agree to limit their development to the acreage set forth in the report;

(2) That certain applications to appropriate large quantities of water from the Duchesne River and tributaries, pending before the State Engineer, be subordinated to water rights for the Central Utah Project; and

(3) That this report be accepted as a basis for planning the Central Utah Project development."

At its last meeting on April 25, 1962 all members of the committee agreed that the committee-type approach had been worthwhile and had aided in the solution of the problems of the Duchesne River. They were unanimous in their opinion that the method would be applicable to other areas of the Uinta Basin at the appropriate time.

### Savery-Pot Hook Project

The Staff prepared a water supply analysis for the Savery-Pot Hook Project in Colorado and Wyoming. This study was prepared in order to furnish the Commission and the various States with a more complete understanding of the water supply available for the project. Copies of this informational study were made available to the members of the Engineering Committee and Commission.

### Feasibility Reports

Feasibility reports on several potential participating projects have been circulated by the Bureau of Reclamation for comments by affected States and agencies prior to submission of the reports to Congress with requests for authorization of construction of the projects. Our staff has analyzed the reports that have been circulated in order that effective and positive action may be taken by the Commission to assist in securing Congressional approval for these potential additions to the development program in the Upper Colorado River Basin.

## Little Snake River Interstate Priority Schedule

As directed by the Upper Colorado River Basin Compact [Article 11 (a) (2)] a revised interstate priority schedule of water rights on the Little Snake River has been prepared and submitted for approval to the States of Wyoming and Colorado. Officials of Colorado have approved the revised schedule. Officials of Wyoming are currently considering it

## Lower Basin Water Log

The staff compiled for the Commission and its Engineering Committee a water log of the Lower Colorado River Basin. The purpose of the log is to present water supply data in a compact yet usable form with a minimum of analysis.

The records of day to day operations at Lake Mead were tabulated and plotted on charts for ready reference. About once a month the charts and graphs were forwarded to members of the Commission and its Engineering Committee.

The Commission became aware that the Bureau of Reclamation was proposing to release about 280,000 acre-feet of water which was stored in Lake Mead during April, 1962 for the purpose of "sluicing" the river to maintain the channel below Imperial Dam. The Commission directed that a letter be sent to the Secretary of the Interior indicating that water has become too valuable to be used for sluicing purposes. The Commission urged that immediate steps be taken to secure the necessary mechanical equipment to maintain an adequate channel and offered its assistance in support of efforts to secure appropriations of funds by the Congress to accomplish this purpose.

## Pollution of Interstate Waters of the Colorado

In 1960 the United States Public Health Service, following the procedures of Public Law 660, 84th Congress, 2d Session, as amended, called a conference on Colorado River Pollution in Phoenix, Arizona. At this Conference it was determined that a study of the pollution problem in the Colorado River Basin was needed. It was decided to make the study and the scope was outlined in such a manner that the pollution problem would include all aspects of water quality. The original proposed study was to take six years for completion. Apparently the immediate reason for calling the Conference was a problem of radioactive material in the Colorado River and its tributaries caused by the operations of various uranium processing mills in the Upper Basin.



At the Third Conference held in Salt Lake City on May 9 and 10, 1962, attended by members of the Commission Staff, the reports seemed to indicate that a solution to the radioactive materials problem had been reached and that the tributaries of the Colorado are in excellent shape so far as radioactivity is concerned. Evidently all parties having anything to do with the problem had taken effective measures to solve it so that all that remains is to keep a monitorial check on the river as a prerequisite to keeping radioactivity within safe limits. At the third Conference it was apparent that the attention of the Public Health Service would be turned to other aspects of the quality-of-water question on the Colorado River System. The Department of Health, Education and Welfare, acting through the Public Health Service, and apparently with the support of the various States acting through their Health or Pollution Departments, seemed most anxious to attack the over-all quality problem.

### **Upper Colorado River Basin Maps**

Two large maps, one 6½ feet x 4½ feet to scale 1:500,000 and one 3½ feet x 3 feet to scale 1:1,000,000, of the Upper Colorado River Basin have been prepared. In addition to other pertinent features these maps show the authorized Storage Units and participating projects and projects for which feasibility reports have been completed.

### **Stream Flow Gaging Stations**

With the cooperation of the Surface Water Branch of the Geological Survey we are collecting and organizing all data, such as, runoff records, station descriptions, locations, drainage areas, financing, suitability for correlations, etc. for gaging stations in the Colorado River Basin. Maps of each State are being prepared showing the location of these stations. All stations will be analyzed and reviewed with reference to their adequacy and purpose. This is being done as one of the preliminary steps leading to comprehensive hydrological studies and consumptive use of water studies above every major gaging station in the basin in order that eventually we can know intimately the behavior and characteristics of every stream and its watershed before attacking directly the major problems, such as, stream flow routing, operation of the Storage Units, and other aspects of river operation studies.

### **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 by the Commission. Forecasts of stream flow made by various other agencies are to be found in the files of the Commission.

## LEGAL

### Arizona v. California, et al

In January, 1962 the Supreme Court allowed 16 hours of oral argument in Arizona v. California. No decision was reached during the term of court. The Court ordered reargument of the case allowing 6 hours for this reargument. For an outline of the position of the parties in this case attention is called to the Thirteenth Annual Report of the Upper Colorado River Commission at page 26 et. seq.

### Marble Canyon

On September 10, 1962 the Presiding Examiner for the Federal Power Commission filed his recommended Decision in the Arizona Power Authority Application for a Federal license to construct a power project at Marble Canyon. The Presiding Examiner recommended that a license be granted to the Arizona Power Authority upon certain terms and conditions. The Commission's principle interest in the terms and conditions stems from those which protect the interests of the Upper Basin. These are found in the following Articles of the recommended Decision:

*"Article 36.* The Marble Canyon development shall be coordinated with the U. S. Bureau of Reclamation's Glen Canyon project and/or other entities so as to achieve maximum coordination benefits, and there shall be an equitable sharing of the benefits resulting from such coordination.

*"Article 37.* The Licensee shall, prior to beginning of operation of the Marble Canyon development, enter into an agreement with the U.S. Bureau of Reclamation, or his designated representative, to compensate that Bureau for backwater effect and/or tailwater encroachment on the Glen Canyon project. In the event no satisfactory agreement is concluded by such time, the Commission shall fix and determine the compensation to be made by the Licensee for such backwater and/or tailwater encroachment, after notice and opportunity for a hearing.

*"Article 38.* The Licensee shall not make any claim under the authority of this license against the United States or any water users' organization claiming through the United States

for any damage resulting from any future depletion in the flow of waters of the Colorado River and its tributaries for the irrigation of lands and other beneficial consumptive uses.

*"Article 50. All patents, grants, contracts, concessions, leases, permits, licenses, rights of way, or other privileges from the United States or under its authority, necessary or convenient for the use of waters of the Colorado River or its tributaries, or for the generation or transmission of electrical energy generated by means of the waters of said river or its tributaries, whether under this Act, the Federal Water Power Act, or otherwise, shall be upon the express condition and with the express covenant that the rights of the recipient or holders thereof to waters of the river or its tributaries, for the use of which the same are necessary, convenient, or incidental, and the use of the same shall likewise be subject to and controlled by said Colorado River Compact."*

Each interested party has been allowed time to file exceptions to the recommended decision of the F.P.C.'s Presiding Examiner.

### **Tobin v. United States**

The legal staff has maintained a close surveillance of this case as it has proceeded through the Federal Courts. The case involves the refusal of the executive officer of the New York Port Authority to allow a Congressional Subcommittee access to internal operating records. The Federal District Court found the defendant guilty of contempt of Congress (195 F. Supp. 588). The Circuit Court of Appeals on June 7, 1962 reversed the conviction of the lower court (306 Fed. 270, 1962). On August 30, 1962 the U.S. Solicitor General filed the case in the Supreme Court seeking a review of the Circuit Court decision by way of Certiorari.

Our interest in this case stems from the fact that the New York Port Authority is an organization created by an interstate compact, and, also, because of interest in certain issues raised in the trial court by the United States. The issue which concerned the Upper Colorado River Commission most was the claim that Congress had the power to withdraw its consent to an interstate compact. The implications of such a doctrine could have far reaching consequences for an organization such as the Upper Colorado River Commission. We were also interested in the scope of the investigation in that the Congressional Subcommittee sought to secure information concerning the detailed internal operation of the compact organization.



The Circuit Court of Appeals refused to determine the constitutional question of the right of Congress to repeal its consent to a compact on the grounds that this question was not necessary to its disposal of the question before it. It held that the authority of the Subcommittee was not broad enough to cover the request made for the internal operating documents, and, thus, the refusal to submit such documents to the Subcommittee did not constitute contempt of Congress.

The Supreme Court has not acted upon the Solicitor General's Petition.

### **Mexican Treaty**

During the year problems have arisen concerning operations of the Colorado River under the terms of the Treaty between the United States and Mexico. The commission staff has spent a great amount of time studying various aspects of this treaty and its possible effects upon the Upper Basin.

### **Library**

The Commission is continuing its efforts to accumulate a library of pertinent documents pertaining to the Colorado River System in order that Engineering and Legal information can be furnished to any of its member States should the need arise.

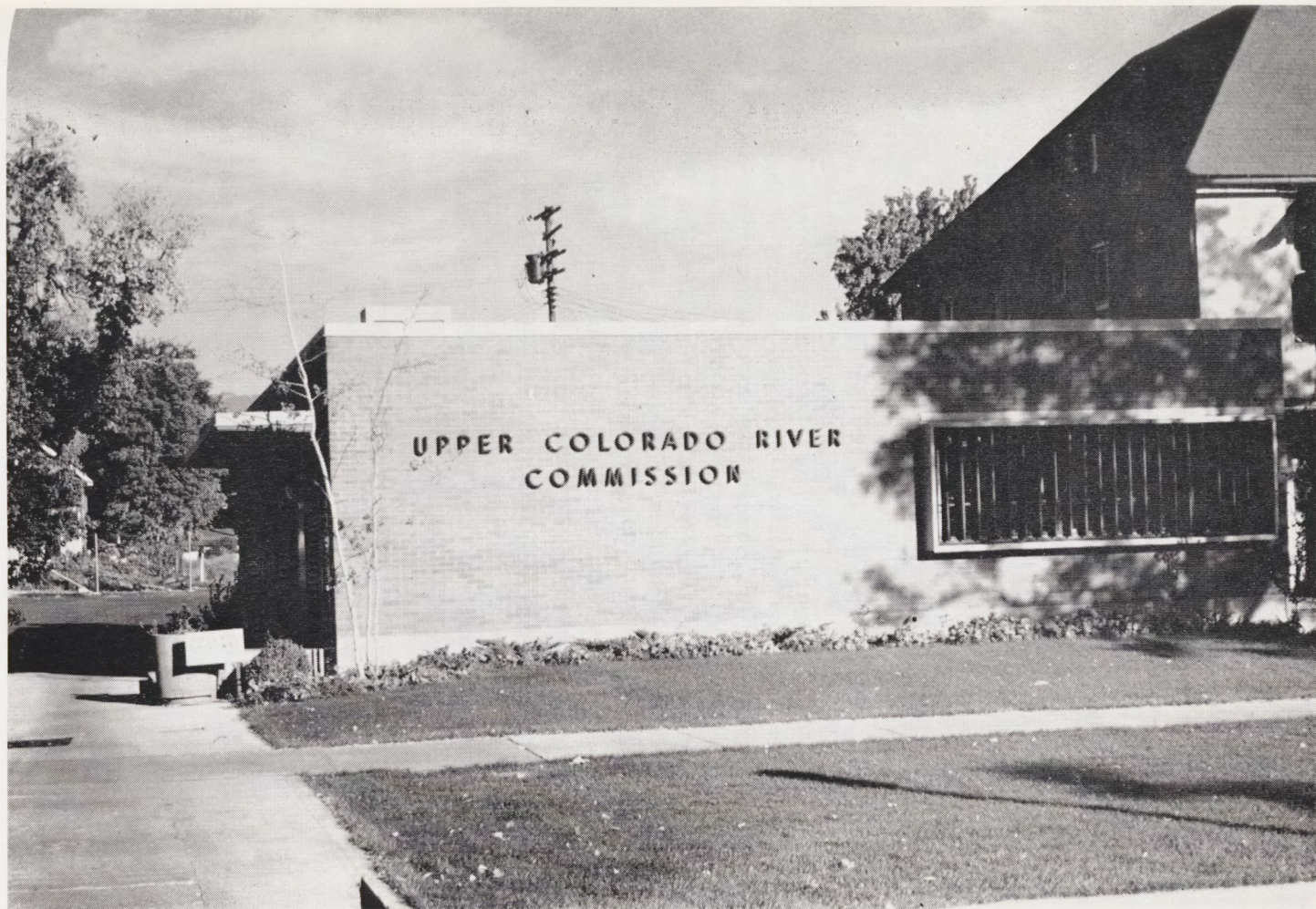
Legal aspects are being studied of many problems associated with the utilization and conservation of water and power resources of the Colorado River Basin.

## **C. EDUCATION — INFORMATION**

The Upper Colorado River Commission has directed its Education and Information 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 with respect to 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





Headquarters Building, Upper Colorado River Commission.  
355 South Fourth East Street, Salt Lake City 11, Utah.



funds for the investigations of additional participating projects that are given priority in planning in the Colorado River Storage Project Act. As part of this cooperation, the Commission's Executive Director has been 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 Relief Model of the Upper Colorado River Basin and adjacent areas has been on display in the City-County Building in Provo, Utah. It continues to attract many interested individuals and groups, especially tourists from other parts of the country. (See picture last page of this report).

The Commission has produced a motion picture on the recreational benefits of reclamation reservoirs in the Upper Colorado River Basin. Twenty-six prints of the picture titled "The Lakes Made For You," were secured. The Bureau of Reclamation purchased fifteen of these prints for distribution through channels available to it. One print was furnished to each of the four States represented on the Commission, and the remaining prints are available in the office of the Commission. Any of these films may be obtained for showing by writing to or calling the Bureau of Reclamation, Region 4 office, individual State Commissioners, or the Commission's office. Those persons who have viewed the picture have been very enthusiastic about it. The film is entertaining, educational, and well worth seeing.

The Commission has authorized the publication of a new informational booklet showing the progress of the development of the water and power resources of the Upper Colorado River Basin. This publication will be available early in 1963.

## VIII. Colorado River Storage Project and Participating Projects

### A. AMENDMENTS TO PUBLIC LAW 485

Since the original Colorado River Storage Project Act was signed by the President on April 11, 1956 to become Public Law 485, 84th Congress, it has been amended as follows:

1. Section 9 of the Norman Project Act of June 27, 1960 (P. L. 86-529) amended Section 5 (f) of the Storage Project Act (P.L. 485) by changing the method of computing the interest rate applicable to the Storage Units and participating projects during construction and on the unpaid balances.

2. Section 10 of the Navajo Irrigation — San Juan-Chama Project Act of June 13, 1962 (P. L. 87-483) supplements Section 12 of the Colorado River Storage Project Act by increasing the amount authorized to be appropriated from \$760,000,000 to \$845,828,000 and specifies that the increase, \$85,828,000, shall be available solely for the construction of the San Juan-Chama Project.

3. Section 15 of P. L. 87-483 amends Section 15 of P. L. 485 which directs the Secretary of the Interior to continue studies and report on the quality of water of the Colorado River. Section 15 of P.L. 87-483 requires the Secretary, in addition to continuing his studies of the quality of water to (a) appraise its suitability for municipal, domestic, and industrial use and for irrigation; (b) estimate the effects of additional developments involving its storage and use (whether already authorized or contemplated for authorization) on the remaining water available for use in the United States; (c) study all possible means for improving the quality of such water and of alleviating the ill effects of water of poor quality; and (d) report the results of his studies and estimates to the 87th Congress and every two years thereafter.

4. Section 18 of P. L. 87-483 eliminates the San Juan-Chama and Navajo Indian Irrigation projects from Section 2 of P. L. 485 (the priority of planning section) and places them in Section 1, subsection (2) of P. L. 485 (the construction authorization section). Section 18 of P. L. 87-483 also makes correction changes in the language of P. L. 485 in Sections 1, 5, and 7.



## B. APPROPRIATIONS OF FUNDS BY THE UNITED STATES CONGRESS

The appropriations of funds for reclamation and other public works projects remained in a state of confusion until the closing days of the 87th Congress. The delay and confusion seemed to stem from the fact that 1962 was an election year, and there were many other important problems in the administration's program that needed resolution ahead of appropriations bills or concurrently with them.

The House Committee on Appropriations did not submit its Report No. 2223 containing recommendations of funds to be appropriated for the Colorado River Storage Project to the Congress until August 14, 1962. As the following Table "A" will show, the House Committee modified the President's budget requests in several respects. The Committee disallowed the \$550,000 for advance planning of the San Juan-Chama Participating Project because it said that it was impossible to hold hearings and go into the merits of the project after the budget estimate was received, and it did not deem it appropriate to recommend beginning advance planning on a project of the magnitude of San Juan-Chama without a careful examination of its economics and its merits during regular hearings. The House Committee also recommended a reduction in the amount of money in the budget request to be appropriated for recreational facilities at the Glen Canyon Dam. The Committee explained its actions regarding the changes from the President's budget request as follows:

### "REDUCTIONS RECOMMENDED

*"San Juan-Chama Project, Colorado and New Mexico. —* An estimate of \$550,000 for advanced planning on the San Juan-Chama feature of the Colorado River Storage Project came to the Congress in the form of a budget amendment some time after the Committee had completed its hearings. The funds requested have been disallowed without prejudice to the project. It was impossible to hold hearings and to go into the merits of the project since the estimate was received so late. It seems inappropriate to recommend beginning advanced planning on a project with a total cost of \$84,500,000 without a careful examination of its economics and its merits in the regular hearing process.

*"Recreation Facilities.—*An appropriation of \$2,322,000 is recommended for the recreation facilities on this project. This is a reduction of \$768,000 in the budget estimate of \$3,090,000. The



reduction includes deletion of \$358,400 programed for a visitor center at the Wahweap site on the Glen Canyon reservoir and a general reduction of 15% on the balance of the budget estimate. The Wahweap site is a recreation center planned on the reservoir some 15 miles from the dam site proper. Its principal purpose is for camping and water recreation on the reservoir. It is the Committee's understanding that a visitor center in the form of an overlook at the spectacular Glen Canyon Dam site is contemplated. This obviously would be the prime attraction for visitations to the project area and will provide an unique opportunity for a view of the project. There appears to be no reason for the expenditure of over a quarter of a million dollars for another visitor center at an area which is primarily adapted to camping, boating and fishing recreation. At this particular location the Committee would consider a scaled down version for a center to provide the essentials necessary for the proper administration of the area and distribution of information concerning the camping and recreational opportunities.

"With respect to the 15% reduction, it must be pointed out that the total program for recreation with respect to this project is nonreimbursable and amounts to \$32,569,000. The Committee is convinced that this is an excessively high figure for providing the minimum basic facilities needed for recreation. It is also convinced that the funds programmed for some of the smaller, less spectacular features of the project will attract users from only the local communities. In anticipation of some willingness on the part of the states to participate to a larger extent in the development and management of such areas, the Committee intends to cut back the total expenditures wherever possible. It is convinced that a hard scrutiny of the plan as presented to date and more realistic appraisals of actual needs would permit the National Park Service to present a much more modest program. This will be expected in connection with the 1964 budget presentation.

*"Fish and Wildlife Facilities.*—The Committee received testimony to the effect that in the acquisition of wildlife refuge areas on this project there has been contemplated the purchase and lease of certain State lands, in some cases to be turned back to the State for management as portions of wildlife areas. The Committee sees no justification whatever for the purchase or lease of State owned land, and directs that none of the funds appropriated for the Colorado River Storage Project be used for this purpose. The total cost of fish and wildlife facilities is estimated at approximately \$11,000,000. The Committee will also expect a more modest presentation in this program next year.



*“Reduction offset by unobligated balance and slippages.—*The Committee has applied a \$2,500,000 reduction in view of the fact that an actual carryover of \$2,563,000 from fiscal year 1962 is available for obligation in fiscal year 1963. The budget had projected no unobligated carryover into the new fiscal year. The general history of obligations and slippages on this project will support the fact that this reduction can be made without disturbing progress on any of the project elements.”

On September 28, 1962 the Senate Committee on Appropriations reported its recommendations to the Senate in Report No. 2178. The Senate Committee recommended the full amount of the amended budget estimate for advance planning, including the \$550,000 for the San Juan-Chama project. It also recommended an additional appropriation of \$250,000 for the purpose of accelerating advance planning on the Central Utah Project, and the full amount of the budget estimate, \$4 million, for recreation facilities of the Colorado River Storage Project. It was also the desire of the Senate Committee that work contemplated for the construction of specific visitor facilities to provide access to Rainbow Bridge National Monument be accomplished as rapidly as possible so that the facilities will be available when the level of Lake Powell will permit their use.

With regards to its actions the Senate Appropriations Committee said:

*“Undistributed reduction based on anticipated delays.—*The committee has increased the reduction for anticipated delays by \$1,000,000, which is \$1,500,000 less than the amount (\$2,500,000) applied by the House of Representatives. As of June 30, 1962, there was an unobligated balance of more than \$2,800,000 in the Upper Colorado River Basin fund.

*“Advance planning, \$2,033,000.—*The committee recommends the full amount of the budget estimate, \$1,783,000, for advance planning, which includes \$550,000 for the San Juan-Chama project. The need for additional irrigation, industrial and domestic water which this project will provide is so urgent that unnecessary delay in its construction should be avoided.

*“The committee also recommends an additional appropriation of \$250,000 for the purpose of accelerating advance planning on the Central Utah project. Of this amount \$200,000 is for planning of the Provo River features of the Bonneville unit, and \$50,000 is to be used for studies in the Sevier River Basin.*

*“Recreation facilities.—*The committee recommends the full amount of the budget estimate, \$4,000,000, for recreation facilities



on the Colorado River storage project. Particularly, the committee approves construction of the visitor center at the Wahweap site on Lake Powell behind Glen Canyon. Visitors to this area now are many, and as facilities increase with the progress of construction of the Glen Canyon Dam, additional visitors will come to the area for many purposes.

*“Seedskadee participating project, Wyoming.*—The committee directs that not more than \$95,000 of the amount for the Seedskadee participating project, Wyoming, be utilized for placing an asphalt surface on the Lincoln County, Wyo., road between U.S. Highway 189 and the Bureau of Reclamation community of Fontenelle. It is the desire of the committee that before this sum is obligated, the State of Wyoming agree to assume financial responsibility for maintaining the road.

*“Rainbow Bridge National Monument.*—Last year funds were provided for transfer to the National Park Service for the construction of specific visitor facilities to provide access to Rainbow Bridge National Monument. It is the desire of the committee that the work contemplated be accomplished as rapidly as possible so that the facilities will be available when the level of Lake Powell will permit their use.”

The House and Senate versions of the Appropriations Bill went to a Conference Committee. Both Houses of Congress adopted the Conference Report No. 2531 dated October 4, 1962 a few days before final adjournment of the 2d Session of the 87th Congress. The Congress acting upon the Conference Report appropriated \$107,808,000 instead of \$106,508,000 as proposed by the House and \$109,576,000 as proposed by the Senate. The final figure also included the \$550,000 for advance planning of the San Juan-Chama Project. The Conference Report No. 2531, 87th Congress, Second Session states:

#### “UPPER COLORADO RIVER STORAGE PROJECT

“Amendments Nos. 10, 11, and 12: Appropriate \$107,808,000 instead of \$106,508,000 as proposed by the House and \$109,576,000 as proposed by the Senate, provide that \$104,576,000 instead of \$103,276,000 as proposed by the House and \$105,576,000 as proposed by the Senate shall be available for the Upper Colorado River Basin fund, and provide that \$3,232,000 as proposed by the House instead of \$4,000,000 as proposed by the Senate shall be available for construction of recreational and fish and wildlife facilities.

“The increase above the House figure includes \$550,000 for San Juan-Chama and restoration of \$750,000 of the House reduc-



tion for slippage. Of the funds available for the Seedskadee, Wyo., project, \$95,000 shall be available for the Lincoln County, Wyo., road between U.S. Highway 189 and the Bureau of Reclamation community at Fontenelle."

A summary of appropriations for the Colorado River Storage Project and participating projects for fiscal 1963 is recapitulated in Table "A". Table "B" shows the summary of appropriations of funds for the Storage Project for fiscal years 1957-1963. It may be interesting to note that for fiscal 1963 the appropriations for the Colorado River Storage Project and participating projects amounted to over 40% of the total appropriations for construction and rehabilitation in the reclamation program.

Table "A"

# COLORADO RIVER STORAGE PROJECT APPROPRIATIONS SUMMARY FOR FISCAL 1963

|   | Original<br>Budget Request | Amended<br>Budget Request<br>5-24-62 | Allowed by<br>House Approp.<br>Committee<br>8-14-62 | Passed by<br>House of Repr. | Allowed by<br>Senate<br>Committee<br>9-28-62 | Passed by<br>Senate | Approp. by<br>Congress |
|---|----------------------------|--------------------------------------|---|-----------------------------|--|---------------------|------------------------|
| STORAGE UNIT                                      |                            |                                      |   |                             |  |                     |                        |
| Glen Canyon                                       | \$44,924,000               | \$44,924,000                         | \$44,924,000  | \$44,924,000                | \$44,924,000                                 | \$44,924,000        | \$44,924,000           |
| Flaming Gorge                                     | 13,622,000                 | 13,622,000                           | 13,622,000  | 13,622,000                  | 13,622,000                                   | 13,622,000          | 13,622,000             |
| Navajo  | 761,000                    | 761,000                              | 761,000   | 761,000                     | 761,000                                      | 761,000             | 761,000                |
| Curecanti   | 10,653,000                 | 10,653,000                           | 10,653,000  | 10,653,000                  | 10,653,000                                   | 10,653,000          | 10,653,000             |
| Transmission Division                             | 39,484,000                 | 32,600,000                           | 32,600,000  | 32,600,000                  | 32,600,000                                   | 32,600,000          | 32,600,000             |
| PARTICIPATING PROJECTS                            |                            |                                      |   |                             |  |                     |                        |
| Vernal Unit, Utah                                 | -----                      | -----                                | -----   | -----                       | -----  | -----               | -----                  |
| Florida, Colorado                                 | 4,086,000                  | 4,086,000                            | 4,086,000   | 4,086,000                   | 4,086,000                                    | 4,805,000           | 4,806,000              |
| Hammond, New Mexico                               | -----                      | -----                                | -----   | -----                       | -----  | -----               | -----                  |
| Paonia, Colorado                                  | -----                      | -----                                | -----   | -----                       | -----  | -----               | -----                  |
| Seedskaadee, Wyoming                              | 10,411,000                 | 10,411,000                           | 10,411,000  | 10,411,000                  | 10,411,000                                   | 10,411,000          | 10,411,000             |
| Smith Fork, Colorado                              | -----                      | -----                                | -----   | -----                       | -----  | -----               | -----                  |
| Emery County, Utah                                | 1,967,000                  | 1,967,000                            | 1,967,000   | 1,967,000                   | 1,967,000                                    | 1,967,000           | 1,967,000              |
| Drainage and Minor Constr.                        | 502,000                    | 502,000                              | 502,000   | 502,000                     | 502,000                                      | 502,000             | 502,000                |
| Advance Planning                                  | 1,233,000                  | 1,783,000                            | 1,233,000   | 1,233,000                   | 2,033,000                                    | 2,033,000           | 1,783,000              |
| TOTAL (Upper Colorado)                            | \$127,643,000              | \$121,309,000                        | \$120,759,000                                       | \$120,759,000               | \$121,559,000                                | \$121,559,000       | \$121,309,000          |
| Other Department of the<br>Interior Agencies      | 4,000,000                  | 4,000,000                            | 3,232,000   | 3,232,000                   | 4,000,000                                    | 4,000,000           | 3,232,000              |
| Unidentified Reduction                            | —14,983,000                | —14,983,000                          | —17,483,000   | —17,483,000                 | —15,983,000                                  | —15,983,000         | —16,733,000            |
| New Money Appropriation                           | \$116,660,000              | \$110,326,000                        | \$106,508,000                                       | \$106,508,000               | \$109,576,000                                | \$109,576,000       | \$107,808,000          |
| Total Reclamation Constr.<br>and Rehabilitation   | \$276,535,000              | \$270,951,000                        | \$259,585,000                                       | \$259,585,000               | \$269,937,000                                | \$269,937,000       | \$266,026,000          |
| Colorado River Storage<br>Project as a % of total | 42.2%                      | 40.7%                                | 41.0%   | 41.0%                       | 40.6%  | 40.6%               | 40.5%                  |



Table "B"

# APPROPRIATIONS SUMMARY FISCAL 1957-1963 COLORADO RIVER STORAGE PROJECT

| FISCAL YEAR                      | 1957         | 1958         | 1959         | 1960         | 1961         | 1962         | 1963          | SUM           |
|----------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|---------------|
| STORAGE UNITS                    |              |              |              |              |              |              |               |               |
| Glen Canyon                      | \$ 9,325,000 | \$27,300,000 | \$47,960,000 | \$46,182,825 | \$23,535,000 | \$19,895,000 | \$ 44,924,000 | \$219,121,825 |
| Flaming Gorge                    | 1,300,000    | 4,800,000    | 10,098,335   | 12,675,000   | 12,000,000   | 7,202,000    | 13,622,000    | 61,697,335    |
| Navajo                           | 800,000      | 1,800,000    | 7,000,000    | 9,696,375    | 11,776,000   | 4,380,500    | 761,000       | 36,213,875    |
| Curecanti                        | .....        | .....        | .....        | .....        | 1,400,000    | 5,229,000    | 10,653,000    | 17,282,000    |
| Transmission Division            | .....        | 100,000      | 205,000      | 702,000      | 5,318,000    | 13,673,000   | 32,600,000    | 52,598,000    |
| Subtotal                         | \$11,425,000 | \$34,000,000 | \$65,263,335 | \$69,256,200 | \$54,029,000 | \$50,379,500 | \$102,560,000 | \$386,913,035 |
| PARTICIPATING PROJECTS           |              |              |              |              |              |              |               |               |
| Paonia                           | .....        | .....        | \$ 1,900,000 | \$ 3,105,375 | \$ 903,000   | \$ 330,000   | .....         | \$ 5,338,375  |
| Vernal                           | .....        | .....        | 1,000,000    | 1,950,000    | 2,189,000    | 1,248,000    | .....         | 6,387,000     |
| Smith Fork                       | .....        | .....        | .....        | 487,500      | 1,500,000    | 2,027,000    | .....         | 4,014,500     |
| Hammond                          | .....        | .....        | .....        | 487,500      | 1,300,000    | 1,816,500    | .....         | 3,604,000     |
| Seedskadee                       | .....        | .....        | .....        | 1,320,150    | 2,000,000    | 5,711,000    | 10,411,000    | 19,442,150    |
| Florida                          | .....        | .....        | .....        | .....        | 750,000      | 2,777,000    | 4,086,000     | 7,613,000     |
| Emery County                     | .....        | .....        | .....        | .....        | .....        | 500,000      | 1,967,000     | 2,467,000     |
| Drainage and Minor Constr.       | .....        | .....        | .....        | .....        | .....        | .....        | 502,000       | 502,000       |
| Subtotal                         | .....        | .....        | \$ 2,000,000 | \$ 7,350,525 | \$ 8,642,000 | \$14,409,500 | \$ 16,966,000 | \$ 49,368,025 |
| Advance Planning                 | \$ 1,575,000 | \$ 1,142,000 | \$ 770,000   | \$ 797,550   | \$ 938,000   | \$ 1,279,000 | \$ 1,783,000  | \$ 8,284,550  |
| Slippage and Under Financing     | .....        | .....        | .....        | —2,944,500   | —2,209,000   | —13,533,500  | —16,733,000   | —35,420,000   |
| Other Dept. of Interior Agencies | .....        | .....        | .....        | .....        | .....        | 2,933,500*   | 3,232,000*    | 6,165,500*    |
| TOTAL                            | \$13,000,000 | \$35,142,000 | \$68,033,335 | \$74,459,775 | \$61,400,000 | \$55,468,000 | \$107,808,000 | \$415,311,110 |

\*Available for construction of recreational and fish and wildlife facilities.

## C. FISCAL DATA — COLORADO RIVER STORAGE PROJECT

Section 6 of the Act authorizing the construction and operation of the Colorado River Storage Project and participating projects (Act 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 the participating projects." Appendix C of this report consists of the FIFTH ANNUAL REPORT ON THE COLORADO RIVER STORAGE PROJECT AND PARTICIPATING PROJECTS of the Secretary of the Interior to the Congress of the United States for the fiscal year ending June 30, 1961.

## D. AUTHORIZED STORAGE UNITS

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

The construction of four Storage Units of the Colorado River Storage Project and eleven participating irrigation projects was authorized in Section 1 of Public Law 485, 84th Congress. The four authorized Storage Units are Glen Canyon on the Colorado River in Utah and Arizona, Flaming Gorge on the Green River in Wyoming and Utah, Navajo on the San Juan River in New Mexico and Colorado, and Curecanti on the Gunnison River in Colorado. Combined they will provide about 34,598,000 acre-feet of reservoir capacity and 1,108,000 kilowatts of installed generating capacity.

### 1. Glen Canyon Storage Unit

Glen Canyon Dam and Reservoir comprises the key Storage Unit and is the largest of the initial four, providing about 80 per cent of both the storage and generating capacity. It will rise 573 feet above the river and will be roughly comparable in size to Hoover Dam and Lake Mead. The concrete gravity-arch dam is 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 (Lees Ferry is the location of the Geological Survey gaging station and is 1.3 miles upstream from the compact point, Lee Ferry, which divides the Colorado River Drainage into two basins). It will be the second tallest dam in the United States. The reservoir will have a capacity of 28,042,000 acre-feet and will





*U. S. Bureau of Reclamation Photo*

Glen Canyon Storage Unit on the Colorado River, Colorado River Storage Project.  
Aerial view of construction at Glen Canyon Dam looking downstream.



extend 186 miles upstream on the Colorado River, and 71 miles up the San Juan River. The power house, which is located at the toe of the dam will have eight generating units with a total installed capacity of 900,000 kilowatts.

### Construction Activities

The prime contract for constructing Glen Canyon Storage Unit is about 80 per cent complete. Translated into absolute terms, this means that there are 3,800,000 cubic yards of concrete in place in the dam with the highest block about 560 feet above the lowest foundation. All of the concrete is in place, and all of the structural steel installed under the prime contract for the powerhouse. The contractor is expected to meet the schedule for the closing of the right diversion tunnel in February, 1963. The first electric generator is to be in operation in June, 1964.

### 2. Flaming Gorge Storage Unit

Flaming Gorge Dam and Reservoir are located on the Green River in northeastern Utah, 40 miles north of Vernal, Utah, and 32 river miles downstream from the Utah-Wyoming state line. The dam is a concrete thin-arch structure rising 445 feet above the river. The reservoir will have a capacity of 3,789,000 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.

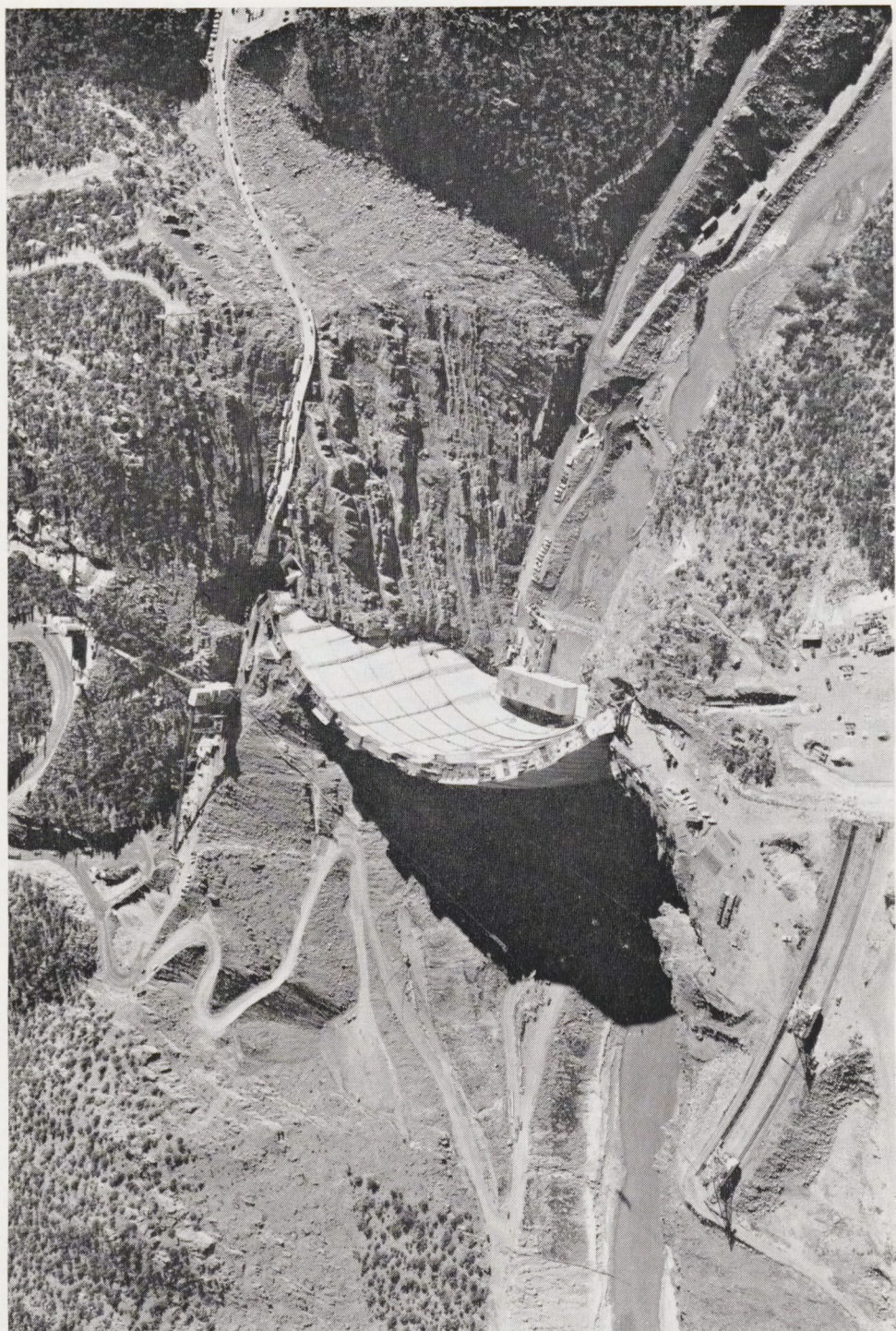
### Construction Activities

Construction of Flaming Gorge Dam was about 90 per cent completed by the end of the water year, September 30, 1962. There were 957,000 cubic yards of concrete in place in the dam. The highest block was 502 feet above bedrock. Clearing of the reservoir area was continuing and work on the powerhouse under the prime contract was complete. Installation of power plant machinery has begun and work under the completion contract is about 14 per cent complete. Closure of Flaming Gorge Dam is expected to take place about November 1, 1962 with initial power production scheduled for late summer of 1963.

### 3. Navajo Storage Unit

Navajo Dam is located in northwestern New Mexico on the San Juan River, 34 miles east of Farmington and 3½ miles down-





*U. S. Bureau of Reclamation Photo*

Flaming Gorge Storage Unit on the Green River, Colorado River Storage Project.  
Aerial view looking down on the construction of the Thin Arch, Flaming Gorge Dam.



stream from the confluence of the Los Pinos and San Juan Rivers. The dam is a rolled earth-fill embankment structure. The reservoir has 1,709,000 acre-feet total capacity and an active capacity of 1,036,000 acre-feet.

The major purpose of this reservoir is to regulate the flows of the San Juan River for the authorized Navajo Indian Irrigation Project near Farmington, the San Juan-Chama participating project in the Rio Grande Basin, and the Hammond participating project. Part of the water to be made available may also be used for industrial and municipal purposes in northwestern New Mexico. Recreational facilities will be provided and are expected to contribute materially to the economy of the area.

### Construction Activities

Navajo Dam was topped out on August 22, 1962 and the dam was dedicated by Secretary of the Interior, Stewart L. Udall, on September 15, 1962. Storage of water was initiated on June 27, 1962 upon closure of the diversion tunnel. About 30,000 acre-feet of water had been stored in the reservoir by September 30, 1962. Water is now being discharged through the auxiliary outlet works in amounts required for downstream rights while the permanent outlet works are being completed by the contractor. Only minimum releases from the reservoir will be made until closure is effected at Glen Canyon. With average runoff, as much as 1 million acre-feet of water may be captured in Navajo Reservoir by the end of the 1963 snow melt runoff.

Reservoir clearing and relocating the D. & R. G. W. Railway have been completed. Recreational facilities are being constructed by the National Park Service. Game fish have been planted in the reservoir by the Colorado and New Mexico Departments of Fish and Game and by the U. S. Bureau of Sport Fisheries and Wildlife.

### 4. Curecanti Storage Unit

Curecanti Storage Unit is located on the Gunnison River in western Colorado, upstream from the Black Canyon of the Gunnison National Monument and downstream from the town of Gunnison. In order to prevent damage to property near the town, the authorizing legislation passed in 1956 (P.L. 485) provides that the storage unit shall store not less than 940,000 acre-feet of water and its high water line shall not extend more than 7,520 feet above sea level. Construction was not to be undertaken until the Secretary





*U. S. Bureau of Reclamation Photo*

Navajo Storage Unit on the San Juan River, Colorado River Storage Project.  
Aerial view of Navajo Dam from upstream showing lake beginning to form.



of the Interior, on the basis of further studies, had certified that in his judgment the benefits of the unit would exceed its costs.

The project will consist of a series of either two or three dams, reservoirs, and appurtenant power generating facilities on the stretch of the Gunnison River that is to be developed. The Secretary of the Interior has certified as to the economic justification of developments at the two upper sites, Blue Mesa and Morrow Point. Investigations of the Crystal site have been completed and a report on its economic justification is being prepared.

In addition to power generation, the Curecanti Unit will regulate the flow of Gunnison River, thus providing benefits to flood control and irrigation. The reservoirs will provide extensive recreational benefits.

Flows of Gunnison River will be largely controlled by the 941,000 acre-foot Blue Mesa Reservoir, the larger and uppermost of the reservoirs. Water released from the Blue Mesa Reservoir through a 60,000 kilowatt capacity power plant at the dam will receive short-term regulation at the Morrow Point Reservoir immediately downstream. The reservoir behind Morrow Point Dam will have a total capacity of 117,000 acre-feet. The active capacity will be about 42,000 acre-feet and the power plant capacity 120,000 kw if the downstream Crystal reservoir is constructed to reregulate flows released at Morrow Point. Without Crystal the power plant capacity will be 40,000 kilowatts.

### Construction Activities

Construction field offices have been established at Gunnison for Blue Mesa Dam and at Montrose for the Morrow Point Dam. The Diversion tunnel has been holed through at Blue Mesa and is now being lined with concrete. The relocation of State Highway 92 near Blue Mesa Dam is nearly complete and work is proceeding on two of the three schedules for relocating U.S. Highway 50 around Blue Mesa Reservoir. The river is scheduled to be diverted around Blue Mesa damsite in March, 1963. Preliminary construction activities are in progress at Morrow Point with award of a prime contract for the dam and powerplant scheduled for May, 1963.

### 5. Transmission Division

The purpose of the Transmission Division is to deliver Colorado River Storage Project power to major load centers or to delivery points from which other agencies may transmit the power to load centers, and to interconnect the generating plants of the





*U. S. Bureau of Reclamation Photo*

Curecanti Storage Unit on the Gunnison River, Colorado River Storage Project. View of river canyon looking upstream toward the axis of Blue Mesa Dam. Note shovel working in outlet portal of the diversion tunnel.



Colorado River Storage Project with each other and with other Federal projects.

### Construction Activities

Construction is essentially complete on the Flaming Gorge-Vernal-Rangely 138-kv Transmission Line and about eighty per cent complete on the Vernal-Hayden-Oak Creek-Kremmling-Green Mountain 138-kv Transmission lines. Construction is continuing on the Vernal Substation and the Green Mountain switchyard additions. These lines and substation facilities are to be in service by August, 1963 for delivery of electrical energy from Flaming Gorge power plant beginning September, 1963.

The Blue Mesa-Gunnison 115-kv Transmission Line was energized in September, 1962, for delivery of construction power to Blue Mesa damsite. This line will eventually deliver power from Curecanti to Gunnison. Construction is essentially complete on the Blue Mesa-Curecanti 115-kv Transmission Line. Construction is about ninety-five per cent complete on the Curecanti-Montrose 115-kv Transmission Line, and fifty-four per cent complete on the Morrow Point-Curecanti 230-kv wood-pole Transmission Line. The Blue Mesa-Gunnison, Blue Mesa-Curecanti, and the Morrow Point-Curecanti Transmission Lines are to be in service by June, 1963 for delivery of construction power to the Morrow Point damsite.

Additional transmission lines under construction are listed with their approximate percentages of completion as follows:

|                                   |                 |
|-----------------------------------|-----------------|
| Glen Canyon-Shiprock 230-kv ..... | thirty per cent |
| Shiprock-Cortez 230-kv .....      | six per cent    |
| Cortez-Curecanti 230-kv .....     | three per cent  |
| Curecanti-Hayden 230-kv .....     | nine per cent   |

A construction contract was awarded June 22, 1962, on the Glen Canyon-Flagstaff-Pinnacle Peak 345-kv Transmission Line. Very little work has been done on this contract to date.

## E. 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 will consume water of the Upper Colorado River System for irrigation, municipal and industrial purposes, and 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.





*U. S. Bureau of Reclamation Photo*

Transmission Division, Colorado River Storage Project.  
Workmen are sagging wire on the wood pole transmission line  
between Vernal, Utah and Hayden, Colorado.



Since 1956 when the original Colorado River Storage Project Act was signed into law, P. L. 485 has been amended once to include additional participating projects. This amendment was by Public Law 87-483 which authorized the construction, operation and maintenance of the Navajo Indian Irrigation Project and the initial stage of the San Juan-Chama Project as participating projects of the Colorado River Storage Project.

Although the Fryingpan-Arkansas Project is not a full-fledged participating project of the Colorado River Storage Project because it does not participate in the use of Basin Fund revenues, it could be called a "limited" participating project in the Upper Basin development plan because it does use water apportioned to the Upper Basin by the Colorado River Compact and to the State of Colorado by the Upper Colorado River Basin Compact. This project was authorized by P. L. 87-590, which was signed by the President August 16, 1962.

A brief description of each of the authorized participating projects and the present status of its construction or investigations follows:

## 1. COLORADO

### a. Paonia Project

The project is located near Paonia and Hotchkiss in west-central Colorado on the North Fork of Gunnison River. Water stored in the 21,000 acre-foot capacity Paonia Reservoir will be distributed to project lands through an enlarged and extended Fire Mountain Canal. Irrigation water supply is supplemented for 13,070 acres of land previously irrigated 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.

#### Construction Activities

Construction of Paonia Dam was completed in January, 1962; initial storage of water in the reservoir began in February; and the reservoir filled and spilled in mid-May. The Paonia Project was dedicated in a ceremony held in Paonia on September 29, 1962. The responsibility for operating and maintaining the project was transferred to the North Fork Conservancy District on June 1, 1962.

### b. Smith Fork Project

Smith Fork Project is located in Delta County, along the Smith Fork of Gunnison River. Crawford Dam and Reservoir,





*U. S. Bureau of Reclamation Photo*

Paonia Participating Project, Colorado River Storage Project.  
Aerial view of Paonia Dam and Reservoir. Reservoir filled and spilled  
during the Spring of 1962.



capacity 13,650 acre-feet, is being constructed on Iron Creek, a tributary of Smith Fork. The reservoir will regulate the flow of Iron Creek and surplus flows of the Smith Fork that will be conveyed to it by Smith Fork Feeder Canal. Small quantities of reservoir storage water will be released to Iron Creek and diverted by several small existing ditches. The remainder will be released to the new Aspen Canal and conveyed by this canal to existing ditches for distribution. Some of the storage releases through the Aspen Canal will replace present direct flow diversions from Smith Fork, thus permitting additional direct flow diversions to be made higher on the stream through existing ditches. Recreational facilities will be provided at Crawford Reservoir.

Smith Fork Project will provide a full water supply for irrigating 1,423 acres of new land and a supplemental supply for 8,056 acres of currently inadequately irrigated land located near Crawford, Colorado.

#### Construction Activities

A contract was awarded in September, 1960 for Crawford Dam, and construction is now about 99 per cent complete. Work on Aspen Canal, Smith Fork Diversion Dam and the Smith Fork Feeder Canal will be completed by late fall 1962 with full operation of the project to begin in the spring of 1963.

#### c. Florida Project

Florida Project is located in southwestern Colorado, southeast of Durango in the Florida River Valley and on Florida Mesa. Its principal features include Lemon Dam on the Florida River with a reservoir capacity of 40,300 acre-feet, enlargement of the existing Florida Farmers Ditch and Florida Canal, and the construction of a new diversion dam. Irrigation laterals will be constructed to 2,210 acres of project lands. Flood control and fish and wildlife values will be improved. The project includes 5,730 acres of new land and 13,720 acres of presently irrigated land needing a supplemental water supply.

#### Construction Activities

Florida Project was a "new start" during fiscal year 1961. A prime contract for constructing Lemon Dam was awarded in June, 1961 and by September, 1962 the contract was 58 per cent complete with 550,000 cubic yards of fill in the dam. Initial storage in Lemon Reservoir is scheduled for the spring of 1964. Work on the





Smith Fork Participating Project, Colorado River Storage Project.  
View of completed Crawford Dam showing lake beginning to form.

*U. S. Bureau of Reclamation Photo*



Florida Canal and Florida Farmers Ditch and Diversion Dam has started and construction is proceeding satisfactorily.

#### d. Silt Project

An improved water supply for more than 4,480 acres of partially irrigated land, and a full supply for about 2,120 acres of new land will be provided by construction of the Silt Project between Rifle and Elk Creeks in western Colorado. Construction features will include the Rifle Gap Reservoir of 12,650 acre-feet capacity, a pumping plant, headworks and inlet channel, rehabilitation of existing works and construction of laterals and drains.

#### Advance Planning

Advance planning activities continued on the Silt Project. A definite plan report was completed in December, 1961.

#### e. Pine River Project Extension

As originally conceived this project would involve an extension to the existing Pine River Project in southwestern Colorado and northwestern New Mexico on Pine River about 20 miles east of Durango, Colorado.

A special Bureau of Reclamation report has been transmitted by the Department of the Interior to the Congress and the President showing unfavorable findings and recommending that construction of the Pine River Project Extension be indefinitely deferred.

#### f. Fryingpan-Arkansas Project

The Fryingpan-Arkansas Project is located in central Colorado. The project will: (a) divert through new project works from the Roaring Fork River Basin in western Colorado to the Arkansas River Basin in eastern Colorado approximately 69,000 acre-feet of water per year; (b) divert through the existing works of the Twin Lakes Canal Company about 15,000 acre-feet of water per year in excess of that now being diverted by that company; (c) store the waters imported to the eastern slope, and, in addition, store eastern slope flood waters and winter flows averaging 50,000 and 93,000 acre-feet per year respectively.

Supplemental irrigation water will be supplied for 280,000 acres of irrigated land in the Arkansas River Valley that do not now have an adequate water supply. Water will also be supplied for expanding municipal, domestic, and industrial purposes on both





*U. S. Bureau of Reclamation Photo*

Florida Participating Project, Colorado River Storage Project.  
Aerial view of construction activity at Lemon Dam on the Florida River.



sides of the continental divide. The project will prevent a large part of the flood damages along the Arkansas River which presently occur between Pueblo, Colorado and the John Martin Reservoir. In accomplishing the above primary purposes of the project, works will be provided for the generation of about 469,000,000 kilowatt hours of hydroelectric energy annually.

The Ruedi Dam and Reservoir costing about \$13 million, a water storage facility on the Fryingpan River in western Colorado, will be constructed as a part of the Fryingpan-Arkansas Project, the over-all cost of which is about \$170 million.

Negotiations by representatives of eastern and western Colorado resulted in the establishment of operating principles for the project. These operating principles as last modified on December 9, 1960, have been printed as House Document 130,87th Congress.

Conservation and development of fish and wildlife have been specifically included as major purposes of the project.

### Advance Planning

The 87th Congress appropriated \$500,000 for fiscal year 1963 to initiate advance planning activities.

## 2. NEW MEXICO

### a. Hammond Project

Hammond Project is located in northwestern New Mexico along the south bank of the San Juan River 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 new lands will be divided into 20 to 30 full-time, family-sized farms.

The project works 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.

### Construction Activities

The Hammond Diversion Dam, pumping plant, main gravity canals, main laterals, and distribution system have been completed. Construction of drainage facilities has been deferred until the need for them develops. A limited amount of water was run through the





*U. S. Bureau of Reclamation Photo*

Hammond Participating Project, Colorado River Storage Project.  
Hammond Diversion Dam on the San Juan River in northern New Mexico.



upper end of the canal system during the 1962 irrigation season to supply water to lands which were originally served by canals that suffered interference from construction activities. The Hammond Project will begin its first full year of service in 1963.

#### b. Navajo Indian Irrigation Project

The Navajo Indian Irrigation project is in northwestern New Mexico along the south side of the San Juan River in the Farmington-Shiprock area. The project will irrigate 110,630 acres of new land on the present or extended Navajo Indian Reservation. Although this project is directly dependent upon the Navajo Storage Unit (currently nearing completion) of the Colorado River Storage Project, Public Law 485 states that irrigation costs that will be beyond the capability of the Indian irrigators to repay shall be non-reimbursable, and irrigation costs that are within the capability of the lands to repay shall be deferred so long as the lands remain in Indian ownership.

#### c. San Juan-Chama Project

The San Juan-Chama project is located in southcentral Colorado and northcentral New Mexico in the San Juan River, Rio Grande and Canadian River Basins. This project will divert waters from the headwaters of the San Juan River into the Rio Grande Basin for the purpose of providing supplemental water for existing irrigation projects and for municipal and industrial uses in the Albuquerque, New Mexico metropolitan area. Although water for the diversion will be collected from tributaries of the San Juan River in both Colorado and New Mexico, all water will be used in New Mexico in the Rio Grande Basin. By exchange, the project will also increase the use of water in New Mexico in the Canadian River Basin. It is planned to provide for an initial diversion of an average of 110,000 acre-feet of Colorado River Basin water per year. This project will also improve conditions for recreation and fish and wildlife in the Rio Grande Basin.

#### Advance Planning

Under the policy of the State of New Mexico, the Navajo Indian Irrigation Project and the San Juan-Chama Project, are to be developed concurrently. The authorizing legislation for these two projects (P. L. 87-483) provided that the Bureau of Indian Affairs should construct the Navajo Indian Irrigation Project and the Bureau of Reclamation the San Juan-Chama Project. The 87th



Congress appropriated \$500,000 to the Bureau of Reclamation to initiate advance planning activities on the San Juan-Chama Project. The Bureau of Indian Affairs did not receive an initial appropriation from the 87th Congress for the Navajo Indian Irrigation Project.

### 3. UTAH

#### a. Central Utah Project (Initial Phase)

The Central Utah Project (initial phase) will intercept streams draining the southern slope of the Uinta Mountains in the Colorado River Basin and will convey about 145,000 acre-feet of 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. Works will be provided in the Bonneville Basin to utilize the imported water and to effectively correlate its use with local water supplies. Water conservation for irrigation, municipal use, and other purposes will also be accomplished in Utah's Uinta Basin, a part of the Colorado River Basin.

The potential Strawberry Aqueduct will intercept flows of Rock Creek and other Uinta Mountain streams west of Rock Creek and convey the water to the existing Strawberry Reservoir which will be enlarged by the construction of Soldier Creek Dam below the present dam. The stored water will be released through the Wasatch Mountains to the Central Utah area. Through various exchanges and by the construction of the required facilities, the water will be made available to an area extending from Salt Lake City south 75 miles to Nephi.

New project works that will develop water for use in the Uinta Basin will 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, Steinaker Reservoir with a feeder canal from Ashley Creek, and Tyzack Reservoir on Brush Creek.

#### Construction Activities

Construction of the Vernal Unit of the Central Utah Project is practically complete. Water was stored in Steinaker Reservoir during the 1962 spring runoff; however, no water was released for irrigation during the season. All canals will be completed this fall and the reservoir should fill next spring so that the project will begin operations in 1963 with a full water supply assured.

## Advance Planning

The definite plan report on the Bonneville Unit of the Central Utah Project is scheduled for completion in June, 1963. This unit is the largest and most complex of those that comprise the initial phase of the over-all project. The Bonneville Unit includes plans for supplementing the irrigation supply for those lands in the Duchesne River Area and for transporting water into the Bonneville Basin for municipal, industrial and irrigation purposes. A Study Committee was formed in April, 1961 composed of representatives of the various interests in water development in the Duchesne River Area. The Committee issued a report in April, 1962 which proposes a basis for water use determinations in the Duchesne River Area.

Reports on the remaining two separable units, the Upalco and Jensen, will be completed in 1964 and 1965, respectively.

### b. Emery County Project

Emery County Project will provide supplemental water for 18,004 acres of land and a full supply for 771 acres in Emery County in eastcentral Utah near the towns of Huntington, Castle Dale, and Orangeville. Principal construction features will include Joes Valley Dam and Reservoir on Cottonwood Creek with an active storage capacity of 50,000 acre-feet, the Swasey Diversion Dam located about ten miles downstream from Joes Valley, the 16-mile Cottonwood-Huntington Canal heading at the Swasey Diversion Dam, the Huntington North Dam and Reservoir with an active capacity of 3,100 acre-feet, and the 3½-mile Huntington North Service Canal. Canal lining, laterals and drains will be constructed as required. Recreational facilities will be provided at the project storage sites.

## Construction Activities

The construction office for the Emery County Project was established in Castle Dale, Utah in December, 1961. The Emery County Water Conservancy District was formed and a repayment contract between the District and the Bureau of Reclamation has been signed. Preconstruction work has been underway. It is planned to award the contract on Joes Valley Dam next spring.

## 4. WYOMING

### a. LaBarge 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 1½ miles.

The Bureau of Reclamation concluded in its definite plan report, which was submitted to the Commissioner on June 12, 1961, that the project was not justified at this time and that construction should be indefinitely deferred.

#### b. Lyman Project

The Lyman Project is located in Uinta County in southwestern Wyoming near the town of Lyman. The project would improve the late season irrigation water supply on 39,700 acres of land. To provide additional late season irrigation water, storage and conveyance structures would be constructed to utilize the spring flood flows of Blacks Fork and its tributary, East Fork of Smith Fork. Recreation and Fish and Wildlife benefits would also be derived from the project.

#### Advance Planning

Advance planning was started in fiscal year 1957. Engineering and economic studies are directed towards formulating a plan of development. Plan formulation was necessary to study alternative reservoir sites. It now appears that the Meek's Cabin site on Blacks Fork and China Meadows on the East Fork of Smiths Fork can be combined to present the most desirable alternative. Completion of the definite plan report is scheduled for November, 1962.

#### c. Seedskadee Project

The Seedskadee Project will provide for the irrigation of 58,775 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. It will also provide water for future municipal and industrial needs.

Fontenelle Dam and Reservoir on Green River will be used both for storage (to a total capacity of 345,000 acre-feet) and as a means of diverting water from the river. A 10,000 kilowatt power plant will be constructed at the toe of the dam. Development of a wildlife refuge downstream from Fontenelle Dam will be an adjunct to the project to be constructed under Section 8 of Public Law 485.

About 100 miles of canals and 160 miles of laterals will be constructed in the distribution system to convey water from the reservoir to farm units.





*U. S. Bureau of Reclamation Photo*

Seedskadee Participating Project, Colorado River Storage Project.  
Aerial view of Fontenelle Dam on the Green River in Wyoming.  
View is taken looking west from above the left abutment.



## Construction Activities

A contract was awarded in June, 1961 for constructing Fontenelle Dam. The contractor made excellent progress during the past summer. More than one million cubic yards out of the total of 5,300,000 cubic yards in the earthfill dam have been placed. Construction work for the dam is about 53 per cent complete.

The Bureau of Reclamation was prepared to accept bids on June 7 for the first segment of the West Side Canal, but has postponed receiving bids indefinitely until a special review commission appointed to study all Wyoming Reclamation projects completes its studies and report. The Interior and Insular Affairs Committee of the House of Representatives during the second session of the 87th Congress directed the Secretary of the Interior to appoint a review commission to make a study of the Wyoming reclamation program and review the economic outlook of projects under development. Construction of the Fontenelle Dam is not affected by this directive. A further reason for delaying West Side Canal construction is because Bureau of Reclamation officials and the University of Wyoming are studying the possibility of including more extensive community pasture in the Seedskaadee Project.

## F. POTENTIAL STORAGE UNITS

### 1. GRAY CANYON

The Bureau of Reclamation continued reconnaissance investigations on the potential Gray Canyon Storage Unit during the year. Work consisted principally of field investigations of possible dam sites. It is anticipated that the reconnaissance report will be completed in fiscal year 1964.

## G. POTENTIAL PROJECTS

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 on investigations has been accomplished during the past year.

The San Juan-Chama and Navajo Indian Irrigation projects, originally in the priority of planning category, were found feasible

and through congressional action during the 87th Congress were transferred to the authorized participating projects stage. The Savery-Pot Hook and Bostwick Park projects have been found feasible and legislation has been introduced in Congress to authorize their construction as participating projects of the Colorado River Storage Project.

Other projects in the priority-for-planning category are in various stages of detailed planning for feasibility reports or preliminary investigations for reconnaissance reports.

## 1. CONGRESSIONAL AUTHORIZATION PENDING

### COLORADO

#### a. Bostwick Park Project

A feasibility report on the Bostwick Park Project, with the approval of the Bureau of the Budget, was submitted to Congress by the Secretary of the Interior in July, 1962 with a recommendation for authorization.

### COLORADO AND WYOMING

#### a. Savery-Pot Hook Project

The feasibility report on the Savery-Pot Hook project was completed in October, 1959. Both Colorado and Wyoming have approved the plan set forth in the report. The Bureau of the Budget approved the report in June, 1962 and it was promptly forwarded to the Congress by the Secretary of the Interior with a recommendation for authorization.

## 2. UNDER FEASIBILITY INVESTIGATIONS

### COLORADO

#### a. Animas-LaPlata Project

The States of Colorado and New Mexico contributed funds to the Bureau of Reclamation to accelerate the investigations on the Animas-La Plata project. The proposed report of the Regional Director was circulated for comments to State and regional interests in May, 1961. The report was revised and submitted to the Commissioner of Reclamation who approved it in August, 1962. The report will now be circulated by the Department of the Interior under the provisions of the Flood Control Act of 1944.



b. Dallas Creek Project

Continued feasibility studies showed the need for more extensive drainage and land classification investigations than were previously anticipated. The investigation is now scheduled for completion in fiscal year 1964.

c. Dolores Project

Feasibility investigations continued during the year. The proposed report of the Regional Director of the Bureau of Reclamation on the feasibility of the Dolores Project was completed in May, 1962, and has been distributed for review by field interests. Revision of the report late in 1962 is anticipated.

d. Fruitland Mesa Project

The project feasibility report on the Fruitland Mesa Project was approved by the Secretary of the Interior in May, 1962, and has been distributed to interested States and Federal agencies for review as required by the Flood Control Act of 1944.

e. San Miguel Project

Feasibility investigations on the San Miguel project were initiated in fiscal year 1959. Engineering surveys and revisions of land classification work are under way. The project report is scheduled for completion early in fiscal year 1964.

f. West Divide Project

Topographic maps of a portion of the potential project land area were obtained by the State of Colorado in 1957. Detailed land classification surveys were commenced in 1958. Studies are being continued on the engineering, water supply and economic aspects of the project. The feasibility report is scheduled for completion in fiscal year 1964.

g. Yellow Jacket Project

The Yellow Jacket project is located in Moffat and Rio Blanco Counties, Colorado, in the White and Yampa River Basins. Reconnaissance investigations on this project were completed in fiscal year 1957. The State of Colorado contributed funds to the Bureau of Reclamation to be used to review a development plan proposed by the Rocky Mountain Power Company to determine whether it

would be in conflict with the potential Yellow Jacket project. Feasibility studies were started in fiscal year 1962, and are underway.

## UTAH

### a. Gooseberry Project

The Bureau of Reclamation completed a feasibility report for this project in January, 1953. The plan of that report contemplated a diversion of 11,700 acre-feet from the Price River Basin. The people of Carbon County in the Price River Basin opposed the plan, and, as a result it has not been recommended to Congress for authorization.

Comparative data on a revised plan for a smaller diversion were compiled in 1957 for the use of the State of Utah in resolving the controversy between Carbon and Sanpete Counties.

Since that time the local people have proceeded with planning a project to be developed through the Department of Agriculture under the Watershed Protection and Flood Prevention Act (P. L. 566). The Department of Agriculture and the Bureau of the Budget approved the plan and hearings were held August 16th by the Flood Control and Rivers and Harbors Subcommittee of the House Public Works Committee. The development plan was not reported by the Subcommittee.

## 3. UNDER RECONNAISSANCE INVESTIGATIONS

### COLORADO

#### a. Grand Mesa Project

The State of Colorado contributed funds to aid in the completion of the reconnaissance report on this project. The report was completed in March, 1962. It presented a development that is an improvement over earlier plans and outlined a program of feasibility investigations.

#### b. Juniper Project

This project is not classified in P.L. 485 as either a Storage Unit or participating project. Its status will be determined by the type of development ultimately planned.

The irrigation possibilities of the Juniper Project were appraised in the February, 1957 reconnaissance report on the Yampa-White Project as a basis for further reconnaissance studies of a multiple-



purpose irrigation and power development. The reconnaissance report to determine the relative justification and desirability of including power development as a part of the Juniper Project and to provide data to aid in selecting either the Juniper or an alternate dam and reservoir to investigate in feasibility scope, is scheduled for completion late in 1962.

c. Parshall Project

Funds contributed by the State of Colorado will make possible the issuance of the reconnaissance report on the Parshall Project late in 1962.

d. Ruedi Western Slope Project

The results of reconnaissance investigations financed in part by the State of Colorado are to be reported by December, 1962.

e. Upper Gunnison Basin Project

The State of Colorado contributed funds to assist the Bureau of Reclamation make reconnaissance studies on this project. The report is scheduled for completion in May, 1963.

f. Battlement Mesa Project

Investigations were undertaken to determine the feasibility of this potential project in Fiscal Year 1963. The report is scheduled to be completed in FY 1965.

g. Bluestone Project

A feasibility report on this potential development in Garfield and Mesa Counties in Colorado is scheduled to be completed in FY 1965.

UTAH

a. Juniper Project

(See discussion under Colorado)

## IX. 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.



## **X. Acknowledgments**

The Upper Colorado River Commission wishes to acknowledge the united actions of the Governors of Colorado, New Mexico, Utah and Wyoming on the fundamental issues involved in the development of the water and land resources of the Upper Colorado River Basin and for their interest in and support of the Upper Colorado River Commission.

The Commission especially wishes to give recognition to the difficult and able work of the members of the United States Congress from the Upper Colorado River Basin States and to acknowledge with appreciation the assistance it has received from agencies of the Executive Branch of the Federal Government: the Department of the Interior, Bureau of Reclamation, Geological Survey, Bureau of Indian Affairs, and the Department of Agriculture.

Officers and personnel of many state agencies having their primary interests in various phases of water resources have also aided materially with cooperative efforts and information.

## Appendices



APPENDIX A

Report of the Auditor

REPORT OF EXAMINATION  
Upper Colorado River Commission  
SALT LAKE CITY, UTAH  
JUNE 30, 1962

JOHN E. McNULTY  
CERTIFIED PUBLIC ACCOUNTANT  
200 NORTH SIXTH STREET  
GRAND JUNCTION, COLORADO

Upper Colorado River Commission  
Salt Lake City, Utah

Gentlemen:

I have examined the balance sheets of the General Fund, the Property and Equipment Fund, and the New Motion Picture Fund of the Upper Colorado River Commission as of June 30, 1962, and the related Statement of Revenue and Expense — General Fund for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records as I considered necessary in the circumstances.

In my opinion, the accompanying balance sheets and statement of revenue and expense present fairly the financial position of the Upper Colorado River Commission at June 30, 1962, 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/ JOHN E. McNULTY

Certified Public Accountant



# BALANCE SHEET — GENERAL FUND

## UPPER COLORADO RIVER COMMISSION

June 30, 1962

### ASSETS

#### CASH

|   |                    |
|---|--------------------|
| Office cash fund  | \$ 25.00           |
| Demand deposit — First National Bank in<br>Grand Junction, Colorado | 70,603.57          |
|   | <u>\$70,628.57</u> |

OTHER ASSET — returnable deposit United Air Lines 425.00

PREPAID EXPENSE — unexpired insurance premiums 83.05

\$71,136.62

### LIABILITIES, RESERVES, AND FUND BALANCE

#### ACCOUNTS PAYABLE

|                           |                    |
|---------------------------|--------------------|
| For supplies and expenses | \$ 2,525.75        |
| Other                     | 719.25             |
|                           | <u>\$ 3,245.00</u> |

#### RESERVE

|   |           |
|---|-----------|
| For fiscal year 1963 assessments received<br>in advance | 49,007.50 |
|---|-----------|

#### UNAPPROPRIATED FUND BALANCE

|  |                           |
|--|---------------------------|
| Balance July 1, 1961 — deficit   | \$ 2,214.29*              |
| Less excess of receipts over expenses<br>for fiscal year ended June 30, 1962 | 21,098.41                 |
| Balance June 30, 1962  | 18,884.12                 |
|  | <u><u>\$71,136.62</u></u> |

Note — At June 30, 1962, unrecorded liability of the Commission to its full-time employees for accrued annual leave amounted to \$3,074.53. According to Commission policy (effective July 1, 1960) each employee is expected to take annual leave of 15 days each calendar year during which period of time regular salary payments are continued. Employees may accumulate a maximum of 30 days annual leave.

\*Indicates red figure.

# BALANCE SHEET — PROPERTY AND EQUIPMENT FUND

## UPPER COLORADO RIVER COMMISSION

June 30, 1962

### ASSETS

|   |                    |
|---|--------------------|
| PROPERTY AND EQUIPMENT — at cost        |                    |
| Land and land improvements              | \$26,366.00        |
| Building                                | 47,527.24          |
| Furniture and fixtures                  | 13,224.29          |
| Library                                 | 1,975.09           |
| Automobile                              | 1,500.00           |
| Engineering equipment                   | 3,165.21           |
| Motion picture film — at nominal value  | 3.00               |
| Upper Colorado River Basin relief model | 5,937.77           |
|   | <u>\$99,698.60</u> |

### FUND BALANCE

#### INVESTMENT IN PROPERTY AND EQUIPMENT

|                                    |                    |                    |
|------------------------------------|--------------------|--------------------|
| Balance July 1, 1961               |                    | \$23,818.33        |
| Transactions for fiscal year ended |                    |                    |
| June 30, 1962:                     |                    |                    |
| Transfer from New                  |                    |                    |
| Commission Office Building         |                    |                    |
| Fund                               | \$73,893.24        |                    |
| Additions                          | 2,411.38           |                    |
|                                    | <u>\$76,304.62</u> |                    |
| Retirements                        | 424.35             | <u>75,880.27</u>   |
| Balance June 30, 1962              |                    | 99,698.60          |
|                                    |                    | <u>\$99,698.60</u> |



# BALANCE SHEET — NEW MOTION PICTURE FUND UPPER COLORADO RIVER COMMISSION

## ASSET

|   |                   |
|---|-------------------|
| CASH— on deposit with United States Bank of<br>Grand Junction, Colorado | <u>\$1,793.59</u> |
|---|-------------------|

## FUND BALANCE

|  |  |
|--|--|
| Balance July 1, 1961                                       | \$1,793.84                             |
| Adjustment of uncollected portion of<br>account receivable | <u>.25</u>                             |
| Balance June 30, 1962                                      | <u>\$1,793.59</u><br><u>\$1,793.59</u> |

# STATEMENT OF REVENUE AND EXPENSE — GENERAL FUND

## UPPER COLORADO RIVER COMMISSION

For the fiscal year ended June 30, 1962

|                                    | Budget<br>Amount    | Actual<br>Amount    | Actual<br>Amount<br>Over-<br>Under* |
|------------------------------------|---------------------|---------------------|-------------------------------------|
| REVENUE                            |                     |                     |                                     |
| Assessments                        | <u>\$100,000.00</u> | <u>\$100,000.00</u> | <u>\$ —0—</u>                       |
| EXPENSE                            |                     |                     |                                     |
| Personal services:                 |                     |                     |                                     |
| Administrative salaries            | \$ 20,100.00        | \$ 20,076.00        | \$ 24.00*                           |
| Engineering salaries               | 21,500.00           | 18,130.25           | 3,369.75*                           |
| Attorney's salary                  | 11,700.00           | 11,700.00           | —0—                                 |
| Assistant Treasurer's salary       | 300.00              | 300.00              | —0—                                 |
| Clerical salaries                  | 3,700.00            | 302.00              | 3,398.00*                           |
| Janitor                            | 1,200.00            | 1,160.74            | 39.26*                              |
| F.I.C.A. tax                       | 1,500.00            | 618.81              | 881.19*                             |
|                                    | <u>\$ 60,000.00</u> | <u>\$ 52,287.80</u> | <u>\$ 7,712.20*</u>                 |
| Current expenses:                  |                     |                     |                                     |
| Accounting and reporting           | \$ 1,400.00         | \$ 1,084.10         | \$ 315.90*                          |
| Telephone and telegrams            | 2,500.00            | 3,405.18            | 905.18                              |
| Insurance and bond premiums        | 1,200.00            | 814.89              | 385.11*                             |
| Printing                           | 2,600.00            | 2,059.86            | 540.14*                             |
| Engineering supplies               | 1,000.00            | 498.98              | 501.02*                             |
| Office supplies and postage        | 2,800.00            | 2,806.39            | 6.39                                |
| Secretarial service                | 1,000.00            | 640.49              | 359.51*                             |
| Library supplies and expense       | 800.00              | 306.41              | 493.59*                             |
| Utilities                          | —0—                 | 711.03              | 711.03                              |
| Building repair and<br>maintenance | —0—                 | 456.71              | 456.71                              |
| Office rent                        | 5,500.00            | —0—                 | 5,500.00*                           |
| Miscellaneous                      | 200.00              | 208.66              | 8.66                                |
|                                    | <u>\$ 19,000.00</u> | <u>\$ 12,992.70</u> | <u>\$ 6,007.30*</u>                 |
| Capital outlay                     | \$ 3,000.00         | \$ 2,411.38         | \$ 588.62*                          |
| Education and information          | 6,000.00            | 620.12              | 5,379.88*                           |
| Travel                             | <u>12,000.00</u>    | <u>10,589.59</u>    | <u>1,410.41*</u>                    |
| TOTAL EXPENSE                      | <u>\$100,000.00</u> | <u>\$ 78,901.59</u> | <u>\$21,098.41*</u>                 |
| EXCESS OF REVENUE<br>OVER EXPENSE  |                     | <u>\$ 21,098.41</u> | <u>\$21,098.41</u>                  |









# STATEMENT OF CASH RECEIPTS AND DISBURSEMENTS —

## GENERAL FUND

### UPPER COLORADO RIVER COMMISSION

For the fiscal year ended June 30, 1962

|  |             |                            |
|--|-------------|----------------------------|
| Balance of cash and demand deposit at July 1, 1961                     |             | \$ 11,297.01               |
| Cash receipts:   |             |                            |
| Assessments for fiscal year 1962                                       | \$88,750.00 |                            |
| Assessments for fiscal year 1963                                       | 49,007.50   |                            |
| Return premiums on insurance and sundry                                | 59.76       | 137,817.26                 |
|  |             | <u>\$149,114.27</u>        |
| Cash disbursements:  |             |                            |
| Personal services  | \$52,287.80 |                            |
| Current expenses   | 10,866.62   |                            |
| Capital outlay   | 2,530.62    |                            |
| Education and information  | 608.80      |                            |
| Travel   | 10,011.29   |                            |
| Expenses of fiscal year ended June 30, 1961<br>paid after July 1, 1961 | 2,180.57    | 78,485.70                  |
| Balance of cash and demand deposit at June 30, 1962                    |             | <u><u>\$ 70,628.57</u></u> |

# INSURANCE COVERAGE

## UPPER COLORADO RIVER COMMISSION

June 30, 1962

|                     | Coverage                      |                     |
|---------------------|-------------------------------|---------------------|
|                     | Type                          | Amount (in dollars) |
| Treasurer           | Fidelity bond                 | \$ 40,000           |
| Assistant Treasurer | Fidelity bond                 | \$ 40,000           |
| Automobile          | Comprehensive Liability:      | Actual cash value   |
|                     | Each person                   | \$100,000           |
|                     | Each accident                 | \$300,000           |
|                     | Property damage               | \$ 10,000           |
|                     | Collision and upset           | \$100 deductible    |
| Employees           | Workmen's compensation        | statutory           |
| Office contents     | Fire and comprehensive        | \$ 18,500           |
| Office premises     | Liability:                    |                     |
|                     | Each person                   | \$100,000           |
|                     | Each accident                 | \$300,000           |
|                     | Property damage               | \$5,000/\$25,000    |
| Building            | Fire, extended coverage, etc. | \$ 45,000           |
| Plate glass         |                               | Actual cash value   |



## APPENDIX B

### UPPER COLORADO RIVER COMMISSION

### BUDGET

For fiscal year ending June 30, 1964

#### PERSONAL SERVICES

|  |          |          |
|--|----------|----------|
| Administrative Salaries (incl. Admin. Sec'y) | \$21,400 |          |
| Legal Salary                                 | 12,300   |          |
| Engineering Salaries                         | 22,600   |          |
| Assistant Treasurer                          | 300      |          |
| Clerical                                     | 3,700    |          |
| Janitor                                      | 1,200    |          |
| Social Security                              | 1,300    |          |
|  | <hr/>    | \$62,800 |

|        |          |
|--------|----------|
| TRAVEL | \$12,000 |
|--------|----------|

#### CURRENT EXPENSE

|                                 |       |          |
|---------------------------------|-------|----------|
| Utilities                       | 850   |          |
| Building Repair & Maintenance   | 500   |          |
| Reporting & Accounting          | 1,400 |          |
| Telephone and Telegraph         | 3,500 |          |
| Insurance & Bond Premiums       | 1,200 |          |
| Printing                        | 2,500 |          |
| Secretarial Services            | 1,000 |          |
| Engineering Supplies & Services | 500   |          |
| Office Supplies & Postage       | 3,500 |          |
| Library & Miscellaneous         | 800   |          |
|                                 | <hr/> | \$15,750 |

|  |          |
|--|----------|
| EDUCATION & INFORMATION (incl. Public Relations) | \$ 4,850 |
|--|----------|

|                |          |
|----------------|----------|
| CAPITAL OUTLAY | \$ 2,000 |
|----------------|----------|

#### TOTAL ESTIMATED EXPENSE

|   |                 |
|---|-----------------|
| Fiscal Year July 1, 1963 thru June 30, 1964 | <u>\$97,400</u> |
|---|-----------------|

## APPENDIX C

### FIFTH ANNUAL REPORT, COLORADO RIVER STORAGE PROJECT AND PARTICIPATING PROJECTS

#### INTRODUCTION

Legislation authorizing construction of the Colorado River storage project and participating projects was enacted into law (70 Stat. 105) on April 11, 1956. The act initiated the comprehensive development and use of the water resources of the Upper Colorado River Basin. Initially authorized for construction are 4 storage units and 11 participating projects. The storage units on the Colorado River and its larger tributaries were authorized primarily for river regulation and power production. The 11 participating projects will provide water for irrigation of farmland and supply of water for growing cities and industries. Construction has been initiated on all units of the storage projects and on the following participating projects: Florida, Hammond, Paonia, Seedskadee, Smith Fork, and the Vernal unit of the central Utah project.

Section 6 of the authorizing act stipulates that, on January 1 of each year, the Secretary of the Interior 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.

The project is still in the initial stages of construction and no income-producing facilities were in operational status during the year. The report therefore, deals primarily with the construction progress to June 30, 1961. Limited comments are furnished with respect to the remaining items required to be reported upon.



## 1. STATUS OF REVENUES

There were no revenues from water rental, water sales or from sales of electric energy during the fiscal year. Revenues to date have been limited to nonoperating income from grazing leases and other miscellaneous sources, and at June 30, 1961, these revenues amounted to \$39,860.

## 2. COST OF CONSTRUCTING, OPERATING, AND MAINTAINING THE PROJECT

The cost of constructing the project to June 30, 1961, is reflected on the following attached financial exhibits:

Exhibit A—Comparative balance sheets at June 30, 1961, and June 30, 1960.

Exhibit B—Statement of source and application of funds and other credits as of June 30, 1961.

Exhibit A sets forth comparatively the financial condition of the project at June 30, 1961, and June 30, 1960. The cumulative funds and other credits available to the project at June 30, 1961, and how such funds and credits were used or applied are set forth on exhibit B by storage units, participating projects, transmission division, and the advance planning activity.

During the 5th fiscal year of the project, which ended June 30, 1961, activities were directed mainly to: (1) Construction work on the Flaming Gorge, Glen Canyon, Navajo, and Curecanti storage units; the Hammond, Seedskaadee, Florida, Smith Fork, Paonia, and the Vernal unit of the central Utah project; (2) preconstruction activities on the transmission division; (3) continued advance planning on the Crystal features of the Curecanti storage unit and on the central Utah, Emery County, Florida, LaBarge, Lyman, and Silt participating projects; and (4) acquisition and construction of service facilities. Costs incurred for those activities constitute the principal items of cost of constructing the project to June 30, 1961, and are summarized as follows:

| Activity:   | <i>Cost to date</i> |
|---|---------------------|
| Construction work in progress .....                   | \$183,307,024       |
| Service facilities .....                              | 14,175,124          |
| Investigations (undistributed advance planning) ..... | 4,348,207           |
| Total .....   | 201,830,355         |

Details with respect to the foregoing, identified as to storage unit, participating project, transmission division, or advance plan-

ning activity are shown respectively on schedules Nos. 1, 2, and 3 attached.

Highlights of certain of the major construction and advance planning activities are set forth in the following paragraphs:

#### **Curecanti Storage Unit, Colorado**

Construction funds were appropriated in fiscal year 1961 to initiate construction of the Blue Mesa and Morrow Point features of the Curecanti storage project. Further studies and investigations were necessary on the proposed Crystal Dam and powerplant during the year, and a supplemental report on this feature is scheduled for completion early in 1962. Construction on the Curecanti unit began in fiscal year 1961 on the relocation of portions of U.S. Highway 50 to bypass the Blue Mesa Reservoir site. Surveys and other pre-construction work will be completed for Blue Mesa Dam and the prime contract for construction of the dam is scheduled for award in fiscal year 1962.

#### **Flaming Gorge Storage Unit, Utah**

Work on the \$33.6 million prime contract for construction of the 502-foot high concrete dam and 108,000-kilowatt powerplant on the Green River in Utah is running behind schedule at June 30, 1961. Work completed at June 30, 1961, was estimated at 47 percent in 60 percent of the overall time allowed by the contract. Excavation for the dam and powerplant foundation and keyways was completed and placement of concrete in both structures was initiated in October 1960.

The first phase of clearing the reservoir site was completed during the spring and progress is well ahead of schedule on the final phases of clearing. Various items of fixed equipment such as generators, turbines, cranes, and embedded metalwork for penstocks and outlet pipes were in the process of manufacture and fabrication at the close of the fiscal year.

#### **Glen Canyon Storage Unit, Arizona**

At June 30, 1961, construction of the 710-foot high concrete arch dam and the 900,00-kilowatt powerplant continued behind schedule. Physical completion of the prime contract to date is estimated at 52 percent while time elapsed for overall completion is 60 percent. Concrete lining of both spillway tunnels is underway and to date approximately 1.5 million cubic yards of concrete have been placed in the dam and powerplant. Fabrication of the penstocks and



river outlet pipes was completed and their installation in the dam and powerplant structure is underway.

Various items of fixed equipment for installation in the dam and powerplant such as radial gates and gate hoists, outlet gate valves, cranes and turbines were in the process of manufacture and fabrication. Contract was awarded in fiscal year 1961 for \$8 million for furnishing and installing eight generators in the powerplant.

### Navajo Storage Unit, New Mexico

Progress by the prime contractor for construction of the 405-foot high earth and rock fill dam on the San Juan River in the northwestern part of New Mexico continues well ahead of schedule with physical completion estimated at 83 percent within 63 percent of the overall time allowed by the contract. To date, approximately 20 million cubic yards of fill material have been placed in the dam.

Reservoir clearing operations were in progress in several locations in the reservoir area in both Colorado and New Mexico. Relocation of Colorado State Highway 151 and 172, the D. & R. G. W. narrow-gage railroad, and sections of Archuleta County roads was nearly completed at fiscal year end.

### Transmission Division

Activities of the transmission division during fiscal year 1961 consisted primarily of preconstruction work such as completion of field surveys, right-of-way acquisition, and preparation of designs and specifications for the Flaming Gorge to Oak Creek, and Glen Canyon to Curecanti transmission lines.

Contracts were awarded for construction of the Flaming Gorge to Oak Creek, Colo., transmission lines and construction was started in June on the first phase from Flaming Gorge to Rangely, Colo. Work on the Rangely-Oak Creek phase was started early in fiscal year 1962. Contracts were also awarded in June 1961 for various items of hardware for the Glen Canyon-Shiprock transmission line.

Field surveys and reconnaissance surveys continued on other proposed transmission lines.

### Central Utah Participating Project, Vernal, Unit, Utah

Construction of the Vernal unit is nearing completion at the close of the fiscal year. Work on the prime contract for construction of the earthfill Steinaker Dam was completed in January 1961. The Fort Thornburgh diversion dam and the Steinaker feeder canal was completed in April 1961.

Contract was awarded in March for earthwork, concrete lining, and structures for the Steinaker service canal and at June 30, 1961, work under this contract was 24 percent completed.

#### Hammond Participating Project, New Mexico

Work on the contract for construction of the Hammond diversion dam and main canal was slightly behind schedule with physical completion estimated at 18 percent in 28 percent of the overall time allowed by the contract. The contractor diverted the San Juan River in June 1961 and excavation for portions of the piling and the gate structure on the diversion dam was begun shortly thereafter.

Contract for construction of earthwork and structures for portion of the Hammond main canal was 99 percent complete at June 30, 1961, and contract award was made late in June for construction of additional sections of the Hammond main canal and laterals.

#### Paonia Participating Project, Colorado

At June 30, 1961, work on the prime contract for construction of Paonia Dam and relocation of Colorado State Highway 133 was nearing completion with physical completion estimated at 97 percent in 90 percent of the time allowed by the contract. Reservoir site clearing was completed and accepted in February 1961.

Relining of the Fire Mountain Canal was completed in April 1961 and the canal was utilized to some extent during the 1961 irrigation season.

Construction of the Paonia project will be completed in fiscal year 1962 and irrigation water will be available in calendar year 1962 for delivery through the project works.

#### Seedskaadee Participating Project, Wyoming

Contracts were awarded during the latter part of the fiscal year for construction of the Fontenelle Dam, for construction of permanent residences, streets, and utilities, and for administration buildings, and service buildings at Fontenelle community. Negotiations were started in June for relocation of U.S. Highway 189.

A compatible solution was reached in the problem of trona deposits within the irrigable area of the project by the adoption of a plan for stage development of the Seedskaadee project which will allow the development of both the trona and irrigation resources of the project.



### Smith Fork Participating Project, Colorado

At June 30, 1961, work on the prime contract for construction of the earthfill Crawford Dam was slightly ahead of schedule with physical completion estimated at 36 percent in 34 percent of the overall time allowed by the contract. Concrete placements were completed in the outlet works, intake structure, and outlet tunnel lining.

Contract for relocation of Black Canyon Road was completed during the year. Contracts were awarded and work started on the relocation of Colorado State Highway 92, and on earthwork and structures for the Aspen Canal.

### Florida Participating Project, Colorado

Funds were appropriated for initiating construction of the Florida participating project during fiscal year 1961. Activity during the fiscal year was directed mainly to the preparation of design data for project features. A contract for construction of the Lemon Dam and county road relocation was awarded June 30, 1961, in the amount of \$5,820,807.

### Advance Planning Activities

The definite plan report on the Emery County project in Utah was completed in October 1961, and funds were appropriated for initiating construction in fiscal year 1962.

Investigations and studies on the potential Crystal Dam and powerplant of the Curecanti storage unit were continued during the year.

Advance planning studies for definite plan reports were continued during the fiscal year on other authorized participating projects.

## 3. ALLOCATION OF FEDERAL INVESTMENT

Section 6 of the authorizing act 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. No projects or units have been completed; therefore, no formal allocations to the several purposes to be served by the project have been made of the cost to June 30, 1961. However, tentative allocations have been made of the total

estimated cost to complete the entire project (schedule No. 5). The tentative allocations are summarized as follows:

| Purpose  | Amount<br>(thousands) | Percent |
|--|-----------------------|---------|
| Reimbursable allocations:  |                       |         |
| Irrigation.....  | \$308,693             | 28.1    |
| Power.....   | 670,398               | 61.0    |
| Municipal and industrial water.....  | 46,644                | 4.2     |
| Total.....   | 1,025,735             | 93.3    |
| Nonreimbursable allocations:   |                       |         |
| Flood control.....   | 4,211                 | .4      |
| Fish and wildlife.....   | 30,666                | 2.8     |
| Recreation.....  | 27,362                | 2.5     |
| Other nonreimbursable costs: Colorado River development fund investigations and non-Federal contributions..... | 5,433                 | .5      |
| Total.....   | 67,672                | 6.2     |
| Unallocated costs: Ultimate phase costs of central Utah participating project.....                             | 5,750                 | .5      |
| Total.....   | 1,099,157             | 100.0   |

#### 4. PROGRESS OF RETURN AND REPAYMENT OF FEDERAL INVESTMENT

As indicated heretofore, no unit or separable feature of the project has been completed, therefore, no progress has been made on actual repayment of the Federal investment as a result of operations. However, repayment contracts which schedule annual payments on irrigation construction facilities have been negotiated and executed with water user's organizations on the following participating projects:

|   | Amount      |
|---|-------------|
| Central Utah, Vernal unit—Uintah Water Conservancy District,<br>July 14, 1958 ..... | \$1,500,000 |
| Hammond—Hammond Conservancy District, Oct. 20, 1959 .....                           | 450,000     |
| Paonia—North Fork Water Conservancy District, Aug. 21, 1957 ....                    | 2,320,000   |
| Smith Fork—Crawford Water Conservancy District, May 10, 1960 .....                  | 1,025,000   |
| Florida—Florida Water Conservancy District, Dec. 29, 1960 .....                     | 1,900,000   |
| Total .....   | 7,195,000   |

#### 5. ESTIMATED RATE OF PROJECT REPAYMENT, YEAR BY YEAR

As stated under item 3, above, no storage unit, participating project, or separable feature thereof had been completed to June 30, 1961, and final cost allocations of the Federal investment as of that date to power, irrigation and to other purposes have not been made. Accordingly no estimated rate of progress of project repayment year by year, of the investment to be so allocated is included in this annual report.



# Colorado River Storage Project and Participating Projects

## Exhibit A — Comparative Balance Sheets

|   | June 30     |             | Increase<br>(decrease) |
|---|-------------|-------------|------------------------|
|   | 1961        | 1960        |                        |
| ASSETS  |             |             |                        |
| Plant in service (irrigation) .....                               | \$1,599,704 | \$1,599,704 | .....                  |
| Construction work in progress (schedule No. 1) <sup>1</sup> ..... | 183,307,024 | 117,373,220 | \$65,933,804           |
| Service facilities (schedule No. 2) .....                         | 14,175,124  | 15,248,742  | (1,073,618)            |
| Investigation costs (schedule No. 3) .....                        | 4,348,207   | 4,169,968   | 178,239                |
| Current assets:   |             |             |                        |
| Cash and fund balances with U.S. Treasury:                        |             |             |                        |
| Operating funds <sup>2</sup> .....                                | 65,182,547  | 63,400,654  | 1,781,893              |
| Deposit and trust funds <sup>3</sup> .....                        | 6,194,466   | 6,577,470   | (383,004)              |
| Accounts receivable:  |             |             |                        |
| Government agencies .....   | 14,234      | 14,907      | (673)                  |
| Other .....   | 64,194      | 169,198     | (105,004)              |
| Materials and supplies .....                                      | 252,272     | 226,338     | 25,934                 |
| Prepayments and advances (schedule No. 4) .....                   | 457,255     | 529,549     | (72,294)               |
| Total, current assets .....                                       | 72,164,968  | 70,918,116  | 1,246,852              |
| Other assets:   |             |             |                        |
| Undistributed and deferred charges .....                          | 186,767     | 75,268      | 111,499                |
| Deferred and unmatured receivables .....                          | 305,812     | .....       | 305,812                |
| Total, other assets .....   | 492,579     | 75,268      | 417,311                |
| Total, assets .....   | 276,087,606 | 209,385,018 | 66,702,588             |
| LIABILITIES   |             |             |                        |
| Net investment:   |             |             |                        |
| United States:  |             |             |                        |
| Congressional appropriations .....                                | 251,981,177 | 193,281,177 | 58,700,000             |
| Transfers of property and services .....                          | 4,257,029   | 4,239,759   | 17,270                 |
| Interest during construction capitalized .....                    | 4,748,975   | 2,740,687   | 2,008,288              |
| Total .....   | 260,987,181 | 200,261,623 | 60,725,558             |
| Less:   |             |             |                        |
| Funds returned to U.S. Treasury .....                             | 52,175      | 50,882      | 1,293                  |
| Nonreimbursable expense <sup>4</sup> .....                        | 141,530     | 101,370     | 40,160                 |
| Total, net investment, United States .....                        | 193,705     | 152,252     | 41,453                 |
| Total, net investment, United States .....                        | 260,793,476 | 200,109,371 | 60,684,105             |
| Non-Federal contributions .....                                   | 249,733     | 249,615     | 118                    |
| Accumulated net nonoperating income .....                         | 39,860      | 38,567      | 1,293                  |
| Total, net investment .....                                       | 261,083,069 | 200,397,553 | 60,685,516             |
| Current liabilities:  |             |             |                        |
| Accrued liabilities .....   | 6,189,016   | 6,577,170   | (388,154)              |
| Accounts payable:   |             |             |                        |
| Government agencies .....   | 137,761     | 33,163      | 104,598                |
| Other .....   | 8,672,280   | 2,376,822   | 6,295,458              |
| Total, current liabilities .....                                  | 14,999,057  | 8,987,155   | 6,011,902              |
| Other deferred credits .....                                      | 5,480       | 310         | 5,170                  |
| Total, liabilities .....  | 276,087,606 | 209,385,018 | 66,702,588             |

<sup>1</sup>Construction work in progress: Construction work in progress includes certain completed features, e.g., Glen Canyon bridge and access roads, etc., aggregating \$9,293,573.

<sup>2</sup>Operating funds:

|  |                   |
|--|-------------------|
| Amount committed to payment of unliquidated obligations and accounts payable ..... | \$43,341,402      |
| Budgetary reserve .....  | 18,517,740        |
| Other unobligated balance .....  | 3,323,405         |
| <b>Total</b> .....   | <b>65,182,547</b> |

<sup>3</sup>Deposit funds:

|   |                  |
|---|------------------|
| Retained percentages of contractors' earnings ..... | \$6,186,716      |
| Utility deposits .....                              | 2,300            |
| Trust funds .....                                   | 5,450            |
| <b>Total</b> .....                                  | <b>6,194,466</b> |

<sup>4</sup>Nonreimbursable expense:

|   |           |
|---|-----------|
| Cost of quality of water studies required by sec. 15, Public Law 485, 84th Cong ..... | \$141,530 |
|---|-----------|

### GENERAL NOTES

Value of repayment contracts: Long-term repayment contracts, no part of which have matured at June 30, 1961, have been executed with water users' organizations for the repayment of the portion of the investment in irrigation facilities. At that date such contracts amounted to \$7,195,000.

Contingent liabilities: At June 30, 1961, the Upper Colorado River Basin fund is contingently liable for wage escalation claims in dispute, claims for additional compensation due to changed conditions, and other contingent liabilities in the approximate amount of \$2,727,000.

**Colorado River Storage Project and Participating Projects**  
**Exhibit B — Statement of source and application of funds and other credits, June 30, 1961**

|   | Total         | Storage units |               |               |              |
|---|---------------|---------------|---------------|---------------|--------------|
|   |               | Curecanti     | Flaming Gorge | Glen Canyon   | Navajo       |
| SOURCE OF FUNDS AND OTHER CREDITS                             |               |               |               |               |              |
| Congressional appropriations:                                 |               |               |               |               |              |
| Prior fiscal years .....                                      | \$192,681,177 |               | \$29,003,335  | \$126,978,818 | \$20,289,525 |
| Fiscal year 1961 .....  | 58,700,000    | \$2,400,000   | 11,210,900    | 19,512,540    | 11,622,000   |
| Total, direct appropriations .....                            | 251,381,177   | 2,400,000     | 40,213,335    | 146,491,358   | 31,911,525   |
| Transfer appropriations, Bureau of Public Roads .....         | 600,000       |               |               | 600,000       |              |
| Total, congressional appropriations .....                     | 251,981,177   | 2,400,000     | 40,213,335    | 147,091,358   | 31,911,525   |
| Non-Federal contributions .....                               | 249,733       | 35,000        | 78            | 60,065        |              |
| Net transfers-in of property or services without charge ..... | 4,257,029     | 456,699       | 215,843       | 1,044,240     | 108,466      |
| Interest during construction capitalized .....                | 4,748,975     | 15,519        | 606,517       | 4,056,066     |              |
| Net nonoperating income .....                                 | 39,860        |               | 4,883         | 3,038         | 910          |
| Total .....   | 261,276,774   | 2,907,218     | 41,040,656    | 152,254,767   | 32,020,901   |
| APPLICATION OF FUNDS AND OTHER CREDITS                        |               |               |               |               |              |
| Plant in service (irrigation) .....                           | 1,599,704     |               |               |               |              |
| Construction work in progress .....                           | 183,307,024   | 1,777,676     | 25,103,052    | 110,816,707   | 27,386,280   |
| Service facilities (net) .....                                | 14,175,124    | 22,892        | 4,136,390     | 8,897,282     | 344,695      |
| Investigation costs .....                                     | 4,348,207     |               |               |               |              |
| Nonreimbursable expense:                                      |               |               |               |               |              |
| Quality-of-water studies .....                                | 141,530       |               |               |               |              |
| Funds returned to U.S. Treasury .....                         | 52,175        |               | 4,882         | 3,038         | 910          |
| Working capital (see below) .....                             | 57,653,010    | 1,106,650     | 11,796,332    | 32,537,740    | 4,289,016    |
| Total .....   | 261,276,774   | 2,907,218     | 41,040,656    | 152,254,767   | 32,020,901   |
| ANALYSIS OF WORKING CAPITAL                                   |               |               |               |               |              |
| Current and deferred assets:                                  |               |               |               |               |              |
| Operating fund balance with U.S. Treasury .....               | 65,182,547    | 1,719,556     | 13,487,787    | 35,711,894    | 5,321,612    |
| Deposit funds with U.S. Treasury .....                        | 6,194,466     |               | 1,117,761     | 4,464,888     | 383,074      |
| Accounts receivable .....                                     | 78,428        | 792           | 22,526        | 40,069        | 9,629        |
| Inventories .....   | 252,272       |               | 26,741        | 219,120       | 3,204        |
| Prepayments and advances .....                                | 457,255       | 66,618        | 9,233         | 65,538        | 40,169       |
| Deferred and unmatured receivables .....                      | 305,812       |               |               | 305,812       |              |
| Deferred and undistributed charges .....                      | 186,767       |               | 41,208        | 4,363         | 23,558       |
| Total .....   | 72,657,547    | 1,786,966     | 14,705,256    | 40,811,684    | 5,781,246    |
| Current and deferred liabilities:                             |               |               |               |               |              |
| Accounts payable .....  | 8,810,041     | 680,316       | 1,791,163     | 3,809,026     | 1,109,156    |
| Trust and deposit liabilities .....                           | 6,189,016     |               | 1,117,761     | 4,464,888     | 383,074      |
| Deferred and undistributed credits .....                      | 5,480         |               |               | 30            |              |
| Total .....   | 15,004,537    | 680,316       | 2,908,924     | 8,273,944     | 1,492,230    |
| Working capital .....   | 57,653,010    | 1,106,650     | 11,796,332    | 32,537,740    | 4,289,016    |



# Exhibit B — Statement of source and application of funds and other credits, June 30, 1961—Continued

|   | Participating projects |           |           |             |             |               | Transmis-<br>sion division | Advance<br>planning |
|---|------------------------|-----------|-----------|-------------|-------------|---------------|----------------------------|---------------------|
|   | Central<br>Utah        | Florida   | Hammond   | Paonia      | Seedskadee  | Smith<br>Fork |                            |                     |
| SOURCE OF FUNDS AND OTHER CREDITS                             |                        |           |           |             |             |               |                            |                     |
| Congressional appropriations:                                 |                        |           |           |             |             |               |                            |                     |
| Prior fiscal years .....                                      | \$2,985,000            |           | \$292,500 | \$6,177,442 | \$1,154,400 | \$350,500     | \$1,099,003                | \$4,350,654         |
| Fiscal year 1961 .....  | 2,189,000              | \$862,500 | 1,300,000 | 903,000     | 1,055,170   | 1,500,000     | 5,108,000                  | 1,037,790           |
| Total, direct appropriations .....                            | 5,174,000              | 862,500   | 1,592,500 | 7,080,442   | 2,209,570   | 1,850,500     | 6,207,003                  | 5,388,444           |
| Transfer appropriations, Bureau of Public Roads .....         |                        |           |           |             |             |               |                            |                     |
| Total, congressional appropriations .....                     | 5,174,000              | 862,500   | 1,592,500 | 7,080,442   | 2,209,570   | 1,850,500     | 6,207,003                  | 5,388,444           |
| Non-Federal contributions .....                               | 3,565                  |           |           | 91,035      |             |               |                            | 59,990              |
| Net transfers-in of property or services without charge ..... | 498,951                | 327,821   | 286,160   | 335,810     | 1,201,617   | 206,341       | 156,240                    | (581,159)           |
| Interest during construction capitalized .....                | 18,930                 |           |           |             |             |               | 51,943                     |                     |
| Net nonoperating income .....                                 |                        |           |           | 24,368      | 5,397       |               |                            | 1,264               |
| Total .....   | 5,695,446              | 1,190,321 | 1,878,660 | 7,531,655   | 3,416,584   | 2,056,841     | 6,415,186                  | 4,868,539           |
| APPLICATION OF FUNDS AND OTHER CREDITS                        |                        |           |           |             |             |               |                            |                     |
| Plant in service (irrigation) .....                           |                        |           |           | 1,599,704   |             |               |                            |                     |
| Construction work in progress .....                           | 4,838,513              | 1,032,254 | 1,441,949 | 5,340,881   | 1,918,201   | 1,763,129     | 1,888,382                  |                     |
| Service facilities (net) .....                                | 60,835                 | 41,561    | 104       | 18,794      | 217,731     | 11,025        | 74,024                     | 201,383             |
| Investigation costs .....                                     |                        |           |           | 18,194      |             |               |                            | 4,329,413           |
| Nonreimbursable expenses: Quality of water studies .....      |                        |           |           |             |             |               |                            | 141,530             |
| Funds returned to U.S. Treasury .....                         |                        |           |           | 36,683      | 5,397       |               |                            | 1,265               |
| Working capital (see below) .....                             | 796,098                | 116,506   | 436,607   | 368,391     | 1,275,255   | 282,687       | 4,452,780                  | 194,948             |
| Total .....   | 5,695,446              | 1,190,321 | 1,878,660 | 7,531,655   | 3,416,584   | 2,056,841     | 6,415,186                  | 4,868,539           |
| ANALYSIS OF WORKING CAPITAL                                   |                        |           |           |             |             |               |                            |                     |
| Current and deferred assets:                                  |                        |           |           |             |             |               |                            |                     |
| Operating fund balance with U.S. Treasury .....               | 1,023,748              | 404,624   | 526,404   | 491,713     | 1,362,031   | 405,456       | 4,505,841                  | 221,881             |
| Deposit funds with U.S. Treasury .....                        | 69,665                 |           | 28,734    | 63,351      | 3,656       | 63,337        |                            |                     |
| Accounts receivable .....                                     | 755                    | 988       |           |             | 676         |               | 2,993                      |                     |
| Inventories .....   |                        |           |           |             | 1,388       |               |                            | 1,819               |
| Prepayments and advances .....                                | 21,165                 | 38,745    | 40,906    | 4,853       | 48,096      | 18,645        | 49,783                     | 53,504              |
| Deferred and unmatured receivables .....                      |                        |           |           |             |             |               |                            |                     |
| Deferred and undistributed charges .....                      | (2,165)                | (167)     |           |             | 120,631     |               | 87                         | (748)               |
| Total .....   | 1,113,168              | 444,190   | 596,044   | 559,917     | 1,536,478   | 487,438       | 4,558,704                  | 276,456             |
| Current and deferred liabilities:                             |                        |           |           |             |             |               |                            |                     |
| Accounts payable .....  | 247,405                | 327,684   | 130,703   | 128,175     | 257,567     | 141,414       | 105,924                    | 81,508              |
| Trust and deposit liabilities .....                           | 69,665                 |           | 28,734    | 57,901      | 3,656       | 63,337        |                            |                     |
| Deferred and undistributed credits .....                      |                        |           |           | 5,450       |             |               |                            |                     |
| Total .....   | 317,070                | 327,684   | 159,437   | 191,526     | 261,223     | 204,751       | 105,924                    | 81,508              |
| Working capital .....   | 796,098                | 116,506   | 436,607   | 368,391     | 1,275,255   | 282,687       | 4,452,780                  | 194,948             |

<sup>1</sup>Includes \$2,046,067 appropriated to the original Paonia project (authorized June 25, 1947).

<sup>1</sup>Includes \$2,046,067 appropriated to the original Paonia project (authorized June 25, 1947).

### Schedule No. 1 — Construction work in progress, June 30, 1961

| Property class  | Total              | Storage units    |                   |                    |                   | Participating projects |                  |                  |                  |                  |                  | Transmission division |
|---|--------------------|------------------|-------------------|--------------------|-------------------|------------------------|------------------|------------------|------------------|------------------|------------------|-----------------------|
|   |                    | Curecanti        | Flaming Gorge     | Glen Canyon        | Navajo            | Central Utah           | Florida          | Hammond          | Paonia           | Seedskadee       | Smith Fork       |                       |
| Dams and reservoirs .....                               | \$141,763,496      | \$1,639,853      | \$20,063,701      | \$80,148,975       | \$27,386,280      | \$3,955,429            | \$887,301        |                  | \$5,062,822      | \$988,747        | \$1,630,388      |                       |
| Diversion works .....                                   | 232,679            |                  |                   |                    |                   |                        | 12,706           | \$219,973        |                  |                  |                  |                       |
| Pumping plants .....                                    | 160,193            |                  |                   |                    |                   |                        |                  | 89,446           |                  | 70,747           |                  |                       |
| Canals and conduits .....                               | 2,847,957          |                  |                   |                    |                   | 802,072                | 119,021          | 1,070,545        | 278,059          | 445,519          | 132,741          |                       |
| Laterals .....  | 328,498            |                  |                   |                    |                   |                        | 13,226           | 61,044           |                  | 254,228          |                  |                       |
| Drains .....  | 221,983            |                  |                   |                    |                   | 62,082                 |                  | 941              |                  | 158,960          |                  |                       |
| Powerplants, hydro .....                                | 30,159,267         | 114,170          | 3,920,451         | 26,124,646         |                   |                        |                  |                  |                  |                  |                  |                       |
| Transmission lines, switch-<br>yards, substations ..... | 2,762,701          | 8,134            | 431,108           | 487,020            |                   |                        |                  |                  |                  |                  |                  | \$1,836,439           |
| General property .....                                  | 81,275             |                  | 81,275            |                    |                   |                        |                  |                  |                  |                  |                  |                       |
| Interest during construc-<br>tion capitalized .....     | 4,748,975          | 15,519           | 606,517           | 4,056,066          |                   | 18,930                 |                  |                  |                  |                  |                  | 51,943                |
| <b>Total .....</b>                                      | <b>183,307,024</b> | <b>1,777,676</b> | <b>25,103,052</b> | <b>110,816,707</b> | <b>27,386,280</b> | <b>4,838,513</b>       | <b>1,032,254</b> | <b>1,441,949</b> | <b>5,340,881</b> | <b>1,918,201</b> | <b>1,763,129</b> | <b>1,882,382</b>      |
| <b>Additions:</b>                                       |                    |                  |                   |                    |                   |                        |                  |                  |                  |                  |                  |                       |
| Prior fiscal years .....                                | 117,373,220        |                  | 15,970,328        | 73,993,976         | 18,205,312        | 2,573,744              |                  | 422,608          | 3,591,767        | 1,384,792        | 489,029          | 741,664               |
| Fiscal year 1961 .....                                  | 65,933,804         | 1,777,676        | 9,132,724         | 36,822,731         | 9,180,968         | 2,264,769              | 1,032,254        | 1,019,341        | 1,749,114        | 533,409          | 1,274,100        | 1,146,718             |
| <b>Total .....</b>                                      | <b>183,307,024</b> | <b>1,777,676</b> | <b>25,103,052</b> | <b>110,816,707</b> | <b>27,386,280</b> | <b>4,838,513</b>       | <b>1,032,254</b> | <b>1,441,949</b> | <b>5,340,881</b> | <b>1,918,201</b> | <b>1,763,129</b> | <b>1,882,382</b>      |



# Schedule No. 2 — Service facilities, June 30, 1961

|   | Total       | Storage units  |                  |                |           | Participating projects |          |              |           |                 |               | Trans-<br>mission<br>division | Ad-<br>vance<br>Plan-<br>ning |
|---|-------------|----------------|------------------|----------------|-----------|------------------------|----------|--------------|-----------|-----------------|---------------|-------------------------------|-------------------------------|
|   |             | Cure-<br>canti | Flaming<br>Gorge | Glen<br>Canyon | Navajo    | Central<br>Utah        | Florida  | Ham-<br>mond | Paonia    | Seed-<br>skadee | Smith<br>Fork |                               |                               |
| Structures:   |             |                |                  |                |           |                        |          |              |           |                 |               |                               |                               |
| Permanent housing .....   | \$5,033,406 |                | \$1,374,965      | \$3,667,585    |           |                        |          |              |           | \$17,856        |               |                               |                               |
| Temporary housing .....   | 929,247     |                | 180,199          | 373,516        | \$210,965 |                        |          |              | \$141,263 | 23,304          |               |                               |                               |
| Warehouse buildings .....   | 626,226     |                | 75,261           | 540,302        |           |                        |          |              | 3,546     |                 | \$7,117       |                               |                               |
| Administration buildings .....  | 442,725     |                | 124,053          | 305,126        |           |                        |          |              | 13,546    |                 |               |                               |                               |
| Municipal building .....  | 116,001     |                |                  | 116,001        |           |                        |          |              |           |                 |               |                               |                               |
| Police buildings, garages,<br>fire stations .....   | 324,661     |                | 77,165           | 239,612        | 7,884     |                        |          |              |           |                 |               |                               |                               |
| Sewers, water systems,<br>electrical distribution ....  | 3,507,961   |                | 1,153,569        | 2,051,395      | 157,486   |                        |          |              |           | 145,511         |               |                               |                               |
| Streets, street improve-<br>ments, access roads .....   | 3,300,060   |                | 1,164,653        | 2,118,850      |           |                        |          |              | 16,557    |                 |               |                               |                               |
| Airstrip .....  | 322,650     |                |                  | 322,650        |           |                        |          |              |           |                 |               |                               |                               |
| Other structures .....  | 908,100     |                | 216,281          | 557,708        | 85,863    | \$17,629               |          |              | 22,824    | 3,870           | 412           |                               | \$3,513                       |
| Miscellaneous equipment ....  | 1,997,960   | \$23,123       | 529,666          | 701,972        | 125,805   | 55,757                 | \$42,132 | \$110        | 45,359    | 30,790          | 3,780         | \$97,103                      | 342,363                       |
| Subtotal .....  | 17,508,997  | 23,123         | 4,868,812        | 10,994,717     | 588,003   | 73,386                 | 42,132   | 110          | 243,095   | 221,331         | 11,309        | 97,103                        | 345,876                       |
| Less accumulated deprecia-<br>tion to date (transferred<br>to construction work in<br>progress) ..... | 3,333,873   | 231            | 732,422          | 2,097,435      | 243,308   | 12,551                 | 571      | 6            | 75,893    | 3,600           | 284           | 23,079                        | 144,493                       |
| Total .....   | 14,175,124  | 22,892         | 4,136,390        | 8,897,282      | 344,695   | 60,835                 | 41,561   | 104          | 167,202   | 217,731         | 11,025        | 74,024                        | 201,383                       |
| Additions:  |             |                |                  |                |           |                        |          |              |           |                 |               |                               |                               |
| Prior fiscal years .....  | 15,248,742  |                | 4,354,560        | 9,954,544      | 451,902   | 57,499                 |          |              | 184,872   | 33,210          | 2,505         | 25,000                        | 184,650                       |
| Fiscal year 1961 .....  | (1,073,618) | 22,892         | (218,170)        | (1,057,262)    | (107,207) | 3,336                  | 41,561   | 104          | (17,670)  | 184,520         | 8,520         | 49,024                        | 16,733                        |
| Total .....   | 14,175,124  | 22,892         | 4,136,390        | 8,897,282      | 344,695   | 60,835                 | 41,561   | 104          | 167,202   | 217,731         | 11,025        | 74,024                        | 201,383                       |

Schedule No. 3 — Investigation costs, June 30, 1961  
(undistributed)

| Description                          | Amount    | Description                      | Amount    |
|--------------------------------------|-----------|----------------------------------|-----------|
| Corecant storage unit (Crystal) .... | \$124,788 | Participating projects—Continued |           |
| Participating projects:              |           | Paonia .....                     | \$18,794  |
| Central Utah (excludes Ver-          |           | Pine River extension .....       | 136,496   |
| nal unit) .....                      | 2,634,588 | Silt .....                       | 317,545   |
| Emery County .....                   | 347,496   | Total .....                      | 4,348,207 |
| LaBarge .....                        | 220,045   |                                  |           |
| Lyman .....                          | 548,455   |                                  |           |

Schedule No. 4 — Prepayments and advances, June 30, 1961

Advances to other Bureau of Reclamation activities performing services for the project are reflected in the accounting records of such entities in the following manner:

Fund balances with U.S. Treasury:

Centralized projects activities ..... \$140,088  
Denver office ..... 679,992

Accounts receivable:

Denver office ..... \$35,519  
Centralized projects activities ..... 11,255  
46,774

Total ..... 866,854

Less accounts payable:

Denver office ..... \$265,288  
Centralized projects activities ..... 144,311

409,599  
Total ..... 457,255



Schedule No. 5 — Allocation of federal investment tentative  
(In thousands)

|                                    | Total <sup>1</sup> | Allocation to purposes |          |                                   |                  |                      |            |                    | Unallo-<br>cated <sup>4</sup> |
|------------------------------------|--------------------|------------------------|----------|-----------------------------------|------------------|----------------------|------------|--------------------|-------------------------------|
|                                    |                    | Reimbursable           |          |                                   | Nonreimbursable  |                      |            |                    |                               |
|                                    |                    | Irrigation             | Power    | Municipal<br>and industrial water | Flood<br>control | Fish and<br>wildlife | Recreation | Other <sup>3</sup> |                               |
| Storage project:                   |                    |                        |          |                                   |                  |                      |            |                    |                               |
| Curecanti unit, Colorado .....     | \$103,038          | \$2,287                | \$92,040 | .....                             | \$1,520          | \$3,315              | \$3,744    | \$132              | .....                         |
| Flaming Gorge unit, Utah .....     | 73,856             | 12,579                 | 49,939   | .....                             | .....            | 8,142                | 3,109      | 87                 | .....                         |
| Glen Canyon, Ariz .....            | 365,504            | 42,312                 | 297,891  | .....                             | .....            | 6,566                | 15,692     | 3,043              | .....                         |
| Navajo unit, New Mexico .....      | 42,857             | 33,120                 | .....    | .....                             | 207              | 6,482                | 2,983      | 65                 | .....                         |
| Transmission division .....        | 178,876            | .....                  | 178,776  | .....                             | .....            | .....                | .....      | 100                | .....                         |
| Subtotal .....                     | 764,131            | 90,298                 | 618,646  | .....                             | 1,727            | 24,505               | 25,528     | 3,427              | .....                         |
| Participating projects:            |                    |                        |          |                                   |                  |                      |            |                    |                               |
| State of Colorado:                 |                    |                        |          |                                   |                  |                      |            |                    |                               |
| Florida .....                      | 10,935             | 9,031                  | .....    | .....                             | 176              | 1,651                | 55         | 22                 | .....                         |
| Paonia .....                       | 7,815              | 7,540                  | .....    | .....                             | 72               | 10                   | 42         | 151                | .....                         |
| Pine River extension .....         | 244                | 191                    | .....    | .....                             | .....            | .....                | .....      | 53                 | .....                         |
| Silt .....                         | 3,682              | 3,531                  | .....    | .....                             | .....            | 10                   | 124        | 17                 | .....                         |
| Smith Fork .....                   | 4,430              | 4,128                  | .....    | .....                             | .....            | 201                  | 29         | 72                 | .....                         |
| State of New Mexico: Hammond ..... | 3,290              | 3,174                  | .....    | .....                             | .....            | 108                  | .....      | 8                  | .....                         |
| State of Utah:                     |                    |                        |          |                                   |                  |                      |            |                    |                               |
| Central Utah:                      |                    |                        |          |                                   |                  |                      |            |                    |                               |
| Vernal unit .....                  | 7,840              | 6,782                  | .....    | \$594                             | .....            | 173                  | 205        | 86                 | .....                         |
| Other units .....                  | 234,712            | 125,089                | 51,752   | 46,050                            | 2,236            | 1,725                | 1,067      | 1,043              | \$5,750                       |
| Emery County .....                 | 10,006             | 9,705                  | .....    | .....                             | .....            | 125                  | 158        | 18                 | .....                         |
| State of Wyoming:                  |                    |                        |          |                                   |                  |                      |            |                    |                               |
| LaBarge .....                      | 1,816              | 1,751                  | .....    | .....                             | .....            | .....                | .....      | 65                 | .....                         |
| Lyman .....                        | 11,736             | 11,376                 | .....    | .....                             | .....            | 300                  | .....      | 60                 | .....                         |
| Seedskaadee .....                  | 38,520             | 36,097                 | .....    | .....                             | .....            | 1,858                | 154        | 411                | .....                         |
| Subtotal .....                     | 335,026            | 218,395                | 51,752   | 46,644                            | 2,484            | 6,161                | 1,834      | 2,006              | 5,750                         |
| Total .....                        | 1,099,157          | 308,693                | 670,398  | 46,644                            | 4,211            | 30,666               | 27,362     | 5,433              | 5,750                         |

<sup>1</sup>Includes reimbursable interest during construction and proposed sec. 8 costs.

<sup>2</sup>Excludes \$3,519,000 transmission division costs and interest included in central Utah power allocation.

<sup>3</sup>Colorado River development fund investigations and non-Federal contribu-  
tions.

<sup>4</sup>Ultimate phase costs of central Utah participating project.

## APPENDIX D

### GENERAL PRINCIPLES TO GOVERN, AND OPERATING CRITERIA FOR, GLEN CANYON RESERVOIR (LAKE POWELL) AND LAKE MEAD DURING THE LAKE POWELL FILLING PERIOD

1. The following principles and criteria are based on the exercise, consistent with the law of the River, of reasonable discretion by the Secretary of the Interior in the operation of the Federal projects involved. The case generally styled "Arizona v. California, et al, No. 9 Original" is in litigation before the Supreme Court of the United States. Anything which is provided for herein is subject to change consistent with whatever rulings are made by the Supreme Court which might affect the principles and criteria herein set out. They may also be subject to change due to future Acts of the Congress.

2. The principles and criteria set forth hereinafter are applicable during the Lake Powell filling period, which is defined as that time interval between the date Lake Powell is first capable of storing water (estimated to occur in the spring of 1963) and the date Lake Powell storage first attains elevation 3,700 (content 28.0 MAF total surface storage) and Lake Mead storage is simultaneously at or above elevation 1146 (content 17.0 MAF available surface storage), or May 31, 1987, whichever occurs first. If, in the judgment of the Secretary, the contents of Lake Powell and Lake Mead warrant such action, and after consultation with appropriate interests of the Upper Colorado River Basin and the Lower Colorado River Basin, the Secretary may declare that in no less than one year from and after the date of such declaration these principles and criteria are no longer applicable.

3. Sufficient water will be passed through or released from either or both Lake Mead and Lake Powell, as circumstances require under the provisions of Principles 7 and 8 hereof, to satisfy downstream uses of water (other than for power) below Hoover Dam which uses include the following:

- a. Net river losses
- b. Net reservoir losses
- c. Regulatory wastes
- d. The Mexican obligation limited to a scheduled 1.5 million acre-feet per year
- e. The diversion requirements of mainstream projects in the United States



4. All uses of water from the main stem of the Colorado River between Glen Canyon Dam and Lake Mead will be met by releases from or water passed through Lake Powell and/or by tributary inflow occurring below Glen Canyon Dam. Diversions of water directly out of Lake Mead will be met in a similar manner or, if application of the criteria of Principles 7 and 8 hereof should so require, by water stored in Lake Mead.

5. The United States will make a fair allowance for any deficiency, computed by the method herein set forth, in firm energy generation at Hoover Powerplant. For each operating year deficiency in firm energy shall be computed as the difference between firm energy which, assuming an over-all efficiency of 83 percent, would have been generated and delivered at transmission voltage at Hoover Powerplant in that year if water has not been impounded in the reservoirs of the Colorado River Storage Project storage units (Glen Canyon, Flaming Gorge, Navajo, and Curecanti), but excluding the effects of evaporation from the surface of such reservoirs, and the energy actually generated and delivered at transmission voltage at Hoover Powerplant during that year adjusted to reflect an over-all efficiency of 83 percent. At the discretion of the Secretary, allowance will be accomplished by the United States delivering energy, either at Hoover Powerplant or at points acceptable to both the Secretary and the affected Hoover power contractors, or monetarily in an amount equal to the incremental cost of generating substitute energy. To the extent the Upper Colorado River Basin Fund is utilized the moneys expended therefrom in accomplishing the allowance, either through the delivery of purchased energy or by direct monetary payments, shall be reimbursed to said Fund from the Separate Fund identified in Sec. 5 of the Act of December 21, 1928 (45 Stat. 1057), to the extent such reimbursement is consistent with the expenditures Congress may authorize from said Separate Fund pursuant to said Act. The attached Additional Regulation No. 1 for Generation and Sale of Power in accordance with the Boulder Canyon Project Adjustment Act, upon issuance, will be made a part of these principles and criteria.

6. In accomplishing the foregoing, Lake Powell will be operated in general accordance with the provisions of Principles 7 and 8.

7. Storage capacity in Lake Powell to elevation 3,490 (6.5 million acre-feet surface storage) shall be obtained at the earliest practicable time in accordance with the following procedure:

Until elevation 3,490 is first reached, any water stored in Lake Powell shall be available to maintain rated head on Hoover Powerplant. When stored water in Lake Powell

has reached elevation 3,490, it will not be subject to release or diminution below elevation 3,490. The obtaining of this storage level in Lake Powell will be in such manner as not to cause Lake Mead to be drawn down below elevation 1,123 (14.5 million acre-feet available surface storage), which corresponds to rated head on the Hoover Powerplant. In the process of gaining storage to elevation 3,490, the release from Glen Canyon Dam shall not be less than 1.0 million acre-feet per year and 1,000 cubic feet per second, as long as inflow and storage will permit.

8. The operation of Lake Powell above elevation 3,490 and Lake Mead will be coordinated and integrated so as to produce the greatest practical amount of power and energy. In view of the provision for allowance set forth in Principle 5 hereof, the quantity of water released through each powerplant will be determined by the Secretary in a manner appropriate to meet the filling criteria.

9. In general, it is not anticipated that secondary energy will be generated at Hoover during the filling period. However, any secondary energy, as defined in the Hoover contracts, which may be generated and delivered at transmission voltage at Hoover Powerplant will be disposed of under the terms of such contracts.

10. In the annual application of the flood control regulations to the operation of Lake Mead, recognition shall be given to available capacity in upstream reservoirs.

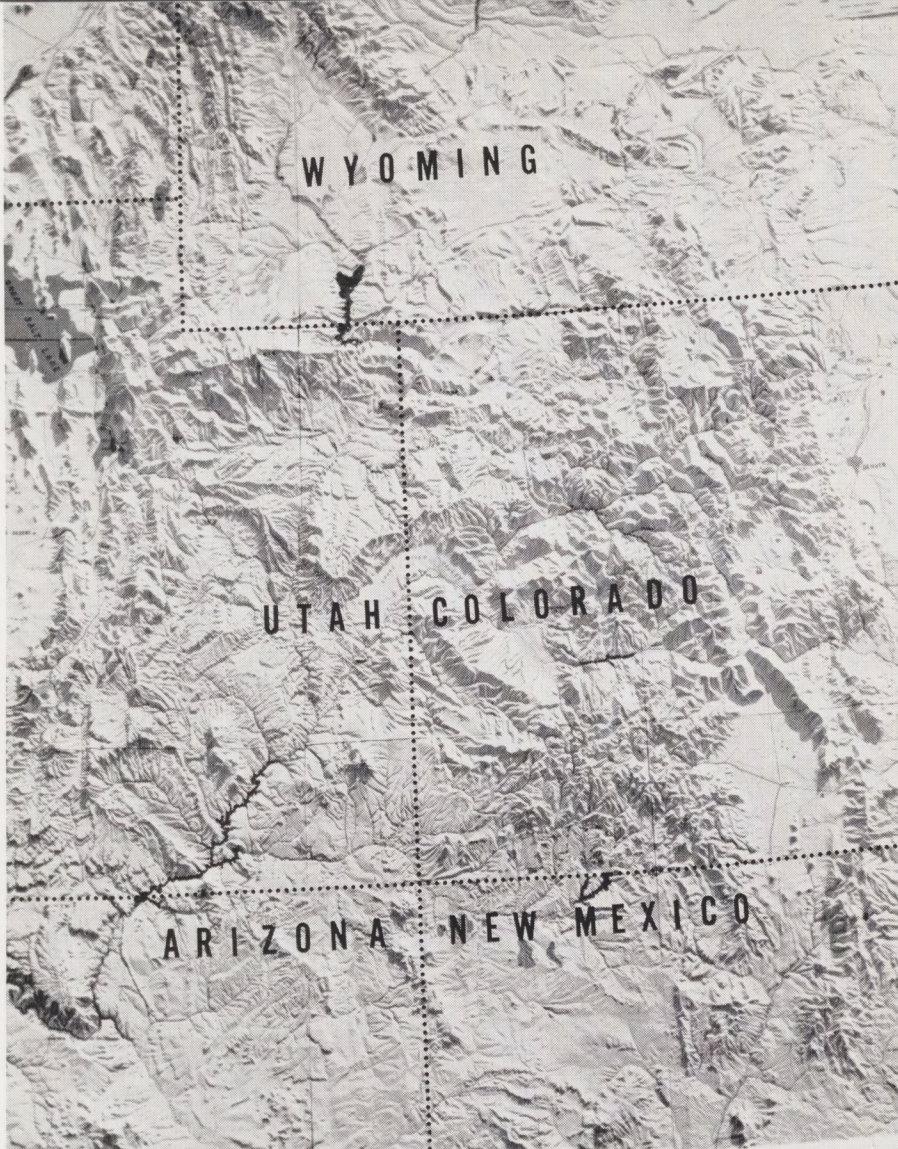


ADDITIONAL REGULATION NO. 1  
to the  
GENERAL REGULATIONS FOR GENERATION AND SALE OF  
POWER IN ACCORDANCE WITH THE  
BOULDER CANYON PROJECT ADJUSTMENT ACT

In accordance with the terms and conditions of the Act of July 19, 1940 (54 Stat. 774), and Article 27 of the General Regulations promulgated May 20, 1941, the following additional Regulation No. 1 is hereby promulgated:

Commencing with June 1, 1987, charges for electrical energy in addition to such other components as may then be authorized or required under the then existing laws and regulations, and to the extent not inconsistent therewith, shall include a component to return to the United States funds adequate to reimburse the Upper Colorado River Basin Fund for moneys expended from such fund on account of allowances for Hoover diminution during the filling period of the storage project reservoirs authorized by the Act of April 11, 1956, (70 Stat. 105), in accordance with paragraph 5 of the General Principles to Govern, and Operating Criteria for, Glen Canyon Reservoir (Lake Powell) and Lake Mead during the Lake Powell Filling Period, approved April 2, 1962. Such component shall be sufficient, but no more than sufficient, to provide said reimbursement in equal annual installments over a period of years equal to the number of years over which costs on account of allowance were incurred by the said Upper Colorado River Basin Fund.





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 for display at conventions and other public events.

## UPPER COLORADO RIVER COMMISSION

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