WATER-RIGHT DOCKET

Rocky Mountain National Park

Docket No: 19

VARIOUS DECREED PRIORITIES

Preliminary Docket Information

00-00-0000: water docket information

WATER DOCKET INFORMATION

AREA ROCKY MOUNTAIN N P

DOCKET NO. 19

APPLICATION NO. _____

PERMIT NO. _____

CERTIFICATE NO. _____

TITLE OF DOCKET ADJUDICATION OF FILED CLAIMS IN WATER DISTRICT NO 51 IN THE DISTRICT COURT OR THE U.S. OR ONE DISTRICT OF COLORADO

PRIORITY DECREED PRIORITIES

REMARKS: _____

DOCKET NO. 19
ADJUDICATION OF WATER RIGHTS
WATER DISTRICT 51
CASE 814

Part I History of Federal Claims in District Court

A.	Jan. 6, 1939	Claim for Timber Creek Water System with priority of July 1, 1931, Filing No. 16511, accepted by State Engineer (SEE DOCKET 14).
B.	June 13, 1939	Published notice of Pending Adjudication on October 1, 1939.
C.	July 22, 1939	Memorandum from Superintendent Canfield transmitting copy of Notice of June 13.
D.	Aug. 24, 1939	Memorandum from Superintendent Canfield transmitting copy of Notice of August 14, setting adjudication on October 2, 1939.
E.	Sept. 29, 1939	Telegram from Acting Superintendent McLaughlin advised that Federal Claims will not be submitted to State Court because of adverse effect of 1937 Decree for Moffott Tunnel, and advising of plan for Federal Court Trial.
F.	Sept. 29, 1939	Telegram to Director from Attorney Taylor indicating concurrence.
G.	Oct. 2, 1939	Claim for Grand Lake Lodge Power Pipeline with priority of June 1, 1920, Filing No. 16658, accepted by State Engineer, (filing for Domestic Supply deferred pending redesing of system). (SEE DOCKET 17).
H.	Oct. 2, 1939	Claim for Milner Pass Road Camp Water System with priority of July 1, 1919, Filing 16659, accepted by State Engineer (SEE DOCKET 15).
I.	Oct. 5, 1939	Memorandum from Acting Chief Counsel Lee reciting indecision concerning Federal participation in adjudication and advising that date of hearing was set over.
J.	Oct. 9, 1939	Memorandum from Attorney Taylor indicating Federal participation may be dropped on basis that scope of adjudication is limited to irrigation use.

K. Oct. 10, 1939 — Memorandum from Acting Superintendent McLaughlin reporting on hearing of October 2, extension of 60 days for submitting claims, and advising of proposed analysis of conflicting claims.

L. Oct. 11, 1939 — Memorandum from Special Assistant to Attorney General Allen giving reasons for not submitting Federal Claims.

M. Oct. 12, 1939 — Letter to Attorney General from Special Assistant to Attorney General Allen presenting his interpretation of Federal Case.

N. Oct. 13, 1939 — Memorandum from Special Assistant to Attorney General Allen, confirming 60 days extension of time and recommending completion of statements of Federal Claims.

O. Nov. 5, 1939 — Claim for West Beaver Pipeline with priority of August 1, 1931, Filing No. 16668, Accepted by State Engineer. (SEE DOCKET 16) (Claim later abandoned because water system was removed).

P. Nov. 6, 1939 — Memorandum from Superintendent Canfield submitting alien claim for Grand River Ditch.

1. Copy of Claim of the Water Supply and Storage Co.

Q. Nov. 30, 1939 — Memorandum from Superintendent Canfield transmitting alien claims to water in Rocky Mountain National Park.

1. Claim of Robert A. Harbison, dated October 2, 1939.
2. Claim of Mary Alice Schnor, dated October 2, 1939.
3. Claim of Melvin E. Adkins, dated August 7, 1939 (DeWitt Ditch).
4. Petition for Nelvin E. Adkins, dated August 7, 1939 (DeWitt Ditch).

R. — Attempt to protest alien claim to Fleshuts Ditch as conflict with Federal Claim for Timber Creek Pipeline.

1. November 7, 1939, memorandum from A. van V. Dunn describing filing.
2. November 10, 1939, memorandum from A. van V. Dunn questions Timber Creek Source.
3. November 10, 1939, memorandum from Attorney Taylor transmitting 1 and 2 to Superintendent.

4. November 16, 1939, letter to Special Assistant to Attorney General of which copy to Superintendent recommends that Holzwarth amend claim to show that source of water is not Timber Creek.

5. November 20, 1939, from Acting Chief Counsel Lee confirming request that Holzwarth make voluntary amendment.

6. November 24, 1939, memorandum from Superintendent Canfield advising that Holzwarth has not actually filed claim to Fleshuts Ditch.

7. November 29, 1939, memorandum from A. van V. Dunn offering conditions under which Holzwarth might divert limited amounts of Timber Creek water.

S. Aug. 26, 1940 — Letter from Special Assistant to Attorney General advising of second special adjudication since general adjudication of 1937.

T. Aug. 22, 1940 — Memorandum report on position of United States and Northern Colorado Water Conservancy District in connection with Special Adjudication No. 2.

U. Sept. 10, 1940 — Letter to Attorney General from Under Secretary stating views of Department of the Interior.

V. July 15, 1943 — Memorandum from Acting Superintendent Miller, reporting on adjudication of 1943.

W. Sept. 26, 1944 — Water Right Status in Water District No. 51 by A. van V. Dunn.

X. Jan 25, 1945 — Memorandum from Superintendent Doerr advising of pending 1945 adjudication (for copy of Notice of December 18, 1944, SEE ALIEN WATER RIGHT NO. 1).

Y. July 5, 1945 — Letter to Attorney General from Assistant Secretary requesting that Park Service claims be included with other Federal Claims in 1945 adjudication in State District Court.

Z. July 26, 1945 — Letter from Acting Head, Lands Division, Department of Justice, advising that Bureau of Reclamation is not yet ready to subject its Federal Claims to adjudication.

Al. Aug. 2, 1945 — Letter from Acting Head, Lands Division, Department of Justice, advising that hearings on 1945 adjudication were set over to March 1946.

B1. Aug. 17, 1945 Letter from Special Assistant to Attorney General transmitting transcript of testimony on claims of Town of Grand Lake (SEE ALIEN WATER RIGHT 1).

C1. Jan. 21, 1946 Claim for Grand Lake Lodge and Ranger Station water system, with priorities of June 1, 1920, and July 1, 1926, Filing No. 17579, accepted by State Engineer (SEE DOCKET NO. 20).

D1. Feb. 6, 1946 Letter from Special Assistant to Attorney General advises that National Park Service water claims are in final form, and conditional decree was awarded on claim of Town of Grand Lake.

E1. Feb. 15, 1946 Letter from Acting Head, Lands Division, Department of Justice, instructed Special Assistant to Attorney General not to file any Federal claims on March 4 because they would jeopardize Bureau of Reclamation claims "which are most important."

F1. Mar. 18, 1946 Teletype from Demaray advised hearing set over to April 15 and may be postponed several months because Bureau of Reclamation has recommended special appearance of Attorney General.

G1. Mar. 29, 1946 Letter from Acting Director transmitted Dunn's analysis of Water Rights of Town of Grand Lake to Superintendent with request for discussion with Town officials. (SEE ALIEN WATER RIGHT NO. 1 (memo just added 2/10/54)).

H1. Apr. 9, 1946 Telegram from Canfield advises conference with Town officials reveals Town will not pay asking price of $15,000 for Cairns No. 1 rights and new claim is not duplication. (SEE ALIEN WATER RIGHT NO. 1) (good added).

I1. Apr. 10, 1946 Telegram from Tolson instructed Superintendent to advise Town of mutual interest in blocking final decrees for Cairns No. 1 pipeline and Mitchell Ditch (SEE ALIEN WATER RIGHT NO. 1) (just added).

J1. Apr. 10, 1946 Letter from Acting Director advises Superintendent of potential perfection of needless rights by Town through water sales on Shadow Mountain Lake Recreational Area (SEE ALIEN WATER RIGHT NO. 1) (just added).

K1. Jun. 30, 1947 Statement for C. V. Marmaduke, successor to Worth Allen as Special Assistant to Attorney General concerning relation of Federal and Town Claims to Tonahutu Creek water.

L1.	Jul. 2, 1947	Letter from Chief, Water Resources Division, transmitting records to support statement for Mr. Marmaduke.
M1.	Jul. 2, 1947	Memorandum from Mr. Dunn to inform Director that Department of Justice is to submit Federal claim to Federal District Court to quiet title to waters for Colorado - Big Thompson Project, and Mr. Marmaduke has been unable to find titles of Worth Allen relating to case.
N1.	Dec. 23, 1947	Letter to Attorney General from Under Secretary presenting 5 water claims for Rocky Mountain BASIS FOR CLAIMS NOW BEFORE FEDERAL DISTRICT COURT.
O1.	Jan. 28, 1948	Letter to Attorney General from Associate Director, concurring in proposal to submit "suggestions without submitting to State Court."
P1.	Mar. 5, 1948	Letter from Assistant Attorney General acknowledging receipt of National Park Service water claims, and advising that no claim is needed for use of well (at Ranger's Station).
Q1.	May 27, 1948	Letter from Assistant Attorney General transmitting copies of proposed statements of claim for National Park Service, with attached statements.
R1.	Jun. 4, 1948	Memorandum from Superintendent advising name of National Park Service is given in given incorrectly in statements of claim.
S1.	Jun. 15, 1948	Comments for amendments proposed by Chief, Water Resources Branch.
T1.	Jun. 21, 1948	Letter to Attorney General from Solicitor recommending changes.
U1.	Jun. 25, 1948	Letter to Special Assistant to Attorney General from Assistant Attorney General instructing as to changes in statements of claim.
V1.	Jun. 29, 1948	Letter from Assistant Attorney General transmitting copy of letter of June 25 to Solicitor.
W1.	Jul. 13, 1948	Letter to Attorney General from Special Assistant to Attorney General transmitting copies of claims filed in State court on July 12, 1948.
X1.	Jun. 29, 1948	Motion by Special Assistant to Attorney General to dismiss suit of Peterson vs. Abbott. (Case 876).
Y1.	Jun. 29, 1948	Letter to Attorney General advising that motion was filed by Special Assistant to Attorney General.

Z1.	Jul. 19, 1948	Letter to Solicitor transmitting copy of motion from Acting Assistant Attorney General.
AII.	Jul. 19, 1948	Memorandum to Chief Counsel from Bruce Wright transmitting motion.
BII.	Feb. 25, 1949	Publish notice of Adjudication. Perterson, et al., vs. Abbott, US, et al.
CII.	Mar. 2, 1949	Unsigned Ruling on Motion to Dismiss.
DII.	Mar. 2, 1949 Mar. 7, 1949	Motion for clarification of order of Dismissal. Notice of Motion (unsigned by U. S. Attorney).
EII.	Mar. 7, 1949	Amended Ruling on Motion to Dismiss (unsigned).
FII.	Mar. 8, 1949	Letter to Attorney General from Special Assistant to Attorney General explaining apparent objective of Peterson et al.
GII.	Mar. 8, 1949	Letter to Superintendent from Special Assistant to Attorney General advising that motion for Dismissal of Case 876, as applicable to United States has been granted - ending State Court Case.
HII.	Mar. 11, 1949	Memorandum from Regional Director transmitting information on Case 876.
III.	Mar. 15, 1949	Letter to Solicitor from Assistant Attorney General advising of action in Case 876.
JII.	Mar. 13, 1951	Notice of Adjudication of change of Point of Diversion of DeBerard Ditch.

DOCKET NO. 19
ADJUDICATION OF WATER RIGHTS
WATER DISTRICT'S 51 AND 36
IN UNITED STATES DISTRICT COURT
CASE NO. 2722

Part II in United States District Court

A.	Aug. 19, 1949	Letter to Attorney General from Solicitor concerning Federal Court Case.
B.	Sept. 22, 1949	Letter to Solicitor from Assistant Attorney General clarifying Case in State and Federal Courts, respectively.
C.	Sept. 28, 1949	Memorandum to Commissioner of Reclamation, from Chief Counsel requesting coordination of Federal interests.
D.	Oct. 7, 1949	Memorandum to Region Two from Chief, Water Resources Branch changing title of Deed 86 from State to Federal Case.
E.	Aug. 9, 1949	Memorandum concerning proposed water use Shadow Mountain National Recreation Area by Hubler.
F.	Aug. 19, 1949	Letter from Blomgren, Bureau of Reclamation concerning Bureau camp water system.
G.	Sept. 21, 1949	Memorandum from Superintendent concerning E and F.
H.	Nov. 30, 1950	Memorandum from Regional Director concerning E, F and G.
I.	May 6, 1952	Statement of Federal claim relating to National Park Service systems.
J.	May 6, 1952	Letter from Special Assistant to Attorney General transmitting I.
K.	May 16, 1952	Memorandum from Superintendent transmitting I and J to Regional Director.
L.	May 22, 1952	Memorandum from Assistant Regional Director transmitting I, J and K and calling attention to needed corrections.
M.	Jul. 15, 1952	Amended statement of claim for National Park Service.
N.	Aug. 12, 1952	Memorandum from Superintendent transmitting M and stating it appears to be okey.
O.	Aug. 22, 1952	Memorandum from Acting Assistant Regional Director transmitting M and N.

P. Sept. 25, 1952 Memorandum to Region from Assistant Director recommending correction of certain errors.

Q. Aug. 25, 1953 Memorandum from Chief, Water Resources Branch advising on status of case as discussed with Special Assistant to Attorney General.

R. Jan. 20, 1954 Memorandum from Superintendent advising that hearing will be on February 23 and only National Park Service witness will be Wayne Hackett.

IN THE DISTRICT COURT OF THE UNITED STATES

FOR THE DISTRICT OF COLORADO

THE UNITED STATES OF AMERICA, Plaintiff, v. NORTHERN COLORADO WATER CONSERVANCY DISTRICT, a quasi-municipal corporation of the State of Colorado; THE COLORADO RIVER WATER CONSERVATION DISTRICT, a quasi-municipal corporation of the State of Colorado; THE PALISADE IRRIGATION DISTRICT, a quasi-municipal corporation of the State of Colorado; THE CITY AND COUNTY OF DENVER, a municipal corporation; THE MOFFAT TUNNEL WATER & DEVELOPMENT COMPANY, a corporation; THE CITY OF COLORADO SPRINGS, a municipal corporation; THE PUBLIC SERVICE COMPANY OF COLORADO, a corporation; THE SOUTH PLATTE WATER USERS ASSOCIATION, a public corporation of the State of Colorado; Defendants.	)	C O M P L A I N T

The United States of America, by A. Devitt Vanech, Assistant Attorney General, Robt. E. Mulroney, C. V. Marmaduke, Jr., and William H. Veeder, Special Assistants to the Attorney General, acting under the authority of the Attorney General of the United States and at the request of the Secretary of the Interior, complains and alleges as follows:

I.

This is a civil action brought pursuant to the provisions of 28 U. S. C. 1345, in which the plaintiff in accordance with the provisions of 28 U. S. C. 2201, 2202, an actual controversy having arisen between the plaintiff and the defendants named herein, seeks to have declared its rights and obligations in connection with the operation of the Colorado-Big Thompson Project hereinafter described; to have the Court determine its rights to the use of water from the Colorado River, the

Blue River and other tributaries of the Colorado River in accordance with appropriations to the use of water made, owned and claimed by it in connection with the Colorado-Big Thompson Project.

II.

The United States of America, through the Bureau of Reclamation, Department of the Interior, in conformity with the provisions of the Reclamation Act, the Act of June 17, 1902 (32 Stat. 388), and the acts amendatory thereof and supplementary thereto, and Northern Colorado Water Conservancy District and other predecessors in interest, has initiated and now is in the process of constructing, developing and carrying forward to completion a reclamation project known as the Colorado-Big Thompson Project. That project as designed and as now being constructed has as its primary objective a diversion from the Colorado River Basin of Water for the purpose of irrigating approximately 615,000 acres of land located within the Northern Colorado Water Conservancy District in northeastern Colorado, and for domestic, industrial, and municipal uses. Diversion of Colorado River water for the purposes mentioned, from the Pacific or Western Slope to the Atlantic or Eastern Slope of the Rocky Mountains, is accomplished by a transmountain tunnel which exceeds 13 miles in length.

III.

Senate Document No. 80, 75th Congress, 1st Session, designated "Synopsis of Report on Colorado-Big Thompson Project," embodies the salient features of that project and purports to set forth the manner in which it is to be operated. Congress by the Act of August 9, 1937 (50 Stat. 595) appropriated $900,000 to initiate the construction of the project "in accordance with the plan described" in Senate Document No. 80 and thereafter by the Act of May 9, 1938 (52 Stat. 321) appropriated $1,250,000 subject to the proviso that "not less than $600,000 of the sum * * * appropriated shall be used in the construction of the Green Mountain Reservoir in accordance with the plans set forth in the said Senate Document No. 80." Congress has continued to appropriate large sums of money for the prosecution of the Colorado-Big

Thompson Project but has not since the date last mentioned alluded in any way to the said Senate Document No. 80, nor has it made the expenditure of the sums so appropriated conditioned upon compliance with that Document. Attached hereto and by reference made a part hereof is a copy of the aforesaid Senate Document No. 80, which is marked Exhibit A.

The United States, acting by and through the Secretary of the Interior, has entered into a contract dated July 5, 1938, with the Northern Colorado Water Conservancy District for the construction and operation of the Colorado-Big Thompson Project. Such contract at all times since its execution, and now, has been and is in full force and effect. Article 27 thereof reads as follows:

> "27. It is understood and agreed that the Project will be constructed and operated and maintained by the United States and the District so that the interests on the WESTERN SLOPE OF THE CONTINENTAL DIVIDE IN COLORADO will be protected in respect to the several matters and in the manner outlined under the heading 'Manner of Operation of Project Facilities and Auxiliary Features' in Senate Document No. 80 of the First Session of the 75th Congress of the United States."

The Northern Colorado Water Conservancy District, a defendant, is a quasi-municipal corporation which has been organized, and is operating, under and pursuant to Colorado Statutes Annotated, 1935 (Cumulative Supp. 1947) c. 173 B, sec. 15 et seq.

Representing the Western Slope interests referred to in the above-quoted paragraph 27 and Senate Document No. 80 is The Colorado River Water Conservation District, a defendant. That Conservation District, a quasi-municipal corporation organized and existing pursuant to Colorado Statutes Annotated, 1935 (Cumulative Supp. 1947) c. 173 B, sec. 15 et seq., is comprised of water users from the Colorado River, and others interested in the development of that stream and its tributaries on the Western Slope. By this action the United States seeks, among other things, to have declared the respective rights under Senate Document No. 80 of the Northern Colorado Water Conservancy District, The Colorado River Water Conservation District, and the interests they represent, thus establishing the basis for the administration of the Colorado-Big Thompson Project.

IV.

The construction of the Colorado-Big Thompson Project has progressed to the point where several of the larger components of it have been completed and are now in use. Among those components is the Alva B. Adams Tunnel, through which the water from the Colorado River is diverted to the Eastern Slope, and quantities of water, though small as compared to that which will be delivered when the project is in full operation, are at the present time being conducted through that transmountain diversion and have been beneficially applied for irrigation, domestic and power purposes. Also completed is the dam across the Colorado River creating Shadow Mountain Lake. Likewise completed and now in use is the Green Mountain Reservoir and Power Plant which are located on the Blue River, a tributary of the Colorado River. Plaintiff has stored in the Green Mountain Reservoir 156,545 acre-feet of water and has applied the water so stored, together with 1726 cubic feet of water per second of time of the direct flow of the Blue River to beneficial purposes in the generation of electricity in the power plant at Green Mountain Dam referred to in said Senate Document as Power Plant No. 5 and has applied some of said stored water to irrigation.

Granby Reservoir on the Colorado River and the power plants, reservoirs, conduits and distribution systems situated on the Eastern Slope are in the process of construction at the present time and are nearing completion. Many millions of dollars have been spent on the completed structures and those which are in the process of completion. It is anticipated the ultimate cost of the project when completed will be approximately $145,000,000.

V.

Those structures referred to in the paragraphs immediately preceding, although dispersed over a large area of the State of Colorado, are nevertheless integrated components of the Colorado-Big Thompson Project which, if the ends for which it is designed are to be accomplished must be operated as a single unit. The magnitude of the Colorado-Big Thompson Project and the complexities attendant upon the determination of the rights to the use of water from the several streams involved are disclosed by the fact that the Alva B. Adams

Tunnel and Granby Reservoir are situated and take their supplies of water in Water District No. 51; Green Mountain Reservoir and power plant are situated and take their supplies of water in Water District No. 36; the Shoshone Power Plant, hereafter referred to, is located in Water District No. 39; the Grand Valley diversions, likewise hereafter referred to, are in Water District No. 42. In addition the boundaries of the Northern Colorado Water Conservancy District embrace several other water districts. Further, if jurisdiction over the subject matter of this action were conferred upon the courts of the several water districts mentioned in the preceding sentences they could not, due to the limited scope of the State statutory proceedings for adjudication of water rights, grant to the parties the character of relief which they require and to which they are entitled. Assuming that jurisdiction over the subject matter of this action were to be conferred upon these courts, and assuming that the required relief could be granted to the parties pursuant to the statutory proceedings for the adjudication of water rights, it would nevertheless necessitate several separate State court actions thus resulting in a multiplicity of suits.

VI.

The public records of the State of Colorado and its legal subdivisions and the other departments thereof including the records in the offices of the Clerks of the District Courts of Summit and Grand Counties, Colorado, respectively, and other information acquired by the plaintiff indicate that the defendants named in this paragraph assert rights to the use of the waters of the Blue River and its tributaries and of the Colorado River and its tributaries as follows:

(a) The defendant, the City and County of Denver, asserts the right to divert to the South Platte River and its tributaries on the Eastern Slope of Colorado from the Blue River and its tributaries including Ten-Mile Creek and the Snake River, for irrigation, domestic and power purposes, by means of a tunnel, the intake of which is intended to be situated near Dillon, in Summit County, Colorado, and a reservoir intended to be constructed across

the Blue River at or near Dillon, Colorado, quantities of water in amounts and with priority dates as follows:

1. 1600 cubic feet of water per second of time direct flow from Blue River, Ten-Mile Creek and Snake River, with priority right claimed to date back to March 21, 1914.

2. For storage in various intended reservoirs situated in Eastern Colorado, 801,281 acre-feet of water with priority right claimed to date back to March 21, 1914, and 252,678 acre-feet of water to be stored in the intended Dillon Reservoir near Dillon on the Blue River with priority dating back to October 1, 1941.

The said Dillon Reservoir and the points of diversion of the water claimed for exportation to the Eastern Slope are situated in Water District No. 36, about 26 miles upstream from the Green Mountain Reservoir.

Said defendant, the City and County of Denver, State of Colorado, may also claim other water supplies from Colorado River and its tributaries, Fraser and Williams Fork Rivers.

(b) The defendant, The Moffat Tunnel Water and Development Company, a Colorado corporation, asserts the conditional right to divert to the South Platte River or its tributaries on the Eastern Slope of Colorado from the Fraser River, a tributary of the Colorado River, and from Hamilton Creek, Hurd Creek, Cabin Creek, Meadow Creek, and other water tributary to the Colorado River for irrigation, domestic, municipal and power purposes, through the Moffat Tunnel, the intake of which is situate in Water District No. 51 and in Grand County, Colorado, and thereby to take a direct flow of 95 cubic feet of water per second of time, with priority right relating back to July 2, 1932, and also the conditional right to store in the Ranch Creek Reservoir (the same being a reservoir which said company proposes to construct at approximately the same site, and with the same supply of water, as the Ranch Creek Reservoir which is part of the Colorado-Big Thompson Project as described in Senate Document No. 80), 880,000,000 cubic feet of water with priority dates relating back to July 2, 1932, and October 1, 1933, respectively. Said claimant likewise asserts the right to impound and store in other reservoirs on which no work has yet been done, said reservoirs being known as the Cabin Creek

Reservoir and the Meadow Creek Reservoir, water tributary to the Colorado River, for exportation to Eastern Colorado, an additional 407,156,000 cubic feet of water with priority date as of July 2, 1932.

(c) The defendant, The South Platte Water Users Association, a corporation, asserts the conditional right to divert to the South Platte River and its tributaries on the Eastern Slope of Colorado from the Blue River and other tributaries of the Colorado River for irrigation, domestic, municipal, power, and other purposes, through a tunnel, the intake of which is intended to be situated near Dillon in Summit County, Colorado, in Water District No. 36, 3,300 cubic feet of water per second of time, with a priority date as of October 27, 1942.

(d) The defendant, the City of Colorado Springs, a municipal corporation, asserts the conditional right to divert to the South Platte River or its tributaries on the Eastern Slope of Colorado from the Blue River, also known as Monte Cristo Creek, and its tributaries, Crystal Creek, Spruce Creek, McCullough Gulch, Hoosier Creek, and other water tributary to the Colorado River for irrigation, domestic, municipal and power purposes, through a tunnel to be located about one-half mile west of Hoosier Pass, the intake of which is located in Water District No. 36, and thereby to take a direct flow sometimes stated as intended to be at the rate of 400 cubic feet of water per second of time, and sometimes as 200 cubic feet of water per second of time with priority right relating back to October 1907.

VII.

If the claims of the City and County of Denver, The Moffat Tunnel Water and Development Company, The South Platte Water Users Association, and the City of Colorado Springs are awarded priority dates senior and paramount to the dates of appropriation claimed by the plaintiff for the various units of the Colorado-Big Thompson Project as described in Exhibit A attached hereto, waters of the Colorado River and of the Blue River will be so depleted that there will not be sufficient water available for the plaintiff to fulfill its responsibilities under Senate Document No. 80, nor will there be sufficient

water to divert 320,000 acre-feet of water to the Eastern Slope of Colorado. Further, if the City and County of Denver, the City of Colorado Springs, and The South Platte Water Users Association are awarded priorities on the Blue River senior and paramount to the dates of appropriation of the plaintiff, the direct flow right in and to waters of that stream exercised by the plaintiff for the generation of electricity at the Green Mountain Power Plant will not be available and the ability of the said Colorado-Big Thompson Project to repay the cost thereof, both as to the part of the cost allocated to power and the part of the cost allocated to irrigation, domestic, municipal and industrial uses will be greatly impaired or destroyed.

VIII.

The City and County of Denver, The Moffat Tunnel Water and Development Company and the City of Colorado Springs insist that their respective claims are paramount and senior to the rights and priority dates claimed by plaintiff for the various parts and units of the Colorado-Big Thompson Project. Plaintiff asserts and alleges that the priority dates and appropriations pertaining to the Colorado-Big Thompson Project are prior and paramount and denies the contentions and assertions of the City and County of Denver, The Moffat Tunnel Water and Development Company and The City of Colorado Springs, and further alleges that work on the projects claimed by said cities and by said defendants was not prosecuted with due diligence.

The interests of The South Platte Water Users Association are dependent by contract and otherwise upon the interests and claims asserted by said City and County of Denver and are affected by the controversy herein mentioned.

IX.

The plaintiff alleges said Senate Document No. 80, by reason of its incorporation by reference in the Act of Congress to appropriate funds for the construction of said Colorado-Big Thompson Project (1) has the force and effect of law and to the extent that the terms thereof are clear, unambiguous and supported by facts, is binding upon the plaintiff and the

appropriators of water on the Western Slope who now use or hereafter use any of the water impounded in, or released from the Green Mountain Reservoir; (2) also that said instrument is contractual in nature and is therefore binding on all persons, associations and corporations who use water stored in, conveyed through, or made available by means of, said Project. However, some of the water users on the Western Slope of Colorado interpret said Document to mean that all of the water stored in the Green Mountain Reservoir is to be released and used primarily for irrigation, and that the release and use thereof for the generation of electricity must be made subservient to all demands for irrigation, present and prospective, and that the water so impounded must be released whenever necessary to maintain a flow of 1250 cubic feet per second of water in the Colorado River at Shoshone, and a flow of 1800 cubic feet per second of water at Grand Valley, even though the amount of water concurrently being diverted or impounded by means of the Colorado-Big Thompson Project be less than the amount necessary to be released from the Green Mountain Reservoir to provide a stream flow of 1250 cubic feet per second at Shoshone and 1800 cubic feet per second at Grand Valley. Further, The Colorado River Water Conservation District claims rights to the use of water from the Colorado River and its tributaries for manufacturing purposes, including the shale oil industry, irrigation, domestic and other uses. It asserts that its rights are paramount and superior to any priorities of the plaintiff for the Colorado-Big Thompson Project. It likewise claims rights for those purposes from the water impounded in Green Mountain Reservoir for replacement and power purposes. The plaintiff denies that the foregoing contentions of the defendants are correct.

X.

Many persons and corporations (in excess of one thousand) in the State of Colorado have rights in the Colorado River to the use of its water. These users fall into three distinct classes. The first of these classes claims rights from the Colorado River and its tributaries for domestic and irrigation purposes. The second class claims rights for the generation of electricity. The third class claims rights for industrial purposes. Each

class has a common and general interest in the issues and questions here involved. Nevertheless the users in each class are so numerous as to make it impracticable to bring them before the Court. Accordingly, pursuant to Rule 23 of the Federal Rules of Civil Procedure, the Palisade Irrigation District, a quasi-municipal corporation organized under the laws of the State of Colorado, is named a defendant in this action and is a fair representative of that class of water users on the Western Slope who assert claims for domestic and irrigation purposes and who divert water from below the present site of Green Mountain Dam and Reservoir on the Blue River or below the confluence of that stream and the Colorado River. The Public Service Company of Colorado is named defendant in this action and is a fair representative of that class of water users who divert water from the Colorado River for the generation of electricity. Representative of the third class claiming rights for industrial purposes is The Colorado River Water Conservation District. The Northern Colorado Water Conservancy District is fairly representative of those water users situated on the Eastern Slope for whom water will be diverted from the Colorado River by means of the Colorado-Big Thompson Project for domestic, municipal, industrial, and irrigation purposes. Between the plaintiff and the named defendants and the classes of water users they represent there is a common question of law affecting all and the object of this action is the adjudication of their several claims to rights to the use of water from the Colorado River and its tributaries.

The defendants, the Palisade Irrigation District, the Public Service Company of Colorado, The Colorado River Water Conservation District, and those of each of the classes of which they are representative, assert that the plaintiff is, in the construction and administration of the Colorado-Big Thompson Project, bound by all of the provisions of Senate Document No. 80, Exhibit A of this Complaint; the Public Service Company of Colorado asserts a right to the use of the replacement water stored by plaintiff in accordance with the applicable provisions of Senate Document No. 80, Exhibit A of this Complaint; the defendants, the Palisade Irrigation District, the Public Service

Company of Colorado, and The Colorado River Water Conservation District, likewise assert that their rights and the rights of those of the classes of which they are representative, are entitled to priorities ahead of any of the rights of the plaintiff in connection with the transmountain diversion of water from the Colorado River; each of the defendants, the Palisade Irrigation District, the Public Service Company of Colorado, and The Colorado River Water Conservation District, likewise seeks to construe Senate Document No. 80 in a manner which will require plaintiff to release replacement water in amounts for purposes, and during periods, not contemplated by the Document. Plaintiff denies each and every one of the foregoing contentions of the defendants referred to in this paragraph.

XI.

Thus, actual controversies exist, not only as to whether the priority rights and dates, to which the Colorado-Big Thompson Project is entitled, to the waters of the Colorado River and the Blue River and their various tributaries are senior to the claim of the defendants, the City and County of Denver, the Moffat Tunnel Water and Development Company and the City of Colorado Springs, but also as to the divergent interests of the water users on the Eastern and Western Slopes of the Rocky Mountains respecting their rights to the water from the Colorado-Big Thompson Project, controversies which directly involve the rights and responsibilities of the plaintiff in the administration of the Colorado-Big Thompson Project and the distribution of the water developed by that project between the opposing parties, and likewise, the nature and extent of the responsibility emanating from said Senate Document No. 80. These last mentioned controversies center around and involve, among others, the following questions respecting Senate Document No. 80:

1. Is the plaintiff obligated to construct and operate the Colorado-Big Thompson Project in accordance with the provisions of Senate Document No. 80, or are that Document and its provisions only directive in character?

2. If the plaintiff is obligated to construct and operate the Colorado-Big Thompson Project in accordance with the provisions of Senate Document No. 80, then the Court is asked to declare the rights and obligations of the plaintiff under that Document with respect to the following matters:

(a) Are the replacement provisions of Senate Document No. 80 applicable only to the rights to the use of water for purposes of irrigation or do those provisions relate to other uses?

(b) Is the 100,000 acre-feet of storage water in Green Mountain Reservoir referred to in Senate Document No. 80, Manner of Operation of Project Facilities and Auxiliary Features, paragraph 5 (a) and (c) to be used primarily for the generation of electricity at the Green Mountain Power Plant and released in the most efficient manner for production of electricity or must that storage water be released to meet the demands of Western Slope water users both present and future, including the shale oil and other industries, without regard to the efficient development of electricity?

(c) Is the responsibility of the plaintiff pursuant to the replacement provisions of Senate Document No. 80 limited to releases of water from Green Mountain Reservoir in quantities sufficient to fill the vested appropriations below Green Mountain Reservoir up to an amount equivalent to the quantities of water concurrently diverted from the direct flow of the Colorado River and its tributaries or impounded from those sources by the Colorado-Big Thompson Project for use

on the Eastern Slope? If not, what is the extent of the responsibility of the plaintiff to those users on the Western Slope entitled to benefit under the replacement provisions of Senate Document No. 80?

(d) Is the plaintiff obligated to release impounded water from Green Mountain Reservoir in quantities sufficient to maintain a flow in the Colorado River at Shoshone Dam of 1250 cubic feet of water per second of time and 1800 cubic feet of water per second of time at the head of Grand Valley, even though the water which is concurrently diverted from direct flow or impounded for transmountain diversion by the facilities of the Colorado-Big Thompson Project is not being so diverted and impounded to the injury of any vested rights to the use of water from the Colorado River below Green Mountain Reservoir?

(e) Is the plaintiff obligated to release impounded water from Green Mountain Reservoir in quantities sufficient to maintain a flow in the Colorado River at Shoshone Dam of 1250 cubic feet of water per second of time and 1800 cubic feet of water per second of time at the head of Grand Valley, even though the historical flow of the river at those points at certain times of the year has been less than those amounts; and if the plaintiff is so obligated what is the extent of its obligations?

XII.

The United States of America in connection with the Colorado-Big Thompson Project, for itself and for the benefit of the ultimate users under the aforesaid project, for domestic, agricultural, irrigation, municipal, industrial, and power purposes, with a date of priority of September 14, 1933, is the owner of and possesses the rights and is entitled to the use of the water from the sources and in the amounts which are hereafter set forth:

FROM THE COLORADO RIVER AND ITS TRIBUTARIES

1. A direct flow right of 550 cubic feet of water per second of time from the Colorado River.

2. A storage right in Granby Reservoir of 548,867 acre-feet per annum. The dam creating that reservoir is situated across the Colorado River in Section 11, Township 2 North, Range 76 West of 6th Principal Meridian. That aggregate storage right will be derived from the following sources: The entire annual flow of the Colorado River, Willow Creek, Strawberry Creek, Meadow Creek, and Walden Hollow Creek, subject to releases required by Senate Document No. 80.

3. A storage right in Ranch Creek Reservoir of approximately 600,000 acre-feet per annum. The dam creating that reservoir is located across the Fraser River in Section 26, Township 1 North, Range 76 West of the 6th Principal Meridian. That aggregate storage right will be derived from the following sources: The Fraser River, St. Louis Creek, Elk Creek, Vasquez Creek, Ranch Creek, Hamilton Creek, Hurd Creek and all of the tributaries of the Fraser River upstream from the Ranch Creek Dam.

4. A storage right of 19,669 acre-feet from the North Fork of the Colorado River in Shadow Mountain

Reservoir. The dam for that reservoir is located in Section 19, Township 3 North, Range 75 West of the 6th Principal Meridian.

5. A direct flow right of the entire flow from the North Fork of the Colorado River.

Water so diverted and stored will be used for the following beneficial purposes:

(a) Within the Northern Colorado Water Conservancy District, located in the Counties of Larimer, Weld, Boulder, Morgan, Logan, Washington, and Sedgwick in the State of Colorado, as a supply of supplemental water for the irrigation of 615,000 acres of land, and for domestic, municipal, and industrial purposes. Such water will likewise be utilized for the generation of electricity at power plants which will be subsequently described herein. This water will be conveyed from the Colorado River to the South Platte River Basin, at a rate not to exceed 550 cubic feet of water per second of time by means of the Alva B. Adams Tunnel which heads on the east shore of Grand Lake. Said tunnel has its lower or east slope portal in Wind River, a tributary of the Big-Thompson River in the Estes Park area of Larimer County, Colorado, whence, by natural streams and by artificial conduits, said water will be conducted by a continuity of control and flow through a series of power plants, reservoirs, and canals to the Cache la Poudre and St. Vrain Rivers, and through said rivers and Big Thompson River and its tributaries to reservoirs and canals in the said counties on the Eastern Slope in the South Platte River watershed for said irrigation, domestic, municipal, industrial and power uses, more particularly described in Exhibit B.

(b) For the irrigation of approximately 4,500 acres of land situated between the site of Granby Dam and the confluence of the Colorado River with the Blue River, and for domestic and municipal uses within that area.

The power plants above referred to are named and in general located as follows:

Mary's Lake Power Plant situated Section 2, Township 4 North, Range 73 West of the 6th Principal Meridian;

Estes Power Plant situated Section 30, Township 5 North, Range 72 West of the 6th Principal Meridian;

Quillan Power Plant situated Section 26, Township 5 North, Range 71 West of the 6th Principal Meridian;

Cottonwood Power Plant situated Section 30, Township 5 North, Range 70 West of the 6th Principal Meridian;

Rattlesnake Power Plant situated Section 29, Township 5 North, Range 70 West of the 6th Principal Meridian;

Flatiron Power Plant situated Section 28, Township 5 North, Range 70 West of the 6th Principal Meridian;

Big Thompson Power Plant situated Section 10, Township 5 North, Range 70 West of the 6th Principal Meridian;

all in Larimer County, Colorado.

FROM THE BLUE RIVER AND ITS TRIBUTARIES

1. A storage right in the Green Mountain Reservoir of 156,545 acre-feet per annum. The dam creating that reservoir is situated across the Blue River in Section 15, Township 2 South, Range 80 West of the 6th Principal Meridian. That aggregate storage will be derived from the following sources: The entire annual flow from the Blue River and Elliott Creek.

The rights from Blue River described above will be utilized for the following purposes:

(a) 52,000 acre-feet per annum of the storage will be utilized to replace the water diverted from the Colorado River and will be utilized by the United States for the generation of electricity.

(b) 100,000 acre-feet per annum of that storage will be utilized by the United States for the generation of electricity and to supply all losses chargeable in the delivery of said 52,000 acre-feet of water and for future use for domestic, industrial and municipal purposes and in the irrigation of lands now or hereafter to be brought under cultivation in Western Colorado and to supply demands at Shoshone Power Plant and Grand Valley as provided by Senate Document No. 80.

The utilization of the storage right for purposes of replacement shall be in accordance with the pertinent provisions of Senate Document No. 80, Exhibit A, as construed by this Court.

2. A direct flow right of 1726 cubic feet of water per second of time from the Blue River and Elliott Creek for the purpose of generating electricity at the power plant located in Section 15, Township 2 South, Range 80 West of the 6th Principal Meridian.

The sources, the amounts, the points of diversion, the structures utilized in diverting or impounding the water, regulatory reservoirs, power plants, distribution systems, and places of use of all of the water referred to in this paragraph are described with particularity in Exhibits B and C which are attached to this complaint and by reference made a part of it.

XIII.

In addition to the rights to the use of water for the Colorado-Big Thompson Project described in the preceding paragraph, the plaintiff, for and on behalf of the Forest Service, Department of Agriculture, and the National Park Service, Department of the Interior, claims rights to the use

of water in the amounts, with the priorities, for the purposes and at the places described in Exhibit D attached hereto and incorporated into this Complaint by reference. Each of the defendants herein named asserts that its respective claims are paramount and senior to the rights and priority dates claimed by the plaintiff as set forth in Exhibit D. Plaintiff denies the contentions, alleging that those rights described in Exhibit D are paramount and senior to all of the rights claimed by defendants.

In order that there may be a fair and adequate administration of diversion, storage and use of the waters of the affected streams, and in order that there may not be a multiplicity of suits in regard thereto, it is essential that the rights and obligations of the parties hereto be fixed and determined.

WHEREFORE, the plaintiff prays:

1. That all of the defendants named in this action be required to answer this Complaint and set up fully their claims to the use of water from the streams referred to in the preceding paragraphs.

2. That this Court adjudge and declare whether the plaintiff is legally bound to operate and maintain the Colorado-Big Thompson Project in conformity with the provisions of Senate Document No. 80; that if this Court determines that the plaintiff is legally bound to operate and maintain that project in conformity with Senate Document No. 80, that it adjudge, decree, and determine the nature and extent of the liabilities, duties and obligations which the plaintiff has to the respective defendants and the classes of which they are representative pursuant to the provisions of that Document; that it declare, determine, construe and interpret the controversial provisions of Senate Document No. 80 to which reference has been made, and that it settle all conflicting rights and interests between the respective parties by reason of those controversial provisions and such other controversies as may arise by reason of the trial of the issues herein presented.

3. That this Court decree to each of the defendants and the class of water users of which they are representative their relative priority rights to water from the Colorado-Big Thompson Project.

4. That this Court quiet the title of the United States for itself with reference to the defendants, the City and County of Denver, The South Platte Water Users Association, The Moffat Tunnel Water and Development Company, the City of Colorado Springs, in and to the rights to the use of water which are in this complaint described, declare their respective rights subject and subordinate to the rights of the United States with respect to the Colorado-Big Thompson Project and forever enjoin them or any of them from encroaching upon or in any way interfering with those rights.

5. That the Court adjudicate the priority dates, sources, amounts, points of diversion and places of storage of the water owned and claimed by the United States from the Colorado River or its tributaries as and for the water supply of the Colorado-Big Thompson Project.

6. That this Court quiet the title of the United States in and to the rights described in Exhibit D of this Complaint as against each and all of the defendants in and to those rights to the use of water and declare their respective rights subject and subordinate to those set forth in Exhibit D; that the Court adjudicate the priority dates, sources, amounts, points of diversion, places of storage and use of the water owned and claimed by the Unites States from the Colorado River and its tributaries as set forth in said Exhibit D.

7. That this Court provide such means for the enforcement of its decree as may be necessary and for such further relief as may be proper.

THE UNITED STATES OF AMERICA
By

A. Devitt Vanech,
Assistant Attorney General

Robt. E. Mulroney,
Special Assistant to the Attorney General

C. V. Marmaduke, Jr.,
Special Assistant to the Attorney General

William H. Veeder,
Special Assistant to the Attorney General

EXHIBIT D

Forest Service Rights

1. Slate Creek Ranger Station Domestic Water Supply Line: two hundredths (.02) cubic foot of water per second of time for domestic purposes with a priority of September 1, 1933, from Slate Creek, a tributary of the Colorado River; diversion accomplished by pipe line one and one-quarter inches in diameter with its point of diversion being situated in the north bank of Slate Creek whence the quarter section corner common to Sections 18 and 19, Township 3 South, Range 78 West of the 6th Principal Meridian, Summit County, Colorado, bears north forty-six degrees, sixteen minutes, twenty seconds (46° 16' 20") East eight hundred seventy-eight and forty-seven hundredths (878.47) feet; said pipe line proceeds in a general northeast course from the point of intake for a distance of thirteen hundred forty-nine and sixteen hundredths (1349.16) feet.

2. Officers Gulch Retaining Pond: six and forty-one hundredths (6.41) acre-feet of storage and one cubic foot of water per second of time of direct flow from Ten-Mile Creek, a tributary of the Blue River, a tributary of the Colorado River, for fish culture and stock-watering purposes, with a priority date of August 6, 1934; the aforesaid pond being situated in the Southwest quarter (SW 1/4) of Section 8, Township 6 South, Range 78 West of the 6th Principal Meridian, Summit County, Colorado. The height of the dam creating said retaining pond is seven (7) feet; and the depth of the water in said pond from high-water line to the bottom of the outlet is five (5) feet.

3. West Ten-Mile Retaining Pond and West Ten-Mile Ditch: forty-one thousand six hundred seventy (41,670) cubic feet of storage and one cubic foot of water per second of time of the direct flow of Guller Gulch and Willow Gulch, tributaries of West Ten-Mile Creek, a tributary of the Blue River, a tributary of the Colorado River, with a priority of August 23, 1935, for fish culture, stock-watering and recreational purposes.

Said pond is situated in the Northwest quarter (NW 1/4) of Section 25, Township 6 South, Range 79 West of the 6th Principal Meridian, Summit County, Colorado. The dam creating the retaining pond is eight (8) feet high and the depth of the water of said pond to the bottom of the outlet is seven (7) feet. The headgate of Ten-Mile Ditch is located at a point in Guller Gulch whence the East quarter section corner of Section 30, Township 6 South, Range 78 West of the 6th Principal Meridian, Summit County, Colorado, bears South eighty-eight degrees, three minutes (88° 03') East a distance of ten thousand, one hundred and five (10,105) feet. Said ditch empties into Willow Gulch at a point whence the westerly end of the West Ten-Mile Retaining Pond bears North seventy-seven degrees, ten minutes (77° 10') East, eleven hundred and sixty-eight (1168) feet distant. Water is carried in Willow Gulch from the point where said ditch enters same, to the said retaining pond. The general course of said ditch and of said Willow Gulch is Northeast; the depth of said ditch at high-water line as now constructed is one (1) foot; the width of said ditch at high-water line is three and five-tenths (3.5) feet; the bottom width of said ditch is one and five-tenths (1.5) feet; the grade of said ditch is two (2) feet per one thousand (1,000) feet; the length of said ditch is seven hundred and fifteen (715) feet; the carrying capacity of said ditch is one and seventy-three hundredths (1.73) cubic feet of water per second of time.

4. Idlewild Ranger Station Yard Ditch: five tenths (.5) cubic foot of water per second of time from Cooper Creek, a tributary of the Fraser River, which is a tributary of the Colorado River, with a priority date of May 22, 1916, for irrigation of approximately one and one-half (1 1/2) acres of land used for a lawn and garden at the Idlewild Ranger Station situated in the Southeast quarter of the Southwest quarter (SE-1/4 SW-1/4) of Section 3, and the Northeast quarter of the Northwest quarter (NE-1/4 NW-1/4) of Section 10, all in Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado. The headgate of said ditch is located in the right bank of

Cooper Creek, whence the Northeast corner, Section 3, Township 2 South, Range 75 West of the 6th Principal Meridian, bears North thirty degrees, twenty-three minutes (30° 23') East, seven thousand, one hundred and fifty (7,150) feet; the general course of said ditch is easterly; the depth of said ditch at high-water line is eight (8) inches; the top width at high-water line is one (1) foot; the bottom width is eight (8) inches; the grade is ten (10) feet to forty (40) feet per one thousand (1000) feet; the length of said ditch is seven hundred and eighteen (718) feet; and the carrying capacity is five tenths (.5) cubic foot of water per second of time.

5. Fraser Experimental Station Pipe Line: fifty-five thousandths (.055) cubic foot of water per second of time, with a priority date of August 13, 1939, for domestic and irrigation purposes, including the irrigation of about three-fourths (3/4) of an acre of land used for lawn and garden at Fraser Experimental Station, situated in unsurveyed Section 3, Township 2 South, Range 76 West, of the 6th Principal Meridian, Grand County, Colorado; diversion accomplished by pipe line two inches in diameter, with its point of diversion situated in the east bank of West St. Louis Creek, tributary of St. Louis Creek, tributary of Fraser River, tributary of Colorado River, whence the Southwest (SW) corner, Section 34, Township 1 South, Range 76 West, of the 6th Principal Meridian, bears North thirty-five degrees, no minutes (35° 00') East, two thousand eight hundred and forty (2,840) feet; said pipe line proceeds in a general northeasterly course for a distance of three thousand three hundred (3,300) feet.

6. Idlewild Ranger Station Domestic Water Supply Pipe Line: fifteen thousandths (.015) cubic foot of water per second of time with a priority date of June 10, 1927, for domestic and irrigation purposes, including the irrigation of one and one-half (1 1/2) acres of lawn and garden at Idlewild Ranger Station, situated in the Southeast quarter of the Southwest quarter (SE 1/4 SW 1/4), Section 3, and the Northeast quarter of the

Northwest quarter (NE¼ NW¼), Section 10, both in Township 2 South, Range 75 West of the 6th Principal Meridian, from a spring, a tributary of the Colorado River; diversion accomplished by pipe line one inch in diameter, with its headgate located at the spring whence the Northeast (NE) corner of Section 3, Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado, bears north thirty-two degrees, no minutes (32° 00') East, four hundred and thirty-two (432) feet, thence North twenty-five degrees, no minutes (25° 00') East, six hundred and seventy-one (671) feet; said pipe line proceeds in a general northeasterly course from the point of intake for a distance of six hundred and twenty (620) feet.

7. Idlewild Ranger Station Pasture Ditch: one cubic foot of water per second of time from the Fraser River, a tributary of the Colorado River, with priority date of May 5, 1936, for irrigation and stock-watering purposes; the headgate of said ditch is located on the east bank of the Fraser River, whence the Northeast (NE) corner, Section 3, Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado, bears North twenty-five degrees, sixteen minutes (25° 16') East five thousand, nine hundred and seventy-four (5,974) feet; the general course of said ditch is northwesterly; the depth at high-water line is one (1) foot; the top width at high-water line is one and five-tenths (1.5) feet; the bottom width is one (1) foot; the length of said ditch is one thousand, six hundred and five (1,605) feet. Said ditch diverts water for irrigation of twelve (12) acres of land in the Southeast Quarter of the Southwest Quarter (SE¼ SW¼) of Section 3, Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado.

8. Idlewild Ranger Station Cooper Creek Supply Pipe Line: thirteen hundredths (.13) cubic foot of water per second of time, from Cooper Creek, a tributary of Fraser River, a tributary of the Colorado River, with priority date of June 1, 1939, for domestic and irrigation purposes, including irrigation of one and one-half (1.5) acres of lawn and garden at said Ranger Station in the Southeast quarter of the Southwest quarter (SE¼ SW¼),

Section 3, and the Northeast quarter of the Northwest quarter (NE¼ NW¼), Section 10, both in Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado. Said pipe line is two (2) inches in diameter and extends a distance of approximately twelve hundred three and one-half (1203.5) feet; its general course is northeasterly; its headgate is located on the East bank of Cooper Creek whence the Northeast (NE) corner, Section 3, Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado, bears North sixty-five degrees, no minutes (65° 00') East one thousand, five hundred and ten (1,510) feet, thence North twenty-five degrees, no minutes (25° 00') East six thousand, seven hundred and twelve (6,712) feet.

National Park Service Rights

Milner Pass Road Camp Pipe Line: three-tenths (.3) cubic foot of water per second of time from a tributary of Beaver Creek, a tributary of the North Fork of the Colorado River, with a priority date of July 1, 1919, for domestic, irrigation, recreational and fire protection purposes, at Milner Pass Road Camp and Public Camp Ground area, situated in the Southeast quarter of the Northwest quarter (SE¼ NW¼) and the North half of the Southwest quarter (N½ SW¼) of Section 9, Township 5 North, Range 75 West of the 6th Principal Meridian, Grand County, Colorado. The headgate of said pipe line is located at a point on the south, or right bank of a tributary of Beaver Creek, a tributary of the North Fork of the Colorado River, whence the Northeast corner of Section 1, Township 5 North, Range 75 West of the 6th Principal Meridian, bears North sixty-nine degrees, three minutes (69° 03') East twenty thousand, seven hundred and fifty-two (20,752) feet; the general course of the diversion pipe line 16.5' in length is southeasterly and the distribution pipe line is southwesterly; the diameter of said pipe line from the diversion or intake point to a distribution reservoir or tank, with a capacity not exceeding ten thousand (10,000) gallons, is two and one-half (2½) inches; the grade of said pipe line is two hundred and nine (209) feet

per one thousand (1000) feet; the carrying capacity of said pipe line is three-tenths (.3) cubic foot of water per second of time.

2. Timber Creek Water System: five hundred and forty-two thousandths (.542) cubic foot of water per second of time from Timber Creek, a tributary of the North Fork of the Colorado River, with a priority date of July 1, 1931, for domestic, irrigation, recreational, and fire protection purposes at Timber Creek Camp Ground situated in the Northwest quarter of the Southwest quarter (NW¼ SW¼) of Section 19; T5N, R75W East half of the Southeast quarter (E½ SE¼) Section 24, Township 5 North, Range 76 West of the 6th Principal Meridian, Grand County, Colorado. Rights are claimed for approximately twenty (20) acres of irrigable lands of the property last described. Diversion is accomplished by means of a four-inch pipe line two thousand two hundred and sixty-four and eighty-seven hundredths (2,264.87) feet in length, having its intake at a point on the North bank of Timber Creek, whence the West quarter corner of Section 19, Township 5 North, Range 75 West of the 6th Principal Meridian, bears North sixty-four degrees, fifty-two minutes (64° 52') West seven hundred thirty-four and thirty-three hundredths (734.33) feet.

3. Grand Lake Lodge Power Pipe Line and Power Plant: eight (8) cubic feet of water per second of time from Tonahutu Creek, a tributary of the North Fork of the Colorado River, with a priority date of June 1, 1920, for the generation of electricity in a power plant located in the Northeast quarter of the Southwest quarter of the Northwest quarter (NE¼ SW¼ NW¼) of Section 32, Township 4 North, Range 75 West of the 6th Principal Meridian, Grand County, Colorado. Diversion of the quantity of water above specified is accomplished by a headgate situated at a point on the West or right bank of Tonahutu Creek, whence the Northwest (NW) corner of Section 32, Township 4 North, Range 75 West of the 6th Principal Meridian bears North eighty-seven degrees, fifty-two minutes (87° 52') West one thousand seven hundred and fifty-six and thirty-four hundredths (1,756.34) feet. The diversion capacity of the

× Correction recommended to Dept. of Justice by Solicitors letter of Aug. 19, 1949

Amended Decree

00-00-0000: synopsis of report on colorado-big thompson project

Exhibit A.

75TH CONGRESS
1st Session

SENATE

DOCUMENT
No. 80

COLORADO-BIG THOMPSON PROJECT

SYNOPSIS OF REPORT

ON

COLORADO-BIG THOMPSON PROJECT, PLAN OF DEVELOPMENT AND COST ESTIMATE PREPARED BY THE BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR

PRESENTED BY MR. ADAMS

JUNE 15, 1937—Ordered to be printed without illustrations

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1937

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LETTER OF TRANSMITTAL

FEBRUARY 3, 1937.

From Senior Engineer Porter J. Preston.
To Chief Engineer.
Subject: Colorado-Big Thompson project.

1. Transmitted herewith is a synopsis of the report of plan of development and cost estimate of the Colorado-Big Thompson project.

2. The plans and designs upon which the estimates are based are shown in the full report to follow this synopsis.

3. The detail estimates have been worked out in the Denver office under the following divisions:

Canals: H. R. McBirney.
Reservoirs: K. B. Keener.
Power: L. N. McClellan.
Hydraulics: E. B. Debler.

4. The field work was done under the supervision of M. E. Bunger.

5. The economic study was carried on by R. L. Parshall, senior irrigation engineer, Bureau of Agricultural Engineering, United States Department of Agriculture. This study is later proposed to be issued as a separate document.

PORTER J. PRESTON.

Revised synopsis of report submitted June 11, 1937.

LETTERS OF SUBMITTAL

JUNE 11, 1937.

Hon. HAROLD L. ICKES,
Secretary of the Interior.

MY DEAR MR. SECRETARY: There is attached hereto the portion of the report on the Colorado-Big Thompson project in Colorado covering the principles and stipulations governing the construction and operation of said project for the protection of the rights and interests dependent on the Colorado River in Colorado.

The provisions contained therein have been considered by the Northern Colorado Water Users' Association, representing the irrigation and other interests on the eastern slope in Colorado, and we respectfully submit that they are satisfactory and meet the approval of said association.

We ask that acknowledgment be made of this communication.

Respectfully yours,

NORTHERN COLORADO WATER USERS' ASSOCIATION,
CHAS. HANSEN, *President.*
MOSES E. SMITH, *Vice President.*
THOMAS A. NIXON, *Attorney.*

JUNE 11, 1937.

Hon. HAROLD L. ICKES,
Secretary of the Interior.

MY DEAR MR. SECRETARY: There is attached hereto the portion of the report on the Colorado-Big Thompson project in Colorado covering the principles and stipulations governing the construction and operation of said project for the protection of the rights and interests dependent on the Colorado River in Colorado.

The provisions contained therein have been considered by the Western Slope Protective Association, representing the irrigation and other interests on the western slope in Colorado, and we respectfully submit that they are satisfactory and meet the approval of said association.

We ask that acknowledgment be made of this communication.

Respectfully yours,

THE WESTERN SLOPE PROTECTIVE ASSOCIATION,
SILMON SMITH, *Secretary.*
CLIFFORD H. STONE, *Director.*
A. C. SUDAN,
Special Representative of Grand County.

SYNOPSIS OF REPORT, COLORADO-BIG THOMPSON PROJECT

OUTLINE OF CONSTRUCTION AND OPERATING CONDITIONS

The Colorado-Big Thompson project in Colorado contemplates the diversion of surplus waters from the headwaters of the Colorado River on the Pacific or western slope to lands in northeastern Colorado on the Atlantic or eastern slope greatly in need of supplemental irrigation water.

To accomplish this diversion, the following features are required:

ON COLORADO RIVER

(1) Storage on the Blue River in what is called Green Mountain Reservoir located about 16 miles southeast of Kremmling, Colo., where the Blue enters the Colorado River. This reservoir is to be used to replace water diverted to the eastern slope that would be required by prior rights along the Colorado River.

(2) A hydroelectric plant below the Green Mountain Dam to utilize the flow of the Blue River and water stored in the reservoir for the generation of electrical energy.

(3) A storage reservoir located on the Colorado River about 6 miles northeast of Granby, Colo., to be known as Granby Reservoir. This reservoir will store the flow of the Colorado at this point as well as water diverted from Willow Creek, a tributary of the Colorado and Strawberry and Meadow Creeks, tributaries of the Fraser River.

(4) A diversion dam located about one-half mile below the junction of the North Fork and Grand Lake outlet and about 3 miles south of the village of Grand Lake. This dam will create a lake known as Shadow Mountain Lake which will have the same elevation as Grand Lake and will aid in supplying the transmountain diversion tunnel with water pumped from Granby Reservoir. This lake together with Grand Lake is to be kept at nearly constant level.

(5) An electrically driven pumping plant on the shore of Granby Reservoir, where water will be pumped into a canal feeding Shadow Mountain and Grand Lakes. The length of the canal is 4½ miles.

(6) An outlet channel at the east end of Grand Lake connecting the lake with the portal of a transmountain diversion tunnel and provided with control features that will regulate the level of Grand Lake within a fluctuating range of 1 foot.

(7) A transmountain diversion tunnel under the Continental Divide 13.1 miles in length extending from Grand Lake to a point in Wind River about 5 miles southwest of Estes Park village.

ON EASTERN SLOPE

(8) A conduit 5.3 miles in length extending from diversion tunnel outlet to penstock of a power plant on the Big Thompson River just below Estes Park village. This conduit will be made up of buried

pipe, siphons, tunnels, and open canal. It will be entirely concealed through the area authorized to be taken into Rocky Mountain National Park.

(9) The waste rock from the tunnel is to be terraced and landscaped and all structures connected with the tunnel will be constructed to blend into their natural surroundings.

(10) A power plant known as power plant no. 1 constructed along the Big Thompson River just below the village of Estes Park utilizing the western slope water.

(11) Four additional power plants down the Big Thompson Canyon to utilize all available fall and also all water available for power in the Big Thompson River in addition to the western slope water diverted.

(12) A diversion dam on Big Thompson River about 12 miles west of Loveland to divert the water by means of a canal 9 miles in length to a storage reservoir known as Carter Lake.

(13) Carter Lake Reservoir located 8 miles northwest of Berthoud, Colo., to store water brought over during winter months. Water is released from this reservoir through a 4-mile canal into the Big Thompson River and through a 9-mile canal into the St. Vrain River for irrigation purposes.

(14) A siphon across the Big Thompson River, 9 miles west of Loveland, Colo., and a canal 10 miles in length to convey water from the fourth power plant to a storage reservoir, located about 5 miles west of Fort Collins, known as Horsetooth Reservoir.

(15) A canal from Horsetooth Reservoir to the Cache La Poudre River and extended north to a pumping plant which lifts water high enough to serve the North Poudre Canal.

(16) A storage reservoir near the mouth of Buckhorn Creek to be known as Arkins Reservoir, supplied from a canal diverting from the Big Thompson River just below the last power plant. It is to be used to aid in balancing the demands for power and irrigation, also storing excess water available in the Big Thompson River. Water will be released from the reservoir for supplemental irrigation in the South Platte area.

(17) Transmission lines connecting the Valmont steam plant of the Public Service Co. with all the hydroelectric plants contemplated, also connecting with the transmountain tunnel portals and the Granby and North Poudre pumping plants. The line connecting power plant no. 1 and Granby pumping plant will run east, and south of the outside boundaries of the Rocky Mountain National Park, crossing the Continental Divide at Buchanan Pass.

In order to carry out the construction, operation, and maintenance of the project as outlined above, it will be necessary to comply with the following requirements as agreed to by representatives of the eastern and western slopes in Colorado and here made as a part of this report.

MANNER OF OPERATION OF PROJECT FACILITIES AND AUXILIARY FEATURES

The construction and operation of this project will change the regimen of the Colorado River below the Granby Reservoir. The project contemplates the maximum conservation and use of the waters of the Colorado River, and involves all of the construction features

heretofore listed. In addition thereto certain supplemental construction will be necessary. This will be for the primary purpose of preserving insofar as possible the rights and interests dependent on this water, which exist on both slopes of the Continental Divide in Colorado. The project, therefore, must be operated in such a manner as to most nearly effect the following primary purposes:

1. To preserve the vested and future rights in irrigation.

2. To preserve the fishing and recreational facilities and the scenic attractions of Grand Lake, the Colorado River, and the Rocky Mountain National Park.

3. To preserve the present surface elevations of the water in Grand Lake and to prevent a variation in these elevations greater than their normal fluctuation.

4. To so conserve and make use of these waters for irrigation, power, industrial development, and other purposes, as to create the greatest benefits.

5. To maintain conditions of river flow for the benefit of domestic and sanitary uses of this water.

In order to accomplish these purposes the project should be operated by an unprejudiced agency in a fair and efficient manner, equitable to all parties having interests therein, and in conformity with the following particular stipulations:

(a) The Green Mountain Reservoir, or similar facilities, shall be constructed and maintained on the Colorado River above the present site of the diversion dam of the Shoshone power plant, above Glenwood Springs, Colo., with a capacity of 152,000 acre-feet of water, with a reasonable expectancy that it will fill annually. Of said capacity, 52,000 acre-feet of water stored therein shall be available as replacement in western Colorado, of the water which would be usable there if not withheld or diverted by said project; 100,000 acre-feet shall be used for power purposes; and all of said stored waters shall be released under the conditions and limitations hereinafter set forth.

(b) Whenever the flow in the Colorado River at the present site of said Shoshone diversion dam is less than 1,250 cubic feet per second, there shall, upon demand of the authorized irrigation division engineer or other State authority having charge of the distribution of the waters of this stream, be released from said reservoir as a part of said 52,000 acre-feet, the amount necessary with other waters available, to fill the vested appropriations of water up to the amount concurrently being diverted or withheld from such vested appropriations by the project for diversion to the eastern slope.

(c) Said 100,000 acre-feet shall be stored primarily for power purposes, and the water released shall be available, without charge, to supply existing irrigation and domestic appropriations of water, including the Grand Valley reclamation project, to supply all losses chargeable in the delivery of said 52,000 acre-feet of water, and for future use for domestic purposes and in the irrigation of lands thereafter to be brought under cultivation in western Colorado. It shall be released within the period from April 15 to October 15 of each year as required to supply a sufficient quantity to maintain the specified flow of 1,250 cubic feet per second of water at the present site of said Shoshone diversion dam, provided this amount is not supplied from the 52,000 acre-feet heretofore specified. Water not required for the above purposes shall also be available for disposal to agencies for the development of the shale oil or other industries.

(*d*) The cost of construction and perpetual operation and maintenance of said reservoir or reservoirs shall be a charge against the project and shall be paid from revenues collected from this project as may be provided in contracts between the Secretary of the Interior and the beneficiaries of the project in eastern Colorado, and any other contracting parties.

(*e*) In the event said reservoir or reservoirs are not maintained with a capacity of 52,000 acre-feet, the Secretary of the Interior should withhold the diversion of water from the western to the eastern slope of Colorado until such storage capacity is made available.

(*f*) The Secretary of the Interior shall have the option to require the transfer to the United States of any and all rights initiated or acquired by the appropriation or use of water through the works of the project in eastern Colorado, at any time: *Provided, however,* That the title so taken shall be subject to a beneficial use of such water as may be provided in the repayment contract or contracts; and the rights to store water to the extent of said 152,000 acre-feet shall be initiated, acquired, and held by the appropriate authorities for use in western Colorado, for replacement of water diverted to the eastern slope, and for other purposes contemplated for this project.

(*g*) The Secretary of the Interior shall operate this project in accordance with the following stipulations as to priorities of water use as between the parties claiming or using project water and within the limits of his legal authority. Said 52,000 acre-feet of replacement storage in Green Mountain or other reservoirs shall be considered to have a date of priority for the storage and use of replacement water earlier than that of the priorities for the water diverted or stored for delivery to the eastern slope. The 100,000 acre-feet of storage in said reservoir shall be considered to have the same date of priority of appropriation as that for water diverted or stored for transmountain diversion.

(*h*) Said Green Mountain Reservoir, or such other replacement reservoirs as provided in paragraph (*a*) herein, as are planned as a part of the project, shall be constructed at the same time as the other parts of the project and shall be completed before any water is diverted to the eastern slope of the Continental Divide by means of said project.

(*i*) Inasmuch as the State of Colorado has ratified the Colorado River Compact, and inasmuch as the construction of this project is to be undertaken by the United States, the project, its operation, maintenance, and use must be subject to the provisions of said Colorado River Compact of November 24, 1922 (42 Stat. 171), and of section 13 of the Boulder Canyon Project Act, dated December 21, 1928 (45 Stat. 1057–1064). Notwithstanding the relative priorities specified in paragraph (*g*) herein, if an obligation is created under said compact to augment the supply of water from the State of Colorado to satisfy the provisions of said compact, the diversion for the benefit of the eastern slope shall be discontinued in advance of any western slope appropriations.

(*j*) An adequate system, as determined by the Secretary of the Interior, shall be provided for the irrigation of the lands in the vicinity of Kremmling, now irrigated by either natural or artificial means, and the installation made therefor shall be a part of this project. The rights to the use of water for the irrigation of these lands shall be considered to have a date of priority earlier than that of the rights to the use of water to be diverted through the works of this project to the eastern slope. This system shall be designed and built in a manner requiring the least possible continuing annual expense for operation and maintenance but the cost thereof shall not exceed $300,000; and said system shall be provided and in operation before any water is stored for transmountain diversion. In addition, the Secretary shall protect, add to, or improve the source of supply of domestic waters for the municipalities of Kremmling and Hot Sulphur Springs in the manner and to the extent which he may determine to be necessary to provide a source of supply not less than that now available for these municipalities. The cost of these features shall be included in the total project cost.

(*k*) To compensate Grand County for the loss of taxes through the transfer of property to the United States for the construction of this project, $100,000 shall be paid to said Grand County. This payment shall be made in 10 annual installments of $10,000 each, commencing upon the date when 10 percent of the total property in Grand County required for said project has been removed from taxation.

(*l*) The project and all of its features shall be operated in a manner determined by the Secretary of the Interior as necessary to provide the water to preserve at all times that section of the Colorado River between the reservoir to be constructed near Granby and the mouth of the Fraser River as a live stream, and also to insure an adequate supply for irrigation, for sanitary purposes, for the preservation of scenic attractions, and for the preservation of fish life. The determination of the need for and the amount and times of release of water from Granby Reservoir to accomplish these purposes shall be made by the Secretary of the Interior, whose findings shall be final.

In order to facilitate compliance with the stipulation in paragraphs (*j*), (*k*), and (*l*) hereof a representative may be selected and designated by the interests dependent thereon in Grand County, Colo., and when so designated he will be recognized as the official spokesman of said interests in all matters dealing with project operations affecting Grand County.

The principles and provisions expressed in these stipulations have been approved by the Western Colorado Protective Association, representing interests in western Colorado, and the Northern Colorado Water Users Association as evidenced by the letters hereto attached.

SUMMARY

The Colorado-Big Thompson project comprises 615,000 acres of irrigated lands, out of approximately 800,000 acres lying under the canal systems in the northern and northeastern portions of Colorado.

The water supply for the area is to be derived from a portion of 782 square miles of drainage area above Hot Sulphur Springs lying west of the Continental Divide in Grand County, Colorado, and varying in elevation from 8,050 to 14,000 feet.

HISTORY

The first irrigation in northeastern Colorado occurred about 1860 where the early settlers plowed out small ditches with sufficient grade and length to irrigate a few acres of land in the first bottom—i. e lands not far above the high-water line of the streams and adjacent to them.

The first irrigation of the higher or second bench lands along the Cache La Poudre River was by the Old Union Colony, of Greeley, in

1870. This colony was organized by Horace Greeley, then editor of the New York Tribune, who will be remembered here especially for his advice to eastern young men to "Go west and grow up with the country."

This colony irrigated about 12,000 acres under their first project and it was a success from the start, due in a large measure to the fact that they were people of considerable means and were then able to finance themselves over the period required to bring raw prairie land into profitable cultivation.

This colony was soon followed by others along the Poudre at Fort Collins, on the Big Thompson, at Loveland and the St. Vrain near Longmont.

The difficulties experienced by these colonists in distributing the water between them led to the creation of Colorado's irrigation laws which have been copied by most of the irrigation States of the West.

This irrigated area of six hundred to eight hundred thousand acres was developed by means of individual initiative and by small scale cooperative enterprises. Today there are 6,400 irrigated farms, served by 124 canals and ditches and 60 storage reservoirs.

IRRIGATION USE

In the early days irrigation in this area was confined to growing crops to supply local needs, the lack of transportation contributing to high prices for the home-grown production and prohibiting shipping to distant points. The crops grown were mainly the grains and hay for local consumption, with some vegetables. Such irrigation corresponded with the run-off of the streams.

As mining developed in the State, Denver and other towns grew into cities, and after these cities were connected to the East by railroads the markets demanded a more diversified agriculture to supply their needs. Thus a gradual demand developed for late water which the streams could not supply.

This change created a need for storing the flood waters for late irrigation. From 1890 to 1910 was a period of reservoir construction, during which storage was provided for all the available water supply of the streams over and above the direct irrigation requirements for the area here under discussion. Much of this development took place during a decade of more than normal run-off on the eastern slope and also during a period expanding the agricultural area throughout the West.

Attempts to maintain the area under cultivation with the depleted run-offs during the past 10 years have spread the water supply to such an extent that much acreage has had an insufficient water supply to produce full crops or crops producing the higher values. Attempts have been made to supplement the individual farm water supply by the development of the underground sources by pumping from numerous wells throughout the region. This is lowering the water table and already is affecting the water supply of the lower South Platte Valley which receives its irrigation supply largely from return waters.

NEED OF SUPPLEMENTAL WATER

Under such conditions only the older water rights have any assurance of an adequate water supply, and in the dryer years the owners of junior rights are forced to confine their farming to crops that can

be matured by the early flood flow or that require a minimum amount of water. In years when the supply is not correctly estimated considerable loss results. Ordinarily the crops raised in this and other irrigated areas do not compete with those grown under rainfall conditions, but a shortage of water always leads to the raising of more of the competing crops. Such crops also cut the income of the irrigation farmer below what he can earn with the higher type, noncompetitive crops.

On fully three-fourths of the 615,000 acres in this area the water supply is inadequate, in spite of every effort to conserve, store flood water, or otherwise add to the water supply that has been within the financial ability of the farmer. This inadequacy is due not only to a development probably too large for the period when run-off of the streams was much higher than at present, but to the fact that the last 10 years have seen a very marked decrease in the stream flow. It must be emphasized that the additional water supply here contemplated is to be used for a supplemental supply and not to create a large new additional irrigated acreage.

There has been expended in this area to date for various types of irrigation works, including nearly $750,000 for pumping plants, most of which have been installed in the last 10 years, about $25,000,000 against which there is an outstanding indebtedness of only $1,510,650. These people, however, have about reached their limit as individuals and mutual irrigation companies to provide for themselves a supplemental water supply so badly needed to make their present water supply secure and are obliged to seek Government aid to bring this about.

It has been conceded by a majority of the irrigation interests in this section of the State that the water supply in 1926 was ample for all their present acreage now irrigated. In order, therefore, to determine the normal shortage in acre-feet over a period of years a comparison of the supply in these years with that of 1926 was made and the difference obtained. These differences are set up in the following table:

TABLE 1.—*Showing water districts, acreage irrigated, deficiencies 1925 to 1935 with tentative allocation of total supplemental supply*

Water district no.	Area irrigated	1926 diversion, acre-feet	Average diversion, 1925-35	Difference, 1926, 11-year average required supplementary water in acre-feet	Tentative allocation of supplemental supply			
					Colorado-Big Thompson project water	Moffat and Jones Pass drained water return	Present seepage return, acre-feet	Total supplemental supply, acre-feet
(1)	(2)	(3)	(7)	(13)	(16)	(17)	(18)	(19)
3	210,540	330,000	208,000	122,000	104,000	.....	46,000	150,000
4	69,806	257,000	183,000	72,000	44,000	.....	21,000	65,000
5	84,806	113,000	94,800	18,000	38,800	.....	18,500	57,300
1	92,354	663,000	453,000	210,000	85,400	11,000	83,000	179,400
2	37,809	146,000	104,000	16,000	5,000	4,300	3,100	14,400
84	121,285	145,000	385,000	103,000	30,700	14,500	27,400	88,600
Total	615,600	2,254,000	1,640,000	575,000	310,000	30,000	214,500	554,900

It will be noted from column no. 15 that the total average shortage in this project area which comprises water districts 3, 4, 5, 1, 2, and 64 is 575,000 acre-feet. Column no. 16 is a tentative allocation of the proposed supplemental supply to the various districts. Column no. 18 is the estimated usable return flow that would arise from the addition of 310,000 acre-feet of new water to this area. Column no. 19 is the total usable supplemental supply amounting to 554,520 acre-feet, an amount within 5 percent of the 10-year average shortage. The sale or rental of supplemental water, when available, in the Poudre Valley has averaged $4.50 per acre-foot over a period of years. In extreme cases it has sold as high as $9 per acre-foot.

The deficiency in water supply for the period 1925 to 1934, inclusive, reflected a direct economic loss in crop production of approximately $42,355,000.

The following shows the approximate annual loss in value of crops because of inadequate water supply:

Sugar beets	$1,900,000
Alfalfa	968,000
Small grain	470,000
Beans	302,000
Corn	228,000
Potatoes	425,000
All other crops	444,000
Total	4,700,000

This average annual direct crop loss is about 19 percent of the $24,800,000 estimated cost of the Colorado-Big Thompson irrigation project.

The crop loss in 1934, due to shortage of water, as compared to 1926, after variation in price and acreage factors had been accounted for, amounted to $12,400,000, or just one-half the cost of the project.

The losses here given are the farm losses and do not include the losses that are due to processing, transporting, or handling of that quantity of production, which would add several million dollars to the loss of the community as a whole.

The effect of such inadequate water supply for the period 1925–35 is shown graphically on drawing no. 1 following.

SUPPLEMENTAL WATER SUPPLY

In 1929 the State engineers of Colorado, in cooperation with the Platte Valley Water Conservation League, and the United States Army engineers, made a comprehensive study of the water resources of the South Platte Basin in northeastern Colorado. This study included the Cache La Poudre River in water district no. 3, the Big Thompson River in water district no. 4, and the St. Vrain River in district no 5. The investigators determined the excess water available on these streams above present normal demands and also above the normal demands on the South Platte River proper below where these streams enter.

The investigators also determined the location, capacity, and cost of the most feasible reservoir sites for the storage of this excess water.

The results are shown in the following table and have been brought up to date by using the same demands for irrigation as set up in the report and using the water-supply records furnished by the State engineer's office.

Stream	Excess supplies as determined for storage, average, 1918–35	Capacity proposed reservoir by Army engineers	Average annual yields at reservoirs	Total reservoir costs	Cost per acre-foot capacity	Cost per acre-foot y.eld
	Acre-feet	*Acre-feet*				
Cache La Poudre	36,000	45,000	25,300	$2,745,000	$72	$147
Big Thompson	16,000	32,700	11,300	2,496,000	0	178
St. Vrain	16,000	36,000	14,000	2,185,000	73	156

From the foregoing table it is evident that there is not sufficient excess water available that originates in this area to supply the demands for supplemental water, and the cost of making use of what is available is prohibitive. It will be shown, however, that 16,000 acre-feet of this surplus is available for storage in the Colorado-Big Thompson project reservoirs on the eastern slope with no additional cost.

The water users in northeastern Colorado have now exhausted every possible source of obtaining supplemental water or augmenting their present supply either by storage, transmountain diversion within their individual cooperative means, and by pumping. Fortunately, however, there exists a surplus of water on the headwaters of the Colorado River west of this area and separated from it by the Continental Divide.

In the spring of 1935, $150,000 was allocated to the Bureau of Reclamation to make surveys and prepare plans and cost estimates for bringing water from the headwaters of the Colorado River into the area in northeastern Colorado in need of supplemental water.

In August 1935 the Bureau of Reclamation started surveys for the project and previously there had been started a land classification to determine the irrigated and arable land in the Colorado River Basin in Colorado in order to arrive at the approximate amount of water now used in the area and how much might be used when full development has been made. Both surveys have been completed, insofar as this project is involved, and the following is the result of the land classification.

LAND CLASSIFICATION—COLORADO RIVER AREA

Since the quantity of water available for diversion from the headwaters of Colorado River might be limited now by the water rights of lands already irrigated, or might in the future limit in turn the development of lands in the Colorado Basin within the State, all the land on Colorado River and its tributaries above the Colorado-Utah line, except the Gunnison River area, has been classified to show the location and extent of irrigated lands and of lands capable of irrigation.

This classification was undertaken in all areas covered by former reports, supplemented by local information as to possible projects and by reconnaissance. For localities with no records of water supply it was assumed to exist unless the contrary was obvious, and doubtful areas were included rather than excluded from the classification. The land was measured by plane-table survey except some small isolated areas which were estimated.

Land that had customarily been irrigated was so classed, no matter how inadequate the supply. Land capable of irrigation was

tested according to a set of standards which fairly represent the experience on this area and others as to what constitutes arable land. Where pumping for irrigation was involved land was classified up to 200 feet above the source of supply.

The result of the survey of the irrigated and arable land appears in the following table.

It should be stated, that, as will be shown under the discussion of water supply which follows, the present irrigated area above the Utah State line does not limit the diversion possible at the location chosen. It is also true that the diversion when in operation, and replacing the summer flow of Colorado River in the manner contemplated by the project plan, will not limit the future development of all the arable land on Colorado River and its tributaries above Gunnison River.

Colorado River drainage—Gunnison excepted—Colorado (land classification according to streams)

Stream name	Irrigated	Arable	Total
Colorado River:	*Acres*	*Acres*	*Acres*
1. To Granby Dam	2,600	1,100	3,700
2. Granby Dam to Hot Sulphur Springs	1,300	330	1,630
3. Hot Sulphur Springs to Kremmling	3,300	1,200	4,500
4. Kremmling to Glenwood Springs	1,100	200	1,300
5. Glenwood Springs to Palisade	7,600	2,500	9,500
6. Palisade to State line	70,000	32,800	102,800
Total	85,800	38,210	124,010
Tributaries:			
Willow Creek	860	120	980
Fraser River	7,100	650	7,750
South Fork Colorado River	410	30	440
Small streams [1]	2,300	4,000	6,300
Williams Fork River	3,400	10,900	14,300
Troublesome Creek	4,200	7,200	11,400
Muddy Creek	4,900	5,100	10,000
Blue River	8,400	3,100	11,500
Small streams [2]	610	570	1,180
Slumgburn Creek	1,300	50	1,350
Piney Creek	700	50	940
Eagle Creek	5,700	9,300	15,000
Cabin Creek area	5,700	2,600	8,300
Catamount Creek	1,000	10	1,010
Sweetwater Creek area	1,100	380	1,480
Eagle River	16,400	5,000	21,400
Small streams [3]	600	60	660
Roaring Fork River	33,400	9,400	42,800
Garfield Creek	2,100		2,100
Rifle Creek	1,700	150	1,850
Divide and Main Creeks	13,730	9,100	22,830
Rifle Creek	1,100	2,900	14,300
Parachute Creek	1,700	220	2,920
Roan Creek	5,600	3,300	8,900
Plateau Creek	26,900	7,000	34,000
Small streams [4]	10,200	3,000	13,200
Grand total	266,300	103,830	370,130

[1] Above Hot Sulphur Springs.
[2] Between Hot Sulphur Springs and Kremmling.
[3] Between Kremmling and Glenwood Springs.
[4] Between Glenwood Springs and Palisade.

WATER SUPPLY

The stream flow records at the different stations in the Colorado River Basin show the amount of water passing the stations after all present irrigation has taken place above, so there is no need for any further adjustment of stream flow to take care of water consumed in this irrigation.

It is assumed that all arable lands as shown will be irrigated some time in the future, notwithstanding the fact that quite a percentage

is so located that it would never be feasible to irrigate. It is also further assumed that reservoirs would be built on the tributaries to conserve a portion of the flood flows to make the irrigation of these arable lands possible.

With the above assumptions it has been found that in a year like 1931, with the run-off only 40 percent of the average for a 31-year period, and the lowest year of record, the Colorado-Big Thompson project would only have to supply approximately 53,000 acre-feet to replace water diverted by the proposed project that could have been used by the Colorado River water users for power and irrigation, provided the project was in operation at that time.

The average run-off of the Colorado for the years of record are: Hot Sulphur, 31 years, 523,000 acre-feet; Glenwood Springs, including Roaring Fork, 3,413,000 acre-feet, Fruita, 6,300,000 acre-feet. These amounts are exclusive of supply consumed in present irrigation of Colorado River Basin lands.

The following is the estimated amount of water available for diversion from the drainage area above the Colorado-Big Thompson collection system at 8,260 feet elevation.

YIELD OF GRANBY RESERVOIR

Stream-flow records available on the Colorado River near the Granby Dam site for the years 1908–11 and 1935–36, and on Willow Creek for the years of 1935 and 1936, were supplemented by estimates based on available stream-flow records on the Colorado River at Hot Sulphur Springs and Glenwood Springs to cover the 37-year period, 1900 to 1936, inclusive.

A capacity of 482,000 acre-feet was selected as the best capacity for the Granby Reservoir, considering cost and use. Of this capacity, 20,000 acre-feet were set aside for dead storage to reduce pumping lifts for waters delivered to Shadow Mountain Reservoir. A further objective is to keep to the lowest practicable area the exposure of reservoir bed when storage is exhausted. This leaves an active capacity of 462,000 acre-feet.

Reservoir operating studies are based on the following conditions:

(*a*) Recorded (or estimated) past flows of Colorado River at Shadow Mountain and Granby Dams reduced by 27 percent prior to 1906, and 13 percent thereafter, of the flow of the North Fork at Grand Lake to allow for increasing diversions by the Grand River ditch.

(*b*) Willow Creek diverted to reservoir to the extent of 90 percent of the flow of Willow Creek and other streams intercepted by the diversion canal from May to October, inclusive, of each year.

(*c*) Strawberry, Meadow, and Walden Hollow Creeks also diverted whenever practicable. The flow of these streams, together with some additional waters capturable from Willow Creek at times, are expected to offset evaporation and seepage losses in excess of present losses from the Granby and Shadow Mountain Reservoir sites.

(*d*) No releases from Granby Dam for any reason.

(*e*) Transmountain tunnel to be operated at full capacity from October 1 until March 31 following, with operations thereafter gaged to fit run-off conditions so as to avoid spills and yet concentrate flows in the period of July 15 to September 15, for the purposes of best

distribution in power production and to minimize reregulating storage requirements on the eastern slope. The computations assumed infallible forecasts of run-off.

(*f*) A minimum storage hold-over of 100,000 acre-feet on September 30 of each year to assure dependable power production in winter.

Under these conditions, a yield of 320,000 acre-feet of primary water is secured as follows:

Unit 1,000 acre-feet

Run-off year (October to September)	Inflow to Granby Reservoir		Tunnel diversion	Spills	Shortages
	Colorado River	Willow Creek			
1899–1900	242.8	52.4	320.0		
1900–1901	245.9	53.4	320.0		
1901–2	191.9	54.7	260.1		61.9
1902–3	222.6	68.8	279.8		48.2
1903–4	293.5	81.2	306.7		13.5
1904–5	287.9	84.9	310.2		9.8
1905–6	292.4	58.7	320.0		
1906–7	267.0	78.3	320.0		
1907–8	199.6	26.6	320.0		
1908–9	232.8	91.5	320.0		
1909–10	260.1	52.5	320.0		
1910–11	268.5	55.9	320.0		
1911–12	259.4	79.3	320.0		
1912–13	235.1	69.5	320.0		
1913–14	271.9	85.1	320.0		
1914–15	233.2	43.8	320.0		
1915–16	249.5	67.8	320.0		
1916–17	246.3	76.1	320.0		
1917–18	252.9	81.2	320.1	18.7	
1918–19	191.3	78.4	320.0		
1919–20	161.3	76.1	345.4		
1920–21	347.9	90.7	368.5	70.9	
1921–22	256.3	26.5	320.0		
1922–23	280.3	60.2	320.0		
1923–24	262.2	54.4	320.0		
1924–25	262.6	26.7	320.0		
1925–26	346.4	76.0	320.0		
1926–27	273.0	54.8	320.0		
1927–28	197.1	61.9	336.3		
1928–29	297.1	61.2	358.3		
1929–30	247.4	42.8	320.0		
1930–31	171.6	36.6	320.0		
1931–32	242.0	46.0	320.0		
1932–33	226.6	54.3	320.0		
1933–34	128.6	25.2	320.0		
1934–35	226.2	41.8	252.2		67.8
1935–36	276.7	45.8	316.0		10.0
Average	263.6	55.4	318.7	2.3	5.5

Operating results cannot be expected to result so favorably. The operating conditions enumerated imply superhuman ability to forecast stream flow. Occasional releases will be required from Granby Reservoir although small in amount. Interruptions in tunnel operation cannot always be arranged so as to lose no water.

In view of these conditions, it is concluded that the firm yield of tunnel water from the Granby and Shadow Mountain Reservoirs should be taken as 300,000 acre-feet annually. Shortages of 5 percent may be expected on an average of once every 5 years and shortages of 25 percent may be expected on an average of once every 20 years. Secondary water may be expected to be available in some years in amounts up to 50,000 acre-feet.

EFFECT OF THE PROPOSED TRANSMOUNTAIN DIVERSION ON FUTURE WESTERN SLOPE DEVELOPMENT

Most of the diverted water is derived from the spring floods, when there is an excess of water over all present and future requirements along the Colorado River in the State. To permit full use of the inflow to the Granby Reservoir, Ranch Creek Reservoir may be constructed near Tabernash to store water locally surplus. The waters there conserved would in part be utilized to replace the waters withheld at Granby Dam, but the greater part of the conserved water would be used to augment irrigation supplies down to Hot Sulphur Springs and to maintain a satisfactory stream flow in this locality for recreational purposes.

With the region above Hot Sulphur Springs taken care of by the Ranch Creek Reservoir, the critical points along the Colorado River, from the standpoint of present and future use of water, are at Glenwood Springs, where the Shoshone power plant of the Public Service Co. uses present stream-flows up to 1,250 second-feet, and near Palisades at the head of the Grand Valley, where the Government highline canal diverts water for irrigation and power purposes. The present irrigated area along the Colorado River between Palisades and the Colorado-Utah State line is 70,600 acres.

The additional arable area in this region, not now irrigated, is as follows:

	Acres
Under constructed canals	13, 800
Pumping unit of Grand Valley project, for which canal capacity has been provided	10, 000
Lands on Mack Flat, no present provision for water service	9, 000
Total	32, 800

Maximum irrigation demand at the head of the Grand Valley for the present irrigated area and for the additional area of 23,800 acres for which provision has been made in the constructed canals, is estimated as 1,700 second-feet, and this amount is being demanded in the pending adjudication proceeding.

With maximum irrigation demands there is a full water supply for the Orchard Mesa pumping plant and for the Grand Valley power plant. In the nonirrigation season the controlling requirement is for power with a total demand of 800 second-feet for power and for domestic needs under the higher canals. With the new area of 9,000 acres developed, the future demands are then estimated as 1,800 second-feet in the months of May to August, inclusive, tapering off uniformly to 800 second-feet on April 1 and on November 30.

In determination of the effect of the Colorado-Big Thompson transmountain diversion on the western slope, the past stream flows at Glenwood Springs and at the head of the Grand Valley were first depleted to show the resulting stream flows with the following developments:

(*a*) Full irrigation development of 276,000 acres of irrigated and arable lands along the Colorado River and tributaries above Palisades (the present irrigated area is 186,600 acres).

(*b*) Full development of Moffat Tunnel diversion from Fraser River and tributaries, Jones Pass diversion from Williams River, and Independence Pass diversion from the Roaring Fork, including

replacement storage so that these projects may divert all flows interceptible.

From the reconstructed flows, thus computed, there was subtracted the water estimated to be withheld at the Granby Reservoir site. The reductions in stream flow at Glenwood Springs and at the head of the Grand Valley, during those periods of each year when the resulting stream flows would be less than the future demands above described, then represents the effect of the project on the western slope if no replacement storage were provided. These computations were made for the years 1926 to 1936, inclusive, at Glenwood Springs, and for the entire period of record, 1902 to 1936, inclusive, at the head of the Grand Valley, with the following results:

Year	Shortages at Glenwood Springs (acre-feet)			Shortages at head of Grand Valley (acre-feet)		
	End of flood season, Oct. 31 [1]	Nov. 1 to flood season of following year [2]	Total	Before flood season in spring [3]	After flood season to Oct. 31	Total
1902	(4)	(4)		6,000	39,000	45,000
1903	(4)	(4)		3,000	12,000	15,000
1904	(4)	(4)		None	2,000	2,000
1905	(4)	(4)		None	14,000	14,000
1906	(4)	(4)		None	None	None
1907	(4)	(4)		None	None	None
1908	(4)	(4)		None	6,000	6,000
1909	(4)	(4)		None	None	None
1910	(4)	(4)		None	12,000	12,000
1911	(4)	(4)		None	1,000	1,000
1912	(4)	(4)		None	None	None
1913	(4)	(4)		None	2,000	2,000
1914	(4)	(4)		None	None	None
1915	(4)	(4)		None	8,000	8,000
1916	(4)	(4)		None	None	None
1917	(4)	(4)		None	None	None
1918	(4)	(4)		None	1,000	1,000
1919	(4)	(4)		None	7,000	7,000
1920	(4)	(4)		2,000	None	2,000
1921	(4)	(4)		None	None	None
1922	(4)	(4)		None	None	None
1923	(4)	(4)		None	None	None
1924	(4)	(4)		None	4,000	4,000
1925	(4)	(4)		None	None	None
1926	18,000	16,000	37,000	None	2,000	2,000
1927	7,000	25,000	26,000	None	None	None
1928	10,000	28,000	28,000	None	None	None
1929	None	26,000	26,000	None	None	None
1930	12,000	14,000	26,000	None	None	None
1931	12,000	14,000	26,000	1,000	27,000	28,000
1932	16,000	26,000	26,000	5,000	23,000	28,000
1933	23,000	21,000	44,000	3,000	15,000	23,000
1934	31,000	17,000	48,000	None	28,000	28,000
1935	20,000	15,000	35,000	2,000	11,000	13,000

[1] Encroachment on irrigation supplies.
[2] Encroachment on winter power waters.
[3] These shortages occur in years of late run-off when irrigation requirements rise faster than stream flow. Winter flows are always adequate Nov. 1 to Apr. 1.
[4] Not computed.

DIVERSION PLAN AND STRUCTURES

REPLACEMENT

In order to protect the water users in the Colorado River Basin against any depletion of their water supply by diversions through the Continental Divide tunnel to northeastern Colorado, a storage reservoir is planned on the Blue River about 16 miles southeast of Kremmling, Colo. This reservoir is to be known as the Green Mountain.

The dam site is located in the E ½ of sec. 15, T. 2 S., R. 80 W., sixth principal meridian, near the head of a box canyon, between Green and Little Green Mountains, caused by the river cutting through a porphyry sill. The foundation bedrock consists of sedimentary rocks, either Dakota sandstone or Morrison shales, and the intrusive porphyry.

The irrigation outlet capacity is 1,000 cubic feet per second, and the power outlet capacity is 1,500 cubic feet per second. The spillway capacity is 25,000 cubic feet per second.

The reservoir will flood 2,100 acres of land and will have a capacity of 152,000 acre-feet.

From the water-supply studies it was found, assuming that full development had taken place in the Colorado River Basin and that the Big Thompson project had been in operation the last 35 years, that in the year 1931, the lowest year of dependable run-off record, the Colorado Basin users above Glenwood Springs would have been shorted 37,000 acre-feet for irrigation use and the Public Service Co. would have been shorted 16,000 acre-feet at their power plant at Shoshone during the nonirrigation season, or a total shortage of 53,000 acre-feet. Accordingly, 50,000 acre-feet of Green Mountain storage have been allocated to replacement purposes for which the water users in northeastern Colorado will pay $1,500,000. The remaining 100,000 acre-feet are allocated to power and will be paid for out of power revenues.

Since the average shortage for both power and irrigation for the last 10 years, the lowest 10 years of run-off record is 36,000 acre-feet. There would be the 16,000 acre-feet difference, and a portion of the 100,000 acre-feet let out for power that could be used by the Colorado Basin users to supply shortages that might occur in their irrigation use in years of extreme low run-off, these shortages not being caused by the transmountain diversion.

The total estimated cost of the dam and reservoir is $3,776,032, $2,276,032 of which will be paid for from power revenues.

GRANBY RESERVOIR AND STORAGE

The storage of Colorado River waters for the project is to be made in what is known as Granby Reservoir which is located in Tps. 2 and 3 N., Rs. 75 and 76 W., sixth principal meridian, in Grand County, Colorado. The reservoir basin occupies the valleys of Stillwater Creek, the south fork or Arapaho Creek, and the main Colorado River.

The damsite is located about 4 miles northeast of the town of Granby, Colo., in the NE¼ of sec. 11, T. 2 N., R. 76 W., in Grand County, Colo. It is located at the head of a short canyon which the river has cut through pre-Cambrian rocks forming a spur of the main Rocky Mountain mass. At the damsite the canyon at river-bottom level is 200 feet wide, while at elevation 8,275 it is 720 feet in width.

The dam is to be a combination earth and rockfill structure with a maximum height of 223 feet. The outlet capacity is 300 cubic feet per second and the spillway capacity is 12,000 cubic feet per second.

With the high-water line at elevation 8,275 feet the reservoir has a capacity of 482,860 acre-feet, and will flood an area of 6,943 acres.

This reservoir will not only intercept the flow of the Colorado at that point, but the flow of Willow Creek will be intercepted near Dexter, Colo., and brought into the reservoir through a canal of 1,000

cubic feet per second capacity. Willow Creek enters the Colorado about 2 miles below Granby Dam.

It is estimated that Willow Creek will supply an average of about 60,000 acre-feet per year, and that the total estimated cost of this diversion is $733,203.

The storage in Granby Reservoir will also be augmented by the flow of Meadow and Strawberry Creeks, tributaries of Fraser River which enters the Colorado about 5 miles below the dam. The canal intercepting these two creeks will have a capacity of 500 cubic feet per second, and it is estimated they will produce an average of 12,000 acre-feet a year. The total estimated cost of this diversion is $133,600.

If water supply records kept in the future show there is sufficient water supply left in the Fraser River below the City of Denver's diversion, a canal could be taken out of it just below the mouth of St. Louis Creek near the town of Fraser, Colo., and extend from there to Granby Reservoir, intercepting Ranch, Meadow, and Strawberry Creeks on the way. A small regulating reservoir should be built on Ranch Creek above where the Canal intercepts it.

NORTH FORK DIVERSION DAM AND SHADOW MOUNTAIN LAKE

In order to divert the water of the North Fork of the Colorado into Grand Lake and thence to the channel extending from it to the west portal of the Continental Divide tunnel, it is planned to construct a concrete overflow dam 35 feet in height, above streambed, across the North Fork about one-half mile below its junction with the Grand Lake outlet.

The dam site proper is located in the NW¼ of sec. 19, T. 3 N., R. 75 W., and is a glacial morain cut through by the river.

The water backed up by this dam will form a lake called Shadow Mountain, the name of a nearby mountain, which will have a surface area of 1,556 acres. The elevation of this lake will be the same as Grand Lake and connected with it by means of the present outlet.

NORTH FORK DIVERSION DAM

The dam proper is a concrete gravity overflow spillway section, 90 feet long, with crest elevation at 8,370. This spillway is designed for maximum discharge of 1,800 cubic feet per second. On each side of the overflow section is a concrete gravity section containing three automatic siphon spillways on each side. The total spillway capacity is 9,400 cubic feet per second.

The total estimated cost is $483,928.

GRANBY PUMPING PLANT

As stated before, the water surface elevation of Granby Reservoir is 8,275 and the water surface of Shadow Mountain and Grand Lakes is 8,369. In order to get the water stored in Granby Reservoir into Shadow Mountain Lake and available for delivery through the Continental Divide tunnel, a pumping plant is located on the north shore of Granby Reservoir about one-half mile above the junction of the South Fork with the Colorado. A granite spur juts out into the reservoir site at that point making it ideal for the intake tunnels and a shaft for the pump.

The proposed pumping plant will contain three motor-driven vertical-shaft pumping units having a total capacity of 900 cubic feet per second with full reservoir and 550 cubic second-feet at low water. At normal water surface the capacity will be 870 cubic feet per second.

Each pump will be driven by a 6,500-horsepower synchronous motor.

Power will be delivered to the plant from a 69,000-volt transmission line extending from power plant no. 1 just below Estes Park, around the Rocky Mountain National Park, and crossing the Continental Divide at Buchanan Pass about 5 miles south of the park boundary.

The water from the pumps empties into a canal of 900 cubic second-feet capacity and runs by gravity into Shadow Mountain Lake. It is planned to operate this canal all winter when temperatures get as low as 40° below zero. The latent heat in the water and the friction heat absorbed from the pumps will prevent this water from freezing and will keep quite an area open after the water reaches Shadow Mountain Lake.

The total estimated cost of the pumping plant is $1,250,000.

The total estimated cost of the pump canal is $417,553.

CONTINENTAL DIVIDE TUNNEL

The west tunnel portal is connected with Grand Lake by means of a channel constructed 67.5 feet in width and 15 feet in depth. At the lake end of this channel a permanent concrete barrier or weir will be placed with a crest elevation at 8,368 which would be the minimum elevation to which the water in Grand Lake could be drawn. Since the barrier is so constructed that it requires the water to be 1 foot in depth over it to supply the normal capacity of the tunnel, the normal elevation of Grand and Shadow Mountain Lakes would be 8,369 feet.

The present maximum fluctuation of Grand Lake is about 4 feet, or from an elevation of 8,368 in winter to 8,372 feet during the peak run-off from melting snow. The automatic control gates at the North Fork Diversion Dam and at tunnel inlet will so control the elevation of the water surface in Grand Lake that it would never fluctuate more than 1 foot.

The Continental Divide tunnel extends from the easterly end of Grand Lake to Wind River, southwest of Estes Park, with an azimuth of 242° 20′ 30″, and length of 69,023 feet. It is to be horseshoe shape 9.5 feet in diameter and lined throughout with a 9-inch concrete lining.

It will be located entirely in pre-Cambrian rock consisting of the Longs Peak and related granites and the gneisses and schists of the Idaho Springs formation. The granites are strong massive rocks. Gneisses predominate over schists and only a small proportion have prominent and continuous cleavage planes. The proportion of granite to gneiss and schist is approximately 4 to 1.

From a detailed geological survey of the tunnel and comparing it with conditions actually encountered in the Moffat Railroad tunnel, which was built under the Continental Divide for the Denver & Salt Lake Railroad, and about 25 miles due south of this one, it was estimated there would be only 400 feet of bad ground and 5,200 feet of ground needing support. However, for purposes of estimate, it was figured there would be 6,900 feet of bad ground and 17,500 feet of ground needing support.

The total estimated cost is $7,271,371.

POWER CONDUIT NO. 1

Power conduit no. 1 extends from the east portal of the Continental Divide tunnel in Wind River to the penstock of power plant no. 1 on the northeast slope of Prospect Mountain.

Both ends of the Continental Divide tunnel are without the national-park boundaries but the area east of the east portal is authorized by Congress to be taken in, through that area. The water will be taken through a closed conduit consisting of a 10-foot reinforced concrete pipe completely buried. The total length of power conduit is 5.36 miles, of which 1.85 miles is closed conduit, 1.19 miles is concrete lined tunnel, 0.98 mile is siphon, and the remainder is open canal.

The total estimated cost of power conduit no. 1 is $1,101,000.

POWER PLANT NO. 1

Power plant no. 1 will be located on the south bank of the Big Thompson River about one-half mile east of Estes Park. It will contain two 15,000 kilovolt-ampere generating units with auxiliaries. Each unit will consist of a vertical-shaft, single-runner, spiral-casing type hydraulic turbine operating under an effective head of 705 feet direct connected to a 15,000 kilovolt-ampere water-wheel type generator. A complete description with cost estimate will be found in Power and Pumping Summary.

Until there has developed a sufficient market for power to justify the construction of power plants nos. 2 and 3, the water will be turned into the Big Thompson at power plant no. 1 and carried by that stream to a diversion dam located in SE¼ sec. 1, T. 5 N., R. 71 W., about midway between the present diversion dam and power plant for the town of Loveland, Colo.

POWER CANAL NO. 4

From this diversion dam the water will be carried in a canal of 750 cubic second-feet capacity on the south side of the stream a distance of 4.93 miles to a point just above the mouth of the Big Thompson Canyon. At this point a portion of the water will drop direct into the Big Thompson River to supply the supplemental water demands of that stream and a portion will be siphoned across to elevation 5,450 to supply the canal going to the Poudre River, which will be described later. Power plants nos. 4 and 4-A will be constructed at this point to take advantage of a fall of 550 feet into the Thompson and 358 feet to the Poudre Canal when the power market justifies.

CARTER LAKE SUPPLY CANAL

About 3.07 miles below the diversion dam mentioned above, a canal of 300 cubic feet per second takes off toward the south and supplies Carter Lake.

This canal is 8.78 miles in length, of which 7,040 feet is tunnel 1,878 feet siphon, and the remainder is open canal.

The estimated cost of this supply canal is $710,629.

CARTER LAKE RESERVOIR

This site is located in Ts. 4 and 5 N., R. 70 W., of sixth principal meridian, about 1 mile north and 7 miles west of Berthoud, Colo.

The reservoir will occupy a valley about 2½ miles long and from one-half to 1 mile wide. The northern portion of the area is a natural

basin called Carter Lake. This lake dried up during the last 5 drought years, for the first time within the memory of the white settlers.

The proposed maximum water surface in the reservoir is at elevation 5,760 with a capacity of 111,963 acre-feet. The area of high water line is 1,150 acres. For this water surface three dams will be required. Dam no. 1 is located at the natural outlet of the valley and will contain the outlet works for the reservoir; the other two dams will occupy saddles. These dams are earth and rock fill; the main dam is 243 feet high, and the saddles 43 and 48, respectively.

The capacity of the outlet to St. Vrain supply canal is 300 cubic feet per second, the outlet to the Big Thompson has a capacity of 1,000 cubic feet per second.

The total estimated cost of the reservoir is $1,822,202.

ST. VRAIN FEEDER CANAL

A canal of 300 cubic feet per second capacity will extend from the small outlet of Carter Lake to the St. Vrain, reaching the St. Vrain high enough to supply all ditches.

The length of this canal is 9.76 miles with 3,445 feet in tunnel, 1,575 feet of siphons, and the remainder open canal.

The estimated cost of the St. Vrain feeder is $368,951.

BIG THOMPSON FEEDER

About one-half mile below Carter Lake Dam a canal will be taken out of the draw leading from the dam, and will run into Cottonwood Creek, a tributary of the Big Thompson. This canal will have a capacity of 1,000 cubic feet per second and be 5.37 miles in length.

The cost is estimated at $155,246.

HORSETOOTH SUPPLY CANAL

This canal starts at the end of a siphon across the Big Thompson from power conduit no. 4. This water will pass through power plant no. 4-A when constructed. The canal starts at elevation 5,450 with a capacity of 250 cubic feet per second. The structures, however, are designed for a capacity of 400 cubic feet per second on the theory that some time in the future it might be necessary to increase the capacity of the canal to that amount. The length of this canal is 9.88 miles, of which 12,863 feet is tunnel, 3,296 feet is siphons, and the remainder open canal.

The elevation of 5,450 was chosen because it not only puts the water above all present diversions on the Poudre River, but it afforded the most direct and economical route.

The estimated cost of this feeder is $1,208,391.

HORSETOOTH RESERVOIR

The proposed Horsetooth Reservoir will occupy a valley 6 miles long and from one-quarter to three-quarters miles wide, extending in a north-south direction, formed by the erosion of soft red beds of Lykens formation between harder ridges of Lyons on the west and Dakota sandstone on the east. There are three natural outlets to the east through the Dakota hogback, namely, Soldier, Dixon, and

Spring Canyons, which are the sites of three proposed dams of the same names. The fourth proposed dam, Horsetooth, will cross the valley at the north end on a low saddle separating the valley from drainage to the north into the Poudre River. The outlet will be through the Horsetooth Dam saddle. There are no outlets through the other dams. The proposed water surface is at 5,400 feet in elevation which gives a capacity of 96,756 acre-feet. The area flooded will be 1,513 acres. The outlet capacity was designed for 1,200 cubic feet per second with reservoir full. This large capacity is necessary as the irrigation use requires that the entire amount of supplemental water be delivered at a rate that would supply it in 60 days.

The advantages of a reservoir at this point are: It is high enough to supply all users from the main Cache La Poudre River and is located close to it. It takes the place of 6 miles of canal through rough country and allows a canal of 250 cubic second-feet to be constructed from the Big Thompson instead of one for 1,000 cubic feet per second.

The estimated cost of the reservoir is $3,625,021.

POUDRE FEEDER CANAL

From the outlet of Horsetooth Reservoir a canal of 1,000 cubic second-feet capacity will extend north to Lewstone Creek, a tributary of the Poudre. The water will run down this creek to the Poudre above all the diversions except the Poudre Valley.

POUDRE VALLEY FEEDER CANAL

A canal will extend from Lewstone Creek to the Poudre Valley Canal about 1 mile below its headgate, crossing the Poudre River in a siphon. This canal will have a capacity of 400 cubic feet per second to take care of the supplemental demands of the Poudre Valley Canal and also the demands of the North Poudre irrigation district. The total length of the two canals is 5.48 miles.

The cost of the Poudre Feeder and Poudre Valley Canals is estimated at $632,843.46.

NORTH POUDRE FEEDER CANAL

It is planned to enlarge the Poudre Valley Canal for a distance of 3.58 miles from the point the supply canal enters to the location of the pumping plant for the North Poudre district. This will enlarge the canal from a capacity of 500 to 750 cubic feet per second and the estimated cost is $11,436.

NORTH POUDRE PUMPING PLANT

This pumping plant, constructed on the banks of the Poudre Valley Canal, will consist of two 75 cubic second-feet capacity vertical synchronous motor driven single stage pumps, operating against an effective head of 187 feet.

The estimated cost is $200,000.

NORTH POUDRE FEEDER CANAL

This canal of 150 cubic second-feet capacity extends from the pressure outlets of the pumping plant to the North Poudre Canal, a distance of 9.98 miles.

The estimated cost is $128,889.

ARKINS RESERVOIR

This reservoir is located on Buckhorn Creek, a tributary of the Big Thompson, in Tps. 5 and 6 N. R. 70 W., sixth principal meridian, and about 8 miles northwest of Loveland, Colo. The object of this reservoir is to provide storage for Colorado River waters brought over in the wintertime and to be used to supply supplemental water on the lower South Platte in water districts 1, 2, and 64. It will also serve in connection with the use of the 16,000 acre-feet of floodwater now available on the Big Thompson.

The bringing of more of the supplemental water over in the wintertime aids materially in the production of a maximum amount of power out of the waters of the Big Thompson River. For that reason the entire cost of the inlet to Arkins Reservoir and one-half the cost of the reservoir itself is assessed against power and paid for out of power revenues from plant no. 1.

The capacity of Arkins Reservoir is 50,000 acre-feet with a high water line at 5,275 feet elevation and floods 929 acres of land.

The dam site occupies a notch cut through the Dakota sandstone ridge by Buckhorn Creek.

The main dam is an earth- and rock-fill structure 155 feet in height with an outlet capacity of 650 cubic feet per second and a spillway of 10,000 cubic second feet capacity.

There is a saddle dam, in addition to the main dam of earth- and rock-fill construction, 50 feet maximum height, built across a saddle at the southern extremity of the reservoir.

The total estimated cost of the reservoir and dam is $1,740,737.

The estimated cost of the Arkins Reservoir inlet is $351,488.

This inlet diverts from the Big Thompson River just below the dam of the Handy Canal and follows around the north side of the river a distance of 2.33 miles to Arkins Reservoir.

ROCKY MOUNTAIN NATIONAL PARK

Every effort has been made in the survey and design of this project to not disturb the natural beauties of the Rocky Mountain National Park and its surrounding areas. The Continental Divide tunnel was lengthened 1.6 miles in order that its extremities should fall outside the boundaries of the park. The conduit leading from the east portal of the tunnel to power plant no. 1 is to be buried and the surface landscaped through the area authorized by Congress to be added to the park. The waste from the east portal of the tunnel placed in this area is to be terraced and planted with evergreen trees. The waste from the west portal is to be used to fill up some low areas and render the area suitable for the building of summer homes.

The approach to the Western Gateway of the Rocky Mountain National Park will be along the shores of Shadow Mountain Lake with

its fluctuation of only 1 foot instead of the swampy area that now breeds mosquitoes and exposes mud flats in low water.

The bill authorizing the creation of the Rocky Mountain National Park reserved the right for the Bureau of Reclamation to survey and construct an irrigation project within the boundaries of the park.

OPERATION OF THE SYSTEM

IRRIGATION PROJECT OPERATIONS

The system is planned and it is anticipated that it will be operated in a manner to have the water available in Carter Lake, Horsetooth and Arkins Reservoirs available by July 1, to the full capacity of those reservoirs, 256,000 acre-feet. The usual demand for supplemental water begins July 1 to 15 and extends to September 15 to 30. The outlets of the reservoirs are planned to deliver the water from the reservoirs in 60 to 75 days, including the water that must pass through them for direct delivery that may be in the way of being transferred from the Colorado River Basin to the eastern slope during the period of irrigation application. The balance of the 310,000 acre-feet, or 54-000 acre-feet, will be available for direct irrigation use as brought over during the above period or to some extent may be required prior to July 1.

The run-off of the waters of the Colorado River here contemplated to be used will largely be secured from the melting snows during May, June, and early July and stored in the Granby Reservoir. During the fall of that year, winter and spring of the following year, the water will be transferred from the Granby Reservoir through the Continental Divide tunnel at a uniform rate and restored in the Carter Lake, Horsetooth, and Arkins Reservoirs. This will permit a flow that is well suited to the development of firm power through the five power plants that will eventually be constructed along the Big Thompson as shown on the map of the general layout.

Granby Reservoir will act as a hold-over reservoir to carry the water from years of excessive run-off to years of subnormal flow.

POWER PROJECT OPERATION

Water will be carried through the Continental Divide tunnel at a uniform flow for the generation of power at the several power plants, except that the quantity will be reduced during the summer season when some water from the Big Thompson is available for power purposes in power plants nos. 2, 3, 4, and 4-A. At this period there will be little or no demand for power for pumping at the Granby pumping plant, which will permit the cutting down of the quantity of water to take care of the commercial power load.

It is planned to construct the Granby pumping plant and the Granby pump canal 150 percent of the capacity of the Continental Divide tunnel. This will permit the operation of the pumping plant at full capacity with off-peak power, and reduce the amount of pumping with firm power. The varying discharge of the pump ditch during the 24-hour period will be equalized by the Shadow Mountain and Grand Lakes, so that a uniform discharge will be maintained through the Continental Divide tunnel. The range in height of water surface in Shadow Mountain and Grand Lake to equalize this

flow will not exceed two-tenths of a foot, and will be greatest in the winter and early spring months.

There is an average of 16,000 acre-feet of surplus water on the Big Thompson available for storage in the system mainly in May and June. In order to take this water into the reservoirs it will be necessary to reserve capacity in the three reservoirs on the eastern slope until toward the latter part of June. The snowfall, the main source of this water supply, will be known well in advance so that operations of the several parts of the system, including the production of power at the several power plants, can be adjusted to take care of this water and hold back an equal amount in Granby Reservoir.

TENTATIVE PROJECT FINANCIAL SET-UPS

This proposed development consists of two projects: first, the irrigation project, and second, the power project.

It is planned that those features of the development that are used mainly for irrigation are grouped under the irrigation project set-up, while those used entirely, or are made of a greater capacity because of power development, are grouped in whole or in part in the power project set-up.

IRRIGATION PROJECT

The following major features with their appurtenant structures are given with the estimated field costs including 10 percent for engineering and 15 percent for contingencies. The full capacity of Arkins Reservoir is necessary to develop a larger portion of firm power than would otherwise be possible without it. At the same time, a reservoir of half its capacity or additional capacity in Horsetooth or Carter Lake Reservoirs would be necessary to provide capacity to deliver the irrigation water as needed. It is, therefore, deemed equitable to divide the cost of this reservoir equally between the irrigation and power projects.

The Green Mountain Reservoir, with a capacity of 152,000 acre-feet, is larger than is necessary to furnish replacement for a like amount of water diverted by the project above Granby Dam at a time when it would be required for irrigation, present and future, and to furnish the Shoshone power plant 1,250 second-feet or such lesser amount that they would be entitled to receive if the proposed project was not operating. From studies made, it appears that 50,000 acre-feet will be sufficient to replace all the water that the proposed project will take at a time when required for use lower down in the stream within the State. Therefore 52,000 acre-feet of the Green Mountain Reservoir capacity is allocated for replacement (including evaporation losses) and charged to the irrigation project. The balance of the capacity or 100,000 acre-feet is allocated to the power project and is to be paid for out of power revenues.

The following is a summary of the irrigation project costs:

Estimated cost chargeable to irrigation feature

Willow Creek feeder canal	$733, 203
Granby Reservoir	2, 815, 703
Granby pumping plant	1, 250, 000
Granby pump canal	417, 553
North Fork diversion dam	483, 928
Continental Divide tunnel	7, 271, 371

Estimated cost chargeable to irrigation feature—Continued

Carter Lake supply canal		$710,629
Horsetooth supply canal		1,208,391
St. Vrain feeder canal		368,951
Big Thompson feeder canal		155,246
Poudre feeder canal		632,843
Poudre Valley feeder canal		11,436
North Poudre feeder canal		128,889
North Poudre pumping plant		200,000
Horsetooth Reservoir		3,625,021
Arkins Reservoir		1,859,323
Carter Lake Reservoir		1,926,253
Green Mountain Reservoir (52,000 acre-feet replacement) (100,000 acre-feet for power)		3,776,032
Improvement of Colorado River above Kremmling to maintain fishing and to adjust the present irrigation system to the altered conditions		300,000
		27,871,772
Less the following items tentatively chargeable to power:		
One-half cost of Arkins Reservoir	$929,661	
Portion of cost of Green Mountain Reservoir for 100,000 acre-feet	2,276,032	
		3,205,693
Cost of irrigation features		24,666,079
Say		24,800,000

REPAYMENT

Twenty-four million eight hundred thousand dollars upon 310,000 acre-feet at $80 per acre-foot.

Two dollars per acre-foot on 40-year repayment basis.

In the above repayment is predicated upon the contracts to be made upon a basis of 310,000 acre-feet. Beside the 320,000 acre-feet available from the Colorado River drainage there is an average of 16,000 acre-feet available for storage on the Big Thompson, making 336,000 acre-feet in all, leaving 26,000 acre-feet for losses on the eastern slope and for the uncertain, heretofore mentioned in operations on the western slope.

The power costs are shown under the heading "Power and pumping system."

The construction of power plant no. 1 as shown in the power set-up is a necessary development in order to secure power for pumping purposes at the Granby pumping plant.

POWER AND PUMPING SYSTEMS

The ultimate power and pumping system is proposed to consist of the major pumping plant at Granby, power plant no. 1 near the town of Estes Park, power plant no. 2 near Drake post office, power plant no. 3 at Cedar Cove, power plants nos. 4 and 4–A near the mouth of the Big Thompson Canyon, and power plant no. 5 at the Green Mountain Reservoir. If conditions justify, there may also be a pumping plant on the Poudre River near the point where the proposed Poudre supply canal crosses the river. Power plant no. 5, Granby pumping plant, and power plant no. 1, would be interconnected by a single circuit 69,000-volt transmission line. Power plants nos. 1 to 4–A, inclusive, would be interconnected by two 115,000-volt transmission lines and these same lines would extend to one or more load centers where the power could be disposed of commercially.

The buildings for the power and pumping plants would be of reinforced concrete construction of suitable size to house the machinery and provide space for such facilities as would be required for efficient and economical operation. For scenic reasons, special care would be taken in the architectural design of the buildings to make them blend in with the beauties of the surrounding territory so as to be both as inconspicuous as possible and also as artistic as feasible without undue expenditure. An artist's sketch of one of these buildings is included with the report.

Following is a tabulation covering the essential data for each of the power and pumping plants:

Power plants

Plant designation	Effective head in feet	Turbine capacity in cubic feet per second	Power available in horsepower	Number of units	Size of each unit in horsepower	Installed power in kilowatts
No. 1	705	550	38,800	2	20,000	30,000
No. 2	1,105	550	60,800	2	34,000	50,000
No. 3	1,155	550	63,500	2	35,000	53,000
No. 4	550	500	25,000	2	12,500	16,000
No. 4–A	394	250	8,500	1	8,500	7,000
No. 5	225	1,500	33,800	2	17,000	26,000
Total installed power in kilowatts						182,000

Pumping plants

Plant designation	Head in feet	Pump capacity in cubic feet per second	Capacity of each pump in cubic feet per second	Number of pumps	Rating of each motor in horsepower	Power required in kilowatts
Granby	126	850	200	3	6,500	12,000
Poudre	167	150	75	2	2,000	3,000
Total installed pumping, kilowatts						38,000

POWER PLANT NO. 1

Power plant no. 1 will be located on the south bank of the Big Thompson River about one-half mile east of the village of Estes Park and will contain two 15,000 kilovolt-ampere generating units with auxiliaries. Each unit will consist of a vertical-shaft, single-runner, spiral casing type hydraulic turbine operating under an effective head of approximately 705 feet and direct connected to a 15,000 kilovolt-ampere water-wheel type generator with direct connected exciter and pilot exciter. Water would be supplied to each turbine through a steel penstock approximately 5,000 feet long, with synchronous bypasses provided so that the flow through the penstock can be discharged either through the turbines or the bypasses into the Big Thompson River. The bypasses will be mechanically connected to the turbine gate operating mechanism so that rapid governing of the units under varying load conditions can be effected without creating excessive water hammer. Trashracks with shut-off gates for

each penstock will be provided in the forebay structure. The headgates will be controlled from the power plant. A spillway will be provided to care for the flow when the headgates are closed and the penstocks inoperative. The plant will be equipped with all necessary auxiliaries, including a traveling crane for handling the large pieces of equipment. A small machine shop will be provided for making minor repairs. An outdoor type substation with self-cooled transformers will be provided for stepping the voltage up to 69,000 for transmission to the Granby pumping plant, and to 115,000 volts for transmission to commercial markets. The substation structure will be of the conventional structural steel type with high voltage oil circuit breakers, lightning arresters and necessary auxiliaries. The control of the oil circuit breakers will be from the main power plant switchboard. Operators' quarters, a warehouse, and a large machine shop for general project repairs will be provided in the vicinity of the power plant.

POWER PLANT NO. 2

Power plant no. 2 will be located about one-half mile northwest of Drake, on the south bank of the north fork of the Thompson River just above its junction with the Big Thompson. The plant will contain two 25,000-kilovolt-ampere generating units of the horizontal shaft type. The net head will be approximately 1,195 feet. Each unit will consist of a double overhung impulse wheel hydraulic turbine with the generator mounted in the center, between the two runners. A direct connected exciter and pilot exciter will be mounted at one end. Water will be delivered to the turbines through two steel penstocks about 4,150 feet long. Each penstock will be provided with two branches to the turbine nozzles and each branch will be provided with a synchronous bypass arranged so that the flow through the penstock can be discharged through either the nozzles of the bypasses to the river. The bypasses will be mechanically connected to the turbine nozzle operating mechanism so that rapid governing can be effected under varying load conditions without excessive water hammer. The head-gate structure will be provided with trash racks and sliding gates at the end of the penstocks and a spillway to care for the flow when the gates are closed. The plant will be complete with all necessary auxiliaries for station service requirements and with a crane for handling the machinery. A structural steel outdoor type substation will be provided with self-cooled transformers for stepping the voltage to 115,000 volts, and with outdoor type oil circuit breakers, lightning arresters, and other necessary auxiliaries. The operation of the substation will be handled from the main switchboard of the power plant. Quarters for the operators will be provided adjacent to the power plant.

POWER PLANT NO. 3

Power plant no. 3 will be located about one-half mile east of the Loveland power-diversion dam on the north bank of the Big Thompson River. The plant will contain two 6,500 kilovolt-ampere generating units, each consisting of a vertical hydraulic turbine direct connected to a generator with main exciter and pilot exciter. The effective head will be approximately 328 feet. Water from the head-gate structure will be delivered to the turbines through steel

pen stocks about 650 feet long. Each pen stock will be provided with a synchronous bypass arranged so that the flow through the pen stock can be discharged either through the turbines or the bypasses to the Big Thompson River, and to allow rapid governing of the units without excessive water-hammer. The head-gate structure will be provided with trash racks and sliding gates at the head of the pen stocks and a spillway to care for the flow when the gates are closed. The plant will be complete with all necessary auxiliaries for station-service operation, and with a crane for handling equipment. The plant will be provided with a structural-steel outdoor-type substation similar to that proposed for plant no. 2.

POWER PLANTS NOS. 4 AND 4 A

Power plant no. 4 will be located about 2 miles east of Cedar Cove on the south bank of the Big Thompson River, while power plant no. 4 A will be located a short distance upstream from plant no. 4, and at an elevation about 175 feet above the river. The capacity of plant no. 4 will be 16,000 kilovolt-amperes and of plant no 4–A, 7,000 kilovolt-amperes. One unit only will be provided at each plant and will consist of a vertical-shaft, single-runner, spiral-easing type turbine direct connected to a vertical water wheel generator with direct connected main and pilot exciters. Plant no. 4 will have an effective head of about 550 feet, and plant no. 4–A, 380 feet. Plant no. 4 will receive its water through a single steel penstock about 1,960 feet long, and plant no. 4–A, through a similar pipe about 1,400 feet long. Each plant will be provided with synchronous bypasses similar to those in plants nos. 1 and 3. Plant no. 4 will discharge directly into the Big Thompson River. Plant no. 4–A will be siphoned under the river through a pressure tunnel to the proposed Poudre supply canal, but will have provisions so that if so desired, the water may be discharged directly into the Big Thompson River. The headgate structure will be provided with trashracks, sliding gates, and spillways similar to those in plants nos. 1, 2, and 3. A single outdoor structural steel type switchyard will be provided for the two plants. The equipment in this substation will be similar to that for plants nos. 1, 2, and 3. Plant no. 4–A will be remotely controlled from plant no. 4, so that the two plants can be operated with one set of operators. The plant will be complete with auxiliaries and cranes similar to that in other plants. Quarters for the operators will be provided in the vicinity of the plants.

POWER PLANT NO. 5

Power plant no. 5 will be located about 12½ miles southeast of Kremmling, on the east bank of the Blue River, immediately downstream from the dam forming the proposed Green Mountain Reservoir. The plant will contain two 13,000 kilovolt-ampere generating units of the vertical hydraulic-turbine driven type, with direct connected generator with main and pilot exciters. The plant will have a varying head depending upon reservoir water surface, but it is expected that the average head will be about 225 feet. The trashrack and intake structure will be located immediately upstream from the dam and a single steel penstock installed in the tunnel will conduct the water to the power plant. Each turbine will be provided with a

pressure regulator or relief valve to limit the water hammer under sudden change of load conditions. The plant will be complete with necessary auxiliaries for station service, a small machine shop for minor repairs, and a crane for handling equipment. An outdoor structural steel substation will be provided complete with equipment for stepping the voltage up to 69,000 volts for transmission and with oil circuit breakers and other necessary auxiliaries for the control and protection of the lines and equipment. The oil circuit breakers will be controlled from the main switchboard of the power plant. Quarters for operators will be constructed in the vicinity of the power plant.

GRANBY PUMPING PLANT

The Granby pumping plant will be located approximately 6 miles south of the village of Grand Lake on the north shore of the proposed Granby Reservoir. The plant will contain three motor-driven vertical-shaft pumping units having a total capacity of 900 second-feet at full reservoir, and 550 second-feet at low water. The total capacity at the normal water surface will be approximately 870 second-feet. The motors will be of the synchronous type and arranged for semi-magnetic operation. That is, the operator will be required only to close the main switch to the unit in order to place it in operation, and to open the same switch to discontinue operation. The motors will be equipped with direct connected exciters. The water from the Granby Reservoir will be delivered to the pumps through tunnels about 155 feet long. A channel in the reservoir will convey the water to the mouth of the intake tunnels in extreme low water. Water from each pump will be discharged through about 175 feet of tunnel, and 165 feet of steel pipe to the canal at elevation approximately 8,381. This canal, which will be approximately 4 miles in length, will discharge into the proposed Shadow Mountain Lake. The center line of each pump and propeller will be at approximately elevation 8,145, with the base of the motor driving the pump 135 feet above, or at elevation 8,280. Vertical shafts in the rock between the underground pump room and the motor room on the surface will accommodate the shafts connecting the pumps to the motors. Each pump will have a capacity of 290 second-feet when operating under a total dynamic head of 130 feet and will be driven by a 6,500-horsepower synchronous motor.

The entrances to the intake tunnels will be provided with trashrack and stop-log structures, and sliding gates will be installed at the intake and discharge of each pump. The intake gates will be located in the gallery adjoining the pump room and will be hydraulically operated. The discharge gates will be located at the head of the canal and will be of a type which will close automatically in the event power service is interrupted, so as to prevent water in the canal from running back down through the pump.

The pumping plant will be complete with auxiliary pumping units for unwatering the intake and discharge tunnels and the drainage sump. It will also be complete with all other necessary station auxiliaries, including a crane for handling the equipment. A small machine shop will be provided for making minor repairs. Quarters for the operators will be provided in the vicinity of the plant.

Power will be delivered to the plant from a 69,000-volt transmission line, through an outdoor structural steel type substation containing self-cooled transformers, together with all necessary protective appa-

ratus and auxiliaries. The operation of the substation will be handled from the main switchboard of the pumping plant.

POUDRE PUMPING PLANT

The Poudre pumping plant will be located on the Poudre Valley Canal at a point about 3 miles below the crossing of the proposed Poudre supply canal. It is proposed to have a capacity of 150 second-feet, composed of two 75-second-foot vertical synchronous-motor-driven single-stage pumps, operating against an effective head of 187 feet. The plant will be complete with all necessary auxiliaries, including a crane for handling the equipment. An outdoor substation will be provided for stepping the voltage down from transmission voltage to motor voltage. Due to the relatively short periods of operation, it is not probable that it will be necessary to construct operator's quarters at this plant.

TRANSMISSION SYSTEM

The transmission system will consist of a single 69,000-volt circuit connecting power plant no. 5 with the Granby pumping plant and power plant no. 1. Power plants nos. 1 to 4–A, inclusive, will be connected by two 115,000-volt lines and two 115,000-volt lines will continue to market. For the purpose of this report only, and to include a sufficient amount in the cost estimates for any probable transmission set-up, this market has been assumed as the valmont steam plant of the Public Service Co. of Colorado. Power plant no. 4 will be connected with the Poudre pumping plant by one 34,500-volt transmission line. The number of lines and mileage involved in each are as shown in the following tabulation:

From—	To—	Number of lines	Number of miles	Voltage
Power plant no. 5	Ka Rose	1	36	69,000
Granby pumping plant	Grand Lake	1	10	69,000
Do	Power plant no. 1	1	16	69,000
Power plant no. 1	Power plant no. 2	2	12	115,000
Power plant no. 2	Power plant no. 3	2	3	115,000
Power plant no. 3	Power plant no. 4	2	4	115,000
Power plant no. 4	Valmont	2	27	115,000
Do	Poudre pumping plant	1	18	34,500

The line to the Poudre pumping plant would be a wood-pole line with pin-type insulators. All other lines would be of the wood-pole, H-frame type, with suspension insulators, and combining all of the most modern features for continuity of service, ease of maintenance, and long life. The line from power plant no. 1 to the Granby pumping plant will probably require special construction to give added strength in the mountainous region near the Continental Divide.

In order to provide power for construction, it is proposed that one of the first features of the project would be to build one of the permanent 115,000-volt circuits from the Valmont plant to plant no. 1, the permanent 69,000-volt lines from plant no. 1 to Granby pumping plant and from Ka Rose to the Green Mountain dam site, and an extension from the Granby Pumping Plant to the west portal of the pro-

posed tunnel. Initially this entire line would be operated at 69,000 volts, and under such operation would be adequate for all contemplated construction activities. In connection with supplying construction power it would also be necessary to install a substation at the Valmont steam plant to step voltage up to 69,000 volts for transmission. Preliminary studies indicate that it would be advisable to make this substation of approximately 5,000 kilovolt-ampere capacity.

The estimated cost of installing the facilities to provide construction power are as indicated in the following tabulation:

From—	To—	Miles	Cost	
			Per mile	Total
Valmont	Power plant no. 2	34	$6,750	$229,500
Power plant no. 2	Power plant no. 1	12	8,150	46,200
Power plant no. 1	Granby pumping plant	56	2,600	120,600
Granby pumping plant	Grand Lake	10	3,300	33,000
Ka Rone	Power plant no. 5	36	5,000	720,600
Total transmission lines		128		569,900
Substation at Valmont				61,100
Total to supply power for construction				631,000

The transmission system as provided to furnish construction power would be adequate for transmission of power to markets from power plant no. 1 or power plant no. 5 if either were built individually, but the additional complete system would probably be constructed when two or more plants are constructed. The additional costs of the lines involved in this construction are shown in the following tabulation:

From—	To—	Miles	Cost	
			Per mile	Total
Power plant no. 1	Power plant no. 2	12	$4,100	$46,200
Power plant no. 2	Valmont	34	6,750	229,500
Power plant no. 1	Poudre pumping plant	18	5,800	32,400
Total additional cost of permanent transmission system		64		311,100

In addition to the transmission lines required for the disposal of power, it may be necessary that the Government also construct a substation at the point of power disposal. As a market survey has not been conducted to establish the points at which this power can be disposed of, or the quantities involved at each point of disposal, it is assumed for the purpose of this report that the substations will average in cost $10 per kilowatt of capacity. Assuming that provision is made to dispose of a peak capacity of 140,000 kilowatts, this will involve an additional expenditure of $1,400,000.

POWER OUTPUT

Water supply studies indicate that with power plant no. 1 only constructed, there is available, above all requirements for pumping purposes, a constant power output at 100 percent load factor of 120,000,000 kilowatt-hours per year. Since the pumping plant capacity proposed is sufficient to allow pumping to be done in 16 hours of each day it will be possible to handle peak commercial power requirements without undue interference. With this in mind, it has been assumed for the purpose of this report that a market can be found which has a load factor such that 60 percent of this power or 72,000,000 kilowatt-hours per year can be absorbed as firm energy. The balance of this energy, or 48,000,000 kilowatt-hours per year, plus about 40,000,000 kilowatt-hours additional, which is available during various parts of the year, is classed as secondary energy.

Since the Valmont steam plant of the Public Service Co. of Colorado has an installed capacity of 75,000 kilowatts, it appears that the 88,000,000 kilowatt-hours of secondary energy could be absorbed as a fuel saving measure if the price does not exceed fuel costs. Allowing 10 percent for line losses, this is equivalent to an average load of about 9,000 kilowatts.

FINANCIAL OPERATION OF POWER SYSTEM

It is contemplated that the initial power development would consist of the construction of power plant no. 1 only, together with such transmission lines and substations as are required to supply power to the Granby pumping plant and to commercial markets. The estimated construction cost of the strictly power features, as well as items which it is expected that power revenues will repay, is given below.

It is assumed that 5 mills per kilowatt-hour can be secured for firm energy and 1.8 mills per kilowatt-hour for secondary energy with delivery at the market. In each case 10 percent loss is allowed for transmission. The following gives the financial set-up for power plant no. 1, operation costs and returns.

While for the purpose of this report the allocation of construction cost to irrigation and power has been made on the basis set out below, it is understood that this allocation is not thereby fixed, and the same may be changed as further information may warrant until such time as the contract for repayment of the cost of the irrigation features has taken final form.

Power plant no. 1 construction costs

Power plant no. 1 near Estes Park	$1,778,000
Conduit from east portal continental divide tunnel to power plant no. 1	1,101,000
Transmission lines connecting power plant no. 1 with Granby pumping plant—with Valmont and line to North Poudre pumping plant	440,000
Commercial substation (30,000 kilowatts)	300,000
Headquarters at power plant no. 1 for operation of power system	100,000
Subtotal	3,719,000
Interest during construction, 3 percent	112,000
Total repayable in 50 years with interest	3,831,000
One-half cost of Arkins Reservoir	929,661
Portion of cost Green Mountain Reservoir, for 100,000 acre-feet allocated to power	2,276,082
Payable on 40-year basis without interest	3,205,693
Total cost power plant no. 1 including other items that are required to be accomplished with the initial development	7,036,693

Annual revenues from power plant no. 1

From sale of 65,000,000 kilowatt-hours firm power, at $0.005	$325,000
From sale of 79,000,000 kilowatt-hours secondary power, at $0.0018	142,000
From rental of water for power development to privately owned plants	20,000
Gross annual income	487,000

Annual operation and maintenance plus retirement of principal

Brought forward	$487,000
3.887 percent, on $3,831,000, interest and retirement of investment on basis of 50 years	148,000
Repayment of $3,295,893 on basis of 40 years without interest	80,000
Operation and maintenance of power plant	36,600
Operation and maintenance Granby pumping plant	27,000
Operation and maintenance of transmission lines	13,800
Operation and maintenance conduit, tunnel, and canals	15,000
Depreciation, 1.5 percent, on $3,831,000	57,000
General expense	18,200
Total annual costs	395,000
Annual surplus during 40 years repayment period of the non-interest-bearing obligation	92,000

FULL POWER DEVELOPMENT

The results of this study indicate that the initial installation proposed is sufficient from a financial standpoint to return all necessary costs of operation and repayments.

There are five additional plants that can be developed in the future in a manner that will keep pace with the power requirements of the section that may be served and not have a large unearning investment tied up for some years.

The following is an estimate of the cost of the additional power plants that may be constructed in the future, but are not a part of the initial development.

Power plant no. 5	$1,190,000
Green Mountain-Ka Rose transmission line	130,000
Operators' quarters	60,000
Substation (20,000 kilowatts)	200,000
Subtotal	1,580,000
Interest during construction, 3 percent	47,400
	1,627,400

The above plant, together with plant no. 1, will produce: 113,000,000 kilowatt-hours firm power annually; 92,000,000 kilowatt-hours secondary power annually.

The following are the construction costs of developing power plants nos. 2, 3, 4, and 4-A with appurtenant structures:

Power plant no. 2	$2,325,000
Power plant no. 3	665,000
Power plant no. 4	760,000
Power plant no. 4-A	429,000
Power canal no. 2	2,464,000
Power canal no. 3	403,000
Power canal no. 3-A	113,000
Power canal no. 4	1,194,000
Operators' quarters	150,000

Substations (60,000 kilowatt hours)	$900,000
Additional transmission lines	311,000
Subtotal	9,775,000
Interest during construction, 3 percent	293,250
Total repayable in 50 years with interest	10,068,250
Arkins Canal feeder, payable in 40 years without interest	351,000
Total power plants nos. 2, 3, 4, and 4-A	10,419,250
Total power plant no. 5	1,927,400
Total second-stage development	12,046,650
Primary development plant no. 1	7,036,593
Cost of full power development	19,083,243

The total salable output of the full development is estimated as follows, exclusive of that used for pumping:

	Kilowatt-hours
Firm power, annually	360,000,000
Secondary power, annually	[1] 200,000,000

[1] Out of an available production of 387,000,000 kilowatt-hours secondary power.

CONCLUSIONS

(1) There is a large area (615,000 acres) of irrigated land in northeastern Colorado, the major portion of which has an inadequate water supply.

(2) The feasible storage possibilities with the available water supply in the drainage area has been exhausted.

(3) There is at least an available water supply of 310,000 acre-feet on the upper drainage area of the Colorado River that can be diverted to supplement the present water supply on the eastern slope.

(4) That the diversion of this quantity of water from the Colorado River watershed will not interfere with or encroach upon the present or future irrigation along the Colorado River and tributaries within the State, with the protection provided in the Green Mountain Reservoir.

(5) That the plan for the project here laid out appears entirely feasible from a construction point of view.

(6) That the cost of construction estimated at $2 per acre-foot per annum over the repayment period of 40 years is less than storage water is now commanding and that it will increase the crop values five or more times this annual cost, showing its economic worth.

(7) That the power developments that may be made in the six power plants will produce a large quantity of cheap hydroelectric power that will materially benefit Colorado.

(8) That the revenues from the commercial power generated at power plant no. 1 will pay for the power features as set up under the initial power development, in addition to the power required for pumping at Granby pumping plant, and in lieu of the irrigation features used in power development, the operation of the system to a point where the water leaves the tailrace of the lower power plants can be taken care of by the power development.

(9) That the cost of the irrigation feature of the project is within the ability of the water users to pay.

00-00-0000: synopsis of report colorado-big thompson project

Exhibit A

75TH CONGRESS
1st Session

SENATE

DOCUMENT
No. 80

COLORADO-BIG THOMPSON PROJECT

SYNOPSIS OF REPORT

ON

COLORADO-BIG THOMPSON PROJECT, PLAN OF DEVELOPMENT AND COST ESTIMATE PREPARED BY THE BUREAU OF RECLAMATION, DEPARTMENT OF THE INTERIOR

PRESENTED BY MR. ADAMS

JUNE 15, 1937—Ordered to be printed without illustrations

UNITED STATES
GOVERNMENT PRINTING OFFICE
WASHINGTON : 1937

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LETTER OF TRANSMITTAL

FEBRUARY 3, 1937.

From Senior Engineer Porter J. Preston.
To Chief Engineer.
Subject: Colorado-Big Thompson project.

1. Transmitted herewith is a synopsis of the report of plan of development and cost estimate of the Colorado-Big Thompson project.

2. The plans and designs upon which the estimates are based are shown in the full report to follow this synopsis.

3. The detail estimates have been worked out in the Denver office under the following divisions:

Canals: H. R. McBirney.
Reservoirs: K. B. Keener.
Power: L. N. McClellan.
Hydraulics: E. B. Debler.

4. The field work was done under the supervision of M. E. Bunger.

5. The economic study was carried on by R. L. Parshall, senior irrigation engineer, Bureau of Agricultural Engineering, United States Department of Agriculture. This study is later proposed to be issued as a separate document.

PORTER J. PRESTON.

Revised synopsis of report submitted June 11, 1937.

LETTERS OF SUBMITTAL

JUNE 11, 1937.

Hon. HAROLD L. ICKES,
Secretary of the Interior.

MY DEAR MR. SECRETARY: There is attached hereto the portion of the report on the Colorado-Big Thompson project in Colorado covering the principles and stipulations governing the construction and operation of said project for the protection of the rights and interests dependent on the Colorado River in Colorado.

The provisions contained therein have been considered by the Northern Colorado Water Users' Association, representing the irrigation and other interests on the eastern slope in Colorado, and we respectfully submit that they are satisfactory and meet the approval of said association.

We ask that acknowledgment be made of this communication.

Respectfully yours,

NORTHERN COLORADO WATER USERS' ASSOCIATION.
CHAS. HANSEN, *President.*
MOSES E. SMITH, *Vice President.*
THOMAS A. NIXON, *Attorney.*

JUNE 11, 1937.

Hon. HAROLD L. ICKES,
Secretary of the Interior.

MY DEAR MR. SECRETARY: There is attached hereto the portion of the report on the Colorado-Big Thompson project in Colorado covering the principles and stipulations governing the construction and operation of said project for the protection of the rights and interests dependent on the Colorado River in Colorado.

The provisions contained therein have been considered by the Western Slope Protective Association, representing the irrigation and other interests on the western slope in Colorado, and we respectfully submit that they are satisfactory and meet the approval of said association.

We ask that acknowledgment be made of this communication.

Respectfully yours,

THE WESTERN SLOPE PROTECTIVE ASSOCIATION,
SILMON SMITH, *Secretary.*
CLIFFORD H. STONE, *Director.*
A. C. SUDAN,
Special Representative of Grand County.

SYNOPSIS OF REPORT, COLORADO-BIG THOMPSON PROJECT

OUTLINE OF CONSTRUCTION AND OPERATING CONDITIONS

The Colorado-Big Thompson project in Colorado contemplates the diversion of surplus waters from the headwaters of the Colorado River on the Pacific or western slope to lands in northeastern Colorado on the Atlantic or eastern slope greatly in need of supplemental irrigation water.

To accomplish this diversion, the following features are required:

ON COLORADO RIVER

(1) Storage on the Blue River in what is called Green Mountain Reservoir located about 16 miles southeast of Kremmling, Colo., where the Blue enters the Colorado River. This reservoir is to be used to replace water diverted to the eastern slope that would be required by prior rights along the Colorado River.

(2) A hydroelectric plant below the Green Mountain Dam to utilize the flow of the Blue River and water stored in the reservoir for the generation of electrical energy.

(3) A storage reservoir located on the Colorado River about 6 miles northeast of Granby, Colo., to be known as Granby Reservoir. This reservoir will store the flow of the Colorado at this point as well as water diverted from Willow Creek, a tributary of the Colorado and Strawberry and Meadow Creeks, tributaries of the Fraser River.

(4) A diversion dam located about one-half mile below the junction of the North Fork and Grand Lake outlet and about 3 miles south of the village of Grand Lake. This dam will create a lake known as Shadow Mountain Lake which will have the same elevation as Grand Lake and will aid in supplying the transmountain diversion tunnel with water pumped from Granby Reservoir. This lake together with Grand Lake is to be kept at nearly constant level.

(5) An electrically driven pumping plant on the shore of Granby Reservoir, where water will be pumped into a canal feeding Shadow Mountain and Grand Lakes. The length of the canal is 4½ miles.

(6) An outlet channel at the east end of Grand Lake connecting the lake with the portal of a transmountain diversion tunnel and provided with control features that will regulate the level of Grand Lake within a fluctuating range of 1 foot.

(7) A transmountain diversion tunnel under the Continental Divide 13.1 miles in length extending from Grand Lake to a point in Wind River about 5 miles southwest of Estes Park village.

ON EASTERN SLOPE

(8) A conduit 5.3 miles in length extending from diversion tunnel outlet to penstock of a power plant on the Big Thompson River just below Estes Park village. This conduit will be made up of buried

pipe, siphons, tunnels, and open canal. It will be entirely concealed through the area authorized to be taken into Rocky Mountain National Park.

(9) The waste rock from the tunnel is to be terraced and landscaped and all structures connected with the tunnel will be constructed to blend into their natural surroundings.

(10) A power plant known as power plant no. 1 constructed along the Big Thompson River just below the village of Estes Park utilizing the western slope water.

(11) Four additional power plants down the Big Thompson Canyon to utilize all available fall and also all water available for power in the Big Thompson River in addition to the western slope water diverted.

(12) A diversion dam on Big Thompson River about 12 miles west of Loveland to divert the water by means of a canal 9 miles in length to a storage reservoir known as Carter Lake.

(13) Carter Lake Reservoir located 8 miles northwest of Berthoud, Colo., to store water brought over during winter months. Water is released from this reservoir through a 4-mile canal into the Big Thompson River and through a 9-mile canal into the St. Vrain River for irrigation purposes.

(14) A siphon across the Big Thompson River, 9 miles west of Loveland, Colo., and a canal 10 miles in length to convey water from the fourth power plant to a storage reservoir, located about 5 miles west of Fort Collins, known as Horsetooth Reservoir.

(15) A canal from Horsetooth Reservoir to the Cache La Poudre River and extended north to a pumping plant which lifts water high enough to serve the North Poudre Canal.

(16) A storage reservoir near the mouth of Buckhorn Creek to be known as Arkins Reservoir, supplied from a canal diverting from the Big Thompson River just below the last power plant. It is to be used to aid in balancing the demands for power and irrigation, also storing excess water available in the Big Thompson River. Water will be released from the reservoir for supplemental irrigation in the South Platte area.

(17) Transmission lines connecting the Valmont steam plant of the Public Service Co. with all the hydroelectric plants contemplated, also connecting with the transmountain tunnel portals and the Granby and North Poudre pumping plants. The line connecting power plant no. 1 and Granby pumping plant will run east, and south of the outside boundaries of the Rocky Mountain National Park, crossing the Continental Divide at Buchanan Pass.

In order to carry out the construction, operation, and maintenance of the project as outlined above, it will be necessary to comply with the following requirements as agreed to by representatives of the eastern and western slopes in Colorado and here made as a part of this report.

MANNER OF OPERATION OF PROJECT FACILITIES AND AUXILIARY FEATURES

The construction and operation of this project will change the regimen of the Colorado River below the Granby Reservoir. The project contemplates the maximum conservation and use of the waters of the Colorado River, and involves all of the construction features

heretofore listed. In addition thereto certain supplemental construction will be necessary. This will be for the primary purpose of preserving insofar as possible the rights and interests dependent on this water, which exist on both slopes of the Continental Divide in Colorado. The project, therefore, must be operated in such a manner as to most nearly effect the following primary purposes:

1. To preserve the vested and future rights in irrigation.

2. To preserve the fishing and recreational facilities and the scenic attractions of Grand Lake, the Colorado River, and the Rocky Mountain National Park.

3. To preserve the present surface elevations of the water in Grand Lake and to prevent a variation in these elevations greater than their normal fluctuation.

4. To so conserve and make use of these waters for irrigation, power, industrial development, and other purposes, as to create the greatest benefits.

5. To maintain conditions of river flow for the benefit of domestic and sanitary uses of this water.

In order to accomplish these purposes the project should be operated by an unprejudiced agency in a fair and efficient manner, equitable to all parties having interests therein, and in conformity with the following particular stipulations:

(a) The Green Mountain Reservoir, or similar facilities, shall be constructed and maintained on the Colorado River above the present site of the diversion dam of the Shoshone power plant, above Glenwood Springs, Colo., with a capacity of 152,000 acre-feet of water, with a reasonable expectancy that it will fill annually. Of said capacity, 52,000 acre-feet of water stored therein shall be available as replacement in western Colorado, of the water which would be usable there if not withheld or diverted by said project; 100,000 acre-feet shall be used for power purposes; and all of said stored waters shall be released under the conditions and limitations hereinafter set forth.

(b) Whenever the flow in the Colorado River at the present site of said Shoshone diversion dam is less than 1,250 cubic feet per second, there shall, upon demand of the authorized irrigation division engineer or other State authority having charge of the distribution of the waters of this stream, be released from said reservoir as a part of said 52,000 acre-feet, the amount necessary with other waters available, to fill the vested appropriations of water up to the amount concurrently being diverted or withheld from such vested appropriations by the project for diversion to the eastern slope.

(c) Said 100,000 acre-feet shall be stored primarily for power purposes, and the water released shall be available, without charge, to supply existing irrigation and domestic appropriations of water, including the Grand Valley reclamation project, to supply all losses chargeable in the delivery of said 52,000 acre-feet of water, and for future use for domestic purposes and in the irrigation of lands thereafter to be brought under cultivation in western Colorado. It shall be released within the period from April 15 to October 15 of each year as required to supply a sufficient quantity to maintain the specified flow of 1,250 cubic feet per second of water at the present site of said Shoshone diversion dam, provided this amount is not supplied from the 52,000 acre-feet heretofore specified. Water not required for the above purposes shall also be available for disposal to agencies for the development of the shale oil or other industries.

(*d*) The cost of construction and perpetual operation and maintenance of said reservoir or reservoirs shall be a charge against the project and shall be paid from revenues collected from this project as may be provided in contracts between the Secretary of the Interior and the beneficiaries of the project in eastern Colorado, and any other contracting parties.

(*e*) In the event said reservoir or reservoirs are not maintained with a capacity of 52,000 acre-feet, the Secretary of the Interior should withhold the diversion of water from the western to the eastern slope of Colorado until such storage capacity is made available.

(*f*) The Secretary of the Interior shall have the option to require the transfer to the United States of any and all rights initiated or acquired by the appropriation or use of water through the works of the project in eastern Colorado, at any time: *Provided, however,* That the title so taken shall be subject to a beneficial use of such water as may be provided in the repayment contract or contracts; and the rights to store water to the extent of said 152,000 acre-feet shall be initiated, acquired, and held by the appropriate authorities for use in western Colorado, for replacement of water diverted to the eastern slope, and for other purposes contemplated for this project.

(*g*) The Secretary of the Interior shall operate this project in accordance with the following stipulations as to priorities of water use as between the parties claiming or using project water and within the limits of his legal authority. Said 52,000 acre-feet of replacement storage in Green Mountain or other reservoirs shall be considered to have a date of priority for the storage and use of replacement water earlier than that of the priorities for the water diverted or stored for delivery to the eastern slope. The 100,000 acre-feet of storage in said reservoir shall be considered to have the same date of priority of appropriation as that for water diverted or stored for transmountain diversion.

(*h*) Said Green Mountain Reservoir, or such other replacement reservoirs as provided in paragraph (*a*) herein, as are planned as a part of the project, shall be constructed at the same time as the other parts of the project and shall be completed before any water is diverted to the eastern slope of the Continental Divide by means of said project.

(*i*) Inasmuch as the State of Colorado has ratified the Colorado River Compact, and inasmuch as the construction of this project is to be undertaken by the United States, the project, its operation, maintenance, and use must be subject to the provisions of said Colorado River Compact of November 24, 1922 (42 Stat. 171), and of section 13 of the Boulder Canyon Project Act, dated December 21, 1928 (45 Stat. 1057–1064). Notwithstanding the relative priorities specified in paragraph (*g*) herein, if an obligation is created under said compact to augment the supply of water from the State of Colorado to satisfy the provisions of said compact, the diversion for the benefit of the eastern slope shall be discontinued in advance of any western slope appropriations.

(*j*) An adequate system, as determined by the Secretary of the Interior, shall be provided for the irrigation of the lands in the vicinity of Kremmling, now irrigated by either natural or artificial means, and the installation made therefor shall be a part of this project. The rights to the use of water for the irrigation of these lands shall be considered to have a date of priority earlier than that of the rights to the use of water to be diverted through the works of this project to the eastern slope. This system shall be designed and built in a manner requiring the least possible continuing annual expense for operation

and maintenance but the cost thereof shall not exceed $300,000; and said system shall be provided and in operation before any water is stored for transmountain diversion. In addition, the Secretary shall protect, add to, or improve the source of supply of domestic waters for the municipalities of Kremmling and Hot Sulphur Springs in the manner and to the extent which he may determine to be necessary to provide a source of supply not less than that now available for these municipalities. The cost of these features shall be included in the total project cost.

(*k*) To compensate Grand County for the loss of taxes through the transfer of property to the United States for the construction of this project, $100,000 shall be paid to said Grand County. This payment shall be made in 10 annual installments of $10,000 each, commencing upon the date when 10 percent of the total property in Grand County required for said project has been removed from taxation.

(*l*) The project and all of its features shall be operated in a manner determined by the Secretary of the Interior as necessary to provide the water to preserve at all times that section of the Colorado River between the reservoir to be constructed near Granby and the mouth of the Fraser River as a live stream, and also to insure an adequate supply for irrigation, for sanitary purposes, for the preservation of scenic attractions, and for the preservation of fish life. The determination of the need for and the amount and times of release of water from Granby Reservoir to accomplish these purposes shall be made by the Secretary of the Interior, whose findings shall be final.

In order to facilitate compliance with the stipulation in paragraphs (*j*), (*k*), and (*l*) hereof a representative may be selected and designated by the interests dependent thereon in Grand County, Colo., and when so designated he will be recognized as the official spokesman of said interests in all matters dealing with project operations affecting Grand County.

The principles and provisions expressed in these stipulations have been approved by the Western Colorado Protective Association, representing interests in western Colorado, and the Northern Colorado Water Users Association as evidenced by the letters hereto attached.

SUMMARY

The Colorado-Big Thompson project comprises 615,000 acres of irrigated lands, out of approximately 800,000 acres lying under the canal systems in the northern and northeastern portions of Colorado.

The water supply for the area is to be derived from a portion of 782 square miles of drainage area above Hot Sulphur Springs lying west of the Continental Divide in Grand County, Colorado, and varying in elevation from 8,050 to 14,000 feet.

HISTORY

The first irrigation in northeastern Colorado occurred about 1860 where the early settlers plowed out small ditches with sufficient grade and length to irrigate a few acres of land in the first bottom l. e lands not far above the high-water line of the streams and adjacent to them.

The first irrigation of the higher or second bench lands along the Cache La Poudre River was by the Old Union Colony, of Greeley, in

1870. This colony was organized by Horace Greeley, then editor of the New York Tribune, who will be remembered here especially for his advice to eastern young men to "Go west and grow up with the country."

This colony irrigated about 12,000 acres under their first project and it was a success from the start, due in a large measure to the fact that they were people of considerable means and were then able to finance themselves over the period required to bring raw prairie land into profitable cultivation.

This colony was soon followed by others along the Poudre at Fort Collins, on the Big Thompson, at Loveland and the St. Vrain near Longmont.

The difficulties experienced by these colonists in distributing the water between them led to the creation of Colorado's irrigation laws which have been copied by most of the irrigation States of the West.

This irrigated area of six hundred to eight hundred thousand acres was developed by means of individual initiative and by small scale cooperative enterprises. Today there are 6,400 irrigated farms, served by 124 canals and ditches and 60 storage reservoirs.

IRRIGATION USE

In the early days irrigation in this area was confined to growing crops to supply local needs, the lack of transportation contributing to high prices for the home-grown production and prohibiting shipping to distant points. The crops grown were mainly the grains and hay for local consumption, with some vegetables. Such irrigation corresponded with the run-off of the streams.

As mining developed in the State, Denver and other towns grew into cities, and after these cities were connected to the East by railroads the markets demanded a more diversified agriculture to supply their needs. Thus a gradual demand developed for late water which the streams could not supply.

This change created a need for storing the flood waters for late irrigation. From 1890 to 1910 was a period of reservoir construction, during which storage was provided for all the available water supply of the streams over and above the direct irrigation requirements for the area here under discussion. Much of this development took place during a decade of more than normal run-off on the eastern slope and also during a period expanding the agricultural area throughout the West.

Attempts to maintain the area under cultivation with the depleted run-offs during the past 10 years have spread the water supply to such an extent that much acreage has had an insufficient water supply to produce full crops or crops producing the higher values. Attempts have been made to supplement the individual farm water supply by the development of the underground sources by pumping from numerous wells throughout the region. This is lowering the water table and already is affecting the water supply of the lower South Platte Valley which receives its irrigation supply largely from return waters.

NEED OF SUPPLEMENTAL WATER

Under such conditions only the older water rights have any assurance of an adequate water supply, and in the dryer years the owners of junior rights are forced to confine their farming to crops that can

be matured by the early flood flow or that require a minimum amount of water. In years when the supply is not correctly estimated considerable loss results. Ordinarily the crops raised in this and other irrigated areas do not compete with those grown under rainfall conditions, but a shortage of water always leads to the raising of more of the competing crops. Such crops also cut the income of the irrigation farmer below what he can earn with the higher type, noncompetitive crops.

On fully three-fourths of the 615,000 acres in this area the water supply is inadequate, in spite of every effort to conserve, store flood water, or otherwise add to the water supply that has been within the financial ability of the farmer. This inadequacy is due not only to a development probably too large for the period when run-off of the streams was much higher than at present, but to the fact that the last 10 years have seen a very marked decrease in the stream flow. It must be emphasized that the additional water supply here contemplated is to be used for a supplemental supply and not to create a large new additional irrigated acreage.

There has been expended in this area to date for various types of irrigation works, including nearly $750,000 for pumping plants, most of which have been installed in the last 10 years, about $35,000,000 against which there is an outstanding indebtedness of only $1,510,650. These people, however, have about reached their limit as individuals and mutual irrigation companies to provide for themselves a supplemental water supply so badly needed to make their present water supply secure and are obliged to seek Government aid to bring this about.

It has been conceded by a majority of the irrigation interests in this section of the State that the water supply in 1926 was ample for all their present acreage now irrigated. In order, therefore, to determine the normal shortage in acre-feet over a period of years a comparison of the supply in these years with that of 1926 was made and the difference obtained. These differences are set up in the following table:

TABLE 1.—*Showing water districts, acreage irrigated, deficiencies 1925 to 1935 with tentative allocation of total supplemental supply*

Water district no.	Area irrigated	1926 diversion, acre-feet	Average diversion, 1925-35	Difference, 1926, 11-year average required supplementary water in acre-feet	Tentative allocation of supplemental supply			
					Colorado-Big Thompson project water	Moffat and Jones Pass tunnel water return	Present sewage return, acre-feet	Total supplemental supply, acre-feet
(1)	(2)	(3)	(7)	(15)	(16)	(17)	(18)	(19)
3	213,040	340,000	308,000	132,000	104,000		49,500	153,500
5	68,408	243,000	166,000	72,000	44,000		23,000	55,140
7	65,106	113,000	65,000	19,000	34,000		14,500	47,500
1	92,304	665,000	497,000	206,000	83,000	11,000	83,000	175,000
2	37,999	170,000	134,000	41,000	5,000	4,500	5,130	14,630
64	121,289	513,000	380,000	130,000	36,500	14,500	37,000	88,000
Total	615,436	2,224,000	1,649,000	577,000	310,000	30,000	214,500	554,500

It will be noted from column no. 15 that the total average shortage in this project area which comprises water districts 3, 4, 5, 1, 2, and 64 is 575,000 acre-feet. Column no. 16 is a tentative allocation of the proposed supplemental supply to the various districts. Column no. 18 is the estimated usable return flow that would arise from the addition of 340,000 acre-feet of new water to this area. Column no. 19 is the total usable supplemental supply amounting to 554,520 acre-feet, an amount within 5 percent of the 10-year average shortage. The sale or rental of supplemental water, when available, in the Poudre Valley has averaged $4.50 per acre-foot over a period of years. In extreme cases it has sold as high as $9 per acre-foot.

The deficiency in water supply for the period 1925 to 1934, inclusive, reflected a direct economic loss in crop production of approximately $42,355,000.

The following shows the approximate annual loss in value of crops because of inadequate water supply:

Sugar beets	$1, 900, 000
Alfalfa	948, 000
Small grain	470, 000
Beans	302, 000
Corn	228, 000
Potatoes	425, 000
All other crops	444, 000
Total	4, 700, 000

This average annual direct crop loss is about 19 percent of the $24,800,000 estimated cost of the Colorado-Big Thompson irrigation project.

The crop loss in 1934, due to shortage of water, as compared to 1926, after variation in price and acreage factors had been accounted for, amounted to $12,400,000, or just one-half the cost of the project.

The losses here given are the farm losses and do not include the losses that are due to processing, transporting, or handling of that quantity of production, which would add several million dollars to the loss of the community as a whole.

The effect of such inadequate water supply for the period 1925–35 is shown graphically on drawing no. 1 following.

SUPPLEMENTAL WATER SUPPLY

In 1929 the State engineers of Colorado, in cooperation with the Platte Valley Water Conservation League, and the United States Army engineers, made a comprehensive study of the water resources of the South Platte Basin in northeastern Colorado. This study included the Cache La Poudre River in water district no. 3, the Big Thompson River in water district no. 4, and the St. Vrain River in district no 5. The investigators determined the excess water available on these streams above present normal demands and also above the normal demands on the South Platte River proper below where these streams enter.

The investigators also determined the location, capacity, and cost of the most feasible reservoir sites for the storage of this excess water.

The results are shown in the following table and have been brought up to date by using the same demands for irrigation as set up in the report and using the water-supply records furnished by the State engineer's office.

Stream	Excess supply available for storage, average, 1918–35	Capacity proposed reservoir by Army engineers	Average annual yields of reservoirs	Total reservoir costs	Cost per acre-foot capacity	Cost per acre-foot yield
	Acre-feet	*Acre-feet*				
Cache La Poudre	30,000	52,000	25,500	$2,745,000	$72	$147
Big Thompson	16,000	32,720	11,300	2,008,000	61	178
St. Vrain	16,000	30,000	10,000	2,180,000	73	156

From the foregoing table it is evident that there is not sufficient excess water available that originates in this area to supply the demands for supplemental water, and the cost of making use of what is available is prohibitive. It will be shown, however, that 16,000 acre-feet of this surplus is available for storage in the Colorado-Big Thompson project reservoirs on the eastern slope with no additional cost.

The water users in northeastern Colorado have now exhausted every possible source of obtaining supplemental water or augmenting their present supply either by storage, transmountain diversion within their individual cooperative means, and by pumping. Fortunately, however, there exists a surplus of water on the headwaters of the Colorado River west of this area and separated from it by the Continental Divide.

In the spring of 1935, $150,000 was allocated to the Bureau of Reclamation to make surveys and prepare plans and cost estimates for bringing water from the headwaters of the Colorado River into the area in northeastern Colorado in need of supplemental water.

In August 1935 the Bureau of Reclamation started surveys for the project and previously there had been started a land classification to determine the irrigated and arable land in the Colorado River Basin in Colorado in order to arrive at the approximate amount of water now used in the area and how much might be used when full development has been made. Both surveys have been completed, insofar as this project is involved, and the following is the result of the land classification.

LAND CLASSIFICATION—COLORADO RIVER AREA

Since the quantity of water available for diversion from the headwaters of Colorado River might be limited now by the water rights of lands already irrigated, or might in the future limit in turn the development of lands in the Colorado Basin within the State, all the land on Colorado River and its tributaries above the Colorado-Utah line, except the Gunnison River area, has been classified to show the location and extent of irrigated lands and of lands capable of irrigation.

This classification was undertaken in all areas covered by former reports, supplemented by local information as to possible projects and by reconnaissance. For localities with no records of water supply it was assumed to exist unless the contrary was obvious, and doubtful areas were included rather than excluded from the classification. The land was measured by plane-table survey except some small isolated areas which were estimated.

Land that had customarily been irrigated was so classed, no matter how inadequate the supply. Land capable of irrigation was

tested according to a set of standards which fairly represent the experience on this area and others as to what constitutes arable land. Where pumping for irrigation was involved land was classified up to 200 feet above the source of supply.

The result of the survey of the irrigated and arable land appears in the following table.

It should be stated, that, as will be shown under the discussion of water supply which follows, the present irrigated area above the Utah State line does not limit the diversion possible at the location chosen. It is also true that the diversion when in operation, and replacing the summer flow of Colorado River in the manner contemplated by the project plan, will not limit the future development of all the arable land on Colorado River and its tributaries above Gunnison River.

Colorado River drainage—Gunnison excepted—Colorado (land classification according to streams)

Stream name	Irrigated	Arable	Total
	Acres	*Acres*	*Acres*
Colorado River:			
1. To Granby Dam	2,800	1,400	3,700
2. Granby Dam to Hot Sulphur Springs	1,300	350	1,650
3. Hot Sulphur Springs to Kremmling	3,300	1,200	4,400
4. Kremmling to Glenwood Springs	3,000	1,550	4,550
5. Glenwood Springs to Palisade	7,000	2,500	9,500
6. Palisade to State line	70,000	32,000	102,000
Total	87,400	38,250	124,600
Tributaries:			
Willow Creek	893	120	980
Fraser River	7,100	650	7,750
South Fork Colorado River	510	30	540
Small streams	2,100	4,000	6,200
Williams Fork River	3,500	10,000	13,500
Troublesome Creek	4,300	7,200	11,500
Muddy Creek	4,600	5,100	10,000
Blue River	8,400	5,100	13,500
Small streams	600	520	1,120
Slaughterhouse Creek	1,200	50	1,250
Piney Creek	1,200	250	940
Eagle Creek	6,700	9,300	16,000
Cabin Creek area	6,700	2,400	9,100
Cottonwood Creek	5,000	970	5,970
Sweetwater Creek area	1,600	380	1,980
Eagle River	16,800	3,800	20,600
Small streams [1]	600	60	660
Roaring Fork River	33,100	9,400	42,500
Garfield Creek	2,100		2,100
Elk Creek	3,000	130	3,130
Divide and Main Creeks	13,700	9,300	22,000
Rifle Creek	11,100	3,300	14,350
Parachute Creek	1,700	370	2,070
Roan Creek	5,600	3,300	8,900
Plateau Creek	24,000	7,000	31,000
Small streams [2]	10,200	3,000	13,200
Grand total	256,300	122,830	379,130

[1] Above Hot Sulphur Springs.
[2] Between Hot Sulphur Springs and Kremmling.
[3] Between Kremmling and Glenwood Springs.
[4] Between Glenwood Springs and Palisade.

WATER SUPPLY

The stream flow records at the different stations in the Colorado River Basin show the amount of water passing the stations after all present irrigation has taken place above, so there is no need for any further adjustment of stream flow to take care of water consumed in this irrigation.

It is assumed that all arable lands as shown will be irrigated some time in the future, notwithstanding the fact that quite a percentage

is so located that it would never be feasible to irrigate. It is also further assumed that reservoirs would be built on the tributaries to conserve a portion of the flood flows to make the irrigation of these arable lands possible.

With the above assumptions it has been found that in a year like 1931, with the run-off only 40 percent of the average for a 31-year period, and the lowest year of record, the Colorado-Big Thompson project would only have to supply approximately 53,000 acre-feet to replace water diverted by the proposed project that could have been used by the Colorado River water users for power and irrigation, provided the project was in operation at that time.

The average run-off of the Colorado for the years of record are: Hot Sulphur, 31 years, 523,000 acre-feet; Glenwood Springs, including Roaring Fork, 3,413,000 acre-feet, Fruita, 6,300,000 acre-feet. These amounts are exclusive of supply consumed in present irrigation of Colorado River Basin lands.

The following is the estimated amount of water available for diversion from the drainage area above the Colorado-Big Thompson collection system at 8,260 feet elevation.

YIELD OF GRANBY RESERVOIR

Stream-flow records available on the Colorado River near the Granby Dam site for the years 1908–11 and 1935–36, and on Willow Creek for the years of 1935 and 1936, were supplemented by estimates based on available stream-flow records on the Colorado River at Hot Sulphur Springs and Glenwood Springs to cover the 37-year period, 1900 to 1936, inclusive.

A capacity of 482,000 acre-feet was selected as the best capacity for the Granby Reservoir, considering cost and use. Of this capacity, 20,000 acre-feet were set aside for dead storage to reduce pumping lifts for waters delivered to Shadow Mountain Reservoir. A further objective is to keep to the lowest practicable area the exposure of reservoir bed when storage is exhausted. This leaves an active capacity of 462,000 acre-feet.

Reservoir operating studies are based on the following conditions:

(*a*) Recorded (or estimated) past flows of Colorado River at Shadow Mountain and Granby Dams reduced by 27 percent prior to 1906, and 13 percent thereafter, of the flow of the North Fork at Grand Lake to allow for increasing diversions by the Grand River ditch.

(*b*) Willow Creek diverted to reservoir to the extent of 90 percent of the flow of Willow Creek and other streams intercepted by the diversion canal from May to October, inclusive, of each year.

(*c*) Strawberry, Meadow, and Walden Hollow Creeks also diverted whenever practicable. The flow of these streams, together with some additional waters capturable from Willow Creek at times, are expected to offset evaporation and seepage losses in excess of present losses from the Granby and Shadow Mountain Reservoir sites.

(*d*) No releases from Granby Dam for any reason.

(*e*) Transmountain tunnel to be operated at full capacity from October 1 until March 31 following, with operations thereafter gaged to fit run-off conditions so as to avoid spills and yet concentrate flows in the period of July 15 to September 15, for the purposes of best

distribution in power production and to minimize reregulating storage requirements on the eastern slope. The computations assumed infallible forecasts of run-off.

(f) A minimum storage hold-over of 100,000 acre-feet on September 30 of each year to assure dependable power production in winter.

Under these conditions, a yield of 320,000 acre-feet of primary water is secured as follows:

Unit 1,000 acre-feet

Run-off year (October to September)	Inflow to Granby Reservoir		Tunnel diversions	Spills	Shortages
	Colorado River	Willow Creek			
1899–1900	242.8	52.4	320.0		
1900–1901	246.9	53.4	320.0		
1901–2	164.9	34.2	253.1		86.9
1902–3	232.0	48.8	270.8		19.2
1903–4	213.2	31.2	301.7		18.3
1904–5	287.9	64.6	310.2		9.8
1905–6	262.4	58.7	320.0		
1906–7	261.6	78.2	320.0		
1907–8	196.6	51.6	320.0		
1908–9	333.8	91.3	320.0		
1909–10	259.1	62.1	320.0		
1910–11	206.2	52.6	320.0		
1911–12	330.4	79.3	320.0		
1912–13	214.4	40.3	320.0		
1913–14	171.0	35.1	320.0		
1914–15	223.2	45.8	320.0		
1915–16	240.5	47.8	320.0		
1916–17	318.3	79.7	320.0		
1917–18	322.9	81.2	358.4	18.7	
1918–19	189.6	36.4	320.0		
1919–20	301.2	73.1	317.3		
1920–21	347.9	90.7	368.5	70.0	
1921–22	195.8	39.5	320.0		
1922–23	260.3	60.3	320.0		
1923–24	262.2	54.4	320.0		
1924–25	303.6	70.7	320.0		
1925–26	346.4	70.0	320.0		
1926–27	217.6	46.8	320.0		
1927–28	212.0	41.3	320.0		
1928–29	307.1	61.2	320.0		
1929–30	247.4	42.6	320.0		
1930–31	171.5	36.6	320.0		
1931–32	243.9	49.6	320.0		
1932–33	239.6	54.5	320.0		
1933–34	128.9	26.2	320.0		67.1
1934–35	209.2	41.8	252.5		16.0
1935–36	279.7	53.8	310.6		
Average	253.0	55.4	318.7	2.8	5.6

Operating results cannot be expected to result so favorably. The operating conditions enumerated imply superhuman ability to forecast stream flow. Occasional releases will be required from Granby Reservoir although small in amount. Interruptions in tunnel operation cannot always be arranged so as to lose no water.

In view of these conditions, it is concluded that the firm yield of tunnel water from the Granby and Shadow Mountain Reservoirs should be taken as 300,000 acre-feet annually. Shortages of 5 percent may be expected on an average of once every 5 years and shortages of 23 percent may be expected on an average of once every 20 years. Secondary water may be expected to be available in some years in amounts up to 50,000 acre-feet.

EFFECT OF THE PROPOSED TRANSMOUNTAIN DIVERSION ON FUTURE WESTERN SLOPE DEVELOPMENT

Most of the diverted water is derived from the spring floods, when there is an excess of water over all present and future requirements along the Colorado River in the State. To permit full use of the inflow to the Granby Reservoir, Ranch Creek Reservoir may be constructed near Tabernash to store water locally surplus. The waters there conserved would in part be utilized to replace the waters withheld at Granby Dam, but the greater part of the conserved water would be used to augment irrigation supplies down to Hot Sulphur Springs and to maintain a satisfactory stream flow in this locality for recreational purposes.

With the region above Hot Sulphur Springs taken care of by the Ranch Creek Reservoir, the critical points along the Colorado River, from the standpoint of present and future use of water, are at Glenwood Springs, where the Shoshone power plant of the Public Service Co. uses present stream-flows up to 1,250 second-feet, and near Palisades at the head of the Grand Valley, where the Government high-line canal diverts water for irrigation and power purposes. The present irrigated area along the Colorado River between Palisades and the Colorado-Utah State line is 70,600 acres.

The additional arable area in this region, not now irrigated, is as follows:

	Acres
Under constructed canals	13,800
Pumping unit of Grand Valley project, for which canal capacity has been provided	10,000
Lands on Mack Flat, no present provision for water service	9,000
Total	32,800

Maximum irrigation demand at the head of the Grand Valley for the present irrigated area and for the additional area of 23,800 acres for which provision has been made in the constructed canals, is estimated as 1,720 second-feet, and this amount is being demanded in the pending adjudication proceeding.

With maximum irrigation demands there is a full water supply for the Orchard Mesa pumping plant and for the Grand Valley power plant. In the nonirrigation season the controlling requirement is for power with a total demand of 800 second-feet for power and for domestic needs under the higher canals. With the new area of 9,000 acres developed, the future demands are then estimated as 1,800 second-feet in the months of May to August, inclusive, tapering off uniformly to 800 second-feet on April 1 and on November 30.

In determination of the effect of the Colorado-Big Thompson transmountain diversion on the western slope, the past stream flows at Glenwood Springs and at the head of the Grand Valley were first depleted to show the resulting stream flows with the following developments:

(c) Full irrigation development of 276,000 acres of irrigated and arable lands along the Colorado River and tributaries above Palisades (the present irrigated area is 186,000 acres).

(b) Full development of Moffat Tunnel diversion from Fraser River and tributaries, Jones Pass diversion from Williams River, and Independence Pass diversion from the Roaring Fork, including

replacement storage so that these projects may divert all flows interceptible.

From the reconstructed flows, thus computed, there was subtracted the water estimated to be withheld at the Granby Reservoir site. The reductions in stream flow at Glenwood Springs and at the head of the Grand Valley, during those periods of each year when the resulting stream flows would be less than the future demands above described, then represents the effect of the project on the western slope if no replacement storage were provided. These computations were made for the years 1926 to 1936, inclusive, at Glenwood Springs, and for the entire period of record, 1902 to 1936, inclusive, at the head of the Grand Valley, with the following results:

Year	Shortages at Glenwood Springs (acre-feet)			Shortages at head of Grand Valley (acre-feet)		
	End of flood season, Oct. 31 [1]	Nov. 1 to flood season of following year [2]	Total	Before flood season in spring [3]	After flood season to Oct. 31	Total
1902	(4)	(4)	.....	6,000	39,000	45,000
1903	(4)	(4)	.....	3,000	12,000	15,000
1904	(4)	(4)	.....	None	2,000	2,000
1905	(4)	(4)	.....	None	14,000	14,000
1906	(4)	(4)	.....	None	None	None
1907	(4)	(4)	.....	None	None	None
1908	(4)	(4)	.....	None	6,000	6,000
1909	(4)	(4)	.....	None	None	None
1910	(4)	(4)	.....	None	12,000	12,000
1911	(4)	(4)	.....	None	1,000	1,000
1912	(4)	(4)	.....	None	None	None
1913	(4)	(4)	.....	None	7,000	7,000
1914	(4)	(4)	.....	None	None	None
1915	(4)	(4)	.....	None	1,000	1,000
1916	(4)	(4)	.....	None	None	None
1917	(4)	(4)	.....	None	None	None
1918	(4)	(4)	.....	None	1,000	1,000
1919	(4)	(4)	.....	None	7,000	7,000
1920	(4)	(4)	.....	2,000	None	2,000
1921	(4)	(4)	.....	None	None	None
1922	(4)	(4)	.....	None	None	None
1923	(4)	(4)	.....	None	None	None
1924	(4)	(4)	.....	None	4,000	4,000
1925	(4)	(4)	.....	None	None	None
1926	16,000	16,000	32,000	None	2,000	2,000
1927	1,000	52,000	53,000	None	None	None
1928	10,000	18,000	28,000	None	None	None
1929	None	50,000	50,000	None	None	None
1930	17,000	14,000	31,000	None	None	None
1931	27,000	26,000	53,000	1,000	27,000	28,000
1932	16,000	34,000	50,000	3,000	13,000	16,000
1933	25,000	21,000	46,000	5,000	15,000	20,000
1934	31,000	17,000	48,000	None	18,000	18,000
1935	20,000	10,000	30,000	2,000	11,000	13,000

[1] Encroachment on irrigation supplies.
[2] Encroachment on winter power waters.
[3] These shortages occur in years of late run-off when irrigation requirements rise faster than stream flow. Winter flows are always adequate Nov. 1 to Apr. 1.
[4] Not computed.

DIVERSION PLAN AND STRUCTURES

REPLACEMENT

In order to protect the water users in the Colorado River Basin against any depletion of their water supply by diversions through the Continental Divide tunnel to northeastern Colorado, a storage reservoir is planned on the Blue River about 16 miles southeast of Kremmling, Colo. This reservoir is to be known as the Green Mountain.

The dam site is located in the E ½ of sec. 15, T. 2 S., R. 80 W., sixth principal meridian, near the head of a box canyon, between Green and Little Green Mountains, caused by the river cutting through a porphyry sill. The foundation bedrock consists of sedimentary rocks, either Dakota sandstone or Morrison shales, and the intrusive porphyry.

The irrigation outlet capacity is 1,000 cubic feet per second, and the power outlet capacity is 1,500 cubic feet per second. The spillway capacity is 25,000 cubic feet per second.

The reservoir will flood 2,100 acres of land and will have a capacity of 152,000 acre-feet.

From the water-supply studies it was found, assuming that full development had taken place in the Colorado River Basin and that the Big Thompson project had been in operation the last 35 years, that in the year 1931, the lowest year of dependable run-off record, the Colorado Basin users above Glenwood Springs would have been shorted 37,000 acre-feet for irrigation use and the Public Service Co. would have been shorted 16,000 acre-feet at their power plant at Shoshone during the nonirrigation season, or a total shortage of 53,000 acre-feet. Accordingly, 50,000 acre-feet of Green Mountain storage have been allocated to replacement purposes for which the water users in northeastern Colorado will pay $1,500,000. The remaining 100,000 acre-feet are allocated to power and will be paid for out of power revenues.

Since the average shortage for both power and irrigation for the last 10 years, the lowest 10 years of run-off record is 36,000 acre-feet. There would be the 16,000 acre-feet difference, and a portion of the 100,000 acre-feet let out for power that could be used by the Colorado Basin users to supply shortages that might occur in their irrigation use in years of extreme low run-off, these shortages not being caused by the transmountain diversion.

The total estimated cost of the dam and reservoir is $3,776,032, $2,276,032 of which will be paid for from power revenues.

GRANBY RESERVOIR AND STORAGE

The storage of Colorado River waters for the project is to be made in what is known as Granby Reservoir which is located in Tps. 2 and 3 N., Rs. 75 and 76 W., sixth principal meridian, in Grand County, Colorado. The reservoir basin occupies the valleys of Stillwater Creek, the south fork of Arapaho Creek, and the main Colorado River.

The damsite is located about 4 miles northeast of the town of Granby, Colo., in the NE¼ of sec. 11, T. 2 N., R. 76 W., in Grand County, Colo. It is located at the head of a short canyon which the river has cut through pre-Cambrian rocks forming a spur of the main Rocky Mountain mass. At the damsite the canyon at river-bottom level is 200 feet wide, while at elevation 8,275 it is 720 feet in width.

The dam is to be a combination earth and rockfill structure with a maximum height of 223 feet. The outlet capacity is 300 cubic feet per second and the spillway capacity is 12,000 cubic feet per second.

With the high-water line at elevation 8,275 feet the reservoir has a capacity of 482,860 acre-feet, and will flood an area of 6,943 acres.

This reservoir will not only intercept the flow of the Colorado at that point, but the flow of Willow Creek will be intercepted near Dexter, Colo., and brought into the reservoir through a canal of 1,000

cubic feet per second capacity. Willow Creek enters the Colorado about 2 miles below Granby Dam.

It is estimated that Willow Creek will supply an average of about 60,000 acre-feet per year, and that the total estimated cost of this diversion is $733,203.

The storage in Granby Reservoir will also be augmented by the flow of Meadow and Strawberry Creeks, tributaries of Fraser River which enters the Colorado about 5 miles below the dam. The canal intercepting these two creeks will have a capacity of 500 cubic feet per second, and it is estimated they will produce an average of 12,000 acre-feet a year. The total estimated cost of this diversion is $133,600.

If water supply records kept in the future show there is sufficient water supply left in the Fraser River below the City of Denver's diversion, a canal could be taken out of it just below the mouth of St. Louis Creek near the town of Fraser, Colo., and extend from there to Granby Reservoir, intercepting Ranch, Meadow, and Strawberry Creeks on the way. A small regulating reservoir should be built on Ranch Creek above where the Canal intercepts it.

NORTH FORK DIVERSION DAM AND SHADOW MOUNTAIN LAKE

In order to divert the water of the North Fork of the Colorado into Grand Lake and thence to the channel extending from it to the west portal of the Continental Divide tunnel, it is planned to construct a concrete overflow dam 35 feet in height, above streamed, across the North Fork about one-half mile below its junction with the Grand Lake outlet.

The dam site proper is located in the NW¼ of sec. 19, T. 3 N., R. 75 W., and is a glacial morain cut through by the river.

The water backed up by this dam will form a lake called Shadow Mountain, the name of a nearby mountain, which will have a surface area of 1,356 acres. The elevation of this lake will be the same as Grand Lake and connected with it by means of the present outlet.

NORTH FORK DIVERSION DAM

The dam proper is a concrete gravity overflow spillway section, 90 feet long, with crest elevation at 8,370. This spillway is designed for maximum discharge of 1,800 cubic feet per second. On each side of the overflow section is a concrete gravity section containing three automatic siphon spillways on each side. The total spillway capacity is 9,400 cubic feet per second.

The total estimated cost is $483,928.

GRANBY PUMPING PLANT

As stated before, the water surface elevation of Granby Reservoir is 8,275 and the water surface of Shadow Mountain and Grand Lakes is 8,369. In order to get the water stored in Granby Reservoir into Shadow Mountain Lake and available for delivery through the Continental Divide tunnel, a pumping plant is located on the north shore of Granby Reservoir about one-half mile above the junction of the South Fork with the Colorado. A granite spur juts out into the reservoir site at that point making it ideal for the intake tunnels and a shaft for the pump.

The proposed pumping plant will contain three motor-driven vertical-shaft pumping units having a total capacity of 900 cubic feet per second with full reservoir and 550 cubic second-feet at low water. At normal water surface the capacity will be 870 cubic feet per second.

Each pump will be driven by a 6,500-horsepower synchronous motor.

Power will be delivered to the plant from a 69,000-volt transmission line extending from power plant no. 1 just below Estes Park, around the Rocky Mountain National Park, and crossing the Continental Divide at Buchanan Pass about 5 miles south of the park boundary.

The water from the pumps empties into a canal of 900 cubic second-feet capacity and runs by gravity into Shadow Mountain Lake. It is planned to operate this canal all winter when temperatures get as low as 40° below zero. The latent heat in the water and the friction heat absorbed from the pumps will prevent this water from freezing and will keep quite an area open after the water reaches Shadow Mountain Lake.

The total estimated cost of the pumping plant is $1,250,000.

The total estimated cost of the pump canal is $417,553.

CONTINENTAL DIVIDE TUNNEL

The west tunnel portal is connected with Grand Lake by means of a channel constructed 67.5 feet in width and 15 feet in depth. At the lake end of this channel a permanent concrete barrier or weir will be placed with a crest elevation at 8,368 which would be the minimum elevation to which the water in Grand Lake could be drawn. Since the barrier is so constructed that it requires the water to be 1 foot in depth over it to supply the normal capacity of the tunnel, the normal elevation of Grand and Shadow Mountain Lakes would be 8,369 feet.

The present maximum fluctuation of Grand Lake is about 4 feet, or from an elevation of 8,368 in winter to 8,372 feet during the peak run-off from melting snow. The automatic control gates at the North Fork Diversion Dam and at tunnel inlet will so control the elevation of the water surface in Grand Lake that it would never fluctuate more than 1 foot.

The Continental Divide tunnel extends from the easterly end of Grand Lake to Wind River, southwest of Estes Park, with an azimuth of 242° 20′ 30″, and length of 69,023 feet. It is to be horseshoe shape 9.5 feet in diameter and lined throughout with a 9-inch concrete lining.

It will be located entirely in pre-Cambrian rock consisting of the Longs Peak and related granites and the gneisses and schists of the Idaho Springs formation. The granites are strong massive rocks. Gneisses predominate over schists and only a small proportion have prominent and continuous cleavage planes. The proportion of granite to gneiss and schist is approximately 4 to 1.

From a detailed geological survey of the tunnel and comparing it with conditions actually encountered in the Moffat Railroad tunnel, which was built under the Continental Divide for the Denver & Salt Lake Railroad, and about 25 miles due south of this one, it was estimated there would be only 400 feet of bad ground and 5,200 feet of ground needing support. However, for purposes of estimate, it was figured there would be 6,900 feet of bad ground and 17,500 feet of ground needing support.

The total estimated cost is $7,271,371.

POWER CONDUIT NO. 1

Power conduit no. 1 extends from the east portal of the Continental Divide tunnel in Wind River to the penstock of power plant no. 1 on the northeast slope of Prospect Mountain.

Both ends of the Continental Divide tunnel are without the national-park boundaries but the area east of the east portal is authorized by Congress to be taken in, through that area. The water will be taken through a closed conduit consisting of a 10-foot reinforced concrete pipe completely buried. The total length of power conduit is 5.36 miles, of which 1.86 miles is closed conduit, 1.19 miles is concrete lined tunnel, 0.98 mile is siphon, and the remainder is open canal.

The total estimated cost of power conduit no. 1 is $1,101,000.

POWER PLANT NO. 1

Power plant no. 1 will be located on the south bank of the Big Thompson River about one-half mile east of Estes Park. It will contain two 15,000 kilovolt-ampere generating units with auxiliaries. Each unit will consist of a vertical-shaft, single-runner, spiral-casing type hydraulic turbine operating under an effective head of 705 feet direct connected to a 15,000 kilovolt-ampere water-wheel type generator. A complete description with cost estimate will be found in Power and Pumping Summary.

Until there has developed a sufficient market for power to justify the construction of power plants nos. 2 and 3, the water will be turned into the Big Thompson at power plant no. 1 and carried by that stream to a diversion dam located in SE¼ sec. 1, T. 5 N., R. 74 W., about midway between the present diversion dam and power plant for the town of Loveland, Colo.

POWER CANAL NO. 4

From this diversion dam the water will be carried in a canal of 750 cubic second-feet capacity on the south side of the stream a distance of 4.93 miles to a point just above the mouth of the Big Thompson Canyon. At this point a portion of the water will drop direct into the Big Thompson River to supply the supplemental water demands of that stream and a portion will be siphoned across to elevation 5,450 to supply the canal going to the Poudre River, which will be described later. Power plants nos. 4 and 4–A will be constructed at this point to take advantage of a fall of 550 feet into the Thompson and 358 feet to the Poudre Canal when the power market justifies.

CARTER LAKE SUPPLY CANAL

About 3.07 miles below the diversion dam mentioned above, a canal of 300 cubic feet per second takes off toward the south and supplies Carter Lake.

This canal is 8.78 miles in length, of which 7,040 feet is tunnel 1,878 feet siphon, and the remainder is open canal.

The estimated cost of this supply canal is $710,629.

CARTER LAKE RESERVOIR

This site is located in Ts. 4 and 5 N., R. 70 W., of sixth principal meridian, about 1 mile north and 7 miles west of Berthoud, Colo.

The reservoir will occupy a valley about 2¾ miles long and from one-half to 1 mile wide. The northern portion of the area is a natural

basin called Carter Lake. This lake dried up during the last 5 drought years, for the first time within the memory of the white settlers.

The proposed maximum water surface in the reservoir is at elevation 5,760 with a capacity of 111,963 acre-feet. The area of high water line is 1,150 acres. For this water surface three dams will be required. Dam no. 1 is located at the natural outlet of the valley and will contain the outlet works for the reservoir; the other two dams will occupy saddles. These dams are earth and rock fill; the main dam is 243 feet high, and the saddles 43 and 48, respectively.

The capacity of the outlet to St. Vrain supply canal is 300 cubic feet per second, the outlet to the Big Thompson has a capacity of 1,000 cubic feet per second.

The total estimated cost of the reservoir is $1,822,202.

ST. VRAIN FEEDER CANAL

A canal of 300 cubic feet per second capacity will extend from the small outlet of Carter Lake to the St. Vrain, reaching the St. Vrain high enough to supply all ditches.

The length of this canal is 9.76 miles with 3,445 feet in tunnel, 1,575 feet of siphons, and the remainder open canal.

The estimated cost of the St. Vrain feeder is $368,951.

BIG THOMPSON FEEDER

About one-half mile below Carter Lake Dam a canal will be taken out of the draw leading from the dam, and will run into Cottonwood Creek, a tributary of the Big Thompson. This canal will have a capacity of 1,000 cubic feet per second and be 5.37 miles in length.

The cost is estimated at $155,246.

HORSETOOTH SUPPLY CANAL

This canal starts at the end of a siphon across the Big Thompson from power conduit no. 4. This water will pass through power plant no. 4–A when constructed. The canal starts at elevation 5,450 with a capacity of 250 cubic feet per second. The structures, however, are designed for a capacity of 400 cubic feet per second on the theory that some time in the future it might be necessary to increase the capacity of the canal to that amount. The length of this canal is 9.88 miles, of which 12,863 feet is tunnel, 3,296 feet is siphons, and the remainder open canal.

The elevation of 5,450 was chosen because it not only puts the water above all present diversions on the Poudre River, but it afforded the most direct and economical route.

The estimated cost of this feeder is $1,208,391.

HORSETOOTH RESERVOIR

The proposed Horsetooth Reservoir will occupy a valley 6 miles long and from one-quarter to three-quarters miles wide, extending in a north-south direction, formed by the erosion of soft red beds of Lykens formation between harder ridges of Lyons on the west and Dakota sandstone on the east. There are three natural outlets to the east through the Dakota hogback, namely, Soldier, Dixon, and

Spring Canyons, which are the sites of three proposed dams of the same names. The fourth proposed dam, Horsetooth, will cross the valley at the north end on a low saddle separating the valley from drainage to the north into the Poudre River. The outlet will be through the Horsetooth Dam saddle. There are no outlets through the other dams. The proposed water surface is at 5,400 feet in elevation which gives a capacity of 96,756 acre-feet. The area flooded will be 1,513 acres. The outlet capacity was designed for 1,200 cubic feet per second with reservoir full. This large capacity is necessary as the irrigation use requires that the entire amount of supplemental water be delivered at a rate that would supply it in 60 days.

The advantages of a reservoir at this point are: It is high enough to supply all users from the main Cache La Poudre River and is located close to it. It takes the place of 6 miles of canal through rough country and allows a canal of 250 cubic second-feet to be constructed from the Big Thompson instead of one for 1,000 cubic feet per second.

The estimated cost of the reservoir is $3,625,021.

POUDRE FEEDER CANAL

From the outlet of Horsetooth Reservoir a canal of 1,000 cubic second-feet capacity will extend north to Lewstone Creek, a tributary of the Poudre. The water will run down this creek to the Poudre above all the diversions except the Poudre Valley.

POUDRE VALLEY FEEDER CANAL

A canal will extend from Lewstone Creek to the Poudre Valley Canal about 1 mile below its headgate, crossing the Poudre River in a siphon. This canal will have a capacity of 400 cubic feet per second to take care of the supplemental demands of the Poudre Valley Canal and also the demands of the North Poudre irrigation district. The total length of the two canals is 5.48 miles.

The cost of the Poudre Feeder and Poudre Valley Canals is estimated at $632,843.46.

NORTH POUDRE FEEDER CANAL

It is planned to enlarge the Poudre Valley Canal for a distance of 3.58 miles from the point the supply canal enters to the location of the pumping plant for the North Poudre district. This will enlarge the canal from a capacity of 500 to 750 cubic feet per second and the estimated cost is $11,436.

NORTH POUDRE PUMPING PLANT

This pumping plant, constructed on the banks of the Poudre Valley Canal, will consist of two 75 cubic second-feet capacity vertical synchronous motor driven single stage pumps, operating against an effective head of 187 feet.

The estimated cost is $200,000.

NORTH POUDRE FEEDER CANAL

This canal of 150 cubic second-feet capacity extends from the pressure outlets of the pumping plant to the North Poudre Canal, a distance of 9.98 miles.

The estimated cost is $128,889.

ARKINS RESERVOIR

This reservoir is located on Buckhorn Creek, a tributary of the Big Thompson, in Tps. 5 and 6 N. R. 70 W., sixth principal meridian, and about 8 miles northwest of Loveland, Colo. The object of this reservoir is to provide storage for Colorado River waters brought over in the wintertime and to be used to supply supplemental water on the lower South Platte in water districts 1, 2, and 64. It will also serve in connection with the use of the 16,000 acre-feet of floodwater now available on the Big Thompson.

The bringing of more of the supplemental water over in the wintertime aids materially in the production of a maximum amount of power out of the waters of the Big Thompson River. For that reason the entire cost of the inlet to Arkins Reservoir and one-half the cost of the reservoir itself is assessed against power and paid for out of power revenues from plant no. 1.

The capacity of Arkins Reservoir is 50,000 acre-feet with a high water line at 5,275 feet elevation and floods 929 acres of land.

The dam site occupies a notch cut through the Dakota sandstone ridge by Buckhorn Creek.

The main dam is an earth- and rock-fill structure 155 feet in height with an outlet capacity of 650 cubic feet per second and a spillway of 10,000 cubic second feet capacity.

There is a saddle dam, in addition to the main dam of earth- and rock-fill construction, 50 feet maximum height, built across a saddle at the southern extremity of the reservoir.

The total estimated cost of the reservoir and dam is $1,740,737.

The estimated cost of the Arkins Reservoir inlet is $351,488.

This inlet diverts from the Big Thompson River just below the dam of the Handy Canal and follows around the north side of the river a distance of 2.33 miles to Arkins Reservoir.

ROCKY MOUNTAIN NATIONAL PARK

Every effort has been made in the survey and design of this project to not disturb the natural beauties of the Rocky Mountain National Park and its surrounding areas. The Continental Divide tunnel was lengthened 1.6 miles in order that its extremities should fall outside the boundaries of the park. The conduit leading from the east portal of the tunnel to power plant no. 1 is to be buried and the surface landscaped through the area authorized by Congress to be added to the park. The waste from the east portal of the tunnel placed in this area is to be terraced and planted with evergreen trees. The waste from the west portal is to be used to fill up some low areas and render the area suitable for the building of summer homes.

The approach to the Western Gateway of the Rocky Mountain National Park will be along the shores of Shadow Mountain Lake with

its fluctuation of only 1 foot instead of the swampy area that now breeds mosquitoes and exposes mud flats in low water.

The bill authorizing the creation of the Rocky Mountain National Park reserved the right for the Bureau of Reclamation to survey and construct an irrigation project within the boundaries of the park.

OPERATION OF THE SYSTEM

IRRIGATION PROJECT OPERATIONS

The system is planned and it is anticipated that it will be operated in a manner to have the water available in Carter Lake, Horsetooth and Arkins Reservoirs available by July 1, to the full capacity of those reservoirs, 256,000 acre-feet. The usual demand for supplemental water begins July 1 to 15 and extends to September 15 to 30. The outlets of the reservoirs are planned to deliver the water from the reservoirs in 60 to 75 days, including the water that must pass through them for direct delivery that may be in the way of being transferred from the Colorado River Basin to the eastern slope during the period of irrigation application. The balance of the 310,000 acre-feet, or 54,000 acre-feet, will be available for direct irrigation use as brought over during the above period or to some extent may be required prior to July 1.

The run-off of the waters of the Colorado River here contemplated to be used will largely be secured from the melting snows during May, June, and early July and stored in the Granby Reservoir. During the fall of that year, winter and spring of the following year, the water will be transferred from the Granby Reservoir through the Continental Divide tunnel at a uniform rate and restored in the Carter Lake, Horsetooth, and Arkins Reservoirs. This will permit a flow that is well suited to the development of firm power through the five power plants that will eventually be constructed along the Big Thompson as shown on the map of the general layout.

Granby Reservoir will act as a hold-over reservoir to carry the water from years of excessive run-off to years of subnormal flow.

POWER PROJECT OPERATION

Water will be carried through the Continental Divide tunnel at a uniform flow for the generation of power at the several power plants, except that the quantity will be reduced during the summer season when some water from the Big Thompson is available for power purposes in power plants nos. 2, 3, 4, and 4–A. At this period there will be little or no demand for power for pumping at the Granby pumping plant, which will permit the cutting down of the quantity of water to take care of the commercial power load.

It is planned to construct the Granby pumping plant and the Granby pump canal 150 percent of the capacity of the Continental Divide tunnel. This will permit the operation of the pumping plant at full capacity with off-peak power, and reduce the amount of pumping with firm power. The varying discharge of the pump ditch during the 24-hour period will be equalized by the Shadow Mountain and Grand Lakes, so that a uniform discharge will be maintained through the Continental Divide tunnel. The range in height of water surface in Shadow Mountain and Grand Lake to equalize this

flow will not exceed two-tenths of a foot, and will be greatest in the winter and early spring months.

There is an average of 16,000 acre-feet of surplus water on the Big Thompson available for storage in the system mainly in May and June. In order to take this water into the reservoirs it will be necessary to reserve capacity in the three reservoirs on the eastern slope until toward the latter part of June. The snowfall, the main source of this water supply, will be known well in advance so that operations of the several parts of the system, including the production of power at the several power plants, can be adjusted to take care of this water and hold back an equal amount in Granby Reservoir.

TENTATIVE PROJECT FINANCIAL SET-UPS

This proposed development consists of two projects: first, the irrigation project, and second, the power project.

It is planned that those features of the development that are used mainly for irrigation are grouped under the irrigation project set-up, while those used entirely, or are made of a greater capacity because of power development, are grouped in whole or in part in the power project set-up.

IRRIGATION PROJECT

The following major features with their appurtenant structures are given with the estimated field costs including 10 percent for engineering and 15 percent for contingencies. The full capacity of Arkins Reservoir is necessary to develop a larger portion of firm power than would otherwise be possible without it. At the same time, a reservoir of half its capacity or additional capacity in Horsetooth or Carter Lake Reservoirs would be necessary to provide capacity to deliver the irrigation water as needed. It is, therefore, deemed equitable to divide the cost of this reservoir equally between the irrigation and power projects.

The Green Mountain Reservoir, with a capacity of 152,000 acre-feet, is larger than is necessary to furnish replacement for a like amount of water diverted by the project above Granby Dam at a time when it would be required for irrigation, present and future, and to furnish the Shoshone power plant 1,250 second-feet or such lesser amount that they would be entitled to receive if the proposed project was not operating. From studies made, it appears that 50,000 acre-feet will be sufficient to replace all the water that the proposed project will take at a time when required for use lower down in the stream within the State. Therefore 52,000 acre-feet of the Green Mountain Reservoir capacity is allocated for replacement (including evaporation losses) and charged to the irrigation project. The balance of the capacity or 100,000 acre-feet is allocated to the power project and is to be paid for out of power revenues.

The following is a summary of the irrigation project costs:

Estimated cost chargeable to irrigation feature

Willow Creek feeder canal	$733,203
Granby Reservoir	2,813,703
Granby pumping plant	1,250,000
Granby pump canal	417,553
North Fork diversion dam	483,928
Continental Divide tunnel	7,271,371

Estimated cost chargeable to irrigation feature—Continued

Carter Lake supply canal		$710,629
Horsetooth supply canal		1,208,391
St. Vrain feeder canal		368,951
Big Thompson feeder canal		155,246
Poudre feeder canal		632,843
Poudre Valley feeder canal		11,456
North Poudre feeder canal		128,889
North Poudre pumping plant		200,000
Horsetooth Reservoir		3,625,021
Arkins Reservoir		1,839,323
Carter Lake Reservoir		1,925,253
Green Mountain Reservoir (62,000 acre-feet replacement) (100,000 acre-feet for power)		3,776,032
Improvement of Colorado River above Kremmling to maintain fishing and to adjust the present irrigation system to the altered conditions		300,000
		27,871,772
Less the following items tentatively chargeable to power:		
One-half cost of Arkins Reservoir	$929,661	
Portion of cost of Green Mountain Reservoir for 100,000 acre-feet	2,276,032	
		3,205,693
Cost of irrigation features		24,666,079
Say		24,800,000

REPAYMENT

Twenty-four million eight hundred thousand dollars upon 310,000 acre-feet at $80 per acre-foot.

Two dollars per acre-foot on 40-year repayment basis.

In the above repayment is predicated upon the contracts to be made upon a basis of 310,000 acre-feet. Beside the 320,000 acre-feet available from the Colorado River drainage there is an average of 16,000 acre-feet available for storage on the Big Thompson, making 336,000 acre-feet in all, leaving 26,000 acre-feet for losses on the eastern slope and for the uncertain, heretofore mentioned in operations on the western slope.

The power costs are shown under the heading "Power and pumping system."

The construction of power plant no. 1 as shown in the power set-up is a necessary development in order to secure power for pumping purposes at the Granby pumping plant.

POWER AND PUMPING SYSTEMS

The ultimate power and pumping system is proposed to consist of the major pumping plant at Granby, power plant no. 1 near the town of Estes Park, power plant no. 2 near Drake post office, power plant no. 3 at Cedar Cove, power plants nos. 4 and 4–A near the mouth of the Big Thompson Canyon, and power plant no. 5 at the Green Mountain Reservoir. If conditions justify, there may also be a pumping plant on the Poudre River near the point where the proposed Poudre supply canal crosses the river. Power plant no. 5, Granby pumping plant, and power plant no. 1, would be interconnected by a single circuit 69,000-volt transmission line. Power plants nos. 1 to 4–A, inclusive, would be interconnected by two 115,000-volt transmission lines and these same lines would extend to one or more load centers where the power could be disposed of commercially.

The buildings for the power and pumping plants would be of reinforced concrete construction of suitable size to house the machinery and provide space for such facilities as would be required for efficient and economical operation. For scenic reasons, special care would be taken in the architectural design of the buildings to make them blend in with the beauties of the surrounding territory so as to be both as inconspicuous as possible and also as artistic as feasible without undue expenditure. An artist's sketch of one of these buildings is included with the report.

Following is a tabulation covering the essential data for each of the power and pumping plants:

Power plants

Plant designation	Effective head in feet	Turbine capacity in cubic feet per second	Power available in horsepower	Number of units	Size of each unit in horsepower	Installed power in kilowatts
No. 1	704	550	38,800	2	26,000	83,000
No. 2	1,103	550	68,800	3	34,000	50,000
No. 3	858	350	18,000	2	9,000	15,000
No. 4	550	400	22,000	1	22,000	16,000
No. 4–A	384	250	9,500	1	9,500	7,000
No. 5	225	1,500	33,500	2	17,000	24,000
Total installed power in kilowatts						142,500

Pumping plants

Plant designation	Head in feet	Pump capacity in cubic feet per second	Capacity of each pump in cubic feet per second	Number of pumps	Rating of each motor in horsepower	Power required in kilowatts
Granby	130	870	290	3	5,500	15,000
Poudre	187	100	75	2	2,000	3,000
Total installed pumping plants, kilowatts						18,000

POWER PLANT NO. 1

Power plant no. 1 will be located on the south bank of the Big Thompson River about one-half mile east of the village of Estes Park and will contain two 15,000 kilovolt-ampere generating units with auxiliaries. Each unit will consist of a vertical-shaft, single-runner, spiral casing type hydraulic turbine operating under an effective head of approximately 705 feet and direct connected to a 15,000 kilovolt-ampere water-wheel type generator with direct connected exciter and pilot exciter. Water would be supplied to each turbine through a steel penstock approximately 5,000 feet long, with synchronous bypasses provided so that the flow through the penstock can be discharged either through the turbines or the bypasses into the Big Thompson River. The bypasses will be mechanically connected to the turbine gate operating mechanism so that rapid governing of the units under varying load conditions can be effected without creating excessive water hammer. Trashracks with shut-off gates for

each penstock will be provided in the forebay structure. The headgates will be controlled from the power plant. A spillway will be provided to care for the flow when the headgates are closed and the penstocks inoperative. The plant will be equipped with all necessary auxiliaries, including a traveling crane for handling the large pieces of equipment. A small machine shop will be provided for making minor repairs. An outdoor type substation with self-cooled transformers will be provided for stepping the voltage up to 69,000 for transmission to the Granby pumping plant, and to 115,000 volts for transmission to commercial markets. The substation structure will be of the conventional structural steel type with high voltage oil circuit breakers, lightning arresters and necessary auxiliaries. The control of the oil circuit breakers will be from the main power plant switchboard. Operators' quarters, a warehouse, and a large machine shop for general project repairs will be provided in the vicinity of the power plant.

POWER PLANT NO. 2

Power plant no. 2 will be located about one-half mile northwest of Drake, on the south bank of the north fork of the Thompson River just above its junction with the Big Thompson. The plant will contain two 25,000-kilovolt-ampere generating units of the horizontal shaft type. The net head will be approximately 1,195 feet. Each unit will consist of a double overhung impulse wheel hydraulic turbine with the generator mounted in the center, between the two runners. A direct connected exciter and pilot exciter will be mounted at one end. Water will be delivered to the turbines through two steel penstocks about 4,150 feet long. Each penstock will be provided with two branches to the turbine nozzles and each branch will be provided with a synchronous bypass arranged so that the flow through the penstock can be discharged through either the nozzles of the bypasses to the river. The bypasses will be mechanically connected to the turbine nozzle operating mechanism so that rapid governing can be effected under varying load conditions without excessive water hammer. The head-gate structure will be provided with trash racks and sliding gates at the end of the penstocks and a spillway to care for the flow when the gates are closed. The plant will be complete with all necessary auxiliaries for station service requirements and with a crane for handling the machinery. A structural steel outdoor type substation will be provided with self-cooled transformers for stepping the voltage to 115,000 volts, and with outdoor type oil circuit breakers, lightning arresters, and other necessary auxiliaries. The operation of the substation will be handled from the main switchboard of the power plant. Quarters for the operators will be provided adjacent to the power plant.

POWER PLANT NO. 3

Power plant no. 3 will be located about one-half mile east of the Loveland power-diversion dam on the north bank of the Big Thompson River. The plant will contain two 6,500 kilovolt-ampere generating units, each consisting of a vertical hydraulic turbine direct connected to a generator with main exciter and pilot exciter. The effective head will be approximately 328 feet. Water from the head-gate structure will be delivered to the turbines through steel

pen stocks about 650 feet long. Each pen stock will be provided with a synchronous bypass arranged so that the flow through the pen stock can be discharged either through the turbines or the bypasses to the Big Thompson River, and to allow rapid governing of the units without excessive water-hammer. The head-gate structure will be provided with trash racks and sliding gates at the head of the pen stocks and a spillway to care for the flow when the gates are closed. The plant will be complete with all necessary auxiliaries for station-service operation, and with a crane for handling equipment. The plant will be provided with a structural-steel outdoor-type substation similar to that proposed for plant no. 2.

POWER PLANTS NOS. 4 AND 4-A

Power plant no. 4 will be located about 2 miles east of Cedar Cove on the south bank of the Big Thompson River, while power plant no. 4–A will be located a short distance upstream from plant no. 4, and at an elevation about 175 feet above the river. The capacity of plant no. 4 will be 16,000 kilovolt-amperes and of plant no 4–A, 7,000 kilovolt-amperes. One unit only will be provided at each plant and will consist of a vertical-shaft, single-runner, spiral-casing type turbine direct connected to a vertical water wheel generator with direct connected main and pilot exciters. Plant no. 4 will have an effective head of about 550 feet, and plant no. 4–A, 380 feet. Plant no. 4 will receive its water through a single steel penstock about 1,960 feet long, and plant no. 4–A, through a similar pipe about 1,400 feet long. Each plant will be provided with synchronous bypasses similar to those in plants nos. 1 and 3. Plant no. 4 will discharge directly into the Big Thompson River. Plant no. 4–A will be siphoned under the river through a pressure tunnel to the proposed Poudre supply canal, but will have provisions so that if so desired, the water may be discharged directly into the Big Thompson River. The headgate structure will be provided with trashracks, sliding gates, and spillways similar to those in plants nos. 1, 2, and 3. A single outdoor structural steel type switchyard will be provided for the two plants. The equipment in this substation will be similar to that for plants nos. 1, 2, and 3. Plant no. 4–A will be remotely controlled from plant no. 4, so that the two plants can be operated with one set of operators. The plant will be complete with auxiliaries and cranes similar to that in other plants. Quarters for the operators will be provided in the vicinity of the plants.

POWER PLANT NO. 5

Power plant no. 5 will be located about 12½ miles southeast of Kremmling, on the east bank of the Blue River, immediately downstream from the dam forming the proposed Green Mountain Reservoir. The plant will contain two 13,000 kilovolt-ampere generating units of the vertical hydraulic-turbine driven type, with direct connected generator with main and pilot exciters. The plant will have a varying head depending upon reservoir water surface, but it is expected that the average head will be about 225 feet. The trashrack and intake structure will be located immediately upstream from the dam and a single steel penstock installed in the tunnel will conduct the water to the power plant. Each turbine will be provided with a

pressure regulator or relief valve to limit the water hammer under sudden change of load conditions. The plant will be complete with necessary auxiliaries for station service, a small machine shop for minor repairs, and a crane for handling equipment. An outdoor structural steel substation will be provided complete with equipment for stepping the voltage up to 69,000 volts for transmission and with oil circuit breakers and other necessary auxiliaries for the control and protection of the lines and equipment. The oil circuit breakers will be controlled from the main switchboard of the power plant. Quarters for operators will be constructed in the vicinity of the power plant.

GRANBY PUMPING PLANT

The Granby pumping plant will be located approximately 6 miles south of the village of Grand Lake on the north shore of the proposed Granby Reservoir. The plant will contain three motor-driven vertical-shaft pumping units having a total capacity of 900 second-feet at full reservoir, and 550 second-feet at low water. The total capacity at the normal water surface will be approximately 870 second-feet. The motors will be of the synchronous type and arranged for semi-magnetic operation. That is, the operator will be required only to close the main switch to the unit in order to place it in operation, and to open the same switch to discontinue operation. The motors will be equipped with direct connected exciters. The water from the Granby Reservoir will be delivered to the pumps through tunnels about 155 feet long. A channel in the reservoir will convey the water to the mouth of the intake tunnels in extreme low water. Water from each pump will be discharged through about 175 feet of tunnel, and 165 feet of steel pipe to the canal at elevation approximately 8,281. This canal, which will be approximately 4 miles in length, will discharge into the proposed Shadow Mountain Lake. The center line of each pump and propeller will be at approximately elevation 8,145, with the base of the motor driving the pump 135 feet above, or at elevation 8,280. Vertical shafts in the rock between the underground pump room and the motor room on the surface will accommodate the shafts connecting the pumps to the motors. Each pump will have a capacity of 290 second-feet when operating under a total dynamic head of 130 feet and will be driven by a 6,500-horsepower synchronous motor.

The entrances to the intake tunnels will be provided with trashrack and stop-log structures, and sliding gates will be installed at the intake and discharge of each pump. The intake gates will be located in the gallery adjoining the pump room and will be hydraulically operated. The discharge gates will be located at the head of the canal and will be of a type which will close automatically in the event power service is interrupted, so as to prevent water in the canal from running back down through the pump.

The pumping plant will be complete with auxiliary pumping units for unwatering the intake and discharge tunnels and the drainage sump. It will also be complete with all other necessary station auxiliaries, including a crane for handling the equipment. A small machine shop will be provided for making minor repairs. Quarters for the operators will be provided in the vicinity of the plant.

Power will be delivered to the plant from a 69,000-volt transmission line, through an outdoor structural steel type substation containing self-cooled transformers, together with all necessary protective appa-

ratus and auxiliaries. The operation of the substation will be handled from the main switchboard of the pumping plant.

POUDRE PUMPING PLANT

The Poudre pumping plant will be located on the Poudre Valley Canal at a point about 3 miles below the crossing of the proposed Poudre supply canal. It is proposed to have a capacity of 150 second-feet, composed of two 75-second-foot vertical synchronous-motor-driven single-stage pumps, operating against an effective head of 187 feet. The plant will be complete with all necessary auxiliaries, including a crane for handling the equipment. An outdoor substation will be provided for stepping the voltage down from transmission voltage to motor voltage. Due to the relatively short periods of operation, it is not probable that it will be necessary to construct operator's quarters at this plant.

TRANSMISSION SYSTEM

The transmission system will consist of a single 69,000-volt circuit connecting power plant no. 5 with the Granby pumping plant and power plant no. 1. Power plants nos. 1 to 4–A, inclusive, will be connected by two 115,000-volt lines and two 115,000-volt lines will continue to market. For the purpose of this report only, and to include a sufficient amount in the cost estimates for any probable transmission set-up, this market has been assumed as the valmont steam plant of the Public Service Co. of Colorado. Power plant no. 4 will be connected with the Poudre pumping plant by one 34,500-volt transmission line. The number of lines and mileage involved in each are as shown in the following tabulation:

From—	To—	Number of lines	Number of miles	Voltage
Power plant no. 5	Ka Rose	1	36	69,000
Granby pumping plant	Grand Lake	1	16	69,000
Do	Power plant no. 1	1	36	69,000
Power plant no. 1	Power plant no. 2	2	12	115,000
Power plant no. 2	Power plant no. 3	2	3	115,000
Power plant no. 3	Power plant no. 4	2	4	115,000
Power plant no. 4	Valmont	2	27	115,000
Do	Poudre pumping plant	1	18	34,500

The line to the Poudre pumping plant would be a wood-pole line with pin-type insulators. All other lines would be of the wood-pole, H-frame type, with suspension insulators, and combining all of the most modern features for continuity of service, ease of maintenance, and long life. The line from power plant no. 1 to the Granby pumping plant will probably require special construction to give added strength in the mountainous region near the Continental Divide.

In order to provide power for construction, it is proposed that one of the first features of the project would be to build one of the permanent 115,000-volt circuits from the Valmont plant to plant no. 1, the permanent 69,000-volt lines from plant no. 1 to Granby pumping plant and from Ka Rose to the Green Mountain dam site, and an extension from the Granby Pumping Plant to the west portal of the pro-

posed tunnel. Initially this entire line would be operated at 69,000 volts, and under such operation would be adequate for all contemplated construction activities. In connection with supplying construction power it would also be necessary to install a substation at the Valmont steam plant to step voltage up to 69,000 volts for transmission. Preliminary studies indicate that it would be advisable to make this substation of approximately 5,000 kilovolt-ampere capacity.

The estimated cost of installing the facilities to provide construction power are as indicated in the following tabulation:

From—	To—	Miles	Cost	
			Per mile	Total
Valmont	Power plant no. 2	34	$6,150	$209,100
Power plant no. 2	Power plant no. 1	12	4,100	49,200
Power plant no. 1	Granby pumping plant	16	3,500	56,000
Granby pumping plant	Grand Lake	35	3,500	122,500
Ka Rose	Power plant no. 3	36	3,500	126,000
Total transmission lines		133		560,800
Substation at Valmont				861,300
Total to supply power for construction				422,250

The transmission system as provided to furnish construction power would be adequate for transmission of power to markets from power plant no. 1 or power plant no. 3 if either were built individually, but the additional complete system would probably be constructed when two or more plants are constructed. The additional costs of the lines involved in this construction are shown in the following tabulation:

From—	To—	Miles	Cost	
			Per mile	Total
Power plant no. 1	Power plant no. 2	12	$4,100	$49,200
Power plant no. 2	Valmont	34	6,735	229,000
Power plant no. 4	Poudre pumping plant	18	1,800	32,400
Total additional cost of permanent transmission system		64		311,100

In addition to the transmission lines required for the disposal of power, it may be necessary that the Government also construct a substation at the point of power disposal. As a market survey has not been conducted to establish the points at which this power can be disposed of, or the quantities involved at each point of disposal, it is assumed for the purpose of this report that the substations will average in cost $10 per kilowatt of capacity. Assuming that provision is made to dispose of a peak capacity of 140,000 kilowatts, this will involve an additional expenditure of $1,400,000.

POWER OUTPUT

Water supply studies indicate that with power plant no. 1 only constructed, there is available, above all requirements for pumping purposes, a constant power output at 100 percent load factor of 120,000,000 kilowatt-hours per year. Since the pumping plant capacity proposed is sufficient to allow pumping to be done in 16 hours of each day it will be possible to handle peak commercial power requirements without undue interference. With this in mind, it has been assumed for the purpose of this report that a market can be found which has a load factor such that 60 percent of this power or 72,000,000 kilowatt-hours per year can be absorbed as firm energy. The balance of this energy, or 48,000,000 kilowatt-hours per year, plus about 40,000,000 kilowatt-hours additional, which is available during various parts of the year, is classed as secondary energy.

Since the Valmont steam plant of the Public Service Co. of Colorado has an installed capacity of 75,000 kilowatts, it appears that the 88,000,000 kilowatt-hours of secondary energy could be absorbed as a fuel saving measure if the price does not exceed fuel costs. Allowing 10 percent for line losses, this is equivalent to an average load of about 9,000 kilowatts.

FINANCIAL OPERATION OF POWER SYSTEM

It is contemplated that the initial power development would consist of the construction of power plant no. 1 only, together with such transmission lines and substations as are required to supply power to the Granby pumping plant and to commercial markets. The estimated construction cost of the strictly power features, as well as items which it is expected that power revenues will repay, is given below.

It is assumed that 5 mills per kilowatt-hour can be secured for firm energy and 1.8 mills per kilowatt-hour for secondary energy with delivery at the market. In each case 10 percent loss is allowed for transmission. The following gives the financial set-up for power plant no. 1, operation costs and returns.

While for the purpose of this report the allocation of construction cost to irrigation and power has been made on the basis set out below, it is understood that this allocation is not thereby fixed, and the same may be changed as further information may warrant until such time as the contract for repayment of the cost of the irrigation features has taken final form.

Power plant no. 1 construction costs

Power plant no. 1 near Estes Park	$1,778,000
Conduit from east portal continental divide tunnel to power plant no. 1	1,101,000
Transmission lines connecting power plant no. 1 with Granby pumping plant—with Valmont and line to North Poudre pumping plant	440,000
Commercial substation (30,000 kilowatts)	300,000
Headquarters at power plant no. 1 for operation of power system	100,000
Subtotal	3,719,000
Interest during construction, 3 percent	112,000
Total repayable in 50 years with interest	3,831,000
One-half cost of Arkins Reservoir	929,661
Portion of cost Green Mountain Reservoir, for 100,000 acre-feet allocated to power	2,276,032
Payable on 40-year basis without interest	3,205,693
Total cost power plant no. 1 including other items that are required to be accomplished with the initial development	7,036,698

Annual revenues from power plant no. 1

From sale of 65,000,000 kilowatt-hours firm power, at $0.005	$325,000
From sale of 79,000,000 kilowatt-hours secondary power, at $0.0018	142,000
From rental of water for power development to privately owned plants	20,000
Gross annual income	487,000

Annual operation and maintenance plus retirement of principal

Brought forward	$487,000
3.887 percent, on $3,831,000, interest and retirement of investment on basis of 50 years	148,000
Repayment of $3,265,653 on basis of 40 years without interest	80,000
Operation and maintenance of power plant	36,000
Operation and maintenance Granby pumping plant	27,000
Operation and maintenance of transmission lines	13,800
Operation and maintenance conduit, tunnel, and canals	13,000
Depreciation, 1.5 percent, on $3,831,000	57,000
General expense	18,200
Total annual costs	395,000
Annual surplus during 40 years repayment period of the non-interest-bearing obligation	92,000

FULL POWER DEVELOPMENT

The results of this study indicate that the initial installation proposed is sufficient from a financial standpoint to return all necessary costs of operation and repayments.

There are five additional plants that can be developed in the future in a manner that will keep pace with the power requirements of the section that may be served and not have a large unearning investment tied up for some years.

The following is an estimate of the cost of the additional power plants that may be constructed in the future, but are not a part of the initial development.

Power plant no. 5	$1,190,000
Green Mountain-Ka Rose transmission line	130,000
Operators' quarters	60,000
Substation (20,000 kilowatts)	200,000
Subtotal	1,580,000
Interest during construction, 3 percent	47,400
	1,627,400

The above plant, together with plant no. 1, will produce: 113,000,000 kilowatt-hours firm power annually; 92,000,000 kilowatt-hours secondary power annually.

The following are the construction costs of developing power plants nos. 2, 3, 4, and 4–A with appurtenant structures:

Power plant no. 2	$2,325,000
Power plant no. 3	665,000
Power plant no. 4	790,000
Power plant no. 4–A	420,000
Power canal no. 2	2,444,000
Power canal no. 3	493,000
Power canal no. 3–A	113,000
Power canal no. 4	1,194,000
Operators' quarters	150,000

Substations (90,000 kilowatt hours)	$900,000
Additional transmission lines	311,000
Subtotal	9,775,000
Interest during construction, 3 percent	293,250
Total repayable in 50 years with interest	10,068,250
Arkins Canal feeder, payable in 40 years without interest	351,000
Total power plants nos. 2, 3, 4, and 4–A	10,419,250
Total power plant no. 5	1,627,400
Total second-stage development	12,046,650
Primary development plant no. 1	7,036,593
Cost of full power development	19,083,243

The total salable output of the full development is estimated as follows, exclusive of that used for pumping:

	Kilowatt-hours
Firm power, annually	360,000,000
Secondary power, annually	[1] 200,000,000

[1] Out of an available production of 387,000,000 kilowatt-hours secondary power.

CONCLUSIONS

(1) There is a large area (615,000 acres) of irrigated land in northeastern Colorado, the major portion of which has an inadequate water supply.

(2) The feasible storage possibilities with the available water supply in the drainage area has been exhausted.

(3) There is at least an available water supply of 310,000 acre-feet on the upper drainage area of the Colorado River that can be diverted to supplement the present water supply on the eastern slope.

(4) That the diversion of this quantity of water from the Colorado River watershed will not interfere with or encroach upon the present or future irrigation along the Colorado River and tributaries within the State, with the protection provided in the Green Mountain Reservoir.

(5) That the plan for the project here laid out appears entirely feasible from a construction point of view.

(6) That the cost of construction estimated at $2 per acre-foot per annum over the repayment period of 40 years is less than storage water is now commanding and that it will increase the crop values five or more times this annual cost, showing its economic worth.

(7) That the power developments that may be made in the six power plants will produce a large quantity of cheap hydroelectric power that will materially benefit Colorado.

(8) That the revenues from the commercial power generated at power plant no. 1 will pay for the power features as set up under the initial power development, in addition to the power required for pumping at Granby pumping plant, and in lieu of the irrigation features used in power development, the operation of the system to a point where the water leaves the tailrace of the lower power plants can be taken care of by the power development.

(9) That the cost of the irrigation feature of the project is within the ability of the water users to pay.

EXHIBIT B

I.

The name of the claimant is the United States of America.

II.

The Post Office address of the United States of America is 209 Post Office Building, Denver, Colorado.

III.

The date of initiation of the original appropriation of the hereinafter described water system is September 14, 1933.

IV and V.

The said project consists of several units which are designed to make one whole complete system for the diversion, storage, transportation, accumulation, regulation, conservation and application of water to a beneficial use. The system consists generally of the following:

1. The Green Mountain Dam and Reservoir is located across the bed of Blue River in Summit County, which reservoir and its power plant are a component and inter-related part of said project. The reservoir stores water from the Blue River and its tributaries. Elliott Creek, which is tributary

to the Blue River below the dam, is diverted by a short canal into Green Mountain Reservoir as shown on Exhibit C, Sheet 1 which is attached hereto and made a part hereof. The Green Mountain Reservoir and the said hydro-electric power plant are an integral part of the Colorado-Big Thompson Project, for irrigation and power, for regulating the flow and stabilizing the Colorado River, for compensating and for replacement of water for appropriators below, and will be so operated. These structures have been completed, and the water thereby stored has been and now is being applied to the said beneficial uses.

2. Colorado River Improvements for the preservation of present and future water rights on the Colorado River between Granby Dam and the confluence of the Blue and Colorado Rivers.

3. The Granby Reservoir, in Grand County, Colorado, created by a dam across the Colorado River for accumulation of water from the Colorado River and its tributaries, either direct or diverted flows.

4. Western Slope Feeder Canals consisting of:

(a) Willow Creek Canal (Sheet 3, Exhibit C) in Grand County, Colorado, of 250 cubic feet per second capacity, diverting water of Willow Creek near Dexter, and intercepted streams, and carrying the same into said Granby Reservoir.

(b) Meadow and Strawberry Creeks and Walden Hollow Diversion Canal in Grand County, to divert waters from said creeks and depressions and intercepted streams on its course and carrying the same into Granby Reservoir.

(c) Williams Diversion Canal (Sheet 2, 3, Exhibit C) in Grand County, Colorado, to divert waters from Middle Fork Creek, Steelman Creek, Bobtail Creek and McQueary Creek, and their tributaries, all of which are tributaries of the Williams River to St. Louis Creek, a tributary of the Fraser River, also the waters from Keyser and Hull Creeks, tributaries of the Williams River, to Crooked Creek, a tributary of the Fraser River.

(d) Ranch Creek Reservoir, Dam and Canal (Sheet 3, Exhibit C) in Grand County, Colorado, to intercept, store and divert water from 4(c) above, and from the Fraser River and its other tributaries, Pole, Crooked, and St. Louis, and other named and unnamed creeks, tributaries of the Fraser River at or up stream from this point, or water from tributaries to the Fraser River below Ranch Creek Reservoir near Tabernash and above the diversion point of the Fraser River Canal or water intercepted by the canal, in delivering said waters to Granby Reservoir.

5. Granby Pumping Plant and Pump Canal (Sheet 3, Exhibit C) in Grand County, Colorado, the pumping plant being located on the north shore of Granby Reservoir, near where Soda Creek discharges into said reservoir, which lifts stored and diverted water from Granby Reservoir to the approximate elevation of Grand Lake and the Pump Canal, which transports this pumped water from the discharge of the pumping plant into Shadow Mountain Lake.

6. Shadow Mountain Dam and Lake (Sheet 4, Exhibit C), located on the Colorado River about one-half mile below the confluence of the Grand Lake Outlet and the North Fork of the Colorado River, creating Shadow Mountain Lake which together with Grand Lake covers an area of 1,852 acres at the same elevation as Grand Lake, and when filled acts as a conduit and diversion and regulatory works across which will flow the natural inflows and the water delivered thereto by the pumping plant and pump canal from Granby Reservoir.

7. The Alva B. Adams Tunnel (also known as the Continental Divide Tunnel and the Grand Lake-Big Thompson Ditch (Tunnel)), (Sheet 4, Exhibit C) the inlet portal of which is at Grand Lake, an integral part of the Colorado River in Grand County, Colorado, is 13.1 miles long and has its outlet portal in the Wind River, a tributary of the Big Thompson River, in Larimer County, Colorado. This tunnel will convey natural inflows of Grand Lake and Shadow Mountain Lake, and also waters which have been collected and stored in Granby Reservoir, pumped and transported to Shadow Mountain Lake and Grand Lake, diverted and transported across Shadow Mountain Lake and Grand Lake to the inlet of the Alva B. Adams Tunnel, thence through the tunnel to the Eastern slope.

8. The Estes Park Aqueduct and Power System, formerly known as Power Conduit No. 1 (Sheet 4, Exhibit C), extends from the east or outlet portal of the Alva B. Adams Tunnel to the Big Thompson River about one-half mile east or downstream from Estes Park Village, all works being in Larimer County, Colorado. This aqueduct transports western slope water from said tunnel portal to said river, generating hydro-electric power at the Marys Lake Power Plant (No. 1A) and the Estes Power Plant (No. 1) enroute. The separate structures along this route are named from west to east, or in the direction of water flow, as follows:

East Portal Reservoir
Aspen Creek Siphon
Rams Horn Tunnel
Marys Lake Penstock
Marys Lake Power Plant
Marys Lake Dikes
Prospect Mountain Conduit
Prospect Mountain Tunnel
Estes Penstock
Estes Power Plant
Olympus Dam

9. The Estes-Foothills Aqueduct and Power System (Sheet 5, Exhibit C), formerly known as Power Canals Nos. 2, 3 and 4, and the Carter Lake Supply Canal, extends east from Olympus Dam, located about one mile and one-half east or downstream from Estes Park Village to Carter Lake Reservoir Inlet and includes the Big Thompson Power Plant located on the Big Thompson River near the canyon entrance, all works being located in Larimer County, Colorado. This aqueduct transports western slope water and water from the Big Thompson River and its tributaries, crossed or intercepted enroute, to the inlet of Carter Lake Reservoir, generating hydro-electric power by the Pole Hill and Flatiron Power Plants enroute, and generating additional power by the Big Thompson Power Plant (Sheet 6, Exhibit C) on the south side of the Big Thompson River near the east entrance of Loveland Canyon, at which location water is subsequently released into the Big Thompson River. The separate structures along the route are named from west to east, or in the direction of water flow, as follows:

Olympus Siphon
Olympus Tunnel
Pole Hill Tunnel
Pole Hill Canal
Pole Hill Penstock
Pole Hill Power Plant
Rattlesnake Tunnel
Rattlesnake Dam
Bald Mountain Tunnel

Flatiron Penstock

Flatiron Power Plant

Flatiron Dam

Big Thompson Wasteway,

Penstock and Power Plant

10. The Foothills Reservoirs and Feeder Canals (Sheets 5, 6, 7, Exhibit C) located in Larimer County, Colorado, include Carter Lake Reservoir, Dam and two dikes, and pressure tunnel, Flatiron Dam and Reservoir, Horsetooth Feeder Canal and Horsetooth Reservoir with its dike and four dams, which structures will store and distribute project waters to the supply canals for delivery to the Northern Colorado Water Conservancy District.

11. The Irrigation Supply Canals (Sheet 7, Exhibit C), located in Larimer, Boulder, and Weld Counties, will consist of the final delivery system to the Cache la Poudre, Little and Big Thompson Rivers, St. Vrain and Boulder Creek, and South Platte River, as specified by contract with the Northern Colorado Water Conservancy District, and will include the Poudre Supply Canal, the North Poudre Supply System, the St. Vrain Supply Canal, the Boulder Creek Supply Canal, and the South Platte Supply Canal.

12. The necessary transmission lines and substations to advantageously distribute the generated hydro-electric power to the consumers.

The aforementioned works of the Colorado-Big Thompson Project are to be constructed:

(a) For supplying irrigation water to approximately 615,000 acres of land in Northeastern Colorado.

(b) For a domestic water supply for cities and towns within the area served.

(c) For the stabilization replacement and regulation of the water flow of, and for irrigation on, the Colorado River.

(d) For hydro-electric power development, recreational and industrial purposes on both sides of the Continental Divide.

The project will bring to the farms, industries and cities within the area to be served a necessary supply of water for domestic, irrigational, industrial, power and recreational uses by means chiefly of diversion on the

Colorado River and application to beneficial use by regulating, conserving and distributing said waters so that the same may be applied under canals, ditches, pipelines, feeder and inlet ditches to reservoirs having their headgates in the Big and Little Thompson Rivers, Cache la Poudre River, St. Vrain Creek, Boulder Creek, and South Platte River, and their tributaries.

The appropriations of water from the Colorado River (above Gore Canyon), the Big Thompson River, Cache la Poudre River, St. Vrain Creek, Boulder Creek and South Platte River, and all tributaries thereof for which claim is hereby made, shall include the spring, surface, waste percolating, return, drainage and developed waters now or hereafter arising and resulting from the water diverted from the Colorado River and its tributaries through the works of the Colorado-Big Thompson Project, and from the storage, application and use of all of said waters, together with the right to capture and recapture, use and reuse all of said water and the right to collect, store, convey, transport and carry said waters in any and all of said rivers, and in any and all creeks, arroyos, gulches, ravines, depressions and drainage channels wherein said waters may arise or accumulate. Said waters are to be applied under canals, ditches, pipelines, feeder and inlet ditches, or other aqueduct structures to reservoirs having their headgates in the Big Thompson, Cache la Poudre, St. Vrain, Boulder and South Platte Rivers, and their tributaries. Claim is also made for the right to divert Big Thompson River water at Olympus Dam for the purposes of power production through the Estes-Foothills Aqueduct and Power System and at Tunnel No. 1 of the Horsetooth Feeder Canal for use in the Big Thompson Power Plant, and for the added storage of access Big Thompson River water. The claim of appropriation made shall constitute one complete appropriation.

The Project of the claimant comprises the several aforenamed units (involving the several uses) all of which are inter-dependent and after construction thereof, in a gradual, continuing and progressing manner, are to be operated and maintained together, so as to constitute one entire water appropriation.

Construction was commenced by actual survey on September 14, 1933, upon said original survey of Granby Reservoir, as evidenced by Maps Nos. 15904 and 16101, filed with the State of Colorado, hereinafter referred to and by

amended and supplemental surveys thereof on August 1, 1935, hereinafter referred to as Maps Nos. 16510 (19 sheets), also filed with the State of Colorado. The estimated total cost of the Project is $144,581,000 as of October 15, 1948.

It is intended by said complete system to appropriate water for storage and for the uses herein named, by said reservoirs, tunnels and pumping plants, and also to direct diversion and use by means of said canals, dams, conduits, pumping plants, tunnels and reservoirs and other hydraulic structures in combination with the distributing canals from said rivers.

VI.

In the carriage of said water to the various uses for which it has been appropriated, and in the transportation thereof to and through the various power plants, reservoirs, aqueducts and canals to its ultimate points of diversion from the said rivers on the Western Slope, the said natural streams and aqueducts, are used as connecting conduits and along their courses as a part of the channels thereof, there are temporary storage basins, power plants, forebays and afterbays, all of which are essential parts of said transportation works and works used for applying said water for beneficial use. The use of said water through any one of said works is not in any way intended to be a relinquishment of control thereof through said expansions basins, pipe lines, tunnels, hydro-electric plants and incidental basins for retaining and regulating and stabilizing the flow thereof and control of said waters is retained whether the same is being run in said artificial works or is being run in the channels of natural streams until said water reaches the headgates of the irrigation ditches and reservoir inlets which divert the water from the Cache la Poudre River, Little and Big Thompson Rivers, St. Vrain Creek, Boulder Creek, South Platte River, and other tributaries of the South Platte River, and thereafter control is claimed of any water rights which are the result of importing into the South Platte watershed said water from said outside sources.

The said system of works is one continuous combination of works designed and intended for use in employing said water to all of the purposes for which said Project was initiated and is being constructed, all of which

in combination are required for the carrying out of said purposes and during the passage of water through all of which control is claimed and kept for the accomplishing of said beneficial uses for which said entire water system is intended to be put, in order to make the same one and complete feasible system for development of power, and for the application of water for domestic, irrigational, industrial, recreational, and other beneficial uses.

VII.

The character of uses of said water systems is as follows:

Irrigation, power, domestic, industrial and other purposes by means of collecting ditches and reservoirs and pumping plants and canals diverting said water to the Granby Reservoir, said water, together with intercepted water, being pumped into Shadow Mountain Lake and flowing thence by means of gravity from Shadow Mountain Lake together with water intercepted by it into Grand Lake, the maximum surface elevation of which is 8367.00 ft. being the same as that of Shadow Mountain Lake, and thence flowing said water out of Grand Lake into the Alva B. Adams Tunnel, 13.1 miles under the Continental Divide from the Colorado River watershed into the watershed of the South Platte River, and thence by the Big Thompson River and by tunnels, conduits and canals forming an aqueduct into reservoirs and canals on the Eastern Slope or South Platte watershed, and therefrom to deliver the same into the Little and Big Thompson Rivers, the Cache la Poudre River, the St. Vrain Creek, Boulder Creek, and the South Platte River for delivery therefrom to canals, pipelines and other works of users for domestic, irrigation, power and municipal purposes.

VIII.

There is also claimed and reserved by the claimants for domestic, irrigational, and industrial uses all of the increment, seepage and return flow water which may result from the construction of the project and the importation thereby from an extraneous source, to-wit: from the Colorado River watershed of a new and added supply of water to average 320,000 acre feet or more annually with normal expected shortages into the streams of the South Platte watershed from which the irrigable lands within said District derive their water supply; and the right is reserved on behalf of said District

to capture, recapture, use and reuse the said added supply so often and as it may appear at the stream intake headgates of aqueducts and reservoirs serving lands within said District.

The United States does not abandon or relinquish any of the increment or seepage or return flow water coming from the irrigation of lands or other uses supplied with water from or through the works constructed by the United States, but that the same is reserved and intended to be retained.

GENERAL PHYSICAL DESCRIPTION

Claimants' water system, known as the Colorado-Big Thompson Project, comprises an extensive system of diversion works, tunnels, canals, conduits, basins, pumping plants, hydro-electric plants, and other structures for impounding, diversion and use of water for said purposes, all initiated, constructed and under process of construction, or contemplated for the diversion, carriage and use of water by canals, tunnels, conduits, dams, power plants and basins for an entire, interconnected and inter-dependent water system.

The principal objectives of the project are to furnish supplemental irrigation water to the lands of the Northern Colorado Water Conservancy District and to produce hydro-electrical energy for the entire Rocky Mountain area and in so doing prevent any losses of presently enjoyed rights of the owners in the upper Colorado River Basin. The principal structures and their functions in the project are as follows:

1. Green Mountain Reservoir (Sheet 1, Exhibit C), located in Summit County, Colorado, is formed by a dam across the Blue River. The normal high water surface is elevation 7950.0 feet in the reservoir. The reservoir is located in all or parts of Sections 11, 12, 13, 14, 15 and 24, T. 2 S., R. 80 W., and Sections 17, 18, 19, 20, 21, 28, 29, 33 and 34, T. 2 S., R. 79 W. The Green Mountain Dam, across the bed of the Blue River is located in Section 15, T. 2 S., R. 80 W. The location of the axis of the dam is described as follows:

Starting at the Section corner common to Sections 1, 2, 11 and 12, T. 2 S., R. 80 W., Sixth Principal Meridian Station 0 + 00 of the dam axis bears S. 36° 31' 45" W. a distance of 11,165 feet. The bearing of the axis is N. 21° 00' 00" E. The length of the axis is 1100 feet on the crest. The

height of the dam is 309 feet above the lowest point in the dam foundation. The structure is an earth and rock fill dam with an impervious earth core in the center and rock fill or riprap on the outside faces. The crest width is 40 feet.

The sources of supply are the Blue River and all tributaries of the Blue River upstream from the dam and Elliott Creek by means of its diversion canal with a carrying capacity of 185 second feet.

The above ground surface capacity of Green Mountain Reservoir is 154,645 acre feet.

"Dead" storage	7,757 acre feet
"Active" storage	146,888 acre feet
"Bank" storage	1,900 acre feet
Total storage	156,545 acre feet

The direct flow of the Blue River and of Elliott Creek and the water impounded in the reservoir will pass over the spillway and/or through the outlet works and be returned to the Blue River and/or will pass through a conduit leading to the Green Mountain Power Plant. After passing through this hydro-electric power plant, the water will be returned to the Blue River.

The reservoir will provide storage water for full or partial irrigation of land lying downstream from it, in replacement of water to be exported from the Colorado River Basin by other works of the Colorado-Big Thompson Project. The number of acres of land to be irrigated by water stored in the reservoir is approximately 120,000 acres.

The Green Mountain Power Plant, (Sheet 1, Exhibit C) is located adjacent to the downstream toe of the Green Mountain Dam and also adjacent to the Blue River channel, in the SW¼ of the NE¼ of Section 15, T. 2 S., R. 80 W., 6th Principal Meridian.

The conduit to the power plant is an 18 ft. diameter circular, reinforced concrete tunnel and a twin-barrel steel penstock. The length of the circular tunnel is 633 ft. The grade of this tunnel is 5 ft. per 1000 ft. The penstocks are each 906 ft. long and 102 inches in diameter. The capacity of this entire conduit is 2000 sec. ft. The maximum amount of water claimed for development of hydro-electric energy through the power plant is 1726 s.f.

The power plant, a rectangular reinforced concrete building, contains the two main 10,800 kw. each electric generators and their 14,000 hp. hydraulic turbines and other incidental equipment both in and adjacent to the building for efficient and effective operation.

2. Improvement to the Colorado River and affected tributaries between Granby Dam and the confluence of the Blue and Colorado Rivers (Sheets 1, 2, 3, Exhibit C) will protect the rights of the land owners in the upper Colorado River basin by:

(a) Preserving the vested and future rights in irrigation.

(b) Preserving the fishing and recreational facilities and scenic attractions.

(c) Maintaining conditions of river flow for the benefit of domestic and sanitary uses of this water.

(d) Providing an adequate system where necessary for the irrigation of affected land.

(e) Protect the source of supply of domestic water users.

3. Granby Reservoir (Sheet 3, Exhibit C), located in Grand County, Colorado, is formed by Granby Dam across the Colorado River and four dikes in the immediate vicinity of this dam across four saddles or depressions in the earth's surface below the normal high water surface, elevation 8280.00 feet in the reservoir. The reservoir is located in all or parts of Sections 25, 26, 27, 34, 35 and 36, T. 3 N., R. 76 W.; Sections 29, 30 and 32, T. 3 N., R. 75 W.; Sections 1, 2, 3, 10, 11, 12, 13 and 15, T. 2 N., R. 76 W. and Sections 5, 6, 7, 8, 9, 14, 15, 16, 17, 18, 21, 22 and 23, T. 2 N., R. 75 W. The Granby Dam, across the bed of the Colorado River is located in Sections 11 and 12, T. 2 N., R. 76 W. The location of the axis of the dam is described as follows:

Starting at the southeast corner of Section 11, T. 2 N., R. 76 W., 6th Principal Meridian, Station 11 + 00 of the axis bears N. 9° 37' W. a distance of 2,635.3 feet. The bearing of the axis of the dam is N. 49° 30' W.

The maximum height of the dam is 295 feet above the lowest point in the foundation excavation. The length of the crest is 885 feet. The structure is an earth and rock fill dam with an impervious earth core in the center and rock fill or riprap on the outside faces. The crest width is 40' 0".

Dikes Nos. 1, 2 and 4 are inter-connected and are located in Sections 10, 11, and 15, T. 2 N., R. 76 W. southwest of Granby Dam. The location of the axis of this continuous dike is described as follows:

Starting at the southeast corner of Section 11, T. 2 N., R. 76 W., 6th Principal Meridian, Station 0 + 00 of the axis of Dike No. 2 bears N. 60° 32½' W. a distance of 4,006.3 feet. The bearing of the axis of Dike No. 2 is S. 72° 23' W. a distance of 1,852 feet to an intersection with Dike No. 1, the axis of which bears S. 44° 12' W., a distance of 2,421 ft. to an intersection with Dike No. 4, the axis of which bears N. 45° 48' W., a distance of 435 feet, thence N. 32° 00' W., a distance of 500 feet. The length of the crest of the 3 dikes is 4,408 feet.

The maximum height of this continuous dike (Dikes Nos. 1, 2 & 4) is 80 feet above the lowest point in the foundation excavation. The structures are earth and rock-fill dikes with an impervious earth core and rockfill or riprap on the outside faces. The crest width is 30' 0".

Dike No. 3 is located in Section 13, T. 2 N., R. 76 W., 6th Principal Meridian, southeast of Granby Dam. The location of the axis of this dike is described as follows:

Starting at the northwest corner of Section 13, T. 2 N., R. 76 W., 6th Principal Meridian, Station 20 + 00, of the axis bears S. 63° 17¼' E., a distance of 1996.6 feet. The bearing of the axis of the dike is S. 36° 21' E.

The maximum height of the dike is 60 feet above the lowest point in the foundation excavation. The length of the crest is 1800 feet. The structure is an earth and rock-fill dike with an impervious earth core in the center and rock-fill or riprap on the outside faces. The crest width is 30' 0".

The sources of supply for Granby Reservoir are the Colorado River and its tributaries above the location of Granby Dam; the Willow Creek Diversion; Strawberry and Meadow Creek and Walden Hollow Diversion; Williams River Diversions and the Fraser River Diversions, which diversions are hereinafter described in the next succeeding numbered paragraph.

The above ground surface capacity of Granby Reservoir is 544,867 a.f.

"Dead" storage	77,331 acre feet
"Active" storage	467,536 acre feet
"Bank" storage	4,000 acre feet
Total storage	548,867 acre feet

The water impounded in Granby Reservoir will be pumped to Shadow Mountain Lake and thence via Grand Lake and the Alva B. Adams Tunnel, transported to the eastern slope, or part of it released through the spillway or outlet works to be returned to the Colorado River.

4. The Western Slope Feeder Canals, (Sheets 2, 3, Exhibit C) are a system of collection ditches diverting water from the tributaries of the Colorado River into Granby Reservoir, which collection ditches are described as follows:

From Willow Creek

Willow Creek Reservoir will be formed by a dam across Willow Creek about four miles north of Granby, Grand County, Colorado. Said reservoir is located in parts of Sections 7 and 18, T. 2 N., R. 76 W. and Sections 1, 2, 11, 12, and 13, T. 2 N., R. 77 W., 6th Principal Meridian. The reservoir will act as a collecting reservoir for storage of water to be diverted into Granby Reservoir. The height of the dam will be 140 feet. The dam will be an earth and rock fill gravity-type dam, provided with a spillway. Station 7 + 28.8 on the axis of the dam, and Station 4 + 56.6 on the diversion tunnel bears N. 40° 10' W., a distance of 2540.6 feet from the southeast corner of Section 7, T. 2 N., R. 76 W., of the 6th Principal Meridian. From this point, water from the reservoir will be conveyed to Granby Reservoir by a canal four miles in length, having a capacity of 250 second feet. This canal will be constructed on grade from the outlet end of the diversion tunnel for 2.5 miles, at which point a pumping plant of 250 second feet capacity will be constructed to raise the water approximately 165 feet to a canal leading to Granby Reservoir in the vicinity of the west abutment of Dike No. 4. Sheet 3, Exhibit C, shows the plan of diversion. A second canal from Willow Creek would convey water stored in Willow Creek to the Colorado River to meet irrigation requirements along the Colorado River which otherwise would have to be met by releases from Granby. All intercepted flows from named and unnamed creeks enroute to Granby Reservoir will also be diverted into the reservoir.

The above ground capacity of Willow Creek Reservoir is 29,000 a.f.

"Dead" storage is	4,500 acre feet
"Active" storage is	24,500 acre feet
"Bank" storage is	1,000 acre feet
Total storage is	30,000 acre-feet

From Meadow Creek, Strawberry Creek and Walden Hollow

A diversion dam across Meadow Creek, (Sheet 3, Exhibit C) Section 16, T. 1 N, R. 75 W., diverting flows from Meadow Creek into an aqueduct of 500 second feet capacity which conducts this water to an unnamed tributary of Strawberry Creek in Section 8, T. 1 N., R. 75 W. A diversion dam across Strawberry Creek, Section 32, T. 2 N., R.75 W., diverting surplus flows from Strawberry Creek, including those introduced from Meadow Creek, into an aqueduct of 600 second feet capacity which conducts this water to Walden Hollow in Section 24, T. 2 N., R. 75 W. A diversion dam across Walden Hollow, Section 24, T. 2 N., R. 76 W., diverting surplus flows from Walden Hollow, including those flows introduced from Strawberry Creek and Meadow Creek, into an aqueduct of 1500 second feet capacity which discharges into Granby Reservoir in Section 13, T. 2 N., R. 76 W. All intercepted flows from named and unnamed streams enroute will also be diverted into Granby Reservoir.

From Williams River

A diversion dam (Sheet 2, 3, Exhibit C) in Section 24, T. 2 S., R. 78 W. across the Williams River forming Upper Ute Park Reservoir, approximate capacity 80,000 acre feet. An aqueduct of 400 second feet capacity from the reservoir to the inlet of Keyser Creek Tunnel, located in Section 13, T. 2 S., R. 78 W. Said tunnel extends northeasterly approximately 2 miles to a junction with the Blue Ridge Tunnel in Section 1, T. 2 S., R. 78 W. The Blue Ridge Tunnel, 500 s.f. capacity, extends northeasterly a distance of approximately 10 miles to its outlet portal in Section 4, T. 1 S., R. 76 W., said portal being located on Pole Creek which discharges into Ranch Creek Reservoir. Ranch Creek Reservoir, approximately 600,000 a.f. capacity, is formed by a dam across Fraser River in Section 26, T. 1 N., R. 76 W., high water line of said reservoir at elevation 8525.

From Fraser River

The Ranch Creek Reservoir (Sheet 3, Exhibit C) is formed by a dam across the Fraser River in Section 26, T. 1 N., R. 76 W., the high water elevation of which is 8525 feet and the capacity is approximately 600,000 a.f. This reservoir will intercept and store waters of the Fraser River and tributaries thereof above the dam, including the aforementioned diversions from the Williams River. From this reservoir stored water and all direct flows will be

released, through a power plant, into the Fraser River, which will serve as a conduit for said water to a point of diversion from the river in Section 4, T. 1 N., R. 76 W. A pumping plant, located at said point of diversion, will deliver diverted water into the Fraser River Canal, capacity of which is 900 s.f., said canal to discharge said waters above the aforementioned diversion dam across Walden Hollow in Section 24, T. 2 N., R. 76 W., said point having been previously mentioned in connection with Meadow-Strawberry Creek diversion.

5. The Granby Pumping Plant (Sheet 3, Exhibit C) is located on the north shore of Granby Reservoir in Section 35, T. 3 N., R. 76 W. The building is of reinforced concrete design, 59'-00" x 125'-00", and 185' high from the foundation to the top of the parapet. The building to house three 6000 HP electric motors which will drive three centrifugal pumps each with a capacity of 200 cubic feet of water per second at a pumping head of 186 feet. The pumping plant is located at Station 27 + 37.50 on the Granby Pump Canal line, which line bears N. 34° 46' E., a distance of 292.50 feet to Station 30 + 30, from whence the N. E. Cor. Sec. 36, T. 3 N., R. 76 W., Sixth Principal Meridian bears N. 85° 17' E., a distance of 7,121.4 feet. The Granby Pumping Plant discharge conduit and the Granby Pump Canal, (Sheet 3, 4, Exhibit C) with a capacity of 1100 second feet, extends from the Pumping Plant in a northeasterly direction for a distance of 9353 feet to station 160 + 49.79, which point is the inlet to Shadow Mountain Lake and which point bears N. 23° 16' 26" W., a distance of 3,224.3 feet from the S. E. Cor. Sec. 24, T. 3 N., R. 76 W., Sixth Principal Meridian, said line being more particularly described on Exhibit C, Sheet 3 of 7, which is part of this claim.

6. Shadow Mountain Lake, (Sheet 4, Exhibit C) is in effect an extension of Grand Lake and acts as a conduit to the inlet of the Alva B. Adams Tunnel for waters pumped from Granby Reservoir as well as water intercepted from tributaries of the Colorado River by Shadow Mountain Lake and Grand Lake. The two mentioned lakes also serve as a storage and regulating reservoir with the water surface normally maintained between elevations 8366 and 8367 which will provide a combined active capacity of 1841 acre feet. Shadow Mountain Lake is located upon all or portions of Sections 6, 7, 18 and 19, T. 3 N., R. 75 W., 6th Principal Meridian and Sections 12, 13 and 24, T. 3 N., R. 76 W., 6th

Principal Meridian. Shadow Mountain Dam is located across the bed of the Colorado River in Section 19, T. 3 N., R. 75 W., 6th Principal Meridian. The maximum height of said dam is 78 feet above the lowest point of foundation excavation and the crest length of the dam, including the dike extending on the west side of the river, is 3149.5 feet. Station 0 + 00 on the Shadow Mountain Dam axis bears N. 18° 55' E., a distance of 3862.1 feet from the S. W. Cor. of Sec. 19, T. 3 N., R. 75 W., 6th Principal Meridian. From Station 0 + 00 the dam axis bears S. 30° 00' W., a distance of 520.8 feet; thence along the axis of the dike S. 06° 27' W., 115.7 feet; thence S. 55° 00'W., 264.0 feet; thence N. 75° 00' W., 953.3 feet; thence S. 72° 00' W., 886.20 feet; thence N. 63° 30' W., 409.5 feet to Station 30 + 99.65, said station being on the dam axis.

The sources of water supply for Shadow Mountain Lake are the direct flows of the Colorado River and its tributaries upstream from Shadow Mountain Dam and the water pumped from Granby Reservoir heretofore described.

Total above-ground surface capacity of Shadow Mountain Lake only, is 17,354 acre-feet at elevation 8367.0.

"Dead" storage in Shadow Mountain Lake only, is 14,708 acre feet at elevation 8365.0, the elevation of the lip of the intake at Adams Tunnel.

"Active" storage in Shadow Mountain Lake and Grand Lake is 3661 acre feet between elevations 8365.0 and 8367.0 feet.

"Bank" storage in Shadow Mountain Lake is 1300 acre feet.

Total storage in Shadow Mountain Lake and the top two feet of Grand Lake is 19,669 acre feet.

The water impounded in Shadow Mountain Lake and Grand Lake will flow through the Alva B. Adams Tunnel to the eastern slope or be released through the spillway or outlet works into the Colorado River, and thence into Granby Reservoir and related works, (Sheet 4, Exhibit C).

7. The Alva B. Adams Tunnel (Continental Divide Tunnel) (Sheet 4, Exhibit C), leads from the east shore of Grand Lake, under the Continental Divide a distance of 13.1 miles in a northeasterly direction to Wind River, a tributary of the Big Thompson River, which is a tributary of the South Platte River. Said tunnel has an inside circular diameter of 9' 9", and a normal carrying capacity of 550 s.f. The supply of water for said tunnel is obtained by means of the dams and collecting systems, ditches, and tributaries

of the Colorado River, which combine to deliver water to the West or Inlet Portal of said tunnel.

The inlet conduit of the said tunnel extends from station 5 + 95 (West Portal) of the Alva B. Adams Tunnel in a southwesterly direction into Grand Lake. From station 5 + 95, which station bears S. 74° 31' W., a distance of 1262.2 feet from the N¼ Cor. Sec. 9, T. 3 N., R. 75 W., 6th Principal Meridian, to station 3 + 92.50, the inlet is a double barreled, reinforced concrete, earth covered inlet conduit 20 feet in width. From station 3 + 92.50 the inlet structure fans out to an arc width of 300 feet at station 2 + 39.00 which arc is the point of entrance of water from Grand Lake. The flow of water through the inlet into the Alva B. Adams tunnel is controlled by two steel radial gates located in a gate house at station 5 + 88.

The said Alva B. Adams tunnel is a 9 feet 9 inch inside diameter concrete lined section throughout its entire length of 69,029.94 feet with a slope of 1.55 feet per thousand feet of length. Station 700 + 59.00 is the outlet or eastern portal of said tunnel and said station bears S. 11° 13' 25" E., a distance of 1967.7 feet from NW Cor., Sec. 9, T. 4 N., R. 73 W., Sixth Principal Meridian. The tunnel discharges into the East Portal Reservoir, and said tunnel is more particularly shown on Sheet 4 of Exhibit C.

8. The Estes Park Aqueduct and Power System (Sheet 4, Exhibit C) transports project appropriated water from the outlet of the Alva B. Adams Tunnel into the Estes Park Lake formed by Olympus Dam across the Big Thompson River located about one and one-half miles east of Estes Park, Larimer County, Colorado, developing hydro-electric power enroute.

The East Portal Reservoir is formed by a rock-fill dam across Wind River. The reservoir is used to divert western slope water into the Aspen Creek Siphon, or spill Western Slope flows through an emergency overflow spillway down the Wind River channel to the Big Thompson River where it can be recaptured in Estes Park Reservoir. East Portal Reservoir has a capacity of 20 acre feet. Wind River waters are bypassed in a pipe and do not normally mingle with imported waters in the reservoir. The axis of the dam intersects the extension of the centerline of the Adams Tunnel at right angles such that station 2 + 00 on the dam axis coincides with station 708 + 06.0 on the tunnel

centerline extended. Excavated material from Alva B. Adams Tunnel forms the floor of the reservoir and the upstream and downstream faces of the dam. The top of the dam is at elevation 8265.0 and the normal water surface in the reservoir is at elevation 8258. Material excavated from the eastern part of the tunnel was used to fill the valley to elevation 8248.0 both upstream and downstream from the said dam.

The location of the axis of the rock-fill dam is described as follows:

Beginning at the Northeast corner of Section 9, T. 4 N., R. 73 W., 6th Principal Meridian, Station 0 + 34.52 of the dam axis bears South 68° 12' West a distance of 4670.4 feet. From station 0 + 34.52, the bearing of the axis of the dam is North 26° 43' West and the length of the axis is 245 feet. At the right end of the dam a spillway is provided with a capacity of 550 second feet. Station 0 + 00 on the spillway line bears South 68° 52' West 4731.1 feet from the Northeast corner of Section 9, T. 4 N., R. 73 W., 6th Principal Meridian. The bearing of the spillway centerline is North 69° 37' East from said station 0 + 00.

Aspen Creek Siphon also has its beginning at the right end of the East Portal Dam. It extends from the East Portal Reservoir to a short 70.55 foot flume section located immediately west of the west portal of Rams Horn Tunnel. The said siphon has a circular, reinforced concrete barrel 10' 9" inside diameter, with a capacity of 550 second feet. The flume is a reinforced concrete horseshoe section, 10' 0" inside diameter with a capacity of 550 second feet.

The location of Aspen Creek Siphon and the Flume is further described as follows:

Beginning at station 706 + 82.00, which point bears South 68° 42' 10" West, 4,740.7 feet from the Northeast corner of Section 9, T. 4 N., R. 73 W., Sixth Principal Meridian, thence in a southeasterly direction; more particularly described in traverse table on Sheet 4 of Exhibit C (Drawing Gen. 115); a distance of 7016.66 feet to Station 777 + 03.54, which point is also the west portal of Rams Horn Tunnel. (Equation 777 + 03.54 Bk = 775 + 60.00 Ah)

Rams Horn Tunnel extends from the aforementioned flume at the east end of the Aspen Creek Siphon to the headworks of the Marys Lake penstock, Station 775 + 60.00 to Station 844 + 84, a distance of 6924 feet and has a carrying capacity of 550 second feet. It is a concrete lined horseshoe section 10' 0" inside diameter. The bearing of the centerline is N. 50° 57' N. from Station 775 + 60 Ah. The inlet portal of said tunnal at Station 775 + 60.0 bears South 76° 0' East, a distance of 2063.7 feet from the Northwest corner of Section 10, T. 4 N., R. 73 W., 6th Principal Meridian and the Outlet portal at Station 844 + 84 bears South 49° 49' West a distance of 4302.2 feet from the northeast corner of Section 2, T. 4 N., R. 73 W., 6th Principal Meridian.

Marys Lake Penstock has its beginning at Station 845 + 80, located 96 feet from the outlet portal of Rams Horn Tunnel. The penstock has a 96-inch inside diameter and is designed to operate under a maximum head of 201.5 feet, with a capacity of 550 cubic feet per second. It enters the Marys Lake Power Plant at Station 850 + 46. The bearing of the penstock centerline is the same as said Rams Horn Tunnel extended N. 50° 57' E. In order to by-pass water around the penstock, a three barrel siphon spillway structure on the right side conveys spilled water to Marys Lake. A fixed gate controls the flow into the penstock.

Marys Lake Power Plant is located on the southwest side of Marys Lake at Station 850 + 80 which point is on an extension of the Rams Horn Tunnel centerline and which point bears South 49° 37' West a distance of 3706.4 feet from the Northeast corner, Section 2, T. 4 N., R. 73 W., 6th Principal Meridian. The power plant is a reinforced concrete building 62 feet wide by 64 feet long and will house one main generating unit and station-service equipment. Said main generating unit will be a 8100 kw vertical-shaft generator directly connected to a 11,300 hp. hydraulic turbine. Water passing through the power plant will discharge directly into Marys Lake.

Marys Lake is formed by the construction of dikes along the east (Dike No. 1) and south (Dike No. 2) shores of the existing Marys Lake. Each dike has a crest width of 30 feet and a crest elevation of 8050 feet. Said dikes are each composed of a rolled embankment with a reinforced concrete

corewall. The maximum height of Dikes Nos. 1 and 2 is 40 feet above the lowest point in the foundation excavation. The upstream face of each dike is constructed of 24 inches of rock riprap on 6 inches of gravel. Both faces of each dike are constructed on a 2.1 slope.

The above ground surface capacity of said Marys Lake is as follows: 1148 acre feet.

"Dead" storage	42 acre feet
"Active" storage	683 acre feet
"Emergency" storage	424 acre feet
"Bank" storage	25 acre feet
Total storage	1174 acre feet

Said Marys Lake acts as a forebay for the Estes Power Plant and is the means of transporting and regulating western slope diversions to the Prospect Mountain Conduit and Tunnel.

The Prospect Mountain Conduit extends from Marys Lake to the Prospect Mountain Tunnel. The conduit, is a reinforced concrete pipe cast in place, with a circular cross section of 12' 6" inside diameter and a normal carrying capacity of 1300 second feet.

The location of the conduit is further described as follows:

Beginning at Station 897 + 56.75 thence North 27° 41' East a distance of 508.07 feet to Station 902 + 64.82 which point is on the North edge of Marys Lake and bears South 50° 57' West a distance of 2360.5 feet from the Northeast corner of Section 2, T. 4 N., R. 73 W., 6th Principal Meridian, thence from said station in a northeasterly direction; more particularly described in traverse table on sheet 4 of Exhibit C (Drawing Gen. 115); a distance of 3035.18 feet to Station 933 + 00, which point is also the South portal of the Prospect Mountain Tunnel and bears North 64° 14' East a distance of 2224.9 feet from the Southwest corner of Section 36, T. 5 N., R. 73 W., 6th Principal Meridian.

Prospect Mountain Tunnel is of similar section as the said Prospect Mountain Conduit, 12' 6" inside diameter, with reinforced concrete lining. It has a slope of 0.00465 and a normal carrying capacity of 1300 second feet. It extends North 32° 50' 11" East from Station 933 + 00.00 to Station 987 +

54.09 back which station is equal to Station 987 + 44.00 ahead; thence North 23° 12' 27" East to Station 989 + 00.00 from which point a transition section extends to the outlet portal at Station 989 + 50.00, a total distance from the inlet portal to the outlet portal of 5660.09 feet. Station 987 + 44.00 near the outlet portal is the centerline of a 50 foot diameter reinforced concrete surge tank over the tunnel.

Estes Penstocks:

At the outlet portal, Station 989 + 50.00, which bears North 29° 37' 0" West a distance of 631.9 feet from the Southeast corner of Section 25, T. 5 N., R. 73 W., a penstock gate structure which leads to the Estes Power Plant penstocks extends to Station 989 + 75.00. This is followed by a concrete headworks section extending to Station 989 + 85.00 and at Station 989 + 85.00 three steel 78" inside diameter penstocks lead to the Estes Power Plant. Said penstocks are steel plate varying in thickness from 5/16" at the inlet and to 13/16" at the discharge valves.

The Estes Power Plant is located on the south bank of the Big Thompson River about 1/2 mile east of Estes Park, Larimer County, Colorado. The 96' 6" x 145' 0" reinforced concrete building will house three hydraulic turbines fed by the three aforementioned penstocks. The three 21,000 hp. hydraulic turbines will be directly connected to three 15,000 kw electric generators. The total installed rated capacity of the power plant is 45,000 kw. Station 1029 + 94.64, which is the intersection of the centerline of the penstock and the centerline of the three generating units, bears North 76° 57½' East a distance of 4118.6 feet to the Northeast corner of Section 30, T. 5 N., R. 72 W. Water passing through the said power plant will be discharged directly into Estes Park Lake.

Estes Park Lake is formed by the construction of Olympus Dam across the Big Thompson River about one and one-half miles east of the town of Estes Park, Larimer County, Colorado. Said lake is contained in parts of Section 29 and 30, T. 5 N., R. 72 W., 6th Principal Meridian. The lake acts as pondage and re-regulation of water discharged by the Estes Power Plant. It is also the diversion works for the Estes-Foothills Aqueduct and Power System. The crest of Olympus Dam is at elevation 7,580, and its length is 1,880 feet. The height of the dam is 60 feet. The structure is a combination concrete gravity dam with an earth and rock fill wing. The crest width is 30 feet.

The concrete gravity section has five 20' x 17' radial gates for controlling the flow of water down the Big Thompson River. Station 22 + 27 on the axis of Olympus Dam bears S. 55° 27' E., a distance of 2,660.5 feet from the northwest corner of Section 29, T. 5 N., R. 72 W., 6th Principal Meridian. The axis of the dam bears N. 21° 48' W., a distance of 1,193 feet from Station 22 + 27 and thence N. 59° 56' W., a distance of 634 feet to the west abutment of the dam. The above-ground surface capacity of Estes Park Lake is 2,888 acre feet.

"Dead" storage	407 acre feet
"Active" storage	2,481 acre feet
"Bank" storage	300 acre feet
Total storage	3,188 acre feet

9. The Estes-Foothills Aqueduct and Power System (Sheet 5, Exhibit C) is designed to convey 550 second feet of water diverted from the Western Slope, excess waters of the Big Thompson River, and Big Thompson water to be used for power from Estes Park Lake to the Flatiron Reservoir. The Western Slope water and excess Big Thompson water would then be transferred to the Foothills Reservoir. Big Thompson flows used only for power would be returned to the Big Thompson River at the Big Thompson wasteway. Full utilization of the difference in elevation between the headworks at Olympus Dam and the discharge at Flatiron Reservoir will be used for the production of hydro-electric power by the system generally described as follows and more particularly described by plans, sections, and traverse tables as shown on Sheet 5 of Exhibit C (Drawing No. Gen. 115).

Beginning at the headgate entrance to the Estes-Foothills Aqueduct and Power System which point is Station 47 + 00.10 on the system, and which point coincides with Station 22 + 27 on the Olympus Dam axis, and from which point the NW cor. Sec. 29, T. 5 N., R 72 W., 6th Principal Meridian bears N. 55° 27' W., a distance of 2,660.5 feet, thence in a generally easterly direction for a distance of 14.0 miles to the point of discharge into Flatiron Reservoir and which point bears S. 72° 30' W., a distance of 1,200.00 feet from the NE corner of Section 33, T. 5 N., R. 70 W., 6th Principal Meridian.

The system is more generally described, starting at the headworks and continuing in an easterly direction or the direction of flow to the discharge at Flatiron Reservoir, as follows:

(a) Olympus Conduit, a closed section, 0.8 of a mile in length extending from the headworks at Olympus Dam in Estes Park Lake, to the east portal of Mt. Olympus Tunnel.

(b) Mt. Olympus Tunnel, which is 1,8 miles long.

(c) Pole Hill Tunnel, which is 5.4 miles long.

(d) Pole Hill Canal, which is 0.5 miles long.

(e) Penstock to Pole Hill Power Plant, which is .55 miles long.

(f) Pole Hill Power Plant.

(g) Rattlesnake Tunnel, which is 1.70 miles long.

(h) Rattlesnake Afterbay.

(i) Bald Mountain Tunnel, which is 1.00 miles long.

(j) Penstock to Flatiron Power Plant, which is 1.10 miles long.

(k) Flatiron Power Plant.

A total of two power plants will be located between Olympus Dam and Flatiron Reservoir as above listed and a third power plant, being a part of the above system, located near the intersection of the Horsetooth Feeder Canal and the Big Thompson River and being more particularly located on drawing and traverse of the Horsetooth Feeder Canal on Sheet 5 of Exhibit C and Sheet 6 of Exhibit C (Drawing No. Gen. 115).

10. The Foothills Reservoirs and Feeder Canals (Sheet 5, 6, Exhibit C) will generally transport eastern and western slope diverted water from the aforementioned Estes-Foothills Aqueduct and Power System to the eastern slope storage reservoirs for storage and release to irrigators as required or for restoration of diversional fluctuations in the Big Thompson River and to return like flows as will be withdrawn for power development purposes at Estes Park Lake.

Discharges from the Flatiron Power Plant will enter Flatiron Reservoir. From Flatiron Reservoir, water may be either discharged by gravity into the Horsetooth Feeder Canal or be conveyed to Carter Lake Reservoir. Water may be transported into or out of Carter Lake Reservoir through the same penstock and tunnel hereinafter discussed.

The Carter Lake Reservoir Inlet (and Outlet) consists of a steel penstock and a pressure tunnel capacity 930 second feet leading from the Flatiron Power Plant near Flatiron Mountain into Carter Lake Reservoir. The

said inlet has its beginning in the Flatiron Power Plant, which is located in the NE¼ of Section 33, T. 5 N., R. 70 W., 6th Principal Meridian, and extends in a southeasterly direction for a distance of approximately 1.2 miles to the heading in Carter Lake Reservoir, which point is in Section 34 and bears N. 73° 15' 22" E., 356.8 feet from the South Quarter corner of Section 34, T. 5 N., R. 70 W., 6th Principal Meridian. The bottom grade of said tunnel is flat and is at the low water elevation of Carter Lake Reservoir.

Carter Lake Reservoir is located in Larimer County, Colorado, and more particularly in all or parts of Section 34 and 35, T. 5 N., R. 70 W., and Sections 2, 3, 4, 9, 10, 15 and 16, T. 4 N., R. 70 W., 6th Principal Meridian. The reservoir is formed by placing an earth and rock fill dam and two earth and rock fill dikes across unnamed streams, tributaries of Dry Creek which is a tributary of the Little Thompson River. The construction of these embankments enlarges the capacity of the existing Carter Lake to form a storage reservoir. The maximum water surface elevation is 5800.0 feet.

The location of the axis of Carter Lake Dam is described as follows: Starting at the SE corner of Section 10, T. 4 N., R. 70 W., Station 0 + 00 of the axis bears N. 39° 20' W., a distance of 1827 feet. The bearing of the axis of the dam is N. 2° 07' E. from said station and is 1220 feet in length. The height of the dam is 198 feet.

The location of the axis of Dike No. 1 is described as follows: Starting at the SE corner of Section 3, T. 4 N., R. 70 W., Station 0 + 00 of the axis bears N. 6° 54½' W., a distance of 1918 feet. The bearing of the axis of the dike is N. 58° 32' E. from said station and 1038 feet in length. The height of Dike No. 1 is 75 feet.

The location of the axis of Dike No. 2 is described as follows: Starting at the NE corner of Section 3, T. 4 N., R. 70 W., Station 0 + 00 of the axis bears N 70 - 30 W., a distance of 670 feet. The bearing of the axis of the dike is N. 46° 23' W. from said station and is 1226 feet in length. The height of Dike No. 2 is 50 feet.

The sources of supply of Carter Lake Reservoir are project appropriated waters delivered through the inlet tunnel and tributaries of Carter Lake.

The above ground surface capacity of said reservoir is as follows: 161,800 acre feet.

"Dead" storage	4,000 acre feet
"Active" storage	157,800 acre feet
"Bank" storage	600 acre feet
Total storage	162,400 acre feet

All project water and natural flows to Carter Lake Reservoir will be utilized by the project through the outlet (which is also the inlet) and delivered to Flatiron Reservoir through the Flatiron Power Plant.

The Platiron Reservoir is located in Larimer County, Colorado, and more particularly in all or parts of Sections 22, 27 and 28, T. 5 N., R. 70 W., 6th Principal Meridian. The reservoir is formed by placing an earth and rock fill dam across Dry Creek, a tributary of the Big Thompson River. The maximum water surface of said reservoir is elevation 5462.0 feet.

The reservoir will be used for pondage or re-regulation of discharges from the Flatiron Power Plant into uniform flows for irrigation deliveries.

The location of the axis of Flatiron Dam is described as follows:

Starting at the NE corner of Section 27, T. 5 N., R. 70 W., the south end of the main dam axis bears S. 46° 15' W. a distance of 750 feet. The bearing of the axis of the dam is N. 12° 00' W. from said station and the dam crest is 1085 feet in length. The height of the dam is 137 feet above the lowest point in the foundation excavation.

The sources of supply for Flatiron Reservoir are appropriated project waters delivered from the Flatiron Power Plant and the excess direct flows of Dry Creek and its tributaries above the Flatiron Dam. Dry Creek normal and flood flows will be returned to its stream bed by means of an outlet through and a spillway adjacent to the Flatiron Dam.

The above ground surface capacity of Flatiron Reservoir is as follows: 20,000 acre feet.

"Dead" storage	15,000 acre feet
"Active" storage	5,000 acre feet
"Bank" storage	500 acre feet
Total storage	20,500 acre feet

The Horsetooth Feeder Canal consists of three separate parts, namely, the Flatiron Section, the Horsetooth Section, and Tunnel No. 1.

The Flatiron Section, 930 second feet capacity, will be a concrete lined open canal which extends from the north end of Flatiron Reservoir, which point is Station 106 + 67.6 and the outlet from Flatiron Reservoir and which point bears S. 47° 30½' E., a distance of 2,144.5 feet from the North Quarter Cor. of Sec. 22, T. 5 N., R. 70 W., Sixth Principal Meridian, in a northerly direction for a distance of 2.0 miles to the outlet of Tunnel No. 1 Section at Station 54 + 05.94 = 53 + 80.50 on the Horsetooth Section, said point being Station -(3 + 30) on the Flatiron Section and said point bears S. 26° -22' W. a distance of 1,739.4 feet from the N¼ Cor. of Sec. 10, T. 5 N., R. 70 W., 6th Principal Meridian, and being more particularly described by drawing and traverse as shown on Sheet 6 of Exhibit C (Drawing No. Gen. 115).

The Horsetooth Section, 550 second feet capacity, consisting of 6.01 miles of lined section, 0.15 miles of transition section, 2.89 miles of tunnel section, 0.13 miles of flume section, and 0.80 miles of siphon section, has its beginning at Station 54 + 05.94 BK = 53 + 80.50 Ah which point is -(3 + 30) on the Flatiron Section and which points bears S. 26° -22' W. a distance of 1,739.4 feet from N¼ Cor. of Sec. 10, T. 5 N., R. 70 W., 6th Principal Meridian, and extends in a northeasterly direction for a distance of 10.00 miles to Station 577 + 80, which point is the point of discharge into Horsetooth Reservoir and which bears S. 58° 20' E, a distance of 2,672.2 feet from NW Cor. of Sec. 6, T. 6 N., R. 69 W., 6th Principal Meridian and being more particularly described by drawing and traverse shown on Sheet 6 of Exhibit C (Drawing No. Gen. 115).

The Tunnel No. 1 Section, capacity of 550 second feet, has its beginning on the Big Thompson River, said point of beginning being at Station 0 + 35 and which station bears S. 73° 52' W. a distance of 3,425.2 feet from the NE Cor. of Sec. 9, T. 5 N., R. 70 W., 6th Principal Meridian. From said station Tunnel No. 1 extends in a southeasterly direction for a distance of 5,370.9 feet to Station 54 + 05.94 BK = 53 + 80.50 Ah, which point is the same as Station -(3 + 30.2) on the Flatiron Section and which point bears S. 26° -22' W. a distance of 1,739.4 feet from the N¼ Cor. of Sec. 10, T. 5 N., R. 70 W., 6th Principal Meridian, being more particularly shown on Sheet 6 of Exhibit C (Drawing No. Gen. 115).

The Horsetooth Reservoir is located in Larimer County, Colorado, and more particularly in all or parts of Sections 5, 6 and 8, T. 6 N., R. 69 W., Sections 6, 7, 18, 19, 20, 29, 30, 31 and 32, T. 7 N., R. 69 W., and Sections 1, 12 and 13, T. 7 N., R. 70 W., 6th Principal Meridian. The reservoir is formed by placing four earth and rock fill dams and one dike across Spring Canyon, Dixon Canyon and Soldier Canyon and the saddle between Soldier Creek and Mill Creek. The construction of these dams and dikes forms a storage reservoir for project waters about four miles west of Fort Collins, Colorado. The maximum water surface is elevation 5430.00 feet.

The location of the axis of Spring Canyon Dam is described as follows: Starting at the SW corner of Section 32, T. 7 N., R. 69 W., Station 0 + 15 of the axis bears N. 61° 51' 10" E. a distance of 3,932.2 feet. The bearing of the axis is N. 4° 0' W. from said station and is 1,100 feet in length. The height of the dam is 225 feet above the lowest point in the foundation excavation.

The location of the axis of Dixon Canyon Dam is described as follows: Starting at the NW corner of Section 20, T. 7 N., R. 69 W., Station 2 + 08 of the axis bears S. 17° 28' 18" E. a distance of 5,331.4 feet. The bearing of the axis is N. 8° 0' W. from said station and is 1,200 feet in length. The height of the dam is 240 feet above the lowest point in the foundation excavation.

The location of the axis of Soldier Canyon Dam is described as follows: Starting at the SE corner of Section 7, T. 7 N., R. 69 W., Station 0 + 10 of the axis bears N. 44° 46' 18" W. a distance of 3,328.9 feet. The bearing of the axis is N. 15° 0' W. from said station and is 1,400 feet in length. The height of the dam is 230 feet above the lowest point in the foundation excavation.

The location of the axis of Horsetooth Dam is described as follows: Starting at the SE corner of Section 6, T. 7 N., R. 69 W., Station 0 + 00 of the axis bears N. 66° 39' 43" W. a distance of 4,577.0 feet. The bearing of the axis is S. 71° 0' W. from said station and is 1,600 feet in length. The height of the dam is 150 feet above the lowest point in the foundation excavation. There is also provided an outlet through the dam. This outlet will supply project waters to the Poudre River area. Adjacent to the outlet is a valve house and stilling basin which is the headworks of the Poudre Supply Canal hereinafter discussed. The outlet conduit will be a reinforced concrete

tube throughout and downstream from the gate chamber which is located near the axis; all water will be transported in two 72" inside diameter steel pipes. The maximum capacity of the outlet works is 1500 second feet.

The location of the axis of Satanka Dike is as follows: Starting at the NE corner of Section 1, T. 7 N., R. 70 W., Station 0 / 00 of the axis bears S. 13° 33' 51" W., a distance of 4,335.8 feet. The bearing of the axis is N. 85° 25' W. from said station and is 290 feet in length. The height of the dike is 16 feet above the lowest point in the foundation excavation.

The source of supply of the reservoir is the project water delivered by the Horsetooth Feeder Canal.

The above ground surface capacity of Horsetooth Reservoir is 147,322 acre feet.

"Dead" storage	6,808 acre feet
"Active" storage	140,514 acre feet
"Bank" storage	1,500 acre feet
Total storage	148,822 acre feet

11. The Irrigation Supply Canals (Sheet 7, Exhibit C) are the terminal project features constructed by the Government. These canals receive their water supply from the storage reservoirs and deliver it to the North Poudre Irrigation System, the Cache la Poudre, Big and Little Thompson Rivers, St. Vrain Creek, Boulder Creek and South Platte River.

The St. Vrain Supply Canal has its beginning in Carter Lake Reservoir and more particularly at the intersection of the centerline of the Carter Lake Dam axis and the centerline of the outlet works, which point is designated as traverse Station No. 0 and which point bears N. 39° 00' W. a distance of 1827 feet from the SE cor. of Sec. 10, T. 4 N., R. 70 W., 6th Principal Meridian. The canal will have an earth or lined section as necessary with a capacity of 500 second feet, and will extend from its point of beginning in a southerly direction for a distance of 13.0 miles to its intersection with the North St. Vrain Creek, which intersection is traverse Station No. 22 and bears S. 49° 50' W. a distance of 3,100 feet from the NE Cor. of Sec. 20, T. 3 N., R. 70 W., 6th Principal Meridian (Sheet 7, Exhibit C).

The Boulder Creek Supply Canal, an extension of the St. Vrain Supply Canal, has its beginning at its intersection with the St. Vrain Creek which point is traverse Station No. 22 and bears S. 49° 50' W. a distance of 3,100 feet from the NE Cor. of Sec. 20, T. 3 N., R. 70 W., 6th Principal Meridian. The canal is of earth or lined section with irrigation structures as necessary and has a carrying capacity of 300 cubic feet per second. The canal extends from its point of beginning in a southerly direction for a distance of 16.3 miles to its intersection with Boulder Creek which intersection is traverse Station No. 39 and bears N. 10° 40' E. a distance of 2,100 feet from SW Cor. of Sec. 17, T. 1 N., R. 69 W., 6th Principal Meridian (Sheet 7, Exhibit C).

The South Platte Supply System, an extension of the Boulder Creek Supply Canal, has its beginning at the point of discharge of the Boulder Creek Supply Canal into Boulder Creek, which point is traverse Station No. 39, and bears N. 10° 40' E. a distance of 2,100 feet from the SW Cor. of Sec. 17, T. 1 N., R. 69 W., 6th Principal Meridian. From said point canal waters will be allowed to flow in Boulder Creek stream bed in a northeasterly direction for a distance of 7.7 miles to the confluence of Boulder Creek and Idaho Creek which point is traverse Station No. 44 and bears N. 3° 30' E. a distance of 2,900 feet from the SW Cor. of Sec. 29, T. 2 N., R. 68 W., 6th Principal Meridian. From said traverse point No. 44, canal waters will be allowed to flow in Idaho Creek stream bed in a northeasterly direction for a distance of 1.4 miles to traverse Station No. 45, which point bears N. 14° 50' E. a distance of 2,200 feet to the SW Cor. of Sec. 21, T. 2 N., R. 68 W., 6th Principal Meridian.

From said traverse Station No. 45, waters will be allowed to flow in the South Platte Supply Canal in an easterly direction for a distance of 15.8 miles to a point of discharge into the South Platte River which point is traverse Station No. 55 and bears S. 59° 00' W. a distance of 800 feet from the NE Cor. of Sec. 19, T. 2 N., R. 66 W., 6th Principal Meridian. The South Platte Supply System has a carrying capacity of 300 cubic feet per second with a total length, including natural stream bed and constructed canal, of 24.9 miles (Sheet 7, Exhibit C).

The Poudre Supply Canal, capacity of 1,500 second feet, has its heading in Horsetooth Reservoir through an outlet works in Horsetooth Dam. Beginning at traverse Station No. 1 of the outlet works, said station being the same point as Station 8 + 84.37 of the dam axis, from which point the SE Cor. of Sec. 6, T. 7 N., R. 69 W., 6th Principal Meridian bears S. 73° 09½' E. a distance of 5,264.5 feet; the Poudre Supply Canal extends in a northerly direction for a distance of 5.2 miles to the point of discharge into the Cache la Poudre River, which point is traverse Station No. 66 and bears S. 19° 56½' E. a distance of 3,951.2 feet from the NW Cor. of Sec. 14, T. 8 N., R. 70 W., 6th Principal Meridian (Sheet 7, Exhibit C).

The North Poudre Supply Canal (Gravity Plan), capacity of 250 second feet, has its beginning in the Cache la Poudre River, traverse Station No. 1 being the headworks, and from which point the NE Cor. of Sec. 5, T. 8 N., R. 70 W., 6th Principal Meridian, bears N. 70° 15' E., a distance of 2,460 feet. The canal, consisting of various section including tunnels, siphons, closed conduits, and open canal, extends in a northeasterly direction for a distance of 12.0 miles to a point of discharge into the North Poudre Ditch, said point being traverse Station No. 20 and which point bears S. 71° 30' E., a distance of 850 feet from the NW Cor. of Sec. 9, T. 9 N., R. 69 W., 6th Principal Meridian (Sheet 7, Exhibit C).

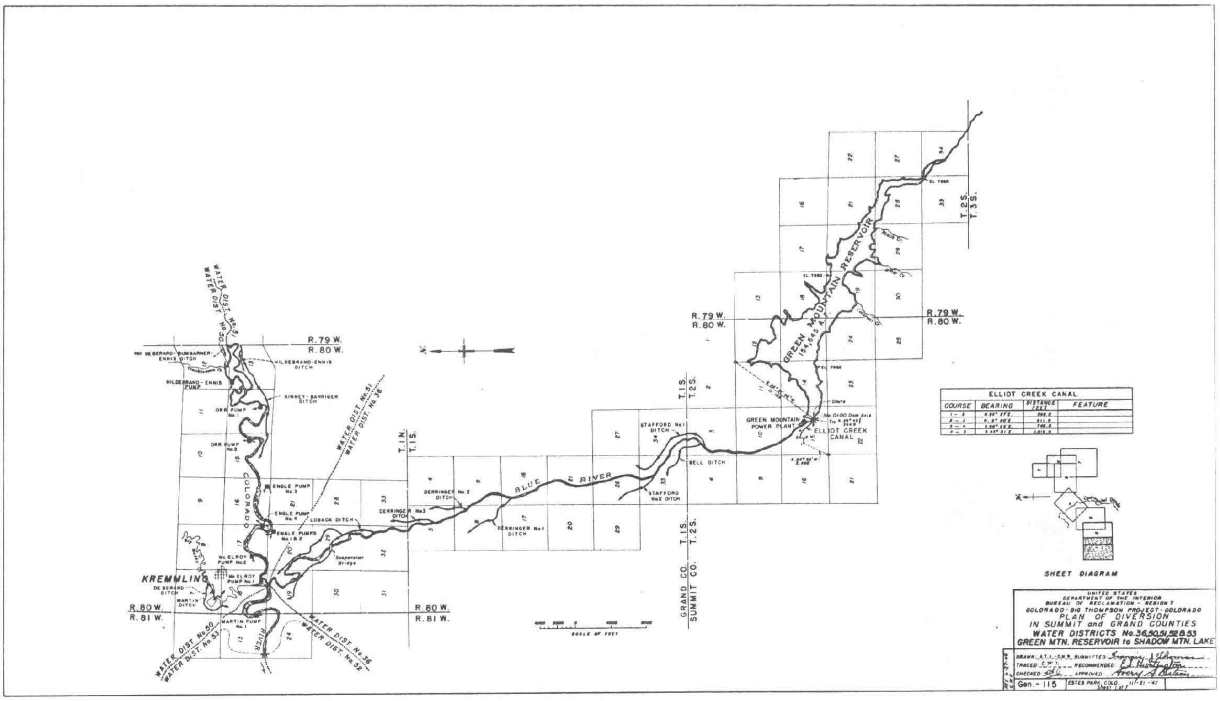
The Pumping Plant Plan, capacity of 250 second feet, an alternate to the Gravity Plan, has its beginning in Section 14, T. 8 N., R. 70 W., 6th Principal Meridian, at the end of the Poudre Supply Canal. Project water is siphoned across the Poudre River and empties into Poudre Valley and Reservoir Co. Canal, which is to be enlarged to convey water to a pumping plant in Section 18, T. 8 N., R. 69 W., which will lift the water 182 feet to a gravity canal. The gravity canal will run in a northerly direction for three miles to coincide with the North Poudre Supply Canal (Gravity Plan) in the SE¼ of Section 31, T. 8 N., R 69 W., as shown on Sheet 7, Exhibit C.

At the aforementioned points of delivery, in the Cache la Poudre, Big and Little Thompson Rivers and the North Poudre Canal, project waters are delivered to the Northern Colorado Water Conservancy District for administration and delivery

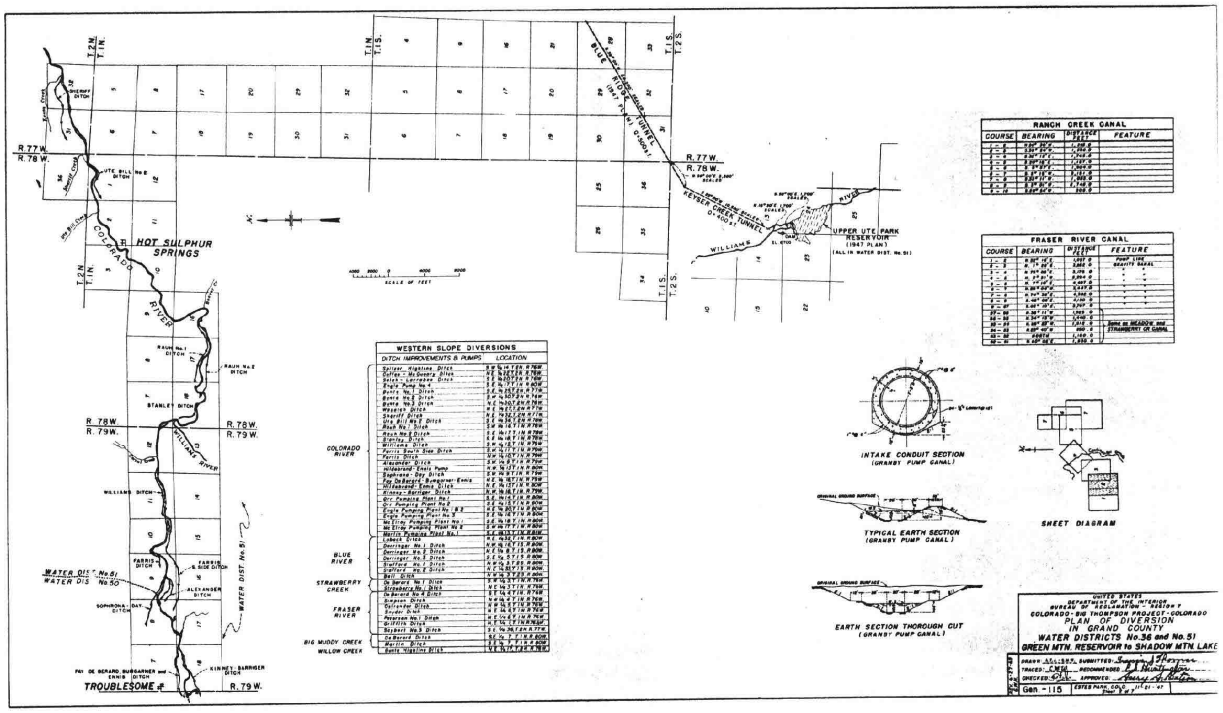
to the water users through existing, enlarged, improved or new irrigation facilities.

12. The transmission lines and substations interconnect the power plants and pumping plants of the project and deliver electric power to the consumers. There are approximately 1000 circuit miles of transmission lines and 50 substations in Northern Colorado to most effectively and efficiently deliver this power to the consumers.

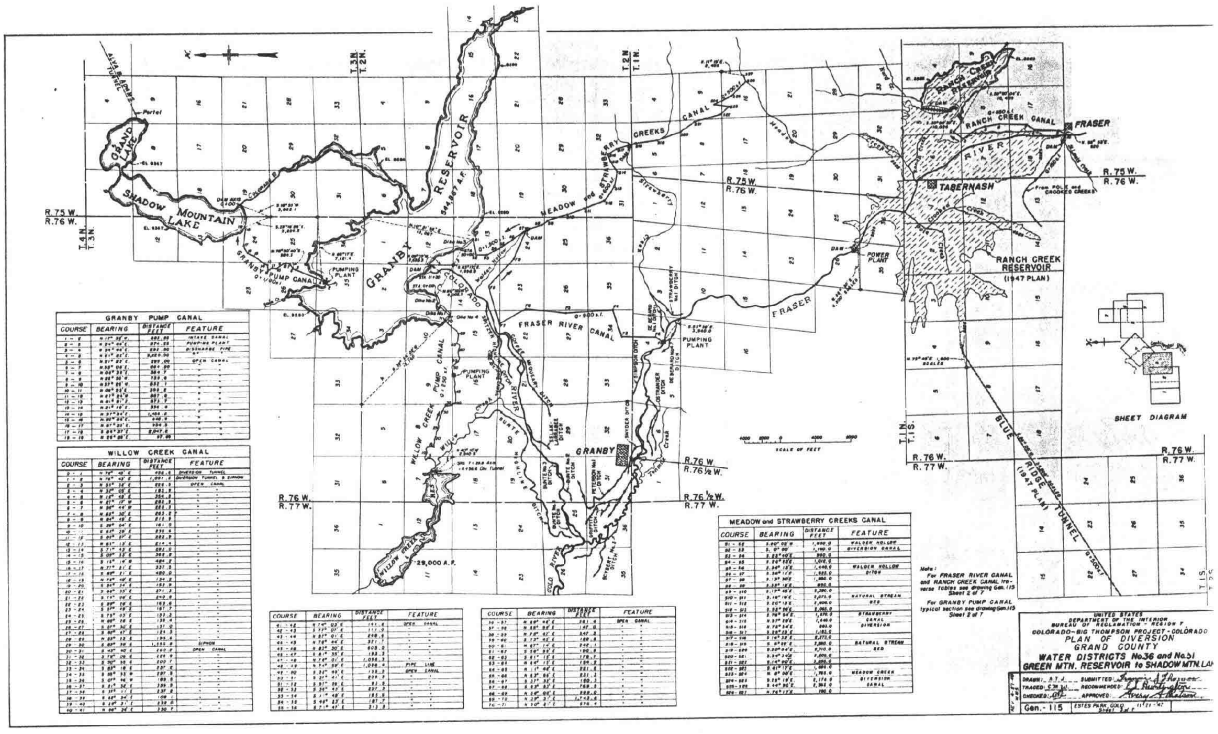
00-00-0000: sketch of elliot creek canal



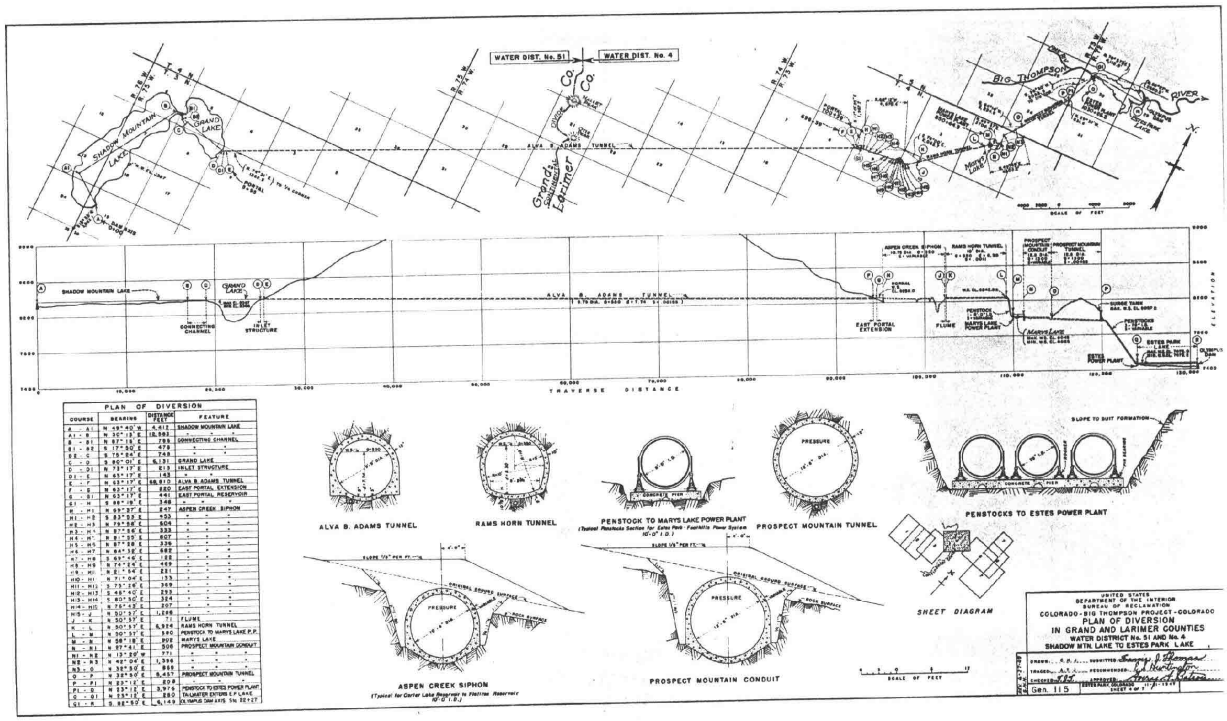
00-00-0000: sketch of plan of diversion



00-00-0000: map of plan of diversion



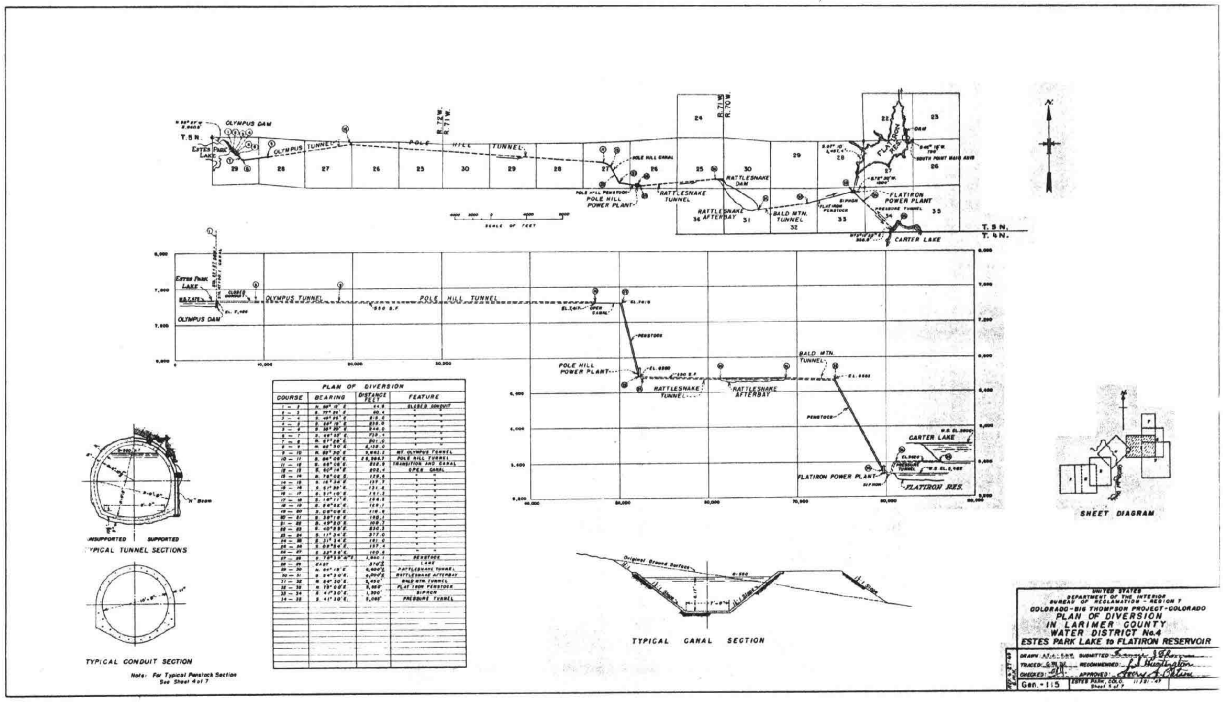
00-00-0000: map of plan of diversion

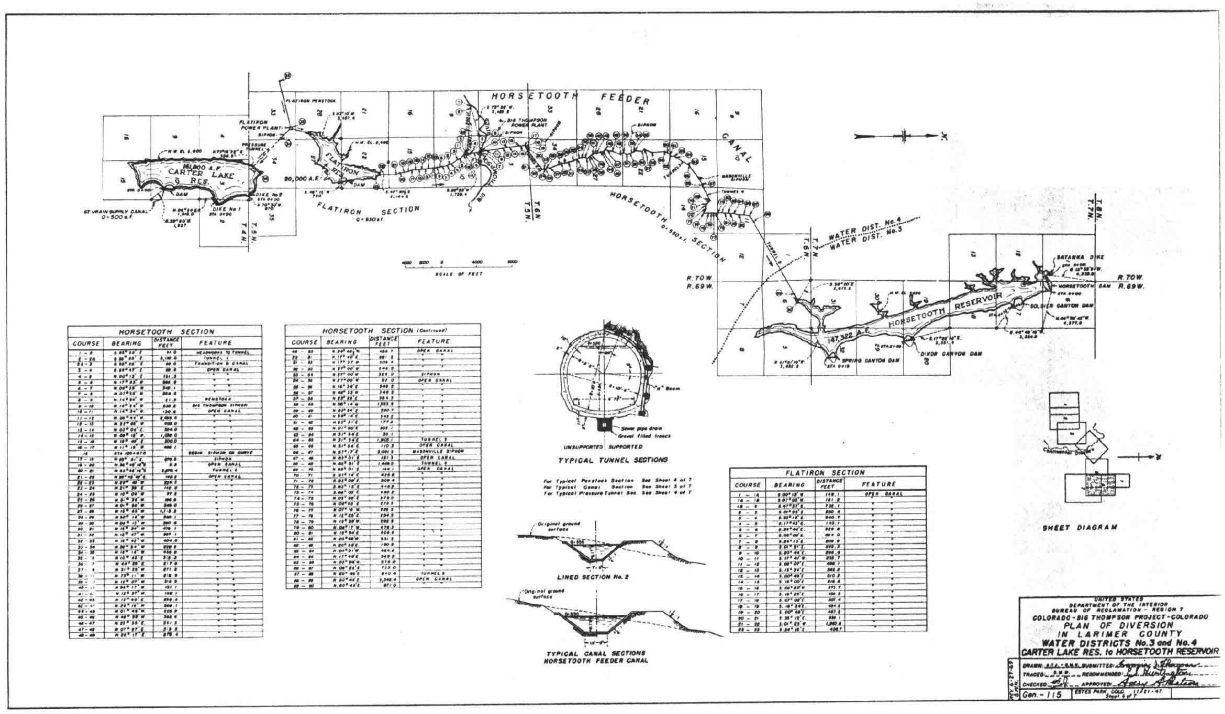


PLAN OF DIVERSION

COURSE	BEARING	DISTANCE IN FEET	FEATURE
A - A1	N 46° 40' W	6,612	SHADOW MOUNTAIN LAKE
A1 - B1	N 35° 15' E	(8,580)	- - -
B - B1	S 82° 15' E	784	CONNECTING CHANNEL
B1 - C	S 17° 50' E	478	" "
C1 - C	S 75° 54' E	748	" "
C - D	S 80° 01' E	6,191	GRAND LAKE
D - D1	N 72° 17' E	819	INLET STRUCTURE
D1 - E	N 65° 17' E	143	"
E - F	N 65° 17' E	58,810	ALVA B. ADAMS TUNNEL
F - G	N 65° 17' E	280	EAST PORTAL EXTENSION
G - G1	N 65° 17' E	491	EAST PORTAL RESERVOIR
G1 - H	S 88° 19' E	348	" " "
H - H1	N 89° 37' E	247	ASPEN CREEK SIPHON
H1 - H2	S 83° 52' E	433	" " "
H2 - H3	N 79° 58' E	604	" " "
H3 - H4	N 87° 56' E	333	" " "
H4 - H5	N 81° 35' E	607	" " "
H5 - H6	N 87° 58' E	339	" " "
H6 - H7	N 84° 18' E	682	" " "
H7 - H8	S 69° 46' E	182	" " "
H8 - H9	S 74° 16' E	469	" " "
H9 - H10	S E' 54' E	231	" " "
H10 - H11	N 71° 04' E	133	" " "
H11 - H12	S 75° 26' E	349	" " "
H12 - H13	S 45° 40' E	293	" " "
H13 - H14	S 80° 30' E	324	" " "
H14 - H15	N 78° 45' E	207	" " "
H15 - J	N 30° 37' E	1,648	" " "
J - K	N 30° 37' E	71	FLUME
K - L	N 30° 37' E	6,924	RAMS HORN TUNNEL
L - M	N 30° 37' E	640	PENSTOCK TO MARYS LAKE P.P.
M - N	N 28° 18' E	902	MARY'S LAKE
N - N1	N 27° 41' E	508	PROSPECT MOUNTAIN OUTAUT
N1 - N2	N 13° 29' W	771	" " "
N2 - N3	N 48° 04' E	1,598	" " "
N3 - O	N 38° 30' E	885	" " "
O - P	N 28° 54' E	5,457	PROSPECT MOUNTAIN TUNNEL
P - P1	N 23° 11' E	209	" " "
P1 - Q	N 15° 11' E	3,975	PENSTOCK TO ESTES POWER PLANT
Q - Q1	N 13° 11' E	280	TAILWATER OUTLET C.F. LAKE
Q1 - R	S. 88° 59' E.	4,149	24 TRIPLE DIAMETERS TO TEE ET

00-00-0000: map of plan of diversion in larimer county




HORSETOOTH FEEDER CANAL
HORSETOOTH RESERVOIR
CARTER LAKE
FLATIRON SECTION
HORSETOOTH SECTION
WATER DIST. No. 4
WATER DIST. No. 3
R. 70 W.
R. 69 W.
SHEET DIAGRAM
TYPICAL TUNNEL SECTIONS
LINED SECTION No. 2
TYPICAL CANAL SECTIONS
HORSETOOTH FEEDER CANAL
PLAN OF DIVERSION
IN LARIMER COUNTY
WATER DISTRICTS No. 3 and No. 4
CARTER LAKE RES. to HORSETOOTH RESERVOIR
Gen. - 115

00-00-0000: map of plan of diversion

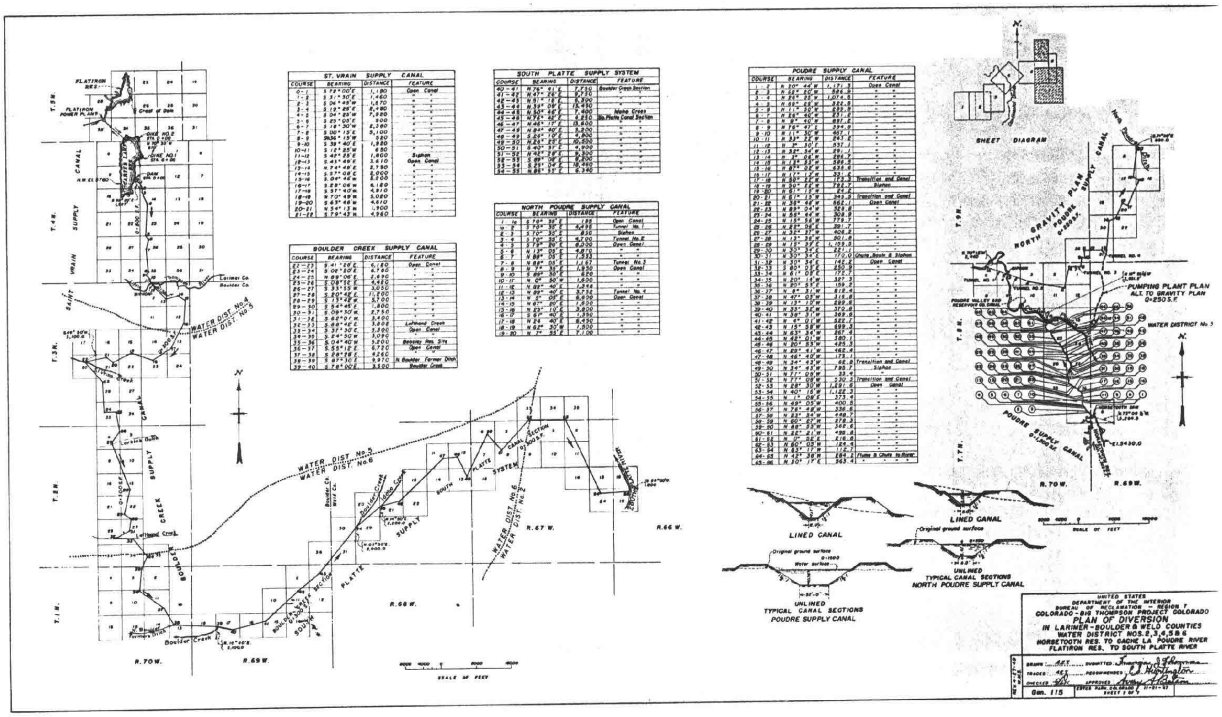


EXHIBIT D

Forest Service Rights

1. Slate Creek Ranger Station Domestic Water Supply Line: two hundredths (.02) cubic foot of water per second of time for domestic purposes with a priority of September 1, 1933, from Slate Creek, a tributary of the Colorado River; diversion accomplished by pipe line one and one-quarter inches in diameter with its point of diversion being situated in the north bank of Slate Creek whence the quarter section corner common to Sections 18 and 19, Township 3 South, Range 78 West of the 6th Principal Meridian, Summit County, Colorado, bears north forty-six degrees, sixteen minutes, twenty seconds (46° 16' 20") East eight hundred seventy-eight and forty-seven hundredths (878.47) feet; said pipe line proceeds in a general northeast course from the point of intake for a distance of thirteen hundred forty-nine and sixteen hundredths (1349.16) feet.

2. Officers Gulch Retaining Pond: six and forty-one hundredths (6.41 acre-feet of storage and one cubic foot of water per second of time of direct flow from Ten-Mile Creek, a tributary of the Blue River, a tributary of the Colorado River, for fish culture and stock-watering purposes, with a priority date of August 6, 1934; the aforesaid pond being situated in the Southwest quarter (SW 1/4) of Section 8, Township 6 South, Range 78 West of the 6th Principal Meridian, Summit County, Colorado. The height of the dam creating said retaining pond is seven (7) feet; and the depth of the water in said pond from high-water line to the bottom of the outlet is five (5) feet.

3. West Ten-Mile Retaining Pond and West Ten-Mile Ditch: forty-one thousand six hundred seventy (41,670) cubic feet of storage and one cubic foot of water per second of time of the direct flow of Guller Gulch and Willow Gulch, tributaries of West Ten-Mile Creek, a tributary of the Blue River, a tributary of the Colorado River, with a priority of August 23, 1935, for fish culture, stock-watering and recreational purposes.

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Said pond is situated in the Northwest quarter (NW 1/4) of Section 25, Township 6 South, Range 79 West of the 6th Principal Meridian, Summit County, Colorado. The dam creating the retaining pond is eight (8) feet high and the depth of the water of said pond to the bottom of the outlet is seven (7) feet. The headgate of Ten-Mile Ditch is located at a point in Guller Gulch whence the East quarter section corner of Section 30, Township 6 South, Range 78 West of the 6th Principal Meridian, Summit County, Colorado, bears South eighty-eight degrees, three minutes (88° 03') East a distance of ten thousand, one hundred and five (10,105) feet. Said ditch empties into Willow Gulch at a point whence the westerly end of the West Ten-Mile Retaining Pond bears North seventy-seven degrees, ten minutes (77° 10') East, eleven hundred and sixty-eight (1168) feet distant. Water is carried in Willow Gulch from the point where said ditch enters same, to the said retaining pond. The general course of said ditch and of said Willow Gulch is Northeast; the depth of said ditch at high-water line as now constructed is one (1) foot; the width of said ditch at high-water line is three and five-tenths (3.5) feet; the bottom width of said ditch is one and five-tenths (1.5) feet; the grade of said ditch is two (2) feet per one thousand (1,000) feet; the length of said ditch is seven hundred and fifteen (715) feet; the carrying capacity of said ditch is one and seventy-three hundredths (1.73) cubic feet of water per second of time.

4. Idlewild Ranger Station Yard Ditch: five tenths (.5) cubic foot of water per second of time from Cooper Creek, a tributary of the Fraser River, which is a tributary of the Colorado River, with a priority date of May 22, 1916, for irrigation of approximately one and one-half (1 1/2) acres of land used for a lawn and garden at the Idlewild Ranger Station situated in the Southeast quarter of the Southwest quarter (SE-1/4 SW-1/4) of Section 3, and the Northeast quarter of the Northwest quarter (NE-1/4 NW-1/4) of Section 10, all in Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado. The headgate of said ditch is located in the right bank of

16—29995-1 GPO 0 - 879013

Cooper Creek, whence the Northeast corner, Section 3, Township 2 South, Range 75 West of the 6th Principal Meridian, bears North thirty degrees, twenty-three minutes (30° 23') East, seven thousand, one hundred and fifty (7,150) feet; the general course of said ditch is easterly; the depth of said ditch at high-water line is eight (8) inches; the top width at high-water line is one (1) foot; the bottom width is eight (8) inches; the grade is ten (10) feet to forty (40) feet per one thousand (1000) feet; the length of said ditch is seven hundred and eighteen (718) feet; and the carrying capacity is five tenths (.5) cubic foot of water per second of time.

5. Fraser Experimental Station Pipe Line: fifty-five thousandths (.055) cubic foot of water per second of time, with a priority date of August 13, 1939, for domestic and irrigation purposes, including the irrigation of about three-fourths (3/4) of an acre of land used for lawn and garden at Fraser Experimental Station, situated in unsurveyed Section 3, Township 2 South, Range 76 West, of the 6th Principal Meridian, Grand County, Colorado; diversion accomplished by pipe line two inches in diameter, with its point of diversion situated in the east bank of West St. Louis Creek, tributary of St. Louis Creek, tributary of Fraser River, tributary of Colorado River, whence the Southwest (SW) corner, Section 34, Township 1 South, Range 76 West, of the 6th Principal Meridian, bears North thirty-five degrees, no minutes (35° 00') East, two thousand eight hundred and forty (2,840) feet; said pipe line proceeds in a general northeasterly course for a distance of three thousand three hundred (3,300) feet.

6. Idlewild Ranger Station Domestic Water Supply Pipe Line: fifteen thousandths (.015) cubic foot of water per second of time with a priority date of June 10, 1927, for domestic and irrigation purposes, including the irrigation of one and one-half (1 1/2) acres of lawn and garden at Idlewild Ranger Station, situated in the Southeast quarter of the Southwest quarter (SE 1/4 SW 1/4), Section 3, and the Northeast quarter of the

16—29995-1 GPO 0 - 878013

Northwest quarter (NE¼ NW¼), Section 10, both in Township 2 South, Range 75 West of the 6th Principal Meridian, from a spring, a tributary of the Colorado River; diversion accomplished by pipe line one inch in diameter, with its headgate located at the spring whence the Northeast (NE) corner of Section 3, Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado, bears north thirty-two degrees, no minutes (32° 00') East, four hundred and thirty-two (432) feet, thence North twenty-five degrees, no minutes (25° 00') East, six hundred and seventy-one (671) feet; said pipe line proceeds in a general northeasterly course from the point of intake for a distance of six hundred and twenty (620) feet.

7. Idlewild Ranger Station Pasture Ditch: one cubic foot of water per second of time from the Fraser River, a tributary of the Colorado River, with priority date of May 5, 1936, for irrigation and stock-watering purposes; the headgate of said ditch is located on the east bank of the Fraser River, whence the Northeast (NE) corner, Section 3, Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado, bears North twenty-five degrees, sixteen minutes (25° 16') East five thousand, nine hundred and seventy-four (5,974) feet; the general course of said ditch is northwesterly; the depth at high-water line is one (1) foot; the top width at high-water line is one and five-tenths (1.5) feet; the bottom width is one (1) foot; the length of said ditch is one thousand, six hundred and five (1,605) feet. Said ditch diverts water for irrigation of twelve (12) acres of land in the Southeast Quarter of the Southwest Quarter (SE¼ SW¼) of Section 3, Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado.

8. Idlewild Ranger Station Cooper Creek Supply Pipe Line: thirteen hundredths (.13) cubic foot of water per second of time, from Cooper Creek, a tributary of Fraser River, a tributary of the Colorado River, with priority date of June 1, 1939, for domestic and irrigation purposes, including irrigation of one and one-half (1.5) acres of lawn and garden at said Ranger Station in the Southeast quarter of the Southwest quarter (SE¼ SW¼),

16—89995-1 GPO 0 - 878013

Section 3, and the Northeast quarter of the Northwest quarter (NE¼ NW¼), Section 10, both in Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado. Said pipe line is two (2) inches in diameter and extends a distance of approximately twelve hundred three and one-half (1203.5) feet; its general course is northeasterly; its headgate is located on the East bank of Cooper Creek whence the Northeast (NE) corner, Section 3, Township 2 South, Range 75 West of the 6th Principal Meridian, Grand County, Colorado, bears North sixty-five degrees, no minutes (65° 00') East one thousand, five hundred and ten (1,510) feet, thence North twenty-five degrees, no minutes (25° 00') East six thousand, seven hundred and twelve (6,712) feet.

National Park Service Rights

Milner Pass Road Camp Pipe Line: three-tenths (.3) cubic foot of water per second of time from a tributary of Beaver Creek, a tributary of the North Fork of the Colorado River, with a priority date of July 1, 1919, for domestic, irrigation, recreational and fire protection purposes, at Milner Pass Road Camp and Public Camp Ground area, situated in the Southeast quarter of the Northwest quarter (SE¼ NW¼) and the North half of the Southwest quarter (N½ SW¼) of Section 9, Township 5 North, Range 75 West of the 6th Principal Meridian, Grand County, Colorado. The headgate of said pipe line is located at a point on the south, or right bank of a tributary of Beaver Creek, a tributary of the North Fork of the Colorado River, whence the Northeast corner of Section 1, Township 5 North, Range 75 West of the 6th Principal Meridian, bears North sixty-nine degrees, three minutes (69° 03') East twenty thousand, seven hundred and fifty-two (20,752) feet; the general course of the diversion pipe line 16.5' in length is southeasterly and the distribution pipe line is southwesterly; the diameter of said pipe line from the diversion or intake point to a distribution reservoir or tank, with a capacity not exceeding ten thousand (10,000) gallons, is two and one-half (2½) inches; the grade of said pipe line is two hundred and nine (209) feet

16—20985-1 GPO O - 879013

per one thousand (1000) feet; the carrying capacity of said pipe line is three-tenths (.3) cubic foot of water per second of time.

2. Timber Creek Water System: five hundred and forty-two thousandths (.542) cubic foot of water per second of time from Timber Creek, a tributary of the North Fork of the Colorado River, with a priority date of July 1, 1931, for domestic, irrigation, recreational, and fire protection purposes at Timber Creek Camp Ground situated in the Northwest quarter of the Southwest quarter (NW¼ SW¼) of Section 19; T5N, R75W East half of the Southeast quarter (E½ SE¼) Section 24, Township 5 North, Range 76 West of the 6th Principal Meridian, Grand County, Colorado. Rights are claimed for approximately twenty (20) acres of irrigable lands of the property last described. Diversion is accomplished by means of a four-inch pipe line two thousand two hundred and sixty-four and eighty-seven hundredths (2,264.87) feet in length, having its intake at a point on the North bank of Timber Creek, whence the West quarter corner of Section 19, Township 5 North, Range 75 West of the 6th Principal Meridian, bears North sixty-four degrees, fifty-two minutes (64° 52') West seven hundred thirty-four and thirty-three hundredths (734.33) feet.

3. Grand Lake Lodge Power Pipe Line and Power Plant: eight (8) cubic feet of water per second of time from Tonahutu Creek, a tributary of the North Fork of the Colorado River, with a priority date of June 1, 1920, for the generation of electricity in a power plant located in the Northeast quarter of the Southwest quarter of the Northwest quarter (NE¼ SW¼ NW¼) of Section 32, Township 4 North, Range 75 West of the 6th Principal Meridian, Grand County, Colorado. Diversion of the quantity of water above specified is accomplished by a headgate situated at a point on the West or right bank of Tonahutu Creek, whence the Northwest (NW) corner of Section 32, Township 4 North, Range 75 West of the 6th Principal Meridian bears North eighty-seven degrees, fifty-two minutes (87° 52') West one thousand seven hundred and fifty-six and thirty-four hundredths (1,756.34) feet. The diversion capacity of the

X Correction recommended to Dept. of Justice by Solicitor's Letter of Aug. 17, 1949 A. Wendt Dunn

16—29986-1

GPO 0 - 878013

structures by means of which the water is conducted to the power plant is approximately thirty (30) cubic feet of water per second of time. After diversion water flows through a ditch discharging into a penstock or pipe line the length of which is one thousand seven hundred and eighty(1780) feet to the place of use. After use the water diverted is returned to the stream two thousand and twenty (2020) feet below the point of diversion.

4. Grand Lake Lodge and Ranger Station Water System: twenty-four thousandths (.024) cubic foot of water per second of time, with a priority date of June 1, 1920; forty-eight thousandths (.048) cubic foot of water per second of time, with a priority date of July 1, 1926, both from Tonahutu Creek, a tributary of the North Fork of the Colorado River, for domestic, irrigation, fire protection, and recreational uses at Grand Lake Lodge, the Grand Lake Ranger Station entrance, and utility areas of Rocky Mountain National Park. Water diverted pursuant to those rights will all be used within the South half of the South half ($S\frac{1}{2}$ $S\frac{1}{2}$) of Section 31, Township 4 North, Range 75 West of the 6th Principal Meridian, Grand County, Colorado. Diversion of the ~~rights~~ water defined above is accomplished at two headgates located in the West, or right bank of Tonahutu Creek, the first of which is at a point at a small concrete dam, whence the northwest corner of Section 32, Township 4 North, Range 75 West of the 6th Principal Meridian, bears North thirty-one degrees, twelve minutes (31° 12'), West eighteen hundred and fifty-five hundredths (1800.55) feet; the second of which is at a point, whence the Northwest corner of said Section 32 bears North eighty-seven degrees, fifty-two minutes (87° 52') West seventeen hundred fifty-six and thirty-four hundredths (1756.34) feet. From the points of diversion referred to the water is conducted by means of pipe lines and conduits to the place of use above described.

x Corrections recommended as noted on page c

16—29995-1 GPO 0 - 879013

RECEIVED
Office of the Director
NATIONAL PARK SERVICE
1952 AUG 27 PM 1:26

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA

Address Reply to:
Regional Director, Region Two
National Park Service

Refer to:
L54 ROCK-L

Packer
~~Lost Bum~~

AUG 22 1952

Pica

Memorandum

To: Director

From: Acting Assistant Regional Director, Region Two

Subject: Rocky Mountain National Park Claims to be Presented in the Pending Water Rights Adjudication in the United States District Court, District of Colorado

Enclosed are a copy of Mr. Canfield's memorandum of August 12 and a copy of the amended petition which accompanied his memorandum.

It is believed that these petitions incorporate the corrections requested by Mr. Allen's memorandum of June 4.

George F Ingalls
George F. Ingalls
Acting Assistant Regional Director

In duplicate

Attachments

Copy to: Supt., Rocky Mt. NP

08-12-1952: memorandum to regional director from superintendent regarding national park claims to be presented in the pending

August 12, 1952

Memorandum

To: Regional Director, Region Two

From: Superintendent, Rocky Mountain National Park

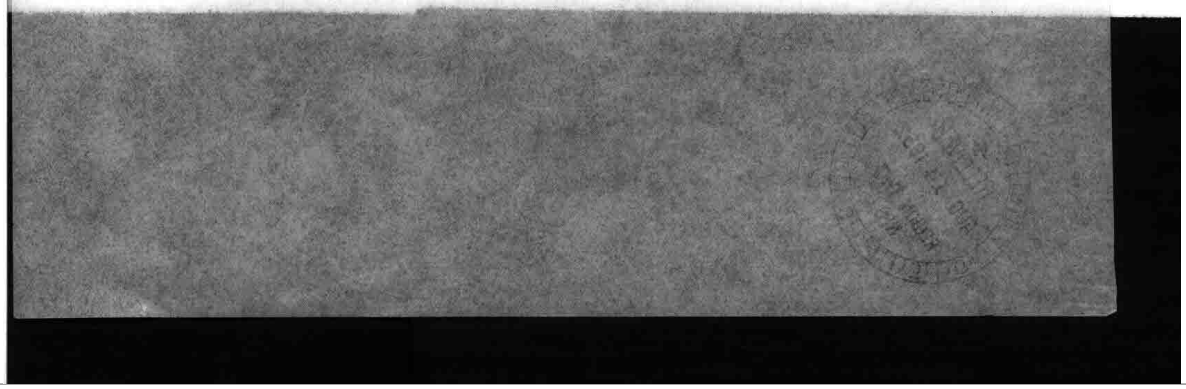
Subject: National Park Claims to be Presented in the Pending Water Rights Adjudication in the United States District Court, District of Colorado

Enclosure is made of two copies of amended petitions which the Special Assistant to the Attorney General proposes to use in perfecting Rocky Mountain National Park's water rights claims in the water adjudication to be heard in the United States District Court for the District of Colorado sometime early in October, 1952.

This office has examined these proposed petitions and believes that the corrections requested by the Water Rights Division have been made and that these instruments are now in proper form.

David H. Canfield
Superintendent

Enclosures 2



08-12-1952: memorandum to regional director from superintendent regarding national park claims to be presented in the pending



00-00-0000: national park service rights

NATIONAL PARK SERVICE RIGHTS

1. MILNER PASS ROAD CAMP PIPELINE: three tenths (.3) of a cubic foot of water persecond of time from a nameless stream, a tributary of the North Fork of the Colorado River through Beaver Creek, with a priority date of July 1, 1919, for domestic (including irrigation of lawns), recreational and fire protection purposes, at Milner Pass Road Camp and Public Camp Ground Area, situated in the Southeast quarter of the Northwest quarter (SE¼NW¼) and the North half of the Southwest quarter (N½SW¼) of Section 9, Township 5 North, Range 75 West of the 6th Principal Meridian. The headgate or intake of said pipeline is located at a point on the south, or right, bank of said nameless stream, whence the Northeast corner of Section 1, Township 5 North, Range 75 West of the 6th Principal Meridian bears North sixty-nine degrees, three minutes (69° 03') East twenty thousand seven hundred fifty-two (20,752) feet. The general course of the diversion pipeline, sixteen and five-tenths (16.5) feet in length, is southwesterly. The diameter of said pipeline from the diversion or intake point to a distribution reservoir or tank, with a capacity not exceeding ten thousand (10,000) gallons, is two and one-half (2½) inches. The grade of said pipeline is two hundred nine (209) feet per thousand (1000) feet. The water from said reservoir or tank is distributed at places of use in said Milner Pass Road Camp and Public Camp Ground Area by a distribution pipe. The carrying capacity of said two and one-half (2½) inch pipe is three-tenths (.3) of a cubic foot of water per second of time, which amount of water is needed for said domestic, sanitary, irrigation, recreational and fire protection purposes. Construction of said pipeline was begun on July 1, 1919, and was completed during the summer of that year, and said pipeline has been used every year since to the capacity thereof, for the purposes stated.

2. TIMBER CREEK WATER SYSTEM: five hundred forty-two thousandths (.542) of a cubic foot of water per second of time from Timber Creek, a tributary of the North Fork of the Colorado River with a priority date of July 1, 1931, for domestic, irrigation and fire protection purposes at a public campground and road camp, designated as Timber Creek Campground, situated in the Northwest quarter of the Southwest quarter (NW¼SW¼) of Section 19, Township 5 North, Range 75 West of the 6th Principal Meridian; and in the East half of the Southeast quarter (E½SE¼) of Section 24, Township 5 North, Range 76 West of the 6th Principal Meridian. The number of acres to be irrigated is approximately 20 acres. The headgate or intake of said pipeline is located at a point on the North, or right, bank of said Timber Creek, whence the West quarter corner of said Section 19 bears North sixty-four degrees, fifty-two minutes (64° 52') West seven hundred thirty-four and thirty-three hundredths (734.33) feet. The general course of said pipeline is southwesterly and crosses said Timber Creek. The diameter of said pipeline is four (4) inches; the grade thereof is sixty-three and six-tenths (63.6) feet; the length thereof is two thousand two hundred sixty-four and eighty-seven hundredths (2,264.87) feet; the carrying capacity thereof is five hundred forty-two thousandths (.542) of a cubic foot of water per second of time.

3. GRAND LAKE LODGE POWER PIPELINE AND POWER PLANT: eight (8) cubic feet of water per second of time from Tonahutu Creek, a tributary of the North Fork of the Colorado River through the North Inlet to Grand Lake with a priority date of June 1, 1920, for the generation of electricity in a power plant located in the Northeast quarter of the Southwest quarter of the Northwest quarter of Section 32, Township 4 North, Range 75 West of the 6th Principal Meridian. The headgate of said pipeline is located on the West, or right, bank of said Tonahutu Creek, at a point whence the Northwest corner of said Section 32 bears North eighty-seven degrees, fifty-two minutes (87° 52') West one thousand seven

7—1404

U. S. GOVERNMENT PRINTING OFFICE

hundred fifty-six and thirty-four hundredths (1756.34) feet. The said headgate, made of wood, is sixty-seven and one-half (67½) inches in width. It is usually opened to provide a submerged opening of more than eleven (11) square feet under an effective head of two and one-half (2½) feet. The diversion capacity thereof is in excess of thirty (30) cubic feet of water per second of time. Water diverted is conveyed one hundred seventy-five (175) feet by earth. Said ditch has a variable cross section, with a minimum width of nine (9) feet. The depth of said ditch is eighteen (18) inches. The length thereof is one hundred seventy-five (175) feet; the minimum grade thereof is one and fifty-five hundredths (1.55) feet per thousand feet; the capacity thereof is in excess of thirty (30) cubic feet of water per second of time, but the actual amount of water carried therein to and through the hydroelectric plant has been and is eight (8) cubic feet of water per second of time. There is a spillway at the end of said ditch by which all water not needed for beneficial use is immediately returned to the stream. The said ditch discharges into a pipeline or penstock. The diameter of said penstock is twenty (20) inches; the length thereof is one thousand seven hundred eighty (1780) feet; the controlling grade thereof is thirty-two and twenty-two hundredths (32.22) feet per thousand (1000) feet; the total fall is one hundred sixty-three (163) feet. The water from the said penstock, after passing over a wheel in the said hydroelectric plant, is immediately returned to the stream by a ditch, one hundred feet in length, at a point two thousand twenty (2020) feet below the point of diversion. The general course of the structure, including the ditch and penstock, is Southwesterly. Work was commenced on said structure on June 1, 1920, and was completed in that year with the lower diversion. The present upper diversion was built in 1926. Continuous use of the amount of water claimed for the purposes stated has been made ever since 1920.

4. GRAND LAKE LODGE AND RANGER STATION WATER SYSTEM; twenty-four thousandths (.024) of one cubic foot of water per second of time, with a priority date of June 1, 1920; and forty-eight thousandths (.048) of one cubic foot of water per second of time with a priority date of July 1, 1926, both from Tonahutu Creek, a tributary of the North Fork of the Colorado River through the North Inlet to Grand Lake. Claim is made to use at Grand Lake Lodge, the Grand Lake Ranger Station entrance, and utility areas of Rocky Mountain National Park for domestic, including lawn irrigation, and for recreational and fire protection purposes, the above amounts of water, and of the right to divert all or any part of the total quantity of seventy-two thousandths (.072) of a cubic foot of water per second of time at either of the headgates hereinafter referred to. The said Lodge, Ranger Station, entrance, and utility areas are all located in the South half of the South half (S½S½) of Section 31, Township 4 North, Range 75 West of the 6th Principal Meridian. There are two headgates or intakes for said water system which are located on the West, or right, bank of said Tonahutu Creek, as follows: (a) at a point, hereinafter referred to as "point a," at a small concrete dam, whence the Northwest corner of Section 32, Township 4 North, Range 75 West of the 6th Principal Meridian bears North thirty one degrees, twelve minutes (31° 12') West eighteen hundred and fifty-five hundredths (1800.55) feet; (b) at a point, hereinafter referred to as "point b," whence the Northwest corner of said Section 32 bears North eighty-seven degrees, fifty-two minutes (87° 52') West seventeen hundred fifty-six and thirty-four hundredths (1756.34) feet. The headgate at "point a" consists of a two-inch gate valve imbedded in said concrete dam. The headgate at "point b" is also the headgate of the Grand Lake Power Pipeline, and is described in a separate statement of claim for that pipeline which is being presented to this court. The open ditch and penstock portion of said power pipeline system extends for a distance of about eighteen hundred fifty-five (1855) feet and is also used by the Grand Lake Lodge and Ranger Station Water System.

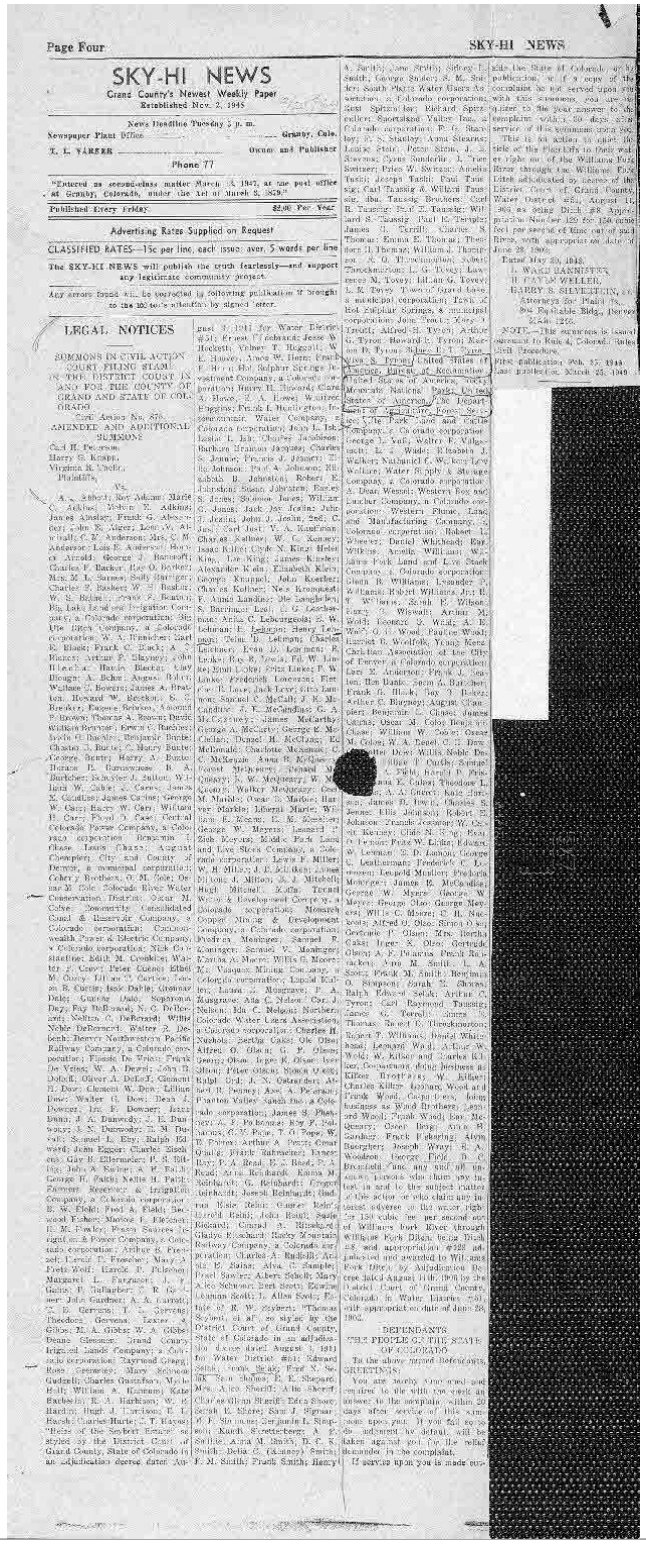
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Two pipes, whose diameters are two (2) inches and whose lengths are each approximately seventy-five (75) feet, extend from said penstock and from the headgate or intake at "point a" to, and form, a junction. The conduits from both diversion or intake points, as described above, which extend to a twenty thousand gallon wood-stave tank or reservoir at the Grand Lake Lodge, are referred to as the main pipeline. However, the headgates at "point a" and "point b" cannot be used simultaneously because of difference in elevation, and the headgate at "point b," which provides the greater pipe capacity, is now used for all normal operation, and constitutes the measure of water use. The general course of the main pipeline is southwesterly. The length of the main pipeline is fifty-six hundred fifty-five (5655) feet, consisting of the aforesaid sixteen hundred eighty (1680) feet of the Grand Lake Lodge Power Pipeline, and thirty-nine hundred seventy-five (3975) feet of galvanized iron pipe, from either the headgate at "point a" or the junction of said galvanized iron pipe and the said Grand Lake Power Pipeline to the aforesaid twenty thousand gallon wood-stave tank or reservoir. The diameter of the penstock, which controls the capacity of the Grand Lake Power Pipeline, is twenty (20) inches. The diameter of the galvanized iron pipe is two (2) inches. The diameter of the penstock is so large that practically no pressure is lost therein and the effective head at the intake of the galvanized iron pipe has a maximum value of one hundred seventy-six (176) feet of water. The effective gradient from "point b" to the twenty thousand gallon tank or reservoir, or of the galvanized iron pipe, is twenty-six and five hundred forty-five thousandths (26.545) feet per thousand (1000) feet. The effective gradient between the headgate at "point a" and said twenty thousand gallon tank or reservoir is five and eight hundred seventy-four thousandths (5.874) feet per thousand (1000) feet. The carrying capacity of said main pipeline when using the upper diversion at "point b" is seventy-two thousandths (.072) of one cubic foot of water per second of time, and when using the lower diversion at "point a" it is twenty-four thousandths (.024) of one cubic foot of water per second of time. Diversion at "point a" was made several years before diversion at "point b," but is now rarely made, and only for emergency purposes when the Grand Lake Lodge Power Pipeline is not in use. A lateral pipeline extends from the main pipeline at a point twenty-five hundred sixty-three (2563) feet below "point a" to the Ranger Station, entrance, and utility areas of the Rocky Mountain National Park. The general course of the lateral is southwesterly. The diameter of said lateral is one (1) inch. The length thereof is thirty-three hundred ninety (3390) feet. The water enters said lateral under pressure, and the maximum effective gradient is one hundred nine (109) feet per thousand (1000) feet. The maximum carrying capacity of said lateral is twenty-one thousandths of one cubic foot of water per second of time. The lateral serves an additional water demand but does not affect the rate of diversion previously described. Work was commenced by construction of the main pipeline from "point a" on June 1, 1920, and was completed in that year. By survey, begun on July 1, 1926, and completed by construction in June 1927, the pipeline was extended to use the diversion at "point b." The claimant has used twenty-four thousandths (.024) of one cubic foot of water per second of time ever since 1920, and an additional forty-eight thousandths (.048) of one cubic foot of water per second of time every year since July 1, 1926, except as public attendance has reduced the demand temporarily during the war.

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SKY-HI NEWS

Grand County's Newest Weekly Paper

Established Nov. 2, 1945

News Deadline Tuesday 5 p. m.

Newspaper Plant Office ——— Granby, Colo.

T. L. VARNER ——— Owner and Publisher

Phone 77

"Entered as second-class matter March 3, 1947, at the post office at Granby, Colorado, under the Act of March 3, 1879."

Published Every Friday $2.00 Per Year

Advertising Rates Supplied on Request

CLASSIFIED RATES—1c per line, each issue; aver. 5 words per line

The SKY-HI NEWS will publish the truth fearlessly—and support any legitimate community project.

Any errors from this be corrected by following publication if brought to the editor's attention by signed letter.

LEGAL NOTICES

SUMMONS IN CIVIL ACTION COURT FILING STAMP

IN THE DISTRICT COUST IN AND FOR THE COUNTY OF GRAND AND STATE OF COLORADO

Civil Action No. 876.

AMENDED AND ADDITIONAL SUMMONS

Clad H. Pearson,
Harry S. Knapp,
Virginia R. Udell,
Plaintiffs,

Vs.

A. ... Abbott; Bert Adkins; Maude C. Adkins; Walter E. Adkins; James Ansley; Frank G. Abercrombie; John R. Akers; Lora W. Albright; C. M. Anderson; Mrs. C. M. Anderson; Lois E. Anderson; Heirs of Arnold, George J. Bennoff; Charles F. Barker; Ray O. Beebee; Mrs. M. L. Barney; Sally Barringer; Charles F. Basbert W. S. Beaton; W. S. Beaton; Frank P. Beaton; Big Lake Island Irrigation Company, a Colorado corporation; Big Ute Oil Company, a Colorado corporation; W. A. Bratcher; Earl R. Black; Frank C. Black; A. ... Blakes; Arthur P. Blayney; John Blanchar; Hazel Blanton; Clay Blough; A. Baker; August Bohn; William G. Boerner; James A. Bratton; Howard W. Bretton; S. ... Brewster; Eugene Brinton; Absorbit Printing; Thomas A. Brown; Dustie Wilson Brunner; Ernest C. Buchtel; Ivole G. Buchtel; Benjamin Burdo; Charles J. Burke; C. Henry Burke; George Bunty; Harry A. Burke; Horace B. Burmeister; B. A. Burtcher; Babcock J. Talbot; W. Ingrid W. Cabot; ... Carey; James K. Candlise; James Carine; George W. Carr; Harry W. Carr; William H. Carr; Floyd D. Case; Central Colorado Power Company, a Colorado corporation; Benjamin T. Chase; Louis Chase; August Chevalier; City and County of Denver, a municipal corporation; Cobey Brothers, O. M. Cole; Oscar D. Cole; Colorado River Water Conservation District; Oscar M. Colse; Community Consolidated Canal & Reservoir Company, a Colorado corporation; Consolidated Power & Electric Company, a Colorado corporation; Nick Costantine; Adolf M. Crenkhorn; Walter F. Cowe; Peter Cuenoc; Ethel M. Curry; Elmer O. Curtice; Towson R. Curtis; Jack Daily; Gronnar Daly; Curtis Dale; Seymour Day; Fay DeBrunel; N. C. DeBrunel; Nelton C. DeBrunel; Willis Noble DeBrunel; Walter A. Deerbeth; Denver Northwestern Pacific Railway Company, a Colorado corporation; Frank De Vries; Frank De Vries; W. A. Dezell; John H. Dobell; Oliver A. DeLoe; Clement H. Dore; Clement W. Dore; Lillian Dore; Walter H. Dore; Dean A. Dowcer; Ira E. Dowcer; Jessie Dunn; J. K. Dunwody; J. E. Dunwody; S. S. Dunwody; E. M. Dysart; Samuel L. Eby; Ralph Edward; Jean Eggar; Charles Sloan; Guy B. Ellermeier; F. S. Billings; John A. Farley; A. F. Fall; George H. Faith; Nellie H. Faith; Farmers Reservoir & Irrigation Company, a Colorado corporation; E. W. Field; Fred A. Fields; Dewood Fisher; Marion I. Fletcher; H. M. Fowler; Fraser Sources Irrigation & Power Company, a Colorado corporation; Arthur S. Frenzel; Harold D. Frescher; Mary ... Fretz-Wolf; Harold F. Fulcher; Margaret L. Furgason; A. J. Gallo; F. Gallagher; J. R. Gardner; John Gardner; A. A. Garratt; C. E. Gerrish; I. ... Gerring; Theodore; Gerwen; Lester ... Gibbs; R. A. Gibbs; W. A. Gibbs; Denne Gleason; Grand County Irrigation Lands Company, a Colorado corporation; Raymond Gregg; Rose ... Gregorius; Mary Robinson Gudrich; Charles Gustafson; Myrtle Holt; William A. Hadman; Kate Barbeslin; R. A. Harbison; W. ... Harding; Hugh J. Harrison; E. L. Hatch; Charles Hartz; C. T. Hayes; "Heirs of the Seybert Estate" as styled by the District Court of Grand County, State of Colorado in an adjudication decree dated August 7, 1911 for Water Electric #31; Priest Of ...chards; Jesse W. Hockett; Volney T. Haggett; W. L. Hovey; Anna W. Hurst; Fred R. Hurst; Hot Sulphur Springs Investment Company, a Colorado corporation; Henry H. Howard; Clara A. Howe; A. A. Howe; Walter Huggins; Frank L. Huntington, Incorporated; Water Company, a Colorado corporation; Mary L. Ingle; Isabel L. Ish; Charles Jacobson; Barbara Brannon Jacques; Charles S. Jenner; Francis J. Jensen; Elmer Johnson; Prof. A. Johnson; Elizabeth B. Johnston; Robert E. Johnston; Glenn Johnston; Barney S. Jones; Stanton Jones; William G. Jones; Jack Joy; Jesse John ... J. Joslin; John J. Joslin, 2nd; C. ... Just; Carl Just; V. A. Kauffman; Charles Kelloway; W. C. Kenney; Isaac Kiffer; Clyde N. Kinzi Hotel; ... King, Lee King; James Kimbell; Alexander Klein; Elizabeth Klein; George Knuppel; John Koetherz; Charles Kollner; Nels Krumsiek; F. Aime Landine; Ike Langhelm; S. Barringer Lash; G. C. Lechner; Anita C. Lebergeois; E. W. Lehman; E. Lehrgin; Henry Lehrgan; Otto D. Lehman; Charles Lechner; Evan D. Lehrgan; R. Linker; Ray R. Lewis; Ed. W. Lindley; Jean Loker; Fritz Lieker; F. W. Lowe; Frederick Lowrance; Fire ... R. Lowe; Jack Lyer; Etta Lawrence; Samuel C. McCall; J. K. McCandlise; J. E. McCandlise; G. A. McCartney; James McCarthy; George A. McCarty; George E. McClellan; Daniel H. McClure; E. McDonald; Charlotte Mckenzie; C. McKenzie; Anna B. McQuer ... Forest Mcqueary; Leonard ... Queary; K. W. Mcqueary; W. ... Queary; Walter Mcqueary; ... M. Maddox; Oscar S. Mardee; Harvey Markle; Liberal Marle; Wilbur E. Rosne; E. K. Zeschen; George W. Meyers; Leonard ... Zeh Meyers; Middle Park Land and Live Stock Company, a Colorado corporation; Lewis F. Miller; W. H. Miller; J. E. Mildebrandt; Dillone J. Milton; S. J. Mitchell; Hugh Mitchell; Katie Tenant Mining & Development Company, a Colorado corporation; Monarch Copper Mining & Development Company, a Colorado corporation; Prudence Montoya; Samuel F. Montgero; Samuel V. Montgero; Ezra A. Moore; Willis G. Moore; Mc. Vanpoot Mining Company, a Colorado corporation; Lupold Mallen; James ... Musgrave; P. A. Musgrave; Ada C. Nelson; Ida C. Nelson; Northern Colorado Water Users Association, a Colorado corporation; Charles H. Nichols; Bertha Cobb; Ole Olsen; Alfred O. Olsen; G. F. Olsen; Penny Olsen; Inga M. Olsen; Ivey Olsen; Peter Olsen; Nelson Quarry; Ralph Orr; J. N. Ostrander; Alfred H. Penney; Asa A. Peterson; Pinetop Valley Ranch Inc., a Colorado corporation; James S. Phelps; A. F. Pichonnac; Roy F. Pichonnac; C. C. Pope; T. C. Pope; W. H. Powers; Arthur A. Pruett; Great Quarry; Frank Rahmeier; Ernest Ray; P. A. Read; E. ... Read; P. A. Read; Anna Reinhardt; Emma M. Reinhardt; G. Reinhardt; Gregor Reinhardt; Joseph Reinhardt; Gudrun Rixie Rehin; Garner Rehr's Harrold Rehl; John Reid; Susie Reigard; Conrad A. Riesberg; Gladys Reichard; Rocky Mountain Railway Company, a Colorado corporation; Charles A. Rudisill; Archie E. Rahn; Alva C. Sample; Pearl Sawyer; Albert Schell; Mary ... Alex Schnurr; Bert Scott; Edwin Lyman Scott; L. Allen Seely; Estate of R. W. Sievers; Thomas Sylvan, et al", as styled by the District Court of Grand County, State of Colorado in an adjudication decree dated August 7, 1911 for Water District #31; Edward Smith; Jesse Brady; First N. Sec. Bk. Sam Shriver; E. E. Shepard; Mrs. Alice Sheriff; Allie Sheriff; Clarence Glenn Sheriff; Edna Shoey; Sarah G. Shore; Saul J. Sigman; O. F. Sloan; Benjamin L. Slaughter; Karch Streetsberger; A. P. ... Sullie; Anna M. Smith; D. C. Smith; Debia G. (Kinney) Smith; F. M. Smith; Frank Smith; Henry ... A. Smith; Jane Smith; Sidney ... Smith; George Snyder; S. M. Snyder; South Platte Water Users Association, a Colorado corporation; Sun Spring Bar; Richard Spitzmiller; Sportsland Valley Inn, a Colorado corporation; P. G. Stanley; E. S. Stanley; Anna Stearns; Louise Stein; Peter Stein, J. S. Sweeney; Cyrus Sunderlin, L. ... Switzer; Peter W. Switzer; Amelia Tashi; Joseph Tashi; Paul Tassig; Carl Tassig & Willard Tassig; Tassig Brothers; Carl R. Tassig; Paul C. Tassig; Willard S. Tassig; Paul H. Templer; James H. Terrill; Charles S. Thomas; Emma E. Thomas; Theodore H. Thomas; William J. Thornton ... S. O. Throckmorton; Adolf Throckmorton; L. G. Tovey; Lawrence M. Tovey; Lillian G. Tovey; L. R. Tovey Town of Grand Lake, a municipal corporation; Town of Hot Sulphur Springs, a municipal corporation; John Trout; Kenneth Trout; Alfred H. Tyron; Addie G. Tyron; Howard C. Tyron; Kenneth D. Tyron; Bruce E. T. Tyron; A. Tyron; United States of America, acting by and through Farmers Home Administration, United States of America, acting by and through Soil Conservation Service, Department of Agriculture; Upper Grand Valley Power Service Company, a Colorado corporation; Upper Park Land and Cattle Company, a Colorado corporation; George D. Vail; Walter F. Villaume; L. J. Wade; Elizabeth J. Walker; Nathaniel C. Walker; Levi Walker; Water Supply & Storage Company, a Colorado corporation; A. Dean Wessel; Western Box and Lumber Company, a Colorado corporation; Western Phase, Line and Manufacturing Company, a Colorado corporation; Robert L. Wheeler; Daniel Whitcomb; Ray Wilcox; Amelia Williams; W. ... Johns Park Land and Live Stock Company, a Colorado corporation; Doris B. Williams; Lysander S. Williams; Robert Williams; Ary H. ... Williams; Keith E. Wilson; Percy C. Wiswall; Archie M. Wolf; Homer J. Wolf; A. E. Wolf; O. G. Wood; Pauline Wood; Harriet B. Woolfolk; Young Mens Christian Association of the City of Denver, a Colorado corporation; Lee E. Anderson; Frank J. Senior; Ben Banks; Jason A. Hatcher; Frank G. Hook; Ray O. Bailey; Arthur C. Burney; August Chevalier; Benjamin C. Chase; James Cikins; Oscar M. Colse; Benjamin Chase; William W. Cosier; Oscar M. Colse; W. A. Dezel; C. H. Dow ... Ute Oil Company; Willis Noble Debrunel; ... Oliver A. DeLoe; Samuel ... Fifth; Harold D. Fisher; Anna E. Colese; Theodore L. ... A. A. Green; Nate Harrison; James B. Irwin; Charles S. Jenner; Ellis Johnson; Robert E. Johnson; Frankie Kearney; W. Kearney; Glen N. King; Ben Levinson; Fritz W. Lieker; Edward W. Lowrance; S. D. Lamon; George A. Leatherman; Frederick C. Lawson; Leopold Maulory Pochaska Mortgage; James E. McCandlise; George W. Myers; George W. Meyer; George Olson; George Meyers; Willis C. Moore; C. H. Nickerson; Alfred O. Olson; Elmer O. ... Gertrude P. Olsen; Mrs. Martha Case; Inger N. Olsen; Gertrude Olsen; A. F. Pichonnac; Frank Rackeen; Ann M. Smith; L. A. Story; Frank M. Smith; Frederick O. Simpson; Sarah E. Shores; Ralph Edward Selak; Arthur C. Tyron; Carl Raymond Tassig; James G. Terrell; James S. Thomas; Robert E. Throckmorton; Robert F. Williams; David Whitehead; Leonard Wadi; Arthur W. Wold; W. Kilner and Sandra G. Kilner, Copartners doing business as Kilner Brothers; W. Kilner; Charles Kilner; Anthony Wood and Frank Wood, Copartners, doing business as Wood Brothers; Anthony Wood; Frank Wood; Inc. McQueary; Glenn Berge; Anna B. Gardner; Frank Pickering; Alvyn Buerghers; Joseph Wray; S. A. Woodson; George Field ... C. Brentzell, Inc., any and all persons, persons who claim any interest in and to the subject matter of this action or who claim any interest adverse to the water rights for 150 cubic feet per second out of Williams Fork River through William Fork Ditch, being Ditch #8, and appropriation #428 adjudicated and awarded to Williams Fork Ditch by Adjudication Decree dated August 11th, 1905 by the District Court of Grand County, Colorado in Water District #31, with appropriation date of June 29, 1902.

DEFENDANTS

THE PEOPLE OF THE STATE OF COLORADO

To the above named Defendants, GREETINGS:

You are hereby commanded and required to file with the clerk an answer to the complaint within 20 days after service of this summons upon you. If you fail to do ... judgment by default will be taken against you for the relief demanded in the complaint.

If service upon you is made out ... the State of Colorado or by publication, or if a copy of the complaint be not served upon you with this summons, you are required to file your answer to the complaint within sixty (60) days after service of this summons upon you.

This is an action to quiet the title of the Plaintiffs to their water rights out of the Williams Fork River through the Williams Fork Ditch adjudicated by decree of the District Court of Grand County, Water District #31, August 11, 1905 as being Ditch #8, Appropriation Number 428 for 150 cubic feet per second of time out of said River, with appropriation date of June 29, 1902.

Dated May 26, 1948.

L. WARD BANNISTER,
H. GAYLE WELLER,
BARRY S. SILVERTHORN,
Attorneys for Plaintiffs,
Bon Ephemere Bldg., Denver 2, Colo.

NOTE.—The summons is issued pursuant to Rule 4, Colorado Rules of Civil Procedure.

First publication June 17, 1948.
Last publication, March 25, 1949.

05-27-1948: letter to department of the interior from assistant attorney general regarding proceeding for the adjudication of rights t

DMM

REM - WHV

90-1-2-83

May 27, 1948

Mastin G. White, Esquire
Solicitor
Department of the Interior
Washington, D. C.

Dear Mr. White:

This will refer to the proceeding for the adjudication of rights to the use of water in Water District No. 51, State of Colorado. (Your reference: National Park Service.)

Enclosed is a copy of a letter dated May 19, 1948, from the United States Attorney at Denver, Colorado, together with copies of proposed forms of suggestions for filing in the proceeding in question.

It would be appreciated if you would examine these forms and give to this Department the benefit of your opinion as to their sufficiency.

Sincerely,

A. DEVITT VANECH
Assistant Attorney General

Enclosure
No. 27324

WR Copy with atty 5/27/48 from Attorney Davis + memo 6/10/48 from Reg II

IN THE DISTRICT COURT IN AND FOR THE
COUNTY OF GRAND AND STATE OF COLORADO

IN THE MATTER OF THE ADJUDICATION OF THE PRIORITIES OF RIGHT TO THE USE OF WATER FOR IRRIGATION PURPOSES IN WATER DISTRICT NO. 61, IN THE STATE OF COLORADO.	NO. 814 STATEMENT OF CLAIM OF THE UNITED STATES OF AMERICA FOR MILNER PASS ROAD CAMP PIPE LINE.

Comes now Max M. Bulkeley, United States Attorney for the District of Colorado, duly authorized and directed by the Attorney General of the United States, appearing for the purpose of this claim only and not submitting the rights of the United States, which are hereafter set out, to the jurisdiction of the above-entitled court, or in any way subjecting its rights to the jurisdiction of the State of Colorado or any of its agencies, and makes the following statements:

I.

The name of the claimant is United States of America.

II.

The postoffice address of the claimant is Rocky Mountain National Park, Estes Park, Colorado.

III.

The name of the pipe line for which claim is made herein is the Milner Pass Road Camp Pipe Line.

IV.

The headgate or intake of said pipe line is located at a point on the south, or right bank of a nameless stream, a tributary of the North Fork of the Colorado River through Beaver Creek, from which nameless tributary it derives its supply of water, whence the northeast corner of Section one (1), Township five (5) North, Range seventy-five (75) West of the 6th Principal Meridian, bears North sixty-nine degrees, three minutes (69° 03') East twenty thousand, seven hundred and fifty-two (20,752) feet.

V.

The general course of said pipe line is southwesterly.

VI.

The diameter of said pipe line from the diversion or intake point to a distribution reservoir or tank, with a capacity not exceeding ten thousand (10,000) gallons, is two and one-half (2½) inches.

The grade of said pipe line is two hundred and nine (209) feet per one thousand (1000) feet.

The length thereof is sixteen and five-tenths (16.5) feet.

VII.

The water from said reservoir or tank is distributed at places of use in Milner Pass road camp and the public camp ground area, situated in the Southeast quarter of the Northwest quarter (SE¼ NW¼) and the North half of the Southwest quarter (N½ SW¼) of Section nine (9), Township five (5) North, Range seventy-five (75) West of the Sixth (6th) Principal Meridian, by a distribution pipe with a capacity of twelve one-thousandths (.012) cubic foot of water per second of time.

VIII.

The carrying capacity of said two and one-half (2½) inch pipe line is three-tenths (.3) cubic foot of water per second of time. Three-tenths (.3) of a cubic foot of water per second of time is needed at times for flushing said reservoir tank and for irrigation and fire protection purposes.

Claim is made of a right to use three-tenths (.3) of a cubic foot of water per second of time for domestic, including irrigation of lawns, recreational and fire protection purposes.

IX.

Construction of said pipe line was begun on July 1, 1919, and was completed during the summer of that year, and said

pipe line has been used every year since to the capacity thereof, for the purposes stated.

X.

A map and statement of claim for the said pipe line was filed with and accepted by the State Engineer of the State of Colorado on October 2, 1939, and was assigned by his filing No. 16,659.

WHEREFORE, without submitting or in any way subjecting the water rights of the United States hereinabove described to the jurisdiction of the above-entitled court, but respectfully stating that said court and the State of Colorado are without jurisdiction over the water rights of the United States and are without jurisdiction to enter any order to make any determination affecting, or in any way affect, said water rights owned by the United States in said Colorado River Watershed, it is suggested that the said court adjust its findings, determinations and decree in the proceedings referred to according to the rights herein disclosed on the part of the United States and that it take cognizance of such rights in the said findings, determinations and judgment.

This statement is made and should be considered in conjunction with similar statements filed by the United States on this date in relation to Timber Creek Water System, Grand Lake Lodge Power Pipe Line, and Grand Lake Lodge and Ranger Station Water System.

Dated May , 1948.

MAX M. BULKELEY
United States Attorney

C. V. MARMADUKE, JR.
Assistant United States Attorney

STATE OF COLORADO)
) ss
City of Denver)

_____, being first duly sworn, on his oath deposes and says that he is _____ Department of Interior, Department Park Service, United States of America, that he has read the foregoing statement and that the contents thereof are true of his own personal knowledge..

_____

Subscribed and sworn to before me this _____ day of May, A.D. 1948.

_____
Notary Public.

My commission expires_____.

CVM/dh

IN THE DISTRICT COURT IN AND FOR THE

COUNTY OF GRAND AND STATE OF COLORADO

IN THE MATTER OF THE ADJUDICATION OF THE PRIORITIES OF RIGHT TO THE USE OF WATER FOR IRRIGATION PURPOSES IN WATER DISTRICT NO. 51, IN THE STATE OF COLORADO.	NO. 814 STATEMENT OF CLAIM OF THE UNITED STATES OF AMERICA FOR THE GRAND LAKE LODGE AND RANGER STATION WATER SYSTEM

Comes now Max M. Bulkeley, United States Attorney for the District of Colorado, duly authorized and directed by the Attorney General of the United States, appearing for the purpose of this claim only and not submitting the rights of the United States, which are hereafter set out, to the jurisdiction of the above-entitled court, or in any way subjecting its rights to the jurisdiction of the State of Colorado or any of its agencies, and makes the following statement:

I.

The name of the claimant is United States of America.

II.

The postoffice address of the claimant is Rocky Mountain National Park, Estes Park, Colorado.

III.

The name of the pipe line for which claim is made herein is the Grand Lake Lodge and Ranger Station Water System.

IV.

There are two headgates or intakes for said water system which are located on the west, or right, bank of Tonahutu Creek, also variously called Little North Inlet and Big Meadows Creek, a tributary of the North Fork of the Colorado River through the North Inlet to Grand Lake, and from which said Tonahutu Creek

it derives its supply of water as follows:

(a) At a point, hereinafter referred to as "point a", at a small concrete dam, whence the northwest corner of Section thirty-two (32), Township four (4) North, Range seventy-five (75) West of the Sixth Principal Meridian, bears North thirty-one degrees, twelve minutes (31° 12') West Eighteen hundred and fifty-five one-hundredths (1800.55) feet.

(b) At a point, hereinafter referred to as "point b", whence the Northwest corner of said Section thirty-two (32) bears North eighty-seven degrees, fifty-two minutes (87° 52') West seventeen hundred fifty-six and thirty-four one-hundredths (1756.34) feet.

V.

The headgate at "point a" consists of a two-inch gate valve imbedded in said concrete dam. The headgate at "point b" is also the headgate of the Grand Lake Power Pipe Line, and is described in a separate statement of claim for that pipe line which is being presented to this court. The open ditch and penstock portion of said power pipe line system for a distance of sixteen hundred and eighty (1680) feet, are also used by the Grand Lake Lodge and Ranger Station Water System. Two pipes, whose diameters are two (2) inches and whose lengths are each approximately seventy-five (75) feet, extend from said penstock and from the headgate or intake at "point a" to, and form, a junction. The conduits from both diversion or intake points, as described in paragraph IV (a) and (b), to a twenty thousand gallon wood-stave tank or reservoir at the Grand Lake Lodge are referred to as the main pipe line. However, the headgates at "point a" and "point b" cannot be used simultaneously because of differences in elevation and the headgate at "point b", which provides the greater pipe capacity, is now used for all normal operation and constitutes the measure of water use.

VI.

The general course of the main pipe line is southwesterly. The length of the main pipe line is fifty-six hundred and fifty-five (5655) feet, consisting of the aforesaid sixteen hundred and eighty (1680) feet of the Grand Lake Lodge Power Pipe Line, and thirty-nine hundred and seventy-five (3975) feet of galvanized iron pipe, from either the headgate at "point a" or the junction of said galvanized iron pipe and the said Grand Lake Power Pipe Line to the aforesaid twenty-thousand gallon wood-stave tank or reservoir. The diameter of the penstock, which controls the capacity of the Grand Lake Power Pipe Line, is twenty (20) inches. The diameter of the galvanized iron pipe is two (2) inches. The diameter of the penstock is so large that practically no pressure is lost therein and the effective head at the intake of the galvanized iron pipe has a maximum value of one hundred and seventy-six (176) feet of water. The effective gradient from "point b" to the twenty thousand gallon tank or reservoir, or of the galvanized iron pipe, is twenty-six and five hundred and forty-five thousandths (26.545) feet per one thousand (1000) feet. The effective gradient between the headgate at "point a" and said twenty thousand gallon tank or reservoir is five and eight hundred and seventy-four thousandths (5.874) feet per one thousand (1000) feet.

VII.

The carrying capacity of said main pipe line when using the upper diversion at "point b" is seventy-two thousandths (0.072) cubic foot of water per second of time, and when using the lower diversion at "point a" it is twenty-four thousandths (0.024) cubic foot of water per second of time.

VIII.

Diversion at "point a" was made several years before diversion at "point b" but is now rarely made, and only for

emergency purposes when the Grand Lake Lodge Power Pipe Line is not in use.

IX.

A lateral pipe line extends from the main pipe line at a point twenty-five hundred and sixty-three (2563) feet below "point a" to the Grand Lake Lodge and Ranger Station and entrance area of Rocky Mountain National Park. The general course of said lateral is southwesterly. The diameter of said lateral is one (1) inch. The length thereof is thirty-three hundred and ninety (3390) feet. The water enters said lateral under pressure, and the maximum effective gradient is one hundred and nine (109) feet per one thousand (1000) feet. The maximum carrying capacity of said lateral is twenty-one thousandths (0.021) cubic foot of water per second of time. The lateral serves an additional water demand but does not affect the rate of diversion previously described.

X.

Work was commenced by construction of the main pipe line from "point a" on June 1, 1920, and was completed in that year. By survey begun on July 1, 1926, and completed by construction in June, 1927, the pipe line was extended to use the diversion at "point b". The claimant has used twenty-four thousandths (0.024) cubic foot of water per second of time ever since 1920, and an additional forty-eight thousandths (0.048) cubic foot of water per second of time every year since July 1, 1926, except as public attendance has reduced the demand temporarily during the war.

The cost of said structure was approximately thirty-five hundred ($3,500.00) dollars.

The United States of America claims a right to use at Grand Lake Lodge and at Grand Lake Ranger Station and entrance area of Rocky Mountain National Park for domestic, including lawn irrigation, and for recreational and fire protection purposes, twenty-four thousandths (0.024) cubic foot of water per

second of time, with a priority date of June 1, 1920, and an additional forty-eight thousandths (0.048) cubic foot of water per second of time, with a priority date of July 1, 1926, and the right to divert all or any part of the total quantity of seventy-two thousandths (0.072) second foot at either headgate located respectively at "point a" or "point b". Both the said Lodge and the Ranger Station and entrance area are located in the South half of the South half (S½ S½) of Section thirty-one (31), Township four (4) North, Range seventy-five (75) West of the Sixth (6th) Principal Meridian.

XI.

A map and statement of claim for said Grand Lake Lodge and Ranger Station Water System was filed with and accepted by the State Engineer, State of Colorado, on the 21st day of January, 1946, and was assigned filing No. 17579.

WHEREFORE, without submitting or in any way subjecting the water rights of the United States hereinabove described to the jurisdiction of the above-entitled court, but respectfully stating that said court and the State of Colorado are without jurisdiction over the water rights of the United States and are without jurisdiction to enter any order to make any determination affecting, or in any way affect, said water rights owned by the United States in said Colorado River Watershed, it is suggested that the said court adjust its findings, determinations and decree in the proceedings referred to according to the rights herein disclosed on the part of the United States and that it take cognizance of such rights in the said findings, determinations and judgment.

This statement is made and should be considered in conjunction with similar statements filed by the United States on this date in relation to Milner Pass Road Camp Pipe Line,

Timber Creek Water System, and Grand Lake Lodge Power Pipe Line.

Dated May , 1948.

MAX M. BURKELEY
United States Attorney

C. V. MARMADUKE, JR.
Assistant United States Attorney

STATE OF COLORADO)
City and County of Denver) ss

_____, being first duly sworn, on his oath deposes and says that he is _____, Department of Interior, Department Park Service, United States of America, that he has read the foregoing statement and that the contents thereof are true of his own personal knowledge.

_____

Subscribed and sworn to before me this _____ day of May, A.D. 1948.

_____
Notary Public

My commission expires_____.

CVM/dh

05-00-1948: court documents: statement of claim of the united states of america for the grand lake lodge power pipeline

IN THE DISTRICT COURT IN AND FOR THE

COUNTY OF GRAND AND STATE OF COLORADO

IN THE MATTER OF THE ADJUDICATION OF THE PRIORITIES OF RIGHT TO THE USE OF WATER FOR IRRIGATION PURPOSES IN WATER DISTRICT NO. 51, IN THE STATE OF COLORADO.	NO. 214 STATEMENT OF CLAIM OF THE UNITED STATES OF AMERICA FOR THE GRAND LAKE LODGE POWER PIPE LINE

Comes now Max N. Bulkeley, United States Attorney for the District of Colorado, duly authorized and directed by the Attorney General of the United States, appearing for the purpose of this claim only and not submitting the rights of the United States, which are hereafter set out, to the jurisdiction of the above-entitled court, or in any way subjecting its rights to the jurisdiction of the State of Colorado or any of its agencies, and makes the following statement:

I.

The name of the claimant is United States of America.

II.

The postoffice address of the claimant is Rocky Mountain National Park, Estes Park, Colorado.

III.

The name of the pipe line for which claim is made herein is the Grand Lake Lodge Power Pipe Line.

IV.

The headgate of said pipe line is located on the West, or right, bank of Tonahutu Creek, also variously called Little North Inlet and Big Meadows Creek, a tributary of the North Fork of the Colorado through the North Inlet to Grand Lake, and from which said Tonahutu Creek it derives its supply of water, at a point whence the northwest (NW) corner of Section thirty-two (32),

Township four (4) North, Range seventy-five (75) West of the 6th Principal Meridian bears North eighty-seven degrees, fifty-two minutes (87° 52') West one thousand seven hundred and fifty-six and thirty-four one-hundredths (1,756.34) feet.

V.

Diversion is by means of a wooden headgate sixty-seven and one-half (67½) inches in width which is usually opened to provide a submerged opening of more than eleven (11) square feet under an effective head of two and one-half (2½) feet. The diversion capacity is in excess of thirty (30) cubic feet of water per second of time.

Water diverted is conveyed for a distance by an earth ditch. Said ditch has a variable cross section, with a minimum width of nine (9) feet. The depth of said ditch is eighteen (18) inches. The length of said ditch is one hundred and seventy-five (175) feet. The minimum grade thereof is one and fifty-five hundredths (1.55) feet per one thousand (1000) feet.

The capacity of said ditch is in excess of thirty (30) cubic feet of water per second of time. There is a spillway at the end of the ditch by which all water not needed for beneficial use is immediately returned to the stream.

VI.

The said ditch discharges into a pipe line or penstock. The diameter of said penstock is twenty (20) inches. The length thereof is one thousand seven hundred and eighty (1780) feet. The controlling grade thereof is thirty-two and twenty-two one-hundredths (32.22) feet per one thousand (1000) feet. The total fall is one hundred and sixty-three (163) feet. The water from the penstock, after passing over a water wheel in a hydroelectric plant, is immediately returned to the stream by a ditch one hundred (100) feet in length at a point two thousand and twenty (2020) feet below the point of diversion.

VII.

The carrying capacity of said penstock is thirty (30)

cubic feet of water per second of time, but the actual amount of water carried therein to and through the hydroelectric plant has been and is eight (8) cubic feet of water per second of time, for which claim is hereby made for the generation of electric energy in the power plant located in the Northeast quarter of the Southwest quarter of the Northwest quarter (NE¼ SW¼ NW¼) of said Section thirty-two (32).

VIII.

The general course of the structure, including the ditch and penstock, is Southwesterly.

IX.

Work was commenced on said structure on June 1, 1920, and was completed in that year with the lower diversion. The present upper diversion was built in 1926. Continuous use of the amount of water stated for the purposes stated has been made ever since 1920.

The cost of said structure was approximately thirty thousand ($30,000) dollars.

X.

A map and statement of claim for said Grand Lake Lodge Pipe Line was filed with and accepted by the State Engineer of the State of Colorado on October 2, 1939, and was assigned by him filing No. 16,689.

WHEREFORE, without submitting or in any way subjecting the water rights of the United States hereinabove described to the jurisdiction of the above-entitled court, but respectfully stating that said court and the State of Colorado are without jurisdiction over the water rights of the United States and are without jurisdiction to enter any order to make any determination affecting, or in any way affect, said water rights owned by the United States in said Colorado River Watershed, it is suggested that the said court adjust its findings, determinations and decree in

the proceedings referred to according to the rights herein disclosed on the part of the United States and that it take cognizance of such rights in the said findings, determinations and judgment.

Dated May , 1948.

MAX M. BUKELEY
United States Attorney

C. V. MARMADUKE, JR.
Assistant United States Attorney

STATE OF COLORADO }
City and County of Denver } ss

_____, being first duly sworn, on his oath deposes and says that he is _____, Department of Interior, Department Park Service, United States of America, that he has read the foregoing statement and that the contents thereof are true of his own personal knowledge.

_____

Subscribed and sworn to before me this _____ day of May, A.D. 1948.

_____
Notary Public.

My commission expires_____.

CVM/dh

IN THE DISTRICT COURT IN AND FOR THE
COUNTY OF GRAND AND STATE OF COLORADO

IN THE MATTER OF THE ADJUDICATION OF THE PRIORITIES OF RIGHT TO THE USE OF WATER FOR IRRIGATION PURPOSES IN WATER DISTRICT NO. 51, IN THE STATE OF COLORADO.	NO. 814 STATEMENT OF CLAIM OF THE UNITED STATES OF AMERICA FOR THE TIMBER CREEK WATER SYSTEM

Comes now Max M. Bulkeley, United States Attorney for the District of Colorado, duly authorized and directed by the Attorney General of the United States, appearing for the purpose of this claim only and not submitting the rights of the United States, which are hereafter set out, to the jurisdiction of the above-entitled court, or in any way subjecting its rights to the jurisdiction of the State of Colorado or any of its agencies, and makes the following statement:

I.

The name of the claimant is United States of America,

II.

The postoffice address of the claimant is Rocky Mountain National Park, Estes Park, Colorado.

III.

The name of the pipe line for which claim is made herein is Timber Creek Water System.

IV.

The headgate or intake of the said pipe line if located at a point on the north, or right bank of Timber Creek, a tributary of the North Fork of the Colorado River, from which it derives its supply of water, whence the west quarter corner of Section nineteen (19), Township five (5) North, Range

seventy-five (75) West of the 6th Principal Meridian, bears North sixty-four degrees, fifty-two minutes (64° 52') West seven hundred thirty-four and thirty-three one-hundredths (734.33) feet.

V.

The general course of said pipe line is southwesterly and crosses said Timber Creek.

The diameter of said pipe line is four (4) inches.

The grade of said pipe line is sixty-three and six-tenths (63.6) feet per one thousand (1,000) feet.

The length thereof is two thousand two hundred and sixty-four and eighty-seven one-hundredths (2,264.87) feet.

VI.

The carrying capacity of said pipe line is five hundred and forty-two one thousandths (0.542) cubic foot of water per second of time, for which claim is hereby made for domestic, irrigation, recreational, and fire protection purposes, at a public campground and road camp, designated as the Timber Creek Campground, situated in the northwest quarter of the southwest quarter (NW¼ SW¼) of said Section Nineteen (19); and in the east half of the southeast quarter (E½ SE¼) of Section twenty-four (24), Township Five (5) North, Range seventy-six (76) West of the Sixth (6th) Principal Meridian.

The number of acres to be irrigated is twenty-two and seventeen one-hundredths (22.17) acres.

VII.

Construction of Timber Creek Water System was begun on July 1, 1931, and was completed in its present condition in the year 1935.

Use of said system began in the year 1931 or 1932, and has continued to the capacity thereof ever since.

VIII.

A map and statement of claim on said system was filed with and accepted by the State Engineer of the State of Colorado on January 6, 1939, and was assigned filing No. 16,511.

WHEREFORE, without submitting or in any way subjecting the water rights of the United States hereinabove described to the jurisdiction of the above-entitled court, but respectfully stating that said court and the State of Colorado are without jurisdiction over the water rights of the United States and are without jurisdiction to enter any order to make any determination affecting, or in any way affect, said water rights owned by the United States in said Colorado River Watershed, it is suggested that the said court adjust its findings, determinations and decree in the proceedings referred to according to the rights herein disclosed on the part of the United States and that it take cognizance of such rights in the said findings, determinations and judgment.

This statement is made and should be considered in conjunction with similar statements filed by the United States on this date in relation to Milner Pass Road Camp Pipe Line, Grand Lake Lodge Power Pipe Line, and Grand Lake Lodge and Ranger Station Water System.

Dated May , 1948.

MAX M. BULKLEY
United States Attorney

C. V. MARMADUKE, JR.
Assistant United States Attorney

STATE OF COLORADO)
) ss
City of Denver)

_____, being first duly sworn, on his oath deposes and says that he is _____, Department of Interior, Department Park Service, United States of America, that he has read the foregoing statement and that the contents thereof are true of his own personal knowledge.

_____

Subscribed and sworn to before me this _____ day of May, A.D. 1948.

_____
Notary Public

My commission expires_____.

CVM/dh

Notice of Adjudication of Water Rights

—★★—

IN THE DISTRICT COURT IN AND FOR THE COUNTY OF GRAND IN THE STATE OF COLORADO.

No. 795

In the matter of the adjudication of rights to the use of water in Water District No. 51 in the State of Colorado.

THE PEOPLE OF THE STATE OF COLORADO, to
All owners or claimants of unadjudicated water rights in Water District No. 51 in the State of Colorado, GREETING:

You will take notice that an application has been filed in the District Court of Grand County, Colorado, in the above entitled matter by Deane Glessner, Barbara Brunton Jacques and David William Brunton to establish and determine their rights to a priority in the use of water for irrigation purposes by means of the Love-Glessner Ditch out of McQueary Creek, also known as Elk Creek, a tributary of the Colorado River in said Water District No. 51 and to obtain a decree of the said Court awarding to the said ditch from said stream a supply of water sufficient to irrigate twenty-five acres of land, more or less, belonging to claimants and to determine the priority of the said ditch on the said stream and in the said water district as will more fully appear from the petition, statement of claim and plat of the said ditch filed in this Court reference to which is hereby made.

Said petition and Statement of claim will be called up for hearing and adjudication on Monday the 12th day of July, A. D. 1943, at ten o'clock a. m., or as soon thereafter as the same may be heard in the District Court at Hot Sulphur Springs, Grand County, Colorado, when and where you may appear in manner provided by law in case you wish to resist the said claim or any claim filed in the said proceeding and all claimants of unadjudicated water rights in the said district are notified to appear at the said time and place in regard to all water rights so owned or claimed by them and file their statement of claim as provided by law.

Witness my hand and the seal of said Court this 26th day of May, A. D. 1943, at my office in Hot Sulphur Springs, Grand County, Colorado.

(Seal of Dist. Court) BRICE SHERIFF, Clerk.

Hugh Gilmore, Attorney for Petitioner.

First publication May 27, 1943.
Last publication June 24, 1943.

Reprint from Middle Park Times.

COPY IN THE DISTRICT COURT IN AND FOR THE COUNTY OF GRAND
IN THE STATE OF COLORADO.
***
No. 814

In the matter of the adjudication of the priorities of right to the use of water for irrigation purposes in Water District No. 51 in the State of Colorado.

NOTICE OF ADJUDICATION OF WATER RIGHTS

THE PEOPLE OF THE STATE OF COLORADO to

All owners or claimants of unadjudicated water rights in Water District No. 51 in the State of Colorado, GREETING:

You will take notice that an application has been filed in the District Court of Grand County, Colorado in the above entitled matter by George W. Snider to establish and determine his rights to a priority in the use of water for irrigation purposes by means of the JAMES SNIDER DITCH and the GEORGE SNIDER DITCH out of Fraser River, in said Water District No. 51 and to obtain a decree of said Court awarding to the said ditches from said stream a supply of water sufficient to irrigate 97 and 40 acres of land respectively, belonging to claimant and to determine the priority of the said ditches on the said stream and in said Water District as will more fully appear from the petition, state of claim and plat of the said ditches filed in this Court, reference to which is hereby made.

Said petition and statement of claim will be called up for hearing and adjudication on Monday the 5th day of March, A. D. 1945 at ten o'clock a. m. or as soon thereafter as the same may be heard in the District Court at Hot Sulphur Springs, Grand County, Colorado, when and where you may appear in manner provided by law in case you wish to resist the said claim or any claim filed in said proceedings and all claimants of unadjudicated water rights in the said Water District No. 51 are notified to appear at the said time and place in regard to all water rights so owned or claimed by them upon which they have filed their statement of claim as provided by law.

Witness my hand and the seal of the said Court at my office in Hot Sulphur Springs, Grand County, Colorado, this 18th day of December, A. D. 1944.

(Seal of
District Court)

BRICE SHERIFF,
Clerk.

Hugh Gilmore, Attorney for Petitioner.

First publication Dec. 21, 1944.

Last publication Jan. 18, 1945.

01-06-1940: memorandum to regional attorney from superintendent regarding water supply and storage company's petition in the

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK
ESTES PARK, COLO.

January 6, 1940

Memorandum for Regional Attorney Joseph E. Taylor:

Enclosure is made of two (2) copies of the Water Supply and Storage Company's Petition in the Adjudication of the Priorities of Water Rights in Water District No. 51 in the State of Colorado.

We have been unable to ascertain if the time for filing petitions has been extended beyond December 2, 1939 but hope to advise you in this matter in a few days.

Superintendent

Encl.

01-09-1940: petition: adjudication of the priorities of right to the use of water for irrigation purposes

RECD JAN 9 1940

STATE OF COLORADO)
) ss
COUNTY OF GRAND)

IN THE DISTRICT COURT

No. 729

IN THE MATTER OF THE ADJUDICATION OF THE PRIORITIES OF RIGHT TO THE USE OF WATER FOR IRRIGATION PURPOSES IN WATER DISTRICT NO. 51 IN THE STATE OF COLORADO.

PETITION

Comes now The Water Supply and Storage Company and represents and shows to the Court:

That the North feeder ditch of the Grand River Ditch in said District No. 51 was surveyed and established in good faith and in relation to a survey, the original notes and corners of which have been lost or destroyed, and grave doubt exists as to whether or not said survey was actual or fictitious;

That since its original construction, said ditch has not been changed and all of the points of diversion are the same now as when the original decree herein was entered;

That during the year of 1936 a resurvey was made of Township five (5) North, Range Seventy-six (76) West of the 6th P. M., which resurvey was accepted by the United States General Land Office, Department of Interior, and is now recognized as an official General Land Office survey;

That it is desirable to amend the description of the point of diversion of the North feeder ditch of the Grand River Ditch at its head in Baker Gulch, also known as Baker Creek, a tributary of the Grand River, from which said ditch draws its supply of water;

That the proper discription of said point of diversion and headgate in the west branch of Baker Gulch or Baker Creek with reference to the 1936 resurvey above mentioned is as follows, to-wit:

> Said headgate is located in the Northeast Quarter of the Northwest Quarter ($NE\frac{1}{4}NW\frac{1}{4}$) of Section Twenty-eight (28), Township five (5) North, Range Seventy-six (76) West of the 6th P. M. at a point

13,683.01 feet South, 86° 05' west of the Section corner common to sections 23-24-25 and 26 of Township five (5) North, Range Seventy-six (76), West of the 6th P.M.

That this point of diversion and all other points of diversion from the several tributaries mentioned in said decree are at the exact place where they have been since the original construction of said ditch.

WHEREFORE PETITIONER PRAYS for an order of this Court amending the description of the point of diversion in the upper or west fork of Baker Gulch in the original decree entered herein, to conform with the sections and corners of the 1936 resurvey of Township Five (5) North, Range Seventy-six (76), West of the 6th P. M.

THE WATER SUPPLY AND STORAGE COMPANY

By R. C. Wykert
President

STATE OF COLORADO)
) ss.
COUNTY OF LARIMER)

R. C. Wykert, being first duly sworn upon his oath, deposes and says:

That he is President of the Water Supply and Storage Company, a corporation, the petitioner herein; that he has read the above and foregoing petition, knows the contents thereof, that the matters and things therein contained are true to the best of his knowledge, information and belief.

R. C. Wykert

Subscribed and sworn to before me this 27th day of November, A. D. 1939.

My commission espires May 9, 1943.

(SEAL) Carl W. Jensen
Notary Public

11-20-1939: memorandum to regional attorney from superintendent regarding petitions for water adjudication

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK
ESTES PARK, COLO.

REC'D NOV 2 1939

November 20, 1939

Memorandum for Regional Attorney Joseph E. Taylor:

Enclosure is made of copies of the three petitions filed to date in the Water Adjudication Case now pending in District No. 51, Colorado. We are also forwarding like copies to Mr. Worth Allen, Special Assistant to the Attorney General, Denver, Colorado.

The Clerk of the District Court, Grand County, charged $6.60 for one original and one carbon copy of the three petitions. He has been instructed to furnish copies of additional Statements of Claim, if and when filed.

Mr. J. W. Kelley is the attorney for the Harbison and the Schnoor Claims, and a Mr. Gilmore of Hot Sulphur Springs represents the Adkins Interests.

David H. Canfield
Superintendent

Enclosures

STATE OF COLORADO)
: SS.
County of Grand)

IN THE DISTRICT COURT

No. 729

In the matter of the adjudication of priorities of right to the use of Water for irrigation purposes in Water District No. 51 in the State of Colorado.

PETITION FOR ADJUDICATION OF THE DE WITT DITCH

Petition of Melvin E. Adkins and Marie C. Adkins for the establishment of their rights to the use of water for irrigation purposes and the priority through and by means of the DeWITT Ditch in Water District No. 51 in the State of Colorado.

To the Honorable District Court of the Fourteenth Judicial District of the State of Colorado and to the Honorable Charles E. Herrick, Judge of the said Court in and for the County of Grand.

Your petitioner respectfully represents and shows:

I.

That several General as well as many Special Decrees have been entered in this Court in respect to the said Water District No. 51 in pursuance of the statutory notice by publication, posting and personal service as required by law.

II.

That your petitioners are the owners of the DeWITT DITCH used for the irrigation of lands belonging to them and lying under and along the line of said ditch, which takes its water from the NORTH FORK OF THE COLORADO RIVER, a tributary of the Colorado River, formerly known as the Grand River, natural streams in said Water District No. 51 in the State of Colorado.

III.

That other owners having decreed rights out of the North Fork of the Colorado River in said Water District and in the vicinity of the said ditch who can conceivably be effected thereby, are:

Mary L. Cairns, owner of the Cairns No. 1, No. 2 and No. 4 Ditches, The Red Top Valley Ditch Company, owner of the Church Ditch, Estate of Teina B. Lehman, deceased and Gus A. Spitzmiller, owners of the Lehman Ditch, George A. McCarthy and Walter R. Dederick, owners of the Hanscom Ditch, George W. Carr, owner of the Carr Ditch Anna E. Gains, owner of the Gains No. 1 Ditch and Harry A. Bunte, owner of the Soda Creek No. 1 Ditch, so far as they are known or can be ascertained by the petitioners and that though there is ample flow in the North Fork of the Colorado River at this point and in the vicinity of all of the ditches owned or claimed by the above named parties and for all other ditches in the vicinity taking water from said stream, and as petitioners understand and believe none of them can be effected by the granting of a decree to the ditch claimed by the petitioners, personal service of notice of the said hearing will be made upon each of the said parties advising them of the time, place and circumstances of the hearing thereon in accordance with law.

IV.

The headgate of the ditch is located at a point on the west bank of the North Fork of the Colorado River, from which stream said ditch takes its supply of water whence the N½ corner of Sec. 25, Tp. 4 N., R. 76 W. of the 6th P. M. bears N. 85° 5' W. 478 feet., the ditch as now constructed is about 0.42 of a mile in length but when completed will be about one mile in length; the general course of the present ditch is southerly and of the proposed extension will be southwesterly.

V.

That patent for a portion of the land of the claimant was issued on the 14th day of December, A.D. 1923 to one Edwin T. DeWitt and that at the time that he filed upon the said land this ditch had been constructed and used by prior homesteaders but abandoned on

abandonment of their filings on the lands; that the said DeWitt at once began the use of the said ditch for the irrigation of these lands and continued to irrigate his lands therefrom, more or less continuously as long as he owned the lands and the subsequent owners thereof up to this date have so used the ditch and are now using it; that Petitioners upon acquiring title to the property had a survey made of the ditch and of the possible extensions thereof and of the lands belonging to them irrigated by the said ditch and susceptible of such irrigation on the 7th day of July, A.D. 1939 which survey and the plat made therefrom are of the ditch as it has existed on the ground and been used since the patent to the said DeWitt except for extensions and enlargement of the use thereof and the lands irrigated thereby; that appropriation is therefore claimed to date from the said date of December 14th, A.D. 1923.

VI.

That the said ditch is 4 feet wide at high water line, 2 feet wide on bottom and 1 foot in depth and has a grade of 10.6 feet per mile which gives it a carrying capacity of 4.00 cubic feet of water per second of time. That the ditch is now used for the irrigation of 14 acres of cultivated land and that there are 66 additional acres of land lying under and along the proposed extension thereof which the claimants intend to irrigate by waters therefrom as soon as it is possible for them to construct the said extensions, clear and cultivate the land and apply the water thereto for irrigation thereof; that the plat of the said ditch showing the line and tie thereof and the lands irrigated and proposed to be irrigated thereby is attached hereto and marked Claimants exhibit "A".

VII.

That the soil is a light loam of shallow depth underlaid by course river gravel and lies at a high altitude and is used mainly

for the growing of hay; that on account of the altitude, the cold temperatures of a large part of the growing season and other natural conditions, the growing season is very short, but with adequate early irrigation and reasonable later irrigation good paying crops of hay can be grown on this land as well as some other crops under proper conditions; that during the main growing and irrigating season the normal amount of water is sufficient for the irrigation of this land but owing to the lateness and shortness of the growing season, the need of getting a quick and early start and the amount of seepage and drying off of the land, double that amount of water is needed and required during the early part of the season when it is available from about the 1st day of April to the 15th day of June of each year; that the claimants and their predecessors in the title to the said lands have used the ditch to the above extent for the irrigation of the lands now under cultivation and intend to so use the extension thereof and to so apply the same if allowed to do so by the order of this Court; that the lands are located within a short distance of the stream from which the said water is taken and the runoff water if any and the seepage returns quickly to the stream and is available for the use of appropriators lower on the stream and that such use is necessary and required for the proper irrigation of the crops now raised and intended to be raised on the said lands and that the same are a reasonable and economical use of the waters of the State for irrigation purposes.

WHEREFORE your petitioners pray this Honorable Court to proceed to an adjudication of the priorities of right of the petitioners to the use of the water of the said stream for irrigation purposes in respect to the said DeWitt Ditch as by statute in such case made and provided; to fix a day for the hearing of evidence and the taking of proofs in regard thereto and that upon the day set for the hearing and determination of the matters and things herein mentioned, testimony be

heard, evidence introduced and proofs taken and an adjudication be made in open Court if the Court shall deem the same practicable and that the said petitioners be granted an absolute decree for the said ditch for a flood and flow right as prayed as to the lands now irrigated and a conditional decree for the remainder thereof and that all orders and directions necessary under the laws and rules of this Court be given to that end.

Hugh Gilmore
Attorney for Petitioners

STATE OF COLORADO)
: SS.
County of Grand)

Melvin E. Adkins, being first duly sworn upon his oath states that he is one of the Petitioners named in the foregoing Petition and one of the owners of the DeWitt Ditch; that he has read the foregoing petition and knows the contents thereof and that the same are true to the best of his knowledge and belief.

Melvin E. Adkins

Subscribed and sworn to before me this 7th day of August A.D. 1939.

Brice Sheriff
Clerk of the District Court.

(Seal of District Court
Grand County, Colorado)

STATE OF COLORADO)
: SS.
County of Grand)

IN THE DISTRICT COURT.

No. 729

In the matter of the adjudication of Priorities of right to the use of Water for Irrigation purposes in Water District No. 51 in the State of Colorado

DE WITT DITCH

DITCH CLAIM STATEMENT.

The undersigned, MELVIN E. ADKINS, one of the owners of the following described ditch herewith makes statement of claim for use in the above entitled matter as required by Section 1755 of the Compiled Laws of Colorado of 1921 and for the purpose of securing the benefits of the act of which the said section is a part and of the amendments thereto and of other statutes of the State of Colorado pertaining to the use of water for irrigation purposes:

1. The name of the ditch is the DeWITT DITCH.

2. The names of the owners of the said ditch are Melvin E. Adkins and Marie C. Adkins, his wife, whose postoffice address is Grand Lake, Grand County, Colorado.

3. The headgate of the ditch is located at a point on the west bank of the North Fork of the Colorado River, whence the N¼ corner of Sec. 25, Tp. 4 N., R. 76 W. of the 6th P. M. bears N. 85° 5' W. 478 Feet.

4. The General Course of the completed ditch is southerly and the continuation thereof which is planned will be southwesterly in direction.

5. The present length of the ditch is 0.42 mile but the complete ditch will be about 1 mile in length.

6. The ditch is 4 feet wide at high water line, 2 feet wide on bottom and 1 foot in depth with a grade of 10.8 feet per mile which gives it a carrying capacity of 4.00 cubic feet of water per second of time.

7. The date of appropriation by original use of the ditch was December 14, 1923 and the amount of water claimed at the present time for the completed portion of the ditch and the present amount of irrigated land is 0.7 of a foot of flood water from April 1 to June 15 of each year and 0.35 of a cubic foot of water per second of time direct flow through the irrigation season and when the full amount of 80 acres lying under the ditch has been irrigated thereby claimant asks for 2 cubic feet of water per second of time as a flood water right as above stated and 1 cubic foot of water per second of time direct flow during the irrigating season.

8. The number of acres of land lying under and along the line of the said ditch belonging to the claimants and to be irrigated thereby is 80.

9. The soil is a sandy loam with gravel subsoil underlying it.

10. That the owners of the said ditch since its construction have beneficially used and applied about 1 cubic foot of water per second of time each year to the 14 acres of land now under cultivation for a period of time from about the 1st of April of each year for as long a time as there is high water in the said stream or until about the 15th day of June and have applied about one half of that amount or about the normal amount for this region to the irrigation of this land during the remainder of the irrigation season; that on account of the high elevation of the land, the shortness of the irrigation season, the cold temperature under which crops are ordinarily required to be raised, it is necessary to get a quick and early start in order to make a paying crop and this can only be done by a large application of water during the flood water stage of the streams in the spring of the year but that after the crop has been well started, it is possible to keep it in good condition and growing to maturity with the normal amount usually required in this general region; that a proportionate amount of water will be required in the same way for the irrigation of the remainder of the land lying under this ditch as soon as the same is placed in cultivation.

11. Claimants therefore ask that they be granted a decree for the DeWitt Ditch for sufficient water to irrigate the said 14 acres of land under the conditions above named, viz: 0.7 of a cubic foot to one cubic foot of water per second of time during the period above named and one half of that amount during the remainder of the irrigation season and that he be given a conditional decree for proportionate amounts of flood water and direct flow water for the remainder of the said 80 acres of land to date from December 14, 1923, but subject to and junior to all decreed priorities and appropriations on the said stream and in the said Water District.

Melvin E. Adkins
Claimant

STATE OF COLORADO)
: SS.
County of Grand)

Melvin E. Adkins, being first duly sworn, upon his oath states that he is one of the claimants above named and one of the owners of the DeWitt Ditch; that he has read the foregoing statement of claim and is conversant with the facts and that the matters and things therein set forth are true of his own knowledge.

Melvin E. Adkins

Subscribed and sworn to before me this 7th day of August A.D. 1939.

(Seal of District Court
Grand County, Colorado)

Brice Sheriff
Clerk of the District Court.

10-02-1939: statement of claim: decree of the adjudication of priorities of water rights in water district no. 51

STATE OF COLORADO)
) SS.
COUNTY OF GRAND)

IN THE DISTRICT COURT

No. 729

IN THE MATTER OF THE ADJUDICATION OF PRIORITIES OF WATER RIGHTS IN WATER DISTRICT NO. 51.

STATEMENT OF CLAIM

The undersigned, Mary Alice Schnoor, hereby makes statement of claim in the above entitled matter for the purpose of securing the benefits of the law of the State of Colorado, in relation to the adjudication of the priorities of water rights, for irrigation, domestic purposes, fire protection, and fish culture, and says:

1. That she is the owner of the Ditch hereinafter described, situated in said Water District No. 51: That her full name is Mary Alice Schnoor and her post office is Grand Lake, Colorado.

2. That the name of said ditch is the Howard Ditch.

3. That the headgate of said ditch is located on the right bank of Columbine Creek (a tributary of the Colorado River) from which Creek said ditch derives and diverts its supply of water at a point whence the S. E. COR. SEC. 36, Tp. 4, N. R. 76 W., 6 P. M. bears S. 44°40' E. for 1290 feet.

4. That from said headgate said ditch runs in a general South easterly direction a distance of 2700 feet.

5. That the length of the said ditch is 2700 feet, the width at the bottom is 2 feet, and its high water surface line is 4 feet, the depth of water carried thereby is 1 foot; its grade is one foot per 1000 feet. That said ditch is an enlargement and extension of the ditch heretofore constructed by Carey Howard along the same course. That this claim for priority precedes all other claims for appropriation out of said Creek.

6. That the carrying capacity of said ditch is 3 cubic feet per second of time, as enlarged and extended.

7. That the amount of water claimed by appropriation under and by means of the construction and enlargement of the said ditch is 3 cubic feet per second of time.

8. That the work was commenced on said ditch on the 1st day of September, A. D. 1933 from which time said appropriation of water is claimed to date.

9. That the number of acres of land lying under and along the line of said ditch are being irrigated by water obtained therefrom is 80 acres. The cost of said enlargement is $250.00.

WITNESS my hand and seal this 2nd day of October, A. D. 1939.

Mary Alice Schnoor (SEAL)

STATE OF COLORADO)
) SS.
COUNTY OF GRAND)

MARY ALICE SCHNOOR, of lawful age being first duly sworn upon her oath deposes and says, that she has read the foregoing Statement of Claim and that the matters and things set forth in such statement are true of her own knowledge.

Mary Alice Schnoor

Subscribed and sworn to before me this 2nd day of October, A. D. 1939.

(Seal of District Court
Grand County, Colorado)

Brice Sheriff
Clerk of District Court

10-02-1939: statement of claim: adjudication of priorities of water rights in water district no. 51

STATE OF COLORADO)
) SS.
COUNTY OF GRAND)

IN THE DISTRICT COURT

No. 729

IN THE MATTER OF THE ADJUDICATION OF PRIORITIES OF WATER RIGHTS IN WATER DISTRICT NO. 51.

STATEMENT OF CLAIM

The undersigned, Robert A. Harbison, hereby makes statement of claim in the above entitled matter for the purpose of securing the benefits of the law of the State of Colorado, in relation to the adjudication of the priorities of water rights, and says:

1. That he is the owner of the Bob Harbison Ditch hereinafter described, situated in said Water District No. 51: That his full name is Robert A. Harbison and his post office is Grand Lake, Colorado.

2. That the name of said ditch is The Bob Harbison Ditch.

3. That the headgate of said ditch is located on the north bank of Harbison Creek (so named for convenience in this case) from which stream said ditch derives and diverts its supply of water at a point whence the N. E. COR. SEC. 36, Tp. 4, N. R. 76 W., 6 P. M. bears N. 0. 10' E. for 997 feet.

4. That from said headgate said ditch runs in a general westerly direction a distance of 1400 feet and thence north 1000 feet, thence west 300 feet.

5. That the length of the said ditch is 2700 feet, the width at the bottom is 1.5 feet, and its high water surface line 3 feet, the depth of water carried thereby is 0.75 feet; its grade is one foot per 100 feet.

6. That the carrying capacity of said ditch is 1.7 cubic feet per second of time.

7. That the amount of water claimed by appropriation under and by means of the construction of the said ditch is 1.7 cubic feet per second of time.

8. That the work was commenced on said ditch on the 15th day of June, A. D. 1932 from which time said appropriation of water is claimed to date.

9. That the number of acres of land lying under and along the line of said ditch are being irrigated by water obtained therefrom is 25 acres.

WITNESS my hand and seal this 2nd day of October, A. D. 1939.

Robert A. Harbison (SEAL)

STATE OF COLORADO)
) SS.
COUNTY OF GRAND)

ROBERT A. HARBISON, of lawful age being first duly sworn upon his oath deposes and says, that he has read the foregoing Statement of Claim and that the matters and things set forth in such statement are true of his own knowledge.

Robert A. Harbison

Subscribed and sworn to before me this 2nd day of October, A. D. 1939.

Brice Sheriff
Clerk of District Court

(Seal of District Court
Grand County, Colorado)

10-13-1939: letter to regional attorney from special assistant to the attorney general regarding general adjudication, district 51,

REC'D OCT 16 1939

DEPARTMENT OF JUSTICE

332 Postoffice Building,

Denver, Colorado, Oct.13, 1939.

ans. 10/17/39

Joseph E. Taylor, Esq.,
Regional Attorney, National Park Service,
601 Sheldon Building,
San Francisco, California.

Re general adjudication, District 51,
Claims for Rocky Mountain National
Park.

Dear Joe:

You have doubtless been informed by Mr. McLaughlin, Assistant Superintendent, Rocky Mountain National Park, that the time for filing claims in this matter was, on October 2, extended sixty days.

There is no reason, that I can see, why we should not have the proper filings made with the State Engineer in the next week or so. Will you please see that the necessary maps and statements are forwarded to Mr. McLaughlin, for that purpose.

Very truly yours,

Worth Allen,
Special Assistant to the
Attorney General.

WA/ELM

they have all been sent to park

* * * * * * * * * * * * * * * *

Priority No. 1 Priority No. 26, Third Series.

All of which is most respectfully submitted.

Fred W. Stow
Referee.

See ltr 12-19-1958 607
to Dir from Reg 2

STATE OF COLORADO)
) ss.
COUNTY OF BOULDER)

IN THE DISTRICT COURT
No. 6673.

IN THE MATTER OF THE ADJUDICATION OF THE PRIORITIES OF RIGHT TO THE USE OF WATER FOR IRRIGATION PURPOSES IN WATER DISTRICT No. 5 OF THE STATE OF COLORADO

ORDER CONFIRMING THE REPORT OF THE REFEREE.

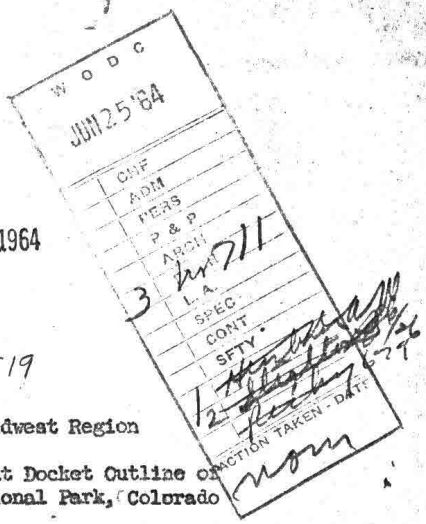
THIS MATTER, coming on to be heard on the 1st day of June, A. D. 1926, upon the report of Fred W. Stow, heretofore duly appointed Referee in said matter, the said report having been filed in this Court on April 5th, 1926, before the said District Court in and for the County of Boulder and State of Colorado, the Honorable Robert G. Smith, one of the Judges thereof presiding, this hearing having been continued from the 17th day of May, 1926, until this day for the filing of objections and exceptions to the report of the Referee aforesaid herein and for hearing upon said report, and it appearing to the Court that no objections or exceptions have been filed to or against the report and recommended decree of said Referee, and the Court being sufficiently advised in the premises, doth hereby in all things confirm the said report and recommended decree of the Referee aforesaid, and does hereby order the same to be entered as of this date as the decree of this Court.

Done in open Court this 1st day of June, A.D. 1926.

Robert G. Smith.
Judge.

608

Other Supporting Information



154
MWR (OL)

JUN 22 1964

Memorandum

To: The Director Docket #19

From: Associate Regional Director, Midwest Region

Subject: Composite Listing of Water Right Docket Outline of Assemblies, Rocky Mountain National Park, Colorado

This office has prepared a composite listing of the outline of assemblies of water dockets received from the Area and your Office, which shows the comparative contents of water right dockets in each office.

To provide identical contents for each water right docket, it will be necessary to provide many copies of data which are missing from one or the other docket files.

Some of the documents, as shown in the individual outline of assemblies are difficult to identify and some of the items may refer to the same document. In other words, a particular document may be listed in the outline of assembly a little differently by the area, the Regional Office, and your Office.

It appears that each office should review the composite outline of assemblies and provide copies for the files of the other offices which do not list the document. A program of funds to cover these costs should be set up in our annual schedule of projects under MAP Accounts.

We shall appreciate your consideration of this project and suggestions regarding its accomplishment.

(Sgd) George F. Baggley

In duplicate Associate Regional Director

Enclosures

cc:
Chief, WODC (2), w/c of enclosures
Superintendent, Rocky Mountain, w/c enclosures

00-00-0000: items: case 814; adjudication of water rights water district 51, history of federal claims in district court

DOCKET NO.	ITEMS	AREA	MRO	WASO
19	CASE 814 - ADJUDICATION OF WATER RIGHTS - WATER DISTRICT 51			
	HISTORY OF FEDERAL CLAIMS IN DISTRICT COURT - CLAIMS, TELEGRAMS, MEMORANDUMS, LETTERS, STATEMENTS, COMMENTS, NOTICES AND MOTIONS			x
	IN UNITED STATES DISTRICT COURT - CASE NO. 2722 - ADJUDICATION OF WATER RIGHTS - WATER DISTRICTS 51 and 36 - SUMMARY OF LETTERS, MEMORANDUMS AND STATEMENTS			x
	1. Synopsis of Report on Colorado Big Thompson Project, Document No. 80, 75th Congress, 1st Session - SENATE, Exhibit A; 33 Page Booklet		x	
	2. Exhibit D - Forest Service Rights - National Park Service Rights - Consisting of 7 pages		x	
	3. COMPLAINT, in the District Court of the United States for the District of Colorado, consisting of 19 pages		x	
	4. Letter of Transmittal to Mastin G. White, Esquire, forwarding copies of Complaints, Signed A. Devitt Vanech		x	
	5. Letter to Mastin G. White of Sept. 22, 1949 with reference to his letter of Aug. 19, 1949; Re: United States vs. Northern Colorado Water Conservancy District et al; 3 pages, Case No. 2782, Signed A. Devitt Vanech		x	
	6. Memo to Commissioner, Bureau of Reclamation; Re: Case of the United States vs. Northern Colorado Water Conservancy District, et al; Sept. 28, 1949		x	
	7. Memo to Regional Director from Acting Supt; Re: Proposed Hearing in United States District Court, Case No. 2782; United States vs. Northern Colorado Water Conservancy District, et al; Oct. 11, 1955		x	
20	GRAND LAKE LODGE AND RANGER STATION WATER SYSTEM			
	SEE NEXT COLUMN FOR LAND STATUS			

DOCKET NO.	ITEMS	AREA	MRO	WASO
20 (Cont'd)				
	LAND STATUS			
	1. GLO Map of T. 4N., R. 75W., of 6th Principal Meridian, Nov. 22, 1932; (Accepted Dec. 9, 1932)	x	x	
	2. Deed of July 1958 from Margaret Mitchell to Colorado Transportation Company	x		
	3. Decree to Quiet Title Colorado Transportation Company versus the Mitchell heirs	x		
	4. Deed of 1962 for Marjorie Thatcher et al to Colorado Transportation Company	x		
	5. Drawing NP-RM 6968	x	x	
	6. Memo of Agreement between United States and the Colorado Trasnportation Company (Approved No. 9, 1960)	x	x	
	7. Supplemental Memo of Agreement dated Feb. 7, 1961	x	x	
	8. Filing No. 17579 (Map NP-RM 6982) Sheets 3 & 4	x	x	
	9. Record of Well dated Aug. 13, 1947	x		
	10. Statement of Claim by the United States for the Grand Lake Lodge & Ranger Station Water System (1948)	x		
	11. Court Decree for sale of James L. Cairns Real Estate dated July 1926	x		
	12. Memo of October 18, 1960	x		
	13. Summary Sheet of Grand Lake Lodge and Ranger Station Water System	x		
	14. Memo of Feb. 14, 1961 from Acting Supt., to Regional Director		x	
	15. Quit-Claim Deed of Dec. 10, 1957		x	
	16. Warranty Deed of Feb. 16, 1959		x	
	17. Supplemental Memo of Nov. 21, 1962		x	
	18. Map, NP-RM 6968 W.O., Mitchell Tract Study		x	
	19. Memo of March 29, 1961 to Regional Director from A. van V. Dunn		x	

COPY

Rocky Mt. ~~Docket 86~~
Docket No. 19

REM - WHV

IMN

90-1-2-83
90-1-2-106

Mastin G. White, Esquire
Solicitor
Department of the Interior
Washington, D. C.

Dear Mr. White:

This will refer to the case entitled United States v. Northern Colorado Water Conservancy District, et al., No. 2782 in the District Court of the United States for the District of Colorado. (Your reference: Bureau of Reclamation; National Park Service.)

Enclosed are copies of the complaint filed June 10, 1949, pursuant to which that cause was instituted. There are described in the complaint those claims asserted by the Bureau of Reclamation in the Blue River in connection with the Colorado-Big Thompson Project. Filings made in connection with those claims in the pending proceedings in Water District No. 36 were withdrawn. A continuance has been ordered in those proceedings until jurisdictional questions stemming from the institution of the above-mentioned suit have been determined. Also described in the complaint are the claims of the National Park Service in Water District No. 51.

You will be advised of all further developments in this matter.

Sincerely,

A. Devitt Vanech
Assistant Attorney General

Enclosure
No. 314363

10-11-1955: memorandum to regional director from acting superintendent regarding proposed hearing in court, case no. 2782 incl

L54

Rocky Mountain National Park
Estes Park, Colorado

October 11, 1955

Memorandum

To: Regional Director, Region Two

From: Acting Superintendent, Rocky Mountain National Park

Subject: Proposed Hearing in U. S. District Court, Case No. 2782, United States vs. Northern Colorado Water Conservancy District et al., including Adjudication of Water Claims in Colorado Water District No. 51 for Rocky Mountain National Park

On October 7 our water claims in the above entitled case, as well as those of the U. S. Forest Service and the Oil Shale Experimental Station, were dismissed in U. S. District Court, without prejudice, on motion of Mr. Veeder, Assistant to the Attorney General in charge of the case.

This case was originally scheduled for hearing on October 5. As you probably know from newspaper accounts the various parties have been negotiating almost continuously for the past two weeks in an effort to reach a compromise on the claims of the Bureau of Reclamation and the cities of Denver, Arvada, and Colorado Springs. Such a compromise has now been reached and stipulated.

I discussed the dismissal of our claims with Special Assistant to the Attorney General H. Lawrence Hinkley, who is associated with Mr. Veeder in the case. Our claims, as well as the other claims of the above-mentioned Federal agencies, apparently were dismissed so as to permit a clear-cut decree in the Colorado-Big Thompson project involving the claims of the Bureau of Reclamation and the cities mentioned above. Mr. Hinkley said the parties did not wish the decree "muddied" with a lot of other claims. The claims of the intervenors in the case which arose out of alleged damages resulting from the construction of the Colorado-Big Thompson Project have, by agreement of the attorneys and the court, been temporarily set aside, although not dismissed, and they will be handled in separate decrees to be entered after the water claims of the cities and the Bureau have been adjudicated.

I inquired of Mr. Hinkley if it was Mr. Veeder's plan to enter a new suit in behalf of the claims which had been dismissed and he said he did not think so. As you know Mr. Veeder has contended that the Federal Government does not have to perfect water claims in

ROMO

10-11-1955: memorandum to regional director from acting superintendent regarding proposed hearing in court, case no. 2782 incl

accordance with the State Water Code. It is his contention that when the Federal Government withdraws land that the withdrawal also applies to the water thereon which is unappropriated at the time of the withdrawal order. I understand that there is considerable disagreement among lawyers, and especially those of the appropriative water rights states, with this theory.

It does not appear that any further action can be taken by us locally in this matter. We were prepared all week to present our testimony in support of our claims and our witnesses, including Mr. Haynes in accordance with Mr. Dunn's memorandum of September 16, spent two full days in Denver waiting to testify before it was decided to dismiss our claims from the suit.

(SGD) GEORGE B. HARTZOG JR.

George B. Hartzog, Jr.
Acting Superintendent

In Duplicate

Copy to: Western Office of Design and Construction

05-22-1952: memorandum to director from assistant regional director regarding proposed form and content of presentation water r

MAY 22 1952

Memorandum

To: The Director

From: Assistant Regional Director, Region Two

Subject: Proposed form and content of presentation of Rocky Mountain National Park water right claims in the pending adjudication in the United States District Court at Denver, Colorado

Enclosed are one copy each of Mr. Canfield's memorandum of May 16, Mr. Marmaduke's letter of May 6 to him, and Exhibit D covering the presentation of Rocky Mountain National Park's water right claims, proposed for use in the now pending adjudication to be heard in Denver during late September and October of this year. Mr. Canfield's letter is self-explanatory.

Exhibit D seems satisfactory to us except for errors which Mr. Canfield has marked and which he will no doubt call to Mr. Marmaduke's attention. However, we note under Timber Creek Water System that the sentence reading "The number of acres to be irrigated is approximately 20 acres" has not been revised to accord with Mr. Dunn's suggestion of June 15, 1948 that the sentence should read "The irrigable area is approximately twenty (20) acres."

We shall appreciate receiving the comments of your Office before we communicate with Mr. Canfield as to the acceptability of the form and content of the proposed Exhibit D.

When Mr. Canfield sends us a separate memorandum covering the Shadow Mountain Recreational Area, we will write to you on that subject.

(Sgd) John S. McLaughlin

John S. McLaughlin
Assistant Regional Director

In duplicate

Attachments 3

Copy to: Supt., Rocky Mt. NP

May 16, 1952

Memorandum

To: Regional Director, Region Two

From: Superintendent, Rocky Mountain National Park

Subject: Proposed form and content of presentation of Rocky Mountain National Park water right claims in the pending adjudication in the United States District Court at Denver, Colorado

Enclosure is made of two copies of a letter dated May 6, 1952, from Special Assistant Attorney General C. V. Marmaduke, Jr., together with two copies of an Exhibit D, which covers the presentation of Rocky Mountain National Park's water right claims, proposed for use in the now pending adjudication to be heard in the United States District Court in Denver, Colorado, during late September and October 1952 (United States vs. Northern Colorado Water Conservancy District et al). Mr. Marmaduke requests the opinion of the National Park Service concerning the content and form of this Exhibit D, and would like to know if the Service wishes to offer any amendments.

No change of consequence has been made during the past six years which would affect our original statements of claim for the four water systems covered in this Exhibit D. Therefore, we see no need for amendments. We have indicated apparent typing errors with red pencil corrections. Your advice concerning the acceptance of the form and content of this proposal is requested before we again contact Mr. Marmaduke's office.

The subject of additional claims to cover a water supply for Shadow Mountain Recreation Area will be covered in a separate memorandum after further study by our office in conjunction with Mr. Hubler.

David H. Canfield
Superintendent

Enclosures 2

05-19-1952: stamp of receival



DEPARTMENT OF JUSTICE

C
O
P
Y

301 New Custom House
Denver 2, Colorado
6 May 1952

Rocky Mountain National Park
Estes Park, Colorado

Re: - United States v. Northern Colorado
Water Conservancy District, et al.
National Park Service Rights
Civil 2782

Dear Sirs:

Enclosed are three copies of a document which has reference to National Park Service rights as set out in Exhibit D in the above case.

We should like to have your opinion as to whether this amplified form of said Exhibit D will better serve the purposes of the National Park Service in presentation of its claims in court. You will, of course, study the contents of the submitted document with a view to determining whether or not the National Park Service would wish to offer an amendment, or amendments, thereto in form or in substance.

After you have had an opportunity to study what is submitted, you will perhaps wish to confer with us in this office. There is no hurry about this matter because the case will not be heard earlier than September 15.

We wish to acknowledge receipt from the State Engineer of a blueprint of the Milner Pass Road Camp Pipeline map, as certified by the State Engineer.

Thanking you for your cooperation, which has been very helpful,

Very truly yours

/s/ C. V. Marmaduke, Jr.
Special Assistant to
The Attorney General

Enc.



05-19-1952: stamp of receival



NATIONAL PARK SERVICE RIGHTS

1. MILNER PASS ROAD CAMP PIPELINE: three tenths (.3) of a cubic foot of water per second of time from a nameless stream, a tributary of the North Fork of the Colorado River through Beaver Creek, with a priority date of July 1, 1919, for domestic (including irrigation of lawns), recreational and fire protection purposes, at Milner Pass Road Camp and Public Camp Ground Area, situated in the Southeast quarter of the Northwest quarter (SE¼NW¼) and the North half of the Southwest quarter (N½SW¼) of Section 9, Township 5 North, Range 75 West of the 6th Principal Meridian. The headgate or intake of said pipeline is located at a point on the south, or right, bank of said nameless stream, whence the Northeast corner of Section 1, Township 5 North, Range 75 West of the 6th Principal Meridian bears North sixty-nine degrees, three minutes (69° 03') East twenty thousand seven hundred fifty-two (20,752) feet. The general course of the diversion pipeline, sixteen and five-tenths (16.5) feet in length, is southwesterly. The diameter of said pipeline from the diversion or intake point to a distribution reservoir or tank, with a capacity not exceeding ten thousand (10,000) gallons, is two and one-half (2½) inches. The grade of said pipeline is two hundred nine (209) feet per thousand (1000) feet. The water from said reservoir or tank is distributed at places of use in said Milner Pass Road Camp and Public Camp Ground Area by a distribution pipe. The carrying capacity of said two and one-half (2½) inch pipe is three-tenths (.3) of a cubic foot of water per second of time, which amount of water is needed at times for flushing said reservoir or tank and for said domestic, irrigation and fire protection purposes. Construction of said pipeline was begun on July 1, 1919, and was completed during the summer of that year, and said pipeline has been used every year since to the capacity thereof, for the purposes stated.

2. TIMBER CREEK WATER SYSTEM: five hundred forty-two thousandths (.542) of a cubic foot of water per second of time from Timber Creek, a tributary of the North Fork of the Colorado River with a priority date of July 1, 1931, for domestic, irrigation and fire protection purposes at a public campground and road camp, designated as Timber Creek Campground, situated in the Northwest quarter of the Southwest quarter (NW¼SW¼) of Section 19, Township 5 North, Range 75 West of the 6th Principal Meridian; and in the East half of the Southeast quarter (E½SE½) of Section 24, Township 5 North, Range 76 West of the 6th Principal Meridian. The number of acres to be irrigated is approximately 20 acres. The headgate or intake of said pipeline is located at a point on the North, or right, bank of said Timber Creek, whence the Northwest quarter corner of said Section 19 bears North sixty-four degrees, fifty-two minutes (64° 52') West seven hundred thirty-four and thirty-three hundredths (734.33) feet. The general course of said pipeline is southwesterly and crosses said Timber Creek. The diameter of said pipeline is four (4) inches; the grade thereof is sixty-three and six-tenths (63.6) feet; the length thereof is two thousand two hundred sixty-four and eighty-seven hundredths (2,264.87) feet; the carrying capacity thereof is five hundred forty-two thousandths (.542) of a cubic foot of water per second of time.

3. GRAND LAKE LODGE POWER PIPELINE AND POWER PLANT: eight (8) cubic feet of water per second of time from Tonahutu Creek, a tributary of the North Fork of the Colorado River through the North Inlet to Grand Lake with a priority date of June 1, 1920, for the generation of electricity in a power plant located in the Northeast quarter of the Southwest quarter of the Northwest quarter of Section 32, Township 4 North, Range 75 West of the 6th Principal Meridian. The headgate of said pipeline is located on the West, or right, bank of said Tonahutu Creek, at a point whence the Northwest corner of said Section 32 bears North eighty-

U. S. GOVERNMENT PRINTING OFFICE

seven degrees, fifty-two minutes (87° 52') West one thousand seven hundred fifty-six and thirty-four hundredths (1756.34) feet. The said headgate, made of wood, is sixty-seven and one-half (67½) inches in width. It is usually opened to proved a submerged opening of more than eleven(11) square feet under an effective head of two and one-half (2½) feet. The diversion capacity thereof is in excess of thirty (30) cubic feet of water per second of time. Water diverted is conveyed for a distance by an earth ditch. Said ditch has a variable cross section, with a minimum width of nine (9) feet. The depth of said ditch is eighteen (18) inches. The length thereof is one hundred seventy-five (175) feet; the minimum grade thereof is one and fifty-five hundredths (1.55) feet per thousand feet; the capacity thereof is in excess of thirty (30) cubic feet of water per second of time, but the actual amount of water carried therein to and through the hydroelectric plant has been and is eight (8) cubic feet of water per second of time. There is a spillway at the end of said ditch by which all water not needed for beneficial use is immediately returned to the stream. The said ditch discharges into a pipeline or penstock. The diameter of said penstock is twenty (20) inches; the length thereof is one thousand seven hundred eighty feet; the controlling grade thereof is thirty-two and twenty-two hundredths (32.22) feet per thousand (1000) feet; the total fall is one hundred sixty-three (163) feet. The water from the said penstock, after passing over a wheel in the said hydro-electric plant, is immediately returned to the stream by a ditch, one hundred feet in length, at a point two thousand twenty (2020) feet below the point of diversion. The general course of the structure, including the ditch and penstock, is Southwesterly. Work was commenced on said structure on June 1, 1920, and was completed in that year with the lower diversion. The present upper diversion was built in 1926. Continuous use of the amount of water claimed for the purposes stated has been made ever since 1920.

4. GRAND LAKE LODGE AND RANGER STATION WATER SYSTEM; twenty-four thousandths (.024) of one cubic foot of water per second of time, with a priority date of June 1, 1920; and forty-eight thousandths (.048) of one cubic foot of water per second of time with a priority date of July 1, 1926, both from Tonahutu Creek, a tributary of the North Fork of the Colorado River through the North Inlet to Grand Lake. Claim is made to use at Grand Lake Lodge, the Grand Lake Ranger Station entrance, and utility areas of Rocky Mountain National Park for domestic, including lawn irrigation, and for recreational and fire protection purposes, the above amounts of water, and of the right to divert all or any part of the total quantity of seventy-two thousandths (.072) of a cubic foot of water per second of time at either of the headgates hereinafter referred to. The said Lodge, Ranger Station, entrance, and utility areas are all located in the South half of the South half (S½S½) of Section 31, Township 4 North, Range 75 West of the 6th Principal Meridian. There are two headgates or intakes for said water system which are located on t he West, or right, bank of said Tonahutu Creek, as follows: (a) at a point ,hereinafter referred to as "point a," at a small concrete dam, whence the Northwest corner of Section 32, Township 4 North, Range 75 West of the 6th Principal Meridian bears North thirty one degrees, twelve minutes (31° 12') West eighteen hundred&fifty-five (1800.55) feet; (b) at a point, hereinafter referred to as "point b," whence the Northwest corner of said Section 32 bears North eighty-seven degrees, fifty-two minutes (87° 52') West seventeen hundred fifty-six and thirty-four hundredths (1756.34) feet. The headgate at "point a" consists of a two-inch gate valve imbedded in said concrete dam. The headgate at "point b" is also the headgate of the Grand Lake Power Pipeline, and is described in a separate statement of claim for that pipeline which is being presented to this court. The open ditch and penstock portion of said power pipeline system extends for a distance of sixteen hundred eighty (1680) feet and is also used by the Grand Lake Lodge and Ranger Station Water System.

7—1404

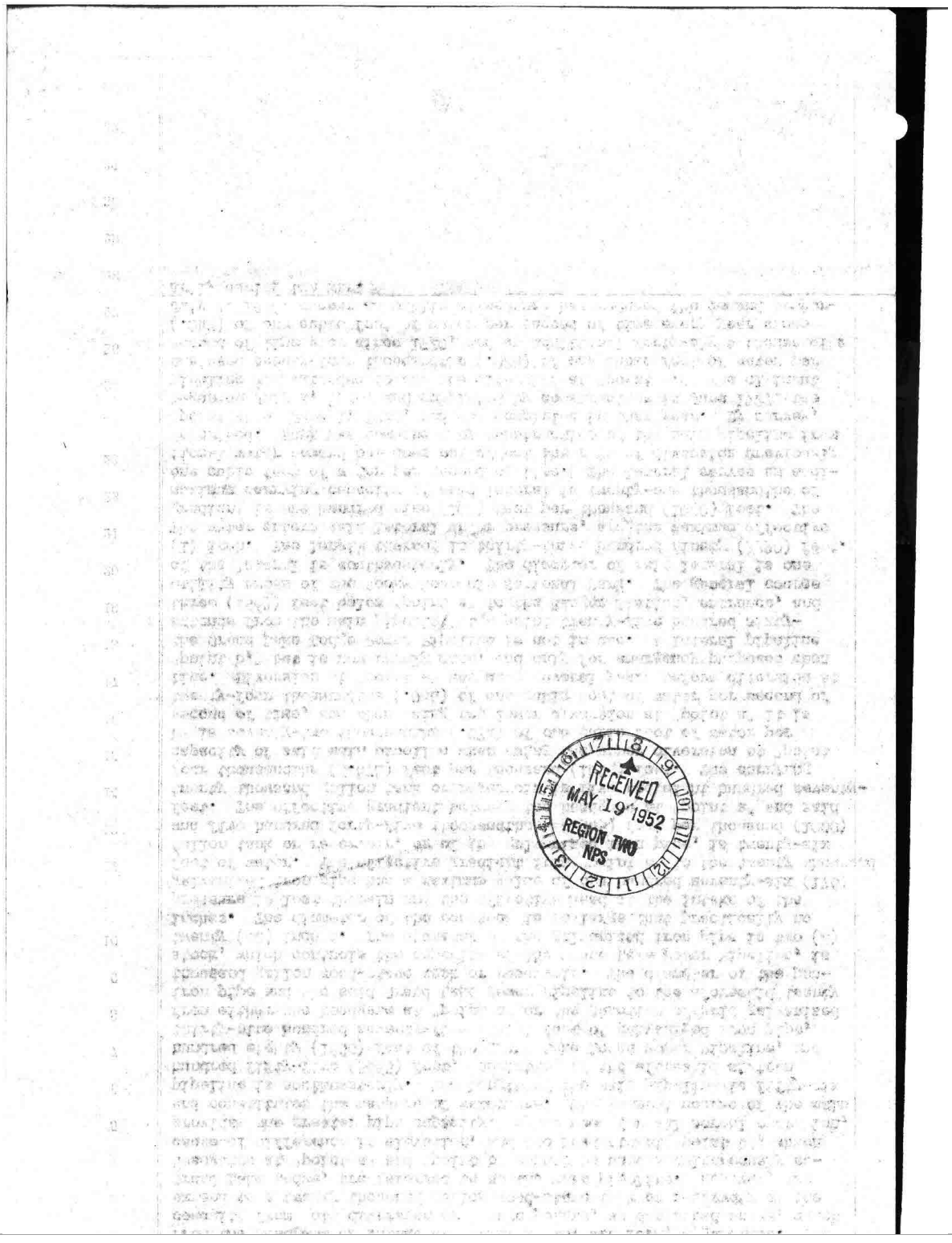
U. S. GOVERNMENT PRINTING OFFICE

Two pipes, whose diameters are two (2) inches and whose lengths are each approximately seventy-five (75) feet, extend from said penstock and from the headgate or intake at "point a" to, and form, a junction. The conduits from both diversion or intake points, as described above, which extend to a twenty thousand gallon wood-stave tank or reservoir at the Grand Lake Lodge, are referred to as the main pipeline. However, the headgates at "point a" and "point b" cannot be used simultaneously because of difference in elevation, and the headgate at "point b", which provides the greater pipe capacity, is now used for all normal operation, and constitutes the measure of water use. The general course of the main pipeline is southwesterly. The length of the main pipeline is fifty-six hundred fifty-five (5655) feet, consisting of the aforesaid sixteen hundred eighty (1680) feet of the Grand Lake Lodge Power Pipeline, and thirty-nine hundred seventy-five (3975) feet of galvanized iron pipe, from either the headgate at "point a" or the junction of said galvanized iron pipe and the said Grand Lake Power Pipeline to the aforesaid twenty thousand gallon wood-stave tank or reservoir. The diameter of the penstock, which controls the capacity of the Grand Lake Power Pipeline, is twenty (20) inches. The diameter of the galvanized iron pipe is two (2) inches. The diameter of the penstock is so large that practically no pressure is lost therein and the effective head at the intake of the galvanized iron pipe has a maximum value of one hundred seventy-six (176) feet of water. The effective gradient from "point b" to the twenty thousand gallon tank or reservoir, or of the galvanized iron pipe, is twenty-six and five hundred forty-five thousandths (26.545) feet per thousand (1000) feet. The effective gradient between the headgate at "point a" and said twenty thousand gallon tank or reservoir is five and eight hundred seventy-four thousandths (5.874) feet per thousand (1000) feet. The carrying capacity of said main pipeline when using the upper diversion at "point b" is seventy-two thousandths (.072) of one cubic foot of water per second of time, and when using the lower diversion at "point a" it is twenty-four thousandths (.024) of one cubic foot of water per second of time. Diversion at "point a" was made several years before diversion at "point b," but is now rarely made, and only for emergency purposes when the Grand Lake Lodge Power Pipeline is not in use. A lateral pipeline extends from the main pipeline at a point twenty-five hundred sixty-three (2563) feet below "point a" to the Ranger Station, entrance, and utility areas of the Rocky Mountain National Park. The general course of the lateral is southwesterly. The diameter of said lateral is one (1) inch. The length thereof is thirty-three hundred ninety (3390) feet. The water enters said lateral under pressure, and the maximum effective gradient is one hundred nine (109) feet per thousand (1000) feet. The maximum carrying capacity of said lateral is twenty-one thousandths of one cubic foot of water per second of time. The lateral serves an additional water demand but does not affect the rate of diversion previously described. Work was commenced by construction of the main pipeline from "point a" on June 1, 1920, and was completed in that year. By survey, begun on July 1, 1926, and completed by construction in June 1927, the pipeline was extended to use the diversion at "point b." The claimant has used twenty-four thousandths (.024) of one cubic foot of water per second of time ever since 1920, and an additional forty-eight thousandths (.048) of one cubic foot of water per second of time every year since July 1, 1926, except as public attendance has reduced the demand temporarily during the war.

7—1404

U. S. GOVERNMENT PRINTING OFFICE

05-19-1952: stamp of receival



06-03-1954: memorandum to director from assistant regional director regarding adjudication of federal rights in state water district

454

JUN 3 1954

Memorandum

To: The Director

From: Assistant Regional Director, Region Two

Subject: Adjudication of Federal Rights in State Water District No. 51 for Rocky Mountain in Case No. 2782 of Federal District Court for Colorado

In response to Mr. Allen's memorandum of March 12, we attach a copy of Mr. Canfield's memorandum of May 25 on the subject "Complaint filed June 10, 1949, in Federal Water Rights Case No. 2782, in Federal District Court for Colorado," and also a copy of the Complaint as filed on June 10, 1949, with exhibit.

If Mr. Canfield gives us information on the date of hearing, we will advise you.

(Sgd) John S. McLaughlin
John S. McLaughlin
Assistant Regional Director

In duplicate

Attachments

Copy to: Supt., Rocky Mt. NP

05-25-1954: memorandum to regional director from superintendent regarding complaint filed june 10, 1949 in federal water rights

L54-L

May 25, 1954

Memorandum

To: Regional Director, Region Two

From: Superintendent, Rocky Mountain National Park

Subject: Complaint filed June 10, 1949, in Federal Water Rights Case No. 2782, in Federal District Court for Colorado

Mr. Allen's memorandum of March 12 requested a copy of information relating to signatures and date of filing of the Complaint in Case No. 2782 in the United States District Court for the District of Colorado, which among other things would adjudicate Rocky Mountain National Park's water claims in State Water District No. 51.

Enclosure is made of a copy of the Complaint as filed on June 10, 1949, and assigned Case No. 2782, including Exhibit D which sets forth the Rocky Mountain National Park claims. We find that the only signatures appearing in this complaint are C. V. Marmaduke, Jr. and William H. Veeder, Attorneys for the Department of Justice.

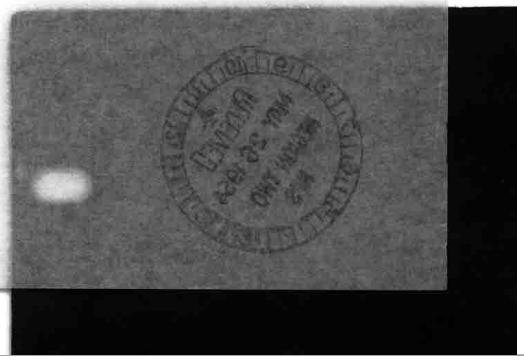
During the conversation, while obtaining the above information, Judge Hinkley, Special Assistant to the Attorney General, indicated that neither he or Mr. Marmaduke were in accord with Mr. Veeder's method of filing the implied request for adjudication of the Forest Service and Park Service water rights claims.

(SGD) DAVID H. CANFIELD

David H. Canfield
Superintendent

In duplicate

Enclosure



05-26-1954: stamp of receival



w/R Copy

January 20, 1954

Air Mail

Memorandum

To: The Director

From: Superintendent, Rocky Mountain National Park

Subject: National Park Claims to be Presented in the Pending Water Rights Adjudication in the United States District Court, District of Colorado, Civil No. 2782, Rocky Mountain National Park

Mr. C. V. Marmaduke, Jr., Special Assistant to the Attorney General, notified this office by telephone on the afternoon of January 19, that the United States District Court for the District of Colorado would hear our evidence in support of our water rights claims in Water District No. 51 (West side of the park) on February 23, 1954, at Denver, Colorado, in Civil No. 2782, United States vs. Northern Colorado Conservancy District, et al.

Mr. Marmaduke stated that our witnesses must be certified to the Court thirty days previous to the hearing, or on or before January 24. He also stated that his superior, Mr. Vetter (or Vedder), of the Attorney General's Office, insisted on having only one witness for the Park Service and one witness for the Forest Service, and has asked that United States Commissioner Wayne H. Hackett be the National Park Service witness.

Mr. Van Dunn undoubtedly knows Mr. Vetter (or Vedder) and may wish to contact him.

Unless we hear further from you, we will proceed along the line set forth above.

David H. Canfield
Superintendent

Copy to: Regional Director, Region Two

08-24-1953: memorandum to regional director from chief, water resources branch regarding federal water claims in colorado wate

In reply refer to:
L54-L

August 24, 1953

Memorandum

To: Regional Director, Region Two

From: Chief, Water Resources Branch

Subject: Federal Water Claims for Rocky Mountain National Park in Colorado Water District No. 51--U. S. vs. Northern Colorado Water Conservancy District, et al., Civil Case No. 2782

While at Denver in June, I asked Mr. C. V. Marmaduke, Special Assistant to the Attorney General, about the status of this case and was informed that testimony was closed, the claims for Rocky Mountain had not been rejected by the Court, and that a decision would be rendered in due course.

(SGD.) A. VAN V. DUNN.
A. van V. Dunn
Chief, Water Resources Branch

In duplicate

Copy to: Mr. Price

AvanVDunn:sh

09-25-1952: memorandum to regional director from assistant director regarding federal water claims in colorado water district no.

In reply refer to:
L54 ROMO-L

SEP 25 1952

Memorandum

To: Regional Director, Region Two

From: Assistant Director

Subject: Federal Water Claims for Rocky Mountain National Park, in Colorado Water District No. 51, To Be Adjudicated in the U. S. District Court, in Case, U. S. vs. Northern Colorado Water Conservancy District, et al., Civil Case No. 2782

By memorandum of August 22, Mr. Ingalls forwarded a copy of the subject statement of claim which Mr. Canfield had received from the Special Assistant to the Attorney General, approximately on July 15. The following points should be called to the attention of the Special Assistant to the Attorney General, and a third copy of this memorandum is enclosed for his records:

In paragraph 2, Timber Creek Water System, insert "per 1000 feet" after "(63.6) feet", in the fourth line from the bottom.

To be consistent, insert "(NE¼SW¼NW¼)" after the fifth word on line 6 of paragraph 3, Grand Lake Lodge Power Pipeline, betweetn "quarter" and "of Section 32".

In the same paragraph, 7th line on the next page, insert the word "ditch" at the end of the statement "seventy-five (175) feet by earth".

While not essential, the word "structure", in the 6th line from the bottom of the same paragraph, might be replaced by the word "conduit."

It might be well to add "industrial" as a purpose for water use, on line 8 or line 9 of paragraph 4, Grand Lake Lodge and Ranger Station Water System. This water system serves the west side utility area of the Park, and some activities at the Lodge, which are better described as industrial than domestic or recreational.

The last sentence on page 2, under paragraph 4, Grand Lake Lodge and Ranger Station Water System, might be clearer if rewritten as follows:

"The open ditch and upper sixteen hundred eighty (1680) feet of the Grand Lake Lodge Power Pipeline, totalling eighteen hundred fifty-five (1855) feet, also serve as the diversion conduit from "point b" of the Grand Lake Lodge and Ranger Station Water System."

We have also received the memorandum of September 5 from Mr. Ingalls, advising that Mr. Canfield does not believe that we have any additional claims to present for water use at the Shadow Mountain National Recreation Area. We will accept that decision if the water for recreational developments is to be pumped from the reservoir or purchased from the Town of Grand Lake. However, we hope it is not necessary to purchase from the town, thus helping to increase the municipal rights to Tonahutu Creek. This matter will be discussed by Mr. Dunn during his trip in October.

(SGD) THOMAS J. ALLEN
Assistant Director

In triplicate

Copy to: Mr. Dunn

AvanVDunn:sh

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA

NOV 30 1950

Memorandum

To: The Director

From: Regional Director

Subject: Water Supply for Shadow Mountain Recreational Area in Relation to Waters of Rocky Mountain National Park

This will refer to Mr. Demaray's memorandum of March 28, 1949, concerning our draft of recreational development outline of Shadow Mountain Lake and Granby Reservoir, in which you gave us the general comments of Mr. Dunn.

The last paragraph of Mr. Demaray's memorandum asks that we submit our comments on the most desirable method of supplying the water needs in the Grand Lake-Shadow Mountain Lake area with the least detriment to the Grand Lake Community or the park values.

We have been investigating this matter for some time and have received the comments of Region 7, Bureau of Reclamation, Mr. Canfield and Mr. Hubler. Copies of this correspondence are attached.

Mr. Dunn's comments indicate that the town of Grand Lake has final decreed rights to divert 0.25 second feet and conditional decreed rights to divert 18.656 second feet or a total of 18.906 second feet of the flow of Tonahutu Creek, except so far as the United States, the Harbison estate and the Mitchell heirs have senior rights to small quantities of the flow. He also indicated that the ultimate needs of the town of Grand Lake alone will not exceed about 3.2 second feet of water. It appears from the above that the balance of 15.706 second feet would be ample to supply the water needs of both the park and the northern section of the proposed recreational area, provided the town of Grand Lake will be willing to allow the use of this flow or a necessary portion of it for such purposes.

Referring to the attached copy of Mr. Canfield's memorandum, he states that the National Park Service owns 1.65 second feet of Tonahutu Creek water through the Harbison Ditch; that this is more than the park needs for the utility area, and with adequate storage facilities could help serve the north area, Shadow Mountain Recreational area.

We also wish to call your attention to the third paragraph of the attached copy of the letter to this office, dated August 19, 1949, from Assistant Director Blomgren, Region 7, Bureau of Reclamation. As he states, irrigation water rights for 16.625 second feet could be changed to domestic water rights which, it would appear, would be adequate for the Bureau of Reclamation's Shadow Mountain camp and other contemplated recreational areas along the south end of the Shadow Mountain Lake.

The above information leads us to believe that this is sufficient water for recreational development at each end of Shadow Mountain Lake where the principle recreational developments are to be located. However, we will not have accurate knowledge of how much water is needed in connection with the above until detail plans, which are being prepared, are completed. After this work is done we will be in a better position to work out a recreational development program including water needs for the Grand Lake-Shadow Mountain area with proper consideration for the town of Grand Lake and the park.

/s/ Howard W. Baker

Howard W. Baker
Regional Director

In duplicate

Attachments 6

Copy to: Superintendent, Rocky Mountain National Park
Denver Office

09-21-1949: memorandum to regional director from superintendent regarding possible water supply sources for shadow mountain

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Rocky Mountain National Park
Estes Park, Colo.

September 21, 1949

Memorandum

To: Regional Director, Region Two

From: Superintendent, Rocky Mountain National Park

Subject: Possible water supply sources for Shadow Mountain Recreational Area

With your memorandum of August 25 you attached copies of correspondence from Park Planner Hubler, The Bureau of Reclamation and others pertinent to the subject of this memorandum. You asked us for any comments we might have to make on the subject.

The following comments have been made by Park Engineer Montgomery and Commissioner Hackett. They are not meant as recommendations for sources of supply but only as a portrayal of potential sources without attempt to analyze the pros and cons of the various suggestions.

Tonuhutu Creek for North Area:
We own 1.65 sec. ft. of Tonuhutu Creek water through Harbison Ditch. This is more than we need for Utility Area, and, with adequate storage facilities, could help serve North Area. Arrangements might be made with the town of Grand Lake whereby they could supply the balance if more were required.

Bureau of Reclamation Camp:
16.625 sec. ft. noted in Mr. Blomgren's letter of August 19, 1949, should be more than enough to serve their needs and recreational area. Points of diversion and changes from irrigation to domestic status should be cleared up.

East Side of Shadow Mountain:
National Park Service owns 2 or more sec. ft. in Pole Creek Ditch which would suffice for east and part of south developments if such seemed advisable.

Seymour Rights:
Catherine G. Seymour owns 2 sec. ft. in Cairns Ditch No. 1, sometimes known as Graves Ditch, which is likely for sale. Diversion point is apparently in vicinity of present Bureau of Reclamation diversion point for Shadow Mountain camp. If these rights were purchased, they could supplement the present U. S. Bureau of Reclamation water.

Off hand appearances indicate adequate supply but when tentative plans are made for recreational areas, demands should be estimated. When these possible demands are known, a thorough investigation should be made to determine sources and possible diversion point alterations.

/s/ David H. Canfield

David H. Canfield
Superintendent

Copy to: Mr. Hubler, Denver

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
Regional Office, Region 7
318 New Customhouse
Denver 2, Colorado

August 19, 1949

Mr. Lawrence C. Merriam,
Regional Director, Region 2,
National Park Service,
307 Federal Office Building,
Omaha, Nebraska.

Dear Mr. Merriam:

Reference is made to your letter of July 8, 1949, requesting information concerning the domestic water supply at Shadow Mountain Camp as it pertains to future public use developments.

The main source of supply of domestic water for Shadow Mountain Camp is from the North Fork of the Colorado River, the diversion being made approximately 800 feet east of U. S. Highway No. 34. The water from the river is chlorinated at a nearby pumphouse and pumped by a 100 g.p.m. pump to a 10,000 gallon concrete reservoir located on the hill south of the camp. For a standby water supply there is a well located near the pumphouse equipped with two 40 g.p.m. pumps, and a well at the camp equipped with a 50 g.p.m. pump.

In one sense, the Bureau does not have any domestic water rights for Shadow Mountain Camp; however, irrigation water rights from the North Fork of the Colorado River, for 3.625 c.f.s. and 13 c.f.s., were included in the purchase of land for Shadow Mountain Reservoir. If an adjudicated domestic water supply is demanded, it will, of course, be necessary to have the irrigation water rights changed to domestic water rights, and at the same time have the points of diversion changed.

It would, therefore, appear that the water supply potential is adequate to serve Shadow Mountain Camp as well as contemplated recreational areas. If needed, a portion of the water rights might be transferred to recreation use with the amount to be transferred based on the expected ultimate demand.

We concur in your opinion that the Shadow Mountain Camp water supply would be too far removed to consider using it for the development of the north end of the reservoir. It is believed that the logical source of supply for this area would be the water system of the Town of Grand Lake. There should be no difficulty experienced in obtaining permission to use water from this source.

Very truly yours,
/s/ W. E. Blomgren

W. E. Blomgren,
Assistant Director.

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
River Basin Recreation Studies-Colorado
Room 201, 1621 18th Street
Denver 2, Colorado

Memorandum August 9, 1949

To: Regional Director, Region Two

From: Park Planner Hubler

Subject: Mr. Dunn's remarks on water supply, Grand Lake and Vicinity

I have several general comments to offer in regard to Mr. Dunn's remarks in connection with the water supply of the Grand Lake-Shadow Mountain-Granby area. You invited comments from Mr. Canfield and myself by postscript on copy of your letter of July 8, 1949 to Mr. Batson.

We did not make a detailed study of the water supplies to serve the recommended recreational developments at the West Portal, Shadow Mountain and Granby areas at the time we made the investigations necessary for preparation of the General Recreation Development Plans. Sufficient funds were not available. However, we did have some idea of the locations where it would be necessary to have water, where a supply would be desirable, and where water would be supplied if conveniently available.

There are a number of possible sources of supply for each of the proposed developments that will need to be investigated when detail studies and plans are undertaken. After the demand is determined and the possible supplies have been thoroughly examined, the most desirable method of filling the needs of the recreation developments with the least detriment to the community or the park values can be established.

If it falls upon the National Park Service to prepare detail plans for Shadow Mountain Lake and West Portal area, it is imperative that sufficient funds be available to employ a qualified engineer to undertake the necessary research and studies to prepare a report on the water supply situation (demand and probable source), in respect to the recreation developments.

As you know, the Bureau of Reclamation installed a temporary system for Grand Lake last summer. I now understand that the Bureau has prepared plans for a permanent system and turned these plans over to the town for consideration of repayment ability if installed by the Bureau. The Bureau in the meantime, will determine if they have authority to install the system on the repayment plan. I am not certain that Superintendent Canfield knows about this and am passing it along in case either your office or his wishes to look into the matter further. Either the town or the Bureau will probably have some worthwhile estimates on the town's demands.

/s/ Harold A. Hubler
Harold A. Hubler
Park Planning in Charge

In duplicate
Copy to: Supt., Rocky Mtn. Nat'l. Park

10-07-1949: memorandum to regional director from chief, water resources branch regarding adjudication of federal water rights in

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

ADDRESS:
THE DIRECTOR, NATIONAL PARK SERVICE

In reply refer to:
L54 ROCK

October 7, 1949

Memorandum

To: Regional Director, Region Two

From: Chief, Water Resources Branch

Subject: Adjudication of Federal water rights on behalf of Rocky Mountain National Park in Water District No. 51

By memorandum of August 27, 1945, we sent you folders including certain records relating to the above subject, designated as Rocky Mountain Deed 86. On May 27, 1947, we transferred the contents of that deed to Rocky Mountain Alien Water Right No. 1. Presumably you still have the folder for Deed 86.

Please cross out the words "Case No. 814" on the top of that deed and type thereunder "in the District Court of the United States for the District of Colorado."

We enclose two copies of the complaint filed by the United States on June 10, including Exhibits A and D. Exhibit A is essential to the understanding of the complaint and Exhibit D constitutes the Federal claim on behalf of the National Park Service and the Forest Service. Also enclosed are two copies of a letter from Mr. Vanech, Assistant Attorney General, advising that these instruments were filed on June 10. Please insert these papers in the assemblies of Rocky Mountain Deed 86 in your office and at the Park.

Also enclosed are two copies of a letter of September 22 from Mr. Vanech to the Solicitor in reply to the latter's letter of August 19, of which you already have copies, and two copies of a memorandum of September 28 from the Chief Counsel for the Commissioner or Reclamation, forwarding said letter and advising that Mr. Dunn will handle the engineering phases for the National Park Service.

(SGD.) A. VAN V. DUNN.

A. van V. Dunn
Chief, Water Resources Branch

Attachments 8

In duplicate

AvanVDunn:sh

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

In reply refer to:
L54 MESA

ADDRESS:
THE DIRECTOR, NATIONAL PARK SERVICE

SEP 28 1949

Memorandum

To: Commissioner, Bureau of Reclamation
Attention: Mr. Herbert J. S. Devries

From: Chief Counsel, National Park Service

Subject: Case entitled United States v. Northern Colorado Water Conservancy District, et al., No. 2722 in the District Court of the United States for the District of Colorado

In accordance with our Mr. Lee's telephone conversation of today with Mr. Devries, there are attached the original and one copy of Assistant Attorney General Vanech's letter of September 22 to Solicitor White concerning the case entitled United States v. Northern Colorado Water Conservancy District, et al. Two copies of the complaint mentioned in that letter are also attached.

As Mr. Lee mentioned to Mr. Devries, it would appear desirable to have coordinated action between the National Park Service and the Bureau of Reclamation on this matter. Mr. A. van V. Dunn of our Water Resources Branch will handle the engineering phase for the Park Service interest in this suit, and it is suggested that he be contacted whenever it is apparent that coordinated action between our two Bureaus is desirable.

(Signed)

Jackson E. Price
Chief Counsel

Attachments 4

Copy to: Mr. Edelstein, Solicitor's Office

COPY

REM - WHV

IMM

90-1-2-454

September 22, 1949

Mastin G. White, Esquire
Solicitor
Department of the Interior
Washington, D. C.

Dear Mr. White:

This will refer to your letter of August 19, 1949, relative to the case entitled United States v. Northern Colorado Water Conservancy District, et al., No. 2782 in the District Court of the United States for the District of Colorado. (Your reference: Bureau of Reclamation; National Park Service.)

In the second paragraph of that letter you refer to the proceeding in the District Court in and for the County of Summit, Colorado, entitled In the Matter of the Adjudication of the Priorities of Water Rights in Water District No. 36 for Purposes of Irrigation, No. 1880, adding that the proceeding in question gave rise to the case entitled United States v. Northern Colorado Water Conservancy District, et al. At the outset it is observed that the proceeding here under consideration is one wholly separate and apart from the general adjudication proceedings in Water District No. 36, Nos. 1805 and 1806. In the present proceeding the petitioner, Mr. Paul R. Heeney, seeks to have the court enter a decree authorizing the change of point of diversion, as distinguished from the general adjudication proceedings pending in that court. With reference to the present proceeding you state that you assume this Department will take whatever action it deems necessary to protect the interests of the United States in connection with the claim.

A full investigation of the matter has recently been undertaken by representatives of this Department. It is understood that the Bureau of Reclamation has advised the petitioner in the proceeding that while it would not assist him in the proceeding in any way, it would not offer any opposition to the petition. Under those circumstances it is assumed that your Department does not desire to have the United States take affirmative action in regard to the cause in question. That course would appear appropriate in view of the fact that the sovereign immunity of the United States from suit would preclude the entry of a decree

which could adversely affect the interests of the United States in the proceeding in question.

Further, the investigation reveals that the City and County of Denver has contested the claim of the petitioner to change the point of diversion. At a hearing respecting the matter held on September 6, 1949, the City and County of Denver interposed the following defenses to the claims of the petitioner:

1. That claimant has failed to disclose due diligence.

2. That claimant had failed to offer evidence every two years respecting due diligence as required by law.

3. That there had been a failure of the claimant to comply with the conditions of the conditional decree thus causing the court to lose jurisdiction to enter a final decree.

4. That the court was powerless to make a final decree for the conditions of the conditional decree had never been fulfilled.

It was likewise disclosed by the City and County of Denver that the court has taken the matter under advisement instructing the City and County of Denver to file a brief on or before October 10, 1949. It was informally suggested by the City and County of Denver that the United States appear on a supplemental brief as amicus curiae. The recommendations of your Department would be appreciated as to the desirability of complying with the request of the City and County of Denver. If you desire this Department to comply with that request it will, of course, be necessary to retract the statement that the Bureau of Reclamation does not desire to oppose the claims of the petitioner. It would likewise be desirable to have an expression from your Department as to the applicability of theprovisions of Senate Document No. 80 to the claims which are here involved.

In the final paragraph on the first page and on the second page of your letter, reference is made to certain provisions of Exhibit D of the Complaint filed in the case of the United States v. Northern Colorado Water Conservancy District, et al., which is now

pending in the District Court of the United States for the District of Colorado. Consideration is being given to those comments. In conformity with the request contained in the paragraph to which reference has been made, there are enclosed four copies of the Complaint and Exhibit D.

An early response to the inquiries contained in this letter would be appreciated.

Sincerely,

A. Devitt Vanech
Assistant Attorney General

Enclosure
No. 314897

00-00-0000: letter to attorney general from solicitor regarding copy of complaint filed by u.s. for the district of colorado in u.s. vs. n

WR Copy @

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON 25, D. C. AUG 9 1946

The Honorable

The Attorney General

Ruby Mtn W.S. 51

Sir:

We have received Assistant Attorney General Vanech's letters of July 19 (your reference: RWK-HV 90-1-2-83 and 90-1-2-106) and July 27 (your reference: RWK-HV 90-1-2-454), with which were enclosed, respectively, a copy of the complaint filed by the United States in the United States District Court for the District of Colorado in United States v. Northern Colorado Water Conservancy District et al., and a copy of the answer of the Public Service Company of Colorado thereto. We appreciate receiving these documents.

In connection with this case, I am advised that the Regional Counsel of the Bureau of Reclamation at Denver, Colorado, by a letter dated June 7, furnished to Mr. Val Marmaduke, Special Assistant to the Attorney General at Denver, copies of a notice filed by Mr. Paul R. Heeney in the District Court in and for the County of Summit, Colorado, in the case there pending entitled In the Matter of the Adjudication of the Priorities of Water Rights in Water District No. 36 for Purposes of Irrigation, which case gave rise to United States v. Northern Colorado Water Conservancy District. I am further informed that a copy of this notice was also handed to Mr. William Veeder, of your staff, by a member of the Bureau of Reclamation's Washington staff on June 13. Mr. Heeney's claim, as you were advised by our letter of March 21, bears upon the rights claimed by the United States for the Green Mountain reservoir of the Colorado-Big Thompson project. I assume that such steps as your Department deems necessary to protect the interests of the United States in connection with this claim will be taken.

It is noted that a continuance has been ordered in the proceedings until certain jurisdictional questions have been determined. It is requested that you advise us of the date of the hearing, as representatives of the National Park Service, which is also interested in this matter, wish to attend as observers, whether needed as witnesses or not.

In connection with the claims on behalf of the National Park Service, your attention is called to the references to Sections 19 and 24 on lines 5 and 9 of page 6 of Exhibit B concerning the

to: Mr. Dunn
Room 2318

Mr. Dewries - Room 7554

Please return to
Room 2318
Thanks
H.J. Dewries

00-00-0000: letter to attorney general from solicitor regarding copy of complaint filed by u.s. for the district of colorado in u.s. vs. n

claim for the Timber Creek Water System. As presently worded, both sections would appear to be in Township 5 North, Range 76 West, 6th Principal Meridian. This should be corrected, if possible, to read "Section 19 in Township 5 North, Range 75 West" and "Section 24, Township 5 North, Range 76 West, of the 6th Principal Meridian."

This is NPS interest

Lines 16, 17, and 18, on page 7 of Exhibit B, state: "Diversion of the rights defined above is accomplished at two headgates located in the West, or right bank of Tonahutu Creek." It is the water that is diverted, and not the rights. Also, it is customary to consider the headgates as being located on, rather than in, the bank of a stream (although the word "in" may be more descriptive). Therefore, you may wish to change this sentence so that it will read: "Diversion of the water defined above is accomplished by two headgates located on the West, or right, bank of Tonahutu Creek."

The complaint and Exhibit B thereof seem to be mimeographed or multilithed. It appears that a relatively large number of copies of them were run off. If possible, it is requested that the National Park Service be furnished three more copies each of the complaint and Exhibit B, and also four copies each of any subsequent decrees or orders which may modify or define the claims of the United States for water to be used by the National Park Service. This request is made upon the assumption that such duplication can be made at no appreciable extra cost to your Department. If, however, only one copy can be spared for the National Park Service, photostats will be made by that Service as necessary.

Very truly yours,

Martin G. White

Martin G. White
Solicitor

Copy to: Regional Director, Region Two (2)
Mr. Price
Mr. D. E. Lee
Mr. Dunn

03-15-1949: letter to solicitor from assistant attorney general regarding motion to dismiss action in regard to case

COPY

REM - WHV

March 15, 1949

90-1-2-373

Mastin G. White, Esquire
Solicitor
Department of the Interior
Washington, D. C.

Dear Mr. White:

This will refer to this Department's letter of July 15, 1948, in regard to the case entitled Carl H. Peterson, et al., v. A. H. Abbott, et al., in the District Court for the County of Grand, State of Colorado. (Your reference: Bureau of Reclamation; National Park Service).

In that letter you were advised that a motion to dismiss that action as it pertains to the United States was filed. Enclosed are two copies of a letter, dated March 8, 1949, from Mr. C. V. Marmaduke, Jr., Special Assistant to the Attorney General, Denver, Colorado, on the subject, together with two copies of the ruling of the court granting the motion of the United States. Likewise enclosed are two copies of a motion for clarification of order for dismissal filed by counsel for the plaintiffs, together with two copies of the amended ruling on the motion to dismiss.

You will be advised of further developments in this action.

Sincerely,

A. Devitt Vanech
Assistant Attorney General

Enclosure
No. 314322

03-11-1949: memorandum to director from regional director regarding summons in civil action in connection with civil action no. 8

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
REGION TWO
OMAHA, NEBRASKA

MAR 11 1949

MEMORANDUM for the Director.

There are enclosed a copy of Mr. Canfield's memorandum of March 8 and a Summons in Civil Action in connection with Civil Action No. 876 in the District Court in and for the County of Grand, State of Colorado, which appeared in the Sky-Hi News on February 25.

This is an action filed by the plaintiffs to quiet title to their water right from the Williams Fork River which was adjudicated by decree of the District Court of Grand County, Water District No. 51, August 11, 1906, Ditch No. 8, Appropriation No. 129 for 150 cubic feet per second.

As the United States of America, Rocky Mountain National Park, has been named as a party defendant, it is believed this matter may be related to the water claims of the United States for the park in Water District No. 51 which have been filed in the District Court at Hot Sulphur Springs.

It is noted that the last publication of this summons will be March 25 from which an answer is required to be filed in 20 days. Please advise what action, if any, should be taken by the Superintendent in this matter.

(Sgd) Lawrence C. Merriam

Lawrence C. Merriam,
Regional Director.

Enclosures: Copy of Mr. Canfield's memo of 3-8-49 and summons.

cc: Supt., Rocky Mountain.

03-08-1949: letter to superintendent from special assistant to the attorney general regarding civil no. 876

C
O
P
Y

DEPARTMENT OF JUSTICE

101 New Custom House
Denver 2, Colorado
March 8, 1949

David H. Canfield
Superintendent
Rocky Mountain National Park
Estes Park, Colorado

Dear Mr. Canfield:

Re: Carl H. Peterson, et al. v.
A. H. Abbott, et al.
Civil No. 876

The Government's Motion to Dismiss, as to the United States and its departments, was granted on March 2, 1949. The Order of Dismissal was modified on March 7, 1949, so that it recites the reason for dismissal as being on the sole ground that the United States had not consented to be sued.

Very truly yours,

/s/ C. V. Marmaduke, Jr.

C. V. Marmaduke, Jr.
Special Assistant to
the Attorney General

CVM:hmf

COPY

701 New Custom House
Denver 2, Colorado
March 8,1949

AIR MAIL

The Attorney General
Lands Division
Washington 25, D. C.

Sir:

Re: Carl H. Peterson, et al. v.
A. H. Abbott, et al.
REM-WHV 90-1-2-373

In connection with the above entitled matter, I herewith enclose two copies of the following, to wit:

1. Ruling on Motion to Dismiss
2. Motion for Clarification of Order of Dismissal
3. Amended Ruling on Motion to Dismiss

For the Department's information, the complaint in this action is one to quiet title to 150 c.f.s. of water, brought against all of the persons who have filed claims with the State Engineer in Water District No. 51.

Frank Delaney filed an answer for the Colorado River Water Conservation District, in which he alleged that the Conservation District was a representative under Rule 23 of all water users on the Western Slope and then alleged abandonment of the plaintiff's water right to all water in excess of 25 c.f.s.

An answer was also filed by the Palisade Irrigation District. A separate answer has been filed by the Taussig interests. The City of Denver had filed a motion to make more specific, which was overruled by the court yesterday.

It is the consensus of opinion on the Western Slope that the plaintiff seeks to quiet title to the water right mentioned above

against all the users on the Colorado River, as he has joined ". . . any and all unknown persons who claim any interest in and to the subject matter of this action . . ." and to later bring an action to change the point of diversion and the manner and the place of use, the latter to the Eastern Slope.

Respectfully,

s/ C. V. Marmaduke, Jr.

C. V. Marmaduke, Jr.
Special Assistant to
the Attorney General

CVM:hmf

Enclosures (6)

C O P Y

IN THE DISTRICT COURT IN AND FOR THE
COUNTY OF GRAND, STATE OF COLORADO

CARL H. PETERSON Plaintiffs vs. A. J. ABBOTT, et al Defendants	)	Civil Action No. 876 AMENDED RULING ON MOTION TO DISMISS

The motion was argued and submitted by the plaintiff and defendant, the United States, on the 28th day of February, 1949, and by the court taken under advisement.

It is ordered on this seventh day of March, 1949, that the said motion be and hereby is granted and the said action as to the defendant, the United States, dismissed solely upon the ground that the United States has not consented to be sued.

BY THE COURT:

_____

Judge

03-07-1949: motion for clarification of order of dismissal: notice of motion

C O P Y

IN THE DISTRICT COURT IN AND FOR THE

COUNTY OF GRAND AND

STATE OF COLORADO

CIVIL ACTION NO. 876

CARL H. PETERSON, et al,
Plaintiffs,
vs.
A. J. ABBOTT, et al,
Defendants.

MOTION FOR CLARIFICATION OF ORDER OF DISMISSAL

Come now the plaintiffs by their attorneys, Bannister, Weller and Friedrich and L. Ward Bannister, and move the Court for a clarification of its order of dismissal entered in this action as to the defendant the United States on the second day of March 1949 and pray that the Court amend the order so as to specify that the dismissal is upon the sole ground of lack of consent of the defendant the United States of America to be sued in the above-entitled action.

s/ Bannister Weller & Friedrich

s/ L. Ward Bannister
Attorneys for Plaintiffs
Equitable Building
Denver, Colorado

Addresses of Plaintiffs:
Carl H. Peterson
429 C. A. Johnsen Bldg.
Denver, Colorado

Harry G. Knapp
Box 827
Canon City, Colorado

Virginia R. Thelin
Memphis, Tennessee

NOTICE OF MOTION

To: C. V. Marmaduke, Jr.
Attorney for defendant United States of America

Please take notice that on the morning of Monday, the 7th day of March, 1949 at the incoming of Court, the undersigned will apply to the Court to hear the above motion forthwith.

s/ Bannister Weller & Friedrich

s/ L. Ward Bannister
Attorneys for Plaintiffs
Equitable Building, Denver, Colo.

Service of above motion and notice and receipt of copy thereof acknowledged in the City and County of Denver, Colorado, this _____ day of March, 1949 at the hour of _____M.

_____
Attorney for defendant United States of America

C O P Y

IN THE DISTRICT COURT IN AND FOR THE
COUNTY OF GRAND, STATE OF COLORADO

CARL H. PETERSON, et al	)	
Plaintiffs,	)	Civil Action No. 876
vs.	)	
A. J. ABBOT, et al	)	RULING ON MOTION TO DISMISS
Defendants.	)	

The motion was argued and submitted by the plaintiff and defendant, the United States, on the 28th day of February, 1949, and by the court taken under advisement.

It is ordered on this second day of March, 1949, that the said motion be and hereby is granted and the said action as to the defendant, the United States, dismissed.

BY THE COURT:

_____
Judge

CC: to C. V. Marmaduke, Jr.
L. Ward Bannister,
Equitable Bldg., Denver, Colo.

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON 25, D. C.

July 19, 1948.

Memorandum

To: The Chief Counsel, National Park Service

From: Bruce Wright

Subject: Carl H. Peterson, et al., v. A. J. Abbott, et al.

There is attached, for information, a copy of a letter dated July 15 and an enclosure from Acting Assistant Attorney General Williams, relating to the case listed above.

(Sgd) Bruce Wright

Bruce Wright,
For the Solicitor.

Attachment

07-15-1948: letter to solicitor from acting assistant attorney general regarding action taken by district court for grand county

COPY

REM - WHW

IMM

90-1-2-373

July 15, 1948

Mastin G. White, Esquire
Solicitor
Department of the Interior
Washington, D. C.

Dear Mr. White:

This will refer to this Department's letter of June 24, 1948, relating to the action in the District Court for Grand County, Colorado, entitled Carl H. Peterson, et al., v. A. J. Abbott, et al. (Your reference: Bureau of Reclamation; National Park Service.) Accompanying that letter were copies of the summons and complaint filed in the action. Enclosed are copies of a motion to dismiss the action against the United States, together with copies of a letter dated June 29, 1948, from Mr. G. V. Marmaduke, Jr., Special Assistant to the Attorney General, Denver, Colorado.

You will be advised of all further developments in this matter.

Sincerely,

J. Edward Williams
Acting Assistant Attorney General

Enclosure
No. 27342

06-29-1948: letter to attorney general, lands division from special assistant to the attorney general regarding copies of the motion t

COPY

101 New Custom House
Denver 2, Colorado
29 June 1948

The Attorney General
Lands Division
Washington 25, D. C.

Re: - Carl H. Peterson, et al.
v.
A. J. Abbott, et al.
No. _____

Sir:

I acknowledge receipt of the Department's letter of June 25, 1948, with reference to the above-entitled matter, and herewith enclose two copies of the Motion to Dismiss, the original of which was today forwarded by mail to the Clerk of the Court of Grand County, Colorado, for filing.

I will keep the Department advised.

Respectfully

C. V. Marmaduke, Jr.
Special Assistant to
The Attorney General

Enc.

00-00-0000: motion to dismiss

COPY

IN THE DISTRICT COURT IN AND FOR THE

COUNTY OF GRAND AND

STATE OF COLORADO

CARL H. PETERSON, et al.,
Plaintiffs,
v.
A. J. ABBOTT, et al.,
Defendants.

MOTION TO DISMISS

No. _____

COMES NOW the United States of America and its Bureau of Reclamation, Rocky Mountain National Park, Department of Agriculture and Forest Service, by C. V. Marmaduke, Jr., Special Assistant to The Attorney General of the United States, acting by and under his instructions and appearing specially for the purpose of this motion only, and moves the Court that the above-entitled case be dismissed as to the United States of America and its above-named departments, and as grounds therefor shows the Court as follows:

1. That plaintiffs' action is one to quiet title in which they assert an ownership to the subject matter thereof;

2. That plaintiffs' complaint fails to state a cause of action against the above-named defendants for which relief can be granted;

3. That the United States of America has never consented to be sued in this type of action.

UNITED STATES OF AMERICA

By_____
C. V. Marmaduke, Jr.
Special Assistant to
The Attorney General

Address of Defendants:

101 New Custom House
Denver 2, Colorado.

07-13-1948: letter to attorney general from special assistant to the attorney general regarding adjudication proceeding in water dist

COPY

101 New Custom House
Denver 2, Colorado
13 July 1948

The Attorney General
Lands Division
Washington 25, D. C.

Re: - Adjudication Proceeding in Water Dist. 51,
Colorado - Rocky Mountain National Park Claims
REM-WHV 90-1-2-83

Sir:

I herewith enclose two copies of the following claims pertaining to the Rocky Mountain National Park, Department of Interior, which were filed with the District Court of Grand County at Hot Sulphur Springs, Colo., on July 12, 1948, to-wit:

1. Milner Pass Road Camp Pipe Line
2. Timber Creek Water System
3. Grand Lake Lodge Power Pipe Line
4. Grand Lake Lodge and Ranger Station Water System.

The claims were filed in open court and an explanation of the Government's position in regard thereto was made. Several local attorneys were present, and the only comment made was by the attorney for the town of Grand Lake, who asked the court if they would be permitted to make motions in regard thereto. The court informed him that he could file protests if he so desired.

I talked with this attorney later, who indicated that he probably would not protest the same.

The case in which the above were filed is Civil No. 814, and it was continued for all purposes until March 2, 1949.

I suggested to the Judge that evidence could be submitted in support of the Government's suggested statement of interest. However, he believed the decision on putting on evidence should be held in abeyance until it is determined what opposition, if any, will be made.

Respectfully

C. V. Marmaduke, Jr.
Special Assistant to
The Attorney General

Enc.

06-29-1948: letter to solicitor from assistant attorney general regarding right to the use of water; colorado water district no. 51

COPY

REM - WHV IMM

90-1-2-83 June 29, 1948

Mastin G. White, Esquire
Solicitor
Department of the Interior
Washington, D. C.

Dear Mr. White:

This will refer to your letter of June 21, 1948, relative to the right to the use of water in Rocky Mountain National Park, Colorado Water District No. 51. (Your reference: National Park Service.)

Enclosed is a copy of a letter addressed to Clement V. Marmaduke, Jr., Special Assistant to the Attorney General, Denver, Colorado, forwarding to him a copy of your letter and the data which accompanied it.

You will be advised of further developments in this matter.

Sincerely,

A. Devitt Vanech
Assistant Attorney General

Enclosure
No. 27333

COPY

REN - WHV

IMM

90-1-2-83

June 25, 1948

Clement V. Marmaduke, Jr., Esquire
Special Assistant to the Attorney General
101 New Customhouse
Denver 2, Colorado

Dear Mr. Marmaduke:

Re: General Adjudication Proceeding,
Water District #51, Colorado

This will refer further to the letter of May 19, 1948, from Mr. Max M. Bulkeley, United States Attorney, Denver, Colorado, relative to the above-entitled proceeding. Accompanying that letter were copies of proposed suggestions to be filed in that proceeding. Those forms were submitted to the Department of the Interior with a request for comments. Enclosed is a copy of a letter dated June 21, 1948, from Mr. Mastin G. White, Solicitor, Department of the Interior, responding to that request. Likewise enclosed is a copy of a memorandum dated June 15, 1948, prepared by A. van V. Dunn, Chief, Water Resources Branch, National Park Service. It will be observed from the enclosures that certain minor revisions in the forms have been recommended. Brief comments follow with reference to each of the recommendations:

1. The proposed revision as to the designation of the agency involved is proper.
2. Each of the suggestions with reference to the proposed form for the Milner Pass Road Camp Pipe Line appears to be necessary.
3. The slight difference in acreage in the first paragraph designated "VI." under the heading of "Timber Creek Water System" seems unimportant. In the second paragraph designated "VII." under the heading last mentioned, reference is made to the date when water was first applied to a beneficial use. It would seem that is the date of priority which should be claimed. Thus, the first sentence of paragraph VII. should be revised to read in substance as follows: "Construction of Timber Creek Water System was initiated in July 1931, and water was applied to a beneficial use at that time."

4. In each of the paragraphs under the heading of "Grand Lake Lodge Power Pipe Line," reference is made to the filings with the State Engineer. In the first paragraph designated "IX." a question relating to the description of the facility is raised. It will no doubt be necessary to review the filing to ascertain the need for the suggested revision.

It is observed that in each of the proposed forms, reference is made to the date on which the agency in question sought to comply with the statute of the State of Colorado respecting the appropriation of water. In each instance the date of that action is many years subsequent to the date when construction was undertaken and water applied to a beneficial use. Under those circumstances the question might well be presented in the pending proceeding as to whether the earlier date or the date of filing will govern insofar as the priority date of each of the claims is concerned. If the later date were accorded to the United States it would be clearly to its detriment. It would be appreciated, therefore, if you would give consideration to the matter and determine whether it would not be more desirable to leave out of the form the reference to the filing with the State Engineer. If you believe there is a possibility that the interests of the United States would be prejudiced by the inclusion of the clause in question, it is suggested that it be eliminated. The Department will defer to your judgment in the matter.

As the suggestions will be filed by you rather than the United States Attorney, the forms must, of course, be revised to reflect that fact.

When the forms have been revised, it would be appreciated if you would submit two copies of each of them to the Department. It is no doubt desirable at this time to ascertain from officials of the National Park Service information as to the witnesses who can testify regarding these claims and as to the evidence which may be adduced in support of them.

Sincerely,

A. DEVITT VANECH
Assistant Attorney General

Enclosure
No. 27325

06-21-1948: letter to attorney general from solicitor regarding statements of claim reviewed by the chief, no. claim has been prepa

WRafty

FOR VICTORY BUY UNITED STATES WAR BONDS AND STAMPS

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SOLICITOR
WASHINGTON 25, D. C.

TO SECRETARY JUN 17 1948 FOR SIGNATURE

JUN 21 1948

The Honorable

The Attorney General.

Sir:

This has reference to the use of water in Rocky Mountain National Park, in Colorado Water District 51, and the drafts of statements submitted with your Department's letter of May 27 (your reference: REM-WHV-90-1-2-83).

The statements of claim have been reviewed by the Chief, Water Resources Branch, of the National Park Service. His comments are attached. He has used the same paragraph numbers which appear in Mr. Bulkeley's drafts of statements.

We note that no claim has been prepared for the well supply at the Grand Lake Ranger Station, item No. 5 in this Department's letter of December 23. It is assumed that the omission was intentional on the ground that priority was not needed, or could be established later. We call this to your attention because no explanation of its omission was made by Mr. Bulkeley.

Two of the statements make reference to cost of construction (one in error), and two make no such reference. The two omitted costs have been supplied for consistency.

When amended as herein suggested, it appears to this Department that the statements of claim are satisfactory.

Very truly yours,

(SGD) MASTIN G. WHITE

Solicitor.

AvVD:DEL:sh.
Enclosure 370.

cc: Regional Director, Region Two, with copy of Mr. Dunn's comments of June 15 (2) (by NPS).
Mr. Price, with copy of Mr. Dunn's comments of June 15 (by NPS).
Mr. Dunn, with copy of comments of June 15 (by NPS).

June 15, 1948.

Comments on
Statements of Claim for the United States
For Rocky Mountain National Park
Colorado Water District No. 51
Case No. 814

In the oath, page 4 of claim for Milner Pass Road Camp Pipe Line, and the similar part of the other claims, "Department Park Service" should be changed to "National Park Service."

Milner Pass Road Camp Pipe Line

V. The course of the diversion pipe, 16.5 in length, is southeasterly to the reservoir. It is believed that this course, rather than the southwesterly course of the distribution pipe, should be given.

VII. Mr. Bulkeley has incorporated the capacity of the distribution pipe (0.012 cubic feet per second) from statements previously prepared for Mr. Worth Allen, former Special Assistant to the Attorney General. Since the distribution pipe is subject to probable enlargement for distribution of water from the reservoir at a rate greater than it is diverted to the reservoir, the reference to old capacity seems needlessly restrictive at a time when we are requesting recognition of use without determination of rights. It is also inconsistent with section IX, which states that the capacity of the diversion pipe has been used. Therefore, if possible, the clause relative to capacity should be eliminated.

Cost $100 to date, ultimate cost probably $2,500 with 10,000-gallon reservoir.

Timber Creek Water System

VI. The area of the campground is 22.17 acres, but part is in roads, part is in campsites, and the rest is covered with a mixture of native evergreens and shrubbery. Irrigation, if needed at all, is to restore vegetation which is killed by the trampling of the campers. Hence, to be correct, the last paragraph should read "the irrigable area is approximately twenty (20) acres," rather than that the total area is to be irrigated.

VII. The pipe line was completed to its present condition in 1939, not in 1935. There is no question about the first use of water in August or September 1931, and, therefore, no reason to suggest 1932 as an alternate date of first use. As a matter of fact, water

was used from the same source, by the construction crew, but dipped with buckets because there was no pipe line, during July and August 1931.

Cost to date, at least $7,500.

Grand Lake Lodge Power Pipe Line

IX. Should we not specify that the earlier, lower diversion was at the "point a" designated as the alternate diversion in the claim for the Grand Lake Lodge and Ranger Station Water System, or at Diversion 1 as shown on filing No. 16658?

X. The claim was given filing No. 16658, not 16659, by the State Engineer.

Grand Lake Lodge and Ranger Station Water System

Since this claim was first drafted, the name of the "Grand Lake Ranger Station and Entrance Area" has been changed to "Grand Lake Entrance and Utility Area." It would be confusing to change the name of the water system and claim, but the following changes are suggested.

IX. Change the third line from "... the Grand Lake Lodge and Ranger Station and entrance area ..." to read "... the Ranger Station, and Entrance and Utility areas ..."

X. In the second line of the third paragraph, the places of use should be changed to "the Grand Lake Lodge, Ranger Station, and Entrance and Utility areas." The last sentence of the same paragraph should be changed to "The Lodge, Ranger Station, Entrance and Utility areas are all located in ..."

The cost of the water system has been at least $16,500 to date, the $3,500 being only the cost of the lateral.

(SGD.) A. VAN V. DUNN

Chief, Water Resources Branch.

06-04-1948: memorandum to regional director from superintendent regarding statements of claim covering four water systems

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK
ESTES PARK, COLO.

June 4, 1948.

MEMORANDUM for the Regional Director, Region Two.

Attached are two copies of the United States Attorney's letter dated May 19, together with copies of the statements of claim covering four water systems as listed in the Attorney's letter.

We have reviewed these claims and find that the oath at the end of each should be changed to the extent that "National Park Service" should be shown instead of "Department Park Service." Also, in Article IX of the statement of claim for the Grand Lake Lodge and Ranger Station Water System the words "Lodge and" should be deleted from the statement.

It is our belief that the Water Rights Division would prefer to review these statements of claim and return them to the United States Attorney at Denver, Colorado, with such comments as may be deemed necessary.

David H. Canfield,
Superintendent.

Enclosures.
In duplicate.



06-07-1948: stamp of receival



03-05-1948: letter to director from assistant attorney general regarding data for use in connection with the filing of claims in the ad

WR Copy

REM - WHV

90-1-2-83

March 5, 1948

Mr. Newton B. Drury
Director
National Park Service
Department of the Interior
Washington, D. C.

Dear Mr. Drury:

This will refer to the letter of February 18, 1948, from Mr. Conrad L. Wirth, Acting Assistant Director, which was accompanied by data for use in connection with the filing of claims in the adjudication proceeding pending in Water District No. 51, Colorado. That data has been referred to the United States Attorney in Denver, Colorado, for appropriate action. In the final paragraph of that letter, comment was made relative to the need of filing in the proceeding in connection with a well. In the opinion of this Department such a filing is unnecessary.

You will be advised of all further developments regarding the claims in question.

Sincerely,

A. DEVITT VANECH

A. DEVITT VANECH
Assistant Attorney General

01-28-1948: letter to attorney general from associate director regarding pending proceedings for the adjudication of rights to the us

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON 25, D. C.

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

January 28, 1948.

The Honorable

The Attorney General.

Sir:

(REM-WHV

This acknowledges your Department's letter of January 16 (REM-WHV 90-1-2-33), to the Under Secretary of this Department, which has been referred to this Service for reply, relative to pending proceedings for the adjudication of rights to the use of water in Water District No. 51, State of Colorado.

This Service appreciates the full discussion in your Department's letter of the two courses of possible action in the above matter, namely, the filing of suggestions without submitting to the jurisdiction of the State Court, or the entry of a general appearance. The recommendation made by your Department that suggestions be filed is satisfactory to this Service and we are proceeding accordingly.

Our Water Rights Engineer, Mr. A. van V. Dunn, telephone extension No. 3306, has been requested to assemble copies of the pertinent filings which have been made in the Office of the State Engineer, and, as requested, they will be forwarded to your Department in the near future.

Very truly yours,

(SGD.) A. E. DEMARAY
A. E. Demaray,
Associate Director.

cc: Regional Director, Region Two (2)
Mr. A. Dunn ✓
Mr. D. E. Lee

12-23-1947: letter to attorney general from secretary of the interior regarding pending proceedings for the adjudication of priorities

THE SECRETARY OF THE INTERIOR
WASHINGTON 25, D. C.

Dec. 23, 1947.

My dear Mr. Attorney General:

At the present time there are pending in the District Court of Grand County, Colorado, proceedings for the adjudication of priorities covering the appropriation of water in Water District No. 51. The National Park Service has unadjudicated rights to use water in that District in Rocky Mountain National Park, Colorado. To avoid the possibility that these unadjudicated rights may be prejudiced by the pending adjudication proceedings if notice is not given as to the claims, it is requested that your Department consider the desirability of entering a special appearance in the pending adjudication proceedings for the purpose of filing a suggestion setting forth the unadjudicated rights of the National Park Service. The nature of the rights, the possible conflicting claims, and related matters, have recently been discussed informally with Mr. Veeder of the Trial Section of your Department.

The five rights involving the use of water in Rocky Mountain National Park, Colorado, in which the National Park Service is interested, are briefly identified below for your information:

1. The right to divert twelve one-thousandths (0.012) of a cubic foot per second of time of the water of a nameless tributary of Beaver Creek, which is tributary to the Colorado River, by the Milner Pass Road Camp Pipe Line. This water is used for domestic, recreational, and fire protection purposes, with a priority established by construction before September 20, 1919. The right has been recorded by filing claim No. 18680 which was accepted by the State Engineer on October 2, 1939. The filing indicates a pipe capacity of three-tenths (0.3) of a cubic foot of water per second of time, but this is in excess of the present or proposed use.

2. The right to divert five hundred and forty-two one-thousandths (0.542) of a cubic foot per second of time of the waters of Timber Creek, a tributary of the Colorado River, by the Timber Creek Water System. This water is used for domestic, irrigation, recreational, and fire protection purposes, with a priority established by

the beginning of construction on July 1, 1931. This right has been recorded by filing claim No. 16511 which was accepted by the State Engineer on January 6, 1939.

3. The right to divert eight (8.0) cubic feet per second of time of the waters of Tonahutu Creek, a tributary of the North Inlet of Grand Lake, which is tributary to the Colorado River through Grand Lake, by the Grand Lake Lodge Power Pipe Line for power purposes. A priority was established by the beginning of construction on June 1, 1920. This right has been recorded by filing claims 16658 and 17579 which were accepted by the State Engineer on October 2, 1939, and January 21, 1946.

4. The right to divert seventy-two one-thousandths (0.072) of a cubic foot per second of time of the waters of Tonahutu Creek, a tributary of the North Inlet of Grand Lake, which is tributary to the Colorado River, through Grand Lake, by the Grand Lake Lodge and Ranger Station Pipe Line. This water is used for domestic, recreational, and fire protection purposes. This right has been recorded by filing claim No. 17579 which was accepted by the State Engineer on January 21, 1946. There are two priorities involved in this case. The construction of the first diversion was begun on June 1, 1920, to provide a capacity of twenty-four one-thousandths (0.024) of a cubic foot of water per second of time. Construction was started on a changed point of diversion on July 31, 1926. This latter construction increased the capacity by forty-eight one-thousandths (0.048) of a cubic foot of water per second of time to provide the total claim and right to the seventy-two one-thousandths (0.072) cubic foot of water per second of time. This claim needs minor amendment before being referred to the Court.

5. A right to divert about eleven one-thousandths (0.011) of a cubic foot per second of time of the underground waters of a nameless tributary of Columbine Creek, a tributary of the Colorado River, by well and pump on the Grand Lake Lodge and Ranger Station Pipe Line, for domestic, recreational, and fire protection purposes. The priority was established by the beginning of construction before September 30, 1927. This right has been recorded by filing claim No. 17579 which was accepted by the State Engineer on January 21, 1946. This claim needs minor amendment before being referred to the Court.

12-23-1947: letter to attorney general from secretary of the interior regarding pending proceedings for the adjudication of priorities

As the assembly of data covering the Federal claim to above-outlined rights will involve some expense and considerable work, we would appreciate being advised as soon as possible whether your Department considers it to be in the best interests of the United States to file suggestions in the pending proceedings referred to above. If so, we will be pleased to assemble and forward to your Department such information as may be needed to proceed in the matter.

Sincerely yours,

(SGD.) OSCAR L. CHAPMAN.

Under Secretary of the Interior.

Hon. Tom C. Clark,

Attorney General.

07-02-1947: letter to director from chief regarding plans the attorney general has to take the u.s. into the federal court to quiet title

COPY

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK

July 2, 1947

MEMORANDUM for the Director.

The enclosed statement of June 30 was dictated to the Secretary of Assistant District Attorney C. V. Marmaduke in Denver, and copies have been distributed to the Region and Park. The letter to Mr. Marmaduke, of July 2, has also been distributed, but I find that I did not make a copy for the Water Division files , and should like to have one made by Miss Hicks, on her return to the Office. Both relate to plans the Attorney General now has to take the United States into the Federal Court to quiet title to waters for the Colorado-Big Thompson Project, and my discussion of the related water right interests of the National Park Service in Rocky Mountain National Park, in Water District No. 51.

I called on Mr. Marmaduke, on June 30, to discuss water rights for Mesa Verde, Colorado National Monument, and other areas, but not those of Rocky Mountain National Park. However, he had been visited by Mr. Vedder of the Attorney General's Office, last week, and the proposed adjudication in Water District 51 was his major concern. Mr. Vedder is now in Salt Lake City, and proposes to return to Denver the end of this week, and then to Washington, and to discuss the water rights with Mr. Price when he reaches Washington.

The first complication is that the files which Mr. Worth Allen turned over to Mr. Marmaduke are incomplete and out of order. In addition, the four water claims for Rocky Mountain National Park are undated, include several drafts, and I cannot determine which are the last. Further, there is no tabulation on all the Federal claims to be adjudicated, and no explanation of the conflicts of the Town of Grand Lake.

I have straightened out what I can here, and I left some records in circulation with a forwarding memo, in Chicago, to be sent to the Attorney General through Mr. Demaray. If they have been sent, they will help. When Miss Hicks returns to pick them out, I think wemight lend the complete Water Division file on Water District 51, my analyses, and the record of the recent decree granted to the Town of Grand Lake, to the Attorney General until I return at the end of August. In so doing, it should be understood that the files <u>will</u> be returned to me by Labor Day, and that I will provide suchinformation as is needed, thereafter.

Instead of entering the Court with a normal adjudication, the Attorney General now proposes to enter the Federal Court to quiet title to make the trans-mountain diversions, and I believe have the Northern Colorado water users adjudicate their filings in the State Court. I do

not understand the whole legal approach, but there seems to be a question as to whether the State Court would have jurisdiction over the trans-mountain feature. I gather, however, that after the United States had quieted title in the Federal Court, and since the water users will have their priorities established in the State Court, the National Park Service, and the Forest Service, could then have their claims adjudicated in the State Court because the United States could not have an interest in the rights for the Big Thompson Project. Mr. Price should try to obtain a copy of a memorandum or letter of October 28, 1940 from Solicitor Maston G. White, to W. J. Ise, Regional Land Officer of the Forest Service in Denver for cases cited with regard to the Federal position, and a similar California case.

In following this procedure, it was the desire that the claims of the National Park Service and the Forest Service would not have to be included in the Federal Court case because they would be in conflict with the scope which Mr. Vedder has in mind. However, Mr. Marmaduke said that they could be entered as a later amendment, if the Bureau interests warranted it. The Big Thompson case is now tentatively scheduled for presentation to the Federal Court within the two coming months. If the NPS claims were entered as an amendment, they would be presented about October.

Mr. Marmaduke, and those in the Bureau of Reclamation, because of the missing records, were concerned because they thought this Service wanted to adjudicate to adjust some conflicts with the claims for the Big Thompson Project. Mr. H. E. Syradley, Engineer in the Bureau of Reclamation, was called into the conference, and I explained that our only concern was at having the adjudication of our priorities deferred while other private claimants were establishing conflicting rights, and that while we might get priorities of 1920 when we went to Court, they would be junior to the decrees of 1946 under the procedure being followed by the State Courts. This clarified the matter to the extent that there was no conflict between the NPS and Bureau of Reclamation. Mr. Syradley departed, apparently satisfied.

Mr. Marmaduke then explained that the State Court procedure of decreeing priorities of the date of proven first construction or use, but junior to all decrees rendered before the adjudication then in progress, was a State police power. It is apparently a penalty for not having entered the proper, earlier adjudication. The United States is not subject to the police power, as he explained, and as I already knew. However, he also explained that we could only obtain the exemption from the police power in a Federal Court. Therefore, I stated that I thought the Service claims should be taken to the Federal Court because we were subject to the penalty for having been kept out of the State adjudications since 1938 through the uncertain action of the Bureau of Reclamation, and also because we had not even tried to adjudicate the rights for systems as built between Park establishment, and the date the Water Rights Section was initiated. I feel very strongly now, therefore, that

Mr. Price should arrange with Mr. Vedder, for the adjudication of our rights in the Federal Court, and not in the State Court.

I have not yet been to the West Side to look at the Town water development, and its potential use to provide water to all private interests around Grand and Shadow Lakes, but I am, and told Mr. Marmaduke that I feel the NPS claims should be adjudicated as soon as possible, and that the priorities should be fixed senior to those of the Town, as far as possible. I also pointed out that there was no reason to wait longer because of increasing future needs because we would now obtain conditional decrees for all anticipated future needs, and would have the old Harbison decrees to transfer to cover any future deficit due to mis-judgment. I also explained that while the water right situation was not so acute as it relates to the rights for the Timber Creek Campground and Milner Pass Road Camp Water Systems, they should also be adjudicated when we submitted any claims.

We have had some discussion of the Grand Lake Lodge Hydro-electric Plant both in Mr. Marmaduke's office, and in the Park. It is not so important whether a right to the 8.00 second feet is adjudicated or not, as I see it, but I favor doing so as we adjudicate the other claims, and if the plant is to remain in operation. It should also be adjudicated before the other owners of interests in the Harbison Ditch initiate additional rights in that ditch, which is possible because of their rights of way in the ditch. The latter is important because the Grand Lake Lodge and Ranger Station Pipe Line, including the power penstock, straddle the Harbison Ditch.

I have raised the question as to whether the hydro-electric plant would be abandoned now that the power can be purchased from the Colorado-Big Thompson Project or the company which now acts as the intermediary between the Bureau of Reclamation and the Town of Grand Lake. There has been no change in the source of power yet, and apparently, the concessioner will continue to use the hydro-electric unit as long as it can without excessive replacement of parts.

In connection with the alternate form of water rights, which could be transferred to the Grand Lake Lodge and Ranger Station Water System from the Harbison Ditch, your attention is called to my memo from Denver with regard to the proposed purchase of rights for Mesa Verde National Park. I do not fully understand the difference in procedure resulting from the amendment of the water code in 1943, but in my previous memorandum I called attention to Mr. Marmaduke's statement that his office was not anxious to adjudicate such changes in point of diversion if there was danger of protest. There is less danger of

protest in the case of rights on Tonahutu Creek than on the Mancos. There are no alien diversions between the Harbison Ditch headgate and other existing and proposed NPS diversions. However, we should determine why the new method is more difficult than that followed by us in Water District No. 4, on the east side of the Park about 1938. The Colorado Session Laws of 1943 are in one of my book cases at the Office, if Messrs. Price or Sanders wishes to review them. The laws of 1921 were in effect in 1938, and are in the law library in the file room.

(Sgd) A. van V. Dunn

A. van V. Dunn
Chief, Water Division

CC: Region Two.
Supt., Rocky Mountain National Park.

07-02-1947: letter to assistant district attorney from chief regarding water system plans to complete record of claims; water district

COPY

Estes Park, Colorado

July 2, 1947

Mr. C. V. Marmaduke, Assistant District Attorney,
Post Office Building,
Denver, Colorado.

My dear Mr. Marmaduke:

As suggested in our discussion on Monday afternoon, I enclose three water system plans to complete your record of claims for Rocky Mountain National Park, in Water District No. 51.

You had the plan and statement, in two sheets, covering the claim for the Grand Lake Lodge and Ranger Station Pipe Line, the drawing number in the lower right hand corner being 6982. I believe that your copy has the file number and date of acceptance of the State Engineer. Enclosed drawing No. 6952, Grand Lake Lodge Power Pipe Line, Filing No. 16658, shows the portion of the same pipe line involved in the independent water claim for power development. You had the statements of claim which Mr. Worth Allen, former Assistant to the Attorney General, had prepared for submission to the Court. Neither in your office, nor here in Rocky Mountain National Park, can I tell whether you have the final drafts for the Court or not, and I hope you will send me your modified drafts for review in Chicago, before you file them with the Court.

Enclosed Drawing No. 6982 A, Grand Lake Lodge and Ranger Station Water Systems, is not for filing as a water claim, but shows the Grand Lake Lodge and Ranger Station Pipe Line, the Harbison Ditch, and a proposed lateral pipe line from that ditch to serve a proposed utility area near the ranger station. These systems all serve the interests of the United States and its concessioner, but the Harbison Ditch also conveys water to lands outside the park, which are owned by private interests. The rights in the Harbison Ditch are all decreed, and other Federal diversions are to be adjudicated when the United States goes to Court.

This Drawing No. 6982 A also shows the Cairns Pipe Lines 1 and 2, and Hoffman and Readel Ditch which have appurtenant decreed rights which are now all, or partially owned by the Town of Grand Lake. I have also sketched in, in pencil, the new pipe line of the Town, which may, or may not be constructed yet, but for which the Town obtained a conditional decree to 6.75 second feet of water in 1946. As explained to you, on Monday, the Town has final and conditional decrees for the use of far more water than it can use in any reasonably remote future, and is in a position to sell water to all private land owners around the whole of Grand Lake, and Shadow Lake, below. In addition to the explanation I gave you, I arranged to have some of my previous analyses of this situation sent to the Attorney General, for Mr. Vedder, before I left Chicago.

07-02-1947: letter to assistant district attorney from chief regarding water system plans to complete record of claims; water district

Enclosed Drawing No. 6988 A, Timber Creek Water System, Filing No. 16511, constitutes the other major federal water claim for the National Park Service, for which you have Mr. Allen's drafted statement for the Court.

You had the Drawing No. 6954, Milner Pass Road Camp Pipe Line, Filing 16659, and Mr. Allen's statement for the Court in your files.

From our discussion, and what I have found in the Park, I can see that we should have an additional conference, probably with Messrs. Vedder and Chief Counsel Jackson Price of this Service after you have had time to study the four claims and the conflicting uses. I hope, however, that I have provided sufficient data for your immediate purposes.

Yours sincerely,

(Sgd) A. van V. Dunn

A. van V. Dunn,
Chief, Water Division.

CC: Director.
Region Two.
Rocky Mountain National Park.

C O P Y

Denver, Colorado

June 30, 1947

The National Park Service has purchased certain decreed rights in the Harbison Ditch with diversion from Tonahutu Creek. Under that, 1.65 s.f. of rights were for irrigation, purchased from Harbison heirs. Slightly less than that amount was for fish cultural purposes when the water was not needed for irrigation purposes, and that was purchased from W. J. Kelly.

The original plan was to transfer a portion of those rights to the water systems serving the Grand Lake Lodge, Grand Lake Ranger Station and Grand Lake Utility areas of the National Park Service. The transfers and conversions of change in purpose and point of diversion has not yet been made. It is still in the Harbison Ditch, which is largely owned by the United States now.

For independent adjudication we have filed a claim for the Grand Lake Lodge and Ranger Station water system, also diverted from Tonahutu Creek about 1/4 mile above headgate of the Harbison Ditch and with place of use approximately an equal distance below the intake of the Harbison Ditch and the amount of water involved is about 0.072 s.f. or less, now diverting 0.07 of this. We also have from that same point of diversion a claim for 8 s.f. for a hydro-electric power developments and the return flow from that would be below the intake of the Harbison Ditch. The water for the hydro-electric plant would be non-consumptive. It is my idea that if we could get a sufficiently early priority for the domestic use, under this adjudication, it might not be necessary to transfer the earlier decreed rights from the Harbison Ditch. However, the Harbison Ditch rights have priority two, three, or possibly four on Tonahutu Creek and the remainder are pertinent to the Mitchell Pipe Line, Cairns Pipe Line, serving the Town of Grand Lake and the Hoffman and Radell Ditch, also serving the Town of Grand Lake.

In addition, in the adjudication of 1946, the Town of Grand Lake initiated a claim for 6.75 s.f. for a new pipe line with diversion approximately at the same point as the Cairns Pipe Line and the Hoffman and Radell Ditch. At the time of the adjudication, it was my desire to have the United States enter the proceedings in order to protest the excessive claims thus initiated for the Town of Grand Lake. Not being able to go to Court, the National Park Service approached the Town of Grand Lake informally on the recommendation of Worth Allen, Special Assistant to the Attorney General and asked why a new claim was necessary when the decreed rights in the irrigation ditch and the Cairns Pipe Line seemed to be ample for all reasonable expansion of the Town.

The Mayor informed the Superintendent of the Rocky Mountain National Park that they did not intend to use the Cairns rights any longer because the price demanded by the Cairns' heirs was exorbitant. Accordingly, although the 6-3/4 s.f. was by itself an exorbitant claim, the Chief Counsel and I decided not to press the matter further but to count on an opportunity to protest final proof for final decree if there were not justification for the full amount of water at that time. The court rendered a conditional decree to the Town for 6-3/4 s.f. Immediately thereafter, the Town actually did buy the Cairns rights as well. The total decreed rights on Tonahutu Creek now therefore are considerably in excess of the stream flow in late July and August, when the demand is greatest and it appears that any further adjudication of any water claims for the United States will be of little value unless we can establish the priority based on the original date of first use about 1921 and 1927. (Note: Your explanation of the Federal exception from police powers of the State, suggests that it may still be worth while therefor to adjudicate the Park Service claim for the Grand Lake Lodge and Ranger Station water system in Federal Court, although any additional claim resulting from a proposal to enlarge the water system may require a transfer of the Harbison rights to cover any quantities of water for which claim has been initiated, or will be initiated, subsequent to the recent decree rndered to the Town of Grand Lake.)

In addition, the National Park Service, has a water claim 1/2 c.f.s. for the Timber Creek Road Camp Water System of the Timber Creek Camp Road. This water claim is the only one on Timber Creek, a tributary to the Colorado River, about 10 miles north of Grand Lake.

The Park Service has filed a claim for the Milner Pass Road Camp water system, approximately .005 c.f.s., which is practically at the head waters of one of the tributaries of the Colorado River at the Continental Divide and apparently on a stream where there is ample water to satisfy any other claims down stream. These lower claims by the owners of the Phantom Valley Ranch.

The Park Service also claimed at one time certain amount of water for the West Beaver Creek Pipe Line which served the CCC camp, slightly above the Timber Creek Development, but the claim was not presented to Mr. Allen because the CCC camp had been abandoned and there did not seem to be any further plan for use of the stream within any reasonable length of time.

These statements are from memory, as I do not have notes here.

(Sgd) A. van V. Dunn

A. van V. Dunn

cc: Director.
Region Two.
Supt., Rocky Mountain.

03-18-1946: letter to dept. of the interior from office of the assistant chief clerk regarding water district 51 water rights be presente

COPY

DEPARTMENT OF THE
INTERIOR

RECEIVED
MAR 18 1946

OFFICE OF THE
ASSISTANT CHIEF CLERK

PARKS

TOLSON

CH COUNSEL, BU OF RECLA, ADVISES INFORMALLY THAT BURU PLANS TO RECOMMEND ATTY GENERAL THAT CLAIMS IN COLO. WATER DIST 51 PROCEEDINGS BE PRESENTED THRU SPECIAL APPEARANCE. PARK SVC CLAIMS MAY ALSO BE PRESENTED IN THIS MANNER. BURU WILL ADV US SOON AS FORMAL ACTION TAKEN. IF THIS IS DONE, HEARINGS SCHEDULED FOR APR 15 PROBABLY WILL BE POSTPONED FOR SEVERAL MONTHS.

DEMARAY.

COPY

February 15, 1946.

Mr. Worth Allen
Special Assistant to the
Attorney General
704 Ernest & Cranmer Bldg.
Denver, Colorado

Dear Mr. Allen:

Re: General Adjudication, Water District
No. 51-- Claim of Colorado-Big Thompson
Project.

This acknowledges your letters of February 5 and 6, 1946, regarding the above entitled matter.

At this time there is no request from either the Department of Agriculture or the Department of Interior that the United States submit any of its claims to water in the pending proceeding in the state court. As you know, the Department has consistently taken the position that the United States should not go into any court until the rights claimed by all Government agencies were ready for adjudication. Since the rights of the Bureau of Reclamation are by far the most important in Water District No. 51, the Department of Agriculture has acquiesced in withholding Forest Service claims from adjudication until the Bureau of Reclamation is ready to proceed and, of course, the Department of Interior has not requested the adjudication of National Park Service claims which would prejudice the rights of the Bureau of Reclamation.

It is not anticipated that the Bureau will be ready to proceed by March 4 and in the absence of further instructions from the Department nothing should be filed and no appearance should be made in the pending adjudication proceeding. It is probable that Mr. William Veeder will return to Denver about the first of March to discuss this case and other matters with you.

Respectfully,
For the Attorney General

(Sgd) J. Edward Williams,
J. EDWARD WILLIAMS
Acting Head, Lands Division

08-17-1945: letter from special assistant to the attorney general to the attorney general regarding general adjudication, water distr

C
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P
Y

90-1-2-83.

704 Ernest & Cranmer Building,

Denver, Colorado, August 17, 1945.

The Attorney General,
Washington, D. C.

General Adjudication, Water
District No.51-- Claims of
National Park Service.

Sir:

Enclosed herewith are two copies each of the following:

Letter dated August 13, 1945, written to me by F. J. Cuckow, Court Reporter.

Transcript of testimony in support of the claim of the Town of Grand Lake.

Statement dated August 13, rendered by Mr. Cuckow.

Respectfully,

Worth Allen,
Special Assistant to
the Attorney General.

WA/KLM

08-02-1945: letter to assistant secretary, doi from acting head, lands division regarding water rights adjudication, district 51

DEPARTMENT OF JUSTICE
WASHINGTON 25, D. C.

August 2, 1945

REM - WHV

90-1-2-83

Honorable Oscar L. Chapman
Assistant Secretary
Department of the Interior
Washington, D. C.

Dear Mr. Chapman:

There are enclosed copies of a letter received from Mr. Worth Allen, Special Assistant to the Attorney General, Denver, Colorado, advising that proceedings respecting the adjudication of water rights in Water District No. 51, Colorado, had been continued to the first Monday in March of 1946. (Your reference: Bureau of Reclamation; National Park Service.)

As the information is of importance both to the Bureau of Reclamation and the National Park Service a copy of Mr. Allen's letter is enclosed for each of those agencies.

Respectfully,
For the Attorney General,

(Sgd) J. Edward Williams

J. EDWARD WILLIAMS
Acting Head, Lands Division

Enclosure
No. 127832

C
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WR Copy
(2)

Address reply to:
"The Attorney General"
and refer to initials
and number

DEPARTMENT OF JUSTICE

Washington 25, D.C.

REM - WHV
90-1-2-83

July 26, 1945

Honorable Oscar L. Chapman
Assistant Secretary
Department of the Interior
Washington, D.

Dear Mr. Chapman:

This has reference to your letter of July 16, 1945, with respect to the proposed filing on behalf of the National Park Service of a claim to water rights in the pending proceedings for the adjudication of water rights in Water District No. 51 in the State of Colorado. (Your reference: N ational Park Service). In that letter you referred to the communications from this Department dated July 7, 1945, and July 10, 1945, and advised that the previous request of the National Park Service could be considered withdrawn if the Bureau of Reclamation decides against participating in the proceedings.

The matter of submitting the rights of the United States to the jurisdiction of the court in which the action in question has arisen was discussed with Mr. C. E. Fix, Chief Counsel, Bureau of Reclamation, who advised that the agency which he represents has yet to reach a definite decision as to the course to pursue in the matter. He added that this Department will be advised when a determination respecting the subject has been made. Accordingly, the request relative to the filing on behalf of the National Park Service will be held in abeyance pending further advice from your Department.

Respectfully,
For the Attorney General,

(sgd) J. EDWARD WILLIAMS

J. Edward Williams
Acting Head,
Lands Division.

C
O
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Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF THE SECRETARY
WASHINGTON

28 D. C.

JUL 5 1945

The Honorable

The Attorney General.

Sir:

This Department has been informed that there is now pending a proceeding for the adjudication of priorities of appropriation of water in Water District No. 51, Colorado. That district includes the part of Rocky Mountain National Park within the drainage area of the Colorado River. The United States has purchased certain decreed rights in the Harbison Ditch and has made filings Nos. 16,611, 16,688, and 16,689 for further appropriations with the State Engineer.

It will be appreciated if you will request Mr. Worth Allen, Special Assistant to the Attorney General, who I understand is handling the case, to present the claims covered by the aforesaid filings on behalf of the National Park Service of this Department. Drafts of the claims covering the above-mentioned filings, which include all pertinent information except the latest figures on the maximum amount of the pipe capacity that has been beneficially used to date, are attached. Representatives of the National Park Service will call on Mr. Allen and supply him with these data before July 9 when the next hearing is scheduled.

The National Park Service also has a water system serving the Grand Lake Lodge and Ranger Station for which no claims have been prepared at this time. There is some question as to whether to adjudicate new rights or transfer part of those in the Harbison Ditch, and whether the claims can be adequately prepared before July 9. The Hydraulic Engineer of the National Park Service will discuss this with Mr. Allen on his arrival in Denver.

Very truly yours,

(SGD.) OSCAR L. CHAPMAN

Assistant Secretary.

AvVD:HT:sh.
Enclosure 204.

cc: Regional Director, Region Two (2) (by NPS).
Mr. Demaray (2).
Mr. Worth Allen. (by NPS).
Mr. Dunn. (by NPS).

01-25-1945: memorandum to director from superintendent regarding the first publication notice for adjudication in water district 51

C O P Y

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK
ESTES PARK, COLO.

January 25, 1945.

MEMORANDUM for the Director.

Enclosed is a copy of a First Publication Notice of Adjudication of Water Rights in Water District No. 51.

Water District No. 51 includes the upper drainage of the Colorado River including all of Rocky Mountain National Park west of the Continental Divide.

The James and George Snider ditches, cited in the notice, divert water from the Fraser River eight miles or more from this park's nearest boundary and consequently would not directly affect any of our proposed water claims.

A copy of this notice is being forwarded to Mr. Worth Allen, Special Assistant to the Attorney General, Denver, Colorado, for his information and any suggestion he may wish to make in regard to the adjudication. I think we are all familiar with his consistent thought that we should stay out of a State adjudication in Water District No. 51.

(Sgd) John E. Doerr

John E. Doerr
Superintendent

Enclosure

cc Regional Director, Region Two
w/c of notice.

Mr. Worth Allen w/c of notice.

Water Rights Status in Water District 51 - Colorado River Drainage

Rocky Mountain National Park

September 26, 1944.

Notes regarding:

Dunn's letter to Worth Allen of July 11, 1944.
Assistant Attorney General Littell's letter to Worth Allen of Sept. 15, 1944.
Worth Allen's letter to Dunn of Sept. 23, 1944.

1. Dunn's letter was written for verification of a discussion, and not for interdepartmental policy considerations.

2. Mr. Littell's statement that no decision has been reached regarding court jurisdiction is not entirely true.

   a. The United States did not enter the adjudication of 1939 in the State Court after the question was raised, even after the scope was broadened in November of that year.

   b. The United States did not enter the further adjudication of 1943.

   c. In conference Aug. 22, 1940, recorded by memorandum of the same date, the following recommended that the United States do not enter the State Court:

Worth Allen)Special Wayne Williams)Assistants to Roy W. Stoddard)Attorney General.	Thomas A. Nixon, Attorney for Northern Colorado Water Conservancy District. Porter J. Preston, Engineer, Bureau of Reclamation. J. R. Alexander) Attorneys for Spencer L. Baird) Bureau of Reclamation.

   d. By memorandum of September 10, 1940, the Under Secretary of the Interior transmitted above mentioned memorandum to the Attorney General and signified concurrence.

3. Mr. Allen's letter does not deny any of Dunn's letter which is supposed to represent his remarks in the discussion.

4. The Water Rights Division actually filed claims with State Engineer in 1939 for presentation to federal court, on instructions in letter from Worth Allen, dated Sept. 22, 1939.

5. The United States purchased the land and decreed water rights of the late Annie and Kate Harbison with the intent to adjudicate transfers to National Park Service water systems, which must be through the Court which decreed the original priorities (State Courts).

Questions still needing answers:

A. Can Federal Court establish priorities senior to adjudicated rights of 1939, or is this Service losing valuable priorities by deferring to wishes of the Bureau of Reclamation and Northern Colorado Conservancy District?

B. Granting that the United States does not become bound by a State Court until it subjects itself, does federal participation in a special adjudication to amend existing rights bind it to all general adjudications to establish original priorities in the same State Court?

C. Does not the deliberate purchase of a right previously decreed in a State Court bind the United States to that Court just as much as federal participation in an adjudication in that Court?

D. If the answer to "C" is yes, have not the purchases of the rights of Harbison, Kelley and Fisher, by this Service, already undermined the basis for the present stand of the Bureau of Reclamation?

Hydraulic Engineer.

Water Rights Status in Water District 51 - Colorado River Drainage

Rocky Mountain National Park

September 26, 1944.

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Hydraulic Engineer.

Water Rights Status in Water District 51 - Colorado River Drainage

Rocky Mountain National Park

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D. If the answer to "C" is yes, have not the purchases of the rights of Harbison, Kelley and Fisher, by this Service, already undermined the basis for the present stand of the Bureau of Reclamation?

Hydraulic Engineer.

07-15-1943: memorandum to regional director, region 2 from acting superintendent regarding water rights in district 51

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK
ESTES PARK, COLO.

July 15, 1943

MEMORANDUM for the Regional Director, Region Two.

Worth Allen, Special Assistant to the Attorney General, Denver, Colorado, and Wayne H. Hackett, U.S. Commissioner for this national park, attended the opening session of the State District Court at Hot Sulphur Springs, Colorado, on July 12.

The taking of proof to establish decreed rights in the pending water adjudication in District No. 51 was postponed until the March term of the court. At the request of interested attorneys, an extension of 60 days was made in which to file additional petitions.

Only three petitions have been filed to date. Their points of diversion are downstream and will have very little effect on this national park's unadjudicated claims. These filed petitions are as follows:

1. George G. Leatherman, owner of the Leatherman Ditch, claims 4.2 cubic feet per second of time to irrigate 57.2 acres of land. The headgate is on the east bank of Elk Creek (a tributary of the Colorado River) at a point whence the W¼ corner of section 17, T. 2 N., R. 77 W., bears N. 62° 50' W. 295 feet. The ditch course is southerly. It is 3 feet wide at top and 1 foot at bottom, has a grade of 2 feet per 1,000 feet, and was constructed in July 1936.

2. Ira F. and Dean J. Bowner, owners of the Sagener Ditch, claim 2.00 cubic feet per second to irrigate 85 acres. The headgate is on the south bank of the South Fork of Ranch Creek, a tributary of the Fraser River, at a point whence the E¼ corner of section 27, T. 1 S., R. 75 W., bears N. 56° 10' E. 1211 feet. The course is northwesterly and the grade is 2 feet per 1,000 feet. The size is 5 feet at top, 2 feet at bottom, and 1.3 feet deep.

3. Dean Glessner, Barbara B. Jacques, and David W. Brunton are the owners of the Love-Glessner Ditch, claiming 3.00 second feet of water during high water and 1.5 second feet of water during the rest of the season for the purpose of irrigation. The headgate is on the west bank of Elk Creek, sometimes known as McQueary Creek, at a point whence the W¼ corner of section 29, T. 2 N., R. 77W., bears S. 19° 5' W., 1,920 feet. The ditch is 3 feet wide at top and 1.5 feet at the bottom and was constructed in October 1933.

Copies are included for the Water Rights Division and the Chief Counsel's office, if you desire to forward them.

(SGD) GEORGE W. MILLER

George W. Miller
Acting Superintendent.

09-10-1940: letter to attorney general from regarding usa court participation in adjudication proceedings for water district 51

C
O
P
Y

SEP 10, 1940

The Honorable

The Attorney General.

Sir:

Further reference is made to your letter of August 5 (RHM-CEF, 90-1-2-83), regarding a participation by the United States in a State Court adjudication proceeding, Water District No. 51, brought by John Blecha and others to adjudicate their claimed right, with an alleged priority of December 1, 1882, to irrigate 156.27 acres of bottom land, with a claimed conditional right to irrigate 142.18 acres additional, all from a vested right now claimed by the plaintiffs, to irrigate certain bottom meadow land from the waters of the Colorado River.

The water right of the Colorado-Big Thompson project is derived from the same source, and the question discussed in your letter is whether the United States should take part in the State Court proceedings.

Senate Document No. 80, 75th Congress, First Session, enumerates (page 4 of the Printed Report) the following as one of the primary purposes of the Colorado-Big Thompson project: "(j) An adequate system, as determined by the Secretary of the Interior, shall be provided for the irrigation of the lands in the vicinity of Kremmling, now irrigated by either natural or artificial means, and the installation made therefor shall be a part of this project. The rights to the use of water for the irrigation of these lands shall be considered to have a date of priority earlier than that of the rights to the use of water to be delivered through the works of this project to the eastern slope."

The appropriation act of August 9, 1937, 50 Stat., 564, 595, contains the following: "Colorado-Big Thompson project, Colorado: For construction in accordance with the plan described in Senate Document No. 80, Seventy-fifth Congress, $900,000."

The lands of the plaintiffs in the adjudication proceeding filed in the State Court, are in the vicinity of Kremmling and so

are within the area intended to be benefited by the act of August 9, 1937, above. Whether the intention of the act was to protect water rights resulting merely from natural flooding of land, and, if so, whether the protection extended so far as to permit the parties benefiting from natural overflows to claim a priority senior to the United States for a larger amount of water than utilized from the natural overflow or for water divertable at times other than times of floods, are matters that would have to be considered in a suit brought by the United States to protect its water rights for the Colorado-Big Thompson project.

I am enclosing a copy of a memorandum report by Messrs. Worth Allen, Wayne C. Williams, Roy W. Stoddard, Thomas A. Nixon, Porter J. Preston, J. R. Alexander and Spencer L. Baird, which report was prepared by the seven parties named after they had investigated the Blecha adjudication case. The conclusion of the report is that the United States should not participate in the State proceedings. In this conclusion this Department concurs. It is also suggested, in accordance with the last paragraph of the memorandum report, that Special Assistants to the Attorney General, Messrs. Worth Allen and Wayne C. Williams be instructed to further investigate any threatened invasion of the water rights of the United States for the Colorado-Big Thompson project, and report whether in their opinion the United States should, as soon as possible, initiate action in the Federal Court for the adjudication and protection of the water rights of the Colorado-Big Thompson project.

Very truly yours,

Under Secretary.

Enclosure 2589951.

Copy to CE, Denver, Colorado
DC, Salt Lake City, Utah
SE, Estes Park, Colorado.

C
O
P
Y

Denver, Colorado
August 22, 1940.

MEMORANDUM REPORT

Subject: In the matter of the adjudication of the priorities of rights to the use of water for irrigation purposes in Water District No. 51, in the State of Colorado. Adjudication of overflow rights from Colorado River that might be in conflict with Colorado-Big Thompson project. Petition for adjudication of rights of John Blecha, et al - Colorado Big Thompson Project.

1. Following service by mail of notice of adjudication in the subject proceedings, a conference was called in the office of District Counsel Baird, in Denver, Colorado, on August 22, 1940, in which the following participated: Messrs. Worth Allen, Wayne C. Williams and Roy W. Stoddard, Special Assistants to the Attorney General, Mr. Thomas A. Nixon, Attorney for the Northern Colorado Water Conservancy District, Mr. Porter J. Preston, Supervising Engineer of the Colorado-Big Thompson project, and Messrs. J. R. Alexander and Spencer L. Baird, District Counsel for the Bureau of Reclamation.

2. In this conference consideration was given; first, to the effect of such proceedings upon the water rights of the Colorado-Big Thompson project, and second, to what, if any, action should be recommended to be taken by the United States with reference thereto.

3. A copy of the petition in the subject proceedings, together with the statement of claim filed therein, is attached hereto for convenient reference, and from which it appears that the same is somewhat indefinite as to the object of the petitioner.

4. It was reported to the conference by Mr. Nixon and District Counsel Baird that they had consulted with Hugh Gilmore, Esq., the Attorney for the petitioner in an attempt to have him clarify his position. He is reported to have stated that while his client could have doubtless refrained from constructing the irrigation works for the direct diversion of water from the Colorado River upon his lands, until such work was undertaken for him at the expense of the Colorado-Big Thompson Project, in pursuance of Senate Document No. 80, he could not wait longer for such development; that in the past several years due to the diminishing flood flow of the river from natural causes, and from diversions made by the City and County of Denver from the Frasier River for transmountain carriage and use, he could not get any flood waters upon his lands, hence the necessity for his direct diversion works out of the Colorado River. Such action taken by this meadow land water user shows that the depletion of his water supply is from a cause other than the construction of the Colorado-Big Thompson Project.

5. It is understood that the lands of the petitioner are all meadow lands within the immediate vicinity of Kremmling, lying on both sides of, and about level with, or below the Colorado River, and are such lands as are referred to in Senate Document No. 80, page 4 subsection J. The petitioner and his predecessors for a long period of time, commencing approximately in 1882, have by the natural action of the river in flowing and receding in the spring months, been irrigating natural hay upon such lands.

6. As shown by the map attached to the petition, the petitioner has recently constructed irrigation works for the direct irrigation of some of his lands and proposes to extend such works for the direct irrigation of the remainder thereof, and proposes to have the decree in the subject proceedings decree a direct diversion (natural flow) right to such lands in lieu of the so-called overflow rights in pursuance of Section 19, Chapter 90, Colorado Statutes Annotated (1935), which such proposed decreed rights are conceded to be junior to all adjudicated rights upon the river decreed in previous adjudication proceedings because of failure to participate therein, but senior to the rights of the United States for the Colorado-Big Thompson Project.

7. In view of the proposed undertaking of the United States under the provision of Senate Document No. 80 (pages 3 and 4), which were made a part and condition of the first appropriation made for the Colorado-Big Thompson project (50 Stat. 564, 595), it is believed that the question of what interference the rights proposed to be decreed in the subject proceedings may have with the rights of the Colorado-Big Thompson project is settled, since it is understood that the United States undertakes by virtue of that Document to provide the lands of the petitioner and similar lands with a means of irrigation by direct diversion thereupon, and that such lands are entitled to a water right senior to those of the Colorado-Big Thompson Project.

8. If, as appears from Senate Document No. 80, the Colorado-Big Thompson Project is required to bear the cost of irrigation works for meadow lands in the vicinity of Kremmling, the action of the petitioner in providing himself with such irrigation works will be a benefit to the United States, in that it will; (a) save the cost of such construction to the project; (b) establish a precedent for construction of works for similar lands, and (c) demonstrate that depletion of the flood water supply for such lands is not due to the construction of the Colorado-Big Thompson Project.

9. The only object for any appearance in the proceedings would be to hold the petitioner's decree to a maximum of beneficial use. However, as pointed out in the conference, such lands would not be entitled under the law to use any more than such maximum, regardless of any decree which might be given.

10. Consideration was also given as to whether, if the United States should not participate as a party in the proceedings, it should attempt to appear specially by suggestion to suggest to the Court either lack of jurisdiction, or that the petitioner does not have rights for which he prays, and it was the concensus that the United States should not in any event make an appearance by suggestion, i. e., an informal appearance by a representative of the Department of Justice, with the object of making a suggestion as to the Court procedure.

11. General appearance by the United States, by filing its statement of claim in the proceedings would, in the opinion of the undersigned, have the effect of subordinating all of the water rights of the United States in this district to any and all water rights of others which have heretofore been decreed in other adjudication proceedings, including the decree to the Moffat Tunnel Water & Development Co., which went to decree in 1937, and which is commonly referred to as the "Bannister Decree."

Huerfano Valley Ditch, etc. Co. v. Hinderlider, 81 Colo. 468; 256 Pac. 305.
Hardesty Reservoir Canal, etc. Co. v. Arkansas Valley Sugar Beet, etc. Co., 85 Colo. 555; 277 Pac. 763.
Kibbee v. Kosterlic, 87 Colo. 215; 287 Pac. 652.
Stratton v. Beaver Farmers' Canal & Ditch Co., 87 Colo. 349; 287 Pac. 861.

12. Based upon the foregoing, recommendations are made as follows:

(A) (1) That the United States do not enter the subject proceedings by the filing of a statement of claim therein, and submit the rights of the United States to the jurisdiction of the State Court.

(2) That the United States do not enter an "appearance by suggestion" in the proceedings.

(B) That Special Assistants to the Attorney General, Messrs. Worth Allen and Wayne C. Williams, should be instructed to further investigate any threatened invasion of the water rights of the United States in the Colorado-Big Thompson Project, and to report whether or not the United States should, at this time, initiate action in the Federal Court for an adjudication and protection of the water rights of the Colorado-Big Thompson Project.

Worth Allen — Thomas A. Nixon
Wayne C. Williams — Porter J. Preston
Roy W. Stoddard — J. R. Alexander
Spencer L. Baird

COPY

08-26-1940: letter to regional attorney from special assistant to the attorney general regarding second special proceeding instituted

REC'D AUG 29 1940

DEPARTMENT OF JUSTICE

332 Postoffice Building,
Denver, Colorado, August 26, 1940.

J. E. Taylor, Esq.,
Regional Attorney,
National Park Service,
601 Sheldon Building,
San Francisco, California.

Dear Joe:

I am this morning in receipt of a copy of a memorandum, dated August 22, 1940, written by Mr. Albert L. Johnson, Associate Attorney, for the Director, and a copy of a memorandum, dated August 14, 1940, written by Mr. A. van V. Dunn, for Regional Attorney Taylor.

This pending proceeding is, as stated in Mr. Johnson's memorandum, a new one, it being the second special proceeding instituted since the general proceeding culminated in a decree in 1937.

The matter has been considered carefully by the attorneys representing the Reclamation Bureau, Northern Colorado Water Conserving District, and by Mr. Williams and the undersigned. We are all agreed that the United States should not appear in this proceeding. We take the position that the United States is not bound by any of these state decrees, and that at a time deemed appropriate an adjudication proceeding will be instituted by the United States in the Federal Court for the District of Colorado. The same broad reason for not going into the last special proceeding, obtains here.

Of course, there is a question whether the scope of the proceeding is such as to affect any claimants having priority rights for power, domestic, and other purposes than irrigation. With kind regards,

Very truly yours,

Worth Allen,
Special Assistant to
the Attorney General

WA/mls

Copies to Director, Regional Director of Region II, Supt. Canfield, and Mr. Dunn 8/30/40

11-29-1939: memorandum to attorney from hydraulic engineer regarding granting permit for fleshuts ditch

601 Sheldon Building,
San Francisco, Calif.,
November 29, 1939.

Memorandum for Mr. Joseph E. Taylor:

Referring to Superintendent Canfield's airmail memo of November 24, 1939, regarding the Fleshuts Ditch, I feel that the Park Service should be very cautious about granting any permit.

1. The Fleshuts Ditch filing was not covered by a supplemental statement. Hence it is legally dead.

2. The Fleshuts Ditch has not been used for so many years that I feel physical abandonment has been proven.

3. Mr. Canfield's letter bears out my guess that the existing Holzwarth water system does not divert from Timber Creek. Hence:

   a. If he wishes to adjudicate his existing system, he should give the correct description of the source of supply and point of diversion (springs tributary to North Fork of Colorado, and not Timber Creek or a tributary of Timber Creek.)

   b. Though I fail to see any connection between Holzwarth's System and the old Fleshuts Ditch, we could not object to his claim of change in point and getting the Fleshuts priority for his diversions now in use, if it is not on Timber Creek.

4. A new point of diversion on Timber Creek should be permitted by the Park Service, only on condition it is given priority junior to the Timber Creek Campground water system.

   a. It will be built later.

   b. Any rights from the Fleshuts Ditch are already fully assigned to Holzwarth's present spring diversion and unused portions of the originally claimed 14.88 sec. ft. have been abandoned.

c. Any new Timber Creek diversion by Holzwarth should be limited to 0.5 sec. ft. because:

(1) The stream flow is only about 2.0 sec. ft. in late summer.

(2) The park needs approximately 0.5 sec. ft. of that flow for Timber Creek.

(3) Approximately 1.0 sec. ft. should be left unappropriated to cover dry year shortages, and assure proper diversion by the Park Service whose diversion would be below.

A. van V. Dunn,
Hydraulic Engineer.

(Copies mailed Director, Regional Director of Region II, and Supt., Rocky Mountain National Park, Dec. 1, 1939.)

11-24-1939: memorandum to regional attorney from superintendent regarding pending adjudication proceedings in water district n

NOV 27 1939

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK
ESTES PARK, COLO.

ans. 12/1/39 - J.E.T

November 24, 1939

AIR MAIL

Memorandum for Regional Attorney Taylor:

We have a copy of Acting Chief Counsel Lee's memorandum to you under date of November 20 discussing further the pending adjudication proceedings in Water District No. 51 on the Colorado River.

Last Wednesday we had a lengthy conference with Mr. Worth Allen on this matter, and all Federal agencies are now in complete agreement that it is best to refrain from entering the pending case. The Forest Service, we understand, was particularly reluctant to accept the views of Mr. Allen and the Attorney General on this case, and we must admit we were not particularly pleased with the turn of events; but, in view of recent developments and information available to us, the Attorney General's decision now seems very satisfactory.

You will recall that we have requested the Clerk of the District Court to furnish us with all claims filed involving water above the junction of the outlet of Grand Lake and the Colorado River, and to date nothing of particular interest has appeared so far as we are concerned.

Holzwarth's Ranch has not as yet filed any claims. Insofar as the Holzwarth-Fleshuts filing is concerned, we are inclined to believe that Holzwarth can produce evidence that the intent of the Fleshuts filing was to obtain water from Timber Creek. We have examined Timber Creek in this vicinity and have gone over the ground with Mr. John Holzwarth and he pointed out what he claimed was the Fleshuts diversion. Undoubtedly a diversion has been made just below the intake to our Timber Creek Camp-Ground pipe line, and it definitely connects with what must have been the Fleshuts ditch.

The Grand County engineer was present at the time and it was his opinion that an error was made in the Fleshuts filing and, inasmuch as he had been in the country for a long period of years, he seemed inclined to the view that the ditch Mr. Holzwarth has in mind and the Fleshuts filing are probably one and the same. In any event, this diversion and ditch were definitely abandoned for a period of years and we have informed Mr. Holzwarth that, before any diversion can be made from Timber Creek, the consent of this Service must be secured in the form of a special use permit. He accepted this view and it seems to me, regardless of

what the District Court might grant the Holzwarth interests in the way of a decree, we still are in a position to exercise some control over his diversion use since he must take the water across park lands.

The last time we talked to Mr. Holzwarth, he desired to divert water from Timber Creek about one-quarter of a mile above our Timber Creek Campground diversion. He desired to divert approximately two second feet of water in a ditch around the side of the mountain above his ranch and empty it into a combination of ditch, flume, and pipe, and use it for power and irrigation purposes. In the event a special use permit could be secured from the park covering this use, he proposed to abandon whatever claim he might have on the Fleshuts ditch below. Inasmuch as considerable scar and damage to the natural features and landscape would arise from the upper diversion proposed by Mr. Holzwarth, we have told him that it would not be possible to authorize the upper diversion so far as we were concerned. We did indicate that we would recommend to the Director that a special use permit be issued to him covering a diversion through the alleged Fleshuts ditch, subject to such conditions and considerations as might be necessary, if he decided to proceed with use from the lower diversion.

We believe now that the situation has clarified itself to a great extent and, in view of the control over lands that we happen to have at strategic points, we have little to fear so far as any decisions of the State courts are concerned in the pending adjudication. We will, of course, keep you informed of latest developments. We plan to have a representative at Hot Sulphur Springs on December 1 as an observer to the adjudication proceedings.

David H. Canfield
Superintendent.

cc Director
Region II

11-20-1939: memorandum to regional attorney from acting chief counsel regarding pending adjudication proceedings in water dist

REC'D NOV 27 1939

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

ans. 12/1/39 - J.E.T.

November 20, 1939.

Memorandum for Regional Attorney Taylor:

Reference is made to your memorandum of November 10, relating to the pending adjudication proceedings in Water District No. 51, Colorado, which district includes a part of Rocky Mountain National Park. We also have received a copy of your letter of November 13 to Mr. Worth Allen, relating to the same matter.

Since it has definitely been determined that the United States should make no appearance in the proceedings, any arrangement which you are able to make to secure even partial protection of park uses and filings without such appearance, will be satisfactory. A voluntary amendment of the Holzwarth claim to show that it does not affect Timber Creek, if such is the fact, would seem to be proper.

It is assumed that you will continue to watch the pending proceedings and that you will scrutinize the decrees which may finally be entered, to determine their effect on the interests of this Service. Our interests were so obviously minor as compared with those of the Bureau of Reclamation that the decision not to appear could not well be protested, but the extent of our sacrifice, if any, should be determined for the record.

Acting Chief Counsel.

cc: Supt. Rocky Mountain National Park
Regional Director, Region II
Mr. Barton

11-16-1939: letter to regional attorney from special assistant to the attorney general regarding clarification of holzwarths diversion

DEPARTMENT OF JUSTICE

REC'D NOV 20 1939

332 Postoffice Building,

Denver, Colorado, November 16, 1939.

Joseph E. Taylor, Esq.,
Regional Attorney, National Park Service,
601 Sheldon Building,
San Francisco, California.

Re: General Adjudication, Water District No. 51,-- Claims for National Park Service.

Dear Joe:

Replying to your letter of November 13, with enclosures, I believe you have taken the proper course in calling this matter to the attention of Superintendent Canfield so that he may bring to the attention of the Holzwarths the fact that their diversion is not from Timber Creek but from an unnamed stream in the next draw. This would be for the benefit of both the Holzwarths and the United States.

I am more convinced than ever that it is to the interest of the United States to submit none of its claims to adjudication by the State Court in Hot Sulphur Springs. We are now of the opinion that, as soon as some substantial work has been started in the construction of the Colorado-Big Thompson Project Tunnel through the Continental Divide, it will be advisable for us to institute an adjudication suit in the Federal District Court in Denver. If we secure an adjudication in that Court, we should not be greatly concerned about anything that may be done in the State Court.

With kind regards, I remain,

Very truly yours,

Copies mailed director and Regional Director of Region II 11/21/39

Worth Allen,
Special Assistant to
the Attorney General.

WA/ELM

CC to
Att'y Gen'l,
Canfield,
Ise.

Decree signed by Baldwin Ditch 14th. provisions thereof as submitted to me letter of the 14th. Copies of all will be forwarded to you as soon as copied.

11-10-1939: memorandum to superintendent canfield from regional attorney regarding general adjudication in water district no. 51

FILE COP

601 Sheldon Building
November 10, 1939

Memorandum for Superintendent Canfield,
Rocky Mountain National Park:

Reference is made to Special Assistant to the Attorney General Worth Allen's letter to me of November 7 relating to the general adjudication in Water District No. 51. It is noted that a copy of this letter was forwarded to you.

In this regard, we enclose copies of memoranda from Associate Engineer A. van V. Dunn upon this subject, dated November 7 and 10, pointing to the fact that Mr. Kelley would have no interest to protect by way of protest against the Holzwarth claim in Fleshuts Ditch. Inasmuch as Mr. Dunn seems to feel that the claims of Mr. Holzwarth may have a direct and substantial influence upon Park Service claims on Timber Creek, it is suggested that you bring Mr. Dunn's findings to the attention of Mr. Holzwarth. If Mr. Holzwarth agrees with Mr. Dunn to the effect that the actual diversion of this pipe line is not upon Timber Creek, but upon the next draw, he may be willing to amend his statement of claim so as to correct the description of the diversion and show it to be upon some stream (name unknown) other than Timber Creek.

Joseph E. Taylor,
Regional Attorney.

Encl. 1782702.

JET:SH

cc: Director, with copy of Mr. Dunn's memoranda of Nov. 7 and 10.
Regional Director, Region II, with copy of Mr. Dunn's memoranda of Nov. 7 and 10.
Mr. Worth Allen, with copies of Mr. Dunn's memoranda of Nov. 7 and 10.

11-10-1939: memorandum to regional attorney from assistant engineer regarding clarification of point of diversion

601 Sheldon Building
San Francisco, Calif.
November 10, 1939

Memorandum for Regional Attorney Joseph E. Taylor:

In regard to Worth Allen's letter of November 7, suggesting that Mr. Kelley might protest the claims before us if the United States does not participate in the pending adjudication in Water District No. 51, I feel that he precludes one of the most important needs by limiting such protest to cases in which Mr. Kelley is interested.

The more data I get on the Fleshuts Ditch, the more I feel that the diversion is not actually from Timber Creek and that some one should appear to obtain a proper description of the source of supply and the time of the diversion. Mr. Kelley can have no interest in the Fleshuts Ditch, while it is of vital importance to the Park Service developments at the Timber Creek Campground Area. Since Mr. Holzwarth and the Park Service are the only appropriators of Timber Creek, no one but the United States could protest or challenge the Holzwarth claim.

If the United States cannot appear in the adjudication, I should like to refer to my memorandum of November 7, including the map showing possible Fleshuts Ditch locations, and suggest that perhaps a park official should call directly on Mr. Holzwarth and try to get him to make any necessary corrections in his application to eliminate the need for a Park Service protest.

A. van V. Dunn,
Associate Engineer.

(Copies mailed Director, Regional Director of Region II, and Supt., Rocky Mountain National Park, Nov. 10, 1939.)
(Copy mailed Mr. Worth Allen Nov. 13, 1939.)
with Maps

11-07-1939: memorandum to regional attorney from associate engineer regarding fleshuts ditch filing no. 1769

601 Sheldon Bldg.,
San Francisco, Calif.,
November 7, 1939.

Memorandum for Mr. Joseph E. Taylor:

Re: Fleshuts Ditch Filing No. 1769,
Water District No. 51,
Rocky Mountain National Park.

For possible protest against Mr. John Holzwarth's claims by the Fleshuts Ditch, in the pending adjudication in District No. 51 of Colorado, I have assembled the following data.

Joseph Fleshuts patented tract No. 38-HE 01879 as shown on the General Land Office plat of the resurvey of T 5 N, R 76 W, 6th P. M., the resurvey having been made between September 8, 1928, and October 19, 1929. The tract consisted of the W½ NE¼, NW¼ SE¼, and NE¼ SW¼ of Section 25 of said township and range. By resurvey, the General Land Office altered the section in such a manner that the tract actually extends slightly into Section 24, but the NE corner of said Section 25 is nominally as established by earlier surveys.

Mr. Fleshuts constructed and filed on the Fleshuts Ditch, which was accepted by the State Engineer November 10, 1904, with file number 1769. The filing claims that work was commenced May 13, 1904, not specifying whether construction or merely survey. At some time between 1904 and 1930 Mr. Fleshuts seems to have sold his tract to John G. Holzwarth who had already occupied tract 39 of the same section, being the NW¼ with No. HD. 025785, and lying west of the North Fork of the Colorado River.

In 1919 the State passed a law requiring that all undecreed filings be substantiated by a supplemental statement if they were to remain valid. The time limit was extended to 1922. No such statement was filed in behalf of the Fleshuts Ditch. The State record shows that notice was sent to owner, advising of the law, but this record does not indicate an acknowledgment of the notice by the owner. If Mr. Holzwarth owned the land by that time, but had not recorded his title to the ditch with the State Engineer, it is possible that the notice was sent to Mr. Fleshuts, or his heirs. At all events, the claim is dead so far as the State is concerned.

(Copies with 1 blueprint each mailed Director, Regional Director of Region II, and Supt., Rocky Mountain National Park, Nov. 10, 1939.)
(Copy mailed Worth Allen Nov. 13, 1939.)

On drawing NP-RM-6954, Timber Creek Water Claims, I have shown the Timber Creek Campground Area, Timber Creek Campground Pipe Line, filing No. 16511 by the Park Service, in fine line, and the Fleshuts Ditch, filing No. 1769, in heavy line, together with tract No. 38. I have also shown topography and other data from the B.P.R. map.

The file map shows the Fleshuts Ditch to start 860 feet southerly from the W¼ corner of Section 19. This location places the diversion in the boggy draw south of the Timber Creek Road Camp barn -- a very plausible place to obtain water, but not on Timber Creek. The weakness in this location is that the ditch would climb 40 feet in elevation from the diversion before flowing easily to the Fleshuts tract. This is not possible without a pump which is not mentioned in the statement.

It is possible that in plotting the map Mr. Harris overlooked a decimal in his notes for the tie. I have plotted the same ditch in heavy dash line from a point 86.0 feet southerly from said 1/4 corner. This places the diversion approximately in Timber Creek where it should be. But here again, the ditch would have to climb over a knoll requiring a pump lift of roughly 20 feet. The ditch route would also lead out into Beaver Ponds from which there would be another five foot lift to the terminus.

I seem to recall traces of what may have been a ditch at one time in the campground area, but they were never in use after 1929, and probably not for many years before. I am inclined to feel that if the Fleshuts Ditch ever diverted from Timber Creek as claimed, it was abandoned prior to 1919 when the supplemental statement was required.

But with further reference to the map, there is a pipe line which crosses the road at the Lodge, and the B.P.R. indicates ditch above and below. This pipe crosses the road a quarter mile below the filed terminus for the Fleshuts Ditch.

We know that there is an error in sectionalization between the east and west side of the park, and that in the resurvey of 1928 the General Land Office made quite independent and drastic relocations. We might assume an error of 1/4 mile north to south. On this basis, I have plotted the Fleshuts Ditch as filed, but from the SW corner of NW¼ SW¼ of Section as dot and dash line.

Note that this also places the diversion in a draw, and again is not from Timber Creek. This location also places the lower terminus approximately in line with ditch and pipe crossing the road which is now in use.

In other words, Mr. Holzwarth should prove transfer of point of diversion, or correct the location and name of source of supply if he wishes to obtain the Fleshuts Ditch priority.

Since finding the print of filing 1769, I have found the State record to be in error as to quantity claimed. The ditch capacity should have been 14.88 second feet instead of 1488.0 second feet. But even this capacity is preposterous according to the stream flow of 2.05 second feet which I found on August 4, 1937. This, of course, was below any possible high ditch, but that ditch could not have diverted more than the following for beneficial use:

1. If delivered to 1" pipe on grade 420 ft. per 1000',

28,800 g.p.d. or 0.045 sec. ft.

2. If delivered to 2" pipe on grade 209 ft. per 1000',

158,000 g.p.d. or 0.250 sec. ft.

In other words, the very maximum stream flow August 4, 1934, was not over 2.30 sec. ft. and Mr. Holzwarth has not diverted and beneficially used more than 0.25 sec. ft. for at least 10 years.

Further, from the stream flow, I do not see any reason for the United States to object to a Holzwarth claim for 1.0 sec. ft., or less, from Timber Creek if he proves beneficial use and actual relation to the Fleshuts Ditch. If the diversion is from another draw, or a spring, instead of Timber Creek, we should not protest.

A. van V. Dunn,
Associate Engineer.

11-07-1939: letter to attorney general from special assistant to the attorney general regarding general adjudication

RECD OCT 23 1939

90-1-2-83.

332 Postoffice Building,

Denver, Colorado, October 12, 1939.

The Attorney General,
Washington, D. C.

Re: General Adjudication, Water District No. 51, Grand County, Colorado. Colorado-Big Thompson Project.

Sir:

On sheets 3 and 4 of our letter of September 28, will be found the following:

> "One question which was raised at one of the conferences is whether or not if the claims are filed for the Forest Service and the National Park Service, the submission of those claims to the adjudication of a State court could be held to have submitted the rights of the United States with respect to other and distinct water priorities. My impression is that the mere fact that the United States consents to submit certain claims, wholly disconnected with the Colorado Big Thompson project, would not be enough to constitute a submission to the jurisdiction of the State court with respect to the latter."

It seems to me that much could be said for and against the conclusion-- rather impression-- stated in that letter.

It is elementary, of course, that a sovereign cannot be sued in its own courts, or in any other, without its consent and permission. The rule is so well established that it is unnecessary to quote Chief Justice Taney, Chief Justice Marshall and others. It is likewise elementary that the United States when consenting to a suit in certain cases may limit and condition the right to bring such suit. Such rule is announced by Chief Justice Marshall in

U. S. v. Clarke, 8 Pet. 436, 444.

This general rule, requiring one to bring his case clearly within the authority of some Act of Congress is found stated in 26 R.C.L. 1461.

An Act of Congress authorizing the prosecution of claims for the value of property taken or destroyed by Indians cannot be extended to other consequential damages resulting from such taking or destruction.

> "Beyond the letter of such consent the courts may not go, no matter how beneficial they may deem or in fact might be their possession of a larger jurisdiction over the liabilities of the government."
> Price v. U.S. and Osage Indians, 174 U.S. 373, at 375-376.

I refer also to a statement by the Supreme Court of Colorado found in the opinion of the Court in

The Rio Grande Land & Cattle Co., et al., v. The Prairie Ditch Co., et al., 27 Colo. 225, 231, 60 P. 726.

The Court was there dealing with the two-year statute relating to the re-argument or review of an adjudication decree. After the decree had been reopened on the petition of certain parties filed within the two-year period, and after notice had been served upon all others who were parties to the adjudication, stating that if they so desired, they might come in and be heard, other petitioners came in, after the expiration of the two-year period, attacking other priority rights than those which had been attacked by the original petitioners who filed their petition within the statutory period. In deciding that those who had not come in within the two-year period had no standing in such a proceeding, the Court said (underscoring is ours):

> "This contention is based upon the theory, which we think tenable, that the adjudication which these statutory proceedings contemplate results in, and consists of, separate, distinct and divisible parts of one general decree, there being as many such as there are separate ditches or rights existing."

It might then very well be argued that, inasmuch as the priority rights with respect to separate ditches and other structures are separate and distinct, the submission of some of them for determination cannot be construed as having submitted to the jurisdiction of the Court the rights of the United States with reference to other structures.

I am frank to say that, in my rather hurried search for authorities, I have found no case directly in point. I have found enough, however, to conclude that it is extremely dangerous for the United States to go into any State adjudication proceeding unless it is willing to submit to the Court for adjudication all claims for all priority rights which it has.

To begin with, this is not a case which is brought under some Act of Congress. This is a proceeding which does not rest upon any consent of the United States. It is a proceeding that has, from its very nature, a rather well-known and extensive scope. The United States may or may not submit itself to the jurisdiction of the State Court in which the adjudication proceeding is pending, but if it does submit, can it say that the general rule applicable to all other persons over which the State acquires jurisdiction, does not apply to it? That rule is that, if a party, whether jurisdiction has been obtained by service or not,

submits any claim in a general adjudication, all other claims held by such party not submitted therein automatically, upon the entry of final decree, become junior to all claims adjudicated in the decree.

There are numerous cases laying down the general rule or abstract proposition that, when the United States comes into a case, it comes as does any other litigant and is subject to the general rules applying to other litigants. A few of such cases are

O'Brien v. U. S., 51 F(2d) 674.

U. S. v. Bighorn Sheep Co., 9 F(2d) 192.

First National Bank v. U. S., 2 F. Supp. 107.

Kandle, et al. v. U. S., 4 F(2d) 183, 184.

Ritter v. U. S., 29 F(2d) 265, 267.

Sweet v. U. S. 223 F. 421

Central Trust Co. of New York v. Treat, 192 F. 942, 943.

In the Kandle case, it is stated:

"When the United States becomes a party litigant, it divests itself of sovereignty and stands as any ordinary suitor before the court and is bound by these (equity) rules."

In the Ritter case is found this statement:

"It is true, as plaintiff contends, that when the sovereign becomes an actor in a court of justice, its rights must be determined upon those fixed principles of justice which govern between man and man in like situations."

In the opinion in the Treat case is found this statement:

"But when the United States sues or consents to be sued, even in its own courts, it becomes a litigant, and is to be treated like any other litigant, except wherein it has otherwise provided by law."

In Lynch, et al. v. U. S. 73 P. (Okla) 1095, the Supreme Court of Oklahoma had the following to say with respect to that is the standing of the United States in a State Court:

"The United States stands in no different relation as a suitor than any individual. When the government comes into a court to submit a question to judicial determination, she is not acting in her capacity as a sovereign, but as a litigant, claiming the same rights, and bound by the same rules, as any of her citizens under similar circumstances."

In The Nuestra Senora de Regla, 108 U. S. 92, it appears that a Spanish-owned ship was seized by officers of the United States for use in the Civil War, and that thereafter the United States filed a libel in an admiralty court for adjudication and determination. Some question was raised as to the extent of the finding and judgment of the lower court. The Supreme Court of the United States held that the questions were incidents to the suit brought by the United States and continued, saying:

"When, therefore, the United States, through the executive of the nation, waived their right to exemption from suit, and asked the prize court to complete the adjudication, we think the government is bound by the submission, and that it is the duty of the court to proceed to the final determination of all the questions legitimately involved."

The United States concluded to and did submit itself to the jurisdiction of the State Court in a general water adjudication proceeding brought by Pioneer Irrigation District in one of the State Courts of Idaho. The United States intervened. The United States was dissatisfied with the decree of the lower court and took an appeal to the Supreme Court of Idaho.

Pioneer Irrigation Dist. v. Amer. Ditch Assn. et al. 4 P. 2d 196, 201:

"The United States further contends that, though it was not made a party to the suit herein, but after leave sought and obtained, intervened, and participated throughout the trial as any other party, the state courts have no jurisdiction to enter a decree fixing its priorities. The government of course, may not be sued without its consent, which consent may be given only by Congress. Morrison v. Work, Secretary of Interior, 266 U.S. 481, 45 Ct. 149, 69 L. Ed. 394. Here the United States of its own volition, filed a complaint in intervention by its local United States district attorney and his assistant and the special local attorney for the reclamation service.

"Judge Cushman denied a motion to remand in a suit similar to this (North Side Canal Co. v. Twin Falls Canal Co. (D.C.) 12 F. 2d 311), but herein no motion to remove was made. The precise question here involved was not therein considered.

"If the government to protect its rights desires to enter a state court, may the state court, which otherwise has jurisdiction of the cause, refuse admission? If so, on what grounds? The government certainly may sue on behalf of a reclamation project. West Side Irr. Co. v. United States (C.C.A.) 246 F. 212.

"Under the section of the federal statute above referred to, it would seem that the government, suing for a federal reclamation project in a state court, would be bound by the decree of such court the same as any other party. United States v. Dominion Oil Co. (D.C.) 241 F. 428; United States v. West Side Irr. Co. (D.C.) 250 F. 284, 290; United States v. Midway Oil Co. (D.C.) 232 F. 619, at page 631.

"The right of the Attorney General to intervene on behalf of the United States has been recognized. Peo. of State of New York v. State of New Jersey, 256 U. S. 296, 41 S. Ct. 492, 65 L. Ed. 937."

One of the points made by the United States in the Pioneer Irr. Dist. case was that the statutory requirement as to completion of appropriations within five years did not apply to the United States. Its contention was overruled.

The following are three excerpts from the opinion of the Court in

Walker v. U. S., 139 F. 409, 412, 413:

"It is, however, equally true, when the sovereign becomes an actor in a court of justice, especially in an action which proceeds on equitable principles, that his rights must be determined upon those fixed principles of justice which govern between man and man in like situations."

"When the sovereign sues, he brings with him no privileges which exempt him from the common fate of suitors."

"The underlying principle of all the decisions is that, when the sovereign comes into court to assert a pecuniary demand against the citizen the court has authority, and is under duty, to withhold relief to the sovereign, except upon terms which do justice to the citizen or subject, as determined by the jurisprudence of the forum in like subject-matter between man and man.

We conclude the citation of authorities by referring to

Luckenbach S.S. Co., Inc., et al. v. The Thekla, 266 U.S. 328, 45 S. Ct., 112.

The Luckenbach Steamship Company libeled the barque Thekla in admiralty for a collision with the steamship P. J. Luckenbach. The owners of the Thekla filed an answer and a cross libel, or cross bill. The United States was thereafter made a party libellant upon its motion and stood on the Steamship Company's libel.

"It filed a claim 'without submitting itself to the jurisdiction' of the Court, alleging possession and ownership at the time when the libel was filed." (112).

At the trial it appeared that the United States was owner pro hac vice and that the Luckenbach alone was in fault, which finding was affirmed by the Circuit Court of Appeals. A decree was entered against the claimant and stipulator, U. S. Shipping Board Emergency Fleet Corporation, for the damages amounting to $120,619.71, with interest and costs.

The first question certified by the Circuit Court of Appeals to the Supreme Court was whether the District Court was empowered by law to render the decree entered. The answer was "Yes". It was argued that "there is no statute by which the government accepted this liability". The court, speaking through Mr. Justice Holmes, answered:

"It joined in the suit, and that carried with it the acceptance of whatever liability the courts may decide to be reasonably incident to that act." (113.)

The court further stated:

"When the United States comes into Court to assert a claim it so far takes the position of a private suitor as to agree by implication that justice may be done with regard to the subject matter." (113)

The court pointed out that the libel in such a case "is like a bill for an account, which imports an offer to pay the balance if it should turn out against the party bringing the bill."

I understand that steps are being taken to secure an enlargement of this general adjudication proceeding.

We very strongly recommend, therefore, that whatever the scope ofthe proceeding may be, it is much better for the United States not to submit any claims to the jurisdiction of the State Court for determination at this time, even though, so far as the State Court

are concerned, the priority rights of the United States in connection with the National Park and Forest Services' structures may, and probably will, become junior to every water right adjudicated at the time the decree is made herein, provided, however, no claims are filed by others in connection with claimed priorities on the same small streams from which the National Park Service and the Forest Service divert their water.

It is doubtful whether any claims for the use of water from the small streams from which the National Park Service and Forest Service divert water will be filed herein. But if they should be filed, we should have some instruction as to what to do.

We can be in Hot Sulphur Springs on the last day on which claims may be filed and at the 11th hour file claims for the United States. However, we must then be ready to act as the Court undoubtedly will not grant any further extensions of time.

On the one hand we have the claims of the United States with respect to the Colorado-Big Thompson Project which may, and probably will, be very seriously affected if any claims are filed by the United States in this adjudication proceeding, particularly if the decree made on November 4, 1937, in the former adjudication proceeding as to the priority rights of Moffat Tunnel Water & Development Co. is not substantially modified. If the Moffat Company's project is ever completed as now planned, it will take a large and valuable amount of water which otherwise the United States would collect in the ditches of the Colorado-Big Thompson Project.

There is a very grave doubt, as I have heretofore written you, whether the Moffat Company's project as it appears on paper ever will develop beyond that stage. It is thought by a number of people that the whole thing is designed to "hold up" the United States and Northern Colorado Water Conservancy District.

As I have heretofore written you, my information is that it will be impossible for the Moffat Tunnel project to interfere with the Colorado-Big Thompson Project unless the United States grants a right of way over its land to the Moffat Company. There is even grave doubt whether the Moffat Company would complete its project even if it had a right of way.

In spite of these probabilities as to the Moffat Company, the taking of any course that might prejudice the right of the United States as against that project is serious.

I am not familiar with the Forest Service structures. To what extent the right of the United States would be impaired by somebody else's acquiring some decreed rights on the streams from which the Forest Service takes its water, I cannot, therefore, say.

Att'y Gen'l-7.

I do know that if any substantial amount of water in Tonahutu Creek should be decreed in this proceeding to some third person, it would greatly impair the hydro-electric use being made of some 8 feet of water in that stream for the generation of electricity for Grand Lake Lodge.

As aforesaid, it is quite likely that no claim will be filed for any priority rights on any of the streams from which water is taken by the two departments of the government.

I believe we should have no difficulty in reaching the conclusion that, unless claims are filed which, in our opinion, impair the rights of the United States, all claims of the National Park Service and the Forest Service should be withheld.

It is the other question which is serious. That question is whether, in the event claims are filed by others for priority of right to take water from one or more of the streams from which the Park Service or the Forest Service takes water, we should in that event file claims for the Park Service and the Forest Service, thus probably submitting to the jurisdiction of the State Court the priority rights of the United States with respect to all claims, including that of the Colorado-Big Thompson Project.

I submit this idea for your consideration: Even though claims might be filed for the use of a substantial amount of water on one or more of the streams from which the National Park Service and the Forest Service divert water, it might be better to allow those claims to be successfully adjudicated and to withhold our claims, with the idea that the United States could, if it were compelled so to do, buy the water rights so adjudicated for an amount of money which would be trifling as compared with the value of the water which might be taken away from the United States by the Moffat Company's project.

The time for filing claims was extended, as I informed you, for 60 days from October 2. We should, therefore, have instructions before the expiration of that time as to what course we should pursue.

Respectfully,

Worth Allen,
Special Assistant to
the Attorney General.

WA/ELM

10-11-1939: memorandum to regional attorney from special assistant to the attorney general regarding adjudication proceedings

REC'D OCT 14 1939

DEPARTMENT OF JUSTICE

ans 10/14 J.E.T.

332 Postoffice Building,

Denver, Colorado, October 11, 1939.

Joseph E. Taylor, Esq.,
Regional Attorney, National Park Service,
601 Sheldon Building,
San Francisco, California.

Re: Adjudication proceedings,
Water District 51, Claims
for National Park Service.

Dear Joe:

I acknowledge with thanks receipt of your letter of October 9, attached to which was a copy of an airmail memorandum for the Director bearing the same date, and a copy of an airmail memorandum to you from the Acting Chief Counsel, dated October 5.

It would seem that if the adjudication proceeding is limited to the adjudication of the priority of right to the use of water for irrigation purposes, it would have no effect whatever on the priority of right to the use of water for other purposes. However, see Model Land Co. v. Baca Irrigating Ditch Company, 83 Colo.131, 262 P.517.

It is my understanding that Mr. Kelley, a lawyer of Denver, is going to ask that the scope of the proceeding be enlarged. He is interested in the water from some springs for fish cultural purposes, and in some water from Columbine Lake for irrigation.

I very much fear that if the United States goes into a general adjudication with any claims, its submission to the jurisdiction of the State Court will result in its right to the use of water under any claims not submitted becoming junior to all priority rights adjudicated in the case. Hence, I hope it will not be necessary for us to file any claims in this adjudication for either the Park Service or the Forest Service.

I am very strongly convinced that a few decrees as to the use of a small amount of water in the District will not substantially impair the rights of the United States with respect to the National Park uses and the Forest Service uses now being made unless some of the claims filed and adjudicated are for the use of water diverted from the same streams from which the National Park Service and the Forest Service take their water. If in this case claim should be filed, for instance, for the use of water taken from Tonahutu Creek by others, it would be a very serious matter if the United States did not file and have adjudicated its power use of water from that stream.

10-11-1939: memorandum to regional attorney from special assistant to the attorney general regarding adjudication proceedings,

In other words, the mere fact that a few ditches get some rights in this adjudication which generally will be senior in the whole district to those of the Forest Service and Park Service is not serious. The matter would be serious only if the decrees are for water out of the small streams from which the United States is taking water.

I, therefore, am going to recommend to the Attorney General that I be instructed not to file the Forest Service and Park Service claims unless there are other claims filed in the case for the use of water from the same streams from which our diversions are made.

That leaves a question as to what should be done in the event claims are filed in the pending case by one or more other people with respect to the use of water from one or more streams from which the United States is taking water.

Very truly yours,

Worth Allen,
Special Assistant to
the Attorney General.

WA/ELM

10-10-1939: memorandum to regional attorney from acting superintendent regarding opening of the adjudication of water rights

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK
ESTES PARK, COLO.

REC'D OCT 13 1939

October 10, 1939

Memorandum for Regional Attorney Taylor:

Assistant Superintendent John S. McLaughlin and United States Commissioner Wayne H. Hackett were present at the opening of the Adjudication of Water Rights in Water District No. 51 in the State District Court at Hot Sulphur Springs, Colorado, on Monday, October 2, 1939.

Before the adjudication case was opened at 10:30 a.m., a conference was held attended by Worth Allen, Special Assistant to the Attorney General, S. L. Baird, Attorney for the Reclamation Service, Tom Nixon, Attorney for the Northern Colorado Conservancy District, W. J. Ise, Attorney for the Forest Service, Mr. Gilmore, Attorney for the original petitioners in this case, and J. W. Kelley, Attorney for the other petitioners. At this conference it was agreed that the Court should be asked for an extension of sixty days in which to file petitions for adjudication. Upon the opening of the case, Mr. Tom Nixon requested the sixty day extension and Judge Herrick granted the request. The Judge indicated that he would entertain a motion at any time to include all general uses of water other than for irrigation in this adjudication case.

None of the petitions filed with the Clerk of the District Court up to 11:00 a.m. October 2, would interfere with or jeopardize the water rights which this park wishes to adjudicate. Petitions filed during the next sixty days will be examined by a representative of this office to determine if they materially affect any of our claims.

John S. McLaughlin
Acting Superintendent

cc: The Director
The Regional Director, Region II

10-09-1939: letter to special assistant to the attorney general from regional attorney regarding pending adjudication of priorities

FILE COPY

601 Sheldon Building
October 9, 1939

AIR-MAIL

Worth Allen, Esq.,
Special Assistant to the Attorney General,
332 Post Office Building,
Denver, Colorado.

Dear Mr. Allen:

Enclosed is a copy of an air mail memorandum dated October 5, received from our Acting Chief Counsel, with respect to pending adjudication of priorities in Water District No. 51.

Also enclosed is a copy of my answering memorandum, from which you will note that I have recommended that, unless the scope of the adjudication be broadened so as to include uses other than for irrigation purposes, we refrain from entering, which recommendation is subject, however, to a concurrence from you.

We would greatly appreciate receiving any suggestions or recommendations you may care to make, either with respect to joint action with the Reclamation Service or action by ourselves alone.

Sincerely yours,

Joseph E. Taylor,
Regional Attorney.

Encls.

JET:SH

cc: Supt., Rocky Mountain National Park.

10-05-1939: memorandum to regional attorney from acting chief counsel regarding pending adjudication of priorities

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
WASHINGTON

ADDRESS ONLY
THE DIRECTOR, NATIONAL PARK SERVICE

REC'D OCT 9 1939

October 5, 1939.

AIR MAIL

Memorandum for Regional Attorney Taylor:

Reference is made to your radiogram of September 29 to the Director, and to your air mail letter of September 29 to Mr. Worth Allen, relating to the pending adjudication of priorities in Water District No. 51, Colorado.

Immediately upon receipt of your radiogram, suggesting that there be no appearance for the purpose of adjudicating claims for the uses of Rocky Mountain National Park, we recalled a letter to the Attorney General which was about to be signed by the Acting Secretary, requesting that Mr. Allen make an appearance for that purpose. We are taking no action in the matter until we receive your further recommendations.

We are informally advised that Mr. Allen has requested the Attorney General for an opinion as to whether submission of claims on behalf of this Service and the Forest Service would embarrass the action of the Northern Colorado Conservancy District or the Bureau of Reclamation in the proposed proceeding in the United States District Court, wherein the jurisdiction of the State court may be attacked. If the Attorney General decides that the submission of the claims of this Service would not adversely affect the proceedings in the Federal court, the way would appear to be open to participate in the adjudication proceedings for Water District No. 51. The fact that the present petition is for the adjudication of priorities for irrigation only would not appear to be an insuperable obstacle, as you will recall that the original petition for the adjudication in Water District No. 4 was limited in the same way, and we succeeded in having the scope of the adjudication broadened so as to include other uses.

We are informed that the Bureau of Reclamation will not join with the Northern Colorado Conservancy District in the action which it proposes to begin in the Federal court. If that is true, we do not see how the conservancy district can get into the Federal court at all. This information is given to you for your consideration in determining what course of action should be taken by this Service.

It is understood that a request has been made to extend the time for filing claims in the pending adjudication proceedings, but we have not

Copy mailed Worth Allen 10/9/39.

been informed whether the request was granted. If so, the proposal to adjudicate claims for park uses may be given further consideration. We shall be guided by your recommendations regarding the action to be taken.

Acting Chief Counsel.

cc: Supt., Rocky Mountain Nat. Park
Regional Director, Region II
Mr. Barton

FILE COPY

NAVY RADIOGRAM

NATIONAL PARK SERVICE
GARFIELD 2080 ROUTINE

SAN FRANCISCO, CALIF.
SEPTEMBER 29, 1939

GOVT INT

DIRECTOR
NATIONAL PARK SERVICE
WASHINGTON, D. C.

ACTING SUPERINTENDENT ROCKY MOUNTAIN HAS JUST ADVISED THAT COLORADO CONSERVANCY DISTRICT PLANS NOT TO ENTER PENDING ADJUDICATION IN WATER DISTRICT FIFTYONE AND WILL INSIST NINETEEN THIRTYSEVEN DECREE STATE DISTRICT COURT IN FAVOR OF OTHER PARTIES BE SET ASIDE UPON GROUNDS OF LACK OF JURISDICTION. PERIOD WIRE STATES DISTRICT PLANS ADJUDICATING CLAIMS IN FEDERAL COURT AND THAT BOTH IT AND BUREAU RECLAMATION REQUEST THAT WE AND OTHER FEDERAL AGENCIES REFRAIN FROM ENTERING IN STATE COURT IN ORDER TO PRECLUDE RECOGNITION STATE COURTS JURISDICTION IN THIS INSTANCE. PARAGRAPH

WE HAVE REPLIED TO WIRE THAT WE AGREE WITH SPECIAL ASSISTANT TO ATTORNEY GENERAL THAT WE SHOULD WITHHOLD CLAIMS BOTH ON THIS GROUND AND ON GROUND THAT ADJUDICATION CONTEMPLATES ONLY IRRIGATION USAGE AND NOT BROAD ENOUGH TO COVER USES. PARAGRAPH

COPIES OF CORRESPONDENCE AND WIRES BEING FORWARDED AIRMAIL.

CERTIFIED OFFICIAL BUSINESS

REGIONAL ATTORNEY, REGION IV.

JOSEPH E. TAYLOR, REGIONAL ATTORNEY.

CC: Acting Supt., Rocky Mt. Nat. Park.
Mr. Worth Allen.

09-29-1939: letter to regional attorney from acting superintendent regarding pending adjudication

CLASS OF SERVICE DESIRED

DOMESTIC		CABLE	
TELEGRAM		FULL RATE	
DAY LETTER		DEFERRED	
NIGHT MESSAGE		NIGHT LETTER	
NIGHT LETTER		SHIP RADIOGRAM	

Patrons should check class of service desired; otherwise message will be transmitted as a full-rate communication.

WESTERN UNION

R. B. WHITE, PRESIDENT — NEWCOMB CARLTON, CHAIRMAN OF THE BOARD — J. C. WILLEVER, FIRST VICE-PRESIDENT

1211-A

CHECK

ACCT'G INFMN.

TIME FILED

Send the following message, subject to the terms on back hereof, which are hereby agreed to

Estes Park, Colorado, September 29, 1939

Regional Attorney Taylor,
National Park Service,
San Francisco, Calif.

Since one 1937 decree of District Court given Ward Bannister and associates involving diversion through Moffett Tunnel materially affects Conservancy District it plans not to enter pending adjudication 51 and will insist above decree be set aside by claiming jurisdiction Federal Court. District plans adjudicating claims in Federal Court. District and Bureau of Reclamation request that we and other Federal agencies refrain from entering to preclude recognition State courts jurisdiction this instance. Question too involved for me, but am hesitant about proceeding in circumstances. Allen believes we should withhold claims and has presented matter to Attorney General who probably is now in touch with Department. Appreciate your advice return wire and suggest you contact Director immediately.

McLaughlin, Acting.

GOVERNMENT RATE

ALL MESSAGES TAKEN BY THIS COMPANY ARE SUBJECT TO THE FOLLOWING TERMS:

To guard against mistakes or delays, the sender of a message should order it repeated, that is, telegraphed back to the originating office for comparison. For this, one-half the unrepeated message rate is charged in addition. Unless otherwise indicated on its face, this is an unrepeated message and paid for as such, in consideration whereof it is agreed between the sender of the message and this company as follows:

1. The company shall not be liable for mistakes or delays in the transmission or delivery, or for non-delivery, of any message received for transmission at the unrepeated-message rate beyond the sum of five hundred dollars; nor for mistakes or delays in the transmission or delivery, or for non-delivery, of any message received for transmission at the repeated-message rate beyond the sum of five thousand dollars, *unless specially valued;* nor in any case for delays arising from unavoidable interruption in the working of its lines; nor for errors in cipher or obscure messages.

2. In any event the company shall not be liable for damages for mistakes or delays in the transmission or delivery, or for the non-delivery, of any message, whether caused by the negligence of its servants or otherwise, beyond the sum of five thousand dollars, at which amount each message is deemed to be valued, unless a greater value is stated in writing by the sender thereof at the time the message is tendered for transmission, and unless the repeated-message rate is paid or agreed to be paid, and an additional charge equal to one-tenth of one percent of the amount by which such valuation shall exceed five thousand dollars.

3. The company is hereby made the agent of the sender, without liability, to forward this message over the lines of any other company when necessary to reach its destination.

4. Domestic messages and incoming cable messages will be delivered free within one-half mile of the company's office in towns of 5,000 population or less, and within one mile of such office in other cities or towns. Beyond these limits the company does not undertake to make delivery, but will, without liability, at the sender's request, as his agent and at his expense, endeavor to contract for him for such delivery at a reasonable price.

5. No responsibility attaches to this company concerning messages until the same are accepted at one of its transmitting offices; and if a message is sent to such office by one of the company's messengers, he acts for that purpose as the agent of the sender.

6. The company will not be liable for damages or statutory penalties in any case where the claim is not presented in writing within sixty days after the message is filed with the company for transmission.

7. It is agreed that in any action by the company to recover the tolls for any message or messages the prompt and correct transmission and delivery thereof shall be presumed, subject to rebuttal by competent evidence.

8. Special terms governing the transmission of messages according to their classes, as enumerated below, shall apply to messages in each of such respective classes in addition to all the foregoing terms.

9. No employee of the company is authorized to vary the foregoing.

THE WESTERN UNION TELEGRAPH COMPANY
INCORPORATED
R. B. WHITE, PRESIDENT

CLASSES OF SERVICE

TELEGRAMS

A full-rate expedited service.

NIGHT MESSAGES

Accepted up to 2:00 A.M. at reduced rates to be sent during the night and delivered not earlier than the morning of the ensuing business day.

Night Messages may at the option of the Telegraph Company be mailed at destination to the addressees, and the Company shall be deemed to have discharged its obligation in such cases with respect to delivery by mailing such night messages at destination, postage prepaid.

DAY LETTERS

A deferred day service at rates lower than the standard telegram rates as follows: One and one-half times the standard night letter rate for the transmission of 50 words or less and one-fifth of the initial rates for each additional 10 words or less.

SPECIAL TERMS APPLYING TO DAY LETTERS:

In further consideration of the reduced rate for this special Day Letter service, the following special terms in addition to those enumerated above are hereby agreed to:

A. Day Letters may be forwarded by the Telegraph Company as a deferred service and the transmission and delivery of such Day Letters is, in all respects, subordinate to the priority of transmission and delivery of regular telegrams.

B. This Day Letter is received subject to the express understanding and agreement that the Company does not undertake that a Day Letter shall be delivered on the day of its date absolutely, and at all events; but that the Company's obligation in this respect is subject to the condition that there shall remain sufficient time for the transmission and delivery of such Day Letter on the day of its date during regular office hours, subject to the priority of the transmission of regular telegrams under the conditions named above.

NIGHT LETTERS

Accepted up to 2:00 A.M. for delivery on the morning of the ensuing business day, at rates still lower than standard night message rates, as follows: The standard telegram rate for 10 words shall be charged for the transmission of 50 words or less, and one-fifth of such standard telegram rate for 10 words shall be charged for each additional 10 words or less.

SPECIAL TERMS APPLYING TO NIGHT LETTERS:

In further consideration of the reduced rates for this special Night Letter service, the following special terms in addition to those enumerated above are hereby agreed to:

Night Letters may at the option of the Telegraph Company be mailed at destination to the addressees, and the Company shall be deemed to have discharged its obligation in such cases with respect to delivery by mailing such Night Letters at destination, postage prepaid.

FULL RATE CABLES

An expedited service throughout. Code language permitted.

DEFERRED HALF-RATE CABLES

Half-rate messages are subject to being deferred in favor of full rate messages for not exceeding 24 hours. Must be written in plain language.

CABLE NIGHT LETTERS

An overnight service for plain language communications, at one-third the full rate, or less. Minimum of 25 words charged for. Subject to delivery at the convenience of the Company within 24 hours.

SHIP RADIOGRAMS

A service to and from ships at sea, in all parts of the world. Plain language or code language may be used.

08-24-1939: memorandum to regional attorney from superintendent regarding recent developments regarding water right matters

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK
ESTES PARK, COLO.

Rec'd. 8/29/39

August 24, 1939

Memorandum for Regional Attorney Taylor:

We believe it desirable to acquaint you with recent developments regarding water right matters here.

Worth Allen indicated to us late last week that he intended to stick with his job as Special Assistant to the Attorney General so that we need have no fears that he may abandon us in midstream. Apparently he has written you and requested that Mr. Dunn be here several days before the final hearings on the Big Thompson adjudication. We concur with Mr. Allen in this respect and hope that Mr. Dunn can be here at least by Labor Day. There is nothing in the State Engineer's record to indicate that an adjudication is being considered or is pending on the St. Vrain.

There is attached a notice of adjudication of water rights in Water District No. 51 involving the Colorado River, or what is locally known as the North Fork of the Colorado. We have just received this notice and are forwarding it to you for any comments you may have. We have not had the time to look into the ditches involved, but will do so at the first opportunity.

David H. Canfield
Superintendent.

Enclosure

Note: Original to Mr. Taylor at Olathe
Copy to San Francisco

RECEIVED
AUG 19 1939
Rocky Mountain National Park

Superintendent
Asst. Supt.
Chief Ranger
Asst. Chief Ranger
Clerk
Chief Clerk
Purchasing Clerk
Engineer
Architect
Landscape
Storehouse
Files

NOTICE OF ADJUDICATION OF WATER RIGHTS

IN THE DISTRICT COURT
No.....

STATE OF COLORADO)
)ss.
COUNTY OF GRAND)

In the matter of the adjudication of the priorities of right to the use of water for irrigation purposes in Water District No. 51 in the State of Colorado.

THE PEOPLE OF THE STATE OF COLORADO, to:

All persons owning ditches having decreed water rights out of the North Fork of the Colorado River and the tributaries thereof in Water District No. 51 in the State of Colorado and to all other persons in interest, GREETING:

You will take notice that an application has been filed in the District Court of Grand County, Colorado, in the above entitled matter by Melvin E. Adkins and Marie C. Adkins to establish and determine their rights to a priority in the use of water for irrigation purposes by means of the DeWitt Ditch out of the North Fork of the Colorado River, a tributary of the Colorado River in said Water District No. 51 and to obtain a decree of the said Court awarding to the said ditch from the said stream a supply of water sufficient to irrigate eighty acres of land, more or less, lying under and along the line of the said ditch and irrigated or proposed to be irrigated thereby and to determine the priority of the said ditch on the said stream and in said Water District No. 51 as will more fully appear from the petition, statement of claim and plat of said ditch filed in this Court, reference to which is hereby made.

Said petition will be called up for hearing and adjudication on Monday the 2nd day of October, A. D. 1939, in the District Court of Hot Sulphur Springs, Grand County, Colorado, or as soon thereafter as the same may be heard when and where you may appear in manner provided by law should you deem proper.

Witness my hand and the seal of the said Court at my office in Hot Sulphur Springs, Grand County, Colorado, this 14th day of August, A. D. 1939.

BRICE SHERIFF,
Clerk.

Hugh Gilmore, Attorney for Petitioners.
First publication Aug. 17, 1939.
Last publication Sept. 7, 1939.

Reprint from Middle Park Times.

07-22-1940: memorandum to regional attorney from superintendent regarding notice of adjudication proceeding in the district cour

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
ROCKY MOUNTAIN NATIONAL PARK
ESTES PARK, COLO.

REC'D JUL 26 1940

July 22, 1940

Memorandum for Regional Attorney Taylor:

Attached is Notice of Adjudication Proceeding in the District Court, State of Colorado, Grand County, in Water District No. 51.

It appears from this notice that another adjudication is to be held on the west side of the park on October 1. As yet we have not been able to discuss this with Mr. Worth Allen, but it is assumed that it will in no way change the Government's plans for a Federal adjudication of uses on the west side of the park and that general area.

Superintendent

cc Region II

Enclosure

RECD JUL 26 1940

NOTICE OF ADJUDICATION PROCEEDING

IN THE DISTRICT COURT

No.....

STATE OF COLORADO)
)ss.
COUNTY OF GRAND)

In the matter of the) adjudication of Prior-) ities of right to the) use of Water for Irri-) gation purposes in) Water District No.) 51 in the State of) Colorado.)

THE PEOPLE OF THE STATE OF COLORADO—To Bertha Oaks; Catherine Heini, Tony Heini and Margaret Roddy, heirs at law of Anton Heini, deceased; Lilly McElroy, Henry McElroy, F. C. DeBerard, Frank E. Yust, Mary Yust, Ted A. Engle and other heirs at law of Mary Engle, deceased, the Ennis Land and Cattle Company, a corporation; the heirs at law of Henry P. Eastin, deceased, and to all unknown owners or claimants claiming some rights for irrigation purposes on the Colorado River in Water District No. 51 in the State of Colorado adverse to the claims of the petitioner herein, GREETING:

You will take notice that an application has been filed in the District Court of Grand County, Coloado, in the above entitled matter by John Blecha and others to establish and determine their rights to a priority in the use of water for irrigation purposes by means of the Kinney-Berriger Ditch Enlargement and Extension taking water from the Colorado River for the purpose of protecting the rights in overflow and meadow water from said stream for many years enjoyed by them under the provisions of Sec. 1636 Compiled Laws of Colorado of 1921 and to obtain a decree of said Court awarding to the said Ditch sufficient flood and direct flow water from the said Colorado River through said ditch in lieu of such overflow to irrigate 156.27 acres of river bottom meadow land and a conditional decree for 142.18 additional acres of such land to be brought under said ditch in the immediate future, said right having been claimed to have been used since December 1, 1882 and to determine the priority of said water right on said stream and in said district as will more fully appear from the said application, statement of claim and plat of said ditch filed in this Court, reference to which is hereby made.

Said Petition will be called up for hearing and adjudication before the said Court at the County Court House in Hot Sulphur Springs, Grand County, Colorado on the 1st day of October, A. D. 1940, at the hour of 10:00 o'clock a. m. or as soon thereafter as the petition can be heard when and where you may appear in manner provided by law should you deem proper.

Witness my hand and the seal of said Court at Hot Sulphur Springs, Grand County, Colorado, this 22nd day of May, A. D. 1940.

(Seal of District Court)

BRICE SHERIFF,
Clerk of the District Court.

Hugh Gilmore, Attorney for Petitioner.

First publication June 13, 1940.
Last publication July 11, 1940.

Reprint from Middle Park Times.

Docket Information

Number of Documents in Docket 286

Documents Dated from 6/1/1926 to 6/22/1964

Docket Compiled: 6/14/2011