

# FOURTEENTH ANNUAL REPORT

## BEAR RIVER COMMISSION

1971



For the Report Year October 1, 1970 to  
September 30, 1971

LOGAN, UTAH

April 1, 1972

## BEAR RIVER COMMISSION

P. O. BOX 413  
LOGAN, UTAH

April 1, 1972

Mr. President:

Submitted herewith is the Fourteenth Annual Report of the Bear River Commission, as required by Article III D 2 of the Bear River Compact.

A copy of the report is being transmitted to the Governor of each signatory State to the Bear River Compact.

Very truly yours,



Wallace N. Jibson  
Assistant Secretary

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

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# **FOURTEENTH ANNUAL REPORT**

**of the**

## **BEAR RIVER COMMISSION**

April 1, 1972

### **INTRODUCTION**

The Bear River Compact determines the rights and obligations of the signatory States of Wyoming, Idaho, and Utah with respect to the waters of Bear River. Federal consent to the Compact was given by the Congress and signed by the President, March 17, 1958. The Bear River Commission was organized as an interstate agency to administer the Compact.

Article III D 2 of the Compact provides that the Bear River Commission shall compile annually a report covering the work of the Commission for the water year ending the previous September 30 and transmit it to the President of the United States and to the Governors of the signatory States on or before April 1 of each year.

Activities of the Bear River Commission during the water year ending September 30, 1971 are summarized in this report. Financial report of the auditors and daily streamflow records are shown in the appendixes.

### **ORGANIZATION**

Ten commissioners, three representing each State and one the United States, constitute the Bear River Commission. The Federal representative serves as Chairman without vote.

J. C. Hedin, Preston, was appointed to the Commission as an Idaho delegate to replace Cecil Foster. Thomas O. Parker, Regional Solicitor for the Department of the Interior, will serve as legal adviser to E. O. Larson, Federal Representative. Ferris M. Kunz, Idaho delegate, was elected Vice-Chairman of the Commission in Annual Meeting, April 19, 1971.

## OFFICERS

Chairman .....	E. O. Larson, Salt Lake City, Utah
Vice-Chairman .....	Ferris M. Kunz, Montpelier, Idaho
Secretary-Treasurer .....	Daniel F. Lawrence, Bountiful, Utah
Assistant Secretary .....	Wallace N. Jibson, Logan, Utah

## MEMBERS

### Idaho

Ferris M. Kunz .....	Montpelier, Idaho
William G. Jenkins .....	Malad, Idaho
J. C. Hedin .....	Preston, Idaho
R. Keith Higginson (Ex officio) .....	Boise, Idaho

### Utah

Daniel F. Lawrence.....	Bountiful, Utah
Gordon H. Peart .....	Randolph, Utah
S. Paul Holmgren .....	Bear River City, Utah

### Wyoming

Floyd A. Bishop .....	Cheyenne, Wyoming
S. Reed Dayton .....	Cokeville, Wyoming
J. W. Myers .....	Evanston, Wyoming

### United States

E. O. Larson .....	Salt Lake City, Utah
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### Budget Committee

J. W. Myers .....	Evanston, Wyoming
S. Paul Holmgren .....	Bear River City, Utah
Ferris M. Kunz .....	Montpelier, Idaho

### Operations Committee

S. Reed Dayton .....	Cokeville, Wyoming
William G. Jenkins .....	Malad, Idaho
Gordon H. Peart .....	Randolph, Utah

## MEETINGS

Two meetings were held during the report year in accordance with the bylaws as follows:

Regular Meeting—November 23, 1970....Salt Lake City, Utah  
 Annual Meeting—April 19, 1971.....Cokeville, Wyoming

## BUDGET AND FISCAL DISBURSEMENTS

### Adopted Budget

	<i>Fiscal Year Ending</i> <i>6-30-1971</i>	<i>Fiscal Year Ending</i> <i>6-30-1972</i>	<i>Fiscal Biennium Ending</i> <i>6-30-1972</i>
<b>Compact Administration</b>			
Personal Services .....	\$5,726	\$5,962	\$11,688
Travel and Subsistence .....	240	450	690
General Office Expense .....	450	432	882
Fiscal and Administrative .....	328	352	680
Washington Office Tech.Charge ..	656	704	1,360
Printing and Reproduction .....	500	500	1,000
Treasurer (Bond and Audit) .....	300	300	600
Transcribing Minutes .....	100	100	200
Legal Retainer Fee .....	300	300	600
Miscellaneous .....	0	0	0
Sub-Total .....	\$8,600*	\$9,100**	\$17,700

### Stream-Gaging Program

U.S. Geological Survey .....	\$64,425	\$67,411	\$131,836
Total .....	\$73,025*	\$76,511**	\$149,536

\*As revised by \$2,000 decrease, and supplemental Federal allocation of \$2,025.

\*\*As revised by \$2,000 decrease and supplemental Federal allocation of \$611.

### Allocation of Budget

U.S. Geological Survey .....	\$33,224	\$34,010	\$ 67,234
State of Idaho .....	13,267	14,167	27,434
State of Utah .....	13,267	14,167	27,434
State of Wyoming .....	13,267	14,167	27,434
Total .....	\$73,025	\$76,511	\$149,536

All disbursements of Commission funds are made by check on vouchers signed by the Secretary-Treasurer, and approved and counter-signed by the Chairman or Vice-Chairman.

The audit of accounts and records, including balance sheet of June 30, 1971 and statement of budget revenue and appropriation accounts for the fiscal year ended June 30, 1971, are included in this report as appendix A.

## **STREAM-GAGING PROGRAM**

A cooperative, basin-wide program of stream gaging is administered by the Geological Survey project engineer at Logan, Utah. The Geological Survey and Bear River Commission contribute equally to finance the collection of daily streamflow records at about 50 gaging stations. An additional eight gaging stations in the basin are operated by Utah Power & Light Company in connection with Federal Power Commission projects. Streamflow records of significance to the Commission are published herein as appendix B.

A study of gains and losses in the Migratory Bird Refuge area of the lower basin involves measurement of inflow to the area across a control line extending west from Brigham City about 20 miles to Blue Spring Creek drainage. Outflow is measured at the trestle opening where Bear River Bay joins Great Salt Lake. Logan office personnel are assisting in this study that is being financed by Utah's Division of Water Resources.

## **ADMINISTRATION OF BEAR RIVER COMPACT**

Provisions of the Compact are administered and enforced by direction of Bear River Commission. However, water rights within each State are adjudicated and administered in accordance with State law subject to limitations provided in the Compact.

Cooperative stream-gaging agreements with the Geological Survey include a program of administrative and technical assistance to the Commission financed without matching Federal funds. This program is directed by the Geological Survey project engineer at Logan where the project office is also the principal office of the Commission.

The project engineer is Assistant Secretary to the Commission with responsibility of providing technical assistance and current streamflow information required to administer the Compact. He establishes operational procedures, conducts hydrologic studies, compiles annual reports, and maintains the records of the Commission.

Seasonal daily records were collected on about 130 diversions above Bear Lake by district water commissioners under the general supervision of the Geological Survey. These records include all of the diversions from Bear River main stem and Smiths Fork, as they are required to administer the Bear River Compact. Daily discharge records for canals in the Central Division have been published in previous annual reports. Records are published this year (tables 1-10) for both the Upper and Central Divisions. (See frontispiece for Division boundaries.)

Expenses incurred by the Bear River Commission are paid equally by the signatory States. Compensation and expenses of the Federal representative, each commissioner, and each adviser are paid by the Government which he represents.

## WATER SUPPLY

Record-breaking flows occurred in 1971 in many areas of Bear River basin. Runoff from the Uintas, though 24 percent above normal, was proportionately less than from most downstream tributaries. Flow from Smith's Fork was about 20 percent higher than in any other year of the 29-year period of record, and Logan River yield was greater than in any year since 1912.

The bar charts on the opposite page (figure 1) illustrate a comparison of monthly and yearly streamflow in 1971 with a longtime average. Mean flow in cubic feet per second is shown at three gaging stations representing the Upper, Central, and Lower Divisions of the basin. Streamflow at the two upper stations is the major supply for the Upper and Central Divisions so is shown also on daily hydrographs in figures 2 and 3. Seasonal and water-year flow at these stations is summarized in the following table:

*Discharge in Acre-feet  
May-September*

	<i>Average 1943-71</i>	<i>1970</i>	<i>1971</i>
Upper Bear River .....	115,700	116,800	141,600
Smiths Fork .....	109,100	100,300	188,600
Logan River .....	121,300	127,900	216,400

*Water Year*

	<i>Average 1943-71</i>	<i>1970</i>	<i>1971</i>
Upper Bear River .....	138,200	135,700	171,300
Smiths Fork .....	141,400	130,100	225,800
Logan River .....	181,200	177,900	295,200

Bear River supply and inflow to Bear Lake (figure 4) exceeded that of any previous year in which the Lake has been operated as a reservoir. However, much of this water was diverted directly to the outlet canal, so the annual inflow and outflow about balanced at about 537,000 acre-feet or more than double the 1924-71 average. The bar charts in figure 4 show the respective amounts that Bear River and peripheral tributaries contributed to the Lake. Exclusive of Bear River, the Lake on an average would gain about 9,000 acre-feet annually over evaporation and other losses, whereas in 1971 this gain was 121,000 acre-feet. Stage and content hydrographs for the past two years are shown in figure 5.

Storage capacity in Bear Lake for the first time in many years was inadequate to store all the snowmelt runoff, and flows up to 2,400 cfs were bypassed to the Lower Division.

*Bear Lake Elevation (U.P. & L. Datum)*

<i>Water Year</i>	<i>Beginning of Water Year</i>	<i>End of Storage Period</i>	<i>End of Water Year</i>
1970 .....	5,919.80	5,921.08	5,919.23
1971 .....	5,919.23	5,923.12	5,920.98

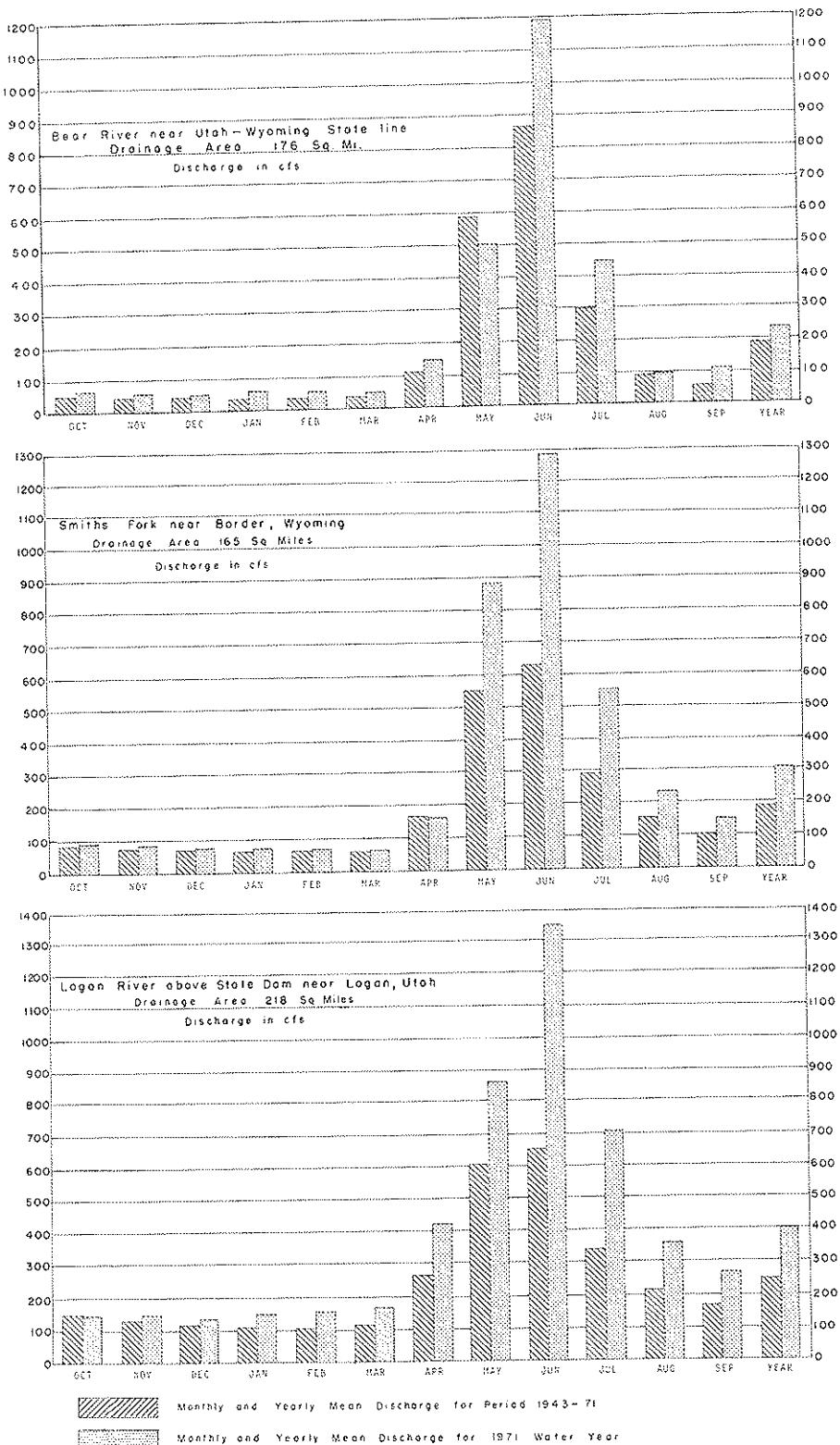
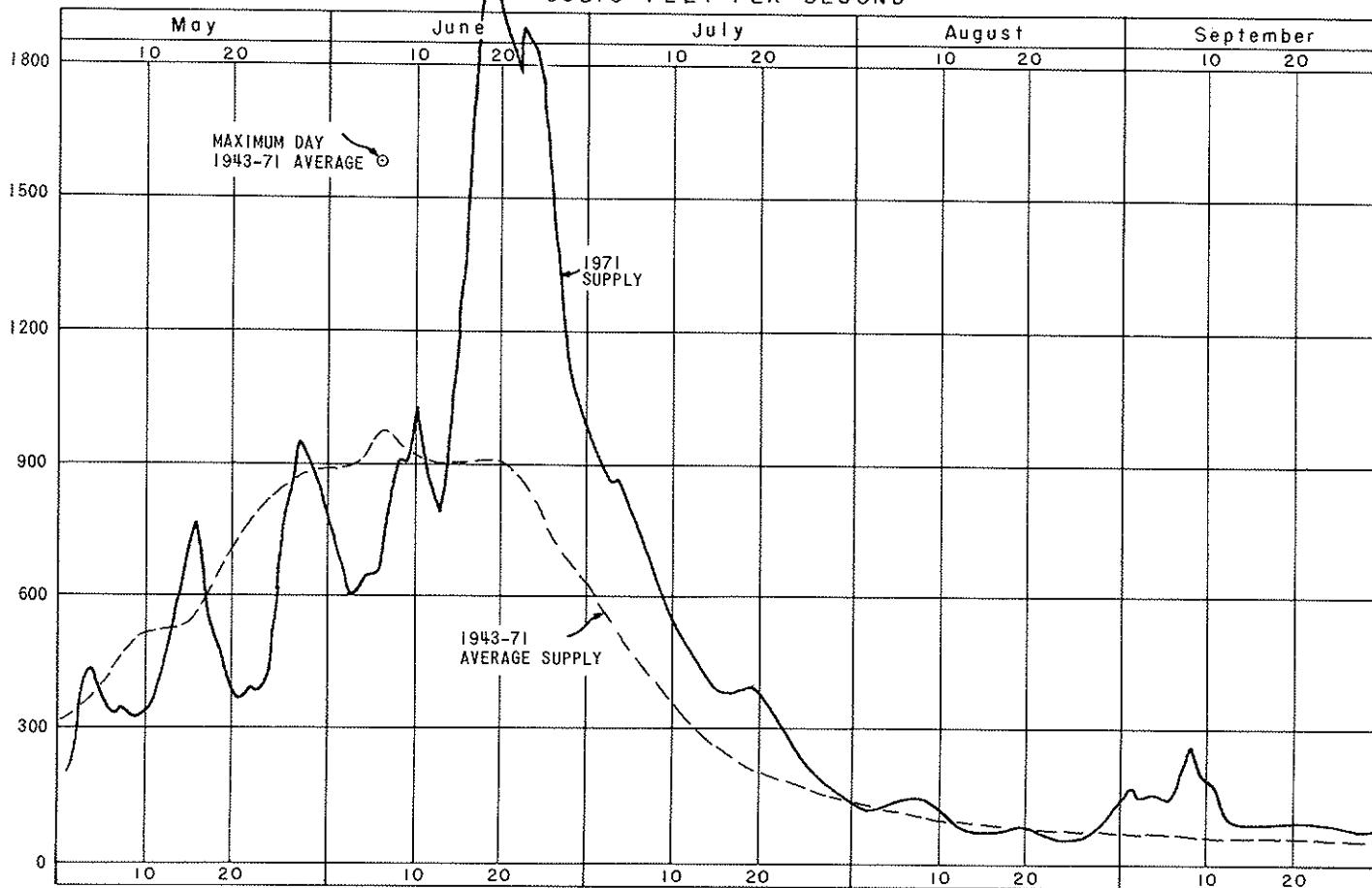


Figure 1. Comparison of discharge of three representative gaging stations in 1971 with average discharge for period 1943-71

# UPPER DIVISION - BEAR RIVER SUPPLY \*

CUBIC FEET PER SECOND

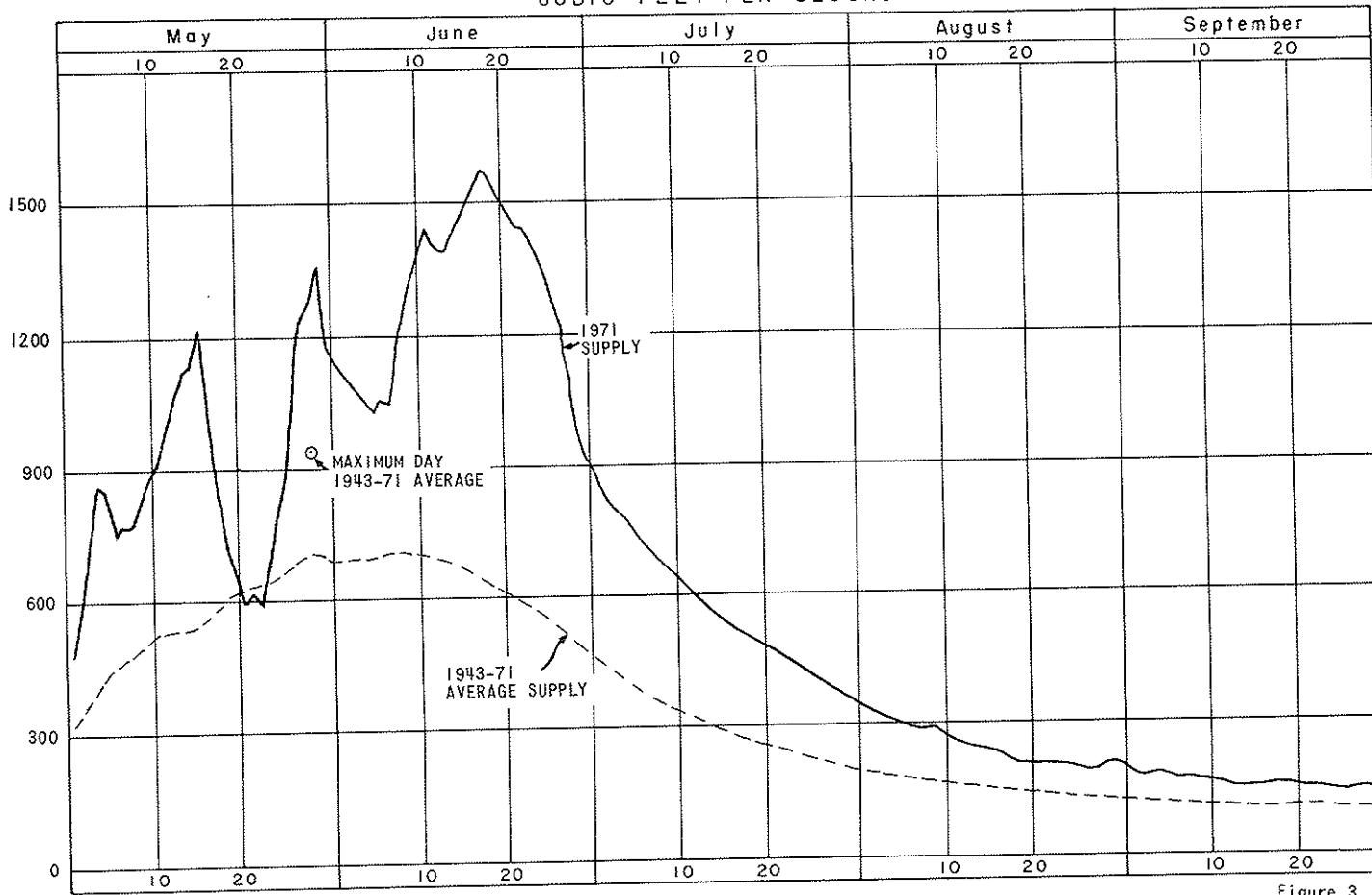


\*Bear River near Utah-Wyoming State line

Figure 2

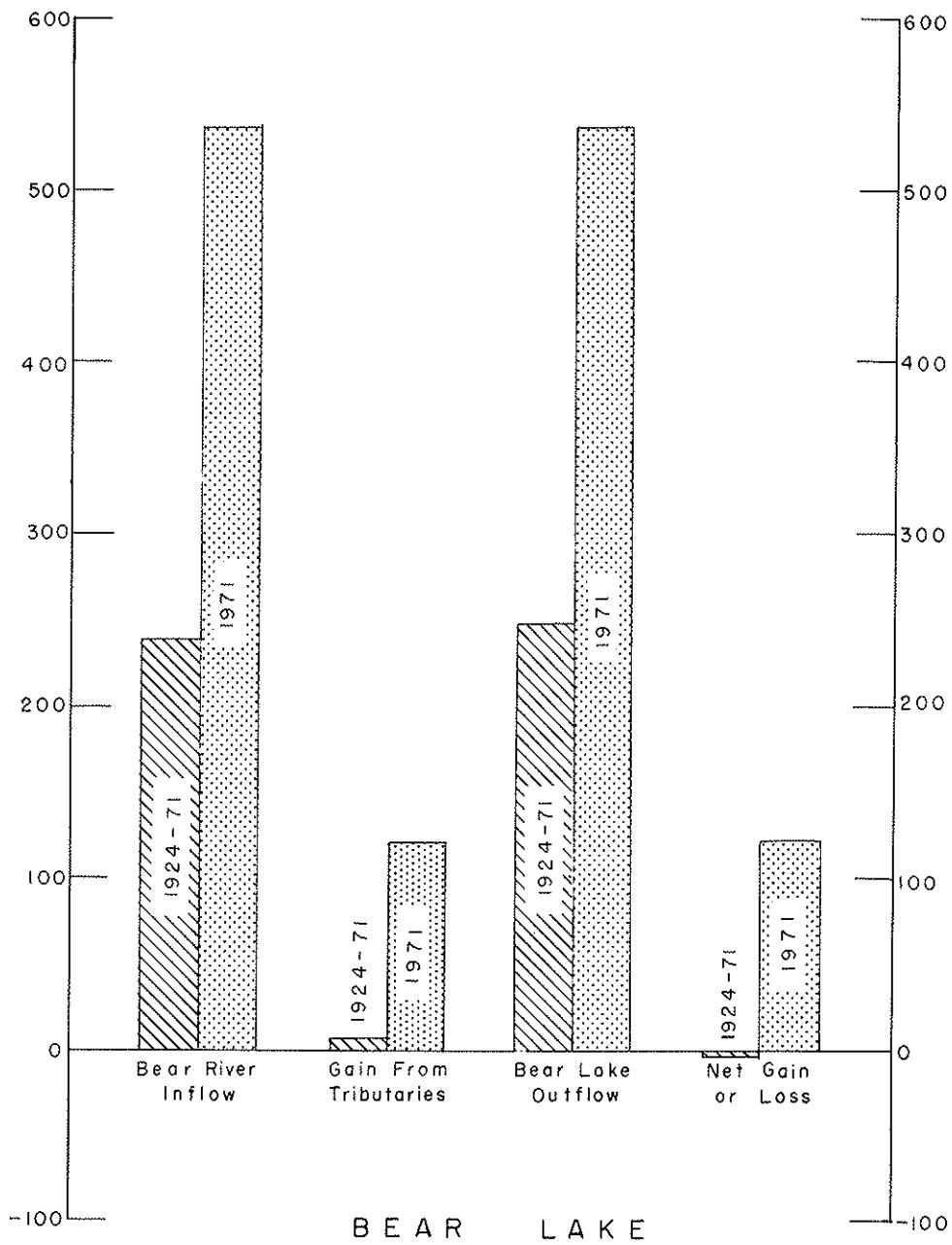
# CENTRAL DIVISION - SMITHS FORK SUPPLY \*

CUBIC FEET PER SECOND



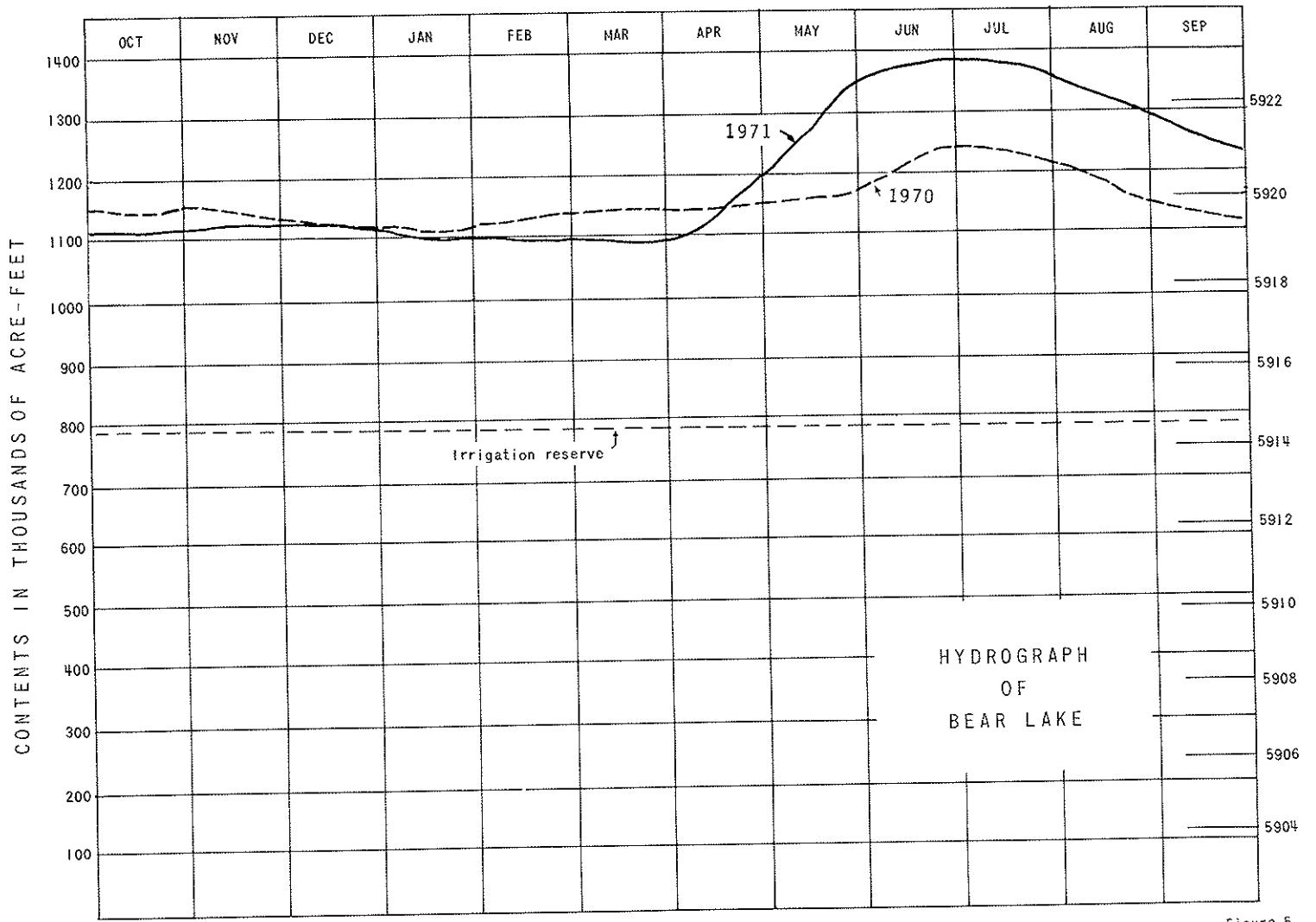
\*Smiths Fork near Border, Wyoming

Figure 3



Annual Quantities in Thousands of Acre-Feet

Figure 4



## STREAMFLOW DISTRIBUTION

Records of diversions from Bear River main stem above Bear Lake and from Smiths Fork were collected by district water commissioners and submitted weekly to the Assistant Secretary. He computed section diversions and allocations and informed these district commissioners and members of the Commission of the quantities diverted and of State-section allocations, where applicable, for the regulatory action needed to comply with the Compact.

### Upper Division

The Upper Division comprises that part of the basin above and including Pixley Dam and includes two sections in Wyoming and two in Utah. The Compact provides that when the total diversions in the division plus the flow passing Pixley Dam is less than 1,250 cfs (divertible flow), a water emergency exists and such divertible flow is allocated to sections as follows:

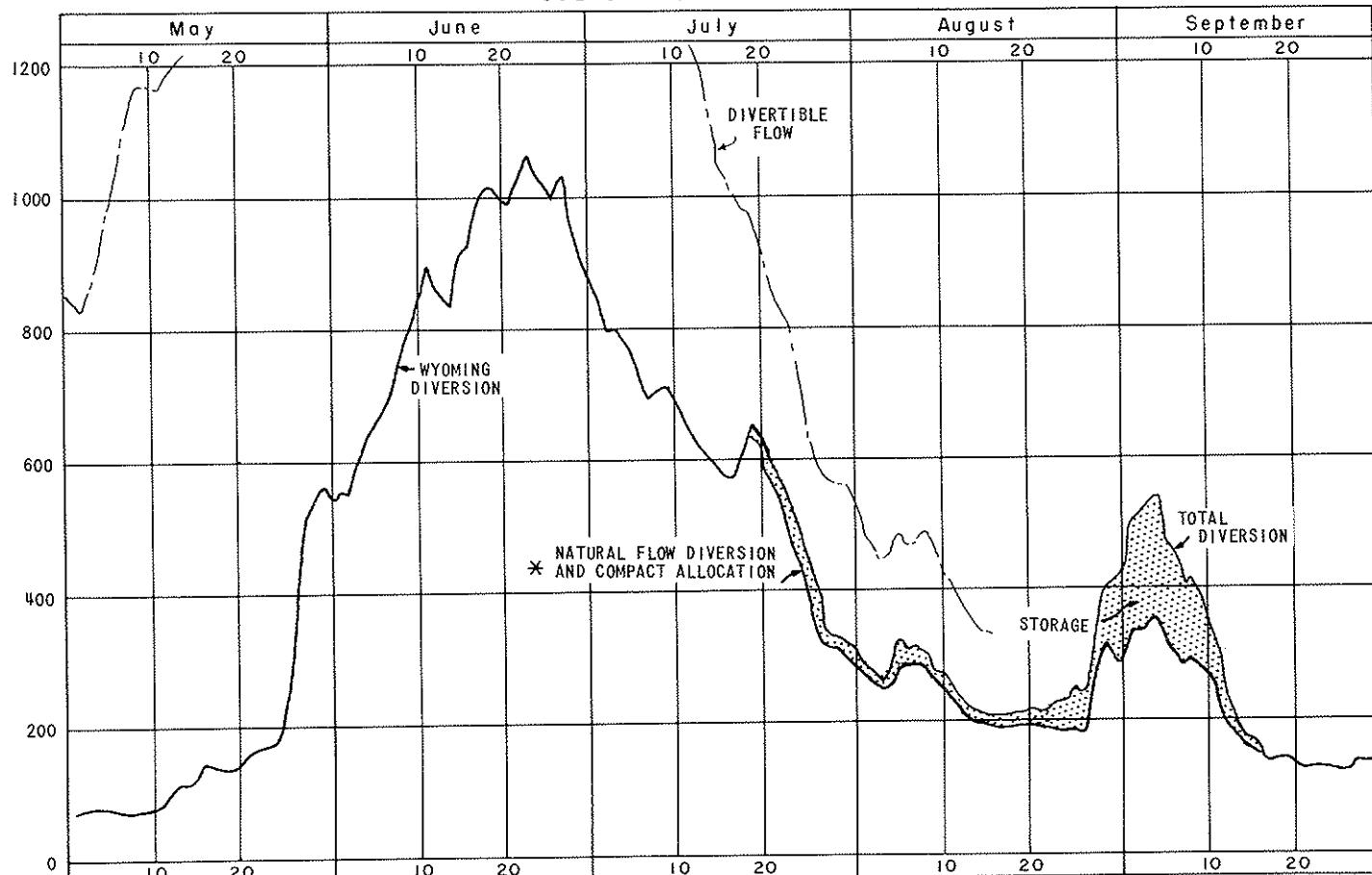
Upper Utah Section Diversions .....	0.6 percent
Upper Wyoming Section Diversions .....	49.3 percent
Lower Utah Section Diversions .....	40.5 percent
Lower Wyoming Section Diversions .....	9.6 percent

Interstate regulation in years of average or better water supply usually is not required in this division where meadow hay predominates. Article IV of the Compact makes available to other sections the unused allocation in any section. Thus, under present practice, after about July 10 Upper Wyoming Section allocation is increased by 9.6 percent as the Lower Wyoming Section ceases diverting and shortly thereafter is increased by most of Lower Utah's allocation as this section shuts down for haying operations. Except for the first few days in May, divertible flow in these years of good supply does not drop to the 1,250 cfs emergency condition until near mid-July when the two lower sections have ceased diverting for harvesting. Thereafter, Upper Wyoming Section could not conceivably divert in excess of allocation.

We should not infer from these conditions in years of good supply that direct-flow provisions of the Compact are meaningless in the Upper Division. Benefits from compact regulation in this division depend on available water supply and the period of regulation. Potentially, development of further storage would likely modify to some extent the present irrigation practice and increase the value of later supplies.

Tabulation of diversion data, tables 1-5, shows that divertible natural flow was below 1,250 cfs May 1-12 and after July 12. By Article IV then, the amount of natural flow diverted in each section during these periods of water emergency became essentially the allocation to that section because of large unused allocations in both periods. Hydrographs of water diverted from direct or natural flow and from storage are shown in figures 6, 7, and 8 for the three principal sections in the Upper Division. About 16,000 acre-feet was released from Woodruff Narrows Reservoir (figure 9) and about 5,600 acre-feet from Whitney and Sulphur Creek Reservoirs.

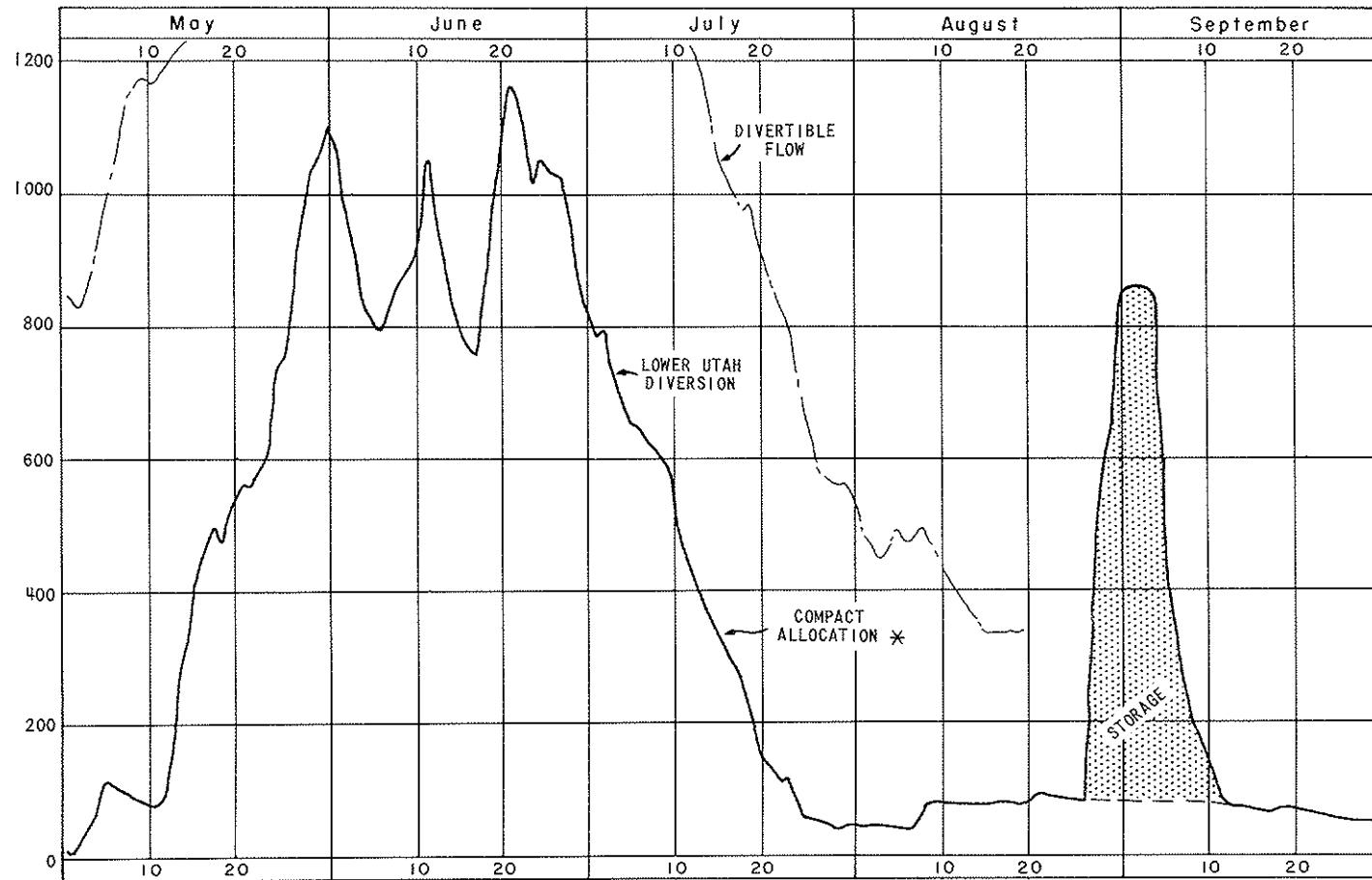
UPPER DIVISION - UPPER WYOMING SECTION  
CUBIC FEET PER SECOND



\* See footnote, Tables 3-5

Figure 6

UPPER DIVISION - LOWER UTAH SECTION  
CUBIC FEET PER SECOND



\* See footnote, Tables 3-5

Figure 7

UPPER DIVISION - LOWER WYOMING SECTION

CUBIC FEET PER SECOND

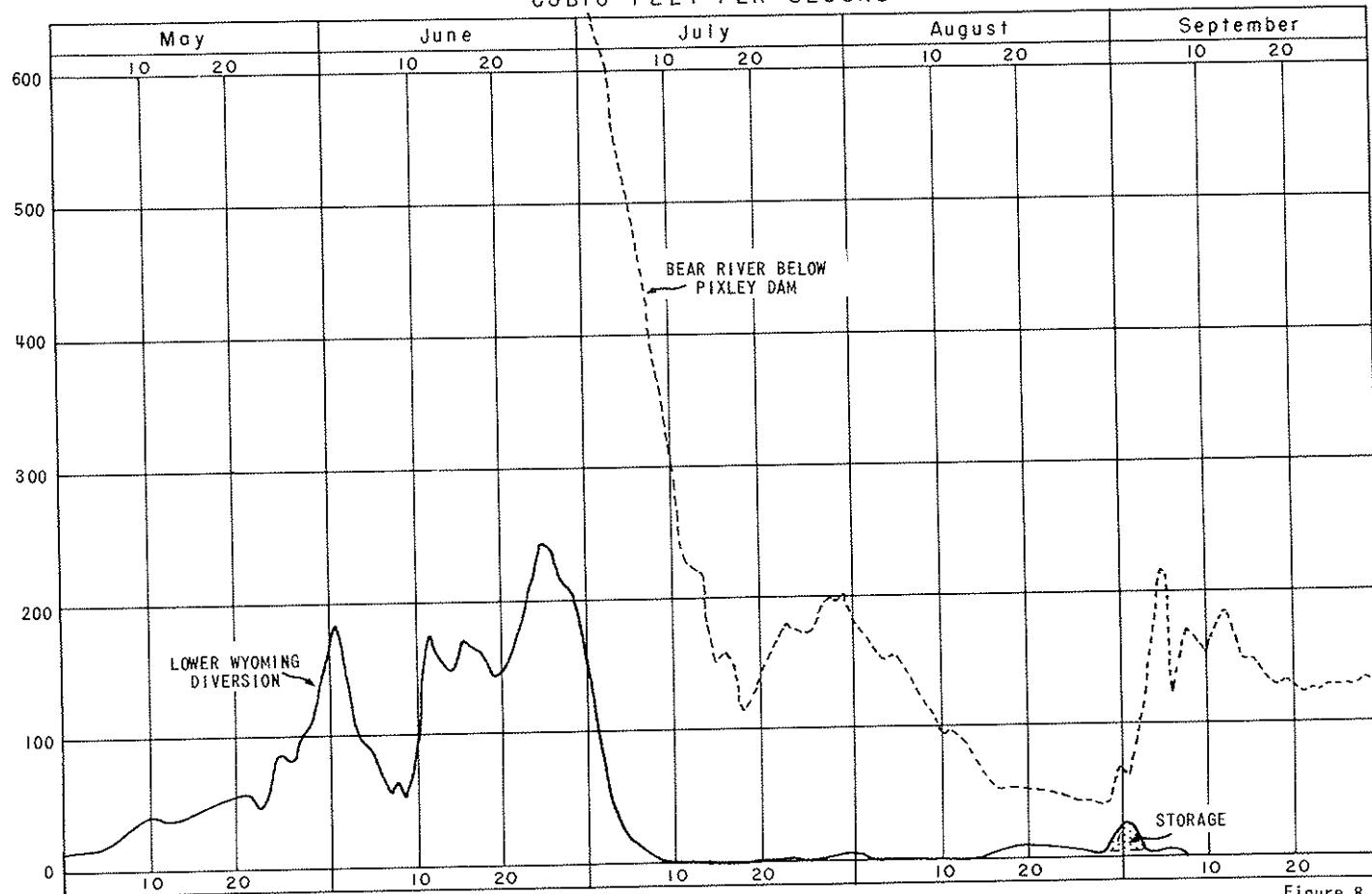


Figure 8

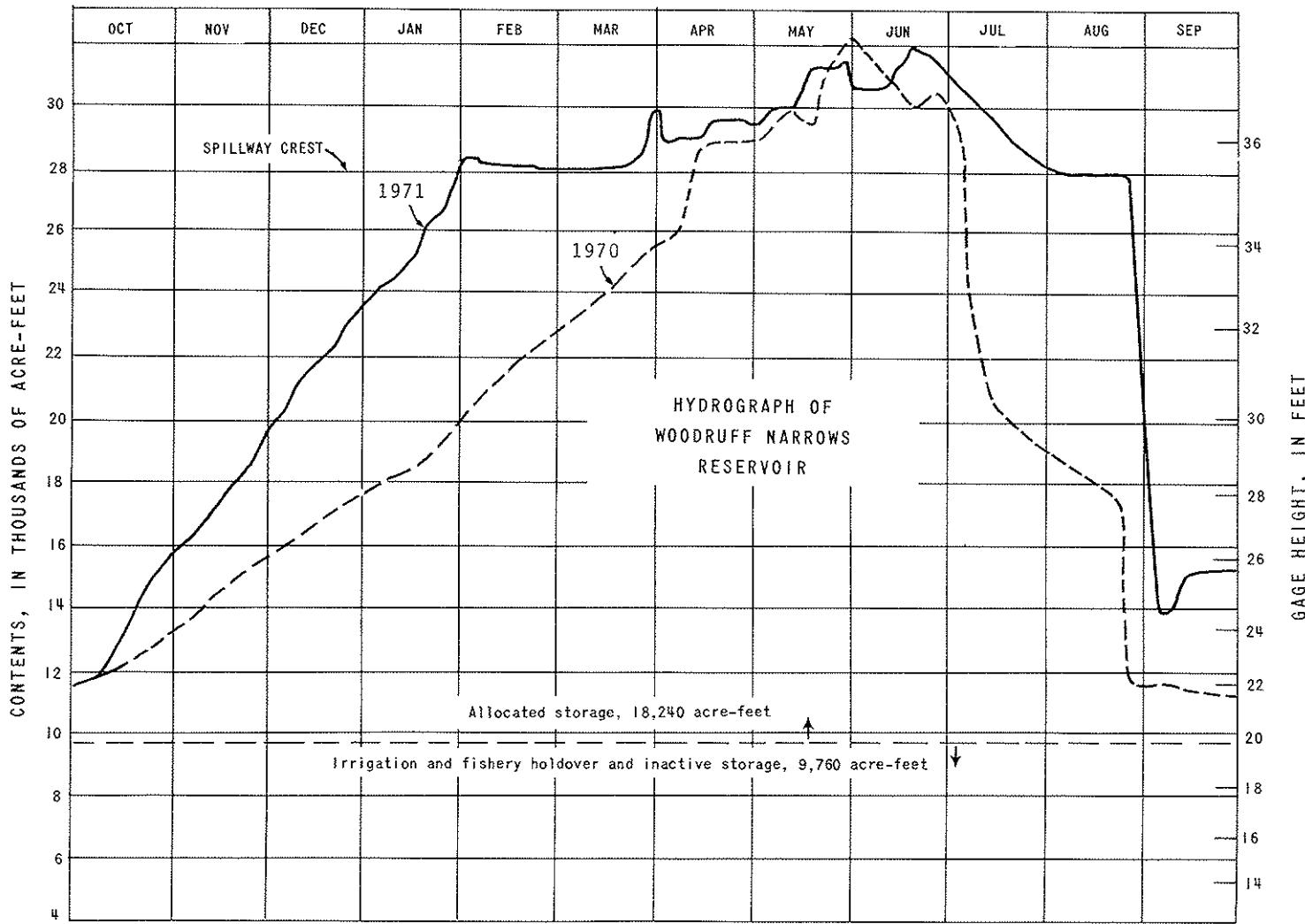


Figure 9

## Central Division

The Central Division comprises that part of the basin from Pixley Dam down to and including Stewart Dam (the point of diversion to Bear Lake). It includes a section in Wyoming and one in Idaho.

Divertible flow in the Central Division is the sum of diversions from Smiths Fork and designated tributaries, diversions from Bear River in the division, and flow passing Stewart Dam. A water emergency shall exist when this divertible flow is less than 870 cfs, or when Bear River entering Idaho (gaging station at Border) is discharging less than 350 cfs. Wyoming diversions are limited to 43 percent of the divertible flow during a water emergency.

Diversion and allocation hydrographs are shown for the Wyoming Section in figure 10 and for the Idaho Section in figure 11. Total divertible flow did not decrease below 870 cfs until August 2, while the flow passing the Border gage dropped below 350 cfs on August 11. Thus, a water emergency as defined above existed from August 2 through the balance of the season. Again, it is noted that in years of extremes, wet or dry, the interval of time between the two initiating criteria is greater, but the order of occurrence reverses between the wet and dry year. For instance, in dry years the flow passing Border usually initiates the water emergency.

Wyoming diversion was less than the allocation throughout the period of emergency except for three or four days in August. In the Idaho Section of the Central Division (figure 11) diversion rate was only about half of the allocation due to relatively high flow in the Rainbow Inlet Canal throughout the season.

Effectiveness of interstate regulation in the dry years of 1961 and 1966 is indicated in the following table by the small spread in diversion rate per acre in the two sections. In good years with less restriction, the Wyoming rate is much higher and reflects the greater requirement of gravelly soils.

*Diversion in acre-feet per acre  
May-September*

	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971
Wyoming .....	2.16	5.82	5.06	4.48	4.96	3.32	4.78	4.02	4.24	4.25	4.39
Idaho .....	1.72	3.26	3.28	2.91	2.87	2.95	3.05	3.39	3.48	3.50	3.33

## Lower Division

Authority is given the Commission upon its own motion to declare a water emergency in any division, and in the Lower Division such a declaration may be made also upon petition of an aggrieved Utah user against an Idaho user. Upon declaration of an emergency, the Commission is required to enforce water-delivery schedules based on priority of rights without regard to State lines.

No petitions were filed with the Commission or water emergencies declared in the Lower Division in 1971.

## **Interstate Tributaries**

An aggrieved user on an interstate tributary may petition for declaration of water emergency and distribution of flow under direction of the Commission. Interstate arbitration on tributaries was not requested in 1971.

## **STORAGE**

### **New Storage**

The Compact defines storage rights in existing reservoirs above Bear Lake and provides for an additional storage allowance of 36,500 acre-feet annually. Idaho users on Thomas Fork are allotted 1,000 acre-feet of this amount and the remainder is divided equally between Wyoming and Utah.

The reservoirs shown below have been constructed under additional storage provisions of the Compact and all were filled to capacity in 1971. A total allocation to Woodruff Narrows Reservoir for storage of 18,240 acre-feet includes 15,240 acre-feet from Utah and 3,000 acre-feet from Wyoming.

<i>Reservoir</i>	<i>Allocation</i>
Sulphur Creek Reservoir (Wyoming) .....	4,614 ac-ft
Sulphur Creek Reservoir Enlargement (Wyoming) .....	1,100 ac-ft
J. L. Martin Reservoir, Sulphur Creek (Wyoming) .....	88 ac-ft
A. J. Barker Reservoir, Yellow Creek (Utah) .....	162 ac-ft
Hatch Brothers Reservoir (Utah) .....	350 ac-ft
Woodruff Narrows Reservoir (Utah-Wyoming) .....	18,240 ac-ft
Whitney Reservoir (Wyoming) .....	4,200 ac-ft
Wyman Reservoir (Wyoming) .....	22 ac-ft
Massae Reservoir (Wyoming) .....	107 ac-ft
Woodruff Creek Reservoir (Utah) .....	2,000 ac-ft
Total Allocation .....	30,883 ac-ft

### **Bear Lake**

Article V of the Compact provides an irrigation reserve level in Bear Lake below which water shall not be released solely for generation of power, except in emergency, but after release for irrigation it may be used in generating power as it is conveyed to irrigation diversion works. The reserve is to be increased by designated amounts as additional storage, under terms of the Compact, is developed above Bear Lake. No development of new storage took place in 1971, so the irrigation reserve elevation remained at 5,914.61 feet with active storage content in the reserve of 794,900 acre-feet. This reserve corresponds to 30,000 acre-feet of additional storage allocation.

## **APPLICATIONS FOR APPROPRIATION**

Article X of the Compact states, "Applications for appropriation, for change of point of diversion, place and nature of use, and for exchange of Bear River water shall be considered and acted upon in

accordance with the law of the State in which the point of diversion is located, but no such application shall be approved if the effect thereof will be to deprive any water user in another State of water to which he is entitled. The official of each State in charge of water administration shall, upon the filing of an application affecting Bear River water, transmit a copy thereof to the Commission."

Copies of filings presented to the Commission in 1971 covered pending and approved applications in the amount of 137.1 cfs including 74.8 cfs of ground water appropriation. Breakdown by states shows 82.8 cfs in Utah, 38.7 cfs in Idaho, and 15.6 cfs in Wyoming. Pending storage rights for 2,400 acre-feet would impound water in two reservoirs on Black Slough in Box Elder County, Utah.

The Commission has not protested any filing that has been presented either in 1971 or in any earlier year. Yet, in the aggregate these new rights continue to accumulate at a rather high rate, and the possible effect on rights in another State continues to be a problem of concern to the Commission. Eventually, the effect on streamflow and established rights, particularly of additional ground water use, will need to be studied and action taken if necessary to implement the intent of Article X of the Compact.

### **REVIEW OF COMPACT PROVISIONS**

Article XIII, Bear River Compact, requires that the Commission review provisions of the Compact at intervals not exceeding twenty years and may propose amendments to any such provision for consideration of the legislatures of the signatory States. Wyoming commissioners have urged such a review with particular emphasis on their recommendation for an increase in storage allocation to the basin above Bear Lake. Discussion on the subject has continued in the 1971 meetings of the Commission with emphasis on the responsibility of the Bear River Commission and the function of a Bear River Negotiating Commission consisting of members from each State appointed by the respective Governors. An important issue, in addition to the Wyoming recommendation, is the division of unconsumed river flows between Idaho and Utah in the Lower Division. This allocation may or may not be accomplished through modification of the Compact, but it has been the principal consideration of the Negotiating Commission whose membership includes but is not limited to members of the Bear River Commission.

# CENTRAL DIVISION - WYOMING SECTION

CUBIC FEET PER SECOND

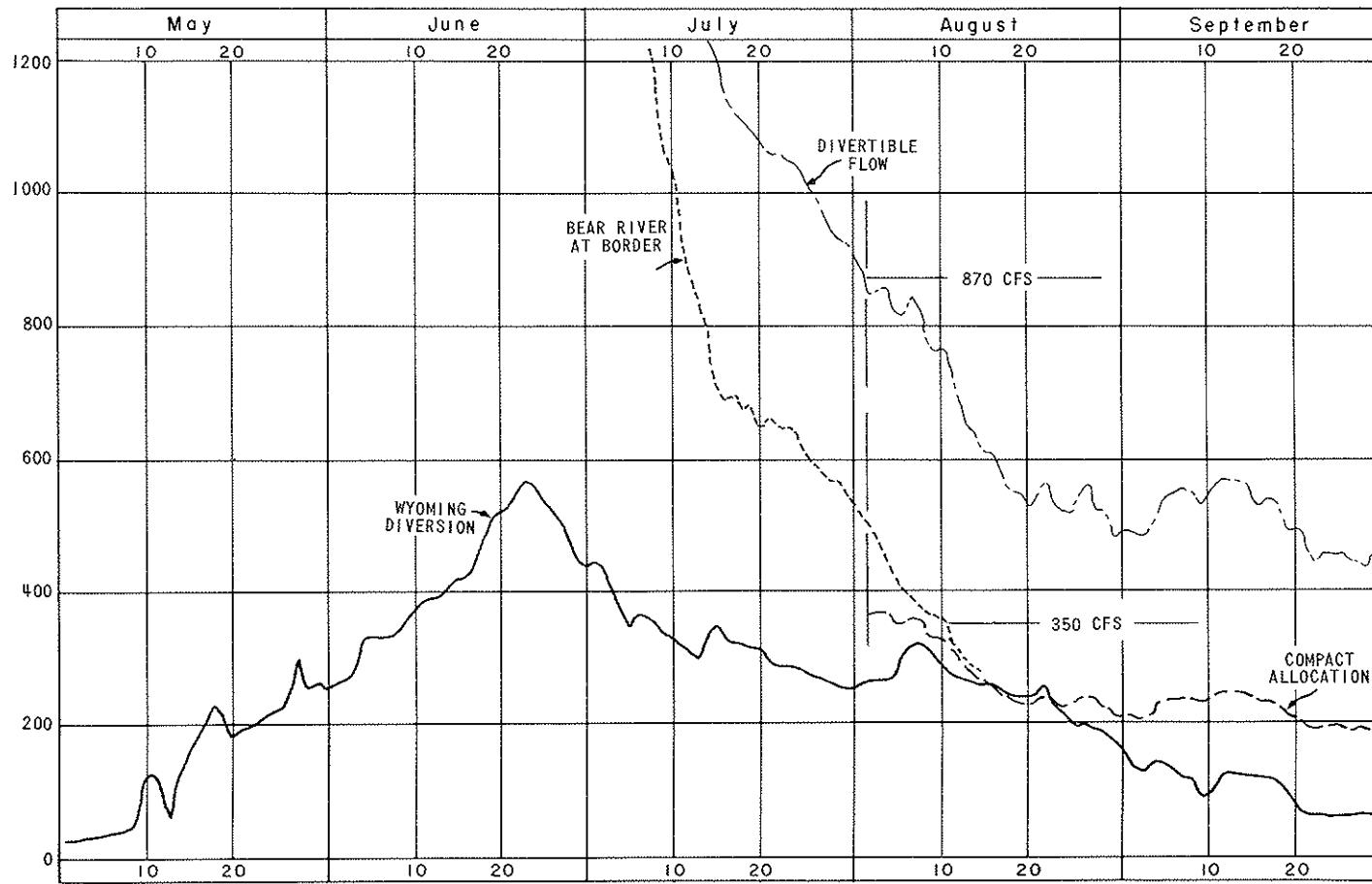


Figure 10

CENTRAL DIVISION - IDAHO SECTION  
CUBIC FEET PER SECOND

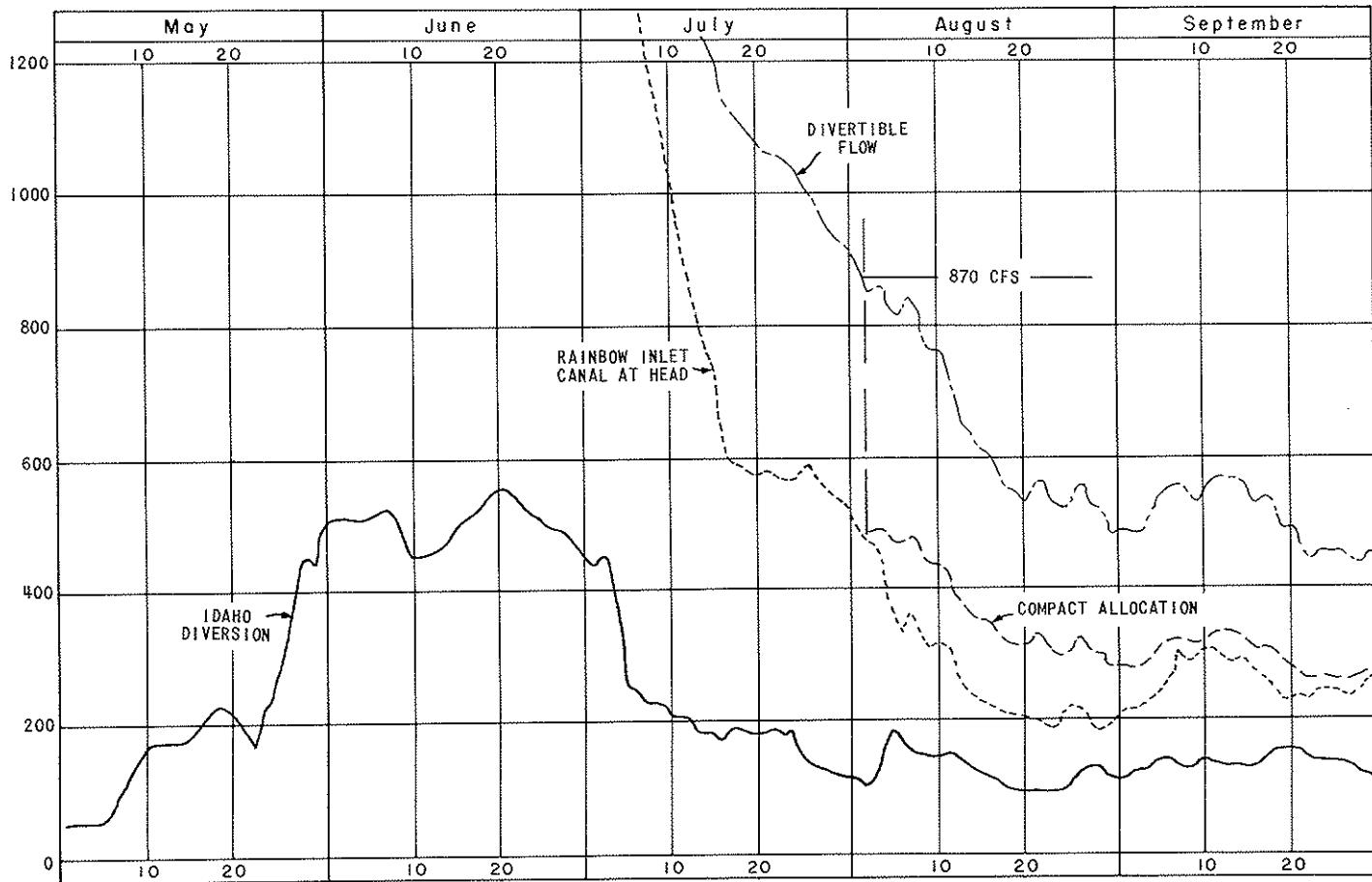


Figure II

DAILY DISCHARGE IN CFS OF BEAR RIVER CANALS WITH COMPACT ALLOCATION IN UPPER DIVISION

DAILY DISCHARGE IN CFS OF BEAR RIVER CANALS WITH COMPACT ALLOCATION IN UPPER DIVISION

DAILY DISCHARGE IN CFS OF BEAR RIVER CANALS WITH COMPACT ALLOCATION IN UPPER DIVISION

Note: Divertible Flow is the sum of all diversions plus Bear R. below Pixley Dam minus storage water diverted.

Each State section allocation is equal to the amount diverted minus storage water diverted in the section. (See Article IV, 1.)

Table 3

DAILY DISCHARGE IN CFS OF BEAR RIVER CANALS WITH COMPACT ALLOCATION IN UPPER DIVISION

SUGEST	1971																														
	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
UPPER UTAH - Newark E F	9	9	8	8	8	7	7	7	7	7	7	6	6	6	6	5	5	5	5	5	4	3	3	2	2	2	2	2	2	2	168
UPPER UYUHINA																															
Hilliard East Fork	12	11	9	9	8	8	8	7	7	6	6	6	6	6	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	126
Lamont	12	12	12	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13
Hilliard West Side	22	20	7	4	4	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	259
Bear	35	35	36	36	39	40	41	40	30	26	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Iropic	8	7	6	6	5	5	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	92
Danielson	4	4	5	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	149
Elk Grove & Crown	25	24	25	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26
Kearny & Big Bend	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	102
Homer																															
Lewis	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Lewis & Blanchard	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	44
Mayers	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	3	3	145
Mare	6	7	8	6	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	93
Coffman 1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	27
Coffman 2	2	3	5	6	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	79
Elmwood	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	125
Myers Irrigation	2	2	2	2	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	102
Booth	2	2	11	13	13	13	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15
Aneil	7	8	10	11	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	319
Cornelison	4	4	3	3	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	6
Coronado Water Supply	12	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16
State Hospital																															
Evanston Water	12	12	6	10	10	35	33	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36	36
Barton	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	744
Faulkner	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	42
Rocky Mtn-Slythe	5	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	755
Bennie Hatch	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	392
Bennie Barton	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	30
A. W. Sims	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	36
Graham 2	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
Farmer Ditch	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
Saxton Turner	0	0	3	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	47
Saxton Irrigation	3	3	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
John Sim's So. Pacific	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
Alpin	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
Sim's-83 Right-Turner	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
Bowen-Russell	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
Turner	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
Chapman Canal at Rd	10	10	12	17	17	21	22	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23	23
Sheriff-Ippen-Morris	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	99
Lewis Morris	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
Leslie Roberts	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
Tunnel	0	2	1	7	1	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	291
Foxwells	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
Upper Island	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
Slight Irrigation	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
Francis Lee	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
West River	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 Upper Wyo.	26	27	26	27	27	32	32	31	31	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30	30
LOWER UTAH																															
Reville	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
Scott	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
Rock Land & Laramie Rock	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
Crawford-Thompson	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	0
Edmunds-Wadsworth	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
Pandolph Sage Creek	2	2	1																												

the sum of all diversions plus Part B below Pixley Dam minus storage water diverted.

Divertible flow is the sum of all diversions plus net inflow to State water storage. Each State section allocation is equal to the amount diverted minus storage water diverted in the section. (See Article 17, 1, e.)

Table 4

**DAILY DISCHARGE IN CFS OF BEAR RIVER CANALS WITH COMPACT ALLOCATION IN UPPER DIVISION**

SEPTEMBER	1971	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				
UPPER UTAH - Howard L. F.	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				
UPPER WYOMING																																			
Hilliard East Fork	14	16	26	24	24	26	28	30	28	27	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	340		
Lennon	17	17	17	18	18	18	19	19	19	17	17	11	10	9	9	9	9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	383		
Hilliard West Side	13	12	28	27	25	26	28	28	26	26	25	20	19	19	18	18	18	19	19	19	19	19	18	17	17	17	17	17	17	17	17	605			
Bear Creek	53	50	51	51	52	53	53	53	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	52	738			
Big Piney	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	2	2	69		
Danielsen	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	118		
Pine Grove & Fremont	18	18	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	265			
McGraw & Big Bend	19	17	15	13	12	12	15	12	11	11	10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Hemer	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Lewis	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	100	
Moore & Blanchard	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	4	4	48	
Morris 1	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	51	
Morris 2	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	4	4	43	
Horn	3	3	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	42	
Coffman 1	3	3	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	42	
Coffman 2	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	4	4	39	
Knoder	4	4	3	3	3	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	56	
Mayers 1	5	6	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	42	
Mayers Irrigation	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	2	2	2	39	
Booth	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	2	2	2	2	
Ancil	16	17	17	18	18	19	18	18	16	16	15	14	11	11	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	211			
Cornelison	3	3	3	3	3	3	3	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	19	
Extraction Water-Supply	12	12	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	508			
Knight 1, 2, 3	7	5	6	6	6	6	6	6	6	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	196	
State Hospital	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	3	3	3	3	66	
Mountain Water	36	36	36	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	40	229			
Bartow	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	0	0	
Faulkner	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	0	0	
Rocky Mtn-Blythe	6	6	7	7	7	7	7	7	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	99	
Bennett Ditch	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	0	0	
Bruce Barton	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	0	0	
A. K. Sims	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	0	0	
Reed Station	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	0	0	
Learnard Ditch	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	0	0	
Saxton Turner	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	2	2	2	0	
John Sims-San. Pacific	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	208				
Ramsey	16	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	51			
Sims-Bright-Turner	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	0	0	60
Bowns-Russell	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	2	2	2	0	
Turner	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	0	0	
Chapman Canal at Hd	51	42	47	65	65	63	70	70	64	64	51	51	48	45	42	40	42	44	45	46	46	46	46	46	46	46	46	46	46	46	46	1,385			
Gardlett-Upper Morris	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	0	0	0
Lower Morris	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	0	0	0
Lower Towns	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	0	0	0
Tunnel	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	281
Foxnes	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	0	0	0
Upper Island	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	0	0	0
Bright-Irrigation	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	0	0	0
Francis-Lee	28	34	39	38	29	29	15	28	36	35	15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	298		
Bear River	86	85	85	73	73	26	26	26	192	192	192	192	192	192	192	192	192	192	192	192	192	192	192	192	192	192	192	192	192	192	192	192			
Total Upper Wyo	505	516	538	540	471	405	414	388	352	201	201	173	164	164	164	164	164																		

DAILY DISCHARGE IN CFS OF SMITHS FORK AND BEAR RIVER CANALS WITH COMPACT ALLOCATION IN CENTRAL DIVISION																																	
DAY	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		
WYOMING DIVERSIONS																																	
BEAR RIVER CANALS																																	
Garrett	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		
Sights	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		
Hyman East	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		
Hyman West	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		
Snyder	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		
Rocky Point	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		
Coop	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		
J. S. Richards	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		
TRIBUTARY CANALS																																	
Pine Cr.	10	18	10	16	10	11	11	11	12	12	12	12	12	12	12	12	13	13	12	12	12	12	12	12	12	12	12	12	12	12	12		
V. H. Canal - Pine Cr.	10	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	
Lakeview Canal	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		
Grade Creek Canal	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		
Diamond Cap fil-Burner	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		
Haggerty West-Burner	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		
Sublette C at Thompson	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		
SMITHS FORK CANALS																																	
Smiths Fork	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		
Smiths Fork-Source	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		
Button Flats	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		
Perry Partridge	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		
Frontress	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		
Emelle	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		
Cooper	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		
Black Rock	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		
Covey Canal at Head	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		
Covey Canal-Lemmer Cr.	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		
Covey Canal-Spring Cr.	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		
Tanner, Hunt & Garrett	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		
White Water	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		
Martin (Collett Cr.)	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		
John Bourne-Collett Cr.	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		
Stoner-Nichols (So Br.)	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		
Morgan (South Branch)	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		
Cockeyville Water-So Br	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		
Hammer L (South Br.)	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		
Smiths Fk Canal-So Br.	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		
Smiths Fk Canal-So Br.	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		
Igo Star Ditch	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 WYO. DIVERSIONS	29	29	29	35	35	35	43	44	44	125	126	94	59	123	153	101	213	236	212	180	132	199	206	213	219	223	243	300	259	262	256	4,599	
IDAHO DIVERSIONS																																	
Hilfer Ditch	6	9	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		
Hilfer Canal	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		
Sorenson Ditch	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		
Jensen Ditch	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		
Loyd Ditch	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		
Dingle Irrig. Canal	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		
Black Rock Canal	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		
Preston Montpelier Cr.	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		
LaRocco Kent Canal	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		
West Fork Canal	28	28	28	28	30	31	52	92	113	146	150	149	148	147	148	150	162	181	182	186	153	139	137	122	121	111	105	157	166	182	199		
Pugmire Ditch	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 IDAHO DIVERSIONS	45	45	45	45	47	49	72	110	131	165	169	168	162	166	164	181	202	223	224	209	197	173	160	123	228	291	262	413	491	438	495	5,065	
Rainbow Inlet-C-Bear I.	1710	1740	1790	1840	1850	2140	2310	2400	2610	2460	2510	2580	2670	2750	2800	2910	2820	3050	3180	3200	3150	3030	2930	2780	2670	2470	2130	1970	1900	1860	1920	76,130	
Beartooth Canal-Bear B.	4	5	5	6	7	6	6	6	7	7	6	6	6	7	6	6	6	9	8	8	9	10											

**DAILY DISCHARGE IN CFS OF SMITHS FORK AND BEAR RIVER CANALS  
WITH COMPACT ALLOCATION IN CENTRAL DIVISION**

JUNE 1971	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				
<b>WYOMING DIVERSIONS</b>																																			
BEAR RIVER CANALS																																			
Garrett	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				
Sights	39	32	12	20	32	91	71	71	88	38	39	35	39	43	43	60	61	76	76	77	73	74	78	73	58	46	42	20	22	0					
Wyman Ditch	26	22	27	29	30	29	29	30	30	29	29	30	32	32	32	32	31	31	31	31	31	31	31	30	30	30	30	30	30	1,204					
Snyder	28	29	27	29	30	29	29	30	30	29	29	30	32	32	32	32	31	31	31	31	31	31	31	30	30	30	30	30	30	308					
Rocky Point	5	5	3	2	8	9	2	8	6	6	6	6	26	26	32	34	34	32	30	30	28	28	26	26	25	25	23	23	23	23	619				
Cook	0	0	4	37	39	39	39	36	37	47	42	39	39	39	46	46	44	44	44	44	44	44	44	44	44	44	44	44	44	44	44				
J. R. Richards	17	17	17	17	17	17	17	17	17	17	17	17	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	1,143				
<b>Tributary Canals</b>																																			
Goodall S. & Pine Cr.	14	14	14	14	14	14	14	14	14	14	14	14	14	14	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	13	392				
V. M. Canal - Pine Cr.	11	11	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	346				
Collett Canal - Pine Cr.	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5		
Grade Creek Canal	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			
Diamond Cap S. & Bruner	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			
Haggerott West-Bruner	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			
Sublette C. & Thompson	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			
<b>SMITHS FORK CANALS</b>																																			
Quinn-Bourne	2	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			
Bottom Flat	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			
Perry Partridge	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			
Prossess	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			
Willow	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			
Cooper	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			
Wheclock	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			
Covey Canal at Head	100	107	124	130	130	131	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132	132					
Covey Canal - Bruner Cr.	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			
Covey Canal - Spring Cr.	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			
Covey Canal - Hagerott Cr.	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			
Whitney Water	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			
Martin (Collect Cr.)	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			
John Rouse(Collect Cr.)	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			
Forseen (Collect Cr.)	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			
Stoner-Nichols (So. Br.)	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			
McGraw - Nichols (So. Br.)	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			
Cookson - Nichols (So. Br.)	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			
Tannerill (South Cr.)	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			
Smiths Fk Canal - So. Br.	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			
South Br. 2-Smiths Fork	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			
South Br. 1-Smiths Fork	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			
Igo Star Ditch	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			
<b>TOTAL WYO. DIVERSIONS</b>	511	518	515	503	504	518	526	503	474	437	429	351	459	470	494	507	512	526	534	535	536	546	533	517	508	487	493	486	468	456	456	456	456	456	
Arinbow Inlet Co-Boar 1.	2000	2050	2102	2110	2145	2166	2191	2220	2040	1840	1400	1360	1400	1440	1510	1510	1540	1560	1570	1620	1640	1620	1580	1540	1520	1510	1500	1480	1460	1440	1420	1400	1380		
Bear R. St. Stewart Dam	138	136	129	136	135	135	136	136	136	138	138	139	131	131	132	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131	131
Idaho Diversible Flow	2659	2702	2754	2773	2777	2822	2804	2815	2640	2514	2541	2542	2543	2544	2545	2546	2547	2548	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549	2549
Wyoming Diversible Flow	2652	271	273	275	276	334	330	333	332	382	501	502	503	504	505	506	522	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	539	539
Total Diverisible Flow	2912	2975	3017	3079	3131	3177	3205	3169	3156	2997	2941	2926	3007	3125	3166	3204	3206	3207	3208	3209	3210	3211	3212	3213	3214	3215	3216	3217	3218	3219	3219	3219	3219	3219	
Evening Allocation (43%)																																			
Idaho Allocation (57%)																																			

DAILY DISCHARGE IN CFS OF SMITHS FORK AND BEAR RIVER CANALS

## WITH COMPACT ALLOCATION IN CENTRAL DIVISION

JULY	1971	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
<b>WYOMING DIVERSIONS</b>																																
BEAR RIVER CANALS																																
Garrett	3	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	
Sights	23	26	25	26	27	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0	0	0		
Wyo. East																																
Human West	20	29	28	27	26	25	25	24	23	23	22	21	21	20	19	18	18	17	17	16	15	14	13	12	11	10	9	8	7	6	5	
Snyder	23	21	23	21	23	21	22	22	22	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	
Rocky Point	23	17	13	3	6	5	3	2	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Cook	46	35	37	32	36	69	79	63	63	63	50	42	31	30	27	5	5	1	1	19	18	12	22	21	21	21	21	21	21	21	21	
J. P. Richards	19	19	19	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	57	
<b>TRIBUTARY CANALS</b>																																
ROGUE CANAL	12	12	12	12	12	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	
H. C. Canal	Pine Cr.																															
Collecti Canal-Pine Cr.	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	
Grade Creek Canal	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	
Diamond Cr. & Bruner	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	
Haggerty West-Bruner	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	
Schlette C. & Thompson	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	2	
<b>SMITHS FORK CANALS</b>																																
Quinn-Source	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	
Sutton Flat	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Perry Partridge	10	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	
Progress	7	6	5	4	3	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Emelle	13	18	18	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	
Cooley	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Buck Rock																																
Covey Canal at Head	92	92	91	91	91	90	87	87	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	86	
Covey Canal-Spring Cr.	11	11	11	11	11	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	
Covey Canal-Spring Cr.	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Tanner, Hunt & Garrett	6	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	
White Water	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	2	
John M. Elliott Cr.	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	
Johnson-Collett Cr.	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	
Forreston-Kirchhoff Cr.	10	16	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	8	8	8	8	
Morgan (South Branch)	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	3	
Cokeville Water-So. Cr.	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	
Lower South Fork Cr.	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	2	
South Fork Cr. & So. Cr.	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	
South Fork Cr. & 2-South Fork	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	
South Fork Cr. & 3-Schlette Fork	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	
Igor Star Ditch	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	
<b>TOTAL WYO. DIVERSIONS</b>	499	498	404	370	342	366	366	354	334	331	316	309	298	337	353	329	325	321	316	316	287	282	286	221	250	371	267	266	256	258	250	9,949
<b>IDAHO DIVERSIONS</b>																																
Hiller Ditch	8	8	8	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
Huffer Canal	0	0	0	0	0	11	16	13	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12	12
Sorensen Ditch	6	10	18	18	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17
Jensen Ditch	10	12	10	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	
Loyd Ditch	10	9	8	7	6	5	4	3	3	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Single Irrig. Canal	35	34	32	28	22	20	16	10	6	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4		
Ream-Crockett Canal	52	45	37	33	33	31	29	26	19	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Bracken Montezuma Cr.	36	35	33	33	31	31	29	26	19	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	
Proctor Montezuma Cr.	19	18	10	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	
LaRocca Kent Canal	138	145	170	114	86	5	5	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
West Fork Canal	138	145	170	114	86	5	5	4	3	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Eugenie Ditch	8	7	7	6	5	3	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	
<b>TOTAL IDAHO DIVERSIONS</b>	238	237	226	208	166	155	122	136	126	121	108	102	95	93	87	80</td																

DAILY DISCHARGE IN CFS OF SMITHS FORK AND BEAR RIVER CANALS WITH COMPACT ALLOCATION IN CENTRAL DIVISION																																
AUGUST 1971	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	
<b>WYOMING DIVERSIONS</b>																																
BEAR RIVER CANALS																																
Garrett	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	
Sights	61	61	61	61	61	51	51	51	41	41	41	31	31	31	31	31	31	31	31	31	21	21	21	21	21	21	21	21	21	21	105	
Wyman East	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	
Wyman West	14	14	13	12	12	10	8	8	7	7	7	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6		
Snyder Point	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	
Cook	21	22	24	23	23	23	23	23	21	20	19	16	14	12	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
J. R. Richards	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	
<b>TIBBLETHAW CANALS</b>																																
Gondall Ea - Pine Cr.	10	10	11	10	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	337	
V. H. Canal - Pine Cr.	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	11	361	
Collectt Canal - Pine Cr.	2	2	2	2	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	
Grade Creek Canal	3	3	3	3	3	3	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	
Diamond Cap Rd - Bruner	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	
Hegarty West - Bruner	0	0	0	0	0	0	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	
Sullette C at Thompson	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	2	
<b>SMITHS FORK CANALS</b>																																
Quinn Bourne	8	8	7	7	8	8	8	8	7	7	7	7	7	7	7	7	5	6	6	5	4	4	5	5	4	6	5	4	3	3	3	
Button Flat	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Perry Partridge	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	
Prosser	2	3	3	3	3	3	3	3	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Collett	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Cooper	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	
Wheelock	2	2	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	
Covey Canal at Head	70	70	70	72	83	12	130	128	116	104	99	95	96	92	90	80	66	63	63	62	61	49	42	17	4	23	28	29	12	4	2,128	
Covey Canal-Bruner Cr	9	8	8	7	6	7	9	11	11	12	13	16	17	17	16	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	397
Covey Canal-Spring Cr	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	
Miller & Garrett	12	21	21	21	21	22	22	23	23	24	25	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	26	125
White Water	13	21	21	21	21	21	21	21	21	20	20	20	20	20	20	20	19	18	17	16	15	15	14	13	13	13	12	12	12	12	12	497
Martin (Collett Cr.)	20	20	20	21	21	21	21	21	21	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	20	695
John Bourne-Collett Cr.	6	4	4	3	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	
Ferguson (Collett Cr.)	4	4	4	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	
Stoner-Nichols (So Br.)	3	2	4	5	10	6	7	6	5	5	5	5	4	4	4	4	4	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
McGraw (South Branch)	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	3	
Covered Shrub - So Br.	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	
Lamper - So Br.	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	2	
Smiths Fx Canal - So Br.	2	2	7	6	6	6	6	6	6	5	5	5	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	
Smiths Bx Canal - So Br.	1	1	1	1	1	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	
Igo Star Ditch	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
TOTAL WYO. DIVERSIONS	113	94	110	150	182	163	149	150	141	142	150	146	137	126	117	110	111	92	88	86	92	93	91	89	90	107	132	132	130	107	164	7,746
Rainbow Inlet Ca-Bear L. Bear R. Stewart Dam	581	469	466	431	358	333	360	336	317	396	275	265	238	228	224	219	216	217	199	199	199	192	213	214	184	182	184	206	8,423			
Idaho Divertible Flow	526	576	588	593	553	508	520	496	457	475	465	429	392	372	353	350	338	317	313	293	293	295	300	317	345	354	350	325	324	327	12,513	
Wyoming Divertible Flow	263	258	266	265	264	307	321	320	297	281	271	268	259	265	240	236	221	217	196	207	192	201	179	170	163	171	170	166	170	174	20,259	
Total Divertible Flow	882	844	846	848	817	815	841	816	764	745	743	709	659	636	612	616	592	557	531	531	521	518	561	522	526	483	491	491	491	491	491	491
Wyoming Allocation (.5%)	363	367	369	351	350	362	351	328	329	315	301	283	273	263	264	255	240	238	228	224	223	220	222	223	223	221	221	221	221	221	221	221
Idaho Allocation (.5%)	481	487	489	465	479	465	435	436	424	393	375	363	349	331	329	317	315	304	310	312	303	297	295	308	320	307	279	280	280	280	280	280

DAILY DISCHARGE IN CFS OF SMITHS FORK AND BEAR RIVER CANALS  
WITH COMPACT ALLOCATION IN CENTRAL DIVISION

SEPTEMBER	1973	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			
<b>WYOMING DIVERSIONS</b>																																			
BEAR RIVER CANALS																																			
Garrett	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			
Sights	2	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			
Kymen East	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			
Kymen West	5	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			
Rocky Point	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			
Cool Ranch	48	46	34	56	56	51	34	50	14	15	45	76	70	68	64	66	61	62	42	33	10	11	12	13	13	14	15	15	15	15					
J. R. Richards	2	3	2	3	5	5	1	2	4	4	3	4	3	2	2	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		
<b>TRIBUTARY CANALS</b>																																			
Goodell Cr - Pine Cr.	11	11	11	11	11	11	11	11	11	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	307				
Y. H. Canal - Pine Cr.	11	11	11	11	11	11	11	11	11	11	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	306				
Yellowtail Canal	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	2	2	2		
Grade Creek Canal	3	3	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	2		
Diamond Cr - Bruner	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	0		
Haggerty West-Bruner	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	0		
Sublette Cr at Thompson	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	2	2	2		
<b>SMITHS FORK CANALS</b>																																			
Gulch-Bourne	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Button Flats	5	5	5	5	5	5	5	5	5	5	4	4	4	4	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3		
Perry Partridge	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	0		
Progress	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	2	2	2		
Emelia	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	0		
Geoper	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	0		
Wallowa	2	4	3	4	3	3	3	3	3	3	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Covey Canal at Head	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1		
Covey Canal-Bruner Cr	14	14	14	14	14	15	15	15	15	15	16	16	16	16	16	16	16	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	17	
Covey Canal-Spring Cr	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
Timmer Hunt - Garrett	10	9	9	9	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		
Whites Water	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	
MacCoy's Allot (Cr)	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	0	0	
Forgeron (Collett) Cr	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	0	0	
Forgeron (Collett) Cr	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	0	0	
Stoner-Nichols (So Br)	6	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Morgan (South Branch)	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	0	0	0
Cokeville-Mt So Br	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Lander 1 (South Branch)	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	2	2	2	2	2
Lander 2 (South Branch)	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	2	2	2	2	2
South Fork 1-South Fork	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	0	0	0
South Fork 2-South Fork	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	0	0	0
South Fork 3-South Fork	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	0	0	0
Log Star Ditch	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	0	0	0
<b>TOTAL WYO. DIVERSIONS</b>	141	132	134	136	140	132	137	140	138	132	133	128	129	124	142	156	155	155	144	134	134	135	135	133	132	115	112	111	3,157						
<b>IDAHO DIVERSIONS</b>																																			
Miller Ditch	13	13	13	10	8	7	7	7	7	7	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	168	
Nuffer Canal	12	12	12	13	15	16	14	15	15	15	15	16	16	16	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15	15		
Sorenson Canal	5	5	7	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10		
Jensen Ditch	8	8	8	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
Loyd Ditch	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	0	0	0
Dingle Irrig. Canal	30	30	30	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32	32		
Black Utter Canal	14	14	14	17	23	28	33	27	25	27	35	36	32	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33	33		
Preston Montpelier Cr.	18	18	18	18	18	15	15	15	16	17	17</																								

## APPENDIX A

### WM. DEAN KIMBER CERTIFIED PUBLIC ACCOUNTANT

4815 SOUTH 3720 WEST  
SALT LAKE CITY, UTAH 84120

MEMBER  
AMERICAN INSTITUTE OF  
CERTIFIED PUBLIC ACCOUNTANTS

August 12, 1971

Bear River Commission  
Utah State Capitol  
Salt Lake City, Utah

Gentlemen:

In accordance with your instructions I have examined the accounting records of the Bear River Commission for the fiscal year ended June 30, 1971 and I submit my report of the examination.

My examination included a review of the financial transactions and an examination of the statement of revenue and expenditures for the year and budget estimates and related expenses as included in the minutes of the Commission meetings. The budget in the audit report is adjusted to reflect a supplemental appropriation of \$2,025 to offset pay raises of Federal employees.

I confirmed the funds available at June 30, 1971 by direct correspondence with the depository. My examination was conducted in accordance with generally accepted auditing standards and accordingly included such tests of the accounting records and such other auditing procedures as I considered necessary in the circumstances. All cash receipts have been properly accounted for and all disbursements were duly authorized. Extraneous income arose during the year from reimbursement for the installation of a stream gauge station at Woodruff Creek and interest from savings. The expenses incurred in installing the gauging station were paid from Federal funds, hence not available for independent verification. Expenditures for operations were made directly by the United States Geological Survey and are included in detail in this report. Administrative expenses in the amount of \$1,216.40 were disbursed by the Salt Lake City Office.

The results of my examination are presented herewith and include comments and explanations as appropriate in the following described statements.

Exhibit "A" Statement of Revenue and Expenditures for the fiscal year ended June 30, 1971.

Exhibit "B" Statement of Available Revenue and Appropriations thereof for the fiscal year, showing balances at June 30, 1971.

Schedule "A-1" Statement of Expenditures--Stream-Gauging Program Allocated to the United States Geological Survey and to the Bear River Commission.

GENERAL COMMENTS

The Bear River Compact is a tri-state agreement between Wyoming, Idaho and Utah for the utilization and development of the waters of the Bear River. The Commission was organized April 5, 1958 and the by-laws were adopted April 26, 1958. The Commission is the administrative agency which carries out the provisions of the Bear River Compact. Three Commissioners from each of the three represented states, plus one non-voting Commissioner representing the United States, constitutes the ten member Commission. The United States representative acts as Chairman. All expenses of the Commission are shared by the three states on an equal basis.

The Commission enters into an annual agreement with the United States Geological Survey, Department of the Interior, for the operation and maintenance of gauging stations. Expenses for the gauging station program are shared equally by the Commission and the Geological Survey, except the Geological Survey makes up any budget deficits arising from Federal salary increases. Other expenses attributable to the Commission are paid by the Commission whether the expense is incurred by the Geological Survey or the Salt Lake City Office. Detail of the expenses incurred under the agreement are shown in Schedule "A-1."

In my opinion, the accompanying statements of revenue and expenditures and supplemental statement of budget appropriations and related disbursements present fairly the position of the Bear River Commission at June 30, 1971 and the results of the financial transactions for the period then ended in conformity with generally accepted accounting principles applied on a consistant basis.

Yours very truly,  
*W. D. Kimber*

BEAR RIVER COMMISSIONStatement of Revenue & Expenses  
For the Fiscal Year Ended June 30, 1971REVENUE:

## Assessments:

State of Wyoming	\$13,600.00
State of Idaho	13,600.00
State of Utah	<u>13,600.00</u>
	\$40,800.00

## Other Income:

Reimbursement for construction of stream gauge at Woodruff Creek	688.00
Interest	<u>2,108.85</u>
Total Revenue	<u>2,796.85</u>
	43,596.85

EXPENDITURES:

Commission's portion of direct expenses of the  
stream gauge program, Schedule "A-1"

Personal Services	\$27,076.00
Travel and Subsistence	2,546.00
General Office	3,544.00
Fiscal and Administration	1,778.00
Washington Office Charges	<u>3,556.00</u>
Total--Schedule "A-1"	38,500.00

## Administrative Expenses

Auditing Fee	200.00
Legal Consultant	300.00
Transcript of Minutes	100.00
Printing Annual Report	556.00
Surety Bond	50.00
Supplies	<u>10.40</u>
	<u>1,216.40</u>
	<u>39,716.40</u>

EXCESS OF REVENUES OVER EXPENDITURES FOR  
THE FISCAL YEAR ENDED JUNE 30, 1971

3,880.45

FUNDS AVAILABLE JULY 1, 1970	<u>5,938.83</u>
FUNDS AVAILABLE JULY 1, 1971	<u>\$10,819.28</u>
Cash in bank July 1, 1971	\$ 819.28
Investment in savings July 1, 1971	<u>10,000.00</u>
Total funds available July 1, 1971	<u>\$10,819.28</u>
Expenditures as above	\$39,716.40
Expenditures incurred through stream-gauging program allocated to and paid direct by--	
United States Geological Survey	<u>33,225.00</u>
Total expenditures as per Exhibit "B"	<u>\$72,941.40</u>

Exhibit "B"

BEAR RIVER COMMISSION

Statement of Available Revenue and Appropriation Thereof  
for the Fiscal Year Ended June 30, 1971

	Expected Revenue & Expenditures as Budgeted*	Actual Revenue & Expenditures	Balance or (Deficit) Budget
<u>CASH REVENUES</u>			
Cash Balance	\$ 2,938.83	\$ 2,938.83	\$ -0-
Savings Certificates	4,000.00	4,000.00	-0-
Balance of Funds June 30, 1970	6,938.83	6,938.83	-0-
<u>REVENUE:</u>			
Assessments:			
State of Wyoming	13,600.00	13,600.00	-0-
State of Idaho	13,600.00	13,600.00	-0-
State of Utah	13,600.00	13,600.00	-0-
Other Income:			
Reimbursement for installation of stream-gauge at Woodruff Creek	-0-	688.00	688.00
Interest	-0-	2,108.85	2,108.85
	47,738.83	50,535.68	2,796.85
<u>FUNDS FURNISHED BY UNITED STATES GEOLOGICAL SURVEY DIRECT</u>	33,225.00	33,225.00	-0-
Total Funds Available	80,963.83	83,760.68	2,796.85
<u>APPROPRIATIONS:</u>			
Stream-gauging--Schedule "A-1"	64,425.00	64,425.00	-0-
Personal Services	5,726.00	5,726.00	-0-
Travel and Subsistence	240.00	240.00	-0-
Fiscal and Administrative	328.00	328.00	-0-
Washington Office Services	656.00	656.00	-0-
Office and Supplies	450.00	360.40	89.60
Annual Report	500.00	556.00	(56.00)
Treasurer's Bond and Audit	300.00	250.00	50.00
Transcript of Minutes	100.00	100.00	-0-
Legal Retainer Fee	300.00	300.00	-0-
Total Appropriations	73,025.00	72,941.40	83.60
Unappropriated Surplus**	1,000.00	-0-	1,000.00
Unappropriated at July 1, 1970	6,938.83	-0-	6,938.83
Funds Available at June 30, 1970	80,963.83	72,941.40	8,022.43
	\$ -0-	\$10,819.28	\$10,819.28

\*As revised June 1, 1971.

\*\*The Federal Government made a supplemental allocation of \$2,025. The budget was adjusted to reflect a decrease of \$1,000 each to the Federal Government and to the Bear River Commission.

Schedule "A-1"

BEAR RIVER COMMISSION

Statement of Expenditures--Stream-Gauging Program  
Allocated to the United States Geological Survey and to the  
Bear River Commission for the Fiscal Year Ended June 30, 1971

	<u>ALLOCABLE EXPENDITURES</u>			Charged Direct to Bear River Commission	Total Expenses to Bear River Commission
	U.S.G.S.	Bear River Commission	Total		
Personal Services	\$44,725.00	\$23,375.00*	\$21,350.00*	\$ 5,726.00	\$27,076.00
Travel and Subsistence	4,613.00	2,307.00	2,306.00	240.00	2,546.00
General Office	6,388.00	3,194.00	3,194.00	350.00	3,544.00
Fiscal and Administra- tion	2,900.00	1,450.00	1,450.00	328.00	1,778.00
Washington Office	<u>5,799.00</u>	<u>2,899.00</u>	<u>2,900.00</u>	<u>656.00</u>	<u>3,556.00</u>
Totals	<u>\$64,425.00</u>	<u>\$33,225.00</u>	<u>\$31,200.00</u>	<u>\$ 7,300.00</u>	<u>\$38,500.00</u>

\*Unequal distribution of personal services arose because of a supplemental Federal appropriation for salary increases.

## APPENDIX B

### GAGING STATION RECORDS

Records of streamflow for State line and other key stations are included herein. The record consists of description of the station and a table showing the daily discharge in cubic feet per second and monthly and yearly runoff in acre-feet for the 1971 water year.

The description of the station gives the location, drainage area, records available, type and history of gage, average discharge, extremes of discharge, general remarks, and a statement of cooperation where applicable. This is essentially the same information published in annual water-supply papers of the Geological Survey.

In the monthly summary below the daily table, the line headed "Total" gives the sum of the daily figures; it is the total second-foot-days for the month. The line headed "Mean" gives the average flow in cubic feet per second (second-feet) during the month. Quantities for the month are expressed in acre-feet (line headed "Ac-ft").

Records included herein have been collected by the U. S. Geological Survey through cooperative agreement with the Bear River Commission and by the Utah Power & Light Company.

## BEAR RIVER BASIN

### 10-112. West Fork Bear River at Whitney Dam near Oakley, Utah

LOCATION.--Lat  $40^{\circ}50'30''$ , long  $110^{\circ}55'20''$ , in NE $\frac{1}{4}$  sec. 9, T. 1 N., R. 9 E., Summit County, on left bank, 1,380 ft below Whitney Dam, 7 miles upstream from Deer Creek, 21.5 miles northeast of Oakley.

DRAINAGE AREA.--7.5 sq mi, approximately.

PERIOD OF RECORD.--October 1963 to current year. Prior to October 1965 published as, "at Whitney Dam site."

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir since Aug. 4, 1966. Altitude of gage is 9,120 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 115 cfs June 22 (gage height, 2.80 ft); minimum daily, 0.67 cfs Apr. 1, 2.

Period of record: Maximum discharge, 145 cfs June 13, 1965 (gage height, 1.95 ft); maximum gage height, 13.08 ft June 26, 1967; no flow July 24 to Sept. 30, Nov. 16-29, 1966.

REMARKS.--Records good. Flow regulated by Whitney Reservoir. Usable capacity between sill of outlet and spillway crest, 4,200 acre-ft. Dead storage 500 acre-ft. Construction of dam began Aug. 1, 1965 and completed October 1966. Storage began July 24, 1966, and reached sill of outlet Nov. 20, 1966. No diversion above station.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	7.4	1.3	1.3	1.6	.77	.67	.73	1.3	17	4.2	114
2	9.0	4.9	1.3	1.3	1.6	.77	.67	.77	1.3	27	4.1	111
3	9.0	1.4	1.3	1.3	1.6	.77	.70	.80	1.4	29	3.9	108
4	9.0	1.4	1.3	1.3	1.6	.77	.70	.77	1.4	28	4.8	109
5	9.0	1.4	1.3	1.3	1.6	.80	.70	.77	1.4	26	5.7	105
6	9.0	1.3	1.3	1.3	1.6	.80	.70	.77	1.4	24	5.7	105
7	8.9	1.3	1.3	1.3	1.6	.77	.70	.80	1.4	22	5.9	106
8	8.9	1.4	1.3	1.3	1.6	.77	.70	.80	1.5	20	5.3	99
9	8.9	1.4	1.3	1.3	1.6	.77	.70	.80	1.5	18	4.9	98
10	8.9	1.4	1.3	1.3	1.6	.77	.70	.83	1.5	16	4.4	97
11	8.7	1.4	1.3	1.3	1.6	.73	.70	.83	1.4	14	3.8	55
12	8.7	1.4	1.3	1.3	1.6	.77	.70	.86	1.2	13	3.4	6.9
13	8.7	1.4	1.3	1.3	1.6	.77	.70	.86	1.2	12	3.2	6.9
14	8.7	1.4	1.3	1.3	1.6	.77	.70	.96	1.3	11	3.2	6.9
15	8.5	1.3	1.3	1.3	1.6	.77	.70	.93	1.6	11	3.1	6.9
16	8.5	1.3	1.3	1.3	1.6	.77	.73	.96	62	9.6	3.1	6.8
17	8.5	1.3	1.3	1.3	1.6	.73	.73	.96	97	9.3	3.1	6.7
18	8.4	1.3	1.3	1.3	1.6	.70	.73	.96	103	12	3.3	6.8
19	8.4	1.3	1.3	1.3	1.6	.70	.73	.93	101	16	3.1	6.8
20	8.4	1.3	1.3	1.3	1.6	.70	.73	.93	96	13	3.0	6.8
21	8.2	1.3	1.3	1.4	1.6	.70	.73	.93	90	11	3.0	6.8
22	8.2	1.3	1.3	1.4	1.6	.70	.73	.96	109	9.2	3.0	5.6
23	8.2	1.3	1.3	1.4	1.4	.70	.73	1.0	89	8.5	3.0	3.5
24	8.2	1.3	1.3	1.4	.80	.70	.73	1.1	87	7.7	3.0	3.5
25	8.0	1.3	1.3	1.4	.79	.70	.73	1.1	86	6.9	3.2	3.5
26	8.0	1.3	1.3	1.5	.80	.70	.73	1.2	81	6.5	3.4	3.5
27	7.5	1.3	1.3	1.5	.77	.70	.73	1.3	72	5.8	3.4	3.5
28	7.2	1.3	1.3	1.5	.77	.70	.73	1.3	64	5.4	3.9	3.8
29	7.4	1.3	1.3	1.5	-----	.70	.73	1.3	57	4.8	4.6	3.8
30	7.5	1.3	1.3	1.5	-----	.70	.73	1.3	30	4.6	4.8	3.9
31	7.5	-----	1.3	1.5	-----	.70	-----	1.3	4.4	110	-----	-----
TOTAL	261.2	49.7	40.3	42.0	40.53	22.87	21.39	29.81	1,244.8	422.7	269.7	1,209.9
MEAN	8.43	1.66	1.30	1.35	1.45	.74	.71	.96	41.5	13.6	8.70	40.3
MAX	9.2	7.4	1.3	1.5	1.6	.80	.73	1.3	109	29	110	114
MIN	7.2	1.3	1.3	1.3	1.3	.77	.70	.73	1.2	4.4	3.0	3.5
AC-FT	518	99	80	83	80	45	42	59	2,470	838	535	2,400

CAL YR 1970 TOTAL 2,883.64 MEAN 7.90 MAX 70 MIN .10 AC-FT 5,720  
 WTR YR 1971 TOTAL 3,654.90 MEAN 10.0 MAX 114 MIN .67 AC-FT 7,250

# BEAR RIVER BASIN

## 10.115. Bear River near Utah-Wyoming State Line.

LOCATION.--Lat 40°57'58", long 110°51'04", in SE<sub>1</sub> sec.30, T.3 N., R.10 E., Summit County, on left bank just downstream from West Fork, 2.8 miles upstream from Utah-Wyoming State line.

DRAINAGE AREA.--176 sq mi.

PERIOD OF RECORD.--July 1942 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,965 ft (from river-profile map).

AVERAGE DISCHARGE.--29 years, 191 cfs (138,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,640 cfs June 18 (gage height, 3.86 ft); minimum, 26 cfs Nov. 11.

Period of record: Maximum discharge, 2,980 cfs June 6, 1968 (gage height, 3.79 ft); maximum gage height, 4.27 ft June 6, 1957; minimum discharge determined, 16 cfs Apr. 11, 1951, Nov. 5, 1954, Nov. 1, 1955, Oct. 30, 1956.

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated slightly by Whitney Reservoir completed 1966. Usable capacity 4,200 acre-ft. Three diversions above station for irrigation of about 265 acres above and 2,600 acres below station. Records of chemical analysis for the water year 1971 are published in part 2 of this report and for the water year 1970 in part 2 of the report for that year.

DISCHARGE, IN CUBIC FEET PER SECOND; WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

CAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56	64	60	55	62	50	61	193	630	903	120	159
2	55	59	60	55	61	50	55	267	598	849	114	146
3	52	52	56	55	62	50	58	368	590	876	111	155
4	52	55	56	55	62	52	58	426	638	849	122	155
5	52	61	56	52	62	49	59	362	630	795	133	149
6	62	59	56	52	62	49	72	320	654	742	130	139
7	64	59	56	58	62	49	83	340	742	686	143	267
8	58	59	59	64	62	49	81	335	912	654	133	240
9	62	58	58	67	62	49	96	310	894	598	128	193
10	65	61	58	67	62	49	122	315	1,020	541	106	179
11	56	46	55	65	59	49	146	346	966	485	93	150
12	68	62	55	60	66	46	172	454	786	438	85	85
13	68	59	55	56	62	46	190	477	786	414	79	81
14	70	53	55	54	61	48	236	598	912	408	70	79
15	61	55	55	56	59	51	272	742	1,200	390	68	78
16	65	55	55	56	62	52	295	768	1,480	374	68	78
17	64	56	55	61	62	46	315	569	1,930	362	68	78
18	64	58	55	72	58	46	272	444	2,070	384	83	79
19	66	61	55	76	58	46	228	379	1,910	414	70	79
20	64	60	55	70	56	45	208	352	1,880	368	66	79
21	68	59	55	64	54	45	182	352	1,740	320	64	79
22	68	50	55	62	54	44	162	384	1,880	295	66	78
23	59	59	55	60	54	44	146	368	1,840	280	66	76
24	75	62	55	60	54	45	139	402	1,820	249	62	74
25	61	62	55	60	54	45	139	555	1,570	220	62	72
26	59	59	55	60	52	51	130	726	1,400	186	62	68
27	62	61	55	60	50	61	125	912	1,280	172	61	61
28	56	60	55	68	50	55	117	948	1,090	162	68	59
29	70	60	55	74	-----	54	122	903	1,060	146	91	59
30	70	60	55	62	-----	54	146	849	975	133	108	61
31	66	-----	55	62	-----	54	-----	718	-----	128	176	-----
TOTAL	1,938	1,752	1,730	1,898	1,644	1,523	4,487	15,492	35,883	13,821	2,876	3,335
MEAN	62.5	58.4	55.8	61.2	58.7	49.1	150	500	1,196	446	92.8	111
MAX	75	64	60	76	66	61	315	948	2,070	903	176	267
MIN	52	46	55	52	50	44	55	193	590	128	61	59
AC-FT	3,840	3,480	3,420	3,760	3,260	3,020	8,900	30,730	71,170	27,410	5,700	6,610

CAL YR 1970 TOTAL 69,590 MEAN 191 MAX 1,350 MIN 38 AC-FT 138,000  
WTR YR 1971 TOTAL 86,379 MEAN 237 MAX 2,070 MIN 44 AC-FT 171,300

PEAK DISCHARGE (BASE, 1,100 CFS).--June 18 (0230) 2,640 cfs (3.86 ft).

## BEAR RIVER BASIN

### 10-157. Sulphur Creek above reservoir, near Evanston, Wyoming.

LOCATION.--Lat 41°08'39", long 110°48'18", in SE<sub>4</sub>SW<sub>1/4</sub> sec. 35, T. 14 N., R. 119 W., Uinta County, on right bank 1.2 miles downstream from Willow Creek, 2 miles upstream from Sulphur Creek Dam, and 11.5 miles south-east of Evanston.

DRAINAGE AREA.--64 sq mi, approximately.

PERIOD OF RECORD.--October 1957 to current year. Monthly discharge only for October and November 1957, published in WSP 1734.

GAGE.--Water-stage recorder. Altitude of gage is 7,180 ft (from topographic map).

AVERAGE DISCHARGE.--14 years, 14.1 cfs (10,220 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 282 cfs May 15 (gage height, 4.27 ft); minimum, 1.6 cfs Aug. 2, 3. Period of record: Maximum discharge, 1,220 cfs Apr. 21, 1965 (gage height, 6.02 ft); no flow at times most years.

REMARKS.--Records good except those for winter months, which are fair. Several diversions for irrigation above station.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.2	12	16	5.0	5.0	5.1	68	49	53	11	2.8	6.1
2	7.2	10	15	5.0	5.0	4.9	55	65	56	11	1.9	5.1
3	7.4	9.0	15	5.0	5.0	5.4	50	94	50	7.4	1.7	5.1
4	7.7	8.0	15	5.0	5.0	6.9	55	121	55	6.9	2.2	6.7
5	7.7	8.0	14	5.0	5.0	6.9	70	101	49	7.2	4.0	8.0
6	12	9.9	14	5.0	5.0	5.9	80	78	45	6.7	3.4	8.3
7	16	11	14	5.0	5.0	5.1	95	111	47	5.1	3.0	32
8	16	12	15	5.0	5.0	5.4	80	111	55	3.6	4.3	22
9	19	10	15	5.0	5.0	5.4	61	94	46	2.5	4.7	16
10	30	15	14	5.0	5.0	5.4	68	92	56	3.2	5.1	12
11	18	12	13	6.0	5.5	6.1	60	133	66	2.2	6.1	11
12	16	11	11	6.0	5.5	12	52	134	61	2.8	4.9	9.9
13	13	10	10	6.0	5.5	13	50	135	47	3.6	4.9	8.9
14	11	9.5	10	6.0	5.5	11	56	173	44	3.6	3.6	8.0
15	11	8.6	10	6.0	5.5	9.0	55	191	44	3.4	3.4	7.7
16	8.9	7.7	10	6.0	5.5	7.5	63	215	32	3.6	3.4	8.0
17	7.4	8.3	10	6.0	5.5	13	60	134	27	3.6	3.4	8.6
18	7.2	8.3	10	6.0	5.5	19	59	90	25	3.8	8.9	
19	7.4	7.7	10	6.0	5.5	25	42	75	25	11	3.8	6.6
20	9.9	9.2	10	6.0	5.5	35	54	63	22	11	4.0	10
21	11	8.6	8.0	6.0	5.5	40	76	58	20	11	4.3	10
22	14	8.6	8.0	6.0	5.5	55	81	86	17	16	3.6	9.2
23	15	10	8.0	6.0	5.5	75	73	82	16	17	3.8	10
24	12	14	8.0	6.0	5.5	95	84	78	14	23	3.8	9.9
25	14	19	8.0	6.0	5.9	120	69	116	10	20	3.8	9.2
26	12	18	8.0	6.0	5.1	130	64	133	8.6	12	4.3	8.9
27	10	16	8.0	6.0	5.1	125	59	145	8.0	9.2	4.0	8.9
28	9.0	15	8.0	6.0	5.4	120	46	126	12	8.0	4.0	9.2
29	10	17	8.0	6.0	-----	110	40	112	10	4.7	4.9	6.6
30	12	17	8.0	6.0	-----	92	39	117	10	2.8	5.4	9.2
31	13	-----	8.0	6.0	-----	80	-----	79	-----	3.0	5.1	-----
TOTAL	374.0	340.4	339.0	176.0	148.5	1,249.0	1,868	3,351	1,030.6	243.5	121.4	306.0
MEAN	12.1	11.3	10.9	5.68	5.30	40.3	62.3	109	34.4	7.85	3.92	10.2
MAX	30	19	16	6.0	5.9	130	95	215	66	23	6.1	32
MIN	7.2	7.7	8.0	5.0	5.0	4.9	39	49	8.0	2.2	1.7	5.1
AC-FT	742	675	672	349	295	2,480	3,710	6,730	2,040	483	241	607

CAL YR 1970 TOTAL 6,802.89 MEAN 18.6 MAX 182 MIN .28 AC-FT 13,490  
WTR YR 1971 TOTAL 5,587.40 MEAN 26.3 MAX 215 MIN 1.7 AC-FT 19,020

## BEAR RIVER BASIN

### 10-159. Sulphur Creek below reservoir, near Evanston, Wyoming.

LOCATION.--Lat 41°09'22", long 110°50'04", in SE $\frac{1}{4}$ SE $\frac{1}{4}$  sec.28, T.14 N., R.119 W., Uinta County, on left bank 400 ft downstream from Sulphur Creek Dam, 6.3 miles upstream from mouth, and 10.5 miles southeast of Evanston.

DRAINAGE AREA.--68 sq mi, approximately.

PERIOD OF RECORD.--April 1958 to current year.

GAGE.--Water-stage recorder and concrete V-notch control. Altitude of gage is 7,120 ft (from topographic map).

AVERAGE DISCHARGE.--7 years (1964-71), 24.5 cfs (17,750 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 120 cfs June 1, 2 (gage height, 3.47 ft); no flow June 29, 30. Period of record: Maximum discharge, 343 cfs June 11, 1958 (gage height, 4.96 ft); no flow at times each year.

REMARKS.--Records good. Flow regulated by Sulphur Creek Reservoir 900 ft upstream (capacity, 7,100 acre-ft). Enlargement completed November 1966. Prior to enlargement (capacity, 4,600 acre-ft). Records prior to 1965 do not include flow over spillway of the dam.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.1	7.4	7.0	4.4	25	31	31	110	120	.01	11	69
2	7.1	7.4	7.1	4.3	25	31	31	109	119	.03	10	72
3	7.0	7.4	7.1	4.3	27	31	31	109	118	.10	9.3	71
4	6.9	7.4	6.9	4.2	27	30	31	109	118	.56	17	71
5	7.1	7.1	6.9	4.0	27	29	32	109	118	1.5	28	70
6	7.4	7.1	6.9	4.0	28	29	32	108	43	3.1	24	54
7	7.4	7.1	6.7	4.0	29	29	32	108	7.9	4.6	22	14
8	7.4	7.1	6.6	3.8	29	29	32	109	7.9	5.7	21	14
9	7.4	7.1	6.6	3.7	30	29	32	109	8.0	5.7	20	14
10	7.4	7.1	6.6	3.7	30	29	33	109	8.1	6.0	20	14
11	7.6	7.1	6.6	3.6	29	29	33	109	8.2	6.2	20	14
12	7.6	7.1	6.4	3.6	29	28	33	109	8.3	7.0	20	14
13	7.6	7.1	6.0	3.6	29	28	33	110	8.4	7.8	20	15
14	7.6	7.1	5.8	3.6	29	28	33	112	8.4	7.8	20	15
15	7.6	7.1	5.7	3.5	29	28	33	113	8.5	7.9	20	15
16	7.6	6.9	5.5	3.4	29	28	33	115	8.4	8.7	22	15
17	7.8	6.9	5.5	9.8	29	28	33	115	8.4	9.8	23	14
18	7.7	6.9	5.5	21	29	28	34	115	8.4	13	23	12
19	7.9	6.9	5.5	21	29	28	34	115	8.4	29	23	9.6
20	7.8	6.9	5.4	21	29	28	34	115	8.4	32	23	9.6
21	7.6	7.1	5.2	21	29	28	33	116	8.4	35	24	9.6
22	7.6	7.1	5.2	21	29	28	34	116	8.1	41	29	9.6
23	7.6	7.1	5.0	21	30	28	34	116	7.6	47	31	9.6
24	7.6	7.3	5.0	21	31	28	34	116	7.6	47	56	9.6
25	7.6	7.4	4.8	21	31	28	34	116	7.6	48	69	9.6
26	7.3	7.1	4.8	21	31	28	34	116	3.6	42	68	9.6
27	7.2	7.1	4.6	22	31	28	34	118	.04	34	67	9.6
28	7.1	7.1	4.6	23	31	28	32	118	.01	27	67	9.6
29	7.1	7.1	4.5	23	-----	30	112	118	0	21	67	9.4
30	7.1	7.1	4.4	24	-----	30	111	118	0	16	66	9.3
31	7.1	-----	4.4	24	-----	31	-----	118	-----	12	66	-----
TOTAL	229.9	213.7	178.8	376.5	810	893	1,192	3,503	794.65	526.50	1,006.3	691.7
MEAN	7.42	7.12	5.77	12.1	28.9	28.8	39.7	113	26.5	17.0	32.5	23.1
MAX	7.9	7.4	7.1	24	31	31	112	118	120	48	69	72
MIN	6.9	6.9	4.4	3.4	25	28	31	108	0	.01	9.3	9.3
AC-FT	456	424	355	747	1,610	1,770	2,360	6,950	1,580	1,040	2,000	1,370

CAL YR 1970 TOTAL 9,239.80 MEAN 25.3 MAX 167 MIN 0 AC-FT 18,330

WTR YR 1971 TOTAL 10,416.05 MEAN 28.5 MAX 120 MIN 0 AC-FT 20,660

## BEAR RIVER BASIN

### 10-195. Chapman Canal at State Line, near Evanston, Wyoming.

LOCATION.--Lat 41°24'24", long 111°02'26", in SE $\frac{1}{4}$  sec.36, T.17 N., R.121 W., Uinta County, on left bank at highway bridge, 6.5 miles downstream from headgates and 10 miles northwest of Evanston.

PERIOD OF RECORD.--April 1942 to current year (prior to October 1944 irrigation seasons only). Monthly discharge only for some periods, published in WSP 1314.

GAGE.--Water-stage recorder. Altitude of gage is 6,570 ft (from river-profile map). Prior to Oct. 11, 1946, nonrecording gage and Oct. 11, 1946 to Aug. 2, 1961, water-stage recorder at site 20 ft downstream at same datum.

AVERAGE DISCHARGE.--27 years (1944-71), 19.7 cfs (14,270 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 143 cfs June 24, 1970; no flow at times each year.

REMARKS.--Records fair. Canal diverts water from Bear River in NW $\frac{1}{4}$  sec.36, T.16 N., R.121 W. Many diversions above station for irrigation in Wyoming. Flow at station is for storage in Neponset Reservoir, Utah, and irrigation in Salteratus basin, Utah.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	57	8.4	4.0	1.0	0	13	44	48	51	11	13
2	C	56	5.8	1.0	1.0	0	13	48	43	46	7.1	14
3	C	51	7.4	0	1.0	0	11	52	63	41	2.4	19
4	C	45	5.1	0	1.0	0	11	57	66	48	4.3	44
5	0	53	7.1	0	1.0	0	9.7	55	69	58	1.0	52
6	0	58	5.3	0	1.0	0	10	37	66	55	1.8	50
7	0	57	7.8	0	1.0	0	11	35	64	44	5.1	47
8	0	61	6.6	0	1.0	1.0	11	36	69	38	7.4	49
9	0	60	5.8	0	1.0	1.0	10	36	81	55	7.4	41
10	0	62	6.0	0	1.0	2.0	11	35	88	57	7.1	33
11	0	65	5.5	0	1.0	2.0	11	42	105	58	6.0	30
12	0	57	5.5	0	1.0	5.0	11	78	98	49	6.0	28
13	0	62	5.0	0	1.0	10	11	80	82	41	4.5	20
14	C	62	6.0	0	1.0	10	11	74	81	37	3.6	15
15	0	62	6.0	0	1.0	10	12	84	89	39	3.1	17
16	0	58	6.0	0	0	10	12	100	97	39	2.2	20
17	0	62	6.0	0	0	10	23	112	108	41	2.2	21
18	0	55	6.0	1.0	0	10	50	87	103	26	.94	23
19	0	60	6.0	2.0	0	10	51	74	114	32	0	21
20	0	65	6.0	2.0	0	10	50	74	115	42	0	19
21	36	65	5.0	2.0	0	14	49	73	106	43	0	21
22	11	68	5.0	2.0	0	14	48	72	92	42	0	23
23	46	57	5.0	2.0	0	14	44	72	92	49	0	27
24	49	62	5.0	2.0	0	14	46	72	74	60	0	30
25	56	95	5.0	2.0	0	14	47	76	63	51	0	30
26	49	103	4.0	2.0	0	14	47	85	52	44	0	28
27	54	85	4.0	2.0	0	14	48	97	78	39	2.0	31
28	48	49	4.0	2.0	0	14	46	96	77	33	6.8	38
29	45	11	4.0	2.0	-----	14	46	78	66	29	7.1	40
30	58	11	4.0	2.0	-----	14	44	68	59	26	7.8	41
31	57	-----	4.0	2.0	-----	14	-----	60	-----	20	7.8	-----
TOTAL	473.36	1,774	172.3	32.0	15.0	245.0	817.7	2,089	2,408	1,333	114.64	885
MEAN	15.3	59.1	5.56	1.03	.54	7.90	27.3	67.4	80.3	43.0	3.70	29.5
MAX	58	103	8.4	4.0	1.0	14	51	112	115	60	11	52
MIN	0	11	4.0	0	0	0	9.7	35	43	20	0	13
AC-FT	939	3,520	342	63	3C	486	1,620	4,140	4,780	2,640	227	1,760

CAL YR 1970 TOTAL 10,882.19 MEAN 29.8 MAX 143 MIN 0 AC-FT 21,580  
 WTR YR 1971 TOTAL 10,359.00 MEAN 28.4 MAX 115 MIN 0 AC-FT 20,950

# BEAR RIVER BASIN

## 10-201. Bear River above reservoir, near Woodruff, Utah.

LOCATION.--Lat 41°26'05", long 111°01'00", in NW<sub>1</sub>NW<sub>1</sub> sec.29, T.17 N., R.120 W., Uinta County, Wyoming, on right bank 9.3 miles upstream from Woodruff Narrows Dam and 10 miles southeast of Woodruff.

DRAINAGE AREA.--780 sq mi, approximately.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,455 ft (from river-profile map).

AVERAGE DISCHARGE.--10 years, 242 cfs (175,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,000 cfs June 19 (gage height, 5.28 ft); minimum, 3.1 cfs Aug. 20.

Period of record: Maximum discharge, 3,340 cfs June 13, 14, 1966 (gage height, 5.89 ft); minimum, 0.1 cfs Aug. 24, 1964.

REMARKS.--Records good except those for winter months, which are fair. Diversion for irrigation of about 43,500 acres above station.

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	41	84	134	90	245	120	518	410	1,080	620	10	18
2	43	81	130	90	220	118	398	482	978	930	7.9	19
3	49	66	140	90	205	118	355	602	876	665	6.6	18
4	49	59	150	90	190	118	335	751	876	447	6.6	38
5	45	64	140	90	170	115	330	793	870	429	5.9	56
6	54	77	134	90	165	115	340	751	793	398	4.5	46
7	72	77	150	90	155	118	380	686	732	335	12	56
8	82	86	160	100	155	118	392	745	850	285	18	123
9	81	79	150	110	155	120	375	775	1,010	214	22	109
10	95	77	140	110	160	120	392	732	1,100	190	22	68
11	130	97	125	105	165	150	435	726	1,290	164	20	54
12	107	68	127	100	175	180	447	745	1,220	137	23	45
13	116	90	107	90	185	175	453	918	930	116	19	37
14	116	71	114	100	200	165	459	1,040	906	95	17	24
15	105	59	124	110	190	155	512	1,230	1,090	84	13	18
16	93	54	130	130	185	152	556	1,120	1,380	77	10	15
17	95	77	140	145	175	150	578	1,380	1,650	63	7.9	13
18	90	71	125	160	170	145	572	1,070	1,830	56	7.0	14
19	97	63	115	175	160	145	530	882	1,930	68	5.9	17
20	99	65	110	165	155	160	482	787	1,860	112	4.5	18
21	93	68	110	150	145	185	494	693	1,790	120	4.2	18
22	97	74	110	165	140	220	500	686	1,650	112	3.6	21
23	64	71	110	170	135	260	441	726	1,670	132	3.9	28
24	66	77	110	180	135	310	635	732	1,680	150	4.5	29
25	88	137	110	185	135	546	447	850	1,570	127	4.5	20
26	64	175	100	200	125	720	447	1,070	1,340	109	5.9	26
27	54	125	100	200	125	864	441	1,270	1,150	88	12	24
28	60	123	100	205	120	757	423	1,470	996	71	7.0	37
29	57	147	100	215	-----	638	429	1,570	870	50	5.5	32
30	82	164	100	230	-----	693	392	1,440	757	44	8.4	31
31	91	-----	100	260	-----	781	-----	1,270	-----	24	12	-----
TOTAL	2,484	2,617	3,795	4,390	4,640	8,725	13,286	28,602	36,724	5,910	314.3	1,073
MEAN	80.1	87.2	122	142	166	281	443	923	1,224	181	10.1	35.8
MAX	130	175	160	260	245	864	978	1,570	1,930	620	23	123
MIN	41	50	100	90	120	115	330	410	732	26	3.6	13
AC-FT	4,930	5,190	7,530	8,710	9,200	17,310	26,350	56,730	72,640	11,720	623	2,130

CAL YR 1970 TOTAL 77,534.6 MEAN 212 MAX 1,710 MIN 3.4 AC-FT 153,800  
 WTR YR 1971 TOTAL 112,560.3 MEAN 308 MAX 1,930 MIN 3.6 AC-FT 223,300

## BEAR RIVER BASIN

### 10-202. Woodruff Narrows Reservoir near Woodruff, Utah.

**LOCATION.**--Lat 41°30'10", long 111°00'55", in sec.32, T.18 N., R.120 W., Uinta County, Wyoming, in gate house on dam, 5.6 miles upstream from Wyoming-Utah State line and 7.7 miles east of Woodruff.

**DRAINAGE AREA.**--810 sq mi, approximately.

**PERIOD OF RECORD.**--October 1965 to current year.

**GAGE.**--Water-stage recorder and mercury manometer. Altitude of the gage is 6,405 ft (from levels by Bureau of Reclamation).

**EXTREMES.**--Current year: Maximum contents, 32,180 acre-ft June 20 (gage height, 37.8 ft); minimum, 11,520 acre-ft Oct. 1, 2.

Period of record: Maximum contents, 32,520 acre-ft June 23-25, 1967 (gage height, 38.0 ft); minimum, 6,480 acre-ft Sept. 11-13, 1966.

**REMARKS.**--Reservoir formed by earth-fill, rock faced dam. Lower portion of spillway cut in natural rock. Storage began Jan. 5, 1962. Total capacity 28,000 acre-ft below spillway crest, which includes 18,240 acre-ft of compact allocation for irrigation, 4,260 acre-ft of irrigation holdover, 4,000 acre-ft for winter release for fish propagation in Utah, and 1,500 acre-ft of storage for fish propagation in Wyoming. Gage height of spillway is 35.3 ft. Figures given herein represent total contents.

Capacity table (gage height, in feet, and total contents, in acre-feet)

21	10,760	30	20,180
22	11,600	32	23,040
24	13,360	34	25,800
26	15,570	36	29,000
28	17,770	38	32,520

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,520	15,890	23,520	29,410	28,120	29,930	29,370	30,630	31,200	28,120	18,880	
2	11,520	16,000	19,960	23,520	28,410	28,120	29,950	29,370	30,630	31,030	28,120	17,130
3	11,600	16,120	20,060	24,010	28,410	28,120	29,370	29,550	30,630	30,850	28,120	15,570
4	11,600	16,120	20,180	24,140	28,410	28,120	29,180	29,740	30,630	30,850	28,120	14,260
5	11,690	16,1240	20,360	24,140	28,410	28,120	29,180	30,080	30,630	30,630	27,970	13,910
6	11,690	16,370	20,510	24,140	28,260	28,120	29,000	30,080	30,630	30,630	27,970	13,690
7	11,690	16,600	20,700	24,260	28,260	28,120	29,000	30,080	30,630	30,410	27,970	13,800
8	11,870	16,710	20,890	24,410	28,260	28,120	29,000	30,080	30,630	30,230	27,970	14,030
9	11,960	16,810	21,180	24,410	28,260	28,120	29,000	30,080	30,630	30,080	27,970	14,260
10	12,150	16,920	21,320	24,560	28,260	28,120	29,180	30,080	30,850	30,080	27,970	14,370
11	12,410	17,130	21,460	24,560	28,260	28,120	29,180	30,080	31,200	29,930	27,970	14,480
12	12,570	17,230	21,600	24,710	28,260	28,120	29,180	30,080	31,200	29,930	27,970	14,590
13	12,740	17,330	21,740	25,170	28,260	28,260	29,180	30,080	31,200	29,740	27,970	14,590
14	12,900	17,440	21,740	25,170	28,260	28,260	29,180	30,410	31,200	29,550	27,970	14,590
15	13,090	17,550	21,880	25,340	28,260	28,260	29,180	30,850	31,370	29,550	27,970	14,590
16	13,270	17,550	22,020	25,340	28,260	28,260	29,370	31,030	31,370	29,370	27,970	14,590
17	13,470	17,660	22,170	25,500	28,260	28,260	29,550	31,200	31,530	29,370	27,970	14,590
18	13,690	17,770	22,310	25,650	28,260	28,260	29,550	31,200	31,850	29,180	27,970	14,590
19	13,800	17,890	22,310	25,970	28,260	28,120	29,550	31,200	32,020	29,000	27,970	14,590
20	14,140	17,890	22,310	26,140	28,260	28,120	29,550	31,200	32,180	29,000	27,970	14,590
21	14,260	18,000	22,590	26,660	28,260	28,120	29,550	31,200	32,020	28,860	27,970	14,590
22	14,480	18,000	22,740	26,660	28,260	28,260	29,550	31,200	31,850	28,860	27,970	14,590
23	14,700	18,260	22,850	26,660	28,120	28,260	29,550	31,200	31,850	28,710	27,970	14,590
24	14,700	18,390	22,890	26,660	28,120	28,410	29,550	31,200	31,690	28,710	27,970	14,590
25	14,900	18,510	23,040	26,660	28,120	28,410	29,550	31,200	31,690	28,560	27,970	14,590
26	15,110	18,880	23,040	26,660	28,120	28,860	29,550	31,200	31,530	28,560	27,830	14,590
27	15,110	23,160	25,260	28,120	29,550	29,550	31,200	31,530	28,410	27,550	14,590	14,590
28	15,340	23,160	25,260	28,120	29,530	29,370	31,370	31,370	28,260	25,340	14,590	14,590
29	15,340	23,410	28,410	-----	29,930	29,370	31,530	31,370	28,260	23,640	14,590	14,590
30	15,570	19,720	23,520	28,410	-----	29,930	29,370	31,530	31,200	28,260	21,820	14,590
31	15,780	-----	23,520	28,410	-----	29,930	-----	31,530	-----	28,260	20,180	14,590
xax	15,780			28,410	28,410	29,930	29,930	31,530	32,180	31,200	28,120	14,590
MIN	11,520			23,520	26,120	29,000	29,370	30,630	30,630	28,120	20,180	14,590
(1)	26.2	29.6	32.4	35.6	35.4	38.5	38.5	37.4	37.2	35.5	30.0	25.2
(4)	+4,260	+3,940	+3,800	+4,890	-290	+1,810	-560	+2,160	-330	-2,940	-8,080	-5,480

CAL YR 1970.....# +5,970

WTR YR 1971.....# +3,180

† Gage height, in feet, at 2400 of last day of month.

‡ Change in contents, in acre-feet.

## BEAR RIVER BASIN

### 10-203. Bear River below reservoir, near Woodruff, Utah.

LOCATION.--Lat 41°30'20", long 111°00'50", in NW<sub>1</sub>NW<sub>4</sub> sec.32, T.18 N., R.120 W., Uinta County, Wyoming, on right bank, 1,100 ft below Woodruff Narrows Dam, 1.6 miles upstream from Salt Creek, 5.4 miles upstream from Wyoming-Utah State line, and 7.7 miles east of Woodruff.

DRAINAGE AREA.--810 sq mi, approximately.

PERIOD OF RECORD.--October 1961 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,400 ft (from river-profile map). Prior to Sept. 26, 1962, at site 175 ft upstream at same datum.

AVERAGE DISCHARGE.--10 years, 234 cfs (169,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,140 cfs June 20 (gage height, 7.23 ft); minimum daily, 1.4 cfs Aug. 26.

Period of record: Maximum discharge, 3,000 cfs June 14, 1965 (gage height, 7.88 ft); no flow July 4, 1962.

REMARKS.--Records excellent. Flow regulated by Woodruff Narrows Reservoir beginning January 1962 (see sta 10020200). Diversions for irrigation of about 43,500 acres above station. Records of chemical analysis are published in part 2 of this report and for the water year 1970 in part 2 of the report for that year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	12	31	33	226	122	666	392	1,290	742	34	886
2	23	12	31	33	237	119	538	407	1,100	633	24	867
3	23	12	31	33	234	117	448	453	976	528	18	844
4	23	12	32	33	218	118	396	545	787	484	15	681
5	24	12	32	33	197	117	362	657	754	452	12	199
6	24	12	32	33	180	116	346	694	778	424	11	154
7	24	12	32	33	168	109	351	673	751	385	7.5	13
8	19	12	32	33	158	115	370	679	732	343	7.5	13
9	2.6	12	32	33	155	115	372	705	835	291	7.8	13
10	2.2	12	32	33	154	117	373	693	912	238	9.1	13
11	2.6	12	32	33	151	119	387	685	1,060	181	10	13
12	2.1	12	33	33	156	122	405	682	1,130	158	9.9	13
13	2.1	12	33	33	164	166	417	766	997	139	10	14
14	2.2	12	33	33	175	176	428	832	941	121	11	14
15	2.2	12	32	33	190	165	453	950	920	99	11	14
16	2.0	12	33	33	192	157	484	1,090	1,070	90	10	16
17	1.9	12	33	33	187	154	515	1,230	1,290	77	8.6	24
18	1.9	12	33	33	183	148	533	1,150	1,510	69	7.0	24
19	2.0	12	33	33	178	143	545	972	1,700	62	5.5	24
20	2.0	21	33	33	169	140	531	858	1,950	62	4.4	24
21	1.9	30	33	33	156	143	499	765	1,870	66	3.5	24
22	1.9	31	32	35	151	155	495	682	1,710	73	5.0	24
23	1.9	31	33	61	144	182	481	677	1,510	77	2.3	24
24	2.0	31	33	102	137	222	463	673	1,420	85	1.9	24
25	1.9	30	33	142	136	259	457	684	1,490	92	1.6	24
26	2.1	30	33	174	133	312	455	800	1,410	89	1.4	24
27	2.1	31	33	187	128	513	439	954	1,230	82	164	24
28	2.1	31	33	197	124	672	429	1,120	1,090	73	773	24
29	6.2	31	33	203	-----	680	418	1,330	962	61	763	24
30	12	31	33	204	-----	680	406	1,310	851	52	831	24
31	12	-----	33	208	-----	708	-----	1,420	-----	45	908	-----
TOTAL	254.9	556	1,007	2,206	4,781	7,181	13,462	25,508	35,026	6,383	3,688.0	4,103
MEAN	8.22	18.5	32.5	71.2	171	232	449	823	1,168	206	119	137
MAX	24	31	33	208	237	708	666	1,420	1,950	742	908	886
MIN	1.9	12	31	33	124	109	346	392	732	45	1.4	13
AC-FT	506	1,100	2,000	4,380	9,480	14,240	26,700	50,600	69,470	12,660	7,320	8,140

CAL YR 1970 TOTAL 71,507.7 MEAN 196 MAX 1,610 MIN 1.9 AC-FT 141,800  
WTR YR 1971 TOTAL 104,155.9 MEAN 285 MAX 1,950 MIN 1.4 AC-FT 206,600

**BEAR RIVER BASIN**  
**10-265. Bear River near Randolph, Utah**

LOCATION.--Lat 41°48'02", long 111°04'20", in SE 1/4 sec. 7, T.12 N., R.8 E., Rich County, on left bank 3.5 miles upstream from Twin Creek, 4.8 miles upstream from Utah-Wyoming State line, and 11 miles northeast of Randolph.

DRAINAGE AREA.--1,640 sq mi, approximately.

PERIOD OF RECORD.--October 1943 to current year. Monthly discharge only for some periods, published in WSP 1314.

GAGE.--Water-stage recorder. Altitude of gage is 6,205 ft (from river-profile map).

AVERAGE DISCHARGE.--28 years, 193 cfs (139,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,500 cfs June 24 (gage height, 7.36 ft); minimum daily, 31 cfs Aug. 27, 28.

Period of record: Maximum discharge, 2,660 cfs May 8, 1952; maximum gage height, 8.99 ft June 17, 1965; minimum discharge, 1.6 cfs Nov. 12, 1961.

REMARKS.--Records good except those for winter months, which are fair. Diversion for irrigation of about 94,500 acres above station. Flow regulated by Woodruff Narrows Reservoir beginning January 1962 (see sta 10020200). Records of chemical analysis for the water year 1971 are published in part 2 of this report and for the water year 1970 in part 2 of the report for that year.

DISCHARGE, IN CUBIC FEET PER SECND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	70	130	66	270	190	926	620	923	785	114	122
2	45	72	130	65	265	190	874	597	1,020	634	109	186
3	51	74	130	64	260	185	824	599	1,060	532	105	222
4	56	72	130	62	250	180	713	618	976	443	101	248
5	56	72	130	60	230	175	631	659	860	398	95	268
6	65	74	125	61	210	170	592	758	737	348	92	206
7	74	81	120	62	195	170	571	827	645	308	90	134
8	71	81	120	64	190	170	544	884	566	286	86	134
9	67	80	115	66	190	170	539	870	564	259	84	104
10	67	81	110	64	190	180	551	857	597	203	79	110
11	71	81	105	65	190	200	544	857	716	188	76	158
12	66	84	95	64	200	230	527	845	818	164	73	136
13	66	88	85	61	215	270	537	839	1,010	158	71	123
14	66	86	84	60	240	290	541	870	1,140	138	70	116
15	66	87	82	60	280	300	554	906	1,260	130	68	111
16	65	79	80	68	290	290	568	948	1,180	122	65	112
17	64	81	80	74	285	275	594	1,010	1,050	120	63	107
18	64	90	80	78	280	260	656	1,120	968	122	60	116
19	61	88	78	80	275	255	655	1,230	976	122	59	110
20	58	88	78	74	270	260	719	1,320	1,060	125	58	110
21	62	88	76	68	260	290	755	1,270	1,110	128	56	111
22	65	90	76	67	250	350	776	979	1,180	130	50	111
23	67	95	74	70	240	450	737	722	1,350	135	48	105
24	72	101	73	76	230	656	737	653	1,480	138	45	105
25	71	114	72	110	215	690	737	607	1,400	140	43	108
26	70	123	71	170	210	806	728	527	1,260	140	42	107
27	70	124	70	220	205	962	734	494	1,080	138	31	110
28	70	122	68	256	195	990	722	496	1,050	132	31	111
29	68	120	68	250	-----	1,030	690	529	1,010	125	43	111
30	67	125	67	250	-----	1,140	656	639	923	121	129	111
31	68	-----	67	260	-----	1,110	-----	767	-----	118	68	-----
TOTAL	1,994	2,711	2,869	3,109	6,580	12,884	19,972	24,917	29,969	7,030	2,204	4,023
MEAN	64.3	90.4	92.5	100	235	416	666	804	999	227	71.1	134
MAX	74	125	130	260	290	1,140	926	1,320	1,480	785	129	268
MIN	45	70	67	60	190	170	527	494	564	118	31	104
AC-FT	3,960	5,380	5,690	6,170	13,050	25,560	39,610	49,420	59,440	13,940	4,370	7,980
CAL YR 1970	TOTAL	50,333	MEAN	138	MAX	1,050	MIN	12	AC-FT	99,840		
WTR YR 1971	TOTAL	118,262	MEAN	324	MAX	1,480	MIN	31	AC-FT	234,600		

## BEAR RIVER BASIN

### 10-285. Bear River below Pixley Dam, near Cokeville, Wyo.

LOCATION.--Lat 41°56'20", long 110°59'05", in SE $\frac{1}{4}$  SE $\frac{1}{4}$  sec.25, T.23 N., R.120 W., Lincoln County, 800 ft downstream from Pixley Dam, 11 miles south of Cokeville, and 17.5 miles downstream from Twin Creek.

DRAINAGE AREA.--2,040 sq mi, approximately.

PERIOD OF RECORD.--October 1941 to November 1943 (published as Bear River near Cokeville), October 1952 to September 1956, May 1958 to current year (irrigation seasons only). Monthly discharge only for some periods published in WSP 1314.

GAGE.--Water-stage recorder. Altitude of gage is 6,185 ft (from river-profile map). Oct. 31, 1941 to Nov. 30, 1943, at site 200 ft downstream at different datum.

EXTREMES.--Current season: Maximum discharge, 1,200 cfs June 4 (gage height, 7.59 ft); minimum daily, 41 cfs Aug. 29.

Period of record: Maximum daily discharge, 2,300 cfs Mar. 25, 1956; minimum daily recorded, 0.3 cfs Aug. 21, 1961.

REMARKS.--Records good. Natural flow of stream affected by diversions for irrigation and return flow from irrigated areas. No diversion between station and Collett Creek Branch of Smiths Fork.

#### DISCHARGE IN CUBIC FEET PER SECOND, MAY TO SEPTEMBER 1971

CAY	CCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								752	772	964	177	59
2								732	945	816	167	78
3								730	1,160	687	153	126
4								747	1,200	594	147	164
5								775	1,160	533	155	218
6								832	1,080	501	147	123
7								896	894	453	134	148
8								950	752	398	124	175
9								984	732	366	114	163
10								982	618	318	92	155
11								975	612	253	98	169
12								966	663	228	94	188
13								961	730	223	88	166
14								972	814	194	79	148
15								1,000	853	150	64	148
16								1,030	850	159	59	140
17								1,060	827	156	53	132
18								1,080	874	120	53	128
19								1,110	904	116	94	134
20								1,140	845	134	92	126
21								1,180	848	152	51	123
22								1,180	861	166	52	126
23								1,070	867	180	50	126
24								869	883	174	49	129
25								767	899	172	46	129
26								708	915	172	44	129
27								608	918	183	44	129
28								564	899	200	63	132
29								579	883	199	41	132
30								610	1,020	202	42	132
31								682	-----	183	69	-----
TOTAL								27,491	26,278	9,344	2,625	4,175
MEAN								897	876	301	85.0	139
MAX								1,180	1,200	964	177	218
MIN								564	612	116	41	59
AC-FT								54,530	52,120	18,530	5,230	8,280

THE SEASON AC-FT 138,700

**BEAR RIVER BASIN**  
**10-320. Smiths Fork near Border, Wyo.**

LOCATION.--Lat 42°16'52", long 110°52'05", in NW $\frac{1}{4}$  sec.33, T.27 N., R.118 W., Lincoln County, on left bank 4.5 miles upstream from Howland Creek, 6 miles downstream from Hobble Creek, and 12 miles northeast of Border.

DRAINAGE AREA.--165 sq mi.

PERIOD OF RECORD.--May 1942 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,650 ft (from topographic map). Prior to Oct. 16, 1945, at site 0.8 mile downstream at different datum.

AVERAGE DISCHARGE.--29 years, 195 cfs (141,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,610 cfs June 18 (gage height, 5.61 ft); minimum daily 62 cfs Mar. 19.

Period of record: Maximum discharge, 1,610 cfs June 18, 1971 (gage height, 5.61 ft); minimum recorded, 35 cfs Mar. 21, 1955, result of freezeup.

REMARKS.--Records good except those for winter periods, which are fair. One diversion for irrigation of about 200 acres above station.

REVISIONS (HATER YEARS).--WSP 1734: 1952(M).

DAY	DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971											
	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	79	78	70	74	65	69	469	1,120	847	332	179
2	92	79	77	70	73	65	67	593	1,100	811	318	171
3	94	80	77	70	72	65	69	738	1,080	805	312	179
4	94	82	78	70	70	65	68	860	1,050	786	305	179
5	94	84	77	70	70	65	69	841	1,020	750	298	171
6	99	84	77	70	70	65	73	744	1,080	719	295	162
7	99	84	77	70	70	65	79	774	1,070	701	279	164
8	96	84	79	70	70	65	84	768	1,160	678	282	162
9	97	80	79	70	70	65	90	823	1,260	654	282	157
10	106	84	75	70	70	65	108	902	1,380	632	257	152
11	97	77	75	70	70	65	122	902	1,440	620	248	152
12	97	86	75	70	70	66	124	986	1,410	598	245	150
13	94	80	75	70	70	67	119	1,060	1,380	572	239	148
14	92	78	75	70	69	65	130	1,120	1,380	557	233	148
15	91	86	75	70	71	65	152	1,130	1,440	541	230	145
16	91	82	75	75	70	65	166	1,210	1,490	521	224	145
17	90	80	75	80	68	65	195	1,060	1,540	507	221	148
18	88	80	75	86	68	63	212	872	1,570	502	209	148
19	88	78	75	85	68	62	198	725	1,550	492	206	145
20	86	78	75	84	67	65	187	672	1,500	474	203	145
21	88	78	75	82	65	65	187	593	1,460	464	203	143
22	90	77	75	80	65	65	212	615	1,430	451	200	141
23	86	79	75	80	65	67	209	598	1,430	437	195	139
24	92	88	75	79	65	68	224	683	1,390	424	190	137
25	85	102	75	79	65	67	257	780	1,340	407	190	132
26	84	92	75	79	65	69	266	890	1,270	395	187	134
27	85	85	75	78	65	72	242	1,060	1,210	387	181	139
28	91	84	75	75	65	69	251	1,240	1,110	372	181	139
29	86	84	75	75	65	66	282	1,270	980	364	203	137
30	84	84	75	75	65	66	350	1,350	908	350	198	139
31	62	-----	75	74	-----	73	-----	1,160	-----	342	184	-----
TOTAL	2,830	2,478	2,349	2,316	1,920	2,048	4,861	27,488	38,548	17,160	7,330	4,530
MEAN	91.3	82.6	75.8	74.7	68.6	66.1	162	887	1,285	554	236	151
MAX	106	102	79	86	74	73	350	1,350	1,570	847	332	179
MIN	82	77	75	70	65	62	67	469	908	342	181	132
AC-FT	5,610	4,920	4,660	4,590	3,810	4,060	9,640	54,520	76,460	34,040	14,540	8,990

CAL YR 1970 TOTAL 66,069 MEAN 181 MAX 890 MIN 55 AC-FT 131,000  
 WTR YR 1971 TOTAL 113,858 MEAN 312 MAX 1,570 MIN 62 AC-FT 225,800

# BEAR RIVER BASIN

## 10-395. Bear River at Border, Wyoming

LOCATION.--Lat 42°12'40", long 111°03'11", in NE&NE $\frac{1}{4}$  sec.15, T.14 S., R.46 E., Bear Lake County, Idaho, on left bank 0.2 mile west of Wyoming-Idaho State line, 0.5 mile west of Border, and 2.1 miles upstream from Thomas Fork.

DRAINAGE AREA.--2,490 sq mi, approximately.

PERIOD OF RECORD.--October 1937 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,051.63 ft above mean sea level, unadjusted.

AVERAGE DISCHARGE.--34 years, 410 cfs (297,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,810 cfs June 20 (gage height, 8.09 ft); minimum daily, 167 cfs Oct. 6.

Period of record: Maximum discharge, 3,680 cfs May 11, 1952 (gage height, 8.89 ft); minimum daily, 30 cfs Aug. 18-22, 1940.

REMARKS.--Records good except those for winter months, which are fair. Diversions for irrigation of about 122,000 acres above station. Records of chemical analysis for the water year 1971 are published in part 2 of this report and for the water year 1970 in part 2 of the report for that year.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	173	210	253	230	350	300	2,000	1,400	2,150	2,020	511	259
2	208	207	246	230	350	280	1,940	1,400	2,160	1,920	499	251
3	180	203	240	230	325	260	1,750	1,420	2,250	1,750	475	263
4	176	199	265	230	305	250	1,510	1,520	2,360	1,580	452	301
5	173	205	260	230	295	250	1,350	1,730	2,420	1,450	416	321
6	167	212	260	220	290	250	1,240	1,900	2,460	1,370	400	357
7	180	226	260	220	290	250	1,240	1,880	2,350	1,260	382	296
8	197	230	260	220	290	250	1,300	1,940	2,110	1,190	374	326
9	226	228	250	220	300	250	1,260	2,000	1,980	1,090	364	352
10	240	228	240	220	350	250	1,260	2,060	2,000	1,040	360	343
11	240	228	240	220	350	250	1,300	2,110	2,010	960	326	322
12	230	226	235	220	360	300	1,260	2,160	2,110	880	301	331
13	226	234	225	220	370	350	1,130	2,220	2,210	832	290	336
14	222	228	220	210	380	400	1,090	2,310	2,300	805	285	322
15	218	212	220	205	400	480	1,100	2,410	2,390	718	274	314
16	212	220	210	205	430	520	1,120	2,520	2,480	690	259	312
17	212	228	210	220	450	490	1,180	2,600	2,580	697	246	308
18	208	226	210	240	420	460	1,280	2,630	2,660	683	246	305
19	205	226	215	250	420	450	1,350	2,580	2,710	683	246	308
20	203	224	220	250	420	420	1,420	2,480	2,800	645	248	308
21	201	214	225	250	390	400	1,420	2,370	2,760	662	236	303
22	205	220	230	250	360	440	1,420	2,260	2,620	652	216	301
23	212	222	235	250	340	600	1,460	2,200	2,520	652	222	301
24	224	226	240	250	325	800	1,480	2,080	2,480	642	244	296
25	230	253	240	260	320	1,000	1,480	1,920	2,470	616	244	288
26	224	290	240	260	320	1,100	1,520	1,930	2,420	599	253	281
27	207	283	240	275	320	1,600	1,500	1,820	2,360	583	248	285
28	193	270	240	290	320	2,100	1,450	1,800	2,340	571	226	296
29	205	296	240	310	-----	2,250	1,420	1,880	2,220	571	230	296
30	218	285	240	330	-----	2,200	1,400	2,000	2,060	551	240	303
31	214	-----	240	350	-----	2,200	-----	2,100	-----	539	251	-----
TOTAL	6,431	6,955	7,349	7,565	6,840	21,400	41,630	63,530	70,740	28,901	9,564	9,187
MEAN	207	232	237	244	351	690	1,388	2,049	2,358	932	309	306
MAX	240	296	265	350	450	2,250	2,000	2,630	2,800	2,020	511	357
MIN	167	195	210	205	290	250	1,090	1,400	1,980	939	216	251
AC-FT	12,760	13,800	14,580	15,010	19,520	42,450	82,570	126,000	140,300	57,330	18,970	18,220

CAL YR 1970 TOTAL 115,035 MEAN 315 MAX 1,440 MIN 111 AC-FT 228,200

WTR YR 1971 TOTAL 283,096 MEAN 776 MAX 2,800 MIN 167 AC-FT 561,500

**BEAR RIVER BASIN**  
**10-460. Rainbow inlet canal near Dingle, Idaho**

LOCATION.--Lat 42°13'48", long 111°17'43", in SE $\frac{1}{4}$  sec.3, T.14 S., R.44 E., Bear Lake County, on left bank 1.5 miles west of Dingle and 1.8 miles downstream from headworks at Stewart Dam.

PERIOD OF RECORD.--January 1922 to current year. Monthly discharge only prior to October 1946, published in WSP 1314.

GAGE.--Water-stage recorder. Elevation of gage datum is 5,922.0 ft above mean sea level (by topographic survey). Prior to Oct. 1, 1923, at site 300 ft downstream at different datum; Oct. 1, 1923 to Oct. 27, 1944, at site 0.5 mile downstream at different datum.

AVERAGE DISCHARGE.--49 years, 321 cfs (232,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,270 cfs May 20 (gage height, 7.94 ft); minimum, 115 cfs Jan. 7. Period of record: Maximum discharge, 4,180 cfs May 7, 1952 (gage height, 8.62 ft); minimum daily, 1 cfs on several days in 1931, 1934, 1940, 1948.

REMARKS.--Records good. Discharge measurements generally made three to five times a week. Canal diverts from Bear River at Stewart Dam in NE $\frac{1}{4}$  sec.34, T.13 S., R.44 E., for storage in Bear Lake. At times flow in canal is augmented by surplus water from Black Otter Slough entering at the station and by seepage and wastage from irrigation lands on both sides of canal.

COOPERATION.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	138	260	250	126	331	233	2,060	1,700	2,010	1,400	494	219
2	138	233	224	130	304	260	2,040	1,740	2,050	1,380	468	217
3	159	208	212	136	304	245	1,940	1,780	2,110	1,420	462	219
4	147	210	226	130	402	288	1,740	1,640	2,120	1,380	429	228
5	130	186	224	124	376	290	1,530	1,950	2,140	1,360	358	247
6	136	199	231	126	438	285	1,440	2,140	2,190	1,400	333	262
7	141	215	188	121	384	260	1,380	2,310	2,210	1,320	361	299
8	153	222	226	130	339	238	1,430	2,410	2,220	1,180	336	283
9	171	224	286	126	312	262	1,500	2,410	2,040	1,120	306	293
10	199	224	226	128	333	255	1,470	2,460	1,610	1,040	317	306
11	219	222	186	128	353	270	1,480	2,530	1,400	980	304	301
12	224	224	159	128	322	273	1,480	2,580	1,380	880	275	288
13	226	224	138	159	325	288	1,400	2,660	1,410	837	245	286
14	233	228	136	167	333	320	1,260	2,730	1,440	787	238	291
15	226	222	151	136	347	317	1,210	2,800	1,440	749	226	275
16	219	203	159	132	361	399	1,230	2,920	1,500	653	224	260
17	222	206	178	138	367	465	1,250	2,930	1,520	597	219	257
18	217	215	184	165	390	519	1,320	3,070	1,540	590	215	235
19	212	215	188	186	420	429	1,420	3,190	1,560	586	222	226
20	208	212	201	215	420	447	1,460	3,200	1,570	576	199	231
21	210	206	159	233	420	432	1,560	3,180	1,620	583	199	238
22	208	199	163	212	415	438	1,550	3,030	1,640	576	199	233
23	203	203	175	199	405	456	1,560	2,930	1,620	569	188	245
24	215	208	186	228	320	513	1,630	2,780	1,580	563	197	245
25	222	222	147	252	336	667	1,670	2,670	1,540	576	212	243
26	231	245	145	255	304	924	1,730	2,170	1,520	586	224	231
27	222	280	149	250	301	1,060	1,780	2,130	1,500	563	210	231
28	208	275	138	247	257	1,120	1,780	1,570	1,500	546	184	238
29	201	252	141	267	-----	1,530	1,710	1,910	1,480	539	182	262
30	210	247	153	280	-----	1,860	1,700	1,660	1,490	536	184	262
31	231	-----	145	299	-----	2,220	-----	1,920	-----	519	208	-----
TOTAL	6,079	6,689	5,674	5,553	9,919	17,563	46,710	75,900	50,950	26,391	8,418	7,651
MEAN	196	223	183	179	354	567	1,557	2,448	1,698	851	272	255
MAX	233	280	286	299	438	2,220	2,060	3,200	2,220	1,420	494	306
MIN	130	186	136	121	257	233	1,210	1,700	1,380	519	182	217
AC-FT	12,060	13,270	11,250	11,010	19,670	34,840	92,650	150,500	101,100	52,350	16,700	15,180

CAL YR 1970 TOTAL 87,371 MEAN 239 MAX 1,100 MIN 39 AC-FT 173,300  
 HTR YR 1971 TOTAL 267,497 MEAN 733 MAX 3,200 MIN 121 AC-FT 530,600

# BEAR RIVER BASIN

## 10-465. Bear River below Stewart Dam, near Montpelier, Idaho

LOCATION.--Lat 42°15'14", long 111°17'35", in NE<sub>4</sub> sec. 34, T.13 S., R.44 E., Bear Lake County, on right bank 300 ft downstream from Stewart Dam and 4.5 miles south of Montpelier.

DRAINAGE AREA.--2,820 sq mi, approximately.

PERIOD OF RECORD.--January 1922 to current year. Monthly discharge only January 1922 to September 1945, published in WSP 1314.

GAGE.--Water-stage recorder. Altitude of gage is 5,950 ft (from topographic map).

AVERAGE DISCHARGE.--49 years, 51.8 cfs (37,530 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 754 cfs June 22 (gage height, 5.52 ft); minimum, 1.3 cfs Jan. 12.

Period of record: Maximum daily discharge, 3,050 cfs June 3, 1923; no flow July 15, 1956.

REMARKS.--Records good. Discharge measurements generally made once a week. Water diverted at Stewart Dam through Rainbow inlet canal (see station 10046000) for storage and regulation in Bear Lake. Many diversions above station for irrigation.

COOPERATION.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	5.6	4.6	1.7	3.8	1.8	4.6	4.4	136	617	14	12
2	4.4	4.6	4.2	1.7	4.2	1.8	4.2	4.4	134	494	13	12
3	4.6	4.4	3.4	1.6	4.2	1.8	3.8	4.6	124	322	12	12
4	5.0	4.0	3.6	1.7	3.6	2.0	3.2	5.6	126	232	12	11
5	4.8	3.8	3.6	1.7	3.8	2.2	2.9	6.5	127	129	12	11
6	4.8	3.6	4.0	1.7	3.8	2.3	2.6	6.8	131	20	12	12
7	4.6	3.8	3.4	1.6	3.6	2.2	2.8	6.8	132	16	11	12
8	4.6	3.8	3.6	1.7	3.6	2.3	2.9	6.2	131	14	10	13
9	4.8	3.8	4.0	1.7	3.6	2.5	3.4	6.5	160	11	10	12
10	5.0	4.0	3.4	1.6	3.6	2.5	3.2	6.8	535	9.2	9.6	14
11	5.0	3.8	2.8	1.6	3.8	2.6	3.4	7.7	683	7.7	8.8	14
12	5.3	3.8	2.6	1.3	3.8	2.9	3.6	8.4	683	7.4	8.0	14
13	5.3	3.6	2.6	1.3	4.0	3.2	3.4	8.4	674	8.8	7.4	14
14	5.0	3.8	2.4	1.4	3.8	3.2	2.9	8.8	680	6.8	7.4	14
15	5.0	3.8	2.3	1.5	3.8	3.4	2.9	8.4	686	4.2	7.1	14
16	5.0	3.6	2.3	1.5	3.8	4.0	2.8	8.4	689	9.1	7.4	14
17	5.0	3.6	2.2	1.5	3.8	4.2	2.8	8.4	701	17	7.4	14
18	5.3	3.6	2.3	1.6	3.6	4.0	2.9	10	714	16	7.4	13
19	5.3	3.6	2.2	1.6	3.6	4.0	3.0	12	722	16	7.7	14
20	5.3	3.8	2.2	1.8	3.4	4.0	3.4	12	738	15	8.8	13
21	4.4	3.8	2.0	1.6	3.4	4.0	3.6	11	744	19	13	13
22	3.8	3.8	2.0	1.6	3.4	3.6	3.2	10	751	14	14	12
23	3.6	3.8	2.0	1.6	3.0	3.8	3.2	9.6	741	14	12	11
24	3.6	3.6	2.0	1.9	2.8	3.8	3.6	9.2	720	14	12	11
25	3.6	3.8	2.0	1.6	3.6	4.0	3.0	11	701	14	13	11
26	4.0	4.4	1.9	2.2	2.6	4.4	3.4	52	689	14	14	10
27	3.8	5.6	1.9	2.3	2.4	4.0	3.8	116	671	14	12	9.6
28	4.2	5.6	1.8	2.3	1.8	3.6	4.0	123	665	14	13	10
29	4.0	5.0	1.8	2.5	-----	5.0	4.2	132	662	14	12	11
30	4.2	4.8	1.7	2.7	-----	8.4	4.2	132	650	14	12	12
31	4.6	-----	1.7	2.6	-----	5.9	-----	134	-----	14	12	-----
TOTAL	142.3	122.6	82.6	56.4	97.6	107.2	101.3	850.9	15,701	2,127.2	332.0	369.6
MEAN	4.59	4.09	2.66	1.82	3.49	3.46	3.38	28.7	523	68.6	10.7	12.3
MAX	5.3	5.6	4.8	2.5	4.2	8.4	4.6	136	751	617	14	14
MIN	3.6	3.6	1.7	1.3	1.8	1.8	2.6	4.4	124	4.2	7.1	9.6
AC-FY	282	243	164	112	194	213	201	1,770	31,140	4,220	659	732

CAL YR 1970 TOTAL 1,683.7 MEAN 4.61 MAX 5 9 MIN 1.7 AC-FT 3,340  
WTR YR 1971 TOTAL 20,130.7 MEAN 55.2 MAX 751 MIN 1.3 AC-FT 39,930

# BEAR RIVER BASIN

## 10-555. Bear Lake at Lifton, near St. Charles, Idaho

LOCATION.--Lat 42°07'16", long 111°18'52", in NE<sub>1/4</sub> sec.16, T.15 S., R.44 E., Bear Lake County, in Lifton pumping plant of Utah Power & Light Company, 3.5 miles east of St. Charles.

DRAINAGE AREA.--435 sq mi, approximately (does not include Mud Lake drainage).

PERIOD OF RECORD.--October 1903 to June 1906 (elevations only), January 1921 to current year. Monthly contents only January 1921 to September 1945 published in WSP 1314. Published as Bear Lake at Fish Haven 1903-06.

GAGE.--Water-stage recorder. Datum of gage is 5,900 ft above mean sea level, unadjusted (levels by Utah Power & Light Company). October 1903 to June 1906, staff gage at different site and datum.

EXTREMES.--Current year: Maximum contents, 1,384,000 acre-ft June 25 to July 8 (elevation, 5,923.12 ft); minimum, 1,088,000 acre-ft Mar. 20-28 (elevation, 5,918.89 ft).

Period of record: Maximum contents, 1,423,000 acre-ft June 10, 1923 (elevation, 5,923.68 ft); no usable contents Nov. 9-19, 1935 (elevation, 5,902.00 ft, lower limit of pumps).

REMARKS.--Outflow regulated by gates and pumps at Bear Lake and by gates in dike at north end of Mud Lake. Inflow to lake augmented by water diverted from Bear River through Rainbow inlet canal and Dingle inlet canal, which empty into Mud Lake (see station 10046000). Water from Mud Lake reaches Bear Lake by a sluice at pumping plant or by gates in causeway at south end of Mud Lake. Capacity, 1,421,000 acre-ft between elevation 5,902.00 (lower limit of pumps) and 5,923.65 ft (present feasible upper limit of storage with existing facilities). Storage water used for irrigation and power development. Figures given herein represent usable contents.

COOPERATION.--Gage heights furnished by Utah Power & Light Company, under general supervision of Geological Survey, in connection with a Federal Power Commission project. Contents computed by Geological Survey from capacity table based on data furnished by Utah Power and Light Company.

Capacity table (elevation, in feet, and usable contents, in acre-feet)

5,918.50	1,060,400	5,921.00	1,234,900
5,919.00	1,095,200	5,921.50	1,269,900
5,919.50	1,130,000	5,922.00	1,305,000
5,920.00	1,164,900	5,922.50	1,340,100
5,920.50	1,199,900	5,923.20	1,389,500

CONTENTS, IN THOUSANDS OF ACRE-FEET, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,111	1,115	1,127	1,107	1,098	1,095	1,093	1,207	1,253	1,284	1,358	1,294
2	1,110	1,115	1,128	1,106	1,098	1,095	1,095	1,211	1,254	1,284	1,356	1,293
3	1,110	1,115	1,128	1,104	1,098	1,094	1,097	1,215	1,256	1,284	1,355	1,291
4	1,110	1,115	1,128	1,103	1,097	1,094	1,098	1,220	1,259	1,284	1,354	1,289
5	1,110	1,115	1,128	1,102	1,097	1,094	1,099	1,223	1,261	1,284	1,352	1,286
6	1,110	1,115	1,128	1,100	1,097	1,093	1,101	1,227	1,264	1,284	1,351	1,283
7	1,109	1,117	1,127	1,099	1,097	1,092	1,103	1,232	1,267	1,284	1,349	1,281
8	1,108	1,118	1,127	1,097	1,097	1,092	1,105	1,237	1,270	1,284	1,348	1,278
9	1,108	1,119	1,127	1,097	1,096	1,092	1,107	1,242	1,272	1,283	1,346	1,276
10	1,108	1,120	1,127	1,097	1,096	1,092	1,110	1,248	1,273	1,284	1,344	1,275
11	1,108	1,121	1,127	1,097	1,095	1,091	1,113	1,253	1,275	1,282	1,342	1,273
12	1,108	1,122	1,127	1,097	1,095	1,091	1,116	1,259	1,276	1,282	1,339	1,272
13	1,108	1,122	1,126	1,097	1,054	1,091	1,119	1,264	1,277	1,282	1,337	1,270
14	1,108	1,122	1,124	1,097	1,094	1,090	1,122	1,270	1,277	1,282	1,335	1,267
15	1,108	1,122	1,124	1,097	1,094	1,090	1,126	1,276	1,277	1,281	1,334	1,264
16	1,108	1,122	1,123	1,097	1,094	1,090	1,129	1,282	1,278	1,280	1,332	1,262
17	1,108	1,123	1,122	1,098	1,094	1,098	1,132	1,288	1,278	1,279	1,330	1,259
18	1,108	1,123	1,122	1,099	1,094	1,089	1,136	1,294	1,279	1,279	1,329	1,256
19	1,108	1,123	1,120	1,100	1,094	1,089	1,142	1,300	1,280	1,278	1,327	1,253
20	1,108	1,124	1,120	1,091	1,095	1,088	1,148	1,306	1,281	1,278	1,325	1,252
21	1,109	1,124	1,119	1,101	1,095	1,088	1,153	1,313	1,282	1,276	1,320	1,251
22	1,109	1,124	1,118	1,101	1,095	1,088	1,158	1,320	1,282	1,275	1,317	1,250
23	1,110	1,124	1,118	1,101	1,095	1,088	1,164	1,326	1,283	1,273	1,312	1,248
24	1,110	1,124	1,117	1,100	1,095	1,088	1,169	1,332	1,283	1,272	1,308	1,245
25	1,111	1,124	1,115	1,100	1,095	1,088	1,175	1,337	1,284	1,271	1,304	1,243
26	1,113	1,125	1,115	1,100	1,095	1,088	1,180	1,342	1,284	1,270	1,301	1,242
27	1,113	1,126	1,113	1,100	1,095	1,088	1,186	1,345	1,284	1,268	1,300	1,240
28	1,113	1,126	1,112	1,099	1,095	1,088	1,191	1,347	1,284	1,267	1,299	1,238
29	1,114	1,126	1,111	1,099	-----	1,089	1,196	1,349	1,284	1,265	1,298	1,236
30	1,114	1,127	1,110	1,099	-----	1,090	1,202	1,350	1,284	1,263	1,297	1,234
31	1,115	-----	1,108	1,099	-----	1,091	-----	1,351	-----	1,261	1,296	-----
MAX	1,115	1,127	1,128	1,107	1,098	1,095	1,202	1,351	1,284	1,384	1,358	1,294
MIN	1,108	1,115	1,108	1,097	1,094	1,088	1,093	1,207	1,353	1,261	1,296	1,234
(+)	5,919.28	5,919.45	5,919.19	5,919.05	5,919.00	5,918.94	5,920.53	5,922.66	5,923.12	5,922.79	5,921.87	5,920.98
(+)	+4.0	+12.0	-19.0	-9.0	-4.0	-4.0	+11.0	+149.0	+33.0	-23.0	-65.0	-62.0

CAL YR 1970..... + 9.0

WTR YR 1971..... + 123.0

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

**BEAR RIVER BASIN**  
**10-595. Bear Lake outlet canal near Paris, Idaho**

LOCATION.--Lat 42°13'00", long 111°20'35", in SW<sub>4</sub> sec.8, T.14 S., R.44 E., Bear Lake County, on right bank 2,000 ft downstream from headgates (at dike) and 3 miles southeast of Paris.

PERIOD OF RECORD.--January 1922 to current year. Monthly discharge only January 1922 to September 1945, published in WSP 1314.

GAGE.--Water-stage recorder. Elevation of gage datum is 5,912.6 ft above mean sea level (from topographic survey).

AVERAGE DISCHARGE.--49 years, 345 cfs (250,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,840 cfs June 26 (gage height, 20.49 ft); minimum daily, 14 cfs on many days.

Period of record: Maximum daily discharge, 1,870 cfs Aug. 8, 1924; minimum daily, 1 cfs for many days in 1937, 1954, 1959, 1961, 1964.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Discharge measurements generally made six times a week during periods of release from Bear Lake.

COOPERATION.--Records collected by Utah Power & Light Co., under general supervision of Geological Survey, in connection with a Federal Power Commission project.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	14	420	680	736	700	480	20	1,510	1,560	1,430	1,070
2	16	14	411	733	692	700	355	20	1,510	1,560	1,440	1,080
3	16	14	422	730	643	700	188	20	1,490	1,560	1,480	1,120
4	16	14	465	698	652	700	172	128	1,360	1,550	1,440	1,120
5	16	14	465	698	560	700	203	293	1,470	1,540	1,480	1,120
6	16	14	463	704	660	700	200	291	1,650	1,530	1,540	1,130
7	16	14	460	706	665	709	201	236	1,720	1,480	1,480	1,120
8	16	14	470	706	641	689	201	212	1,750	1,390	1,540	1,070
9	16	14	480	704	657	686	184	213	1,770	1,260	1,540	1,060
10	16	14	490	715	660	709	20	208	1,750	1,140	1,560	1,030
11	16	14	505	715	660	724	20	213	1,750	1,040	1,550	997
12	16	14	505	725	663	747	20	198	1,760	1,040	1,520	980
13	16	14	510	725	695	849	20	198	1,750	1,050	1,470	970
14	16	14	540	725	692	852	20	260	1,720	1,030	1,490	915
15	15	14	540	725	698	849	20	339	1,740	1,130	1,480	993
16	15	14	550	724	692	852	20	339	1,740	1,300	1,450	1,030
17	15	14	600	721	675	896	20	328	1,750	1,360	1,450	1,030
18	15	14	640	715	663	870	20	343	1,760	1,490	1,390	1,020
19	14	14	650	721	665	871	20	348	1,770	1,500	1,390	1,020
20	14	14	650	715	670	892	20	459	1,770	1,500	1,390	666
21	14	14	660	721	680	865	20	705	1,760	1,480	1,390	43
22	14	14	680	730	685	846	20	865	1,800	1,420	1,430	29
23	14	172	700	733	690	834	20	877	1,800	1,360	1,400	408
24	14	458	735	759	700	798	20	816	1,800	1,350	1,430	831
25	14	413	735	741	680	753	20	819	1,760	1,340	1,430	825
26	14	434	735	715	680	692	20	894	1,690	1,320	1,350	813
27	14	427	735	706	709	655	20	1,210	1,660	1,320	1,210	919
28	14	415	735	706	689	672	20	1,540	1,660	1,350	1,170	1,350
29	14	411	727	721	-----	680	20	1,470	1,620	1,400	1,170	1,360
30	14	415	718	730	-----	572	20	1,450	1,530	1,430	1,140	1,280
31	14	-----	658	724	-----	507	-----	1,480	-----	1,470	1,080	-----
TOTAL	466	3,452	18,094	22,271	18,856	23,229	2,694	16,782	50,570	42,250	43,710	28,379
MEAN	15.0	115	584	718	673	749	86.8	541	1,686	1,363	1,410	946
MAX	16	458	735	759	736	896	480	1,540	1,800	1,560	1,560	1,360
MIN	14	14	411	680	560	507	20	20	1,360	1,030	1,090	29
AC-FT	924	6,850	35,890	44,170	37,400	46,070	5,170	33,290	100,300	83,800	86,700	56,290

CAL YR 1970 TOTAL 87,146.6 MEAN 239 MAX 1,140 MIN 5.0 AC-FT 172,000  
 WTR YR 1971 TOTAL 270,664.0 MEAN 742 MAX 1,900 MIN 14 AC-FT 536,900

# BEAR RIVER BASIN

## 10-905. Bear River near Preston, Idaho

**LOCATION.**--Lat  $42^{\circ}10'05''$ , long  $111^{\circ}50'59''$ , in NW sec. 36, T. 14 S., R. 39 E., Franklin County, on left bank 600 ft downstream from headgates of West Cache Canal, 5 miles downstream from Mink Creek, 5 miles north of Preston, and 5.5 miles upstream from Battle Creek.

**DRAINAGE AREA.**--4,500 sq mi, approximately.

**PERIOD OF RECORD.**--October 1889 to December 1916, January to September 1917 (gage heights only), October 1943 to current year. Prior to 1903, published as "at Battlecreek." Monthly discharge only for some periods, published in WSP 1314.

**GAGE.**--Water-stage recorder. Datum of gage is 4,524.8 ft above mean sea level, unadjusted. October 1889 to September 1917 nonrecording gages at several sites within 5 miles downstream at different datums.

**AVERAGE DISCHARGE.**--28 years (1943-71), 811 cfs (587,600 acre-ft per year).

**EXTREMES.**--Current year: Maximum discharge, 3,960 cfs June 11 (gage height, 5.27 ft); minimum, 17 cfs Nov. 20 (gage height, 0.50 ft); minimum daily, 19 cfs Nov. 19.

1889-1917: Maximum discharge, about 8,500 cfs June 9, 10, 1907, estimated on basis of records for station near Collinston, Utah; maximum gage height observed, 9.04 ft Jan. 17, 18, 1917 (backwater from ice), site and date then in use; minimum discharge not determined.

1943-71: Maximum discharge, 4,420 cfs Apr. 17, 1950 (gage height, 5.61 ft); minimum, 0.6 cfs June 14, 1949; minimum daily, 2.0 cfs May 11, 1968.

**REMARKS.**--Records good. Station is below all irrigation diversions from Bear River in Idaho except Cub River pumps in SE $\frac{1}{4}$  sec. 20, T. 16 S., R. 39 E. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas.

**REVISIONS (WATER YEARS).**--WSP 250: 1905-7.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	352	275	838	1,180	1,360	1,300	1,790	2,120	3,070	3,310	1,420	1,530
2	376	723	1,110	921	1,420	1,130	1,570	2,200	3,280	3,210	1,290	1,410
3	351	958	867	870	1,210	1,340	1,610	2,380	3,370	2,950	1,440	1,330
4	352	1,060	819	859	1,470	1,360	1,600	2,180	3,000	2,770	1,310	1,400
5	531	971	668	1,100	1,210	1,270	1,550	2,530	2,980	1,980	1,170	1,530
6	744	524	1,210	1,470	1,470	1,180	1,980	2,330	3,070	2,270	1,160	1,440
7	761	824	868	1,410	1,080	1,340	1,790	2,330	3,310	2,510	1,190	1,350
8	444	1,000	907	1,000	1,250	1,110	1,880	2,230	3,370	2,500	1,640	1,420
9	594	413	885	909	1,140	1,470	1,930	2,370	3,420	2,280	1,570	1,430
10	576	32	974	1,280	1,300	1,630	2,080	2,370	3,550	2,390	1,290	1,480
11	466	24	974	1,330	1,310	921	2,170	2,300	3,880	1,290	1,060	1,420
12	373	24	886	1,240	1,420	1,390	1,920	2,290	3,930	1,690	1,370	1,480
13	750	151	815	1,330	1,190	1,930	1,850	2,560	3,910	1,370	1,290	1,250
14	548	1,170	738	1,180	1,270	1,350	2,040	2,420	3,820	1,760	1,090	1,490
15	434	1,520	733	1,230	1,470	1,520	2,050	2,410	3,850	1,490	1,370	1,270
16	702	336	841	1,240	1,290	1,560	2,070	2,410	3,900	1,550	1,350	1,530
17	671	28	764	1,350	1,390	1,350	1,970	2,350	3,880	1,330	1,020	1,440
18	564	21	653	1,250	1,300	1,310	2,170	2,360	3,840	887	1,320	1,340
19	248	19	901	1,360	1,300	1,590	1,890	2,120	3,820	1,740	1,670	1,410
20	231	38	866	1,570	1,200	1,430	1,960	2,040	3,790	992	1,150	1,370
21	324	96	970	1,190	1,330	1,490	2,100	2,400	3,760	1,800	1,420	1,340
22	319	51	1,130	1,560	1,210	1,330	2,040	2,380	3,730	1,420	1,210	1,590
23	409	302	932	1,230	1,320	1,520	2,020	2,870	3,720	1,260	1,220	1,230
24	257	200	983	1,400	1,340	1,980	2,030	2,910	3,690	1,010	1,290	1,570
25	152	602	845	1,230	1,340	1,930	1,930	2,870	3,520	1,330	1,410	1,450
26	598	598	1,020	987	1,320	1,730	2,360	2,700	3,400	1,630	1,040	1,180
27	144	869	902	1,480	1,310	2,130	2,620	3,180	3,340	1,270	1,450	1,690
28	360	1,000	1,360	1,340	1,140	1,840	2,110	3,270	3,370	1,220	1,280	1,450
29	191	902	1,190	1,330	-----	1,710	1,940	3,270	3,370	1,450	1,420	1,410
30	135	916	1,200	1,330	-----	1,540	2,050	3,160	3,330	1,420	1,390	1,630
31	399	-----	1,220	1,310	-----	1,700	-----	3,080	-----	1,130	984	-----
TOTAL	13,376	15,647	29,069	38,546	36,360	46,381	59,150	78,300	106,270	55,209	39,884	42,860
MEAN	431	522	938	1,243	1,299	1,496	1,972	2,529	3,542	1,781	1,287	1,429
MAX	761	1,520	1,360	1,570	1,470	2,130	2,620	3,270	3,930	3,310	1,570	1,690
MIN	135	19	653	859	1,080	921	1,550	2,040	2,980	887	984	1,180
AC-FT	26,530	31,040	57,660	76,460	72,120	92,000	117,300	155,500	210,800	109,500	79,110	85,010
CAL YR 1970	TOTAL 213,939	MEAN 586	MAX 1,520	MIN 19	AC-FT 424,300							
HTR YR 1971	TOTAL 561,142	MEAN 1,537	MAX 3,930	MIN 19	AC-FT 1,113,000							

# BEAR RIVER BASIN

## 10-930. Cub River near Preston, Idaho

LOCATION.--Lat 42°08'28", long 111°41'19", in SW<sub>1/4</sub> sec.5, T.15 S., R.41 E., Franklin County, on right bank 0.2 mile upstream from headgates of Cub River-Worm Creek Canal, 0.7 mile upstream from forest boundary, and 10 miles east of Preston.

DRAINAGE AREA.--19.4 sq mi.

PERIOD OF RECORD.--March 1940 to September 1962, October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,285.1 ft above mean sea level, unadjusted.

AVERAGE DISCHARGE.--28 years, 83.6 cfs (60,570 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 803 cfs June 11 (gage height, 3.13 ft); minimum, 15 cfs Jan. 10. Period of record: Maximum discharge, 803 cfs June 11, 1971 (gage height, 3.13 ft); maximum gage height, 3.83 ft June 2, 1943; no flow for part of Jan. 29, 1965, result of snowslide.

REMARKS.--Records good. No diversion above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	33	28	34	26	31	26	54	115	480	392	101	53
2	33	28	32	26	31	26	48	141	445	358	98	53
3	32	27	31	26	31	26	46	190	450	342	96	55
4	32	27	31	26	31	26	48	250	485	334	94	53
5	32	27	31	26	31	26	55	232	445	318	92	51
6	31	28	30	26	30	25	66	210	495	303	89	50
7	31	28	29	25	29	25	79	235	558	288	86	51
8	31	28	29	25	28	25	82	274	608	277	85	49
9	32	27	31	25	28	25	90	284	653	266	82	49
10	34	28	31	25	28	25	104	274	712	253	79	48
11	31	28	31	25	28	25	104	303	782	244	78	47
12	31	28	31	25	28	26	103	366	719	232	75	46
13	30	28	30	24	28	34	103	455	660	213	72	46
14	30	27	30	25	30	31	105	521	615	200	71	45
15	29	26	29	24	33	30	106	552	602	193	70	46
16	29	26	29	24	32	29	113	608	634	183	69	46
17	29	26	29	27	32	29	121	552	698	172	68	45
18	29	26	29	34	31	27	118	415	747	166	66	45
19	29	26	28	38	31	27	113	326	705	159	64	45
20	28	26	28	38	30	27	104	280	698	155	63	44
21	28	26	28	36	25	27	100	241	640	149	62	44
22	29	26	28	34	28	27	101	226	640	143	67	43
23	29	26	27	34	28	33	100	210	653	139	62	43
24	30	28	27	32	28	54	101	216	660	133	60	42
25	29	32	27	32	28	51	111	274	660	128	58	42
26	28	34	26	31	27	54	118	379	627	123	57	42
27	28	32	26	31	26	70	116	490	615	118	56	42
28	27	31	26	31	27	59	111	552	571	113	57	41
29	27	30	27	31	-----	57	108	558	500	110	58	41
30	27	36	26	39	-----	66	103	565	445	108	56	42
31	27	-----	26	31	-----	63	-----	521	-----	103	54	-----
TOTAL	925	844	897	894	822	1,101	2,831	10,815	18,202	6,415	2,240	1,389
MEAN	29.8	28.1	28.9	28.9	29.4	35.5	94.4	349	607	207	72.3	46.3
MAX	34	36	34	38	33	70	121	608	782	392	101	55
MIN	27	26	26	24	26	25	46	115	445	103	54	41
AC-FT	1,830	1,670	1,780	1,770	1,630	2,180	5,620	21,450	36,100	12,720	4,440	2,760

CAL YR 1970 TOTAL 31,739 MEAN 87.0 MAX 692 MIN 18 AC-FT 62,950  
 WTR YR 1971 TOTAL 47,375 MEAN 130 MAX 782 MIN 24 AC-FT 93,970

# BEAR RIVER BASIN

## 10-1090. Logan River above State dam, near Logan, Utah

LOCATION.--Lat 41°44'40", long 111°47'00", in NE<sup>1/4</sup> sec.36, T.12 N., R.1 E., Cache County, on right bank at Logan plant of Utah Power & Light Co., 125 ft upstream from tailrace, 0.5 mile upstream from State dam, and 2.5 miles east of Logan.

DRAINAGE AREA.--218 sq mi.

PERIOD OF RECORD.--June 1896 to current year. Published as Logan River near Logan prior to 1913. Records since May 1913 equivalent to earlier records if records for Utah Power & Light Co.'s tailrace near Logan are added. Monthly discharge only for some periods, published in WSP 1314.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,680 ft (from topographic map). Prior to May 7, 1913, nonrecording gage at various sites within 0.5 mile downstream, below confluence of tailrace, at different datums. May 7 to Sept. 30, 1913, water-stage recorder at present site at different datums and Oct. 1, 1913, to Sept. 3, 1938, at datum about 2.3 ft lower than present datum.

AVERAGE DISCHARGE.--58 years (1913-71), 109 cfs (78,970 acre-ft per year). Average combined discharge of Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal, 75 years (1896-71), 273 cfs (197,800 acre-ft per year).

EXTREMES (River only).--Current year: Maximum discharge, 1,660 cfs June 12 (gage height, 5.92 ft); minimum daily, 90 cfs Jan. 4.

Period of record: Maximum discharge, 2,000 cfs Mar. 21, 1916 (gage height, 5.6 ft, datum then in use), from rating curve extended above 1,000 cfs; minimum daily, 6 cfs Nov. 7, 1940.

(Combined flow, Logan River above State dam, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal).--Current year: Maximum discharge, 1,720 cfs June 12; minimum daily, 96 cfs Jan. 4.

Period of record: Maximum observed discharge, 2,480 cfs May 24, 1907; minimum daily, 50 cfs Jan. 21, 1935.

REMARKS.--Records good. Water diverted from river and springs above station for power, irrigation and municipal supply. Flow regulated by powerplants above station. For records of combined flow of Logan River, Utah Power & Light Co.'s tailrace, and Logan, Hyde Park & Smithfield Canal, see following page. Combined flow record excludes that in Logan City culinary pipe lines and one small irrigation diversion from Power flume that siphons canyon 400 ft upstream from station. During 1963 site of gaging station for Logan, Hyde Park & Smithfield Canal was changed; records of combined flow since that time are equivalent to previous records. Combined flow records this year for October and November includes flow of Utah Power and Light Co.'s tailrace for which figures are published in Water Resources Data for Utah - Part 1, 1970.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	120	149	117	158	128	263	460	1,040	1,020	390	290
2	128	120	143	117	161	125	253	520	1,030	969	382	290
3	122	117	143	106	164	131	253	616	1,040	939	375	294
4	120	117	140	90	152	137	263	745	1,090	921	372	287
5	122	120	137	93	161	131	290	680	1,080	888	364	297
6	128	128	137	93	146	128	332	628	1,180	844	361	287
7	128	140	137	114	149	120	375	655	1,240	816	361	290
8	125	131	137	125	146	134	390	665	1,290	794	354	287
9	128	137	143	131	143	125	415	685	1,370	761	343	280
10	146	149	140	126	149	131	484	720	1,480	740	336	277
11	131	143	134	120	152	125	484	783	1,590	720	328	270
12	128	146	128	122	143	134	437	882	1,560	695	322	266
13	128	143	120	120	143	143	419	1,010	1,480	670	314	263
14	128	131	125	114	146	137	460	1,070	1,450	641	300	253
15	125	131	131	117	155	134	488	1,120	1,470	614	294	243
16	120	131	125	117	155	131	512	1,190	1,390	600	294	237
17	122	131	125	146	155	134	540	1,140	1,430	574	287	237
18	120	131	125	204	152	128	540	980	1,430	584	287	246
19	117	131	117	224	152	125	488	922	1,450	548	277	246
20	114	128	111	214	149	131	457	788	1,420	520	273	243
21	117	128	117	195	140	131	453	745	1,420	512	270	243
22	131	129	117	186	134	143	457	730	1,390	492	266	240
23	128	128	108	173	143	155	445	685	1,380	480	266	237
24	143	137	111	164	143	201	445	715	1,360	468	266	237
25	131	155	117	158	143	204	468	898	1,320	453	256	230
26	128	167	117	158	137	208	476	939	1,260	434	253	227
27	117	158	120	155	134	263	453	1,010	1,250	426	253	230
28	117	149	120	152	140	260	437	1,100	1,180	419	260	237
29	120	143	120	152	-----	263	415	1,130	1,120	419	297	237
30	120	155	120	152	-----	283	419	1,110	1,070	408	290	240
31	120	-----	117	155	-----	297	-----	1,050	-----	400	283	-----
TOTAL	3,880	4,073	3,931	4,412	4,145	5,020	12,611	26,209	39,260	19,757	9,574	7,741
MEAN	125	136	127	142	148	162	420	845	1,309	637	309	258
MAX	146	167	149	224	164	297	540	1,190	1,590	1,020	390	297
MIN	114	117	108	90	134	120	253	46C	1,030	400	253	227
AC-FT	7,700	8,080	7,800	8,750	8,220	9,960	25,010	51,990	77,870	39,190	18,900	15,350

CAL YR 1970 TOTAL 73,750 MEAN 202 MAX 1,020 MIN 45 AC-FT 146,300  
WTR YR 1971 TOTAL 140,613 MEAN 385 MAX 1,590 MIN 90 AC-FT 278,900

## BEAR RIVER BASIN

### 10-1090. Logan River above State dam, near Logan, Utah—continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF LOGAN RIVER ABOVE STATE DAM, UTAH POWER & LIGHT CO.'S TAILRACE, AND LOGAN, HYDE PARK & SMITHFIELD CANAL AT HEAD, NEAR LOGAN, UTAH,  
WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	149	136	155	123	164	133	267	461	1,080	1,090	448	304
2	149	136	149	123	167	130	257	520	1,070	1,050	439	304
3	142	133	149	112	170	136	257	614	1,080	1,020	431	308
4	140	133	146	96	158	142	267	745	1,130	997	428	259
5	142	136	143	99	167	136	294	680	1,120	966	419	304
6	147	144	143	101	152	133	336	628	1,220	932	415	294
7	146	153	143	124	154	125	378	655	1,280	906	415	297
8	143	140	143	136	152	139	393	665	1,330	881	408	294
9	146	144	149	140	148	129	417	685	1,410	848	396	287
10	164	156	146	135	154	135	486	720	1,510	821	389	284
11	149	150	140	126	158	129	486	790	1,610	795	380	277
12	146	153	134	128	148	128	446	895	1,590	768	374	273
13	146	150	126	126	148	147	431	1,020	1,520	742	368	270
14	146	138	131	120	151	141	472	1,090	1,480	718	363	269
15	143	138	137	123	160	138	500	1,140	1,500	694	356	268
16	138	138	131	123	160	135	523	1,200	1,420	671	355	265
17	140	138	131	152	160	138	551	1,150	1,460	648	346	261
18	138	138	131	210	157	132	551	999	1,460	635	349	262
19	135	138	123	230	157	130	496	858	1,480	623	341	262
20	132	134	117	220	154	136	459	824	1,460	604	336	259
21	135	134	123	201	145	136	454	781	1,480	590	333	259
22	148	134	123	192	139	148	458	766	1,450	568	329	256
23	145	134	114	179	148	160	446	721	1,440	551	328	253
24	160	144	117	170	148	206	446	751	1,620	538	328	253
25	148	162	123	164	148	209	469	883	1,400	522	317	250
26	144	174	123	164	142	213	477	1,000	1,350	502	312	240
27	133	164	126	161	139	268	454	1,080	1,330	493	310	251
28	133	155	126	158	145	265	438	1,170	1,250	483	313	250
29	136	149	126	158	-----	268	416	1,200	1,190	478	322	250
30	136	161	126	158	-----	288	419	1,170	1,140	467	315	251
31	136	-----	123	161	-----	301	-----	1,100	-----	458	307	-----
TOTAL	4,435	4,337	4,137	4,613	4,293	5,164	12,744	26,961	40,660	22,059	11,270	8,163
MEAN	143	145	133	149	153	167	425	870	1,355	712	364	272
MAX	164	174	155	230	170	301	551	1,200	1,610	1,090	448	308
MIN	132	133	114	96	139	125	257	461	1,070	458	307	249
AC-FT	8,800	8,600	8,170	9,150	8,520	10,240	25,280	53,480	80,650	43,750	22,350	16,190

CAL YR 1970 TOTAL 90,991 MEAN 249 MAX 1,120 MIN 89 AC-FT 180,500

WTR YR 1971 TOTAL 148,816 MEAN 408 MAX 1,610 MIN 96 AC-FT 295,200

## BEAR RIVER BASIN

### 10-1170. Hammond (East Side) Canal near Collinston, Utah

LOCATION.--Lat 41°49'51", long 112°03'24", in SE<sub>1</sub> sec.27, T.13 N., R.2 W., Box Elder County, on right bank 3,600 ft downstream from Cutler Dam and 4 miles north of Collinston.

PERIOD OF RECORD.--June 1912 to current year. Prior to 1915, published as Hammond Ditch near Collinston. Monthly discharge only for some periods, published in WSP 1314

GAGE.--Water-stage recorder. Prior to May 22, 1914, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--59 years, 51.0 cfs (36,950 acre-ft per year).

EXTREMES.--Maximum daily discharge, 184 cfs June 29, 1963; no flow at times in each year.

REMARKS.--Records good. Canal diverts from east side of Bear River in NW<sub>1</sub> sec.26, T.13 N., R.2 W., at dam at which West Side Canal and intake of Cutler powerplant also divert. Water from this canal and West Side Canal used for irrigation of about 58,000 acres below station in eastern Box Elder County.

COOPERATION.--Gage-height record and 9 discharge measurements furnished by Utah Power & Light Co.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	63	6.3						0	95	163	155	113
2	63	6.3						0	98	163	154	108
3	63	5.3						0	98	164	141	99
4	63	5.3						0	95	164	147	93
5	63	5.3						0	90	164	148	87
6	62	5.3						0	91	165	148	84
7	61	5.3						0	90	155	147	78
8	59	5.3						0	90	164	148	75
9	57	5.3						0	90	165	148	68
10	40	5.3						0	85	164	148	66
11	5.9	5.3						66	34	164	150	66
12	2.6	5.3						68	9.9	165	150	66
13	9.0	5.3						68	9.4	162	148	66
14	6.8	5.3						57	9.2	163	149	66
15	6.3	5.3						66	33	163	148	67
16	6.9	5.3						67	73	162	148	66
17	12	2.5						66	108	161	148	66
18	20	0						66	135	162	148	66
19	10	0						92	153	161	148	67
20	9.2	0						97	161	162	150	66
21	9.0	0						97	163	159	150	63
22	8.6	0						96	170	156	150	57
23	7.9	0						97	173	157	150	56
24	7.7	0						97	174	157	150	56
25	6.9	0						97	174	157	148	56
26	6.3	0						106	174	156	146	56
27	6.3	0						112	166	158	145	56
28	6.3	0						111	164	157	145	56
29	6.3	0			-----			111	142	156	134	54
30	6.3	0			-----			111	162	154	113	48
31	6.3	-----			-----			104	-----	155	113	-----
TOTAL	760.6	89.3	0	0	0	0	0	1,862	3,313.5	4,978	4,515	2,091
MEAN	24.5	2.98	0	0	0	0	0	60.1	110	161	146	69.7
MAX	6?	6.3	0	0	0	0	0	112	174	165	155	113
MIN	2.6	0	0	0	0	0	0	0	9.2	154	113	48
AC-FT	1,510	177	0	0	0	0	0	3,690	6,570	9,870	8,960	4,150
CAL YR 1970	TOTAL 20,110.90	MEAN 55.1	MAX 165	MIN 0	AC-FT 35,890							
WTR YR 1971	TOTAL 17,609.40	MEAN 48.2	MAX 174	MIN 0	AC-FT 34,930							

**BEAR RIVER BASIN**  
**10-1175. West Side Canal near Collinston, Utah**

LOCATION.--Lat 41°49'55", long 112°03'36", in SW<sub>1</sub> sec.27, T.13 N., R.2 W., Box Elder County, on left bank 4,200 ft downstream from Cutler Dam and 4 miles north of Collinston.

PERIOD OF RECORD.--June 1912 to current year. Monthly discharge only for some periods, published in WSP 1314.

GAGE.--Water-stage recorder. Prior to May 22, 1914, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--59 years, 240 cfs (173,900 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 763 cfs July 11, 1967; no flow for periods in every year except 1914.

REMARKS.--Records good. Canal diverts from west side of Bear River in NE<sub>1</sub>SE<sub>1</sub> sec.27, T.13 N., R.2 W., at dam at which Hammond (East Side) Canal and intake of Cutler powerplant also divert. Water from this canal and Hammond (East Side) Canal used for irrigation of about 58,000 acres below station in eastern Box Elder County.

COOPERATION.--Gage-height record and 11 discharge measurements furnished by Utah Power & Light Co.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	397	104	96	66	37	26		0	527	735	703	584
2	402	103	95	66	37	26		0	529	735	705	575
3	392	103	88	66	36	26		0	529	737	701	539
4	373	102	89	66	35	26		0	511	735	699	495
5	350	101	89	66	35	26		0	490	735	703	463
6	326	101	89	66	35	24		0	440	735	701	422
7	287	101	89	66	35	24		0	470	735	699	422
8	248	101	87	66	35	12		0	488	733	701	420
9	232	101	86	66	35	0		0	488	733	703	416
10	176	101	86	66	35	0		0	513	733	701	418
11	176	101	86	67	34	0	241	234	733	701	432	
12	148	102	85	67	34	0	252	69	739	701	444	
13	180	102	85	67	34	0	270	361	739	705	442	
14	173	102	83	67	34	0	271	402	733	703	450	
15	154	101	81	67	35	0	270	442	729	703	457	
16	128	101	80	66	34	0	271	511	725	699	468	
17	122	98	80	63	34	0	292	561	725	701	475	
18	125	96	80	60	34	0	330	601	725	707	473	
19	124	96	80	47	35	0	350	624	717	713	473	
20	125	96	80	38	34	0	371	657	705	721	470	
21	126	96	80	38	34	0	371	691	703	723	454	
22	118	96	80	38	34	0	368	713	669	721	439	
23	108	96	79	38	34	0	373	729	603	725	427	
24	108	96	78	38	34	0	398	737	594	721	423	
25	108	96	78	38	34	0	435	735	594	715	420	
26	108	96	78	38	30	0	490	735	609	715	416	
27	108	96	78	38	27	0	511	735	632	715	384	
28	108	96	78	38	27	0	550	735	645	707	366	
29	107	96	78	38	-----	0	605	737	673	651	365	
30	107	97	68	37	-----	0	588	735	683	592	349	
31	107	-----	67	37	-----	0	529	-----	693	584	-----	
TOTAL	5,851	2,974	2,556	1,695	951	190	0	8,136	16,729	21,714	21,639	13,381
MEAN	189	99.1	82.5	54.4	34.0	6.13	0	262	558	700	698	446
MAX	402	194	96	67	37	26	0	605	737	739	725	584
MIN	107	96	67	37	27	0	0	0	69	594	584	349
AC-FT	11,610	5,900	5,070	3,340	1,890	377	0	16,140	33,180	43,070	42,920	26,540

CAL YR 1970 TOTAL 102,622.00 MEAN 281 MAX 745 MIN 0 AC-FT 203,600  
 WTR YR 1971 TOTAL 95,806.00 MEAN 262 MAX 739 MIN 0 AC-FT 190,000

# BEAR RIVER BASIN

## 10-1180. Bear River near Collinston, Utah

LOCATION.--Lat 41°50'03", long 112°03'16", in NW<sub>1</sub>SE<sub>4</sub> sec.27, T.13 N., R.2 W., Box Elder County, on right bank 800 ft downstream from Cutler plant of Utah Power & Light Co., 2,000 ft downstream from Cutler Dam, and 5.5 miles north of Collinston.

DRAINAGE AREA.--6,000 sq mi, approximately.

PERIOD OF RECORD.--July 1889 to current year. Published as "at Collinston" prior to 1900. Monthly discharge only for some periods, published in WSP 1314.

GAGE.--Water-stage recorder. Datum of gage is 4,276.13 ft above mean sea level (levels by Bureau of Reclamation). Prior to Nov. 8, 1913, nonrecording gage, and Nov. 8, 1913 to Sept. 10, 1938, water-stage recorder, at site 0.8 mile downstream at different datums.

EXTREMES.--Current year: Maximum discharge, 7,370 cfs June 14 (gage height, 6.81 ft); minimum daily, 15 cfs Oct. 17-20.

Period of record: Maximum discharge observed, 11,600 cfs June 7-10, 1909 (gage height, 7.70 ft, site and datum then in use); minimum daily, 10 cfs Aug. 4-12, 18-23, 1905; practically no flow at 2400 Aug. 5, 1920.

REMARKS.--Records excellent. Natural flow of stream affected by storage reservoir, power developments, diversions for irrigation, and return flow from irrigated areas.

COOPERATION.--Fifteen discharge measurements furnished by Utah Power & Light Co.

REVISIONS (WATER YEARS).--WSP 1564: 1902.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	256	659	2,030	1,660	2,080	2,300	3,860	5,210	5,670	4,470	885	1,600
2	717	729	2,170	1,860	2,880	2,240	3,850	4,550	5,700	4,150	1,000	1,740
3	462	1,430	1,790	2,050	2,910	2,260	3,040	4,290	5,700	4,020	1,390	1,870
4	294	1,030	1,710	1,490	2,930	2,390	3,370	4,790	5,680	4,000	1,330	2,190
5	1,480	1,110	2,030	1,220	2,920	2,790	3,400	5,330	5,690	3,990	407	2,240
6	1,760	1,610	2,060	1,190	2,420	2,320	3,350	5,680	5,690	3,510	499	2,000
7	1,680	1,960	1,860	1,310	2,400	2,240	3,320	5,750	5,680	3,070	2,210	2,680
8	1,930	1,340	1,890	1,280	2,180	1,850	3,440	5,510	5,630	2,750	1,010	1,820
9	2,050	1,510	1,650	2,789	2,320	1,300	3,620	5,390	5,550	2,840	932	1,730
10	1,510	1,430	2,020	784	2,150	2,480	3,650	5,720	5,790	2,900	1,590	2,390
11	1,430	1,430	2,040	2,040	2,290	2,250	3,770	5,670	6,450	2,350	825	2,480
12	1,180	1,200	2,160	1,650	2,270	2,370	3,820	5,350	7,060	2,140	1,370	1,950
13	981	793	1,880	1,670	1,830	2,950	3,830	5,210	6,980	1,890	1,040	1,840
14	949	985	2,050	1,980	2,850	2,970	3,810	5,460	7,150	2,110	898	2,050
15	1,150	1,390	1,660	1,900	2,450	2,970	3,800	5,830	7,110	1,950	885	1,760
16	722	1,230	1,260	2,240	2,840	3,020	3,790	5,930	6,980	1,890	1,050	1,740
17	15	1,060	1,230	2,230	2,780	3,000	3,810	6,210	6,700	1,610	838	1,730
18	15	1,280	2,120	2,930	2,580	2,960	3,820	6,400	6,490	1,310	981	1,680
19	15	1,040	1,480	3,470	2,920	2,870	4,120	6,110	6,270	1,400	1,090	1,600
20	15	1,020	1,220	3,700	2,930	2,670	4,620	5,570	6,270	1,320	651	2,070
21	207	503	1,260	3,910	2,930	2,590	4,610	5,460	6,260	1,180	818	1,500
22	457	108	1,200	3,790	2,930	2,610	4,590	5,130	5,890	2,060	554	1,820
23	1,040	783	1,430	3,920	2,590	2,610	4,600	4,740	5,670	699	807	1,910
24	905	889	2,080	3,310	1,820	2,630	4,300	4,740	5,630	525	1,070	1,920
25	1,260	1,010	1,710	2,940	2,830	3,820	4,750	5,490	1,630	825	1,860	
26	1,420	1,190	1,430	2,960	2,170	3,620	4,490	4,750	5,230	2,020	852	1,910
27	353	1,740	1,270	3,010	2,020	3,740	5,290	5,040	5,150	1,150	772	1,760
28	1,050	1,770	1,180	2,950	2,480	3,870	5,650	5,210	4,870	644	991	1,650
29	1,220	1,190	1,200	2,930	-----	3,870	5,870	5,230	4,470	1,010	1,260	1,790
30	1,120	1,810	1,690	2,900	-----	3,870	5,590	5,240	4,520	1,410	1,560	1,770
31	416	-----	1,810	2,850	-----	3,870	-----	5,410	-----	1,340	1,810	-----
TOTAL	28,059	35,309	52,570	72,903	71,500	86,410	123,700	165,660	177,420	67,338	31,200	57,050
MEAN	905	1,177	1,696	2,352	2,554	2,787	4,123	5,344	5,914	2,172	1,006	1,902
HAX	2,050	1,960	2,170	3,920	2,930	3,670	5,870	6,400	7,150	4,470	1,810	2,680
MIN	15	108	1,180	784	1,820	1,300	3,320	4,290	4,470	525	407	1,500
AC-FT	55,660	70,040	104,300	144,600	141,800	171,400	245,400	328,600	351,900	133,600	61,890	113,200

CAL YR 1970 TOTAL 377,274 MEAN 1,034 MAX 2,850 MIN 15 AC-FT 748,300  
 HTR YR 1971 TOTAL 969,119 MEAN 2,655 MAX 7,150 MIN 15 AC-FT 1,922,000

**BEAR RIVER BASIN**  
**10-1260. Bear River near Corinne, Utah**

LOCATION.--Lat 41°34'35", long 112°06'00", in SE<sub>1/4</sub>NE<sub>1/4</sub> sec.30, T.10 N., R.2 W., Box Elder County, on right bank 1.2 miles downstream from Salt Creek, 2.0 miles northeast of Corinne, and 2.8 miles downstream from Maled River.

DRAINAGE AREA.--6,800 sq mi, approximately.

PERIOD OF RECORD.--October 1949 to September 1957, October 1963 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,204.6 ft, unadjusted. Auxiliary nonrecording gage 7,800 ft downstream July 27, 1950 to Nov. 21, 1955.

AVERAGE DISCHARGE.--16 years, 1,667 cfs (1,208,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 7,370 cfs June 17 (gage height, 15.12 ft); minimum daily, 104 cfs Oct. 20.

Period of record: Maximum discharge, 7,370 cfs June 17, 1971 (gage height, 15.12 ft); minimum daily, 72 cfs Aug. 20, 21, 26, Sept. 8, 1964, July 5, 1970.

REMARKS.--Records good except those for winter months, which are fair. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas. Records are equivalent to flow at Bear River Bird Refuge diversion works.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1970 TO SEPTEMBER 1971

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	605	701	1,600	2,000	2,970	2,600	4,050	6,000	5,430	4,630	1,400	2,170
2	471	645	1,930	2,000	2,980	2,650	4,040	5,720	5,620	4,550	1,100	2,000
3	726	883	2,480	2,000	2,980	2,580	4,030	4,990	5,710	4,240	1,100	2,190
4	666	1,450	2,220	2,200	3,000	2,400	3,920	4,600	5,750	4,110	1,500	2,470
5	520	1,230	2,090	2,000	3,000	2,700	3,680	4,910	5,800	4,090	1,400	2,610
6	1,420	1,330	2,300	1,600	2,800	2,790	3,600	5,300	5,830	4,070	703	2,460
7	2,000	1,780	2,360	1,500	2,510	2,520	3,560	5,570	5,820	3,540	678	2,690
8	1,980	1,900	2,220	1,500	2,460	2,380	3,520	5,730	5,790	3,220	1,200	2,690
9	2,080	1,610	2,220	1,500	2,300	1,890	3,610	5,740	5,770	2,970	1,150	2,260
10	2,310	1,630	2,050	1,200	2,340	1,620	3,790	5,600	5,700	3,070	1,100	2,290
11	2,080	1,580	2,340	1,100	2,260	2,450	3,810	5,690	5,880	3,140	1,700	2,750
12	1,750	1,530	2,340	2,200	2,390	2,380	3,910	5,790	6,210	2,720	1,300	2,630
13	1,490	1,310	2,430	2,100	2,350	2,770	3,970	5,610	6,670	2,270	1,400	2,350
14	1,240	892	2,250	2,100	2,310	3,060	3,990	5,410	6,990	2,160	1,200	2,240
15	1,190	994	2,320	2,100	2,680	3,130	3,990	5,470	7,180	2,270	1,000	2,320
16	1,390	1,400	1,990	2,100	2,820	3,180	3,990	5,710	7,310	2,200	1,050	2,170
17	1,110	1,280	1,520	2,300	2,960	3,270	4,010	5,860	7,340	2,100	1,100	2,100
18	320	1,140	1,500	2,500	2,930	3,270	4,060	6,040	7,200	1,900	940	2,070
19	140	1,300	2,140	3,500	2,960	3,240	4,060	6,250	6,970	1,500	1,050	2,060
20	104	1,100	1,830	4,340	3,140	3,090	4,440	6,230	6,710	1,550	1,150	2,070
21	111	1,020	1,550	4,500	3,180	2,860	4,870	5,910	6,550	1,500	800	2,340
22	246	629	1,590	4,530	3,190	2,750	4,980	5,650	6,460	1,350	880	2,070
23	463	169	1,510	4,410	3,030	2,750	4,970	5,290	6,250	2,200	700	2,190
24	1,230	521	2,340	4,340	2,770	2,760	4,970	4,900	6,000	1,500	900	2,260
25	1,160	748	2,030	3,890	2,630	2,840	4,620	4,770	5,820	1,110	1,200	2,330
26	1,440	978	2,000	3,490	2,620	3,090	4,390	4,730	5,680	1,700	1,210	2,230
27	1,590	1,110	1,700	3,380	2,470	3,400	4,910	4,710	5,440	1,900	1,150	2,340
28	793	1,490	1,500	3,410	2,350	3,480	5,470	4,960	5,300	1,500	1,060	2,180
29	1,140	1,530	1,500	3,220	-----	3,990	5,820	5,140	4,980	1,150	1,350	2,060
30	1,390	1,230	1,500	3,090	-----	4,030	6,050	5,220	4,600	1,100	1,750	2,240
31	1,300	-----	1,700	3,030	-----	4,060	-----	5,250	-----	1,500	1,950	-----
TOTAL	34,537	35,190	61,050	82,130	76,180	89,980	129,040	168,750	182,770	76,810	36,171	68,830
MEAN	1,114	1,173	1,969	2,682	2,721	2,903	4,301	5,446	6,092	2,478	1,167	2,294
MAX	2,310	1,900	2,480	4,530	3,190	4,060	6,050	6,250	7,340	4,630	1,950	2,750
MIN	104	169	1,500	1,100	2,260	1,620	3,520	4,600	4,600	1,100	678	2,000
AC-FT	68,500	69,800	121,100	164,900	151,100	178,500	256,000	334,700	362,500	152,400	71,750	136,500

CAL YR 1970 TOTAL 447,266 MEAN 1,225 MAX 2,960 MIN 72 AC-FT 887,200

WTR YR 1971 TOTAL 1,042,438 MEAN 2,856 MAX 7,340 MIN 104 AC-FT 2,068,000