BUREAU OF WATER RESOURCES
WATER APPROPRIATIONS
CAREY ACT DEVELOPMENT

D. W. DAVIS, GOVERNOR

STATE OF IDAHO

DEPARTMENT OF RECLAMATION

W. G. SWENDSEN, COMMISSIONER

BOISE

April 22, 1922

In Re: Water District No. 36

Honorable D. W. Davis,
Governor of Idaho,
Capitol Building,
Boise, Idaho

Dear Governor:

It is my pleasure to submit herewith for your consideration a report of this department covering the administration of the waters of Snake River and its distribution in Water District No. 36 for the year 1921.

This work was performed under the direction and supervision of Mr. G. Clyde Baldwin, acting as Special Deputy to distribute stored water and as Special Deputy Commissioner of Reclamation, representing this department in the said district. Mr. John Empey, the duly elected watermaster in District No. 36 served throughout the year under the direction of this department and the Special Deputy.

No effort has been made to embody in this report all of the vast detailed data collected during the year, but only such information and records as will likely be of value to the general public and the State in future years, are contained herein. This report is prepared in the same general form as the reports of 1919 and 1920 and because of the demonstrated value to the State and because of the useful reference made to these reports in various matters affecting water distribution and water rights, I am sure the time, effort and expense in compiling these data is well worth while.

On Page 15 under the heading "Permanent Transfers" this report calls attention to the tendency to barter decreed water rights in the same way as other commodities, and this matter is again referred to under the heading, "Recommendations" on Page 40. Under the last mentioned heading you will find suggestions regarding desirable changes in our irrigation laws

to eliminate the evil growing out of the permanent transfers of decreed water rights and also regarding the almost absolute necessity for statutory amendments relating to the payment of watermasters and expense of distribution service.

It is my purpose to more specifically outline these recommendations along with other legislation in the biennial report of this department.

It is not my purpose to specifically refer to the many individuals, associations, and companies to whom the department is indebted for assistance and cooperation in distributing the water in this very important district during the year, but it is a pleasure to express a keen appreciation of their splendid assistance.

Because of the numerous intricate problems involved in the water distribution of the Snake River, the highest standard of technical skill, ability and practical judgment is necessary and essential to a proper service, and the splendid results obtained is an evidence of the qualifications, untiring efforts and ability of Mr. Baldwin, the Deputy Commissioner.

I should be exceedingly ungrateful if I failed to recognize the splendid service rendered by Mr John Empey, the watermaster in this district, the other members of the distribution organization, and especially your valuable counsel and advice.

Very truly yours,

Commissioner of Reclamation

BUREAU OF WATER RESOURCES
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W. DAVIS, GOVERNOR

STATE OF IDAHO
DEPARTMENT OF RECLAMATION

W. G. SWENDSEN, COMMISSIONER
BOISE

Idaho Falls, Idaho,
April 15, 1922.

Mr. W. G. Swendsen,
Commissioner of Reclamation,
Boise, Idaho.

Dear Sir:-

There is submitted herewith the technical report covering water distribution and hydrometric operations in Water District No. 36 for the irrigation season of 1921.

U. S. Geological Survey methods have been used throughout as a standard for the collection and compilation of hydrometric data. Most of the latter which are contained herein have been recomputed since the close of the irrigation season, and in this, as well as in other respects, the report is similar to and consistent with reports for the two preceding years.

Special acknowledgments are due to the Idaho Irrigation District and the Utah Power & Light Company for gage readings and to the Aberdeen-Springfield Canal Company, Mr. D. G. Martin, the U. S. Reclamation Service, the Twin Falls Canal Company and the North Side Canal Company, Ltd., for gage readings, results of current meter measurements and other data which were furnished without charge.

Money was again advanced by the Water Users' Protector Association of the North Fork of Snake River and Tributaries, the Farmers' Protective Irrigation Association, the Twin Falls Canal Company and the North Side Canal Company, Ltd., to create the so-called Normal Flow Fund, through which the prompt payment of all expenses incident to the distribution of normal flow was made possible.

The advice and assistance given throughout the season by Messrs. J. R. Thomson, D. H. Blossom and F. A. Banks, members of the water users' Advisory Committee, was very much appreciated.

Much credit should be given to Water Master John Empey, to each of the hydrographers and to the other members of the distribution personnel for the conscientious manner in which their duties were performed and for the willing assistance and hearty cooperation which they so freely rendered.

For valued assistance in the preparation of this report acknowledgment is accorded to Thomas R. Newell, to C. A. McClelland and to Mrs. Edith M. Care.

Respectfully yours,

W. Clyde Baldwin

Special Deputy.

WATER DISTRIBUTION AND HYDROMETRIC WORK

In District No. 36

1921

By G. Clyde Baldwin

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PREFACE.

The primary purpose of this report is to present a complete record of the distribution of water within District No. 36 during the irrigation season of 1921. This has entailed the collection and preparation of many hydrometric records. Some of these are of especial value only because of their application to distribution problems, while a part are of more general interest.

Prior to 1919 much of the general hydrometric work, at river stations in particular, was performed by the U. S. Geological Survey. The data obtained in this way were of course available and were utilized by the distribution organization, which at that time was only in existence for a few months each summer. Under this system while duplication of work could be largely avoided, delay or lost motion and lack of coordination were inevitable.

Early in 1919 the distribution personnel was reorganized with provision made for a part to continue upon a permanent or all year basis. In this reorganization, which has since been effective, I was selected to fill the position of Special Deputy State Commissioner of Reclamation, while at the same time retaining my status as Hydraulic Engineer in the U. S. Geological Survey. In this way it became possible to handle all hydrometric work as well as water distribution with a single organization. A joint Geological Survey and State office was established in the Federal Building at Idaho Falls and has since been maintained as headquarters for both classes of work.

This arrangement eliminates the delay and expense of duplicating data and forwarding it from one office to another, permits field work to be planned and carried out to the best advantage, insures uniformity of methods and undoubtedly results in some reduction of total expenditures.

Care has of course been used in the segregation of all expenses, Federal and State Cooperative funds have been used for hydrometric work of general interest and value, while data which is chiefly of use in connection with distribution has been paid for by water users. Special hydrometric data have also been collected and compiled for and at the expense of the U. S. Indian Service.

A summary and segregation of expenditures is contained in the body of this report (pages 42-46), but it seems desirable to make this brief explanation in advance for the benefit of readers who may not be thoroughly familiar with the present procedure.

Acknowledgments are due to the U. S. Geological Survey and to the State of Idaho for financial and other assistance rendered in accordance with the above outlined plan.

G. Clyde Baldwin.

INTRODUCTION.

The general plan of operation under which water distribution and hydrometric work were carried on in Water District No. 36 during the season of 1921 was almost identical with that followed during 1920, which in turn differed but little from that adopted for 1919. Detailed explanation of this plan is contained in the report of the Special Deputy State Commissioner of Reclamation for the season of 1919*; While modifications which became effective during 1920 are described in the Special Deputy's report for that year**.

The contract between the stored water users and the State of Idaho which was executed on May 1, 1919, to define the portion of the total river expense which would be paid by the former, covered the two years ending April 30, 1921. Since a new contract would be necessary prior to the beginning of the 1921 distribution period the Special Deputy asked the directors of the Water Users' Protector Association of the North Fork of Snake River and Tributaries, the direcotors of the Farmers' Protective Irrigation Association and representatives of each of the large canal systems located below American Falls, Idaho, to meet at Idaho Falls on February 3, 1921, for the purpose of discussing a budget for future river operations and agreeing upon a basis for the negotiation of a new contract between the stored water users and the State.

The minutes of this meeting are as follows:

*Water Distribution and Hydrometric Work in District No. 36, 1919
by G. Clyde Baldwin.
**Water Distribution and Hydrometric Work in District No. 36, 1920
by G. Clyde Baldwin.

MINUTES OF MEETING HELD IN THE NEW COURT HOUSE
AT IDAHO FALLS, IDAHO, ON FEBRUARY 3, 1921.

"This meeting was presided over by F. A. Banks and John Lee was chosen secretary.

The following men were present:

J. C. Wheelon, Twin Falls; Eph Peterson, Rexburg; P. J. Davis, Idaho Falls; F. A. Banks, American Falls; John Pincock, Sugar City; George Pincock, Sugar City; John E. Kelley, Shelley; Chas. E. Anderson, Idaho Falls; John Wilcox, St. Anthony; Barry Dibble, American Falls; John Empey, Idaho Falls; Geo. Harrigfeld, Ashton; H. G. Fuller, Ashton; C. W. Foster, Heyburn; H. W. Hurlebaus, Jerome and John Lee, Idaho Falls.

Mr. Baldwin stated that the Executive Committee appointed by Mr. Swendsen to represent the various interests in the valley consisted of Mr. J. H. Thomson, Mr. D. H. Blossom and Mr. F. A. Banks.

It was stated by Mr. Baldwin that it was necessary to call a meeting at this time to decide upon a budget for the ensuing year and the organization for handling the distribution of water in District No. 36, on account of the fact that the agreement made with Mr. Swendsen would expire on April 30 of this year. Mr. Baldwin presented a statement of expenditures for water distribution and hydrometric work for the year ending March 31, 1921, and also a proposed budget for the ensuing year. This was discussed item by item at some length by Mr. Baldwin, the following facts being developed:

Some of the river riders travel from 45 to 65 miles per day, and are paid but $8.00 per day for services and all transportation expenses. It was recommended that salaries be increased from $8.00 per day to $10.00 per day. The cost per acre-foot for distributing water in the Lost River and Wood River areas is ten to fifteen times as great as it is in District No. 36. There are four employees on an annual basis; the Special Deputy, two hydrographers and one clerk. No cars have been bought for the hydrographers, it being necessary for them to purchase their own cars, for which they are paid at a rate of ten cents per mile. It was recommended that this be increased to fifteen cents per mile. In support of this recommendation a statement was read of the expenses incurred by Mr. Howard for the season of 1920. On a motion by Mr. Wilcox, seconded by Mr. Fuller, it was voted to reimburse the hydrographers at the rate of fifteen cents per mile for the use of personally owned cars on official business in District No. 36. Carried. Upon motion by Mr. Wilcox and seconded by Mr. John Pincock, Mr. Baldwin's recommendation for an average of $10.00 per day salary for river riders was approved. On motion by Mr. Harrigfeld and seconded by Mr. Geo. A. Pincock, Mr. Baldwin's recommendation for hydrographers was approved. On motion by Mr. Dibble and seconded by Mr. Geo. Pincock, Mr. Baldwin's recommendation for stenographers was approved. On motion by John Pincock and seconded by Chas. E. Ander-

son, it was voted that changes may be made in the budget as proposed by Mr. Baldwin, provided that the total amount of the budget was not exceeded. With reference to his own position Mr. Baldwin stated that a considerable amount of stored water had been sold during the past year for $1.00 per acre-foot; that his organization had delivered during the season of 1920 about 6,000,000 acre-feet of water, and that while the value of the water handled by him might not be $6,000,000.00, this statement was made as an indication of the responsibility imposed upon him as Special Deputy in handling its distribution. Mr. Baldwin stated that he could not handle the work for another year on a salary of $3,600.00. A similar position on the Boise basin paid a salary of $5,000.00 per annum; on Wood River, $4,000.00 per annum, with a car furnished.

Mr. Baldwin then retired from the room and a discussion was had on the amount that should be offered Mr. Baldwin for the ensuing year. On motion by Mr. Harrigfeld, seconded by Mr. Chas. E. Anderson, it was voted to increase Mr. Baldwin's salary from $300.00 per month to $400.00 per month. Mr. Baldwin upon being informed of the offer that had been made, accepted the position and thanked the water users for their continued support. It was moved by Mr. Hurlebaus and seconded by Mr. John Pincock, that Mr. Swendsen be requested to appoint Mr. Baldwin as Special Deputy for District No. 36. Inasmuch as Mr. Howard had stated that he would not continue to serve as hydrographer on the North Fork at less than $3,600.00 per annum, and Mr. Baldwin's budget called for $2,400.00 per year for this position, the North Fork Association had been previously requested to take some action as to whether or not it desired to pay an additional $100 per month to secure the services of Mr. Howard. It was stated at the meeting that the association had decided to leave to Mr. Baldwin the matter of filling the position of hydrographer on the North Fork. Upon a suggestion by Mr. Baldwin it was moved by Mr. Wheelon and seconded by John Pincock, that the two months' salary of hydrographer on the North Fork, previously paid by the North Fork water users, be in the future paid out of the general fund and not charged directly to the North Fork water users. Carried.

Mr. Dibble raised the question as to whether or not the water users on the North Fork desired to form themselves into a separate district. It was stated by Mr. John Pincock, Mr. Harrigfeld and Mr. Geo. Pincock that the water users on the North Fork had not decided to form, at this time, a separate unit.

Meeting adjourned."

Thereafter a new stored water contract was executed as of date May 1, 1921. This new agreement was similar to the old one except to the extent of providing higher maximum salary limitations, revising the method of making winter payments and other minor modifications which would make it consistent with the actions taken at the meeting of February 3, 1921, above referred to.

The same Advisory Committee which was originally appointed in 1919 by W. G. Swendsen, State Commissioner of Reclamation, to represent the water users of the three principal sections of the water district was elected to serve during the season of 1920 and re-elected for 1921.

These men, J. R. Thomson representing the North Fork area, D. H. Blossom representing the central section and F. A. Banks the lower or Minidoka-Twin Falls portion of the district, have been largely responsible for the general plan of river operation and have passed upon all principal changes or modifications of the original plan.

The following summary or minutes of the first meeting of this committee for the season will be self-explanatory:

SUMMARY OF PROCEEDINGS OF MEETING OF THE WATER USERS' ADVISORY COMMITTEE OF DISTRICT NO. 36, HELD AT IDAHO FALLS, IDAHO, MAY 3, 1921.

"Present, Messrs. D. H. Blossom, F. A. Banks and J. R. Thomson, members of Advisory Committee, and G. Clyde Baldwin, Special Deputy State Commissioner of Reclamation.

Consideration was first given to the financing of the normal flow portion of the 1921 water distribution. An itemized budget was presented by Mr. Baldwin which indicated that a total sum of $12,000 will be required to finance this work until the end of the irrigation season. After some discussion the committee drafted and signed the following letter or statement:

"We, the Advisory Committee of the water users of District No. 36, State of Idaho, in session in Mr. Baldwin's office at Idaho Falls, Idaho, have given consideration to the decisions reached in the meeting of water users held in Idaho Falls on February 3, 1921, at which time the organization for the distribution of natural flow and stored water during the coming season was decided upon. In accordance with the decisions reached in this meeting, it is the opinion of this committee that it will be necessary to raise the sum of $12,000 for the administration of the distribution of normal flow in this district during the coming season, and it is the recommendation of your committee that these funds be advanced as follows:

Water Users' Protector Assn. of the North Fork of Snake R.	$2,500
Farmers' Protective Irrigation Association	4,500
North Side Canal Co. Ltd.	2,500
Twin Falls Canal Co.	2,500

On account of the necessity of having these funds available at an early date, it is respectfully requested that they be forwarded to Mr. Baldwin at Idaho Falls as soon as possible, and in any case, that he be advised as to when he may expect to receive the funds."

The employment of river riders and deputy water masters beginning June 1, 1921, was approved.

The matter of properly crediting the summer inflow from Blackfoot River was discussed, together with plans for reducing this inflow and for taking surface waste into account in computing storage losses between the Woodville and Blackfoot gaging stations. The committee favored the continuation of the 1920 plan of operation under which the Blackfoot inflow was credited to the Upper Valley canals as available natural flow, and suggested that during the 1921 season the surface waste to the river between the Woodville and Blackfoot gaging stations be ascertained as nearly as practicable by occasional series of measurements.

With respect to domestic water the committee favored the continuation of the 1920 practice to grant no allowances for this purpose when it is possible for a canal to supply same by purchase or through transfer. It was also the consensus of opinion that a definite settlement of the municipal water rights of the cities of Idaho Falls and St. Anthony should be sought immediately.

The use of mean gage heights instead of single daily readings for operation purposes was advocated, at least to the extent of giving this plan a thorough trial.

Many other miscellaneous matters pertaining to the work of distribution were discussed during the meeting, but no important decisions were made involving any changes in present practice."

During the months of April and May many river and canal measurements were secured and in the North Fork area Stevens' 8 Day Recording Gages were installed at three of the more important river gaging stations. Regular records were also resumed at a number of the river stations which had been discontinued for the winter. As in the two preceding years however, daily records were not obtained at all of the river and canal stations until June 1, when the river riders and deputy water masters began their season's work.

PERSONNEL.

The personnel engaged in the work of distribution during the season of 1921 was as follows:

G. Clyde Baldwin,	Special Deputy State Commissioner of Reclamation
John Empey,	Water Master
Thomas R. Newell,	Hydrographer
C. A. McClelland,	Hydrographer and Deputy Water Master
Frank A. Backman,	Hydrographer
L. L. Bryan,	Hydrographer
Mrs. Edith M. Cure,	Clerk and Office Assistant, Idaho Falls office
Miss Phebe Arnold,	" " " " St. Anthony "
F. C. Braun,	Deputy Water Master, Upper Fall River division
Geo. A. Pincock,	" " " Henrys Fork "
W. F. Dawson,	" " " & Hydrographer, Teton River div.
W. J. Kremer,	" " " Heise division
Albert Terry,	" " " Rigby "
Chas. A. McCurdy,	" " " Idaho Falls division
Antone Christensen,	" " " Blackfoot "
Wm. Burton,	" " " Swan Valley canals
Hyrum E. Bowman,	" " " Sand Creek canals (Fremont Co.)
Harold F. Wallace,	" " " Minidoka Dam
W. N. McConnel,	" " " & Hydrographer, Milner Dam
Joseph Markham,	Superintendent, Jackson Lake Dam
Miss Frances Woodburn,	Forwarding Agent, Ashton, Idaho.

Ernest Luetjen, Harold Fuqua, Mrs. J. F. Johnson, Mrs. Fred Monk, E. L. Jennings, James Thorne, Miss Lena Byington, Oliver L. Kofoed, J. A. Clough and H. R. Wallis, Gage Readers.

NO	STATION
1	JACKSON LAKE AT MORAN, WYO
2	SNAKE RIVER NEAR MORAN, WYO
3	SNAKE RIVER NEAR HEISE, IDAHO
4	SNAKE RIVER NEAR SHELLEY, IDAHO
5	SNAKE RIVER AT PORTERVILLE BRIDGE, IDA.
6	SNAKE RIVER NEAR BLACKFOOT, IDA.
7	SNAKE RIVER AT NEELEY, IDAHO.
8	LAKE WALCOTT NR. MINIDOKA, IDA.
9	SNAKE RIVER NEAR MINIDOKA, IDA
10	LAKE MILNER AT MILNER, IDA.
11	SNAKE RIVER AT MILNER, IDA.
12	HENRY'S FORK NEAR ASHTON, IDA.
13	HENRY'S FORK AT ST ANTHONY, IDA.
14	HENRY'S FORK NEAR REXBURG, IDA.
15	FALL RIVER NEAR SQUIRREL, IDA
16	FALL RIVER NEAR CHESTER, IDA.
17	TETON RIVER NEAR ST ANTHONY IDA.
18	BLACKFOOT RIVER NEAR BLACKFOOT, IDA.
19	PORTNEUF RIVER AT POCATELLO, IDA.
20	NORTH SIDE MINIDOKA CANAL NR. MINIDOKA, IDA
21	SOUTH SIDE MINIDOKA CANAL NR. MINIDOKA, IDA.
22	SOUTH SIDE TWIN FALLS CANAL AT MILNER, IDA.
23	NORTH SIDE TWIN FALLS CANAL AT MILNER, IDA.

AUXILIARY STATIONS

A SNAKE RIVER AT SOUTH BOUNDARY OF YELLOWSTONE NATIONAL PARK
B HENRY'S FORK AT WARM RIVER, IDAHO
C WARM RIVER AT WARM RIVER, IDAHO.
D ROBINSON CREEK AT WARM RIVER, IDAHO
E HENRY'S FORK AT LAKE, IDAHO.



PLATE NO 1

PRINCIPAL STREAMS
GING STATIONS

N

CLARK

JEFFERSON

FREMONT

BINGHAM

MADISON

TETON

YELLOWSTONE NATIONAL PARK

Henrys Lake

Roberts

Rigby

Willow Creek

Idaho Falls

Ashton

Fall River

St Anthony

Teton River

NORTH OR HENEY'S FORK

SNAKE RIVER

Aberdeen

Blackfoot

BONNEVILLE

Blackfoot River

American Falls

Pocatello

Portneuf River

BANNOCK

POWER

CARIBOU

Grays Lake

Blackfoot Reservoir

IDAHO

WYOMING

JACKSON LAKE RESERVOIR

SNAKE RIVER

DESCRIPTIVE OUTLINE OF 1921 DISTRIBUTION.

The winter of 1920-21 was considerably milder than that of 1919-20, but early reports, which were later substantiated, indicated that the snowfall in the upper Snake drainage area, particularly throughout the foothill region, was greater than that of the preceeding year.

The flow of practically all streams above Idaho Falls was slightly greater during the month of April than during the same period in 1920, but the variation was not such as to indicate any abnormal condition. This general comparison or relation continued throughout the greater part of the month of May, while during the first half of June the increase over corresponding dates of the preceeding year was more pronounced.

Jackson Lake Reservoir contained 126,120 acre-feet of unused storage when the outlet gates were closed on September 16, 1920. These gates remained closed until June 13, 1921, when, the filling of the reservoir to its capacity of 847,000 acre-feet being assured, water was again released in gradually increasing amounts for the purpose of securing measurements at different stages to define the rating at the Moran gaging station. From June 15 to June 30 the stage of the reservoir was maintained practically at capacity and the entire natural flow of the stream was allowed to pass the dam.

The flow of Snake River at the Heise gaging station reached its maximum for the year of 33,300 second-feet on June 15, following which date it dropped very rapidly to 18,400 second-feet on June 21 and 22. (These discharges are for regular days, from midnight to midnight.)

Another slight rise occurred June 23 to 25, only to be followed by a sudden drop of 3,100 second-feet in two days. The discharge was now approaching the critical stage when the available supply becomes insufficient to fill all demands without restrictions, and it appeared that regulation might be required as early as June 29. A break in the dike or dam at the outlet of the small Two Ocean Lake reservoir near Moran, Wyoming, on the morning of June 28 caused a slight temporary increase which served to defer regulation until July 1, when the canals were ordered cut to their record rights and the first storage was released from Jackson Lake Reservoir.

On July 6 all license and permit rights were cut off and most of the youngest 1908 decree also became invalid. Unseasonable cold weather was experienced throughout the Upper Snake Valley during the early part of July and as a result the natural flow of the streams decreased more rapidly than usual. This condition made it necessary on July 10 to cut off all decreed rights having a priority date subsequent to March 26, 1903.

Thereafter decreed rights were ordered cut as follows:

July 17	Rights	having	a	priority	date	subsequent	to	October	11, 1900
21	"	"	"	"	"	"	"	June	1, 1900
23	"	"	"	"	"	"	"	May	31, 1899
24	"	"	"	"	"	"	"	July	9, 1896
26	"	"	"	"	"	"	"	March	22, 1895
27	"	"	"	"	"	"	"	February	6, 1895
31	"	"	"	"	"	"	"	August	8, 1894

Decreed rights were most affected for the season on August 1, when a part of the 400 second-feet right of the Peoples Canal dated August 18, 1894, was cut off. The demand for water began to decrease however, and this fact, together with slight increases in natural flow resulting from rains and the effect of the August 1 reduction in decreed rights on canals in the vicinity of St. Anthony made it possible to be-

gin the reinstatement of decreed rights on August 2.

About August 5 material increases were noted in the return flow entering between the Heise and Woodville gaging stations. These coincided with the rapid drop in river stage brought about by the reduction in the amount of stored water released from Jackson Lake from nearly 9,000 second-feet on August 2 to about 5,500 second-foot on August 6. These increases, together with the gain which resulted from the voluntary shutting of the Reservation Canal headgates on the afternoon of August 5, permitted this restoration to proceed sufficiently to include rights of June 1, 1895, on August 7. During most of the period from August 2 to August 15 however, the large right of the Aberdeen-Springfield Canal Company, dated February 6, 1895, served as a pivot to the extent that it was valid in part only.

Demands for water after the middle of August fell off rapidly and on August 19 the reinstatement of all rights having a priority date earlier than October 11, 1900, was ordered. Before the end of the month the necessity for regulation throughout the upper valley seemed to be at an end for the season.

A meeting of the Advisory Committee was held on August 31, at which arrangements for the termination of field work for the season were agreed upon as outlined in the following minutes:

SUMMARY OF PROCEEDINGS OF MEETING OF THE WATER USERS' ADVISORY COMMITTEE OF DISTRICT NO. 36, HELD AT IDAHO FALLS, IDAHO, AUGUST 31, 1921.

"Present, Messrs. D. H. Blossom, F. A. Banks and J. R. Thomson, members of Advisory Committee; John Empey, Water Master and G. Clyde Baldwin, Special Deputy State Commissioner of Reclamation.

The general situation on Snake River existing at the present date was reviewed and discussed with special regardito natural and stored water diversions, probable demands of canals and available supplies. Comparisons with data for other years were also made. Thereafter it was unanimously agreed that the services of all the regular river riders might be terminated at the end of August, 1921, without serious detriment to any water users and since this action would result in a considerable reduction in the distribution expense, it was so ordered. The Water Master and all hydrographers, gage readers at the more important river stations and the Deputy Water Masters at Minidoka and Milner Dams are to be retained until the need for their services is no longer evident, which in the case of all except the regular winter organization, will probably be on or before September 30, 1921. It was also agreed that the Water Master and hydrographers should secure sufficient gage readings and measurements at the canal stations to afford reasonably reliable data concerning diversions during the month of September, but that daily readings on each canal could not be expected.

Informal discussion of the probable amount of attorney's fees in the case of the Enterprise Canal Company vs. the City of Idaho Falls followed, but it was deemed advisable to take no definite action in regard to recommendations for the payment of this claim until it was submitted in final form.

Mr. Baldwin stated that some investigations concerning the amount of surface return flow or waste which enters the river between the Woodville and Blackfoot gaging stations had already been made and others were in progress. He desired to postpone any recommendations regarding this and the Blackfoot River situation until more data had been secured and opportunity had been afforded for analysis.

Continuation of the policy adopted during 1920 of gradually installing permanent equipment at all the important river gaging stations was approved and the immediate installation of a reinforced concrete gage well and shelter at the Neeley gaging station was authorized."

No storage was released from Jackson Lake Reservoir after September 8 and on September 12 the outlet gates were closed for the season with 152,000 acre-feet of unused storage remaining in the reservoir.

Plate II illustrates graphically the rate at which Jackson Lake Reservoir was filled or drawn down during the period from November 15, 1914 to March 31, 1922 inclusive. All graphs are plotted on the basis of 1919 capacity tables.

DEPARTMENT OF THE INTERIOR UNITED STATES GEOLOGICAL SURVEY

HYDROGRAPH FOR JACKSON LAKE BEGINNING NOVEMB

STORAGE IN ACRE FEET

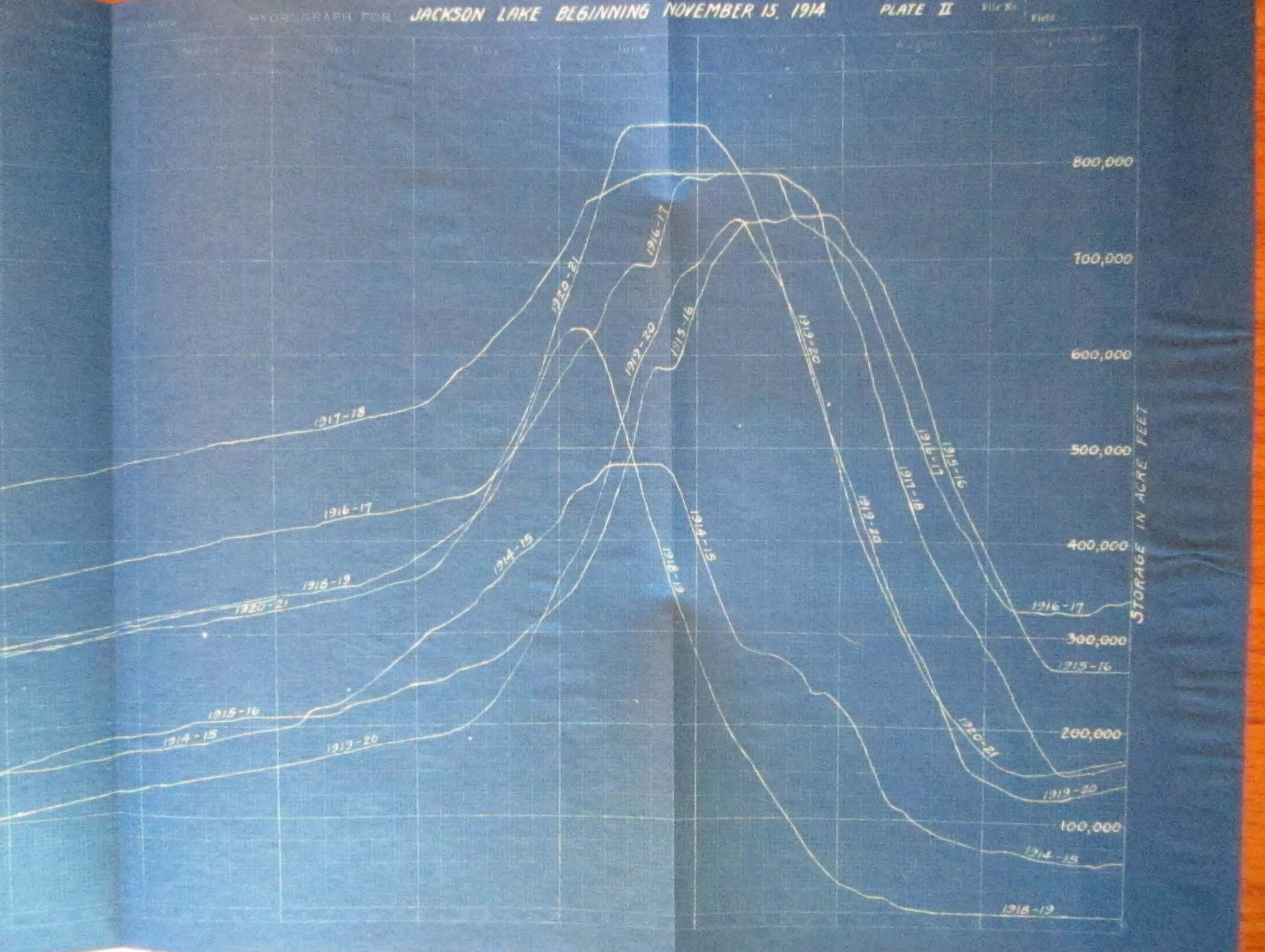
500,000
700,000
600,000
500,000
400,000
300,000
200,000
100,000

1917-18
1916-17
1918-19
1921-22
1920-21
1914-15
1915-16
1919-20

1920-21
1916-17
1918-19
1914-15
1917-18
1916-17
1918-19
1920-21
1921-22
1915-16
1914-15
1919-20

Plotted by Checked By Date

HYDROGRAPH FOR JACKSON LAKE BEGINNING NOVEMBER 15, 1914 PLATE II



WATER SUPPLY.

The 1920 report of the Special Deputy State Commissioner of Reclamation* contains a brief discussion and comparison of annual water supply as measured at the Moran and Neeley gaging stations.

Since this is something which is of interest to most water users the same comparison can now be extended to include the climatic year ending September 30, 1921, as follows:

Station	Mean annual run-off for 18 yrs. ending Sept. 30, 1921	run-off for year ending Sept. 30, 1921	% of mean
Moran	1,136,000	1,067,370	94.0
Neeley	6,858,000	6,770,000	98.7

In the preparation of this table, beginning with the year 1910 all Moran records have been corrected to take account of the storage in Jackson Lake which is held over from one climatic year to another. Neeley records, on the other hand, have not been subjected to any storage corrections but represent actual totals measured at the gaging station. Variations in the amount diverted for irrigation as well as in the quantity of inflow entering between the two stations also affect the Neeley comparisons. Attempts to harmonize the percentage relations at the two stations by applying approximate storage and diversion corrections to the Neeley data in the manner suggested in the preceeding report, instead of bringing the percentages into closer agreement, will, in 1921, raise the Neeley quantity to slight-

*Water Distribution and Hydrometric Work in District No. 36, by G. Clyde Baldwin.

ly more than 100 per cent of the 18 year average. This would seem to indicate that in this year, at least, the inflow between the two stations or the run-off from the lower drainage areas was proportionately greater in comparison with that of other years than was that from the high mountainous areas. This condition bears out the snowfall reports of the spring of 1921 which indicated an unusually large amount in the foot-hills but proportionately less in the higher altitudes. Six and seven year comparisons with Moran data which are available respectively at the stations on Henrys Fork at Warm River and Fall River near Squirrel show 1921 run-off as a higher percentage of the mean at the two latter stations than at Moran, thus affording additional confirmation or explanation of the Neeley results.

At any rate it seems evident that in considering the whole territory embraced in Water District No. 36, the year ending September 30, 1921, was one of very nearly average total run-off.

To determine its relation to other years as regards the water supply available for irrigation from natural flow would be a much more complicated problem because of the many varying factors which would have to be considered. There can be little doubt however, that from this standpoint it was the most favorable year since 1918.

STORAGE vs. FLOOD WATER DIVERSIONS.

Because Jackson Lake Reservoir was filled to capacity more than two weeks before any regulation in Idaho became necessary the right to store water did not conflict with the use of natural flow at any time during the season of 1921.

DOMESTIC WATER.

As noted in the minutes of the Advisory Committee meeting of May 3, 1921, the 1920 practice of granting no domestic water allowances when it was possible for a canal to obtain water either by purchase or transfer, was continued.

Surplus storage at Jackson Lake to the amount of about 50,000 acre-feet was again available and about 5,000 acre-feet were sold by the U. S. Reclamation Service at the rate of $1.00 per acre-foot.

MUNICIPAL WATER RIGHTS.

The status of the water rights of the cities of Idaho Falls and St. Anthony remained practically unchanged in 1921 from that of 1920.

The Utah Power & Light Company, which furnishes the water for St. Anthony, had purchased stored water for that city during the latter part of 1920, and in July, 1921, they again purchased a sufficient amount of storage to cover low water period requirements.

In view of the failure, during 1920, of the officials of the City of Idaho Falls to provide water rights which would be valid after the expiration of their decree of April 20, 1900, arrangements were made to bring this matter to the early attention of the new city administration which took office during May, 1921. On June 20 the Water Master and Special Deputy outlined the situation briefly to Mayor Ralph A. Louis and at his request presented it a few days later at a meeting of the City Council. There then followed a number of confer-

ances and meetings at which this question was discussed, but on July 23, when orders were issued to cut decreed rights having a priority date subsequent to May 31, 1899, no arrangements had yet been made to provide a valid right for the city. Consequently the Water Master, in pursuance of his duty, attempted on that date to shut down the city pumps and thus cut off the supply to the mains. He was prevented from doing so by the refusal of members of the city police force to allow him to enter the building in which the pumps were housed.

Following this, on the same afternoon, papers were filed bringing suit in the name of the Enterprise Canal Company, one of the next appropriators in point of time under the Snake River Decree, against the City of Idaho Falls. A hearing on this case in the District Court of the Ninth Judicial District of Idaho was scheduled to be held at Idaho Falls on August 8. On that morning however, the City Attorney, on behalf of the City of Idaho Falls, agreed to purchase a sufficient amount of Jackson Lake storage to cover the use during that portion of 1921 when the decreed rights of the city were invalid, with the further proviso that before the beginning of the 1922 irrigation season the city would endeavor to provide a permanent right of adequate amount and priority. Upon this understanding the hearing on the case was indefinitely postponed.

Immediately thereafter the city purchased 350 acre-feet of storage and the rate of delivery was fixed, largely upon the showing of the city engineer, at $8\frac{1}{2}$ acre-feet per day.

TEMPORARY TRANSFERS.

Temporary transfers were recognized upon the same basis as during preceeding years, although the need for them, because of the better sustained natural flow, was less keenly felt.

The pooling system was again used to advantage in the North or Henrys Fork area and served to promote harmony amongst the water users of this section.

After the headgates of the Reservation Canal had been voluntarily closed on August 5 the water to which this canal was entitled was placed at the disposal of the Water Master and Special Deputy to be used as most needed to aid in the production of crops. This action was made possible by reason of the sufficient supply available from Blackfoot River for use on the Indian Service project lands and was taken upon the express understanding that it should in no way jeopardize the Snake River rights of the Reservation Canal. The use of this water was of material benefit to many canals which might otherwise have suffered from water shortage.

PERMANENT TRANSFERS.

The constantly increasing value of old decreed water rights seems to have resulted in an increased number of permanent transfers or changes in the points of diversion. Since water rights are only granted in Idaho upon a basis of beneficial use and are made appurtenant to specific lands, permanent transfers would ordinarily be expected only

under unusual circumstances. The frequency with which they have recently been effected therefore, gives rise to the question as to whether these water rights are not being bartered for gain in the same way as farm products and other commodities and contrary to the spirit if not the letter of our laws.

This is a matter which does not primarily come within the sphere of activity of the distribution organization, but it can do no harm to call attention to the possible misuse of a privilege which was undoubtedly only intended to cover the most exceptional cases.

EXCHANGE of NATURAL FLOW for STORAGE.

During July and August a number of prearranged trades of natural flow for storage were effected under the plan followed in 1920.

The canal desiring to participate in such an exchange sends in a written request for storage credit, stating the extent to which they propose to release natural water and the exact time when their gates will be shut down. If the arrangement is completed, the natural flow released by this canal is accepted and delivered in lieu of stored water and is later repaid as required from Jackson Lake Reservoir.

A necessary condition which must first be agreed to is that storage credit will not be given in the event that unexpected changes in the flow of the river should make it impossible to complete the transaction without wastage of water or detriment to some other water user. Should such a situation arise however, the canal is notified and per-

mitted to resume their natural draft as promptly as possible.

All requests of this character which were made during the 1921 storage delivery period were granted, but each was handled separately and no general rule was adopted which would prevent the refusal of such exchanges should they become so numerous as to seriously complicate the distribution.

Stored water sold to canals in the Henrys Fork area was delivered under a modification of this plan whereby actual deliveries to the purchasing canals were from natural flow, while storage was given to canals farther down the river in place of the latter.

CANAL DELIVERIES.

The total amount diverted daily through each canal heading either in the South Fork or main river for the four months ending September 30, 1921, is shown on Plates III, IV, V and VI.

Following the practice inaugurated in the 1919 report, except for a few of the smaller canals where estimates were used, all data were recomputed prior to their presentation herein. This practice affords opportunity to more thoroughly analyze the records at each station than is possible in the limited time available during the field season. Wherever changes in rating have been noted, either because of the growth of vegetation, variation of checks or for any other reason, all water measurements, notes and other data have been carefully reviewed to the end that the final computed data may represent the most reason-

U.S. RECLAMATION SERVICE BOISE PROJECT, IDAHO

DAILY DISCHARGE IN SECOND FEET OF CANALS DIVERTING FROM SNAKE RIVER FOR JUNE 1921

PLATE NO. 11

WEEK OF CANAL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	TOTAL
NEW YORK																															
BOISE CITY																															
BOISE CITY-PIONEER CREEK																															
BOISE-PAYETTE LAKES																															
CALDWELL																															
NELSON																															
NAMPA & MERIDIAN																															
ARROWROCK																															
BOISE RIVER DIVERSION																															
BULLER ISLAND																															
STELLE																															
HARRISON																															
CORNEY																															
BOOKER																															
KING																															
RIGHT BANK																															
BURGESS																															
CLARK & EDWARDS																															
LOWER SLOUGH																															
JENNINGS																															
LA BELLE																															
CONSOLIDATED FEEDER																															
LENROOT																															
REID																															
TEXAS FEEDER																															
NELSON COREY																															
HILL PETTINGER																															
MORGAN																															
BOYAN																															
LONG ISLAND																															
LYMAN																															
RIGBY																															
MOA																															
WEST LABELLE																															
IDAHO FALLS CITY MAIN																															
MOODVILLE																															
SNAKE RIVER VALLEY																															
TOTAL DIVERSIONS ABOVE MOODVILLE																															
RESERVATION																															
BLACKFOOT																															
NEW LAVA SIDE																															
PEOPLES																															
AMERICAN FALLS																															
CORBETT																															
NIELSEN HANSEN																															
RIVERSIDE																															
JOHNSON																															
TOTAL DIVERSIONS MOODVILLE TO TWIN FALLS																															
TRESO																															
DEER CREEK																															
VANNOY																															
PERRINE																															
THOMSEN																															
TOTAL DIVERSIONS FOR PERRINE & BLACKFOOT																															
NORTH SIDE MINIDOKA																															
SOUTH SIDE MINIDOKA																															
TOTAL MINIDOKA CANALS																															
PA LATERAL																															
NORTH SIDE TWIN FALLS																															
CHRISTIAN																															
SOUTH SIDE TWIN FALLS																															
TOTAL TWIN FALLS CANALS																															

U.S. DISTRIBUTION REPORT DISTRICT NO 36 — PLATE NO. 36

DAILY DISCHARGE IN SECOND FEET OF CANALS DIVERTING FROM SNAKE RIVER FOR JULY 1921

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL
NORTH SIDE CANAL																																
MILNER																																
MILNER-GOODING & KIMBERLY CREEK																																
BURLEY IRRIGATION																																
MINIDOKA																																
NAVY																																
NORTH SIDE MAIN																																
SUNDBERG																																
GOODING & NYKANEN																																
MINTER ISLAND																																
WILEY																																
SUNNYSIDE																																
CLEAR																																
ROGER																																
BOSS																																
EXETER NORTH																																
BURRIS																																
CLARK & EDWARDS																																
LOWER SALMON																																
JENSINGER																																
LA BELLE																																
CONSOLIDATED FEEDER																																
LENROOT																																
REID																																
MILNER FEEDER																																
NELSON CANAL																																
MILLER FLUME																																
MORGAN																																
ROSTON																																
LAKE ISLAND																																
ISLAND																																
RIGBY																																
PILOT																																
WEST LABELLE																																
ROCKWELL-HOPKINS																																
NORTH RIGBY																																
WILLOW																																
SUBTOTAL																																
BUTTE & MARKET LAKE																																
OSGOOD																																
SCHMIDT & BURGRAFF																																
GREAT WESTERN																																
MUD																																
PORTER																																
IDAHO FALLS CITY MAIN																																
BOUNDARY																																
SNAKE RIVER VALLEY																																
TOTAL DIVERSIONS HEBE TO IDAHO FALLS																																
RESERVATION																																
BONNEVILLE																																
NEW LAVA SIDE																																
PEORIA																																
IDAHO FALLS																																
CORBETT																																
NELSON HANSEN																																
RIVERSIDE																																
BAKER																																
TOTAL DIVERSIONS IDAHO FALLS TO DRUMMOND																																
TEDDO																																
HENRICKS																																
HANSON																																
FAIRVIEW																																
MARSHALL																																
TOTAL DIVERSIONS FORT HALL TO BLACKFOOT																																
NORTH SIDE MINIDOKA																																
SOUTH SIDE MINIDOKA																																
TOTAL MINIDOKA CANALS																																
PA LATERAL																																
NORTH SIDE TWIN FALLS																																
MURTAUGH																																
SOUTH SIDE TWIN FALLS																																
TOTAL TWIN FALLS CANALS																																

DAILY DISCHARGE IN SECOND FEET OF CANALS DIVERTING FROM SNAKE RIVER FOR AUGUST 1921

NAME OF CANAL	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	TOTAL
ANDES	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BINGHAM	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
BINGHAM & BLACKFOOT

DAILY DIVERSIONS IN SECOND FEET OF CANALS OPERATING FROM SNAKE RIVER FOR SEPTEMBER 1921.

[illegible]																																				

able interpretation of these changes, particularly as regards time. On days when more than one stage has been observed mean discharges have been recorded. Daily summaries showing the total diversions between river gaging stations have also been included.

Since no river riders were employed during the month of September, data for this month are based upon the smaller number of gage readings which it was possible for the remainder of the organization to secure in connection with other work, and for this reason the September canal records are probably less reliable than those for the three preceeding months. Discharges listed for days for which no gage readings are available have, with few exceptions, been interpolated.

Two canals which are somewhat isolated as regards location, viz. the Independent and the Smith-Maxwell, were measured and regulated for the first time during 1921. No June records are available for either and data for the later months are partially interpolated.

Beginning July 21 after a dike to exclude river water had been constructed across the slough from which the Morgan and Rostan canals divert, records of the flow through these canals were discontinued. Thereafter they were supplied from other adjacent canal systems.

Laterals which divert from several of the canals above the main gaging stations are, in these tables, in each case included with the flow in the main canal.

The canals are listed by divisions, each of which represents the territory covered by a deputy water master or river rider. The canals of each division in general are shown in downstream order.

RIVER DATA.

The extensive tables found on Plates VII and VIII summarize data in regard to total flow, normal and stored water segregation, diversions, losses and gains for each section of the river between Jackson Lake and Milner.

These tables are prepared upon the following time interval basis:

Time from Jackson Lake in hours	Gaging Station	Period used for comparable daily means
0	Jackson Lake and Moran	Day ending at 4 a.m.
24	Heise	Day ending at 4 a.m. 1st day following
28	Rexburg	Day ending at 8 a.m. 1st day following
42	Woodville	Day ending at 10 p.m. 1st day following
48	Porterville	Day ending at 4 a.m. 2nd day following
54	Blackfoot	Day ending at 10 a.m. 2nd day following
68	Neeley	Day ending at 12 midnight; 3rd day following
92	Minidoka	Day ending at 12 midnight; 4th day following
116	Milner	Day ending at 12 midnight; 5th day following

This schedule for time of transmission is the same as the one adopted for the two preceeding years, and while not exactly correct for all stages of the river, it is believed to be fairly representative of average conditions, and on this account was used throughout the entire period from June 1 to September 30.

The dates given on these two plates are those which agree most nearly with the midday hour on this schedule, but the discharges for

1921 DISTRIBUTION WATER DISTRICT NO 36

DATE	JACKSON LAKE			MORAN				056000		DATE	HEISE						MORAN-HEISE				REXBURG		HEISE +RILEY +REXBO	DATE	DIV HEISE	
1921	GAGE	CAP AC FT	DRAIN AF	GAGE	DISCH	STD	NAT	DISCH	+MORAN	1921	GAGE	DISCH	+RILEY	STD	OSG	NAT	TOT GAIN	LOSS STR	LOSS OS	GAIN NAT	GAGE	DISCH		1921	TOTAL	STD OSG
MAY 30	6060	838780		052	48					MAY 31	561	25460	25460				25412				977	7930	33440	JUNE	2615	
31	6112	851310		052	48					JUN 1	535	23860	23860				23812				1004	8140	32000	2	2564	
JUN 1	6161	863180		049	44					2	492	21320	21320				21276				1007	8250	29570	3	2911	
2	6208	878570		048	42					3	471	20130	20130				20088				981	8040	28170	4	2751	
3	6262	887740		047	41					4	480	20630	20630				20589				955	7830	28460	5	2971	
4	6326	903390		053	50					5	504	22010	22010				21960				935	7750	29760	6	3071	
5	6397	918370		057	56					6	526	23310	23310				23254				953	7680	30990	7	3206	
6	6465	933430		061	62					7	556	25150	25150				25088				953	7590	32740	8	3481	
7	6510	943720		060	60					8	583	26850	26850				26790				948	7440	34310	9	4064	
8	6578	963710		060	60					9	604	28200	28220				28160				951	7410	35630	10	4435	
9	6642	981720		061	62					10	608	28460	28482				28420				954	7390	35862	11	5231	
10	6704	997280		061	62					11	621	29310	29328				29266				942	7170	36498	12	5411	
11	6770	813950		058	57					12	637	30360	30361				30304				938	7050	37411	13	6521	
12	6830	829160		108	174					13	642	30690	30708				30534				942	7020	37728	14	7511	
13	6865	833060		439	2880					14	676	32990	33004				30124				941	6930	39934	15	8035	
14	6933	843920		549	4480					15	677	33060	33078				28598				922	6720	39798	16	8385	
15	6997	846210		591	5190					16	648	31100	31124				25934				892	6310	37434	17	8405	
16	6998	846460		640	6060					17	633	30100	30128				24068				854	5750	35818	18	8478	
17	6999	846720		561	4680					18	566	25780	25806				21176				791	5090	30896	19	7871	
18	6900	847000		527	4130					19	511	22420	22447				18317				717	4170	26617	20	8092	
19	6901	847230		502	3750					20	470	20070	20096				16346				646	3530	23486	21	7923	
20	6903	847740		479	3420					21	439	18390	18416				14996				590	2830	21246	22	8602	
21	6901	847230		511	3880					22	442	18550	18577				14697				544	2410	20997	23	9041	
22	6901	847230		496	3660					23	444	18660	18686				15076				529	2340	21246	24	9308	
23	6902	847480		497	3680					24	456	19300	19329				15649				511	2290	21819	25	9366	
24	6902	847480		517	3980					25	463	19680	19707				15727				512	2390	22097	26	9611	
25	6899	846720		525	4100					26	454	19200	19230				15130				510	2460	21690	27	9228	
26	6901	847230		465	3220					27	418	17290	17320				14100				500	2370	19690	28	9138	
27	6903	847740		442	2920					28	402	16480	16510				13590				497	2360	18950	29	9361	
28	6903	847740		460	3150					29	411	16930	16960				13810				496	2340	19300	30	9571	
29	6899	846720		486	3510					30	407	16730	16760				13250				502	2390	19150	JULY	8735	
30	6900	847000		424	2690					JUL 1	377	15250	15277				12587				488	2260	17977	2	7669	
JUL 1	6897	846210	790	438	2860	398	2462	0	2860	2	361	14490	14515	388	0	14127	11655	10	0	11665	431	2160	16675	3	7566	0
2	6896	840860	5330	579	4980	2697	2283	0	4980	3	391	15930	15955	2630	0	13325	10975	67	0	11042	462	1980	18935	4	7725	0
3	6851	834500	6360	595	5260	3207	2053	0	5260	4	380	15390	15415	3127	0	12288	10155	80	0	10235	460	1940	18355	5	7569	0
4	6830	829160	5340	551	4520	2692	1828	0	4520	5	343	13660	13684	2625	0	11059	9164	67	0	9231	451	1850	15534	6	7241	0
5	6809	823820	5340	542	4370	2692	1678	0	4370	6	329	13030	13054	2625	0	10429	8684	67	0	8751	436	1720	14774	7	7156	20
6	6779	816270	7600	607	5470	3832	1638	0	5470	7	350	13980	14005	3736	0	10269	8535	96	0	8631	417	1560	15565	8	7701	20
7	6745	807630	8590	639	6040	4331	1709	0	6040	8	362	14530	14555	4223	0	10332	8515	108	0	8623	391	1360	15915	9	7631	20
8	6713	799350	8030	597	6040	4074	1966	0	6040	9	358	14350	14374	3972	0	10402	8334	102	0	8436	381	1280	15654	10	7568	21
9	6678	790450	8300	670	6620	4436	2184	0	6620	10	370	14910	14934	4325	0	10609	8314	111	0	8425	352	1080	16014	11	7673	21
10	6636	780210	10540	719	7570	5314	2256	0	7570	11	395	16130	16154	5181	0	10973	8584	133	0	8717	330	940	18094	12	7564	21
11	6589	768450	11760	752	8240	5929	2311	0	8240	12	411	16930	16954	5781	0	11173	8714	148	0	8862	315	847	17801	13	7731	20
12	6535	755000	13450	792	9080	6781	2299	0	9080	13	425	17650	17674	6611	0	11063	8594	170	0	8764	306	795	18469	14	7703	54
13	6477	740600	14400	813	9540	7260	2280	0	9540	14	429	17860	17884	7078	0	10806	8344	182	0	8526	299	750	17634	15	7677	50
14	6422	727000	13600	794	9120	6858	2262	0	9120	15	416	17190	17214	6687	0	10527	8094	171	0	8265	285	673	17857	16	7666	59
15	6367	713460	13540	788	9020	6826	2194	0	9020	16	408	16780	16804	6655	0	10149	7784	171	0	7955	268	591	17395	17	7651	48
16	6305	698230	15230	825	9800	7679	2121	0	9800	17	420	17390	17414	7437	0	9977	7614	192	0	7806	259	542	17958	18	7778	220
17	6239	682130	16100	844	10280	8117	2103	0	10270	18	425	17650	17674	7914	0	9760	7454	203	0	7657	256	523	18192	19	7773	135
18	6178	667290	14840	808	9430	7482	1948	0	9430	19	411	16930	16953	7295	0	9658	7523	187	0	7710	253	511	17443	20	7653	209
19	6117	652570	14770	803	9320	7446	1874	0	9320	20	402	16480	16503	7260	0	9243	7183	186	0	7369	255	519	17072	21	7643	271
20	6055	637580	14940	801	9290	7532	1758	0	9290	21	398	16230	16303	7344	0	8959	7013	188	0	7201	253	511	16814	22	7611	260
21	5993	622480	14900	800	9250	7512	1738	0	9260	22	394	16080	16103	7328	0	8779	6853	188	0	7041	258	540	16643	23	7585	298
22	5930	607640	15040	803	9320	7588	1737	0	9320	23	388	15780	15803	7393	0	8410	6483	190	0	6673	253	544	16347	24	7705	330
23	5865	592170	15470	810	9470	7799	1671	0	9470	24	387	15730	15753	7604	0	8149	6283	195	0	6478	250	519	16272	25	6988	163
24	5793	576510	15660	811	9490	7895	1595	0	9490	25	383	15640	15663	7698	0	7965	6173	197	0	6370	257	552	16215	26	6871	444
25	5733	560960	13550	810	9470	7940	1530	0	9470	26	385	15640	15663	7644	0	8019	6193	196	0	6389	265	596	16259	27	6917	382
26	5666	545230	15730	814	9560	7931	1629	0	9560	27	378	15540	15559	7733	0	7826	5999	198	0	6197	268	614	16173	28	7566	998
27	5596	527860	16370	830	9910	8253	1657	0	9910	28	385	15640	15658	8047	0	7611	5743	206	0	5954	269	627	16285	29	7683	1177
28	5524	512130	16730	836	10040	8435	1605	0	10040	29	382	15490	15508	8224	0	7284	5468	211	0	5679	278	687	16195	30	7651	1161
29	5450	495010	17120	843	10200	8631	1569	0	10200	30	394	15590	15611	8415	0	7196	5411	216	0	5627	277	706	16317	31	7713	1007
30	5372	477060	17960	865	10680	9065	1625	0	10680	31	392	15980	16002	8879	0	7123	5322	226	0	5548	276	711	16713	AUG 1	7763	1265

DAILY SUMMARY OF DATA AT AND BETWEEN SI

	HEISE-WOOD			WOOD	WOODVILLE				HEISE-WOODVILLE					DIV WOOD-PORT		PORT	PORTERVILLE				WOOD-PORT			BLACK RIVER			P-B	BLACK
	STD	OBS	NAT	TH BAL	GAGE	DISCH	STD	NAT	TOT GAIN	LOSS ST	LOSS OB	GAIN NAT		TOTAL	STD	NAT	TH BAL	GAGE	DISCH	STD	NAT	TOT GN	LOSS ST	GN NA	GAGE	DISC	"PORT	DIV	TH BAL
1				30827	1316	30320			-507					1293			29027	943	28500			-527			618	244	28744	223	28521
2				29438	1300	29620			182					1300			28320	928	28000			-320			628	276	28316	219	28097
3				26657	1261	28230			1573					1261			26969	907	26600			-369			660	322	26972	213	26709
4				25300	1233	26730			1430					1272			25458	884	24940			-518			670	336	25276	206	25070
5				25489	1216	26000			511					1233			24761	873	24530			-231			578	176	24696	230	24466
6				26689	1211	26340			-347					1344			24996	877	24610			-386			550	179	24739	239	24500
7				27781	1254	26940			-841					1543			25392	886	25030			-362			565	153	25194	259	24935
8				29076	1253	27590			-1436					1572			26068	896	25500			-568			540	114	25614	258	25356
9				30247	1266	28150			-2097					1754			26396	904	25880			-516			502	69	25949	257	25692
10				31178	1277	28620			-2558					1807			26813	910	26160			-653			468	57	26129	241	25928
11				30565	1274	28490			-2075					1924			26466	904	25880			-586			410	8	25988	280	25708
12				31078	1274	28490			-2588					2091			26379	903	25830			-519				0	25830	278	25552
13				30887	1275	28540			-2347					2147			26393	901	25740			-653				0	25740	290	25450
14				30216	1269	28280			-1936					2312			25963	893	25560			-608				0	25560	292	25268
15				31913	1271	28660			-3253					2696			25964	899	25640			-324			468	39	25679	296	25383
16				31432	1278	28660			-2772					2736			25924	897	25550			-374			523	186	25736	281	25455
17				29028	1247	27330			-1698					2814			24516	873	23910			-606			645	302	24212	314	23898
18				27406	1212	25830			-1576					2797			23033	845	22110			-923			592	194	22304	301	21993
19				22958	1129	22330			-628					2700			19630	786	18950			-680			585	190	19140	264	18876
20				18518	1046	18920			402					2699			16221	727	15890			-331			525	94	15984	272	15712
21				15498	973	16020			522					2722			13298	670	13020			-278			600	219	13239	242	12997
22				12637	915	13770			1133					2770			11000	622	10650			-350			520	82	10738	318	10420
23				11946	823	12550			604					2917			9633	592	9490			-143			466	53	9528	303	9225
24				11739	872	12140			401					2969			9171	580	9030			-141			412	9	9039	294	8745
25				12253	873	12180			-73					2994			9186	582	9110			-76			625	271	9381	294	9087
26				12485	878	12370			-115					3039			9331	587	9300			-31			690	366	9666	294	9372
27				12464	871	12110			-354					2924			9186	580	9030			-156			690	366	9396	304	9092
28				10507	836	10810			303					2823			7987	548	7840			-147			700	382	8222	290	7932
29				9481	813	9980			499					2859			7121	527	7070			-51			654	314	7384	268	7116
30				9783	813	9980			197					2861			7119	527	7070			-49			662	325	7395	284	7111
31				10416	807	9760			-656					2800			6760	524	6960			0			658	319	7279	263	7016
1				9867	805	9690			-177					2734			6956	524	6960			4			613	247	7207	241	6966
2	0	0	7561	9114	803	9620	377	9243	506	11	0	517	2698	0	2698	6922	522	6890	375	6515	-32	2	-30	602	229	7113	274	6839
3	0	0	7726	10209	830	10590	2606	7984	381	24	0	405	2780	0	2780	7810	547	7800	2593	5207	-10	13	3	612	244	8044	234	7810
4	0	0	7549	9786	821	10270	3111	7159	484	16	0	500	2683	0	2683	7587	538	7470	3095	4375	-117	16	-101	640	295	7765	240	7525
5	0	0	7411	8123	779	8760	2612	6148	637	13	0	650	2628	0	2628	6132	500	6110	2588	3522	-22	24	2	660	322	6432	206	6226
6	20	0	7542	7212	757	8000	2592	5408	788	13	0	801	2559	0	2559	5441	480	5420	2569	2851	-21	23	2	659	321	5741	195	5546
7	20	0	7681	7864	765	8280	3697	4533	416	19	0	435	2667	0	2667	5613	434	5560	3679	1881	-53	18	-35	622	266	5826	197	5629
8	20	0	7611	8284	774	8590	4182	4408	306	21	0	327	2753	0	2753	5857	489	5730	4157	1573	-101	25	-82	605	230	5960	231	5729
9	21	0	7485	8148	773	8620	3931	4689	472	20	0	492	2739	0	2739	5881	483	5690	3888	1802	-191	43	-148	556	199	5829	232	5597
10	21	0	7658	8335	791	8940	4282	4658	505	22	0	527	2763	0	2763	6077	495	5940	4192	1748	-137	90	-47	520	88	6028	231	5797
11	21	0	7643	9530	806	9730	5134	4596	200	26	0	226	2851	0	2851	6879	516	6680	5016	1664	-199	118	-91	396	4	6684	249	6435
12	20	0	7612	10169	826	10450	5732	4718	281	29	0	310	2872	0	2872	7578	533	7290	5606	1684	-238	126	-162	450	28	7318	244	7074
13	56	0	7646	10767	840	10960	6522	4438	193	33	0	226	2883	0	2883	8077	548	7840	6339	1501	-237	183	-54	465	37	1877	229	7648
14	50	0	7623	10955	846	11180	6993	4187	225	35	0	260	2785	0	2785	8395	554	8060	6790	1270	-335	203	-132	480	48	8108	249	7859
15	39	0	7608	10220	828	10520	6595	3925	300	33	0	333	2731	0	2731	7789	539	7500	6397	1103	-289	138	-91	445	25	7525	245	7280
16	68	0	7586	9741	817	10120	6554	3566	379	33	0	412	2756	0	2756	7364	529	7140	6331	809	-224	273	-1	441	23	7169	250	6913
17	200	0	7582	10176	828	10520	7250	3270	344	37	0	381	2833	0	2833	7687	535	7360	7040	320	-327	210	-117	403	6	7366	252	7114
18	175	0	7538	10484	834	10740	7699	3041	256	40	0	296	2876	0	2876	7864	540	7640	7460	80	-324	239	-85	412	9	7549	249	7300
19	209	0	7423	9811	820	10230	7050	3180	419	36	0	455	2296	650	2886	7994	553	8020	7423	597	26	277	303	410	8	8028	246	7782
20	271	0	7373	9378	809	9830	6953	2877	452	36	0	488	1615	953	2568	8215	551	7950	7748	202	-265	153	-107	418	12	7962	223	7739
21	260	0	7351	9203	806	9730	7047	2683	527	37	0	564	1751	955	2706	1979	546	1760	1846	-106	-219	136	-83	450	28	7788	223	7565
22	291	0	7284	9061	800	9510	6989	2521	449	37	0	486	2065	677	2692	7445	532	7250	7403	-153	-195	213	18	455	30	7780	220	7560
23	306	0	6300	9241	807	9760	7050	2710	519	37	0	556	2667	125	2576	7381	530	7180	7101	-79	-263	172	-91	468	39	6969	231	6738
24	161	0	6757	9348	815	10050	7399	2651	702	38	0	740	2669	93	2531	7287	527	7070	6784	286	-212	195	-17	515	82	7230	240	6990
25	444	0	6427	9344	815	10050	7216	2834	706	38	0	744	2768	237	2443	7060	519	6780	6549	231	-280	161	-119	542	142	6897	234	6915
26	389	0	6528	9342	814	10010	7277	2733	668	38	0	706	2893	579	2334	6547	502	6180	5947	233	-367	178	-189	526	95	6275	232	6663
27	990	0	6672	8611	798	9440	6704	2736	829	39	0	868	2921	909	2012	6299	496	5970	5684	286	-329	237	-92	478	41	6017	230	6043
28	1177	0	6509	8599	792	9220	6830	2390	621	40	0	661	2933	1108	1825	6287	494	5900	5648	252	-387	264	-121	472	42	5942	234	5787
29	1161	0	6490	8544	792	9220	7022	2198	676	41	0	717	2933	1151	1776	6313	497	6000	5732	268	-313	284	-30	470	40	6020	237	5783
30	1207	0	6506	8604	798	9760	7166	2094	656	42	0	698	2947	1151	1772	6346	515	6640	6352	288	-306	306	0	501	68	6708	243	6465
31	1295	0	6474	8944	801	9550	7490	2060	606	44	0	650	2604	831														

SNAKE RIVER GAGING STATIONS FROM JACKSON LAKE WYOMING TO MILNER IDAHO

BLACKFOOT				PORT-BLACK			CUM LOSS STD	CORR APPLD STD	DATE	NEELEY				B-N	DATE	LAKE WALCOTT			NSMINC		SSMINC		NS SS MIN CANS		MIN	
GAGE	DISCH	STD	NAT	TOTON	LOSSTR	ONNA			1921	GAGE	DISCH	STD	NAT	GAIN	1921	GAGE	CAP AC FT	DRAFT	GAGE	DISCH	GAGE	DISCH	TOTAL	STD	NAT	THI BAL	GAGE
1149	23760			239					JUN 2	1094	32050			290	JUN 3	4564	102900	242	399	394	209	403	761			31531	1226
1135	27940			-117					3	1090	31810			3170	4	4596	101930	489	398	396	209	403	799			31540	1213
1103	26430			-279					4	1072	30750			4120	5	4544	100490	726	397	394	209	403	797			30719	1249
1068	24630			-390					5	1046	29230			4550	6	4536	99520	439	389	505	209	403	908			28811	1253
1057	24140			-326					6	1025	28020			3830	7	4529	98680	424	571	654	208	401	1055			27389	1234
1058	24190			-310					7	1020	27430			3540	8	4531	98920	121	660	830	208	401	1231			26378	1231
1061	24690			-243					8	1023	27920			3120	9	4534	99280	-131	726	971	207	401	1419			26301	1237
1030	25220			-76					9	1033	28470			1190	10	4532	99040	121	793	1120	333	516	1536			26955	1242
1039	25330			41					10	1039	28820			3090	11	4532	99040	0	837	1230	405	638	1868			26852	1239
1093	25930			2					11	1044	29110			3180	12	4527	98440	302	893	1310	446	743	2113			27299	1241
1083	25680			72					12	1041	28940			3240	13	4536	99520	-545	924	1450	410	754	2204			27619	1205
1039	25730			178					13	1040	29880			3150	14	4546	100730	-610	925	1450	410	451	1901			26462	1244
1083	25430			-20					14	1035	28590			3160	15	4540	100010	363	923	1440	494	761	2303			26645	1200
1064	24680			-383					15	1024	27960			3180	16	4543	100370	-181	925	1450	512	974	2374			26504	1205
1079	25230			-153					16	1025	28020			3190	17	4547	100850	-242	925	1450	514	761	2417			25514	1205
1078	25180			-225					17	1028	28190			3010	18	4539	99880	489	926	1450	537	956	2446			26139	1202
1048	23700			-198					18	1012	27270			3570	19	4538	99760	60	924	1450	537	956	2446			24.84	1167
1012	21960			-33					19	981	25540			3580	20	4534	99280	242	925	1450	536	993	2453			23339	1085
942	18690			-136					20	920	22280			3590	21	4536	99520	-121	927	1450	535	990	2440			19719	993
869	15530			-182					21	850	18760			3230	22	4554	101690	-1014	926	1450	540	1000	2450			15216	890
798	12580			-117					22	784	15680			3100	23	4560	102410	-363	926	1450	542	1010	2460			12157	843
734	10460			40					23	732	13420			2960	24	4581	104940	-1276	927	1460	539	999	2449			9695	766
694	9160			-65					24	701	12150			2990	25	4590	106030	-550	929	1460	531	979	2439			9161	754
683	8830			85					25	690	11710			2880	26	4590	106030	0	928	1460	521	970	2430			9280	789
692	9100			13					26	696	11950			2850	27	4591	106150	-60	928	1460	530	976	2436			9454	803
701	9390			8					27	702	12190			2810	28	4586	105550	302	929	1460	532	972	2442			10050	799
691	9070			-22					28	695	11910			2840	29	4592	106270	-363	930	1460	531	979	2439			9109	737
651	7890			-42					29	663	10660			2770	30	4591	106150	60	929	1460	536	993	2453			8267	721
622	7090			-26					30	641	9840			2750	JUL 1	4582	105070	545	928	1460	542	1010	2470			7915	704
622	7090			-21					JUL 1	638	9730			2640	2	4586	105550	-242	927	1450	543	1010	2460			7022	723
618	6990			-26					2	637	9690			2700	3	4586	105550	0	930	1460	541	1010	2470			7220	711
617	6960			-6					3	634	9580			2620	4	4584	105310	121	930	1460	537	996	2456			7245	711
617	6960	374	6586	71	1	72	0	0	4	634	9580	324	9206	2620	5	4592	106270	-484	930	1460	533	985	2445	0	2445	6651	712
650	7360	2585	5275	50	8	58	0	0	5	652	10470	2585	7885	2610	6	4583	105790	242	930	1460	543	1010	2470	535	1735	8242	726
635	7440	3080	4360	-85	15	-70	0	0	6	648	10100	3080	7020	2660	7	4581	104940	429	928	1460	532	1040	2500	773	1776	8029	710
588	6220	2567	3653	-6	21	15	0	0	7	615	8900	2567	6333	2680	8	4565	103020	968	929	1460	537	1060	2520	794	1726	7349	677
556	5450	2548	2902	-96	21	-75	0	0	8	592	8100	2548	5552	2650	9	4552	101450	792	928	1460	539	1060	2520	794	1726	6372	678
560	5540	3639	1901	-89	40	-49	0	0	9	592	8100	3639	4461	2560	10	4540	100010	726	927	1450	561	1070	2520	1459	1061	6306	673
563	5610	4090	1520	-119	67	-52	0	0	10	590	8030	4090	3940	2420	11	4526	98370	852	928	1460	545	1080	2540	2000	540	6342	674
562	5590	3818	1772	-7	70	63	0	0	11	592	8100	3818	4282	2510	12	4516	97110	610	929	1460	548	1080	2540	1658	882	6170	677
569	5760	4138	1622	-37	54	17	0	0	12	594	8170	4138	4032	2410	13	4512	96630	242	929	1460	568	1090	2550	1918	632	5862	678
595	6400	4986	1414	-33	30	-3	0	0	13	609	8680	4986	3694	2380	14	4515	96990	-181	931	1460	569	1090	2550	2256	294	5949	681
618	6990	5572	1418	-34	34	-50	0	0	14	623	9250	5572	3678	2260	15	4522	97840	-419	934	1470	570	1100	2570	2293	277	6351	696
635	7440	6288	1152	-208	51	-157	0	0	15	642	9870	6288	3582	2430	16	4536	99520	-847	943	1500	571	1100	2600	2418	182	6483	680
643	7660	6654	1006	-199	136	-63	0	0	16	651	10210	6654	3556	2350	17	4543	100970	-731	943	1500	570	1100	2600	2444	156	6779	678
622	7090	6231	859	-190	166	-24	0	0	17	642	9870	6231	3639	2380	18	4553	101810	-424	942	1490	571	1100	2590	2351	239	6856	682
611	6810	6166	644	-103	165	62	0	0	18	632	9500	6166	3334	2690	19	4558	102170	-181	941	1490	566	1080	2570	2570	0	6749	686
619	7010	6899	111	-104	141	37	0	0	19	635	9620	6899	2721	2610	20	4558	102170	0	941	1490	560	1060	2550	2550	0	7070	691
628	7150	7356	-206	-150	104	-46	306	-306	20	698	9730	7050	2680	2580	21	4570	103620	-731	942	1490	561	1070	2560	2560	0	6439	692
642	7640	7297	343	-142	126	-16	63	243	21	650	10170	7540	2630	2550	22	4583	105190	-792	943	1500	562	1070	2570	2570	0	6808	699
640	7580	7601	-21	-159	147	-12	184	-121	22	649	10130	7480	2650	2600	23	4590	106030	-484	942	1490	557	1050	2540	2540	0	7166	689
634	7420	7717	-297	-145	149	4	581	-397	23	646	10020	7320	2700	2560	24	4592	106270	-121	941	1490	554	1040	2530	2530	0	7389	695
616	6940	7255	-315	-120	142	23	958	-416	24	632	9500	6840	2660	2570	25	4586	105550	363	940	1490	553	1040	2590	2530	0	7333	694
609	6750	6877	-127	12	126	138	1223	-227	25	627	9320	6650	2670	2570	26	4587	105670	-60	943	1490	553	1030	2520	2570	0	6140	691
615	6910	7023	-113	-80	72	-2	1438	-213	26	630	9430	6810	2620	2520	27	4585	105430	121	942	1490	557	1040	2530	2530	0	7021	693
612	6830	6730	100	-85	54	-31	1458	0	27	623	9180	6730	2450	2550	28	4579	104700	368	942	1490	563	1050	2540	2540	0	7008	691
602	6570	6470	100	-93	39	-14	1434	0	28	620	9070	6470	2600	2580	29	4569	103280	726	941	1490	563	1050	2540	2540	0	7256	687
572	5970	5870	100	-73	77	4	1436	0	29	604	8510	5870	2640	2620	30	4561	102540	363	941	1490	564	1050	2540	2540	0	6533	685
567	5710	5610	100	-77	74	-3	1434	0	30	593	8130	5610	2520	2620	31	4538	99760	1402	942	1490	567	1060	2540	2540	0	6992	687
566	5680	5580	100	-28	68	40	1480	0	31	592	8100	5520	2580	2570	AUG 1	4524	98080	847	940	1490	565	1040	2530	2530	0	6417	691
570	5780	5680	100	-23	52	29	1436	0	AUG 1	599	8340	5630	2660	2560	2	4526	98320	-121	939	1490	563	1020	2510	2510	0	5709	673
586	6420	6320	100	-45	32	-13	1458	0	2	617	8960	6320	2640	2540	3	4536	99520	-605	934	1470	556	1000	2470	2470	0	5885	672

PLATE NO VII

MINIDOKA			N-M	DATE	MIL	PA LAT		NSTF CAN		PA+N	NSTF CAN		SJ TF CANAL				MURTAUGH C		MIL	MILNER				M-M
DISCH	STD	NAT	LOSS	1921	GAGE	GAGE	DISC	GAGE	DISCH	TOTAL	STD	NAT	GAGE	DISCH	STD	NAT	GAGE	DISC	STD	NAT	TH BAL	GAGE	DISCH	STD	NAT	GAIN
32460			-929	JUN 4	10.90	198	53	6.80	2120	2171			6.78	1590				0			28697	2101	26330			-4317
31660			-120	5	10.89	196	41	7.51	2460	2501			6.92	1650				0			27509	2065	25210			-3709
30010			709	6	10.88	198	53	7.74	2580	2633			7.18	1770				0			25607	2023	23890			-1717
28270			541	7	10.90	194	51	HD	1940	1991			7.89	2110				0			24169	2008	23440			-729
27330			59	8	10.89	196	52	HD	863	915			8.10	2210				0			24205	2077	23710			-495
26910			-532	9	10.90	201	55	8.30	2980	3035			8.92	2640				0			21235	1943	21698			455
27050			-749	10	10.91	202	56	8.35	3000	3056			9.91	3210				0			20784	1933	21460			676
27330			-375	11	10.89	207	59	8.35	3000	3059			10.28	3430				0			20841	1934	21310			469
27570			-618	12	10.91	208	59	8.40	3020	3079			10.00	3260				0			21731	1944	21750			19
27490			-131	13	10.91	206	58	8.46	3060	3118			10.01	3270				0			21043	1906	20540			-503
26120			71	14	10.92	206	58	8.43	3040	3098			10.09	3320				0			19702	1854	19260			-440
25840			529	15	10.90	206	58	8.48	3060	3118			10.26	3420				0			19273	1942	20450			1177
26780			-75	16	10.91	208	59	8.49	3070	3129			10.35	3480				0			20072	1964	19580			-492
25610			-205	17	10.91	208	59	8.50	3080	3139			10.36	3480				0			18352	1883	19090			738
25790			-429	18	10.90	209	60	8.52	3080	3140			10.36	3480				0			19751	1965	19564			-187
25700			533	19	10.95	209	60	8.62	3140	3200			10.56	3610				0			16851	1793	16870			19
24090			794	20	11.00	209	60	8.66	3160	3220			10.41	3510				0			17321	1686	15510			-1811
20340			2999	21	10.92	210	60	8.63	3140	3200			10.27	3430				0			13671	HD	11920			-1751
16260			3459	22	11.00	208	59	8.65	3150	3209			10.28	3430				0			9575	1199	7740			-1835
12110			3106	23	11.00	208	59	8.66	3160	3219			10.29	3440				0			5419	936	4870			-549
10370			2487	24	10.98	210	60	8.62	3140	3200			10.27	3430				0			3733	HD	3030			-703
8050			1645	25	11.00	210	60	8.66	3160	3220			10.35	3480				0			1320	550	1190			-130
7720			1441	26	11.00	208	59	8.66	3160	3219			10.40	3510				0			938	758	3060			2122
8990			290	27	11.00	211	61	8.67	3160	3221			10.40	3510				0			2206	762	3160			954
9740			-286	28	11.00	211	61	8.65	3150	3211			10.39	3500				0			2976	739	3370			394
9610			440	29	10.98	212	62	8.66	3160	3222			10.40	3510				0			2825	632	1870			-955
7800			1308	30	10.98	212	62	8.65	3150	3212			10.46	3540				0			995	470	682			-313
7380			887	JUL 1	10.89	211	61	8.60	3130	3191			10.43	3530				0			607	321	176			-431
6930			985	2	10.60	212	62	8.34	3000	3062			10.28	3430				0			334	244	96			-292
7430			-402	3	11.03	211	61	8.69	3180	3241			10.43	3560				0			577	459	625			48
7120			100	4	11.02	211	61	8.68	3190	3251			10.48	3560				0			257	432	498			241
7120			125	5	11.02	211	61	8.68	3200	3261			10.48	3560				0			247	462	640			393
7140	379	6761	-489	6	11.02	210	60	8.68	3200	3260	0	3260	10.43	3560	0	3560	176	52	0	52	268	471	688	374	314	420
7510	1510	6000	732	7	11.03	210	60	8.68	3200	3260	260	3000	10.47	3550	550	3000	HD	48	48	0	652	HD	1040	1040	0	388
7090	1798	5294	939	8	11.02	210	60	8.42	3080	3140	846	2294	10.43	3560	560	3000		0	0	0	390	276	41	41	0	-349
6250	1643	4607	1098	9	10.82	212	60	8.12	2940	3000	1393	1607	10.44	3530	530	3000		0	0	0	-280	187	24	24	0	304
6280	2454	3826	92	10	10.78	212	60	7.99	2870	2930	2104	826	10.44	3530	530	3000		0	0	0	-180	186	23	23	0	203
6150	2750	3400	156	11	10.78	212	59	7.96	2860	2919	2519	400	10.44	3530	530	3000		0	0	0	-299	136	23	23	0	322
6180	2780	3400	162	12	10.79	211	58	7.96	2860	2918	2518	400	10.43	3530	530	3000		0	0	0	-268	192	21	21	0	289
6250	2850	3400	-80	13	10.82	211	58	7.99	2880	2938	2538	400	10.44	3540	540	3000	HD	11	11	0	-239	184	22	22	0	261
6280	2880	3400	-418	14	10.84	210	58	7.99	2880	2938	2538	400	10.43	3560	560	3000	168	50	50	0	-268	196	28	28	0	296
6350	2950	3400	-401	15	10.86	209	57	8.28	3030	3087	2687	400	10.52	3580	580	3000	168	50	50	0	-367	187	24	24	0	391
6480	3080	3400	-229	16	10.84	211	58	8.29	3040	3098	2698	400	10.56	3610	610	3000	168	50	50	0	-278	184	23	23	0	301
6320	2920	3400	103	17	10.76	211	58	8.15	2960	3018	2618	400	10.54	3590	590	3000	168	50	50	0	-338	184	22	22	0	360
6280	2880	3400	599	18	10.76	209	57	8.10	2940	2997	2597	400	10.54	3590	590	3000	168	50	50	0	-357	183	22	22	0	379
6380	2980	3400	476	19	10.78	211	58	8.15	2960	3018	2618	400	10.54	3590	590	3000	168	50	50	0	-278	182	21	21	0	299
6440	3146	3334	269	20	10.83	211	58	8.40	3090	3148	2756	392	10.55	3600	658	2942	168	50	50	0	-318	177	19	19	0	337
6600	3879	2721	470	21	10.87	211	58	8.54	3140	3198	2878	320	10.56	3610	1209	2401	168	50	50	0	-258	174	17	17	0	275
6630	3950	2680	-191	22	10.84	212	59	8.56	3140	3199	2884	315	10.55	3600	1235	2365	168	50	50	0	-219	174	17	17	0	236
6550	3920	2630	258	23	10.85	212	59	8.52	3100	3159	2850	309	10.54	3590	1269	2321	168	50	50	0	-249	176	18	18	0	267
6550	3900	2650	616	24	10.87	213	59	8.57	3100	3159	2847	312	10.57	3610	1272	2338	168	50	50	0	-269	176	18	18	0	287
6700	4000	2700	669	25	10.89	212	59	8.57	3080	3139	2821	318	10.53	3590	1208	2382	HD	44	44	0	-73	173	18	18	0	91
6680	4020	2660	653	26	10.88	213	59	8.55	3060	3119	2806	313	10.55	3600	1253	2347	168	50	50	0	-89	174	17	17	0	106
6600	3930	2670	140	27	10.86	213	59	8.55	3100	3159	2845	314	10.53	3590	1234	2356	168	50	50	0	-199	170	16	16	0	215
6650	4030	2620	371	28	10.92	213	59	8.60	3180	3239	2931	308	10.56	3600	1288	2312	168	50	50	0	-239	167	14	14	0	253
6500	3900	2600	408	29	10.92	213	59	8.59	3200	3259	2971	288	10.41	3510	1348	2162	168	51	51	0	-220	166	14	14	0	234
6450	3810	2640	736	30	10.90	213	58	8.57	3200	3258	2952	306	10.38	3490	1196	2294	168	51	51	0	-299	163	15	15	0	314
6500	3980	2520	-117	31	10.94	212	58	8.59	3200	3258	2947	311	10.41	3510	1181	2329	168	52	52	0	-370	169	15	15	0	335
6350	3830	2520	492	AUG 1	10.86	212	58	8.56	3190	3248	2952	296	10.38	3490	1266	2224	168	52	52	0	-290	174	17	17	0	307
6150	3490	2660	-441	2	10.85	213	58	8.52	3060	3118	2822	296	10.18	3370	1146	2224	168	28	28	0	-166	148	15	15	0	181
6120	3480	2640	-235	3	10.83	213	58	8.51	3120	3178	2865	313	10.14	3350	1009	2347	168	21	21	0	-399	166	14	14	0	413
6120	3480	2640	-235	4	10.70	213	58	8.38	3130	3188	2877	311	10.13	3340	1011	2329	168	21	21	0	-429	164	13	13	0	442

ALL DISCHARGE QUANTITIES ARE GIVEN IN SECOND FEET UNLESS OTHERWISE NOTED AT TOP OF COLUMN

1921 DISTRIBUTION WATER DISTRICT NO 36

DATE	JACKSON LAKE			MORAN				OSGOOD		DATE	HEISE					MORAN-HEISE				REXBURG		HEISE + RILEY + REXBG	DATE	DIV HEISE
1921	GAGE	CAP AC FT	DRAFT AF	GAGE	DISCH	STD	NAT	DISCH	+ MORAN	1921	GAGE	DISCH	+ RILEY	STD	OSG	NAT	TOT GAIN	LOSS ST	LOSS OS	GAIN NAT.	GAGE	DISCH		1921	TOTAL
APR 30	5292	459440	18830	681	10810	9231	1579	0	10810	AUG 1	398	16280	15302	9000	0	7302	5492	231	0	5723	282	760	17042	AUG 1	7197
MAY 1	5212	440340	18200	872	10830	9176	1654	10	10840	2	397	16230	16231	8947	10	7294	5411	229	0	5640	296	847	17098	2	6979
2	5134	422230	17610	856	10480	8878	1602	27	10507	3	392	15980	15980	8656	26	7298	5413	222	1	5636	308	938	16914	3	6642
3	5071	403780	18450	771	8640	7134	1506	35	8675	4	354	14160	14160	6956	34	7170	5485	178	1	5664	313	963	15128	4	6453
4	5017	394700	12080	717	7530	6090	1440	37	7567	5	321	12670	12670	3933	36	6696	5103	152	1	5256	313	962	13638	5	6410
5	4968	383810	10890	679	6790	5490	1300	35	6825	6	304	11950	11964	3353	34	6577	5139	137	1	5277	306	934	12198	6	6908
6	4920	375180	10630	667	6560	5359	1201	35	6595	7	293	11490	11511	5225	34	6252	4916	134	1	5051	301	906	12417	7	7189
7	4870	367170	11010	671	6640	5551	1089	41	6681	8	292	11440	11461	5412	40	6009	4780	139	1	4920	305	934	12395	8	7196
8	4819	362990	11180	673	6680	5637	1043	39	6719	9	294	11530	11550	5496	38	6016	4831	141	1	4973	302	917	12467	9	7202
9	4763	341880	11110	669	6600	5601	999	38	6638	10	294	11530	11546	5461	37	6048	4908	140	1	5047	307	951	12497	10	7047
10	4719	331240	10640	657	6370	5364	1006	38	6408	11	286	11200	11211	5230	37	5944	4803	134	1	4938	306	951	12162	11	6843
11	4670	320490	10560	654	6320	5324	996	38	6358	12	282	11030	11042	5191	37	5814	4684	133	1	4818	308	962	12004	12	6496
12	4621	310170	10510	654	6320	5299	1021	35	6355	13	282	11030	11041	5167	34	5840	4686	132	1	4819	305	951	11997	13	6023
13	4573	299930	10240	647	6190	5163	1027	34	6224	14	280	10950	10961	5034	33	5894	4737	129	1	4867	315	1010	11971	14	6045
14	4523	289750	10180	649	6220	5132	1088	31	6251	15	283	11070	11081	5004	30	6047	4830	128	1	4957	333	1120	12201	16	6163
15	4477	279630	10120	650	6240	5102	1138	30	6270	16	284	11110	11121	4974	29	6112	4851	128	1	4980	356	1260	12381	17	6274
16	4429	269580	10050	630	6240	5067	1173	29	6269	17	280	10950	10961	4940	28	5993	4692	127	1	4820	371	1380	12341	18	5826
17	4384	260200	9380	626	5810	4729	1081	28	5838	18	266	10390	10400	4611	27	5762	4562	118	1	4681	324	1400	11800	19	5524
18	4343	251720	8480	597	5290	4275	1015	27	5317	19	247	9670	9678	4168	26	5484	4361	107	1	4469	373	1390	11068	20	5224
19	4307	244280	7440	556	4600	3751	849	27	4627	20	231	9070	9078	3657	26	5395	4451	94	1	4546	349	1360	10432	21	5024
20	4271	236920	7360	547	4460	3711	739	25	4475	21	228	8960	8968	3618	24	5376	4493	93	1	4587	369	1360	10328	22	5330
21	4238	230190	6730	530	4180	3393	787	21	4201	22	217	8560	8565	3308	20	5237	4364	85	1	4450	361	1300	9865	23	5078
22	4204	223250	6940	537	4290	3499	791	21	4311	23	217	8560	8565	3412	20	5133	4254	87	1	4342	356	1270	9835	24	5078
23	4170	216400	6850	532	4210	3454	756	20	4230	24	220	8670	8675	3368	20	5287	4445	86	0	4531	359	1290	9965	25	5092
24	4138	209970	6490	528	4150	3242	908	12	4162	25	218	8600	8604	3161	12	5431	4442	81	0	4523	370	1370	9974	26	5369
25	4105	203340	6630	534	4240	3343	897	0	4240	26	217	8560	8564	3259	0	5305	4324	84	0	4408	371	1390	9944	27	5389
26	4072	196780	6560	530	4180	3307	873	0	4180	27	212	8390	8394	3224	0	5170	4214	83	0	4297	374	1400	9794	28	5216
27	4039	190250	6530	526	4120	3292	828	0	4120	28	212	8390	8394	3210	0	5184	4274	82	0	4356	375	1400	9794	29	5225
28	4009	184310	5940	504	3780	2995	785	0	3780	29	204	8120	8122	2920	0	5202	4342	75	0	4417	373	1390	9512	30	5018
29	3982	179020	5290	473	3330	2667	663	0	3330	30	191	7680	7682	2600	0	5082	4352	67	0	4419	374	1400	9082	31	5021
30	3959	174330	4490	442	2920	2264	656	0	2920	31	175	7180	7180	2207	0	4973	4260	57	0	4317	371	1380	8560	SEP 1	5079
31	3937	170250	4280	431	2770	2158	612	0	2770	SEP 1	168	6960	6963	2104	0	4859	4193	54	0	4247	365	1330	8293	2	5080
SEP 1	3915	165960	4290	428	2740	2162	578	0	2740	2	169	6990	6993	2108	0	4885	4253	54	0	4307	364	1330	8373	3	4967
2	3894	161850	4080	418	2620	2057	563	0	2620	3	171	7050	7053	2006	0	5047	4433	51	0	4484	375	1400	8453	4	4840
3	3876	158430	3450	408	2500	1739	761	0	2500	4	178	7270	7272	1696	0	5576	4772	43	0	4815	401	1590	8862	5	4816
4	3864	156130	2300	377	2140	1160	980	0	2140	5	164	6840	6842	1131	0	5711	4702	29	0	4731	423	1810	8657	6	4753
5	3856	154600	1530	319	1530	771	759	0	1530	6	140	6150	6151	752	0	5399	4621	19	0	4640	434	1850	8001	7	4933
6	3850	153450	1150	290	1260	580	680	0	1260	7	121	5630	5630	566	0	5064	4370	14	0	4384	435	1860	7490	8	4784
7	3844	152300	1150	289	1250	580	670	0	1250	8	115	5470	5471	566	0	4905	4221	14	0	4235	430	1820	7291	9	4752
8	3840	151530	770	267	1070	388	682	0	1070	9	115	5470	5472	378	0	5094	4402	10	0	4412	424	1770	7242	10	4511
9	3842	151910		187	516					10	104	5190	5192				4676				452	2000	7192	11	3809
10	3843	152110		213	672					11	095	4960	4961				4289				446	1958	6911	12	3755
11	3842	151910		235	822					12	098	5040	5041				4219				444	1930	6971	13	3602
12	3845	152490		149	326					13	095	4960	4961				4635				448	1970	6951	14	3563
13	3851	153640		039	30					14	075	4480	4480				4458				435	1860	6340	15	3601
14	3856	154600		035	27					15	061	4150	4150				4123				429	1810	5960	16	3569
15	3861	153560		034	26					16	055	4020	4020				3994				429	1910	5830	17	3509
16	3866	156520		034	26					17	053	3970	3970				3944				430	1885	5790	18	3554
17	3871	157470		034	26					18	051	3920	3920				3894				435	1840	5780	19	3449
18	3876	158430		034	26					19	053	3970	3970				3944				440	1920	5870	20	3554
19	3882	159580		037	29					20	055	4020	4020				3991				441	1910	5930	21	3370
20	3889	160930		038	30					21	055	4020	4020				3998				441	1910	5930	22	3192
21	3895	162080		035	27					22	052	3950	3950				3923				435	1860	5810	23	3045
22	3901	163230		034	26					23	048	3860	3860				3834				428	1810	5670	24	2934
23	3906	164200		033	25					24	045	3790	3790				3765				420	1940	5530	25	2843
24	3911	165180		033	25					25	043	3750	3750				3725				413	1890	5440	26	2740
25	3916	166150		032	24					26	042	3720	3720				3696				403	1810	5330	27	2939
26	3921	167130		032	24					27	040	3680	3680				3656				401	1890	5270	28	2913
27	3928	168490		031	23					28	038	3640	3640				3617				401	1590	5130	29	2886
28	3932	169270		030	22					29	036	3600	3600				3578				400	1580	5180	30	2830
TOTAL			695470			350632								341869			174070	8763	21						
MEAN																	4432								

TOTAL AND MEAN DETERMINATIONS ARE FOR SEASON AND INCLUDE RECORD FROM BOTH PLATE VII AND PLATE VIII

DAILY SUMMARY OF DATA AT AND BETWEEN S

DIV HEISE WOOD				WOOD	WOODVILLE				HEISE-WOODVILLE			
TOTAL	STD	DSG	NAT	TH BAL.	GAGE	DISCH	STD	NAT	TOT GAIN	LOSS ST	LOSS DS	GAIN NAT
7220	1150	0	6520	9322	807	9760	7805	1955	438	45	0	483
7197	599	0	6638	9901	829	10340	8343	1997	439	45	0	484
6970	348	0	6522	10024	828	10520	8245	2275	436	43	0	539
6542	277	0	6265	8586	794	9290	6644	2646	704	35	0	739
6653	39	0	6614	6985	758	8030	5869	2161	1045	30	0	1075
6410	-90	0	6500	6488	739	7390	5416	1974	902	27	0	929
6901	579	0	6379	5509	715	6580	4670	1910	1071	26	0	1097
7183	805	0	6378	5212	728	6230	4580	1650	1018	27	0	1045
7190	820	0	6370	5277	705	6260	4649	1611	983	27	0	1010
7202	485	0	6717	5295	707	6320	4949	1371	1025	27	0	1052
7047	445	0	6602	5115	705	6260	4759	1501	1145	26	0	1171
6943	369	0	6474	5161	705	6260	4796	1464	1099	26	0	1125
6496	164	0	6332	5496	716	6620	4977	1643	1124	26	0	1150
6025	1	0	6024	5946	732	7150	5008	2142	1204	25	0	1229
6085	-21	0	6066	6156	739	7370	5000	2390	1234	25	0	1259
6105	21	0	6034	6276	737	7320	4928	2392	1044	25	0	1069
6214	6	0	6208	6127	736	7280	4909	2371	1153	25	0	1178
5987	3	0	5986	5811	723	6950	4585	2265	1039	23	0	1062
5927	2	0	5925	5241	711	6450	4145	2305	1209	21	0	1230
6004	3	0	6001	4434	693	5880	3636	2244	1446	18	0	1464
5734	2	0	5732	4394	684	5590	3598	1992	1196	18	0	1214
5898	14	0	5884	3967	672	5230	3277	1953	1263	17	0	1280
5832	14	0	5818	3953	667	5080	3381	1699	1127	17	0	1144
5974	12	0	5972	3981	670	5170	3339	1831	1189	17	0	1206
5877	6	0	5871	4077	673	5260	3139	2121	1183	16	0	1199
5892	6	0	5886	4052	674	5290	3237	2053	1238	16	0	1254
5646	0	0	5646	4128	682	5530	3208	2322	1402	16	0	1418
5425	0	0	5425	4369	683	5560	3194	2366	1191	16	0	1207
5416	0	0	5416	4096	676	5350	2905	2445	1254	15	0	1269
5171	0	0	5171	3911	667	5080	2587	2493	1169	13	0	1182
5129	0	0	5129	3431	652	4640	2196	2444	1209	11	0	1220
5080	0	0	5080	3213	645	4440	2093	2347	1227	11	0	1238
4967	0	0	4967	3356	639	4270	2097	2173	914	11	0	925
4840	0	0	4840	3613	643	4380	1996	2384	767	10	0	777
4716	0	0	4716	4146	658	4810	1688	3122	664	8	0	672
4630	0	0	4630	4022	664	4990	1125	3865	968	6	0	974
4287	0	0	4287	3714	657	4780	748	4032	1066	4	0	1070
4230	0	0	4230	3260	646	4470	563	3907	1210	3	0	1213
4152	0	0	4152	3139	636	4190	563	3627	1051	3	0	1054
4019	0	0	4019	3223	633	4110	376	3734	887	2	0	889
3879				3313	632	4080			767			
3755				3156	629	4000			844			
3602				3389	630	4030			661			
3563				3338	628	3980			592			
3601				2739	616	3670			931			
3569				2991	604	3390			999			
3508				2322	596	3220			898			
3636				2234	594	3170			936			
3449				2331	595	3200			869			
3344				2426	596	3220			794			
3370				2560	599	3280			720			
3192				2738	603	3370			632			
3045				2765	600	3300			535			
2932				2738	597	3240			502			
2943				2587	593	3150			563			
2940				2500	589	3070			570			
2969				2381	585	2990			609			
2918				2352	581	2910			558			
2886				2344	581	2910			566			
2830				2350	579	2870			520			
	2174						925225		50235	1730	0	
									412			

DIV WOOD-PORT			PORT	PORTERVILLE				WOOD-PORT			BLACK RIVER			P-B	BLACK
TOTAL	STD	NAT	TH BAL	GAGE	DISCH	STD	NAT	TOT GN	LOSS ST	GN NAT	GAGE	DISC	+ PORT	DIV	TH BAL
2340	616	1724	7420	577	7070	6901	169	-350	283	-67	531	101	7171	245	6926
2428	557	1871	7912	545	7720	7475	245	-192	311	119	562	148	7866	247	7621
2571	507	2064	7949	544	7690	7490	200	-259	248	-11	574	169	7859	243	7616
2491	0	2491	6799	511	6500	6478	22	-299	166	-133	594	207	6707	238	6469
2072	0	2072	5958	486	5620	5675	-55	-358	194	-144	634	286	5906	215	5691
2062	0	2062	5328	475	5250	5178	72	-78	238	160	700	382	5632	221	5411
2013	0	2013	4567	453	4520	4525	-5	-47	145	98	650	308	4921	221	4607
2007	366	1641	4273	441	4130	4172	-42	-95	42	-51	658	319	4449	209	4240
1971	484	1487	4289	441	4130	4111	19	-159	54	-105	630	280	4416	197	4219
1964	692	1272	4356	442	4160	4155	5	-196	102	-94	630	280	4440	191	4249
2009	645	1364	4251	438	4040	3974	66	-211	140	-71	591	201	4241	196	4045
2012	518	1494	4248	439	4070	4111	-41	-178	167	-11	602	223	4293	189	4104
1962	234	1728	4658	451	4450	4563	-113	-208	180	-28	658	319	4765	194	4570
1911	0	1911	5239	463	5010	4828	182	-279	180	-49	702	385	5395	213	5182
1924	0	1924	5466	475	5260	4810	440	-216	190	-26	685	359	5601	221	5337
1890	0	1890	5430	474	5220	4751	469	-210	177	-33	670	336	5556	205	5351
1870	0	1870	5410	476	5280	4742	538	-130	167	37	720	415	5695	217	5478
1794	0	1794	5056	446	4950	4461	489	-106	124	18	750	466	5416	216	5200
1773	0	1773	4677	453	4520	4066	456	-157	79	-78	712	401	4921	199	4722
1714	0	1714	4166	438	4040	3552	488	-126	84	-42	700	382	4428	194	4228
1690	0	1690	3900	429	3750	3501	249	-150	97	-53	694	357	4107	174	3933
1665	0	1665	3565	417	3380	3182	198	-185	95	-90	674	244	3572	152	3472
1753	0	1753	3327	414	3290	3253	37	-37	123	91	464	36	3376	151	3175
1774	0	1774	3396	415	3320	3252	68	-76	87	11	510	77	3397	166	3231
1774	0	1774	3486	416	3350	3098	252	-136	41	-95	576	174	3525	159	3334
1776	0	1776	3514	421	3500	3156	344	-14	81	67	594	170	3684	170	3514
1766	0	1766	3764	428	3720	3150	570	-46	58	14	650	308	4022	183	3840
1743	0	1743	3817	430	3780	3172	608	-37	22	-15	644	303	4085	189	3896
1701	0	1701	3649	425	3620	2879	741	-29	26	-3	635	282	3908	177	3731
1682	0	1682	3398	416	3350	2569	781	-48	18	-30	602	94	3474	157	3267
1656	0	1656	2934	403	2960	2176	784	-28	20	-4	588	195	3133	109	3024
1643	0	1643	2797	395	2720	2074	646	-77	19	-58	490	58	2772	132	2640
1628	0	1628	2642	393	2670	2068	602	-28	29	57	490	58	2722	132	2590
1610	0	1610	2770	399	2840	1970	870	10	26	96	551	133	3033	135	2898
1591	0	1591	3219	413	3260	1680	1580	-41	8	49	623	276	3638	161	3395
1558	0	1558	3432	418	3410	1119	2291	-22	6	-16	637	290	3706	173	3533
1524	0	1524	3256	416	3350	744	2606	94	4	98	637	290	3646	190	3456
1475	0	1475	2995	406	3050	560	2490	55	3	58	638	292	3342	176	3166
1450	0	1450	2740	399	2840	560	2280	100	3	103	537	110	2956	169	2781
1425	0	1425	2685	397	2780	374	2406	95	2	97	537	110	2892	160	2730
1413			2667	396	2750			83			565	154	2924	171	2753
1403			2597	394	2700			103			585	190	2890	144	2746
1392			2638	394	2700			67			592	203	2903	136	2767
1386			2594	392	2640			46			546	123	2763	133	2630
1342			2328	384	2410			82			486	53	2464	129	2335
1298			2092	376	2190			98			555	137	2327	126	2201
1254			1966	372	2080			114			473	43	2123	123	2000
1247			1923	368	1980			57			533	104	2084	121	1963
1237			1963	368	1980			17			556	139	2119	117	2002
1227			1993	371	2060			67			563	150	2216	113	2097
1218			2062	374	2140			78			564	152	2292	101	2191
1210			2160	375	2160			6			587	193	2353	111	2242
1209			2091	374	2140			49			593	205	2341	111	2230
1182			2058	373	2110			52			578	176	2286	106	2180
1157			1993	369	2000			7			562	148	2148	101	2047
1133			1937	367	1950			13			550	129	2079	95	1984
1113			1877	365	1900			23			550	129	2029	96	1933
1093			1817	362	1820			3			550	129	1949	93	1856
1073			1837	362	1820			-17			660	145	1965	96	1869
1056			1814	362	1820			6			560	145	1965	96	1869
	6725					309910		21097	8530						
								-173							

EEN SNAKE RIVER GAGING STATIONS FROM JACKSON LAKE WYOMING TO MILN

T	P-B	BLACK	BLACKFOOT				PORT-BLACK			CUM LOSS	CORR APPLD	DATE	NEELEY		B-N	DATE	LAKE WALCOTT			WSMINC		55MINC		NS+55 M	
	DIV	TH BAL	GAGE	DISCH	STD	NAT	TOTGN	LOSS	GNNA	STD	STD	1921	GAGE	DISCH	GAIN	1921	GAGE	CAP AC FT	DRAFT	GAGE	DISCH	GAGE	DISCH	TOTAL	S
	245	6926	617	6960	6860	100	31	41	73	1436	0	APR1	8.35	9650	6860	2760	2660	4004	4558	102170	-1136	920	1440	558	1000	2440	2
	247	7621	638	7530	7430	100	-91	45	-46	1436	0	2	6.68	10100	7430	2670	2670	3	4582	105070	-1462	899	1380	554	932	2362	2
	243	7616	638	7530	7430	100	-86	60	-26	1436	0	3	6.47	10000	7430	2630	2530	6	4589	105910	-474	898	1380	550	970	2350	2
	238	6469	599	6500	6400	100	31	78	109	1436	0	6	6.23	9180	6400	2780	2660	7	4588	105190	60	899	1380	548	964	2340	2
	213	5691	568	5730	5630	100	39	45	84	1436	0	7	6.00	8580	5630	2740	2640	8	4579	104700	550	901	1390	547	964	2354	2
	221	5411	551	5330	5152	178	-81	26	-55	1358	78	8	5.88	7940	5152	2730	2630	9	4561	102540	1089	897	1380	548	964	2344	2
	209	4240	500	4230	4480	100	-27	45	18	1358	0	9	5.68	7200	4480	2810	2710	10	4543	100250	1135	893	1370	552	976	2246	2
	191	4219	498	4190	4130	100	-10	42	32	1358	0	10	5.43	6830	4130	2520	2420	11	4550	101210	-484	892	1380	555	985	2365	2
	191	4249	500	4230	4130	100	-29	21	-8	1358	0	11	5.91	6740	4090	2650	2550	12	4524	104100	-1457	900	1380	552	990	2370	2
	194	4017	491	4050	3950	100	3	24	27	1358	0	12	5.53	6310	4130	2680	2580	13	4591	106150	-1034	900	1380	551	979	2352	2
	189	4104	498	4190	4090	100	86	21	107	1358	0	13	5.49	6660	3950	2730	2630	14	4591	106150	0	899	1380	548	964	2344	2
	199	4570	520	4640	4540	100	70	23	93	1358	0	14	5.50	6710	4090	2620	2520	15	4593	106390	-121	897	1380	550	924	2304	2
	213	5182	546	5220	4804	416	38	24	62	1042	316	15	5.64	7230	4540	2690	2590	16	4590	106030	181	898	1380	549	907	2287	2
	221	5387	556	5450	4786	664	63	24	87	478	564	17	5.87	7910	5120	2810	2710	17	4589	105910	60	897	1380	546	890	2250	2
	205	5351	557	5470	4727	743	119	24	143	0	478	18	5.93	8130	5350	2780	2680	18	4590	106030	-60	897	1380	548	959	2239	2
	217	5478	560	5540	4718	822	62	24	86	0	0	19	5.97	8190	5205	2925	2660	19	4593	106390	-181	898	1380	548	948	2228	2
	216	5200	545	5200	4439	761	0	22	22	0	0	20	5.82	7960	4718	3382	2560	20	4584	105310	545	898	1380	549	891	2231	2
	199	4722	524	4730	4046	684	8	20	28	0	0	21	5.67	7200	4439	3321	2560	21	4580	104820	247	898	1370	548	948	2208	2
	194	4223	496	4150	3534	616	-78	18	-60	0	0	22	5.57	6930	4046	3214	2530	22	4572	103860	434	897	1380	546	951	2231	2
	174	3933	481	3860	3459	401	-73	42	-31	0	0	23	5.47	6610	3534	3396	2780	23	4570	103620	121	897	1380	549	965	2245	2
	152	3472	458	3430	3125	305	-42	57	15	0	0	24	5.34	6200	3459	3151	2750	24	4564	102900	363	897	1380	553	1824	2264	2
	151	3175	453	3340	3204	136	165	49	214	0	0	25	5.27	5990	3125	3075	2770	25	4559	102290	308	896	1370	543	918	2282	2
	166	3231	457	3420	3226	194	189	26	215	0	0	26	5.28	6010	3204	2786	2650	26	4549	101090	605	902	1410	548	927	2337	2
	189	3334	459	3450	3083	367	116	15	131	0	0	27	5.31	6110	3226	2794	2600	27	4546	100730	181	913	1430	542	910	2340	2
	170	3518	468	3610	3140	470	92	16	108	0	0	28	5.34	6200	3083	3027	2660	28	4543	100370	181	916	1430	522	882	2312	2
	188	3840	486	3950	3134	816	110	16	126	0	0	29	5.47	6610	3140	3060	2590	29	4543	100610	-121	854	1310	530	898	2268	2
	187	3896	483	3990	3156	834	94	16	110	0	0	30	5.48	6650	3134	3476	2660	30	4550	101210	-302	862	1310	519	876	2076	2
	177	3731	475	3740	2865	875	9	14	23	0	0	31	5.42	6450	3156	3484	2660	31	4542	101090	60	860	1280	503	856	2136	2
	157	3267	462	3510	2556	954	243	13	256	0	0	SEP1	5.20	5780	2865	3585	2710	SEP1	4519	97470	1125	860	1250	478	818	2092	1
	129	3026	437	3070	2165	905	44	11	55	0	0	2	5.19	5750	2556	3224	2270	2	4501	96030	726	858	1240	473	785	2045	2
	132	2646	418	2760	2064	696	114	10	124	0	0	3	5.11	5510	2165	3585	2680	3	4506	95910	60	855	1230	450	704	1934	1
	132	2596	414	2690	2058	632	94	10	104	0	0	4	4.99	5160	2064	3446	2750	4	4494	94490	1116	858	1230	416	615	1825	1
	135	2898	431	2970	1966	1004	72	4	76	0	0	5	5.09	5450	1966	3484	2480	5	4482	93090	1206	853	1220	429	635	1905	1
	161	3375	455	3430	1680	1700	5	0	5	0	0	6	5.23	5870	1680	4190	2490	6	4479	92740	1476	852	1220	409	591	1851	1
	173	3527	466	3580	1119	2461	53	0	53	0	0	7	5.34	6220	1119	5081	2620	7	4435	93440	-353	852	1260	385	833	1793	1
	184	3456	461	3490	743	2747	34	1	35	0	0	8	5.33	6170	743	5427	2680	8	4492	94250	-408	858	1280	378	838	1798	1
	176	3166	445	3200	559	2641	34	1	35	0	0	9	5.23	5870	559	5311	2670	9	4510	96330	1092	862	1290	382	887	1817	1
	169	2781	431	2970	560	2410	189	0	189	0	0	10	5.18	5720	560	5160	2750	10	4519	97470	543	867	1300	393	889	1829	1
	160	2730	427	2900	374	2526	170	0	170	0	0	11	5.13	5670	374	5196	2670	11	4524	98040	303	869	1310	394	879	1839	1
	151	2753	425	2870			117					12	5.14	5660			2730	12	4532	99040	484	850	1260	394	829	1789	1
	144	2746	422	2820			74					13	5.11	5610			2730	13	4540	100010	459	853	1270	396	851	1751	
	136	2761	421	2810			43					14	5.09	5650			2690	14	4546	100730	363	858	1280	382	822	1712	
	133	2630	417	2740			110					15	5.08	5430			2640	15	4554	101690	484	875	1290	381	813	1698	
	129	2335	403	2520			185					16	5.06	5560			2680	16	4557	102050	181	882	1280	382	819	1698	
	126	2201	385	2240			39					17	4.98	5130			2340	17	4560	102430	181	894	1280	382	818	1691	
	123	2000	378	2140			140					18	4.99	5160			2890	18	4561	102540	64	885	1280	380	811	1691	
	121	1963	374	2090			127					19	4.84	5000			3020	19	4556	101930	302	888	1280	381	813	1683	
	117	2002	379	2160			153					20	4.93	4830			2710	20	4562	102660	363	878	1280	382	816	1696	
	113	2097	382	2200			103					21	4.90	4910			2690	21	4570	103620	484	884	1280	385	827	1727	
	111	2181	387	2280			99					22	4.91	4940			2710	22	4577	104460	423	878	1280	377	801	1681	
	111	2242	391	2340			98					23	4.96	5090			2660	23	4552	101450	1513	880	1280	377	801	1851	
	111	2234	388	2290			56					24	4.91	5020			2710	24	4503	93550	6975	851	1230	377	801	1831	
	106	2180	384	2230			50					25	4.93	4960			2790	25	4446	88900	3353	840	1200	371	796	1796	
	101	2047	377	2130			83					26	4.99	4970			2760	26	4388	82190	3333	840	1200	377	782	1762	
	95	1984	370	2030			46					27	4.97	4880			2780	27	4323	74320	2636	849	1220	371	790	1710	
	96	1933	364	1950			17					28	4.91	4810			2850	28	4260	67870	3534	835	1190	370	807	1705	
	95	1854	360	1890			36					29	4.81	4720			2710	29	4206	61940	2990	823	1170	373	784	1767	
	90	1864	362	1920			51					30	4.80	4710			2770	30	4146	55470	3262	816	1160	374	791	1781	
	96	1869	365	1960			91										2660									
					306623		2000	3237			0															
							-16																		

ER IDAHO

PLATE NO VIII

MIN CANS		MIN	MINIDOKA				N-M	DATE	L MIL	PALAT		NSTFCAN		PA+NSTF CAN			SSTF		CANAL		MURTAUGH C				MIL	MILNER				M-M
TD	NAT	TH BAL	GAGE	DISCH	STD	NAT	LOSS	1921	GAGE	GAGE	DISC	GAGE	DISCH	TOTAL	STD	NAT	GAGE	DISCH	STD	NAT	GAGE	DISC	STD	NAT	TH BAL	GAGE	DISCH	STD	NAT	GAIN
30	0	5844	670	6080	3320	2760	-236	AUG3	1062	213	58	832	3020	3078	2753	325	1013	3340	905	2435	100	21	21	0	-359	164	13	13	0	372
62	0	6276	665	5950	3280	2670	326	6	1052	213	58	832	2900	2958	2644	314	1014	3350	904	2356	100	21	21	0	-319	163	13	13	0	332
80	0	7286	667	6000	3370	2630	1286	7	1052	213	58	824	2900	2958	2649	309	1013	3340	1019	2321	113	23	23	0	-326	164	13	13	0	333
46	0	6896	664	5930	3150	2780	966	8	1052	213	58	822	2900	2958	2631	327	1016	3360	907	2453	HD	14	14	0	-402	164	13	13	0	415
64	0	6586	666	5980	3240	2740	586	9	1050	213	58	820	2880	2938	2616	322	1013	3340	922	2418		0	0	0	-298	164	13	13	0	311
41	0	6705	667	6000	3270	2730	705	10	1047	214	58	816	2860	2918	2597	321	1006	3300	891	2409		0	0	0	-218	162	12	12	0	230
46	0	6099	652	5630	2820	2810	469	11	1034	214	57	HD	1420	1477	1146	331	991	3210	731	2479		0	0	0	943	161	12	12	0	-931
65	0	3801	578	3950	1430	2520	-149	12	1037		0	060	45	45	-251	296	982	3160	936	2224		0	0	0	745	162	12	12	0	-733
70	0	2913	519	2820	170	2650	93	13	1050		0	059	41	41	-271	312	981	3150	812	2338		0	0	0	-371	162	12	12	0	383
39	0	3417	524	2900	220	2690	517	14	1060		0	HD	758	758	443	315	980	3140	775	2365		0	0	0	-998	164	13	13	0	1011
48	0	4336	576	3910	1180	2730	426	15	1053		0	670	2100	2100	1779	321	964	3050	641	2409		0	0	0	-1240	164	13	13	0	1253
04	0	4285	610	4640	2020	2620	-355	16	1031	HD	10	810	2780	2790	2482	308	966	3060	748	2312	HD	13	13	0	-1223	164	13	13	0	1236
87	0	5124	661	5850	3160	2690	-726	17	1105	176	44	857	3020	3064	2748	316	982	3160	726	2334	109	26	26	0	-400	159	234	234	0	635
50	0	5740	657	5750	2940	2810	-10	18	1086	181	47	778	2620	2667	2336	331	961	3030	551	2479	113	18	28	0	-25	165	15	15	0	-10
79	0	5831	643	5410	2630	2780	421	19	1104	181	47	820	2830	2877	2550	327	958	3020	567	2453	160	50	50	0	-5337	177	219	219	0	1186
28	0	5721	663	5900	2975	2925	-179	20	1100	182	47	812	2830	2877	2533	344	955	3000	419	2581	160	50	50	0	-27	196	515	515	0	542
97	0	6414	666	5980	2598	3382	434	21	1104	182	46	767	2640	2686	2288	398	957	3010	76	2934	160	50	50	0	234	164	326	326	0	152
78	0	5789	649	5560	2239	3321	229	22	1101	184	47	765	2670	2717	2326	391	953	2990	60	2930	115	29	29	0	-176	163	17	17	0	193
31	0	5513	624	4960	1746	3214	553	23	1074	181	45	748	2590	2635	2257	378	954	2990	154	2836	HD	13	13	0	-678	169	15	15	0	693
45	0	4806	598	4380	984	3396	426	24	1050	179	46	491	1350	1396	996	400	955	3000	4	2996		0	0	0	-16	166	14	14	0	30
64	0	4709	582	4030	879	3151	679	25	1058	182	46	487	1330	1376	1005	371	956	3000	220	2780		0	0	0	-342	165	14	14	0	362
82	0	4226	536	4120	1045	3075	106	26	1055	181	45	500	1390	1435	1073	362	953	2990	277	2713		0	0	0	-305	162	12	12	0	317
37	0	4258	583	4050	1264	2786	208	27	1051	180	45	485	1320	1365	1037	328	955	3000	342	2458		0	0	0	-315	161	12	12	0	327
40	0	3861	583	4050	1256	2794	-189	28	1060	180	45	516	1470	1515	1186	329	955	3000	535	2465		0	0	0	-165	161	12	12	0	177
12	0	3979	585	4100	1073	3027	-121	29	1064	179	44	543	1610	1654	1298	356	953	2990	319	2671		0	0	0	-544	162	12	12	0	556
42	0	3811	585	4100	1040	3060	-289	30	1063	179	44	543	1610	1654	1294	360	954	2990	290	2700		0	0	0	-544	164	13	13	0	557
10	76	4122	585	4100	700	3400	22	31	1062	180	45	543	1610	1655	1255	400	956	3000	0	3000		0	0	0	-555	166	14	14	0	569
42	98	4574	583	4050	650	3400	524	SEP1	1062	179	44	584	1780	1824	1424	400	957	3010	10	3000		0	0	0	-784	165	14	14	0	798
07	185	6183	599	4400	1000	3400	1783	2	1058	178	44	707	2360	2404	2004	400	953	2990	-10	3000		0	0	0	-994	166	14	14	0	1008
365	0	4441	612	4690	1466	3224	249	3	1026	HD	25	675	2190	2215	1836	379	952	2980	135	2845		0	0	0	-505	166	14	14	0	519
99	185	3826	604	4510	1110	3400	-684	4	1045	177	43	684	2230	2273	1873	400	956	3000	0	3000		0	0	0	-763	170	16	16	0	779
49	46	4331	599	4400	1000	3400	-69	5	1043	177	43	684	2220	2263	1863	400	954	2990	-10	3000		0	0	0	-858	168	15	15	0	873
05	0	3961	604	4510	1408	3102	-549	6	1042	177	43	682	2190	2233	1868	365	947	2950	113	2737		0	0	0	-7673	153	13	13	0	486
67	84	3775	592	4250	850	3400	-475	7	1036	176	42	662	2070	2112	1512	600	918	2790	-10	2860		0	0	0	-652	167	14	14	0	666
03	790	3724	586	4120	720	3400	396	8	1020	176	42	654	2010	2052	1452	600	919	2790	-10	2860		0	0	0	-722	167	14	14	0	736
17	1681	3994	579	3970	570	3400	24	9	983	167	38	519	1420	1458	758	700	898	2680	-20	2700		0	0	0	-168	166	14	14	0	182
21	1726	3274	554	3460	-241	3701	-186	10	996	177	43	474	1250	1293	292	1001	901	2690	-10	2700		0	0	0	-523	162	15	15	0	538
23	1726	3496	545	3280	303	3585	216	11	996	176	42	479	1270	1312	427	985	898	2680	-20	2700		0	0	0	-712	168	15	15	0	727
13	1726	3573	647	3320	114	3434	253	12	997	177	43	479	1260	1303	369	934	898	2680	-20	2700		0	0	0	-665	168	15	15	0	673
53	1726	3297	552	3420	-50	3470	-123	13	1002	176	42	482	1270	1312	542	770	900	2690	-10	2700		0	0	0	-532	164	15	15	0	597
		3360	543	3250			110	14	1002	176	42	482	1270	1312			894	2660				0			-722	163	15			737
		3435	550	3380			55	15	999	177	43	482	1260	1303			879	2570			HD	30			-573	168	15			588
		3268	551	3400			-132	16	1021	177	43	488	1290	1333			884	2600			132	32			-572	170	16			588
		3541	547	3320			221	17	1030	177	43	490	1290	1333			863	2490			135	41			-544	172	16			560
		3481	545	3280			201	18	1028	177	43	492	1300	1343			HD	2060			135	41			-1662	HD	450			6112
		3373	541	3210			163	19	1009	178	44	485	1270	1314			HD	898			HD	29			959	150	8980			8011
		3805	547	3320			485	20	902	178	44	479	1240	1284			869	2520			HD	12			-476	HD	1420			1896
		2876	541	3210			-334	21	904	178	44	479	1240	1284			833	2330			135	41			443	402	372			817
		2889	534	3080			-171	22	904	177	43	471	1200	1243			790	2110			135	41			-314	475	710			1024
		3035	533	3060			-25	23	900	177	43	466	1180	1223			731	1830			135	41			-84	HD	1560			1598
		5007	670	4870			137	24	906	177	43	466	1180	1221			711	1740			154	43			1859	311	4610			2553
		6694	691	6600			6	24	902	178	44	468	1190	1234			708	1720			155	50			3496	919	4900			1264
		7037	705	7040			3	24	900	177	43	459	1150	1193			710	1730			155	50			4067	955	5040			973
		6991	704	6930			61	27	904	HD	32	455	1130	1162			721	1780			155	50			3938	935	4770			832
		7196	706	6990			206	28	882		0	407	1090	1090			728	1820			155	50			4030	825	4440			610
		6999	717	7270			-271	29	900		0	451	1110	1110			730	1870			155	50			4790	957	5090			700
		6283	704	6930			-647	30	904		0	434	1040	1040			762	1980			155	50			3860	908	4580			640
		6586	704	6930			-344																							
261					157830		30535								137258				2430											

ALL DISCHARGE QUANTITIES ARE GIVEN IN SECOND FEET UNLESS OTHERWISE NOTED AT TOP OF COLUMN

all river stations have been computed from recording gage records and agree exactly with the schedule. The summaries of diversions or canal totals are for the dates indicated on the tables.

The river stations were maintained continuously during all four months but, as previously explained, records of the upper valley diversions were not secured every day in September; hence canal discharges for this month have been partially interpolated.

From August 1 to August 24 inclusive storage was released from the small Emma Matilda and Two Ocean Lake Reservoirs. This water was turned out for delivery to the Osgood Canal of the Utah-Idaho Sugar Company but, because anticipated transfers of a portion of the natural flow rights of this canal were never completed, the storage was not needed. Hence, in these final computations, it has been included with the natural water available at the Woodville river station but has not been added in the column showing gain in natural water between Heise and Woodville. At Heise and above it is shown separately as Two Ocean lake storage.

SEGREGATION OF FLOW.

Plate IX shows graphically both the actual total flow and the computed natural flow past the Moran and Heise gaging stations during the season of 1921. The difference between the total and natural flow graphs on any date of course indicates storage.

These graphs are plotted from the special day discharges with the time interval adjusted to make them coincide with the nearest regular day at Heise. For example, the Heise data shown for July 15 really represent mean quantities for the 24 hour period ending at 4 a.m. on

BEL DISTRIBUTION WATER DISTRICT NO. 36 — HYDROGRAPHS SHOWING TOTAL FLOW AND NATURAL FLOW AT MORAN AND HEISE GAGING STATIONS — PLATE

May | June | July | August

DISCHARGE IN CUBIC FEET PER SECOND.

20000
17500
15000
12500
10000
7500
5000
2500

HEISE

MORAN

ACTUAL TOTAL
COMPUTED NAT

VING TOTAL FLOW AND NATURAL FLOW AT MORAN AND HEISE GAGING STATIONS PLATE IX

File No. Washington
Field

July | August | September

LEGEND
ACTUAL TOTAL DISCHARGE ——
COMPUTED NATURAL FLOW .....

HEISE
HEISE
HEISE
MORAN
MORAN
MORAN

July 16, while the indicated Moran data for July 15 are means for the 24 hour period ending at 4 a.m. on July 15.

While these diagrams are merely a graphical representation of some of the numerical quantities contained in the tables on Plates VII and VIII, they will be of interest and perhaps of some assistance in connection with the explanations and discussions which have preceded as well as those which follow.

JACKSON LAKE STORAGE DELIVERIES.

The amount of stored water released each day from Jackson Lake was determined from the reservoir capacity tables by noting the quantity corresponding to the daily decrease in stage indicated by the lake gage readings. Occasional irregularities in the latter, attributable to wind effect, were largely eliminated by short period interpolations or adjustments.

This method of determining the proportion of the total daily flow passing the dam and the Moran gaging station, which is stored water, has been in use for several years. Its use assumes a certain balancing of unknown factors which may or may not be fair. Natural flow rights should obtain the benefit of such natural storage as would have been created in the old lake during flood periods and they should not be required to stand the extra evaporation loss attributable to the larger flooded area of the present reservoir. On the other hand the storage owners should obtain the benefit of all the additional ground or bank storage which results from the increased elevation of the water surface

in the lake. Without data upon which to base any equitable segregation of those several factors, however, the method heretofore followed appears to be the most practicable which can be devised.

Below the Moran gaging station stored water losses were determined and applied in exactly the same manner as during the two preceeding seasons*, viz., 2½ per cent between the Moran and Heise stations and computed losses based upon the average of the two preceeding days between the Heise and Woodville and between the Woodville and Blackfoot stations, with minimum loss in each of the two latter sections never less than one-half of one per cent.

Losses for all storage delivered to canals diverting above the Blackfoot gaging station were computed upon the basis of the losses to the Woodville station, as specified in the purchase contracts. Obviously it would be impracticable to calculate losses to the heading of each individual canal and this group method was doubtless originally adopted to avoid the necessity for such procedure. Since about half the Jackson Lake storage owned in the upper valley is diverted above the Woodville station and the balance within a distance of about twelve miles below that point, this grouping of losses would seem to be at least a reasonably fair one. 1921 calculations show that these upper valley canals should have received at their headgates 97.0074 per cent of the storage turned out for them at Moran.

Storage released for the Minidoka and Twin Falls canals was charged with prorata losses to the Blackfoot gaging station which for the season

*Pages 27 and 28, Water Distribution and Hydrometric Work in District No. 36, 1919, by G. Clyde Baldwin.

averaged 6.6103 per cent; hence delivery to these canals should have been upon the basis of 93.3897 per cent of amounts released from Jackson Lake.

These computed losses differ but little from those of the preceding year, although they are only about one-half of those noted for the season of 1919. This variation is accounted for chiefly by the larger return flow noted during the last two years between the Heise and Blackfoot gaging stations. The increased return flow is probably attributable in part to more favorable ground water conditions and partially to increased surface waste from canal systems of this section.

The advisability of attempting to keep daily records of the surface return or waste has several times been considered by the members of the water users' Advisory Committee, but the probable benefits to be derived have not been deemed sufficient to warrant the expense. Hence during 1920 and 1921, by agreement, the entire inflow from Blackfoot River was credited to the upper valley canals to offset any loss of water available to them resulting from inadequate storage loss computations. In order to obtain information which would assist in determining the justice of this compromise, two sets of measurements of the surface return between the Woodville and Blackfoot stations were obtained during the 1921 season and will be discussed later in this report. (Pages 27-31).

Plate X contains a summary of the daily and total deliveries of Jackson Lake storage to each company or canal owning rights therein. Deliveries are shown in second-feet for actual dates at the head of the

1921 DISTRIBUTION WATER DISTRICT NO 36

DATE JULY	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	2
POPLAR IRRIG DIST (RILEY)													12	24	23	23	23	23	23	
FARMERS FRIEND CANAL CO																40	52	61	59	
ENTERPRISE CANAL CO																				
HARRISON CANAL CO																				
RUDY CANAL CO																				
BURGESS CANAL CO																				
LOWDER CANAL CO																				
SUNNYDELL IRRIG DIST																				
LENROOT CANAL CO																				
NEW SWEDEN IRRIG DIST										36	30	32	36	38	26	26	71	69	96	
W S LYLE BRADBURY & MCMULLEN																				
MARTIN CANAL CO			20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	
SNAKE RIVER VALLEY IRRIG DIST														117	105	99	99	91	95	
PEOPLES CANAL CO																42	91	91	82	
ABERDEEN SPRINGFIELD CAN CO																-692	-1044	-1046	-709	
USRS - CITY OF ST ANTHONY																				
USRS - DE FAST																				
USRS - J S SIMPSON																		1	1	
USRS - JACOB BLOOM																		1	1	
USRS - CITY OF IDAHO FALLS																			2	
USRS - L J HARWARD						1	1	1	1	0	0	0	0	0	1	1	1	0	0	1
USRS - STORED IN LAKE WALCOTT		102	859	0	-109	0	0	0	0	0	0	0	590	951	601	113	195	304	783	75
USRS - MINIDOKA CANALS		385	774	620	0	567	1021	707	962	1645	2191	2419	2444	2351	2570	2550	2560	2570	2544	
USRS - MILNER LOW LIFT IRR DIST			48	0	0	0	0	0	11	50	50	50	50	50	50	50	50	50	50	
TWIN FALLS CANAL CO			572	582	543	543	543	541	552	575	593	623	602	602	601	668	1218	1244	1270	
NORTH SIDE CANAL CO LTD			279	863	1404	2114	2529	2528	2542	2551	2698	2708	2628	2607	2698	2765	2846	2892	2854	
EXTRAORDINARY WASTE MILNER		374	999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

DATE JULY	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
USRS - MINIDOKA CANALS				174	794	891	979	951	956	611	101	0	0	0	0	0	0	0	0
USRS MILNER LOW LIFT IRR DIST																			
TWIN FALLS CANAL CO																			
NORTH SIDE CANAL CO LTD																			

JACKSON LAKE STORAGE DELIVERIES

24	25	26	27	28	29	30	31	A-1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
23	23	23	19	18	18	21	22	22	21	0	0	0	14	21	21	20	16	0	0	0	0	0	0	0
59	59	59	59	61	61	59	59	59	59	59	58	28	6											
65	68	186	137	117	123	118	121	135	148	145	144	95	1	0	9	110	118	17	12					
							47	137	37															
			10	45	43	42	42	39	37	38	35	33	35	33	44	51	52	49	47	51	52	52	50	14
		159	159	159	162	159	155	159	151	159	159	170	40	0	159	159	162	159	128	41				
64	94	99	96	96	92	98	100	58	35	0	0	0	0	0	0	0	0	0	2	21	16	19	22	0
				55	74	69	75	75	77	77	77	62	71	36										
93	92	88	81	83	74	79	71	75	71	84	70	69	53											
20	20	20	20	20	20	15	15	15	15	15	15	11	11	11	11	11	11							
-25	-196	-196	-200	329	503	493	491	493	491	-27	-199	-200	-200	-200	276	445	453	251	247	247	88	-78	-100	
82	93	91	87	91	91	89	91	-228	-424	-424	-215	0	0	0	0	0	0	59	42	51				
-207	0	146	420	488	818	1019	1060	1060	1040	981	722	0	0	0	0	366	484	633	597	467	234			
				1	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2	1	2
							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
1	1	1	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1			
4	4	4	5	4	4	4	5	4	4	4	5	4	4	4	5	4	4	4	5	4	4	4	5	4
1	1	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
699	184	0	0	0	0	0	0	0	0	0	728	1396	1371	491	0	0	245	1068	1167	540	0	0	0	0
2530	2530	2505	2527	2346	2256	1675	1323	1569	1777	2398	2440	2362	2350	2344	2079	1730	2346	2365	2370	2359	1517	294	746	2150
50	44	50	50	50	51	51	52	52	28	21	21	21	21	28	14	0	0	0	0	0	0	0	13	26
1282	1218	1262	1243	1296	1356	1204	1189	1275	1154	1011	1018	912	1001	1026	914	929	892	732	943	819	722	642	759	794
2855	2829	2814	2852	2937	2977	2959	2954	2960	2829	2871	2883	2759	2650	2655	2637	2622	2602	1151	-246	-266	449	1785	2422	2754
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	220

LAKE WALCOTT STORAGE DELIVERI

24	25	26	27	28	29	30	31	A-1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
0	0	15	3	194	284	865	1217	961	733	72	0	0	0	0	275	614	0	0	0	0	827	1470	1541	60

	19	20	21	22	23	24	25	26	27	28	29	30	31	5 1	2	3	4	5	6	7	8	9	10	11	12	13
	0	0	0	0	3	5	4	4	4																	
	0	0	0	0	3	1	5																			
	4	1	2	1	2	1	2	1	2																	
	1	1	1	1	1																					
	0	0	0	0	1	1	1	1																		
	0	0	0	0	375	0	0	0	0	0	0	0	0	0	0	0	0	-36	0	0	250	358	34	-4	-173	
	1163	1169	1166	1166	1243	1220	1183	1183	1433	1268	1243	1165	1160	1351	1511	1496	1496	0	1450	1224	1111	91	163			
	32	30	30	29	0	0																				
	576	483	35	19	19	19	221	22	189	221	386	29	0	19	-2	143	9	-2	280	-2	-2	-12	-2	-12	-12	-2
	2559	2540	2425	2353	1824	1601	1611	1572	1242	1191	1303	1360	1160	1430	1510	1642	1930	1930	1874	1518	1458	764	799	434	576	545
	283	499	376																							

25

	19	20	21	22	23	24	25	26	27	28	29	30	31	5 1	2	3	4	5	6	7	8	9	10	11	12	13
	349	263	211	624	0	44	519	724	34"	252	725	245	338	1050	1494	1523	1653	1905	1917	779	0	0	0	113	63	24

PLATE NO 2

14	15	16	17	ACT DELIV SEC FT	ADJUSTMT SEC FT	ADJUSTED DELIVERY SEC FT	DELIVERY AC FT	JL EQUIV AC FT	JL RIGHT AC FT
				473	0	473	942	971	1200
				963	0	963	1910	1969	2000
				1869	0	1869	3707	3821	6100
				241	0	241	478	493	5000
				894	0	894	1773	1828	2000
				2599	0	2599	5155	5314	5120
				0	0	0	0	0	1040
				929	0	929	1842	1899	4000
				748	0	748	1484	1530	3000
				1544	0	1544	3062	3157	5000
				0	0	0	0	0	355
				616	0	616	1222	1260	1500
				3792	0	3792	7521	7753	15000
				-112	0	-112	-222	-229	8000
				6837	0	6837	13561	13979	42685
				46	0	46	91	94	100
				24	0	24	48	49	50
				24	0	24	48	49	50
				24	0	24	48	49	50
				112	0	112	222	229	350
				14	0	14	28	29	50
				13732	143	13875			
				108566	1132	109698	245103	262452	[a] 321000
				1422	-209	1213	2406	2576	2541
				41965	157	42122	83548	89462	97183
				138273	1442	139715	277121	296736	[b] 323626
				2665	-2665	0	HOLDOVER 1972	151530	
							AVAILABLE, 1921,	847000	847000

14	15	16	17						
				30720	-13732	16988	33695	36080	
				0	0	0	0	0	
				0	0	0	0	0	
113	120	236	158	627	0	627	1244	1332	
	INCREASE IN LAKE WALCOTT JULY SEPT,					-1643			
	EXCESS NATURAL AVAILABLE JUL 6					425			
					TOTAL	16397			
LEEY TO MILNER FOR PERIOD, SEE PLATES V, VII						16397			

[a] 325,810 ACRE FEET JACKSON LAKE RIGHT LESS 4810 ACRE FEET SOLD FOR SEASONAL USE

[b] 322007 ACRE FEET JACKSON LAKE RIGHT PLUS 1657 ACRE FEET PURCHASED FROM USBR FOR SEASONAL USE BY HILLSDALE IRRIGATION DISTRICT, 100 ACRE-FEET BY HANSTEN, AND 62 ACRE-FEET BY BODEN

respective canals. In cases where storage rights were sold for delivery through other canals, both the parties owning the right and those receiving the water are indicated in the first column or by foot-notes.

Lake Walcott deliveries were limited to the Minidoka canals during the time when there was Jackson Lake storage in the river. This fact accounts for the small minus quantities which are shown on four different dates as stored in Lake Walcott. Storage delivered to the Twin Falls canals after September 13 was necessarily from Lake Walcott, but was authorized by the U. S. Reclamation Service officials in order to permit closing the outlet gates at Jackson Lake at an earlier date than would otherwise have been possible.

With the exceptions above noted all minus quantities in the body of the table represent credits for natural flow accepted in lieu of storage in accordance with the plan outlined on pages 16 and 17 of this report.

Because of the better sustained natural flow, especially during the latter part of August, less storage was used by upper valley canals than in 1920. The Farmers Friend, Rudy and Burgess were the only canals owning Jackson Lake rights which required the full amount to which they were entitled. Most of the other canals in this section had a substantial balance remaining to their credit at the close of the season, while the Peoples Canal had a small natural flow credit remaining in addition to their entire storage right. In a number of instances, due to revision of ratings, etc. the final computed totals differ slightly from those indicated by the summer or field computations, but in no case is the discrepancy of very great magnitude.

MINIDOKA AND MILNER ADJUSTMENTS.

As noted on Plate X water was wasted past Milner Dam to an amount in excess of the normal leakage through the dam on six different days during the period of Jackson Lake storage delivery. With the exception of a small amount of natural flow which passed this point on July 6, this extraordinary waste consisted of stored water. Hence, in order to balance all storage accounts, this wastage was charged or prorated against Jackson Lake rights.

Since no special agreement as to the manner in which these charges should be made was executed for the 1922 season, the general plan adopted for 1921 was again used. This provided essentially that waste due to faulty regulation should be prorated between the Minidoka and Milner canals in proportion to their respective seasonal diversions of stored water.

1922 extraordinary storage waste consisted of the 2,665 second-feet which actually passed Milner Dam and excess deliveries at times when the water must otherwise have been wasted totaling 224 second-feet to the Murtaugh Canal and 280 second-feet to the Twin Falls Canal Co. 3169 second-feet were therefore prorated as above outlined and the net charge against each canal is shown in the adjustment column. These latter quantities of course take account of the excess delivery credits given to the Murtaugh and Twin Falls Canal Co. rights.

Part of the waste during the period August 16 to 21 inclusive might be attributed to underdeliveries to the Minidoka canals amounting to 797 second-feet but, in order to simplify the final adjustments, this

was considered to be offset by the acceptance on the part of these canals during September of Jackson Lake storage in lieu of that from Lake Walcott. Likewise a slight overdelivery to the North Side Canal Co. during the same period has been considered as compensated by the failure of that company to accept all the storage ordered for September.

A more exact segregation of these charges might perhaps be warranted were it not for the material balance remaining to the credit of these storage rights at the end of the season.

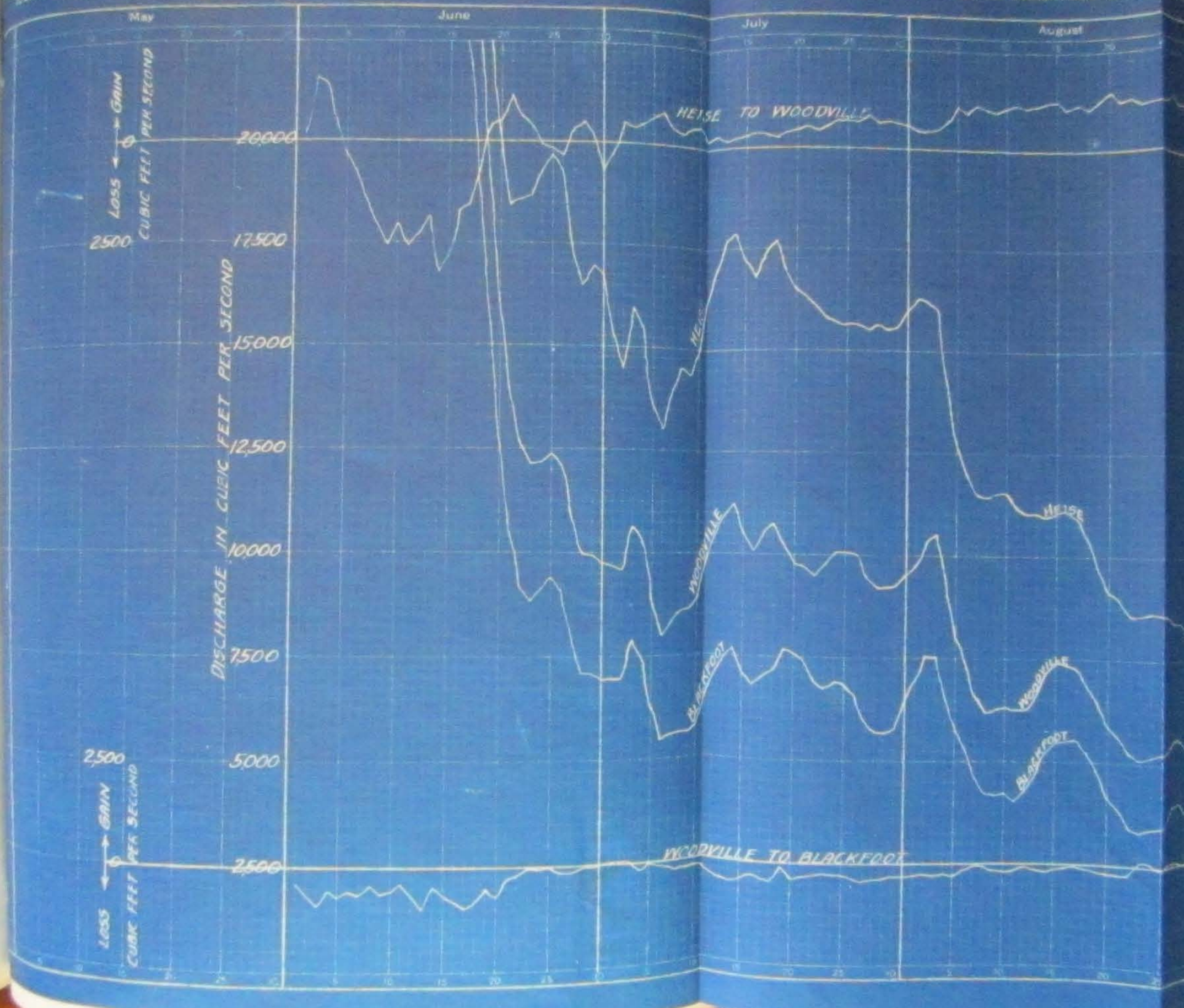
RIVER LOSSES AND GAINS.

Losses and gains throughout different sections of Snake River are included in the data contained on Plates VII and VIII, but the changes in the quantities and the relation which these changes have to the discharge of the river at different points are much more readily noted when indicated graphically.

Plate XI contains hydrographs of the total flow passing the Heise, Woodville and Blackfoot gaging stations during the period from June to September together with graphs showing the net losses and gains in the two intervening sections. All graphs are plotted to the same scale and with a time interval allowance to make them coincide with the Heise dates.

The same tendency toward increased losses coincident with sharp rises in river stage and the reverse of decreased losses or increased gains at the time of rapid drops in the river, to which attention has been called in both the 1919 and 1920 reports, is again noted. In fact the general characteristics of these graphs differ but little from

SNAKE RIVER DISTRICT NO. 36 — HYDROGRAPHS ILLUSTRATING THE NET LOSSES AND GAINS BETWEEN THE HEISE AND BLACKFOOT GAGING STATIONS — PLATE



...ER JOINT AD... ...ILLUSTRATING THE NET LOSSES AND GAINS BETWEEN THE HEISE AND BLACKFOOT GAGING STATIONS. PLATE XI File No. (Washington Field

June

July

August

September

HEISE TO WOODVILLE

DISCHARGE IN CUBIC FEET PER SECOND

20,000
17,500
15,000
12,500
10000
7500
5000
2500

HEISE
WOODVILLE
BLACKFOOT

WOODVILLE TO BLACKFOOT

those of former years.

Variations in the quantity of water diverted by intervening canals, in the amount of return flow or loss and in the discharge of tributary streams account for the differences noted in the shape of the three hydrographs.

No diagrams are included for the Porterville station, but complete data are listed on Plates VII and VIII, in accordance with previous practice.

During 1920 it became evident that the computed losses on some sections of the river were less than the actual losses because surface waste or return flow from adjacent canal systems was not measured and accounted for in the computations. Because of the insufficient supply of water available in 1919 very little waste of this character was then noted. In the two following years, however, the water supply was more abundant, irrigation methods were less efficient and the waste consequently increased. This was especially noticeable in the section of the river between the Woodville and Blackfoot gaging stations. The Advisory Committee recognized this condition and as a compromise measure agreed to the plan under which the inflow from Blackfoot River has for the last two years been credited as natural flow available to upper valley canals.

Because of the constantly fluctuating character of surface waste it would be not only difficult but also very expensive to secure a dependable daily record of this quantity. On the other hand, without some knowledge as to its amount little progress could be made in determining the equity of any plan for compensation or adjustment.

Occasional measurements of this waste throughout the 1921 season were therefore decided upon and two complete sets were secured for the Woodville to Blackfoot section of the river. These had to be obtained as time was available and without serious detriment to other more urgent work; hence are not consecutive as to dates.

The following is a detailed summary of the two sets of measurements:

	Right Bank River				Left Bank River			
Name	Date	Amt.	Date	Amt.	Name	Date	Amt.	Date Amt.
Fugal Gulch	7/28	0.30	9/8	0.20				
Woodville Bridge								
# 1	7/28	0.04	9/8	0.20	#1 (Big Channel)	7/28	0.30	9/8 15.1
# 2	"	Dry	"	0.10	#2 (Tile Drain)	"	0.06	" 0.20
# 3	"	Dry	"	0.10				
# 4 (Woodville)	"	1.20	"	3.00				
# 5	"	0.30	"	Dry				
# 6	"	0.10	"	0.10				
# 7 (Woodville)	"	1.39	"	15.7				
# 8 (Wood Flume)	"	0.20	"	0.10				
# 9 (New Sweden)	"	4.43	"	34.9				
Lower Shelley Bridge								
#10	7/28	Dry	9/8	Dry	#3	7/28	0.20	9/8 0.80
					#4	"	Dry	" 2.00
#11	"	0.50	"	1.20	#5 (Cox Ranch)	"	0.25	" 0.15
#12 (Wood Flume)	"	1.14	"	0.20	#6 (Cox Ranch)	"	Dry	" 0.65
#13	"	0.40	"	Dry	#7 (Comes under Reser.Canal)	"	1.00	" 8.50
#14-16	"	Dry	"	0.40	#8	"	0.40	" Dry
#17	"	2.00	"	0.30	#9	"	0.20	" Dry
#18	"	Dry	"	Dry	#10	"	Dry	" 0.20
#19 (Gulch)	"	0.90	"	Dry				
#20 (End Lateral)	"	Dry	"	Dry				
#21	"	Dry	"	Dry				
#22 (Gulch)	"	0.50	"	Dry				
#23-25	"	1.00	"	Dry				
Firth Bridge								

Name	Date	Amt.	Date	Amt.	Name	Date	Amt.	Date	Amt.
#26 (New Lavaside)	7/29	1.00	9/22	28.2	#11 (Slough)	7/29	1.00	9/22	0.50
#27	"	Dry	"	0.15	#12	"	0.06	"	Dry
#28	"	Dry	"	0.10	#13 (Slough)	"	0.30	"	1.38
#29	"	0.10	"	0.15	#14	"	0.04	"	0.20
#30 (Gulch)	"	0.10	"	0.20	#15	"	0.30	"	Dry
#31 (Gulch)	"	0.20	"	0.15	#16 (Nielsen-Hansen)	"	0.25	9/23	Dry
#32 (Regular Wasteway)	"	1.00	"	32.2	#17	"	Dry	"	0.20
					#18	"	0.35	"	Dry
					#19 (End Lateral)	"	2.42	"	0.30
					#20	"	0.88	"	Dry
					#21	"	0.10	"	0.10
Porterville Bridge									
#33	8/2	Dry	8/30	Dry	#22	7/29	Dry	8/30	0.50
#34-35	"	0.20	"	0.20	#23 (Channel)	"	0.20	"	7.00
#36-37	"	0.30	"	1.00	#24 (Blackfoot)	8/ 2	45.0	"	72.0
#38-41	"	1.00	"	0.80	#25 (Channel)	"	1.80	"	0.50
#42 (Metal Culvert)	"	Dry	"	Dry					
#43 (Rock Culvert)	"	Dry	"	Dry					
#44 (Regular Wasteway)	"	10.8	"	4.67					
#45	"	0.80	"	1.48					
Lower Blackfoot Bridge									
#46-47	8/2	Dry	8/30	0.10	#26	8/3	1.50	8/30	0.50
#48	"	0.80	"	0.20	#27	"	0.50	"	0.10
#49	"	0.20	"	Dry	#28-34	"	0.90	"	Dry
#50 (Gulch)	"	6.15	"	Dry	#35	"	1.00	"	0.33
#51 (Trego)	"	1.00	"	21.1					
#52	"	0.20	"	Dry					
#53 (Parsons)	"	0.50	"	1.50					
#54 (Watson)	8/3	0.20	"	2.27					
#55 (Combined Wasteway)	"	37.1	"	34.8					
#56 (Peoples)	"	0.40	"	3.46					
#57-58	"	0.10	"	1.25					
Blackfoot Gaging Station on Snake River									
Total Right Bank	76.55		190.28		Total Left Bank	59.01		109.21	

Most of the larger quantities noted in this summary were actually measured with a current meter, while those not measured were estimated as

closely as possible by the hydrographers who made the investigation.

The fluctuating character of this surface waste is indicated not only by the difference in the totals of the two sets of determinations but also by the variation in the discharge of individual wasteways on different dates. The fact that much more waste is shown by the second set of measurements than by the first tends to substantiate general conclusions heretofore reached to the effect that this quantity may be expected to increase as the demand for water decreases.

Without additional data it would be unwise to attempt much more definite statements as to the variation of this waste throughout the irrigation season.

Some idea concerning the effect upon computed losses may be obtained by assuming that the total waste indicated by each of these two determinations is applicable during each day the respective determination was in progress and then recomputing the river losses after first crediting the waste as inflow. During the first period, without taking into account the ground or sub-surface return flow, this procedure would increase the average river loss between the Woodville and Blackfoot gaging stations by 136 second-feet or from 4.4 per cent to 6.0 per cent, while during the second period 299 second-feet would be added to the loss, changing it from a net gain of 1.9 per cent to a loss of 6.1 per cent.

During the first period the average amount of storage to which this increased loss would apply was 6,755 second-feet. 1.6 per cent of 6,755 second-feet gives 108 second-feet as the resulting average in-

crease in storage loss which may be compared to 98 second-feet, the mean inflow from Blackfoot River on these four days.

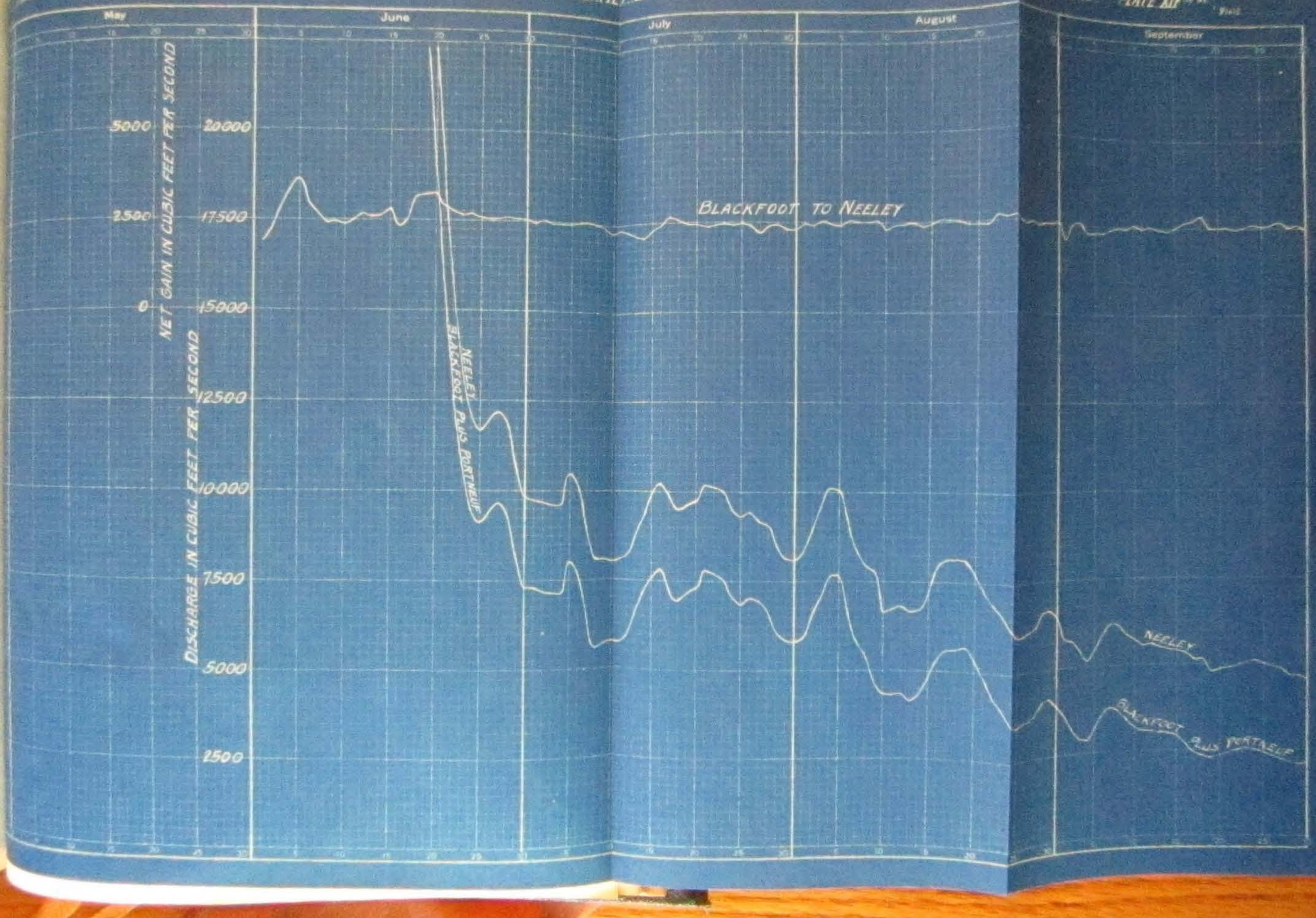
No storage was in transit on September 22 and 23, so a similar mean computation for the second period would perhaps not be consistent. Using the individual days, August 30 and September 8 however, storage losses would be increased respectively by 177 second-feet and 26 second-feet in comparison with 288 second-feet and 292 second-feet, the inflow from Blackfoot River on these two days.

The results of these investigations will be presented to and undoubtedly will be carefully considered by the Advisory Committee before the plan for 1922 operation is adopted.

Plate XII contains graphs similar to those shown on Plate XI but covering the section between the Blackfoot and Neeley gaging stations. Neeley dates are here used. The average net gain indicated amounts to about 2,500 second-feet for the entire four months period or about 100 second-feet greater than that for 1920. The increase can doubtless be explained as greater return flow from intervening irrigated lands on the theory of the more abundant water supply available, but there is a possibility that changes in the inflow from springs whose origin is farther removed may be responsible.

Plate XIII shows net gain or loss graphs for the two sections between the Neeley and Minidoka and the Minidoka and Milner gaging stations respectively. It also includes graphs showing the fluctuations in water surface elevation at both Lake Walcott and Lake Milner. All graphs are plotted to coincide with Lake Walcott or Minidoka dates.

DISTRIBUTION WATER DISTRICT NO. 36. HYDROGRAPHS ILLUSTRATING THE NET GAIN BETWEEN THE BLACKFOOT AND NEELEY GAGING STATIONS. PLATE XII



Power requirements at the Minidoka Dam were again emphasized, and a stage of 45.33 feet was set as the minimum to which Lake Walcott might be drawn down prior to the latter part of August. As noted from the graph the limit was not exceeded by more than about 0.2 foot during this period.

Authority was granted to draw more heavily upon Lake Walcott storage beginning September 1, but since the demand upon the part of natural flow rights decreased more rapidly than was anticipated, little actual benefit was derived from this concession.

The pronounced drop in the Minidoka graph which begins on August 1(is explained by the shutting of the North Side Canal headgates at Milner for the purpose of killing moss and conserving storage. A change of such magnitude at the lowest point on the river system involving, as it did, regulation at Jackson Lake, 300 miles upstream, proved very difficult to handle exactly and probably should not be attempted in the future unless a more extensive use of Lake Walcott as an equalizing reservoir is possible.

The general trend of the loss curves is not materially different from that of 1920 but still greater irregularities are noted. Some of these latter are difficult of explanation, but most can be accounted for by the failure of a single time interval to apply at all stages of the river, by the effect of wind on the backwater above the two dams and in a few instances by Lake Milner storage, of which no account has been taken in this report.

While the average losses for the season differed somewhat on the individual sections, the mean gain of 42 second-feet from Neeley to

HYDROGRAPHS ILLUSTRATING THE NET LOSSES AND GAINS BETWEEN THE NEELEY AND MILNER GAGING STATIONS

...DISTRIBUTION WATER DISTRICT NO 36 ... PLATE XIII ... Washington Files

May | June | July | August | September

GAGE HEIGHT IN FEET (LAKE WALCOTT)

GAGE HEIGHT IN FEET (LAKE MILNER)

DISCHARGE IN CUBIC FEET PER SECOND (MINIDOKA)

LAKE WALCOTT

LAKE MILNER

MINIDOKA

NEELEY TO MINIDOKA

MINIDOKA TO MILNER

LOSS ← 6 MIN → GAIN

CUBIC FEET PER SECOND

Milner compares very favorably with the gain of 21 second-feet noted for 1920.

NORMAL FLOW COMPARISON.

Attention has previously been called to the fact that the total run-off during the year is not necessarily a dependable measure of the natural water supply available durirg the irrigation season.

The diagrams contained on Plate XIV will help to illustrate this fact and will afford a better means of comparison than tabulation of total run-off.

Each hydrograph represents the sum of the computed normal flow at the Heise gaging station and the total discharge past the Rexburg station. In other words, except for increases from return flow or tributaries, and for losses in transit, the hydrographs show the supply available to fill natural flow rights originating below these two gaging stations.

The data for these diagrams were obtained from the reports of the Special Deputy State Commissioner of Reclamation for the respective years indicated.

STORAGE RELEASED VERSUS WASTE.

Plate XV shows graphically the way in which storage was released from Jackson Lake, together with the amount of water passing Milner Dam during the storage delivery periods. The diagrams cover the three years of 1919, 1920 and 1921, which comprise the period of activities of the present distribution organization.

...TRIBUTION WATER DISTRICT NO 36... HYDROGRAPH SHOWING HEISE NATURAL FLOW PLUS REXBURG TOTAL DISCHARGE 1913-1921

PLATE XIV

File No. | Washington / Field

May | June | July | August | September

DISCHARGE IN CUBIC FEET PER SECOND

20000
17500
15000
12500
10000
7500
5000
2500

1921 1914 1913 1915 1919 1916 1917 1918 1920

All hydrographs have been plotted to the same scale and have been adjusted to correspond with Jackson Lake or Moran dates.

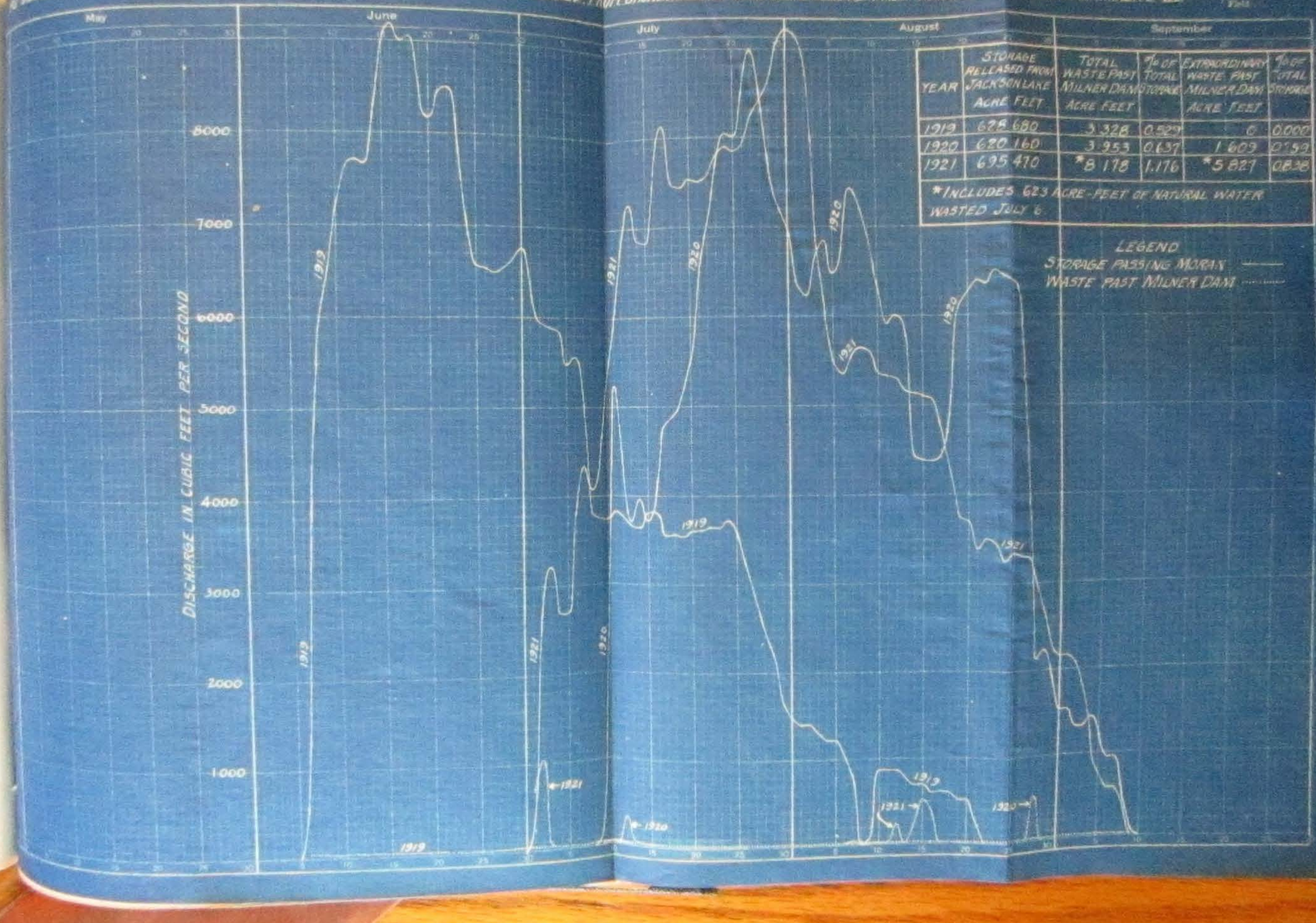
Water flowing past Milner Dam drops down into Snake River canyon and is absolutely wasted in so far as irrigation benefits within District No. 36 are concerned. On this account the quantity passing this point during the low water period of each irrigation season may be used to some extent to indicate the efficiency of the distribution.

The unavoidable leakage through the Milner Dam, which varies from about 9 to 45 second-feet, depending upon the head in Lake Milner and the care taken in calking around the gates, has been included on the diagrams and in the "Total Waste" column of the accompanying tabulation, but has been eliminated from the "Extraordinary Waste" column.

Inspection of the tabular summary shows that the extraordinary waste which may be attributed to inefficient regulation varied from 0 in 1919 to 5,827 in 1921. Because of the 1919 deficiency in water supply less power was needed to operate the Minidoka project pumps, and consequently, during that year, Lake Walcott could be utilized as an equalizing reservoir to a greater extent than was permitted during 1920 and 1921. It was therefore less difficult to secure efficient distribution in 1919 than in either of the two subsequent years.

The extent to which the delivery orders of the lower canals are filled should also be considered in any comprehensive study of efficiency. In this respect the year 1921 was more satisfactory than 1920, although at the same time the waste was greater.

...DISTRIBUTION, WATER DISTRICT NO 36.... HYDROGRAPHS SHOWING STORAGE RELEASED FROM JACKSON LAKE AND TOTAL WASTE PAST MILNER DAM 1919-1921.... PLATE XV



YEAR	STORAGE RELEASED FROM JACKSON LAKE ACRE FEET	TOTAL WASTE PAST MILNER DAM ACRE FEET	% OF TOTAL STORAGE	EXTRAORDINARY WASTE PAST MILNER DAM ACRE FEET	% OF TOTAL STORAGE
1919	628 680	3 328	0.529	0	0.000
1920	620 160	3 953	0.637	1 603	0.259
1921	695 470	*8 178	1.176	*5 827	0.838

*INCLUDES 623 ACRE-FEET OF NATURAL WATER WASTED JULY 6

LEGEND
STORAGE PASSING MORAN ——
WASTE PAST MILNER DAM .....

DISTRIBUTION OF NATURAL FLOW ORIGINATING
FROM HENRYS FORK AND TRIBUTARIES.

On April 1, 1921, C. A. McClelland replaced E. C. Howard as hydrographer and was assigned to work in the Henrys Fork area. A little later Mr. McClelland was appointed Deputy Water Master and placed in direct charge of all distribution above the Rexburg gaging station, subject only to general supervision and instructions from the Idaho Falls office.

Following the plan inaugurated in 1920, desk space was rented from Lieut. Governor C. C. Moore at St. Anthony, and an office was maintained there during the period June 1 to September 15.

The general plan of operation in the Henrys Fork, Fall and Teton River territory was in other respects almost identical with that of the preceding year. The following abstract from a brief report prepared by Mr. McClelland explains the work in greater detail:

Stevens' 8 Day Recording Gages were installed early in the season at the stations on Henrys Fork near Ashton, Fall River near Chester and Teton River near St. Anthony. Several staff gages were reset or repaired and a number of foot-bridges were either strengthened or rebuilt. In addition to this construction work one or more meter measurements were secured at practically all gaging stations within the Ashton-St. Anthony-Rexburg territory prior to June 1. W. F. Dawson who arrived at St. Anthony on May 12 assisted materially in the latter work.

Beginning June 1 daily records were obtained at all gaging stations, and on the same day the St. Anthony headquarters office was established in the Haines Building.

The water supply was ample to fill all demands during the months of May and June, and when orders were received on July 1 to cut to record rights, the entire irrigated area was well watered and in good shape, with the possible exception of lands served by the Enterprise Canal, on which a serious break had occurred a few days earlier.

1921 DISTRIBUTION WATER DISTRICT NO 36

PLATE NO XXI

DAILY DISCHARGE IN SECOND FEET OF CANALS DIVERTING FROM HENRY'S FORK AND TRIBUTARIES FOR JUNE 1921

FALL RIVER CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
YELLOWSTONE	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	24	24	24	22	22	21	24	31	34		256
HARRIGFELD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	16	27	28	29	38	42	42	41	40	38		404
MARYSVILLE	26	0	0	0	0	20	20	21	40	41	42	65	58	65	96	112	109	106	104	104	108	124	125	137	136	138	140	146	144	144		2415
FARMERS OWN	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	12	18	18	26	26	35	38	39	41	41	40	41	43	45	46		510
ENTERPRISE	107	112	106	108	112	110	116	113	113	117	123	130	136	139	139	129	129	129	125	145	145	139	139	145	151	139	151	149	0	0		3612
BELL	6	4	0	8	8	8	8	11	11	11	11	10	10	9	8	8	6	4	4	3	5	8	11	8	9	9	7	8	7	6		223
FALL RIVER	184	16	16	163	167	163	283	281	281	285	281	444	447	444	422	404	391	369	369	426	413	398	444	444	444	444	417	408	201	433		7881
McBEE	36	30	28	28	11	11	9	20	33	30	10	33	33	33	23	23	20	19	19	17	18	16	18	16	14	13	10	9	13	11		602
CHESTER	2	2	2	2	2	14	30	89	86	87	88	90	105	105	100	114	115	112	119	119	101	94	93	93	93	87	73	90	108	93		2503
SILKEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	52	27	25	18	12	12	19	27	32	33	32	27	23	28	46	37	430
CURR	23	23	18	18	12	16	30	30	31	31	39	39	39	38	37	37	37	39	39	39	50	50	24	24	24	40	40	37	40	40		989
WHITE	3	3	2	2	2	2	2	2	2	2	2	2	2	2	3	4	5	5	4	3	3	3	4	5	4	3	2	3	4	4		85
TOTAL	387	190	172	329	314	343	500	561	597	604	596	813	852	835	880	870	865	817	857	923	937	947	988	1009	1012	1022	970	984	698	901		21723

HENRY'S FORK CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
DEWEY	10	10	10	10	10	14	18	17	16	17	16	16	18	12	36	25	25	24	24	22	25	24	24	32	27	31	31	19	29	21		604
LAST CHANCE	34	40	46	38	29	46	64	64	74	74	74	74	92	90	89	80	80	83	79	69	69	96	92	91	92	94	84	72	93	84		2266
ST ANTHONY UNION	292	285	288	255	319	278	399	397	389	451	451	458	451	447	435	472	458	394	387	370	422	418	451	451	505	494	426	380	506	494		12433
FARMERS FRIEND	171	132	126	126	128	128	128	207	215	220	233	233	233	259	287	259	233	207	220	205	202	178	128	176	195	183	179	183	169	168		5740
TWIN GROVES	140	135	130	130	135	133	137	133	169	164	160	160	179	164	210	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187		5187
SALEM UNION	142	139	134	134	129	134	152	181	209	206	203	217	215	215	239	195	192	203	203	204	192	169	187	187	184	184	192	201	208	182		4004
EGIN	216	226	224	226	246	238	238	291	262	266	330	308	300	308	172	218	238	258	300	300	287	283	274	270	295	300	262	121	133	2		5849
ST ANTHONY UNION FEEDER	59	27	55	34	34	57	74	76	74	73	72	72	72	59	94	69	67	64	64	63	59	58	40	62	74	65	70	74	62	62		1948
INDEPENDENT	152	205	217	217	225	221	217	249	253	257	257	257	269	282	287	292	282	257	247	241	257	247	249	265	265	257	241	239	264	253		7416
CONSOLIDATED FARMERS	181	181	191	187	187	219	224	219	219	219	219	219	219	219	291	291	291	240	240	240	240	240	274	270	270	270	270	219	219	249		7057
TOTAL	1465	1384	1421	1377	1463	1465	1611	1694	1868	1947	2015	2049	2043	2065	2180	2066	2031	1877	1931	1863	1874	1805	1830	1891	2001	1975	1941	1730	1869	1802		58106

TETON RIVER CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30		
RIDGWAY	11	12	12	11	11	11	13	12	13	14	14	14	14	19	18	18	12	13	14	6	22	20	21	21	20	21	19	19	20	18		483
WILFORD	84	85	81	85	91	93	100	107	120	121	135	137	160	166	154	202	199	125	122	137	132	101	161	140	151	146	125	131	148	142		4117
TETON IRRIGATION	0	0	29	30	34	37	39	45	46	46	44	43	48	58	74	65	68	70	46	34	66	73	79	79	75	74	70	72	87	79		1936
GOOD LUCK	11	8	8	8	5	5	6	6	7	6	7	8	12	9	9	10	10	9	10	11	14	14	18	24	23	24	15	24	24	24		348
PIONEER	12	4	5	6	4	4	3	12	6	4	18	15	23	26	19	20	5	5	17	22	21	18	18	22	20	20	17	17	18	18		417
STEWART	18	8	6	8	6	8	16	2	2	5	6	8	30	30	32	38	40	41	30	42	43	50	51	49	52	68	62	63	56	58		889
PINCOCK BYINGTON	7	7	7	7	6	6	7	6	7	7	6	6	7	7	6	6	6	6	6	5	9	9	9	9	9	8	8	6	5	5		203
PINCOCK GARNER	54	54	4	4	4	8	17	17	8	8	14	14	8	8	8	8	8	12	15	0	4	7	20	21	21	19	17	19	16	20		422
TETON ISLAND FEEDER	264	264	212	226	133	254	283	281	235	240	265	289	307	317	238	243	313	317	307	245	254	354	334	269	278	274	240	213	259	245		7318
POCATA	16	17	15	15	15	22	18	13	14	14	11	12	10	10	17	14	14	9	8	0	8	22	41	43	42	41	21	24	21	20		446
ISLAND WARD	36	37	38	36	48	43	46	45	43	46	48	48	43	72	78	76	76	82	84	83	87	36	46	40	40	41	35	55	58	55		1245
WOODMANSEE JOHNSON	11	18	12	11	13	13	18	14	15	15	13	15	18	13	10	3	7	6	3	24	23	58	24	25	40	31	44	41	42	44		599
CITY OF REXBURG	48	49	50	58	62	64	65	65	61	65	67	68	69	69	69	73	72	72	71	76	76	73	74	76	78	78	70	65	61	65		1733
REXBURG IRRIGATION	212	208	177	176	172	168	168	168	168	192	199	204	221	219	223	243	243	243	245	158	243	243	243	241	243	243	243	243	243	243		6575
TOTAL	794	758	644	673	594	785	793	738	722	768	841	859	947	1014	1010	1057	1065	1065	878	924	1009	1027	1093	1065	1145	1116	1009	1043	1067	1058		47508

[illegible] DISTRIBUTION WATER DISTRICT NO. 36 [illegible]

DAILY DISCHARGE IN SECOND FEET OF CANALS DIVERTING FROM HENRY'S FORK AND TRIBUTARIES FOR JULY 1921

FALL RIVER CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
YELLOWSTONE	34	37	38	37	13	37	37	37	37	37	37	37	37	36	36	25	25	26	24	24	24	15	20	17	24	23	23	10	10	10	3	814
HARRISFELD	31	30	30	30	0	29	30	30	32	33	32	32	35	41	41	30	30	30	30	30	30	22	30	30	30	29	28	17	17	7	17	873
MARYSVILLE	160	170	167	171	169	0	157	170	169	168	170	170	173	170	172	150	150	150	150	150	150	120	142	143	144	142	140	80	80	60	80	4427
FARMERS OWN	43	44	44	43	42	45	40	46	[illegible]	36	44	43	[illegible]	46	44	37	37	37	37	37	37	24	41	36	36	36	37	23	23	23	23	1188
ENTERPRISE	0	0	0	0	0	0	0	28	120	116	127	127	13	[illegible]	132	114	110	108	106	94	92	134	129	125	127	126	126	72	72	72	81	2474
BELL	5	5	5	5	4	3	2	1	1	1	5	5	5	3	3	3	3	4	3	3	5	4	7	6	6	6	3	7	6	6	5	132
FALL RIVER	[illegible]	424	402	402	402	402	402	384	386	358	391	380	398	380	380	336	336	354	354	355	358	380	402	380	393	380	229	380	314	314	314	11546
McBEE	5	6	5	5	8	11	7	7	6	8	6	4	14	11	0	6	6	10	6	6	7	7	6	9	10	10	4	6	6	10	10	232
CHESTER	83	77	73	72	69	70	65	26	18	14	28	22	32	18	6	30	33	42	45	52	66	46	92	31	38	39	63	39	38	45	28	1349
SILKEY	24	24	23	23	21	23	16	13	11	4	9	15	18	12	6	15	21	21	19	19	24	19	15	9	9	12	23	19	19	23	24	455
CURR	33	33	33	32	32	20	20	20	9	22	22	21	30	30	29	26	30	30	30	30	30	30	27	27	27	27	30	30	30	30	30	841
WHITE	2	3	3	3	3	3	2	2	1	0	0	0	3	2	5	3	4	4	4	4	4	3	3	3	3	2	3	2	2	1	3	80
TOTAL	899	853	823	813	765	445	768	760	831	797	871	856	913	883	854	775	785	815	808	747	769	496	864	816	848	814	714	685	669	651	826	24412

HENRYS FORK CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
DEWEY	21	24	22	22	22	22	9	14	13	[illegible]	25	25	25	24	24	24	24	23	23	22	23	21	20	22	21	20	19	16	8	8	16	630
LAST CHANCE	82	72	71	70	68	68	56	58	62	59	56	54	54	52	50	50	49	60	59	58	59	55	50	54	54	54	54	55	52	56	55	1806
ST ANTHONY UNION	319	387	394	404	336	336	305	223	465	440	444	422	422	422	434	455	440	[illegible]	498	[illegible]	302	292	288	360	387	390	436	436	436	436	12514
FARMERS FRIEND	[illegible]	155	157	157	155	185	129	120	136	123	85	107	105	108	82	84	82	67	56	78	75	77	82	80	83	84	93	36	93	62	62	3100
TWIN GROVES	197	90	94	101	97	94	72	45	82	70	101	45	114	114	128	128	135	120	124	136	134	134	122	121	119	119	110	108	103	103	103	3368
SALEM UNION	171	168	168	178	173	142	137	139	173	206	225	206	208	[illegible]	223	[illegible]	209	215	215	201	220	217	195	195	168	147	145	145	145	155	78	5717
EGIN	0	287	308	[illegible]	298	254	287	295	300	287	287	298	298	298	300	298	298	298	298	298	298	298	308	287	254	266	254	283	295	247	287	8714
ST ANTHONY UNION FEEDER	86	74	72	71	62	57	50	36	56	55	50	53	48	47	49	45	45	42	48	49	49	54	47	52	60	50	52	45	46	50	49	1893
INDEPENDENT	[illegible]	261	253	249	253	257	217	225	225	209	197	201	190	221	229	190	190	188	186	190	190	229	190	190	229	248	233	171	171	171	158	6543
CONSOLIDATED FARMERS	249	234	224	211	211	179	179	151	151	151	145	199	183	179	175	140	140	245	236	266	249	274	274	261	261	[illegible]	205	179	183	179	179	6467
TOTAL	1560	1742	1763	1743	1675	1569	1441	1306	1663	1627	1613	1610	1642	1655	1746	1674	1612	1763	1747	1796	1804	1661	1580	1650	1690	[illegible]	1452	1405	1478	1511	1524	50447

TETON RIVER CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
SIDDOWAY	24	23	22	17	16	16	16	20	19	18	17	16	16	14	14	13	13	12	10	10	17	17	19	16	14	16	16	16	14	13	13	482
WILFORD	[illegible]	138	129	121	117	97	93	93	93	92	[illegible]	140	147	134	138	134	129	138	136	140	140	140	119	132	129	124	[illegible]	119	118	118	114	3674
TETON IRRIGATION	[illegible]	79	72	66	64	63	59	78	0	56	56	57	61	60	64	64	66	64	62	79	65	67	60	61	64	64	66	63	63	64	56	1968
GOOD LUCK	24	23	23	24	24	16	0	14	14	14	13	13	13	12	12	11	10	10	10	9	9	8	8	8	9	22	21	20	18	18	18	447
PIONEER	17	16	15	12	13	10	10	11	12	11	11	11	12	11	12	12	14	14	14	14	16	14	15	13	13	16	15	14	15	12	13	406
STEWART	[illegible]	51	43	40	34	37	36	38	35	33	37	28	28	28	28	28	28	28	27	26	27	26	26	26	27	27	26	25	24	20	19	759
PINCOCK BYINGTON	5	5	4	4	3	4	4	4	4	4	3	4	4	4	4	3	3	3	4	4	5	5	4	4	4	4	4	4	[illegible]	4	3	89
PINCOCK GARNER	18	18	14	12	10	8	9	8	14	13	12	13	12	21	21	[illegible]	16	17	16	15	15	14	10	10	10	10	9	8	8	7	7	393
TETON ISLAND FEEDER	245	245	240	231	235	231	226	226	216	212	209	212	216	285	278	274	271	269	269	269	266	218	212	212	191	193	193	184	184	184	184	7140
ROBANA	19	20	19	19	8	9	7	6	1	1	1	0	0	7	5	6	6	4	4	17	16	14	13	10	17	6	5	8	2	5	4	285
ISLAND WARD	53	53	49	46	21	25	1	1	31	29	31	32	29	25	22	51	41	46	44	37	38	38	37	36	46	44	43	40	42	33	37	1108
WOODMANSEE JOHNSON	41	40	36	32	33	24	23	22	27	26	14	14	20	21	22	30	42	44	38	39	36	38	41	43	50	52	50	40	33	40	43	1071
CITY OF REXBURG	61	61	63	63	60	50	50	48	48	48	46	47	50	49	46	42	47	45	54	54	51	53	57	54	49	51	51	53	50	49	44	1611
REXBURG IRRIGATION	241	243	235	228	231	193	191	221	228	227	198	178	184	189	191	151	153	152	142	144	130	130	156	158	163	162	162	145	146	134	137	6535
TOTAL	1028	1012	963	915	871	781	725	790	739	705	753	765	802	858	860	818	851	850	852	861	833	843	793	787	780	800	794	738	725	691	688	25442

1921 DISTRIBUTION WATER DISTRICT NO 36

SHEET NO XVIII

DAILY DISCHARGE IN SECOND FEET OF CANALS DIVERTING FROM HENRY'S FORK AND TRIBUTARIES FOR AUGUST 1921

FALL RIVER CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
YELLOWSTONE	10	10	10	10	9	9	9	9	9	11	11	11	11	11	11	11	11	11	11	11	10	10	10	13	9	8	8	8	8	8	8	306
HARRIGFELD	17	17	17	17	17	17	17	17	16	17	16	17	17	17	17	17	17	16	16	15	15	15	15	16	16	15	15	15	14	14	14	485
MARYSVILLE	74	60	60	60	60	60	50	50	50	50	60	60	60	60	70	70	65	66	65	65	60	60	65	67	67	67	67	56	56	49		1854
FARMERS OWN	[illegible]						18	18	18	18	18	18	18	18	18	18	18	18	17	17	17	17	17	14	14	14	13	13	13	13		546
ENTERPRISE	80	47	56	116	116	113	79	66	79	79	79	78	78	78	86	104	120	117	121	119	121	121	121	123	[illegible]	121	121	123	123	123	123	3172
BELL	5	5	4	5	4	4	4	3	3	3	0	3	3	4	4	4	3	3	2	2	2	2	2	3	5	4	4	5	6	4	5	108
FALL RIVER	320	314	314	310	310	310	308	314	303	314	292	292	292	292	296	229	222	225	225	211	218	218	231	232	237	232	223	223	223	225	231	8149
McBEE	10	9	9	8	8	7	6	7	7	7	6	6	6	6	6	1	0	0	0	0	0	1	3	5	6	4	4	5	4	4	4	147
CHESTER	37	6	33	22	19	28	20	20	20	20	20	20	20	20	20	25	24	40	36	37	39	39	39	40	48	39	39	48	39	39	37	924
KILKEY	24	24	24	23	12	19	12	12	8	8	6	6	5	5	6	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	0	154
CURR	30	27	30	29	24	24	24	24	24	24	12	12	12	12	12	12	12	12	10	9	9	9	9	9	9	9	9	9	8	6	6	432
WHITE	2	1	1	1	1	0	0	0	0	0	0	0	1	1	1	1	1	1	1	2	1	1	1	2	2	1	1	0	1	1	0	29
TOTAL	648	545	581	624	603	614	544	562	559	551	520	523	523	524	547	492	493	509	506	486	497	498	493	505	525	485	494	499	486	486	492	16396

HENRY'S FORK CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
DEWEY	[illegible]	21	20	20	19	19	19	19	19	17	17	17	17	17	17	16	16	18	18	18	18	18	17	17	18	18	18	15	18	17	17	560
LAST CHANCE	60	58	56	56	56	55	54	54	54	56	48	48	48	48	47	60	60	56	56	56	56	56	52	56	60	60	38	38	38	38	36	1814
STANTHONY UNION	[illegible]	387	299	299	299	336	336	387	380	[illegible]						444	387	387	319	220	230	230	230	230	233	230	230	233	234	233	233	233	230	236	226	9560
FARMERS FRIEND	[illegible]	24	40	39	35	35	31	28	26	24	24	24	23	23	24	24	25	25	24	24	25	25	25	26	26	26	28	45	46	48	48	988
TWIN GROVES	83	83	79	74	66	66	66	58	58	58	75	75	75	75	85	83	81	80	82	80	80	80	40	53	55	55	55	52	39	34	35	36	2044
SALEM UNION	[illegible]	155	139	137	122	127	124	124	124	124	105	105	105	105	105	113	90	73	73	73	73	73	72	73	79	73	73	56	71	71	71	3080
EGIN	295	274	274	246	[illegible]		287	283	266	266	266	266	287	279	200	200	198	149	127	124	124	165	167	172	169	139	139	139	136	136	136	4213
STANTHONY UNION FEEDER	52	58	64	68	63	61	58	63	63	68	67	67	68	68	67	63	48	44	45	22	23	23	23	24	22	34	35	42	41	41	43	1428
INDEPENDENT	174	171	171	[illegible]	174	171	152	171	167	171	167	163	147	143	150	150	147	147	140	136	130	147	149	149	149	149	149	149	149	149	149	4604
CONSOLIDATED FARMERS	179	183	183	[illegible]			205	205	205	199	181	179	171	171	171	171	108	106	106	106	103	106	106	106	106	106	106	106	106	106	106	4625
TOTAL	1584	1414	1325	1323	1349	1385	1352	1392	1362	1454	1401	1388	1328	1316	1185	1100	1083	928	901	869	865	923	853	905	914	895	894	868	869	871	868	35053

TETON RIVER CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
RIDGWAY	12	12	14	14	13	12	12	11	10	14	14	14	14	14	14	14	14	14	12	12	12	12	12	12	12	14	14	13	14	13	14	402
WILFORD	118	107	[illegible]	113	105	101	99	95	93	96	95	95	97	97	95	96	96	96	92	78	77	77	77	85	87	88	93	92	92	85	85	2895
TETON IRRIGATION	60	54	[illegible]	60	50	48	43	57	57	[illegible]		58	60	58	58	58	54	50	45	50	48	46	44	45	46	42	42	42	42	42	42	1604
GOOD LUCK	16	16	12	11	11	9	9	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7	7	8	8	8	264
PIONEER	12	12	16	14	14	13	12	12	11	12	11	11	11	11	11	11	10	10	9	9	8	8	8	8	8	10	10	10	10	10	10	335
STEWART	19	18	21	19	18	17	17	17	17	16	17	17	17	18	18	19	18	17	17	18	17	17	15	16	[illegible]	19	19	[illegible]				558
PINCOCK BYINGTON	[illegible]	3	3	3	3	3	3	3	2	2	2	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	73
PINCOCK GARNER	5	5	6	6	6	5	4	4	8	9	8	8	8	5	8	[illegible]	3	8	6	6	6	6	6	6	9	9	[illegible]					235
TETON ISLAND FEEDER	179	136	179	177	172	170	168	168	161	161	161	158	161	165	163	170	165	161	156	152	152	152	149	152	154	170	165	170	172	168	163	5087
ROXANA	8	7	21	21	18	21	21	25	29	31	33	36	19	23	2	4	4	4	4	4	4	4	4	9	8	9	9	9	9	9	8	411
ISLAND WARD	36	41	58	60	58	56	53	52	52	53	52	51	31	35	35	38	6	7	6	6	8	6	3	4	4	6	6	8	8	8	8	871
WOODMANSEE JOHNSON	48	47	65	51	47	45	40	40	34	33	34	34	36	41	41	46	43	40	37	36	35	34	30	35	36	42	40	42	40	41	38	1236
CITY OF REXBURG	45	46	52	50	32	47	44	45	51	38	39	39	37	38	37	37	41	41	38	38	38	36	37	39	40	38	38	38	44	44	41	1264
REXBURG IRRIGATION	129	158	176	172	174	160	163	162	165	142	160	158	151	162	160	163	194	193	181	185	183	181	163	170	174	194	194	194	87	91	78	5324
TOTAL	683	681	749	771	741	707	706	699	696	696	698	689	695	681	652	677	673	609	615	603	598	588	564	592	605	635	640	[illegible]	655	651	621	26570

DAILY DISCHARGE IN SECOND FEET OF CANALS DIVERTING FROM HENRY'S FORK AND TRIBUTARIES FOR SEPT 1914

FALL RIVER CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
YELLOWSTONE	8	8	7	7	7	7	7	7	7	7	7	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	7	7	7	7	221
HARRIGFELD	14	14	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	446
MARYSVILLE	48	48	48	47	47	46	46	45	45	45	44	45	43	46	47	48	48	49	50	51	51	52	51	50	50	50	49	49	48	46	1436
FARMERS OWN	[illegible]	12	12	11	11	10	10	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	263
ENTERPRISE	124	126	127	128	[illegible]	127	124	122	119	117	115	112	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	110	3480
BELL	6	6	6	7	7	6	5	4	4	3	2	1	0	0	0	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	72
FALL RIVER	[illegible]	[illegible]	174	125	124	124	123	123	122	122	121	121	120	113	105	98	90	83	82	82	81	81	80	79	79	78	78	78	78	78	2486
McBEE	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	6	6	6	6	7	7	7	7	7	7	7	7	168
CHESTER	39	42	43	46	46	47	47	46	46	45	45	44	44	44	44	44	44	44	44	43	43	43	43	43	43	43	43	43	43	43	1323
SILKEY	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
GURR	7	8	9	10	9	9	9	9	8	8	8	8	8	8	8	8	8	8	8	7	7	7	7	7	7	7	7	7	7	7	235
WHITE	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	63
TOTAL	486	491	449	406	403	397	393	387	382	377	372	368	364	368	551	346	339	333	334	333	332	333	332	330	330	328	327	327	326	326	10857

HENRY'S FORK CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
DEWEY	[illegible]	13	11	9	9	9	9	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	302
LAST CHANCE	35	34	32	31	31	31	31	31	31	31	32	32	32	32	32	33	33	33	33	33	33	34	34	34	34	34	34	34	34	34	982
STANTHONY UNION	[illegible]	[illegible]	[illegible]	198	194	189	185	180	176	171	167	162	158	158	158	159	158	158	157	157	157	156	156	154	155	155	153	185	185	155	4817
FARMERS FRIEND	48	49	50	51	52	54	55	[illegible]	[illegible]	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	47	47	47	47	47	47	783
TWIN GROVES	36	37	37	37	37	37	37	37	37	24	18	12	6	6	6	6	7	7	7	7	7	7	6	6	6	6	6	6	6	6	494
SALEM UNION	[illegible]	58	58	58	58	58	58	58	59	59	59	59	59	59	59	59	59	59	59	58	58	58	58	58	57	57	57	57	57	57	1952
EGIN	[illegible]	[illegible]	83	83	83	83	83	83	83	83	83	83	83	83	83	83	83	82	82	83	96	103	109	116	123	130	130	130	130	131	3078
ST ANTHONY UNION FEEDER	41	39	37	36	35	34	33	32	26	20	14	8	2	2	2	2	1	0	0	0	0	7	14	22	29	30	31	31	32	33	595
INDEPENDENT	[illegible]	147	132	143	134	124	115	106	106	106	106	106	106	106	107	108	108	109	111	112	114	116	118	120	121	123	125	126	128	129	131	3605
CONSOLIDATED FARMERS	109	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	106	105	104	104	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	3175
TOTAL	853	848	792	757	739	725	712	699	685	611	597	580	564	564	564	566	567	568	575	583	692	606	622	636	637	700	702	704	707	710	19819

TETON RIVER CANALS

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	
RIDGEWAY	14	14	15	15	15	16	15	14	14	14	12	10	8	6	4	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	216
WILFORD	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	64	64	63	63	62	61	61	60	60	59	57	56	54	52	46	40	35	29	29	29	29	29	29	29	1590
TETON IRRIGATION	[illegible]	39	37	35	34	32	33	35	36	38	35	32	30	27	27	26	25	24	24	23	23	23	22	22	22	23	23	23	23	23	856
GOOD LUCK	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9	252
PIONEER	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	277
STEWART	[illegible]	[illegible]	19	18	18	17	16	16	15	15	14	14	13	13	12	12	11	10	9	8	8	7	6	6	6	6	6	6	6	6	283
PINCOCK BYINGTON	2	2	2	[illegible]	[illegible]	[illegible]	[illegible]	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	64
PINCOCK GARNER	11	11	12	12	13	14	14	15	15	16	16	17	17	17	18	18	18	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	501
TETON ISLAND FEEDER	157	152	146	140	135	129	122	115	109	102	99	97	94	91	89	86	83	81	78	75	71	77	76	76	76	76	76	76	76	76	2947
ROXANA	8	7	6	6	5	5	4	4	3	3	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	74
ISLAND WARD	20	19	18	19	18	18	17	17	17	15	12	10	8	5	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	352
WOODMANSEE JOHNSON	39	39	39	40	40	41	41	42	42	43	44	44	45	45	46	46	46	45	44	44	42	41	42	41	40	40	40	40	40	40	1241
CITY OF REXBURG	40	38	37	37	36	35	34	34	34	34	33	33	32	32	32	32	31	30	30	29	28	28	28	28	28	28	28	28	28	28	917
REXBURG IRRIGATION	133	100	96	92	88	83	79	75	74	72	74	78	77	77	72	71	69	64	63	61	60	59	59	59	57	56	56	56	56	56	2146
TOTAL	872	823	810	799	787	775	760	759	741	733	722	716	699	690	675	668	656	637	625	613	589	597	593	592	590	591	591	591	591	591	14110

Provision for aiding canals which might be later cut off because of the comparatively recent priority dates of their decreed rights was discussed at a meeting of the directors of the North Fork Water Users' Association held at St. Anthony on July 6. Assistance through the medium of temporary transfers from valid rights was agreed upon, with the understanding that all transfers were to be handled through a representative committee consisting of J. T. Fisher, Geo. Harrigfeld and Wm. Lavery, in the manner first adopted during the preceding season.

This action was confirmed at a general meeting of water users held on July 9, at which time the necessary resolutions were adopted to put it into effect.

During the next four weeks the temporary transfers secured through this pooling committee undoubtedly prevented material crop losses under several canal systems, and at the same time promoted a spirit of harmony between the water users of this section.

While the above description applies more especially to the Henrys Fork and Fall River canals the distribution on Teton River differed but little. W. F. Dawson acted in the combined capacity of hydrographer, deputy water master and river rider for this section.

Before the middle of August the need for water had decreased materially, and by the end of the month there appeared to be no further need for regulation. Consequently the services of Deputies Pincock and Braun and of Miss Arnold, the part-time clerk in the St. Anthony office, were terminated on August 31.

With the assistance of Mr. Dawson, each canal was visited about once each week or oftener, and at least two meter measurements were secured at most of the stations, during September. In addition some repair work was done and a cable measuring equipment was installed at the gaging station on Henrys Fork near Ashton.

Actual deliveries to the canals diverting from Henrys Fork, Fall and Teton Rivers are shown on Plates XVI, XVII, XVIII and XIX.

Plates XX and XXI summarize data in regard to the flow of the three principal streams, diversions therefrom, losses and gains throughout different sections, in so far as it is practicable to show all these facts from the existing data.

The time interval basis used for the computation of records from the river gaging stations as presented in these tables is as follows:

1921 DISTRIBUTION WATER DISTRICT NO 36

PLATE NO XX

FALL RIVER

DATE 1921	SQUIRREL	CANALS ABOVE STATION	SQUIRREL + CANALS ABOVE STATION	DATE 1921	TOTAL DIVERSIONS	THEO BALANCE CHESTER	CHESTER	GAIN ABOVE CHESTER	ASHTON
June 1	2935	26	2961	June 2	190	2801	3210	409	3315
2	2525	0	2525	3	172	2353	2740	387	3530
3	2510	0	2510	4	329	2181	2590	409	3340
4	2760	0	2760	5	314	2446	2850	404	3230
5	2960	0	2960	6	343	2617	2980	363	3190
6	2980	20	3000	7	500	2500	2900	400	3120
7	3020	20	3040	8	561	2479	2830	351	3010
8	3130	21	3151	9	597	2554	3040	486	2950
9	3130	40	3170	10	604	2566	2950	384	2950
10	3110	41	3151	11	596	2555	2900	345	2840
11	3350	42	3392	12	613	2579	2980	401	2720
12	3430	65	3495	13	632	2663	3110	447	2630
13	3375	58	3433	14	835	2598	3090	492	2550
14	3250	65	3315	15	880	2435	2810	375	2380
15	2855	96	2951	16	870	2081	2420	339	2360
16	2435	112	2547	17	853	1694	2100	406	2260
17	2055	109	2164	18	817	1347	1680	333	2260
18	1825	106	1931	19	837	1094	1330	236	2180
19	1755	120	1875	20	923	952	1230	278	2100
20	1705	131	1836	21	937	899	1110	211	2100
21	1610	148	1758	22	947	811	1010	199	2080
22	1585	177	1762	23	988	774	976	202	2020
23	1625	187	1812	24	1009	803	985	182	1900
24	1640	201	1841	25	1012	829	976	147	1880
25	1580	200	1780	26	1022	758	891	133	1900
26	1455	206	1661	27	970	691	792	101	1860
27	1345	206	1551	28	986	565	687	122	1800
28	1260	214	1474	29	698	776	854	78	1820
29	1215	231	1446	30	901	545	938	393	1760
30	1160	231	1391	July 1	899	492	564	72	1700
July 1	1075	225	1300	2	853	447	525	78	1780
2	1025	237	1262	3	823	439	533	94	1840
3	987	235	1222	4	813	409	517	108	1840
4	950	228	1178	5	763	415	474	59	1780
5	936	182	1118	6	643	475	481	6	1760
6	864	66	930	7	768	162	408	246	1670
7	776	224	1000	8	766	234	340	106	1590
8	763	237	1000	9	831	169	258	89	1860
9	742	238	980	10	797	183	230	47	1630
10	702	238	940	11	871	69	150	81	1570
11	658	239	897	12	856	-41	122	81	1590
12	654	239	893	13	913	-20	96	116	1550
13	643	245	888	14	883	-5	98	93	1570
14	605	247	852	15	854	-2	76	78	1570
15	608	249	857	16	775	-32	58	-24	1500
16	616	205	821	17	785	-36	103	67	1500
17	601	205	806	18	815	-9	113	122	1480
18	594	205	799	19	808	-9	98	107	1460
19	590	204	794	20	747	47	145	100	1480
20	590	204	794	21	767	27	159	132	1430
21	616	204	820	22	796	24	127	103	1440
22	616	157	773	23	854	-81	94	175	1380
23	586	192	778	24	818	-40	74	114	1360
24	579	190	769	25	845	-76	74	151	1320
25	590	197	787	26	834	-47	84	131	1440
26	590	194	784	27	741	43	135	92	1460
27	612	191	803	28	685	118	122	4	1460
28	638	107	745	29	609	136	159	23	1400
29	631	107	738	30	631	107	185	78	1400
30	624	107	731	31	626	105	178	73	1420
31	620	106	726	Aug 1	648	78	220	142	

HENRY'S FORK

ASHTON + FALL RIVER CHESTER	DIVER ASHTON TO ST ANTH	THEO BAL	ST ANTH	GAIN ASHTON TO ST ANTH	DIVERS BELOW ST ANTH	THEO BAL.	EST BALANCE BELOW DIVERS
4115	741	6389	6160	-229	645	5515	
4130	734	5586	5750	164	687	5063	
4530	643	5297	5470	233	684	4786	
4536	643	5330	5680	350	712	4968	
4080	760	5337	5630	143	795	4835	
4170	738	5437	5260	-138	778	4482	
4020	898	5122	5200	359	835	4365	
3940	990	4841	5090	172	808	4282	
3990	1072	4918	4840	-78	815	4025	
3900	1132	4768	4840	72	878	3962	
3740	1137	4603	4640	37	891	3749	
3700	1158	4542	4640	98	890	3750	
3740	1183	4557	4640	83	860	3780	
3640	1187	4459	4600	147	868	3732	
3190	1266	3924	4010	86	864	3146	
4780	1196	3584	3490	-94	870	2620	
4560	1143	3217	3040	-177	878	2162	
3940	1058	2882	2660	-222	819	1841	
3510	1072	2438	2440	2	859	1581	
3330	1019	2311	2440	129	844	1596	
3210	1031	2179	2100	-79	843	1257	
3090	975	2115	1920	-195	828	1092	
2996	993	2003	1850	-153	857	993	
2885	1027	1858	1820	-38	864	956	
2856	1097	1759	1700	-59	904	796	
2791	1076	1715	1700	-15	900	800	
2652	1090	1562	1660	98	851	809	
2487	1107	1380	1570	190	643	927	
2674	1126	1548	1660	112	653	977	
2678	1054	1644	1620	-24	546	1074	
2264	952	1312	1450	138	608	842	
2305	896	1409	1450	41	846	604	
2373	906	1467	1450	-17	857	593	
2357	932	1425	1450	25	811	639	
2254	851	1403	1450	47	824	626	
2241	817	1424	1450	26	747	703	
2078	708	1370	1340	-30	733	607	
1930	599	1331	1160	-171	707	453	
2068	931	1127	1080	-47	792	288	
1860	925	935	937	2	702	235	
1720	934	786	796	10	679	117	
1712	859	853	773	-80	781	-72	
1646	923	723	750	27	719	31	
1668	950	718	721	3	745	-24	8
1646	1001	645	721	76	747	-26	8
1558	1001	557	614	57	673	-59	8
1603	939	664	614	-50	673	-59	8
1593	990	603	679	76	763	-84	8
1551	982	576	679	103	765	-86	8
1627	993	634	665	31	803	-138	8
1639	1018	621	679	58	786	-107	8
1601	806	801	750	-51	855	-105	8
1474	761	713	714	1	819	-105	8
1434	760	674	700	26	790	-90	8
1574	806	648	796	148	784	12	8
1593	811	715	773	60	807	-34	8
1618	811	784	827	43	821	6	8
1591	791	791	796	5	704	92	
1515	807	754	811	57	691	120	
1598	870	765	811	46	691	120	
1545	850	743	811	68	674	137	
	884	756	877	121	700	177	

TETON RIVER

ST ANTH	TOTAL DIVERS.	THEO BAL	EST BALANCE BELOW DIVERS	BAL. HEN. FK. ST ANTH + BAL. TETON R. ST ANTH	HENRY'S FORK RESERVE	GAIN BELOW ST ANTH.
3140	788	2352		5767	5500	-267
3090	646	2444		5787	5640	-103
3040	573	2467		5747	5040	-461
3040	536	2504		5368	5136	-232
3060	574	2486		5422	5400	-22
3040	598	2442		5441	4636	-805
3040	592	2448		5407	4960	-447
3040	592	2448		5410	4710	-700
3040	641	2399		5447	4930	-517
3040	641	2399		5051	4934	-117
3040	657	2383		5114	4650	-464
3040	657	2383		5413	4870	-543
3040	664	2376		5208	4930	-278
3060	636	2424		5370	5370	450
3060	643	2417		5393	6310	917
3060	643	2417		4593	5758	1141
3060	726	2334		5546	5030	1214
3040	878	2162		5043	4870	1107
3080	924	2156		4652	5390	738
3080	989	2091		2069	2830	762
3110	1027	2083		1775	2410	635
3080	1093	1987		1700	2360	660
3090	1165	1925		1781	2390	609
2100	1182	918		1714	2330	616
2120	1187	933		1748	2460	712
2080	1043	937		1746	2370	624
2060	1067	799		1726	2340	614
2090	1058	739		1712	2340	628
2120	1093	684		1763	2390	627
2070	1028	541		1584	1750	166
2060	1014	448		1052	2160	1108
2060	1123	437		1030	1980	950
2010	1015	995		1034	1740	706
2000	1077	923		1053	1850	797
1970	1041	929		1092	1770	678
1090	1125	965		972	1560	588
1070	1130	940		1733	1960	227
1070	1129	941		1672	1280	608
1060	1115	945		1316	1040	570
1060	1124	936		1313	1240	527
1060	1143	917		1301	847	546
1060	1102	958		1319	1295	476
1070	1158	912		1188	1750	562
1070	1160	910		1134	1673	539
1080	1160	920		1141	1591	510
1090	1129	961		1155	1544	483
1090	1150	940		1151	1573	508
1090	1150	940		1115	1511	496
1090	1152	938		1119	1519	559
1090	1181	909		1111	1511	510
1090	1153	937		1097	1540	547
1090	1141	949		1119	1544	530
1090	1152	938		1111	1515	511
1090	1181	909		1111	1552	541
1090	1200	890		1099	1501	502
1090	1124	966		1099	1414	515
1090	1133	957		1124	1647	523
1090	1102	988		1210	1687	699
1090	1137	953		1235	1706	753
1090	1096	994		1224	1771	777
1090	1088	1002		1293	1760	758
1090	1115	975				

1921 DISTRIBUTION WATER DISTRICT NO 36

PLATE NO XXI

FALL RIVER

DATE 1921	SQUIR REL	CANALS ABOVE STATION	SQUIRR + CANALS ABOVE STATION	DATE 1921	TOTAL DIVERSIONS	THEO BALANCE CHESTER	CHESTER	GAIN ABOVE CHESTER	ASHTON
Aug 1	631	101	732	Aug 2	545	187	234	47	1440
2	646	87	733	3	581	152	270	118	1380
3	650	87	737	4	624	113	223	110	1400
4	634	87	721	5	605	118	216	98	1340
5	620	86	706	6	614	92	205	113	1380
6	616	86	702	7	544	158	205	47	1380
7	616	76	692	8	562	130	230	100	1360
8	612	76	688	9	539	149	220	71	1340
9	620	75	695	10	551	144	238	94	1340
10	620	78	698	11	520	178	234	56	1340
11	601	87	688	12	525	165	234	69	1340
12	586	88	674	13	523	151	223	72	1340
13	586	88	674	14	524	150	242	92	1340
14	594	88	682	15	547	135	234	99	1400
15	594	98	692	16	492	200	292	92	1400
16	593	98	691	17	493	188	288	100	1380
17	565	93	658	18	509	149	258	109	1380
18	554	93	647	19	506	141	238	97	1320
19	546	92	638	20	488	150	227	77	1340
20	540	91	631	21	497	134	223	89	1320
21	536	90	626	22	498	128	216	88	1300
22	532	90	622	23	493	129	205	76	1300
23	572	90	662	24	505	157	227	70	1420
24	616	96	712	25	525	187	306	119	1420
25	587	92	679	26	495	184	274	90	1440
26	547	90	637	27	494	143	266	123	1460
27	550	90	640	28	499	141	270	129	1420
28	562	90	652	29	486	166	274	108	1420
29	547	73	620	30	486	134	274	140	1440
30	530	72	602	31	482	120	258	138	1400
31	490	71	561	Sept 1	486	75	254	179	1400
Sept 1	457	70	527	2	491	36	254	218	1360
2	464	70	534	3	447	75	283	208	1340
3	450	70	520	4	404	116	361	245	1360
4	454	69	523	5	403	120	389	269	1500
5	460	69	529	6	397	132	361	229	1480
6	460	68	528	7	392	136	366	230	1400
7	457	68	525	8	387	138	366	228	1380
8	466	67	533	9	382	151	361	210	1250
9	472	67	539	10	377	162	408	246	1530
10	489	67	556	11	372	184	395	211	1290
11	483	66	549	12	368	181	383	202	1170
12	457	67	524	13	364	160	371	211	1300
13	457	67	524	14	358	166	361	195	1300
14	457	68	525	15	351	174	355	181	1340
15	454	69	523	16	346	177	350	173	1340
16	450	70	520	17	339	181	345	164	1340
17	466	71	537	18	333	204	361	157	1420
18	509	72	581	19	334	247	371	124	1420
19	522	73	595	20	333	262	432	170	1400
20	509	74	583	21	332	251	420	169	1380
21	506	74	580	22	333	247	395	148	1400
22	499	75	574	23	332	242	383	141	1360
23	489	74	563	24	330	233	371	138	1340
24	482	73	555	25	330	225	366	141	1320
25	482	73	555	26	328	227	361	134	1300
26	482	73	555	27	327	227	350	123	1300
27	482	72	554	28	327	227	350	130	1300
28	476	71	547	29	327	213	345	132	1300
29	469	71	540	30	326	213	345	132	1300
30	469	70	539						

HENRYS FORK

ASHTON + FALL RIVER = CHESTER	DIVER ASHTON TO ST ANTH	THEO BAL	ST ANTH	GAIN ASHTON TO ST ANTH	DIVERS BELOW ST ANTH	THEO BAL	EST BALANCE BELOW DIVERS
1674	728	946	911	-35	686	225	
1650	633	1017	1060	43	692	368	
1623	625	998	1030	32	698	332	
1596	597	999	1060	61	752	308	
1585	638	947	1030	83	747	283	
1585	630	955	1000	45	702	298	
1590	670	920	1030	110	722	308	
1560	661	899	981	82	701	280	
1578	730	848	981	133	704	277	
1574	720	854	963	109	681	282	
1574	713	861	937	76	675	262	
1563	655	908	963	55	673	290	
1582	655	927	1030	103	661	369	
1634	597	1037	1120	83	588	532	
1692	516	1176	1260	84	584	676	
1668	502	1166	1260	94	501	759	
1638	482	1156	1230	74	446	784	
1558	483	1075	1180	105	418	762	
1567	481	1086	1200	114	388	812	
1543	485	1058	1180	122	380	800	
1516	482	1034	1160	126	441	719	
1505	436	1069	1160	91	447	713	
1647	458	1189	1180	-9	451	729	
1726	468	1258	1280	22	446	834	
1714	465	1249	1230	-19	418	812	
1726	445	1281	1260	-21	429	831	
1690	429	1261	1260	-1	436	824	
1694	437	1237	1260	3	432	828	
1714	439	1275	1260	-15	432	828	
1658	434	1224	1200	-24	434	766	
1651	424	1230	1180	-50	431	744	
1614	417	1197	1230	33	428	802	
1623	414	1209	1340	131	378	962	
1721	384	1337	1360	23	368	992	
1889	381	1508	1390	-118	358	1032	
1841	378	1463	1510	47	347	1163	
1766	375	1391	1450	59	337	1113	
1686	372	1314	1390	76	327	1063	
1611	362	1249	1340	91	321	1019	
1938	296	1642	1630	-12	315	1315	
1685	288	1397	1630	233	309	1321	
1553	277	1276	1570	294	303	1267	
1671	267	1404	1510	106	297	1213	
1661	267	1394	1510	116	297	1213	
1655	267	1388	1450	62	297	1153	
1690	269	1421	1450	29	297	1153	
1685	269	1416	1450	34	298	1152	
1781	269	1512	1510	-2	299	1211	
1791	268	1523	1510	-13	307	1203	
1832	267	1565	1570	5	316	1254	
1800	267	1533	1570	37	325	1245	
1795	266	1529	1510	-19	346	1170	
1743	266	1477	1450	-27	356	1094	
1711	266	1445	1390	-55	372	1018	
1686	309	1377	1390	13	388	1002	
1661	309	1352	1390	38	391	999	
1650	309	1341	1390	49	393	997	
1650	309	1341	1390	49	395	995	
1645	309	1336	1340	4	398	942	
1645	309	1336	1340	4	401	939	

TETON RIVER

ST ANTH	TOTAL DIVERS	THEO BAL	EST BALANCE BELOW DIVERS	BAL HENRYS FK ST ANTH + BAL TETON R ST ANTH	HENRYS FORK BELOW	GAIN BELOW ST ANTH
805	691	114		439	847	408
802	789	83		451	934	483
852	771	81		419	968	549
816	741	75		383	968	586
787	707	80		363	934	571
778	708	68		366	906	540
744	699	45		373	934	561
783	696	87		337	917	580
753	696	57		334	951	617
742	695	47		29	951	622
736	689	47		309	962	653
736	693	43		373	951	578
782	681	101		470	1010	540
763	652	101		633	1120	487
764	677	87		763	1260	497
759	673	86		845	1380	535
736	650	86		870	1400	530
782	693	89		851	1390	539
691	603	88		900	1360	460
685	598	87		887	1360	473
674	588	86		805	1300	495
668	564	104		817	1270	453
691	592	99		828	1290	462
724	605	119		953	1370	417
753	645	108		910	1380	470
736	648	88		919	1400	481
736	656	80		904	1400	496
747	655	92		920	1390	470
719	631	88		916	1400	484
702	621	81		847	1380	533
691	572	119		823	1390	467
685	523	162		964	1330	366
696	510	186		1148	1400	252
742	499	243		1235	1590	355
733	481	248		1298	1810	512
736	475	255		1418	1850	432
713	460	253		1366	1860	494
713	450	263		1326	1820	494
787	441	266		1285	1770	485
770	433	337		1652	2000	348
811	422	389		1710	1950	240
782	414	368		1635	1930	295
742	404	338		1551	1970	419
724	394	330		1543	1860	317
713	387	326		1479	1810	331
702	377	325		1478	1810	332
675	365	314		1466	1820	354
668	356	312		1523	1860	337
674	345	329		1532	1900	368
696	337	359		1613	1910	297
727	328	379		1624	1910	286
696	310	377		1547	1860	313
668	312	456		1455	1810	360
657	304	353		1371	1740	369
646	301	345		1347	1690	343
646	301	345		1344	1610	266
646	301	345		1342	1590	248
635	301	334		1329	1590	261
630	301	329		1271	1540	269
625	301	324		1263		

Gaging Station	Period Used For Comparable Daily Means
Henrys Fork near Ashton	Day ending at 4 p.m.
Fall River near Squirrel	Day ending at 10 a.m.*
Fall River near Chester	Day ending at 5 p.m.
Henrys Fork at St. Anthony	Day ending at 12 midnight*
Teton River near St. Anthony	Day ending at 6 p.m.
Henrys Fork near Rexburg	Day ending at 8 a.m. 1st day following

* Approximate means used. No recording gage records available.

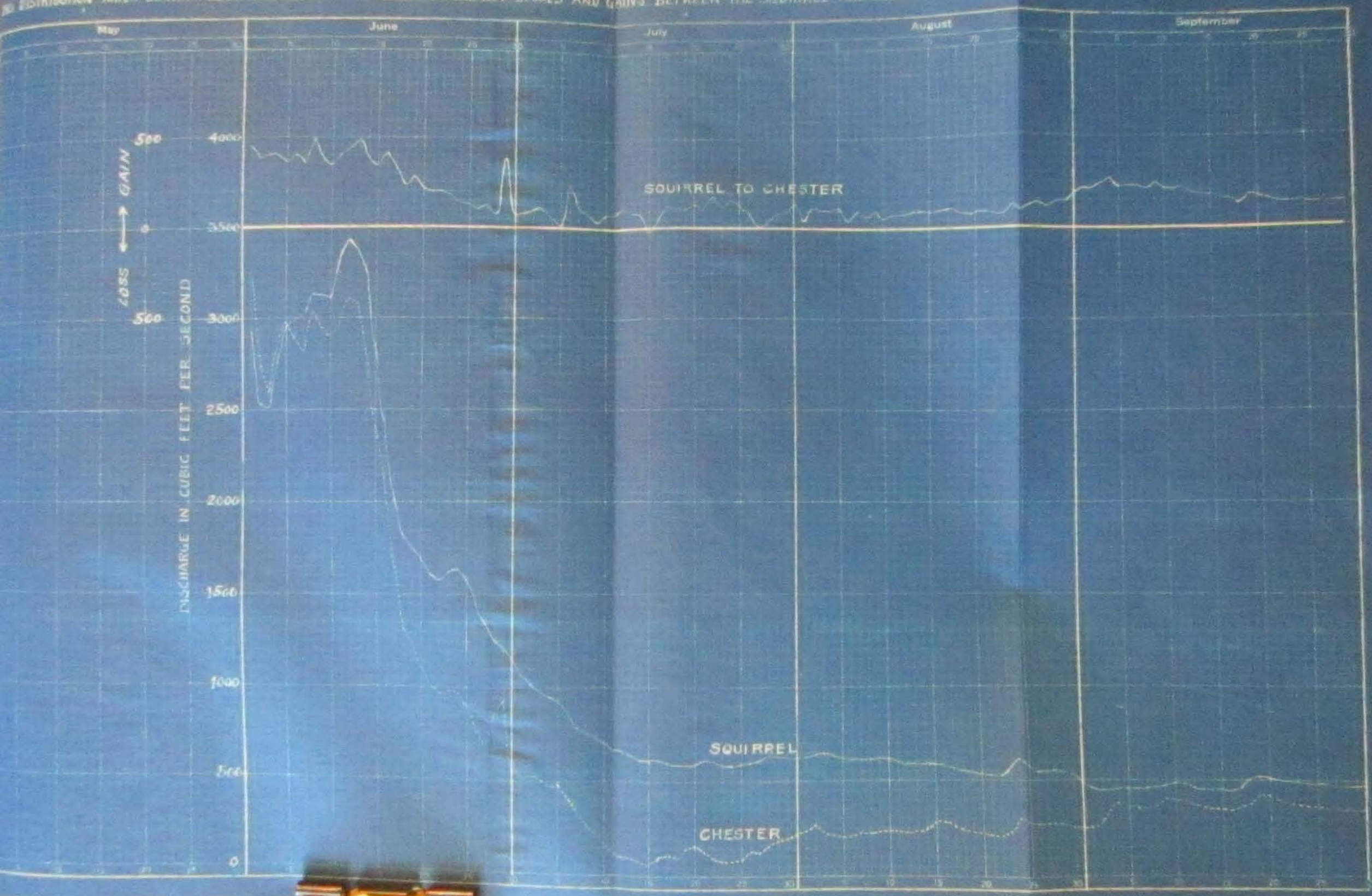
This schedule is so arranged as to make the data correspond to the river records on Plates VII and VIII. The dates indicated in the tables are the nearest midnight to midnight or calendar day.

No satisfactory sites have been found for gaging stations located immediately below the lowest canals diverting from Henrys Fork and Teton River, and on this account data have been included in the column headed "Estimated Balance Below Diversions" only for days when these quantities were determined either by actual measurements or by estimates.

The period during which the quantity of water passing the lowest canal on Henrys Fork was limited to leakage through the diversion dam is slightly shorter than in 1920, while the two determinations of Teton River waste would seem to indicate a larger contribution from that source than during preceding seasons. The latter were made some distance below the last point of diversion, however, and probably include return flow which could not be utilized by Teton canals. The south channel of the Teton is known to have been dry immediately below the head of the Rexburg Irriga-

...DISTRIBUTION WATER DISTRICT NO 36 - HYDROGRAPHS ILLUSTRATING THE NET LOSSES AND GAINS BETWEEN THE SQUIRREL AND CHESTER GAGING STATIONS, TAU RIVER. PLATE XXII

Washington
Plate



tion Co. canal during a considerable portion of the summer, and this fact, together with other miscellaneous information, leads to the conclusion that except for a possible increased return flow at the lower end of the stream the utilization of available supply was probably about as complete as during former years.

Plate XXII contains hydrographs for the two gaging stations on Fall River and a graph showing indicated net gains above the lower or Chester station. These are plotted to coincide with the dates at the upper station.

The large gains noted during June undoubtedly can be attributed to unmeasured inflow from Squirrel Creek and other small tributaries which later in the season may not reach the main river. Likewise the increased gains in September may be partially due to a pick-up in these minor sources of supply.

The effect of the break in the Enterprise Canal during the latter part of June is very noticeable on the Chester graph. Other small irregularities can doubtless be explained by the fact that the Squirrel station is not equipped with a recording gage.

The hydrograph for the Rexburg station and graphs showing gains and losses on Henrys Fork above and below St. Anthony are included on Plate XXIII. These curves are all plotted to agree with the Rexburg dates.

Comparison with similar diagrams for 1920 shows a larger gain or return flow in 1921 below St. Anthony, with a corresponding increase in the minimum discharge for the season at the Rexburg station.

DISTRIBUTION WATER DISTRICT NO 36 — HYDROGRAPHS ILLUSTRATING THE NET LOSSES AND GAINS BETWEEN THE ASHTON AND REXBURG GAGING STATIONS, HENRY'S FORK — PLATE XXIII File No. Washington Field

May | June | July | August | September

ASHTON TO ST ANTHONY

ST ANTHONY TO REXBURG

REXBURG

LOSS ← → GAIN

DISCHARGE IN CUBIC FEET PER SECOND

500 4000
0 3500
500 3000
500 2500
0 2000
500 1500
1000
500

Plate XXIV shows hydrographs at the Rexburg station for the summer months throughout the entire period for which records are available. This plate should be of especial interest in connection with water supply studies covering several years.

DISTRIBUTION IN SWAN VALLEY.

Swan Valley water distribution was handled in the same manner as during 1920. A deputy water master was appointed for this section but his salary and other expenses incident to the work were paid directly by the local water users; hence no charges against the canals in this area were included in the annual water master's bill. Copies of all instructions regarding cuts were forwarded to this deputy, who was directed to regulate diversions in accordance with these orders.

DISTRIBUTION ON SAND CREEK, FREMONT COUNTY.

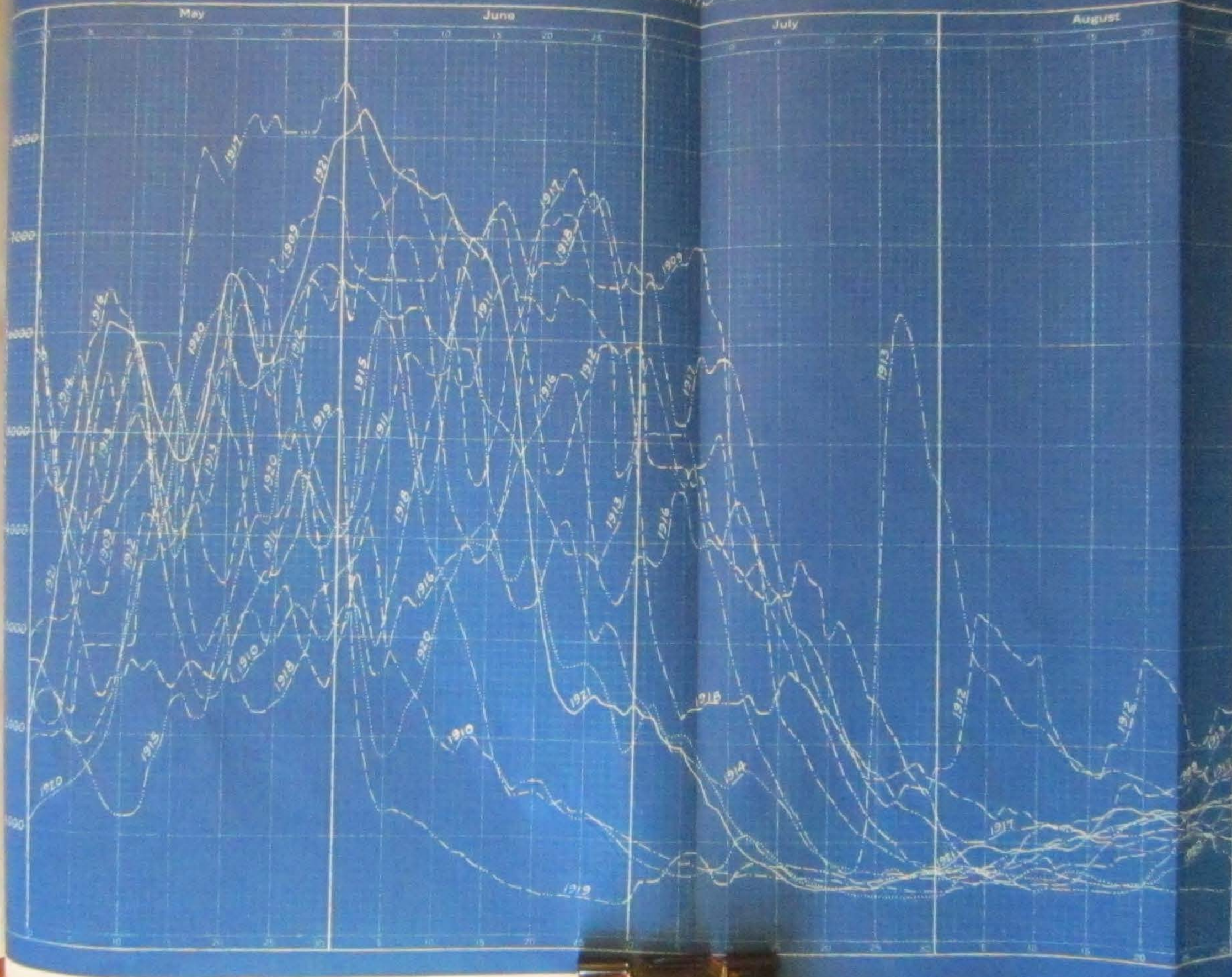
The system followed in Swan Valley was also ad opted to govern the distribution of the flow of Sand Creek in Fremont County. This stream is nominally tributary to Henrys Fork, but during the summer months does not actually contribute any surface inflow.

NEW CONSTRUCTION AND REPAIRS.

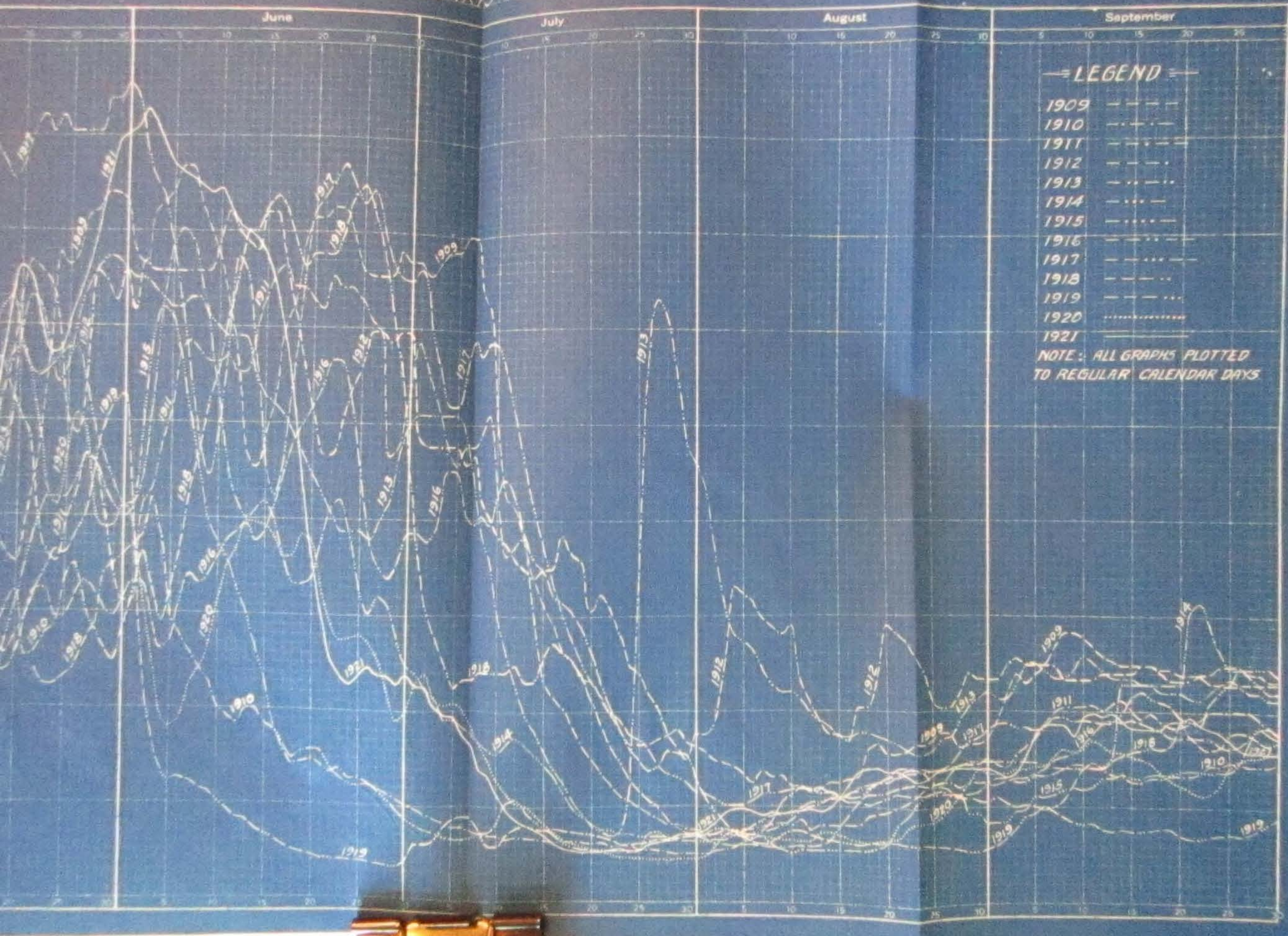
New gaging stations were established during the season on the Independent Canal in Jefferson County and on the Smith-Maxwell Canal near Blackfoot.

Wooden shelter houses and float wells were constructed and Stevens' 8 Day Recording Gages were installed at the gaging stations on Henrys

1921 DISTRIBUTION WATER DISTRICT NO. 36 HYDROGRAPHS HENRYS FORK NEAR REXBURG IDAHO 1909-1921



WATER DISTRICT NO. 36 HYDROGRAPHS HENRYS FORK NEAR REXBURG IDAHO 1909-1921 PLATE XXIV File No. Washington Field



Fork near Ashton, Fall River near Chester and Teton River near St. Anthony. The first of these was also equipped with a cable and car from which measurements could be secured more accurately and expeditiously than was possible from the old highway bridge.

The wooden shelter and float well which had been in use at the Neeley station on Snake River ever since 1910 was replaced by a substantial reinforced concrete structure. This was completed about October 1, as a part of the general plan to gradually provide permanent equipment at all of the principal river gaging stations.

RECOMMENDATIONS.

Two revisions of the Idaho statutes which were urged in the 1919 report are still needed. These are, briefly:

(1) Adequate provision should be made for the prompt payment of natural flow distribution expenses.

(2) Present limitations as regards the compensation of water masters, deputy water masters and special deputies should either be materially increased or should be altogether eliminated.

Attention has already been directed to the misuse of the permanent transfer or change of point of diversion statute; hence it now seems proper to advocate its amendment to the extent necessary to prevent merchandising of decreed water rights. Those who favor the present system call attention to the fact that the sale of water as a commodity encourages the use of less water per acre and thus promotes a higher duty. They frequently overlook, however, the injustice which is done to water rights which are younger then those involved in the transaction, due to

the fact that after a transfer is completed the water is almost invariably more fully utilized than before, and in consequence later rights must be cut off at an earlier date each year than was required prior to the change.

Recommendations concerning changes in the methods of distribution will be presented to the Advisory Committee in accordance with the practice of preceding years.

EXPENDITURES.

A complete statement of expenditures covering the year ending March 31, 1922, follows. This statement includes all items which appeared in the annual water master's bill for the season of 1921, as well as everything pertaining to the work of the Idaho Falls office. No attempt has been made, however, to segregate expense for strictly hydrometric work from that for water distribution, as in many respects these phases are too closely related to warrant more than an arbitrary separation.

The winter expenses charged against the normal flow and stored water users have been prorated on a basis of 61.8 per cent to the former and 38.2 per cent to the latter, in accordance with the relative expense incurred in the two classes of distribution during the 1921 irrigation season. This method of division differs slightly from that of the preceding year since it does not include hydrometric work performed during May in the totals from which the relative winter percentages are determined, even though expenditures for such work come within the irrigation season (May 1 to September 30). The present division adheres more strictly to the provisions of the resolution adopted on April 28, 1919, by the special water users' committee of nine.

EXPENDITURES FOR WATER DISTRIBUTION AND HYDROMETRIC WORK.

April 1, 1921 to March 31, 1922.

					Irrigation Season	Winter Season
Water Master						
John Empey,	Salary May 31-Sept.30,123 days at $7				861.00	
	Expense (telephoning)				.90	
	Auto hire,May 31-Sept.30,123 days at $5				615.00	
Deputy Water Masters						
W. J. Kremer,	Salary June 1-Aug.31,92 days at $4				368.00	
	Auto hire	do	do	6	552.00	
Antone Christensen,	Salary	do	do	4	368.00	
	Auto hire	do	do	5	460.00	
Albert Terry,	Salary	do	do	4	368.00	
	Auto hire	do	do	6	552.00	
Chas.A.McCurdy,	Salary	do	do	4	368.00	
	Auto hire	do	do	5.50	506.00	
F. C. Braun,	Salary	do	do	3	276.00	
	Auto hire	do	do	3	276.00	
Geo.A.Pincock,	Salary	do	do	4	368.00	
	Auto hire	do	do	6	552.00	
W. N. McConnel,	Salary June 1-Sept.24, 3 4/5 mo. at			50	190.00	
Special Deputy						
G. Clyde Baldwin,	Salary May 1-Sept.30,5 mo.at $400				2000.00	
	Expenses	do			42.39	
	Auto hire	do			189.60	
	Salary April 1-30,		1 mo.at $300			300.00
	Oct.1-Mar.31,		6 mo.at 400			2400.00
	Expenses April 1-30;Oct.1-Mar.31					392.99
	Auto hire	do	do			14.25
Hydrographers						
T. R. Newell,	Salary May 1-Sept.30,5 mo. at $250				1250.00	
	Expenses	do			125.25	
	Auto hire	do			802.05	
	Salary April 1-30,		1 mo. at $200			200.00
	Oct.1-Mar.31,		6 mo. at 250			1500.00
	Expenses April 1-30;Oct.1-Mar.31					51.30
	Auto hire	do	do			111.60

			Irrigation Season	Winter Season
C.A.McClelland,	Salary May 1-Sept.30,5 mo.at $190		950.00	
	Expenses	do	6.05	
	Auto hire	do	737.55	
	Salary April 1-30;Oct.1-Mar.31, 7 mo.at $190			1330.00
	Expenses April 1-30;Oct.1-Mar.31			148.31
	Auto hire	do do		65.90
Frank A.Backman,	Salary May 1-Sept.24, 4 4/5 mo.at $150		720.00	
	Expenses May 1-Sept.24,		81.45	
	Auto hire	do	997.50	
W. F. Dawson,	Salary May 11-Sept.30, 4 2/3 mo.at $150		700.00	
	Expenses May 11-Sept.30		70.90	
	Auto hire	do	869.25	
L. L. Bryan,	Salary August 23		7.50	
	Expenses	do	5.00	

Stenographers

Mrs.Edith M.Cure,	Salary May 1-Sept.30,5 mo.at $130		650.00	
	April 1-30;Oct.1-Mar.31, 7 mo.at $130			910.00
Miss Phebe Arnold,	Salary June 1-Aug.31,3 mo.at $50		150.00	
E.Hazel Haugse,	Salary May 15-16 (job)		7.50	

Observers

H. R. Wallis,	Salary May 1-31,4 3/7 wk. at $2		8.86	
	June 1-Sept.30,4 mo.at $50		200.00	
	April 1-30;Oct.1-Dec.10, 14 2/7 wk. at $2			28.57
	Dec.15-Mar.25, 3 11/30 mo.at $15			50.50
	Mar. 26-31,6/7 wk. at $2			1.71
Harold Fuqua,	Salary May 1-31;Sept.1-30, 2 mo. at $5		10.00	
	June 1-Aug.31, 3 mo.at $12		36.00	
	April 23-30,8/30 mo.at $ 5			1.33
Oliver Kofoed,	Salary May 8-31;June 1-15, 1 8/30 mo. at $5		6.33	
	June 16-Aug.31,77 days at $1		77.00	
	July 20-Aug.31,43 days at 50¢		21.50	
	Sept. 1-30, 1 mo. at $9		9.00	
E. L. Jennings,	Salary July 1-Aug.31, 62 days at $1		62.00	

			Irrigation Season	Winter Season
Lena Byington,	Salary	April 8-30, 22/30 mo. at $7.50	7.50	5.75
		May 1-31, 1 mo. at $7.50	15.00	
		Sept. 1-15, 15 days at $1		
J. A. Clough,	Salary	April 1-30; Oct. 1-Mar. 31, 7 mo. at $10		70.00
		May 1-31; Sept. 16-30; 1½ mo. at $10	15.00	
		June 1-Sept. 15, 107 days at $1	107.00	
Mrs. Fred Monk,	Salary	April 25-30, 6/30 mo. at $5		1.00
		May 1-31, 1 mo. at $5	5.00	
		June 1-Sept. 15, 107 days at $1	107.00	
E. Luetjen,	Salary	April 1-30, 1 mo. at $8		8.00
		May 1-31, 1 mo. at $8	8.00	
		Sept. 1-30, 1 mo. at $9	9.00	
		Oct. 1-Mar. 31, 6 mo. at $9		54.00
A. A. Lehmann,	Salary	April 17-30; Oct. 1-31, 1 14/30 mo. at $15		22.00
		May 1-Sept. 30, 5 mo. at $15	75.00	
Axel Anderson,	Salary	April 1-30; Oct. 1-31, 2 mo. at $15		30.00
		May 1-Sept. 30, 5 mo. at $15	75.00	
H. E. Sheppard,	Salary	Nov. 1-Mar. 31, 5 mo. at $15		75.00
S. W. Pincock,	Salary	April 17-30, 14/30 mo. at $8		3.73
		May 1-Sept. 30, 5 mo. at $8	40.00	
Mrs. J. F. Johnson,	Salary	April 19-30; Oct. 7-Mar. 31, 6 1/5 mo. at $5		31.00
		May 1-11, 11/30 mo. at $5	1.83	
James Thorne,	Salary	April 21-30, 1/3 mo. at $7.50		2.50
		May 1-31, 1 mo. at $7.50	7.50	
P. W. Wernette,	Salary	April 1-30; Oct. 1-Mar. 31, 7 mo. at $5		35.00
		May 1-Sept. 30, 5 mo. at $5	25.00	
R. E. Reid,	Salary	April 1-30; Oct. 1-Mar. 31, 7 mo. at $10		70.00
		May 1-Sept. 30, 5 mo. at $10	50.00	
C. N. Kemper,	Salary	April 3-30; Oct. 1-Nov. 30, 2 28/30 mo. at $4		11.73
		May 1-Sept. 30, 5 mo. at $4	20.00	
Earl Killian,	Salary	April 2-30; Oct. 1-Nov. 30, 21 trips at $2		42.00
		May 1-Sept. 30, 39 trips at $2	78.00	
M. A. Jensen,	Salary	April 1-30; Oct. 1-Nov. 19, 2 19/30 mo. at $9		23.70
		May 1-Sept. 30, 5 mo. at $9	45.00	

		Irrigation Season	Winter Season
S. Henderson,	Salary Oct.9-Dec.9, 2 mo. at $8		15.00
Wm. Heitzel,	Salary Oct.9-Feb.11;Mar.17-31, 4 10/30 mo. at $5		23.00
Chas. Jensen,	Salary Oct.9-Mar.31, 5 22/30 mo. at $5		23.67
Telephone toll and rental,	May 1-Sept.30	298.30	
	April 1-30;Oct.1-Mar.31		58.30
Miscellaneous field and office supplies		304.89	257.17
Materials and equipment for gaging stations		509.83	95.04
Premiums and filing fees for official bonds		44.00	
Filing fees in case of Enterprise Canal Co. vs. City of Idaho Falls		10.00	
Rent of office space at St. Anthony, June 1-Sept.15, $3\frac{1}{2}$ mo. at $20		70.00	
Total expenditures during irrigation season (May 1-Sept.30)		$19401.43	
Total expenditures during winter season (April 1-30;Oct.1-Mar.31)			$8472.05

SOURCES OF REVENUE.

Normal Flow Fund	10815.14	3496.13
Stored Water Users (through State)	6297.82	1875.29
Stored Water Users (through U.S.Geological Survey)		286.66
U. S. Geological Survey	211.21	973.55
State of Idaho (Cooperative Stream Measurement Fund)	1123.75	1016.13
State of Idaho (Mud Lake Investigations)		140.69
State of Idaho (Commissioner of Reclamation)	15.96	
U. S. Indian Service	896.22	625.60
U. S. Treasury (Federal Salary Bonus)	17.33	40.00
Idaho Irrigation District (Willow Creek Gage Reader)	24.00	18.00
	$19401.43	$8472.05

FUNDS AVAILABLE APRIL 1, 1922.

Normal Flow Fund (a)	$ 1,201.21
U. S. Geological Survey (b)	200.70
State of Idaho (c)	
Cooperative Stream Measurement Fund	1,360.77
U. S. Indian Service (b)	
Actual expenditures not exceeding	731.99
Stored Water Users (a)	
Estimated	742.50
	$ 4,237.17

(a) Additional funds probably available on or about June 1, 1922.
(b) Represents amount available for expenditure prior to July 1, 1922.
(c) Amount alloted for expenditure prior to July 1, 1922,
(subject to slight change)

Because of the cooperation with the U. S. Geological Survey it has been possible to secure adequate office quarters in the Federal Building at Idaho Falls without any expenditure for rent.

The cost of securing the necessary prints for 35 copies of the 1920 report, together with the expense for binding these reports, was paid by the State Commissioner of Reclamation.

Since the exact value of these items is not known they have been omitted from all the preceding summaries.

WATER RIGHTS.

Revised diagrams and summaries of all the principal decreed water rights are shown on Plates XXV, XXVI and XXVII. The revisions take account of changes resulting from all supplementary decrees and permanent transfers which were reported prior to March 1, 1922. Rights decreed to canals in comparatively remote or isolated portions of the district have not, in general, been listed on these plates.

On the diagrams, the longer vertical line at the right hand side of each triangular block represents approximately the priority date, and the horizontal length of the block the size of the right. Very small rights appear simply as vertical lines. Exact dates and amounts are given in the adjacent tabular summary. Wherever two names appear in the latter for a single decreed right, the larger letters refer to the canal through which the water is now diverted and the smaller to the source from which the right was obtained. Under the "Decree" heading the amount of the individual right is listed; under "Total" the total of all decreed rights to which the canal is entitled; and under "Older" the total of all older valid rights is given.

Storage rights in Jackson Lake Reservoir are also shown in one column on Plate XXV.

1921 DISTRIBUTION WATER DISTRICT NO 36

PARTY OR CANAL	TOTAL SF	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889
RILEY	24.										
ANDERSON & LAGLE ROCK & WCR	800.										
FARMERS FRIEND	302.83										
ENTERPRISE	188.										
NELSON	1.										
MATTSON CRAIG	17.76										
ARNSBERGER	6.										
HEISE	56.										
BUTLER ISLAND	5991.										
HICKMAN	24.										
ROSS & RAND	334.										
STEELE	38.										
HARRISON	459.28										
CHENEY	6.										
BOOMER & IDAHO	1000.										
RUDY	1912.6										
KITE & NORD	88.										
BURGESS	800.										
CLARK & EDWARDS	70.										
LOWDER & JENNINGS	52.										
EAST LABELLE	140.										
CONSOLIDATED FEEDER	184.										
LENROOT	220.										
REID	150.										
TEXAS FEEDER	280.										
NELSON COREY	168.										
HILL PETTINGER	13.										
ROSTAN	1.6										
LONG ISLAND	494.4										
ISLAND	290.										
RIGBY	160.										
DILLS	28.										
WEST LABELLE	109.9										
PARKS & LEWISVILLE	351.12										
NORTH RIGBY	50.										
WHITE	64.										
BUTTE & MARKET LAKE	366.4										
OSGOOD	120.25										
KENNEDY & BURGRAFF (LYLE)	24.81										
GREAT WESTERN & PORTER (MARTIN	549.										
TAYLOR & GOSHEN	46.										
CITY OF IDAHO FALLS	188.										
WOODVILLE	1255.										
SNAKE RIVER VALLEY	710.										
RESERVATION	600.										
BLACKFOOT	3668.										
NEW LAVA SIDE	152.										
PEOPLES	4242.										
ABERDEEN SPRINGFIELD	1250.										
CORBETT SLOUGH	2394.3										
NIELSEN HANSEN	15.										
RIVERSIDE	100.										
DANSKIN	180.										
FREGO	654.1										
WEAKLEY RICK	41.2										
WATSON SLOUGH	974.										
PARSONS	22.										
THORSEN	4.										
SMITH MAXWELL	178.										
USRS MINIDOKA CANALS	2726.										
TESS CANAL	3000.										
TENS CANALS	3000.										
ANNUAL TOTALS IN SEC FT.	20938.40	200.00	600.00	600.00	1600.00	4830.00	6204.40	4542.20	2648.80	1774.74	2041.00

REVISED CHART

1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	19

RT AND TABULAR SUMMARY OF PRINCIPAL SOUTH FORK AND SNAKE RIVER WATER RIGHTS

1902	1903	1904	1905	1906	1907	1908	STORAGE
							1200Ac.ft.
							0
							2000
							6100
							0
							0
							0
							0
							0
							0
							0
							0
							5000
							0
							0
							2000
							0
							5120
							0
							1040
							0
							4000
							3000
							0
							0
							0
							0
							0
							0
							0
							0

ECREE	PARTY OR CANAL	TOTAL	OLDER
130	CORBETT SLOUGH	23943	10943
600	RESERVATION	600	0
	Idaho Canal & Imp Co		
48	NELSON-COREY	168	12
	PO Carlson		
6	ARNSBERGER	6	0
	Supplemental		
15	LENROOT	220	24
	6-1-03 & 99 Amended		
195	ISLAND	290	95
	105 Supplemental		
14	TEXAS FEEDER	280	212
	Texas Slough Co		
400	GR WESTERN & PORTER	549	149
	New Sweden Dist		
72	NEW LAVA SIDE	152	80
17	BUTTE & MARKET LAKE	3664	3494
	Lavina Cutshaw		
3494	BUTTE & MARKET LAKE	3664	0
106	OSGOOD	180.25	6965
	Butte & Market Lake		
240	HARRISON	459.28	59.28
240	BURGESS	800	400
88	KITE & NORD	88	0
	Hatfield - Nord		
08	STEELE	38	3
	Hatfield		
65.41	TREGO	6541	0
4.39	KENNEDY & BURGRAFF	24.81	20.22
	Trego		
26	LOWDER & JENNINGS	52	0
	6-1-00 Error		
178	SMITH-MAXWELL	178	0
	Smith-Jarvis-Brennan		
3663	BLACKFOOT	3663	0
104	OSGOOD	180.25	59.25
	Blackfoot		
140	GR WESTERN & PORTER	549	135
	Blackfoot		
88	KENNEDY & BURGRAFF	24.81	11.42
	Blackfoot		
6	CHENEY	6	0
	Streeper		
6	LENROOT	220	18
30	RUDY	191.26	111.26
80	REID	150	70
44	CONSOLIDATED FEEDER	184	0
	Sunnydell - Lyman		
38	TEXAS FEEDER	280	174
	Liberty Park Co		
12	HARRISON	459.28	47.28
	O.H. Olive		
1882	LONG ISLAND	494.4	476.52
20	ISLAND	290	75
	Long Island		
043	OSGOOD	180.25	53.82
	Long Island		

DATE	DECREE	PARTY OR CANAL	TOTAL	OLDER
1889 JUN 1	043	HARRISON	459.28	46.85
		Long Island		
" 1	0.26	KENNEDY & BURGRAFF	24.81	11.16
		Long Island		
MAY 11	700	IDAHO	740	40
" 1	10943	CORBETT SLOUGH	23943	0
" 1	7.75	OSGOOD	180.25	51.07
		Corbett Slough		
" 1	282	KENNEDY & BURGRAFF	24.81	8.34
		Corbett Slough		
APR 15	300	ANDERSON & ER & W CRK	800	500
		Farmers Progress		
" 6	200	SNAKE RIVER VALLEY	710	0
		Cedar Point		
MCH 1	60	NEW LAVA SIDE	152	20
JAN 12	5	KENNEDY & BURGRAFF	24.81	3.34
		WS Lyle Amendment		
1888 AUG 13	100	RUDY	191.26	11.26
" 13	40	IDAHO	740	0
" 13	260	BOOMER	260	0
		Idaho Canal & Imp Co		
JUL 15	302	WATSON SLOUGH	974	67.2
" 15	166	PEOPLES	424.2	76
		Watson Slough		
" 15	32	WEARY RICK	41.2	38
		Watson Slough		
JUN 15	120	RIGBY	160	40
" 10	380	BURGESS	800	20
" 1	80	DANSKIN	180	100
" 1	92	EAST LA BELLE	140	48
" 1	38	TEXAS FEEDER	280	136
		Liberty Park Co		
" 1	211.12	PARKS & LEWISVILLE	351.12	140
" 1	28.88	HARRISON	459.28	17.97
		Parks & Lewisville		
" 1	08	ROSTAN	16	0.8
		John Matson		
" 1	2	RUDY	191.26	9.26
		C.E Rostan		
" 1	334	ROSS & RAND	3.34	0
		Supplemental		
" 1	2	STEELE	38	1
		Supplemental Probert		
" 1	24	HICKMAN	24	0
		Supplemental Rands		
" 1	2832	LONG ISLAND	494.4	447.2
" 1	30	ISLAND	290	45
		Long Island		
" 1	065	OSGOOD	180.25	50.42
		Long Island		
" 1	065	HARRISON	459.28	17.32
		Long Island		
" 1	038	KENNEDY & BURGRAFF	24.81	2.96
		Long Island		
MAY 13	32	WATSON SLOUGH	974	64
		HM Palmer		
" 1	10	OSGOOD (Morgan)	180.25	49.42

DATE	DECREE	PARTY OR CANAL	TOTAL	OLDER
1888 JAN 18	300	FARMERS FRIEND	302.83	2.83
1887 JUN 15	20	RIGBY	160	20
" 10	10	BURGESS	800	10
" 1	90	RIVERSIDE	100	10
" 1	38	TEXAS FEEDER	280	98
		Liberty Park Co		
" 1	12	NELSON-COREY	168	0
" 1	48	MATTSON-CRAIG	17.76	0
		RA Craig		
" 1	30	ISLAND	290	15
" 1	58.33	LONG ISLAND	494.4	382.87
" 1	064	OSGOOD	180.25	48.78
		Long Island		
" 1	064	HARRISON	459.28	16.68
		Long Island		
" 1	039	KENNEDY & BURGRAFF	24.81	2.57
		Long Island		
1886 JUL 23	100	DANSKIN	180	0
JUN 15	10	RIGBY	160	10
" 10	10	BURGESS	800	0
" 1	1.6	WATSON SLOUGH	974	6.24
		Eliz. Kratzer		
" 1	15	ISLAND	290	0
" 1	50	TEXAS FEEDER	280	48
		Texas Sl & Liberty Park		
" 1	08	ROSTAN	16	0
		Mattson		
" 1	48	OSGOOD	180.25	43.98
		Martin		
" 1	2	RUDY	191.26	7.26
		Rostan		
" 1	40	REID	150	30
" 1	58.34	LONG ISLAND	494.4	330.53
" 1	0.64	OSGOOD	180.25	43.34
		Long Island		
" 1	064	HARRISON	459.28	16.04
		Long Island		
" 1	0.38	KENNEDY & BURGRAFF	24.81	2.19
		Long Island		
MAY 3	38.	WEARY RICK	41.2	0
" 1	2	OSGOOD	180.25	41.34
		Morgan		
JAN 7	120	GR WESTERN & PORTER	549	15
		New Sweden Dist		
1885 JUN 30	22	PARSONS	22	0
" 15	10	RIGBY	160	0
" 10	124	HARRISON	459.23	3.64
		ST & W Summers		
" 10	1	STEELE	38	0
		ST & W Summers		
" 1	10	RIVERSIDE	100	0
" 1	48	TEXAS FEEDER	280	0
		Texas Sl & Liberty Park		
" 1	100	PARKS & LEWISVILLE	351.12	40
" 1	48	EAST LA BELLE	140	0

DATE	DECREE	PARTY
1885 JUN 1	9	LENR
" 1	30	RE.D
" 1	1099	WEST
" 1	64	WHITE
		West
" 1	37	OSGOO
		West
" 1	59.91	BUTLE
" 1	7.26	RUDY
		Butler
" 1	2.83	FARM
		Butler
" 1	58.33	LONG
" 1	064	OSGOO
		Long
" 1	064	HARR
		Long
" 1	039	KENN
		Long
MCH 6	624	WATSO
" 6	7.6	PEOP
		Watson
FEB 27	70	CLARK
1884 JUN 4	34	OSGOO
		Indep
" 1	20	NEW L
" 1	20	PARKS
" 1	9	LENRO
" 1	58.34	LONG
" 1	064	OSGOO
		Long
" 1	064	HARR
		Long
" 1	038	KENN
		Long
APR 3	340	ANDERS
		Farmer
1883 JUN 10	50	NORTH
" 1	20	PARKS
" 1	15	NIELSEN
" 1	15	GR WEST
		Nielsen
" 1	58.33	LONG IS
" 1	064	OSGOO
		Long Is
" 1	064	HARRIS
		Long Is
" 1	039	KENNE
		Long Is
1882 JUN 1	58.34	LONG I
" 1	064	OSGOO
		Long Is
" 1	064	HARRIS
		Long Is
" 1	038	KENNE
		Long Is

PLATE NO XXV

AL	OLDER
83	283
	20
	10
	10
	98
38	0
176	0
	15
	3989.37
25	4878
	1668
381	257
	0
	10
	0
14	624
	0
	48
16	0
025	49.98
1126	726
	30
14	390.53
025	49.34
928	1604
481	219
1.2	0
025	41.34
9	15
2	0
	0
928	364
38	0
0	0
0	0
112	40
0	0

DATE	DECREE	PARTY OR CANAL	TOTAL	OLDER
1885 JUN 1	9	LENROOT	220	9
" 1	30	REID	150	0
" 1	1099	WEST LA BELLE	1099	0
" 1	64	WHITE West La Belle	64	0
" 1	37	OSGOOD West La Belle	180.25	37.64
" 1	59.91	BUTLER ISLAND	59.91	0
" 1	7.26	RUDY Butler Island	191.26	0
" 1	2.83	FARMERS FRIEND Butler Island	302.83	0
" 1	58.33	LONG ISLAND	494.4	272.2
" 1	0.64	OSGOOD Long Island	180.25	37.0
" 1	0.64	HARRISON Long Island	459.28	3.
" 1	0.39	KENNEDY & BURGRAFF Long Island	24.81	1.8
MCH 6	624	WATSON SLOUGH	97.4	0
" 6	7.6	PEOPLES Watson Slough	424.2	0
FEB 27	70	CLARK & EDWARDS	70	0
1884 JUN 4	34	OSGOOD Independent	180.25	3
" 1	20	NEW LAVA SIDE	152	0
" 1	20	PARKS & LEWISVILLE	351.12	20
" 1	9	LENROOT	220	0
" 1	58.34	LONG ISLAND	494.4	213.86
" 1	0.64	OSGOOD Long Island	180.25	2.36
" 1	0.64	HARRISON Long Island	459.28	2.36
" 1	0.38	KENNEDY & BURGRAFF Long Island	24.81	1.42
APR 3	340.	ANDERSON & E.R. & W.C.R.R. Farmers Progress	800.	160
1883 JUN 10	50	NORTH RIGBY	50	0
" 1	20	PARKS & LEWISVILLE	351.12	0
" 1	15	NIELSEN-HANSEN	15	0
" 1	15	GR WESTERN & PORTER Nielsen-Hansen	549	0
" 1	58.33	LONG ISLAND	494.4	155.53
" 1	.064	OSGOOD Long Island	180.25	1.72
" 1	0.64	HARRISON Long Island	459.28	1.72
" 1	0.39	KENNEDY & BURGRAFF Long Island	24.81	1.03
1882 JUN 1	58.34	LONG ISLAND	494.4	97.19
" 1	0.64	OSGOOD Long Island	180.25	1.08
" 1	0.64	HARRISON Long Island	459.28	1.08
" 1	0.38	KENNEDY & BURGRAFF Long Island	24.81	0.65

DATE	DECREE	PARTY OR CANAL	TOTAL	OLDER
1881 JUN 1	58.31	LONG ISLAND	494.4	38.88
" 1	0.65	OSGOOD Long Island	180.25	0.43
" 1	0.65	HARRISON Long Island	459.28	0.43
" 1	0.39	KENNEDY & BURGRAFF Long Island	24.81	0.26
1880 JG 1	160	ANDERSON & E.R. & W.C.R.R. Farmers Progress	800	0
IN 11	38.88	LONG ISLAND	494.4	0
" 11	0.43	OSGOOD Long Island	180.25	0
11	0.43	HARRISON Long Island	459.28	0
11	0.26	KENNEDY & BURGRAFF Long Island	24.81	0

NOTE : ALL DECREES ARE LISTED IN SECOND FEET IN ABOVE SUMMARY.

LICENSE AND PERMIT RIGHTS DO NOT APPEAR.