
BREAK

File: Dist. 36 - Interstate
Madison River Diversion
Hebgen Lake

1935

PRELIMINARY

REPORT OF PROPOSED REGIONAL PROJECT

FOR

CONSERVATION OF NATURAL RESOURCES IN THE AREAS

ADJACENT TO YELLOWSTONE NATIONAL PARK

AREAS LOCATED WITHIN THE STATES OF

MONTANA IDAHO AND WYOMING

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Livingston, Montana

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GENERAL STATEMENT

The data presented in this report has been made up largely by a study of surveys and reports gathered from many sources. No actual field work has been attempted other than inspection from time to time of practically all of the areas. The sources of information have been: maps, plans and drawings from various engineering offices, government topographic sheets, soil surveys and engineering reports on various projects, stream gagings by the United States Geological Survey, data furnished by the National Park Service, the Biological Survey and the United States Departments of Interior and Agriculture, and various bulletins and periodicals dealing with the subject. The writer, having lived within the area the greater part of his life, has been able to check roughly the available data which is being used.

LOCATION OF THE PROJECT

MONTANA

THE AREA AFFECTED BY THE PROPOSED PROJECT IN MONTANA

1. The irrigable lands along the entire length of the Yellowstone River from Yankee Jim's Canyon, fourteen miles north of the Yellowstone National Park to the junction of the Yellowstone and Missouri rivers in western North Dakota

2. The irrigable lands along the entire length of the Madison River from Hebgen Reservoir to the town of Three Forks, Montana

3. The irrigable lands along the lower part of the Gallatin River adjacent to Bozeman, Belgrade, Manhattan, and Three Forks, Montana

4. A considerable portion of the irrigable lands along the Missouri River from Three Forks, Montana to Fort Benton, Montana, and principally in the area in the Crow Creek Valley, and the area adjacent to Toston and Townsend, Montana

5. The area which comprises 183 square miles located northeast of Helena, Montana, lying along the Missouri River between 46 30' and 47 North Latitude, which will include the proposed Gates of the Mountains National Park and Gates of the Mountains National Game Preserve

6. The southern half of Park County, which will comprise the proposed reservoir site, Park Reservation and Migratory Bird Refuge

7. The area adjacent to the Hebgen Reservoir and including the land up to the Montana-Idaho line, to become a Migratory Bird Refuge

8. A portion of Custer National Forest south and west of Red Lodge, Montana, to be made into a Park Reservation

IDAHO

THE AREA AFFECTED BY THE PROPOSED PROJECT IN IDAHO

1. The irrigable lands along the Henry's Fork of the Snake River and the Snake River proper

2. The area around Henry's Lake and including the land up to the Idaho-Montana state line, to be set aside as a Migratory Bird Refuge

WYOMING

THE AREA AFFECTED BY THE PROPOSED PROJECT IN WYOMING

1. The land in the northwest corner of the state lying within the borders of Shoshone National Forest, the proposed area to take in the entire length of the new road from Red Lodge, Montana, to Cooke City, Montana, and to be made into a Park Reservation

2. The land comprising the watershed of the Yellowstone River and lying adjacent to the southeast corner of Yellowstone National Park, to be made into a Park Reservation

PRINCIPAL FEATURES

THE PRINCIPAL FEATURES OF THE PROPOSED PROJECT ARE:

1. Conservation of a large water supply for

   I. Irrigation
   II. Power and Electrification
   III. Flood Control
   IV. Municipal Water Supply
   V. Transportation and Navigation
   VI. Rehabilitation

2. VII. Enlarging the Yellowstone National Park to increase the national recreation area and to preserve wild life

3. VIII. Creation of Gates of the Mountains National Park

4. IX. Enlarging the National areas set aside for migratory bird refuges and game preserves

GENERAL DESCRIPTION OF PRINCIPAL FEATURES

MONTANA

THE GENERAL FEATURES OF THE PROPOSED PROJECT FOR MONTANA

I. IRRIGATION

1. The construction of a dam, reservoir, power house and control works at the four-mile post south of Livingston, Montana on the Yellowstone River

2. The construction of a diversion works, canal and tunnel from the Yellowstone River to the Missouri River Watershed, thru the mountains between Livingston and Bozeman, Montana, and the construction of diversion canals and works in the Gallatin Valley, extending some of these canals thru the Crow Creek area, crossing the Missouri River above Toston, Montana for irrigation in the Toston-Townsend area; also extending the canal into the Prickly Pear Valley adjacent to Helena, Montana

3. Increasing the storage capacity of Hebgen Reservoir by adding to the height of the present dam

4. The construction of a diversion tunnel thru the mountains from Hebgen Reservoir in Montana to Henry's Lake in Idaho

5. The maintenance of a uniform water level in the following rivers sufficient to enable the present irrigation canals to be filled during the low water season without temporary wing dams being built each year

    a. Yellowstone River
    b. Gallatin River (Lower End)
    c. Madison River
    d. Missouri River

II. POWER AND ELECTRIFICATION

6. The installation of a power house at the dam site and more intensive electrification of the Yellowstone River Valley and adjacent rural districts

7. The use of the present Hebgen Reservoir to supplement the water supply for power purposes along the Missouri River, as well as to store irrigation water for the Madison River Valley and for diversion into Idaho

III. FLOOD CONTROL

8. The control of flood waters in the following rivers with a resulting material decrease in the damage done each year

   a. Yellowstone River
   b. Madison River
   c. Missouri River

IV. MUNICIPAL WATER SUPPLY

9. The improvement of the source of water supply for the cities and towns along the following rivers

   a. Yellowstone River
   b. Gallatin River
   c. Madison River
   d. Missouri River

V. TRANSPORTATION AND NAVIGATION

10. The removal of the Northern Pacific Railway tracks from Livingston to Gardiner, Montana, and the substitution of motor transportation

11. The construction of a modern highway approximately 20 miles in length for motor travel from Livingston to a point approximately opposite Emigrant, Montana, and above the highway level of the reservoir, the road then to connect with the present highway into Yellowstone National Park

12. The construction of a new tunnel and railroad alignment for the Northern Pacific Railway Company between Livingston and Bozeman, Montana, and the utilization of the old road bed for a motor highway

13. As an alternative for No. 12: The electrification of the Northern Pacific Railway over the "Bozeman Hill", such an alternative possibly proving feasible due to the large power supply generated at the proposed dam

14. The diversion of water from the Yellowstone River to the Missouri River to supplement the water for storage in the Fort Peck Reservoir, which will aid in the navigation possibilities in the lower Missouri River

VI. REHABILITATION

15. The provision of an adequate water supply in the rivers for irrigation, municipal and power uses, which will act as a stabilizing factor in the lives of the inhabitants

VII. ENLARGEMENT OF AREA OF YELLOWSTONE NATIONAL PARK

16. The addition of the area of the present Absarokee National Forest to the Yellowstone National Park as a controlled game reservation and recreational area

17. As an alternative for No. 16: The placing of the entire area from the dam site to Gardiner under federal control, and the removal of the National Park headquarters from Mammoth Hot Springs to Livingston, Montana; the utilization of the present Park headquarters as a recreational center

VIII. GATES OF THE MOUNTAINS NATIONAL PARK

18. The formation of the required area on the Missouri River northeast of Helena, Montana, specifically known as the Gates of the Mountains, into a National Park area

IX. MIGRATORY BIRD REFUGES AND GAME PRESERVES

19. The setting aside of the reservoir site on the Yellowstone as a migratory bird refuge

20. The setting aside of the area around Hebgen Reservoir and the Rock Creek Lakes as a migratory bird refuge

21. The formation of the area lying along the Missouri River northeast of Helena, Montana between 46° 30' and 47° North Latitude, into a national migratory bird refuge and game preserve. (This area is adjacent to the proposed Gates of the Mountains National Park.)

IDAHO

THE GENERAL FEATURES OF THE PROPOSED PROJECT FOR IDAHO

I. IRRIGATION

1. The construction of a diversion tunnel from Hebgen Reservoir in Montana thru the mountains to Henry's Lake in Idaho. (See No. 4, page 4, Montana: Irrigation.)

2. The maintenance of a higher, more uniform water level in the Henry's Lake Fork of Snake River for irrigation purposes

3. Addition to the present stream flow in the Snake River proper for irrigation and for storage in the American Falls Reservoir and other reservoirs along the Snake River

II. MUNICIPAL SUPPLY

4. The improvement of the source of water supply in the Henry's Lake Fork and the Snake River proper

III. MIGRATORY BIRD REFUGE

5. The setting aside of the area surrounding Henry's Lake in Idaho

for a migratory bird refuge. This area is adjacent to the area around Hebgen Reservoir in Montana.

WYOMING

THE GENERAL FEATURES OF THE PROPOSED PROJECT FOR WYOMING

I. ENLARGEMENT OF AREA OF YELLOWSTONE NATIONAL PARK

1. The setting aside as a part of Yellowstone National Park, as a controlled game preserve, those parts of Custer National Forest in Montana, and Shoshone National Forest in Wyoming, that will include the newly constructed Red Lodge-Cooke City Highway, and also the area included in the Yellowstone River Watershed southeast of the Park

DETAILED DESCRIPTION OF FEATURES

MONTANA

I. IRRIGATION

1. Dam, reservoir, power house and controlling works

After making a study of the U. S. Geological Survey records on the area and making estimates therefrom, we have the following:

Height of dam	330 feet
Length of dam at top	2,150 feet
Concrete in dam	1,600,000 cubic yards
Storage capacity	3,080,000 acre feet
Length of lake	22 miles
Width at greatest point	4 miles
Area flooded	23,000 acres

The average annual flow of the Yellowstone River at Livingston, Montana, since 1898 is estimated from the U. S. Geological Survey records to be 3,080,000 acre feet annually. From subsequent tables, it will be seen that this water supply will prove ample for the needs of the project.

2. Diversion to Missouri River Watershed

The diversion of water into the Missouri River Watershed to supplement the supply therein would necessitate the construction of a canal approximately seven miles long, and a tunnel approximately eleven miles long, with a capacity of 3,000 second feet.

The purpose of this diversion is to supply water on the Missouri River Watershed for irrigation and power, and to supplement the supply furnished for irrigation in the Madison River Valley and in the Snake River Watershed in Idaho by the present Hebgen Reservoir which is now in use by the Montana Power Company.

3. The Hebgen Reservoir

The run-off area for the Madison River at Hebgen Dam is 911 square miles and the average yearly discharge is 819,000 acre feet. The present Hebgen Dam is 87.5 feet above the original channel, and the present storage capacity is 346,000 acre feet. By increasing the height of the dam 25 feet, the storage capacity may be increased 819,000 acre feet. With this capacity, the project will be able to accomplish the releases of water as outlined in other parts of this report.

4. Diversion to Snake River Watershed

For diversion to the Idaho side into the Snake River drainage basin, a gravity flow tunnel approximately six miles long and with a diameter of about 16 feet will be required. This tunnel will discharge 500,000 acre feet into Henry's Lake during a 125-day period.

The reason for this diversion is to supplement the water supply for the land along the Snake River in Idaho.

5. Irrigation

(a) Yellowstone River Area

(Note: In general the irrigation problems along the Gallatin, Madison, Missouri, Henry's Fork, and Snake rivers are similar to those along the Yellowstone.)

The valley lands of the Yellowstone have partially been reclaimed by gravity canals and by pumping from the river. The use of gravity canals directly from the river is the most economical method of supplying irrigation water to the land. However, during the period of irrigation - June, July, August, and September - the water level in the Yellowstone becomes so low at times that the canals cease to function.

The amount of land covered by gravity diversions on the Yellowstone is at present about 400,000 acres, with a potential acreage of 600,000. During the irrigation season from July 15th to September 1st, the water in the Yellowstone reaches such low stages that the headworks of many of the canals are too high above the water level to take the water from the river. To overcome this, the irrigation companies construct at a cost of many thousands of dollars, temporary diversion dams. These dams are of such a type that they are swept away in the next spring floods. This yearly cost is prohibitive and the temporary dams do not do much to solve the problem. The water level in many of the past years became so low that even such temporary measures were unsuccessful.

It is estimated by operators of these various canal companies that a supplemental supply of 45 days duration, from July 15th on, would solve the problem. From the records of discharge at Intake, Montana, the flow in the stream gradually decreases from about July 15th, until well past the irrigation season, which ends about September 1st. As the natural flow of the stream decreases, supplemental water from the proposed reservoir would be released and the level of the water in the river could be maintained within reasonable limits.

The approximate manner of release would be as follows:

YELLOWSTONE RIVER STORAGE

Release of Water for Period of Minimum Flow

During Irrigation Season

July 15 to September 1 47 Day Period	Second Feet To Maintain Maximum Flow	Total Acre Feet
July 15 to 20	2,000	20,000
" 20 to 25	6,000	60,000
" 25 to 31	6,000	72,000
Aug. 1 to 5	10,000	100,000
" 5 to 10	10,000	100,000
" 10 to 15	14,000	140,000
" 15 to 20	14,000	140,000
" 20 to 25	18,000	180,000
" 25 to 31	18,000	216,000
Total - 47 days		1,028,000 Acre Feet

Storage Table for the Reservoir

Elevation in Feet Above Sea Level	Flooded Area Acres	Acre Feet	Total Acre Feet
4530			
4600	2,840	99,400	99,400
4630	5,034	117,600	217,000
4700	9,820	633,000	850,000
4780	15,404	1,008,960	1,858,960
4800	16,800	322,040	2,181,000
4850	23,100	977,500	3,178,500

In considering the water requirements or distribution from the above table, the year is divided into four parts:

1. Supplemental Irrigation Season - period of minimum flow, from July 15th to September 1st — 47 days

2. Full Irrigation Season - May 1st to September 1st (i.e., for Crow Creek Valley) — 120 days

3. Navigation Season on the Lower Missouri - March 20th to November 15th

   Total - 244 days less 47-day supplemental irrigation season — 197 days

   Or - 244 days less 120-day irrigation season — 124 days

4. Remainder of year to maintain flow for domestic supply, stock and stream life — 121 days

The distribution from the proposed reservoir on the Yellowstone will be approximately as follows:

Estimated annual storage - - - - - - - - - - - - - - - -	3,080,000 acre feet
Dead Storage in reservoir below contour 4630 - - - -	217,000 acre feet
Available Storage - - - -	2,863,000 acre feet

The average annual releases from the reservoir will be approximately as follows:

5. 47-day Supplemental Yellowstone Valley for Irrigation - Average Flow 10,900 second feet	1,028,000 acre feet
6. 197-day Navigation Supply, Lower Missouri via Yellowstone - Average Flow 1,500 second feet	591,000 acre feet
7. 121-day Power Supply at Dam Site - Average Flow 1,000 second feet	242,000 acre feet
8. 120-day Diversion to Missouri River Full Irrigation Supply - Average Flow 3,000 second feet	720,000 acre feet
Total Average Annual Release - - - -	2,581,000 acre feet

From the above it is seen that only by storage above Livingston can there be any real solution to the problem. The site of the reservoir is the only feasible one for capacity, from the standpoint of service to the greatest number of canals (since over 60% of the land now irrigated lies above the confluence of the Big Horn River with the Yellowstone), and also with respect to diversion to the Upper Missouri River Watershed.

It is important to note that, unless this storage project is built, due to the development of irrigation systems on many of the lesser side streams, the summer flow percentage will be greatly lessened. There is no way by which to arrive at the volume of water that will be necessary to meet these requirements, but it will almost certainly be sufficient to lessen the supply to the Yellowstone when it is most needed.

(b) Gallatin River (Lower End)

The irrigable lands adjacent to Bozeman, Montana, which are irrigated by water by diversion from the Gallatin River, would be greatly benefited by the diversion from the Yellowstone. Prior water rights farther up the Gallatin River and its tributaries leave nothing for the farmer lower down except "run back" during the dry season.

Approximately 114,800 acres can thus be supplied with the above supplemental water before it reaches the Missouri River at Three Forks, Montana. (See paragraph "(d) Missouri River" which follows.)

(c) Madison River

There are approximately 30,000 acres of irrigable land needing supplemental water along the Madison River, and the problem of diversion is much the same as along the Yellowstone; that is, the maintaining of a uniform water level. By increasing the storage of Hebgen Reservoir (see No. 3, Montana - Irrigation, page 8), this need of water can be supplied. The distribution of water from the Hebgen Reservoir is approximately as follows:

	Acre Feet	
Present Capacity - Hebgen Reservoir		346,000
Proposed Capacity - Hebgen Reservoir		819,000
47-day Supplemental Supply Madison Valley for Irrigation - Average Flow 2,000 second feet	188,000	
197-day Navigation Supply Lower Missouri - Average Flow 200 second feet	78,000	
121-day Domestic Supply, Stock and Stream Life - Average Flow 100 second feet	24,200	
125-day Diversion to Henry's Lake in Idaho - Average Flow 2,000 second feet	500,000	
Hebgen Reservoir - Total Average Annual Release	790,200	
		790,200
Average Annual Surplus		18,800

(d) Missouri River

The same difficulties with respect to irrigation systems exist along the Missouri River as along the Yellowstone. In this project, it is proposed to maintain to some extent the flow in the Missouri River basin for supplemental irrigation. It is also proposed to irrigate under a system of canals to be constructed, the land in the following table:

Table of Irrigable Lands - Upper Missouri River Basin

Location of Area	Total Acres Under Proposed Canal	Acres Irrigable	Acres Amount
South of East Gallatin River	98,000	60%	58,800
Lower Madison	28,000	50%	14,000
Willow Creek to Three Forks	40,000	50%	20,000
North of East Gallatin River	38,000	60%	22,800
Three Forks Bench Missouri River	22,000	50%	11,000
Crow Creek-Radersburg	100,000	70%	70,000
Toston-Townsend East Side	140,000	60%	84,000
Winston-Beaver Creek	48,000	30%	14,400
Helena-Prickly Pear Valley	180,000	40%	72,600
Total -	694,000		367,000

It is proposed to divert from the Yellowstone 1,008,000 acre feet for this irrigation. (See item No, 8 in the table on page 10.)

II. POWER AND ELECTRIFICATION

6. Power and Electrification of Rural Areas

With an adequate supply of water for irrigation, the areas will be in a better position to support rural electrification. The opportunities for power generation on the proposed Yellowstone dam will be confined to a minimum head of 100 feet and a minimum release of 1,000 second feet for the 121-day period, with the output rated at 10,000 H. P. The potential annual average power output is estimated at over 200,000,000 K. W. H. by taking advantage of the 47 and 197-day periods when quantities of water are released under varying heads. The minimum release of 1,000 second feet for the 121-day period is in excess of the minimum flow in the Yellowstone at Livingston.

7. Montana Power Company - Hebgen Reservoir

The Montana Power Company has at the present time in Hebgen Reservoir a storage capacity of 346,000 acre feet. This is used mainly as a supplemental and standby supply for the power station at Hauser Lake Dam on the Missouri River near Helena.

From the tables of diversions in this report, it is shown that 1,008,000 acre feet can be diverted into the Missouri from the Yellowstone, and of this, approximately 75% can be used for power generation at Hauser Lake Dam and stations lower down the Missouri River.

The release for the Madison Valley from Hebgen Reservoir is 197,000 acre feet. The total is 819,000 acre feet, almost three times more than the present capacity of Hebgen Reservoir. This amount of water together with a capacity of 3,000 second feet from the Yellowstone should prove of greater benefit to the power company.

III. FLOOD CONTROL

8. Flood Control

(a) Yellowstone River

Conversely with supplementing the supply during periods of minimum flow, the storage reservoir will retard and level off flood flows during high water in the early spring; also, by raising the dam height at Hebgen Reservoir, it will aid in this same respect the control of floods on the Madison and Missouri rivers.

The safe limit of discharge of the Yellowstone River at Livingston is 20,000 second feet and at Intake, Montana, 43,000 second feet. The maximum recorded discharge of the Yellowstone at Corwin Hot Springs in Yankee Jim's Canyon occurred June 17 and 18, 1918, reaching 26,500 second feet. In case of repetition, the proposed reservoir could release the safe maximum flow of 20,000 second feet in the Yellowstone River and store the balance. This balance, 6,500 second feet, for a two-day period as above, would amount to 26,000 acre feet, and would raise the level of the reservoir approximately one foot at maximum pool level.

The estimated damage caused by the 1918 flood along the Yellowstone River is set at $5,000,000. From $800,000 to $1,000,000 of this was suffered by the Northern Pacific Railway. The yearly damage varies from $100,000 to $500,000, all of which will be materially reduced by the storage of water in the upper Yellowstone.

(b) Madison River

The early spring floods along the Madison River could be entirely controlled by the additional storage at Hebgen Reservoir, and would allow for the permanence of wing dam and diversion dam structures by the various canal companies.

(c) Missouri River

The repetition of the disastrous flood which occurred June 7, 1908, could be partially avoided by the enlarged capacity in the Hebgen Reservoir. The sudden rise in temperature, melting the snows that year, caused a flood of 107,000 second feet capacity in the Missouri below Hauser Lake. With the added capacity of Hebgen Reservoir, the above flood would have been greatly reduced, decreasing the extent of the flood damages.

IV. MUNICIPAL WATER SUPPLY

9. Water Supply and Sanitation

Along the (a) Yellowstone, (b) Madison, (c) Missouri, (d) Gallatin, (e) Snake rivers.

The increasing demand for water by growing communities and the recurrence of periods of drought creates the problem of furnishing adequate supplies of water for domestic and industrial uses, and the use of streams for carrying away municipal sewage and industrial wastes presents a serious problem in the field of sanitation and public health.

The water supply for towns along the Yellowstone, Madison, Gallatin, Missouri, and Snake rivers would be of uniform quality and improved considerably by storage in reservoirs. During the period of minimum flow in the summer months, pollution of the streams is not uncommon, and purification, usually by chemical treatment, is used. The quality of water is greatly benefited by storage, and an opportunity for coagulation, precipitation, bleaching, death of disease germs and subsidence of silt and clay is afforded.

Since the reservoirs will have storage greatly in excess of needs, this supply of water will only be incidental to the project as a whole, and it will eliminate some of the excessive pumping costs that are paid by the various towns, as well as the installation of temporary pumping apparatus during periods of minimum flow.

V. TRANSPORTATION AND NAVIGATION

10. Northern Pacific Railway

This line runs from Livingston to Gardiner, paralleling the river for a distance of 54 miles. The increased use of motor transport, the short duration of tourist travel during the summer months, the excess grade to be overcome, and other important reasons, may cause this branch line to be taken up, and a motor bus system installed similar to the present system in the Park. It is estimated that about 26 miles of the present Yellowstone Park Branch of the Northern Pacific Railway will be flooded by the proposed reservoir.

11. Highway - Livingston to Gardiner

The new proposed highway, to replace that part flooded by the reservoir, will join the present road about twelve (12) miles south of Livingston. This highway will carry a grade to reach the top of the dam and then continue along the edge of maximum water level of the reservoir.

12. Railroad and Highway Changes

The most difficult obstacle to be met by transportation systems, both railroad and highway, is the Bozeman Pass, lying in the range of mountains between Bozeman and Livingston. The highest point is twelve miles west of Livingston and is crossed by the highway at an elevation of 6,100 feet, and by a tunnel for the railroad at an elevation of 5,564 feet. It is proposed that the Northern Pacific Railway Company work in conjunction with this project in making a new tunnel in order to eliminate a very steep grade in their main line. This grade starts at Livihgston, and on an average of 1.8% to 2% runs up to the present tunnel, a distance of 12 miles, thence down again to Bozeman.

With the new tunnel, approximately at an elevation of 4,650 , this grade would be reduced to 0.6% for a length of seven miles on both sides of the Bozeman Hill. The greater ease in construction for the combination rail and water tunnels will decrease in proportion the cost of the work.

The present railroad alignment could be used for a motor highway, the present railroad tunnel eliminating the "Bozeman Hill", that portion of the road which winds over the apex of the hill. This will also lessen the travel risks during the winter months, when, due to ice and snow, motor travel proves very hazardous.

13. Alternative for No. 12

Since electrical power will be generated so close to this part of the Northern Pacific Railway, it is suggested that the railway company investigate the possibilities of electrification over the "Bozeman Hill" on their present trackage.

14. Aid to Navigation on the Lower Missouri
(In Conjunction with the Fort Peck Dam)

It is estimated that from 40% to 60% of the water used during the 47-day irrigation season mentioned heretofore, will be "return flow" back into the streams.

Practically all of the release during the 197-day navigation period will be used by the lower Missouri. This water will aid in maintaining a minimum flow of 30,000 cubic feet per second at Yankton, South Dakota during the navigation season from March 20th to November 15th.

The following table gives approximately the amount of this flow during the navigation season, which may be put to beneficial use for that purpose.

Period (Days)	Source	Second Feet Average	Percent Return Flow	Amount Second Feet	Estimated Acre Feet Return Flow
47	Yellowstone	10,900	80%	8,720	819,680
168	"(To Missouri Basin)	3,000	75%	2,250	756,000
47	Hebgen Reservoir	2,000	60%	1,200	112,800
197	Yellowstone	1,200	100%	1,200	472,800
197	Hebgen Reservoir	200	100%	200	78,800
	Total Flow - Missouri River Navigation Season				2,240,080
	Average Flow in Second Feet to Missouri River During Navigation Season				5,700

When the mean annual discharge of the Missouri River at the Fort Peck Dam is given at 8,253,000 acre feet, it will be seen that the above amounts to more than 25% of this average annual flow of the Missouri.

It is also seen that the bulk of this water comes during the 47-day period, such period being at the time when all the rivers are at their minimum flow. This part of the project, the aid to navigation, is one of the benefits derived, and, from the magnitude, it becomes an important factor.

VI. REHABILITATION

15. Rehabilitation of Areas

Water conservation is a national responsibility, and water is the first and most important of our national resources. Without an adequate supply of water, entire communities can be affected, as is easily shown by the drought of last year (1934). Without an adequate water supply it is doubtful whether great areas can survive a recurrence of similar droughts. With the assurance of uniform crop productions each year, the agricultural areas outlined in this report will become more permanent in character.

With a better chance for electrification of the rural communities, the standard of living of many people will be affected. The rehabilitation of many farmers affected by drought conditions, and the withdrawal of many areas where living is but a mere existence, can be in a measure made possible for many by this project.

The support of this project would lead to substantial gains in the nation's wealth and in the broader distribution of human welfare, a policy at which our national government aims.

VII. ENLARGEMENT OF AREA OF YELLOWSTONE NATIONAL PARK

16. In keeping with the present national plan to set aside popular recreational areas, none offer such an ideal location as those areas shown on the drawings. Those areas, besides having characteristics ideal for national parks and recreational grounds, are also ideally situated to help solve the problem of conservation of wild life.

Since the areas affected are part of the project, and in order to accomplish at this time something that will ultimately come, it is now proposed to set aside for the enlargement of Yellowstone Park the following areas, 95% of which are in National Forest areas. These areas are described as follows:

TABLE OF AREAS - YELLOWSTONE PARK ENLARGEMENT

Area north of the Park in Montana	607	square	miles
Area in Montana east of the Park and south of Red Lodge	338	"	"
Area in Wyoming east of the Park	679	"	"
Area in Wyoming south of the Park	331	"	"
Total	1,955	square	miles
Present area of Yellowstone Park	3,500	square	miles
Grand Total	5,455	square	miles

17. Alternative for No. 16

The entire area from the dam site south to the Yellowstone Park boundary is to be a national park area. (The State of Montana, however, is to have control over the water stored annually in the reservoir.) After weighing carefully the recreational and wild game possibilities against the commercial possibilities of such an area, the advantages will most certainly be in the former's favor.

VIII. GATES OF THE MOUNTAINS NATIONAL PARK

18. "Gates of the Rocky Mountains" is the name given in 1805 by Captain Meriwether Lewis of the Lewis and Clark Expedition to a small stretch of the Missouri River, which, due to the singular appearance of the surrounding areas is one of scenic beauty. This area is about 19 miles northeast of Helena, Montana, and is comprised of about 15 square miles.

It is proposed that this area, being a part of this entire project, and having the natural characteristics necessary to make it suitable for recreation, become a national park area, and bear the name of "Gates of the Mountains National Park".

IX. MIGRATORY BIRD REFUGES AND GAME PRESERVES

19. It is proposed to set aside the reservoir site on the Yellowstone as a migratory bird refuge.

20. It is proposed to set aside the area adjacent to and surrounding the Hebgen Reservoir as a migratory water fowl refuge. This area would in-

clude the following lakes in Montana along Rock Creek: Lower Red Rock, Upper Red Rock, Elk, Hidden, Cliff, Wade and Swan lakes. In Idaho the area would include Henry's Lake. Such small areas as are now set aside and would come within the scope of this project would be absorbed.

21. It is proposed to set aside the area lying along the Missouri River northeast of Helena, Montana between 46 30' and 47 North Latitude, as a national migratory bird refuge and game preserve. This area is adjacent to the proposed Gates of the Mountains National Park.

The various rivers named in this report are so situated that they are used by countless fowl as a flyway each fall. From a study of maps showing mountain ranges, these areas prove to be natural refuges before the flights pass over into lower altitudes on the Idaho side. The fact that they are adjacent to Yellowstone Park and to the proposed Gates of the Mountains National Park will be an added incentive for the creation of these bird sanctuaries. During the season of 1934 it became apparent that the nation's supply of ducks and geese will need areas at low altitudes where they may be allowed to increase, and where they may be allowed to find unmolested feeding grounds on their flights. It is to be noted that the areas proposed offer the only natural flyway in a belt approximately 600 miles wide, and are located in line with present bird sanctuaries. The following table indicates the amounts of these proposed areas:

TABLE OF AREAS FOR MIGRATORY BIRD REFUGES AND GAME PRESERVES

Adjacent to Yellowstone Park

Montana -	Reservoir Site, Yellowstone River	70	square miles
	Hebgen Reservoir - Rock Creek Lakes	496	" "
Idaho -	Henry's Lake Area	120	" "
	Total	686	square miles

Adjacent to the Proposed

Gates of the Mountains National Park

Montana -	Area containing Lakes Sewall, Helena, Hauser, and Holter	130	square miles
	Grand Total	816	square miles

IDAHO

I. IRRIGATION

1. The construction of a gravity flow tunnel from the Madison River watershed through the mountains to the Snake River watershed is proposed. This tunnel will divert 500,000 acre feet of water which may be used along the Henry's Fork of the Snake River and the Snake River proper.

2. The maintenance of a higher water level in the Henry's Fork of the Snake River during the period of low flow will materially aid the small canal diversions to the land. The problem is similar to that along the Yellowstone River.

3. There are approximately 600,000 acres of land adjacent to the rivers mentioned and under the American Falls Reclamation project. The American Falls Reservoir with a storage of 1,700,000 acre feet and other diversions and storage works will be considerably augmented by this addition of 500,000 acre feet.

II. MUNICIPAL SUPPLY

4. The general improvement of domestic water supply will be accomplished from the rivers as the flow is kept uniform during the dry season.

III. MIGRATORY BIRD REFUGE

5. It is proposed to set aside the area of Henry's Lake and the adjacent land up to the Idaho-Montana State Line. This area, in conjunction with that in Montana around Hebgen Reservoir, will greatly aid in preserving the wild water fowl.

WYOMING

I. ENLARGEMENT OF YELLOWSTONE NATIONAL PARK

1. A new entrance to Yellowstone Park will be formally opened during the summer of 1935. This entrance is a new road built from Red Lodge to Cooke City, Montana, and thence into the Park. The main portion of the road rises from 6,000 feet elevation a few miles from Red Lodge to 11,000 feet above sea level. This part of the highwat for over 60 miles winds through some of the most rugged mountainous scenery. The entire area abounds in small lakes and streams, the character of the country in general being very similar to Yellowstone Park. On account of this, and since it borders on the Park, it is proposed to set aside a considerable portion of the National Forest areas in Montana and Wyoming for a part of the Park. The area south of the Park and located within the Yellowstone River drainage basin offers the same general characteristics and is included in the proposed areas.

TABLE OF IRRIGABLE AREAS

AREA	WATER	TOTAL ACRES	IRRIGABLE %	IRRIGABLE AMOUNT	ACRE FEET REQUIRED	ACRE FEET DELIVERED	% OF LOSS IN CANALS	DIVERSION ACRE FEET
I.	Supplemental Supply - South of East Gallatin River	98,000	60%	58,800	1.5	88,200	40%	123,480
II.	Supplemental Supply - Lower Madison	28,000	50%	14,000	1.5	21,000	40%	29,400
III.	Supplemental Supply - Willow Creek	40,000	50%	20,000	1.5	30,000	40%	42,000
IV.	Supplemental Supply - North of East Gallatin River	38,000	60%	22,800	1.5	34,200	40%	47,880
V.	Full Supply - Three Forks Bench - Missouri River	22,000	50%	11,000	2.0	22,000	40%	30,800
VI.	Full Supply - Crow Creek - Radersburg District	100,000	70%	70,000	2.5	175,000	40%	245,000
VII.	Supplemental Supply - Toston - Townsend	140,000	40%	56,000	2.0	112,000	40%	156,800
VIII.	Supplemental Supply - Winston - Beaver Creek	48,000	30%	14,400	2.0	28,800	40%	40,320
IX.	Supplemental Supply Helena - Prickly Pear Valley	180,000	40%	72,000	2.0	144,000	40%	201,600
	TOTALS	694,000		329,000		655,200		917,280
A.	Supplemental Supply -Madison Valley - Hebgen Reservoir	50,000		30,000	1.5	45,000	20%	54,000
B.	Supplemental Supply -Yellow-stone Valley	600,000		400,000	1.5	600,000	20%	720,000
C.	Supplemental Supply -Idaho Diversion from Hebgen Reservoir	600,000		200,000		500,000		500,000
	TOTALS	1,250,000		630,000		1,145,000		1,395,000
	GRAND TOTALS	1,944,000		959,000		1,800,200		2,191,280

January 8, 1936

Hon. D. WORTH CLARK,
The House of Representatives,
Washington, D. C.

My dear Mr. Clark:

I am enclosing herewith copy of a letter addressed to Hon. Elwood Mead, U. S. Commissioner of Reclamation, under date of December 13, 1935, with reference to the construction of the so-called "Teton Basin reservoir," in Teton County, Idaho, to store something like 50,000 acre feet of water to relieve the shortage existing in Teton County and a small acreage just over the line in Wyoming, included in the Teton Basin area.

As you know, the situation in Teton County is a very distressing one and became so acute last season that the State was forced to send the militia into that district to enforce the law with reference to the distribution and use of water.

I sincerely trust that you will lend your efforts toward the construction of this reservoir at the earliest possible date, and you may be assured that the water users of the Upper Snake River Valley will appreciate anything you may be able to do to further their interests.

Very truly yours,

Commissioner of Reclamation

RWF/mt
Enc.

3-e misc

January 8, 1935

Hon. J. P. POPE,
The United States Senate,
Washington, D. C.

My dear Senator Pope:

I am enclosing herewith copy of a letter addressed to Hon. Elwood Mead, U. S. Commissioner of Reclamation, under date of December 13, 1935, with reference to the construction of the so-called "Teton Basin reservoir," in Teton County, Idaho, to store something like 50,000 acre feet of water to relieve the shortage existing in Teton County and a small acreage just over the line in Wyoming, included in the Teton Basin area.

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Very truly yours,

Commissioner of Reclamation

RWF/mt
Enc.

36-C misc

January 8, 1935

Hon. COMPTON I. WHITE,
The House of Representatives,
Washington, D. C.

My dear Mr. Congressman:

I am enclosing herewith copy of a letter addressed to Hon. Elwood Mead, U. S. Commissioner of Reclamation, under date of December 13, 1935, with reference to the construction of the so-called "Teton Basin reservoir," in Teton County, Idaho, to store something like 50,000 acre feet of water to relieve the shortage existing in Teton County and a small acreage just over the line in Wyoming, included in the Teton Basin area.

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Very truly yours,

Commissioner of Reclamation

RWF/mt
Enc.

February 17, 1938

Mr. Charles E. Poole
Attorney at Law
Rexburg, Idaho

Dear Charlie:

Within the last few days I have received a copy of a Resolution prepared by a committee of the North Fork Water Users Protective Association, etc., urging that the contract which has been submitted by the government be not signed until further plans are made for the building of dams on Fall River and also on the Teton River. I want to tell you the story of this whole situation.

When the three million odd dollars were made available two years ago the purpose of the appropriation was, of course, to put men to work immediately. Consequently, no allocations were made out of this fund except for projects which had already been surveyed and were ready for immediate construction. As you know, at that time it was thought that a site had been found on the North Fork and that construction could be begun immediately. Dr. Elwood Mead went before the PWA and reported that he was ready to proceed at once with this construction. He thought he was; and as a result, was allocated four million dollars. Immediately after this allocation the proposed site appeared to be very faulty; that is, further drilling disclosed a lava formation which made it extremely dubious whether the proposed dam would hold water. Consequently, new surveys had to be started, and it took over a year to obtain the present location which was finally approved.

In the meantime, the PWA became restless and threatened to withdraw this four million dollars inasmuch as they had plenty of places to use it where construction could be started and men put to work immediately. Dr. Mead fought them off on this until within the last few weeks. Then the PWA began to run short of money and insisted that all allocations, including the four million dollars for which the government had not become obligated, be restored to the PWA for relief and other purposes. Dr. Mead had no choice in the matter, and the four million dollars was taken away. I immediately went to work on the matter in conjunction with Dr. Mead, and a desperate tale was

put up to the PWA. They asked us squarely whether the government contract for the North Fork Dam had been signed, and we, of course, were forced to say that it had not, and the government was not obligated. But we stated that it was almost obligated inasmuch as the site had been approved, much money spent, and we were prepared to go to work just as soon as the contract was signed. Finally, Joseph Andreasen of St. Anthony came to Washington, and we had a long personal conference with Dr. Mead. Now, the PWA (after much pressure was put on them) has agreed to restore two million out of the four million dollars so that work on the dam can be actually started just as soon as the contract is signed, and just as soon as the weather breaks but, the two million was restored on the promise that the contract would be promptly signed and the work proceed at once. They also stated that when the new Four Billion Dollar Appropriation Bill is signed by the President, which will be within a few days, that they would be glad to discuss the restoration of the other two millions; provided, we had projects ready to go.

Now, Dr. Mead feels confident that he will obtain an allocation from the new appropriation of four hundred thousand dollars for surveys in Idaho, and he has promised Mr. Andreasen and myself that he will use a part of this at once to complete surveys on Fall River and on the Teton River. Some work has already been done on these projects and it should not take more than a few months to complete the surveys and endeavor to find a suitable site. We think that the Four Billion Dollars will not be entirely allocated by that time, and, of course, we will have to take a chance on that. But, if these surveys are rushed, and we are able to show in a short time that the projects on the Fall River and on the Teton River are ready to go we can go before the PWA and probably get our two million dollars for North Fork storage restored. Mead seems very fine and wants to work with us in every particular.

Now the whole trouble is, Charlie, that the people who represented us prior to 1932 apparently used no efforts to have surveys made in Idaho so that when funds were available we would have something concrete to present, and some projects which were ready to go. I am not blaming anyone in particular, but may I call your attention to the fact that the reason why Utah, Wyoming, Montana, Oregon and Washington got such large allocations from the original three billion dollars was because they had been far-sighted enough in 1927, 1928, 1929 and 1930 to have their Washington representatives insist upon adequate surveys to take advantage of any moneys that might later be available. As a matter of fact, we had no business getting the original four million dollar allocation, although at that time Mead was sincere in stating that he was ready to go, not knowing that the site then under consideration was inadequate.

-2-

Charles R. Poole February 17, 1938.

Now, Charlie, I think the best thing to do is to sign the present contract, if it seems otherwise adequate, just as soon as possible, as the longer we delay the more impatient the PWA is going to become at allowing the present allocation of two million dollars to stand. Then we will get this four hundred thousand dollar survey money in use right away and we will hope that suitable sites can be approved on Fall River and Teton River before the new Four Billion Dollars is gone.

I hope that you will call your committee together and read this letter to them as both Mr. Andreason and myself have been working hard on this matter during the last few days, and I have had several conferences with Mead and others during the last few weeks.

By the way, Dr. Mead assured Andreason and myself yesterday that if out of this survey money we can find satisfactory sites on Fall River and on the Teton River that his department will be very much in favor of trying to obtain a restoration of our two million dollars and use as much of it as necessary for the construction of reservoirs on these sites.

Now, Charlie, as much information has been spread about this project that I would appreciate it very much if you would not only read this letter at your meeting, but if you will see to it that it gets published in all of the weekly newspapers in Teton, Fremont and Madison counties. It might be a good idea also to send it to the Post-Register at Idaho Falls. For that purpose I am enclosing several copies of this letter.

Please keep me advised.

Very Sincerely Yours,

D. WORTH CLARK

DWC:le
Encls.

36 c misc

March 28, 1935

Hon. D. WORTH CLARK,
The House of Representatives,
Washington, D. C.

Dear Mr. Clark:

A considerable doubt and uneasiness exists among the water users of the Upper Snake River with reference to the withdrawal of two million dollars from the four million dollar appropriation made some two years ago for storage in that section. Some contend that the fund was only withdrawn temporarily or loaned to the Department until such time as it would be necessary for the construction of other storage works, while others believe that it has been irretrievably lost.

I assume, of course, that you have been contacted with reference to this matter from various sources, and particularly from the Idaho Falls Chamber of Commerce. I would, however, personally greatly appreciate any information you may have or would be able to secure with reference to this matter.

Trusting that all is well with you, and that you are enjoying the work, I am, with kindest personal regards,

Very truly yours,

Commissioner of Reclamation

RWF/mt

D. WORTH CLARK
2D IDAHO DISTRICT

COMMITTEE:
BANKING AND CURRENCY

LU LU SHANK
SECRETARY

Congress of the United States
House of Representatives
Washington, D. C.

April 7, 1935

Mr. R. W. Faris
Commissioner of Reclamation
Boise, Idaho

Dear Mr. Faris:

In connection with your letter of March 28th I think I can best answer it by enclosing a copy of a letter which I wrote some time ago to Mr. Poole. I think without question we can get the two million dollars back if we can find a place to spend it in the reasonably near future in connection with North Fork Storage.

I understand the government has a crew on the Teton again, and there is likelihood of a site being approved.

Please call on me for any further information I can supply.

Sincerely yours,

D. WORTH CLARK

CLASS OF SERVICE DESIRED

DOMESTIC		FOREIGN	
TELEGRAM	X	FULL RATE CABLE	
DAY LETTER		DEFERRED CABLE	
NIGHT MESSAGE		NIGHT CABLE LETTER	
NIGHT LETTER		WEEK-END CABLE LETTER	
SHIP RADIOGRAM		RADIOGRAM	

Patrons should check class of service desired, otherwise message will be transmitted as a full-rate communication

COPY

POSTAL TELEGRAPH—CABLE CO.

TELEGRAM

Gen

AUGUST 2, 1935

HON. J. S. JAMES
STATE ENGINEER
HELENA, MONTANA

PLEASE WIRE HIGH WATER ELEVATION LAKE HEBGEN IF AVAILABLE STOP

BEST REGARDS

T R. W. FARIS
Commissioner of Reclamation

Charge: State Dept. Reclamation

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

1201-S

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable sign above or preceding the address.

WESTERN UNION

(02)

R. B. WHITE, PRESIDENT
NEWCOMB CARLTON, CHAIRMAN OF THE BOARD
J. C. WILLEVER, FIRST VICE-PRESIDENT

SIGNS
DL = Day Letter
NM = Night Message
NL = Night Letter
LC = Deferred Cable
NLT = Cable Night Letter
Ship Radiogram

The filing time shown in the date line on telegrams and day letters is Standard Time at point of origin. Time of receipt is Standard Time at point of destination.

Received at 919 Main Street, Boise, Idaho Always Open

1935 AUG 2 PM 4 02

MINUTES IN TRANSIT	
FULL-RATE	DAY LETTER

KHA357 9=HELENA MONT 2 349P

F W FARIS=

COMMISSIONER OF RECLAMATION BOISE IDA=

SPILLWAY CREST LAKE HEBGEN SIX THOUSAND FIVE THREE SIX=

J S JAMES STATE ENGINEER.

CJ36.

THERE IS NO DEPENDABLE SUBSTITUTE FOR WESTERN UNION TIME

3 b e Interstate

August 13, 1935

Mr. J. S. JAMES,
State Engineer,
Helena, Montana

Dear Mr. James:

We are again confronted with an acute water shortage in the Upper Snake River area of this State, and in our search for supplementary and additional water our eyes turn longingly to the apparently surplus supply from your good State, with particular reference to the Madison River and Hebgen Lake.

It is our understanding that the Hebgen Lake or reservoir is owned by the Montana Power Company, which has no present use for the waters impounded in it, and that there is no land in Montana available for irrigation from that source. If our understanding is correct, it has occurred to us that some arrangement might be made with the Montana Power Company to secure and divert a portion of this water into Idaho by means of a tunnel under Targhee Pass, or in that vicinity, which, from a recent casual investigation, appears to be physically possible.

Naturally, we would want an understanding with and the consent of Montana to make such diversion before entering into any negotiations with the Montana Power Company, with reference to which we would greatly appreciate your reaction, together with any information you may have as to the available water supply from that source.

With kindest personal regards, I am

Very truly yours,

Commissioner of Reclamation

RWF/mt

1217-A

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

CHECK
ACCT'G INFMN.
TIME FILED

Send the following message, subject to the terms on back hereof, which are hereby agreed to

1935 AUG 14 PM 2 14

HON C BEN ROSS

GOVERNOR STATE OF IDAHO BOISE IDAHO

BUREAU OF RECLAMATION JUST WIRED H A PARKER IN CHARGE OF ASHTON OFFICE TO SUPPLY YOU WITH ALL AVAILABLE INFORMATION ON THE TETON RIVER DAM STOP THIS SITE LOOKS GOOD BUT NOT YET DEFINITELY APPROVED BY BUREAU STOP SUGGEST YOU PREPARE APPLICATION FOR FUNDS WITH AID OF PWA DIRECTOR IN IDAHO AND FORWARD IT TO WASHINGTON QUICKLY STOP I WILL CONTACT PWA OFFICIALS HERE TOMORROW AND WIRE FURTHER

D WORTH CLARK M C

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.

63

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.

2500.00
1000.00

COPY OF
WESTERN UNION TELEGRAM

COPY

GOVT DL EXTRA DENVER COLO AUG 16 PM 4

C BEN ROSS
GOVERNOR STATE OF IDAHO BOISE IDAHO

RETEL TETONIA RESERVOIR STOP PRELIMINARY PLANS AND ESTIMATE COMPLETED TODAY ON TETONIA RESERVOIR SHOW COST OF ONE MILLION FIFTY THOUSAND DOLLARS FOR CAPACITY FIFTY THOUSAND ACRE FEET STOP REPAYMENT CONTRACT WITH MADISON FREMONT DISTRICT COVERING ISLAND PARK RESERVOIR PROVIDES FOR CONSTRUCTION OF TETONIA RESERVOIR IF DISTRICT DESIRES AND FUNDS AVAILABLE STOP DETAILED PLANS FOR TETONIA RESERVOIR WILL BE DEVELOPED WHEN DISTRICT ACTS FAVORABLY

RECLAMATION BUREAU S O HARPER ACTING CHIEF ENGINEER

CLASS OF SERVICE DESIRED

DOMESTIC		FOREIGN	
TELEGRAM		FULL RATE CABLE	
DAY LETTER		DEFERRED CABLE	
NIGHT MESSAGE		NIGHT CABLE LETTER	
NIGHT LETTER		WEEK-END CABLE LETTER	
SHIP RADIOGRAM		RADIOGRAM	

Patrons should check class of service desired, otherwise message will be transmitted as a full-rate communication

COPY

POSTAL TELEGRAPH—CABLE CO.

TELEGRAM

36-C mic

BOISE, IDAHO, AUG. 16, 1935

U. S. BUREAU RECLAMATION
DENVER, COLO.

RETEL CONGRESSMAN CLARK FOURTEENTH ADVISING WASHINGTON OFFICE HAD WIRED PARKER TO FURNISH US PLANS TETON DAM AND WIRE FROM PARKER ADVISING HE HAD REQUESTED YOU FURNISH PLANS AND SUGGESTING WE FURNISH DETAILS AS TO WHAT IS WANTED STOP WE WOULD LIKE ALL PLANS DEVELOPED TO DATE WITH INFORMATION REFERENCE FOUNDATION CONDITIONS AND ALL OTHER AVAILABLE DATA PERTAINING TO TETONIA SITE

C. BEN ROSS
GOVERNOR

DAY LETTER
Charge: Governor's office

1217-A

CLASS OF [redacted] 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

CHECK
ACCT'G INFMN.
TIME FILED

Send the following message, subject to the terms on back hereof, which are hereby agreed to

1935 AUG 16 AM 10 19

ASHTON IDA

GOVERNOR C BEN ROSS

BOISE IDA

HAVE REQUESTED DENVER OFFICE TO FURNISH PLANS TETON DAM SUGGEST

YOU COMMUNICATE WITH THEM GIVING FULL DETAILS OF WHAT YOU DESIRE

H A PARKER BUREAU OF RECLAMATION

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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.

MISSOULIAN LITHO. MISSOULA, MONT.

STATE OF MONTANA

STATE ENGINEER

36 Interstate (Montana)

HELENA, MONTANA
August 17, 1935

Mr. R. W. Faris
Commissioner of Reclamation
Boise, Idaho

Dear Mr. Faris:

I can understand and sympathize with your people for looking longingly at Hebgen Lake. It might be that through some adjustment of water supplies this might be made available to Idaho at some time in the future. However, there are a great many obstacles in the way of this.

1. The Montana Power Company not only uses this storage, but it is very essential in their operation.

2. A special Act of the Montana Legislature would be necessary to divert this water out of the state.

3. I believe the Army Engineers would be inclined to oppose any diversion of water from the Missouri to the Columbia system.

A proposal has been suggested for storing and diverting waters of the Yellowstone into the Missouri system. This with development of other storage on the Upper Missouri would replace most of the use of Hebgen Reservoir in Montana. However, it would still leave the objection of the Army Engineers to diverting waters from the whole Missouri system. It is, however, barely possible that a comprehensive Federal Project might be worked out satisfactorily to all concerned.

With very best regards, I am

Sincerely yours,

J. S. James,
State Engineer

JSJ:td

August 21, 1935

Mr. J. S. JAMES,
State Engineer,
Helena, Montana

Dear Mr. James:

We have your letter of the 17th inst., in reply to our letter with reference to the Hebgen Lake situation, and I assure you that we appreciate the information and suggestions contained in it. We realize that there would be many complications involved in an endeavor to work out such a project and that the chances of accomplishing anything are remote, but we are not overlooking any possibility of relieving our distressed water conditions.

We have taken the matter up with the Montana Power Company in a preliminary and tentative way, and if their reaction is at all favorable, will endeavor to make an appointment with them to go into the matter in detail, in which case "I'll be seein' you."

As you may or may not know, we stole your Water Conservation Board law at the last session of our Legislature insofar as it could be made applicable to our conditions, but to date our Board has not gotten very far. We note that your Board is apparently functioning and would appreciate a little information as to how you operate, particularly with reference to such a project as the Cooney Dam. That is, how you handle the financing of such projects and where you get the money.

If you have any rules and regulations for the Board's operations, we would appreciate a copy, together with any other information you may have conveniently at hand.

Thanking you in advance for the information requested, I am, with kindest personal regards,

Very truly yours,

Commissioner of Reclamation

RWF/mt

36 Interstate (Montana)

September 6, 1935

Mr. B. E. STOUTEMYER, District Counsel
U. S. Bureau of Reclamation,
603 Post Office Building,
Portland, Oregon

Dear Mr. Stoutemyer:

Pursuant to your request, we are sending you, under another cover, four copies of sketch map of the proposed diversion of Madison River, Montana, into North Fork of Snake River, Idaho. We will be pleased to send you any further information you may desire with reference to this project.

With kindest personal regards, I am

Very truly yours,

Commissioner of Reclamation

RWF/mt

36 Interstate (Montana)

September 11, 1935

Hon. C. BEN ROSS,
Governor,
Building

Dear Governor Ross:

The appointment of W. G. Sloan to make investigations to determine the feasibility and cost of the diversion of the waters of Madison River, Montana, into the Snake River drainage area, has been confirmed by the Secretary of the Interior. Sloan is now in the field making surveys, and I would suggest that if you have not already done so, that you get in touch with the Governor of Montana and advise him as to what is going on, so that he and the people of Montana will not feel that we are intruding on them.

Very truly yours,

Commissioner of Reclamation

RWF/mt

3b Interstate (Montana)

September 14, 1935

Sec 36 (1935) letters

STATE WATER CONSERVATION BOARD
Building

Gentlemen:

I attended a meeting of the South Fork Reservoir Committee of the Idaho Falls Chamber of Commerce a few days ago, at which was discussed the matter of securing supplementary and additional water for the Upper Snake River Valley, with particular reference to the possible diversion of Madison River or other new sources of water supply into the Valley, and of the storage on the South Fork of Snake River, for irrigation and flood control.

The Committee expressed itself as being favorably inclined toward an effort to secure new water from any available source, but thought an effort should also be made to secure the construction of a reservoir or reservoirs on the South Fork, with particular reference to flood control.

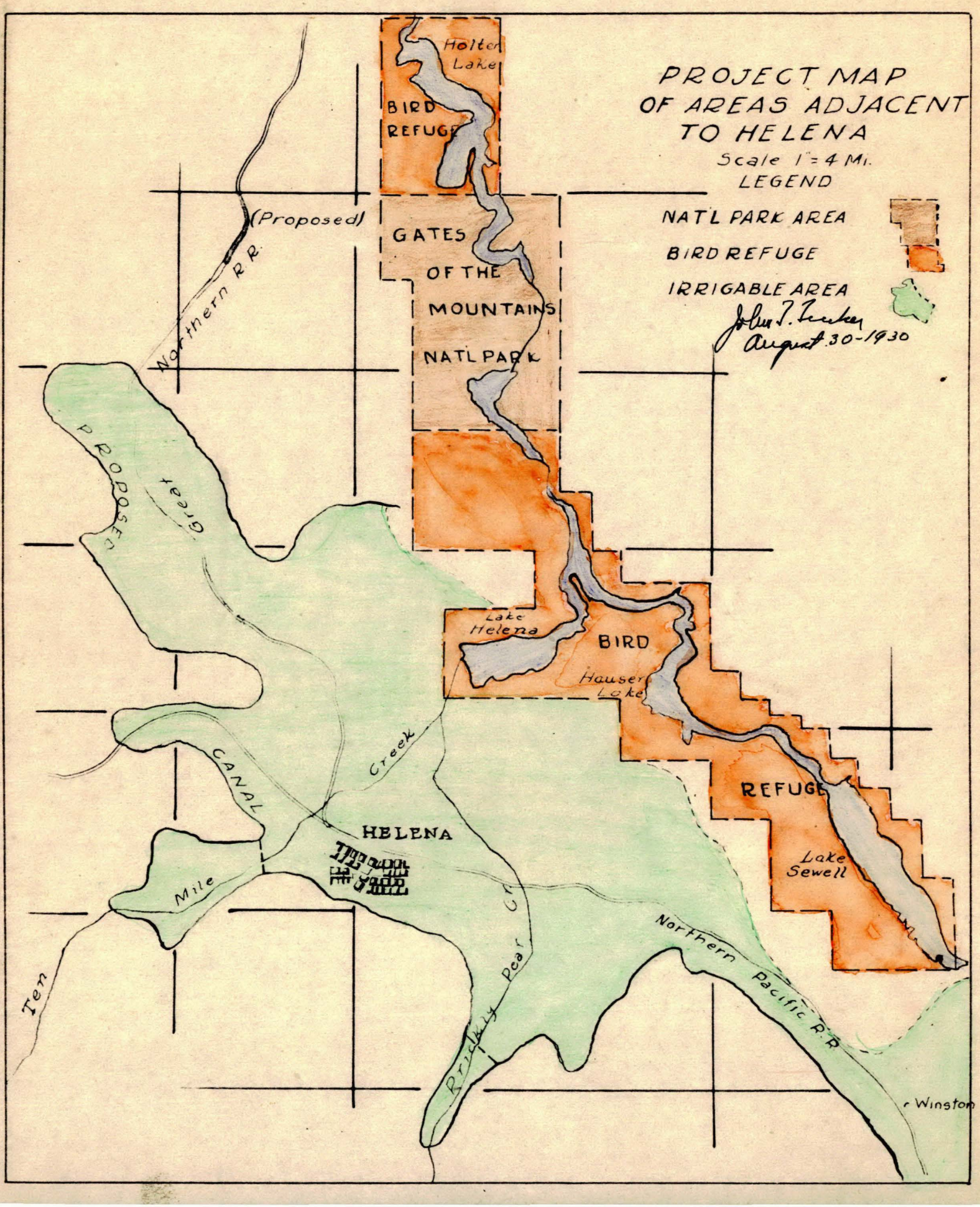
It was explained to the Committee that under the Work Relief Act of Congress, approved April 8, 1935, such works would be under the direction of the U. S. Bureau of Reclamation, and that an application for funds to cover the cost of such construction would have to come from that source.

I am today in receipt of a letter from W. O. Cotton, Chairman of the South Fork Reservoir Committee, in which he asks me to request you to request the U. S. Bureau of Application to make an application to the Public Works Administration, or other Governmental agency, for funds for the construction of such reservoir or reservoirs on the South Fork as may be found feasible and necessary. In that connection he adds that he has been informed by Mr. A. J. Parker, Reclamation engineer at Ashton, that the necessary information for such an application is available only at Denver, and that he has some doubt as to whether the Denver office has the necessary information.

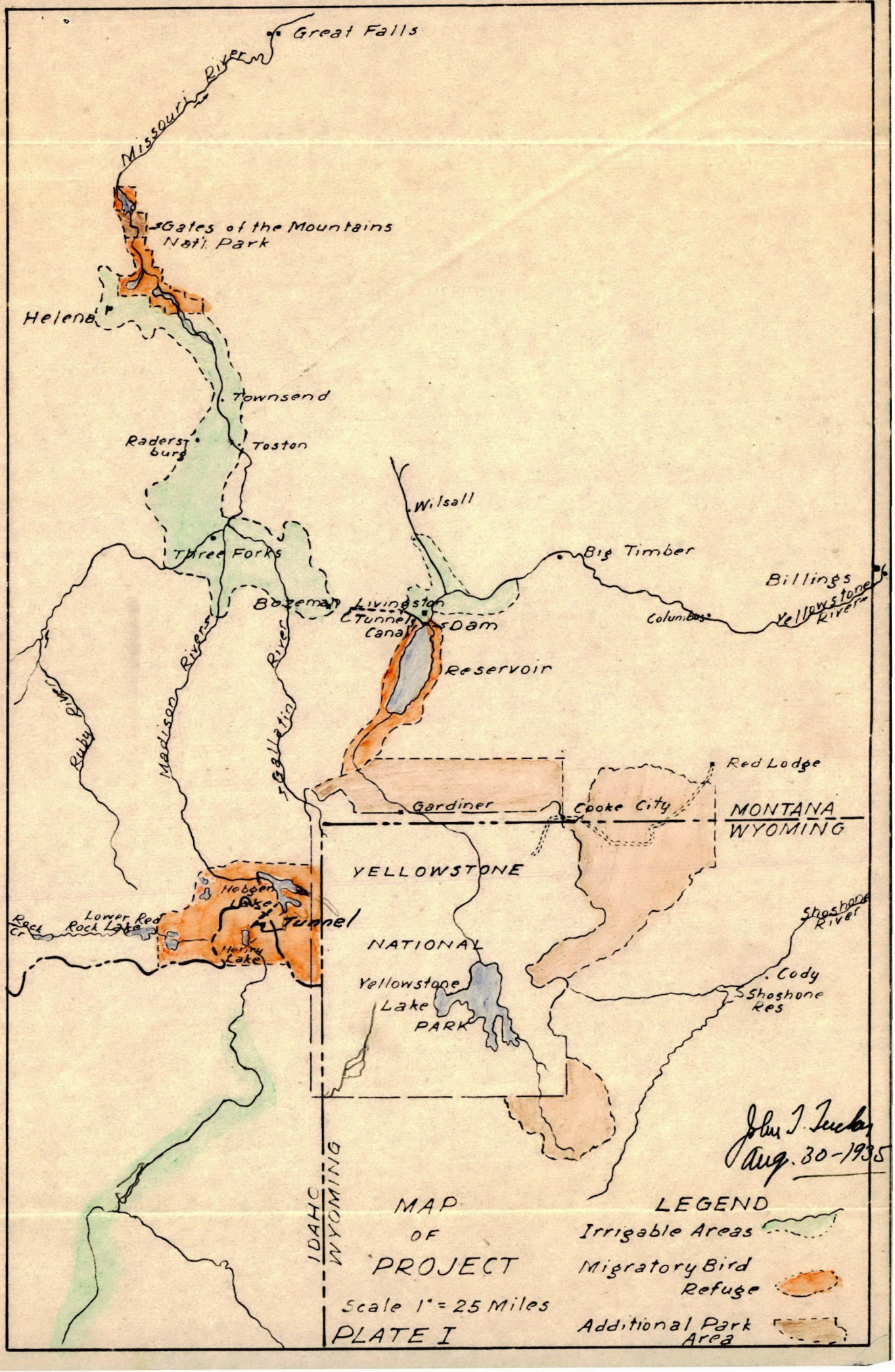
Very truly yours,

Commissioner of Reclamation

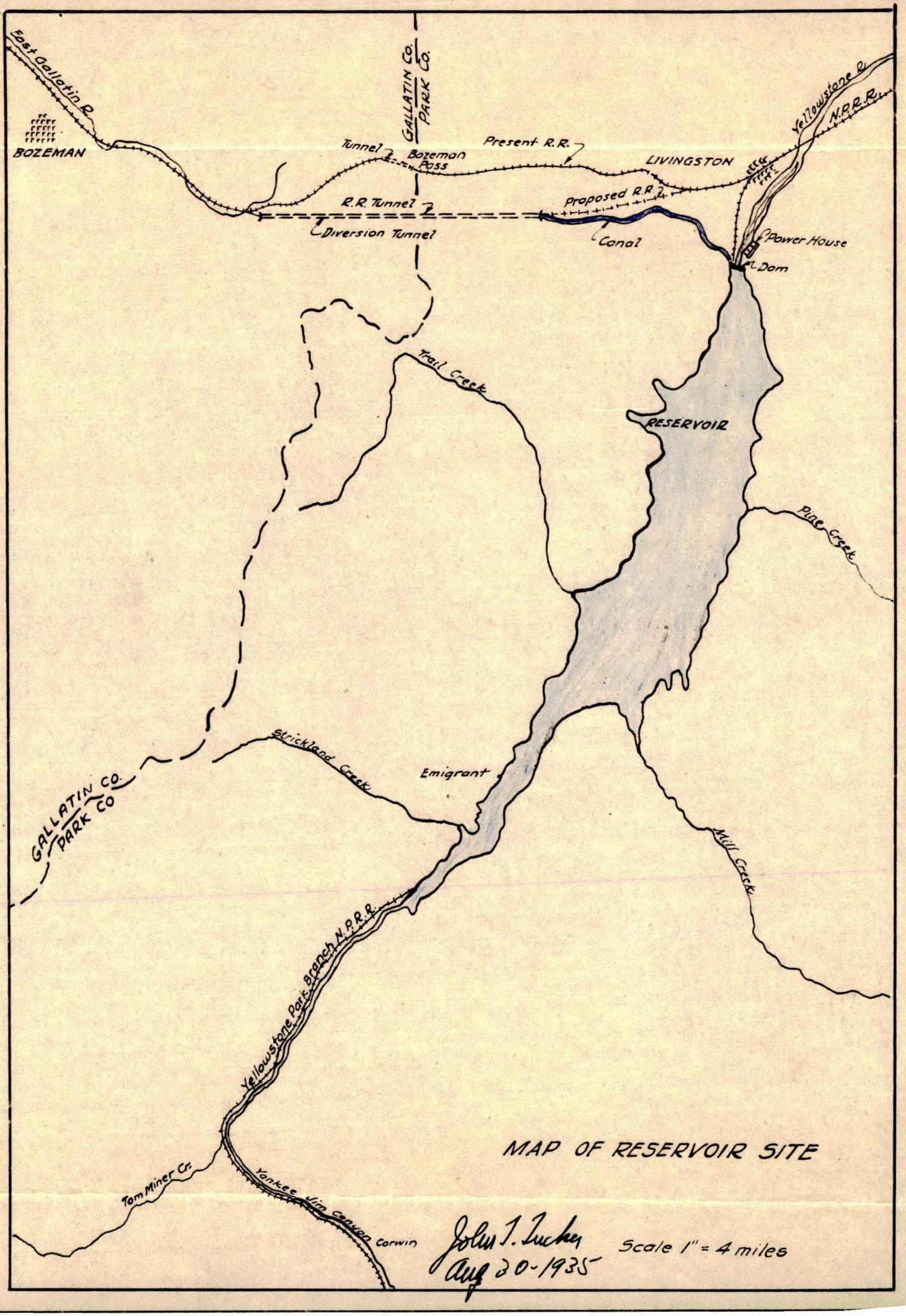
RWF:mt


PROJECT MAP
OF AREAS ADJACENT
TO HELENA
Scale 1" = 4 Mi.
LEGEND
NAT'L PARK AREA
BIRD REFUGE
IRRIGABLE AREA
John T. Tucker
August 30-1930
Holter Lake
BIRD REFUGE
GATES OF THE MOUNTAINS NAT'L PARK
(Proposed)
Northern R.R.
PROPOSED
Great
Lake Helena
BIRD
Hauser Lake
REFUGE
Lake Sewell
CANAL
Creek
HELENA
Mile
Ten
Prickly Pear Cr.
Northern Pacific R.R.
Winston

36 - Interstate
Madison River division


Great Falls
Missouri River
Gates of the Mountains Nat'l Park
Helena
Townsend
Radersburg
Toston
Wilsall
Three Forks
Big Timber
Billings
Yellowstone River
Bozeman
Livingston
Tunnel
Canal
Dam
Columbus
Reservoir
Ruby River
Madison River
Gallatin River
Red Lodge
Gardiner
Cooke City
MONTANA
WYOMING
YELLOWSTONE
NATIONAL
PARK
Hebgen Lake
Tunnel
Lower Red Rock Lake
Rock Cr
Henry Lake
Yellowstone Lake
Shoshone River
Cody
Shoshone Res
IDAHO
WYOMING
MAP
OF
PROJECT
Scale 1" = 25 Miles
PLATE I
LEGEND
Irrigable Areas
Migratory Bird Refuge
Additional Park Area
John T. Tucker
Aug. 30-1935

File:
Wash. 36 - Interstate
Madison River Diversion


East Gallatin R.
BOZEMAN
GALLATIN CO.
PARK CO.
Tunnel
Bozeman Pass
Present R.R.
LIVINGSTON
Yellowstone R.
N.P.R.R.
R.R. Tunnel
proposed R.R.
Diversion Tunnel
Canal
Power House
Dam
Trail Creek
RESERVOIR
Pine Creek
Strickland Creek
Emigrant
GALLATIN CO.
PARK CO
Mill Creek
Yellowstone Park Branch N.P.R.R.
Tom Miner Cr.
Yankee Jim Canyon
Corwin
MAP OF RESERVOIR SITE
John T. Tucker
Aug 30-1935
Scale 1" = 4 miles

Rte 36 - Interstate.
Madison Area Extension

36 - Interstate (Montana)

Gov. Ross

September 25, 1935

MEMORANDUM FOR LETTER FROM GOVERNOR ROSS TO R. F. WALTER, CHIEF ENGINEER, U. S. BUREAU OF RECLAMATION, DENVER, COLORADO

I returned to my office this morning after a conference with the Governor, State Engineer and others interested in Montana and with the officials of the Montana Power Company, with reference to the diversion of water from Madison River, Montana, into Idaho. We found all interests in a receptive frame of mind and feel confident that a satisfactory arrangement can be worked out to bring enough water into Idaho from Montana to relieve the distressing condition in the Upper Snake River Valley, if funds can be provided to cover the expense.

The officials of the Montana Power Company concur in the conclusion reached by Idaho engineers and others who have investigated the situation, that there exists on the Big Hole River, in the vicinity of Apex, Montana, a storage site that will compare favorably with the Hebgen Lake site both as to cost, capacity and availability, and they indicated that they would be favorably inclined toward a proposition to develop storage in that location in exchange for Hebgen Lake.

I understand that Mr. Sloan has about completed his work in the Hebgen Lake vicinity and that he has been able to confirm the understanding heretofore had as to the feasibility of diverting water from that source into Idaho. In order to arrive at a basis of exchange with the Montana Power Company, it will be necessary to have investigated the feasibility and cost of the construction of a reservoir on the Big Hole River, in connection with which I trust that you may be able, in the near future, to designate Mr. Sloan or some other engineer from your organization to make the necessary investigations.

I was greatly surprised and disappointed to find on my desk this morning a copy of your letter of September 20, 1935, to W. H. Tuller, Boise Project Manager, in which you advise him that no work has been done in connection with the promised investigations as to water conditions in the Boise Valley, and that such investigations are being held up by the allotment of funds.

It has been my understanding that the investigations made by Mr. Debler, in 1932, disclosed the feasibility of the construction of a storage dam and the development of power at Twin Springs, but that Mr. Debler's conclusion was that the success of the project would depend upon finding a market for the power to be developed, with reference to which he expressed no opinion or conclusion. The State Commissioner of Reclamation, R. W. Faris, in cooperation with Mr. Tuller, Boise Project Manager, W. E. Welsh, Boise River Watermaster, and others interested, adopted Mr. Debler's conclusions with reference to the construction of the dam and the development of power at Twin Springs, and worked out a preliminary or tentative plan for the utilization of the power, which was embodied in a report entitled "Supplementary Water for Boise Valley, Idaho -- Twin Springs Project, February, 1935," copy of which was mailed to under date of September 6, 1935, from Mr. Faris' office.

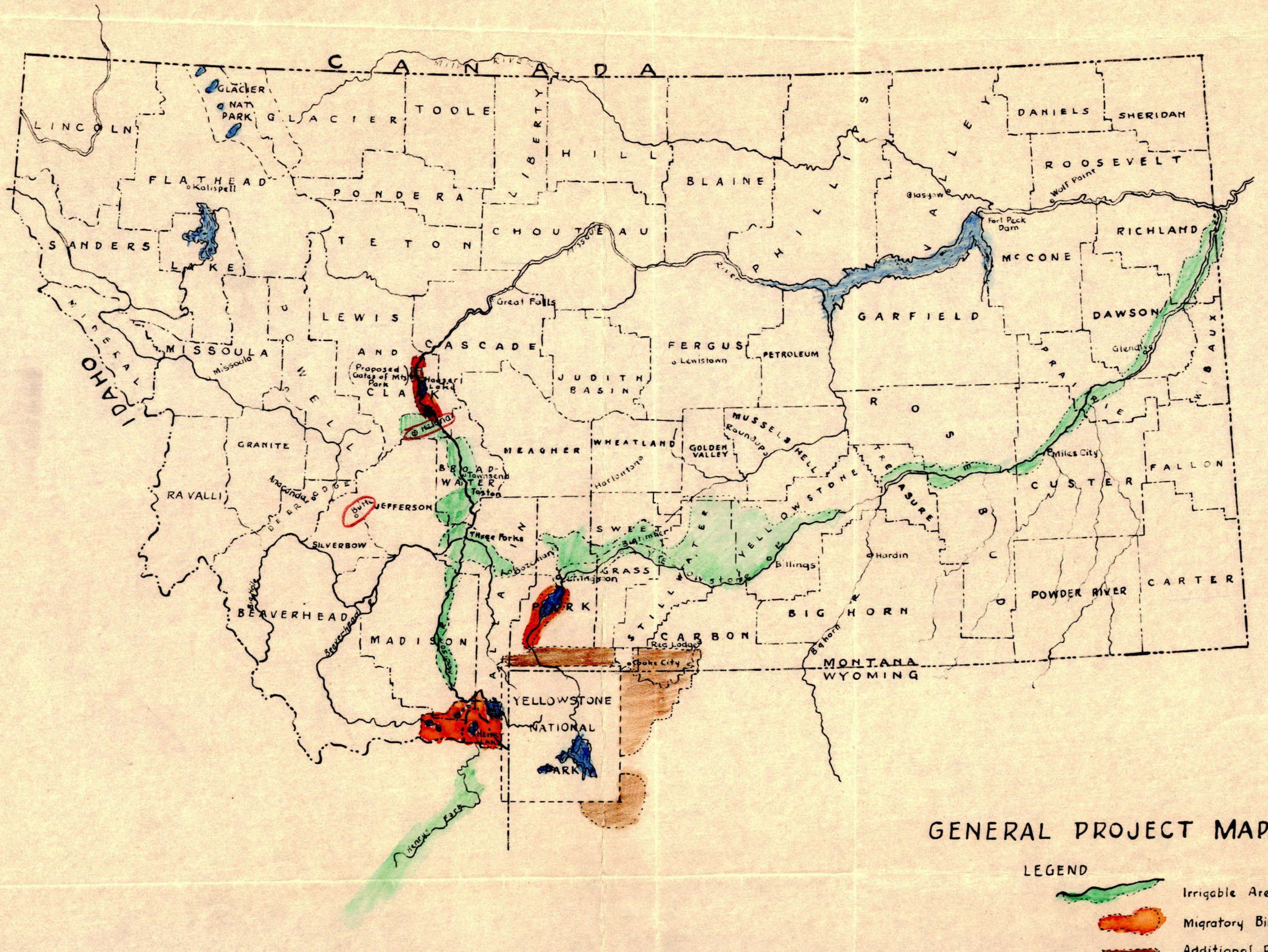
#2

MEMORANDUM -- Hebgen Lake and Twin Springs 9/25/35

I understood from the members of the State Water Conservation Board and the State Planning Board, upon their return from the Portland conference of August 30, 1935, that all that would be necessary at this time would be that you designate Mr. Debler or some other engineer from your organization to confer with local parties and check up on their conclusions as to the utilization and disposal of power, and that no considerable amount of field work would be necessary. If, however, some further field investigations are thought advisable and funds are not available to cover the expense of such investigations, I feel confident that money for that purpose can be supplied by local interests.

As the season is already well advanced and our water situation is acute, I sincerely hope that you can and will make arrangements in the near future to take up these investigations.

With kindest personal regards, I am

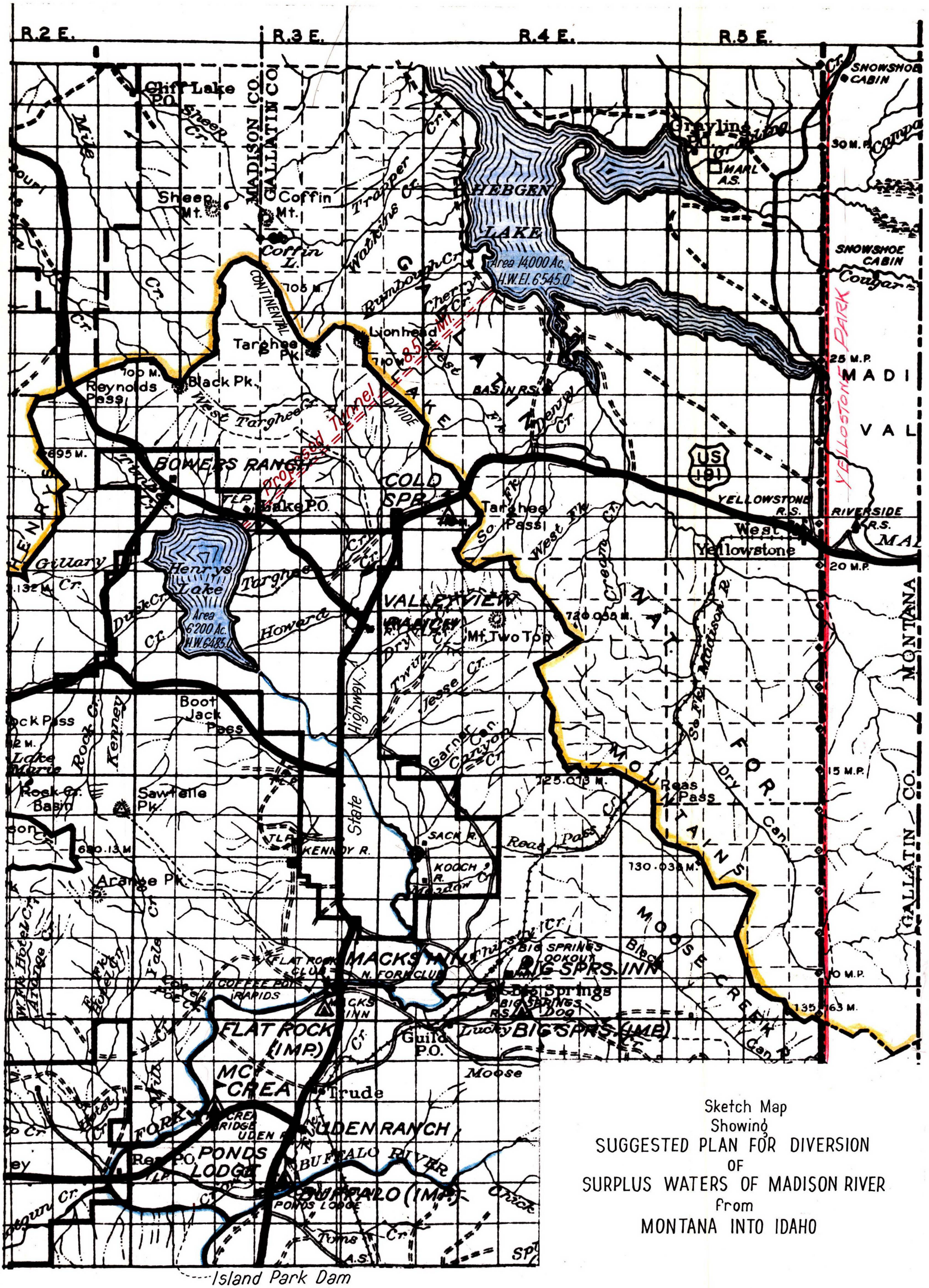


GENERAL PROJECT MAP

LEGEND

- Irrigable Ares
- Migratory Bird Refuge
- Additional Park Areas

Dist. 36 - Interstate
Hefgen Lake


R.2 E.
R.3 E.
R.4 E.
R.5 E.
MADISON CO.
GALLATIN CO.
Cliff Lake P.O.
Sheep Mt.
Coffin Mt.
Coffin L.
Mile
Sheep Cr.
Trapper Cr.
Watkins Cr.
Bunsen Cr.
Cherry Cr.
HEBGEN LAKE
Area 14,000 Ac.
H.W.El. 6545.0
Grayling P.O.
MARL A.S.
SNOWSHOE CABIN
Cougar
30 M.P.
CONTINENTAL DIVIDE
Targhee Pk.
Lionhead
Reynolds Pass
Black Pk.
West Targhee Cr.
Proposed Tunnel
8.5 Mi.
West Fk.
BASIN R.S.
Timber Cr.
25 M.P.
MADI
VAL
YELLOWSTONE PARK
US 191
BOWERS RANCH
COLD SPR.
TLP
Lake P.O.
Henrys Lake
Area 6200 Ac.
H.W.6485.0
Gilluary
Targhee
Howard
Duck Cr.
VALLEYVIEW
Mt. Two Top
Dry Cr.
Twin
Jesse Cr.
Highway
Targhee Pass
Yellowstone
YELLOWSTONE R.S.
RIVERSIDE R.S.
Creamer Cr.
20 M.P.
Madison R.
Boot Jack Pass
Rock Cr.
Kenney
Lake Marie
Garns Cr.
Canyon Cr.
Rock Cr. Basin
Sawtelle Pk.
State
Reas Pass
Dry Cr.
15 M.P.
KENNEDY R.
SACK R.
KOOCH R.
Meadow Cr.
Arange Pk.
Arange Cr.
FLAT ROCK CLUB
N. FORK CLUB
MACKS INN
COFFEE POT RAPIDS
BIG SPRS. INN
BIG SPRINGS LOOKOUT
Big Springs
BIG SPRINGS R.S.
Dog
Lucky
BIG SPRS. (IMP.)
Guild P.O.
Black
Moose Cr.
135.763 M.
10 M.P.
FLAT ROCK (IMP.)
MC CREA
Trude
Moose
FORK
CREA BRIDGE
UDEN RANCH
Rea P.O.
PONDS LODGE
BUFFALO RIVER
BUFFALO (IMP.)
PONDS LODGE
Timms Cr.
A.S.
Island Park Dam
Sketch Map
Showing
SUGGESTED PLAN FOR DIVERSION
OF
SURPLUS WATERS OF MADISON RIVER
From
MONTANA INTO IDAHO

36 - Interstate
Madison R. Diversion

SUPPLEMENTARY WATER UPPER SNAKE RIVER VALLEY

Upper Snake River Valley is in urgent, or, it might be said, desperate need of supplementary water for lands now under irrigation, to the extent of at least 500,000 acre feet. Various plans and schemes have been considered for supplying water to this area, among which is the diversion of Green River from Wyoming, diversion of the waters of Yellowstone Lake, and the diversion of Madison River from Montana into Idaho. Of all the possibilities, the diversion of the Madison River seems the most logical and feasible.

The Montana Power Company has constructed a dam something like 85 feet high on the Madison River about 15 miles downstream from West Yellowstone, forming a reservoir commonly known as Hebgen Lake, having a capacity of about 345,000 acre feet. The high water level of Hebgen Lake is about 60 feet above the high water level of Henrys Lake reservoir in Idaho. It has been proposed to divert the surplus waters of Madison River into Idaho by means of a tunnel of a maximum length of from eight to eight and one-half miles. It is thought that by means of an open cut from the south arm of Hebgen Lake in Montana and up Targhee Creek in Idaho, the length of the tunnel may be reduced to something like six miles. The average annual flow out of Hebgen Lake is between 800,000 and 850,000 acre feet.

Henrys Lake, with a dam about 15 feet high, has a storage capacity of approximately 78,700 acre feet, with a high water area of 6,200 acres. By increasing the height of the dam 10 feet, the storage capacity could be increased to approximately 131,000 acre feet. Any surplus water diverted from Madison River could be stored in Henrys Lake or in Island Park Reservoir now under construction by the U. S. Bureau of Reclamation, or in American Falls Reservoir, or could be applied directly to the lands needing supplementary water. Such diversion would furnish a full and complete solution of the

problem of supplying the much needed supplementary water to the Upper Snake River Valley.

Surveys and investigations are now being made by the U. S. Bureau of Reclamation to determine the feasibility and cost of the diversion of the surplus waters of the Madison River into Idaho. The diversion of flood water from Madison River into Idaho would also be beneficial as flood control on the lower Madison River.

From a recent report, entitled Preliminary Report of Proposed Regional Project for Conservation of Natural Resources in the Areas Adjacent to Yellowstone National Park - Areas Located Within the States of Montana, Idaho and Wyoming, by John T. Tucker, Civil Engineer, Livingston, Montana, dated February, 1935, there is extracted the following data with reference to the diversion of the waters of Madison River into Idaho:

"MONTANA

I. IRRIGATION

2. Diversion to Missouri River Watershed

The diversion of water into the Missouri River Watershed to supplement the supply therein would necessitate the construction of a canal approximately seven miles long, and a tunnel approximately eleven miles long, with a capacity of 3,000 second feet.

The purpose of this diversion is to supply water on the Missouri River Watershed for irrigation and power, and to supplement the supply furnished for irrigation in the Madison River Valley and in the Snake River Watershed in Idaho by the present Hebgen Reservoir which is now in use by the Montana Power Company.

3. The Hebgen Reservoir

The run-off area for the Madison River at Hebgen Dam is 911 square miles and the average yearly discharge is 819,000 acre feet. The present Hebgen Dam is 87,5 feet above the original channel, and the present storage capacity is 346,000 acre feet. By increasing the height of the dam 25 feet, the storage capacity may be increased 819,000 acre feet. With this capacity, the project will be able to

accomplish the releases of water as outlined in other parts of this report.

5. Irrigation

(c) Madison River

There are approximately 30,000 acres of irrigable land needing supplemental water along the Madison River, and the problem of diversion is much the same as along the Yellowstone; that is, the maintaining of a uniform water level. By increasing the storage of Hebgen Reservoir (see No. 3, Montana - Irrigation, page 8), this need of water can be supplied. The distribution of water from the Hebgen Reservoir is approximately as follows:

	Acre Feet	
Present Capacity - Hebgen Reservoir		346,000
Proposed Capacity - Hebgen Reservoir		819,000
47-day Supplemental Supply Madison Valley for Irrigation - Average Flow 2,000 second feet	188,000	
197-day Navigation Supply Lower Missouri - Average Flow 200 second feet	78,000	
121-day Domestic Supply, Stock and Stream Life - Average Flow 100 second feet	24,200	
125-day Diversion to Henry's Lake in Idaho - Average Flow 2,000 second feet	500,000	
Hebgen Reservoir - Total Average Annual Release	790,200	
		790,200
Average Annual Surplus		18,800

II. POWER AND ELECTRIFICATION

7. Montana Power Company - Hebgen Reservoir

The Montana Power Company has at the present time in Hebgen Reservoir a storage capacity of 346,000 acre feet. This is used mainly as a supplemental and standby supply for the power station at Hauser Lake Dam on the Missouri River near Helena.

From the tables of diversions in this report, it is shown that 1,008,000 acre feet can be diverted into the Missouri from the Yellowstone, and of this, approximately 75% can be used for power generation at Hauser Lake Dam and stations lower down the Missouri River.

The release for the Madison Valley from Hebgen Reservoir is 197,000 acre feet. The total is 819,000 acre feet, almost three times more than the present capacity of Hebgen Reservoir. This amount of water together with a capacity of 3,000 second feet from the Yellowstone should prove of greater benefit to the power company.

III. FLOOD CONTROL

8. Flood Control

(b) Madison River

The early spring floods along the Madison River could be entirely controlled by the additional storage at Hebgen Reservoir, and would allow for the permanence of wing dam and diversion dam structures by the various canal companies.

(a) Missouri River

The repetition of the disastrous flood which occurred June 7, 1908, could be partially avoided by the enlarged capacity in the Hebgen Reservoir. The sudden rise in temperature, melting the snows that year, caused a flood of 107,000 second feet capacity in the Missouri below Hauser Lake. With the added capacity of Hebgen Reservoir, the above flood would have been greatly reduced, decreasing the extent of the flood damages."

From the foregoing it would appear that the water supply of the Madison River is sufficient to supply all Montana demands, except those of the Montana Power Company, to divert 500,000 acre feet annually into Idaho, and leave a substantial surplus.

As a substitute for the rights of the Montana Power Company in Hebgen Lake, the proposed diversion of the Yellowstone River into the Missouri River drainage seems feasible and economical.

Of course, any movement looking to the diversion of any of the waters of Madison River into Idaho would have to have the approval and consent of Montana and an agreement or understanding with the Montana Power Company.

Attached hereto is a map showing the proposed plan of diverting Madison River into Idaho.

CLASS OF SERVICE DESIRED

DOMESTIC		FOREIGN	
TELEGRAM		FULL RATE CABLE	
DAY LETTER		DEFERRED CABLE	
NIGHT MESSAGE		NIGHT CABLE LETTER	
NIGHT LETTER		WEEK-END CABLE LETTER	
SHIP RADIOGRAM		RADIOGRAM	

Patrons should check class of service desired, otherwise message will be transmitted as a full-rate communication

COPY

POSTAL TELEGRAPH—CABLE CO.

TELEGRAM

SEPTEMBER 25,1935

UNITED STATES GEOLOGICAL SURVEY,

HELENA, MONTANA

PLEASE WIRE ACRE FEET RUNOFF MADISON RIVER AT WEST YELLOWSTONE YEAR NINETEEN THIRTY-FOUR (STOP) THANKS

R. W. FARIS
Commissioner of Reclamation

36 Interstate (Montana)

THE COMPANY WILL APPRECIATE SUGGESTIONS FROM ITS PATRONS CONCERNING ITS SERVICE

1201-S

CLASS OF SERVICE

This is a full-rate Telegram or Cablegram unless its deferred character is indicated by a suitable sign above or preceding the address.

WESTERN UNION

(49)

R. B. WHITE, PRESIDENT
NEWCOMB CARLTON, CHAIRMAN OF THE BOARD
J. C. WILLEVER, FIRST VICE-PRESIDENT

SIGNS
DL = Day Letter
NM = Night Message
NL = Night Letter
LC = Deferred Cable
NLT = Cable Night Letter
Ship Radiogram

The filing time shown in the date line on telegrams and day letters is Standard Time at point of origin. Time of receipt is Standard Time at point of destination.

Received at 919 Main Street, Boise, Idaho Always Open

1935 SEP 25 AM 11 50

MINUTES IN TRANSIT	
FULL-RATE	DAY LETTER

KHA200 7 GOVT=HELENA MONT 25 1135A

R W FARIS=

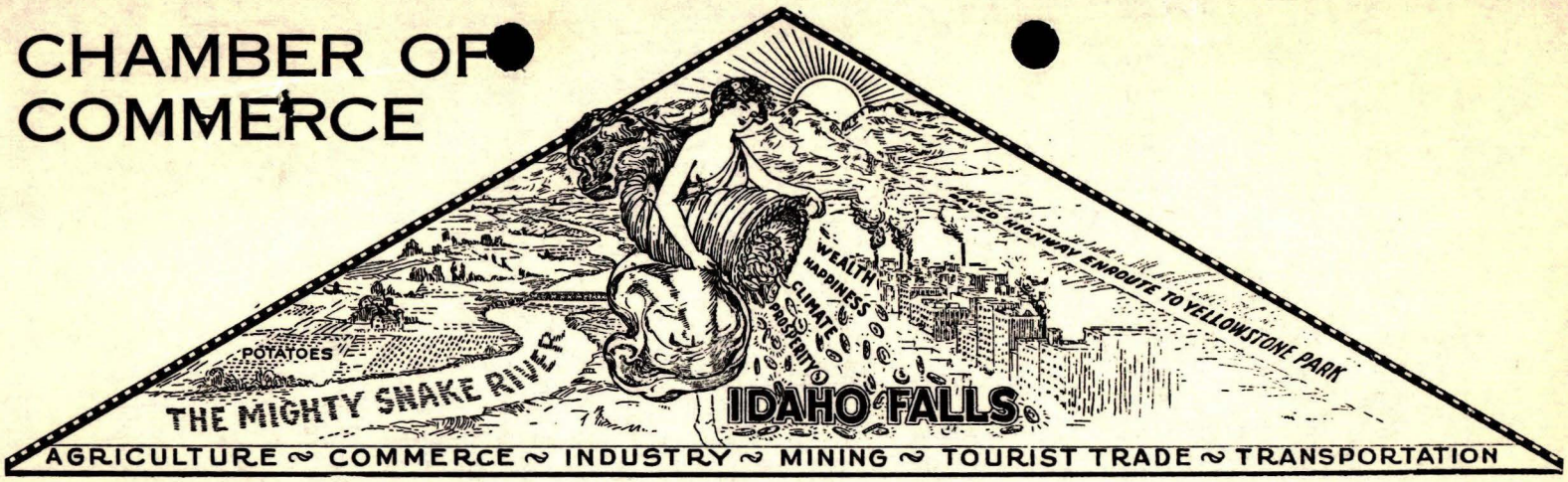
COMMISSIONER OF RECLAMATION BOISE IDA=

MADISON RIVER UNDER DIRECTION OF BOISE OFFICE=

LAMB.

THERE IS NO DEPENDABLE SUBSTITUTE FOR WESTERN UNION TIME

CHAMBER OF COMMERCE



October 9, 1935

Mr. R. W. Faris
Commissioner of Reclamation
Department of Public Works
Boise, Idaho

Dear Mr. Faris:

At a meeting held in Idaho Falls some six weeks ago, it was reported that a survey was now underway to determine the feasibility of bringing water from Hebgen Lake to the Henrys Fork of the Snake River. Several men who were present at that meeting asked me what the result of the survey was. I would appreciate it if you would drop me a note by return mail giving the engineer's findings.

Let me take this opportunity to advise you that the Bonneville County Planning Board has approved the project of putting a dam across Rainey Creek in Swan Valley providing water is available to fill it.

Sincerely yours,

Alyson E. Smith

Alyson E. Smith
Secretary-Manager

AES:MM

5 - Interstate

October 11, 1935

To his Excellency,
The President of the United States,
Franklin D. Roosevelt,
Washington, D. C.

Dear President:

The farmers located on the Bear river in Wyoming, Idaho and Utah are faced with a most serious dilemma on account of the short water supply during the past twelve years. Bear river is a stream which rises in the tops of the Uintah mountains in Utah, flows from Utah into Wyoming, back into a portion of Utah, through a large portion of Wyoming, extends northward into Idaho, turns and again flows nearly south through a portion of Idaho into Utah, and finally flows into Great Salt Lake.

Settlement on the farm lands along this river drainage began about 1850 and the river is now depended upon for irrigating 55,000 acres in Wyoming, 67,000 acres in Idaho and 125,000 acres in Utah. These 247,000 acres have been broughtbto a high state of cultivation, much of them producing specialized crops such as sugar beets, peas, potatoes and fruits. It has been estimated that 32,000 people are directly dependent for a living on the farms which are irrigated from the Bear river system and that as many as 85,000 people are directly, or indirectly, dependent upon the farm income which results from this irrigation agriculture.

The people are of an industrious, home making type, with but one idea, and that is to establish a satisfying home on the land location they have chosen, and now they are confronted with the question as to whether or not they can maintain these farms.

On the boundary line between Idaho and Utah and close to the Bear river drainage is located Bear lake, a structural lake of approximately 100 square miles. To supplement the irrigation and power supply of the Bear river, the drainage of this lake has been dammed and the lake is used as a reservoir. Two diversion canals have been constructed to transfer the water from the regular flow of the river into Bear lake. The capacity of these canals is 4,500 second feet. There is no water wasted in the system. The elevation of Bear lake is approximately 1,700 feet higher than Great Salt Lake and in the Bear river drainage, between

these two lakes, have been builded power plants utilizing 1,100 feet of possible power development. There is also builded on the Bear river, between Bear lake and Great Salt Lake, three reservoirs in connection with the power plants, and these reservoirs have made possible irrigation water supply in the amount of 41,000 acre feet. Water flowing or pumped from Bear lake, in addition to the accretion to Bear river below Bear lake, may be used for power purposes without interfering with the use of this water for irrigation. A pumping plant was installed on Bear lake for the purpose of supplementing the flow in the river and it was intended that this pump should be used only when the supply from the river was insufficient to give the water necessary below the reservoir. The pumping plant has been used during the last two years to supply irrigation water to the lands below, and during the irrigation season all the water in the Bear river has been used to irrigate the lands above the diversion canals, so there has been no contribution from the upper river directly to the irrigation supply. The capital investment in the form of water supply has been drawn on so heavily that all the water has now been taken out of the lake that is economically or physically feasible to remove. It would take 1,600,000 acre feet of water to fill the lake, which has been used as a reservoir, back to its normal high level.

The farmers in the entire Bear river irrigation area of Wyoming, Idaho and Utah are facing a catastrophe unless more water can be provided. With the low level of Bear lake, only a fraction of the water necessary is available for next year's crop production. Good homes, schools, churches, utilities and roads have been builded. The area supports five sugar factories, seven canning factories and a number of large milling plants. Unless the water can be maintained, much of the area will be reduced to submarginal, non-producing lands and a large proportion of the people will be faced with the necessity of hunting new places in which to make homes, or being placed on relief rolls for actual subsistence. Under the present production there is little submarginal land in the area. Canals and diversions have been constructed at a large cost and if only the water supply can be maintained, the section will grow.

The irrigation of these lands has a far reaching effect because the homes and the ranches along Bear river are the nucleus through which the public domain yields grazing to thousands of cattle. If the homes, ranches or farms are forced into abandonment, the economic income from the public domain will immediately be out of balance.

The problem is not without hope. Some study has been made as to the possibility of an increased water supply and the solution to the problem appears to be in the diversion of part of the water

from the Green river in Wyoming, - the main branch of the Colorado river, over into the Bear river system. Records indicate that at the present at least 1,000,000 acre feet of water flows from the Green river into the Colorado river, unused.

Under the Colorado River Compact there was allocated to the four upper states, - New Mexico, Colorado, Wyoming and Utah, 7,500,000 acre feet. If any substantial portion of this water is to be used in Utah it must be by diversion from the Green river drainage. There is more land than water along the Bear river drainage. It is being interpreted, under the Colorado River Compact, that a proper and consistent use of the water allocated to the upper states might be the diversion from Green river over into the Bear river drainage and thus give to the lands in these three states an adequate and dependable irrigation supply. It is recognized that to make such diversion will necessitate storage on the Green river so that the waters which now run to waste during the flood season might be held on the upper reaches of the river for economic and beneficial use both in the Green river valley and in the diversion to the Bear river.

A study, as made by the Bureau of Reclamation under Section 15 of the Boulder Canyon Act and the United States Geological Survey, indicates that storage could be made at a point above Daniel on the Green river and that from such diversion there is upward of 1,000 feet of fall to the head of Twin Creeks and by a canal approximately 60 to 100 miles in length, the water might thus be transferred to the Bear river drainage. It has been interpreted that such diversion is physically possible and that the construction on the Green river will be beneficial both to the lands in Wyoming on the Green river and to the irrigated lands in Wyoming, Idaho and Utah, and while Idaho has been no party to the Colorado River Compact, it is recognized that since the water used in the northern part of Utah, - in Cache county and in Boxelder county, must pass through Idaho, and in this they are concerned; and further by the addition of the water to the Bear river system the irrigation supply to the lands of Wyoming and Utah may be rehabiditated and the water rights of Idaho protected.

To determine the economic feasibility of this project a detailed survey must be made and it has been estimated this will cost approximately $200,000.00. Because the three states were concerned in the economic results and benefits which might come out of diverting water from the Green river drainage to the Bear river drainage, a meeting was called and held at the State Capitol in Salt Lake City, which was attended by Governors, State Engineers, delegates and Congressional representatives from the three states, who unanimously agreed that the proposed diversion of water would be economic and beneficial to all states concerned, and since it was considered that it was physically possible to make such diversion, that immediate

request should be made for an appropriation to cover the cost of the detailed and economic survey to locate the storage sites on Green river, the position of the proposed diversion canal, the cost of the canal, the benefits in the Green river valley, the benefits in the Bear river valley, and correlate these benefits with the total cost of the project.

It was recognized by those present that the farmers in the Bear river valley are faced with a catastrophe which will force them either to attempt to find new homes or to readjust their means of obtaining livelihood, or to join the relief rolls. Great benefits, it was found, might be derived on the Green river from such development as has been suggested.

It appeared not only that an expenditure of $200,000 for preparation of a detailed survey would be fully justified, but that the imminence of the present threat demanded such study at the earliest possible moment. We therefore petition and request that this amount of money be made available immediately to the Bureau of Reclamation for the purpose of making a complete survey and report.

Respectfully submitted,

Leslie A. Miller, Governor
State of Wyoming

C. Ben Ross, Governor
State of Idaho

Henry H. Blood, Governor
State of Utah

N. B. Green river-Bear river diversion map is attached hereto for reference.

The State of Wyoming

STATE ENGINEER'S OFFICE

Cheyenne

October 18, 1935

Hon. Ray E. Lee
Attorney General, Wyoming
Building

Dear Mr. Lee:

Transmitting herewith report as to the status of water rights in Jackson Lake Reservoir.

An examination of this report discloses the fact that no secondary permits have been filed under the laws of Wyoming, as passed in 1921, and this is explained in the bottom paragraph of Page 1. Please note the fact that the law provided that secondary permits should be filed for applications heretofore constructed as well as on reservoirs hereafter lawfully constructed.

It will also be noticed that proof of construction of reservoir was filed on April 20, 1917, and that these proofs are still pending in the office of the State Board of Control.

The larger portion of the waters of Jackson Lake Reservoir are appropriated for lands in the State of Idaho, and Wyoming people are interested in the companies receiving this water fully complying with the laws of the State as to the distribution of the waters stored. The Bureau of Reclamation have, in the case of the Pathfinder Reservoir, made application for proof and have received certificates of appropriation for the lands in Wyoming and Nebraska, stored in the Pathfinder Reservoir, but no action has been taken by the Bureau in filing these secondary applications for the Jackson Lake Reservoir.

I am transmitting a copy of this report to Dr. Elwood Mead, and also to Commissioner of Reclamation for the State of Idaho, Mr. R. W. Faris of Boise. If the Governor deems it advisable, I am of the opinion that the Bureau of Reclamation and the water users obtaining the waters of Jackson Lake Reservoir should be called upon to follow the laws of Wyoming as stated in Section 122-1601, Wyoming Revised Statutes of 1931.

Your report to the Governor, concerning this, will be very much appreciated.

Very truly yours,

EDWIN W. BURRITT
State Engineer

EWB:LE

CC - Governor Leslie A. Miller
Dr. Elwood Mead
Commissioner R. W. Faris

THE STATE OF WYOMING

STATE ENGINEER'S OFFICE

CHEYENNE

Received
Oct. 21, 1935
Department of Reclamation

October 18, 1935

Hon. Ray E. Lee
Attorney General, Wyoming
B u i l d i n g

Dear Mr. Lee:

Transmitting herewith report as to the status of water rights in Jackson Lake Reservoir.

An examination of this report discloses the fact that no secondary permits have been filed under the laws of Wyoming, as passed in 1921, and this is explained in the bottom paragraph of Page 1. Please note the fact that the law provided that secondary permits should be filed for applications here-to-fore constructed as well as on reservoirs hereafter lawfully constructed.

It will also be noticed that proof of construction of reservoir was filed on April 20, 1917, and that these proofs are still pending in the office of the State Board of Control.

The larger portion of the waters of Jackson Lake Reservoir are appropriated for lands in the State of Idaho, and Wyoming people are interested in the companies receiving this water fully complying with the laws of the State as to the distribution of the waters stored. The Bureau of Reclamation have, in the case of the Pathfinder Reservoir, made application for proof and have received certificates of appropriation for the lands in Wyoming and Nebraska, stored in the Pathfinder Reservoir, but no action has been taken by the Bureau in filing these secondary applications for the Jackson Lake Reservoir.

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Your report to the Governor, concerning this, will be very much appreciated.

Very truly yours,

Signed: EDWIN W. BURRITT
State Engineer

EWB:LE

cc - Governor Leslie A. Miller
Dr. Elwood Mead
Commissioner R. W. Faris

36- Interstate Diversion Madison River

October 18, 1935

Mr. ALYSONBE. SMITH, Secretary
Chamber of Commerce,
Idaho Falls, Idaho

Dear Mr. Smith:

Your letter dated October 9, 1935, requesting information as to the progress of surveys to determine the feasibility of the diversion of Madison River from Montana into Idaho was received in due course, but I have delayed reply in the hope of securing some definite information with reference to the matter.

As you know, the surveys are being made by Mr. Sloan under the direction of the U. S. Bureau of Reclamation, to which Department he will make his report. However, I saw Mr. Sloan today and he advised me that the surveys had progressed far enough to disclose the feasibility of the proposed diversion and that the cost would be reasonable. Mr. Sloan has also had some contact with the Montana state officials and parties in interest and feels that the prospect of securing the waters seems favorable.

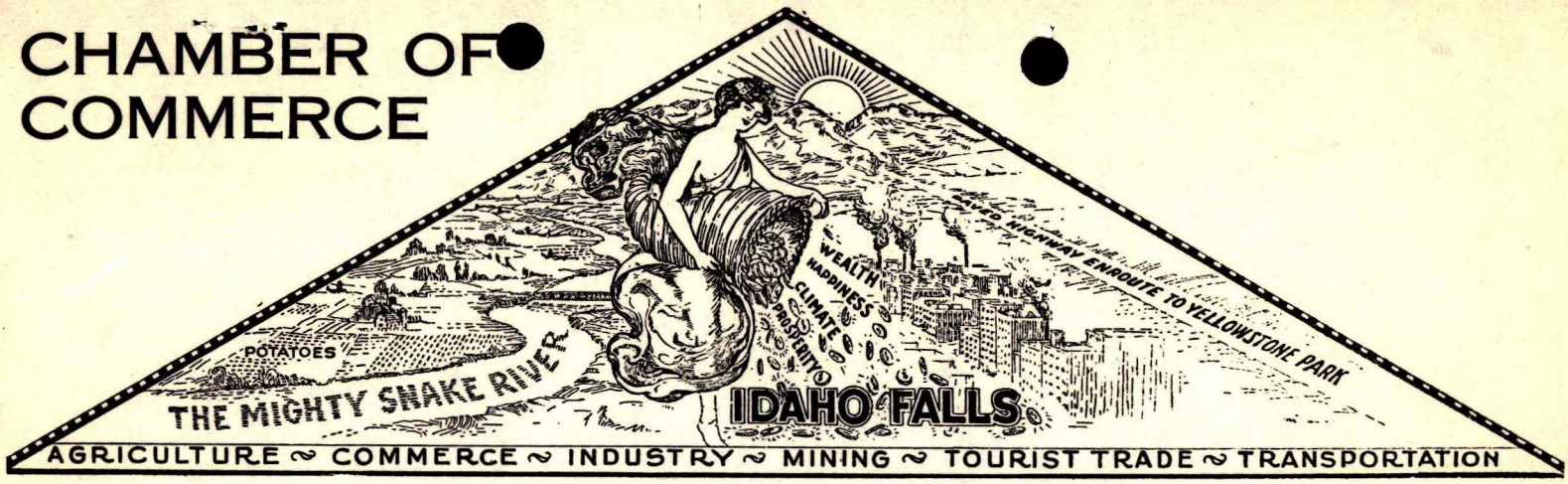
I will keep in touch with you and advise you from time to time as to information coming to this Department.

Very truly yours,

Commissioner of Reclamation

RWF/mt

CHAMBER OF COMMERCE



October 19, 1935

Mr. R. W. Faris
Commissioner of Reclamation
Department of Public Works
Boise, Idaho

Dear Mr. Faris:

Your letter of October 18, regarding this survey on the Madison River-Henry Lake project was received this morning.

We are very pleased to hear that the survey seems to indicate that the project is feasible. There was considerable agitation in this vicinity over the announcement of the filing in Montana by the Twin Falls Land and Water Company on Madison River water. It is our understanding, however, that this file, if granted, will not disturb present negotiations.

Water users have asked me just how that water is to be handled if secured from the Montana Power Company and I would appreciate it if you would drop me a line giving the proposed procedure should the project prove out.

Sincerely yours,

Alyson E Smith

Alyson E. Smith
Secretary-Manager

AES:MM

MERRILL & MERRILL
COUNSELORS AND ATTORNEYS AT LAW
POCATELLO, IDAHO

A.L. MERRILL
R.D. MERRILL

October
Nineteenth
1 9 3 5

Mr. R. W. Faris,
Commissioner of Reclamation,
Boise, Idaho.

Dear Mr. Faris:

I have noticed a news item in the Salt Lake Tribune to the effect that Twin Falls Land & Water Company filed on 1500 second feet of water in the Madison River. While I do not see the effectiveness or the purpose of this procedure at the present time, yet I am wondering if a similar procedure ought not to be undertaken on behalf of the Portneuf Marsh Valley Canal Company in which I am so much interested.

If you have any suggestions to make, I would appreciate it.

Sincerely yours,

MERRILL & MERRILL,

BY A. L. Merrill

ALM:L

REPORT

on

STATUS OF WATER RIGHTS

JACKSON LAKE RESERVOIR

STATE OF WYOMING

EDWIN W. BURRITT, STATE ENGINEER

October 17, 1935

Received
Oct. 21, 1935
Department of Reclamation

The Jackson Lake Reservoir, as constructed at present, has a total capacity of 847,000 acre-feet between the elevations 6,730 and 6,769. The dam consists of an earth embankment about 4,000 feet long and a massive concrete section with a maximum height of 67 feet. A temporary log crib dam was first constructed by the U. S. Bureau of Reclamation in 1907. This dam had a height of 15 feet and stored 300,000 acre-feet, of water. This dam was washed out in July, 1910, and was rebuilt to a capacity of 780,000 acre feet. The outlet channel was dredged in 1919 to a sufficient depth to allow for a total available storage, at the present time, of 847,000 acre-feet.

Six permits have been secured by the United States for the construction of this reservoir and later Enlargements. These permits are as follows:

Permit No. 894 Res.
Permit No. 1903 Res.
Permit No. 2185 Res.
Permit No. 2659 Res.
Permit No. 2894 Res.
Permit No. 2895 Res.

Notices of completion under the above permits have been received, and proof of appropriation (construction of reservoir) was submitted before R. E. Carron, Division Superintendent, on April 20, 1917. Action upon these proofs has not been taken by the Board of Control, and they are still pending in the files of that office.

The expense of enlarging the dam to develope the upper 17 feet of storage was paid by the Kuhn Irrigation & Canal Company which operated certain Carey Act Projects in the State of Idaho. A large number of Warren Act Contracts have been entered into by the Bureau of Reclamation with various canal companies and irrigation districts in the State of Idaho for sale of storage in the Jackson Lake Reservoir. A list of these contracts, as furnished by the Commissioner of Reclamation on March 4, 1926, is attached hereto.

No secondary applications have been filed in the office of the State Engineer of Wyoming for use of this stored water. It appears that the users of water from Jackson Lake Reservoir should file secondary applications in the State Engineer's office and secure permits before this water can be definitely adjudicated to any particular lands. Section 122-1601, Wyoming Revised Statutes, 1931, provides that the water stored in any reservoir cannot be used outside the boundaries of the State of Wyoming without special permit from the State Engineer. This law was passed by the Legislature of Wyoming in 1921 which also provided that the law should apply to reservoirs heretofore constructed as well as all reservoirs hereafter lawfully constructed.

A tabulation of data relative to the permits issued and other information, regarding the operation of Jackson Lake Reservoir, is attached hereto.

PERMITS FOR JACKSON LAKE RESERVOIR

Permit No. 894 Res.

Name: Jackson Lake Reservoir
Applicant: The United States by D. W. Ross
Source: South Fork of Snake River.
Priority: August 23, 1906
Use: Irrigation in connection with the Minidoka Project, Idaho.
Capacity: 299,000 acre-feet
Proposed a timber dam to store 15 feet of water.
Approval bears the following reservation:

"A water supply for all irrigable lands in the Snake River Valley in Wyoming is hereby reserved. Plans for permanent structures to be filed in the State Engineer's Office of Wyoming prior to December 31st, 1910. Those described herein are regarded as of a temporary character."

Notice of completion received April 25, 1910.

Permit No. 1903 Res.

Name: Enlargement of Jackson Lake Reservoir
Applicant: United States of America
Source: South Fork of Snake River
Priority: August 18, 1910
Use: Irrigation in connection with the Minidoka Project, Idaho.
Capacity: Total capacity, 392,990 acre-feet; additional capacity, 93,990 acre-feet
Approval contains the following reservation:

"A water supply for all irrigable lands in the Snake River Valley in Wyoming is hereby reserved."

Notice of completion received January 20, 1912.

Permit No. 2185 Res.

Name: Enlargement Jackson Lake Reservoir
Applicant: United States of America
Source: South Fork of Snake River
Priority: July 24, 1911
Use: Irrigation in connection with the Minidoka Project, Idaho.
Capacity: Total capacity, 438,000 acre-feet
This permit proposed to increase the height of the dam under Permit No. 1903 Res. by 2 feet, thereby increasing the storage capacity 45,000 acre-feet.

Approval contains the same reservation as Permit No. 1903 Res.

Notice of completion received January 20, 1912.

Permit No. 2659 Res.

Name: Enlargement Jackson Lake Reservoir
Applicant: United State of America
Source: South Fork of Snake River
Priority: June 10, 1914
Use: Irrigation and domestic purposes on the North Side Twin Falls Project in Gooding, Lincoln, and Minidoka Counties, Idaho, and the South Side Twin Falls Project in Twin Falls County, Idaho.
Capacity: Total Capacity, 789,500 acre-feet; increased capacity, 351,500 acre-feet

This permit proposed to raise the dam an additional 17 feet.

Approval contains a reservation requiring applicant to construct a good and substantial wagon bridge at a cost of not less than $36,000 across the Snake River in the Jackson Hole Country, Lincoln County, Wyoming.

Notice of completion of bridge received September 4, 1915.
Notice of completion received October 21, 1918.

Permit No. 2894 Res.

Name: Enlargement Jackson Lake Reservoir
Applicant: United States of America
Source: South Fork of Snake River
Priority: May 20, 1912
Use: Irrigation and domestic purposes in connection with the South Side Twin Falls, North Side Twin Falls, and some new smaller projects to be supplied by pumping upon lands in the vicinity of Milner and Murtaugh, Idaho, and possibly also in the vicinity of Minidoka.
Capacity: Total capacity, 738,000 acre-feet

This permit proposed to increase the height of the dam under Permit No. 2185 Res. by 13 feet and the storage by 300,000 acre-feet.

Application was rejected by A. J. Parshall on February 10, 1914, as detrimental to the public interest. An appeal was made to the Board of Control, and permit ordered issued by the Board on November 19, 1915. The permit was then approved by James B. True, on January 21, 1916.

Notice of commencement of work received November 27, 1916.
Notice of completion received November 27, 1916.

Permit No. 2895 Res.

Name: Enlargement of Jackson Lake Reservoir
Applicant: United States of America
Source: South Fork of Snake River
Priority: May 24, 1913
Use: Irrigation and domestic purposes on the North Side Twin Falls Project, South Side Twin Falls Project, and some smaller projects to be supplied by pumping upon lands in the vicinity of Milner and Murtaugh, Idaho.
Capacity: Total Capacity, 838,000 acre-feet.

This permit proposed to increase the height of the dam under Permit No. 2894 Res. by 4 feet and to increase the storage by 100,000 acre-feet.

Permit No. 2895 Res. (Continued)

Application was rejected by A. J. Parshall on February 10, 1914. Rejection was appealed to the Board of Control and permit ordered issued by the Board on November 19, 1915. The permit was then approved by James B. True under date of January 21, 1916.

Notice of commencement of work received November 27, 1916.
Notice of completion received November 27, 1916.

Proof of appropriation of water under all of these permits was submitted by F. A. Banks in behalf of the United States on April 20, 1917, before R. E. Carron, Division Superintendent, and were filed in the Office of the State Board of Control on October 22, 1917.

Action has never been taken on these proofs, and they are still pending before the Board.

LIST OF WARREN ACT CONTRACTS

FOR STORAGE IN JACKSON LAKE.

Furnished by the Commissioner of Reclamation on March 4, 1926.

Name	Acre-Feet
Aberdeen Springfield Canal Co., Aberdeen, Idaho	40,000
American Falls Canal Securities Co., (assigned to above)	2,685
Bradbury & McMullen	200
Burgess Canal & Irrigating Co.	5,120
Enterprise Canal Co., Ltd.	6,100
Farmers Friend Irrigation Co.	2,000
Harrison Canal & Irrigation Co.	5,000
Lenroot Canal Co., Ltd.	3,000
Lowder Slough Canal Co., Ltd.	1,040
W. S. Lyle	155
Martin Canal Co.	1,500
New Sweden Irrigation District	5,000
Peoples Canal & Irrigation Co.	8,000
Poplar Irrigation District	1,200
Rudy Irrigation District	2,000
Snake River Valley Irrigation District	15,000
Sunnydell Irrigation District	4,000
Twin Falls Water Company and Kuhn Irrigation & Canal Co. (Kuhn Co. is now Twin Falls North Side Land and Water Co.)	400,000
Murtaugh Canal Company	900
Total	502,900

JACKSON LAKE RESERVOIR

(From U. S. G. S. Water Supply Paper No. 657,
Water Utilization in the Snake River Basin.)

JACKSON LAKE RESERVOIR, WYO. (12GA 1).-- During October, 1907, the United States Bureau of Reclamation completed construction of a temporary log crib dam at the outlet of Jackson Lake, in Sec. 18, T. 45 N., R. 114 W. This temporary dam, which raised the level of the lake 15 feet and created a storage capacity of 300,000 acre-feet, was washed out by high water July 5, 1910. Work was commenced later in 1910 on a permanent dam to create a reservoir, having a capacity of about 380,000 acre-feet. In 1916 the dam was rebuilt to provide a capacity of about 780,000 acre-feet, and in 1919 the outlet channel was dredged to permit additional draft, providing a total storage capacity of 847,000 acre-feet, between the altitudes of 6,730 and 6,769 feet above sea level. (See pl. 6, A.) The dam consists of an earth embankment about 4,000 feet long and a massive concrete section, having a maximum height of 67 feet. There has been considerable adverse criticism of the use of Jackson Lake for storage, largely because of failure to remove the trees from the flooded area, but the trees are now being removed.

The main highway between Yellowstone National Park and Teton National Park crosses the dam. The original dam was constructed to provide storage for the Minidoka system of the Bureau of Reclamation. Subsequent increases in capacity were required by the development of the Twin Falls area and the need of additional supply for other canals diverting from the Snake River in Idaho, above Milner.

The ownership of water in the reservoir (1930) is as follows:
The points of diversion are all in Idaho.

	Acre-Feet
Aberdeen-Springfield Canal Co.	42,685
Bradbury & McMullen (Merrill Nibley)	200
Burgess Canal & Irrigation Co.	5,120
Burley Irrigation District	139,780
Enterprise Canal Co., Ltd.	6,100
Farmers Friend Irrigation District	2,000
Harrison Canal & Irrigation Co.	5,000
Lenroot Canal Co.	3,000
Lowder Slough Canal	1,000
Lyle, W. S. (Herbert Austin)	155
Martin Canal Co.	1,500
Minidoka Irrigation District	186,030
New Sweden Irrigation District	5,000
Peoples Canal & Irrigation Co.	8,000
Poplar Irrigation District	1,200
Rudy Irrigation District	2,000
Snake River Valley Irrigation District	15,000
Sunnydell Irrigation District	4,000
Twin Falls Canal Company	# 97,183
Twin Falls North Side Land & Water Company	#322,000
	847,000

Rights above altitude 6,752 feet.

OPERATION OF JACKSON LAKE RESERVOIR

Date	Maximum Storage (a)	Storage Remaining Sept. 30
	Acre-feet	Acre-feet
1910, July 1	(b) 317,500	113,800
1911, Aug. 1	(b) 310,400	75,200
1912, July 1	(b) 433,300	110,100
1913, July 1	(b) 438,500	70,000
1914, July 1	(b) 437,800	117,600
1915, June 12	480,000	59,000
1916, June 26	750,000	264,600
1917, June 30	800,000	342,700
1918, June 24	797,530	168,300
1919, June 3	628,680	340
1920, July 9	746,040	142,920
1921, June 24	847,230	170,250
1922, June 27	847,480	255,650
1923, June 22	847,480	145,200
1924, June 20	486,700	2,410
1925, June 30	848,250	390,020
1926, May 21	758,980	1,380
1927, July 18	848,000	519,100
1928, June 18	847,740	590,030
1929, June 30	847,480	395,140
1930, June 23	827,120	246,140

(a) No attempt was made to fill Jackson Lake to capacity until 1921.

(b) Storage on date given; not necessarily the maximum for the year.

MEAN ANNUAL RUN-OFF OF SNAKE RIVER BELOW JACKSON LAKE RESERVOIR

1904--30

(Drainage Area Above Reservoir 820 Square Miles)

Year ending Sept 30.	Acre-Feet	Per Cent Of Mean
1904	1,302,000	119
1905	780,000	71
1906	899,000	82
1907	(a) 1,282,000	117
1908	1,123,000	103
1909	1,461,000	134
1910	1,239,000	113
1911	1,346,000	123
1912	1,214,000	111
1913	1,436,000	131
1914	1,149,000	103
1915	770,000	70
1916	1,222,000	112
1917	1,238,000	113
1918	1,248,000	114
1919	685,000	63
1920	993,000	91
1921	1,067,000	98
1922	1,006,000	92
1923	944,000	86
1924	648,000	59
1925	1,328,000	121
1926	761,000	70
1927	1,417,000	130
1928	1,351,000	122
1929	865,000	79
1930	794,000	73
Mean	1,094,000	100

(a) Estimated in part.

Note: Corrected for holdover storage. Storage when available is carried over from 1 year to the next; the maximum amount so carried over was 500,000 acre-feet, 1927.

WYOMING REVISED STATUTES, 1931

122-1501. PROCEDURE. All applications under this article shall be subject to the provisions of §§ 122-405 to 122-414 and 122-1401 to 122-1403, which set forth the duties and authority of the state engineer and provide for the protection of the rights of applicants; provided, that an enumeration of any lands proposed to be irrigated under this article, shall not be required in the primary permit. The party or parties proposing to apply to a beneficial use the water stored in any such reservoir shall file with the state engineer an application for permit, to be known herein as the secondary permit, in compliance with the provisions of §§ 122-404 to 122-414. Said application shall refer to such reservoir for a supply of water and the state engineer shall not approve the said application and issue secondary permit until the applicant thereunder shall show to such state engineer by documentary evidence that he has entered into an agreement with the owners of the reservoir for a permanent and sufficient interest in said reservoir to impound enough water for the purposes set forth in said application. When beneficial use has been completed and perfected under the said secondary permit the division superintendent shall take the proof of the water user under such permit and the final certificate of appropriation shall refer to both the ditch described in the secondary permit and the reservoir described in the primary permit. (L. '03, c. 69, § 2; L. '07, c. 86 § 1; C. S. '10, § 744; C. S. '20, § 863.

122-1601. RIGHTS OF OWNER -- SALE OF PROTION OF CAPACITY OF RESERVOIR. Except as otherwise provided by deed or other written instruments of the owner or owners of the right to impound water in any reservoir, such reservoir owner or owners shall, after the completion of the works in connection with such reservoir, be held to be the owner of the right to impound the water, and the right to sell or lease a portion of all his right to impounded waters; provided, that the sale of any portion of the capacity of any reservoir shall carry with it an interest in the reservoir and works appurtenant thereto of such proportion as the portion sold bears to the total capacity of the reservoir; and provided, further, that the water stored in any reservoir can not be used outside the boundaries of the state of Wyoming without special permit from the state engineer; and provided, further, that the state engineer may deny any use of water from any reservoir that would be detrimental to the public interest. (L. '21, c. 141, § 1.

REPORT

ON

STATUS OF WATER RIGHTS

JACKSON LAKE RESERVOIR

STATE OF WYOMING

EDITH W. BURRITT, STATE ENGINEER

October 17, 1935

The Jackson Lake Reservoir, as constructed at present, has a total capacity of 847,000 acre-feet between the elevations 6,730 and 6,769. The dam consists of an earth embankment about 4,000 feet long and a massive concrete section with a maximum height of 67 feet. A temporary log crib dam was first constructed by the U. S. Bureau of Reclamation in 1907. This dam had a height of 15 feet and stored 300,000 acre-feet of water. This dam was washed out in July, 1910, and was rebuilt to a capacity of 780,000 acre-feet. The outlet channel was dredged in 1919 to a sufficient depth to allow for a total available storage, at the present time, of 847,000 acre-feet.

Six permits have been secured by the United States for the construction of this reservoir and later Enlargements. These permits are as follows:

Permit No. 894 Res.
Permit No. 1903 Res.
Permit No. 2185 Res.
Permit No. 2659 Res.
Permit No. 2894 Res.
Permit No. 2895 Res.

Notices of completion under the above permits have been received, and proof of appropriation (construction of reservoir) was submitted before R. E. Carron, Division Superintendent, on April 20, 1917. Action upon these proofs has not been taken by the Board of Control, and they are still pending in the files of that office.

The expense of enlarging the dam to develope the upper 17 feet of storage was paid by the Kuhn Irrigation & Canal Company which operated certain Carey Act Projects in the State of Idaho. A large number of Warren Act Contracts have been entered into by the Bureau of Reclamation with various canal companies and irrigation districts in the State of Idaho for sale of storage in the Jackson Lake Reservoir. A list of these contracts, as furnished by the Commissioner of Reclamation on March 4, 1926, is attached hereto.

No secondary applications have been filed in the Office of the State Engineer of Wyoming for use of this stored water. It appears that the users of water from Jackson Lake Reservoir should file secondary applications in the State Engineer's office and secure permits before this water can be definitely adjudicated to any particular lands. Section 122-1601, Wyoming Revised Statutes, 1931, provides that the water stored in any reservoir cannot be used outside the boundaries of the State of Wyoming without special permit from the State Engineer. This law was passed by the Legislature of Wyoming in 1921

which also provided that the law should apply to reservoirs heretofore constructed as well as all reservoirs hereafter lawfully constructed.

A tabulation of data relative to the permits issued and other information, regarding the operation of Jackson Lake Reservoir, is attached hereto.

PERMITS FOR JACKSON LAKE RESERVOIR

Permit No. 894 Res.

Name: Jackson Lake Reservoir
Applicant: The United States by D. W. Ross
Source: South Fork of Snake River
Priority: August 23, 1906
Use: Irrigation in connection with the Minidoka Project, Idaho.
Capacity: 299,000 acre-feet
Proposed a timber dam to store 15 feet of water.
Approval bears the following reservation:

"A water supply for all irrigable lands in the Snake River Valley in Wyoming is hereby reserved. Plans for permanent structures to be filed in the State Engineer's Office of Wyoming prior to December 31st, 1910. Those described herein are regarded as of a temporary character."

Notice of completion received April 25, 1910.

Permit No. 1903 Res.

Name: Enlargement of Jackson Lake Reservoir
Applicant: United States of America
Source: South Fork of Snake River
Priority: August 18, 1910
Use: Irrigation in connection with the Minidoka Project, Idaho.
Capacity: Total capacity, 392,990 acre-feet; additional capacity, 93,990 acre-feet.
Approval contains the following reservation:

"A water supply for all irrigable lands in the Snake River Valley in Wyoming is hereby reserved."

Notice of completion received January 20, 1912.

Permit No. 2185 Res.

Name: Enlargement Jackson Lake Reservoir
Applicant: United States of America
Source: South Fork of Snake River
Priority: July 24, 1911
Use: Irrigation in connection with the Minidoka Project, Idaho.
Capacity: Total capacity, 438,000 acre-feet

Permit No. 2185 Res. (Continued)

This permit proposed to increase the height of the dam under Permit No. 1903 Res. by 2 feet, thereby increasing the storage capacity 45,000 acre-feet.

Approval contains the same reservation as Permit No. 1903 Res.

Notice of completion received January 20, 1912.

Permit No. 2659 Res.

Name: Enlargement Jackson Lake Reservoir
Applicant: United States of America
Source: South Fork of Snake River
Priority: June 10, 1914
Use: Irrigation and domestic purposes on the North Side Twin Falls Project in Gooding, Lincoln, and Minidoka Counties, Idaho, and the South Side Twin Falls Project in Twin Falls County, Idaho.
Capacity: Total capacity, 789,500 acre-feet; increased capacity, 351,500 acre-feet.

This permit proposed to raise the dam an additional 17 feet.

Approval contains a reservation requiring applicant to construct a good and substantial wagon bridge at a cost of not less than $36,000 across the Snake River in the Jackson Hole country, Lincoln County, Wyoming.

Notice of completion of bridge received September 4, 1915.
Notice of completion received October 21, 1918.

Permit No. 2894 Res.

Name: Enlargement Jackson Lake Reservoir
Applicant: United States of America
Source: South Fork of Snake River
Priority: May 20, 1912
Use: Irrigation and domestic purposes in connection with the South Side Twin Falls, North Side Twin Falls, and some new smaller projects to be supplied by pumping upon lands in the vicinity of Milner and Murtaugh, Idaho, and possibly also in the vicinity of Minidoka.
Capacity: Total capacity, 738,000 acre-feet

This permit proposed to increase the height of the dam under Permit No. 2185 Res. by 13 feet and the storage by 300,000 acre-feet.

Application was rejected by A. J. Marshall on February 10, 1914, as detrimental to the public interest. An appeal was made to the Board of Control, and permit ordered issued by the Board on November 19, 1915. The permit was then approved by James B. True on January 21, 1916.

Permit No. 2894 Res. (Continued)

Notice of commencement of work received November 27, 1916.
Notice of completion received November 27, 1916.

Permit No. 2895 Res.

Name: Enlargement of Jackson Lake Reservoir
Applicant: United States of America
Source: South Fork of Snake River
Priority: May 24, 1913
Use: Irrigation and domestic purposes on the North Side Twin Falls Project, South Side Twin Falls Project, and some smaller projects to be supplied by pumping upon lands in the vicinity of Milner and Murtaugh, Idaho.
Capacity: Total Capacity, 838,000 acre-feet

This permit proposed to increase the height of the dam under Permit No. 2894 Res. by 4 feet and to increase the storage by 100,000 acre-feet.

Application was rejected by A. J. Marshall on February 10, 1914. Rejection was appealed to the Board of Control and permit ordered issued by the Board on November 19, 1915. The permit was then approved by James B. True under date of January 21, 1916.

Notice of commencement of work received November 27, 1916.
Notice of completion received November 27, 1916.

Proof of appropriation of water under all of these permits was submitted by F. A. Banks in behalf of the United States on April 20, 1917, before R. R. Carron, Division Superintendent, and were filed in the office of the State Board of Control on October 22, 1917.

Action has never been taken on these proofs, and they are still pending before the Board.

LIST OF WARREN ACT CONTRACTS

FOR STORAGE IN JACKSON LAKE

Furnished by the Commissioner of Reclamation on March 4, 1926.

Name	Acre-Feet
Aberdeen Springfield Canal Co., Aberdeen, Idaho	40,000
American Falls Canal Securities Co. (assigned to above)	2,685
Bradbury & McMullen	200
Burgess Canal & Irrigating Co.	5,120
Enterprise Canal Co., Ltd.	6,100
Farmers Friend Irrigation Co.	2,000
Harrison Canal & Irrigation Co.	5,000
Lenroot Canal Co., Ltd.	3,000
Lowder Slough Canal Co., Ltd.	1,040
W. S. Lyle	155
Martin Canal Co.	1,500
New Sweden Irrigation District	5,000
Peoples Canal & Irrigation Co.	8,000
Poplar Irrigation District	1,200
Rudy Irrigation District	2,000
Snake River Valley Irrigation District	15,000
Sunnydell Irrigation District	4,000
Twin Falls Water Company and Kuhn Irrigation & Canal Co. (Kuhn Co. is now Twin Falls North Side Land & Water Co.)	400,000
Murtaugh Canal Company	900
Total	502,900

JACKSON LAKE RESERVOIR
(From U. S. G. S. Water Supply Paper 657, Water Utilization in The Snake River Basin)

JACKSON LAKE RESERVOIR, WYO. (12CA 1).--During October, 1907, the United States Bureau of Reclamation completed construction of a temporary log crib dam at the outlet of Jackson Lake, in Sec. 18, T. 45 N., R. 114 W. This temporary dam, which raised the level of the lake 15 feet and created a storage capacity of 300,000 acre-feet, was washed out by high water July 5, 1910. Work was commenced later in 1910 on a permanent dam to create a reservoir, having a capacity of about 380,000 acre-feet. In 1916 the dam was rebuilt to provide a capacity of about 780,000 acre-feet, and in 1919 the outlet channel was dredged to permit additional draft, providing a total storage capacity of 847,000 acre-feet, between the altitudes of 6,730 and 6,769 feet above sea level. (See pl. 6, A.) The dam consists of an earth embankment about 4,000 feet long and a massive concrete section, having a maximum height of 57 feet. There has been considerable adverse criticism of the use of Jackson Lake for storage, largely because of failure to remove the trees from the flooded area, but the trees are now being removed.

The main highway between Yellowstone National Park and Teton National Park crosses the dam. The original dam was constructed to provide storage for the Minidoka system of the Bureau of Reclamation. Subsequent increases in capacity were required by the development of the Twin Falls area and the need of additional supply for other canals diverting from the Snake River in Idaho, above Milner.

The ownership of water in the reservoir (1930) is as follows. The points of diversion are all in Idaho.

	Acre-feet
Aberdeen-Springfield Canal Co.	42,685
Bradbury & McMullen (Merrill Nibley)	200
Burgess Canal & Irrigation Co.	5,120
Burley Irrigation District	139,780
Enterprise Canal Co., Ltd.	6,100
Farmers Friend Irrigation District	2,000
Harrison Canal & Irrigation Co.	5,000
Lenroot Canal Co.	3,000
Lowder Slough Canal	1,000
Lyle, W. S. (Herbert Austin)	155
Martin Canal Co.	1,500
Minidoka Irrigation District	186,030
New Sweden Irrigation District	5,000
Peoples Canal & Irrigation Co.	8,000
Poplar Irrigation District	1,200
Rudy Irrigation District	2,000
Snake River Valley Irrigation District	15,000
Sunnydell Irrigation District	4,000
Twin Falls Canal Co.	/ 97,185
Twin Falls North Side Land & Water Co.	/ 322,000
	847,000

/ Rights above altitude 6,752 feet.

OPERATION OF JACKSON LAKE RESERVOIR

Date	Maximum storage a	Storage remaining Sept. 30
	Acre-feet	Acre-feet
1910, July 1	b 317,500	113,800
1911, Aug. 1	b 310,400	75,200
1912, July 1	b 433,300	110,100
1913, July 1	b 438,500	70,000
1914, July 1	b 437,800	117,600
1915, June 12	480,000	59,000
1916, June 26	750,000	264,600
1917, June 30	800,000	542,700
1918, June 24	797,530	168,300
1919, June 5	688,680	540
1920, July 9	786,040	142,920
1921, June 24	847,250	170,250
1922, June 27	847,480	255,650
1923, June 28	847,480	145,200
1924, June 20	486,700	2,410
1925, June 30	848,250	590,020
1926, May 21	758,980	1,380
1927, July 18	848,000	519,100
1928, June 16	847,740	590,030
1929, June 30	847,480	395,140
1930, June 23	827,120	246,140

a No attempt was made to fill Jackson Lake to capacity until 1921.

b Storage on date given; not necessarily the maximum for the year.

MEAN ANNUAL RUN-OFF OF SNAKE RIVER BELOW JACKSON LAKE RESERVOIR, 1904-30

(DRAINAGE AREA ABOVE RESERVOIR 820 SQUARE MILES)

Year ending Sept. 30	Acre-feet	Percent of mean
1904	1,305,000	119
1905	760,000	71
1906	699,000	63
1907	a 1,282,000	117
1908	1,125,000	103
1909	1,461,000	134
1910	1,259,000	115
1911	1,345,000	123
1912	1,214,000	111
1913	1,436,000	131
1914	1,149,000	105
1915	770,000	70
1916	1,222,000	112
1917	1,258,000	115
1918	1,248,000	114
1919	685,000	63
1920	993,000	91
1921	1,067,000	98
1922	1,008,000	92
1923	944,000	86
1924	646,000	59
1925	1,528,000	141
1926	761,000	70
1927	1,417,000	130
1928	1,331,000	122
1929	865,000	79
1930	794,000	73
Mean	1,094,000	100

a Estimated in part.

Note: Corrected for holdover storage. Storage when available is carried over from 1 year to the next; the maximum amount so carried over was 500,000 acre-feet, 1927.

WYOMING REVISED STATUTES, 1931

122-1501. PROCEDURE. All applications under this article shall be subject to the provisions of §§ 122-405 to 122-414 and 122-1401 to 122-1403, which set forth the duties and authority of the state engineer and provide for the protection of the rights of applicants; provided, that an enumeration of any lands proposed to be irrigated under this article shall not be required in the primary permit. The party or parties proposing to apply to a beneficial use the water stored in any such reservoir shall file with the state engineer an application for permit, to be known herein as the secondary permit, in compliance with the provisions of §§ 122-404 to 122-414. Said application shall refer to such reservoir for a supply of water and the state engineer shall not approve the said application and issue secondary permit until the applicant thereunder shall show to such state engineer by documentary evidence that he has entered into an agreement with the owners of the reservoir for a permanent and sufficient interest in said reservoir to impound enough water for the purposes set forth in said application. When beneficial use has been completed and perfected under the said secondary permit the division superintendent shall take the proof of the water user under such permit and the final certificate of appropriation shall refer to both the ditch described in the secondary permit and the reservoir described in the primary permit. (L. '03, c. 69, § 2; L. '07, c. 86 § 1; C. S. '10, § 744; C. S. '20, § 863.

122-1601. RIGHTS OF OWNER--SALE OF PROTION OF CAPACITY OF RESERVOIR. Except as otherwise provided by deed or other written instruments of the owner or owners of the right to impound water in any reservoir, such reservoir owner or owners shall, after the completion of the works in connection with such reservoir, be held to be the owner of the right to impound the water, and the right to sell or lease a portion or all his right to the impounded waters; provided, that the sale of any portion of the capacity of any reservoir shall carry with it an interest in the reservoir and works appurtenant thereto of such proportion as the portion sold bears to the total capacity of the reservoir; and provided, further, that the water stored in any reservoir can not be used outside the boundaries of the state of Wyoming without special permit from the state engineer; and provided, further, that the state engineer may deny any use of water from any reservoir that would be detrimental to the public interest. (L. '21, c. 141, § 1.

36 Interstate
Madison River diversion

October 25, 1935

Mr. ALYSON E. SMITH, Secretary-Manager
Chamber of Commerce,
Idaho Falls, Idaho

Dear Mr. Smith:

We have your letter dated October 19, 1935, requesting information as to the handling of water that might be secured from the Montana Power Company for the Upper Snake River Valley, with reference to which you are advised that this project is as yet only in its preliminary stages, and as far as we know, no consideration has been given to the handling of any water that might be obtained from that source.

The filing by the Twin Falls Land and Water Company on the Montana River is considered merely as a promoter's dream and not taken seriously here.

Very truly yours,

Commissioner of Reclamation

RWF/mt

36 - Interstate
Madison River diversion

October 25, 1935

Mr. A. L. MERRILL,
Attorney,
Pocatello, Idaho

Dear Mr. Merrill:

I have your letter dated October 19, 1935, with reference to a filing recently made by the Twin Falls Land and Water Company on the waters of Madison River. As you may or may not know, the Twin Falls Land and Water Company is the original Carey Act company, which has been inactive for the last 25 or 30 years, and so far as I am aware, has no interests or land on which to apply water. The movement is looked upon here as a promoter's gesture and not taken at all seriously.

Very truly yours,

Commissioner of Reclamation

RWF/mt

Interstate

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UNITED STATES

DEPARTMENT OF THE INTERIOR

GEOLOGICAL SURVEY

Boise, Idaho, November 1, 1935.

Mr. R. W. Faris,
Commissioner of Reclamation,
Boise, Idaho.

Dear Mr. Faris:-

On the last visit to our station on Madison River near West Yellowstone a miscellaneous measurement was made on South Fork of Madison River at a point below the flow line of the Hebgen Reservoir. This is the larger stream entering from the south between our gaging station and the dam. Other streams representing a considerable drainage area enter from the north. It was thought that you would be interested in comparative flow at the regular station and in the South Fork.

Checked results of measurements follow:

Oct. 8 - Madison River near West Yellowstone - 299 second-feet
Oct. 8 - South Fork Madison River within
Hebgen Reservoir flow line ------- 94.5 second-feet

Very truly yours,

Thomas R. Newell

Thomas R. Newell,
District Engineer.

cc--W.G.Sloan

36-misc

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Idaho Falls, Idaho
November 4, 1935

Mr. R. W. Faris
Commissioner of Reclamation
Boise, Idaho.

Dear Mr. Faris:

I am returning herewith the copy of a report by Mr. Burritt, Wyoming State Engineer on the "Status of Water Rights, Jackson Lake Reservoir".

I suppose the U. S. Bureau of Reclamation will take any necessary steps to maintain their rights in Jackson Lake Reservoir.

The State Engineer of Wyoming has been rather touchy on the subject of Idaho water rights lately and his report on the Jackson Lake rights may have been inspired, in part at least, by two events that have occurred during the past year, - first, the users on lower Teton River in Idaho brought suit in the Wyoming Federal Court last spring to have the water rights adjudicated on certain tributaries of Teton River in Wyoming. There have been no hearings as yet but the Wyoming users are greatly exercised over the filing of this action.

Second,- In 1909 certain filings were made in the Wyoming State Engineers office for reservoirs on the Gros Ventre and other streams in the Jackson Hole country. No work was ever done but the filings have been kept alive through extensions of time having been granted by the Wyoming State Engineer. These filings are now owned by some promoters who, for the past year have been endeavoring to get various canal companies in Idaho to advance funds for the purchase of water rights in these contemplated reservoirs, which would merely store water that is now being stored at American Falls. I have advised various parties who have discussed the matter with me that we would not recognize any 1909 priority on water stored in new Wyoming reservoirs for Idaho use until such right had first been defined by decree of some court in Idaho.

The Wyoming State Engineer has taken the position that Wyoming can determine the date of priority right of any Wyoming stored waters to be used in Idaho, and that priorities so determined should be respected by the Idaho watermaster after the water enters Idaho.

Very truly yours,

Lynn Crandall

District Engineer.

cc: Elwood Mead
Washington, D.C.

36-misc.

November 9, 1935

Hon. JAMES R. BOTHWELL,
Twin Falls,
I d a h o

Dear Judge:

Pursuant to your request, we are enclosing herewith copy of a letter from Edwin Burritt, State Engineer of Wyoming, with a report on the status of water rights in Jackson Lake reservoir, together with a letter from Lynn Crandall with reference to the same.

Very truly yours,

Commissioner of Reclamation

RWF/mt
Enc.

36 - misc.

November 9, 1935

Mr. B. E. STOUTEMYER, District Counsel
U. S. Bureau of Reclamation,
603 Postoffice Building,
Portland, Oregon

Dear Mr. Stoutemyer:

We are enclosing herewith copy of a letter from Edwin Burritt, State Engineer of Wyoming, with a report on the status of water rights in Jackson Lake reservoir, together with a letter from Lynn Crandall with reference to the same.

Very truly yours,

Commissioner of Reclamation

RWF/mt
Enc.

36-misc

November 8, 1935

Mr. LYNN CRANDALL,
Watermaster,
Idaho Falls, Idaho

Dear Mr. Crandall:

We are enclosing herewith a letter, from State Engineer Burritt of Wyoming, with reference to proof of application of water from Jackson Lake upon land in Idaho.

I wish you would go over Mr. Burritt's communication and let me have your reaction with reference to it at your earliest convenience, returning the communication from him to me.

Very truly yours,

Commissioner of Reclamation

RWF/rg
Encl.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
603 Post Office Building
Portland, Oregon
November 11,1935

36-Misc.

Mr. R. W. Faris,
Commissioner of Reclamation,
Boise, Idaho.

Dear Mr. Faris:

We wish to thank you for your letter of November 9, enclosing copy of letter from Edwin Burritt, State Engineer of Wyoming, with report on the status of water rights in the Jackson Lake reservoir.

We had a communiation some little time ago from the Commissioner of this Bureau asking our advice on some of these matters and replied, under date of November 6. I am enclosing copy of our reply which gives our views in regard to the legal questions involved.

We would be very much interested to have any information which you can give as to just what the State Engineer of Wyoming hopes to gain for the State of Wyoming by urging this matter at the present time.

I am sending copy of this letter and enclosure to Mr. Crandall as I think he may be interested in this subject.

Very truly yours,

B. E. Stoutemyer

B. E. Stoutemyer
District Counsel

encl

cc (with encl) - Mr. Crandall

(copy)

Portland, Oregon, November 6, 1935

From District Counsel

To Commissioner

Subject: Water Priorities - Jackson Lake reservoir

1. A copy of letter from the State Engineer of Wyoming to the Attorney General of Wyoming, dated October 18, 1935, was received in this office. This correspondence relates to the subject of water filings in Wyoming in connection with the Jackson Lake reservoir. The State Engineer of Wyoming submits the matter to the Attorney General of Wyoming for his consideration with the recommendation that the Bureau of Reclamation and the water users obtaining the waters of Jackson Lake reservoir should be called upon to follow the laws of Wyoming as stated in Sec. 122-1601, Wyoming Revised Statutes of 1931, which requires a special permit from the State Engineer for the use of the waters stored in Jackson Lake reservoir. This section of the Wyoming law was passed by the legislature of Wyoming in 1921, and it also provides that the law should apply to reservoirs theretofore constructed as well as all reservoirs thereafter lawfully constructed.

2. We will await with interest the report of the Attorney General of Wyoming, although we do not see how any action taken in accordance with the State Engineer's present recommendation will have any effect upon the situation in view of the fact that the application of such stored water to beneficial use was accomplished long ago. And the Idaho courts have taken jurisdiction of the distribution and beneficial use of this water and have decreed the rights to the same.

3. All previous State Engineers of Wyoming have taken the position that they have no authority to issue such secondary permits. The Jackson Lake reservoir storage works were constructed under the approval of the proper Wyoming authorities and the Board of Control of that State has found "that the physical structure of the dam has been completed in accordance with the terms of the permits". This order was issued November 24, 1917 as a result of proofs of appropriation submitted by F. A. Banks under

Permits 894, 1903 Enl., 2185 Enl., 2894 Enl., and 2895 Enl. of the Jackson Lake reservoir. No certificates of completion were issued however by the board, and the order states: "The board at this time does not determine the right to store water in the Jackson Lake reservoir or the right to use water therefrom. The board orders that further action on these proofs be postponed".

4. As no certificates of completion were issued under our permits by the board, and as the various state engineers of Wyoming consistently held they had no jurisdiction to consider the granting of secondary permits for the application of the waters to beneficial use, we rest our claim against the State of Wyoming upon the fact that the water has actually been applied to beneficial use. This in itself would give a perfectly valid right to the Idaho appropriators even without a permit. The Supreme Court has held in Morris v. Bean, 221 U. S. 485, 55 L. ed. 821 and in Wyoming v. Colorado, 259 U. S. 419, 66 L. ed. 999, that water rights on interstate streams in two or more states, both of which recognize the doctrine of prior rights, will be recognized in the order of their priority regardless of state lines. We are also protected by the natural conditions which have existed in Wyoming and which make it impossible to use any considerable amount of this water in Wyoming.

5. The case in which the Idaho courts have decreed the rights to this stored water is Twin Falls Canal Company, a corporation, plaintiff v. Charles N. Foster et al., defendants, and in this case the court decrees as follows:

> "It is further ORDERED, ADJUDGED AND DECREED that the stored water of the Snake River now or hereafter stored in Lake Walcott Reservoir and Jackson Lake Reservoir, as at present constructed, is hereby awarded to the SECRETARY OF THE INTERIOR OF THE UNITED STATES and his successors in office, operating under the National Reclamation Act subject to such contracts as he may hereafter make for the delivery thereof; and unless otherwise provided by contract, shall be delivered to the Minidoka Project and canal system.
>
> It is further ORDERED, ADJUDGED AND DECREED that the stored waters from the proposed enlargement of Jackson Lake Reservoir shall when available be distributed as provided in the contract between the United States, the Kuhn Irrigation and Canal Company, and the Twin Falls Canal Company for the enlargement of said reservoir."

6. The Circuit Court of Appeals for the Eighth Circuit has decided that water rights from a reservoir in Wyoming, if used on lands in Idaho, are appurtenant to the lands in Idaho and therefore have their situs in that state notwithstanding the fact that the reservoir or controlling works are located in Wyoming. In the case of North Side Canal Company v. State Board of Equalization, 17 F. (2d) 55, the Circuit Court of Appeals held:

> "On the facts stated, settlers on lands in the two Carey Act projects acquired water rights for the irrigation of their lands. The right is said to be a right in a natural resource, hence classed as real estate. Wiel (3d Ed.) sec. 283. It is not land, but when used for irrigation it becomes appurtenant to the land to which it is applied, an incorporeal hereditament. An appurtenant thing is attached to and belongs to another thing as the principal thing. Harris v. Elliott, 10 Pet. 25, 9 L. Ed. 333. And its situs is the same as that of the principal thing."

and quoting from the decision of the Supreme Court of Wyoming, the Circuit Court of Appeals further stated:

> "Thus it seems that the doctrine is very general, in the States of the arid region, that a water right becomes appurtenant to the land upon which the water is used, and the ditch, waterpipe, or other conduit for the water becomes attached to the land, and necessary to its beneficial enjoyment, and therefore becomes part and parcel of the realty. * * * The appurtenance is subject to the same condition as the principal thing, subject to its liabilities and entitled to its exemptions."
>
> 17 Fed. (2d) 55, 60

and the conclusion of the court is as follows:

> "There has never been a severance of these water rights from the Idaho lands. There is no property or property right involved in these suits, except the right to continue to apply the impounded waters to the lands in Idaho to which they have become appurtenant. This right constitutes property - not personalty, but partaking of the nature of real estate - an

incorporeal hereditament with its situs in Idaho; and, in our judgment, it is not taxable in the State of Wyoming. Cooley on Taxation (4th Ed.) sec. 94; Wharton on the Conflict of Laws (3d Ed.) vol. 1, sec. 80a; Louisville, etc., Ferry Co. v. Kentucky, 188 U. S. 385, 23 S. Ct. 463, 47 L. ed. 513."

The reservoir in Wyoming referred to in the above case is the very same reservoir that we are discussing, namely, the Jackson Lake Reservoir.

7. In view of the above quoted decision, I do not see how an application for a secondary permit at this time can add anything to what are already vested and decreed rights to the use of stored water from Jackson Lake on lands in Idaho.

8. To the contrary, it seems to me that such an application might be construed as conceding that the State Engineer definitely has the right to control delivery of water, the rights to which the courts have decided are already fully vested. For that reason we are not in favor of making any such application for secondary permits unless we can be certain in advance that the application for such secondary permits will be granted without any restrictions or any attempt to postpone the priorities to any later date than the dates of the original filings for the construction of the reservoir.

- - -

B E STOUTEMYER

CC - Denver office
Burley "
Ashton "

Salt Lake City, Utah
November 16, 1935

Hon. C. Ben Ross
Governor, State of Idaho
Boise, Idaho

My dear Governor Ross:

The results to date of the investigations bearing on the diversion of Madison River waters from Hebgen Reservoir in Montana to Henry's Lake in Idaho are such that it is advisable to ascertain the measures that must be taken in order that Montana and its interests, particularly the Montana Power Company, may not object to the diversion of these waters.

Among the measures that have been suggested are the following:

(a) An outright payment to the Montana Power Company.

(b) Construction for the use of the power company of a steam power plant near its load center to enable lost power to be replaced.

(c) Raising of Canyon Ferry dam and reconstruction of the power plant now there, to enable replacement of power lost, by using the new storage capacity through the new plant and the old plants downstream.

(d) Construction of the Apex reservoir on Big Hole River to store unused flood waters, in part to offset Hebgen waters now used by the company and in part to enable irrigation development.

It is my feeling that the State of Idaho, as represented by yourself and your advisors, is in better position to carry on the necessary negotiations with Montana interests, than would be the Bureau of Reclamation, the personnel of which is, however, available to you if you feel the need of their assistance and advice.

What is needed is a concrete proposal, the cost of which, to Idaho interests, can be definitely ascertained. As Snake River interests are anxious to proceed with the formulation of a plan to augment their water supplies, an early conclusion of the negotiations will be highly desirable.

Very truly yours,

R. F. Walter
Chief Engineer

36 - C. Misc.

F. A. MILLER
COUNSELOR AND ATTORNEY-AT-LAW
~~ST. ANTHONY~~, IDAHO
REXBURG.

November 21, 1935.

Hon. R. W. Faris,
Commissioner of Reclamation,
Boise, Idaho.

Re: Teton Valley P & M Co vs Crandall et al.

My dear Mr. Faris:

Had written the Attorney General's office a letter which was in the mail before you called me yesterday. In it enclosed a copy of a letter had written to Mr. Stoutemyer of Portland.

Was very glad that your office called upon the Attorney General to file a demurrer for the defendants and further that you had called me regarding the case.

Have taken the matter up with Mr. Parker, the resident engineer for the Reclamation Department, at Ashton, who has made some measurements of the flow of water being used for the development of electrical energy and who also has made some computations on the flow of water that would be required to produce all the electrical energy that could be generated by the present equipment. Mr. Parker's figures to me indicate that less than 100 s. f. would be required to operate the present installation to its full capacity. He also gave me some measurements taken of the stream flow and the figures given are,

Teton river near power plant	303.1 sec. ft.
Teton river at damsite (reservoir)	207.9 sec. ft.
Inflow between	95.2 sec. ft.

He states that these measurements correspond closely to the beginning of the storage period.

On May 21, 1935, Mr. Attridge, for the department, made a rating of the tail race at the plant and found that 23.6 sec. ft. were being used. However, it was stated that this perhaps would not represent the maximum load.

I am writing Mr. Johanneson, attorney for plaintiff Power Plant today, and am enclosing you a copy of letter. We may be able to work out a settlement as you suggested over the telephone.

Yours very truly,

FAM/z

F. A. Miller.

36-e misc.

November 22, 1935

Re: Teton Valley Power & Milling Company
vs Lynn Crandall, et al

MR. F. A. MILLER
Attorney at Law,
Rexburg, Idaho

Dear Mr. Miller:

I have your letter, dated November 21, 1935, with reference to the action brought by the Teton Valley Power and Milling Company to have confirmed a water right from Teton River. I also have a copy of Mr. Parker's letter to Lynn Crandall on the same subject.

not filed m.s.

From the records of this office and my own knowledge, it seems certain that the milling company will be able to establish a right to the use of some water. I assume that the measure of the right would be the amount of water used by them during the past year, but this would be a very difficult matter to establish. From Mr. Parker's statement it would seem that we might safely conceed or confess a right equal to the amount of water necessary to operate the plant to maximum capacity. This could be arrived at very easily by measuring the amount of water passing through the wheels and taking the killowatt output of the generators off the switchboard at whatever load the generator happened to be carrying, which would give the efficiency of the plant and from which could be readily computed the amount of water necessary to operate to full capacity. It would be desirable to take the readings at the maximum load for the reason that the heavier the load the higher the efficiency of the plant would be. No doubt Mr. Parker has, in his organization, men who could qualify to make these determinations.

In your letter you speak of enclosing a copy of a letter to the Attorney General's Office and one to Mr. Stoutemyer but which you failed to enclose.

We want to cooperate with you in connection with this matter and assist in every way possible in reaching a satisfactory adjustment.

With kindest personal regards, I am

Very truly yours,

Commissioner of Reclamation

RWF/rg

COPY

F. A. MILLER
COUNSELOR AND ATTORNEY-AT-LAW
~~ST. ANTHONY~~, IDAHO
REXBURG

November 29, 1935.

Mr. Lynn Crandall,
Watermaster, District No. 36,
Idaho Falls, Idaho.

Dear Mr. Crandall,

Teton Valley, etc. vs. Crandall, et. al.

In reply to yours of the 27th inst. asking the status of the above action, have to say; A general demurrer was filed to the complaint by the attorney general--Mr. Bresnahan, assistant, on the part of all defendants named. Nothing additional has been filed.

No publication of the filing of the action and its purpose has been made, a necessary step in my judhment to confer jurisdiction.

Mr. Stoutemyer, district counsel, has suggested and has sent to me necessary pleading for filing asking removal ofthe action to the U. S. District Court. I have not filed the petition as it has seemed advisable to see what if anything may be determined between the parties.

The assistant attorney general, Mr. Bresnahan, has written that his office is in receipt of a communication from Mr. Johannesen, attotney for the company, that it would be agreeable that the matter stand until an engineer's report can be had. Mr. Johannesen has also written me to the same effect.

In a conversation with and a letter from Mr. Faris, Commissioner of Reclamation he has suggested an investigation and that perhaps it could be made through Mr. Parker's office. Would it not be well to ask Mr. Parker, resident engineer, to make such investigations and surveys as will be required to determine what flow of water has been actually put to beneficial use at the plant of the company. Your letter suggests such and in conversation with Mr. Parker am sure that he would do so upon proper suggestion.

Yours truly,

F. A. Miller

fam

November 30, 1935

Mr. R. F. Walter
Chief Engineer
United States Department of the Interior
Bureau of Reclamation
Salt Lake City, Utah

My dear Mr. Walter:

I received your letter of November 16, relative to the diversion of Madison River waters from Hebgen Reservoir in Montana to Henry's Lake in Idaho.

May I say we will attempt to carry out your suggestions and send a committee to Montana to meet with the Montana Power officials. I was especially pleased with your suggestion that your Department would cooperate with us in any way you could.

Thanking you for your keen interest in the upper Snake River Valley, I remain

Yours very truly,

C. Ben Ross
Governor

cbr dj

December 4, 1935

Honorable C. Ben Ross
Governor
State of Idaho
Boise, Idaho

Dear Governor Ross:

In your letter of November 30, you state that you will attempt to send a committee to Montana to meet with the Montana Power officials in the matter of the Madison River Diversion. In this connection, I wish to call your attention to the necessity of securing the approval of Montana State officials for any plan that may be offered. While the Montana Power Company may be found agreeable to some particular plan which would adequately meet the requirements of that company, such a plan may not be satisfactory to Montana State officials whose interests are likely to be broader than the interests of the Power Company.

In a few words, it is not only the legal rights of the Power Company that must be observed, but also the aspirations of Montana interests whose legal rights may not be invaded, but who nevertheless would have sufficient influence to defeat any plan which in their opinion is unsatisfactory from the standpoint of the interests of the state as a whole.

Very truly yours,

R. F. Walter
Chief Engineer

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.

COPY OF WESTERN UNION TELEGRAM

KHA286 82 DL-DENVER COLO 9 510P

C BEN ROSS GOVERNOR

BOISE IDAHO

RETEL NINTH REGARDING MADISON RIVER REPORT STOP COMPLETION OF REBORT HAS BEEN WITH-

HELD AWAITING INFORMATION REQUESTED IN MY LETTER NOVEMBER SIXTEENTH WHICH YOUR LETTER

OF NOVEMBER THIRTIETH AGREED TO SECURE STOP SEE ALSO MY LETTER OF DECEMBER FOURTH

STOP WE CAN FURNISH ESTIMATED COST OF TRANSMOUNTAIN TUNNEL BUT CANNOT STATE TOTAL PROJECT COST NOR ACRE FOOT COST FOR WATER SECURE UNTIL WE KNOW WHAT ADJUSTMENT THE POWER COMPANY WILL DEMAND IN PLACE OF HEBGEN RESERVOIR AND WHAT ADDITIONAL DEMANDS MONTANA WILL MAKE

WALTER RECLAMATION BUREAU
R F WALTER CHIEF ENGINEER

F. A. MILLER
COUNSELOR AND ATTORNEY-AT-LAW
ST. ANTHONY, IDAHO
REXBURG.

December 6, 1935.

Hon. R. W. Faris,
Commissioner of Reclamation,
Boise, Idaho,

My dear Mr. Faris:

You are, I am sure, aware of the fact that an appropriation of Four Million Dollars was made for the construction of a reservoir and related works on the Henry's Fork of Snake River and its tributaries, and perhaps know that Two Million Dollars of that amount was afterwards withdrawn.

Projects have been approved on the Henry's Fork and tributaries of Fall River that will cost approximately $1,750,000.00. This leaves of course a very small part of the remaining Two Million that remained in the fund.

A project has been approved on the Teton River in Teton County. The estimated cost of building it is $1,050,000. The contract that was entered into between the Irrigation District and the United States provided that the lands in Teton County would be included in the Fremont-Madison Irrigation District if a feasible site should be found on the Teton River. It also provided that some three thousand acres in Teton County, Wyoming, should be permitted storage space in any reservoir that might be erected on the Teton River.

It is needless for me to tell you the needs of the water users along the Teton River, and I was quite hopeful that by the building of a reservoir on that stream that we could overcome the unfortunate situation that now exists there, and which will ultimately lead to serious consequences before settlement I am afraid.

I am writing a letter to Dr. Mead, Commissioner of Reclamation, setting out briefly the situation.

In discussing the question with the Board of Directors of the Fremont-Madison Irrigation District and other influential men, we decided that you would be able to, and would, more forcably and authoritatively explain the situation on the Teton River from the fact that your office has had to bear the brunt of a condition almost impossible to cope with, better than any one else. Therefore, I am not only writing you as a personal wish, but as the wish of the members of the Board of Directors, and particularly that of Mr. H. G. Fuller, president, asking you to assist us in securing, if possible, the restoration of sufficient money to the fund that the reservoir on the Teton River may be constructed.

If there is any source that we should approach, or any thing else that we can do, we would like your advice and counsel in order that we may accomplish our purpose.

Hoping to hear from you soon, and with very kind personal regards, I remain,

Very truly yours,

FAM/z

A. L. WEBSTER, PRESIDENT — WHEELER [redacted]ARA, VICE PRESIDENT — DAVID W. KASSEN[redacted]CRETARY — L. J. HUGHES, TREASURER

North Side Water Users' Protective Association

INCORPORATED

DIRECTORS
A. L. WEBSTER, JEROME
THOMAS SMITH, JEROME
E. M. GREGG, JEROME
J. H. DAY, EDEN

WENDELL, IDAHO

DIRECTORS
L. J. HUGHES, WENDELL
H. J. CRATTERTON, HAGERMAN
FRITZ HANSTEN, BLISS
A. F. JAMES, ATTORNEY

Dec 7 '35

State Engineer
Boise Ida

Dear Sir: Several of my farmer neighbors have asked me to write you of the significance of the filing of the water in Hayden Lake by the Twin Falls Water Co. When the news became public, of the possibility of securing additional water to remedy the shortage of the upper Snake River projects, a wave of hope spread over the farmers. But this filing has caused a very grave doubt to arise. These farmers fear that what was thought to be public property has become a private ownership, and that this Utah Corporation can make whatever use of this water they deem best for their interests

Please advise us if this view is correct. Does the state through some disinterested body still have the right to allocate this new water supply?

L J Hughes Sec.

36-c misc
Irr. Upper Snake River Valley

December 13, 1935

Hon. ELWOOD MEAD,
U. S. Commissioner of Reclamation,
Washington, D. C.

Dear Doctor Mead:

Release No. 80 of the Federal Emergency Administration of Public Works, dated August 30, 1933, contained, among other things, the following:

> "Approval of the expenditure of $15,415,000 from the public works fund for construction work on fourteen irrigation projects was announced today by Public Works Administrator Harold L. Ickes.
>
> * * * * * * * * *
>
> "Idaho - Upper Snake River, storage, $4,000,000.00"

The question arose almost immediately as to the application of this fund, it being contended by some that it was limited entirely to the North Fork (Henrys Fork) of Snake River and by others that it was applicable to both the North Fork and the South Fork. A considerable amount of feeling was engendered, and later, as I understand it, two million dollars of this allocation was returned to the Public Works Administration and the remaining two million dollars held available to cover the cost of a reservoir or reservoirs on Henrys Forks and tributaries and other related works, -- though I understand some money out of the fund was used for investigations on the South Fork.

I now understand that projects have been approved on Henrys Fork and tributaries and on Fall River which will cost approximately $1,750,000.

I think you are aware that a very serious situation exists in Teton Basin, in Teton County, Idaho, and across the line, in Wyoming, on account of shortage of water for irrigation, which condition became so acute last year that the State was forced to send troops into that area to protect the Watermaster in the performance of his duties with reference to distribution and use of water. It was my understanding at the time the North Fork reservoir was authorized and the Fremont-Madison Irrigation District was formed, that the project would include the construction of a reservoir in Teton Basin, and the Teton Valley, including some 3,000 acres of land in Wyoming, would be included in the project, but when the district was finally organized this territory was not included. However, I have recently been advised that the contract between the irrigation district and the United States provides that the lands in Teton County might be included in the Fremont-Madison District

if and when a feasible reservoir site were found on Teton River.

I now understand that a site in the Teton Basin has been approved by your Department for the construction of a dam to form a reservoir having a capacity of something like 50,000 acre feet, at an estimated cost of something like $1,050,000.00.

If some means cannot be found to supply supplementary water for the Teton Valley, this well developed and most prosperous community will have to be abandoned. If means could be found to provide money for the construction of this reservoir it would be a complete solution of the water problem in the Teton Basin and adjacent territory, would relieve this critical and distressing situation, and being about harmony and cooperation among the people of the Upper Snake River Valley.

Trusting that you may see your way to cooperate with the people in the areas mentioned, and to bring about a solution of the vexatious and perplexing problem with which we are confronted, I am, with kindest personal regards,

Very truly yours,

Commissioner of Reclamation

RWF/mt

36-c misc
gen. Upper Snake River Valley

S December 13, 1935

Mr. F. A. MILLER,
Attorney,
Rexburg, Idaho

Dear Mr. Miller:

Enclosed herewith find copy of a letter that I have just written to Doctor Mead with reference to the Teton Basin situation. Please be assured that I want to cooperate with you and the people of the Upper Snake River Valley in every way possible looking to the betterment of conditions in that area.

With kindest personal regards to you all, I am

Very truly yours,

Commissioner of Reclamation

RWF/mt
Enc.

COPY

Emmett, Idaho
Dec. 13, 1935.

Hon. Mr. Ickes, Sec. Interior,
Washington, D.C.

My dear Mr. Ickes:

I am writing in regard to the Black Canyon Irrigation project, and I shall be honored if what I have to say receives your personal attention.

I note that you have held up work upon the project. It would be well if development were indefinitely postponed for several reasons.

First. We have too much land under cultivation now, producing surpluses we farmers cannot sell at cost of production.

2d. Farmers who may settle upon this land can not pay out the costs of applying water. Also there are very few people living now upon this land. They who did live on this land, gave up and moved away years ago. Their improvements have been moved away or gone to rack and ruin, and I doubt very much if the farmers themselves desire the development of this land. Then who do want the project put in? Real estate men, merchants living in towns adjacent to the project, and others who can make a few dollars out of the works but care nothing about the welfare of the poor devil who might undertake to develop some of the land and wring a livelihood out of it.

3d. The canal itself will ruin many farms, valuable fruit farms, in the Emmett Irrigation district through seepage. For example, the water table on my own land under our own small canal has raised 20 ft. in 16 yrs. What will happen when a canal carrying 10 times as much water is constructed above my land?

I know nothing about the amount of labor available for the construction of the canal, but I do have a fellow feeling for the poor fellow who undertakes to make a home upon this. I have seen too many failures and blasted hopes not to know what difficulties one will encounter.

I have lived in this valley for over 30 years and I believe I know what expenses this land will carry and leave a living.

I have served upon the board of directors of the Emmett Irrigation District for 14 years and feel that I am in touch with conditions of the farmer.

Yours respectfully,

/s/ W. Fred Harper
Pres. of the board of E.I.D.

36 - Interstate

December 14, 1935

Mr. L. J. HUGHES, Secretary
North Side Water Users Protective Assn.,
Wendell, Idaho

Dear Mr. Hughes:

We have your letter dated December 7, 1935, requesting information as to the status of the filing on the waters of Madison River by the Twin Falls Water Company, with reference to which you are advised that this filing or application for permit was not made by the Twin Falls Canal Company but by officers of the Twin Falls Land & Water Company, which was, as you know, the Construction Company on the South Side project. This filing is looked upon as a promoters' gesture and not considered seriously.

In the meantime, progress is being made looking toward securing the right to divert water from Hebgen Lake or the Madison River into Snake River Valley, which we sincerely hope may be successful.

Very truly yours,

Commissioner of Reclamation

RWF/mt

ADDRESS ALL COMMUNICATIONS TO
THE COMMISSIONER

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WASHINGTON

OFFICE OF THE COMMISSIONER

DEC 20 1935

Mr. R. W. Faris,
Commissioner of Reclamation,
Boise, Idaho.

My dear Mr. Faris:

I find your letter of December 13 waiting for me upon my return from a trip to Texas. You discuss the conditions on the Upper Snake River Valley and the need for a supplemental water supply, particularly in the Teton Basin.

As you know, $2,000,000 was withdrawn from the original allocation for the Upper Snake River Storage and the press release which you quote is not entirely accurate, in that the total of $4,000,000 is no longer available.

While the investigations have revealed that a satisfactory site appears to exist on the Teton River in Wyoming, there is no assurance that this can be constructed with the available funds, and there is the further complication that the storage will not be within the State of Idaho. These matters are receiving study and you may be sure that this Bureau is anxious to obtain the best utilization of the water resources of the Upper Snake River which can possibly be worked out.

Very truly yours,

Elwood Mead

Commissioner.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION
WASHINGTON

OFFICE OF THE COMMISSIONER

3 6 - e misc
upper snake R. Valley

DEC 21 1935

Mr. W. Fred Harper,
President, Emmett Irrigation District,
Emmett, Idaho.

My dear Mr. Harper:

Your letter of December 13, 1935 to the Secretary of the Interior has been referred to this Bureau for reply.

The objections you present to further irrigation development are not in agreement with the statements of many local residents who, for the last ten years, have been urging the Bureau to build this canal. I have no doubt both sides are sincere, but I am sure that if the canal is not built there will be many heart breaks among those who for years have longed and worked to get water for their land.

I want to do the just and right thing. To help find out what it is, I am sending copies of your letter to Mr. Newell, Construction Engineer of the project, and two others, asking them what crops can be successfully grown and if Idaho has reached the limit of profitable growth.

Very truly yours,

Elwood Mead

Commissioner.

Copy to R. W. Faris,
State Engineer

— Dist # 36 Monthly Deliveries —

Canal	Month	24 Hr. S.F.
Burgess	May first	11487
	July	26407
	Aug.	24234
	Sept.	14356
	Sept. last	11962
Total Season		88446
Island	May first	986
	June	4362
	July	4679
	Aug.	2183
	Sept.	1999
Total "		14209
Harrison	May first	2550
	June	14429
	July	13792
	Aug.	6140
	Sept.	3484
Total "		40395
Season Total		143050

Dist # 36. Monthly Deliveries. 1935 (24 Hr. S.F.)

Canal	May	June	July	Aug.	Sept.	Season Totals
Burgess	11487	26407	24234	14356	11962	(10741) * 88446
Island	986	4362	4679	2183	1999	* (5891) 14209
Harrison	2550	14429	13792	6140	3484	* (7023) 40395
						143050
Group Totals	15023	45198	42705	22679	17445	

Plats * 6, 7, 8, 9, 10,

* (storage)

Dist 36 E

R. 34 E.

R. 35 E.

R. 36 E.

T. 1 S.

T. 2 S.

T. 3 S.

T. 4 S.

T. 5 S.

T. 6 S.

T. 7 S.

T. 8 S.

R. 33 E.

R. 31 E.

R. 32 E.

R. 30 E.

O. S. L. R. R.

Moreland

Riverside

Blackfoot

Blackfoot River

36 E

SNAKE RIVER

American Falls

D-68.

Blaine Co

Power Co

Dist. 32

AM. FALLS CANAL CO.

File 36 – B

9-211 c DEPARTMENT OF THE INTERIOR—GEOLOGICAL SURVEY—WATER RESOURCES BRANCH File Number

Daily discharge, in second-feet, of NO. SIDE TWIN FALLS CANAL at MILNER, IDAHO *, for the year ending September 30, 19* 35

Plate No. 40

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	395	367	90	497	409	389	0	154	2240	2340	2490	1620
2	401	361	86	509	409	392	0	362	2260	2300	2510	1610
3	404	762	86	518	406	386	7	546	2330	2250	2460	1590
4	404	1010	86	528	404	389	24	607	2330	2260	2320	1580
5	406	1030	86	534	418	386	25	728	2340	2310	2030	1580
6	409	1050	86	512	436	392	25	954	2360	2270	1940	1500
7	404	1050	86	490	430	395	25	1100	2350	2290	1880	1500
8	406	419	86	487	424	383	22	1320	2380	2300	1810	1490
9	545	75	81	481	424	378	20	1640	2420	2360	1790	993
10	543	113	85	484	424	358	19	1680	2440	2400	1760	0
11	442	109	80	481	424	348	19	1780	2460	2440	1840	0
12	395	94	80	484	421	316	19	1840	2470	2410	1840	0
13	392	103	80	484	418	308	19	1840	2500	2460	1800	0
14	406	101	80	481	412	303	19	1840	2510	2480	1800	0
15	167	101	80	487	415	289	6	1840	2530	2520	1870	1030
16	0	106	77	487	412	415	0	1960	2550	2510	1840	1840
17	0	99	82	484	412	466	0	2080	2540	2560	1790	1840
18	0	91	83	487	412	442	0	2130	2590	2600	1780	1830
19	0	108	87	500	412	421	0	2220	2520	2540	1790	1790
20	0	643	88	490	415	386	0	2260	2510	2480	1760	1760
21	0	902	90	497	415	329	0	2200	2540	2510	1750	1740
22	0	837	85	506	415	75	0	2190	2470	2520	1740	1720
23	0	392	85	512	401	31	0	2200	2380	2520	1160	1700
24	0	139	85	503	398	37	67	2320	2370	2520	0	1650
25	0	88	87	475	398	42	154	2350	2410	2500	0	1090
26	0	83	547	472	389	44	154	2420	2400	2500	0	0
27	0	86	773	469	392	50	149	2470	2360	2500	0	0
28	0	96	677	460	386	51	147	2510	2360	2500	1170	0
29	0	103	540	445		10	149	2520	2310	2570	1710	0
30	180	101	506	427		0	151	2540	2340	2550	1650	0
31	369		481	409		0		2410		2550	1600	
Mean	215	354	182	486	412	265	40.7	1,775	2,419	2,446	1,609	1,048
Acre-Feet	13,230	21,060	11,170	29,910	22,870	16,290	2,420	109,100	143,900	150,400	98,940	62,390

U. S. GOVERNMENT PRINTING OFFICE: 1929 6—7149

YEAR OR PERIOD MEAN 942

ACRE-FEET 681,700

9-211 c

DEPARTMENT OF THE INTERIOR—GEOLOGICAL SURVEY—WATER RESOURCES BRANCH

File Number _____

Daily discharge, in second-feet, of SOUTH SIDE TWIN FALLS CANAL at MILNER, IDAHO *, for the year ending September 30, 19* 35

Plate No. 41

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	1680	832	559	598	509	473	501	1440	2760	3040	3380	3420
2	1670	822	562	616	506	476	498	1330	2800	3040	3410	3420
3	1690	378	562	622	504	478	495	1570	2940	3020	3380	3390
4	1680	106	565	628	498	481	498	1740	2970	3020	3350	3340
5	1670	106	565	634	495	481	504	1870	2950	3070	3360	3300
6	1600	109	565	640	492	481	504	2210	2880	3060	3350	3320
7	1590	311	565	619	492	476	249	2630	2930	3120	3340	3290
8	1510	694	565	604	492	478	119	2640	3010	3100	3340	3270
9	1580	616	562	601	478	478	123	2510	3000	3160	3330	3200
10	1480	637	562	604	460	484	114	2470	2850	3210	3380	3140
11	1550	637	565	604	460	484	175	2560	2880	3300	3440	3000
12	1520	634	570	604	457	481	367	2800	3060	3280	3460	2930
13	1510	598	575	604	460	484	454	2980	3120	3240	3440	2910
14	1570	598	580	604	462	487	467	2970	3110	3260	3450	2890
15	1540	634	590	595	465	481	467	3020	3130	3280	3450	2890
16	1470	637	595	590	465	478	470	3020	3150	3360	3480	2840
17	1360	595	601	580	462	484	467	3000	3130	3420	3480	2790
18	1250	544	595	580	465	476	481	3020	3110	3400	3450	2650
19	1210	538	610	580	465	476	553	3080	3030	3400	3460	2570
20	1140	529	619	580	467	484	592	3070	3020	3400	3440	2460
21	1100	498	613	580	467	490	613	3060	3050	3400	3420	2330
22	1070	504	604	580	470	492	662	3070	3020	3400	3420	2290
23	1040	512	607	580	470	484	631	3040	2970	3390	3440	2190
24	1000	515	610	579	470	490	559	3070	3000	3390	3420	2070
25	903	515	604	579	470	501	625	3110	3060	3390	3420	1960
26	865	544	604	575	467	501	777	3150	3030	3420	3420	1940
27	848	568	604	574	470	501	1070	3190	2980	3430	3420	1800
28	838	571	601	574	470	498	1710	3250	2970	3410	3430	1540
29	828	565	604	574		504	1800	3210	2970	3460	3410	1440
30	828	562	619	565		501	1670	3110	3020	3420	3420	1440
31	832		592	523		501		2870		3420	3410	
MEAN	1,297	530	587	595	475	486	607	2,712	2,997	3,261	3,415	2,667
ACRE-FEET	79,780	31,540	36,080	36,440	26,400	29,880	36,120	166,700	178,300	201,700	209,900	158,700

U. S. GOVERNMENT PRINTING OFFICE 16—7140

YEAR OR PERIOD: MEAN 1,646

ACRE-FEET 1,192,900

9-211 c

DEPARTMENT OF THE INTERIOR—GEOLOGICAL SURVEY—WATER RESOURCES BRANCH

File Number _____

Daily discharge, in second-feet, of SNAKE RIVER at MILNER, IDAHO *, for the year ending September 30, 19* 35

Plate No. 42

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	283	5	248	370	356	204	101	10	8	7	9	204
2	278	5	301	378	310	208	73	15	8	7	11	204
3	280	6	296	384	401	208	20	16	7	7	12	202
4	278	6	315	392	384	210	6	12	7	7	11	206
5	283	7	356	401	372	208	7	10	7	8	11	206
6	283	7	345	404	367	210	8	11	8	7	11	268
7	280	7	336	392	328	210	9	12	8	7	11	331
8	260	7	356	384	312	206	9	12	8	8	11	331
9	198	7	350	381	312	210	9	11	7	8	11	320
10	189	7	353	381	301	210	9	9	7	8	10	301
11	165	6	356	381	301	210	10	10	8	8	9	304
12	87	6	361	381	273	210	10	10	8	8	9	307
13	85	38	358	375	208	210	10	10	8	8	9	307
14	85	224	364	372	202	210	14	10	8	8	11	310
15	90	246	372	378	204	198	34	9	52	9	10	315
16	92	251	370	372	204	57	23	9	193	9	8	304
17	84	251	356	370	204	4	11	9	191	9	53	304
18	84	251	364	372	204	4	12	9	155	11	200	301
19	85	251	372	381	204	4	12	10	150	12	206	301
20	87	251	372	367	204	4	9	11	135	10	206	278
21	87	251	378	384	204	4	7	10	90	10	206	251
22	87	251	378	390	204	4	7	9	97	10	206	251
23	87	246	384	395	204	91	7	8	70	9	210	251
24	87	246	381	398	204	140	7	8	8	9	206	251
25	87	246	378	401	204	140	7	8	7	10	202	256
26	89	239	378	395	206	138	7	8	7	10	206	251
27	85	239	378	395	206	140	6	7	7	9	208	251
28	85	237	378	392	206	140	6	8	7	9	208	251
29	85	235	372	392		140	7	8	7	10	206	251
30	34	239	370	387		133	8	8	7	10	206	263
31	6		364	390		99		9		10	204	
MEAN	141	142	356	385	260	141	15.5	9.87	43.0	8.77	99.9	271
ACRE-FEET	8,680	8,470	21,900	23,670	14,460	8,660	922	607	2,559	540	6143	16,130

U. S. GOVERNMENT PRINTING OFFICE: 1929 6—7149

YEAR MEAN 156

ACRE-FEET 112,700

9-211 c DEPARTMENT OF THE INTERIOR—GEOLOGICAL SURVEY—WATER RESOURCES BRANCH File Number _____

Daily discharge, in second-feet, of HENRYS FORK near LAKE, IDAHO *, for the year ending September 30, 19* 35

Plate No 44

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	12										349	43
2	10										341	39
3											314	38
4										39	256	37
5											232	34
6											151	54
7											111	44
8										67	112	37
9										101	109	30
10										101	109	27
11										186	109	23
12										211	103	25
13										209	101	25
14									2	209	86	23
15										222	86	22
16										260	75	21
17										256	65	23
18										258	55	23
19										260	43	23
20										261	72	23
21										261	63	23
22										260	57	23
23										261	56	23
24										261	59	31
25								2		261	57	31
26										314	57	48
27										330	53	47
28										326	52	29
29										332	52	26
30									20	330	44	13
31										343	47	
MEAN									2.6	198	112	30.3
ACRE-FEET									155	12,200	6,890	1,800

U. S. GOVERNMENT PRINTING OFFICE: 1929 6—7149

YEAR OR PERIOD MEAN _____ ACRE-FEET _____

9-211 c

DEPARTMENT OF THE INTERIOR—GEOLOGICAL SURVEY—WATER RESOURCES BRANCH

File Number

Daily discharge, in second-feet, of HENRY'S FORK NEAR ISLAND PARK, IDAHO *, for the year ending September 30, 19* 35

Plate No. 45

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	332	312	304			276	268	570	814	491	655	403
2	329	311	304		310	266	271	588	788	491	660	400
3	327	310	336			266	272	515	777	491	660	400
4	325	316		310	330	266	274	515	772	487	637	400
5	323	323			310	266	275	588	762	483	592	396
6	322	329			310	267	276	646	767	480	571	393
7	322	326			310	269	280	725	767	491	506	396
8	322	322		310	310	270	283	872	772	506	480	396
9	322	322	310	308	310	272	287	963	772	498	476	393
10	319	322		307	310	273	282	1180	757	494	465	390
11	316	322		305	310	275	276	1340	747	537	458	390
12	313	322		304	310	276	287	1290	737	571	458	387
13	310	322		304	310	276	298	1080	722	571	454	381
14	314	319		304	310	276	304	963	698	571	447	374
15	318	316		304	310	276	310	777	655	588	440	374
16	322	313			310	276	335	777	614	623	440	374
17	322	310			306	276	322	783	592	614	430	374
18	322	314	310		302	276	322	798	571	614	430	374
19	322	318	310		298	276	335	798	554	610	426	374
20	322	322	310		298	274	360	798	550	614	419	374
21	322	318	310	307	298	271	388	798	533	614	436	374
22	322	314	310		298	268	570	830	525	614	447	374
23	322	309	310		298	266	515	873	521	610	444	387
24	324	304	310		294	269	432	873	514	610	444	384
25	326	306	310		290	273	417	862	498	601	436	378
26	328	308	310		286	276	449	868	487	601	436	378
27	329	310	310		283	272	515	862	483	632	430	387
28	325	310	310		280	269	515	835	483	651	426	384
29	320	310	310	310		268	515	793	487	646	423	381
30	316	307	310	310		266	570	798	480	651	413	381
31	314		310	310		266		830		651	403	
MEAN	322	316	310	308	304	271	360	832	640	571	479	385
ACRE-FEET	19820	18780	19090	18920	16880	16680	21430	51150	38080	35120	29440	22910

U. S. GOVERNMENT PRINTING OFFICE: 1929 6—7140

YEAR OR PERIOD MEAN 426

ACRE-FEET 308,300

9-211 c

DEPARTMENT OF THE INTERIOR—GEOLOGICAL SURVEY—WATER RESOURCES BRANCH

File Number

Daily discharge, in second-feet, of HENRYS FORK near ASHTON, IDAHO *, for the year ending September 30, 19* 35

Plate No 47

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	778	874	1030	714	854	921	812	1690	1810	1070	1260	975
2	778	886	887	879	792	887	819	1650	2000	1050	1280	949
3	778	923	830	757	799	799	819	1450	1740	1050	1280	936
4	814	936	830	828	834	865	867	1460	1700	1050	1280	949
5	826	874	832	828	826	802	919	1650	1690	1040	1260	1090
6	838	910	797	864	879	823	875	1850	1620	1050	1160	1200
7	838	862	865	937	879	823	812	1920	1650	1070	1150	1230
8	826	862	839	878	879	846	889	1910	1630	1070	1010	1110
9	862	862	797	891	854	818	906	1960	1620	1070	949	1050
10	862	862	797	826	799	787	839	2160	1620	1070	949	1180
11	838	850	791	826	708	854	872	2450	1530	1050	1010	1200
12	838	862	730	882	753	874	863	2350	1600	1070	988	1200
13	862	862	759	741	783	834	780	2080	1550	1130	988	1190
14	862	862	980	799	862	842	988	1910	1500	1180	1010	1130
15	886	862	920	831	799	850	1000	1890	1430	1180	988	1120
16	862	850	899	938	862	930	1070	1830	1350	1180	988	1070
17	874	862	867	726	776	858	1080	1890	1250	1230	988	1030
18	874	898	834	574	844	862	1070	1960	1250	1280	1010	1040
19	923	923	825	879	795	873	1070	1980	1220	1350	1000	1030
20	936	898	842	494	867	792	1200	1920	1190	1350	988	988
21	886	886	876	560	879	854	1450	1940	1200	1350	975	975
22	874	886	845	843	823	871	1580	1980	1160	1310	1000	988
23	886	874	817	934	879	884	1580	2040	1120	1320	1010	1000
24	886	862	757	979	654	831	1340	2140	1130	1250	1080	988
25	949	874	845	934	788	831	1230	2020	1090	1230	1000	949
26	874	898	845	884	574	827	1290	1910	1070	1220	1000	936
27	874	886	828	851	966	812	1480	1960	1070	1200	1000	936
28	874	874	912	854	887	785	1530	1960	1050	1250	1000	949
29	874	838	862	871		887	1510	1790	1040	1250	988	962
30	874	874	784	838		831	1810	1650	1040	1260	975	962
31	862		706	823		827		1780		1260	962	
MEAN	860	878	840	821	818	845	1,112	1,907	1,397	1,177	1,049	1,044
ACRE-FEET	52,900	52,230	51,640	50,500	45,410	51,930	66,150	117,300	83,150	72,380	64,510	62,110

U. S. GOVERNMENT PRINTING OFFICE: 1929 6—7149

YEAR MEAN 1,064

OR BASED ACRE-FEET 770,210

9-211 c DEPARTMENT OF THE INTERIOR—UNITED STATES GEOLOGICAL SURVEY—WATER RESOURCES BRANCH File Number _____

Daily discharge, in second-feet, of FALL RIVER near SQUIRREL, IDAHO *, for the year ending September 30, 19* 35

Plate No. 50

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1	340	318	358	350		318	340	840	2200	890	606	502
2	329	346	358	352		318	329	870	2940	850	456	502
3	329	358	350	352	330	364	329	738	2060	850	456	502
4	329	376		352		329	376	850	1920	792	449	486
5	318	329		352	332	296	352	990	1920	747	449	486
6	307	329		340		329	329	1260	2170	693	442	486
7	318	340		340		329	329	1240	2110	702	442	486
8	376	340			330	285	340	1620	2490	630	574	486
9	340	329				215	340	1570	2670	614	566	486
10	324	329	340	340	318	275	340	1750	2700	765	558	486
11	318	329			285	318	352	1720	2640	729	558	478
12	318	318			285	352	352	1620	2700	729	550	478
13	312	312		346	340	296	414	1310	2850	747	550	478
14	318	307		318	340	296	428	1220	2850	729	550	478
15	329	307	350	320	352	352	486	1140	2280	693	550	502
16	340	307		320	275	364	614	1290	2180	657	550	486
17	318	307		329	285	352	526	1750	1710	711	542	486
18	329	376	364	307	318	352	566	1620	1530	675	542	478
19	388	364	364	318	329	340	598	1590	1620	566	574	478
20	340	364	364		340	340	666	1590	1650	550	550	470
21	340	352			352	340	684	1670	1620	534	550	463
22	340	340			352	352	702	1920	1680	518	550	463
23	340	329			352	340	738	1970	1710	630	558	478
24	352	307	350		296	340	598	2030	1610	630	550	566
25	414	318		325	275	340	598	2230	1260	630	550	486
26	376	329			352	352	648	2030	1180	630	550	478
27	364	352	352		245	352	756	2110	1090	614	542	470
28	329	352	352		364	340	756	1810	1090	598	518	470
29	318	364	352			340	792	1810	1180	598	510	463
30	307	364	352			340	870	1750	1060	598	510	463
31	307		350			340		1950		606	502	
Mean	336	336	350	332	322	329	518	1544	1956	674	529	484
Acre-Feet	20,640	20,020	21,490	20,420	17,900	20,220	30,840	94,920	116,400	41,460	32,540	28,800

GOVERNMENT PRINTING OFFICE 16-27141

YEAR MEAN 643

~~PERIOD~~ ACRE-FEET 465,600

9-211 c

DEPARTMENT OF THE INTERIOR—GEOLOGICAL SURVEY—WATER RESOURCES BRANCH

File Number _____

Daily discharge, in second-feet, of PORTNEUF RIVER at POCATELLO, IDAHO *, for the year ending September 30, 19* 35

Plate No. 54

Day	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.
1		76	177	159	186	225	322	322	197	43	30	50
2		80	173	173	188	237	300	311	186	49	27	48
3		81	184	206	188	260	280	260	180	44	27	41
4	84	82	186	240	188	280	290	231	159	42	28	43
5		85	184	235	189	270	311	216	140	40	32	43
6		84	173	197	195	246	322	216	119	37	32	43
7		79	171	204	214	237	322	220	98	38	31	47
8	77	77	152	206	260	239	311	222	82	41	28	48
9	73	80	154	197	290	233		223	77	40	31	53
10	75	75	168	197	280	223		227	90	36	26	57
11	72	74	175	197	227	223		239	80	35	27	56
12	70	74	173	199	216	225		222		32	31	55
13	72	74	170	191	216	227		216	70	34	28	52
14	73	74	197	184	216	260		208		37	30	55
15	74	74	206	189	206	322	375	197	59	37	32	52
16	74	73	216	191	199	384		193	69	36	37	49
17	78	73	218	193	193	395		204	67	36	40	50
18	81	77	201	191	195	332		240	65	40	42	43
19		89	195		199	300		235	63	43	47	55
20		100	204		206	290		231	59	50	47	57
21	82	94	227		223	280		218	55	54	45	61
22		88	244		240	280	438	210		54	42	58
23		90	248		270	270	438	212		53	43	61
24	84	94	227		260	270	406	212		52	48	69
25	82	93	216	180	223	260	364	197	47	52	49	70
26	79	97	208		212	280	311	184		49	49	70
27	77	118	202		218	342	300	180		48	53	67
28	76	135	201		218	322	311	193		41	39	68
29	76	162	201			300	300	199	39	37	54	63
30	76	164	201			300	280	204	41	32	54	62
31	75		188			311		201		31	52	
MEAN	78.8	90.5	195	190	218	278	349	221	82.1	41.7	38.1	54.9
ACRE-FEET	4,840	5,390	11,980	11,680	12,150	17,100	20,790	13,570	4,890	2,560	2,340	3,260

U. S. GOVERNMENT PRINTING OFFICE: 1926 6—7149

YEAR MEAN 153

ACRE-FEET 110,530