

State of Idaho

H. C. BALDRIDGE, GOVERNOR

DEPARTMENT OF RECLAMATION

GEORGE N. CARTER, COMMISSIONER

BOISE

May 5, 1927

HONORABLE H. C. BALDRIDGE
Governor of Idaho
Boise, Idaho

SIR:

The eighth annual report of G. CLYDE BALDWIN, Special Deputy Commissioner of Reclamation and Watermaster of Water District No. 36, Snake River, is herein transmitted.

It is doubtful if there is any other single item of interest of so great importance to as many people involved as a unit in Idaho as the equitable apportionment of the waters of the Snake River, and I assure you that the responsibility of carrying through an irrigation season, the faithful administration of the decrees of courts and laws of the State, as they relate to the distribution of irrigation water in this district, is no light task.

The diversity of the problems which are constantly presented in this work requires most careful consideration and correct solutions are necessarily based on the soundest of judgment.

During the year 1926 the first use of American Falls Reservoir was had and 1927 will witness a full use of this latest addition to the irrigation resources of Idaho. With its use will come changes in the characteristics of the flow of Snake River; thus, information gathered heretofore, and so completely assembled and analyzed in the Watermaster's office, will be of incalculable value in future distribution of water from this river.

A great amount of credit is due Mr. Baldwin and his organization for the orderly manner in which Snake River water has been parceled out to its rightful owners and users during the period of his administration, and I take this means of expressing, on behalf of the Department of Reclamation, a grateful acknowledgment of the value of Mr. Baldwin's service.

Yours very respectfully

GEO. N. CARTER
Commissioner of Reclamation



STATE OF IDAHO
DEPARTMENT OF RECLAMATION

GEORGE N. CARTER, COMMISSIONER
G. CLYDE BALDWIN, DEPUTY

WATER DISTRICT No. 36

IDAHO FALLS, IDAHO

April 30, 1927.

C. BALDRIDGE, GOVERNOR

Mr. George N. Carter,
Commissioner of Reclamation,
Boise, Idaho.

Dear Sir:

It is with considerable pleasure that I submit herewith the technical report covering all regular water distribution and hydrometric operations in Water District No. 36 for the irrigation season of 1926.

The year marked the first use of the American Falls Reservoir for the storage of water for irrigation purposes and although the amount actually impounded was relatively small in proportion to the final capacity, it was of material benefit in supplementing the sub-normal supply. Furthermore, this reservoir afforded an excellent equalizing basin and, used for this purpose, helped both to prevent any waste of water and also to maintain the power head at the Minidoka Dam. Its use, however, introduced new problems in connection with the equitable segregation of stored water from normal flow and necessitated the revision of methods heretofore used. The practice of the past season is quite fully described herein but it appears probable that further modification of the plan of operation may be required as this new development becomes more fully utilized.

The normal stream flow was somewhat better sustained and more storage was available for use in 1926 than in the other recent "low water" years of 1919 and 1924. Through the exchange of normal flow for storage and by temporary transfers, as these were finally agreed upon, it was also possible after June 18th for many canals to adopt a sort of rotation system of delivery which helped to conserve their valid rights and increased the water duty. Because of these facts and advanced climatic conditions crop losses were generally not very serious.

U. S. Geological Survey methods have been used throughout as a standard for the collection and compilation of the hydrometric data which are presented in this report. In this, in the recomputation of records since the close of the irrigation season and in other respects the report is consistent with those which have been issued for the seven preceding years.

The so-called Normal Flow Fund was continued as a means of financing that portion of the work eventually paid for under the annual Water Master Bill. This fund was maintained during the past year through the advance of money by the Water Users Protector Association of the North Fork of Snake River and Tributaries, the Upper Snake River Water Users Protective Union, the Twin Falls Canal Company and the North Side Canal Company, Ltd.

Special acknowledgments are due to the North Fork Reservoir Company, the Snake River Valley Irrigation District and the Aberdeen-Springfield Canal Company for gage readings and to the Upper Snake River Water Users Protective Union, D. G. Martin, Thomas R. Newell, the U. S. Indian Irrigation Service, the U. S. Bureau of Reclamation, 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.

Appreciation should also be expressed to you and to your predecessor in office, W. G. Swondson, as well as to the members of the Water Users Committee of Nine of District No. 36 for kindly cooperation and for advice and assistance which was freely given whenever required.

The conscientious service of the hydrographers, deputy water masters and other members of the regular organization must again be recognized and full credit be given for their part in the success of the year's operations.

For valued assistance in the preparation of this report acknowledgment is accorded to C. A. McClelland, Mans H. Coffin and Miss Helen George.

Respectfully yours,

G. Clyde Baldwin
Deputy.

WATER DISTRIBUTION AND HYDROMETRIC WORK

In District No. 36

1926

by G. Clyde Baldwin

CONTENTS

	<u>Page</u>
Introduction - - - - -	1
Personnel - - - - -	9
Descriptive Outline of 1926 Distribution - - - - -	10
Water Supply - - - - -	13
Storage versus Flood Water Diversions - - - - -	14
Domestic Water - - - - -	14
Temporary Transfers - - - - -	15
Exchange of Normal Flow for Storage - - - - -	16
Litigation - - - - -	17
Canal Deliveries - - - - -	19
River data - - - - -	20
Segregation of Flow - - - - -	23
Upper Valley Storage Deliveries from Jackson Lake, Twin Lakes and Market Lake - - - - -	25
Lower Valley Storage Deliveries - - - - -	31
River Losses and Gains - - - - -	36
Normal Flow Comparison - - - - -	41
Ground Water - - - - -	44
Water Distribution and Hydrometric Work in the Springfield-Sterling Section - - - - -	46
Water Distribution and Hydrometric Work in the Henrys Fork - Fall River - Teton Area - - - - -	48
Henrys Lake Storage Deliveries - - - - -	53
Distribution in Swan Valley - - - - -	56
Distribution on Sand Creek, Fremont County - - - - -	57
Climatological Data - - - - -	57
Evaporation - - - - -	60
New Construction and Repairs - - - - -	60
Expenditures - - - - -	60
Water Rights - - - - -	65

PLATES

		<u>Following Page</u>
Plate	I - Map showing principal streams and gaging stations in District No. 36-----	9
Plate	II - Hydrographs for Jackson Lake during the period October 1, 1918 to March 31, 1927-----	12
Plate	III - Daily discharge of canals diverting from Snake River, May 1926-----	19
Plate	IV - Daily discharge of canals diverting from Snake River, June 1926-----	19
Plate	V - Daily discharge of canals diverting from Snake River, July 1926-----	19
Plate	VI - Daily discharge of canals diverting from Snake River, August 1926-----	19
Plate	VII - Daily discharge of canals diverting from Snake River, September 1926-----	19
Plates	VIII	
	IX and X - Daily summary of data at and between Snake River gaging stations from Jackson Lake to Milner, Idaho, May to September 1926-----	21
Plate	XI - Hydrographs of total and normal flow of Snake River at Moran, Wyoming and Heise, Idaho gaging stations-----	23
Plate	XII - Hydrographs illustrating net losses and gains between the Heise and Lorenzo gaging stations-----	26
Plate	XIII - Upper Valley Storage Deliveries from Jackson Lake, Twin Lakes and Market Lake-----	27
Plate	XIV - Lower Valley Storage Deliveries-----	31
Plate	XV - Hydrographs illustrating the net losses and gains between the Heise and Blackfoot Bridge gaging stations-----	36
Plate	XVI - Hydrographs illustrating the net losses and gains between the Blackfoot Bridge & Clough gaging stations-----	38
Plate	XVII - Hydrographs illustrating the net gains between the Clough and Keeley gaging stations-----	39
Plate	XVIII - Hydrographs illustrating the net losses and gains between the Keeley and Milner gaging stations-----	40
Plate	XIX - Monthly summary of normal flow conditions for the irrigation seasons 1919, 1920, 1921, 1922, 1923, 1924, 1925 and 1926-----	41

PLATES

		<u>Following</u>
		<u>Page</u>
Plate	A - Diagrams showing progressive changes in ground water levels-----	45
Plate	XX - Daily discharges of canals in the Springfield-Sterling Section, May, June and July, 1926-----	47
Plate	XXI - Daily discharges of canals in the Springfield-Sterling Section August and September, 1926-----	47
Plate	XXII - Daily discharges of canals diverting from Henrys Fork and Tributaries, May 1926-----	49
Plate	XXIII - Daily discharges of canals diverting from Henrys Fork and Tributaries, June 1926-----	49
Plate	XXIV - Daily discharges of canals diverting from Henrys Fork and Tributaries, July 1926-----	49
Plate	XXV - Daily discharges of canals diverting from Henrys Fork and Tributaries, August 1926-----	49
Plate	XXVI - Daily discharges of canals diverting from Henrys Fork and Tributaries, September 1926-----	49
Plates	XXVII	
and	XXVIII - Daily summary of data at and between gaging stations on Henrys Fork and Tributaries from Henrys Lake to Rexburg-----	50
Plate	XXIX - Hydrographs for Henrys Lake and showing total and normal flow at the Lake, Warm River and Ashton gaging stations-----	52
Plate	XXX - Henrys Lake Storage Deliveries-----	54
Plate	XXXI - Hydrographs illustrating the net gain between the Squirrel and Chester gaging stations on Fall River-----	55
Plate	XXXII - Hydrographs illustrating the net losses and gains between the Ashton and Rexburg gaging stations on Henrys Fork-----	56
Plates	XXXIII	
and	XXXIV - Daily precipitation diagrams for Upper Snake River area-----	58
Plate	XXXV - Decrees and priority of water rights, Snake River, Idaho-----	66

INTRODUCTION

At the annual meeting and election held in Idaho Falls, Idaho on March 1, 1926, G. Clyde Baldwin was again reelected to the position of Water Master of District No. 36 and F. A. Miller, Eph Peterson, John W. Hart, W. O. Cotton, John E. Kelley, L. C. Walker, E. B. Darlington, C. J. Miller and R. E. Shepherd were selected as members of the Committee of Nine.

After considerable discussion the following majority report of the resolutions committee was finally adopted as the program or plan to govern operations during the 1926 season, with only the Minidoka Project and the Twin Falls Canal Company recorded as voting in the negative:

"Your committee have to recommend that for the year 1926, water administration of Snake River, Water District No. 36, be had as follows:

I.

That from Jackson Lake (Moran) to Heise storage water shall be charged a transmission loss of $2\frac{1}{2}\%$, and in an attempt to establish conditions at Heise as nearly as practicable to pre-reservoir times, that storage water shall be charged a reasonable amount to cover lag and other causes of loss in return flow. Said amount to be repaid and returned to storage water interests before the close of the irrigation season, or before the storage water interests shall have exhausted their rights. It is understood that when a decreed right shall have been cut under river regulations that right shall not be reinstated until such time as its proportion of this amount shall have been repaid.

II.

That from Heise to Lorenzo bridge a minimum 3% channel transmission loss be charged storage water, and when it shall be shown by a "two day mean method" that there is an additional loss in excess of said 3% the natural or direct flow users must be credited with the additional amount. It being understood that a measuring station will be maintained at or near Lorenzo.

III.

That from Lerenzo to Woodville a loss of 0.5% be charged storage water for evaporation.

IV.

That from Woodville to Blackfoot a loss of 6% be charged to storage water.

V.

That the practice of temporary exchange, or temporary transfer shall be permitted; provided, however, that no exchanges or temporary transfers between water users shall be permitted or practiced until decreed rights shall have been invalidated or cut off, to a priority dating as of July 1, 1900, or rights superior thereto, and shall not continue after any right with a priority date as of July 1, 1900, may be reinstated. The date July 1, 1900 is fixed for the purpose of protecting direct flow users in what is called the lower valley from any possible harm through such practices.

VI.

That the salary of the Watermaster for the year 1926, be fixed in the same amount paid him for the year 1925, and that said Watermaster shall select such assistants and in the same manner as practiced during 1925, and that the total expenditure for river administration be kept within the total expended for like services and administration as that of 1924. That the Watermaster's bond be fixed at \$500.00 and his bond as Treasurer of the Normal Flow fund be fixed at \$4500.00.

VII.

In the matter of further investigation on Snake River and its tributaries your committee feels that this matter should be left to the water users at this meeting.

VIII.

These recommendations are offered for adoption with the understanding that the regulations therein provided for are temporary only for the irrigation of 1926 and for the purpose of harmonizing the interests of the various water users in District No. 36 for the said irrigation season of 1926 and are not offered in the light of admission that the plan therein proposed establishes any fixed or accurate facts touching the matters therein dealt with for the future irrigation seasons and are only binding for said irrigation

season of 1926. Nor shall the adoption of these recommendations be considered as an estoppel for future years."

The opposition to this plan was directed chiefly against paragraph V although the Twin Falls Canal Company also sought to have a section added which would provide for a storage transmission loss charge of 5% between the Blackfoot Bridge and Keeley gaging stations.

At this annual meeting the Committee of Nine was authorized to approve or incur whatever expenditures were in their judgment necessary for the proper administration of the affairs of Water District No. 36.

A resolution endorsing and recommending favorable action by Congress on legislation which would permit the creation of the so-called Bechler or Fall River Meadows Reservoir, in what is now the south-west corner of Yellowstone National Park, was also unanimously adopted.

On March 29, 1926 the Committee of Nine met at Idaho Falls, considered the annual Water Master budget and approved same in the amount of \$15817.50 as the estimated cost of all regular work properly chargeable against normal flow water users.

The following statement was unanimously approved for immediate transmission to the different canal companies and for release to the press of the district:

"To the Water Users of District No. 36.

The following general outline of the 1926 irrigation water supply prospects as same appear at the present time is furnished

for the information and use of water users of the District or others directly concerned:

Reports from Joseph Markham, Supt. Jackson Lake Dam, under date of March 17, 1926 show an average depth of snow above the outlet of Jackson Lake Reservoir of 53 inches with a mean water content of 18 inches. This is slightly more than was recorded for the same date of 1924 but is less than for any other year since the monthly snow surveys were first inaugurated in 1920. Earlier reports indicated a still more unfavorable situation over the upper Snake drainage area below Jackson Lake. For the Henrys Fork territory west of the Teton Mountains reports are less reliable but show a similar condition, although relative snow-fall appears to be slightly greater.

On March 20th, 540,090 acre-feet were stored in Jackson Lake Reservoir as against 180,380 acre-feet on the same date during the preceding year and 281,100 acre-feet in 1924. 360,440 acre-feet of the total now available represents the hold-over from 1925. Nearly 50,000 acre-feet are also understood to be now available at Henrys Lake Reservoir of which the major portion represents 1925 carry-over.

Mild weather was generally experienced during most of March, as a consequence of which the snow is well packed. Light winds during the winter resulted in very little drifting. In view of these conditions an early run-off may be expected unless cool weather continues.

From the above it seems possible that Jackson Lake Reservoir may fill to capacity although this will depend upon the time when storage draft begins.

Latest information is to the effect that work at American Falls Dam will not be advanced sufficiently to permit beginning the storage of water there before about April 15. How much can be impounded after that time will of course depend upon the extent of the supply available thereafter which is not required for immediate direct diversion use. Flood water waste up to a maximum of about 300,000 acre-feet can doubtless be eliminated by storage at this point.

Normal Flow users may reasonably expect to have little if any more water than in 1924 and should precipitation from now on be deficient or should the present snow reserve be materially depreciated by an early flood run-off, later irrigation water supply may be considerably less than in that year. Hence those depending chiefly upon normal flow rights are advised to prepare to use water during the early part of the season and to consider these prospects carefully in determining the best crops to plant for the season.

All users are urged to conserve water in every way possible to the end that waste may be eliminated and the highest possible duty obtained."

Action taken upon other matters is outlined in the following quotation from the minutes of this meeting:

"Moved by J. B. Stocking and seconded by John E. Kelley that the committee recommend the appointment of G. Clyde Baldwin as Deputy State Commissioner of Reclamation. Carried.

Moved by L. C. Walker and seconded by John E. Kelley that Water Master Baldwin be authorized to request advances to the Normal Flow Fund of Water District No. 36 in the manner heretofore followed and up to the limit of normal flow expense set forth in the budget, upon the understanding that these advances will be called for from Water Users' associations or canal companies approximately as the funds may be required to cover current bills and that interest at the rate of 8 per cent per annum will be allowed for the use of this money. Carried."

On March 10, 1926, the directors of the Twin Falls Canal Company, the Minidoka Irrigation District and the Burley Irrigation District jointly adopted a formal resolution protesting against the authorization of the exchange of normal flow for storage and the temporary transfer of water as provided for in paragraph V of the plan of operations which was adopted by majority vote at the annual meeting held in Idaho Falls on March 1, 1926. (See page 2). A copy of this protest was forwarded to W. G. Svendsen, Commissioner of Reclamation, Boise, Idaho and the latter in a letter to the Water Master under date of March 17, 1926, thereupon rendered the following opinion:

"It is your duty as watermaster to distribute the water in District 36, comprising Snake River and certain tributaries, pursuant to laws governing such distribution and the existing decrees of courts defining the rights to the use of water therein.

As I interpret the statutes and under legal advice I have obtained, no administrative officer has a right to or is justified

in departing from court decrees affecting water rights and distribution except by common consent of all users or owners of rights in and to the supply in question.

I have carefully examined the court decrees relating to rights in District 36 and find nothing therein which I am able to construe as giving you authority to carry out the provisions of Paragraph V of the resolution quoted in the foregoing. To carry out the said resolution would therefore be a departure from the provisions of the court decrees. Since a protest has been filed against the practice of temporary exchange covered by Paragraph V of the said resolutions, and common or unanimous consent to its adoption was not had, any administrative officer putting the resolution into effect under these conditions would in all probability be guilty of contempt of court and liable for damages under his bond."

Under this opinion, efforts to put into effect any modified rotation system of water delivery as between different canals were apparently blocked so long as this protest remained valid. Therefore when it later appeared certain, not only that a considerable shortage in the normal flow water supply would exist, but also that Jackson Lake Reservoir would not be filled and the amount of storage impounded at American Falls would be too small to afford material relief, the Committee of Nine went to Twin Falls, Idaho and on May 21, 1926, met there with the directors of the protestant irrigation interests in an attempt to agree upon some emergency plan which would help to eliminate threatened loss of crops by promoting a higher duty in the use of water throughout District No. 36.

Much difference of opinion was apparent and when no mutually satisfactory solution had been developed after an all day session, the meeting was continued at Rupert, Idaho on the next day. Here, after another long series of conferences and discussions which were participated

in by a number of attorneys as well as by committee members, canal directors and others, a compromise agreement was finally reached, drafted and signed. This waived the former protests and authorized both the exchange of normal flow for storage and the temporary transfer of water, after decreed rights were cut back to a priority of April 15, 1898, upon a net loss basis of $17\frac{1}{2}$ per cent (except in the Henry's Fork area where temporary transfers were permitted without deduction). The $17\frac{1}{2}$ per cent penalty was prorated on the basis of $12\frac{1}{2}$ to normal flow rights at Neeley and 5 to the Minidoka Project.

Water distribution and hydrometric work were administered in 1926 under the same general cooperative plan which has been described in detail in preceding reports.* Funds for securing hydrometric data of a wide-spread interest character were provided by the State of Idaho and the U. S. Geological Survey while operations conducted primarily in connection with water distribution were sustained at the expense of normal flow and stored water users of the district.

Beginning in 1923 the offices of Water Master and Special Deputy were consolidated, but aside from this the organization and division of work has changed but little since the central office at Idaho Falls was first established on a permanent basis in May 1919.

*Water Distribution and Hydrometric Work in District No. 36, 1919; 1920; 1921; 1922; 1923; 1924 and 1925 by G. Clyde Baldwin.

Actual water deliveries, storage transmission via natural stream channels and other phases of river operation have been conducted each year in accordance with certain regulations and schedules usually adopted by the water users at the annual March election meeting. These regulations cover points on which the statutes and decrees are not sufficiently definite or concerning which available data are too incomplete to afford satisfactory basis for a single fixed method of procedure. Occasionally also, when unanimous consent has been secured, certain departures from statutory methods prescribed for water distribution have been authorized. The former reports of the Deputy State Commissioner of Reclamation, already referred to, should be consulted for further details or information concerning the changes in these regulations which were in force during former years.

In addition to the usual early season activities of re-establishing stations which had been temporarily discontinued for the winter and securing meter measurements for the fixation of current ratings, gages were established and records of flow initiated on all spring and tributary stream diversions in the vicinity of Springfield and Sterling, Idaho. This new work was made necessary by reason of a formal demand on the part of the Twin Falls Canal Company for the regulation of all canals and ditches in this area.

Regular river riders and deputy water masters were required to begin their work for the season on May 19.

Because of the unusually low stream discharges noted and in order to obtain a more complete record of upper Valley diversions than would otherwise have been practicable, four of these men had already been on duty as gage readers for a period of about two weeks prior to this date. As in 1925, however, this pre-season employment was at the expense of lower valley canal companies.

PERSONNEL

The personnel engaged in the work of distribution during the season of 1926 was as follows:

G. Clyde Baldwin	Deputy State Commissioner of Reclamation, Special Deputy in charge of Jackson Lake, Twin Lakes, Market Lake and American Falls Stored Water Delivery and Water Master of District No. 36.
C. A. McClelland	Hydrographer, Deputy Water Master and Special Deputy in charge of Henry's Lake Stored Water Delivery
L. L. Bryan	Hydrographer
Mans H. Coffin	Hydrographer
Leo K. Homer	Hydrographer
Alfreda Haggerty	Clerk and office assistant, Idaho Falls office
Mrs. Wilma Adams	" " " " St. Anthony office
Bruno Albert	Deputy Water Master, Upper Fall River division
T. W. Luetjen	" " " St. Anthony division
John H. Reed	" " " and Hydrographer Teton River division
Wm. Burton	" " " Swan Valley Canals
W. J. Kremer	" " " Heise division
Wm. Sauer	" " " Rigby division
Chas. McCurdy	" " " Idaho Falls division (May 19-July 24)
S. W. Dennis, Jr.	" " " " " " (July 25-Sept. 30)
Delbert Taylor	" " " Blackfoot division
C. T. Judah	" " " and Hydrographer Springfield-Sterling Section
Fred J. Anderson	" " " Minidoka Dam
W. N. McConnel	" " " and Hydrographer, Milner Dam
J. M. McGinn	Gate Tender, Henry's Lake Dam
Joseph Markham	Superintendent, Jackson Lake Dam
Frances W. Herre	Forwarding Agent, Ashton, Idaho.

MAP SHOWING PRINCIPAL STREAMS AND GAGING STATIONS

Scale 1" = 24 STATUTE MILES

STATION

- 1 JACKSON LAKE AT MORAN WYO.
- 2 SNAKE RIVER NR. MORAN WYO.
- 3 SNAKE RIVER NR. NEFUSE, IDA.
- 4 GREAT FEEDER CANAL NR. RIRIE, IDA.
- 5 SNAKE RIVER AT LORENVIC, IDA.
- 6 SNAKE RIVER NR. SHELLEY, IDA.
- 7 SNAKE RIVER AT BLACKFOOT, IDAHO COLACRIFT BRIDGE
- 8 SNAKE RIVER AT CLOUGH'S RANCH (formerly listed as nr. BLACKFOOT)
- 9 SNAKE RIVER AT NEELEY, IDA.
- 10 LAKE WALCOTT NR. MINIDOKA, IDA.
- 11 SNAKE RIVER NR. MINIDOKA, IDA.
- 12 NORTH SIDE MINIDOKA CANAL NR. MINIDOKA, IDA.
- 13 SOUTH SIDE MINIDOKA CANAL NR. MINIDOKA, IDA.
- 14 LAKE MILNER AT MILNER, IDA.
- 15 NORTH SIDE TWIN FALLS CANAL AT MILNER, IDA.
- 16 SOUTH SIDE TWIN FALLS CANAL AT MILNER, IDA.
- 17 HENRY'S LAKE RESERVOIR NR. LAKE, IDA.
- 18 HENRY'S LAKE NR. LAKE, IDA.
- 19 HENRY'S FORK NR. ASHTON, IDA.
- 20 HENRY'S FORK AT ST. ANTHONY, IDA.
- 21 HENRY'S FORK NR. REXBURG, IDA.
- 22 FALL RIVER NR. SQUIRREL, IDA.
- 23 FALL RIVER NR. CHESTER, IDA.
- 24 TETON RIVER NR. ST. ANTHONY, IDA.
- 25 BLACKFOOT RIVER NR. BLACKFOOT, IDA.

AUXILIARY STATIONS

- A SNAKE RIVER AT SOUTH BOUNDARY YELLOWSTONE PARK.
- B HENRY'S FORK AT WARM RIVER, IDA.
- C WARM RIVER AT WARM RIVER, IDA.
- D ROBINSON CREEK AT WARM RIVER, IDA.
- E PORT NEUF RIVER AT POCATELLO, IDA.
- F SNAKE RIVER AT ROBERTSON RANCH

NEW REGULAR STATIONS

- 27 AMERICAN FALLS RESERVOIR AT AM. FALLS, IDA.
- 28 SNAKE RIVER AT AMERICAN FALLS, IDA.



Mrs. J. L. Carter, Harold Ruqua, Mrs. Irvin Siepert, W. H. Kremer, Eva Davis, J. A. Clough, A. J. Ayers and G. S. Gilham, Gage Readers.

T. R. Smith and Eugene Anderson of the U. S. Bureau of Reclamation, W. G. Steward and H. G. Haight of the Twin Falls Canal Company also did a large amount of hydrometric work between the Blackfoot Bridge and Neeley gaging stations which was made available for use in connection with the preparation of this report.

DESCRIPTIVE OUTLINE OF 1926 DISTRIBUTION

Throughout the upper Snake Valley temperatures were generally considerably above, while precipitation was somewhat below normal during each of the months of March, April, May and June. This situation resulted in an unusually early, although rather dry spring. May demands for irrigation water were consequently heavier than usual while at the same time stream flow was far below normal. Everyone was anxious to have the maximum possible amount of storage impounded to afford protection for the latter part of the summer and for this reason, presumably, the demand for beginning the regulation of diversions was postponed until Snake River became practically dry at Blackfoot Bridge when it came almost simultaneously from several sections of the district.

Consequently, the impounding of stored water ceased and all canals were ordered cut to record rights on May 20, 1926 while the first storage was released from Jackson Lake Reservoir on the following day.

Diversions under permit and license rights together with those under some of the youngest decreed rights were first ordered stopped on June 1. Prior to this date and before regulation was

initiated, many rights were automatically curtailed, either because of deficient normal flow in certain sections of the river to fill them, or because of inability of the respective canals to divert full heads of water at the low river stages which then prevailed.

Thereafter, decreed rights were regulated in accordance with the following schedule:

June	6	Cut off rights having a priority date subsequent to	Mar.	26,	1903
"	12	Reinstated rights having a priority date earlier than	June	11,	1903
"	14	Cut off rights having a priority date subsequent to	Mar.	26,	1903
"	17	" " " " " " " " " " " "	Oct.	11,	1900
"	19	" " " " " " " " " " " "	Apr.	14,	1898
"	21	" " " " " " " " " " " "	July	1,	1895
"	22	" " " " " " " " " " " "	Mar.	25,	1895
"	23	" " " " " " " " " " " "	Feb.	6,	1895
"	24	" " " " " " " " " " " "	Aug.	18,	1894
"	25	" " " " " " " " " " " "	June	1,	1892
"	26	" " " " " " " " " " " "	Dec.	14,	1891
July	1	Reinstated rights having a priority date earlier than	May	2,	1892
"	10	" " " " " " " " " " " "	May	1,	1893
"	11	" " " " " " " " " " " "	Aug.	18,	1894
"	14	Cut off rights having a priority date subsequent to	May	1,	1892
"	15	" " " " " " " " " " " "	Dec.	14,	1891
"	16	" " " " " " " " " " " "	Jan.	24,	1891
"	17	" " " " " " " " " " " "	Oct.	16,	1890
"	18	" " " " " " " " " " " "	June	10,	1890
"	19	" " " " " " " " " " " "	Mar.	1,	1890
"	20	" " " " " " " " " " " "	July	10,	1889
Aug.	5	Reinstated rights having a priority date earlier than	Oct.	17,	1890
"	6	" " " " " " " " " " " "	Jan.	24,	1891
"	7	Cut off rights having a priority date subsequent to	June	2,	1890
"	8	" " " " " " " " " " " "	Mar.	2,	1890
"	12	Reinstated rights having a priority date earlier than	Oct.	16,	1890
"	24	" " " " " " " " " " " "	Dec.	14,	1891
"	26	Cut off rights having a priority date subsequent to	Jan.	24,	1891
"	27	" " " " " " " " " " " "	Oct.	16,	1890
"	28	" " " " " " " " " " " "	Mar.	1,	1890
"	31	" " " " " " " " " " " "	July	10,	1889
Sept.	3	" " " " " " " " " " " "	May	11,	1889
"	8	Reinstated rights having a priority date earlier than	April	30,	1890
"	9	" " " " " " " " " " " "	July	12,	1890
"	20	Cut off rights having a priority date subsequent to	July	10,	1889
"	25	Reinstated rights having a priority date earlier than	June	10,	1890

Demand for water decreased materially after the latter date and following a very general storm on September 29-30 regulation for the season (except a small amount of supervision of distribution to lower valley canals) was ended.

As in 1925 and also to some extent in former years, upper valley canals were regulated slightly later than canals below American Falls in an effort to take into account and make allowance for the so-called storage transmission lag as provided for in paragraph 1 of the 1926 program of operations (see page 1),

Sales of storage by upper to lower valley canals at irregular intervals during August and September delayed the damming of Snake River below Blackfoot which usually occurs in the latter part of seasons of very deficient water supply and made equitable distribution somewhat more difficult because of the resulting fluctuations in river stage. In fact, on several occasions canals between Idaho Falls and Blackfoot were allowed to divert water under other than strict adherence to the regulation schedule previously outlined, because, had they not been allowed to do so, rights with still younger priorities located farther downstream would have received the surplus which perhaps really should have been given to canals in the Heise-Rigby section had it been practicable to anticipate the changes in flow with sufficient accuracy.

By the end of September Jackson Lake Reservoir was nearly empty and the release of storage was terminated. The entire normal flow of the river was allowed to pass the dam, however, until October 6 when the gates were ordered closed to begin impounding water for the 1927 irrigation season.



HYDROGRAPH FOR JACKSON LAKE, BEGINNING OCTOBER 1, 1918. PLATE II

WATER RESOURCES BRANCH

UNITED STATES GEOLOGICAL SURVEY



STORAGE IN ACRE-FEET

Plate II shows graphically the manner in which Jackson Lake was filled and drawn down during the period from October 1, 1918 to March 31, 1927. All graphs are plotted on the basis of 1919 capacity tables. (See 1925 report for similar graphs covering the period from November 15, 1914 to September 30, 1918).

WATER SUPPLY

If the comparison of annual run-off at the Moran and Neeley gaging stations which has been included in the six preceding reports, is extended to include the year ending September 30, 1926 the data may be summarized as follows:

Station	Mean annual run-off for 23 years ending September 30, 1926	Run-off for year ending September 30, 1926	% of Mean
Moran	1,093,000	761,000	69.6
Neeley	6,525,000	4,789,000	73.4

In this tabulation all Moran records beginning with the year 1910 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, represent actual totals measured at the gaging station except in the year ending September 30, 1926 when a single correction was made to take into account the storage then remaining in the American Falls Reservoir. 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. If dependable corrections could be computed to cover all these different factors, their application to the Neeley data would undoubtedly make

the records at the latter station more consistent with those at Moran. This has not been attempted because the development of such corrections from the data available would be difficult, if not almost impossible, and for the further reason that total annual run-off is often not a true measure of the summer water supply.

Additional information concerning the latter together with comparisons showing the relative normal flow supply and use by months will be found further on in the text of this report and in the tables on Plate XIX.

STORAGE VERSUS FLOOD WATER DIVERSIONS

No appreciable conflict between the use of water for storage under permit rights and its use by direct flow diversion under prescriptive or non record rights existed during the season. Something of this character might have developed had regulation been demanded at an earlier date but even then it would have been of short duration.

DOMESTIC WATER

The practice first inaugurated in 1920 of making no allowance of water for domestic or culinary use to canals whose entire rights had become invalidated, was again continued.

In the early part of the summer very little stored water was offered for sale and purchasers of small quantities at that time were compelled to pay about \$2.00 per acre-foot for 1926 use. Later, when the requirements of the respective canals were more definitely established, comparatively large quantities were disposed of at \$0.75 per acre-foot.

TEMPORARY TRANSFERS

In accordance with the agreement signed at Rupert on May 22 the temporary transfer of water was permissible beginning June 19 when regulation reached the stage where decreed rights with a priority date subsequent to April 14, 1898 were cut off.

During the balance of the season the total amount released for transfer to other canals amounted to about 70,000 acre-feet of which 30,469 acre-feet in the central area was subject to the $17\frac{1}{2}$ per cent deduction while the remainder, representing transfers in the Henry's Fork area, covers transactions not penalized.

Under date of June 26, 1926 a written protest against the continuation of the practice of allowing temporary transfer of water was forwarded to both the Commissioner of Reclamation and the Water Master of District No. 36 by officials of the Fall River Irrigation Company and the Twin Groves Canal and Irrigation Company.

In the Water Master's reply, dated June 28, attention was called to the fact that at the annual election meeting of March 1, 1926 these companies had at least tacitly agreed (through failure to register any objection) to paragraph V of the plan of operations which authorized these temporary transfers under fewer restrictions than were finally provided in the Rupert agreement. In view of these circumstances the opinion was given that the later protest could hardly be considered in connection with the 1926 water distribution. This position was also approved by the Commissioner of Reclamation.

EXCHANGE OF NORMAL FLOW FOR STORAGE

The general conditions under which it was possible during 1926 to release normal flow in exchange for stored water to be delivered at a later date have already been described. (See pages 5-7).

With the exceptions noted herein these exchanges were carried out under the same regulations provided in 1924 and described on pages 16-17 of the report on "Water Distribution and Hydrometric Work in District No. 56" for that year.

During the season a total of 156,202 acre-feet was released by upper valley canals for exchange in this manner, all of which was subject to the $17\frac{1}{2}$ per cent penalty charge.

During the latter part of the summer several of the canals which succeeded in accumulating the largest storage credits through the medium of these exchanges found that, because the normal flow of the river had been better sustained than had been expected, they would not require all this water for their own use. Therefore, they proceeded to sell part or all of their storage accumulation to other canals - chiefly in the lower valley - whose need was greater than their own. Most of these sales were made at the rate of \$0.75 per acre-foot measured at the Woodville gaging station.

Normal flow was substituted for storage under authority of Section 5560 of the Idaho Compiled Statutes in two instances as follows:

1. The water being diverted from Snake River by the Reservation Canal of the U. S. Indian Service was turned back to the stream in lieu of stored water from Blackfoot-Marsh Reservoir for delivery to the

North Side Canal Company, Ltd. during the period May 26-June 15. This was done in order to expedite the storage delivery and avoid delays which must otherwise result from the limited carrying capacity of lower Blackfoot River -- the normal outlet for water from the Blackfoot Reservoir. The usual 6 per cent loss was charged for transmission of this water from the Reservation heading to Blackfoot Bridge.

2. Stored water sold by the Farmers Friend Irrigation Company to the Enterprise Irrigation District whose canal diverts from Fall River was turned down Snake River to replace normal flow diverted from the latter stream. This is the only method by which Jackson Lake storage can now be delivered to canals in the Henry's Fork area.

LITIGATION

On June 3, 1926, a temporary injunction was issued by Ralph W. Adair, Judge of the Sixth Judicial District restraining G. Clyde Baldwin, Water Master and C. T. Judah, Deputy Water Master, from regulating or in any way interfering with the diversion and use of water from Alkali Spring and Colborn Creeks in the vicinity of Sterling, Idaho by R. A. Ward, L. D. Bronson, John W. Herbert, Mark Colborn, Mrs. L. A. Nugent and John W. Wright, all of whom were plaintiffs in an action brought against these two officials.

The principal question at issue is whether or not State and Water District authorities have the right to prevent diversion of water from the above named streams under permit and license rights at times when the normal flow of Snake River is insufficient

to fill decreed rights with an older priority date located below American Falls, Idaho. It is generally understood that most if not all of the water in these small streams has appeared since the American Falls or Aberdeen-Springfield Canal has been in operation.

On September 16, 1926 a complaint in intervention in this case was filed by the Twin Falls Canal Company but up to date no regular hearing has been scheduled.

On December 15, 1926 a decision was handed down by the Supreme Court of the State of Idaho in the case of the Independent Irrigation Company, Ltd., et. al., versus G. Clyde Baldwin, Water Master of District No. 36, et. al., in which the judgment of the lower court in granting a nonsuit was reversed. It, therefore, appears probable that this action will again come before the District Court for trial on its merits. (See 1922, 1923 and 1924 reports on "Water Distribution and Hydrometric Work in District No. 36" for summary of the earlier history of this case).

On February 25, 1927 the first hearing on demurrers in the case of Woodville Canal Company versus Clark and Edwards Canal and Irrigating Company et. al., or the so-called "High Water Decree" case was held before Geo. W. Edgington, Judge of the Ninth Judicial District. At the time this report was prepared negotiations were in progress looking towards a stipulated agreement between the different parties at interest concerning many of the principal issues involved and no final hearing date had as yet been fixed.

No decision has as yet been rendered by the State Supreme Court on the appeal from Judge Edgington's verdict sustaining the validity of the permanent transfer of 40 second-feet of water from the Long Island to the Farmers Friend Irrigation Company. (See 1925 report for further description).

The action brought by the Minidoka and Burley Irrigation Districts during 1924 in the Court of the Eleventh Judicial District against the Water Master of District No. 36 and others on the matter of temporary transfer and exchange of water has not as yet been dismissed although it now seems unlikely that it will ever come up for trial.

CANAL DELIVERIES

The total amount diverted daily through each canal heading either in the South Fork or main river during the period from May 1 to September 30, 1926 is shown on Plates III, IV, V, VI and VII.

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 meter measurements, notes and other information have been carefully reviewed to the end that the final computed data may represent the most reasonable 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.

Data for upper valley canals for the first ten days of May have been partially estimated or interpolated but with this exception the records are based upon daily gage readings.

No record is included of the small amount of water which was diverted by the Morgan and Rostan canals prior to May 14 as thereafter the channel in which these canals lead was shut off from its river supply, first because of low stage conditions and when regulation began, by the reconstruction of the old temporary dam.

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 down stream order.

RIVER DATA

The extensive tables found on Plates VIII, IX and X 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	Lorenzo and Rexburg	Day ending at 8 a.m. 1st day following
42	Woodville	Day ending at 10 p.m. 1st day following
50	Blackfoot Bridge	Day ending at 6 a.m. 2nd day following
53	Blackfoot (Robertson)	Day ending at 9 a.m. 2nd day following
54	Blackfoot (Cloughs)	Day ending at 10 a.m. 2nd day following
66	American Falls	Day ending 10 p.m. 2nd day following
68	Neeley	Day ending at 12 midnight 2nd day following
92	Minidoka	Day ending at 12 midnight 3rd day following
116	Milner	Day ending at 12 midnight 4th day following.

This schedule for time of transmission is the same as the one adopted for the seven preceding 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 of record.

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

1926 DISTRIBUTION WATER DISTRICT NO. 36.

DATE	JACKSON LAKE		MORAN		TWIN LAKE DATE		HEISE		MORAN - HEISE		LORENZO		H-L	
	CHAS. CHENET	WATERGAGE	DISCH	STD	NOR.	DISCH	MORAN 726	GRACE DISCH	WILLY STD	TLK. NGR.	TOTGN STD	TLK. ON NR		STD
MAY 2	6269	689440	0.26	34	34		MAY 9	4.35	9540	9564	9530			
9	6289	694320	0.26	34	34		10	4.13	8800	8821	8787			
10	6306	699480	0.33	45	45		11	3.97	8280	8295	8253			
11	6321	702160	0.33	45	45		12	3.84	7870	7888	7843			
12	6335	705600	0.33	45	45		13	3.73	7530	7546	7501			
14	6348	708780	0.33	45	45		14	3.65	7250	7295	7250			
15	6363	712470	0.33	45	45		15	3.66	7310	7324	7279			
16	6385	717280	0.33	45	45		16	3.78	7620	7636	7651			
17	6413	724770	0.33	45	45		17	4.05	8540	8557	8514			
18	6444	732440	0.34	47	47		18	4.26	9230	9253	9206			
19	6474	739680	0.36	51	51		19	4.46	9920	9945	9901			
20	6510	748780	0.32	44	44		20	4.46	9920	9945	9901			
21	6551	758980	H/D	1770	1770		21	5.10	12410	12410	10640			
22	6556	760230	5.72	5280	5280		22	6.00	16020	16104	10324			
23	6541	756490	6.60	6950	1886	5064	23	6.33	17630	17672	1839			
24	6529	753310	6.70	7170	1502	3669	24	6.55	18800	18825	1464			
25	6524	752260	6.48	6730	630	6100	25	6.47	18480	18473	64			
26	6527	751760	5.00	568	5250	4995	26	6.00	16490	16513	246			
27	6522	751760	0	4.53	3440	0	27	5.41	14140	14163	0			
28	6521	751510	2.50	3.16	4390	126	28	5.45	14290	14315	0			
29	6514	749770	1.740	5.45	4260	277	29	5.60	14880	14905	22			
30	6500	746280	3.490	5.91	5660	1760	30	5.73	15420	15503	1716			
31	6483	742090	4.200	6.05	5910	2118	31	5.70	15280	15303	2065			
JUN 1	6464	737380	4.700	6.10	6000	2370	1	5.45	15080	15104	2311			
2	6444	732440	4.940	6.10	6000	2491	2	5.63	15000	15023	2429			
3	6422	727000	3.410	6.10	6000	2743	3	5.59	14840	14866	2674			
4	6400	721560	5.440	6.11	6030	2743	4	5.63	15000	15024	2674			
5	6379	716400	5.160	6.11	6020	2602	5	5.69	15240	15264	2537			
6	6356	710760	5.640	6.26	6300	2844	6	5.81	15720	15744	2773			
7	6332	704560	5.300	6.32	6420	2975	7	5.83	15800	15824	2901			
8	6300	698970	5.890	6.30	6380	2970	8	5.83	15800	15824	2901			
9	6283	692860	6.110	6.29	6360	3080	9	5.78	15600	15624	2896			
10	6255	686030	6.830	6.30	6300	3443	10	5.68	15200	15223	3003			
11	6226	673960	7.070	6.32	6420	3564	11	5.59	14840	14864	3473			
12	6194	671170	7.790	6.34	6460	3927	12	5.51	14580	14604	3829			
13	6153	661720	9.450	6.70	7120	4764	13	5.53	14600	14624	4645			
14	6111	651070	10.650	6.83	7430	5369	14	5.51	14520	14544	5235			
15	6066	640230	10.940	6.80	7370	5465	15	5.39	14060	14082	5328			
16	6020	629160	11.070	6.81	7390	5581	16	5.32	13780	13799	5441			
17	5984	620330	8.630	6.12	6040	4351	17	5.05	12750	12763	4848			
18	5972	617670	2.860	H/D	2900	1442	18	4.35	10200	10211	1406			
19	5942	615230	2.390	4.06	2890	1205	19	4.10	9340	9351	1175			
20	5912	612790	1.179	4.7	1655	1605	20	4.10	9340	9351	1175			
21	5882	610350	1.179	4.7	1655	1605	21	4.10	9340	9351	1175			
22	5852	607910	1.179	4.7	1655	1605	22	4.10	9340	9351	1175			
23	5822	605470	1.179	4.7	1655	1605	23	4.10	9340	9351	1175			
24	5792	603030	1.179	4.7	1655	1605	24	4.10	9340	9351	1175			
25	5762	600590	1.179	4.7	1655	1605	25	4.10	9340	9351	1175			
26	5732	598150	1.179	4.7	1655	1605	26	4.10	9340	9351	1175			
27	5702	595710	1.179	4.7	1655	1605	27	4.10	9340	9351	1175			
28	5672	593270	1.179	4.7	1655	1605	28	4.10	9340	9351	1175			
29	5642	590830	1.179	4.7	1655	1605	29	4.10	9340	9351	1175			
30	5612	588390	1.179	4.7	1655	1605	30	4.10	9340	9351	1175			
31	5582	585950	1.179	4.7	1655	1605	31	4.10	9340	9351	1175			
32	5552	583510	1.179	4.7	1655	1605	32	4.10	9340	9351	1175			
33	5522	581070	1.179	4.7	1655	1605	33	4.10	9340	9351	1175			
34	5492	578630	1.179	4.7	1655	1605	34	4.10	9340	9351	1175			
35	5462	576190	1.179	4.7	1655	1605	35	4.10	9340	9351	1175			
36	5432	573750	1.179	4.7	1655	1605	36	4.10	9340	9351	1175			
37	5402	571310	1.179	4.7	1655	1605	37	4.10	9340	9351	1175			
38	5372	568870	1.179	4.7	1655	1605	38	4.10	9340	9351	1175			
39	5342	566430	1.179	4.7	1655	1605	39	4.10	9340	9351	1175			
40	5312	563990	1.179	4.7	1655	1605	40	4.10	9340	9351	1175			
41	5282	561550	1.179	4.7	1655	1605	41	4.10	9340	9351	1175			
42	5252	559110	1.179	4.7	1655	1605	42	4.10	9340	9351	1175			
43	5222	556670	1.179	4.7	1655	1605	43	4.10	9340	9351	1175			
44	5192	554230	1.179	4.7	1655	1605	44	4.10	9340	9351	1175			
45	5162	551790	1.179	4.7	1655	1605	45	4.10	9340	9351	1175			
46	5132	549350	1.179	4.7	1655	1605	46	4.10	9340	9351	1175			
47	5102	546910	1.179	4.7	1655	1605	47	4.10	9340	9351	1175			
48	5072	544470	1.179	4.7	1655	1605	48	4.10	9340	9351	1175			
49	5042	542030	1.179	4.7	1655	1605	49	4.10	9340	9351	1175			
50	5012	539590	1.179	4.7	1655	1605	50	4.10	9340	9351	1175			
51	4982	537150	1.179	4.7	1655	1605	51	4.10	9340	9351	1175			
52	4952	534710	1.179	4.7	1655	1605	52	4.10	9340	9351	1175			
53	4922	532270	1.179	4.7	1655	1605	53	4.10	9340	9351	1175			
54	4892	529830	1.179	4.7	1655	1605	54	4.10	9340	9351	1175			
55	4862	527390	1.179	4.7	1655	1605	55	4.10	9340	9351	1175			
56	4832	524950	1.179	4.7	1655	1605	56	4.10	9340	9351	1175			
57	4802	522510	1.179	4.7	1655	1605	57	4.10	9340	9351	1175			
58	4772	520070	1.179	4.7	1655	1605	58	4.10	9340	9351	1175			
59	4742	517630	1.179	4.7	1655	1605	59	4.10	9340	9351	1175			
60	4712	515190	1.179	4.7	1655	1605	60	4.10	9340	9351	1175			
61	4682	512750	1.179	4.7	1655	1605	61	4.10	9340	9351	1175			
62	4652	510310	1.179	4.7	1655	1605	62	4.10	9340	9351	1175			
63	4622	507870	1.179	4.7	1655	1605	63	4.10	9340	9351	1175			
64	4592	505430	1.179	4.7	1655	1605								

DAILY SUMMARY OF DATA AT AND BETWEEN

MEXBURG	MEDE RILEY	DATE	DIV. HEISE-WOOD		WOODVILLE		TOP WOOD		HEISE-WOODVILLE		DINWOOD BLACK		BLACK THEO BAL.	DISCH STD.	BLACK THEO BAL.	DISCH STD.	NO. ATGR. STD. BA
			TOTRL	STD.	NOR.	GHDL	DISCH	STD.	NOR.	GHDL	DISCH	STD.					
4.97	2190	11754	5764	5990	714	6640	6640	650	650	650	3032	3608	3580	3580	28		
4.35	1840	10661	5703	4958	685	5700	5700	742	742	742	2914	2786	2800	2800	14		
4.14	1320	9815	5646	4172	660	4950	4950	778	778	778	2826	2124	2120	2120	4		
3.80	1290	9168	6049	3119	628	4090	4090	971	971	971	2566	1524	1480	1480	44		
3.49	1070	8616	6452	2164	592	3270	3270	1106	1106	1106	2238	1032	1010	1010	22		
3.17	895	8190	6405	1782	536	2590	2590	808	808	808	2147	443	415	415	25		
2.98	795	8119	6668	1451	527	2140	2140	689	689	689	1641	499	164	164	335		
2.99	800	8496	7204	1292	523	2080	2080	788	788	788	1661	419	61	61	358		
3.26	945	2504	7960	1544	532	2210	2210	666	666	666	1942	265	3	3	265		
3.74	1240	10493	5076	2417	563	2710	2710	293	293	293	2428	202	7	7	275		
3.76	1250	10473	5829	2644	574	2920	2920	276	276	276	2641	279	108	108	171		
3.79	1270	11215	7758	3459	607	3590	3590	133	133	133	2950	640	499	499	141		
4.58	1890	14300	8005	6295	687	5760	5760	-535	-535	-535	3241	2519	2060	2060	459		
4.95	2250	18354	7953	10401	809	10000	10000	-401	-401	-401	3390	6610	6280	6280	330		
4.83	2160	19852	8096	11736	857	11790	11790	54	54	54	3442	8346	8130	8130	218		
5.15	2490	21315	8056	13259	899	13340	13340	81	81	81	3393	7947	9530	1128	417		
5.49	2540	21313	7934	13329	903	13530	13530	201	201	201	3471	10494	10000	966	9034	494	
5.23	2600	19113	8009	11104	853	11630	11630	526	526	526	3482	8745	8240	8240	505		
4.70	2120	16283	8185	8088	775	8170	8170	672	672	672	3533	5067	5400	5400	467		
4.82	1810	16125	8269	7626	759	8200	8200	64	64	64	3493	5027	4760	4760	267		
4.01	1560	16182	8165	8017	753	8060	8060	43	43	43	3490	5170	4940	4940	230		
3.85	1440	16345	8219	8126	767	8480	8480	354	354	354	3491	5083	5340	5340	243		
3.30	1490	16983	8222	8761	789	9020	9020	259	259	259	3501	6119	5830	5830	289		
3.79	1400	16703	8226	8477	781	8990	8990	513	513	513	3492	6089	5760	5760	338		
3.53	1220	16324	8213	8020	768	8520	8520	500	500	500	3474	5646	5300	5300	346		
3.28	1070	16093	8249	7626	759	8200	8200	374	374	374	3490	5310	5000	5000	290		
3.08	945	15811	8237	7574	752	7950	7950	376	376	376	3496	5054	4940	4940	264		
2.85	821	15845	8186	7659	753	7950	7950	321	321	321	3501	5329	5088	5088	224		
2.78	780	16044	8190	7854	760	8230	8230	378	378	378	3513	5967	5600	5600	367		
3.08	934	16678	8176	8502	778	8680	8680	576	576	576	3519	6000	6090	6090	261		
3.23	1020	16844	8150	8694	789	9270	9270	671	671	671	3496	6444	6100	6100	248		
3.13	956	16772	8140	8688	790	9370	9370	853	853	853	3495	6595	6290	6290	305		
3.29	1050	16674	8077	8597	794	9450	9450	823	823	823	3490	6377	5940	5940	300		
3.39	1100	16325	8016	7964	785	9130	9130	1063	1063	1063	3434	5976	5620	5620	336		
3.14	951	15945	8068	8015	7747	8910	8910	970	970	970	3305	5665	5340	5340	335		
2.95	847	15390	7910	7480	766	8490	8490	866	866	866	3375	5160	4920	4920	280		
2.83	780	15404	7970	7434	762	8300	8300	943	943	943	3411	4929	4700	4700	303		
2.87	795	15338	7941	7397	763	8340	8340	982	982	982	3301	4539	4300	4300	307		
2.74	730	14812	7874	6938	751	7920	7920	848	848	848	3417	4113	3910	3910	344		
2.82	688	14467	7838	6632	740	7530	7530	712	712	712	3409	5577	5530	5530	476		
2.81	668	13431	7859	6242	740	7930	7930	393	393	393	3413	6313	6000	6000	413		
2.58	654	10865	7768	7107	739	7900	7900	225	225	225	3386	5772	5470	5470	475		
2.64	687	11038	7826	6687	722	8390	8390	1	1	1	3385	5772	5470	5470	475		

EYNSTFCAN					P.A. NSTFCAN					S. STFCAN					MIL. LOWLIFT CAN.				MIL. THEO.				MILNER				MIN MIL LOSS	
STU	GAGE	DISCH	TOTAL	STD.	NOR.	GAGE	DISCH	STD.	NOR.	GAGE	DISCH	STD.	NOR.	GAGE	DISCH	STD.	NOR.	BAL.	GAGE	DISCH	STD.	NOR.	GAGE	DISCH	STD.	NOR.		
8.61	2970	3025	-	125	3150	10.38	3560	560	3000	2.90	103	103	0	-168	1.68	25	25	0	1.68	1.68	25	25	0	0	0	0	213	
8.51	2910	2965	-	124	3089	9.96	3300	300	3000	H.D.	95	95	0	80	1.86	24	24	0	4	1.81	22	22	0	0	0	0	56	
8.44	2880	2934	-	251	3185	9.74	3170	-	223	3393	2.87	102	102	0	107	1.77	20	20	0	1.72	1.72	19	19	0	0	0	18	
8.59	2900	2954	-	231	3185	10.10	3390	198	3192	2.90	103	103	0	128	1.72	19	19	0	162	1.67	17	17	0	0	0	0	127	
8.60	2900	2954	-	46	3000	10.26	3490	490	3000	2.91	104	104	0	98	1.67	17	17	0	104	1.64	15	15	0	0	0	0	147	
8.43	2810	2864	-	136	3000	9.73	3160	160	3000	2.91	104	104	0	287	1.67	17	17	0	93	1.67	17	17	0	0	0	0	145	
8.42	2810	2864	-	275	3139	9.52	3030	30	3000	H.D.	93	93	0	197	1.62	15	15	0	104	1.62	15	15	0	0	0	0	115	
8.39	2790	2844	-	341	3185	9.54	3040	-	266	3306	2.91	104	104	0	158	1.66	16	16	0	104	1.66	16	16	0	0	0	0	304
8.44	2820	2873	-	127	3000	9.56	3040	40	3000	2.91	104	104	0	103	1.67	16	16	0	104	1.67	16	16	0	0	0	0	212	
8.49	2840	2894	-	457	2437	9.54	3030	30	3000	2.93	104	104	0	178	1.68	17	17	0	104	1.67	16	16	0	0	0	0	174	
8.47	2830	2879	-	1234	1645	9.47	2990	-	10	3000	2.92	104	104	0	141	1.65	16	16	0	103	1.67	16	16	0	0	0	0	119
8.50	2850	2895	-	1993	902	9.45	2970	-	30	3000	2.90	103	103	0	112	1.65	16	16	0	103	1.67	16	16	0	0	0	0	195
8.45	2820	2868	-	2468	400	9.44	2960	-	40	3000	2.90	103	103	0	81	1.64	15	15	0	103	1.67	16	16	0	0	0	0	157
8.47	2830	2875	-	2478	400	9.44	2950	-	50	3000	2.91	104	104	0	70	1.64	15	15	0	103	1.67	16	16	0	0	0	0	128
8.30	2750	2798	-	2398	400	9.44	2950	-	50	3000	2.90	103	103	0	121	1.64	15	15	0	103	1.67	16	16	0	0	0	0	96
8.48	2840	2888	-	2530	358	9.44	2940	254	2686	2.89	102	102	0	172	1.60	14	14	0	102	1.64	15	15	0	0	0	0	136	
8.47	2830	2878	-	2547	331	9.17	2780	295	2485	2.90	103	103	0	172	1.60	14	14	0	102	1.64	15	15	0	0	0	0	376	
H.D.	2170	2217	-	1900	317	8.75	2550	176	2374	2.89	102	102	0	452	1.55	13	13	0	102	1.63	15	15	0	0	0	0	158	
2.96	538	586	-	282	304	8.73	2540	256	2284	2.89	102	102	0	446	1.52	12	12	0	102	1.63	15	15	0	0	0	0	465	
2.73	472	520	-	220	300	8.74	2550	299	2251	2.88	102	102	0	376	1.52	12	12	0	102	1.52	12	12	0	0	0	0	458	
2.52	416	464	-	163	301	8.75	2550	296	2254	2.87	102	102	0	431	1.52	12	12	0	102	1.52	12	12	0	0	0	0	388	
2.52	416	464	-	157	307	8.73	2540	235	2305	2.87	102	102	0	193	1.50	12	12	0	102	1.52	12	12	0	0	0	0	443	
2.50	411	459	-	59	400	8.83	2600	-	400	3000	2.87	102	102	0	561	1.52	12	12	0	102	1.52	12	12	0	0	0	0	573
2.50	411	459	-	2541	3000	9.53	2990	-	10	3000	2.88	102	102	0	179	1.53	13	13	0	102	1.50	12	12	0	0	0	0	205
2.47	403	451	-	2574	3025	9.52	2980	-	20	3000	2.89	102	102	0	157	1.49	12	12	0	102	1.49	12	12	0	0	0	0	163
2.50	411	459	-	2726	3185	9.57	3010	-	590	3600	2.88	102	103	-	176	1.49	12	12	0	103	1.49	12	12	0	0	0	0	188
H.D.	345	396	-	2789	3185	9.56	3000	-	600	3600	2.84	100	103	-	121	2.22	43	6	37	100	1.49	12	12	0	0	0	0	164
H.D.	47	51	-	3134	3185	9.54	2990	-	610	3600	2.83	100	103	-	1429	1.52	12	12	0	103	1.49	12	12	0	0	0	0	1441
H.D.	1820	1869	-	598	2467	9.58	3020	20	3000	2.83	100	100	0	179	1.53	13	13	0	100	1.52	12	12	0	0	0	0	192	
8.60	2820	2869	-	1011	1888	9.55	3000	0	3000	2.85	100	100	0	38	1.55	13	13	0	100	1.53	13	13	0	0	0	0	51	
8.65	2840	2888	-	1026	1862	9.55	3000	0	3000	2.85	100	100	0	26	1.71	19	19	0	100	1.55	13	13	0	0	0	0	45	
8.76	2900	2948	-	1398	1550	9.54	2990	-	10	3000	2.67	88	88	0	115	1.84	22	22	0	88	1.71	19	19	0	0	0	0	137
8.75	2900	2949	-	1725	1224	9.56	3000	0	3000	2.63	86	86	0	284	1.59	14	14	0	86	1.84	22	22	0	0	0	0	298	
8.65	2840	2888	-	2044	844	9.55	3000	0	3000	2.63	86	86	0	295	1.57	14	14	0	86	1.59	14	14	0	0	0	0	309	
8.63	2830	2879	-	2479	400	9.54	2990	-	10	3000	2.64	86	86	0	455	1.55	13	13	0	86	1.57	14	14	0	0	0	0	468
8.47	2830	2879	-	2479	400	9.55	3000	0	3000	2.63	86	86	0	374	1.53	13	13	0	86	1.55	13	13	0	0	0	0	387	
8.42	2810	2858	-	2458	400	9.54	2990	-	10	3000	2.63	86	86	0	275	1.52	12	12	0	86	1.53	13	13	0	0	0	0	287
8.40	2800	2847	-	2449	400	9.55	3000	0	3000	2.63	86	86	0	275	1.50	12	12	0	86	1.52	12	12	0	0	0	0	287	
8.40	2800	2847	-	2449	400	9.55	3000	0	3000	2.64	86	86	0	284	1.46	11	11	0	86	1.50	12	12	0	0	0	0	295	
8.32	2760	2808	-	2408	400	9.55	3000	0	3000	2.63	86	86	0	242	1.46	11	11	0	86	1.46	11	11	0	0	0	0	253	
8.34	2770	2819	-	2173	646	9.55	3000	0	3000	2.58	83	83	0	277	1.48	11	11	0	83	1.46	11	11	0	0	0	0	286	
8.23	2710	2758	-	1946	812	9.56	3000	0	3000	2.50	79	79	0	165	1.48	11	11	0	79	1.48	11	11	0	0	0	0	176	
8.17	2680	2729	-	1926	803	9.55	3000	0	3000	2.45	76	76	0	146	1.46	11	11	0	76	1.48	11	11	0	0	0	0	157	
8.12	2650	2699	-	2299	400	9.55	3000	0	3000	2.05	57	57	0	230	1.48	11	11	0	57	1.46	11	11	0	0	0	0	241	
8.17	2680	2728	-	2328	400	9.57	3010	10	3000	1.95	52	52	0	197	1.48	11	11	0	52	1.48	11	11	0	0	0	0	208	
8.20	2700	2749	-	2349	400	9.55	3000	0	3000	2.08	58	58	0	136	1.48	11	11	0	58	1.48	11	11	0	0	0	0	147	
8.09	2640	2689	-	2337	352	9.55	3000	357	2643	2.05	57	57	0	93	1.48	11	11	0	57	1.48	11	11	0	0	0	0	104	
8.02	2600	2649	-	2349	300	9.54	2990	742	2248	2.20	64	64	0	101	1.48	11	11	0	64	1.48	11	11	0	0	0	0	112	
8.07	2630	2679	-	2382	297	9.56	3000	769	2231	H.D.	32	32	0	133	1.56	13	13	0	32	1.48	11	11	0	0	0	0	146	
8.15	2670	2719	-	2414	365	9.56	3000	716	2284	2.00	54	54	0	256	1.60	14	14	0	54	1.56	13	13	0	0	0	0	270	
8.18	2670	2719	-	2435	284	9.54	2990	863	2127	H.D.	57	57	0	386	1.52	12	12	0	57	1.60	14	14	0	0	0	0	398	
8.10	2640	2691	-	2413	276	9.56	3000	927	2071	H.D.	35	35	0	449	1.51	12	12	0	35	1.52	12	12	0	0	0	0	461	
8.04	2580	2629	-	2342	267	9.55	3000	847	2153	2.13	60	60	0					0	60	1.51	12	12	0	0	0	0		

VALUES ARE GIVEN IN SECOND FEET UNLESS OTHERWISE NOTED AT TOP OF COLUMN

1926 DISTRIBUTION WATER DISTRICT NO 36

DATE	JACKSON LAKE			MORAN			TWINLAKES			HEISE			MORIN-HEISE			LORENZO			H-L		
	GAGE	CARR. FT	DRAFT	DISCH	STD	NOR	DISCH	MORAN	DATE	DISCH	STAD	TRILTY	STD	TLK	NOR	TOTON	L STD	TLK		STD	TLK
JUN 20	5944	60980	4300	3680	2163	1512	53	3733	21	424	9640	2114	51	1488	5920	54	2	5976	1965	47	197
21	5922	60720	526	4080	2652	1428	48	4128	22	429	9656	2506	47	7023	5528	66	1	5595	2305	43	198
22	5890	595730	9990	6750	5037	1713	46	6796	23	463	10870	10885	45	5924	4089	126	1	4216	4591	42	320
23	5570	58490	4240	8900	7179	1721	46	8946	24	528	12900	12911	44	5867	3965	179	2	4146	6651	42	349
24	5758	566850	14640	9190	7381	1809	46	9236	25	544	13510	13520	45	6279	4284	185	1	4470	6929	43	267
25	5896	552250	14600	9190	7361	1823	46	9236	26	546	13590	13600	45	6378	4364	184	1	4549	6962	44	215
26	5674	537730	13500	9230	7310	1920	45	9278	27	545	13550	13563	44	6392	4288	183	1	4472	6913	43	214
27	5570	522820	14930	9500	7927	1975	44	9344	28	550	13740	13757	43	6375	4213	188	1	4462	7119	42	220
28	5304	507480	15340	9590	7734	1856	42	9632	29	553	13860	13876	41	6294	4244	193	1	4438	7315	40	226
29	5437	492010	15470	9590	7799	1791	39	9627	30	553	13780	13796	38	6154	4167	195	1	4363	7316	37	228
30	5378	478430	15580	9590	7847	1773	34	8854	JUL 1	545	13530	13566	33	6857	4712	171	1	4884	6176	32	200
31	5325	464280	12150	7850	6126	1724	30	7850	2	521	12640	12655	29	6653	4775	153	1	4929	5794	29	179
1	5271	453960	12320	7810	6211	1599	28	7838	3	511	12260	12275	27	6192	4437	159	1	4593	5974	26	182
2	5217	441680	12280	7790	6191	1579	25	7815	4	510	12220	12233	24	6173	4418	159	1	4574	5835	23	181
3	5161	429020	12660	7510	6384	1426	20	7830	5	507	12110	12121	20	5877	4291	160	0	4451	6037	19	187
4	5106	416610	12410	7540	6257	1283	20	7860	6	498	11780	11791	19	5671	4231	156	1	4388	5918	18	183
5	5051	404300	12310	7410	6205	1205	20	7430	7	473	11600	11615	20	5545	4185	159	0	4340	5868	19	182
6	5005	394020	10280	7430	5183	2247	20	7450	8	498	11780	11801	19	6729	4351	150	1	4482	4901	15	152
7	4961	384260	9760	7230	4921	2309	20	7250	9	498	11780	11785	20	6267	4335	123	0	4658	4654	19	144
8	4914	373830	10410	6310	5248	1562	20	6830	10	490	11480	11500	19	6364	4670	131	1	4802	4963	18	194
9	4866	353290	10560	6630	5324	1306	20	6650	11	473	10940	10964	20	5753	4314	133	0	4447	5033	19	156
10	4817	352530	10740	6610	5415	1195	17	6627	12	470	10760	10777	16	5481	4150	135	1	4286	5122	16	158
11	4767	341660	10890	6570	5490	1080	15	6585	13	466	10620	10630	15	5262	4045	137	0	4182	5192	15	161
12	4719	331240	10420	639	5253	1297	15	6565	14	462	10480	10493	15	5356	3928	131	0	4059	4968	15	154
13	4670	320680	10560	6590	5324	1226	15	6565	15	462	10480	10492	15	5286	3927	133	0	4060	5085	15	156
14	4620	309950	10730	6530	5410	1140	15	6565	16	456	10260	10273	15	4983	3708	135	0	3843	5117	15	158
15	4568	298870	11080	6610	5586	1024	13	6623	17	451	10200	10212	13	4753	3589	140	0	3729	5283	15	163
16	4515	287630	11240	6630	5667	963	12	6642	18	453	10160	10175	12	4636	3533	142	0	3675	5397	12	166
17	4463	276700	10930	6630	5511	1119	12	6642	19	457	10300	10322	12	4937	3680	138	0	3816	5212	12	161
18	4414	266440	10260	6530	5173	1357	11	6541	20	453	10340	10363	11	5308	3822	129	0	3951	4893	11	151
19	4361	255440	11000	6570	5546	1024	10	6580	21	451	10090	10111	10	4694	3531	139	0	3670	5245	10	162
20	4306	244070	11320	640	5732	836	10	6580	22	447	9950	9971	9	4372	3391	143	0	3534	5421	10	168
21	4251	232840	11230	6420	5662	758	10	6430	23	443	9810	9831	10	4301	3401	142	0	3543	5354	10	166
22	4198	222030	10810	6170	5450	720	10	6180	24	435	9540	9560	9	4237	3360	136	1	3517	5127	9	187
23	4145	211380	10650	6060	5369	691	8	6068	25	432	9440	9458	8	4215	3390	134	0	3524	5063	8	172
24	4092	200750	10630	6040	5359	681	7	6047	26	429	9340	9357	7	4125	3310	134	0	3444	5068	7	157
25	4038	190070	10700	6040	5395	645	0	6047	27	427	9270	9287	0	4027	3247	135	0	3382	5093	0	167
26	3984	179410	10640	6020	5364	656	0	6047	28	430	9370	9387	0	4157	3367	134	0	3501	5032	0	198
27	3930	168850	10530	6040	5309	731	0	6047	29	432	9440	9456	0	4280	3416	133	0	3549	5021	0	153
28	3875	158240	10640	6040	5364	676	0	6047	30	429	9340	9356	0	4126	3316	134	0	3450	5073	0	157
29	3820	147690	10550	6020	5319	701	0	6047	31	423	9130	9147	0	3961	3177	133	0	3260	5030	0	156
30	3767	137630	10060	592	5072	608	0	6047	AUG 1	418	8970	8987	0	4042	3307	127	0	3434	4791	0	154
31	3715	127820	9810	582	4946	554	0	6047	2	408	8640	8654	0	3852	3154	124	0	3278	4674	0	148
1	3679	121050	6740	518	3398	1022	0	6047	3	400	8360	8395	0	5082	3975	85	0	4060	3194	0	119
2	3633	116620	4480	412	2248	642	0	6047	4	359	7100	7110	0	4978	4220	56	0	4276	2126	0	66
3	3637	113270	3380	391	1689	921	0	6047	5	335	6380	6395	0	4748	3765	42	0	3827	1586	0	59
4	3616	109370	3900	391	2610	644	0	6047	6	327	6160	6164	0	4247	3534	49	0	3603	1773	0	144
5	3594	105300	4070	392	2630	578	0	6047	7	326	6130	6134	0	4133	3504	51	0	3535	1638	0	163
6	3573	101450	3850	393	2640	699	0	6047	8	330	6240	6257	0	4359	3611	49	0	3680	1758	0	134
7	3553	97780	3670	394	2650	800	0	6047	9	337	6450	6461	0	4697	3811	46	0	3857	1708	0	96
8	3531	93750	4030	392	2630	598	0	6047	10	336	6430	6431	0	4450	3801	51	0	3882	1694	0	87
9	3509	89720	4030	391	2610	2032	0	6047	11	331	6300	6310	0	4329	3700	51	0	3751	1665	0	113
10	3490	86270	3450	391	2610	1739	0	6047	12	331	6240	6250	0	4534	3640	43	0	3683	1586	0	110

REXBURG
 287 805
 275 852
 283 790
 269 726
 258 678
 249 636
 283 805
 289 842
 284 818
 290 852
 300 912
 305 945
 303 945
 310 979
 309 979
 312 1000
 303 951
 321 1066
 330 1120
 316 1044
 289 896
 268 788
 282 748
 243 668
 259 744
 273 818
 276 844
 271 810
 282 874
 293 934
 290 924
 274 836
 287 900
 296 922
 287 906
 288 912
 298 966
 301 985
 291 926
 292 934
 291 926
 297 962
 304 1000
 302 971
 297 962
 295 951
 293 884
 290 923
 284 870
 304 1050
 312 1050
 308 1034
 312 1050

AMERICAN FALLS				MERS		COMP		NEELEY				LAKE WILCOTT				WSMINCAN				SSMINCAN				NS+SSMIN CANALS				MINID	
GAGE	CAPAC	DRAFT HC FT	DRAFT SECT	CL-N	INFLOW	CL-N	INFLOW	GAGE	DISCH	STD	NOR	CLONCH	DATE	GAGE	CAPAC	DRAFT	GAGE	DISCH	DISCH	GAGE	DISCH	TOTAL	STD	NOR	BAL	THEO			
0059	23100	-430	-217	1237	2406	2406	2406	5.97	8340	5944	2390	NEELEY	1926	8.81	105790	-489	1320	3.77	1010	1320	3.77	2330	2330	0	5521	6.41			
0065	23530	-430	-217	1200	2412	2412	2412	6.00	8440	6078	2362	GRIN	June 25	9.12	106390	-303	1400	5.53	1030	1400	5.53	2430	2430	0	5707	6.37			
0090	25310	-1780	-897	1181	2374	2374	2374	6.00	8440	6186	2254	NEELEY	June 25	9.43	107240	-429	1480	5.87	1040	1480	5.87	2520	2520	0	5491	6.30			
0107	26590	-1280	-645	1189	2390	2390	2390	6.13	8900	6660	2240	NEELEY	June 27	9.46	107490	-126	1490	5.85	1040	1490	5.85	2530	2530	0	6244	6.45			
0118	27490	-900	-454	1193	2398	2398	2398	6.02	8510	6182	2328	NEELEY	June 27	9.45	107240	126	1490	5.86	1040	1490	5.86	2530	2530	0	6106	6.45			
0122	27820	-330	-166	1181	2374	2374	2374	5.92	8170	5866	2304	NEELEY	June 27	9.45	106510	368	1490	5.86	1040	1490	5.86	2530	2530	0	6008	6.33			
0123	27900	-80	-40	1182	2376	2376	2376	5.93	8200	5904	2296	NEELEY	June 27	9.40	106030	242	1430	5.86	1040	1430	5.86	2520	2520	0	5922	6.19			
0120	27650	250	126	1205	2422	2422	2422	5.92	8110	5765	2402	NEELEY	June 30	9.28	105310	363	1440	5.85	1040	1440	5.85	2480	2480	0	6053	6.36			
0117	27410	240	121	1221	2434	2434	2434	5.91	8130	5666	2464	NEELEY	July 1	9.45	105070	121	1490	5.83	1030	1490	5.83	2520	2520	0	5751	6.35			
0121	27730	-320	-161	1233	2478	2478	2478	5.93	8200	5822	2378	NEELEY	July 2	9.41	104220	429	1480	5.87	1040	1480	5.87	2520	2520	0	6109	6.35			
0127	28220	-490	-247	1229	2470	2470	2470	5.96	8300	5890	2378	NEELEY	July 3	9.26	103740	242	1440	5.85	1040	1440	5.85	2480	2480	0	6062	6.30			
0136	28960	-740	-373	1227	2466	2466	2466	5.92	8170	5764	2410	NEELEY	July 4	9.25	102900	424	1440	5.83	1040	1440	5.83	2490	2490	0	6114	6.43			
0156	30590	-1630	-822	1245	2503	2503	2503	5.82	7830	5397	2433	NEELEY	July 5	9.25	102660	121	1440	5.88	1040	1440	5.88	2460	2460	0	5947	6.30			
0186	33040	-2480	-1235	1229	2470	2470	2470	5.90	8100	5720	2380	NEELEY	July 6	9.25	102660	0	1440	5.83	1040	1440	5.83	2480	2480	0	5620	6.49			
0219	35930	-2890	-1457	1230	2488	2488	2488	5.96	8300	6002	2298	NEELEY	July 7	9.26	103260	-303	1440	5.88	1040	1440	5.88	2480	2480	0	5517	6.45			
0248	38600	-2670	-1346	1247	2507	2507	2507	5.94	8240	5823	2417	NEELEY	July 8	9.03	103140	61	1390	5.88	1040	1390	5.88	2430	2430	0	5871	6.43			
0269	40530	-1930	-975	1264	2541	2541	2541	5.88	8030	5539	2491	NEELEY	July 9	8.98	103740	-303	1260	5.78	1010	1260	5.78	2290	2290	0	5437	6.39			
0289	42370	-1840	-928	1269	2551	2551	2551	5.90	8100	5649	2451	NEELEY	July 10	8.15	104940	-605	1190	5.73	991	1190	5.73	2181	2181	0	5314	6.30			
0301	43480	-1110	-559	1270	2553	2553	2553	5.93	8200	5647	2553	NEELEY	July 11	7.94	105530	-303	1150	5.53	939	1150	5.53	2089	2089	0	5803	6.28			
0306	43990	-510	-257	1269	2551	2551	2551	5.86	7960	5469	2491	NEELEY	July 12	7.94	105530	0	1150	5.53	939	1150	5.53	2089	2089	0	5871	6.30			
0305	43890	100	50	1255	2523	2523	2523	5.71	7460	4897	2563	NEELEY	July 13	7.94	105530	0	1150	5.53	939	1150	5.53	2089	2089	0	5871	6.30			
0295	42920	970	489	1243	2499	2499	2499	5.68	7360	4841	2519	NEELEY	July 14	7.93	105310	121	1150	5.57	945	1150	5.57	2095	2095	0	5436	6.28			
0282	41720	1200	605	1239	2490	2490	2490	5.58	7040	4470	2570	NEELEY	July 15	7.94	105190	60	1150	5.62	959	1150	5.62	2109	2109	0	5311	6.09			
0266	40250	1470	741	1229	2470	2470	2470	5.53	6880	4370	2510	NEELEY	July 16	8.08	104820	187	1180	5.72	989	1180	5.72	2165	2165	0	5062	6.10			
0238	37680	2570	1296	1237	2486	2486	2486	5.53	6880	4424	2456	NEELEY	July 17	8.15	104100	363	1200	5.75	994	1200	5.75	2194	2194	0	5049	6.10			
0203	34460	3220	1624	1232	2476	2476	2476	5.55	6940	4414	2496	NEELEY	July 18	8.14	103380	363	1200	5.82	1020	1200	5.82	2220	2220	0	5023	6.10			
0160	30920	3540	1785	1245	2503	2503	2503	5.63	7200	4777	2423	NEELEY	July 19	8.13	102660	363	1190	5.85	1020	1190	5.85	2210	2210	0	5093	6.12			
0118	27490	3430	1729	1251	2515	2515	2515	5.61	7130	4735	2395	NEELEY	July 20	8.13	103140	-242	1190	5.87	1030	1190	5.87	2220	2220	0	4738	6.11			
0084	24880	2610	1316	1244	2501	2501	2501	5.52	6840	4449	2391	NEELEY	July 21	8.14	102780	182	1200	5.84	1040	1200	5.84	2240	2240	0	5072	6.11			
0050	22460	2420	1220	1247	2507	2507	2507	5.56	6970	4593	2377	NEELEY	July 22	8.13	102290	247	1190	5.74	1040	1190	5.74	2230	2230	0	4857	6.12			
0040	21750	710	358	1228	2468	2468	2468	5.25	6010	3662	2348	NEELEY	July 23	8.14	101330	484	1200	5.76	1040	1200	5.76	2240	2240	0	5214	5.78			
0043	21960	-210	-106	1229	2470	2470	2470	5.03	5370	2990	2380	NEELEY	July 24	8.15	100550	242	1200	5.78	1050	1200	5.78	2250	2250	0	4402	5.40			
0047	22250	-290	-146	1223	2458	2458	2458	5.04	5400	3022	2378	NEELEY	July 25	8.15	100250	302	1200	5.71	1030	1200	5.71	2230	2230	0	5442	5.40			
0044	22030	220	111	1234	2480	2480	2480	5.08	5510	3130	2390	NEELEY	July 26	8.15	100130	60	1200	5.49	962	1200	5.49	2162	2162	0	5298	5.36			
0047	22250	-220	-111	1214	2440	2440	2440	5.14	5690	3260	2430	NEELEY	July 27	8.08	100370	-121	1180	5.49	962	1180	5.49	2142	2142	0	5247	5.36			
0048	22320	-70	-35	1222	2456	2456	2456	5.12	5630	3224	2406	NEELEY	July 28	7.96	101090	-363	1150	5.46	953	1150	5.46	2103	2103	0	5224	5.34			
0040	21750	570	287	1228	2468	2468	2468	5.11	5600	3152	2448	NEELEY	July 29	7.93	101690	-302	1150	5.43	945	1150	5.43	2095	2095	0	5233	5.34			
0002	19040	2710	1366	1224	2460	2460	2460	5.44	6590	4190	2400	NEELEY	July 30	7.96	103680	-973	1150	5.47	936	1150	5.47	2106	2106	0	5321	5.33			
9949	15800	3940	1634	1224	2460	2460	2460	5.38	7040	4610	2430	NEELEY	July 31	7.97	105070	-731	1160	5.52	971	1160	5.52	2131	2131	0	5328	5.48			
9909	13370	2430	1225	1226	2464	2464	2464	5.40	6470	4012	2438	NEELEY	Aug 1	7.93	104220	429	1150	5.50	965	1150	5.50	2115	2115	0	5354	5.48			
9893	12470	900	454	1238	2488	2488	2488	5.23	5950	3445	2505	NEELEY	Aug 2	7.94	102660	786	1150	5.42	942	1150	5.42	2092	2092	0	5164	5.44			
9877	11670	800	403	1231	2474	2474	2474	5.18	5800	3353	2447	NEELEY	Aug 3	7.93	100250	1215	1150	5.41	939	1150	5.41	2089	2089	0	5076	5.42			
9864	11010	660	353	1242	2496	2496	2496	5.07	5490	3353	2447	NEELEY	Aug 4	7.93	97230	1523	1150	5.43	945	1150	5.43	2095	2095	0	5228	5.47			
9852	10410	600	302	1262	2537	2537	2537	5.07	5490	2941	2549	NEELEY	Aug 5	7.91	94950	1149	1140	5.42	942	1140	5.42	2082	2082	0					

1926 DISTRIBUTION WATER DISTRICT NO. 36

DATE	JACKSON LAKE			MORAN			TWIN LAKE		HEISE						MOHAN HEISE				LORENZO		H-L					
	CHRG	CRPCT	DRPFRG	GRGE	DISCH	STD	NOR	DISCH	MORAN	DATE	GAFF	DISCH	HAILEY	STU	T.L.K.	NOR.	TOT.GN.	L. STD.	T.L. UNION	STU		T.L.K.	STD	T.L.K.	STD	T.L.K.
1926										1926																
8/5/26	3472	53020	3250	391	2610	1639	971			Aug 15	330	6240	6250	1598		4652	3640	41	3681	M55					113	
15	3455	79950	5070	375	2420	1548	872			14	326	6130	6140	1509		4631	3720	39	3759	1410					97	
18	3437	76680	3260	365	2300	1644	656			15	313	5760	5768	1603		4165	3468	41	3509	1506					97	
15	3417	73050	3610	368	2340	1520	520			16	308	5620	5628	1774		3854	3288	46	3334	1631					143	
16	3396	69300	3730	365	2300	1906	394			17	306	5570	5577	1958		3719	3217	48	3325	1682					176	
17	3374	65380	3920	365	2300	1976	324			18	304	5510	5517	1927		3590	3217	47	3266	1772					155	
18	3357	62350	3030	365	2300	1528	772			19	310	5680	5687	1490		4197	3387	38	3425	1575					115	
19	3351	61280	1070	309	1690	539	1151			20	308	5620	5628	526		5102	3938	15	3951	492					34	
20	3349	60920	360	247	1120	182	938			21	282	4930	4932	177		4755	3812	5	3817	168					9	
21	3346	60380	540	226	957	272	685			22	265	4500	4500	265		6235	3543	7	3530	238					27	
22	3341	59490	890	225	950	437	501			23	260	4380	4380	438		3942	3430	11	3441	367					71	
23	3335	58070	1420	254	1180	716	464			24	252	4190	4190	698		3492	3010	18	3028	570					128	
24	3321	55930	2440	283	1440	1079	361			25	257	4310	4310	1052		3258	2870	27	2897	800					172	
25	3302	52540	3590	338	2000	1709	291			26	263	4450	4450	1666		2704	2450	43	2493	1504					162	
26	3277	48140	4400	386	2550	2218	352			27	296	5300	5300	2163		5137	2750	55	2805	2044					119	
27	3256	44440	3700	387	2590	1865	725			28	300	5400	5400	1818		3582	2810	47	2857	1763					55	
28	3244	42330	2110	388	2580	1064	1516			29	304	5510	5510	1037		4473	2930	27	2957	1046					31	
29	3225	38630	3700	385	2540	1865	675			30	304	5510	5510	1818		3692	2970	47	3017	1757					67	
30	3199	34410	4220	380	2480	2128	552			31	301	5430	5430	2075		3355	2950	53	3003	1964					111	
31	3176	30410	4000	367	2320	2017	303			SEPT 1	296	5300	5300	1967		3333	2980	50	3030	1840					121	
SEP 1	3156	26930	3480	350	2130	1754	376			2	290	5140	5140	1710		3430	3010	44	3054	1591					119	
2	3138	23800	3130	333	1940	1578	362			3	285	4960	4960	1939		3421	3020	39	3059	1409					130	
3	3130	22410	1390	320	1800	701	1099			4	278	4830	4830	683		4147	3030	18	3048	677					66	
4	3119	20500	1910	297	1570	963	607			5	275	4750	4750	939		3811	3180	24	3204	846					93	
5	3111	19110	1390	246	1110	701	479			6	262	4430	4430	683		3747	3320	18	3338	617					66	
6	3105	18060	1050	232	1000	529	471			7	247	4080	4080	516		3564	3030	13	3093	462					54	
7	3100	17190	870	212	854	459	415			8	242	3960	3960	428		3532	3106	11	3117	372					56	
8	3094	16160	1030	214	869	519	358			9	237	3850	3850	506		3344	2981	13	2794	447					59	
9	3089	15300	860	213	862	434	428			10	236	3830	3830	423		3407	2968	11	2979	385					38	
10	3084	14440	560	211	847	434	413			11	234	3790	3790	423		3367	2943	11	2954	387					36	
11	3078	13410	1030	210	840	519	321			12	232	3740	3740	506		3234	2900	13	2913	464					42	
12	3073	12550	860	212	854	434	420			13	230	3700	3700	423		3277	2846	11	2857	383					40	
13	3068	11690	860	212	854	434	420			14	230	3700	3700	423		3277	2846	11	2857	383					40	
14	3062	10660	1030	212	854	519	335			15	229	3680	3680	506		3174	2826	13	2839	459					47	
15	3057	9800	860	211	847	434	413			16	228	3660	3660	423		3237	2813	11	2824	378					45	
16	3051	8770	1030	210	840	519	321			17	227	3630	3630	506		3124	2790	13	2803	448					58	
17	3045	7740	1030	212	854	519	335			18	224	3570	3570	506		3064	2716	13	2829	445					61	
18	3039	6710	1030	212	854	519	335			19	224	3570	3570	506		3064	2716	13	2829	445					53	
19	3033	5670	1040	211	847	524	323			20	224	3570	3570	511		3059	2723	13	2756	478					33	
20	3026	4470	1200	211	847	605	242			21	223	3550	3550	590		2960	2703	15	2718	550					40	
21	3020	3440	1030	209	833	519	314			22	222	3530	3530	506		3024	2697	13	2710	436					50	
22	3016	2750	690	178	630	345	282			23	220	3480	3480	339		3141	2850	9	2889	301					38	
23	3013	2240	510	162	536	257	279			24	214	3360	3360	251		3109	2824	6	2830	222					29	
24	3010	1720	520	161	531	262	267			25	209	3260	3260	255		3005	2729	7	2736	228					27	
25	3008	1350	340	148	461	171	290			26	207	3220	3222	167		3035	2761	4	2765	145					22	
26	3007	1200	180	137	405	91	314			27	205	3180	3184	89		3095	2779	2	2781	76					13	
27	3005	860	340	137	405	171	234			28	203	3140	3143	167		2976	2738	4	2742	146					21	
28	3003	860	0	128	361	0	362			29	201	3100	3102	0		3102	2740	0	2740	0					0	
TOTRL																										
TOTRL																										
TOTRL																										
MEAN																										

1512180 1313320 373220 1262 839300 738786 9571 32 748391 338531 1221 14147 41

DAILY SUMMARY OF DATA AT AND BETWEEN

COURT	JURY	HEISE	DATE	DIV HEISE WOOD			WOODVILLE			WOOD			DIV HEISE WOODVILLE			DIV WOOD-BLACK			BLACK			BLACK FOOT BRIDGE			WOOD
				TOTAL	STD	NOR	THED	BRL	GAGE	DISCH	STD	APR	DISCH	STD	TOTON	L STD	L LIGN	TOTAL	STD	NOR	BRL	THED	DISCH	STD	
301	905	7125	1926	5210	419	4791	2110	579	300	1058	1957	8	1021	1204	1	1204	1	1204	1506	1410	994	416	396		
302	906	6674	15	5002	423	4579	2123	572	2550	980	1310	7	863	1168	1	1168	1	1168	1622	1300	920	350	592		
303	907	6529	16	5017	424	4593	1657	559	2640	074	1310	7	1088	1226	118	1226	118	1226	1414	1070	699	171	544		
304	908	6475	17	5035	365	4670	1491	543	2350	258	1310	6	1040	1555	530	1555	530	1555	825	505	628	-125	320		
305	909	6445	18	5034	417	4617	1444	531	2200	1256	1310	5	941	1709	769	1709	769	1709	491	323	441	-118	168		
306	910	6445	19	5248	237	5011	1197	529	2170	1526	1310	4	1137	1518	653	1518	653	1518	652	797	819	-422	255		
307	911	6672	20	3225	215	5113	1344	528	2150	1533	1310	3	928	1491	587	1491	587	1491	639	426	532	-106	233		
308	912	6628	21	4920	184	4736	1708	529	2170	305	1310	2	499	1511	587	1511	587	1511	659	426	532	-106	233		
309	913	6501	22	4676	179	4497	1207	508	1890	12	1302	1	693	1070	195	1070	195	1070	659	426	532	-106	233		
310	914	6501	23	4614	185	4429	787	485	1630	52	1310	1	871	862	1	862	1	862	659	426	532	-106	233		
311	915	6501	24	4320	203	4385	671	468	1460	162	1310	1	862	796	1	796	1	796	659	426	532	-106	233		
312	916	6501	25	4723	205	4523	341	453	1330	362	1310	2	862	796	1	796	1	796	659	426	532	-106	233		
313	917	6501	26	4713	195	4518	428	439	1210	681	1310	3	958	702	1	702	1	702	659	426	532	-106	233		
314	918	6501	27	5242	586	4656	13	425	1100	910	1310	4	1257	678	1	678	1	678	659	426	532	-106	233		
315	919	6501	28	5111	626	4455	1025	445	1260	1408	1310	5	364	801	152	801	152	801	659	426	532	-106	233		
316	920	6501	29	5173	569	4604	1058	475	1530	182	1310	6	536	1125	345	1125	345	1125	659	426	532	-106	233		
317	921	6501	30	5113	566	4547	1254	495	1740	435	1310	7	522	1247	424	1247	424	1247	659	426	532	-106	233		
318	922	6501	31	5099	591	4508	1295	508	1890	1151	1310	8	671	1306	429	1306	429	1306	659	426	532	-106	233		
319	923	6501	SEPT	5023	632	4391	1324	511	1720	1322	1310	9	766	703	45	703	45	703	659	426	532	-106	233		
320	1000	6300	2	4986	629	4357	1314	513	1950	1208	1310	10	671	1306	429	1306	429	1306	659	426	532	-106	233		
321	1010	6150	3	4642	640	4002	1508	517	2000	943	1310	11	766	703	45	703	45	703	659	426	532	-106	233		
322	1020	6150	4	4563	640	3923	1376	517	2000	762	1310	12	671	1306	429	1306	429	1306	659	426	532	-106	233		
323	1030	6150	5	4362	618	3964	1388	518	2010	-	1310	13	671	1306	429	1306	429	1306	659	426	532	-106	233		
324	1040	6150	6	4411	510	3901	1509	521	2050	332	1310	14	671	1306	429	1306	429	1306	659	426	532	-106	233		
325	1050	6150	7	4114	331	3783	1456	508	1890	283	1310	15	503	889	33	889	33	889	659	426	532	-106	233		
326	1060	6150	8	3936	147	3789	1174	500	1790	313	1310	16	672	918	28	918	28	918	659	426	532	-106	233		
327	1070	6150	9	3857	62	3795	1133	498	1770	308	1310	17	695	1006	20	1006	20	1006	659	426	532	-106	233		
328	1080	6150	10	4088	32	4056	812	478	1560	413	1310	18	809	1125	0	1125	0	1125	659	426	532	-106	233		
329	1090	6150	11	4410	31	4379	480	445	1260	592	1310	19	830	1022	0	1022	0	1022	659	426	532	-106	233		
330	1020	6150	12	4505	20	4485	305	416	1030	365	1310	20	763	815	0	815	0	815	659	426	532	-106	233		
331	923	6663	13	4483	14	4469	180	386	826	448	1310	21	690	752	0	752	0	752	659	426	532	-106	233		
332	879	4579	14	4493	13	4480	86	369	724	368	1310	22	650	601	0	601	0	601	659	426	532	-106	233		
333	906	4606	15	4474	10	4464	132	358	658	371	1310	23	568	498	0	498	0	498	659	426	532	-106	233		
334	934	4614	16	4501	10	4221	313	377	772	447	1310	24	508	513	0	513	0	513	659	426	532	-106	233		
335	924	4588	17	4210	22	4188	378	378	778	354	1310	25	447	637	0	637	0	637	659	426	532	-106	233		
336	934	4564	18	4133	20	4113	431	375	760	426	1310	26	389	622	0	622	0	622	659	426	532	-106	233		
337	951	4521	19	4057	69	3988	464	378	778	374	1310	27	377	632	8	632	8	632	659	426	532	-106	233		
338	940	4510	20	4044	101	3943	466	396	892	350	1310	28	465	630	42	630	42	630	659	426	532	-106	233		
339	912	4482	21	3936	103	3833	546	408	976	373	1310	29	557	735	50	735	50	735	659	426	532	-106	233		
340	956	4506	22	4030	167	3863	476	410	990	380	1310	30	469	754	11	754	11	754	659	426	532	-106	233		
341	1000	4530	23	3877	57	3820	653	421	1070	397	1310	31	286	829	5	829	5	829	659	426	532	-106	233		
342	985	4465	24	3591	77	3514	874	427	1120	222	1310	32	513	852	0	852	0	852	659	426	532	-106	233		
343	991	4351	25	3714	0	3714	657	427	1120	221	1310	33	489	813	0	813	0	813	659	426	532	-106	233		
344	1070	4330	26	3681	0	3681	649	426	1110	227	1310	34	429	825	0	825	0	825	659	426	532	-106	233		
345	1100	4322	27	3498	0	3498	824	441	1230	144	1310	35	611	986	0	986	0	986	659	426	532	-106	233		
346	1130	4314	28	3582	0	3582	752	453	1330	76	1310	36	722	952	0	952	0	952	659	426	532	-106	233		
347	1100	4243	29	3633	0	3633	610	451	1310	145	1310	37	867	802	0	802	0	802	659	426	532	-106	233		
348	1200	4202	30	3867	0	3867	433	450	1300	0	1310	38	867	802	0	802	0	802	659	426	532	-106	233		
				319335	12720	14	319335	12720	14	319335	12720	14	319335	12720	14	319335	12720	14	319335	12720	14	319335	12720	14	
				22320	41305	523	22320	41305	523	22320	41305	523	22320	41305	523	22320	41305	523	22320	41305	523	22320	41305	523	
				101930	1650	47	101930	1650	47	101930	1650	47	101930	1650	47	101930	1650	47	101930	1650	47	101930	1650	47	

* SEE NOTE FLRT NO 1A

BLACK SNAKE RIVER GAGING STATIONS

STD. ON NO.	CUM. LOSS	CORR. APP. STD.	SMITH ROBT. MAX. CAN.	ROBERTSON	BLACK ROBT. GRN.	BLACK FOOT TRNER		BB-C THEO. BFL.	R-C THEO. BFL.	CLOUGHS				M. BK. CLOUGH GRN.	ROBT. CLOUGH	DATE	AM. RAIN					
						DISCH.	STD.			NOR.	GRDF.	DISCH.	STD.					NOR.	GRDF.			
63	-333	-1280	0	1410	439	1350	1410	-30	728	478	0	1888	1858	366	2000	1888	112	142	19770	600	80	
59	-333	-1636	0	1300	424	1250	1300	-50	726	474	0	1774	1724	328	1850	1774	106	156	9765	600	200	
57	-287	-1783	0	1070	395	1000	1070	-70	706	433	0	1500	1430	341	1640	1500	140	210	9751	640	560	
40	-290	-1636	0	505	300	397	305	-108	661	332	0	837	729	284	970	837	133	241	109731	630	610	
28	-140	-1494	0	323	262	235	225	-55	661	332	0	635	570	258	722	655	67	152	199723	610	510	
52	-203	-1048	0	397	275	288	397	-109	661	332	0	748	639	263	767	748	19	125	209722	610	510	
34	-199	-918	0	426	283	321	426	-105	670	351	0	764	659	267	803	764	39	144	219721	630	40	
17	-250	-1565	0	426	284	325	426	-101	664	334	0	835	724	273	860	825	35	136	229719	630	40	
12	-245	-2343	0	587	317	482	587	-105	692	399	0	1017	914	291	1040	1019	21	126	239723	670	140	
3	-210	-2826	0	555	312	456	555	-99	707	432	0	780	601	282	950	780	170	269	249715	670	140	
10	-237	-3068	0	417	284	325	417	-92	610	227	0	436	344	232	310	436	74	166	259703	670	140	
22	-226	-3040	0	335	262	238	335	-97	610	227	0	335	238	216	399	335	64	161	269695	640	270	
41	-201	-2445	0	266	243	173	266	-93	610	227	0	266	173	200	318	266	52	145	279695	630	60	
55	-141	-1991	0	226	228	126	226	-100	610	227	0	226	126	192	279	226	46	146	289690	630	60	
75	-176	-994	0	208	216	92	208	-104	610	227	0	208	92	185	235	208	27	143	299692	630	60	
50	-153	-382	0	202	218	98	202	-116	610	227	0	202	92	185	235	208	27	143	309693	630	60	
1	-250	-590	0	242	233	141	242	-101	610	227	0	242	141	195	289	242	38	142	319693	630	60	
43	-199	-229	0	342	262	238	342	-104	610	227	0	342	262	235	279	342	46	145	329695	630	60	
53	-177	26	0	592	313	462	592	-130	610	227	0	592	462	282	980	592	2	15	339702	630	60	
70	-202	168	0	975	373	835	975	-140	610	227	0	975	835	286	980	975	5	2	349726	630	60	
53	-221	-3	0	1020	383	910	1020	-110	610	227	0	1020	910	286	1020	1020	0	7	359725	630	60	
42	-221	-355	0	1030	384	918	1030	-112	610	227	0	1030	918	287	1030	1030	0	10	369724	630	60	
4	-286	-1424	0	1030	388	949	1030	-81	610	227	0	1030	949	288	1040	1030	10	5	379724	630	60	
16	-203	219	0	975	378	872	975	-103	610	227	0	975	872	286	1020	975	45	22	389725	630	60	
15	-186	-2660	0	800	354	702	800	-98	610	227	0	800	702	270	890	800	90	58	399724	630	60	
17	-134	-3089	0	721	340	612	721	-109	610	227	0	721	612	257	785	721	64	55	409714	630	60	
17	-181	-3360	0	566	310	446	566	-120	610	227	0	566	446	242	677	566	111	231	419708	630	60	
25	-66	-3292	0	344	260	231	344	-113	610	227	0	344	231	209	432	344	68	201	429702	630	60	
21	-35	-3119	0	182	230	152	182	-50	610	227	0	182	152	190	324	182	142	192	439693	630	60	
22	-118	-2827	0	75	193	38	75	-37	610	227	0	75	38	168	211	75	136	173	449697	630	60	
27	0	-2429	0	47	112	5	47	-42	610	227	0	47	5	160	179	47	132	174	459696	630	60	
22	-79	-2081	0	348	260	231	348	-113	610	227	0	348	260	253	454	348	143	142	469688	630	60	
22	-130	-1740	0	341	260	231	341	-113	610	227	0	341	260	253	454	341	143	142	479688	630	60	
27	-223	-1329	0	411	322	241	411	-103	610	227	0	411	322	241	544	411	143	142	489688	630	60	
21	-109	-1007	0	322	260	231	322	-103	610	227	0	322	260	241	544	322	143	142	499688	630	60	
25	-107	-612	0	395	322	241	395	-103	610	227	0	395	322	241	544	395	143	142	509688	630	60	
22	-121	-271	0	341	260	231	341	-103	610	227	0	341	260	241	544	341	143	142	519688	630	60	
18	-230	5	0	276	204	152	276	-50	610	227	0	276	204	152	344	276	143	142	529691	630	60	
19	-198	209	0	204	152	152	204	-50	610	227	0	204	152	152	344	204	143	142	539692	630	60	
20	-123	407	0	198	152	152	198	-50	610	227	0	198	152	152	344	198	143	142	549693	630	60	
23	-218	695	0	286	204	152	286	-50	610	227	0	286	204	152	344	286	143	142	559694	630	60	
13	-166	787	0	92	72	72	92	-50	610	227	0	92	72	72	344	92	143	142	569694	630	60	
13	-139	879	0	92	72	72	92	-50	610	227	0	92	72	72	344	92	143	142	579699	630	60	
14	-151	960	0	81	60	60	81	-50	610	227	0	81	60	60	344	81	143	142	589701	630	60	
9	-181	860	0	80	60	60	80	-50	610	227	0	80	60	60	344	80	143	142	599703	630	60	
3	-150	662	0	218	152	152	218	-50	610	227	0	218	152	152	344	218	143	142	609711	630	60	
9	-75	524	0	130	100	100	130	-50	610	227	0	130	100	100	344	130	143	142	619711	630	60	
0	-123	147	0	373	373	373	373	-50	610	227	0	373	373	373	373	373	143	142	629711	630	60	
0381	1519																				177941	6033
83	22752																				199216	13746
10349	2535																				499216	13746

177941
199216
499216

FROM JACKSON LAKE WYOMING TO MILLER

M. BK. CLOUGH GRN.	ROBT. CLOUGH	DATE	AM. RAIN	CLOUGHS				BB-C THEO. BFL.	R-C THEO. BFL.	BLACK FOOT TRNER				M. BK. CLOUGH GRN.	ROBT. CLOUGH	DATE	AM. RAIN
				GRDF.	DISCH.	STD.	NOR.			DISCH.	STD.	NOR.	GRDF.				
112	142	19770	600	366	2000	1888	112	1888	1858	366	2000	1888	112	142	19770	600	80
106	156	9765	600	328	1850	1774	106	1774	1724	328	1850	1774	106	156	9765	600	200
140	210	9751	640	341	1640	1500	140	1500	1430	341	1640	1500	140	210	9751	640	560
133	241	109731	630	284	970	837	133	837	729	284	970	837	133	241	109731	630	610
67	152	199723	610	258	722	655	67	655	570	258	722	655	67	152	199723	610	510
19	125	209722	610	263	767	748	19	748	639	263	767	748	19	125	209722	610	510
39	144	219721	630	267	803	764	39	764	659	267	803	764	39	144	219721	630	40
35	136	229719	630	273	860	825	35	825	724	273	860	825	35	136	229719	630	40
21	126	239723	670	291	1040	1019	21	1019	914	291	1040	1019	21	126	239723	670	140
170	269	249715	670	282	950	780	170	780	601	282	950	780	170	269	249715	670	140
74	166	259703	670	232	310	436	74	436	344	232	310	436	74	166	259703	670	140
64	161	269695	640	216	399	335	64	335	238	216	399	335	64	161	269695	640	270
52	145	279695	630	200	318	266	52	266	173	200	318	266	52	145	279695	630	60
46	146	289690	630	192	279	226	46	226	126	192	279	226	46	146	289690	630	60
27	143	299692	630	185	235	208	27	208	92	185	235	208	27	143	299692	630	60
2	15	309693	630	195	289	202	2	202	147	195	289	202	2	15	309693	630	60
5	2	319693	630	195	289	202	5	202	147	195	289	202	5	2	319693	630	60
0	7	329693	630	286	1020	1020	0	1020	917	286	1020	1020	0	7	329693	630	60
0	10	339702	630														

WAR	STB	NOB	WELD MIND LOSS	DRAZ 1726	LAKE MIL	PARLAT.		NSTFCAN.		PR+NSTFCAN.			S.S.F CANAL				MIL. LOW LIFT CAN.				MILNER			MIN. MIL. LOSS				
						GAGE	DISCH.	GAGE	DISCH.	TOTAL	STD	NOB	GAGE	DISCH.	NOB	GAGE	DISCH.	STD.	NOB.	THEO. BAL.	GAGE	DISCH.	STD.		NOB.			
																										DISCH.	DISCH.	
199	2751			9.32	1.81	48	7.15	240	7.15	2100	1667	327	742	1880	-526	2406	1.99	46	22	24	-164	148	11	11	0	175		
303	2717			9.25	1.81	48	7.12	2120	7.12	2168	1651	317	767	2000	-576	2376	2.01	47	23	24	-115	148	11	11	0	126		
393	2737			9.32	1.81	48	7.13	2130	7.13	2176	1659	319	767	2000	-574	2394	2.02	48	24	24	-96	149	12	12	0	108		
470	2692			9.39	1.81	48	7.20	2160	7.20	2208	1694	316	768	2010	-544	2354	2.05	47	25	24	-97	150	12	12	0	109		
576	2634	93		9.44	1.81	48	H.D.	1820	H.D.	1869	1561	307	778	2050	-255	2305	H.D.	36	12	24	-196	148	11	11	0	185		
557	2593	-436		9.50	1.81	48	2.60	432	2.60	480	184	286	798	2150	-73	2223	H.D.	46	22	24	-424	145	11	11	0	-413		
192	2602	-340		9.52	1.81	48	2.63	440	2.63	489	185	303	808	2200	-75	2225	H.D.	36	12	24	-314	148	11	11	0	325		
244	2614	-237		9.54	1.81	48	2.68	453	2.68	501	196	303	808	2200	-85	2285	2.04	49	25	24	-380	148	11	11	0	391		
196	2586	-211		9.45	1.84	48	2.77	478	2.77	526	225	331	808	2200	-61	2261	2.06	49	25	24	-385	148	11	11	0	396		
321	2751	433		9.38	1.84	48	2.76	475	2.76	523	204	319	808	2200	-188	2388	2.07	48	24	24	-361	146	11	11	0	372		
206	2606	75		9.35	1.84	48	2.75	472	2.75	520	216	304	808	2200	-68	2278	2.05	47	23	24	-377	147	11	11	0	388		
235	2605	1		9.36	1.85	48	2.76	475	2.76	523	219	304	808	2200	-77	2277	2.05	47	23	24	-400	147	11	11	0	411		
184	2594	-347		9.31	1.85	48	2.75	472	2.75	520	222	295	802	2170	-62	2232	H.D.	40	16	24	-360	147	11	11	0	371		
310	2550	324		8.52	1.85	43	2.73	467	2.73	515	218	297	763	1980	-249	2229	H.D.	38	14	24	-293	146	11	11	0	304		
295	2525	49		9.04	H.D.	44	2.72	464	2.72	508	214	294	770	2020	-187	2207	2.01	47	23	24	-345	147	11	11	0	356		
445	2585	-56	Set 1	8.99	1.85	48	2.72	464	2.72	512	211	301	767	2000	-260	2260	2.03	48	24	24	-420	146	11	11	0	431		
183	2593	48		8.95	1.85	48	H.D.	1330	H.D.	1378	1076	302	767	2000	-267	2267	2.06	47	23	24	-1015	146	11	11	0	1026		
653	2567	-114		8.93	1.85	48	6.03	1660	6.03	1708	1409	299	768	2010	-234	2244	2.09	47	23	24	-545	146	11	11	0	556		
695	2567	-343		8.78	1.85	48	5.96	1630	5.96	1678	1379	299	767	2000	-244	2244	2.09	47	23	24	-360	147	11	11	0	371		
725	2612	-162		8.73	1.85	48	5.96	1630	5.96	1678	1375	299	767	2000	-244	2244	2.09	47	23	24	-293	146	11	11	0	476		
957	2643	-21		8.72	1.85	48	H.D.	1310	H.D.	1358	1050	305	769	2010	-201	2311	2.10	47	23	24	-395	145	11	11	0	406		
109	2591	9		8.63	1.85	48	2.59	416	2.59	464	162	308	790	2110	-115	2265	2.10	47	23	24	-85	145	11	11	0	-74		
7	2583	72		8.68	1.85	48	2.57	411	2.57	459	162	302	797	2150	-138	2258	2.10	47	23	24	-39	144	10	10	0	-29		
14	2636	-157		9.11	1.85	48	2.47	385	2.47	433	158	301	792	2120	-175	2305	2.09	49	25	24	-38	145	11	11	0	49		
125	2685	250		9.14	1.85	48	2.45	380	2.45	428	126	307	793	2130	-198	2348	2.09	49	25	24	-38	146	11	11	0	49		
41	2679	-27		9.44	1.85	48	2.49	390	2.49	438	115	313	793	2150	-177	2343	2.09	49	25	24	-67	144	10	10	0	-27		
358	2782	-189		9.46	1.85	48	H.D.	289	H.D.	337	126	312	858	2520	-320	2380	2.10	49	25	24	-287	146	11	11	0	298		
143	2657	367		9.38	1.85	48	1.32	0	1.32	0	19	318	892	2700	-347	2323	2.10	49	25	24	-26	154	13	13	0	59		
83	2723	155		9.68	1.85	48	1.32	0	1.32	0	-262	310	881	2670	-279	2351	2.10	49	25	24	-33	213	41	41	0	8		
27	2727	-100		9.76	1.85	48	1.32	0	1.32	0	-270	318	884	2660	-275	2385	2.10	49	25	24	-117	210	39	39	0	156		
253	2733	-90		9.74	1.85	48	H.D.	108	H.D.	156	-163	319	885	2670	-280	2390	2.10	49	25	24	-57	210	39	39	0	96		
381	2729	215		10.14	1.86	49	2.48	416	2.48	465	147	318	884	2660	-273	2387	2.10	49	25	24	-64	162	17	17	0	433		
200	2730	-104		10.71	1.85	48	2.64	459	2.64	507	186	321	867	2570	-161	2409	2.10	49	25	24	-804	184	25	25	0	81		
194	2731	-145		11.00	1.85	48	5.63	1550	5.63	1598	1277	321	863	2550	-140	2410	H.D.	43	43	0	-261	196	31	31	0	-779		
194	2736	-449		10.76	1.85	48	5.99	1700	5.99	1748	1426	322	861	2540	-126	2414	2.13	50	50	0	-408	182	24	24	0	292		
199	2751	115		10.63	1.85	48	5.68	1570	5.68	1618	1294	324	856	2510	-83	2427	2.11	49	49	0	-227	178	23	23	0	432		
960	2770	-177		10.53	H.D.	40	5.57	1520	5.57	1560	1234	326	856	2510	-66	2444	2.10	49	49	0	-309	174	21	21	0	250		
956	2794	135		10.30	DRY	0	5.51	1500	5.51	1500	1171	329	849	2470	-5	2465	2.10	49	49	0	-269	170	20	20	0	410		
993	2757	-520		10.24	DRY	0	H.D.	1050	H.D.	1050	726	324	835	2370	-63	2433	2.09	49	49	0	-281	170	20	20	0	289		
209	2781	-342		10.46	DRY	0	3.65	789	3.65	789	462	327	820	2260	-194	2454	2.08	48	48	0	-107	172	20	20	0	-261		
55	2805	-23		10.16	DRY	0	3.62	786	3.62	786	456	330	816	2240	-235	2475	2.08	48	48	0	-214	170	20	20	0	127		
178	2798	-403		10.33	DRY	0	3.43	716	3.43	716	387	329	808	2200	-269	2467	2.07	49	49	0	-345	168	19	19	0	234		
292	2852	-347		10.32	DRY	0	2.72	492	2.72	492	156	336	802	2170	-346	2516	2.09	49	49	0	-151	167	19	19	0	170		
606	2966	-492		10.22	DRY	0	2.35	401	2.35	401	52	349	802	2170	-447	2617	2.08	48	48	0	-259	168	18	18	0	277		
761	3011	403		9.78	DRY	0	2.00	309	2.00	309	-45	354	783	2080	-577	2657	2.09	49	49	0	-188	160	16	16	0	204		
467	3027	-1382	Oct 1	10.44	DRY	0	1.42	196	1.42	196	-160	356	783	2080	-591	2671	DRY	0	0	0	-284	164	18	18	0	-266		
644	3044	-236		10.64	DRY	0	1.40	193	1.40	193	-165	355	778	2050	-636	2686	DRY	0	0	0	-157	165	18	18	0	-139		
2478		458%																										
8785		18818																										
295	400.185	30076																										

FULL DISCHARGE QUANTITIES ARE GIVEN IN SECOND COLUMN OTHERWISE NOTED AT TOP OF COLUMN

Only stored water quantities are tabulated for the Lorenzo station. Complete segregation of flow would, in this case, involve consideration of all water by-passed through the Great Feeder and this could hardly be shown satisfactorily without the addition of complicated tables to the already voluminous summary herein presented. Losses and gains between the Heise and Lorenzo stations were computed to determine the amounts deducted throughout the season as storage transmission loss and will be discussed further on in this report.

Storage released from the Emma Matilda and Two Ocean Lake Reservoirs is shown under the heading, Twin Lakes.

A record was kept for most of the season of the inflow into the river from the so-called Market Lake Springs, but, as this water is treated as storage used to supply the Sheppard Canal and was discharged at the rate of 5 second-feet or less, the data were purposely omitted from these tabulations.

Attention should perhaps be directed to the partial season records which have been included for the Robertson Station on Snake River. This station was installed about the middle of the summer by the Twin Falls Canal Company under an agreement which provided for its operation by District No. 36 during the balance of the season for the purpose of securing more detailed information about channel losses and gains between the Blackfoot Bridge and Clough stations. Whether or not these data will be of sufficient use in river administration to warrant permanent maintenance of the station has been left for later decision by the Committee of Nine.

The 24 second-feet of normal flow which was credited to the Milner Low Lift Irrigation District from August 10 to September 14 inclusive represents that portion of a temporary transfer from the Long Island Canal which should pass Blackfoot Bridge after the $17\frac{1}{2}$ per cent penalty and 6 per cent transmission loss have been deducted. Because of the involved bookkeeping required for such a long range transfer it seems desirable in the future to limit other transactions of this character to canals within the same transmission loss zone.

Operation of the American Falls Reservoir for the first season introduced new complications and made it necessary to change the methods previously used to segregate the flow past the Neeley gaging station. These changes will be discussed in another section of this report in connection with storage deliveries.

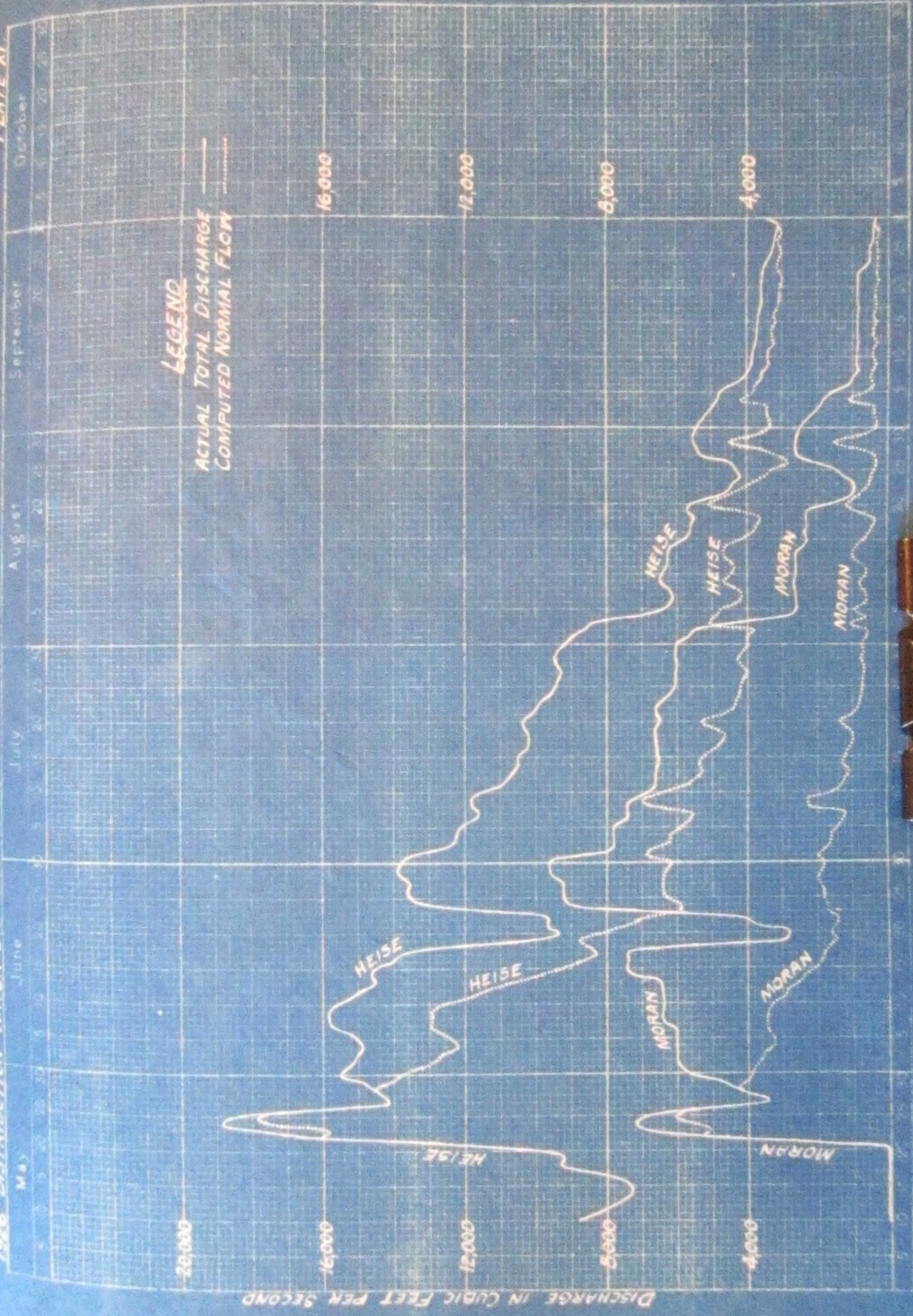
Penalties accruing to Lower Valley canals from exchanges of normal flow for storage and temporary transfers of water have not been separately accounted for in these tables but will also be covered under the heading of storage deliveries.

In most other respects the river data presented herein conform and are consistent with the similar tables contained in former reports.

SEGREGATION OF FLOW

Plate XI shows graphically both the total discharge and the computed normal flow past the Moran and Heise gaging stations during the season of 1926. The difference between the total and normal flow graphs on any date, of course, indicates storage.

HYDROGRAPHS SHOWING TOTAL FLOW AND NORMAL FLOW AT THE MORAN AND HEISE GAGING STATIONS.
 1926 DISTRIBUTION WATER DISTRICT NO. 56
 PLATE XI



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 20 really represent mean quantities for the 24 hour period ending at 4 a.m. on July 21, while the indicated Moran data for July 20 are means for the 24 hour period ending at 4 a.m. on July 20.

While these diagrams are merely a graphical representation of some of the numerical quantities contained in the tables of Plates VIII, IX and X, 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.

The irregularities noted in the Heise normal flow after about August 2 are undoubtedly due very largely to the fact that the single time interval used is too short for proper application during the lower river stages which pertained during the balance of the season. The net effect is similar to that usually experienced on rapid changes of river stage and attributed to increments from or loss to adjacent ground water reservoirs, depending respectively upon whether the river dropped or rose. In reality some of the more pronounced fluctuations are probably due to variable combinations of the two above mentioned factors and actual changes attributable to rains, with the time interval increasing in relative importance as the river stage diminishes.

Total discharges at both stations, with the exception of the period June 18-24 which is accounted for by the normal flow-storage exchange equalization, were more uniform than usual. This was made possible because of the regulatory influence of the American Falls Reservoir.

UPPER VALLEY STORAGE DELIVERIES FROM JACKSON LAKE,
TWIN LAKES & MARKET LAKE,

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 comparatively unknown factors. Normal 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.

The primary object of the investigations conducted during 1924 by Thomas R. Newell and for several years previous by employees

of the U. S. Bureau of Reclamation was to secure a more accurate segregation between stored water and normal flow at the outlet of the reservoir. The data thus secured indicate that the method just described is not strictly applicable under all conditions of river flow and reservoir operation, but hardly suffice as yet to warrant the preparation and adoption of any more equitable plan of division.

The storage transmission loss schedule agreed upon for 1926 (which is the same as that used in both 1924 and 1925) provided for flat deductions of 2.5 per cent between Moran and Heise, 0.5 per cent between Lorenzo and Woodville and 6.0 per cent between Woodville and Blackfoot Bridge, but after fixing a minimum of 3.0 per cent left the actual amount to be deducted for the section from Heise to Lorenzo to be determined by what is called the "two day mean method". Under this method the percentage loss actually applied each day is the mean of the computed losses for the two preceding days as these are evolved from the following equation:

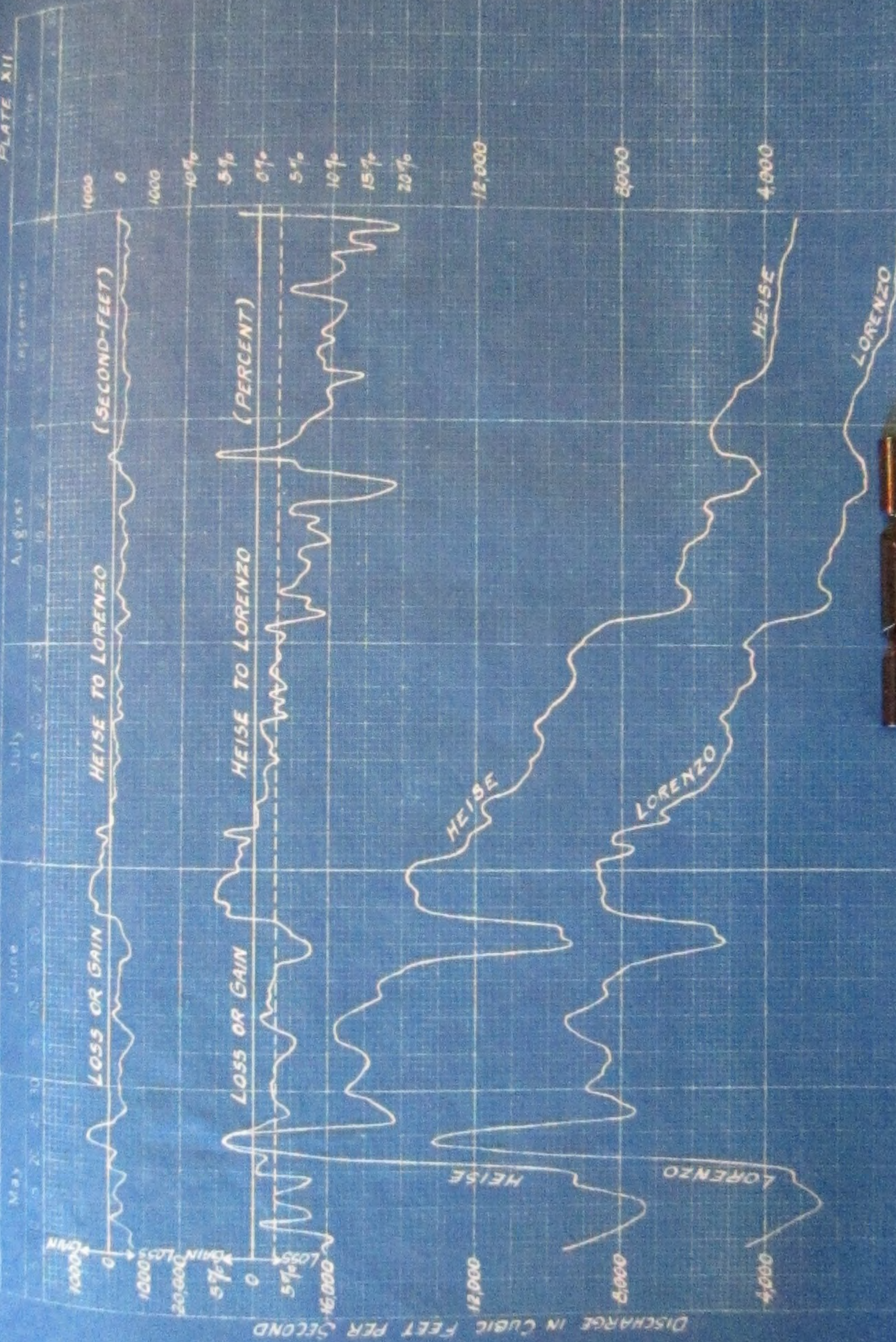
$$\text{Percentage loss} = \frac{\text{actual daily loss}}{\text{Approximate average flow in section}} = \frac{U + T - D - L}{\frac{1}{2}(U + T + L)}$$

Where U equals total flow at upper river station (Heise in this case)
T " inflow from tributary streams entering within section
D " total diversions throughout section
L " total flow at lower river station (Lorenzo)

3.0 per cent, however, was always applied on days for which the mean loss, thus derived, was less than this amount.

Plate XII contains hydrographs for both the Heise and Lorenzo stations together with curves, which exhibit the computed daily losses and gains between the two points, not only in percentage, but also in second-feet. These diagrams have all been adjusted to make them correspond to the nearest Heise dates.

HYDROGRAPHS ILLUSTRATING NET LOSSES AND GAINS BETWEEN HEISE AND LORENZO GAGING STATIONS
1926 DISTRIBUTION WATER DISTRICT NO. 36.
PLATE XII



The pronounced tendency for percentage losses to increase as river discharges decrease, to which attention has been called in former reports, is here again noted. Considering this fact alone we would naturally expect the 1926 losses in this section to be greater than those of the preceding year and almost as heavy as those of 1924. In reality, however, the average applied transmission loss for the entire period of storage delivery was this year only 3.9507 per cent in comparison with 4.1763 per cent in 1925 and 5.2424 per cent in 1924. This smaller loss is thought to be due in part to the transmission of most of the Jackson Lake Storage during the early part of the summer before the very low river stages were experienced and in part to the generally higher ground water levels which prevailed in the early part of the 1926 season. (See pages 44-46 for further discussion of ground water conditions).

Transmission deductions for all storage delivered to canals diverting above the Blackfoot Bridge gaging station were computed upon the basis of losses to Woodville, 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 more than 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 plan would seem to be at least reasonably fair to all concerned. 1926 computations show that upon the basis of the final seasonal loss these canals should have received at their headgates 93.1041 per cent of the stored water turned out for them at Moran.

(REGULAR EXCHANGE) - UPPER VALLEY

Day	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
1	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
2	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
3	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24		
4	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			
5	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24				
6	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24					
7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24						
8	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24							
9	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24								
10	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24									
11	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24										
12	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24											
13	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24												
14	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24													
15	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24														
16	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24															
17	11	12	13	14	15	16	17	18	19	20	21	22	23	24																
18	12	13	14	15	16	17	18	19	20	21	22	23	24																	
19	13	14	15	16	17	18	19	20	21	22	23	24																		
20	14	15	16	17	18	19	20	21	22	23	24																			
21	15	16	17	18	19	20	21	22	23	24																				
22	16	17	18	19	20	21	22	23	24																					
23	17	18	19	20	21	22	23	24																						
24	18	19	20	21	22	23	24																							
25	19	20	21	22	23	24																								
26	20	21	22	23	24																									
27	21	22	23	24																										
28	22	23	24																											
29	23	24																												
30	24																													

The Minidoka and Twin Falls canals were charged with prorata transmission losses to the Blackfoot Bridge Station and on the basis of season deliveries were entitled to receive at their headgates 87.5179 per cent of the amounts released for them at the Jackson Lake outlet gates.

The same daily transmission losses charged against Jackson Lake Storage were applied to stored water released from Emma Matilda and Two Ocean or Twin Lakes, but no losses were charged against the inflow from Market Lake Springs as this water was all diverted again in the immediate vicinity of its point of entrance to the river.

Plate XIII shows 1926 daily and total storage deliveries to Upper Valley canals from both Jackson Lake and Twin Lakes Reservoirs.

Minus quantities listed on this plate represent credits while plus items show charges or deductions. Wherever minus quantities appear in the daily tabulations they indicate credits acquired by the release of normal flow in exchange for storage.

The eleven columns of the tabular summary in left to right order may be briefly explained as follows:

- Column 1. Accumulations from the exchange of normal flow for storage (with single exception described in foot-note).
- " 2. Actual storage (both permanent and temporary) diverted.
- " 3. Penalty charged against all storage rights acquired through the exchange of water.
- " 4. Storage transfers effected upon a head-gate or Woodville River station basis. Plus quantities represent charges and minus quantities show credits.

- Column 5. Algebraic sum of amounts listed in columns 1-4, inclusive. The total of this column shows the net amount of storage actually delivered to upper valley canals at their head-gates during the season.
- " 6. Quantities in column 5 converted into acre-feet.
- " 7. Jackson Lake equivalent of column 6.
- " 8. Jackson Lake ownership right.
- " 9. Jackson Lake equivalent of 1926 American Falls ownership right. (Existing contracts permit upper valley canals owning storage in American Falls Reservoir to exchange for an equal amount at Jackson Lake. Under the 1926 apportionment of the U. S. Bureau of Reclamation each owner of water in the lower reservoir was entitled to receive 6.441752 per cent of the amount to which they would have been entitled had the full capacity of 1,700,000 acre-feet been available).
- " 10. Storage transfers effected upon a Jackson Lake basis (with single exception described in foot-note). Here again the previously outlined significance of plus and minus quantities is applicable.
- " 11. Total Jackson Lake and Twin Lakes season rights after taking into account all water sold or transferred.

Comparison of columns 7 and 11 shows the extent to which 1926 storage rights were actually utilized by or for the benefit of Upper Valley canals. The general tendency towards underdelivery is probably due in part, at least, to the fact that the average season transmission loss between Heise and Lorenzo proved to be somewhat less than had been expected, while the revised ratings used for final computations explain most of the small excess deliveries which are indicated as well as account for some of the discrepancies in the opposite direction.

Another factor, which explains some of the differences between recorded draft and rights, is the storage which was released

for the benefit of Upper Valley canals during August and September but because of fluctuations in river stage and resulting reinstatement of normal flow rights really wasted past Blackfoot Bridge. In ordinary seasons this would have been entirely absorbed by Lower Valley demands but in 1926 the regular Jackson Lake rights of the Minidoka and Milner canals had been exhausted and it was therefore necessary either to charge this surplus to the upper appropriators as storage, in which case a normal flow waste past Blackfoot Bridge would have been noted, or else reinstate normal flow rights as nearly as possible in accordance with priorities and consider the extra water to be storage waste. The latter plan appeared to be the fairest and was therefore adopted but in order to simplify the final record book-keeping a part of this waste was consumed in the payment of temporary transfer penalties which would have been included in the normal flow surplus passing Blackfoot had the other plan been used.

The following summary supplements the data on Plate XIII and completes the accounting for all Upper Valley storage rights in accordance with the methods just described:

	Acre-feet
1. Total 1926 Upper Valley, Jackson Lake and Twin Lakes Rights at reservoirs	147,217
2. Jackson Lake equivalent of not actual use	<u>94,470</u>
3. Difference	52,747
4. Storage remaining in Jackson Lake Reservoir Sept. 27	<u>860</u>
5. Storage released from Jackson Lake but not used in Upper Valley	51,887

6.	Blackfoot Bridge equivalent of item 5	45,410
7.	Blackfoot Bridge equivalent of storage sold by Upper Valley canals for delivery below American Falls	<u>36,892</u>
8.	Difference = Total Upper Valley storage waste past Blackfoot Bridge	8,518
9.	Amount absorbed by temporary transfer penalties less Milnor Low Lift transfer plus Blackfoot Bridge cumulative storage loss (5012 - 1714 + 1039)	<u>4,337</u>
10.	Difference = Net Upper Valley storage waste past Blackfoot Bridge	4,181

Plate XIV contains a summary of all Lower Valley storage or equivalent rights and deliveries and supplements the information contained on Plate XIII.

Daily deliveries to each of the Lower Valley canals are listed on Plates VIII, IX and X.

In former reports a separate tabulation has been included for the purpose of segregating the daily stored water charges between the different sources of supply. Very little additional data of material value is afforded by such a table and for this reason, as well as because of the added complications introduced by the operation of the American Falls Reservoir, it has not been prepared for the 1926 season.

During April when water was being impounded at American Falls some depletion of the Lake Walcott storage resulted. In consequence 106,570 acre-feet rather than the actual maximum recorded amount was fixed as the total 1926 storage to be prorated to the owners of the former reservoir. This factor and the discrepancies arising from the use of two different capacity tables are both cared for in the Lake Walcott-American Falls capacity adjustment item.

TABLE SHOWING SUMMARY OF STORAGE OR
EQUIVALENT RIGHTS AND DELIVERIES
TO LOWER VALLEY CANALS
MAY 1-SEPT 30, 1926 (NEELEY DATES) ON NEELEY
OR HEADGATE DELIVERY BASIS

1926 DISTRIBUTION WATER DISTRICT NO 36.

PLATE NO. XIV

CHARACTER OF RIGHT	MINIDOKA PROJECT	NORTH SIDE CAN. CO. LTD.	TWIN FALLS CANAL CO.	MILNER LOW LIFT IRR. DIS.	TOTAL SEC. FT.	TOTAL ACRE FT.
REGULAR JACKSON LAKE	111703	119507	33788	6619	271617	538744
UPPER VALLEY PURCHASES	13152	3247		2201	18600	36892
EXCHANGE PENALTY	3701	1089	8165		12955	25696
WATER TRANSFER PENALTY	722	212	1593		2527	5012
BLACKFOOT RES. BLACK RIV. DEL.	5042	12679			17721	35149
BLACKFOOT RES. SWANE R. SUBSTN.		11343			11343	22498
AMERICAN FALLS USBR APPORTIONMENT	32846	15390	4583	910	53729	106570
LAKE WALCOTT APR 30-MAY 1 CAP.	50175				50175	99520
NET GAIN NEELEY-MILNER	5142				5142	10199
LAKE WALCOTT AF CAP. ADJ. MT.	539				539	1070
TOTAL	223022	163467	48129	9730	444348	881350
UPPER VALLEY WASTE PAST CLOUGH					2108	4181
TOTAL AVAILABLE					446456	885531
TOTAL ACTUAL DRAFT	228257	159462	37599	9854	435172	863151
UNUSED BALANCE						22380
BALANCE IN AM FALLS RES.						4230
BAL IN LAKE WALCOTT						18150
TOTAL BALANCE						22380

NOTES - AMERICAN FALLS RESERVOIR RIGHTS WERE APPORTIONED ON BASIS OF TABLE SHOWING ZERO CAPACITY AT ELEV. 4292.5 BUT ALL OTHER DATA IN THIS REPORT WERE COMPUTED FROM LATER TABLE WHICH SHOWS ZERO CAPACITY AT ELEV. 4295.66.

STORAGE WASTED PAST MILNER DAM (2140 SEC. FT.) HAS BEEN PRORATED AND CHARGED IN THE ABOVE DELIVERIES, $\frac{5}{11}$ TO THE NORTH SIDE CANAL CO. LTD. AND $\frac{6}{11}$ TO THE TWIN FALLS CANAL CO, BUT WITH THIS EXCEPTION THE ACTUAL DRAFT TOTALS CORRESPOND WITH THOSE SHOWN AT THE BOTTOM OF PLATE X.

All other quantities found on Plate XIV are believed to be sufficiently explained by the headings and notes to make them understandable.

Differences in interpretation of certain contract paragraphs resulted in some controversy during the summer concerning the American Falls rights of the Idaho Power Company but since the latter did not press their claims to the detriment of the irrigation interests and since no storage was released between May 1 and Sept. 30 except for irrigation use, the Power Company rights will not be discussed herein.

All storage delivered to Lower Valley Canals has been computed as the difference between their total draft and the normal flow to which they were entitled under record rights and determined from the amount of the latter passing the Neeley gaging station at a corresponding time. This method has been used for many years but because of the operation of the American Falls Reservoir a new means of determining the normal river flow at Neeley was made necessary.

During the summers of 1924 and 1925 U. S. Bureau of Reclamation hydrographers had been engaged in measuring surface inflow into the reservoir basin. A summary of the results of this work showed that based upon a 10 summer month average 53% of the total inflow between the Clough and Neeley gaging stations was actually measured in 23 or more separate streams.

This work was continued in 1926 by Messrs. Smith and Anderson of the U. S. Bureau of Reclamation, and was checked at frequent intervals during the season by Messrs. Coffin and Judah,

Water District No. 36 hydrographers, also by Messrs. Steward and Haight of the Twin Falls Canal Company. Preliminary discharge summaries were forwarded to the Idaho Falls office every three or four days throughout the summer. These measured totals were then divided by 0.53 to determine the entire inflow between the two base river stations and this in turn was added to the normal flow passing the Clough station to give the normal flow at Neeley 14 hours later. Slight corrections were made every few days to take account of changes in the measured quantities since the last preceding report.

As the season progressed it became evident from unaccounted for gains in the American Falls Reservoir that the 0.53 coefficient was too large to give correct results for 1926 but as there was no assurance that this would continue to be the case throughout the distribution period it seemed desirable to postpone definite readjustments as long as possible.

In a letter sent to all Lower Valley Stored Water Users on July 31, attention was called to the situation and to the probability that credits would be available from this source but, as there appeared at the time to be no particular urgency, distribution of these gains was not made until September 8. By this latter date the amount to be credited had gradually increased to a total of about 31,500 acre-feet of which two thirds was assumed to be attributable to faulty coefficients and one third to bank storage return. Under the distribution then made the Twin Falls Canal Company received a credit of nearly 20,000 acre-feet which

apparently was much more than had been anticipated by them and coming so late in the season was of little benefit, whereas the prorating of even the smaller amount then available, about the middle of August, would have helped materially in the last irrigation of the bean crop.

Too little information is available to make an absolutely equitable segregation of 1926 American Falls Reservoir gains and losses possible. Storage interests should bear the extra evaporation and deep percolation losses but should benefit from the bank storage return while all these are merged with the errors incident to inaccurate normal flow determination as above described.

Study of the past season's data indicates that if the bank storage return can be assumed to exactly offset the excess evaporation and deep percolation losses attributable to the reservoir an average uniform coefficient of 0.499 would have been almost exactly applicable to the Neoley normal flow determination for the months of June, July, August and September. Flood water originating above and at some distance from the reservoir is probably responsible for the materially larger coefficient (0.53) which must be used for the month of May.

While these results appear somewhat inconsistent in comparison with those obtained during the two preceding years it is believed that their use introduces no serious errors and makes the balancing of accounts somewhat easier. Furthermore, the average daily net gain between the Clough and Neoley stations obtained in

this way, as pointed out further on in this report, is consistent with gains noted during previous seasons of similar climatic conditions. For these reasons the computed daily inflow from Clough's to Neeley as shown on Plates VIII, IX and X was obtained from the measured inflow totals as above described by the use of the 1926 coefficients, except that for convenience the inflow was multiplied by the reciprocals of the latter which gradually increased from 1.80 on May 1 to 2.01 on June 1 and each day thereafter throughout the balance of the season.

During the last part of September the Twin Falls Canal Company did not require all the normal flow to which they were entitled and this surplus became available for the use of the Minidoka and North Side canals. These underdrafts on the part of the former continue to show as credits, however, while the use of the water by the latter is reflected in the storage charged against them. For this reason the discrepancies between total storage rights and actual draft as shown on Plate XIV are considerably greater in the case particularly of the Twin Falls Canal Company and the Minidoka Project than would otherwise be indicated.

Lower Valley regulation was materially facilitated by the use of the American Falls Reservoir as an equalizing basin and in consequence no avoidable waste was allowed to pass Milner Dam at any time during the summer. The ordinary leakage through the dam at Milner was prorated in the usual way in proportion to ownership of the structure.

RIVER LOSSES AND GAINS

Losses and gains throughout different sections of Snake River are included in the data contained on Plates VIII, IX and X, 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 XV contains hydrographs of the total flow passing the Heise, Woodville and Blackfoot Bridge gaging stations during the period from May 10 to September 30, together with graphs showing the net losses and gains in the two intervening sections. All are plotted to the same scale and with a time interval allowance to make them coincide with Heise dates.

In general these curves correspond and have the same characteristics as those contained on similar plates in preceding reports. Their greater uniformity and lack of frequent pronounced fluctuations should be noted and attributed chiefly to the more even regulation made possible through the use of the American Falls Reservoir as an equalizing basin.

The average gains and losses in the two sections Heise to Woodville and Woodville to Blackfoot Bridge respectively, differ very little from the means noted for the same sections in 1924.

At different times during the five preceding years nine separate sets of measurements have been obtained covering all surface waste and return flow entering Snake River between the Woodville and Clough gaging stations, all of which have been summarized and discussed in previous reports.

The following tabulation makes available the results of another similar investigation carried on during the low water period of 1926:

<u>Right Bank River</u>				<u>Left Bank River</u>			
<u>Name</u>	<u>Date</u>	<u>Amt.</u>	<u>Name</u>	<u>Date</u>	<u>Amt.</u>	<u>Name</u>	<u>Date</u>
Pugal Gulch	8/30	0.00					
Roadside	"	0.00					
Woodville Bridge -----							
#1	8/30	0.00	#1 (Snake River Valley)	8/30	0.00		
#2	"	1.50	#2	"	0.00		
#3-5	"	0.00					
#6 (Woodville)	"	0.30					
#7	"	0.00					
#8 (New Sweden)	"	0.10					
Lower Sholley Bridge -----							
#10-25	8/30	1.40	#3 (Snake River Valley)	8/30	0.30		
			#4 " " "	"	0.00		
			#5-10	"	0.00		
Firth Bridge -----							
#26 (New Sweden)	8/30	0.00	#11-21	8/30	0.20		
#27-29	"	0.00					
#30 (New Lavaside)	"	0.20					
#31	"	0.30					
#32 (Riverside)	"	0.00					
Porterville Bridge -----							
#33-43	8/31	0.00	#22	8/30	0.30		
#44 (Danskin)	"	0.10	#23	"	0.00		
#45	"	0.00	#24 (Blackfoot Waste)	"	1.75		
			#25 (Blackfoot Sewer)	"	1.00		
Blackfoot Bridge -----							
#46-51	8/31	0.00	#26-31	8/31	0.30		
#52 (Trego)	"	0.30					
#53 (Parsons)	"	0.20					
#54 (Watson)	"	0.00					
#55 (Combined wasteway)	"	12.83					
#55A	"	0.10					
#56 (Peoples)	"	0.30					
#56A	"	0.20					
Blackfoot Gaging Station (Clough's) on Snake River -----							
Total Right Bank		17.83	Total Left Bank		3.85		

These special return flow measurements have been made for the purpose of affording additional information concerning the reasonableness of the 6 per cent which has, for several years, been charged against stored water as transmission loss through this section of the river. The results obtained, however, can hardly be considered as in any sense conclusive because of the effect of preceding river conditions and, when reduced to percentage, of the marked variations introduced by the different amounts of total flow pertaining at the time of the particular investigation. For example; analysis shows actual net differences ranging in amount from an indicated net gain of 43 second-feet up to an average loss of 510 second-feet or from an apparent gain of 1.28 per cent up to a loss of 24.4 per cent. It should be noted also that the largest actual loss which was shown for the first test represents only 6 per cent because the average river flow in the section at that time amounted to about 8500 second-feet while the 24.4 per cent loss which is the result of the 1926 series of measurements corresponds to an actual loss of only 264 second-feet since the average total discharge of the river was then slightly less than 1100 second-feet.

To arrive at really dependable average percentage losses would require carrying on these special measurements continuously (with recording gage records on all important wasteways) for a period of several years. However, the short time tests afford some additional information and, if the 1924 and 1926 series which were made at extremely low river stages (under conditions which do not pertain when any appreciable quantity of storage is being run past Blackfoot) are excluded, indicate that the 6 per cent loss which has been charged is probably not seriously in error.

HYDROGRAPHS ILLUSTRATING NET GAINS AND LOSSES BETWEEN THE BLACKFOOT BRIDGE, ROBERTSON AND CLOUGH GAGING STATIONS
 1926 DISTRIBUTION WATER DISTRICT No. 36
 PLATE XVI.

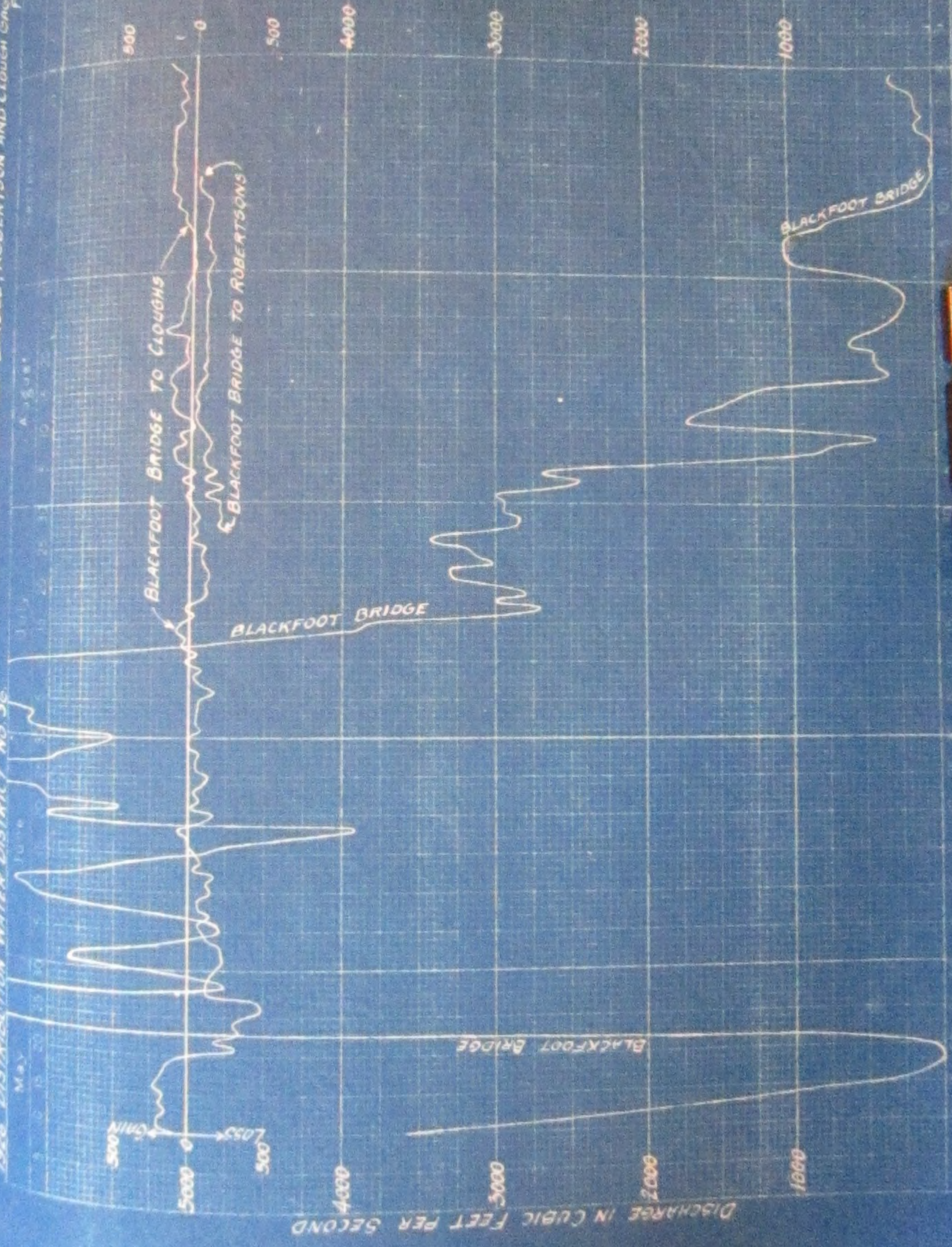


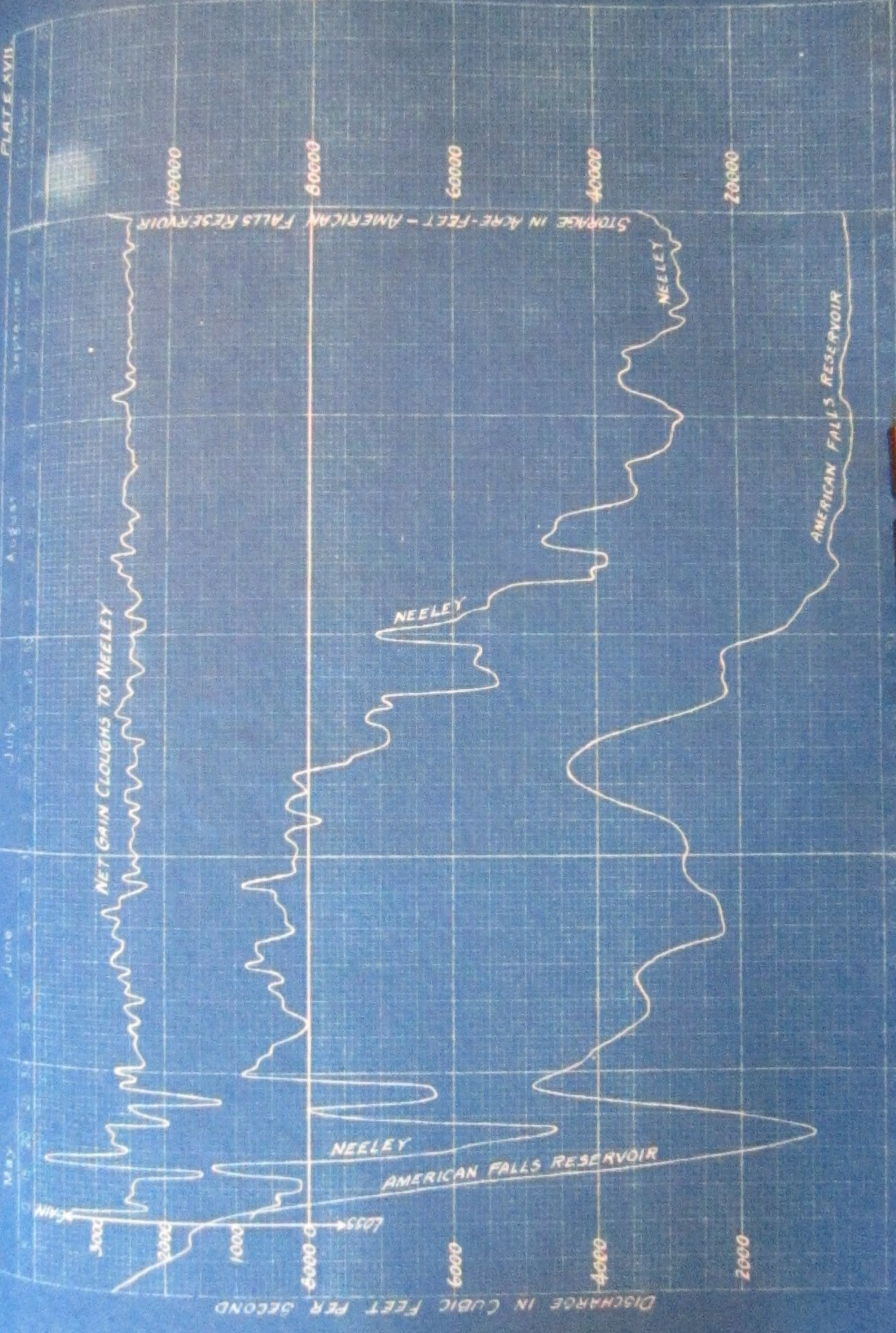
Plate XVI contains a total flow hydrograph for the Blackfoot bridge station together with graphs showing gains and losses between this station and those at the Robertson and Clough ranches farther down the river. These latter show that, while channel losses continue to be noted down as far as the Robertson station, pronounced gains appear between that point and Clough's which at extremely low river stages are greater in amount than the losses which occur in the section immediately above Robertson's.

Plate XVII affords a graphical study of the inflow between Clough and Neeley gaging stations and its relation to changes in the amount of storage impounded in the American Falls Reservoir. The Neeley total discharge hydrograph has been added for the convenience of those who may desire to make comparisons of reservoir inflow and outflow.

The net gain between Clough's and Neeley as shown on this plate is larger than the similarly labeled graph contained in preceding reports by the amount of the Portneuf River discharge past the Pocatello station. Furthermore the computed inflow rather than the computed gain between the two stations is what has been plotted. Under the methods followed these quantities are equal as to total for the season, but the latter would present a much more uneven graph because of irregularities introduced by wind effect, etc. on the reservoir. The average gain here indicated for the period May 1 to September 30 (Neeley dates) is 2542 second-feet or 2435 second-feet if the flow of the Portneuf at Pocatello is deducted. The average net gain on the latter basis for the four months June to September inclusive which corresponds with the mean given in preceding reports amounts to 2456 second-feet.

HYDROGRAPHS ILLUSTRATING NET GAINS BETWEEN CLOUGH AND NEELEY STATIONS
BASE DISTRIBUTION WATER DISTRICT NO. 36

PLATE XVII



In order to afford a comparison, the average gains in second-foot for practically the same period and with the upper Portneuf flow deducted during each of the last eight years are herewith tabulated as follows:

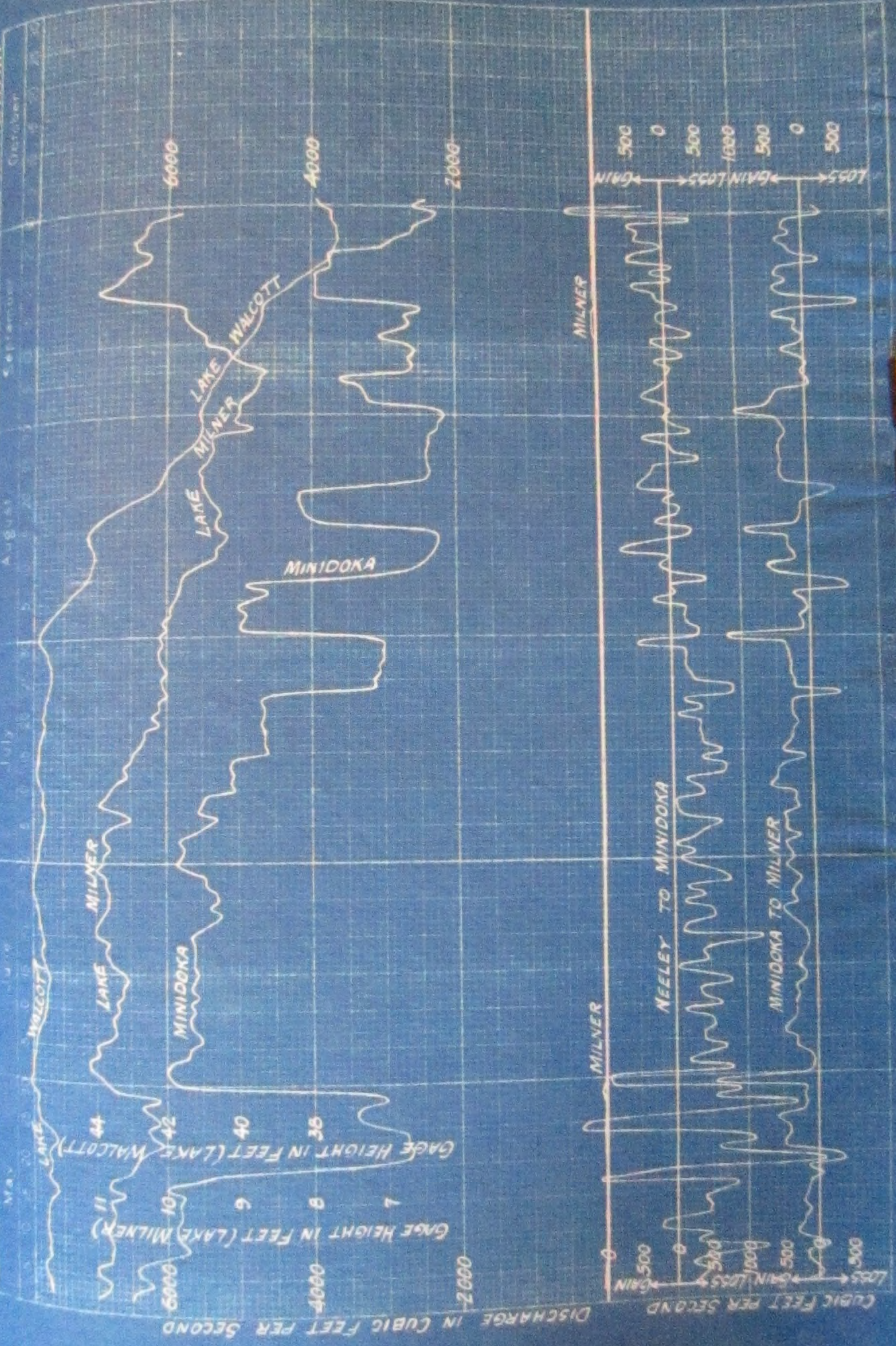
Year	Gain	Year	Gain
1919	2340	1923	2701
1920	2435	1924	2279
1921	2529	1925	2495
1922	2564	1926	2456

8 year average 2475

When we consider the fact that 1926 was, next to 1919 and 1924, the year of greatest deficiency in water supply the mean of 2456 second-foot appears to be somewhat larger than might be expected. Considerably more water was diverted from Blackfoot River in 1926, through the recently enlarged canal system of the U. S. Indian Irrigation Service for application to Reservation lands adjacent to the American Falls Reservoir basin, than in any previous year, hence the return from this source was undoubtedly greater than ever before. With these facts in mind the results appear very reasonable and further substantiate the previously described methods used herein for the determination of normal flow at Noeloy.

Plate XVIII shows net gain or loss graphs for the two sections between the Noeloy and Minidoka and the Minidoka and Milner gaging stations respectively. It also includes curves showing the fluctuations in water surface elevation at both Lake Walcott and Lake Milner, together with hydrographs for the river stations below the Minidoka and Milner dams. All these are plotted to coincide with Lake Walcott or Minidoka dates.

HYDROGRAPHS ILLUSTRATING NET LOSSES AND GAINS BETWEEN NEELEY AND MILNER GAGING STATIONS
 1926 DISTRIBUTION WATER DISTRICT NO. 36.



The flow past Milner Dam was limited at all times during the summer to leakage and was so small in amount as to be almost undecipherable on the scale of these diagrams.

The general trend of the gain or loss curves, as well as the irregularities noted therein, differ but little from those of former years and can probably be similarly explained.

The average net loss for the entire season for the section from Neeley to Minidoka amounted to 197 second-feet while for the corresponding period the average net gain recorded between Minidoka and Milner was 230 second-feet, or a mean daily gain for the combined section of only 33 second-feet. This is by far the smallest net gain recorded for this portion of the river during any one of the last eight seasons and seems to indicate unusual conservation of water on the Minidoka Project.

Most of the more pronounced irregularities in the two gain or loss graphs are probably due to (1) in-applicability at certain river stages of the single time interval used; (2) wind effect on the ponded water of Lakes Walcott and Milner; (3) increase or decrease of Lake Milner storage which was not taken into account in the computations.

NORMAL FLOW COMPARISON

The purpose of Plate XIX is to afford a condensed comparison of the normal flow water supply available during the respective irrigation seasons 1919-1926 for the so-called Idaho Falls area. It consists of a table showing by months the principal component parts which make up the normal flow of Snake River and the extent to which water of this character

SUMMARY BY MONTHS OF NORMAL FLOW CONDITIONS BETWEEN THE HEISE-REXBURG AND BLACKFOOT GAGING STATIONS IRRIGATION SEASONS 1919-1926.

IRRIGATION DISTRIBUTION WATER DISTRICT NO 36

PLATE NO. XIX

YEAR	HEISE NOR. FLOW	REXBURG	BLACKFOOT RIVER	RETURN FLOW HEISE TO BLACKFOOT	NORMAL FLOW GAINS FROM STORED LOSS	TOTAL NORMAL FLOW SUPPLY	TOTAL DIVERSIONS HEISE TO BLACKFOOT	STORED DIVERSIONS HEISE TO BLACKFOOT	NORMAL FLOW DIVERSIONS HEISE TO BLACKFOOT	BALANCE AT BLACKFOOT STATION	NORMAL FLOW PASSING BLACKFOOT STATION
------	-----------------	---------	-----------------	-----------------------------------	---------------------------------------	-----------------------------	--	---	--	---------------------------------	--

JUNE

1919	241439	22477	400	-18994	16728	262050	264752	10433	254319	7731	7731
1920	552010	84910	3205	-14579	0	625546	310026	0	310026	315520	315520
1921	683677	153110	5039	-33854	0	807972	277462	0	277462	530510	530510
1922	595489	113110	8190	-2304	0	714485	331545	0	331545	382940	382940
1923	482579	90200	11597	23918	0	608294	262414	0	262414	345880	345880
1924	503207	15476	201	10631	4577	334092	233547	-66484	300031	34061	34061
1925	499874	123010	4830	25290	0	653004	314594	0	314594	338410	338410
1926	273756	24483	78	12507	14003	324827	271980	-29310	301290	23537	23537

JULY

1919	121226	21652	14	-4693	12321	150520	180218	35521	144697	5823	5823
1920	353997	31670	4810	8812	6048	405337	317285	7089	310196	95141	95141
1921	308767	30480	3213	5651	7803	355914	323826	11031	312795	43119	43119
1922	297376	31066	6471	25067	10796	370775	321988	4681	317307	53468	53468
1923	365108	28661	5864	22459	10881	432973	328971	4020	324951	108022	108022
1924	171278	17345	655	23098	9853	222229	255842	39689	216153	6076	6076
1925	481518	82730	4470	38754	7175	564647	331306	3577	327729	236918	236918
1926	161280	28155	54	18374	14360	222223	243236	24417	218819	3404	3404

AUGUST

1919	98839	19894	78	3938	5123	127872	129054	2217	126837	1035	1035
1920	177244	24553	5266	34866	6390	248319	259201	25851	233350	14969	14969
1921	182975	35843	8209	29756	5620	262403	260670	10608	250062	12341	12341
1922	192659	34222	6897	37086	7071	277935	252849	15156	237693	40242	40242
1923	178904	28659	5979	35700	11008	260250	265384	23833	241551	18699	18699
1924	101953	25686	16	13484	6060	147199	210169	67074	143095	4104	4104
1925	213661	45400	5963	32383	15047	312454	281504	3753	277751	34703	34703
1926	127966	28940	134	14822	5264	177126	198605	23454	175151	1975	1975

SEPTEMBER

1919	87115	22501	345	2234	0	112195	107517	0	107517	4678	4678
1920	66389	21130	2290	10585	521	100915	71638	0	71638	29277	29277
1921	129235	50960	4525	26655	184	211559	149132	0	149132	62427	62427
1922	133751	39758	1996	15950	0	191455	142769	0	142769	48686	48686
1923	120623	30825	3798	23299	5571	184116	194718	22851	171867	12249	12249
1924	87479	24983	503	15364	1890	130219	141596	15613	125983	4236	4236
1925	142414	56000	9268	23884	2280	233846	150283	0	150283	83563	83563
1926	95080	29468	1064	10731	2172	138515	142137	4869	137268	1247	1247

NOTES

ALL DISCHARGE QUANTITIES LISTED IN SECOND FEET
THEORETICAL; SEE TEXT FOR EXPLANATION.
INCLUDES EMMA, MATILDA AND TWO OCEAN LAKE STORAGE.
RECORDS FOR SEPTEMBER 1-15 (INCLUSIVE) ONLY.
RECORDS FOR SEPTEMBER 1-28 (INCLUSIVE) ONLY.

is used in the territory between the Heise and Roxburg gaging stations at the upper end and the Blackfoot or Clough station at the lower end of this section.

The quantities listed are all summarized from the more extensive river data tables contained in District No. 36 Water Distribution Reports. Time intervals have been adjusted to correspond as nearly as practicable to Heise dates.*

The following brief explanation which is almost identical with that contained in the 1925 report is included for the convenience of the reader:

- Columns 1-4 Sufficiently described by headings.
- Column 5 Net gain in the section. To be complete it should probably have added to it the quantities contained in the same lines in Column 6.
- Column 6 If the storage transmission loss is correctly determined, any indicated normal flow gain from that source is really additional return flow. The quantities shown in this column reflect changes in transmission loss schedules which should be taken into account in comparing the data for different years.
- Column 7 The algebraic sum of the quantities listed in the five preceding columns.
- Column 8-10 Headings afford sufficient explanation.
- Column 11 "Total Normal Flow Supply" less "Normal Flow Diversions Heise to Blackfoot."
- Column 12 Equivalent to column 11 on which it affords a check, as the results here given for all years except 1924, 1925 and 1926 were taken direct from the river data sheets. Because of the use of the Blackfoot Bridge rather than the older Blackfoot or Clough station as an adjustment point, theoretical rather than actual totals must be used for the latter point in these three years if a check on column 11 is to be secured.

*1922 and 1923 reports erroneously state that these records have been adjusted to correspond with actual canal diversion dates.

The 1924 and 1926 segregations of diversions as between stored water and normal flow are complicated by the exchanges which were made. For example, the minus storage shown as being diverted during June of these years represents the excess of the normal flow accepted for exchange over actual storage diversions while the normal flow shown as diverted in the same month very evidently is a theoretical rather than an actual quantity.

The analysis of 1926 conditions afforded by this comparative summary illustrates very plainly certain more or less pronounced peculiarities, some of which have already been mentioned.

(1) The total normal supply for the months of June and July was less than in any other year except 1919 while for August and September and for the four month period it was less than in any other year listed except 1919 and 1924.

(2) The return flow entering between Heise and Blackfoot was, with two exceptions, the largest of record for the month of June but decreased in amount in comparison with other years until September when it was, with one exception, the least of record.

(3) The combined total diversions for the entire four months were less than for any of the other years shown except 1919 and 1924 and were only slightly larger than the latter year.

(4) Total normal flow diversions between Heise and Blackfoot, except for 1919 and 1924, were the smallest recorded for July, August and September during the eight year period.

(5) Less normal flow passed Blackfoot during the four months tabulated than in any other year except 1919.

1926, therefore, must be classed as a low water year similar in many respects to 1924, although in general it afforded a somewhat better irrigation water supply than the latter.

GROUND WATER

In connection with the Mooker investigation, records were maintained during the 1923 irrigation season on 134 wells distributed over what was designated as the Snake River Cone -- a triangular area extending in a general northwesterly direction from an apex at the Hoise gaging station.

The ground water levels throughout this triangle are believed to have a material influence not only upon the river losses between the Hoise and Lorenzo gaging stations, but also on the amount of return flow noted as entering between Lorenzo and Woodville. For this reason it seemed advisable to secure additional observations during subsequent seasons. Because of the more intensive regular work required during the water shortage year of 1924 only one set of measurements was then obtained but in 1925 records were secured once each month from May to September inclusive. In 1926 from three to five wells (27 in all) were selected in each of the following described six groups and were measured once each month from June to September inclusive.

Group No. 1.

Wells located on the south side of the Great Feeder Canal and East of the Yellowstone Branch of the O.S.L.R.R.

Group No. 2.

Wells located on the south side of the Great Feeder Canal and west of the Yellowstone Branch of the O.S.L.R.R.

Group No. 3.

Wells located on the north side of Snake River between Heise and the Yellowstone Branch of the O.S.L.R.R.

Group No. 4.

Wells located between Snake River and the Great Feeder Canal and east of the Yellowstone Branch of the O.S.L.R.R.

Group No. 5.

Wells located between Snake River and the Great Feeder Canal and west of the Yellowstone Branch of the O.S.L.R.R.

Group No. 6.

Wells located on the north side of Snake River and west of the Yellowstone Branch of the O.S.L.R.R.

This segregation corresponds to that described in preceding reports but, because all the wells were not measured, 1926 average results cannot consistently be plotted and shown on the same graphs which were used in the 1925 report.

Plate A contains similar diagrams based upon mean results obtained from water level observations at the smaller number of wells for which records are available during each of the last four years. While these necessarily afford less dependable results the general trend and characteristics of ground water changes are almost as well indicated and will be briefly discussed.

In general, the curves which show the greatest fluctuations are those for areas where the wells are the deepest, while the flat curves of groups 5 and 6 cover districts where the wells are comparatively shallow and where sub-irrigation is practiced.

SHOWING PROGRESSIVE CHANGES IN GROUND WATER LEVELS ON 50-CALLED HEISE-LORENZO CONE 1923-1926
 PLATE NO. A
 236 DISTRIBUTION WATER DISTRICT NO. 36



June readings show uniformly higher and both August and September likewise indicate lower water table elevations in 1926 than in any of the other three years. This condition helps materially to explain the losses noted between the Heise and Lorenzo gaging stations and the Heise-Woodville return flow variations to which attention has previously been called herein.

The great value of early irrigation for the specific purpose of increasing ground storage is also evidenced.

WATER DISTRIBUTION AND HYDROMETRIC WORK IN THE SPRINGFIELD - STERLING SECTION.

Between the irrigated lands of the Aberdeen-Springfield system and Snake River there is a comparatively narrow strip of land, part of which has for many years been irrigated while a smaller portion has gradually been put under irrigation since the construction and coincident with the operation of the Aberdeen-Springfield canal.

The water supply for the first developed portion of this area comes from what are known as Danilson, Crystal, Hull and McTucker Springs and from Boone Creek, a short spring fed stream. Rights to the use of this water were granted in the so-called Stufflebeam decrees of 1902 and 1908 and in the regular 1910 Snake River decree. Most of these rights antedate the oldest of those held by the larger lower river canals which, under the Foster decree, have a priority of October 11, 1900.

The other and smaller area depends for its water supply upon the smaller Colborn, Alkali and Artesian Springs or Creeks which were either non-existent or were so small as to be of no material

consequence prior to the irrigation of Aberdeen-Springfield Company lands. Use of water from these latter sources depends for its authorization upon permit or license rights of comparatively recent date.

Prior to 1926 no regulation of diversions had ever been attempted in this Springfield-Sterling section for the reason that the net loss of water resulting from illegal use was believed to be so small as to make the expense of the work unjustifiable.

When a demand was made by the Twin Falls Canal Company under date of March 15, 1926 to have all these diversions regulated during the subsequent irrigation season it, therefore, became necessary to establish gages, make preliminary measurements and otherwise prepare for this work.

This early season investigation and construction was begun by Mans H. Coffin during the latter part of April. C. T. Judah replaced Mr. Coffin about May 20 and remained in direct field charge of both regulation and hydrometric work until August 31, by which date the use of water for irrigation had decreased to such an extent as to make daily records no longer warranted. Local headquarters of these men were maintained at Sterling, Idaho.

Practically all of the canals in this section proved to be short and of small capacity, while in several cases individual holdings were irrigated from more than one ditch. In fact under the existing decrees it was not only possible but was common practice for one or two users to divert their rights through as many as three different ditches with no limitation other than as to total amount.

This situation together with the fact that the irrigators had never before been subjected to restrictions of any sort made the work of regulation rather difficult. The deputy water master was several times threatened and on one occasion assistance from the sheriff's office was requisitioned.

Regulation was of little real value after the temporary injunction of June 3, to which reference has already been made (see page 17), became effective, but records of the amount diverted by each canal were secured throughout the balance of the season. These are summarized on Plates XX and XXI. Data for the first half of May and for the month of September are partially estimated or interpolated but the information included for the balance of the five months period is based upon daily observations.

WATER DISTRIBUTION AND HYDROLETRIC WORK IN THE HENRYS FORK - FALL RIVER - TETON AREA

The position of hydrographer and deputy water master in direct charge of hydrometric work and water distribution in the so-called North Fork section was once more filled by C. A. McClelland who was also appointed as Special Deputy to supervise the delivery of stored water from Henrys Lake Reservoir. All other deputies and assistants working in this area reported to and received their instructions from him, while he in turn worked under general orders issued from the office at Idaho Falls.

Summer headquarters for this work were maintained in the room formerly occupied by the County Surveyor at the Court House, St. Anthony, Idaho, which was made available through the courtesy of the Fremont County Commissioners.

The following abstract from a report prepared by Mr. McClelland affords a brief general summary of the work in this part of District No. 36:

Canal and river measurements, gage readings and minor repairs to station equipment as usual occupied the time of the available personnel during the early part of the season.

John H. Reed assisted with this work beginning May 4 and filled the combined position of hydrographer and deputy water master for the Teton River division throughout the balance of the season.

Regular daily gage readings and reports were initiated May 20 and maintained until September 30.

While stream discharge even during the early part of the season was below normal, it was somewhat better sustained than in 1924. By June 14, however, the entire available normal flow was being utilized and Henrys Fork was practically dry immediately below the diversion dam of the Consolidated Farmers Canal. For several days thereafter it was necessary to cut off decreed rights beyond or in advance of the main Snake River regulation but beginning about June 20 and continuing through the remainder of the summer the restrictions imposed by the latter also governed diversions from Henrys Fork and Fall River.

Fortunately, because of the large carry-over from the preceding year and the settlement of most of the right of way disputes, more storage was available in Henrys Lake Reservoir than had ever before been impounded there. Slightly more than 10,000 acre-feet of this water was sold to non-stockholder canals but the supply was not sufficient to fill all applications of this character. Furthermore, the limited flow of Fall River made it impracticable to furnish water to canals on that stream through exchange, in the amount and to the extent desired.

Temporary transfers which were again permitted under the final river operation agreements totalled nearly 40,000 acre-feet for the season in spite of opposition to this practice on the part of some of the canals in this area.

Normal flow was better sustained than in either 1924 or 1919 and this fact together with the supplemental water which was procurable either by storage purchase or through temporary transfers reduced prospective crop losses very materially.

The need for a storage reservoir on Upper Fall River was again evident and was undoubtedly impressed upon the U. S. Senate Public Lands Committee members and others who visited this section August 17-18 and conducted a hearing at St. Anthony on the latter date.

DAILY DRAINAGE IN SECOND FEET OF CANALS DIVERGING FROM HENRYS FORK AND TRIBUTARIES FOR MAY 1926

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	TOTAL
YELLOWSTONE	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
HARLIGSFELD	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
MARYSVILLE	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
TOTAL DIV ABOVE SQUIRREL	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
FARMERS OWN	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
ENTERPRISE	140	141	142	141	140	139	138	137	136	135	134	133	132	131	130	129	128	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113
BELL RIVER	315	320	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323	323
HUBBE	11	11	12	11	11	10	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
CHESTER	75	78	80	78	75	73	70	68	63	58	59	60	62	63	64	66	67	68	70	72	73	72	76	80	89	62	63	62	62	62	62	62
SILKEY	23	24	25	26	27	28	28	28	28	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29	29
CUAR	25	26	27	28	29	29	30	31	33	35	34	34	33	32	32	31	31	30	32	33	34	34	33	33	33	33	33	33	33	33	33	33
WHITE	5	5	5	5	6	6	6	6	5	4	3	3	3	2	2	3	3	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
TOTAL DIV SQUIRREL TO CHESTER	599	611	620	618	617	614	605	576	581	585	596	610	621	611	616	637	648	652	670	697	716	715	718	740	731	701	700	700	701	701	701	701

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	TOTAL
DEWEY	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18
LAST CHANCE	63	64	65	64	64	63	62	62	61	60	60	59	59	58	58	57	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
ST ANTHONY UNION	557	556	555	553	551	549	548	546	544	542	545	543	540	535	536	538	536	534	533	536	533	535	532	528	526	525	524	523	522	521	520	519
FARMERS FRIEND	856	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855	855
TWIN GROVES	156	160	163	169	170	172	173	174	176	177	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176
SALEM UNION	227	225	222	220	221	221	222	223	223	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224	224
TOTAL DIV ASHTON TO ST ANTHONY	1877	1878	1880	1879	1879	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878
EGIN	354	353	351	350	349	349	349	348	349	350	351	352	349	346	348	350	346	342	340	347	344	340	336	332	324	316	314	312	310	308	306	304
ST ANTHONY UNION FEEDER	110	109	107	106	104	103	101	100	100	100	99	99	98	96	95	94	92	90	89	87	85	86	83	83	83	82	82	80	80	80	80	80
INDEPENDENT	352	354	356	357	359	349	349	329	330	331	332	333	330	326	323	320	324	347	344	342	342	331	333	311	296	231	235	263	311	306	295	285
CONSOLIDATED FARMERS	170	175	180	184	196	207	219	230	242	247	252	256	261	266	270	274	278	282	271	260	248	235	216	204	201	201	201	201	201	201	201	201
TOTAL DIV ST ANTHONY TO RENO	586	591	594	597	598	598	598	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597	597

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	TOTAL
SIDDOWAY	180	180	180	180	182	176	169	162	156	149	143	142	140	139	137	135	134	133	132	131	130	129	128	127	126	125	124	123	122	121	120	119
WILFORD	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
TETON IRRIGATION	18	19	20	21	22	20	18	16	13	11	9	11	12	14	16	17	19	19	19	20	20	21	21	21	21	21	21	21	21	21	21	21
GOOD LUCK	10	11	12	12	12	10	17	19	21	25	28	29	30	30	31	32	33	34	36	37	37	37	36	36	36	36	36	36	36	36	36	36
PIONEER	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
STEWART	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28
PINCOCK BYINGTON	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42	42
PINCOCK GARNER	820	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830	830
TETON ISLAND FEEDER	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	9	9	9
MOXANA	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93	93
ISLAND HARD	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
WOODMANSEE JOHNSON	40	45	45	45	45	44	44	43	42	41	40	38	41	45	48	51	55	58	54	53	54	54	54	54	54	54	54	54	54	54	54	54
CITY OF HEKIBURG	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189	189
HEKIBURG IRRIGATION	983	947	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981	981
TOTAL DIVERSIONS	180	180	180	180	182	176	169	162	156	149	143	142	140	139	137	135	134	133	132	131	130	129	128	127	126	125	124	123	122	121	120	119

DAILY DISCHARGE IN SECOND FEET OF CANALS DIVERTING FROM HENRY'S FORK AND TRIBUTARIES FOR SEPT 1926.

FALL RIVER CANALS

YELLOWSTONE	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	
MARRIGFIELD	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	84
MARYSVILLE	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	
TOTAL DIV ARIVE SQUIRREL	0	0	0	0	0	4	11	17	18	18	18	19	21	21	21	21	21	22	27	27	31	13	0	0	8	9	9	10	19	25	392	
FARMERS OWN	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	
ENTERPRISE	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	
BELL RIVER	2	2	2	1	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	
FALL RIVER	235	236	28	0	0	136	240	79	240	736	8	238	226	211	211	209	209	211	215	222	222	222	222	222	222	222	222	222	222	222	222	
MCBIE	2	2	2	2	3	4	2	9	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
CHESTER	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	
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	
CURR	17	18	18	17	18	16	14	14	14	14	14	15	15	15	15	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
WHITE	2	1	2	3	4	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	
TOTAL DIV SQUIAR TO CHESTER	758	759	57	22	25	160	259	103	262	270	48	272	263	267	292	300	312	318	316	312	292	241	301	294	297	289	299	302	295	294	294	719

HENRY'S FORK CANALS

DEWEY	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	
LAST CHANCE	0	12	11	12	12	12	12	12	12	12	11	10	10	11	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	341
STANTHONY UNION	94	108	94	268	268	268	252	254	258	251	254	249	251	235	230	229	229	222	225	222	226	227	217	215	222	222	222	222	222	222	1099	
FARMERS FRIEND	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	
TWIN GROVES	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
SALEM UNION	0	4	40	40	40	40	40	31	36	37	37	35	93	94	100	100	101	104	104	92	84	82	82	82	79	85	76	0	0	0	1923	
TOTAL DIVAWTON TO STANTHONY	318	397	403	330	365	368	399	342	347	391	392	373	409	380	380	401	402	393	395	363	352	363	362	375	369	376	344	274	219	233	6210	
EB/N	187	187	185	187	187	184	187	150	155	153	105	122	104	103	111	110	111	105	102	103	111	111	114	111	111	111	108	111	110	110	3949	
STANTHONY UNION FEEDER	59	57	57	59	60	60	55	58	55	54	59	57	54	49	42	42	41	41	39	41	42	42	42	43	43	42	43	41	41	41	1499	
INDEPENDENT	189	193	183	189	187	131	136	148	177	183	172	172	181	183	185	181	139	136	136	134	136	121	121	123	100	119	101	106	104	106	4432	
CONSOLIDATED FARMERS	96	98	98	99	99	99	96	98	98	95	95	96	95	96	94	91	93	93	93	95	75	71	69	69	71	94	96	95	95	90	2601	
TOTAL DIV STANTHONY TO REAR	531	535	523	534	533	474	469	464	486	486	431	447	434	411	434	384	376	378	378	353	360	343	343	345	330	348	347	343	304	275	10480	

TETON RIVER CANALS

JUDDEWAY	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	
WILFORD	4	2	2	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	44	
TETON IRRIGATION	73	74	73	74	58	63	63	62	61	67	55	31	38	38	38	38	38	38	38	38	38	40	40	40	43	43	43	43	43	43	1485	
GOOD LUCK	34	29	29	38	48	38	46	44	44	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	46	1006	
PIONEER	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	9	323	
STEWART	12	12	11	10	10	11	14	13	11	10	10	10	12	12	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	379	
PINCOCK BYINGTON	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	9	213	
PINCOCK GARNER	5	5	5	5	4	5	6	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	168	
TETON ISLAND FEEDER	8	8	8	9	9	9	9	10	10	10	9	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	3304	
ROXANA	112	108	106	102	96	104	112	108	100	93	94	104	104	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	112	3304
ISLAND WARD	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	112	
WOODMANSEE JOHNSON	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	
CITY OF REIDBURG	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	167	
REIDBURG IRRIGATION	177	177	176	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	174	5281	
TOTAL DIVERSIONS	745	402	392	379	343	310	304	411	315	361	357	343	373	368	371	373	389	374	379	377	370	346	345	345	348	346	343	342	347	345	10470	

Similar low water conditions pertained on Teton River. The north fork of this stream was dry below diversions from and after June 3, while the south fork was likewise dry except for return flow after about June 10. Disputes concerning the division of water at the forks of this stream were largely averted by the employment of a watchman for the work of maintaining the relative flow in the two branches upon an equitable basis. A new and improved type of dam is understood to have been constructed at this point after the close of the 1926 irrigation season.

Regulation demands during September were somewhat less exacting than during the early part of the summer and for this reason it proved practicable to supervise the construction of a new concrete recording gage shelter at the station on Henrys Fork near Rexburg in addition to the more routine work.

While the deficiency in available water supply undoubtedly reduced the total crop production of this area to a considerable extent and the losses incurred by farmers under some of the canal systems were really serious, the net returns were generally much better than could reasonably have been expected during the early part of the season.

Actual deliveries to the canals diverting from Henrys Fork, Fall and Teton Rivers are shown on Plates XXII, XXIII, XXIV, XXV and XXVI. These are based upon daily observations from and after May 20 but discharges prior to that time have necessarily been partially estimated or interpolated. In the matter of recomputation of data as well as in other respects, the records here presented correspond and are consistent with those contained on Plates III, IV, V, VI and VII.

Plates XXVII and XXVIII 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 in such tables.

The time interval basis used therein for the presentation of river records is as follows:

VS ON HENRY'S FORK AND TRIBUTARIES

PLATE NO. XXVII

CHESTER				HENRY'S FORK										TETON RIVER									
DATE	GAGE	DISCH	GAIN ABOVE CHESTER	ASHTON + CHESTER	DIVERS ABOVE ST ANTH		THEO BAL AT STANTH	STANTHONY STA				GAIN ASH TO STANTH	DIVERS BELOW ST ANTH		THEO BAL BELOW DIVERS	EST BAL BELOW DIVERS	STANTH. STA.			THEO BAL MIN IN STANTH + TETON RIVER	HEN FK NR READG	GAIN BELOW ST ANTH	
					STOR	NOR		GAGE	DISCH	STOR	NOR		STOR	NOR			STOR	NOR	GAGE				DISCH
MAY 20	3.89	1850	910	3560			1310	2250	478	2090			2290	-160	1041	1049	191	1730	1144	136	1185	1270	85
21	3.84	1880	771	3660			1305	2354	472	2090			2490	135	1019	1071	254	1710	1294	416	1387	1390	3
22	3.85	1890	317	3670			1252	2358	428	2400			2410	52	1007	1408	248	1670	1108	562	1265	2250	23
23	4.02	2070	683	3730			1206	2524	436	2480			2280	-218	1008	1272	230	1540	1099	441	1713	2160	447
24	4.09	2100	323	3560			1140	2360	442	2400			2560	36	993	1567	250	1680	1151	579	2096	2490	394
25	3.81	1840	132	2990			1105	1885	424	2340			2710	350	902	1808	253	1780	1116	614	2472	3840	368
26	3.07	480	-328	3040			1100	1940	406	2370			2340	435	871	1469	232	1490	1063	437	206	2600	624
27	3.25	1420	295	2910			1172	1733	397	2300			1570	30	852	1118	183	1230	937	273	1291	3120	729
28	3.38	1540	236	2990			1187	1803	392	2300			1460	67	838	912	168	1130	992	138	1050	1810	760
29	3.39	1650	291	2990			1255	1735	336	2300			1700	-105	821	769	164	1110	980	130	329	1560	671
30	3.45	1820	360	2760			1216	1544	388	2300			1600	-135	807	649	165	1100	1052	48	691	1440	749
JUN 1	3.01	953	-20	2433			1192	1241	375	2330			1630	36	896	734	163	1100	1039	61	795	1450	685
2	2.87	870	45	2280			1222	1048	365	2270			1480	239	893	587	156	1060	1003	57	644	1400	768
3	2.68	652	23	2114			1133	931	357	2160			1270	112	850	450	144	994	952	42	462	1220	758
4	2.43	470	-42	1900			1109	791	349	2050			1160	179	861	299	141	976	867	19	318	1070	752
5	2.50	506	118	1896			1101	795	341	2070			1050	259	851	199	138	965	939	26	325	945	720
6	3.16	1090	693	2470			1071	1399	339	2036			947	152	837	110	137	963	937	2	118	821	703
7	2.84	775	-279	2105			1222	883	362	2240			936	-463	817	119	143	999	1019	-20	39	730	681
8	2.69	645	-15	1895			1157	828	360	2210			1240	387	813	427	148	1030	1041	-1	416	934	518
9	2.70	645	5	1925			1061	914	348	2060			1210	382	780	430	149	1060	1056	6	474	1020	596
10	2.36	397	-116	1737			1006	731	353	1910			1050	136	788	267	154	1070	1096	-26	241	956	715
11	1.98	210	-290	1510			854	656	354	1730			1130	474	705	425	153	1100	126	-26	351	1050	669
12	1.86	187	-78	1417			750	667	340	1558			958	291	689	269	135	999	1023	-24	401	1100	699
13	1.72	133	-144	1393			729	664	329	1324			884	170	784	110	124	920	942	-22	247	951	704
14	1.59	100	-119	1320			720	530	323	1271			771	221	716	56	117	882	930	-43	62	847	785
15	1.49	77	-63	1607			861	746	337	924	147	777	728	716	56	0	111	854	863	-3	47	780	733
16	1.50	77	13	1457			817	640	326	792	207	585	152	740	184	0	104	822	809	13	197	785	592
17	1.53	81	50	1511			807	704	322	760	88	672	56	747	13	0	895	724	744	30	77	730	658
18	1.52	79	64	1419			717	642	323	732	60	782	140	747	13	0	890	747	746	1	14	668	654
19	2.11	247	19	1577			752	525	313	731	29	762	-54	769	-32	0	888	787	718	19	130	668	538
20	2.15	263	59	1573			843	730	335	712	29	883	182	748	164	0	829	742	727	15	23	654	631
21	2.13	254	-39	1534			760	774	340	970			970	196	721	249	291	752	731	21	185	687	502
22	1.95	191	3	1451			621	760	343	936			996	236	655	341	639	742	698	44	293	805	512
23	1.87	168	2	1368			501	717	333	890			890	173	635	256	685	721	683	33	379	852	473
24	1.82	153	37	1385			693	642	327	824			824	132	693	131	682	705	692	13	283	780	522
25	1.80	149	22	1399			752	647	324	792			792	145	689	103	684	716	668	48	179	726	547
26	2.12	250	126	1500	171	569	760	318	731	-23	754	-29	15	567	149	0	834	716	666	50	153	672	525
27	2.00	207	69	1487	75	507	855	344	1020	72	948	165	20	535	415	0	829	690	656	34	133	636	453
28	1.90	174	-14	1514	160	461	893	348	1070	106	964	177	20	649	401	0	876	676	608	67	482	805	323
29	1.92	180	14	1510	76	570	914	343	1040	249	791	126	35	587	368	0	874	664	619	45	446	842	396
30	1.92	180	-41	1640	82	374	984	351	1110	448	662	126	195	513	402	0	872	654	608	46	414	821	467
JUN 1	1.95	183	73	1718	54	751	913	346	1080	408	642	187	196	475	379	0	868	634	550	84	486	852	366
2	1.84	167	12	1847	53	630	1164	360	1240	875	865	76	309	461	470	0	874	664	539	66	445	912	467
3	1.82	151	38	1832	92	630	1160	360	1240	329	911	80	303	552	479	0	871	640	538	82	352	945	393
4	1.84	157	69	1887	92	607	1138	361	1260	329	931	72	233	406	571	0	868	634	571	63	684	979	545
5	1.85	166	78	1850	94	617	1139	360	1240	327	913	101	259	441	549	0	866	624	565	59	599	979	340
6	1.82	152	72	1882	172	564	1126	362	1270	249	1021	124	358	536	576	0	866	624	561	63	639	1000	361
7	1.76	133	69	1863	174	536	1083	354	1160	221	939	77	251	441	468	0	866	624	570	54	627	951	279
8	1.82	152	111	1942	173	569	1200	361	1260	203	1057	60	221	539	600	0	863	616	612	67	652	1060	408
9	1.76	136	81	1996	124	641	1231	365	1320	86	1234	39	237	417	666	0	863	616	612	67	652	1060	408
10	1.61	95	54	1845	170	644	1031	356	1180	6	1174	149	118	557	505	0	863	616	612	67	652	1060	408
11	1.80	144	15	1874	170	670	1034	343	1010	-94	1104	-24	118	570	322	0	863	616	612	67	652	1060	408
12	1.84	150	110	1615	85	693	837	330	858	-11	844	78	118	581	176	0	867	619	553	76	752	730	528
13	1.90	171	61	1551	104	749	698	322	771	24	687	73	118	600	53	0	864	614	542	72	725	706	521
14	1.87	163	50	1623	184	573	741	323	782	259	623	21	284	550	-2	0	862	604	521	83	81	673	492
15	1.83	152	0	1592	353	-13	746	337	936	140	796	90	212	472	312	0	861	589	516	73	125	746	360
16	1.80	144	7	1834	346	425	1063	346	1050	178	878	-13	234	576	300	0	861	589	516	73	125	746	360
17	1.77	136	28	1866	339	470	1057	330	1100	262	838	48	236	524	340	0	860	546	522	24	362	847	283
18	1.85	157	28	1847	337	430	1030	316	1050	206	844	70	236	516	299	0	860	546	522	24	363	847	283
19	1.85	157	48	1977	370	491	1056	354	1160	169	1001	4	275	432	453	0	860	546	522	24	363	847	283
20	1.84	153	3	1955	329	489	1137	355	1170	271	890	33	119	436	616	0	860	546	522	24	363	847	283
21	1.76	130	-13	1880	341	481	1058	352	1130	246	884	72	931	330	469	0	860	546	522	24	363	847	283
22	1.80	141	29	1911	326	495	1106	351	1110	284	826	4	223	486	396								

ATIONS ON HENRY'S FORK AND TRIBUTARIES

PLATE NO. XXVIII

HENRY'S FORK										TETON RIVER																
CHESTER					ST ANTHONY STA.					STANTH STA.					TETON RIVER											
NO	DATE	GAGE	DISCH	GAIN	ASSTON	CHSTN	STOR	NOR	THEO	GAGE	DISCH	STOR	NOR	GAIN	STANTH	STOR	NOR	THEO	EST	THEO	EST	THEO	EST	THEO	EST	
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
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	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54
57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83
84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110
111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137
138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164
165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218
219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245
246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272
273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299
300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326
327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353
354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380
381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407
408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434
435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461
462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488
489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515
516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542
543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569
570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596
597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623
624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650
651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677
678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704
705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731
732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758
759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785
786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812
813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839
840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866
867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893
894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920
921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947
948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974
975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001
1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028
1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055
1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082
1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109
1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136
1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163
1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190
1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	1217
1218	1219	1220	1221	1222	1223	1224	1225	1226	1227	1228	1229	1230	1231</													

Time from Henrys Lake in hours	Gaging Station	Period used for comparable daily means
0	Henrys Lake Outlet near Lake	Day ending at 2 p.m.
40	Henrys Fork at Warm River	Day ending at 6 a.m. 2nd day following
50	Henrys Fork near Ashton	Day ending at 4 p.m. 2nd day following
	Fall River near Squirrel	*Day ending at 10 a.m. 2nd day following
	Fall River near Chester	Day ending at 5 p.m. 2nd day following
54	Henrys Fork at St. Anthony	Day ending at 8 p.m. 2nd day following
	Teton River near St. Anthony	Day ending at 6 p.m. 2nd day following
66	Henrys Fork near Rexburg	Day ending at 8 a.m. 3rd day following

This schedule is so arranged as to make the data correspond to the river records on Plates VIII, IX and X. The dates indicated on the tables are for the nearest midnight to midnight or calendar days.

Actual continuous measurement of the water wasting past the last diversion dams on Henrys Fork and Teton River is not considered practicable and for that reason the "Est. Bal. Below Diversions" columns are blank except for days when either personal inspection was made or other reliable information was secured. Waste and return flow from adjacent irrigated lands enter the lower portions of both streams and comprise the total discharge measured at the Rexburg station at times when all available water is diverted at the upper points.

Fall River water delivered to the Enterprise Irrigation District in exchange for Jackson Lake Storage which was purchased and released for the use of Snake River normal flow users is shown

*Approximate means used. No recording gage records available.

in these tabulations as storage but of course is not included in the later summary of deliveries from Henrys Lake Reservoir.

Plate XXIX contains a curve showing the way in which storage was drawn from Henrys Lake Reservoir together with actual total and computed normal flow hydrographs for Henrys Fork at the Lake, Warm River and Ashton gaging stations. These graphs are all plotted with time interval adjusted to coincide with the nearest calendar day at the Ashton station.

Presumably because of the water surface slope in the comparatively narrow outlet between Henrys Lake proper and the dam, gage readings at the latter point do not afford a really satisfactory index of reservoir capacity. As a result, almost continuous adjustments, especially at the lower reservoir stages, had to be made to avoid unreasonable inconsistencies in the normal flow past the Lake station. The installation of a suitable gage in the lake would entail the expenditure of a considerable sum of money while at the same time the cost of daily readings would be increased. Eventually, however, this will probably be required, especially in the event of disputes concerning the segregation of water passing the dam.

Special effort was made to have the Utah Power and Light Company maintain a constant head behind their Ashton Dam and thus avoid introducing unexpected fluctuations in river stage at points farther downstream. Comparison of the hydrographs for the three

TOTAL AND MONTHLY FLOW AT THE LAKE, WARM RIVER AND ASHTON STATIONS ON HENRY'S LAKE RESERVOIR
 1926 DISTRIBUTION WATER DISTRICT NO. 36
 PLATE XXIX



stations still indicates some discrepancies which are probably attributable to this source but the records are much more consistent than those of 1924.

The Warm River normal flow graph indicates a tendency towards transmission lag which is possibly due to the area at the lower end of Henrys Lake Valley which is still flooded whenever large discharges are released from the reservoir.

HENRYS LAKE STORAGE DELIVERIES

Enlargement and straightening of the outlet channel through the bottoms below the dam together with the acquisition of additional right of way, during the past two years, made it possible to deliver storage during 1926 in larger heads than heretofore or practically as required to meet the demands.

The amount of stored water released from the reservoir each day was determined from the capacity tables by noting the quantity corresponding to the daily decrease in stage indicated by the lake gage readings. As previously noted, however, the latter had to be adjusted to take account of errors introduced by wind and by slope in the outlet channel above the dam to such an extent that in the final record the estimated normal flow past the dam may almost be considered the real governing factor. Except for the more extensive adjustments here required and the consequent increased dependence upon the normal flow estimate, this method is the same as that used at Jackson Lake Reservoir.

A transmission loss of 1.5 per cent was charged between Henrys Lake and Warm River and an additional 0.5 per cent

was deducted between the latter point and the Ashton station. These losses correspond with the recommendations submitted by Consulting Engineer R. I. Meeker on August 14, 1923 but are almost purely arbitrary in character since no data have as yet been secured to afford a basis for any scientific determination.

At the beginning of the release period the total storage available according to the reservoir capacity tables amounted to 60,786 acre-feet while at the end of the season 10,217 acre-feet remained as a carry-over for 1927.

Plate XXX contains the final summary account of all stored water released from Henrys Lake. Head-gate deliveries to the respective canals are shown for actual diversion dates.

Where a minus quantity is given on the "Unused Storage" line an excess storage delivery is indicated, or in other words, normal flow was actually delivered to the canals instead of storage. This line shows at a glance the irregularities of delivery, together with the compensating character of the individual day discrepancies. The algebraic total of unused storage for the entire period amounts to 1004 acre-feet, all of which is accounted for by the waste during the early season tests at Henrys Lake dam.

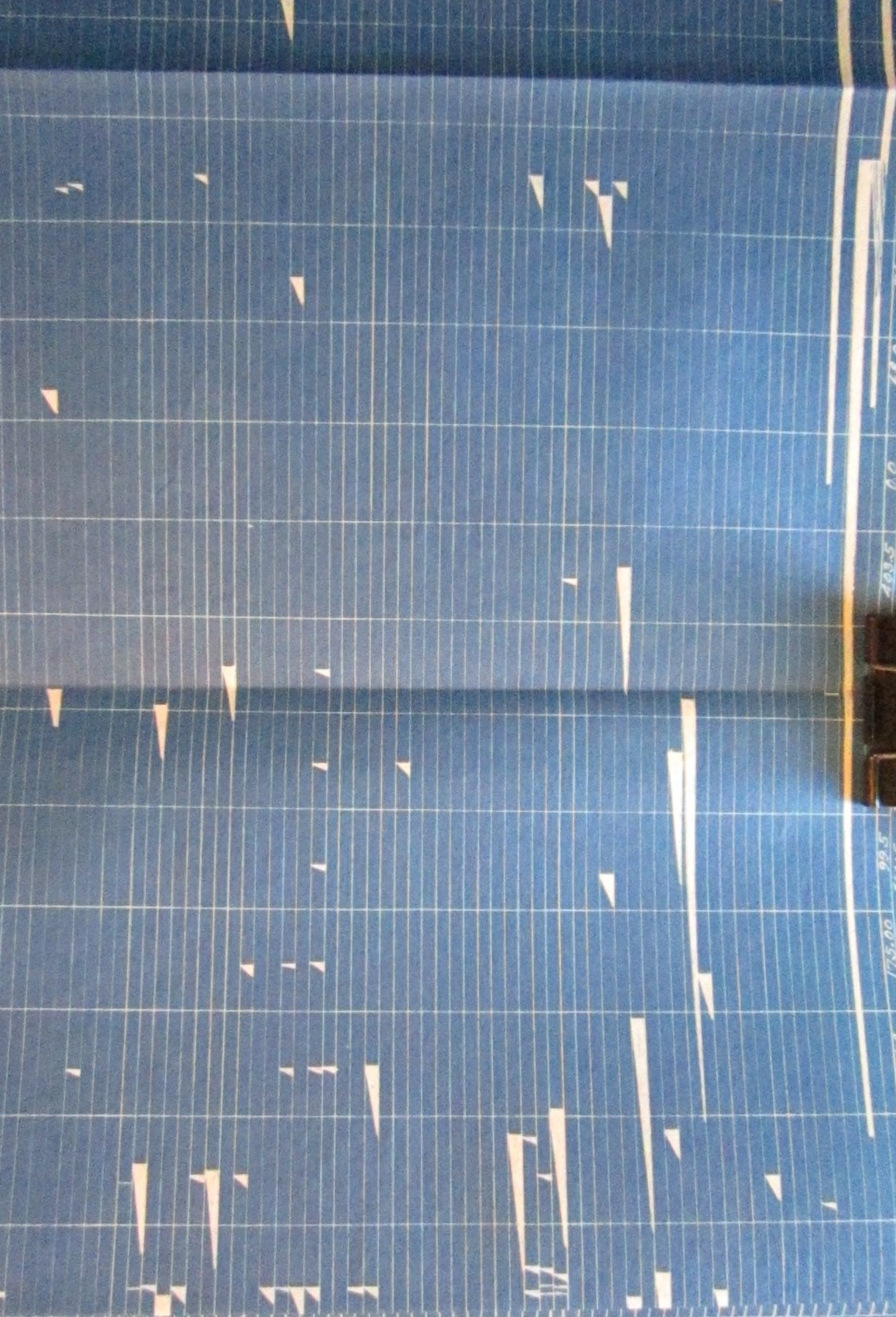
Storage delivered to the Marysville and Farmers Own Canals which divert from Fall River was handled upon the exchange or substitution basis previously described.

1926 DISTRIBUTION WATER DISTRICT NO. 36.

PARTY OR CANAL	TOTALSF	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889
RILEY	24										
ANDERSON & WILLOW CR	800										
FARMERS FRIEND	342.83										
ENTERPRISE	188										
NELSON	8.75										
MALTON - CRAIG	20.16										
ARNBERGER	6										
HEISE	5.6										
BUTLER ISLAND	54.16										
ROSS & RAND	3.34										
STEELE	7.42										
HARRISON	451.94										
CHENEY	6										
BOOMER & IDAHO	1000										
RUDY	191.26										
KITE & WARD	8.8										
BURGESS	200.61										
CLARK & EDWARDS	70										
LOWDER & JENNINGS	52										
EAST LABELLE	140										
CONSOLIDATED FEEDER	184										
LENROOT	220										
REID	150										
TEXAS FEEDER	280										
NELSON - COREY	16.8										
HILL - PETTINGER	13										
LONG ISLAND	457.41										
ISLAND	289.40										
RIGBY	160										
DILTS	28										
WEST LABELLE	109.90										
DARAS & LEWISVILLE	357.12										
NORTH RIGBY	50										
WHITE	6.40										
BRAMWELL	1320										
ELLIS	4.8										
INDEPENDENT	292										
BUTTE & MARKET LAKE	366.7										
OSGOOD	128.55										
KENNEDY	22.49										
PORTER GR WESTERN & MARTIN	571.78										
BEAR ISLAND	3.5										
TAYLOR & GOSHEN	46										
CITY OF IDAHO FALLS	188										
WOODVILLE	126.5										
SNAKE RIVER VALLEY	710										
RESERVATION	600										
BLACKFOOT	366.8										
NEW LAVA SIDE	152										
PEOPLES	424.2										
ABERDEEN SPRINGFIELD	1250										
CORBETT SLOUGH	239.43										
NIELSEN HANSEN	15										
RIVERSIDE	100										
DANSKIN	120										
TREGO	69.41										
WEARYRICK	41.2										
WATSON SLOUGH	27.4										
FARSONS	22										
SMITH - MAXWELL	17.8										
USKS MINIDOKA CANALS	2726										
SCHODDE	2										
TWIN FALLS SOUTH SIDE	3000										
TWIN FALLS NORTH SIDE	3000										
MILNER LOW LIFT CANAL											
ANNUAL TOTALS IN SECT.	21007.86	19321	4000	6000	16000	4330.0	6804.0	45320	26480	17927.4	102900

REVISED CHAR

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



1052.40 1237.3 175.00 99.5 SCALE
 109.5 60 168.0 76.0 932.71

CHART AND TABULAR SUMMARY OF PRINCIPAL SOUTH FORK AND SNAKE RIVER WATER RIGHTS.

1901	1902	1903	1904	1905	1906	1907	1908	STORAGE	DATE	DEGREE	PARTY OR CANAL TOTAL	OLDER DATE	DEGREE
								1900 ANJ	1908	1000	USRS FOSTER	1776	1892 JUN 5
								14000 A		350	TFNSL & W Co FOSTER	2650	
								2000 J		2550	DO	3000	14
								15900 ANJ		36	RUDY	19126	15326
										48	CITY OF IDAHO FALLS	188	26
										110	SNAKE RIVER VALLEY	710	130
										100	LENROOT	220	1891 DEC 14 600
										10	HILL-PETTINGER	13	3
								16200 ANJ			Carlson-Fegersstrom	0	JUN 1 4.8
								25200 A		1726	USRS FOSTER	2726	0
								2000 J		3	HILL-PETTINGER	13	0
											Kotik	0	1 6
								12120 ANJ		24	RILEY	24	1 15
								1040 J		4	TREGO	6941	1 195
								4000 J		5.6	HEISE	5.6	0
								7200 ANJ		140	CONSOL FEEDER	184	44
								2800 A		400	TFNSL & W Co FOSTER	3000	0
										3000	TFSS CANAL Co FOSTER	3000	0
										46	TAYLOR & GASHEN	46	0
										100	OSGOOD	128.55	1890 Nov 24 72
								980 A		40	WOODYVILLE	1255	OCT 16 17
											Taylor & Goshore	8.5	0
										14	RUDY	19126	16 349.4
										475	NELSON	4.25	16 10.6
											BRCGG Mattson	0	0
								2800 A		1296	MATTSON-CRAIG	2016	JUL 12 240
								14000 A			BRCGG Mattson	72	JUN 10 240
								965 J		140	CITY OF IDAHO FALLS	188	1
								33664 ANJ		76	LENROOT	220	1
								280 A		68	ENTERPRISE	188	1
										400	SNAKE RIVER VALLEY	710	0.8
								8400 A		35	BEAR ISLAND (WEIR)	35	1 65.41
								43000 ANJ		12	TEXAS FEEDER	280	1 4.59
										160	BURGESS	80061	26
								14000 A		2	SCHODDE	2	10 6.00
								28000 ANJ			Supplemental	0	FEB 21 17.8
								7949 ANJ		120	ENTERPRISE	188	0
								5600 A		1250	ABERDEEN-SPRING	1250	1890 JUL 10 366.8
											American Falls Co	0	10 20.72
								1400 A		160	HARRISON	45194	6 6.48
										400	PEOPLES	4242	JUN 1 6
										28	DILTS	28	JUN 1 0.66
										14	TEXAS FEEDER	280	10 6.48
								28000 J			Oil & Lumber Co	254	10 6.48
								234290 ANJ		14	TEXAS FEEDER	280	10 6.48
								985956 ANJ		14	TEXAS FEEDER	280	10 6.48
								28000 A		355	WOODVILLE	1935	10 6.48
								1451454				0	

20 1786 1946
 44 2276

PLATE NO XXXV

TOTAL	OLDER	DATE	DECREE	PARTY OR CANAL	TOTAL	OLDER
19126	926	1886 JUN 25	10	RIGBY	160	10
334	0	"	10	BURGESS	80061	0
742	462	"	1	WATSON SLOUGH	974	624
45241	43684	"	1	ISLAND	28940	0
28940	45	"	1	TEXAS FEEDER	280	48
57178	14686	"	1	GR WEST & PORTER	57178	14273
45194	1948	"	1	GR WEST & PORTER	57178	18793
2249	296	"	1	RUDY	19126	726
34283	31483	"	1	REID	150	30
57178	14606	"	1	LONG ISLAND	45241	33338
2016	48	"	1	HARRISON	45194	1724
132	0	"	1	KENNEDY & BURGRAFF	2249	219
48	0	"	1	WEARYRICK	412	0
974	64	1885 JUN 30	22	GR WEST & PORTER	57178	13593
57178	14606	"	15	GR WEST & PORTER	57178	1593
34283	1483	"	10	PARSONS	22	0
160	20	"	10	RIGBY	160	0
80061	10	"	1	HARRISON	45194	484
100	10	"	1	STEELE	742	362
280	98	"	1	RIVERSIDE	100	0
168	0	"	1	TEXAS FEEDER	280	0
2016	0	"	1	PARKS & LEWISVILLE	35112	40
28940	15	"	1	EAST LABELLE	140	0
45241	39236	"	1	LENROOT	220	9
57178	14853	"	1	REID	150	0
45194	1788	"	1	WEST LABELLE	10990	0
2431	257	"	1	WHITE	640	0
34283	283	"	1	OSGOOD	12855	250
180	0	"	1	BUTLER ISLAND	5416	0
		"	1	STEELE	742	0
		"	1	RUDY	19126	0
		"	1	FARMERS FRIEND	34283	0

DATE	DECREE	PARTY OR CANAL	TOTAL	OLDER
1885 JUN 1	0.93	GR WEST & PORTER	57178	15
"	"	Butler Island		
"	1	1.20 HARRISON (Long Is)	45194	364
"	1	58.97 LONG ISLAND	45241	27441
"	1	0.64 HARRISON (Long Is)	45194	300
"	1	0.39 KENNEDY & BURGRAFF	2249	180
"	"	Long Island		
"	MARG	62.4 WATSON SLOUGH	974	0
"	"	7.6 PEOPLES (Watson Sl)	424.2	0
"	FEB 27	70 CLARK & EDWARDS	70	0
1884 JUN 4	29.2	INDEPENDENT	29.2	0
"	"	230 BUTLE & M. LAKE	3687	0
"	"	Independent		
"	"	2.50 OSGOOD (Independ)	128.55	0
"	"	20. NEW LAVASIDE	152	0
"	"	20. PARKS & LEWISVILLE	35112	20
"	"	9. LENROOT	220	0
"	"	58.98 LONG ISLAND	45241	21543
"	"	0.64 HARRISON (Long Is)	45194	236
"	"	0.38 KENNEDY & BURGRAFF	2249	142
"	APR 3	340. ANDERSON & ER & WC	800	160
1883 JUN 10	50	NORTH RIGBY	50	0
"	"	20. PARKS & LEWISVILLE	35112	0
"	"	15. NIELSEN-HANSEN	15	0
"	"	15. GR WEST & PORTER	57178	0
"	"	Nielsen-Hansen		
"	"	58.97 LONG ISLAND	45241	15646
"	"	0.64 HARRISON (Long Is)	45194	172
"	"	0.39 KENNEDY & BURGRAFF	2249	103
1882	"	58.98 LONG ISLAND	45241	9748
"	"	0.64 HARRISON (Long Is)	45194	108
"	"	0.38 KENNEDY & BURGRAFF	2249	0.65
1881 JUN 1	38.96	LONG ISLAND	45241	3852
"	"	0.65 HARRISON (Long Is)	45194	0.43
"	"	0.39 KENNEDY & BURGRAFF	2249	0.26
"	"	Long Island		
1880 AUG 1	160	ANDERSON & ER & WC	800	0
"	"	Farmers Progress		
"	JUN 11	38.52 LONG ISLAND	45241	0
"	"	0.43 HARRISON (Long Is)	45194	0
"	"	0.26 KENNEDY & BURGRAFF	2249	0

NOTES - ALL DECREES ARE LISTED IN SECOND FT STORAGE IS LISTED IN ACRE FEET. OSGOOD HAS STORAGE IN TWIN LAKES. USRS HAS ADDITIONAL STORAGE IN LAKE WALCOTT. LICENSE AND PERMIT RIGHTS NOT SHOWN. A & J - SEE TEXT FOR EXPLANATION.

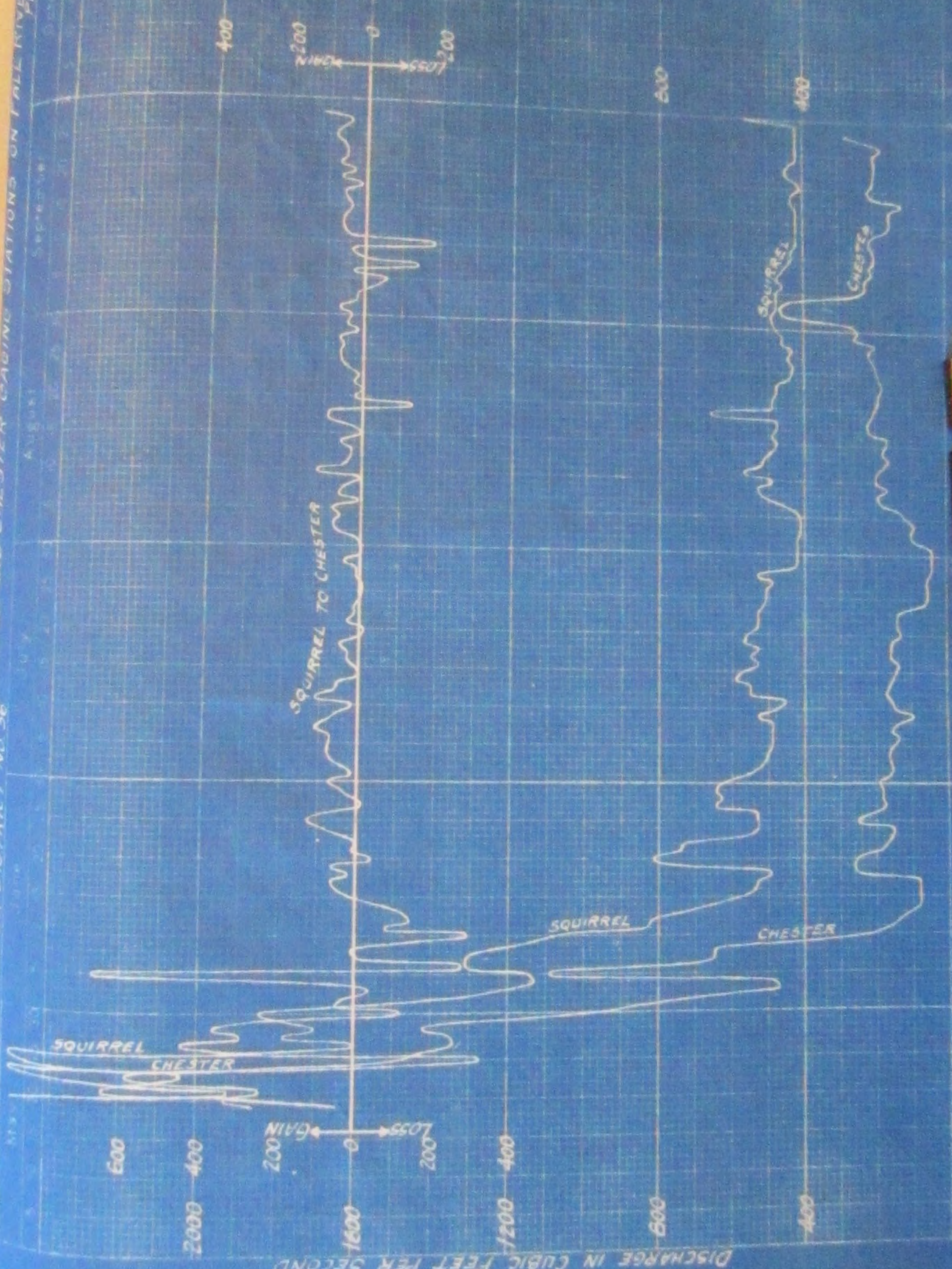
These two, the Farmers Friend and the Twin Groves Canals own no permanent rights in Henrys Lake Reservoir but purchased water for the 1926 season only. This reservoir is owned and controlled by the North Fork Reservoir Company whose stock is held by seven different canal companies. These latter, therefore, participate in the benefits received (whether money from sales or water impounded) each season in proportion to their stock holdings which in per cent are as follows: Dowey and Last Chance (combined), 15.3; St. Anthony Union, 6.8; Salem Union, 24.2; Virgin, 6.8; Independent, 26.8; and Consolidated Farmers, 20.1. While these percentages define the individual rights, actual diversions upon a disproportionate basis may be sanctioned by mutual agreement of the stockholders, hence no attempt has been made to compare these two items.

During 1926 no storage was required by the St. Anthony Union system.

Plate XXXI presents hydrographs for the two gaging stations on Fall River and a graph of indicated net gains or losses above the lower or Chester station. These are plotted to coincide with the dates at Squirrel.

As might be expected, the average net gain noted is slightly greater than that for 1924 but is less than is generally recorded in normal water supply years.

Pronounced irregularities which appear in these curves are presumably chiefly due to the inaccurate daily mean discharges computed for the upper station which is not equipped with a recording gage.



The hydrograph for the Roxburg station and graphs showing gains and losses above and below St. Anthony are included on Plate XXII. These are all plotted to agree with the Roxburg dates.

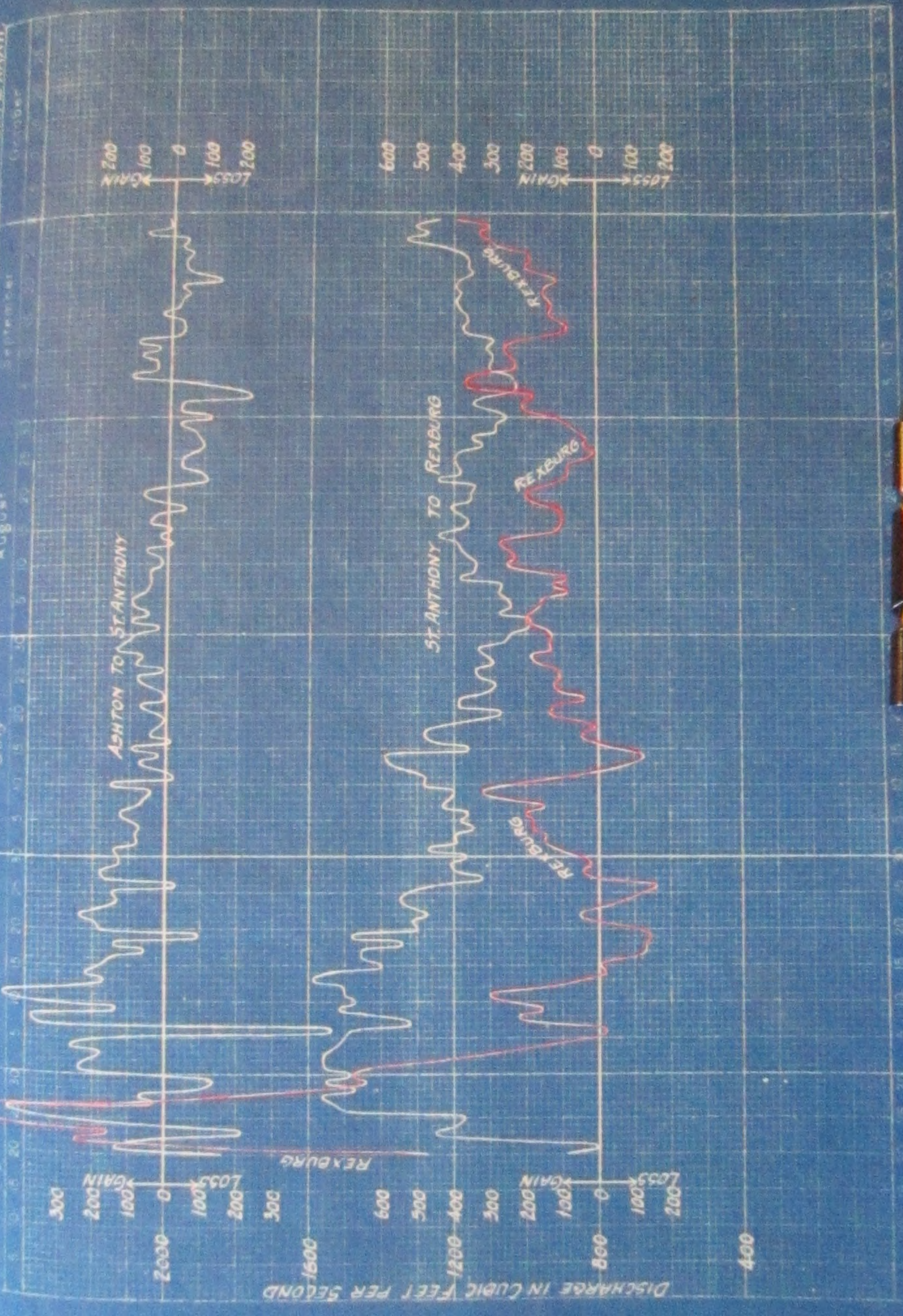
Comparison with similar plates contained in reports for previous years reveals no marked peculiarities which are not readily explainable by climatic or seasonal differences to which attention has already several times been directed.

DISTRIBUTION IN SWAN VALLEY

Mr. Wm. Burton was appointed as deputy water master for the Swan Valley section but his salary and other expenses incident to the work were paid directly by the local water users, in accordance with the custom followed during preceding years. Copies of all instructions regarding cuts and reinstatements were forwarded to him by mail and he was directed to regulate all diversions in accordance with these orders. Aside from the slight delay resulting from the method of communication regulation in this section was therefore consistent with that in other portions of the district.

A number of complaints and counter complaints were received during the season concerning the control or lack of control over the flow of Granite Creek, a tributary of Snake River near the lower end of Conant Valley. Based upon 1917 and 1918 measurements this stream has a total flow during most of the summer of less than one second-foot but it appears to be particularly valuable as a source of domestic supply for adjacent dry farmers. An attempt was made to

NET LOSSES AND GAINS BETWEEN THE ASHTON AND ST. ANTHONY GAGING STATIONS ON HENRY'S FORK
 1936 DISTRICTION WATER DISTRICT NO. 36
 PLATE XXXII



settle questions involving irrigation use of this water (chiefly for small garden patches) through office conferences, correspondence and by sending Mr. Burton into the locality, but no jurisdiction was assumed over the quality of the water. This latter question was raised by some of the objectors who accused their upstream neighbors of purposely contaminating the supply and rendering it unfit for household use. While the whole situation resembled somewhat the proverbial "tempest in a teapot" only patience, persuasion and finances prevented the appointment of an extra deputy water master to take charge of this stream.

No other unusual difficulties were reported from this section.

DISTRIBUTION ON SAND CREEK, FREMONT COUNTY

Water distribution on Sand Creek in Fremont County in 1926 was handled strictly as a local problem. No request for the appointment of a deputy water master was made and since this stream is really not a surface tributary to Henrys Fork during the ordinary regulation period, it was entirely neglected as a part of District No. 36 work.

CLIMATOLOGICAL DATA

Study of the U. S. Weather Bureau monthly and annual climatological summaries covering the twelve months ending September 30, 1926 affords much information of interest and serves to explain certain phases of the year's water supply which might otherwise be difficult to understand.

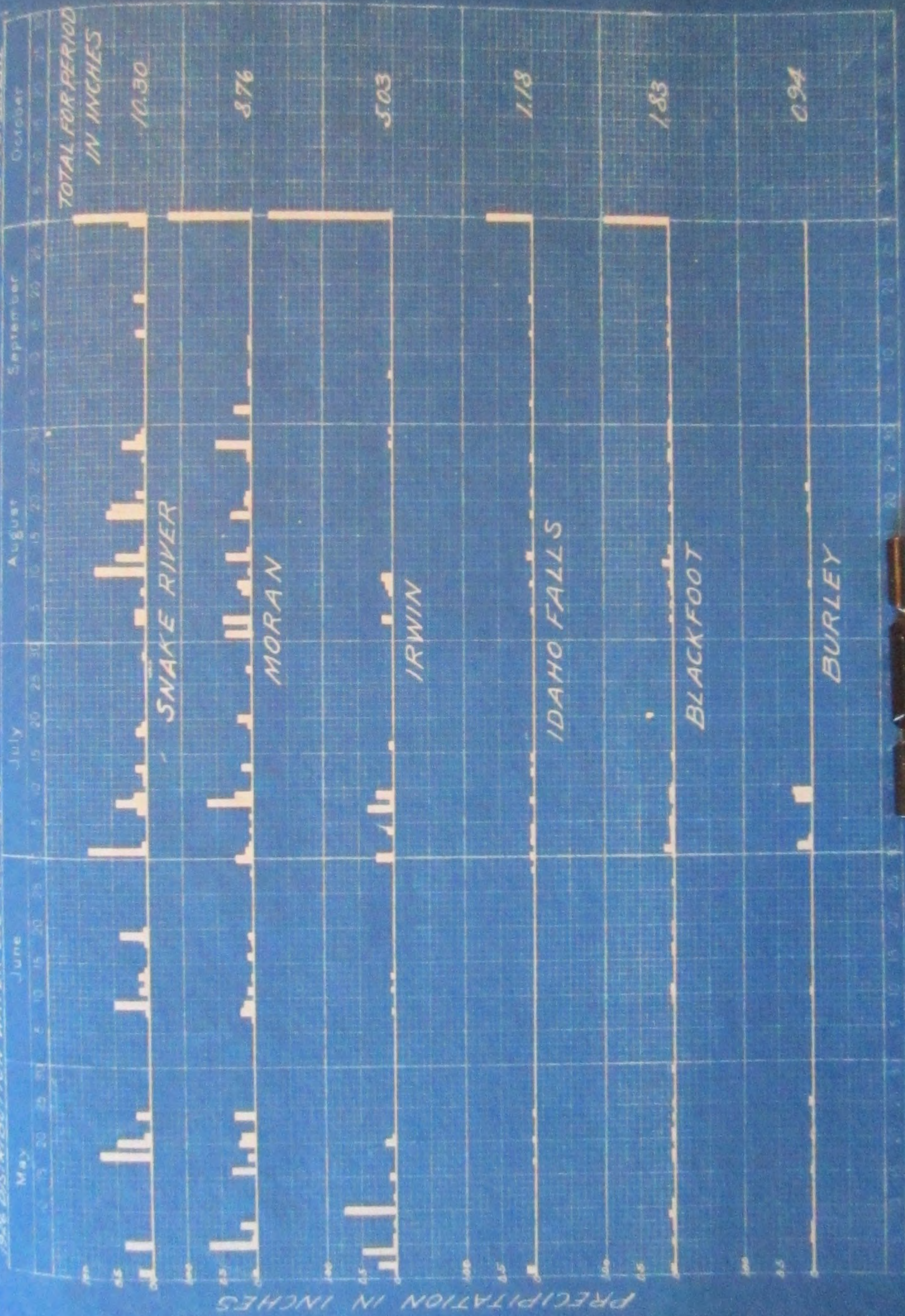
The following notes from the Idaho and Wyoming section reports describe the principal monthly peculiarities:

- | | | |
|-----------|------|---|
| October | 1925 | Both precipitation and temperature below normal. |
| November | 1925 | Nearly an average month in Snake River drainage area. |
| December | 1925 | Above normal temperatures but subnormal precipitation. |
| January | 1926 | Material deficiency in precipitation noted. |
| February | 1926 | Unusually warm. Precipitation about normal. |
| March | 1926 | The warmest March since 1915 and without exception the driest of record in Idaho. Wyoming conditions quite similar. |
| April | 1926 | With one exception the warmest April of record in Idaho. Precipitation below normal. |
| May | 1926 | Mean temperature slightly above normal. Material deficiency in precipitation. |
| June | 1926 | Another warm month with pronounced shortage in rainfall. |
| July | 1926 | Temperatures slightly above normal with nearly average precipitation. |
| August | 1926 | In Idaho the tenth consecutive month with mean temperature above normal. Precipitation somewhat spotted but generally above normal. |
| September | 1926 | The coldest September of record in Idaho with very hard frosts noted on the 24th and 25th. Precipitation a little above normal with heavy rains quite general on the last day of the month. |

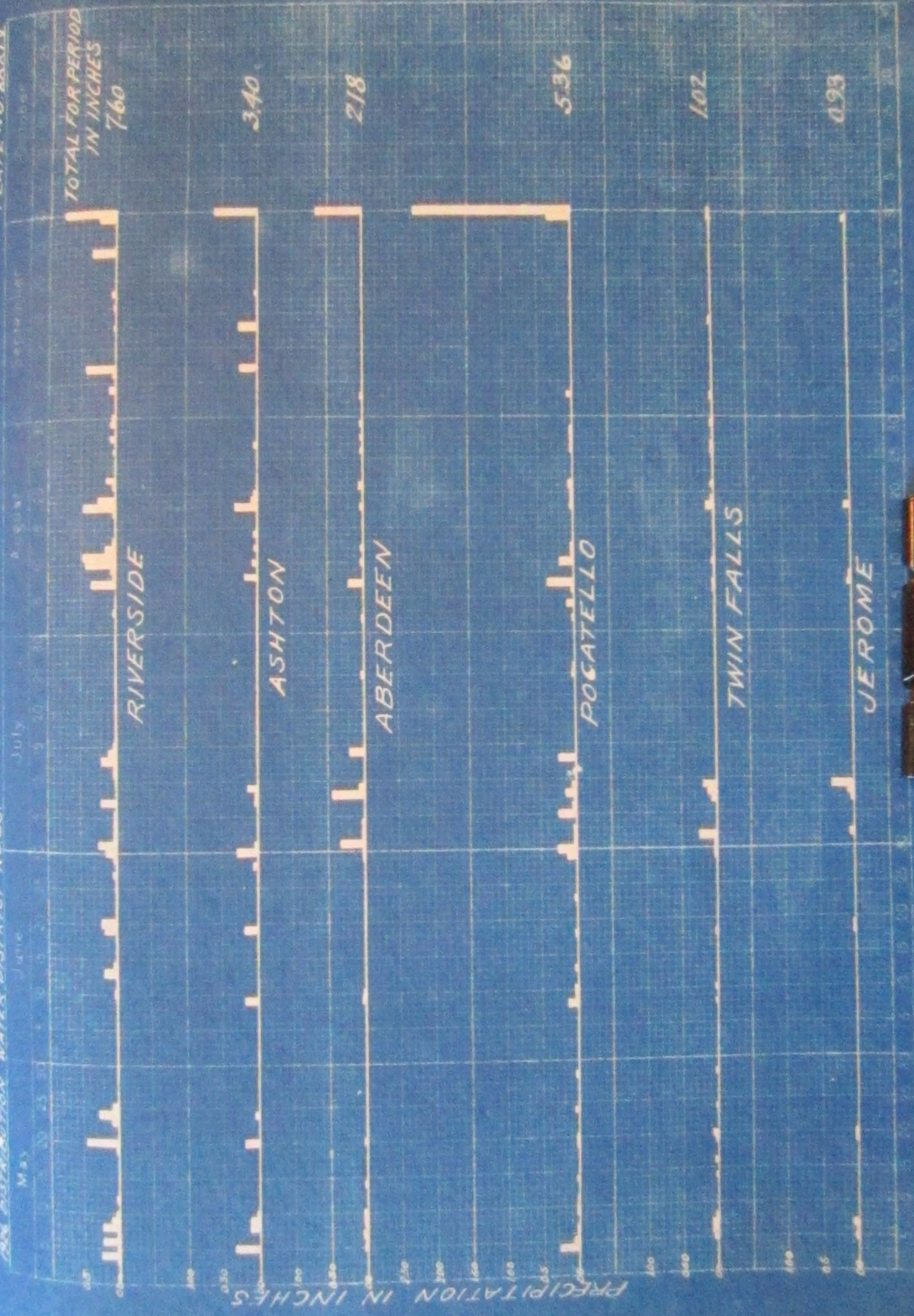
Because of the above normal temperatures indicated throughout the spring and early summer crops matured much earlier than usual and this fact helped materially to minimize the losses attributable to water shortage.

The amount and distribution of precipitation at the principal observation points throughout District No. 36 territory is shown graphically for the irrigation season on Plates XXXIII and XXXIV.

1926 DAILY PRECIPITATION DIAGRAM-SNAKE RIVER ARE A
 1926 DISTRIBUTION WATER DISTRICT NO. 36. PLATE NO. XXIII



1926 DAILY PRECIPITATION DIAGRAM - SNAKE RIVER AREA
 1926 DISTRIBUTION WATER DISTRICT NO. 36 PLATE NO. XXXIV



The record at the Riverside station near the west entrance to Yellowstone National Park is not altogether consistent with those for the other stations but has been included because of its proximity to Henrys Lake.

Month	Total Number of Stations	Number Above Normal	Number Below Normal	Monthly Aver. Precip. in inches for all years of Record	Average Precip. in inches for specific Month	Mean Departure from Average Amount In inches.
1925						
October	8	1	7	1.366	0.959	-0.407
November	8	5	3	1.248	1.365	+0.137
December	8	2	5	1.432	1.186	-0.246
1926						
January	8	0	8	1.861	0.915	-0.946
February	8	4	4	1.376	1.466	+0.090
March	8	0	8	1.592	0.491	-1.101
April	8	3	5	1.355	1.174	-0.181
May	8	1	7	1.744	1.054	-0.690
June	8	0	8	1.292	0.458	-0.834
July	8	4	4	0.931	0.766	-0.165
August	8	4	4	0.782	1.060	+0.278
September	8	4	4	<u>1.126</u>	<u>1.291</u>	<u>+0.165</u>
			Total	16.105	12.205	-3.900

No 1926 records were secured at the American Falls station and the elimination of these data necessarily changes the averages slightly from what would have been tabulated had the same nine stations formerly used again been available.

Records have been obtained at the eight points listed for periods ranging from 16 to 32 years and for this reason, as well as because of their fairly general distribution throughout the Upper Snake drainage area, the combined data may be expected to be fairly representative in character when applied to District 36. The group totals show that precipitation for the entire twelve months amounted to 75.8 per cent of the average while actual run-off for the same

time as determined from records secured at Moran, Wyoming (see page 13) represented 69.6 per cent of a 23 year mean.

EVAPORATION

U. S. Weather Bureau publications should be consulted for 1926 evaporation data at southern Idaho points. No special stations were maintained and for this reason no records will be included herein.

NEW CONSTRUCTION AND REPAIRS

A complete new Snake River gaging station was installed during the summer by the Twin Falls Canal Company at what is known as the Robertson Ranch about $1\frac{1}{2}$ miles above the mouth of Blackfoot River; a new concrete recording gage shelter was constructed during September at the station on Henrys Fork near Rexburg and in November, after a preliminary low water reconnaissance, new measuring cable equipment was installed for use in connection with the U. S. Bureau of Reclamation gage on Snake River a short distance below the American Falls dam.

EXPENDITURES

A complete statement of expenditures covering the year ending March 31, 1927 follows. This statement includes all general charge items which appeared in the annual water master's bill for the season of 1926, as well as everything pertaining to the work of the Idaho Falls office. No attempt has been made, however, to segregate expense for strictly hydrologic work from that for water distribution, as in many respects these phases are too closely related to warrant more than an arbitrary separation.

While some of the construction charges were not specifically included in the pre-season budget they were later authorized and paid as a part of the regular expense. Hence it seems unnecessary to segregate the different items between regular and special work. Salaries and expenses of Upper Valley members of the Committee of Nine and a few charges against individual canals on account of head-gate repairs have been omitted from this summary as they were assessed only against those benefitted.

All general water users charges were prorated on the basis of 60 per cent against normal flow and 40 per cent against stored water. Stored water totals were in turn segregated between the principal reservoirs in the district in proportion to their approximate available capacities. The 1925 capacity ratio was used for this purpose during April and May, following which 868 for Jackson Lake-American Falls, 60 for Henrys Lake and 4 for Twin Lakes were applied.

EXPENDITURES FOR WATER DISTRIBUTION AND HYDROLOGIC WORK

April 1, 1926 to March 31, 1927.

Water Master, Special Deputy and Deputy

G. Clyde Baldwin,	Salary Apr. 1-Mar. 31, 1 year @ \$4800	\$4800.00
	Expenses do	346.59
	Auto hire do	340.21

Hydrographers

Thomas R. Newell,	Salary June 1-4, 4/30 mo. @ \$250.00	33.33
Lester L. Bryan,	Salary Apr. 1-Noon Nov. 9, 7 8 1/2/30 mo. @ \$216.67	1578.08
	Expenses do	60.90
	Auto hire do	661.05
C. A. McClelland,	Salary Apr. 1-Dec. 31, 9 mo. @ \$216.67	1950.02
	Jan. 1-Mar. 31, 3 mo. @ \$225.00	675.00
	Expenses do	105.50
	Auto hire do	914.68

Hydrographers

Mans H. Coffin,	Salary Apr. 20-May 23 & Oct. 1-Dec. 15, 3 19/30 mo. @ \$180.00	\$654.00
	May 24-Sept. 30, 4 7/30 mo. @ \$160.00	677.33
	Dec. 16-Mar. 31, 3 15/30 mo. @ \$200.00	700.00
	Expenses do	31.19
	Auto hire do	1035.64
Leo K. Homer,	Salary May 24-Aug. 31, 3 7/30 mo. @ \$150.00	485.00
	Expenses do	17.85
	Auto hire	641.03
C. T. Judah,	Salary May 17-June 30, 1 14/30 mo. @ \$135.00	198.00
	July 1-Sept. 30, 3 mo. @ \$145.00	435.00
	Expenses do	9.97
	Auto hire do	674.83
John H. Reed,	Salary Apr. 19-June 30, 2 12/30 mo. @ \$130.00	312.00
	July 1-Sept. 30, 3 mo. @ \$140.00	420.00
	Expenses do	8.70
	Auto hire do	961.48

Deputy Water Masters

Bruno Albert,	Salary May 19-Sept. 30, 4 12/30 mo. @ \$50.00	220.00
	Auto hire do	220.00
T. W. Luetjen,	Salary May 20-Sept. 30, 134 days @ \$4.00	536.00
	Auto hire do @ \$3.25	435.50
W. J. Kremer,	Salary May 10-Sept. 30, 144 days @ \$4.00	576.00
	Auto hire do @ \$4.00	576.00
Wm. Sauer,	Salary May 11-Sept. 30, 143 days @ \$4.00	572.00
	Auto hire do @ \$3.75	536.25
C. A. McCurdy,	Salary May 12-Aug. 24, 105 days @ \$4.00	420.00
	Auto hire do @ \$3.75	393.75
S. W. Dennis, Jr.,	Salary Aug. 25-Sept. 30, 37 days @ \$4.00	148.00
	Auto hire do @ \$3.75	138.75
D. G. Taylor,	Salary May 11-Sept. 30, 143 days @ \$4.00	572.00
	Auto hire do @ \$3.25	464.75
W. N. McConnel	Salary May 20-Sept. 30, 4 11/30 mo. @ \$50.00	218.33

Stenographers

Alfreda Haggerty,	Salary Apr. 1-10 & Apr. 14-June 30, 2 27/30 mo. @ \$110.00	319.00
	July 1-Oct. 31, 4 mo. @ \$115.00	460.00
	Salary July 10-11, 1 1/2 days @ \$4.00	6.00
Snow Coffin,	Salary May 17-Sept. 30, 4 14/30 mo. @ \$40.00	178.67
Evelyn L. Baker,	Salary Oct. 25-Feb. 28, 4 6/30 mo. @ \$110.00	462.00
Helen George,	Mar. 1-31, 1 mo. @ \$125.00	125.00

Cage Readers

Stanley Boyle,	Salary Apr. 1-16, 16/30 mo. @ \$15.00	8.00
Mrs. J. L. Carter,	Salary May 17-Mar. 31, 10 14/30 mo. @ \$15.00	157.00
J. D. Luetjen,	Salary Apr. 1-May 19, 1 19/30 mo. @ \$9.00	14.70

Gage Readers

Walter Lenz,	Salary Oct. 1-Mar. 31, 6 mo. @ \$9.00	\$54.00
Mrs. J. F. Johnson,	Salary Apr. 2-May 1, 1 mo. @ \$7.50	7.50
Harold Fuqua	Salary Apr. 21-May 19, 29/30 mo. @ \$5.00	4.83
	May 20-Sept. 30, 4 11/30 mo. @ \$12.00	52.40
	Oct. 11-Dec. 31, 2 20/30 mo. @ \$6.00	16.00
Mrs. Irvin Sieport,	Salary Apr. 1-May 16, 1 16/30 mo. @ \$7.50	11.50
	May 17-Sept. 30, 137 days @ \$0.75	102.75
	Oct. 1-Nov. 30, 2 mo. @ \$5.00	10.00
B. F. Smith,	Salary Apr. 1-May 9, 11 trips @ \$1.00	11.00
	Oct. 2-Dec. 4, 11 trips @ \$1.00	11.00
John Rice,	Salary Dec. 5-11, 1 trip @ \$1.00	1.00
	Dec. 12-Mar. 31, 110 days @ \$0.60	66.00
W. H. Kremer,	Salary May 20-Sept. 30, 134 days @ \$1.00	134.00
Maggie Anderson,	Salary Apr. 25-May 10, 2 trips @ \$1.00	2.00
Eva Davis,	Salary May 10-Sept. 30, 144 days @ \$1.00	144.00
J. A. Clough,	Salary Apr. 1-May 10 & Oct. 1-Mar. 31, 7 10/30 mo. @ \$10.00	73.33
	May 11-Sept. 30, 143 days @ \$1.00	143.00
A. J. Ayers, *	Salary Oct. 1-May 31, 8 mo. @ \$8.00	64.00
	June 1-Sept. 30, 4 mo. @ \$50.00	200.00
G. S. Gilham	Salary May 20-Sept. 30, 4 11/30 mo. @ \$10.00	43.67

Secretary, Water Users Committee of Nine

John Lee, *	Salary Feb. 27, Mar. 1 & 29, May 20-22, July 7 & 15 & Sept. 28, 9 days @ \$5.00	45.00
	Expenses do	36.20
	Auto hire do	19.24

Miscellaneous

Materials, labor and equipment for gaging stations	830.96
Field and office equipment (instruments, etc.)	387.67
Telephone and Telegraph	539.48
Field and office supplies	317.15
Premiums on official bonds	20.75
Interest on borrowed money	196.74
Employees compensation insurance	157.58
Total	<u>\$30,187.83</u>

* These items were computed for the year ending September 30, 1926.

SOURCES OF REVENUE

Normal Flow Fund	\$16,511.35
Normal Flow Users (Direct assessment in 1926 District No. 36 Water Master bill)	218.66
Jackson Lake and American Falls Stored Water Users (through State)	9,658.74
Jackson Lake and American Falls Stored Water Users (Credit in 1926 District No. 36 Water Master bill)	135.77
North Fork Reservoir Company (through State)	646.87
Utah-Idaho Sugar Company (through State)	45.30
Sheppard & Company (through State)	31.66
U. S. Geological Survey	661.27
State of Idaho (Cooperative Stream Measurement Fund)	2,991.37
State of Idaho (Commissioner of Reclamation)	24.59
Minidoka Irrigation District	54.72
Burley Irrigation District	27.56
North Side Canal Company, Ltd.	82.09
Twin Falls Canal Company	82.08
Utah Power & Light Company	16.00
Total	<u>\$30,187.83</u>

*FUNDS AVAILABLE April 1, 1927

Normal Flow Fund (a)	1,375.15
Milner Low Lift Irrigation District (Unpaid 1926 Water Master bill)	30.87
Jackson Lake Stored Water Users (a)	9.24
North Fork Reservoir Company (b)	17.32
Sheppard & Company (b)	18.34
U. S. Geological Survey (c)	602.03
State of Idaho, Cooperative Stream Measurement Fund (d)	1,094.00
Total	<u>5,146.95</u>

* Amounts given in this table represent funds in bank or definitely known to be available after all accounts (except a few outstanding claims which had not yet been presented) were settled and adjusted to and including March 31, 1927.

- (a) Additional funds probably available on or before June 1, 1927.
- (b) Represents unexpended portion of money advanced.
- (c) Represents amount available for expenditure prior to July 1, 1927.
- (d) Amount allotted for expenditure prior to July 1, 1927
(Subject to slight change).

Two important items are not included in these summaries for the reason that their exact value is not definitely known. These are:

- (1) The rent equivalent of the office quarters and furniture in the Federal Building at Idaho Falls. Because of the cooperation

with the U. S. Geological Survey this very desirable office space and equipment is made available without charge.

(2) The cost of securing the necessary prints for and the binding of 55 copies of the 1925 report which was paid direct by the State Commissioner of Reclamation.

The total annual expenditure amounting to \$30,187.83 is greater than that of the preceding year by \$4,734.63 but is less than that for the year ending March 31, 1925 by \$3,796.71. These differences reflect, to some extent, inversely the water supply characteristics of the respective seasons since costs are generally greatest during years of most deficiency. Another important factor which made the 1924 expenditures unusually heavy was the large amount of special investigation work accomplished during that year.

WATER RIGHTS

Decreed rights having their source of supply in Honrys Fork, Fall and Teton Rivers have remained substantially unchanged during the past two years and in consequence the diagrams covering these streams which are contained in the 1924 report are still applicable. Several small permanent transfers have recently been granted which affect some of the canals diverting from Snake River proper and, in addition, material increase in storage rights has resulted from the completion of the American Falls Dam. These changes have been made and the revised rights as of April 1, 1927 are shown on Plate XXXV.

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.

What may be considered permanent storage rights are listed under the "Storage" heading. These represent a combination of Jackson Lake and American Falls water, referred to respectively by the letters "J" and "A". Should some of the American Falls contractors later decide to take their construction cost rebate in money rather than in water these items will be changed somewhat. Slight changes may also be necessary when the final unit cost of the reservoir is definitely established. The following table supplements the storage data contained in this column:

	Acres-feet
Storage rights listed on Plate XXXV	1,457,434
American Falls Reservoir District (unallotted)	631
United States (held for specific projects or for sale)	1,045,935
Idaho Power Company	45,000
Combined capacity of American Falls and Jackson) Lake Reservoirs.	<hr/> 2,547,000