

NINETEENTH ANNUAL REPORT

BEAR RIVER  
COMMISSION

1976



For the Report Year October 1, 1975 to

September 30, 1976

LOGAN, UTAH

April 1, 1977

# BEAR RIVER COMMISSION

22 EAST CENTER  
LOGAN, UTAH

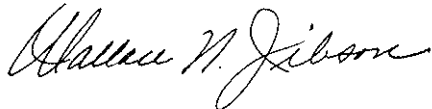
April 1, 1977

Mr. President:

Submitted herewith is the Nineteenth 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,



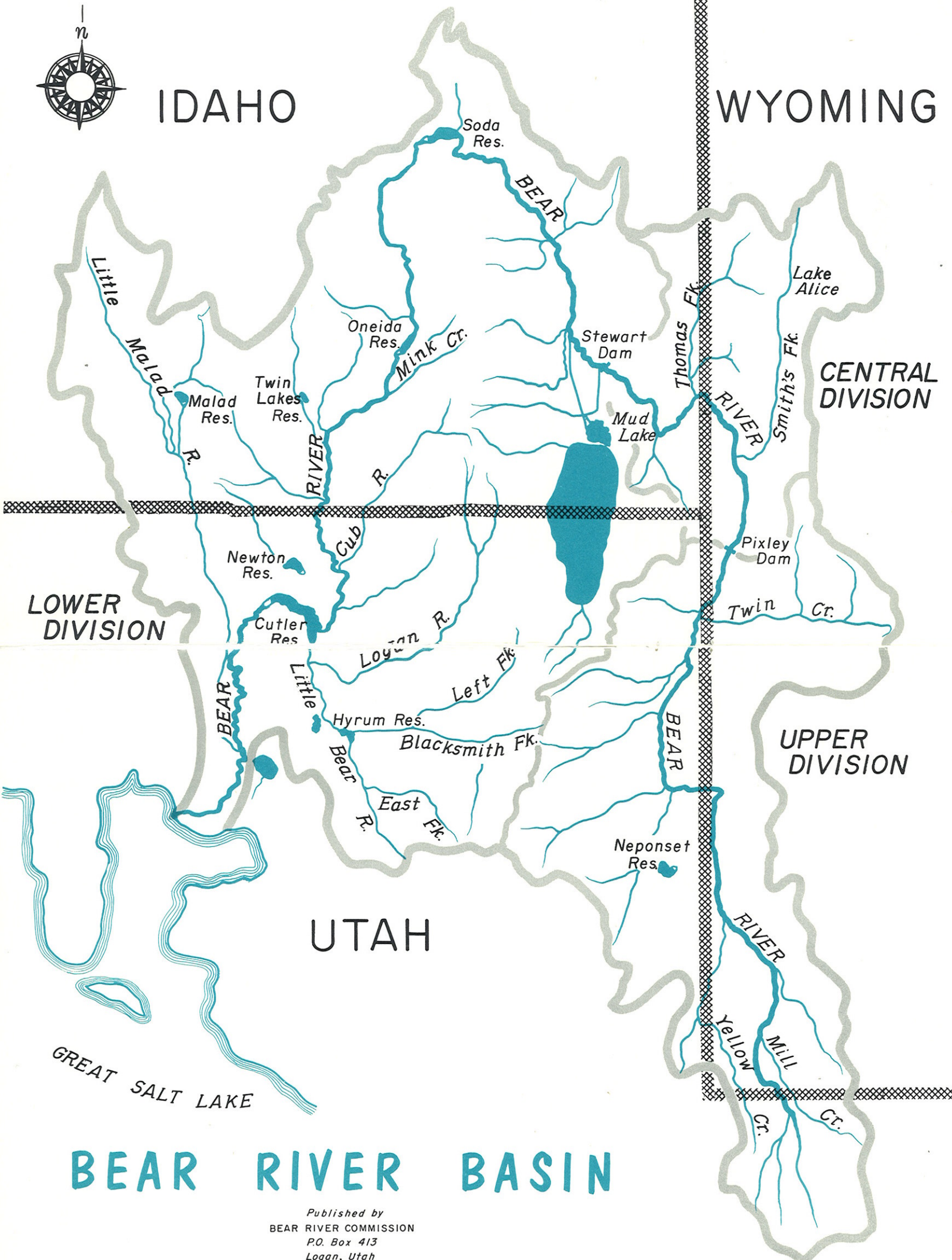
Wallace N. Jibson  
Chairman and  
Federal Representative

The President  
The White House  
Washington, D.C.



IDAHO

WYOMING



LOWER DIVISION

CENTRAL DIVISION

UPPER DIVISION

UTAH

GREAT SALT LAKE

# BEAR RIVER BASIN

Published by  
BEAR RIVER COMMISSION  
P.O. Box 413  
Logan, Utah

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# NINETEENTH ANNUAL REPORT

of the

## BEAR RIVER COMMISSION

April 1, 1977

### 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, 1977 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.

The resignation by E. O. Larson as Federal Representative was accepted by the President and made effective upon appointment of a successor. Mr. Larson has served the present Commission and the earlier negotiating commission for a total of 30 years. His faithful and dedicated service and his able leadership are appreciated by all who have been involved in negotiating and administering the Bear River Compact.

The President appointed Wallace N. Jibson to succeed Mr. Larson, effective September 9, 1976. Mr. Jibson served as Chairman of the Negotiating Commission's engineering committee and, since 1958, has served as Assistant Secretary to the Bear River Commission.

J. Daniel Roberts, Preston, was appointed to replace J. C. Hedin who resigned because of ill health. Mr. Hedin has served faithfully since 1971 as a commissioner from Idaho.

**OFFICERS**

Chairman .....Wallace N. Jibson, Logan, Utah\*  
Vice-Chairman.....S. Paul Holmgren, Bear River City, Utah  
Secretary-Treasurer .....Daniel F. Lawrence, Bountiful, Utah  
\*Succeeding E. O. Larson, Salt Lake City.

**MEMBERS**

**Idaho**

William G. Jenkins .....Malad, Idaho  
J. Daniel Roberts .....Preston, Idaho  
Clifford J. Skinner .....Dingle, 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**

George L. Christophulos .....Cheyenne, Wyoming  
S. Reed Dayton .....Cokeville, Wyoming  
J. W. Myers .....Evanston, Wyoming

**United States**

Wallace N. Jibson .....Logan, Utah

**Budget Committee**

J. W. Myers .....Evanston, Wyoming  
S. Paul Holmgren .....Bear River City, Utah  
William G. Jenkins .....Malad, Idaho

**Operations Committee**

S. Reed Dayton .....Cokeville, Wyoming  
J. Daniel Roberts .....Preston, 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 24, 1975.....Salt Lake City, Utah  
 Annual Meeting — April 19, 1976 .....Salt Lake City, Utah

## BUDGET AND FISCAL DISBURSEMENTS

### Adopted Budget

	Fiscal Year Ending 6-30-1976	Quarter Year Ending 9-30-1976	Fiscal Year Ending 9-30-1977
<b>Compact Administration</b>			
Personal Services .....	\$ 6,677	\$ 935	\$ 8,146
Travel and Subsistence .....	260	80	200
General Office Expense .....	225	95	259
Fiscal and Administrative .....	371	57	445
Washington Office Tech. Charge .....	742	113	890
Printing and Reproduction .....	725	0	720
Treasurer (Bond and Audit) .....	300	0	300
Transcribing Minutes .....	100	0	140
Legal Retainer Fee .....	300	0	300
Sub-Total .....	\$ 9,700	\$ 1,280	\$11,400
<b>Stream-Gaging Program</b>			
U.S. Geological Survey .....	\$72,000*	\$21,000*	\$76,800*
Total .....	\$81,700*	\$22,280*	\$88,200*

\*As revised.

### Allocation of Budget

U.S. Geological Survey .....	\$36,000	\$10,500	\$38,400
State of Idaho .....	15,233	3,927	16,600
State of Utah .....	15,233	3,926	16,600
State of Wyoming .....	15,234	3,927	16,600
Total .....	\$81,700	\$22,280	\$88,200

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

The Commission, by resolution adopted November 24, 1975, amended the bylaws to change the fiscal year to a period beginning October 1 of each year and ending September 30 of the next succeeding year; with a beginning date of October 1, 1976.

The audit of accounts and records, including a statement of budget revenue and disbursements for the 15-month period ended September 30, 1976, is included in this report as Appendix A.

## STREAM-GAGING PROGRAM

A cooperative, basin-wide program of stream gaging is administered by the Geological Survey subdistrict chief 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.

The existing stream-gaging program remained unchanged during the 1976 water year.

## 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 subdistrict chief at Logan where the subdistrict office is also the principal office of the Commission.

The subdistrict chief has been serving as Assistant Secretary to the Commission with responsibility of providing technical assistance and current streamflow information as required in administration of the Compact. He establishes operational procedures, conducts hydrologic studies, compiles annual reports, and maintains the records of the Commission. A re-evaluation of this position and incumbent duties should be considered by 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 all annual reports. Records for the Upper Division, beginning in 1971, are now being published. (See frontispiece map for division boundaries and tables 1-10 for the daily records.)

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

May-July runoff from the upper Bear River basin was a disappointing 70 percent of the 1943-76 average and far short of the May 1 forecast of 109 percent. Downstream water supply improved, and Smiths Fork contributed 53 percent more runoff than that from the upper basin as did Logan River in the lower basin.

The bar charts on the opposite page (figure 1) illustrate a comparison of monthly and yearly streamflow in 1976 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 discharge at these stations is summarized in acre-feet in the following table:

### *Discharge in Acre-feet — May - September*

	Average 1943-76	1975	1976
Upper Bear River .....	116,500	153,100	81,800
Smiths Fork .....	111,200	130,400	124,900
Logan River .....	125,200	165,800	124,700

### *Water Year*

	Average 1943-76	1975	1976
Upper Bear River .....	139,300	171,400	104,000
Smiths Fork .....	144,300	158,100	160,300
Logan River .....	186,300	219,600	192,400

Diversion from Bear River to Bear Lake (for storage or bypass) was 372,600 acre-feet in 1976 or 46 percent above the 53-year average. Outflow, including bypassed water, was 459,800 acre-feet with a net loss in lake content of 48,400 acre-feet.

The bar charts in figure 4, page 16, illustrate the hydrology of Bear Lake in 1976 compared to the 1924-76 average inflow, outflow, and gain. Gain from tributaries, as shown, represents the effect of peripheral tributary and ground-water inflow exclusive of Bear River water. Thus, under natural conditions without Bear River, the Lake in 1976 would have gained 38,800 acre-feet over its evaporation and other losses compared to an average gain of 12,500 acre-feet. Water-year hydrographs of 1975 and 1976 surface elevations are shown in figure 5, page 17.

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

Water Year	Beginning of Water Year	End of Storage Period	End of Water Year
1975 .....	5,919.16	5,922.64	5,920.74
1976 .....	5,920.71	5,921.97	5,920.06

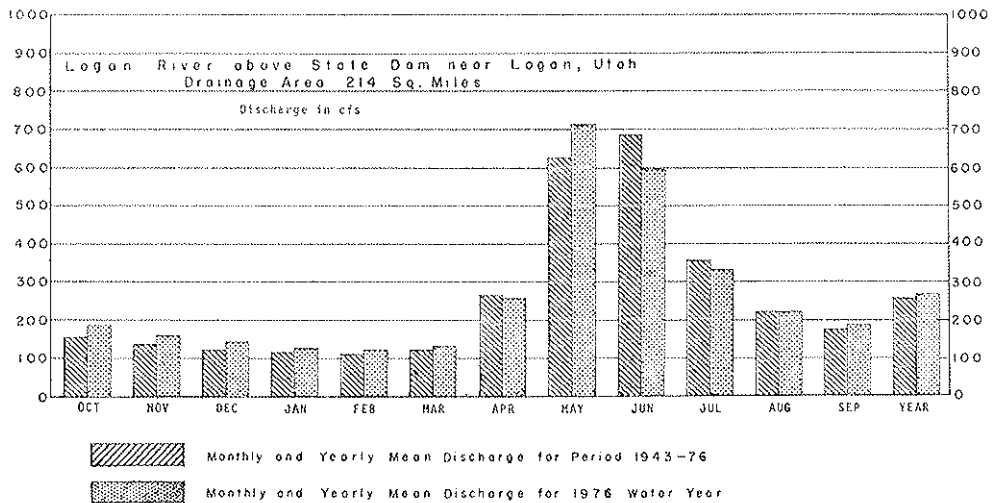
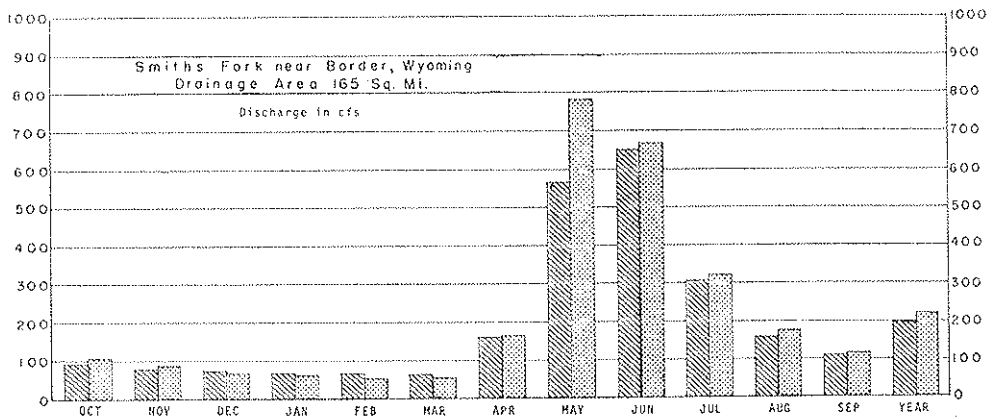
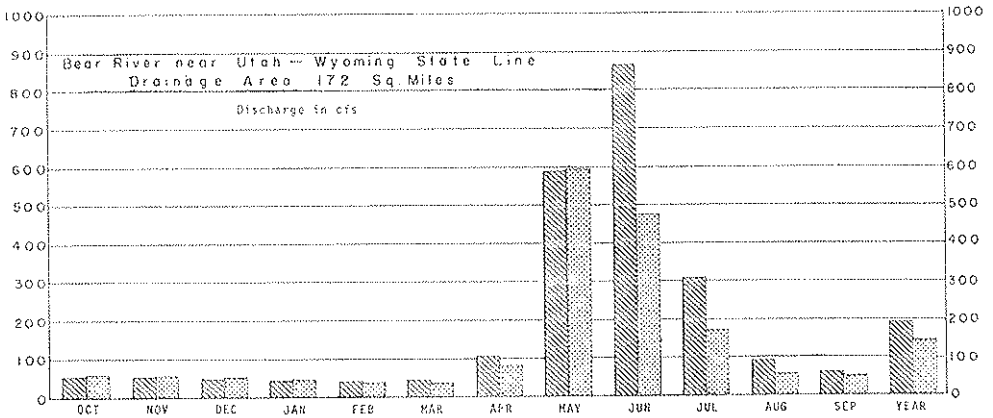
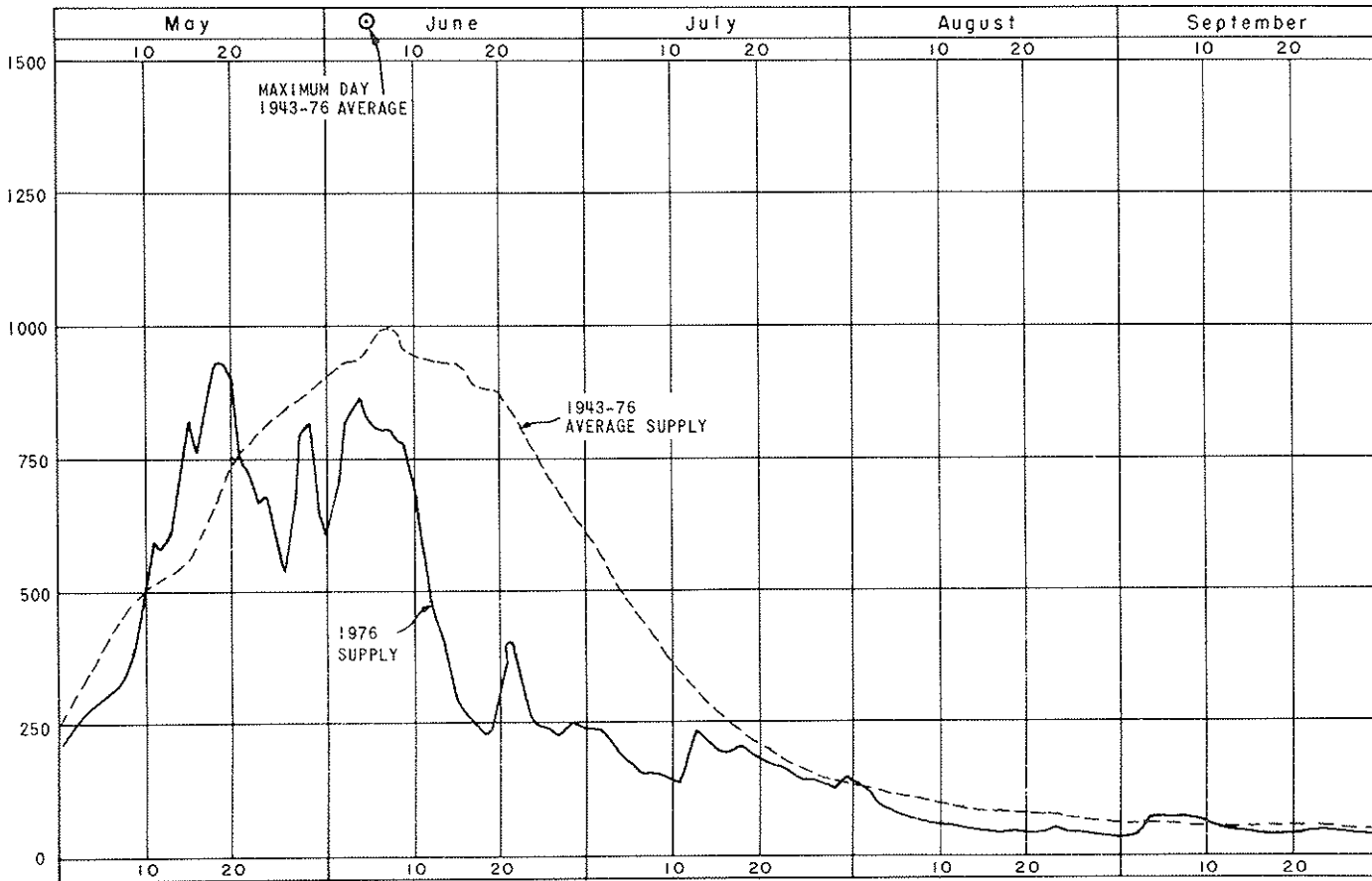


Figure 1. Comparison of discharge of three representative gaging stations in 1976 with average discharge for period 1943-76

# UPPER DIVISION - BEAR RIVER SUPPLY \*

CUBIC FEET PER SECOND



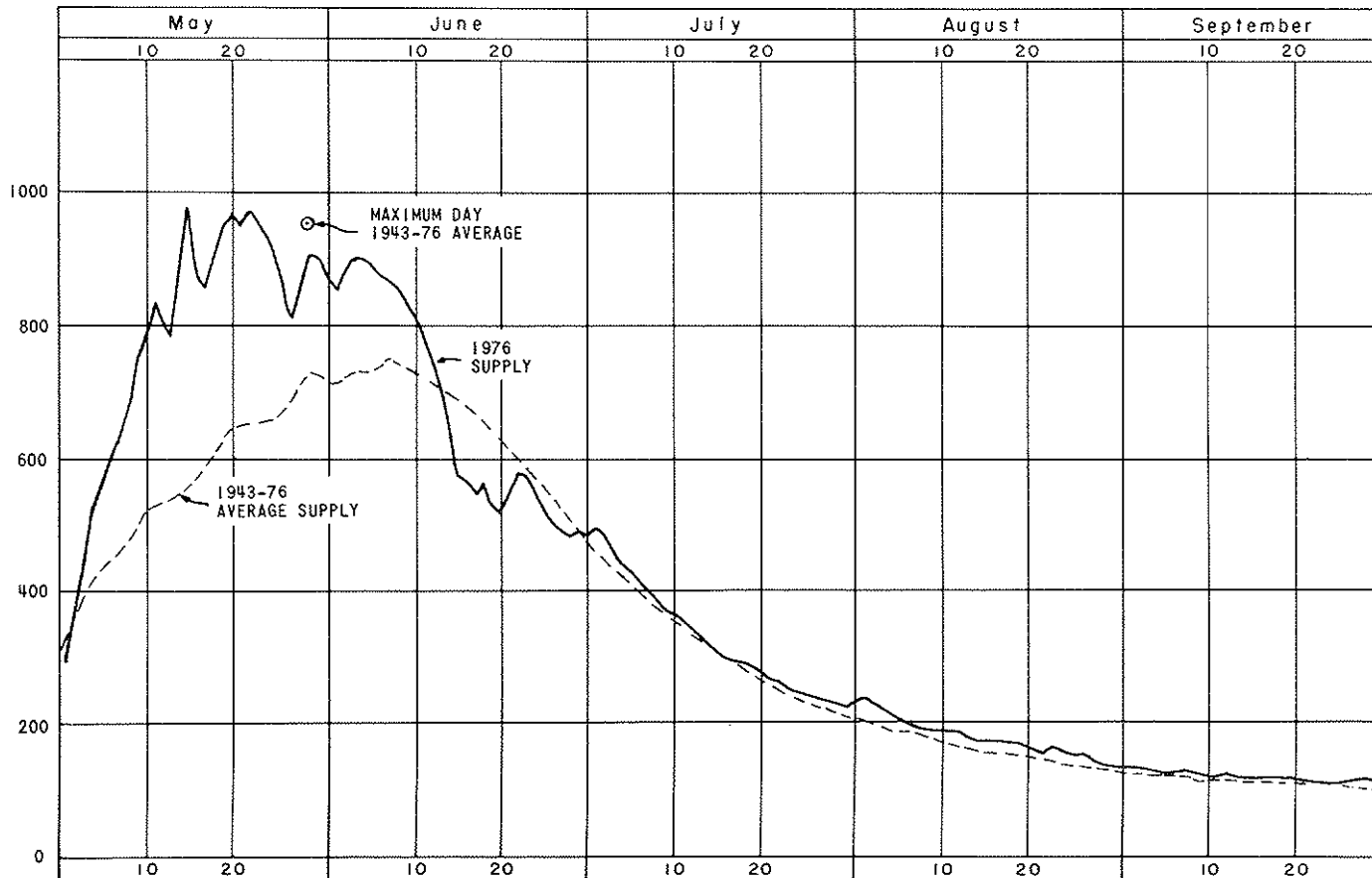
\*Bear River near Utah-Wyoming State line

Figure 2

14

# CENTRAL DIVISION - SMITHS FORK SUPPLY \*

CUBIC FEET PER SECOND



\*Smiths Fork near Border, Wyoming

Figure 3

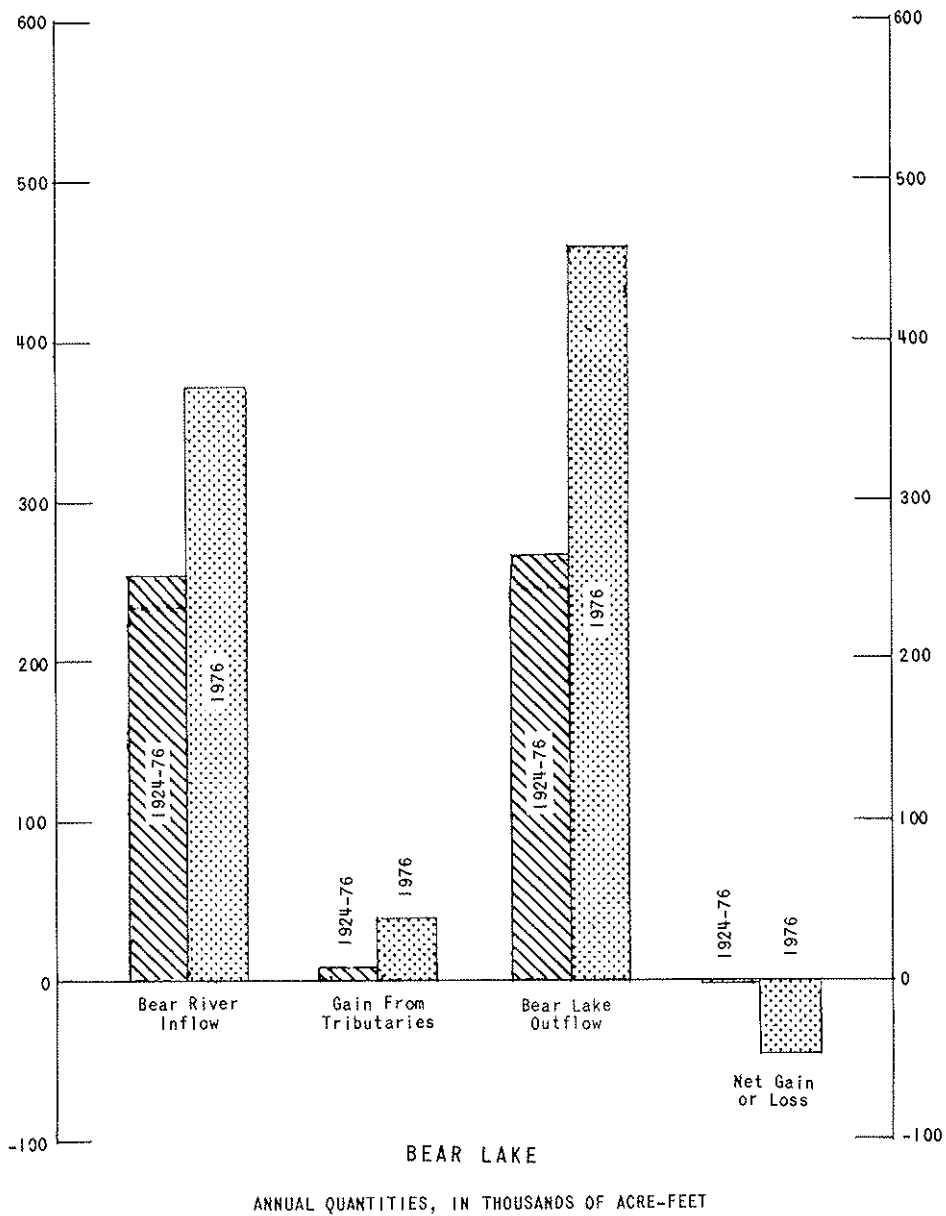


Figure 4

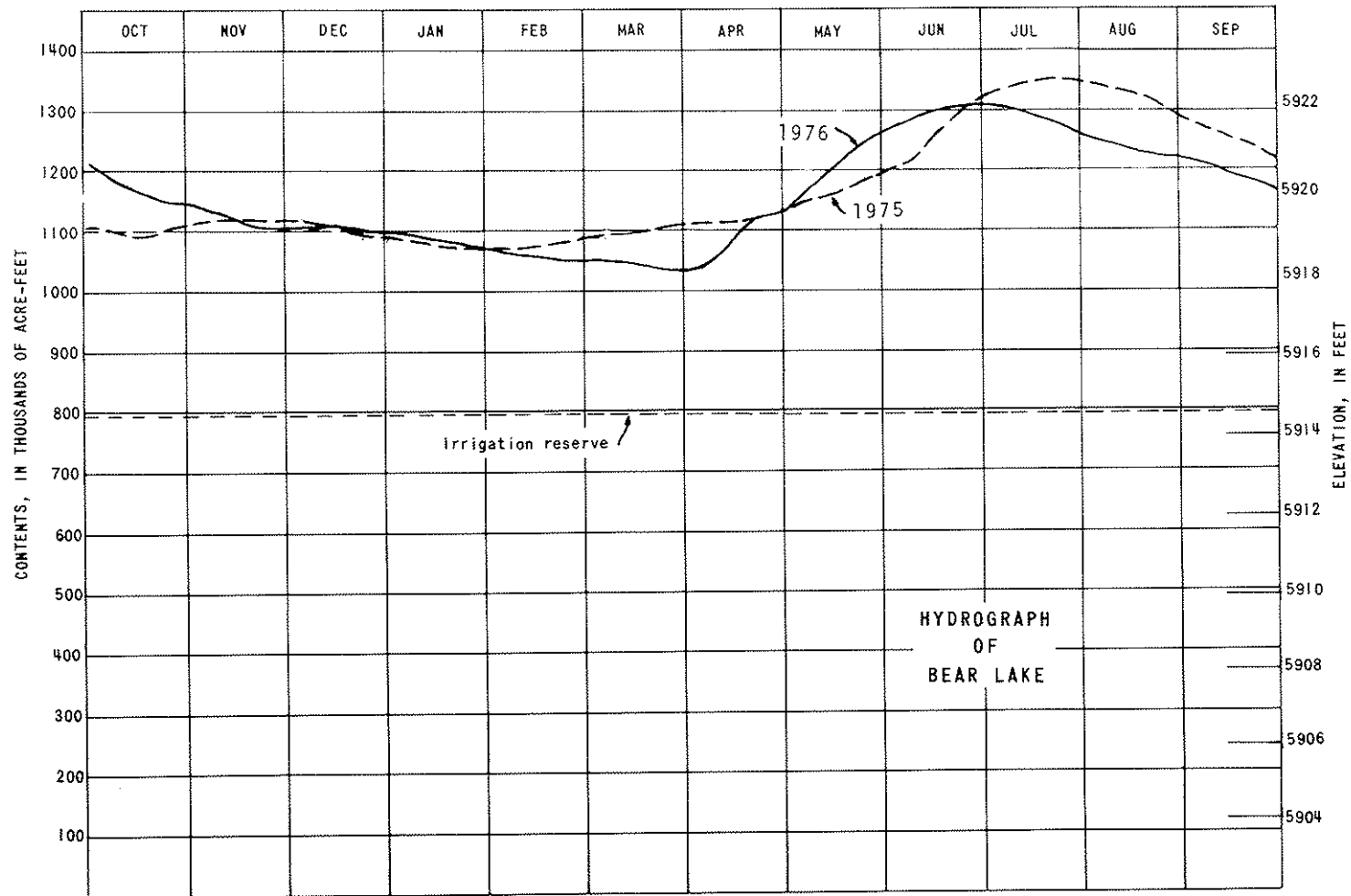


Figure 5

## 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 are 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.

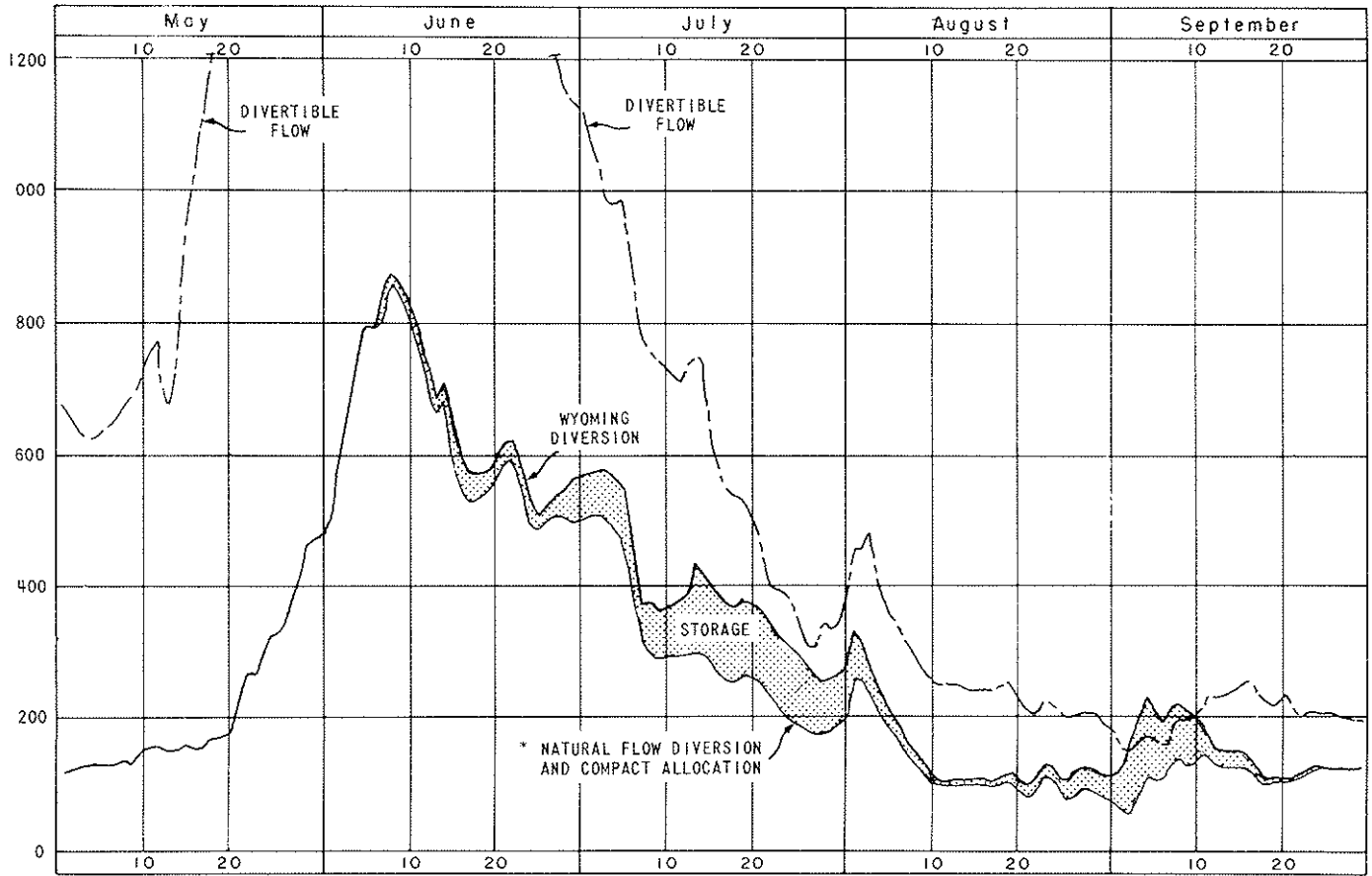
Diversion tabulations for the Upper Division, shown on pages 28-32, indicate that divertible natural flow was below 1,250 cfs prior to May 19 and subsequent to June 25 through the balance of the season. Diversions were minimal during most of the first period, and in the second period Upper Wyoming Section diverted less than its basic allocation of 49.3 percent until mid-July. Other sections in the division had virtually ceased diverting prior to mid-July, so by Article IV, most of the divertible flow would then be allocated to Upper Wyoming Section. Hydrographs in figures 6-8 (pages 19-21) show water diverted from natural flow and storage in the three principal sections in this division.

Diversion included about 21,000 acre-feet storage from Woodruff Narrows Reservoir (figure 9), 5,500 acre-feet from Sulphur Creek Reservoir, and 3,300 acre-feet from Whitney Reservoir.

# UPPER DIVISION - UPPER WYOMING SECTION

## CUBIC FEET PER SECOND

19



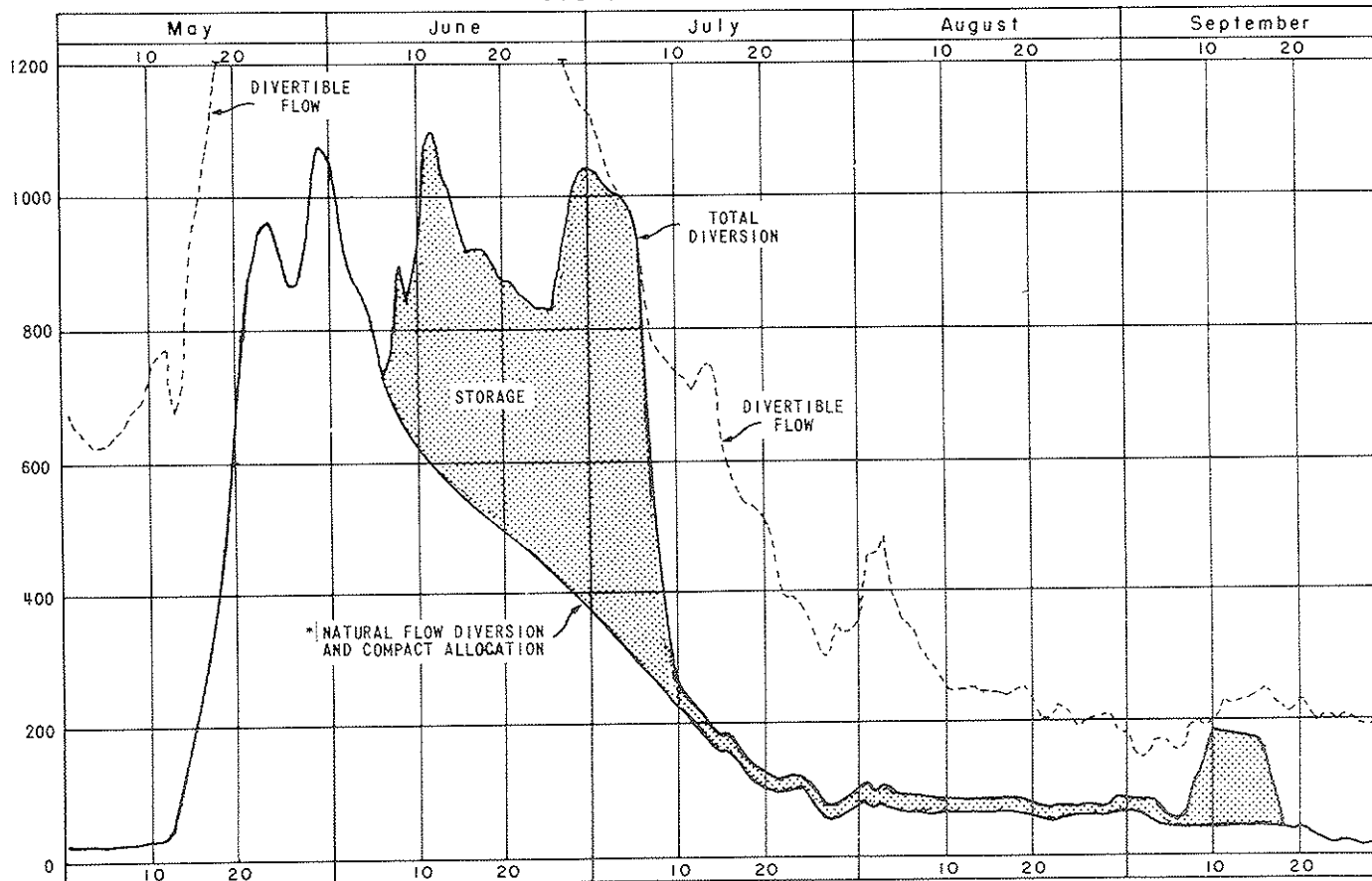
\*See footnote, Tables 1-5

Figure 6



# UPPER DIVISION - LOWER UTAH SECTION

## CUBIC FEET PER SECOND



\*See footnote, Tables 1-5

Figure 7

# UPPER DIVISION - LOWER WYOMING SECTION

CUBIC FEET PER SECOND

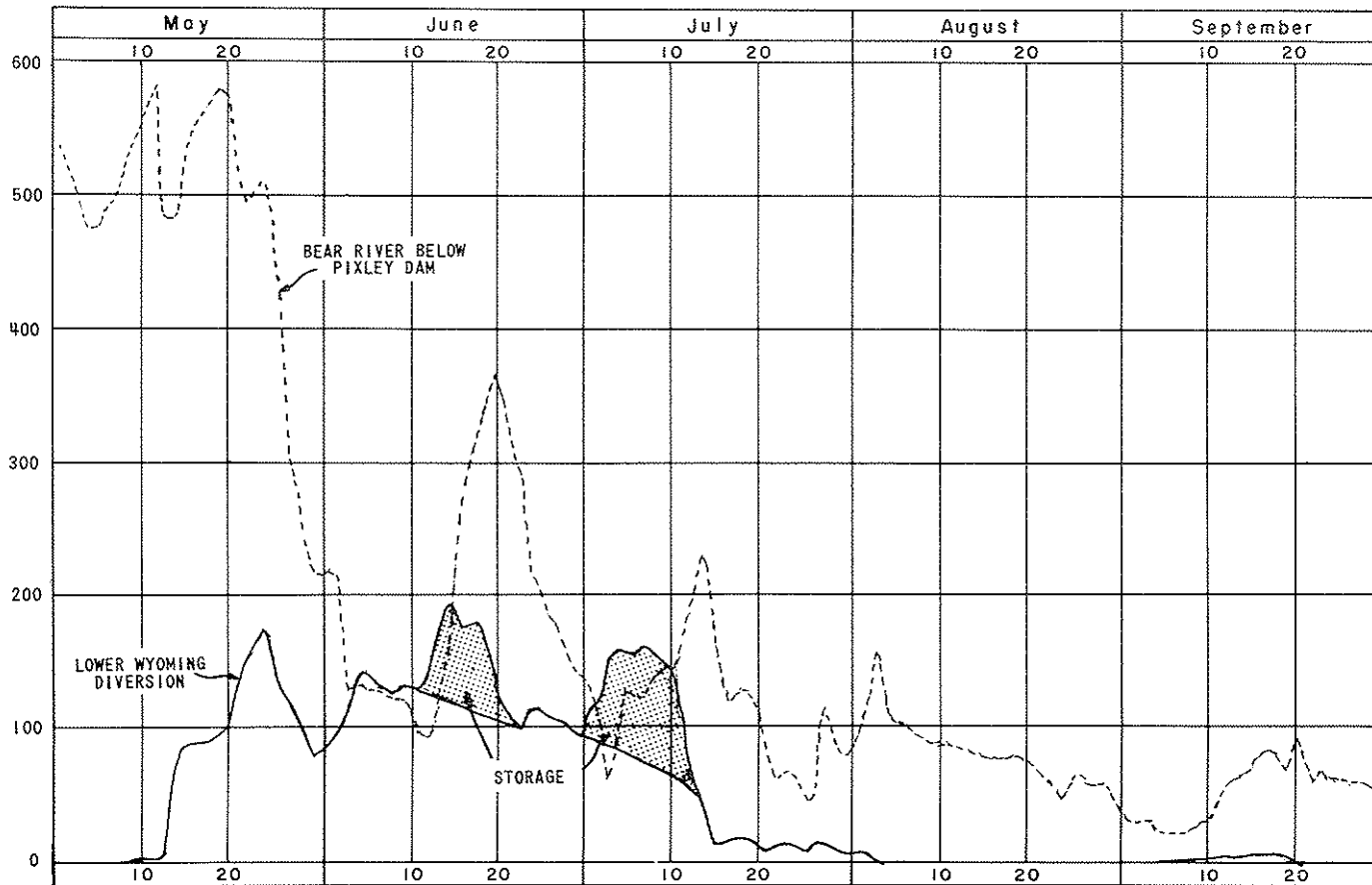


Figure 8

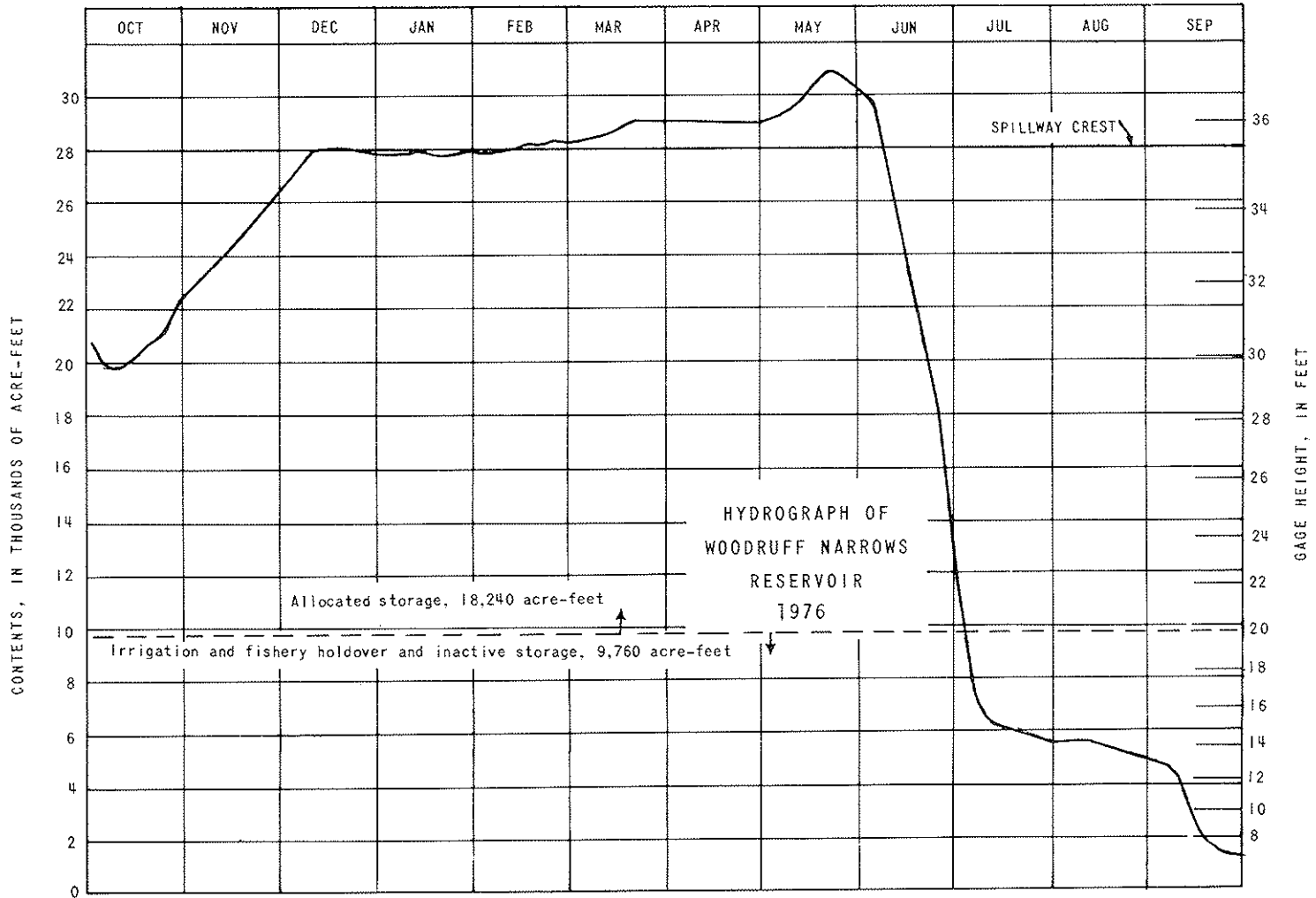


Figure 9

## 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 two sections in the Central Division in figures 10 and 11 (pages 26 and 27), and corresponding data showing individual canals are included in tables 6 to 10 (pages 33-37). A water emergency, as defined above, became effective July 22 when divertible flow dropped below 870 cfs and on the same day, the flow entering Idaho dropped below 350 cfs. Wyoming diversion was less than compact allocation for the balance of the season except August 1-13 when the allocation was exceeded by about 4 percent. (See figure 10.)

The usual diversion pattern is shown in figure 11 for Idaho where the Idaho diversion, as plotted, does not include Rainbow Inlet Canal and accordingly is far less than the compact allocation.

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	1972	1973	1974	1975	1976
Wy.	2.16	5.82	5.06	4.48	4.96	3.32	4.78	4.02	4.24	4.25	4.39	4.74	4.24	5.68	4.39	4.12
Id.	1.72	3.26	3.28	2.91	2.87	2.95	3.05	3.39	3.48	3.50	3.33	3.35	3.09	3.81	3.43	3.32

## 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 1976.

## 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 1976.

## 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 but Whitney were filled to capacity in 1976. 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 1976, so the irrigation reserve elevation remained at 5,914.61 feet with active storage content in the reserve of 794,900 acre-feet. (See figure 5.) This reserve corresponds to 30,000 acre-feet of additional storage allocation.

Bear Lake reached an annual maximum elevation of 5,921.97 feet (usable content, 1,302,900 acre-feet) on June 28. Subsequent irrigation demand was only about 134,000 acre-feet, considerably less than usual and about the same as last year.

## 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."

Presented in the 1975 Annual Report was a cumulative summary of approved and adjudicated water rights having 1958 and later priorities. The Commission agreed in April 1976 to update this summary at two-year intervals starting with a cutoff date of December 31, 1977 to be reported in April 1978. Applications presented during the report year are summarized as follows:

Approved for adjudication	Wyoming	Utah	Idaho
Surface Water .....	1.4 cfs	19.7 cfs	6.6 cfs
Ground Water .....	8.3 cfs	5.5 cfs	47.1 cfs
 Pending			
Surface water .....	0.4 cfs	119.3 cfs	10.4 cfs
Ground Water .....	0	65.3 cfs	3.5 cfs
 Storage			
Pending .....	(1) 25,200 af	0	0

(1) Woodruff Narrows Enlargement

## 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. Negotiations toward amending the present compact continued during the report year. Proposed amendments were presented to the Commission, followed by public hearings and further negotiations which will be discussed in more detail in the 1977 Annual Report. The proposed amendments have not been approved by the Commission but will be studied further in an effort to reach agreement among the States on further apportionment with recognition of present rights to the use of Bear River water.

# CENTRAL DIVISION - WYOMING SECTION

CUBIC FEET PER SECOND

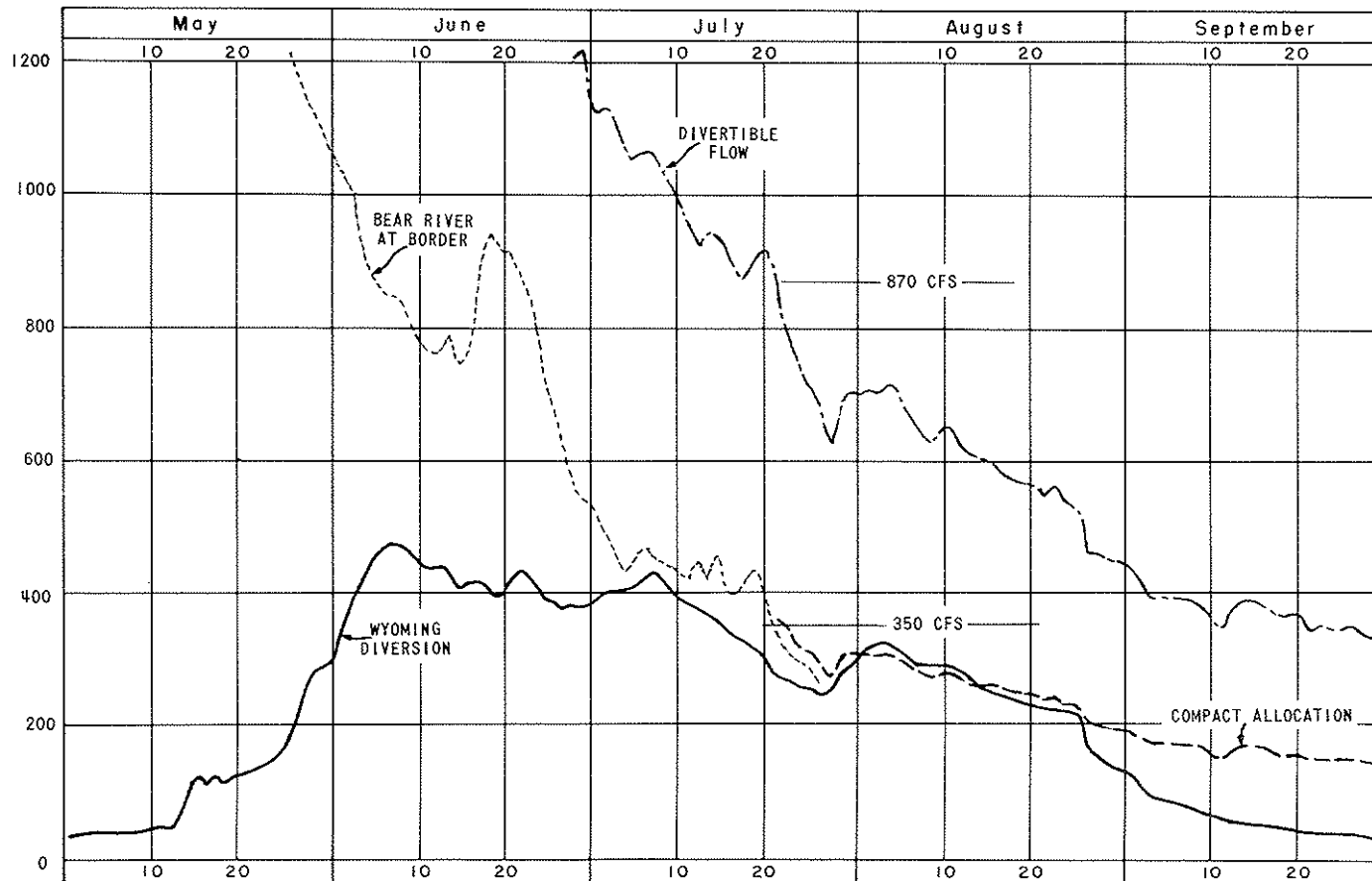


Figure 10

# CENTRAL DIVISION - IDAHO SECTION

CUBIC FEET PER SECOND

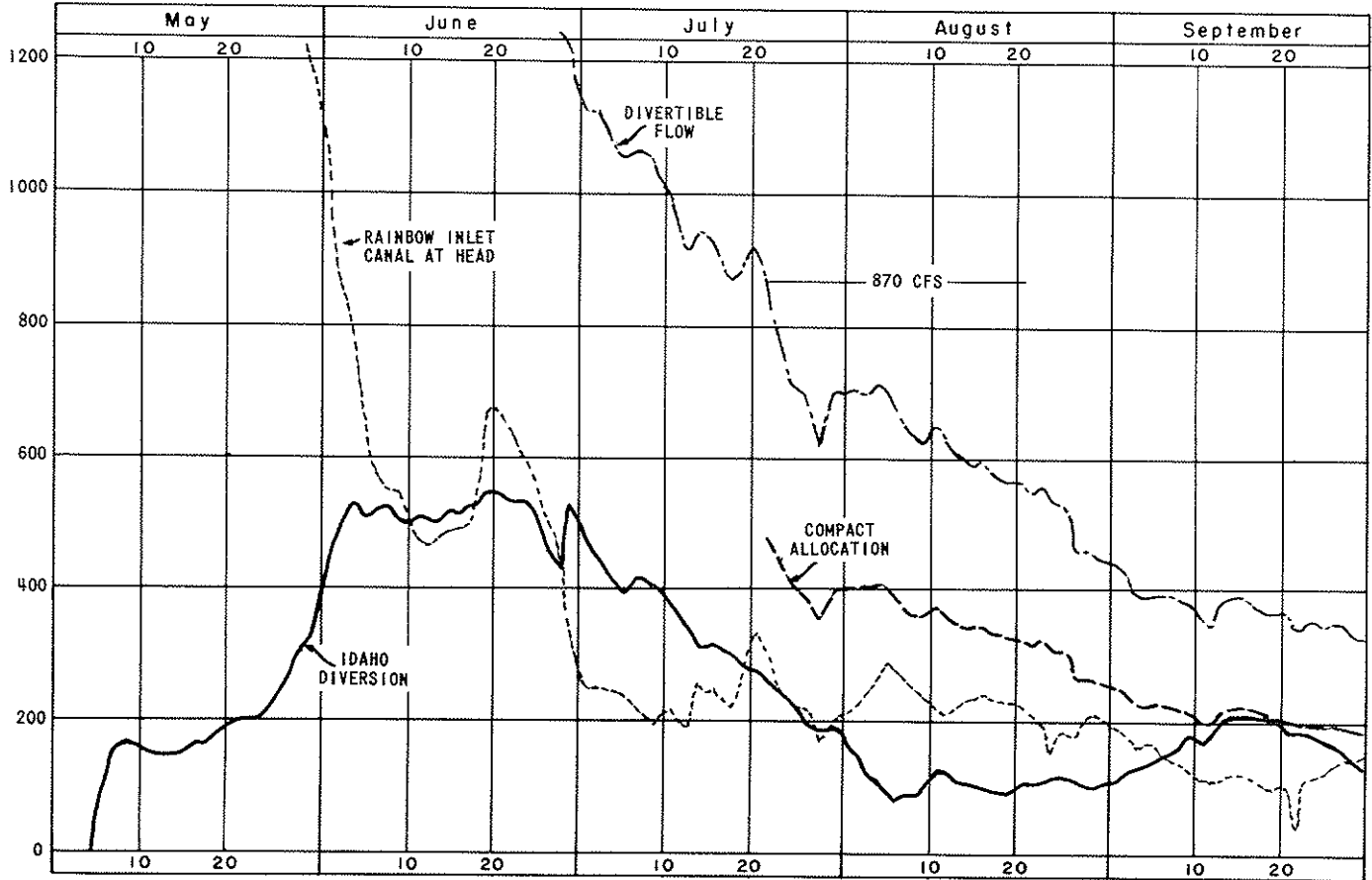


Figure 11











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

SEPTEMBER 1976	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 DIVISION																																			
Havaska (East Fork)	3	3	2	2	2																													58	
Compact Allocation																																			
UPPER WYOMING																																			
Hilliard East Fork	1	1	2	3	5	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	59	
Lennon	5	4	11	14	14	14	17	18	18	18	17	17	18	19	19	22	20	19	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	613	
Hilliard West Side	10	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	7	7	7	7	7	7	135	
Beor	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	25	
Tropic	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	25	
Winnelson	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	3	3	89	
Pine Grove & Crown	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	2	2	2	2	89	
McGraw & Big Bend	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	3	3	89	
Bomer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	75	
Lowell & Blanchard	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	84	
Myers 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	3	3	84	
Harc	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31	
Goldman 1 & 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	3	3	74	
Kadder	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	74	
Myers 1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	118	
Myers Irrigation	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	128	
Spots	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	69	
Anel	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	30	
Dachmann	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	209	
Evansdale Water Supply	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	29	
Knight 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	2	2	2	2	2	2	2	2	35	
State Hospital	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	35	
Evansdale 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	0	50	
Sarson	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	
Faulmer	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	117	
Socky Ste-Blyth	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	159	
Bennett Ditch	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	159	
Bruce-Barton	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	159	
R.H. 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	159	
Junction	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	35	
Fearne Ditch	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	30	
Saxton Turner	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	37	
Saxton 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	32	
John Sims, So. Baritic	6	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	11	11	72	
Ransley	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21	
Almy	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	37	
Sims-Blight-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	11	
Bowen-Russell	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	11	
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	0
Thompson Canal at Hd	14	27	35	46	24	27	34	35	33	33	23	23	25	25	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	496	
Barlett-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
Bowen and Bruce	0	0	0	0	0	0	0	0	0	0	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
Jurnal	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Foxley	0	0	0	0	0	0	0	0	0	0	0	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
Blight-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	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Bear River	115	147	200	231	268	192	215	219	204	201	173	151	140	146	166	151	115	102	150	110	107	115	117	127	125	123	122	122	122	122	122	122	122	122	368
Total Lower Wyoming	115	147	200	231	268	192	215	219	204	201	173	151	140	146	166	151	115	102	150	110	107	115	117	127	125	123	122	122	122	122	122	122	122	122	3





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

JULY	1974																															
	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>																																
<b>BEAR RIVER CANALS</b>																																
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	
Nights	13	13	13	13	11	12	10	10	12	14	15	16	17	17	17	17	16	16	16	16	16	16	16	16	16	16	16	16	16	16	16	
Myraa 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	
Myraa West	15	15	14	14	10	15	15	15	15	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
Spicer	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Rosy 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	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	
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	
<b>TRIBUTARY CANALS</b>																																
Goodsill Co - Pine Cr	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	
Vic Canal - Pine Cr	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	
Lalbert 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	
Grado Creek Canal	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	
Bismark IIP #1 - 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	
Harperly West - Brunner	0	0	0	0	0	0	0	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	
<b>SMITHS FORK CANALS</b>																																
Quinn-Bourne	13	13	12	12	11	11	10	10	10	9	9	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	
Button Flat	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	
Progress	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	27	
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	99	100	99	98	100	100	100	100	100	98	96	94	92	91	88	86	84	82	80	78	76	74	72	70	68	66	64	62	60	58	56	
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 - Brunner 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	
Quinn, Quinn, 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 & Gortick	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Whites Water	42	42	39	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	38	
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	
Ferguson (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	
Cassville 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	
Tanner 1 (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	
South Br 2 - Smiths Fk	0	0	0	0	0	0	0	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 Fk	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Ign 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>	<b>393</b>	<b>407</b>	<b>401</b>	<b>404</b>	<b>403</b>	<b>416</b>	<b>428</b>	<b>433</b>	<b>412</b>	<b>392</b>	<b>366</b>	<b>376</b>	<b>373</b>	<b>379</b>	<b>363</b>	<b>353</b>	<b>341</b>	<b>332</b>	<b>331</b>	<b>313</b>	<b>313</b>	<b>289</b>	<b>271</b>	<b>271</b>	<b>258</b>	<b>253</b>	<b>256</b>	<b>248</b>	<b>248</b>	<b>279</b>	<b>262</b>	<b>291</b>
<b>IDAHO DIVERSIONS</b>																																
Miller Ditch	10	10	9	7	7	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	
Butler Canal	21	21	20	19	19	19	19	18	17	16	15	15	15	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	
Sorensen Ditch	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	11	11	
Jordan 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	
Single Irrig. Canal	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	
Reed Creek at 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 Otter Canal	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	
Wasson-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	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	
West Fork 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	
Dugrine 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 IDAHO DIVERSIONS</b>	<b>456</b>	<b>451</b>	<b>441</b>	<b>411</b>	<b>400</b>	<b>398</b>	<b>378</b>	<b>412</b>	<b>409</b>	<b>392</b>	<b>379</b>	<b>355</b>	<b>342</b>	<b>309</b>	<b>320</b>	<b>326</b>	<b>305</b>	<b>301</b>	<b>292</b>	<b>277</b>	<b>280</b>	<b>262</b>	<b>253</b>	<b>239</b>	<b>222</b>	<b>218</b>	<b>191</b>	<b>190</b>	<b>126</b>	<b>209</b>	<b>221</b>	
<b>TOTAL</b>	<b>849</b>	<b>858</b>	<b>842</b>	<b>815</b>	<b>803</b>	<b>814</b>	<b>806</b>	<b>845</b>	<b>801</b>	<b>784</b>	<b>745</b>	<b>731</b>	<b>724</b>	<b>682</b>	<b>683</b>	<b>659</b>	<b>646</b>	<b>633</b>	<b>623</b>	<b>590</b>	<b>593</b>	<b>551</b>	<b>533</b>	<b>517</b>	<b>500</b>	<b>476</b>	<b>469</b>	<b>468</b>	<b>477</b>	<b>480</b>	<b>500</b>	
<b>Wyoming Divert</b>																																





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

SEPTEMBER 1976	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>																																	
<b>BEAR RIVER CANALS</b>																																	
Gerrett	0	0	0	0	0	0	0	0	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	0	
Wynan 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	0	
Waynes	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Sandy 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	
Cook	0	0	0	0	0	0	0	0	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.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	0	
<b>TRIBUTARY CANALS</b>																																	
Gandell Co. - Pine 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	
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	11	11	
Gallitt Canal - Pine 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	2	
Gracie 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 Exp. Ft. 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	
Hagererty 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. J. 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	
<b>SMITHS FORK CANALS</b>																																	
Quinn-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	
Rutton Flat	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	7	7	7	7	7	7	
Progress	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Soilco	0	0	0	0	0	0	0	0	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	
Wheeler	0	0	0	0	0	0	0	0	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	0	
Covey Canal - Bruner Cr.	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	
Covey Canal - Springs 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	2	
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	0	
Whites Meter	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	14	14	
John Bourne - Collett Cr.	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	
Ferguson 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	
Stanzel - Nichols, 100 Br.	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	13	13	13	13	
Bergan (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	3	
Coveville 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	0	
Tanner 1 - South Br.	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	10	
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 Fk	0	0	0	0	0	0	0	0	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 Fk	0	0	0	0	0	0	0	0	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>	<b>131</b>	<b>107</b>	<b>88</b>	<b>97</b>	<b>85</b>	<b>84</b>	<b>82</b>	<b>81</b>	<b>71</b>	<b>66</b>	<b>65</b>	<b>54</b>	<b>52</b>	<b>51</b>	<b>51</b>	<b>50</b>	<b>50</b>	<b>48</b>	<b>49</b>	<b>42</b>	<b>38</b>	<b>36</b>	<b>36</b>	<b>37</b>	<b>37</b>	<b>37</b>	<b>37</b>	<b>36</b>	<b>36</b>	<b>36</b>	<b>1761</b>		
<b>IDAHO DIVERSIONS</b>																																	
Miller Ditch	3	4	4	4	4	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	5	7	7	7	7	7	7	7	7	7	7	93	
Waffor Canal	13	13	13	13	13	14	14	14	14	14	14	14	14	14	15	16	16	16	16	16	16	16	16	16	15	16	15	16	15	16	15	177	
Sorenson Ditch	0	0	0	0	0	6	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	126	
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	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	0	
Grange Irrig. Canal	32	31	30	34	38	38	36	38	38	26	23	21	21	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	41	1108	
Head Creekett Canal	0	18	27	27	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	28	538	
Black Otter Canal	291	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	292	
Deacon Montpelier Ca.	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	18	533	
LaRocca West 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	1124	
West Fork Canal	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	14	87	
Pushino Ditch	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	82	
<b>TOTAL IDAHO DIVERSIONS</b>	<b>132</b>	<b>128</b>	<b>136</b>	<b>137</b>	<b>141</b>	<b>149</b>	<b>155</b>	<b>159</b>	<b>182</b>	<b>180</b>	<b>166</b>	<b>178</b>	<b>210</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>214</b>	<b>5122</b>		
<b>RAINWATER</b>																																	
Beaver Jet - Bear R.	191	181	159	164	164	154</																											

## APPENDIX A

### MORRISON, RINDLISBAKER & GILCHRIST

CERTIFIED PUBLIC ACCOUNTANTS

370 EAST 500 SOUTH SALT LAKE CITY, UTAH 84111

801 521-7800

Bear River Commission  
Room 435, Utah State Capitol  
Salt Lake City, Utah 84114

We have examined the statement of revenue and expenditures of the Bear River Commission for the fifteen months ended September 30, 1976. Our examination was made in accordance with generally accepted auditing standards, and accordingly included tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances. The statement for the fiscal year ended June 30, 1975 was examined by other auditors.

The Commission amended its by-laws to change its fiscal year end from June 30, to September 30 to conform with the federal fiscal year schedule. (See Note-2 to the financial statements.)

In our opinion the accompanying statement of revenue and expenditures present fairly the results of operations of the Bear River Commission for the fifteen months ended September 30, 1976, in conformity with generally accepted accounting principles applied on a basis consistent with the prior twelve months.

November 16, 1976  
Salt Lake City, Utah

*Morrison Rindlisbaker & Gilchrist*

BEAR RIVER COMMISSION

STATEMENTS OF REVENUE AND EXPENDITURES (Note-2)

	Twelve Months Ended <u>June 30, 1975</u>	Fifteen Months Ended <u>September 30, 1976</u>
<b>REVENUE</b>		
Assessments		
State of Idaho	\$ 14,000	\$ 34,000
State of Utah	14,000	34,000
State of Wyoming	<u>14,000</u>	<u>34,000</u>
Total	42,000	102,000
Interest income	<u>2,994</u>	<u>3,751</u>
Total revenue	<u>44,994</u>	<u>105,751</u>
<b>EXPENDITURES</b>		
Commission's portion of direct expenses of the stream gaging program (Note-1)		
Personal services	34,098	38,778
Travel and subsistence	2,253	4,067
General office	3,936	5,605
Fiscal and administration	2,121	2,520
Washington office charges	<u>4,242</u>	<u>5,040</u>
Total	<u>46,650</u>	<u>56,010</u>
Administrative expenses		
Legal fee	300	300
Auditing fee	250	275
Transcription of minutes	100	100
Annual report	628	722
Surety bond	50	50
Other	<u>20</u>	<u>26</u>
Total	<u>1,348</u>	<u>1,473</u>
Total expenditures	<u>47,998</u>	<u>57,483</u>
EXCESS (DEFICIT) OF REVENUE OVER EXPENDITURES	(3,004)	48,268
Funds available at the beginning of the period	<u>12,336</u>	<u>9,332</u>
Funds available at the end of the period	<u>\$ 9,332</u>	<u>\$ 57,600</u>
<b>FUNDS CONSIST OF</b>		
Cash in bank	\$ 332	\$ 45,600
Savings subject to withdrawal	<u>9,000</u>	<u>12,000</u>
	<u>\$ 9,332</u>	<u>\$ 57,600</u>

See the accompanying notes to the financial statements.

MORRISON, RINDLISBAKER & GILCHRIST

BEAR RIVER COMMISSION

COMPARISON OF BUDGETED REVENUE AND EXPENSES TO ACTUAL (Note-2)

FOR THE FIFTEEN MONTHS ENDED SEPTEMBER 30, 1976

	Expected Revenue and Expenditures As Budgeted (Unaudited)	Actual Revenue and Expenditures	Increase (Decrease)
<b>REVENUE</b>			
Assessments			
State of Idaho	\$ 34,000	\$ 34,000	\$ -0-
State of Utah	34,000	34,000	-0-
State of Wyoming	<u>34,000</u>	<u>34,000</u>	<u>-0-</u>
Total	102,000	102,000	-0-
Interest income	<u>-0-</u>	<u>3,751</u>	<u>3,751</u>
Total revenue	<u>102,000</u>	<u>105,751</u>	<u>3,751</u>
<b>EXPENDITURES</b>			
Commission's portion of direct expense of the stream gaging program (Note-1)			
Personal service	38,778	38,778	-0-
Travel and subsistence	4,067	4,067	-0-
General office	5,650	5,605	(45)
Fiscal and administration	2,520	2,520	-0-
Washington office charge	<u>5,040</u>	<u>5,040</u>	<u>-0-</u>
Total	<u>56,055</u>	<u>56,010</u>	<u>(45)</u>
Administrative expenses			
Legal fee	300	300	-0-
Auditing fee	250	275	25
Transcription of minutes	100	100	-0-
Annual reports	725	722	(3)
Surety bond	50	50	-0-
Other	<u>-0-</u>	<u>26</u>	<u>26</u>
Total	<u>1,425</u>	<u>1,473</u>	<u>48</u>
Total expenditures	<u>57,480</u>	<u>57,483</u>	<u>3</u>
<b>EXCESS (DEFICIT) OF REVENUE OVER EXPENDITURES</b>	<u>\$ 44,520</u>	<u>\$ 48,268</u>	<u>\$ 3,748</u>

See the accompanying notes to the financial statements.

## 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 1976 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

### 104. East Fork Bear River near Evanston, Wyo.

LOCATION.--Lat 40°52'25", long 110°47'00", in SE¼SW¼ sec.26, T.2 N., R.10 E., Summit County, Utah, Hydrologic Unit 16010101, Wasatch National Forest, on right bank 4.1 mi (6.6 km) upstream from mouth, 11.5 mi (18.5 km) upstream from Utah-Wyoming State line, and 28.7 mi (46.2 km) south of Evanston.

DRAINAGE AREA.--34.6 mi<sup>2</sup> (89.6 km<sup>2</sup>).

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,760 ft (2,670 m) from topographic map.

REMARKS.--Records good except those for winter months, which are fair.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 631 ft<sup>3</sup>/s (17.9 m<sup>3</sup>/s) July 4, 1975, gage height, 4.15 ft (1.265 m); minimum, 5.9 ft<sup>3</sup>/s (0.17 m<sup>3</sup>/s) Apr. 8, 1974.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 334 ft<sup>3</sup>/s (9.46 m<sup>3</sup>/s) June 8, gage height, 3.19 ft (0.972 m); minimum observed, 8.5 ft<sup>3</sup>/s (0.24 m<sup>3</sup>/s) Mar. 9.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	16	9.2	10	9.0	9.0	9.0	23	194	120	40	16
2	17	16	9.0	10	9.0	8.9	9.0	32	232	120	38	15
3	17	16	9.0	10	9.0	8.8	9.0	39	238	114	43	15
4	17	16	9.0	10	9.0	8.7	10	41	249	109	38	15
5	17	16	9.0	10	9.0	8.6	10	40	249	105	33	14
6	17	15	9.0	9.9	9.0	8.5	10	39	255	101	30	15
7	19	14	8.0	10	9.0	8.5	11	44	256	95	29	21
8	21	16	6.5	10	9.0	8.5	11	46	264	94	27	17
9	21	17	9.0	9.9	9.0	8.5	11	46	254	92	26	16
10	20	17	9.0	9.5	9.0	8.5	11	52	231	88	25	15
11	19	17	9.5	9.2	9.0	8.5	12	71	206	85	24	16
12	19	17	9.5	9.8	9.0	9.0	12	82	164	83	23	19
13	20	16	10	9.2	9.0	9.0	12	90	144	78	22	18
14	19	15	10	9.5	9.0	9.0	12	124	131	72	22	17
15	21	14	10	9.5	9.0	9.0	13	151	114	66	21	17
16	19	13	10	9.2	9.0	9.0	13	151	112	62	21	16
17	19	12	10	9.2	9.0	9.0	14	186	104	65	20	16
18	18	11	9.8	8.9	9.0	9.0	14	224	96	73	21	16
19	17	10	10	9.0	9.0	9.0	13	231	101	62	21	16
20	17	10	10	9.3	9.0	9.0	12	230	130	57	19	16
21	16	9.0	10	9.5	9.0	9.0	12	211	149	55	18	15
22	17	9.0	10	9.8	9.0	9.0	14	176	148	49	18	22
23	18	8.4	10	9.8	9.0	9.0	16	167	125	45	25	19
24	18	8.5	10	10	9.0	9.0	19	178	111	43	20	19
25	18	9.0	10	10	9.0	9.0	19	154	112	43	19	19
26	18	9.0	10	10	9.0	9.0	19	138	113	42	18	18
27	18	9.2	10	9.7	9.0	9.0	28	178	113	39	18	16
28	17	8.6	10	9.6	9.0	9.0	20	217	118	38	17	16
29	17	8.5	10	9.2	9.0	9.0	15	216	122	36	17	15
30	17	9.0	10	8.9	---	9.0	17	173	117	57	17	15
31	16	---	10	8.9	---	9.0	---	164	---	47	16	---
TOTAL	561	382.2	297.5	297.5	261.0	275.0	407.0	3914	4952	2235	746	500
MEAN	18.1	12.7	9.60	9.60	9.00	8.87	13.6	126	165	72.1	24.1	16.7
MAX	21	17	10	10	9.0	9.0	28	231	264	120	43	22
MIN	16	8.4	8.0	8.9	9.0	8.5	9.0	23	96	36	16	14
AC-FT	1110	758	590	590	518	545	807	7760	9820	4430	1480	992
CAL YR 1975	TOTAL	25489.4	MEAN 69.8	MAX 502	MIN 7.3	AC-FT 50560						
WTR YR 1976	TOTAL	14828.2	MEAN 40.5	MAX 264	MIN 8.0	AC-FT 29410						

# BEAR RIVER BASIN

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

LOCATION.--Lat. 40°50'30", Long 110°55'35", in NE¼ sec. 9, T.1 N., R.9 E., Summit County, Hydrologic Unit 16010101, Wasatch National Forest, on left bank 1,380 ft (421 m) downstream from Whitney Dam, 7 mi (11 km) upstream from Deer Creek, and 21.5 mi (34.6 km) northeast of Oakley.

DRAINAGE AREA.--6.79 mi<sup>2</sup> (17.59 km<sup>2</sup>).

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

REVISED RECORD.--WRD Utah 1973: Drainage area.

GAGE.--Water-stage recorder and concrete control with V-notch sharp-crested weir since Aug. 4, 1966. Altitude of gage is 9,120 ft (2,780 m) from topographic map.

REMARKS.--Records good. Flow regulated by Whitney Reservoir, total capacity, 4,700 acre-ft (5.80 hm<sup>3</sup>) since July 1966.

AVERAGE DISCHARGE.--10 years (water years 1968-76), 8.77 ft<sup>3</sup>/s (0.25 m<sup>3</sup>/s), 6,350 acre-ft/yr (7.83 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 145 ft<sup>3</sup>/s (4.11 m<sup>3</sup>/s) June 13, 1965; maximum gage height, 3.08 ft (0.939 m) June 26, 1967; no flow July 24 to Sept. 30, Nov. 16-29, 1966.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 97 ft<sup>3</sup>/s (2.75 m<sup>3</sup>/s) July 12, gage height, 2.83 ft (0.863 m); minimum, 0.16 ft<sup>3</sup>/s (0.005 m<sup>3</sup>/s) Oct. 18, 19, 20, 21.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	1.5	1.5	1.4	1.4	1.4	1.4	1.3	.50	1.0	33	1.0
2	6.7	1.6	1.4	1.4	1.4	1.4	1.4	1.3	.46	1.0	19	25
3	6.6	1.5	1.4	1.4	1.4	1.4	1.4	1.3	.42	1.0	11	47
4	6.5	1.5	1.4	1.4	1.4	1.4	1.4	1.3	.38	1.0	11	42
5	5.0	1.5	1.4	1.4	1.4	1.4	1.4	1.2	.37	1.0	11	38
6	.23	1.4	1.4	1.4	1.4	1.4	1.4	1.2	.36	1.0	11	31
7	.30	1.4	1.4	1.4	1.4	1.4	1.4	1.1	.35	1.0	11	25
8	.59	1.4	1.4	1.4	1.4	1.4	1.4	1.1	.33	1.0	11	21
9	.55	1.5	1.4	1.4	1.4	1.4	1.4	1.0	.31	1.0	11	17
10	.49	1.6	1.4	1.4	1.4	1.4	1.4	.99	.29	1.0	7.0	13
11	.40	1.6	1.4	1.4	1.4	1.4	1.4	1.7	.72	1.0	1.6	8.4
12	.36	1.7	1.4	1.4	1.4	1.4	1.4	1.7	1.1	56	1.5	6.4
13	.27	1.7	1.4	1.4	1.4	1.4	1.4	1.6	1.1	89	1.4	5.3
14	.27	1.6	1.4	1.4	1.4	1.4	1.4	1.4	1.1	87	1.2	4.5
15	.38	1.6	1.4	1.4	1.4	1.4	1.4	.91	1.0	82	1.2	3.9
16	.27	1.6	1.7	1.4	1.4	1.4	1.4	.79	1.0	82	1.2	3.4
17	.22	1.5	1.4	1.4	1.4	1.4	1.4	.74	1.0	79	1.2	3.2
18	.18	1.4	1.4	1.4	1.4	1.4	1.4	.66	1.0	77	1.3	2.1
19	.17	1.2	1.4	1.4	1.4	1.4	1.4	.70	1.0	77	1.2	.97
20	.17	1.2	1.4	1.4	1.4	1.4	1.4	.76	1.0	75	1.2	.97
21	.55	1.2	1.4	1.4	1.4	1.4	1.4	.87	1.0	73	1.2	.94
22	1.1	1.2	1.4	1.4	1.4	1.4	1.4	1.1	1.0	71	1.2	.94
23	1.1	1.2	1.4	1.4	1.4	1.4	1.4	1.2	1.0	68	1.1	.90
24	1.1	1.2	1.4	1.4	1.4	1.4	1.3	1.2	1.0	65	1.1	.90
25	1.1	1.2	1.4	1.4	1.4	1.4	1.3	1.2	1.0	62	1.1	.90
26	1.1	1.2	1.4	1.4	1.4	1.4	1.3	1.2	1.0	59	1.1	.94
27	1.1	1.2	1.4	1.4	1.4	1.4	1.3	1.0	1.0	48	1.1	.94
28	1.1	1.3	1.4	1.4	1.4	1.4	1.3	.70	1.0	37	1.0	.94
29	1.1	1.3	1.4	1.4	1.4	1.4	1.3	.61	1.0	36	1.0	.94
30	1.2	1.6	1.4	1.4	--	1.4	1.3	.57	1.0	35	1.0	.90
31	1.3	--	1.4	1.4	--	1.4	--	.53	--	34	1.0	--
TOTAL	46.24	42.6	43.8	43.4	40.6	43.4	41.2	32.93	23.79	1303.0	160.9	308.38
MEAN	1.44	1.42	1.41	1.40	1.40	1.40	1.37	1.00	.79	42.0	5.19	10.3
MAX	6.8	1.7	1.7	1.4	1.4	1.4	1.4	1.7	1.1	89	33	47
MIN	.17	1.2	1.4	1.4	1.4	1.4	1.3	.53	.29	1.0	1.0	.90
AC-FT	92	84	87	86	81	86	82	65	47	2980	319	612
CAL YR 1975	TOTAL	3937.24	MEAN	10.8	MAX	118	MIN	.17	AC-FT	7810		
WTR YR 1976	TOTAL	2130.24	MEAN	5.82	MAX	89	MIN	.17	AC-FT	4230		



## BEAR RIVER BASIN

### 114. West Fork Bear River below Deer Creek, near Evanston, Wyo.

LOCATION.--Lat 40°56'40", Long 110°51'40", in NW¼SW¼ sec.6, T.2 N., R.10 E., Summit County, Utah, Hydrologic Unit 16010101, on left bank 0.8 mi (1.3 km) downstream from Deer Creek, 2.1 mi (3.4 km) upstream from mouth, and 22.9 mi (36.8 km) south of Evanston.

DRAINAGE AREA.--52.2 mi<sup>2</sup> (135.2 km<sup>2</sup>).

PERIOD OF RECORD.--October 1973 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 8,190 ft (2,496 m) from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by Whitney Reservoir, total capacity, 4,700 acre-ft (5.80 hm<sup>3</sup>), since July 1966.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 511 ft<sup>3</sup>/s (14.5 m<sup>3</sup>/s) June 8, 1975, gage height, 4.00 ft (1.219 m); minimum, 4.6 ft<sup>3</sup>/s (0.13 m<sup>3</sup>/s) Sept. 2, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 339 ft<sup>3</sup>/s (9.60 m<sup>3</sup>/s) May 14, gage height, 3.30 ft (1.006 m); minimum, 4.6 ft<sup>3</sup>/s (0.13 m<sup>3</sup>/s) Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	16	11	12	10	9.0	9.6	51	129	31	55	5.3
2	15	15	11	12	10	10	13	67	131	29	46	19
3	15	16	11	12	10	10	13	88	126	27	24	68
4	15	15	11	11	10	10	12	98	118	26	21	64
5	14	15	11	11	10	10	13	104	109	24	20	58
6	12	13	11	10	10	10	12	111	101	23	19	50
7	14	13	11	10	10	10	11	118	97	23	18	47
8	17	14	11	10	10	11	15	127	91	21	18	37
9	16	14	11	10	10	11	15	147	84	20	18	30
10	16	14	11	11	10	10	17	187	78	18	17	24
11	15	14	11	10	10	10	21	229	79	19	8.8	17
12	15	14	11	10	10	10	22	208	77	58	7.9	12
13	15	14	11	10	11	9.0	21	210	82	120	7.3	10
14	15	14	11	10	13	8.8	20	250	79	118	7.0	9.4
15	14	14	11	9.8	11	10	19	263	71	112	6.7	8.1
16	15	13	11	9.2	10	9.0	16	227	64	108	7.3	7.8
17	14	13	11	9.6	10	8.6	15	236	64	107	6.6	7.0
18	14	13	11	10	11	8.9	15	241	59	106	7.5	7.3
19	13	13	11	10	11	10	14	236	51	104	7.5	6.8
20	12	13	11	10	11	11	14	222	47	102	6.6	7.1
21	12	12	11	11	10	11	18	195	46	100	6.4	6.7
22	15	12	11	11	10	11	26	190	44	97	6.4	7.8
23	16	12	11	12	10	11	29	166	43	93	9.1	7.9
24	21	12	11	12	10	10	34	167	41	91	7.7	7.9
25	20	12	11	11	10	9.6	34	145	38	89	6.5	7.7
26	16	12	11	10	9.9	10	27	142	37	86	6.0	7.6
27	16	12	11	10	9.5	10	25	150	35	77	6.5	7.4
28	34	12	11	11	9.0	10	22	157	33	59	6.1	7.3
29	30	12	11	10	8.6	10	27	152	33	58	5.7	7.3
30	17	12	11	10	---	10	37	134	33	59	5.3	7.2
31	15	---	11	10	---	10	---	127	---	57	5.2	---
TOTAL	504	400	341	325.6	295.0	308.9	586.6	5145	2120	2062	400.1	569.2
MEAN	16.3	13.3	11.0	10.5	10.2	9.96	19.6	166	70.7	66.5	12.9	19.0
MAX	34	16	11	12	13	11	37	263	131	120	55	68
MIN	12	12	11	9.2	8.6	8.6	9.6	51	33	18	5.2	5.3
AC-FT	1000	793	676	646	585	613	1160	10210	4210	4090	794	1130
CAL YR 1975	TOTAL	20419.1	MEAN	55.9	MAX	429	MIN	6.5	AC-FT	40500		
WTR YR 1976	TOTAL	13057.4	MEAN	35.7	MAX	263	MIN	5.2	AC-FT	25900		

# BEAR RIVER BASIN

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

LOCATION.--Lat 40 57'55", long 110 51'10", in SE¼ sec. 30, T.3 N., R.10 E., Summit County, Utah, Hydrologic Unit 16010101, on left bank just downstream from West Fork and 2.8 mi (4.5 km) upstream from Utah-Wyoming State line.

DRAINAGE AREA.--172 mi<sup>2</sup> (445 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 7,965 ft (2,427.7 m) from river-profile map.

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated slightly by Whitney Reservoir, usable capacity 4,200 acre-ft (5.18 hm<sup>3</sup>) since 1966. Three diversions above station for irrigation of about 265 acres (107,000 m<sup>2</sup>) above and 2,600 acres (10.5 km<sup>2</sup>) below station.

AVERAGE DISCHARGE.--34 years, 192 ft<sup>3</sup>/s (5.44 m<sup>3</sup>/s), 139,100 acre-ft/yr (172 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,980 ft<sup>3</sup>/s (84.4 m<sup>3</sup>/s) June 6, 1968, gage height, 3.79 ft (1.155 m); maximum gage height, 4.27 ft (1.301 m) June 6, 1957; minimum discharge determined, 16 ft<sup>3</sup>/s (0.45 m<sup>3</sup>/s) Apr. 11, 1951, Nov. 5, 1954, Nov. 1, 1955, Oct. 30, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,070 ft<sup>3</sup>/s (30.3 m<sup>3</sup>/s) May 18, gage height, 2.79 ft (0.850 m), no peak above base of 1,100 ft<sup>3</sup>/s (31.2 m<sup>3</sup>/s); minimum, 27 ft<sup>3</sup>/s (0.76 m<sup>3</sup>/s) Mar. 26, 27.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57	60	58	47	40	40	40	210	705	238	131	37
2	56	60	53	47	40	40	45	250	824	235	116	38
3	56	58	53	49	39	40	50	265	846	207	93	74
4	55	59	53	49	38	40	55	280	869	183	87	72
5	53	58	50	49	38	40	60	290	827	174	76	69
6	46	58	50	49	38	39	55	300	808	161	71	67
7	48	58	50	49	38	38	60	320	809	156	63	74
8	57	59	49	46	37	37	65	350	789	153	60	67
9	54	53	49	45	36	35	65	390	789	147	60	59
10	57	59	48	44	36	35	70	480	709	142	59	53
11	55	56	50	45	42	37	75	600	623	140	52	49
12	53	55	49	45	44	35	80	580	477	178	50	48
13	56	56	49	45	40	35	85	600	417	237	47	48
14	55	57	50	45	40	34	80	750	365	217	45	47
15	51	58	50	45	39	34	80	830	296	196	44	45
16	57	56	50	44	38	35	75	760	273	180	45	44
17	63	55	51	44	39	34	75	840	255	181	43	42
18	63	53	50	44	37	35	75	930	227	210	45	41
19	60	56	50	43	38	34	70	930	229	187	47	41
20	57	55	50	42	39	40	60	900	318	178	44	42
21	57	55	50	41	40	38	67	810	399	172	42	42
22	61	55	50	40	40	38	84	730	401	166	41	46
23	56	55	50	40	40	37	96	670	310	161	52	48
24	59	55	50	40	40	36	112	690	253	149	51	46
25	66	53	50	40	40	35	131	600	240	147	44	46
26	68	55	49	40	40	38	130	533	237	148	41	49
27	65	55	48	39	40	35	135	645	227	139	41	45
28	68	56	47	37	40	35	110	795	248	130	40	45
29	72	61	47	38	40	35	105	822	253	125	39	45
30	65	60	47	38	---	36	135	666	234	150	38	44
31	63	---	47	40	---	35	---	609	---	143	38	---
TOTAL	1809	1699	1547	1349	1136	1135	2425	18425	14259	5330	1745	1513
MEAN	56.4	56.6	49.9	43.5	39.2	36.6	80.8	594	475	172	56.3	50.4
MAX	72	61	58	49	44	40	135	930	869	238	131	74
MIN	46	53	47	37	36	34	40	210	227	125	38	37
AC-FT	3590	3370	3070	2680	2250	2250	4610	36550	28280	10570	3460	3000
CAL YR 1975	TOTAL	87468	MEAN 240	MAX 1810	MIN 39	AC-FT 173500						
WTR YR 1976	TOTAL	52372	MEAN 143	MAX 930	MIN 34	AC-FT 103900						

## BEAR RIVER BASIN

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

LOCATION.--Lat 41°08'38", long 110°48'10", in SE1SW4 sec.35, T.14 N., R.119 W., Uinta County, Hydrologic Unit 16010101, on right bank 1.2 mi (1.9 km) downstream from Willow Creek, 2 mi (3.2 km) upstream from Sulphur Creek Dam, and 11.5 mi (18.5 km) southeast of Evanston.

DRAINAGE AREA.--64.2 mi<sup>2</sup> (166.3 km<sup>2</sup>).

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 (2,188 m) from topographic map.

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

AVERAGE DISCHARGE.--19 years, 17.0 ft<sup>3</sup>/s (0.48 m<sup>3</sup>/s), 12,320 acre-ft/yr (15.2 km<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,220 ft<sup>3</sup>/s (34.6 m<sup>3</sup>/s) Apr. 21, 1965, gage height, 6.92 ft (1.835 m); maximum gage height, 6.19 ft (1.887 m) Mar. 11, 1972 (backwater from ice); no flow at times most years.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 669 ft<sup>3</sup>/s (17.3 m<sup>3</sup>/s) Apr. 5, gage height, 5.37 ft (1.637 m); no flow Sept. 1-6.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1976 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	3.0	4.6	4.0	4.0	6.0	141	27	10	4.7	.84	0
2	.30	2.7	4.6	4.0	4.0	5.8	264	32	7.2	3.2	.34	0
3	.30	2.0	4.6	4.0	4.0	4.5	303	36	5.6	2.8	.48	0
4	.30	1.8	4.6	4.0	4.0	4.0	345	42	5.4	2.2	.42	0
5	.30	1.6	4.6	4.0	4.0	4.0	496	40	4.5	1.2	.33	0
6	.30	1.7	5.0	4.0	4.0	4.0	372	44	4.7	1.1	.26	0
7	.42	1.7	5.0	4.0	4.0	4.5	188	46	4.5	.68	.18	.14
8	.68	2.2	5.0	4.0	4.0	5.0	162	67	5.4	.54	.12	.08
9	.54	1.9	5.2	4.0	4.0	5.0	176	54	5.1	.51	.09	.07
10	.51	1.4	5.4	4.0	4.0	4.9	137	57	4.5	.54	.09	.06
11	.45	1.6	5.4	4.0	4.0	4.5	133	69	4.5	1.2	.09	.07
12	.48	1.6	5.0	4.0	4.0	4.0	96	66	5.6	1.3	.08	.09
13	.68	1.7	5.8	4.0	4.0	4.5	79	57	12	1.3	.07	.12
14	1.0	2.0	5.8	4.0	4.0	5.0	64	76	33	1.1	.07	.14
15	1.2	2.2	5.8	4.0	4.0	6.0	51	101	24	1.1	.06	.12
16	1.3	2.8	5.8	4.0	4.0	7.0	55	68	12	.92	.06	.08
17	1.3	3.2	5.8	4.0	4.0	9.0	50	66	14	.92	.06	.07
18	1.2	2.7	5.8	4.0	4.0	12	50	65	14	1.2	.07	.07
19	1.1	3.2	5.6	4.0	4.0	20	50	61	9.9	1.2	.07	.08
20	1.0	3.6	5.4	4.0	4.0	30	50	56	8.9	.92	.06	.08
21	1.1	3.8	5.2	4.0	4.0	40	50	40	3.4	.76	.05	.08
22	1.2	4.0	5.0	4.0	4.0	60	45	67	2.0	1.2	.06	.12
23	1.4	4.2	4.8	4.0	5.0	50	42	58	2.0	.57	.22	.12
24	1.3	4.2	4.8	4.0	6.0	80	40	40	2.4	.68	.18	.14
25	1.2	4.2	4.4	4.0	8.0	100	38	32	3.8	1.1	.16	.14
26	1.7	4.2	4.2	4.0	10	110	35	29	3.6	.54	.12	.14
27	2.8	4.4	4.0	4.0	12	100	35	22	2.5	.45	.09	.10
28	2.2	4.4	4.0	3.8	10	110	34	15	2.5	.33	.06	.09
29	2.7	4.4	4.0	4.0	8.0	139	27	12	2.2	.26	.07	.09
30	4.5	4.6	4.0	4.0	---	113	26	15	3.2	.26	.05	.09
31	4.9	---	4.0	4.0	---	107	---	12	---	.39	.03	---
TOTAL	38.66	87.1	154.2	123.8	147.0	1157.9	3682	1474	220.4	35.17	5.15	2.38
MEAN	1.25	2.90	4.97	3.99	5.07	37.4	123	47.5	7.35	1.13	.17	.079
MAX	4.9	4.6	5.8	4.0	12	139	496	161	33	4.7	.84	.14
MIN	.30	1.4	4.0	3.8	4.0	4.0	26	12	2.0	.26	.03	0
AC-FT	77	173	306	246	292	2300	7300	2926	437	70	10	4.7
CAL YR 1976	TOTAL	7896.31	MEAN 21.6	MAX 178	MIN 0.30	AC-FT 15660						
WTR YR 1976	TOTAL	7127.76	MEAN 19.5	MAX 496	MIN 0	AC-FT 14140						

## BEAR RIVER BASIN

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

LOCATION.--Lat 41°09'21", long 110°50'05", in SE&SE& sec. 28, T.14 N., R.119 W., Uinta County, Hydrologic Unit 16010101, on left bank 400 ft (122 m) downstream from Sulphur Creek Dam, 6.3 mi (10.1 km) upstream from mouth and 10.5 mi (16.9 km) southeast of Evanston.

DRAINAGE AREA.--69.2 mi<sup>2</sup> (179.2 km<sup>2</sup>).

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

GAGE.--Water-stage recorder and concrete V-notch control. Altitude of gage is 7,120 ft (2,170 m) from topographic map.

REMARKS.--Records good. Flow regulated by Sulphur Creek Reservoir, capacity, 7,100 acre-ft (8.75 hm<sup>3</sup>). Records prior to 1965 do not include flow over spillway of the dam.

AVERAGE DISCHARGE.--11 years (water years 1966-76), 27.0 ft<sup>3</sup>/s (0.765 m<sup>3</sup>/s), 19,560 acre-ft/yr (24.1 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD (SINCE 1966).--Maximum discharge, 425 ft<sup>3</sup>/s (12.0 m<sup>3</sup>/s) May 10, 1974, gage height, 3.71 ft (1.131 m); no flow at times each year except 1972.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 83 ft<sup>3</sup>/s (2.35 m<sup>3</sup>/s) Mar. 19, gage height, 2.05 ft (0.625 m); no flow on many days.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	0	9.3	9.1	2.9	2.8	75	73	23	54	42	61
2	13	0	9.3	9.0	2.8	2.8	75	63	19	53	33	71
3	13	0	9.3	8.8	2.9	2.8	74	27	16	54	26	69
4	7.8	0	9.3	8.8	2.9	2.8	74	27	14	54	27	68
5	0	0	9.3	8.8	2.9	2.9	36	27	9.9	53	24	60
6	0	0	9.3	8.8	2.9	3.0	3.5	27	5.3	52	14	53
7	0	4.7	9.3	8.8	2.9	3.0	3.5	27	5.6	61	5.5	49
8	0	8.8	9.3	8.8	2.9	2.9	3.6	27	6.4	78	5.6	47
9	0	8.6	9.3	8.8	2.8	2.9	3.8	21	7.3	76	5.6	44
10	0	8.7	9.3	8.8	2.8	2.9	11	4.0	7.9	75	5.7	37
11	0	8.8	9.3	8.8	2.8	2.9	39	4.1	8.0	75	6.0	4.8
12	0	10	9.3	8.8	2.8	2.9	40	4.2	9.5	65	6.0	4.8
13	0	9.2	9.3	8.8	2.9	3.0	46	4.0	18	49	6.0	4.8
14	0	9.1	9.3	8.8	2.9	3.0	40	4.0	47	40	6.0	4.01
15	0	9.1	9.3	8.8	2.9	3.0	41	4.1	73	40	5.8	0
16	0	9.1	9.3	7.0	2.9	3.0	42	4.0	58	39	5.7	0
17	0	9.1	9.3	3.3	2.8	3.0	42	4.0	47	39	5.7	0
18	0	9.1	9.3	3.0	2.8	3.0	42	4.0	42	39	5.8	0
19	0	9.1	9.3	3.0	2.8	35	42	3.9	36	40	6.0	0
20	0	9.1	9.1	3.0	2.8	82	64	3.6	29	39	11	0
21	0	9.1	9.1	3.0	2.7	82	80	4.1	21	42	17	0
22	0	9.1	9.1	3.0	2.7	81	80	5.1	16	47	17	0
23	0	9.3	9.1	2.9	2.7	80	76	17	15	46	16	0
24	0	9.3	9.1	2.9	2.7	80	77	32	14	46	16	0
25	0	9.3	9.1	2.9	2.8	80	77	40	14	46	22	0
26	0	9.3	9.1	2.9	2.8	79	76	41	14	48	37	0
27	0	9.3	9.1	2.9	2.8	74	76	39	12	49	36	0
28	0	9.3	9.1	2.8	2.8	78	74	34	20	49	35	0
29	0	9.3	9.1	2.9	2.8	78	75	31	54	50	33	0
30	0	9.3	9.1	2.9	2.7	76	74	28	50	48	33	0
31	0	---	9.1	2.9	---	76	---	26	---	42	33	---
TOTAL	45.8	215.1	285.9	183.8	82.0	1038.6	1556.4	660.3	711.9	1588	547.4	572.61
MEAN	1.48	7.17	9.22	5.93	2.83	33.5	51.9	21.3	23.7	51.2	17.7	19.1
MAX	13	10	9.3	9.1	2.9	82	80	73	73	78	42	71
MIN	0	0	9.1	2.8	2.7	2.8	3.5	3.6	5.3	39	5.5	0
AC-FT	91	427	567	365	163	2660	3090	1310	1410	3150	1090	1140
CAL YR 1975	TOTAL	8899.50	MEAN	24.4	MAX	208	MIN	0	AC-FT	17650		
WTR YR 1976	TOTAL	7489.81	MEAN	20.5	MAX	82	MIN	0	AC-FT	14860		

## BEAR RIVER BASIN

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

LOCATION.--Lat 41°24'24", long 111°02'26", in SE¼ sec.36, T.17 N., R.121 W., Uinta County, Hydrologic Unit 16010101, on left bank at highway bridge, 6.5 mi (10.5 km) downstream from headgates, end 10 mi (16 km) north-west 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 and flashboard control. Altitude of gage is 6,570 ft (2,003 m) from river-profile map. Prior to Oct. 11, 1946, nonrecording gage, and Oct. 11, 1946 to Aug. 2, 1961, water-stage recorder at site 26 ft (6 m) downstream at same datum.

REMARKS.--Records fair. Canal diverts water from Bear River in NW¼ sec.36, T.16 N., R.121 W. Many diversions above station for irrigation in Wyoming. Flow at station is for storage in Reponset Reservoir, Utah, and irrigation in Seleratus basin, Utah.

AVERAGE DISCHARGE.--32 years (water years 1945-76), 20.0 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s), 14,490 acre-ft/yr (17.9 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 143 ft<sup>3</sup>/s (4.06 m<sup>3</sup>/s) June 24, 1970; no flow at times each year.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	6.6				0	2.0	60	51	21	31	3.3
2	19	5.3				0	2.0	63	48	22	34	6.0
3	19	4.2				0	2.0	65	46	25	33	12
4	17	2.8				0	2.0	69	44	23	30	10
5	14	1.49				0	2.0	71	41	19	25	8.8
6	12	0				0	2.0	74	42	13	20	9.7
7	11	0				0	2.0	74	41	13	17	12
8	12	0				0	2.0	79	37	27	15	11
9	13	0				0	2.1	77	37	33	12	11
10	13	0				0	4.0	38	35	33	10	11
11	13	0				0	4.0	39	29	28	8.4	9.1
12	13	0				0	4.0	43	28	29	8.6	2.6
13	14	0				0	4.2	43	28	23	11	1.8
14	15	0				0	4.1	46	4.0	23	12	1.6
15	14	0				.50	4.1	50	4.1	22	12	1.4
16	14	0				.50	4.1	41	32	19	11	1.6
17	14	0				.50	39	41	25	18	11	1.6
18	14	0				.50	38	43	21	17	11	2.6
19	13	0				.50	39	43	19	19	12	4.5
20	13	0				1.0	4.0	45	19	19	11	3.8
21	12	0				1.0	4.1	52	18	17	9.1	3.8
22	12	0				1.0	4.0	53	19	17	9.4	3.8
23	12	0				1.0	4.2	49	22	14	11	4.7
24	12	0				1.0	4.3	48	24	12	12	6.6
25	11	0				1.0	4.4	44	19	9.1	10	7.6
26	12	0				1.0	4.6	39	14	9.4	7.4	7.6
27	14	0				1.0	4.4	50	11	8.0	11	7.6
28	13	0				1.0	4.3	53	6.8	8.6	12	8.1
29	12	0				1.0	4.4	72	7.6	8.4	10	7.8
30	14	0				1.0	6.0	72	19	8.4	4.9	7.4
31	14	---			---	1.0	---	76	---	11	4.2	---
TOTAL	425	19.39	0	0	0	14.50	906.1	1712	864.4	569.7	434.0	190.4
MEAN	13.7	.65	0	0	0	.47	30.2	55.2	28.8	18.4	14.0	6.35
MAX	20	6.6	0	0	0	1.0	60	79	51	33	34	12
MIN	11	0	0	0	0	0	2.0	38	6.8	8.4	4.2	1.4
AC-FT	843	38	0	0	0	29	1800	3400	1710	1130	861	378

CAL YR 1975 TOTAL 8013.46 MEAN 22.0 MAX 139 MIN 0 AC-FT 15890  
 WTR YR 1976 TOTAL 5135.49 MEAN 14.0 MAX 79 MIN 0 AC-FT 10190

## BEAR RIVER BASIN

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

LOCATION.--Lat 41°26'04", long 111°01'01", in NW1/4 sec. 29, T. 17 N., R. 120 W., Uinta County, Wyoming, Hydrologic Unit 16010101, on right bank 9.3 mi (15.0 km) upstream from Woodruff Narrows Dam and 10 mi (16 km) southeast of Woodruff.

DRAINAGE AREA.--752 mi<sup>2</sup> (1,948 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Altitude of gage is 6,455 ft (1,967.5 m) from river-profile map.

REMARKS.--Records good except those for winter months, which are fair. Diversion for irrigation of about 43,500 acres (176 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--15 years, 254 ft<sup>3</sup>/s (7.19 m<sup>3</sup>/s), 183,800 acre-ft/yr (227 km<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,340 ft<sup>3</sup>/s (94.6 m<sup>3</sup>/s) June 13, 1965, gage height, 5.89 ft (1.795 m); minimum, 0.1 ft<sup>3</sup>/s (0.003 m<sup>3</sup>/s) Aug. 24, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,320 ft<sup>3</sup>/s (37.4 m<sup>3</sup>/s) May 20, gage height, 4.37 ft (1.332 m); minimum, 4.2 ft<sup>3</sup>/s (0.12 m<sup>3</sup>/s) Sept. 7.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	120	147	80	70	210	316	266	578	79	14	5.5
2	33	101	181	80	75	200	417	303	614	71	30	5.5
3	32	101	166	75	75	160	482	340	626	54	37	6.2
4	32	95	144	75	75	140	602	380	578	46	24	5.5
5	34	93	112	80	75	120	736	417	536	37	18	5.5
6	30	93	107	80	75	110	668	435	459	29	14	5.2
7	28	91	112	80	75	105	512	453	423	21	12	5.5
8	31	99	109	80	75	100	476	512	386	23	10	5.9
9	40	107	107	80	80	100	650	530	375	38	8.9	6.2
10	43	91	109	85	80	100	584	542	340	38	8.4	7.0
11	45	86	105	85	80	92	554	584	312	33	6.6	7.0
12	49	85	101	85	80	100	584	693	298	39	5.9	6.6
13	66	82	97	85	80	100	465	693	281	33	5.5	5.9
14	82	109	88	85	80	100	392	701	355	31	5.5	5.5
15	82	107	88	85	85	100	365	1010	360	26	5.5	5.2
16	86	107	88	85	85	100	335	1100	294	24	5.5	4.8
17	82	114	91	85	85	110	294	1090	277	22	5.5	4.5
18	81	109	88	85	85	160	254	1150	277	23	5.5	4.8
19	77	97	84	85	85	250	258	1210	214	26	5.9	4.8
20	72	178	84	85	85	300	262	1220	158	25	5.2	5.2
21	69	137	85	80	85	300	285	1180	150	21	5.2	5.2
22	69	101	85	80	85	250	298	1100	155	22	5.2	5.5
23	79	127	85	75	80	300	326	930	152	21	6.2	5.5
24	79	137	85	75	80	300	330	894	147	17	5.9	5.9
25	71	127	85	70	80	650	340	850	125	15	5.5	6.2
26	74	101	85	70	80	600	464	738	105	13	5.5	6.6
27	109	114	85	70	85	566	360	700	84	12	5.2	6.6
28	109	142	85	70	95	404	355	795	76	12	5.5	7.0
29	90	142	85	68	140	355	298	857	72	9.8	6.2	7.0
30	101	140	85	70	---	385	262	799	76	9.3	5.9	6.2
31	114	---	85	70	---	262	---	620	---	9.8	5.5	---
TOTAL	2021	3336	3123	2443	2395	7089	12660	23146	8883	879.9	294.7	174.0
MEAN	65.2	111	101	78.4	82.6	229	416	747	296	28.4	9.1	5.80
MAX	114	178	166	85	140	650	738	1220	626	79	37	7.0
MIN	28	82	84	68	70	92	254	266	72	9.3	5.2	4.5
AC-FT	4010	6620	6190	4850	4750	14060	24730	45910	17620	1750	505	345
CAL YR 1975	TOTAL	111559.0	MEAN	306	MAX	2000	MIN	18	AC-FT	221300		
WTR YR 1976	TOTAL	66250.6	MEAN	181	MAX	1220	MIN	4.5	AC-FT	131460		

# BEAR RIVER BASIN

## 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, Hydrologic Unit 16G10101, in gate house at Woodruff Narrows Dam on Bear River, 5.6 mi (9.0 km) upstream from Wyoming-Utah State line, and 7.7 mi (12.4 km) east of Woodruff.

DRAINAGE AREA.--784 mi<sup>2</sup> (2,031 km<sup>2</sup>).

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

GAGE.--Water-stage recorder and mercury manometer. Datum of gage is 6,405 ft (1,952.2 m) from levels by Bureau of Reclamation.

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 (34.5 hm<sup>3</sup>) below spillway crest, which includes 18,240 acre-ft (22.5 hm<sup>3</sup>) of Compact allocation for irrigation, 4,260 acre-ft (5.25 hm<sup>3</sup>) of irrigation holdover, 4,000 acre-ft (4.93 hm<sup>3</sup>) for winter release for fish propagation in Utah, and 1,500 acre-ft (1.85 hm<sup>3</sup>) of storage for fish propagation in Wyoming. Gage height of spillway is 35.3 ft (10.76 m). Figures given herein represent total contents.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 33,080 acre-ft (40.8 hm<sup>3</sup>) May 11, 1974, June 10, 1975, gage height, 38.3 ft (11.67 m); minimum observed, 1,570 acre-ft (1.94 hm<sup>3</sup>) Sept. 21, 1976.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 31,370 acre-ft (38.7 hm<sup>3</sup>) May 19, 20, 21, 22, gage height, 37.3 ft (11.37 m); minimum observed, 1,570 acre-ft (1.94 hm<sup>3</sup>) Sept. 21.

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

6.75	1,570	18	8,360	30	20,180
8	2,080	20	10,000	32	23,040
10	3,020	22	11,600	34	25,800
12	4,120	24	13,360	36	29,000
14	5,370	26	15,570	38	32,520
16	6,780	28	17,770		

CONTENTS, IN ACRE-FeET, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
INSTANTANEOUS OBSERVATIONS AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21030	22450	26320	27830	27970	28260	29000	29000	30080	12050	5840	4850
2	20700	22590	26490	27830	27970	28260	29000	29000	29930	10660	5840	4850
3	20360	22740	26660	27830	27970	28260	29000	29000	29930	9830	5840	4790
4	20060	22890	26840	27830	27970	28410	29000	29180	29930	8780	5840	4790
5	19840	23040	27020	27830	27970	28410	29000	29180	29930	7790	5840	4720
6	19720	23290	27200	27830	27970	28560	29000	29370	29740	7010	5840	4720
7	19720	23290	27550	27830	27970	28560	29000	29370	28860	6930	5770	4660
8	19720	23410	27690	27830	27970	28560	29000	29550	28260	6860	5770	4360
9	19720	23520	27830	27830	27970	28560	29000	29550	27830	6700	5710	4000
10	19720	23760	27970	27830	27970	28560	29000	29740	26840	6630	5710	3660
11	19840	23760	27970	27830	28120	28560	29000	29740	25650	6560	5640	3330
12	19840	23890	28120	27830	28120	28560	29000	29930	24860	6560	5570	3020
13	19960	23890	28120	27830	28120	28710	29000	30080	24560	6480	5570	2720
14	19960	24010	27970	27970	28120	28710	29000	30230	24140	6410	5500	2440
15	20060	24140	27970	27970	28120	28860	29000	30630	23760	6340	5500	2170
16	20180	24410	27970	27970	28120	28860	29000	31030	23410	6260	5440	1870
17	20270	24560	27970	27970	28120	29000	29000	31200	23160	6190	5440	1710
18	20360	24710	27970	27830	28120	29000	29000	31200	22450	6190	5370	1670
19	20510	24860	27970	27830	28120	29000	29000	31370	21880	6120	5370	1630
20	20700	24860	27970	27830	28120	29000	29000	31370	21320	6050	5300	1590
21	20890	25010	27970	27830	28260	29000	29000	31370	20510	6050	5240	1570
22	20890	25170	27970	27830	28260	29000	29000	31370	19960	6050	5170	1570
23	21030	25340	27970	27830	28260	29000	29000	31030	19260	6050	5170	1570
24	21030	25500	27970	27830	28260	29000	29000	30850	18640	6050	5110	1570
25	21180	25500	27970	27830	28260	29000	29000	30850	17890	5980	5110	1570
26	21320	25650	27970	27830	28260	29000	29000	30410	16920	5980	5040	1570
27	21600	25800	27970	27830	28260	29000	29000	30410	15780	5910	5040	1570
28	21740	25970	27970	27970	28260	29000	29000	30410	14700	5910	4980	1570
29	21880	26140	27970	27970	28260	29000	29000	30410	13470	5910	4980	1570
30	22020	26320	27970	27970	---	29000	29000	30410	12490	5840	4920	1570
31	22310	---	27830	27970	---	29000	---	30230	---	5840	4920	---
MAX	22310	26320	28120	27970	28260	29000	29000	31370	30080	12050	5840	4850
MIN	19720	22450	26320	27830	27970	28260	29000	29000	12490	5840	4920	1570
(+)	31.5	34.3	35.2	35.3	35.5	36.0	36.0	36.7	23.0	14.7	(a)13.3	(a)6.75
(#)	+990	+4010	+1510	+140	+290	+740	0	+1230	-17740	-6650	-920	-3350

CAL YR 1975.....# +11230  
WTR YR 1976.....# -19750

+ Gage height, in feet, at 2400 of last day of month.  
# Change in contents, in acre-feet.  
a Estimated.

# BEAR RIVER BASIN

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

LOCATION.--Lat 41°30'20", long 111°00'50", in NW1/4 sec.32, T.18 N., R.120 W., Uinta County, Wyoming, Hydr Unit 16019191, on right bank 1,100 ft (340 m) downstream from Woodruff Narrows Dam, 1.6 mi (2.6 km) upst; from Salt Creek, 5.4 mi (8.7 km) upstream from Wyoming-Utah State line, and 7.7 mi (12.4 km) east of Hood.

DRAINAGE AREA.--784 mi<sup>2</sup> (2,031 km<sup>2</sup>).

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

GAGE.--Water-stage recorder and concrete control. Datum of gage is 6,398.96 ft (1,950.403 m) above mean sea level (levels by Utah Water Resources Division from Bureau of Reclamation bench mark). Prior to Sept. 26, 1962, at site 175 ft (53.3 m) upstream at same datum.

REMARKS.--Records excellent. Flow regulated by Woodruff Narrows Reservoir (station 10020200) beginning January 1962. Diversions for irrigation of about 43,500 acres (176 km<sup>2</sup>) above station.

AVERAGE DISCHARGE.--15 years, 249 ft<sup>3</sup>/s (7.05 m<sup>3</sup>/s), 180,400 acre-ft/yr (222 km<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,000 ft<sup>3</sup>/s (85.0 m<sup>3</sup>/s) June 14, 1965, gage height, 7.88 ft (2.402 m); no flow July 4, 5, 1962.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,170 ft<sup>3</sup>/s (33.1 m<sup>3</sup>/s) May 21, gage height, 6.21 ft (1.893 m); minimum, 3.3 ft<sup>3</sup>/s (0.09 m<sup>3</sup>/s) Sept. 29.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	175	34	35	75	67	185	274	278	622	551	21	20
2	175	34	35	73	68	183	322	271	581	534	21	20
3	174	34	35	69	68	156	388	290	593	519	21	20
4	173	34	35	69	68	135	477	308	571	503	21	20
5	173	34	35	72	71	118	595	337	550	485	21	20
6	107	34	35	73	69	107	665	370	505	398	20	20
7	37	34	36	74	66	100	614	391	737	58	20	41
8	37	34	41	75	66	94	537	419	661	59	20	154
9	37	35	56	75	71	91	543	458	622	59	20	150
10	36	35	72	77	75	91	600	479	769	59	20	146
11	36	35	85	78	75	99	575	500	760	57	20	141
12	36	35	99	80	76	100	566	553	632	58	20	137
13	36	35	108	79	76	96	551	612	488	59	20	133
14	35	35	107	77	76	94	486	644	487	59	20	130
15	35	35	99	77	78	90	434	760	484	58	20	126
16	36	36	95	76	79	86	389	924	481	58	20	76
17	36	36	90	78	80	98	355	968	479	42	20	9.3
18	36	36	90	79	79	144	315	1000	476	27	20	8.3
19	35	36	86	80	78	238	288	1060	474	27	20	8.3
20	35	36	81	79	78	269	277	1130	470	27	20	8.3
21	35	36	78	76	77	268	280	1140	466	27	20	6.5
22	35	37	76	72	76	266	284	1130	464	27	20	7.0
23	34	37	77	69	75	282	286	1060	460	27	20	6.8
24	34	36	79	68	74	294	303	948	456	27	20	7.0
25	34	36	79	66	74	353	317	882	451	27	20	7.0
26	34	36	81	65	74	383	365	799	501	24	20	7.0
27	34	36	83	63	76	390	359	723	607	20	20	6.5
28	34	36	81	63	88	354	350	708	594	20	20	5.4
29	33	36	79	63	133	313	338	749	580	21	20	3.9
30	33	35	80	65	---	280	304	787	566	21	20	4.7
31	33	---	78	66	---	264	---	721	---	21	20	---
TOTAL	1853	1058	2226	2251	2211	6021	12439	21399	16587	3959	625	1450.0
MEAN	59.8	35.3	71.8	72.6	76.2	194	415	690	583	128	20.2	48.3
MAX	175	37	108	80	133	390	665	1140	769	551	21	154
MIN	33	34	35	63	66	86	274	271	451	20	20	3.9
AC-FT	3680	2100	4420	4460	4390	11940	24670	42440	32900	7850	1240	2980
CAL YR 1975	TOTAL	106479.0	MEAN 292	MAX 1960	MIN	23	AC-FT 211200					
WTR YR 1976	TOTAL	72079.0	MEAN 197	MAX 1140	MIN	3.9	AC-FT 143000					



# BEAR RIVER BASIN

## 265. Bear River near Randolph, Utah

LOCATION.--Lat 41°48'02", long 111°04'20", in SE¼NE¼ sec.7, T.12 N., R.8 E., Rich County, Hydrologic Unit 16010101, on left bank 3.7 mi (6.0 km) upstream from Twin Creek, 5.0 mi (8.0 km) upstream from Utah-Wyoming State line, and 11 mi (18 km) northeast of Randolph.

DRAINAGE AREA.--1,616 mi<sup>2</sup> (4,185 km<sup>2</sup>).

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 6,200 ft (1,889.8 m), from river-profile map. Prior to Aug. 17, 1971, 0.2 mi (0.3 km) upstream at different datum.

REMARKS.--Records good except those for winter months, which are fair. Diversion for irrigation of about 94,500 acres (382 km<sup>2</sup>) above station. Flow regulated by upstream reservoirs.

AVERAGE DISCHARGE.--33 years, 207 ft<sup>3</sup>/s (5.86 m<sup>3</sup>/s), 149,700 acre-ft/yr (185 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,660 ft<sup>3</sup>/s (75.3 m<sup>3</sup>/s) May 8, 1952; maximum gage height, 8.99 ft (2.740 m) June 17, 1965, site and datum then in use; minimum discharge, 1.6 ft<sup>3</sup>/s (0.05 m<sup>3</sup>/s) Nov. 12, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,210 ft<sup>3</sup>/s (34.3 m<sup>3</sup>/s) Mar. 26, gage height, 6.88 ft (2.097 m); minimum, 13 ft<sup>3</sup>/s (0.37 m<sup>3</sup>/s) Aug. 31, Sept. 1.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	90	126	102	86	240	600	421	236	184	85	18
2	129	90	131	109	82	402	600	411	251	182	82	21
3	129	91	126	104	84	523	700	395	248	174	87	23
4	131	91	122	103	92	526	800	391	230	165	83	21
5	136	91	117	107	76	450	900	398	195	166	80	20
6	154	91	114	107	60	370	1000	410	174	188	75	20
7	158	91	103	105	62	300	1100	429	161	187	73	23
8	134	91	94	99	93	200	892	450	159	168	70	20
9	102	90	86	104	92	184	850	467	159	158	67	23
10	90	90	80	114	96	180	754	487	157	148	66	38
11	86	93	67	112	93	192	745	510	151	138	65	58
12	86	98	59	105	89	217	744	515	214	111	64	64
13	91	103	102	110	91	217	698	530	263	95	62	67
14	89	90	124	105	92	233	676	562	334	84	59	70
15	92	87	147	109	90	243	647	590	347	72	55	74
16	89	76	124	109	92	247	598	587	337	68	56	78
17	87	73	117	115	89	264	555	621	356	68	57	77
18	85	79	104	118	90	354	522	681	335	60	58	69
19	78	79	102	118	90	634	481	686	321	47	57	53
20	78	67	108	110	90	728	442	678	295	41	55	45
21	81	91	114	98	90	685	423	517	261	35	46	42
22	87	96	121	102	90	731	413	536	242	39	39	52
23	89	100	121	98	90	875	411	560	227	36	27	64
24	90	103	124	97	90	938	402	553	205	31	34	48
25	87	94	122	100	90	1060	406	455	185	29	52	47
26	90	105	119	92	90	1200	423	390	153	54	40	45
27	96	102	118	89	90	1030	444	318	145	81	38	44
28	98	124	116	89	90	832	464	237	126	82	44	40
29	99	128	109	92	150	760	451	196	109	58	35	38
30	96	126	122	90	---	700	439	224	140	55	23	38
31	91	---	116	90	---	650	---	259	---	68	14	---
TOTAL	3156	2820	3455	3202	2619	16163	18586	14466	6736	3075	1748	1343
MEAN	102	94.0	111	103	90.3	521	620	467	225	99.2	56.4	44.8
MAX	158	128	147	118	150	1200	1100	688	356	188	87	78
MIN	78	67	59	89	60	180	402	196	109	29	14	18
AC-FT	6260	5590	6650	6350	5190	32060	36870	28690	13360	6100	3470	2660
CAL YR 1975	TOTAL	96929	MEAN 266	MAX 1830	MIN 44	AC-FT 192300						
WTR YR 1976	TOTAL	77369	MEAN 211	MAX 1200	MIN 14	AC-FT 153500						

## BEAR RIVER BASIN

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

LOCATION.--Lat 41°56'20", long 110°59'05", in SE¼SE¼ sec. 25, T.23 N., R.120 W., Lincoln County, Hydrologic Unit 16010102, 800 ft (243 m) downstream from Pixley Dam, 11 mi (18 km) south of Cokeville, and 17.5 mi (28.2 km) downstream from Twin Creek.

DRAINAGE AREA.--2,032 mi<sup>2</sup> (5,263 km<sup>2</sup>).

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 (1,885.2 m) from river-profile map. Oct. 31, 1941 to Nov. 30, 1943, at site 200 ft (61 m) downstream at different datum.

REMARKS.--Records good. Natural flow of stream affected by diversions for irrigation, return flow from irrigate areas, and regulation by upstream reservoirs.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 2,300 ft<sup>3</sup>/s (65.1 m<sup>3</sup>/s) Mar. 25, 1956; minimum daily recorded, 0.3 ft<sup>3</sup>/s (0.008 m<sup>3</sup>/s) Aug. 21, 1961.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 583 ft<sup>3</sup>/s (16.5 m<sup>3</sup>/s) May 12, gage height, 5.52 ft (1.682 m); minimum daily, 20 ft<sup>3</sup>/s (0.57 m<sup>3</sup>/s) Sept. 6, 7.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							---	535	221	126	98	29
2							---	514	215	99	114	29
3							---	493	126	59	156	30
4							---	473	136	86	116	22
5							---	473	128	128	103	21
6							---	487	128	123	103	20
7							---	497	128	123	96	20
8							---	516	124	135	91	22
9							---	533	120	141	87	27
10							---	548	116	144	87	28
11							---	570	96	144	86	40
12							---	583	91	179	85	55
13							---	479	107	202	83	61
14							---	479	141	230	81	65
15							---	529	185	180	78	69
16							---	550	276	141	76	78
17							---	557	310	120	76	82
18							---	566	320	128	76	77
19							---	579	353	129	78	68
20							---	575	366	120	76	92
21							---	527	344	86	71	79
22							---	493	312	62	64	59
23							---	564	293	67	59	67
24							---	510	218	65	47	60
25							---	471	284	59	53	61
26							---	417	188	42	68	59
27							---	306	174	56	58	59
28							---	279	159	116	55	57
29							575	245	147	87	59	55
30							597	215	138	78	48	53
31							---	213	---	78	36	---
TOTAL							---	14718	5864	3533	2466	1544
MEAN							---	475	195	114	79.5	51.5
MAX							---	583	366	240	156	92
MIN							---	213	91	42	38	20
AC-FT							---	29190	11630	7010	4890	3060

THE SEASON AC-FT 55780

## BEAR RIVER BASIN

### 320. Smiths Fork near Border, Wyo.

LOCATION.--Lat 42°17'16", long 110°02'14", in NW1 sec.33, T.27 N., R.118 W., Lincoln County, Hydrologic Unit 16010102, on left bank 4.5 mi (7.2 km) upstream from Howland Creek, 6 mi (10 km) downstream from Hobble Creek, and 12 mi (19 km) northeast of Border.

DRAINAGE AREA.--165 mi<sup>2</sup> (427 km<sup>2</sup>).

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

REVISED RECORDS.--WSP 1234: 1952 (M).

GAGE.--Water-stage recorder. Altitude of gage is 6,680 ft (2,036 m) from topographic map. Prior to Oct. 16, 1945, at site 0.8 mi (1.3 km) downstream at different datum.

REMARKS.--Records good except those for winter periods, which are fair. One diversion for irrigation of about 200 acres (809,000 m<sup>2</sup>) above station.

AVERAGE DISCHARGE.--34 years, 199 ft<sup>3</sup>/s (5.64 m<sup>3</sup>/s), 144,200 acre-ft/yr (178 km<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,610 ft<sup>3</sup>/s (45.6 m<sup>3</sup>/s) June 18, 1971, gage height, 5.61 ft (1.710 m); minimum, 21 ft<sup>3</sup>/s (0.59 m<sup>3</sup>/s) Mar. 29, 1975.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,540 ft<sup>3</sup>/s (29.5 m<sup>3</sup>/s) May 15, gage height, 4.58 ft (1.396 m); minimum, 25 ft<sup>3</sup>/s (0.71 m<sup>3</sup>/s) Mar. 12.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	95	77	60	60	50	61	286	848	496	243	129
2	111	95	73	60	55	50	62	381	874	485	226	127
3	110	95	74	60	55	50	64	437	896	458	221	125
4	109	93	78	60	50	50	71	528	896	437	211	123
5	108	92	76	60	50	50	83	554	879	427	204	122
6	108	92	74	60	49	50	98	588	870	414	206	122
7	108	93	73	60	50	50	97	636	867	399	195	126
8	114	92	73	60	50	50	107	672	851	388	191	120
9	110	84	73	60	50	50	120	752	832	374	188	118
10	116	87	69	60	50	50	119	793	811	362	186	117
11	108	89	68	60	50	50	135	832	794	358	183	116
12	114	89	71	60	50	54	162	795	726	341	182	121
13	117	89	68	60	50	52	172	777	698	328	177	116
14	113	86	62	60	50	52	180	859	626	316	172	113
15	107	85	64	65	52	50	203	980	577	305	171	111
16	106	85	62	65	53	47	188	871	568	297	171	109
17	106	83	60	64	51	51	171	848	543	292	166	109
18	106	82	60	68	50	52	172	902	566	294	166	111
19	104	82	61	60	50	54	175	946	529	282	166	108
20	103	74	60	60	50	51	182	970	519	275	156	108
21	102	86	60	60	50	53	192	946	548	266	153	107
22	104	84	60	60	50	52	208	967	582	260	151	106
23	102	80	60	60	50	56	227	947	578	253	162	109
24	101	79	60	60	50	55	242	926	551	247	154	107
25	94	80	60	60	50	57	276	883	523	244	148	107
26	106	82	60	60	51	55	251	822	505	239	146	106
27	105	92	60	60	50	57	224	807	488	234	147	106
28	99	83	60	69	49	55	216	848	486	228	140	104
29	95	80	60	75	50	55	215	902	488	225	137	103
30	100	71	60	67	---	58	239	899	482	224	135	102
31	98	---	60	68	---	57	---	862	---	230	133	---
TOTAL	3293	2581	2036	1913	1477	1623	4912	24204	19955	9978	5381	3410
MEAN	106	86.0	65.7	61.7	50.9	52.4	164	781	657	322	174	114
MAX	117	95	78	75	60	58	276	980	896	496	243	129
MIN	94	71	60	60	49	47	61	288	480	224	133	102
AC-FT	6530	5120	4040	3790	2920	3220	9740	48010	39660	19790	10670	6760
CAL YR 1975	TOTAL	80671	MEAN	221	MAX	1040	MIN	44	AC-FT	160000		
WTR YR 1976	TOTAL	80803	MEAN	221	MAX	980	MIN	47	AC-FT	166300		

# BEAR RIVER BASIN

## 395. Bear River at Border, Wyoming

LOCATION.--lat 42°12'46", long 111°03'11", in NEELER's sec.15, T.14 S., R.46 E., Bear Lake County, Idaho, Hydrologic Unit 16010102, on left bank 0.2 mi (0.3 km) west of Idaho-Wyoming State line, 0.5 mi (0.8 km) west of Border, and 2.1 mi (3.4 km) upstream from Thomas Fork.

DRAINAGE AREA.--2,486 mi<sup>2</sup> (6,439 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 6,051.61 ft (1,844.537 m) above mean sea level, unadjusted.

REMARKS.--Records good except those for winter months, which are fair. Natural flow of stream affected by regulation by upstream reservoirs, diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--39 years, 432 ft<sup>3</sup>/s (12.2 m<sup>3</sup>/s), 313,106 acre-ft/yr (396 km<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 3,600 ft<sup>3</sup>/s (104 m<sup>3</sup>/s) May 11, 1952, gage height, 8.89 ft (2.710 m); minimum daily, 30 ft<sup>3</sup>/s (0.85 m<sup>3</sup>/s) Aug. 18-22, 1940.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,620 ft<sup>3</sup>/s (103 m<sup>3</sup>/s) Apr. 6, gage height, 6.72 ft (2.058 m); minimum, 188 ft<sup>3</sup>/s (5.32 m<sup>3</sup>/s) Sept. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	292	292	220	270	240	270	400	470	1040	514	260	201
2	205	290	240	270	230	290	1000	1020	1020	493	260	195
3	263	290	240	270	220	310	1200	1070	996	464	277	214
4	283	288	260	270	217	340	1400	1150	900	433	310	210
5	201	285	260	270	220	440	2400	1190	870	438	272	199
6	285	281	260	260	220	420	3310	1220	650	461	261	195
7	299	286	270	250	220	530	2510	1260	844	467	253	197
8	312	296	280	227	220	500	2450	1320	644	447	251	197
9	301	285	290	240	220	450	2940	1380	609	449	246	195
10	290	277	300	250	220	400	2500	1440	790	438	240	197
11	283	266	290	250	220	340	2340	1500	772	424	242	197
12	281	250	290	260	220	292	2220	1500	761	419	236	208
13	285	270	296	260	220	360	2020	1500	789	447	232	209
14	283	280	310	260	220	320	1960	1481	790	416	228	209
15	274	260	300	260	230	310	1760	1500	740	401	226	216
16	266	285	280	260	230	310	1590	1640	754	405	224	216
17	266	281	270	270	220	310	1360	1620	832	397	222	218
18	263	255	290	270	220	330	1160	1630	900	414	222	222
19	257	253	300	260	220	360	1100	1660	940	433	224	228
20	255	230	300	250	210	500	1040	1670	912	424	220	216
21	253	260	290	250	210	600	1000	1680	916	367	214	242
22	253	260	280	250	210	700	1050	1640	860	340	205	228
23	259	260	270	250	210	650	1010	1610	856	306	207	214
24	259	260	260	250	220	760	1000	1590	609	294	214	234
25	259	260	260	250	230	750	1020	1530	716	288	208	234
26	263	250	270	250	230	750	1050	1440	676	281	207	224
27	285	250	260	250	230	700	1020	1290	629	255	222	220
28	205	240	280	240	240	850	1010	1160	580	261	222	216
29	281	240	270	250	250	850	992	1130	539	299	218	214
30	277	230	270	260	---	850	976	1110	539	266	216	212
31	299	---	270	250	---	460	---	1070	---	261	208	---
TOTAL	8597	8032	8560	7927	6467	15822	96818	43126	24295	12064	7261	6399
MEAN	277	266	276	250	223	510	1561	1391	810	389	234	213
MAX	312	296	310	270	250	900	3310	1690	1040	514	310	242
MIN	253	230	220	227	210	270	900	976	539	255	205	195
AC-FT	17050	15930	16980	15720	12830	31380	92860	65540	48190	23930	14400	12690
CAL YR 1975	TOTAL	205163	MEAN	562	MAX	2360	MIN	160	AC-FT	406900		
WTR YR 1976	TOTAL	195368	MEAN	534	MAX	3310	MIN	195	AC-FT	387500		

# BEAR RIVER BASIN

## 460. Rainbow inlet canal near Dingle, Idaho

LOCATION.--Lat 42°13'48", long 111°17'43", in SE¼ sec.3, T.14 S., R.44 E., Bear Lake County, Hydrologic Unit 16010201, on left bank 1.5 mi (2.4 km) west of Dingle and 1.8 mi (2.9 km) downstream from headworks at Stewart Dam.

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

GAGE.--Water-stage recorder. Elevation of gage datum is 5,922.0 ft (1,805.03 m) above mean sea level [by topographic survey]. Prior to Oct. 1, 1923, at site 305 ft (91 m) downstream at different datum; Oct. 1, 1923 to Oct. 27, 1944, at site 0.5 mi (0.8 km) downstream at different datum.

REMARKS.--Records good. Canal diverts from Bear River at Stewart Dam in NE¼ 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 surplus water from irrigation.

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

AVERAGE DISCHARGE.--54 years, 344 ft<sup>3</sup>/s (9.74 m<sup>3</sup>/s), 249,200 acre-ft/yr (307 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,180 ft<sup>3</sup>/s (118 m<sup>3</sup>/s) May 7, 1952, gage height, 8.62 ft (2.627 m); minimum daily, 1 ft<sup>3</sup>/s (0.028 m<sup>3</sup>/s) on several days in 1931, 1934, 1940, 1948.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,730 ft<sup>3</sup>/s (106 m<sup>3</sup>/s) Apr. 9, gage height, 8.59 ft (2.618 m); minimum, 24 ft<sup>3</sup>/s (0.68 m<sup>3</sup>/s) Sept. 22.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	240	328	218	246	189	170	754	1220	972	256	217	191
2	238	326	253	176	155	242	783	1230	869	266	224	183
3	233	322	240	129	163	259	841	1290	820	259	242	160
4	231	318	224	127	183	235	943	1350	728	251	269	164
5	230	321	243	165	194	226	1100	1430	621	238	292	162
6	233	348	281	210	207	279	1320	1410	582	234	279	150
7	235	328	272	209	193	359	1890	1420	558	216	264	140
8	256	329	280	207	182	382	3610	1460	953	218	246	141
9	283	331	291	207	182	383	3440	1530	547	206	236	131
10	281	321	277	207	191	361	2880	1630	519	215	232	114
11	265	286	258	221	211	370	2690	1710	483	219	219	113
12	253	212	240	193	215	370	2470	1780	465	197	213	102
13	254	199	256	204	221	302	2300	1830	472	193	224	110
14	285	248	318	209	223	254	2180	1850	481	260	229	118
15	289	322	188	211	218	289	2010	1790	489	244	228	116
16	292	300	217	212	245	328	1830	1630	492	254	244	134
17	287	253	209	235	296	276	1660	1910	499	239	236	103
18	284	261	179	238	275	265	1490	1560	543	224	231	95
19	279	230	201	256	222	288	1330	1400	654	272	229	93
20	270	165	195	234	224	365	1230	1900	680	316	227	117
21	267	131	220	210	261	327	1310	1900	662	333	221	94
22	264	182	218	187	207	420	1250	1960	648	294	211	42
23	256	122	222	184	177	442	1260	1920	604	259	196	120
24	264	142	232	194	184	504	1250	1850	596	236	159	124
25	270	181	238	211	199	538	1280	1820	562	227	187	125
26	289	312	245	203	194	620	1320	1760	512	225	183	137
27	309	158	235	212	193	600	1330	1620	390	214	160	146
28	314	234	253	181	183	686	1290	1370	244	179	263	141
29	308	266	211	198	174	714	1260	1240	320	191	212	146
30	307	259	164	204	---	722	1220	1170	265	216	203	152
31	307	---	196	183	---	748	---	1090	---	210	194	---
TOTAL	8373	7735	7274	6263	5962	12324	48921	50190	16830	7341	6930	3834
MEAN	270	258	235	202	206	398	1631	1619	561	237	224	120
MAX	314	348	318	256	296	748	3440	1960	972	333	292	191
MIN	230	122	164	127	155	170	754	1090	244	179	159	42
AC-FT	16610	15340	14430	12420	11830	24440	97030	99550	33380	14600	13750	7600
CAL YR 1975 TOTAL	194320		MEAN 532	MAX 2260	MIN 108	AC-FT 385400						
WTR YR 1976 TOTAL	181977		MEAN 497	MAX 3440	MIN 42	AC-FT 361000						

## BEAR RIVER BASIN

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

LOCATION.--Lat 42°15'14", long 111°17'35", in NE¼ sec.34, T.13 S., R.44 E., Bear Lake County, Hydrologic Unit 16010201, on right bank 300 ft (91 m) downstream from Stewart Dam and 4.5 mi (7.2 km) south of Montpelier.

DRAINAGE AREA.--2,853 mi<sup>2</sup> (7,389 km<sup>2</sup>).

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 (1,814 m) from topographic map.

REMARKS.--Records good. Water diverted at Stewart Dam through Rainbow inlet canal (station 10046000) for storage in Bear Lake.

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

AVERAGE DISCHARGE.--54 years, 47.7 ft<sup>3</sup>/s (1.35 m<sup>3</sup>/s), 34,560 acre-ft/yr (42.6 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 3,050 ft<sup>3</sup>/s (86.4 m<sup>3</sup>/s) June 3, 1923; no flow July 15, 1956.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 155 ft<sup>3</sup>/s (4.39 m<sup>3</sup>/s) Sept. 22, gage height, 2.69 ft (0.820 m); minimum, 3.70 ft<sup>3</sup>/s (0.105 m<sup>3</sup>/s) Sept. 21.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.6	7.0	7.7	7.2	6.9	6.6	16	5.3	12	12	10	5.7
2	6.6	7.1	8.4	6.8	6.9	6.7	18	5.3	12	12	10	6.2
3	6.5	7.1	8.6	6.7	6.9	6.9	18	5.4	12	12	10	6.0
4	6.5	7.0	8.9	6.4	6.6	7.0	18	7.2	12	12	10	5.9
5	6.4	7.0	9.3	6.4	5.9	7.1	21	10	12	13	9.9	5.7
6	6.2	7.5	9.4	6.9	6.0	7.8	25	11	12	13	11	5.7
7	6.3	7.2	9.6	6.4	5.9	8.5	29	12	12	13	11	5.5
8	6.5	7.0	9.9	6.3	5.8	8.1	33	12	12	13	11	5.4
9	6.9	7.0	9.8	6.4	5.6	7.9	30	12	12	13	11	5.3
10	7.1	7.0	10	6.5	4.9	7.7	17	13	13	13	10	5.3
11	7.1	7.1	10	6.5	4.7	7.5	15	13	14	13	10	5.3
12	6.9	7.2	10	6.5	4.6	7.1	14	13	15	13	9.7	5.2
13	6.6	7.5	9.8	6.7	4.6	6.8	13	13	16	12	9.1	5.4
14	6.4	7.8	9.0	6.9	4.5	6.7	12	13	17	12	8.6	5.5
15	6.5	8.6	7.0	7.3	4.4	6.5	11	13	16	12	8.2	5.6
16	6.6	8.8	7.1	7.5	4.4	6.3	11	13	16	12	7.8	5.7
17	6.6	12	7.4	7.9	4.5	6.2	8.7	13	15	12	7.4	6.2
18	6.7	13	7.4	8.0	4.7	6.5	7.0	13	15	13	6.5	6.6
19	6.8	12	7.4	9.1	4.8	6.4	6.0	12	15	13	5.9	7.0
20	6.7	10	7.3	9.1	4.5	6.5	5.8	12	15	13	5.4	7.3
21	6.7	9.2	7.1	8.8	4.4	7.2	5.2	12	14	12	5.0	5.7
22	6.6	9.0	6.9	8.5	4.6	9.3	4.7	12	14	12	4.5	9.9
23	6.4	9.2	7.0	8.3	5.1	12	4.6	12	13	11	3.2	1.3
24	6.3	9.6	7.3	8.0	5.2	15	4.7	11	13	11	4.3	7.7
25	6.3	9.3	7.3	7.8	5.4	17	4.8	11	12	11	3.8	7.7
26	6.4	8.5	7.3	7.6	5.6	16	5.0	10	12	11	4.1	7.7
27	6.9	7.8	7.4	7.4	6.1	16	5.4	11	11	11	4.4	7.7
28	6.9	8.5	7.6	7.1	6.4	14	5.4	11	11	10	4.8	7.7
29	6.9	8.6	7.8	6.9	6.5	13	5.4	12	13	10	5.1	7.8
30	6.7	7.6	7.7	6.9	---	13	5.6	12	13	10	5.4	8.0
31	6.8	---	7.6	6.9	---	14	---	12	---	10	5.0	---
TOTAL	205.4	252.2	255.2	226.3	156.4	287.3	379.3	347.2	401	370	300.2	339.8
MEAN	6.63	8.41	8.23	7.30	5.39	9.27	12.6	11.2	13.4	11.9	9.68	11.3
MAX	7.1	13	10	9.1	6.9	17	33	13	17	13	4.3	9.9
MIN	6.2	7.0	6.9	6.3	4.4	6.2	4.6	5.3	11	10	3.8	5.2
AC-FT	407	500	506	449	310	570	752	669	795	734	595	674
CAL YR 1975 TOTAL	2507.6											
MEAN 6.87												
MAX 13												
MIN 3.4												
AC-FT 4970												
WTR Yr 1976 TOTAL	3520.3											
MEAN 9.62												
MAX 9.9												
MIN 3.8												
AC-FT 6980												

# BEAR RIVER BASIN

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

LOCATION.--Lat<sup>o</sup>42 07'16", long 111°16'52", in NE1/4 sec.16, T.15 S., R.44 E., Bear Lake County, Hydrologic Unit 16010201, in Lifton pumping plant of Utah Power & Light Company 3.5 mi (5.6 km) east of St. Charles.

DRAINAGE AREA.--435 mi<sup>2</sup> (1,127 km<sup>2</sup>), approximately (does not include Mud Lake drainage).

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

GAGE.--Water-stage recorder. Datum of gage is 5,900 ft (1,798.3 m) above mean sea level, unadjusted (Utah Power & Light Company datum).

REMARKS.--Outflow regulated by gates and pumps at the north end of Bear Lake and by gates in dike at north end of Mud Lake, a shallow interconnected lake. Principal inflow to Bear Lake is from Bear River through Rainbow inlet canal (station 10946000) and Dingle inlet canals into Mud Lake, from which the inflow can enter into Bear Lake either through the pumping plant or an opening in the dividing causeway. The inflow can be routed directly into the Outlet canal (station 10059500). Usable capacity of Bear Lake is 1,221,000 acre-feet (1.75 km<sup>3</sup>) between elevation 5,902.00 ft (1,798.93 m), lower limit of pumps, and 5,923.65 ft (1,805.52 m), upper limit of storage with existing facilities. Water is used for irrigation and power development. Figures given herein represent usable contents.

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

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,423,000 acre-ft (1.75 km<sup>3</sup>) June 10, 1923, elevation, 5,923.68 ft (1,805.538 m); no usable contents Nov. 9-10, 1935.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,303,000 acre-ft (1.61 km<sup>3</sup>) June 28, 29, 30, July 1, 2, elevation 5,921.97 ft (1,805.918 m); minimum, 1,035,000 acre-ft (1.28 km<sup>3</sup>) Mar. 27, 28, 29, 30, Apr. 1, 2.

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

5918	1,026,000	5921	1,255,000
5919	1,098,000	5922	1,305,000
5920	1,165,000		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1975 TO SEPTEMBER, 1976

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1215000	1149000	1114000	1094000	1076000	1051000	1035000	1146000	1269000	1033000	1258000	1220000
2	1212000	1147000	1114000	1092000	1074000	1050000	1035000	1143000	1271000	1033000	1258000	1217000
3	1211000	1145000	1113000	1090000	1072000	1049000	1034000	1140000	1273000	1027000	1259000	1216000
4	1209000	1144000	1113000	1088000	1070000	1048000	1033000	1137000	1275000	1020000	1254000	1215000
5	1207000	1143000	1113000	1086000	1068000	1047000	1032000	1134000	1277000	1016000	1252000	1213000
6	1205000	1141000	1112000	1084000	1066000	1046000	1031000	1131000	1278000	1010000	1250000	1212000
7	1200000	1140000	1112000	1080000	1065000	1045000	1030000	1128000	1280000	1000000	1249000	1211000
8	1197000	1138000	1112000	1080000	1065000	1045000	1030000	1126000	1282000	999000	1247000	1210000
9	1194000	1137000	1111600	1079000	1064500	1045000	1030000	1124000	1284000	998000	1245000	1209000
10	1191000	1136000	1111600	1078000	1064000	1045000	1030000	1122000	1286000	997000	1243000	1208000
11	1189000	1134000	1110900	1078000	1062000	1044000	1029000	1119000	1287000	997000	1242000	1206000
12	1186000	1132000	1110500	1078000	1062000	1044000	1029000	1118000	1289000	996000	1241000	1206000
13	1184000	1130000	1110000	1078000	1061500	1044000	1029000	1117000	1290000	995000	1240000	1206000
14	1182000	1127000	1109000	1078000	1061000	1044000	1029000	1116000	1291000	994000	1238000	1197000
15	1179000	1124000	1108000	1078000	1060500	1044000	1029000	1115000	1293000	993000	1236000	1194000
16	1176000	1122000	1107000	1078000	1060000	1044000	1029000	1114000	1295000	992000	1234000	1192000
17	1173000	1121000	1107000	1078000	1059500	1044000	1029000	1113000	1297000	991000	1233000	1190000
18	1171000	1120000	1106000	1078000	1059000	1044000	1029000	1112000	1299000	990000	1232000	1189000
19	1169000	1118000	1106000	1078000	1058500	1044000	1029000	1111000	1301000	989000	1231000	1187000
20	1167000	1117000	1104000	1078000	1058000	1044000	1029000	1110000	1303000	988000	1230000	1185000
21	1165000	1117000	1103000	1081000	1058000	1044000	1114000	1220000	1297000	1282000	1231000	1182000
22	1163000	1116000	1102000	1080000	1058000	1044000	1117000	1231000	1299000	1280000	1229000	1180000
23	1160000	1116000	1101000	1080000	1058000	1044000	1120000	1237000	1299000	1279000	1228000	1178000
24	1157000	1115000	1101000	1079000	1058000	1044000	1121000	1240000	1299000	1277000	1227000	1177000
25	1155000	1115000	1099000	1079000	1058000	1044000	1123000	1240000	1299000	1276000	1225000	1176000
26	1154000	1115000	1099000	1078000	1058000	1044000	1125000	1252000	1299000	1276000	1224000	1175000
27	1154000	1115000	1098000	1078000	1058000	1044000	1128000	1255000	1299000	1275000	1223000	1174000
28	1153000	1115000	1097000	1078000	1058000	1044000	1131000	1258000	1299000	1274000	1222000	1173000
29	1152000	1114000	1097000	1078000	1058000	1044000	1134000	1262000	1299000	1273000	1221000	1172000
30	1150000	1114000	1096000	1078000	1058000	1044000	1137000	1265000	1299000	1272000	1220000	1171000
31	1150000	---	1095000	1071000	---	1035000	---	1267000	---	1259000	1220000	---
MAX	12150000	1149000	1114000	1094000	1076000	1054000	1137000	1267000	1303000	1303000	1258000	1220000
MIN	1150000	1114000	1095000	1071000	1051000	1035000	1140000	1269000	1259000	1220000	1189000	---
(+)	5919.79	5919.27	5919.00	5918.65	5918.33	5918.13	5919.60	5921.46	5921.97	5921.35	5920.70	5920.00
(-)	-67000	-36000	-19700	-24000	-28000	-16000	-192000	-150000	-36000	-44000	-19000	-51000
CAL YR 1975	+7500											
WTR YR 1976	-48700											

+ Elevation, in feet, at end of month.  
- Storage in contents, in acre-feet.

# BEAR RIVER BASIN

## 595. Bear Lake outlet canal near Paris, Idaho

LOCATION:--Lat 42°13'00", long 111°20'35", in SW¼ sec.8, T.14 S., R.44 E., Bear Lake County, Hydrologic Unit 160102Q1, on right bank 2,000 ft (610 m) downstream from headgates (at dike) and 3 mi (5 km) southeast of Paris.

### WATER-DISCHARGE RECORDS

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 (1,802.16 m) above mean sea level (from topographic survey).

REMARKS.--Records good. Flow regulated by Bear Lake (station 10055500).

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

AVERAGE DISCHARGE.--54 years, 374 ft<sup>3</sup>/s (10.6 m<sup>3</sup>/s), 271,000 acre-ft/yr (334 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 1,870 ft<sup>3</sup>/s (53.0 m<sup>3</sup>/s) Aug. 8, 1924; minimum daily, 1 ft<sup>3</sup>/s (0.28 m<sup>3</sup>/s) for many days in 1937, 1954, 1959, 1961, 1964.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 1,340 ft<sup>3</sup>/s (37.9 m<sup>3</sup>/s) Oct. 6, gage height, 18.38 ft (5.602 m); minimum daily, 5.4 ft<sup>3</sup>/s (0.15 m<sup>3</sup>/s) Apr. 11-30, May 1-31, June 1-8, 13-24.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1300	1310	620	858	799	749	514	5.4	5.4	904	1190	226
2	1280	1320	612	852	858	714	521	5.4	5.4	929	1170	373
3	1298	1330	608	804	711	732	537	5.4	5.4	904	1080	517
4	1308	1320	680	738	472	710	552	5.4	5.4	857	956	524
5	1310	1320	581	705	525	720	461	5.4	5.4	812	870	521
6	1330	1310	506	712	668	748	152	5.4	5.4	812	779	518
7	1300	1300	514	694	655	747	5.4	5.4	5.4	1030	762	516
8	1280	1290	411	716	675	598	5.4	5.4	5.4	1210	731	584
9	1300	1280	202	699	721	616	5.4	5.4	119	1200	648	706
10	1280	1270	52	675	718	625	5.4	5.4	278	1240	440	751
11	1290	1260	169	688	725	612	5.4	5.4	274	1180	443	918
12	1280	1260	435	717	745	559	5.4	5.4	160	1180	476	856
13	1310	1280	619	739	759	532	5.4	5.4	5.4	1250	513	789
14	1330	1280	641	715	751	594	5.4	5.4	5.4	1230	506	803
15	1330	1290	653	719	753	692	5.4	5.4	5.4	1210	510	867
16	1320	1280	680	700	760	678	5.4	5.4	5.4	1200	519	801
17	1310	1090	711	701	763	716	5.4	5.4	5.4	1226	563	818
18	1310	694	703	723	714	707	5.4	5.4	5.4	1256	633	832
19	1306	820	701	764	709	607	5.4	5.4	5.4	1270	629	849
20	1300	752	690	773	687	704	5.4	5.4	5.4	1160	555	851
21	1290	734	693	746	688	735	5.4	5.4	5.4	1020	456	861
22	1290	715	704	745	697	713	5.4	5.4	5.4	926	453	786
23	1326	713	705	715	614	676	5.4	5.4	5.4	866	460	783
24	1336	689	707	681	699	587	5.4	5.4	5.4	873	450	777
25	1320	670	703	694	720	485	5.4	5.4	110	883	417	771
26	1310	634	700	683	645	509	5.4	5.4	239	907	386	771
27	1325	656	696	716	646	515	5.4	5.4	232	910	341	771
28	1293	681	671	694	717	527	5.4	5.4	330	935	242	756
29	1266	627	676	688	725	514	5.4	5.4	909	1040	237	770
30	1280	674	665	660	---	472	5.4	5.4	902	1190	234	758
31	1310	---	679	744	---	505	---	5.4	---	1200	233	---
TOTAL	40380	31029	18471	22478	20419	19598	28668	167.4	3861.0	32812	17885	21368
MEAN	1303	1034	596	725	704	632	95.0	5.40	129	1056	577	712
MAX	1336	1330	711	858	858	749	552	5.4	909	1270	1190	918
MIN	1260	627	52	675	472	472	5.4	5.4	5.4	812	233	228
AC-FT	80090	61550	36640	44590	40500	38870	5690	332	7660	65080	35470	42360
CAL YR 1975	TOTAL	216138.7	MEAN	592	MAX	1370	MIN	5.0	AC-FT	428700		
WTR YR 1976	TOTAL	231335.2	MEAN	632	MAX	1330	MIN	5.4	AC-FT	458900		



## BEAR RIVER BASIN

### 927. Bear River at Idaho—Utah State Line

LOCATION.--Lat 42°00'47", long 111°55'14", in NW¼NE¼ sec.29, T.16 S., R.39 E., Franklin County, Idaho, Hydrologic Unit 16010252, on left bank 1,050 ft (320 m) downstream from inlet canal to Cub River pumps, 1.1 mi (1.8 km) downstream from Weston Creek, 1.8 mi (2.9 km) upstream from State line, and 3.5 mi (5.6 km) southeast of Weston.

DRAINAGE AREA.--4,891 mi<sup>2</sup> (12,642 km<sup>2</sup>).

PERIOD OF RECORD.--October 1970 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,420 ft (1,347 m) from topographic map.

REMARKS.--Records good except those for winter period, which are fair. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--6 years, 1,444 ft<sup>3</sup>/s (40.9 m<sup>3</sup>/s), 1,046,000 acre-ft/yr (1.29 km<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,190 ft<sup>3</sup>/s (119 m<sup>3</sup>/s) June 12, 1971, gage height, 8.25 ft (2.515 m); minimum daily, 73 ft<sup>3</sup>/s (2.07 m<sup>3</sup>/s) Nov. 20, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 3,400 ft<sup>3</sup>/s (96.3 m<sup>3</sup>/s) Apr. 12, gage height, 6.84 ft (2.085 m); minimum daily, 100 ft<sup>3</sup>/s (2.83 m<sup>3</sup>/s) June 24.

#### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1610	1690	1370	1500	1700	1400	1630	1580	1510	240	647	447
2	1620	2350	1730	1400	1600	2100	1490	1750	1390	618	461	208
3	1960	1480	1470	1300	1700	1400	1590	1470	1320	636	814	251
4	1640	2030	1250	1200	1500	1300	1540	1950	1270	693	851	621
5	1770	1860	1310	1200	1300	1400	1900	1600	980	720	943	248
6	1960	2040	1500	1200	2900	1500	2050	1670	1070	482	868	408
7	1870	1970	1220	1600	2900	1600	1800	1860	1010	736	720	358
8	1760	2100	1680	1400	2400	1800	1950	1820	505	830	603	517
9	1830	1950	949	1900	2500	1900	2300	1860	801	704	421	728
10	1930	2210	1110	1300	2100	1700	2050	2000	321	1080	600	781
11	1940	1920	1390	1700	2100	1700	1930	1810	607	926	716	889
12	1980	1870	1520	1500	2300	1700	3170	1960	574	789	564	728
13	2100	1888	1230	2000	2300	1200	3130	1620	396	785	603	744
14	2070	1790	967	1000	2600	1600	2900	1700	603	943	651	1160
15	2340	1740	1570	1700	2100	1500	2790	1600	732	989	670	889
16	1790	1820	1200	1500	2200	1200	2610	2110	693	876	793	830
17	2100	2030	1600	1500	1900	1700	2250	1850	557	931	430	1120
18	1960	2090	1500	1200	1400	1800	2050	1660	847	785	564	1010
19	2130	1970	1400	1800	1700	1700	1570	1810	697	943	662	801
20	2380	1690	1600	1500	2400	1200	1590	1890	507	454	296	1520
21	1510	1480	1500	1500	1900	1400	1570	1630	451	678	313	1170
22	2260	1450	1600	1300	2000	1500	1700	1520	568	876	500	1340
23	1990	1410	1500	2900	1800	1600	1620	1610	251	847	333	956
24	1930	1210	1400	2900	1700	1500	1800	1900	100	847	345	724
25	1920	1520	1300	2700	1600	1400	2010	1820	150	647	575	1060
26	2050	1260	1800	2300	1300	1280	2280	1310	200	408	402	951
27	2020	1560	1100	2400	1000	1350	1880	1770	300	863	348	1240
28	2160	1640	1700	1500	1900	1380	1750	1820	500	772	339	1070
29	1890	1130	1300	1400	1600	1640	1800	1520	700	651	568	1110
30	2410	1360	1600	1300	---	1480	2080	1660	400	744	248	797
31	2190	---	1400	1700	---	1420	---	1690	---	868	578	---
TOTAL	61070	52500	43766	51300	56800	47350	60780	53820	20010	23361	17426	24676
MEAN	1970	1750	1412	1655	1959	1527	2026	1736	667	754	562	823
MAX	2410	2350	1800	2900	2900	2100	3170	2110	1510	1080	943	1520
MIN	1510	1130	949	1000	1000	1200	1490	1310	100	240	248	208
AC-FT	121100	104100	86810	101800	112700	93920	120600	106800	39690	46340	34560	48940
CAL YR 1975 TOTAL	490293			1343	MAX 3000	MIN 330	AC-FT	972500				
WTR YR 1976 TOTAL	512859			MEAN 1401	MAX 3170	MIN 100	AC-FT	1017000				

# BEAR RIVER BASIN

## 930. Cub River near Preston, Idaho

LOCATION.--Lat 42°08'28", long 111°41'19", in SW¼ sec.5, T.15 S., R.41 E., Franklin County, Hydrologic Unit 16010202, Cache National Forest, on right bank 0.2 mi (0.3 km) upstream from headgates of Cub River-Worm Creek Canal, 0.7 mi (1.1 km) upstream from forest boundary, and 10 mi (16 km) east of Preston.

DRAINAGE AREA.--31.6 mi<sup>2</sup> (81.8 km<sup>2</sup>).

PERIOD OF RECORD.--March 1940 to September 1952, October 1955 to current year.

REVISED RECORDS.--WRD Utah 1974: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 5,285.1 ft (1,610.90 m) above mean sea level, unadjusted.

REMARKS.--Records good except those for winter periods, which are fair.

AVERAGE DISCHARGE.--33 years, 85.1 ft<sup>3</sup>/s (2.41 m<sup>3</sup>/s), 61,650 acre-ft/yr (76.0 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 803 ft<sup>3</sup>/s (22.7 m<sup>3</sup>/s) June 11, 1971; maximum gage height, 3.63 ft (1.167 m) June 2, 1943; no flow for part of Jan. 29, 1965, result of snowslide.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 516 ft<sup>3</sup>/s (14.6 m<sup>3</sup>/s) May 21, gage height, 2.40 ft (0.732 m); minimum, 15 ft<sup>3</sup>/s (0.43 m<sup>3</sup>/s) Jan. 8.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	28	27	23	22	31	31	93	457	154	56	35
2	35	28	25	23	23	28	32	109	457	147	54	35
3	35	27	25	23	23	26	35	128	449	137	54	35
4	34	27	25	23	24	25	48	167	435	130	52	34
5	34	28	25	23	23	24	63	191	427	124	51	34
6	34	28	25	23	22	23	71	195	416	119	50	35
7	35	29	25	22	22	23	58	226	408	116	49	35
8	34	28	26	22	22	22	70	261	387	111	48	34
9	33	28	26	22	22	22	89	293	370	106	47	34
10	32	27	27	22	23	22	75	310	359	102	46	34
11	32	27	27	22	23	23	85	344	346	98	46	33
12	32	26	28	22	23	23	97	364	308	94	46	34
13	35	27	27	21	23	22	94	331	277	91	45	33
14	34	27	26	21	23	23	86	360	252	87	45	33
15	32	27	26	21	23	22	85	433	232	83	45	32
16	31	26	26	21	23	22	74	434	220	80	45	32
17	30	26	25	21	23	23	64	427	219	78	43	32
18	30	26	25	21	23	25	57	457	217	76	43	31
19	29	26	25	21	23	30	52	486	214	76	42	32
20	29	26	25	21	23	28	51	501	220	73	41	31
21	29	26	25	21	22	27	56	497	229	71	40	31
22	30	26	25	21	22	27	63	484	230	69	40	31
23	29	26	25	21	22	27	70	460	214	66	41	31
24	29	25	24	21	22	26	79	478	197	65	39	31
25	29	26	24	21	22	26	96	463	185	63	39	30
26	31	26	24	21	22	25	92	431	177	62	39	30
27	30	26	24	21	23	25	83	439	167	61	38	30
28	29	26	23	21	24	25	80	466	159	59	38	29
29	29	26	23	21	26	24	80	478	154	58	37	29
30	29	26	24	21	---	24	83	476	154	57	36	28
31	28	---	23	22	---	26	---	469	---	56	36	---
TOTAL	978	801	780	670	664	769	2099	11251	8536	2769	1371	968
MEAN	31.5	26.7	25.2	21.6	22.9	24.8	70.0	363	285	89.3	44.2	32.3
MAX	36	29	28	23	26	31	97	501	457	154	56	35
MIN	28	25	23	21	22	22	31	93	154	56	36	28
AC-FT	1940	1590	1550	1330	1320	1530	4160	22320	16930	5490	2720	1920
CAL YR 1975 TOTAL	38206											
MEAN 105												
MAX 729												
MIN 16												
AC-FT 75780												
WTR YR 1976 TOTAL	31656											
MEAN 86.5												
MAX 501												
MIN 21												
AC-FT 62790												

# BEAR RIVER BASIN

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

LOCATION.--Lat 41°44'40", long 111°47'00", in NE¼ sec.36, T.12 N., R.1 E., Cache County, Hydrologic Unit 16010203, on right bank 0.5 mi (0.8 km) upstream from State dam, and 2.5 mi (4.0 km) east of Logan.

DRAINAGE AREA.--214 mi<sup>2</sup> (554 km<sup>2</sup>).

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 (station 10108000) 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 (1,426 m) from topographic map. Prior to May 7, 1913, nonrecording gage at various sites within 0.5 mi (0.8 km) downstream at different datum. May 7, 1913 to Sept. 3, 1938, water-stage recorder at present site at different datums.

REMARKS.--Records good. Flow affected by regulation and diversions above station for power, irrigation, and municipal culinary supply. Utah Power and Light Co. stopped diverting water from river November 1970 at which time the tailrace station (station 10108000) was discontinued. During 1963, site for gaging station for Logan, Hyde Park and Smithfield Canal (station 10108400) was relocated. Records for combined flow since that time are equivalent to previous records. For record of combined flow, see following page.

AVERAGE DISCHARGE.--River only: 63 years (water years 1914-76), 122 ft<sup>3</sup>/s (3.46 m<sup>3</sup>/s), 88,390 acre-ft/yr (109 hm<sup>3</sup>/yr).  
Combined river and canal: 80 years, 275 ft<sup>3</sup>/s (7.79 m<sup>3</sup>/s), 199,200 acre-ft/yr (246 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--River only: Maximum discharge, 2,000 ft<sup>3</sup>/s (56.6 m<sup>3</sup>/s) Mar. 21, 1916, gage height, 5.6 ft (1.71 m), datum then in use, from rating curve extended above 1,000 ft<sup>3</sup>/s (28.3 m<sup>3</sup>/s); minimum daily, 6 ft<sup>3</sup>/s (0.17 m<sup>3</sup>/s) Nov. 7, 1940.  
Combined river and canal: Maximum discharge observed, 2,480 ft<sup>3</sup>/s (70.2 m<sup>3</sup>/s) May 24, 1907; minimum daily, 50 ft<sup>3</sup>/s (1.42 m<sup>3</sup>/s) Jan. 21, 1935.

EXTREMES FOR CURRENT YEAR.--River only: Maximum discharge, 920 ft<sup>3</sup>/s (26.1 m<sup>3</sup>/s) May 19, gage height, 4.72 ft (1.439 m); minimum, 40 ft<sup>3</sup>/s (1.13 m<sup>3</sup>/s) Feb. 6.  
Combined river and canal: Maximum discharge, 997 ft<sup>3</sup>/s (28.2 m<sup>3</sup>/s) May 19; minimum daily, 106 ft<sup>3</sup>/s (3.00 m<sup>3</sup>/s) Feb. 6.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	167	169	152	129	121	145	131	318	721	376	227	145
2	167	169	154	121	120	131	137	368	721	364	213	145
3	163	169	152	129	121	127	139	407	721	342	210	143
4	163	169	149	129	123	125	145	473	711	332	224	143
5	163	165	149	129	120	127	160	507	702	325	191	143
6	163	166	149	129	105	121	196	494	688	325	181	143
7	160	163	149	129	116	123	189	473	674	364	177	141
8	167	167	147	127	121	123	207	511	646	301	174	139
9	165	160	147	129	131	123	238	546	619	288	174	137
16	160	160	147	131	129	123	232	624	597	272	172	139
11	160	160	145	129	121	125	259	646	666	269	169	141
12	160	156	149	127	121	118	294	676	580	272	167	141
13	165	159	149	145	123	120	294	619	567	262	165	141
14	161	158	145	125	123	123	301	678	511	250	163	141
15	186	158	143	127	125	123	301	792	462	244	163	139
16	179	158	141	129	123	121	269	602	478	238	160	137
17	179	158	141	129	121	121	250	763	469	235	160	135
18	179	158	137	127	121	123	235	936	461	235	160	137
19	179	156	135	123	120	133	238	850	492	227	160	135
20	177	154	133	129	120	133	235	850	461	221	158	129
21	174	154	133	120	112	129	278	846	473	213	156	137
22	177	152	133	120	112	129	314	870	486	207	150	134
23	177	152	133	120	112	133	342	826	444	202	160	139
24	172	152	133	121	116	133	350	841	423	196	158	135
25	169	152	133	121	116	135	387	816	415	213	156	137
26	169	147	133	120	116	135	346	759	407	213	154	137
27	184	152	133	120	120	133	301	735	403	199	154	135
28	172	154	133	123	123	133	268	740	383	199	152	137
29	169	149	133	123	137	129	291	773	379	196	149	141
30	169	147	131	123	---	127	318	764	383	196	147	141
31	169	---	131	123	---	129	---	744	---	204	145	---
TOTAL	5284	4732	4372	3866	3491	3953	7665	20969	16063	7920	5255	4187
MEAN	170	158	141	125	120	126	256	676	535	255	170	140
MAX	186	169	154	131	137	145	367	870	721	376	227	154
MIN	160	147	131	120	105	118	131	318	379	196	145	129
AC-FT	16480	9390	6670	7670	6920	7840	15200	41590	31660	15710	10420	8300
CAL YR 1975	TOTAL	102130	MEAN 280	MAX 1160	MIN 88	AC-FT 262000						
WTR YR 1976	TOTAL	87759	MEAN 246	MAX 870	MIN 105	AC-FT 174100						

# BEAR RIVER BASIN

## 1090.01 Logan River above State dam, near Logan, Utah—continued

COMBINED DISCHARGE, IN CUBIC FEET PER SECOND, OF LOGAN RIVER ABOVE STATE DAM  
AND LOGAN, HYDE PARK & SMITHFIELD CANAL AT HEAD, NEAR LOGAN, UTAH.  
WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	199	171	153	130	122	147	132	318	794	448	260	199
2	199	171	155	122	121	133	138	308	793	448	252	199
3	198	171	153	130	122	129	140	408	792	425	251	197
4	195	171	150	130	124	127	140	473	781	414	246	197
5	195	177	150	130	121	129	161	407	772	467	238	197
6	195	158	150	130	106	123	197	494	757	396	235	196
7	192	164	150	130	120	125	190	473	743	386	231	194
8	199	168	148	128	123	125	208	511	714	383	229	192
9	197	161	148	130	133	125	239	556	689	372	229	195
10	192	161	148	132	131	125	233	646	683	364	227	192
11	191	161	146	121	123	127	260	671	692	359	224	194
12	192	157	150	128	123	120	295	714	651	354	221	194
13	197	159	150	126	125	122	295	663	626	344	219	194
14	198	159	146	126	125	125	302	723	569	331	217	194
15	191	159	144	128	127	125	302	830	539	325	217	192
16	184	159	142	130	125	123	270	631	535	318	214	190
17	184	159	142	130	123	123	251	621	523	315	214	188
18	184	159	138	128	123	124	236	482	504	315	214	190
19	184	157	136	124	122	135	239	614	495	307	214	188
20	181	155	134	121	122	135	236	927	504	301	212	182
21	178	155	134	121	114	131	279	920	516	292	210	166
22	180	153	134	121	114	131	315	917	520	286	210	173
23	180	153	134	121	114	135	343	870	497	281	214	176
24	175	153	134	122	118	135	351	891	497	275	212	177
25	172	153	134	122	116	137	368	874	489	272	210	179
26	172	148	134	121	118	137	347	813	480	269	208	179
27	186	153	134	121	122	135	302	795	478	265	208	177
28	174	155	134	124	125	135	288	615	456	260	206	176
29	171	150	134	124	139	131	292	848	452	257	203	172
30	171	148	132	124	---	129	318	839	454	257	201	172
31	171	---	132	124	---	131	---	818	---	263	199	---
TOTAL	5774	4778	4403	3899	3543	4015	7693	22038	18001	10291	6845	5606
MEAN	186	159	142	126	122	130	256	711	600	332	221	187
MAX	199	177	155	132	139	147	388	927	794	448	260	199
MIN	171	148	132	121	106	120	132	318	452	257	199	166
AC-FT	11450	9480	8730	7730	7630	7960	15260	43710	35700	20410	13580	11120
CAL YR 1975 TOTAL	112370			MEAN 308	MAX 1270	MIN 90	AC-FT 222900					
WTR YR 1976 TOTAL	96886			MEAN 265	MAX 927	MIN 106	AC-FT 192200					

# BEAR RIVER BASIN

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

LOCATION.--Lat 41°49'51", long 112°03'24", in SE¼ sec.27, T.13 N., R.2 W., Box Elder County, Hydrologic Unit 16010204, on right bank 3,600 ft (1,097 m) downstream from Cutler Dam and 4 mi (6 km) 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.

REMARKS.--Records good. Canal diverts from east side of Bear River in NW¼SW¼ sec.26 T.13 N., R.2 W. at dam for irrigation of about 56,000 acres (235 km<sup>2</sup>) below station in eastern Box Elder County.

COOPERATION.--Gage-height record and 3 discharge measurements furnished by Utah Power & Light Co.

AVERAGE DISCHARGE.--64 years, 51.2 ft<sup>3</sup>/s (1.45 m<sup>3</sup>/s), 37,090 acre-ft/yr (45.7 hm<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 184 ft<sup>3</sup>/s (5.21 m<sup>3</sup>/s) June 29, 1963; no flow at times in each year.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52							0	127	163	115	108
2	52							0	138	163	115	110
3	52							0	138	163	115	113
4	52							0	148	163	114	113
5	48							0	151	163	112	112
6	44							0	149	162	113	104
7	38							0	151	162	114	96
8	32							21	153	164	122	89
9	31							58	150	163	128	87
10	31						48	153	163	135	83	
11	30						55	122	164	138	80	
12	30						66	92	164	138	78	
13	30						87	90	165	138	80	
14	30						98	88	160	138	80	
15	28						99	87	158	138	79	
16	26						98	88	159	140	77	
17	27						115	89	159	139	75	
18	28						139	89	145	133	74	
19	28						148	105	147	116	72	
20	28						164	113	149	119	70	
21	24						168	118	138	120	71	
22	15						159	134	148	119	72	
23	15						143	149	145	112	72	
24	15						144	154	145	107	72	
25	15						145	159	146	104	71	
26	15						145	158	146	104	71	
27	13						144	161	145	104	71	
28	9.2						144	164	146	104	71	
29	5.4						144	164	145	104	71	
30	0				---		128	165	145	104	71	
31	0	---			---		---	128	---	137	164	---
TOTAL	853.6	0	0	0	0	0	0	2709.79	3947	4785	3706	2493
MEAN	27.5	0	0	0	0	0	0	87.4	132	154	120	83.1
MAX	62	0	0	0	0	0	0	168	165	165	140	113
MIN	0	0	0	0	0	0	0	0	87	137	104	70
AC-FT	1690	0	0	0	0	0	0	5376	7830	9490	7350	4940
CAL YR 1975	TOTAL	17065.78	MEAN	48.6	MAX	171	MIN	0	AC-FT	33850		
WTR YR 1976	TOTAL	18494.39	MEAN	50.5	MAX	168	MIN	0	AC-FT	36680		

# BEAR RIVER BASIN

## 1175. West Side Canal near Collinston, Utah

LOCATION.--Lat 41°49'55", long 112°03'36", in SW1/4 sec.27, T.13 N., R.2 W., Box Elder County, Hydrologic Unit 16010204, on left bank 4,200 ft (1,280 m) downstream from Cutler Dam and 4 mi (6.4 km) 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.

REMARKS.--Records good. Canal diverts from west side of Bear River in SW1/4 sec.27, T.13 N., R.2 W., at dam for irrigation of about 50,000 acres (235 km<sup>2</sup>) below station in eastern Box Elder County.

COOPERATION.--Gage-height record and 7 discharge measurements furnished by Utah Power & Light Co.

AVERAGE DISCHARGE.--64 years, 244 ft<sup>3</sup>/s (6.91 m<sup>3</sup>/s), 176,000 acre-ft/yr (218 km<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 765 ft<sup>3</sup>/s (21.7 m<sup>3</sup>/s) July 19-24, 26-28, 1975; no flow for periods in every year except 1914.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976  
MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	463	75	76	55	50	54	0	0	667	753	588	584
2	440	81	64	54	50	54	0	0	705	733	586	615
3	423	82	61	53	50	53	0	0	711	733	592	641
4	423	82	59	52	50	53	0	0	711	735	565	647
5	395	82	58	51	50	53	0	0	713	737	561	643
6	387	94	57	50	50	52	0	0	713	737	542	624
7	360	100	56	50	50	52	0	0	713	737	565	563
8	308	100	56	50	50	51	0	0.63	711	737	607	558
9	284	100	59	50	50	52	0	1.2	705	737	649	577
10	268	92	60	50	50	51	0	2.56	705	737	695	571
11	266	87	60	50	50	51	2.52	0	560	739	701	550
12	236	87	60	50	50	50	2.54	0	439	743	701	535
13	198	87	60	50	50	48	2.81	0	406	743	701	539
14	175	87	60	50	50	48	3.47	0	386	739	703	537
15	159	87	58	49	50	47	4.02	0	376	739	701	537
16	146	88	58	50	50	48	4.03	0	370	741	681	527
17	140	88	58	50	50	49	4.56	0	382	737	639	500
18	135	87	57	50	50	48	5.27	0	410	723	622	473
19	135	86	57	49	50	47	5.77	0	481	707	598	470
20	135	86	56	50	50	-7	6.39	0	542	697	598	463
21	130	86	55	50	50	47	6.83	0	622	685	611	435
22	118	86	55	50	50	49	6.59	0	681	671	622	422
23	118	86	55	50	50	44	6.28	0	713	677	605	405
24	118	85	55	50	50	4.6	6.24	0	725	679	592	400
25	117	85	55	50	50	4.3	6.36	0	735	677	590	381
26	116	86	55	50	50	0	6.53	0	733	677	575	382
27	100	87	55	50	50	0	6.49	0	735	677	565	374
28	76	83	55	50	50	0	6.51	0	737	675	565	358
29	72	81	55	50	50	0	6.65	0	733	677	563	386
30	70	82	55	50	---	0	6.61	0	729	675	563	398
31	73	---	55	50	---	0	6.59	0	---	641	571	---
TOTAL	6586	2605	1794	1563	1456	1088.43	0	11557.83	18569	22075	19017	15095
MEAN	212	86.8	58.0	50.4	50.2	35.1	0	373	619	712	613	503
MAX	463	100	76	55	53	54	0	683	737	743	703	647
MIN	70	75	55	49	50	0	0	0	370	641	542	388
AC-FT	13060	5170	3570	3100	2890	2160	0	22920	36830	43790	37720	29940
CAL YH 1975	TOTAL	98919.30	MEAN	271	MAX	765	MIN	0	AC-FT	196200		
WTR YH 1976	TOTAL	101411.26	MEAN	277	MAX	743	MIN	0	AC-FT	201100		

# BEAR RIVER BASIN

## 1180. Bear River near Collinston, Utah

LOCATION.--Lat 41°50'03", long 112°03'16", in NW1/4 sec. 27, T. 15 N., R. 2 W., Box Elder County, Hydrologic Unit 16010204, on right bank 800 ft (244 m) downstream from Cutler plant of Utah Power & Light Co., 2,000 ft (610 m) downstream from Cutler Dam, and 5.5 mi (8.8 km) north of Collinston.

DRAINAGE AREA.--6,267 mi<sup>2</sup> (16,232 km<sup>2</sup>).

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

GAGE.--Water-stage recorder. Datum of gage is 4,276.13 ft (1,303.364 m) 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 mi (1.3 km) downstream at different datums.

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

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

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge observed, 11,600 ft<sup>3</sup>/s (329 m<sup>3</sup>/s) June 7-10, 1909, gage height, 7.70 ft (2.34 m), site and datum then in use; minimum daily, 10 ft<sup>3</sup>/s (0.28 m<sup>3</sup>/s) Aug. 4-12, 18-23, 1905; practically no flow at 2400 Aug. 5, 1920.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,260 ft<sup>3</sup>/s (149 m<sup>3</sup>/s) Apr. 8, gage height, 5.62 ft (1.713 m); minimum daily, 22 ft<sup>3</sup>/s (0.62 m<sup>3</sup>/s) June 25-30, July 1.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1456	2780	1910	1940	1470	2450	3300	3780	2890	22	818	65
2	1540	2890	2530	1480	2010	2960	3480	3780	2820	23	951	24
3	1830	2930	2190	1430	1800	3200	3680	3770	1960	23	120	25
4	1850	2930	1960	1370	1710	3080	3690	3780	2540	23	204	25
5	1200	2640	2540	1260	1980	2150	3720	3780	1820	23	1220	25
6	2130	2590	2540	1120	1410	1810	3780	3790	860	134	725	31
7	2160	2920	1860	1500	1260	2710	3790	3790	1240	24	795	25
8	2070	2870	1930	2140	1150	2860	4250	3780	1590	24	30	634
9	2200	2940	1810	1710	1990	2930	4400	3910	866	24	1060	314
10	2560	2840	2370	1970	2230	2920	4260	4060	325	28	30	1180
11	1820	2330	2000	1800	1800	2860	4390	4230	1170	24	30	362
12	1840	2870	1890	2500	1780	2280	4730	4220	951	50	30	1170
13	3230	2840	1940	2190	2000	2430	4490	4210	1850	24	24	316
14	2910	2440	2010	1790	1810	1946	4370	4180	1890	24	25	896
15	2700	2720	2650	2200	2260	2300	4610	4190	1890	24	25	398
16	2680	1980	1920	1720	2290	1510	4610	3980	1880	25	25	1550
17	2790	2900	1680	2700	2360	2150	4820	3720	1880	25	25	584
18	2630	2200	1980	1890	1740	2180	4830	3560	1880	24	435	1530
19	2940	2830	2180	2850	1740	2550	4570	3500	1880	24	25	748
20	2890	2880	1750	2340	2380	2960	4010	3110	1570	499	685	1370
21	2680	2570	1750	1960	1690	2950	3400	3080	732	101	157	1440
22	2610	2620	1680	1370	1850	3150	2960	3140	93	1250	24	1520
23	2610	2030	1960	1410	2490	3110	3520	3140	876	91	25	968
24	2730	2740	2130	1860	2870	3390	3670	3130	748	854	25	800
25	2780	1460	2470	1280	2640	3750	3590	3100	22	29	828	1320
26	2920	2360	1930	1260	2000	3690	3700	3130	22	262	260	1200
27	2750	1310	1940	1990	1920	3780	3780	3120	22	30	137	625
28	2920	2200	2470	2120	2330	3670	3920	3020	22	773	149	1560
29	2900	1890	1750	2160	2100	3180	4120	2920	22	32	175	1410
30	2820	2320	1860	2240	---	3110	3990	2500	22	30	366	921
31	2800	---	1910	2590	---	3220	---	2900	---	330	841	---
TOTAL	75640	75820	63290	58160	57060	87230	120630	110300	36333	4873	10269	23036
MEAN	2440	2527	2042	1876	1968	2814	4021	3558	1211	157	331	768
MAX	3230	2940	2802	2850	2870	3780	4830	4230	2890	1250	1220	1560
MIN	1200	1310	1610	1120	1150	1510	2960	2500	22	22	24	24
AC-FI	150000	150400	125500	115400	113200	173000	239300	218800	72700	9670	20370	45690
CAL YR 1975	TOTAL	755524	MEAN	2070	MAX	6440	MIN	26	AC-FI	1499000		
WTR YR 1976	TOTAL	722641	MEAN	1974	MAX	4830	MIN	22	AC-FI	1433000		

# BEAR RIVER BASIN

## 1260. Bear River near Corinne, Utah

LOCATION.--Lat 41°34'35", long 112°06'00", in SE1/4 sec.30 T.10 N., R.2 W., Box Elder County, Hydrologic Unit 16010204, on right bank 1.2 mi (1.9 km) downstream from Salt Creek, 2.0 mi (3.2 km) northeast of Corinne, and 2.8 mi (4.5 km) downstream from Malad River.

DRAINAGE AREA.--7,029 mi<sup>2</sup> (18,205 km<sup>2</sup>).

### WATER-DISCHARGE RECORDS

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 (1,281.56 km) unadjusted. Auxiliary nonrecording gage 7,600 ft (2,380 m) downstream July 27, 1950 to Nov. 21, 1955.

REMARKS.--Records good except those for winter months, which are fair. Natural flow of stream affected by upstream reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas.

AVERAGE DISCHARGE.--21 years, 1,805 ft<sup>3</sup>/s (51.1 m<sup>3</sup>/s), 1,308,000 acre-ft/yr (1.61 km<sup>3</sup>/yr).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 7,370 ft<sup>3</sup>/s (209 m<sup>3</sup>/s) June 17, 1971, gage height, 15.12 ft (4.609 m); minimum daily, 72 ft<sup>3</sup>/s (2.04 m<sup>3</sup>/s) Aug. 26, 21, 26, Sept. 8, 1964, July 5, 1970.

EXTREMES FOR CURRENT YEAR.--Maximum discharge, 5,340 ft<sup>3</sup>/s (151 m<sup>3</sup>/s) Apr. 19, gage height, 12.87 ft (3.931 m); minimum, 169 ft<sup>3</sup>/s (4.89 m<sup>3</sup>/s) July 12, 13.

### DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1975 TO SEPTEMBER 1976 MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1029	3060	2536	2100	2700	2790	2750	4400	3110	196	550	903
2	1610	3010	2530	2100	1700	3130	3770	4250	3130	140	899	932
3	1690	3060	2560	1700	2200	3250	3500	4190	2650	150	1240	101
4	1980	3100	2130	1000	2000	3600	4120	4160	2090	147	620	141
5	1830	2990	2450	1500	1900	3300	4180	4130	2620	130	394	133
6	1720	2900	2620	1400	2200	2500	4300	4090	2920	130	1340	140
7	2260	2920	2310	1300	1600	2700	4310	4060	1300	190	1040	105
8	2320	3060	2200	1700	1400	2700	4290	4070	1660	100	1070	192
9	2420	3090	1900	2300	1300	2790	4850	4070	1900	127	497	575
10	2420	3100	2010	1900	2100	2850	4850	4170	1230	117	1040	665
11	2780	2950	2710	2200	2400	2720	4760	4390	771	116	501	1390
12	2210	2790	2110	2000	2000	2670	4900	4490	1500	120	190	806
13	2490	3040	2060	2700	2000	2460	5120	4500	1560	126	140	1300
14	3140	2930	2110	2400	2100	2560	4950	4480	2280	139	124	711
15	3070	2900	2400	2090	2100	2410	4800	4460	2360	134	110	1060
16	2820	2580	2400	2400	2400	2360	5070	4460	2360	127	140	860
17	2940	2670	2020	2000	2500	2190	5740	4230	2350	125	122	1010
18	2840	2770	1850	2900	2600	2480	5300	4000	2350	124	135	1140
19	2920	2620	1800	2200	2000	2910	5320	3840	2310	137	359	1750
20	3070	3040	2290	3000	2000	3220	5030	3680	2280	139	506	1160
21	3050	3070	1890	2600	2600	3420	4490	3430	1980	540	618	1740
22	2850	2890	1840	2100	2050	3560	3850	3430	1250	404	428	1760
23	2810	2680	1880	1600	2000	3600	3520	3480	405	1160	289	1910
24	2900	2420	2080	1700	2500	3710	3960	3400	1080	522	210	1450
25	2860	2660	2360	2000	3000	4620	4060	3460	1140	885	174	1270
26	3050	1980	2200	1500	2700	4780	4080	3420	358	429	794	1640
27	3140	2380	2090	1400	2350	4320	4150	3050	199	351	508	1620
28	3060	1900	2080	2100	2370	4360	4210	3410	100	179	344	1120
29	3130	2270	2200	2300	2720	4180	4370	3290	177	722	275	1760
30	3120	2250	1900	2400	---	3770	4520	3190	169	394	314	1760
31	3060	---	1970	2500	---	3070	---	2860	---	179	456	---
TOTAL	80820	83420	66970	63590	63440	90300	136090	121020	49309	8541	15391	31500
MEAN	2607	2701	2160	2048	2148	3171	4470	3884	1546	276	496	1050
MAX	3140	3100	2620	3050	3000	4360	5320	4560	3130	1160	1340	1910
MIN	1020	1900	1800	1300	1360	2190	3520	2860	169	116	116	133
AC-FT	160300	165500	152600	120000	120000	195000	266000	240000	97200	16940	30530	62400
CAL YR 1975	TOTAL	833070	MEAN	2202	MAX	4500	MIN	312	AC-FT	160000		
WTR YR 1976	TOTAL	816361	MEAN	2230	MAX	5320	MIN	110	AC-FT	1619000		