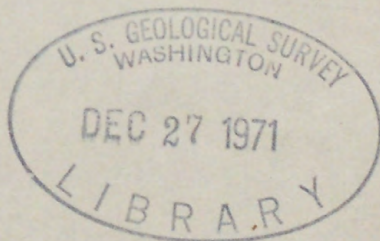


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Pt. 1

Water Resources Data for Idaho

Part 1. Surface Water Records



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Prepared in cooperation with the State of Idaho and with other agencies

CALENDAR FOR WATER YEAR 1970

OCTOBER 1969

S	M	T	W	T	F	S
			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	

NOVEMBER 1969

S	M	T	W	T	F	S
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30						

DECEMBER 1969

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JANUARY 1970

S	M	T	W	T	F	S
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FEBRUARY 1970

S	M	T	W	T	F	S
1	2	3	4	5	6	7
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MARCH 1970

S	M	T	W	T	F	S
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29	30	31				

APRIL 1970

S	M	T	W	T	F	S
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MAY 1970

S	M	T	W	T	F	S
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24	25	26	27	28	29	30
31						

JUNE 1970

S	M	T	W	T	F	S
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JULY 1970

S	M	T	W	T	F	S
				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

AUGUST 1970

S	M	T	W	T	F	S
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9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31					

SEPTEMBER 1970

S	M	T	W	T	F	S
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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		

1970

Water Resources Data

for

Idaho

Part 1. Surface Water Records



UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

Prepared in cooperation with the State of Idaho and with other agencies

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Idaho Department of Water Administration
Idaho Department of Highways
Corps of Engineers, Department of the Army
Bureau of Reclamation, U.S. Department of the Interior
U.S. Department of State
Forest Service, U.S. Department of Agriculture
Bureau of Sports Fisheries and Wildlife, U.S. Department of
the Interior
Bureau of Land Management, U.S. Department of the Interior

Water-quality records for some of the gaging-station
sites in this report will be contained in:

Water Resources Data for Idaho, 1970
Part 2. Water-Quality Records

Copies of this report may be obtained from
District Chief, Water Resources Division
U.S. Geological Survey
Room 365, Federal Building
550 West Fort Street
Boise, Idaho 83702

1971

CONTENTS

	Page
List of gaging stations, in downstream order, for which records are published.....	IV
Introduction.....	1
Cooperation.....	1
Definition of terms.....	2
Special networks and programs.....	3
Downstream order and station numbers.....	3
Explanation of surface-water data.....	3
Collection and computation of data.....	3
Accuracy of data.....	7
Publications.....	7
Other data available.....	8
Hydrologic conditions.....	8
Selected references.....	9
Gaging-station records.....	11
Discharge at partial-record stations and miscellaneous sites.....	273
Crest-stage partial-record stations.....	273
Discharge measurements at miscellaneous sites.....	281
Results of Salmon Falls Creek seepage investigation.....	292
Index.....	293

ILLUSTRATIONS

Figure 1. Comparison of discharge at two long-term gaging stations during 1970 water year with median discharge for 30-year period.....	10
2. Map of Idaho showing location of active gaging stations....	271
3. Map of Idaho showing location of crest-stage partial-record stations.....	279

	Page
<u>THE GREAT BASIN</u>	
<u>GREAT SALT LAKE BASIN:</u>	
<u>BEAR RIVER BASIN</u>	
Bear River at Border, Wyo.....	11
Thomas Fork near Wyoming-Idaho State line.....	12
Bear River at Harer.....	13
Rainbow inlet canal near Dingle.....	14
Bear River below Stewart Dam, near Montpelier.....	15
Montpelier Creek at irrigators weir, near Montpelier.....	16
Bear Lake at Lifton, near St. Charles.....	17
Bear Lake outlet canal:	
Bloomington Creek at Bloomington.....	18
Bear Lake outlet canal near Paris.....	19
Bear River at Pescadero.....	20
Eightmile Creek near Soda Springs.....	22
Bear River at Soda Springs.....	23
Soda Creek at Fivemile Meadows, near Soda Springs.....	24
Bear River at Alexander.....	25
Cottonwood Creek near Cleveland.....	26
Bear River below Utah Power & Light Co.'s tailrace, at Oneida.....	27
Bear River near Preston.....	28
Deep Creek near Clifton.....	29
Cub River near Preston.....	30
Malad River at Woodruff.....	31
<u>UPPER COLUMBIA RIVER BASIN</u>	
<u>COLUMBIA RIVER:</u>	
<u>KOOTENAI RIVER BASIN</u>	
Kootenai River at Libby, Mont.....	32
Yaak River near Troy, Mont.....	33
Kootenai River at Leonia.....	34
Boulder Creek near Leonia.....	35
Moyie River at Eastport.....	36
Moyie River at Eileen.....	37
Kootenai River at Bonners Ferry.....	38
Deep Creek at Moravia.....	39
Kootenai River at Klockmann Ranch, near Bonners Ferry.....	40
Mission Creek near Copeland.....	41
Kootenai River near Copeland.....	42
Boundary Creek near Porthill.....	44
Kootenai River at Porthill.....	45
Kootenay Lake at Kuskonook, British Columbia.....	47
<u>PEND OREILLE RIVER BASIN</u>	
Clark Fork at Whitehorse Rapids, near Cabinet.....	48
Pack River near Colburn.....	49
Pend Oreille Lake at Hope.....	50
Pend Oreille River:	
Priest River:	
Priest Lake at outlet, near Coolin.....	51
Priest River near Coolin.....	52
Priest River near Priest River.....	53
Pend Oreille River at Newport, Wash.....	54
<u>SPOKANE RIVER BASIN</u>	
Coeur d'Alene River (head of Spokane River) above Shoshone Creek, near Prichard.....	55
Coeur d'Alene River at Enaville.....	56
South Fork Coeur d'Alene River:	
Placer Creek at Wallace.....	57
South Fork Coeur d'Alene River at Silverton.....	58
South Fork Coeur d'Alene River at Smelterville.....	59
Pine Creek:	
West Fork Pine Creek near Pinehurst.....	60

Upper Columbia River basin--Continued

Columbia River--Continued

Spokane River basin--Continued	Page
Coeur d'Alene River near Cataldo.....	61
Latour Creek near Cataldo.....	62
St. Joe River at Calder.....	63
St. Maries River near Santa.....	64
Coeur d'Alene Lake at Coeur d'Alene.....	65
Spokane River:	
Hayden Creek below North Fork, near Hayden Lake.....	66
Hayden Lake at Hayden Lake.....	67
Rathdrum Prairie Canal at Huetter.....	68
Spokane River near Post Falls.....	69

SNAKE RIVER BASIN

Jackson Lake at Moran, Wyo.....	70
Snake River at Moran, Wyo.....	71
PACIFIC CREEK BASIN	
Pacific Creek near Moran, Wyo.....	72
BUFFALO FORK BASIN	
Buffalo Fork above Lava Creek, near Moran, Wyo.....	73
Snake River above reservoir, near Alpine, Wyo.....	74
GREYS RIVER BASIN	
Greys River above reservoir, near Alpine, Wyo.....	75
SALT RIVER BASIN	
Salt River above reservoir, near Etna, Wyo.....	76
BEAR CREEK BASIN	
Bear Creek above reservoir, near Irwin.....	77
Palisades Reservoir near Irwin.....	78
Snake River near Irwin.....	79
Snake River near Heise.....	80
HENRYS FORK BASIN	
Henrys Fork near Lake.....	81
Island Park Reservoir near Island Park.....	82
Henrys Fork near Island Park.....	83
Henrys Fork near Ashton.....	84
Falls River:	
Diversions from Falls River above gaging station near Squirrel.....	85
Falls River near Squirrel.....	86
Diversions from Falls River between Squirrel and Chester gaging stations.....	87
Falls River near Chester.....	88
Diversions from Henrys Fork between Ashton and St. Anthony gaging stations.....	89
Henrys Fork at St. Anthony.....	90
Teton River above South Leigh Creek, near Driggs.....	91
Teton River near St. Anthony.....	92
Diversions from Teton River between St. Anthony gaging station and mouth.....	93
Diversions from Henrys Fork between St. Anthony and Rexburg gaging stations.....	94
Henrys Fork near Rexburg.....	95
Smaller reservoirs in Henrys Fork basin.....	96
WILLOW CREEK BASIN	
Willow Creek:	
Grays Lake:	
Grays Lake Diversion to Blackfoot River basin, near Wayan.....	97
Grays Lake near Wayan.....	98
Grays Lake Outlet near Herman.....	99
Willow Creek near Ririe.....	100
Diversions from Snake River between Heise and Shelley gaging stations...	101
Snake River near Shelley.....	102
BLACKFOOT RIVER BASIN	
Blackfoot River above reservoir, near Henry.....	103
Blackfoot Reservoir near Henry.....	104
Blackfoot River near Blackfoot.....	105
Diversions from Snake River between Shelley and Blackfoot gaging stations	106

VI

GAGING STATIONS, IN DOWNSTREAM ORDER

Snake River basin--Continued	Page
Snake River near Blackfoot.....	107
PORTNEUF RIVER BASIN	
Portneuf River near Pebble.....	108
Portneuf River at Topaz.....	109
Marsh Creek near McCammon.....	110
Portneuf River at Pocatello.....	111
Fort Hall Michaud Canal near Pocatello.....	112
AMERICAN FALLS RESERVOIR:	
Michaud Canal at American Falls.....	113
American Falls Reservoir at American Falls.....	114
Snake River at Neeley.....	115
RAFT RIVER BASIN	
Raft River:	
Johnson Creek:	
George Creek near Yost, Utah.....	116
Raft River at Peterson Ranch, near Bridge.....	117
Clear Creek near Naf.....	118
Cassia Creek above Stinson Creek, near Elba.....	119
LAKE WALCOTT:	
North Side Minidoka Canal near Minidoka.....	120
South Side Minidoka Canal near Minidoka.....	121
Lake Walcott near Minidoka.....	122
Snake River near Minidoka.....	123
MARSH CREEK BASIN	
Marsh Creek near Albion.....	124
GOOSE CREEK BASIN	
Goose Creek above Trapper Creek, near Oakley.....	125
Trapper Creek near Oakley.....	126
Oakley Reservoir near Oakley.....	127
DIVERSIONS FROM SNAKE RIVER BETWEEN GOOSE CREEK AND SNAKE RIVER AT MILNER	
Minidoka North Side Pump Canal near Burley.....	128
P. A. lateral near Milner.....	129
Milner low-lift canal near Milner.....	130
Gooding Canal at Milner.....	131
North Side Twin Falls Canal at Milner.....	132
South Side Twin Falls Canal at Milner.....	133
Snake River at Milner.....	134
Snake River near Kimberly.....	135
BLUE LAKES SPRING BASIN	
Blue Lakes Spring near Twin Falls.....	136
ROCK CREEK BASIN	
Rock Creek near Rock Creek.....	137
NIAGARA SPRINGS BASIN	
Niagara Springs near Buhl.....	138
Snake River near Buhl.....	139
BOX CANYON SPRINGS BASIN	
Box Canyon Springs near Wendell.....	140
SALMON FALLS CREEK BASIN	
Salmon Falls Creek near San Jacinto, Nev.....	141
Salmon River Canal Co. canal near Rogerson.....	142
Salmon River Canal Co. reservoir near Rogerson.....	143
Salmon Falls Creek near Hagerman.....	144
MUD LAKE-LOST RIVER BASIN	
Mud Lake:	
Camas Creek at Eighteenmile shearing corral, near Kilgore.....	145
Camas Creek at Camas.....	146
Beaver Creek at Spencer.....	147
Beaver Creek at Dubois.....	148
Beaver Creek at Camas.....	149
Mud Lake near Terretton.....	150
Birch Creek at Blue Dome Inn, near Reno.....	151
Birch Creek at Eight-Mile Canyon Road, near Reno.....	152
Sawmill Creek near Goldburg.....	153

Snake River basin--Continued

Mud Lake-Lost River basins--Continued	Page
Little Lost River below Wet Creek, near Howe.....	154
Little Lost River near Howe.....	155
Blaine County Investment Co.'s canal near Howe.....	156
Big Lost River:	
North Fork Big Lost River at Wild Horse, near Chilly.....	157
Big Lost River at Howell Ranch, near Chilly.....	158
Mackay Reservoir near Mackay.....	159
Big Lost River below Mackay Reservoir, near Mackay.....	160
Lower Cedar Creek above diversions, near Mackay.....	161
Antelope Creek above Willow Creek, near Darlington.....	162
Big Lost River near Arco.....	163
Snake River below Lower Salmon Falls, near Hagerman.....	164
BIG WOOD RIVER BASIN	
Big Wood River near Ketchum.....	165
Combined discharge of Big Wood River and Big Wood Slough at Hailey.....	166
Big Wood River near Bellevue.....	167
Camas Creek near Blaine.....	168
Magic Reservoir near Richfield.....	169
Big Wood River below Magic Dam, near Richfield.....	170
Little Wood River above High Five Creek, near Carey.....	171
Little Wood Reservoir near Carey.....	172
Little Wood River near Carey.....	173
Little Wood River near Richfield.....	174
Big Wood River near Gooding.....	175
King Hill Canal near Hagerman.....	176
Snake River at King Hill.....	177
LITTLE CANYON CREEK BASIN	
Little Canyon Creek at Stout Crossing, near Glenns Ferry.....	178
BRUNEAU RIVER BASIN	
Bruneau River at Rowland, Nev.....	179
Jarbidge River:	
East Fork Jarbidge River near Three Creek.....	180
East Fork Bruneau River near Hot Spring.....	181
Bruneau River near Hot Spring.....	182
Big Jacks Creek near Bruneau.....	183
Snake River near Murphy.....	184
OWYHEE RIVER BASIN	
Owyhee River above China diversion dam, near Owyhee, Nev.....	185
South Fork Owyhee River near Whiterock, Nev.....	186
Jordan Creek above Lone Tree Creek, near Jordan Valley, Oreg.....	187
Owyhee River near Rome, Oreg.....	188
BOISE RIVER BASIN	
Boise River near Twin Springs.....	190
South Fork Boise River near Featherville.....	191
Little Camas Creek:	
Little Camas Canal at heading, near Bennett.....	192
Anderson Ranch Reservoir at Anderson Ranch Dam.....	193
South Fork Boise River at Anderson Ranch Dam.....	194
Arrowrock Reservoir at Arrowrock Dam.....	195
Boise River:	
Mores Creek:	
Bannock Creek near Idaho City.....	196
Mores Creek above Robie Creek, near Arrowrock Dam.....	197
Robie Creek near Arrowrock Dam.....	198
Lucky Peak Reservoir near Boise.....	199
Boise River near Boise.....	200
Lake Lowell near Caldwell.....	201
Diversions from Boise River between near Boise and at Boise gaging stations.....	202

Snake River basin--Continued	
Boise River basin--Continued	Page
Boise River at Boise.....	203
Dry Creek:	
Spring Valley Creek near Eagle.....	204
Diversions from Boise River between at Boise and Notus gaging stations	205
Boise River at Notus.....	206
PAYETTE RIVER BASIN	
South Fork Payette River at Lowman.....	207
Deadwood Reservoir near Lowman.....	208
Deadwood River below Deadwood Reservoir, near Lowman.....	209
Payette River near Banks.....	210
North Fork Payette River:	
Payette Lake at McCall.....	211
North Fork Payette River at McCall.....	212
Lake Fork Payette River above Jumbo Creek, near McCall.....	213
Lake Fork Reservoir near McCall.....	214
Lake Fork Payette River:	
Lake Irrigation District Canal near McCall.....	215
Lake Fork Payette River below Lake Irrigation District Canal, near McCall.....	216
Gold Fork River near Roseberry.....	217
Cascade Reservoir at Cascade.....	218
North Fork Payette River at Cascade.....	219
North Fork Payette River near Banks.....	220
Payette River near Horseshoe Bend.....	221
Payette River near Emmett.....	222
Big Willow Creek near Emmett.....	223
Payette River near Payette.....	224
WEISER RIVER BASIN	
Weiser River:	
West Branch Weiser River near Tamarack.....	225
Weiser River at Tamarack.....	226
Weiser River near Cambridge.....	227
Little Weiser River near Indian Valley.....	228
Crane Creek at mouth, near Weiser.....	229
Weiser River near Weiser.....	230
Mann Creek Reservoir near Weiser.....	231
Mann Creek below Mann Creek Dam, near Weiser.....	232
Snake River at Weiser.....	233
Brownlee Reservoir at Brownlee Dam, Idaho-Oregon State line.....	234
Snake River at Oxbow, Oreg.....	235
PINE CREEK BASIN	
Pine Creek near Oxbow, Oreg.....	236
Snake River at Hells Canyon Dam, Idaho-Oregon State line.....	237
Snake River near Joseph.....	238
SALMON RIVER BASIN	
Salmon River:	
Valley Creek at Stanley.....	239
Salmon River below Yankee Fork, near Clayton.....	240
Little Boulder Creek near Clayton.....	241
Salmon River near Challis.....	242
Challis Creek below Jeffs Creek, near Challis.....	243
Salmon River at Salmon.....	244
Lemhi River near Lemhi.....	245
Panther Creek near Shoup.....	246
Salmon River near Shoup.....	247
Middle Fork Salmon River near Cape Horn.....	248
South Fork Salmon River near Krassel ranger station.....	249
East Fork of South Fork Salmon River:	
Johnson Creek at Yellow Pine.....	250
Little Salmon River at Riggins.....	251
Skookumchuck Creek:	
North Fork Skookumchuck Creek near White Bird.....	252
Salmon River at White Bird.....	253

GAGING STATIONS, IN DOWNSTREAM ORDER

IX

Snake River basin--Continued	Page
Snake River near Anatone, Wash.....	254
ASOTIN CREEK BASIN	
Asotin Creek below Kearney Gulch, near Asotin, Wash.....	255
CLEARWATER RIVER BASIN	
Selway River (head of Clearwater River):	
Meadow Creek near Lowell.....	256
Selway River near Lowell.....	257
Lochsa River near Lowell.....	258
Middle Fork Clearwater River (continuation of Selway River):	
South Fork Clearwater River near Elk City.....	259
South Fork Clearwater River at Stites.....	260
Lawyer Creek near Nezperce.....	261
Clearwater River at Orofino.....	262
North Fork Clearwater River at Canyon ranger station.....	263
Clearwater River near Peck.....	264
Potlatch River:	
East Fork Potlatch River:	
Bloom Creek near Bovill.....	265
East Fork Potlatch River near Bovill.....	266
Clearwater River at Spalding.....	267
Snake River near Clarkston, Wash.....	268
PALOUSE RIVER BASIN	
Palouse River near Potlatch.....	269

WATER RESOURCES DATA FOR IDAHO, 1970

Part 1. Surface-Water Records

INTRODUCTION

Surface-water records for the 1970 water year for gaging stations, partial-record stations, and miscellaneous sites within the State of Idaho are given in this report and their locations shown in figures 2 and 3. Records for a few selected gaging stations in bordering States also are included. The records were collected and computed by the Water Resources Division of the U.S. Geological Survey, under the direction of W. L. Burnham, district chief, Water Resources Division.

Through September 30, 1960, the records of discharge and stage of streams and contents and stage of lakes or reservoirs were published in an annual series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States." Since 1951 there have been 20 volumes in the series; each volume covered an area whose boundaries coincided with those of certain natural drainage areas. The records in Idaho were contained in Parts 10, 12, and 13 of that series.

Beginning with the 1961 water year, streamflow records and related data have been released by the Geological Survey in annual reports on a State-boundary basis. Distribution of these basic-data reports is limited; they are designed primarily for rapid release of data shortly after the end of the water year to meet local needs. The discharge and reservoir-storage records are also being published at 5-year intervals in a Geological Survey water-supply paper series entitled "Surface Water Supply of the United States." These papers which show daily discharge and storage figures are compiled on the same geographical areas used for the annual series published through September 30, 1960. The daily records for 1961-65 are compiled in Water-Supply Papers 1927 (Part 10), 1933 (Part 12), and 1934 (Part 13).

COOPERATION

Cooperative agreements between the U.S. Geological Survey and organizations of the State of Idaho for the systematic collection of streamflow records began in 1909. Organizations that supplied data are acknowledged in station descriptions. Organizations that assisted in collecting data through cooperative agreements with the Survey are:

Idaho Department of Water Administration, R. Keith Higginson, director.

Idaho Department of Highways, E. L. Mathes, State highway engineer.

Bear River Commission, E. O. Larson, chairman.

Assistance in the form of funds or services was given by the Corps of Engineers, U.S. Army, for operation of 19 gaging stations; by the Bureau of Reclamation, U.S. Department of the Interior, for 22 stations; by the U.S. Department of State, for 11 stations; by the Forest Service, U.S. Department of Agriculture, for three stations and 23 crest-gage stations; by the Bureau of Sports Fisheries and Wildlife, U.S. Department of the Interior, for three stations; and by the Bureau of Land Management, U.S. Department of the Interior, for four stations.

The following organizations aided in collecting records:

Water Districts 01, 31, 33, 34, 37, 37M, 37N, and 65K; Big Lost River Irrigation District; King Hill Irrigation District; Black Canyon Irrigation District; Idaho Power Co.; Washington Water Power Co.; Pacific Northwest Power Co.; Utah Power & Light Co.; Mann Creek Irrigation District; Salmon River Canal Co.; and Blaine County Canal Co.

DEFINITION OF TERMS

The terms related to streamflow and other hydrologic data, as used in this report, are defined as follows:

Acre-foot (AC-FT, acre-ft) is the quantity of water required to cover 1 acre to a depth of 1 foot and is equivalent to 43,560 cubic feet or 325,851 gallons.

Cfs-day is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.9835 acre-feet, or 646,317 gallons, and represents a runoff of 0.0372 inch from 1 square mile.

Contents is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

Control designates a feature downstream from the gage that determines the stage-discharge relation at the gage. This feature may be a natural constriction of the channel, a long reach of the channel, or an artificial structure.

Cubic foot per second (cfs) is the rate of discharge representing a volume of 1 cubic foot passing a given point during 1 second, and is equivalent to 7.48 gallons per second or 448.8 gallons per minute.

Cubic feet per second per square mile (CFSM) is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming that the runoff is distributed uniformly in time and area.

Discharge is the volume of water (or more broadly, total fluids) that passes a given point within a given period of time.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, enclosed by a topographic divide from which direct surface runoff from precipitation normally drains by gravity into the stream above the specified point. Figures of drainage area given herein include all closed basins, or noncontributing areas, within the area unless otherwise noted.

Gage height (G.H.) is the water-surface elevation referred to some arbitrary gage datum. Gage height is often used interchangeably with the more general term "stage," although gage height is more appropriate when used with a reading on a gage.

Gaging station is a particular site on a stream, canal, lake, or reservoir where systematic observations of gage height or discharge are obtained. When used in connection with a discharge record, the term is applied only to those gaging stations where a continuous record of discharge is obtained.

Mean altitude is the average elevation of the drainage area.

Partial-record station is a particular site where limited streamflow data are collected systematically over a period of years for use in hydrologic analyses.

Runoff in inches (IN.) shows the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

Stage-discharge relation is the relation between gage height and the amount of water flowing in a channel, expressed as volume per unit of time.

WRD is used as an abbreviation for "Water-Resources Data" in the summary REVISIONS paragraph to refer to previously published State annual basic-data reports.

WSP is used as an abbreviation for "Water-Supply Paper" in references to previously published reports.

SPECIAL NETWORKS AND PROGRAMS

Hydrologic bench-mark station is one that provides hydrologic data for a basin in which the hydrologic regimen will likely be governed solely by natural conditions. Data collected at a bench-mark station may be used to separate effects of natural from manmade changes in other basins which have been developed and in which the physiography, climate, and geology are similar to those in the undeveloped bench-mark basin.

DOWNSTREAM ORDER AND STATION NUMBERS

Records are listed in a downstream direction along the main stream, and stations on tributaries are listed between stations on the main stream in the order in which those tributaries enter the main stream. Stations on tributaries entering above all main-stream stations are listed before the first main-stream station. Stations on tributaries to tributaries are listed in a similar manner. In the list of gaging stations in the front of this report, the rank of tributaries is indicated by indentation, each indentation representing one rank.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and continuous-record gaging stations, so that the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Gaps are left in the numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station, such as 13032500 includes the part number "13" plus a 6-digit station number. In this report, the records are listed in downstream order by parts. All records for a drainage basin encompassing more than one state could be arranged in downstream order by assembling pages from the various state reports by station number to include all records in the basin.

EXPLANATION OF SURFACE-WATER DATA

Collection and Computation of Data

The base data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals and stage and contents of lakes and reservoirs. In addition, observations of factors affecting the

stage-discharge relation, weather records, and other information are used to supplement base data in determining the daily flow. The records of stage are obtained either from a water-stage recorder that gives a continuous graph of fluctuations (for digital recorders, a tape punched at 15-, 30-, or 60-minute intervals) or from direct readings on a nonrecording gage. Measurements of discharge are made with a current meter by the general methods adopted by the Geological Survey on the basis of experience in stream gaging since 1888. These methods are described in standard textbooks on the measurement of stream discharge. (See also SELECTED REFERENCES.)

For a stream-gaging station, rating tables giving the discharge for any stage are prepared from stage-discharge relation curves defined by discharge measurements. If extensions to the rating curves are necessary to define the extremes of discharge, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements, or computation of flow over dams or weirs), velocity-area studies, and logarithmic plotting. The application of the daily mean gage height to those rating tables gives the daily mean discharge, from which the monthly and the yearly mean discharge are computed. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is determined by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is in effect the shifting-control method.

At some stream-gaging stations, the stage-discharge relation is affected by backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in determining discharge. Information required for determining the slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations, the stage-discharge relation is affected by changing stage; at these stations, the rate of change in stage is used as a factor in determining discharge.

At some gaging stations, the stage-discharge relation is affected by ice during the winter, and it becomes impossible to compute the discharge in the usual manner. Discharge for periods of ice effect is computed on the basis of the gage-height record and occasional winter discharge measurements, consideration being given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir station, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations, there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute the daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, float is frozen in the well, or for various other reasons. For such periods, the daily discharges are estimated on the basis of recorded range in stage, adjoining good record, discharge measurements, weather records, and comparison with other station records from the same or nearby basins. Likewise, daily contents may be estimated on the basis of operator's log, adjoining good record, inflow-outflow studies, and other information.

The data in this report generally comprise a description of the station and tabulations of basic data. For gaging stations on streams or canals, a table showing the daily discharge and monthly and yearly discharge is given. For gaging stations on lakes and reservoirs, a monthly summary table of stage and contents or a table showing the daily contents is given. Tables of daily mean gage heights are included for some streamflow stations and for some reservoir stations. Records are published for the water year, which begins on October 1 and ends on September 30. A calendar for the 1970 water year is shown on the reverse side of the front cover to facilitate finding the day of the week for any date.

The description of the station gives the location, drainage area, mean altitude, if determined, period of record, type and history of gages, average discharge, extremes of discharge or contents, and general remarks. The location of the gaging station and the drainage area are obtained from the most accurate maps available. River mileage, given under "LOCATION" is taken from the River Mile Index prepared by the Hydrology Subcommittee, CBIAC. These distances are determined from river surveys and by scaling from the best maps available. Periods for which there are published records for the present station or for stations generally equivalent to the present one are given under "PERIOD OF RECORD." The type of gage currently in use, and the datum of the present gage above mean sea level, and a condensed history of the types, locations, and datums of previous gages used during the period of record are given under "GAGE." In references to datum of gages, the phrase "mean sea level" denotes "Sea Level Datum of 1929" as used by the Topographic Division of the Geological Survey, unless otherwise qualified. The average discharge for the number of years indicated is given under "AVERAGE DISCHARGE"; it is not given for stations having fewer than 5 complete years of record or for stations where changes in water development during the period of record cause the figure to have little significance. The maximum discharge (or contents) and the maximum gage height, the minimum discharge if there is little or no regulation (or the minimum contents), and the minimum gage height if it is significant are given under "EXTREMES." The minimum daily discharge is given if there is extensive regulation (also the minimum discharge and gage height if they are abnormally low). In the first paragraph headed "Current year:" the data given are for the complete current water year unless otherwise specified. In the second paragraph under "EXTREMES" headed "Period of record:" the data given are for the period of record given in the PERIOD OF RECORD paragraph. Reliable information concerning major floods that occurred outside the period of record is given in the third or last paragraph under "EXTREMES." Unless otherwise qualified, the maximum discharge (or contents) corresponds to the crest stage obtained by use of a water-stage recorder (graph or digital), a crest-stage gage, or a nonrecording gage read at the time of the crest. If the maximum gage height did not occur at the same time as the maximum discharge or contents, it is given separately. Information pertaining to the accuracy of the discharge records, to conditions that affect the natural flow at the gaging station, and availability of Water-Quality records, is given under "REMARKS"; for reservoir stations information on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir, is also given under "REMARKS."

Previously published records of some stations have been found to be in error on the basis of data or information later obtained. Revisions of such records are usually published along with the current records in one of the annual or compilation reports. In order to make it easier to find such revised records, a paragraph headed "REVISIONS (WATER YEARS)" has been added to the description of all stations for which revised records have been published. Listed therein are all the reports in which revisions have been published, each followed by the water years for which figures are revised in that report. In listing the water years, only one number is given; for instance, 1933 stands for the water year October 1, 1932, to September 30, 1933. If no daily, monthly, or annual figures of discharge were revised, that fact is brought out by notations after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the

drainage area has been revised, the report in which the revised figure was first published is given. It should be noted that for all stations for which cubic feet per second per square mile and runoff in inches are published, a revision of the drainage area necessitates corresponding revision of all figures based on the drainage area. Revised figures of cubic feet per second per square mile and runoff in inches resulting from a revision of the drainage area only are usually not published in the annual series of reports.

Skeleton rating tables are published for stream-gaging stations where they serve a useful purpose and the dates of applicability can be easily identified.

Skeleton capacity tables are published for all reservoirs for which records of contents are published on a daily basis.

The daily tables for stream-gaging stations give the discharge corresponding to the daily mean gage height unless there are large or rapid changes in the discharge during a day. For days having large or rapid changes, discharge for the day is computed by averaging the mean discharge for several parts of a day. For digital recorders, the daily mean discharge is always the average of the discharges at each punched reading. For stations equipped with nonrecording gages, the daily discharge corresponds to once-daily readings of the gage or to the mean of twice-daily readings; but for periods of rapidly changing stage, the discharge is determined from a gage-height graph based on gage readings.

The daily tables for reservoir stations give the contents corresponding to the water-surface elevation at a given time, usually at 2400 each day. For some reservoirs, the elevation at a given time is given in the daily table.

The monthly summary is given below the daily table. For stream-gaging stations, the line headed "TOTAL" gives the sum of the daily figures; it is the total cubic feet per second per day for the month. The line headed "MEAN" gives the average flow in cubic feet per second during the month. The lines headed "MAX" and "MIN" give the maximum and minimum daily discharges, respectively, for the month. Discharge for the month also may be expressed in cubic feet per second per square mile (line headed "CFSM"), or in inches (line headed "IN.") or in acre-feet (line headed "AC-FT"). Figures of cubic feet per second per square mile and runoff in inches are omitted if there is extensive regulation or diversion, if the drainage area includes large noncontributing areas, or if the average rainfall on the drainage basin is usually less than 20 inches.

For reservoir stations, the monthly summary gives the elevation (or gage height) at the end of the month and the change in contents during the month. If elevation or gage height is given in the daily table, the monthly summary gives the contents at the end of the month, rather than the elevation or gage height.

In the yearly summary below the monthly summary, the figures of maximum are the maximum daily discharges for the calendar and water years; likewise, the minimums in this summary are the minimum daily discharges.

For reservoir stations, the yearly summary gives the change in contents for the calendar year and for the water year. For some small reservoirs, only monthly and yearly summaries are published.

Peak discharges and their times of occurrence and corresponding gage heights for many stations are listed below the yearly summary. All independent peaks above the selected base are given. The base discharge, which is given in parentheses, is selected so that an average of about three peaks a year can be presented. Peak discharges are not published for any canals, ditches, drains, or for any stream for which the peaks are subject to substantial control by man. Time of day is expressed in 24-hour local standard time; for example, 12:30 a.m. is 0030 and 1:30 p.m. is 1330.

In a general footnote, introduced by the word "NOTE", certain periods are indicated for which the discharge is computed or estimated by special methods because of no gage-height record, backwater from various sources, or other unusual conditions. Periods of no gage-height record are indicated if the period is continuous for a month or more or includes the maximum discharge for the year. Periods of backwater from an unusual source, of indefinite stage-discharge relation, or of any other unusual condition at the gage are indicated only if they are a month or more in length and the accuracy of the records is affected. Days on which the stage-discharge relation is affected by ice are not indicated. The methods used in computing discharge for various unusual conditions have been explained in preceding paragraphs. Footnotes to reservoir tables may be used to explain the use of new capacity tables or for other special conditions.

Accuracy of Data

The accuracy of streamflow data depends primarily on (1) the stability of the stage-discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretation of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges is within 5 percent; "good" within 10 percent, and "fair" within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharges of less than 1 cfs; to tenths between 1.0 and 10 cfs; to whole numbers between 10 and 1,000 cfs; and to 3 significant figures above 1,000 cfs. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations. However, since measurements at miscellaneous sites are observed data and are often of a higher degree of accuracy, figures are usually carried to one more significant figure below 100 cfs.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumptive use, regulation, evaporation, or other factors. For such stations, discharge in cubic feet per second per square mile and runoff in inches are not published unless satisfactory adjustments can be made for such effects. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or unadjusted losses (consumptive use, evaporation, seepage, etc.) are large in comparison with the observed discharge.

Publications

Each volume of the 1960 series of U.S. Geological Survey water-supply papers entitled "Surface Water Supply of the United States" contains a listing of the numbers of all water-supply papers in which records of surface-water data were published for the area covered by the individual volumes. Each volume also contains a list of water-supply papers that give detailed information on major floods for the area. The new series of water-supply papers containing daily surface-water records for the 5-year period October 1, 1960, to September 30, 1965 (WSP's 1927, 1933, and 1935) also contain lists of annual and special reports published as water-supply papers.

Records through September 1950 for the area covered by this report have been compiled and published in Water-Supply Papers 1314(10), 1316(12), and 1317(13); records for October 1950 to September 1960 have been compiled and published in Water-Supply Papers 1734(10), 1736(12), and 1737(13). These reports contain summaries of monthly and annual discharge and monthend storage

for all previously published records, as well as some records not contained in the annual series of water-supply papers. All records were reexamined and revised where warranted. Estimates of discharge were made to fill short gaps whenever practical. The yearly summary table for each gaging station lists the numbers of the water-supply papers in which daily records were published for that station.

Discharge measurements made at miscellaneous sites and peak discharges at partial-record stations are compiled for the period 1894-1967 in a special basic-data report. (See SELECTED REFERENCES.)

Special reports on major floods or droughts or of other hydrologic studies for the area have been issued in publications other than water-supply papers. Information relative to these reports may be obtained from the district office.

Other Data Available

Data collected at partial-record stations and at miscellaneous sites are given in three tables at the end of the surface-water records in this report. The first is a table of annual maximum stage and discharge at crest-stage stations, the second is a table of discharge measurements at miscellaneous sites, and the third is a table showing the results of measurements made to determine flows at various points on Salmon Falls Creek below Roseworth crossing.

More detailed information than that published for most of the gaging stations, such as discharge measurements, gage-height records, and rating tables, is on file in the district office. Many gaging-station records in Idaho through 1968 have been analyzed to give several statistical summaries: (1) the number of days in each year that the daily discharge was between selected limits (duration tables); (2) the lowest mean discharge for selected numbers of consecutive days in each year; (3) the highest mean discharge for selected numbers of consecutive days in each year; (4) flood frequency by the Log-Pearson type III method; and (5) flow variability of annual and monthly flows.

At or near some gaging stations, water-quality records also are collected. Data are obtained on the chemical quality of the stream water, on water temperature, on suspended-sediment concentration, and on the particle-size distribution of suspended sediment and bed material. These data are given in Part 2 of this report. Under the "REMARKS" paragraph of the gaging-station description, reference is made to water-quality records collected on a regular basis.

HYDROLOGIC CONDITIONS

Streamflow was near the mean of record and below the preceding year in most streams. Many streams including Big Wood River, Beaver and Camas Creeks in Mud Lake basin, and Moyie River in Kootenai River basin averaged less than half the flow of 1969. Streams in the Mud Lake basin, although much less than last year, were more than twice the means of record. However, discharge of Teton River near St. Anthony in southeast Idaho was higher than any year since 1943. Record momentary peak flows of record occurred in Henrys Fork near Rexburg and in Rock Creek near Rock Creek. New maximum peaks of 10 years of record occurred at 12 of about 80 crest-stage gages operating during the year. Most of these were above Blackfoot River basin or in Salmon River basin. Conversely, Kootenai River and its tributaries in the Panhandle of north Idaho averaged less than any year since 1945, and flows in Bear River basin, in the extreme southeast, were considerably below average.

Flows statewide were near average at the beginning of the water year and gradually decreased to considerably below average in December. Ten storm systems crossed the State in January, consecutive days of precipitation and monthly precipitation exceeded previous records at many weather stations, and

flows increased except in the Panhandle. Some streams in southwestern Idaho, including Snake River at Weiser and Weiser River, averaged near the maximums of record for the month. Flows then receded and were far below average in April and the first half of May because of abnormally low temperatures. Water content of the snowpacks increased at practically all high elevation snow courses during April. The combination of increased snowpack and delayed melt concentrated the runoff in late May, June, and July. Flooding occurred in Henrys Fork and Rock Creek near Rock Creek. Excessive flows (in the highest fourth of the period of record) occurred in most streams draining higher elevations in June, and excessive flows continued in July in many streams. Thunderstorm-type storms caused flooding in Snake River tributaries near American Falls in July. Flows receded to near average levels in August except in Salmon River basin and a few other high elevation drainages where flows continued in the excessive range, and in Kootenai River basin where flows were deficient (in the lowest fourth of the period of record).

Precipitation again raised flows to excessive levels in September. Discharge has been exceeded only once during September in 59 years of record in Snake River at Weiser and only twice in 46 years of record in Clearwater River at Spalding. Flows continued deficient or near deficient in the far north.

At the beginning of the water year, carryover storage in reservoirs was near normal. At the year end, storage was considerably above average in the southern reservoirs, and near average in the northern reservoirs.

Monthly and annual mean discharge is compared with medians at two long-term representative gaging stations in figure 1.

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- Carter, R. W., and Davidian, Jacob, 1968, General procedure for gaging streams: U.S. Geol. Survey Techniques Water-Resources Inv., book 3, chap. A6, 13 p.
- Corbett, D. M., and others, 1943, Stream-gaging procedure, a manual describing methods and practices of the Geological Survey: U.S. Geol. Survey Water-Supply Paper 888, 245 p.
- Decker, S. O., and others, 1970, Miscellaneous streamflow measurements in Idaho, 1894-1967: U.S. Geol. Survey basic-data report, 310 p.
- Langbein, W. B., and Iseri, K. T., 1960, General introduction and hydrologic definitions: U.S. Geol. Survey Water-Supply Paper 1541-A, 29 p.

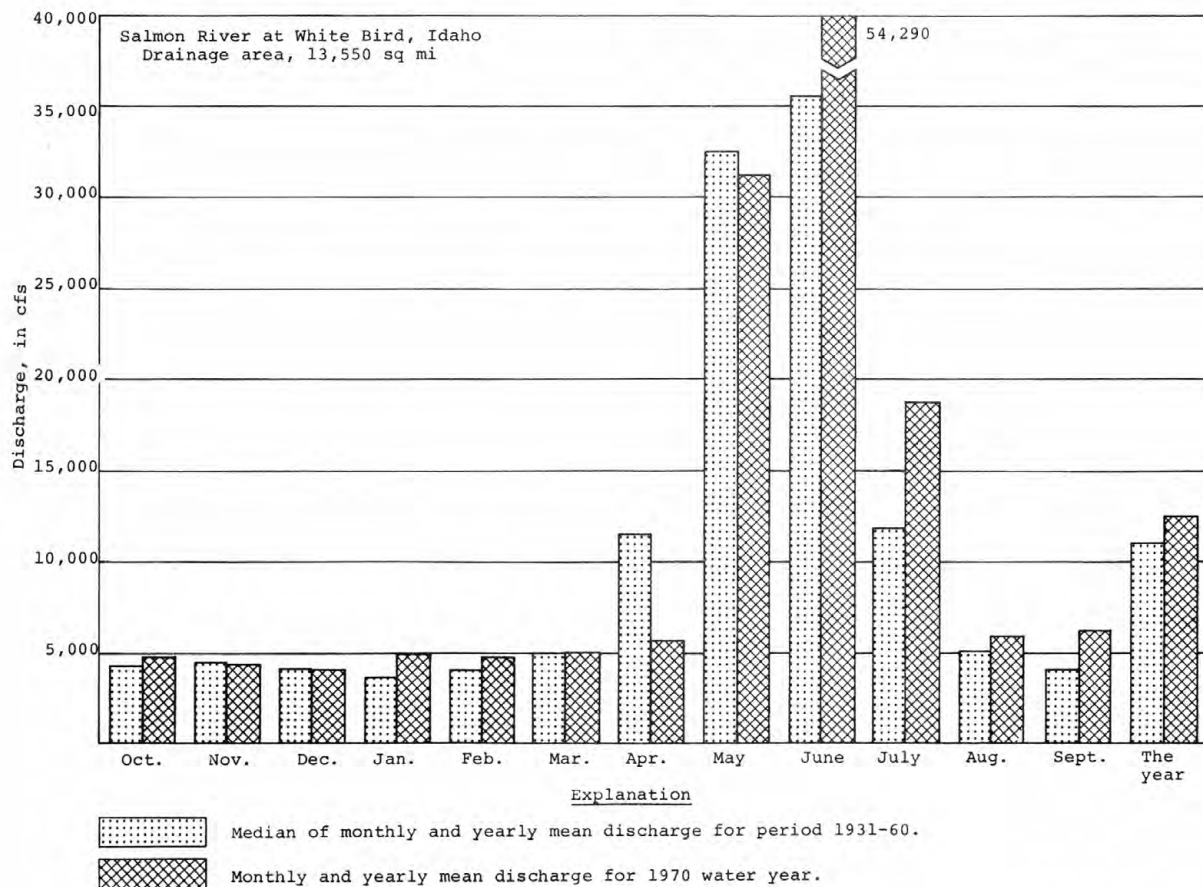
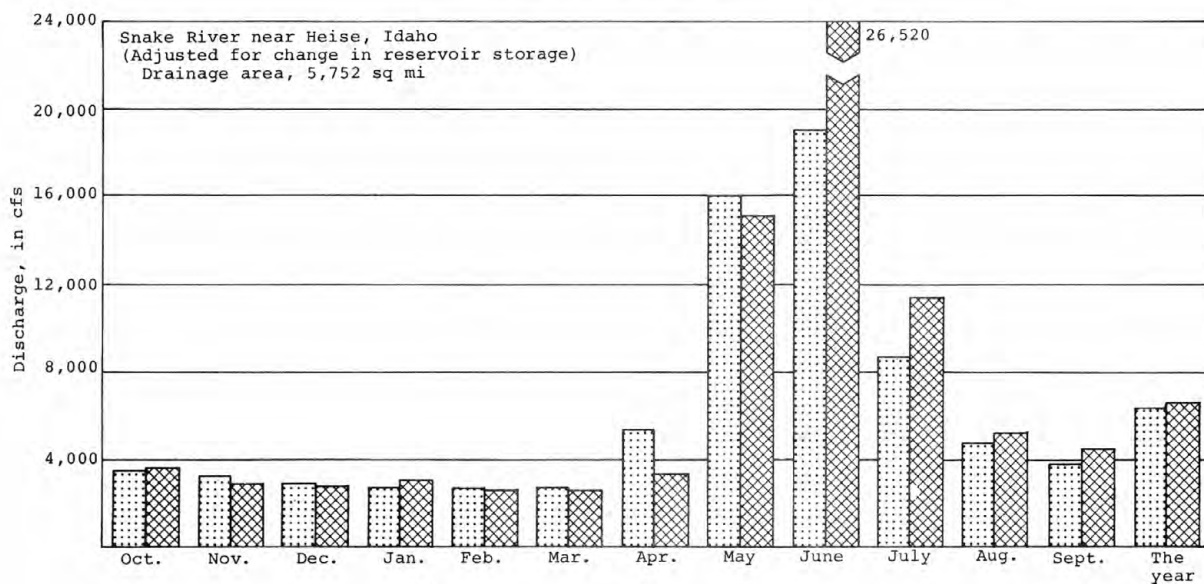


FIGURE 1. Comparison of discharge at two long-term representative gaging stations during 1970 water year with median discharge for period 1931-60.

11

BEAR RIVER BASIN

LOCATION.--Lat 42°12'40", long 111°03'11", in NE¼NE¼ sec.15, T.14 S., R.46 E., Bear Lake County, Idaho, on left bank 0.2 mile west of Wyoming-Idaho State line, 0.5 mile west of Border, and 2.1 miles upstream from Thomas Fork.

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

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

AVERAGE DISCHARGE.--33 years, 398 cfs (288,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,450 cfs June 15 (gage height, 5.51 ft); minimum, 101 cfs Mar. 31.
Period of record: Maximum discharge, 3,680 cfs May 11, 1952 (gage height, 8.89 ft); minimum daily, 30
cfs Aug. 18-22, 1940.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	122	186	175	165	185	185	157	162	1,280	561	270	129
2	124	186	175	165	180	185	153	162	1,390	514	255	127
3	119	184	175	165	180	185	153	173	1,340	487	234	124
4	139	184	175	155	180	185	158	201	1,390	444	222	132
5	146	184	175	155	180	185	164	232	1,430	392	218	139
6	151	184	165	155	180	185	173	270	1,420	377	216	176
7	157	186	150	155	180	185	197	303	1,360	414	210	201
8	158	184	145	165	180	185	208	317	1,380	419	201	186
9	157	180	150	172	180	180	212	301	1,380	414	178	173
10	158	186	160	180	180	180	212	299	1,420	455	171	166
11	158	186	170	183	175	180	222	305	1,330	590	166	162
12	155	182	170	187	180	180	201	277	1,360	590	162	158
13	134	180	170	190	185	184	190	261	1,380	571	157	155
14	162	182	170	190	185	182	186	268	1,360	536	149	155
15	167	178	170	180	180	184	226	263	1,440	472	144	149
16	178	180	170	178	190	191	259	292	1,380	455	144	149
17	188	175	170	175	190	199	220	384	1,340	449	137	148
18	191	165	170	180	185	184	214	523	1,330	419	136	149
19	195	170	170	180	185	164	220	577	1,330	390	130	155
20	193	170	170	185	185	175	220	577	1,250	362	127	166
21	191	170	170	190	185	171	205	583	1,090	352	127	158
22	193	170	170	200	185	169	201	542	964	333	124	158
23	190	175	170	225	185	175	207	523	900	305	119	169
24	190	175	170	225	185	186	207	561	809	314	113	160
25	188	175	170	220	185	180	195	669	722	314	113	164
26	184	175	170	210	185	193	188	790	715	292	111	178
27	180	175	170	215	185	191	178	832	697	299	114	178
28	182	175	170	220	185	184	182	836	715	299	134	176
29	186	175	165	210	-----	175	171	896	683	290	141	178
30	184	175	165	195	-----	175	162	920	622	283	137	178
31	186	-----	165	190	-----	146	-----	1,000	-----	279	129	-----
TOTAL	5,206	5,352	5,200	5,760	5,125	5,608	5,841	14,299	35,207	12,671	4,989	4,796
MEAN	168	178	168	186	183	181	195	461	1,174	409	161	160
MAX	195	186	175	225	190	199	259	1,000	1,440	590	270	201
MIN	119	165	145	155	175	146	153	162	622	279	111	124
AC-FT	10,330	10,620	10,310	11,420	10,170	11,120	11,590	28,360	69,830	25,130	9,900	9,510
CAL YR 1969	TOTAL 170,834		MEAN 468	MAX 3,600	MIN 104	AC-FT						

10041000 Thomas Fork near Wyoming-Idaho State line

LOCATION.--Lat 42°24'10", long 111°01'30", in SE¼NW¼ sec.19, T.28 N., R.119 W., Lincoln County, Wyo., on right bank 1.3 miles upstream from State line, 1.5 miles downstream from Giraffe Creek, and 3.5 miles northeast of Geneva, Idaho.

DRAINAGE AREA.--113 sq mi.

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,280 ft (from topographic map). Prior to Aug. 23, 1957, at site 0.2 mile upstream at different datum.

AVERAGE DISCHARGE.--21 years, 50.2 cfs (36,370 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 431 cfs May 19 (gage height, 2.64 ft); minimum, 7.4 cfs Mar. 18.
Period of record: Maximum discharge, 869 cfs May 18, 1950 (gage height, 5.55 ft, site and datum then in use); minimum, 2.6 cfs Mar. 2, 1956, result of freezeup.

REMARKS.--Records good except those for winter months, which are fair. No diversion above station. Records of chemical analysis for the water year 1970 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	16	15	14	14	14	18	33	134	51	26	18
2	16	15	15	14	14	13	14	48	124	48	25	17
3	18	15	15	14	14	13	14	74	118	46	24	16
4	18	15	15	14	14	13	16	95	113	46	23	15
5	18	15	16	14	14	13	18	105	105	44	24	20
6	16	15	15	14	14	13	25	128	100	47	25	28
7	16	16	15	14	14	13	32	149	97	46	24	26
8	16	16	15	14	14	13	39	126	100	42	22	19
9	16	15	15	14	14	13	46	118	109	40	21	18
10	16	16	15	14	14	13	57	141	100	42	21	16
11	16	16	15	14	14	13	60	115	93	44	20	16
12	16	16	14	14	14	13	39	107	104	43	20	16
13	15	16	14	14	14	13	33	105	100	39	19	16
14	17	16	13	15	14	13	30	104	93	36	18	16
15	18	16	13	14	13	13	36	118	88	35	18	15
16	18	16	13	14	13	13	26	175	84	34	18	15
17	19	16	13	14	14	13	29	258	80	33	18	15
18	19	16	13	13	14	13	36	320	76	31	17	15
19	19	16	13	14	14	13	41	348	74	30	17	15
20	18	16	13	14	14	13	32	334	71	30	18	16
21	18	15	13	13	13	14	28	294	68	30	19	16
22	17	15	14	17	13	15	28	264	65	39	18	16
23	16	15	14	20	13	14	30	252	62	32	17	16
24	16	15	14	18	13	15	32	243	61	29	16	16
25	16	15	14	15	13	15	36	234	57	28	16	15
26	15	15	14	15	13	14	40	220	57	29	16	16
27	15	15	15	18	13	14	49	210	56	29	16	15
28	18	15	14	14	13	15	39	217	56	31	18	15
29	17	15	14	14	-----	14	34	180	52	31	18	15
30	16	15	14	14	-----	14	32	163	51	29	17	15
31	16	-----	14	14	-----	14	-----	147	-----	30	17	-----
TOTAL	520	464	439	452	382	419	989	5,425	2,548	1,144	606	503
MEAN	16.8	15.5	14.2	14.6	13.6	13.5	33.0	175	84.9	36.9	19.5	16.8
MAX	19	16	16	20	14	15	60	348	134	51	26	28
MIN	15	15	13	13	13	13	14	33	51	28	16	15
AC-FT	1,030	920	871	897	758	831	1,960	10,760	5,050	2,270	1,200	998

CAL YR 1969 TOTAL 20,434 MEAN 56.0 MAX 56 MIN 11 AC-FT 40,530
WAT YR 1970 TOTAL 13,891 MEAN 38.1 MAX 348 MIN 13 AC-FT 27,550

PEAK DISCHARGE (BASE, 150 CFS).--May 6 (2230) 192 cfs (1.89 ft); May 19 (0030) 431 cfs (2.64 ft).

LOCATION.--Lat 42°11'50", long 111°10'05", in NW¼ sec.23, T.14 S., R.45 E., Bear Lake County, on right bank 400 ft downstream from Sheep Creek, 0.8 mile north of Harer siding on Union Pacific (Oregon Short Line) Railroad, and 5 miles southeast of Dingle.

PERIOD OF RECORD.--June 1913 to current year. Monthly discharge only October 1916 to December 1918 published in WSP 1314.

AVERAGE DISCHARGE.--57 years, 505 cfs (365,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,580 cfs June 15 (gage height, 6.80 ft); minimum daily, 100 cfs Jan. 9.

Period of record: Maximum discharge, 4,440 cfs May 7, 1952 (gage height, 11.04 ft); minimum daily, 26 cfs Aug. 21-27, 1934.

REMARKS.--Records good. Diversions above station for irrigation of about 140,000 acres.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	171	246	170	130	210	224	208	227	1,290	711	335	145
2	184	252	170	120	215	240	211	221	1,470	654	322	143
3	181	252	170	115	210	266	204	221	1,470	628	309	141
4	194	235	170	115	210	269	211	246	1,480	592	293	141
5	208	235	165	115	215	284	219	288	1,510	519	278	152
6	208	240	160	110	205	255	238	320	1,510	474	270	179
7	216	240	160	110	210	288	275	395	1,470	486	262	216
8	221	240	155	105	215	288	294	447	1,450	515	253	227
9	230	240	150	100	210	297	297	451	1,490	507	232	219
10	227	238	160	125	205	269	300	421	1,550	511	208	194
11	227	246	165	130	200	263	323	421	1,510	645	201	184
12	224	246	165	140	210	272	313	399	1,480	748	196	184
13	219	238	165	150	230	238	278	360	1,520	719	191	186
14	206	235	165	160	230	278	272	353	1,520	680	181	186
15	232	235	165	170	220	240	272	343	1,530	632	160	181
16	240	238	165	175	220	275	320	329	1,550	553	160	186
17	255	235	165	185	220	288	323	381	1,510	544	158	184
18	269	198	165	190	215	297	275	540	1,500	523	156	181
19	275	195	170	200	210	266	284	723	1,480	490	143	184
20	275	185	175	215	200	219	294	760	1,470	439	139	191
21	275	185	180	220	190	211	281	764	1,340	417	135	194
22	275	185	190	230	190	216	266	748	1,200	432	135	189
23	272	185	195	240	205	221	263	706	1,090	392	133	196
24	269	185	195	250	220	235	266	702	973	374	127	191
25	266	180	200	255	225	246	258	776	871	413	123	189
26	258	180	195	255	230	235	252	940	832	388	123	198
27	260	180	185	250	225	255	246	1,020	804	367	137	211
28	263	175	170	220	215	243	252	1,060	812	363	145	208
29	266	175	160	200	-----	238	252	1,060	847	353	158	206
30	255	175	150	200	-----	238	232	1,090	788	350	158	204
31	243	-----	140	210	-----	232	-----	1,100	-----	343	149	-----
TOTAL	7,364	6,474	5,255	5,390	5,960	7,886	7,979	17,812	39,317	15,762	5,970	5,590
MEAN	238	216	170	174	213	254	266	575	1,311	508	193	186
MAX	275	252	200	255	230	297	323	1,100	1,550	748	335	227
MIN	171	175	140	100	190	211	204	221	788	343	123	141
AC-FT	14,610	12,840	10,420	10,690	11,820	15,640	15,830	35,330	77,990	31,260	11,840	11,090
CAL Y												

BEAR RIVER BASIN

10046000 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, on left bank 1.5 miles west of Dingle and 1.8 miles downstream from headworks at Stewart Dam.

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

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

AVERAGE DISCHARGE.--48 years, 313 cfs (226,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,120 cfs June 16 (gage height, 4.18 ft); minimum, 15 cfs Oct. 1. Period of record: Maximum discharge, 4,180 cfs May 7, 1952 (gage height, 8.62 ft); minimum daily, 1 cfs on several days in 1931, 1934, 1940, 1948.

REMARKS.--Records good. Discharge measurements generally made three to six times a week. 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 wastage from irrigation lands on both sides of canal. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	212	128	96	140	171	186	79	625	356	256	39
2	78	233	128	95	145	188	173	72	853	320	243	39
3	101	208	126	92	145	190	180	73	944	322	238	43
4	112	192	124	90	147	192	171	74	968	361	206	48
5	124	182	124	96	148	195	180	96	984	333	188	51
6	143	184	123	86	149	197	197	132	992	296	180	70
7	159	186	96	86	150	184	222	175	984	304	150	89
8	163	180	101	79	150	188	243	203	972	293	147	108
9	167	184	108	82	150	180	262	235	1,000	270	138	108
10	180	182	117	87	151	163	265	231	1,080	267	105	108
11	175	186	121	96	149	157	275	212	1,080	286	94	94
12	178	190	124	97	153	178	262	212	1,040	450	90	92
13	167	180	128	103	169	184	262	167	1,070	484	96	90
14	161	175	126	110	182	188	235	105	1,080	475	94	92
15	169	178	124	121	173	195	252	81	1,060	438	84	94
16	182	182	119	124	171	203	286	64	1,100	381	74	96
17	197	178	119	134	153	217	304	84	1,040	364	76	82
18	212	145	117	138	157	217	247	123	1,020	350	76	81
19	224	141	128	145	159	188	240	240	1,010	325	78	81
20	238	134	135	157	141	173	240	325	984	293	74	79
21	243	145	139	169	130	188	235	333	888	273	70	90
22	238	151	141	173	134	182	188	344	749	270	68	92
23	235	147	149	178	143	184	171	304	622	265	67	97
24	231	134	155	195	161	186	159	255	529	257	64	103
25	222	138	169	203	165	215	165	243	429	299	61	99
26	219	134	151	203	169	208	159	353	367	312	61	103
27	219	132	145	163	165	219	147	447	361	301	53	115
28	222	143	125	146	155	217	119	519	405	304	54	123
29	226	130	110	132	-----	208	110	526	364	293	55	134
30	286	126	95	136	-----	210	92	549	347	288	61	136
31	233	-----	95	130	-----	195	-----	552	-----	283	51	-----
TOTAL	5,726	5,012	3,890	3,942	4,304	5,960	6,227	7,408	24,947	10,113	3,352	2,676
MEAN	185	167	125	127	154	192	208	239	832	326	108	89.2
MAX	286	233	169	203	182	219	304	552	1,100	484	256	136
MIN	22	126	95	79	130	157	92	64	347	257	51	39
AC-FT	11,360	9,940	7,720	7,820	8,540	11,820	12,350	14,690	49,480	20,060	6,650	5,310
CAL YR 1969	TOTAL	156,250	MEAN	428	MAX	3,040	MIN	22	ACFT	309,900		
WAT YR 1970	TOTAL	83,557	MEAN	229	MAX	1,100	MIN	22	ACFT	165,700		

CAL YR 1969	TOTAL 2,261.1	MEAN 6.19	MAX 16	MIN .40	ACFT 4,480
WAT YR 1970	TOTAL 1,721.2	MEAN 4.72	MAX 9.2	MIN 1.9	ACFT 3,410

BEAR RIVER BASIN

10047500 Montpelier Creek at irrigators weir, near Montpelier, Idaho

LOCATION.--Lat 42°19'47", long 111°14'12", in SW¼SE¼ sec.31, T.12 S., R.45 E., Bear Lake County, on right bank 3 miles east of Montpelier and 3.5 miles downstream from South Fork.

DRAINAGE AREA.--50.9 sq mi.

PERIOD OF RECORD.--October 1942 to current year. Monthly discharge only for some periods, published in WSP 1314.

GAGE.--Water-stage recorder and sharp-crested weir. Altitude of gage is 6,210 ft (from topographic map).

AVERAGE DISCHARGE.--28 years, 21.2 cfs (15,360 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 79 cfs May 7 (gage height, 1.83 ft); minimum daily, 7.4 cfs Dec. 8, 12, 13, 16, 17.

Period of record: Maximum discharge, 224 cfs May 18, 1950; maximum gage height, 3.06 ft Apr. 28, 1962; minimum discharge, 0.40 cfs Jan. 28, 1961.

REMARKS.--Records excellent. One small diversion above station for irrigation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	10	8.5	10	14	10	9.2	23	53	28	17	11
2	11	10	7.9	10	12	10	9.2	30	52	27	16	11
3	11	10	7.7	10	11	10	8.5	44	51	27	15	11
4	12	10	8.5	10	11	9.8	9.0	52	50	26	15	10
5	12	10	7.9	10	9.5	9.8	11	62	50	25	15	12
6	11	9.8	7.9	10	11	9.2	16	68	49	26	15	16
7	11	10	7.9	10	11	9.8	25	69	49	26	14	15
8	10	10	7.4	10	9.8	9.8	26	61	54	24	14	12
9	10	9.8	8.5	10	9.5	9.8	29	56	54	24	13	11
10	11	9.8	7.9	9.2	10	9.2	37	60	54	26	13	11
11	11	9.8	7.7	9.0	10	9.0	40	53	50	27	13	11
12	11	9.8	7.4	8.7	11	9.0	30	50	51	26	12	11
13	11	9.8	7.4	8.7	11	9.5	26	48	52	26	13	10
14	12	9.5	7.7	8.5	11	9.5	24	46	50	24	14	10
15	11	9.2	7.7	8.5	10	9.5	21	46	48	23	13	10
16	12	9.5	7.4	8.5	10	9.5	20	49	42	23	13	10
17	12	9.0	7.4	8.5	10	9.5	21	52	43	21	13	10
18	13	7.9	7.9	8.5	10	8.7	24	55	40	21	13	10
19	13	7.9	8.5	8.7	8.7	9.2	27	60	38	21	12	10
20	12	8.5	8.7	8.7	9.2	9.0	22	62	36	20	13	10
21	12	9.0	8.7	8.7	9.2	9.5	20	62	36	19	13	11
22	12	9.0	10	12	9.5	9.2	20	59	34	24	13	10
23	12	8.2	9.2	18	9.8	9.5	20	58	33	21	13	10
24	11	8.2	9.2	15	9.5	9.5	20	58	31	19	13	10
25	11	8.2	8.7	13	9.8	9.5	22	58	31	19	12	10
26	11	8.2	10	12	9.8	10	24	60	30	19	11	10
27	11	8.5	9.2	12	9.5	9.8	29	60	31	19	12	10
28	11	8.5	7.7	10	10	9.8	25	63	30	19	12	10
29	11	9.0	10	10	-----	9.8	22	59	29	19	12	9.9
30	11	8.7	12	9.5	-----	9.8	21	58	29	18	12	9.8
31	11	-----	10	11	-----	9.2	-----	56	-----	18	11	-----
TOTAL	351	275.8	262.6	316.7	286.8	295.4	657.9	1,697	1,280	705	410	322.7
MEAN	11.3	9.19	8.47	10.2	10.2	9.53	21.9	54.7	42.7	22.7	13.2	10.8
MAX	13	10	12	18	14	10	40	69	54	28	17	16
MIN	10	7.9	7.4	8.5	8.7	8.7	8.5	23	29	18	11	9.8
AC-FT	696	547	521	628	569	586	1,300	3,370	2,540	1,400	813	640
CAL YR 1969	TOTAL 5,477.4		MEAN 15.0		MAX 42		MIN 6.2		AC-FT 10,860			
WTR YR 1970	TOTAL 6,860.9		MEAN 18.8		MAX 69		MIN 7.4		AC-FT 13,610			

BEAR RIVER BASIN

17

10055500 Bear Lake at Lifton, near St. Charles, Idaho

LOCATION.--Lat 42°07'16", long 111°18'52", in NE¼ sec.16, T.15 S., R.44 E., Bear Lake County, in Lifton pumping plant of Utah Power & Light Company and 3.5 miles east of St. Charles.

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

PERIOD OF RECORD.--October 1903 to June 1906 (gage heights only), January 1921 to current year. Monthly contents only January 1921 to September 1945 published in WSP 1314. Published as Bear Lake at Fish Haven 1903-6.

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

EXTREMES.--Current year: Maximum contents, 1,240,000 acre-ft June 28, 29 (gage height, 21.08 ft); minimum, 1,110,000 acre-ft Jan. 18-21 (gage height, 19.21 ft).
Period of record: Maximum contents, 1,423,000 acre-ft June 10, 1923 (gage height, 23.68 ft); no usable contents Nov. 9-19, 1935 (gage height, 2.00 ft, lower limit of pumps).

REMARKS.--Outflow regulated by gates and pumps at Bear Lake and by gates in dike at north end of Mud Lake. Inflow to lake augmented by water diverted from Bear River through Rainbow inlet canal and Dingle inlet canal, which empty into Mud Lake (see sta 10046000). Water from Mud Lake reaches Bear Lake by a sluice at pumping plant or by gates in causeway at south end of Mud Lake. Capacity, 1,421,000 acre-ft between gage heights 2.00 (lower limit of pumps) and 23.65 ft (present feasible upper limit of storage with existing facilities). Storage water used for irrigation and power development. Figures given herein represent usable contents.

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

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

5,919.00	1,095,200	5,920.50	1,199,900
5,919.50	1,130,000	5,921.00	1,234,900
5,920.00	1,164,900	5,921.60	1,276,900

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2330, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,150	1,150	1,132	1,117	1,119	1,135	1,139	1,150	1,174	1,240	1,208	1,141
2	1,149	1,150	1,131	1,117	1,120	1,135	1,139	1,150	1,177	1,239	1,207	1,140
3	1,148	1,151	1,131	1,116	1,120	1,136	1,139	1,150	1,180	1,239	1,206	1,138
4	1,148	1,151	1,131	1,116	1,121	1,136	1,139	1,150	1,183	1,238	1,206	1,136
5	1,148	1,151	1,130	1,115	1,122	1,136	1,139	1,150	1,185	1,238	1,204	1,134
6	1,147	1,151	1,129	1,115	1,122	1,137	1,139	1,150	1,187	1,238	1,203	1,134
7	1,146	1,151	1,129	1,114	1,123	1,138	1,140	1,150	1,189	1,238	1,201	1,134
8	1,145	1,150	1,128	1,113	1,124	1,138	1,140	1,151	1,192	1,237	1,200	1,134
9	1,145	1,150	1,127	1,113	1,124	1,138	1,140	1,151	1,195	1,237	1,198	1,134
10	1,144	1,148	1,127	1,113	1,125	1,138	1,140	1,152	1,198	1,237	1,196	1,133
11	1,144	1,148	1,126	1,112	1,126	1,139	1,141	1,153	1,201	1,236	1,194	1,131
12	1,143	1,146	1,125	1,112	1,127	1,139	1,142	1,154	1,203	1,236	1,189	1,131
13	1,143	1,145	1,124	1,111	1,127	1,140	1,143	1,155	1,207	1,236	1,184	1,129
14	1,142	1,145	1,124	1,111	1,128	1,140	1,143	1,156	1,210	1,235	1,180	1,128
15	1,141	1,144	1,123	1,110	1,129	1,141	1,143	1,157	1,214	1,234	1,177	1,127
16	1,140	1,144	1,122	1,110	1,129	1,141	1,144	1,157	1,217	1,233	1,173	1,126
17	1,140	1,143	1,122	1,110	1,130	1,141	1,145	1,157	1,220	1,231	1,170	1,124
18	1,141	1,143	1,121	1,110	1,131	1,141	1,145	1,157	1,222	1,229	1,168	1,124
19	1,143	1,142	1,120	1,110	1,131	1,141	1,145	1,157	1,225	1,227	1,165	1,122
20	1,143	1,140	1,120	1,110	1,132	1,141	1,146	1,158	1,228	1,224	1,163	1,121
21	1,144	1,140	1,120	1,110	1,132	1,141	1,146	1,158	1,231	1,222	1,161	1,120
22	1,145	1,139	1,120	1,110	1,133	1,141	1,147	1,159	1,234	1,221	1,159	1,118
23	1,145	1,138	1,119	1,111	1,133	1,141	1,148	1,159	1,236	1,219	1,157	1,118
24	1,145	1,137	1,119	1,112	1,134	1,141	1,148	1,161	1,238	1,217	1,154	1,116
25	1,146	1,136	1,118	1,113	1,134	1,140	1,148	1,161	1,239	1,215	1,152	1,115
26	1,147	1,136	1,118	1,114	1,134	1,140	1,148	1,162	1,240	1,212	1,150	1,114
27	1,148	1,135	1,118	1,115	1,134	1,140	1,149	1,164	1,240	1,210	1,148	1,113
28	1,148	1,134	1,118	1,117	1,135	1,140	1,149	1,165	1,240	1,209	1,147	1,113
29	1,149	1,134	1,118	1,118	-----	1,140	1,150	1,167	1,240	1,208	1,145	1,112
30	1,149	1,133	1,118	1,118	-----	1,140	1,150	1,169	1,240	1,208	1,144	1,111
31	1,150	-----	1,117	1,119	-----	1,139	-----	1,171	-----	1,208	1,143	-----
MAX	1,150	1,151	1,132	1,119	1,135	1,141	1,150	1,171	1,240	1,240	1,208	1,141
MIN	1,140	1,133	1,117	1,110	1,119	1,135	1,139	1,150	1,174	1,208	1,143	1,111
(†)	5,919.78	5,919.54	5,919.31	5,919.34	5,919.57	5,919.63	5,919.78	5,920.09	5,921.07	5,920.61	5,919.68	5,919.23
(‡)	-1.0	-17.0	-16.0	+2.0	+16.0	+4.0	+11.0	+21.0	+69.0	-32.0	-65.0	-32.0
CAL YR 1969	MAX 1,151	MIN 1,043	‡ +41.0									
WAT YR 1970	MAX 1,240	MIN 1,110	‡ -40.0									

† Elevation, in feet, at end of month.

‡ Change in contents, in thousands of acre-feet.

BEAR RIVER BASIN

10058600 Bloomington Creek at Bloomington, Idaho

LOCATION.--Lat 42°11'05", long 111°25'30", in SE¼SE¼ sec.21, T.14 S., R.43 E., Bear Lake County, on left bank 1 mile west of Bloomington.

DRAINAGE AREA.--24.4 sq mi.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder 4 ft upstream from 8-ft concrete flume. Altitude of gage is 6,070 ft (from topographic map).

AVERAGE DISCHARGE.--10 years, 26.6 cfs (19,270 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 173 cfs May 28 (gage height, 3.92 ft); minimum, 13 cfs Mar. 3.
Period of record: Maximum discharge, 222 cfs June 13, 1965 (gage height, 4.43 ft); minimum, 9.4 cfs Jan. 27, 1961, Feb. 26, 1962.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	19	16	15	16	15	14	17	108	49	30	24
2	21	18	16	15	15	15	15	18	114	46	29	23
3	20	18	16	15	15	14	15	20	121	45	29	23
4	20	18	16	15	15	14	14	23	129	44	29	23
5	20	18	16	15	15	14	16	25	128	42	29	25
6	20	18	16	15	15	14	19	29	119	42	28	26
7	20	18	16	15	15	14	21	31	114	41	27	25
8	20	18	16	15	15	15	23	29	128	40	27	24
9	20	18	16	15	15	14	25	28	136	39	26	24
10	20	18	16	15	15	14	28	30	112	39	26	24
11	19	18	16	15	15	14	24	26	94	40	26	24
12	19	18	16	15	15	14	20	24	83	37	26	23
13	19	18	16	15	15	14	18	24	83	36	26	23
14	20	18	15	15	15	14	18	23	77	36	26	23
15	19	18	15	15	15	15	18	23	74	35	26	23
16	20	18	15	15	15	15	18	26	73	35	26	23
17	20	16	15	15	15	15	18	34	72	34	26	23
18	20	16	15	15	15	15	17	46	71	35	25	23
19	20	16	16	15	15	14	17	53	71	34	25	23
20	19	17	16	15	15	14	17	59	70	33	25	23
21	19	18	18	15	15	14	17	61	69	33	24	23
22	19	18	18	20	15	14	16	61	68	35	24	23
23	19	16	16	23	15	15	16	71	65	34	24	23
24	19	17	16	19	15	16	16	85	63	33	22	23
25	19	17	16	16	15	16	17	99	61	32	22	23
26	19	17	16	16	15	16	18	115	59	32	23	22
27	19	16	16	17	15	15	19	119	58	32	24	22
28	19	16	16	16	15	15	18	146	56	32	24	22
29	19	16	15	16	-----	15	17	129	53	31	24	22
30	18	16	15	16	-----	15	17	119	51	31	23	22
31	19	-----	15	15	-----	15	-----	105	-----	30	23	-----
TOTAL	604	521	492	489	421	453	546	1,698	2,580	1,137	794	697
MEAN	19.5	17.4	15.9	15.8	15.0	14.6	18.2	54.8	86.0	36.7	25.6	23.2
MAX	21	19	18	23	16	16	28	146	136	49	30	26
MIN	18	16	15	15	15	14	14	17	51	30	22	22
AC-FT	1,200	1,030	976	970	835	899	1,080	3,370	5,120	2,260	1,570	1,380
CAL YR 1969	TOTAL	9,268	MEAN	25.4	MAX	92	MIN	13	AC-FT	18,380		
WTR YR 1970	TOTAL	10,432	MEAN	28.6	MAX	146	MIN	14	AC-FT	20,690		

BEAR RIVER BASIN

19

10059500 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, on right bank 2,000 ft downstream from headgates (at dike) and 3 miles southeast of Paris.

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

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

AVERAGE DISCHARGE.--48 years, 337 cfs (244,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,150 cfs Aug. 19 (gage height, 17.53 ft); minimum daily, 5.0 cfs on many days.

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

REMARKS.--Records good except those for period of no gage-height record, which are fair. Discharge measurements generally made six times a week during periods of release from Bear Lake. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	8.4	422	406	5.7	5.0	5.3	7.3	7.9	427	420	588
2	17	8.5	422	404	5.7	5.0	5.3	7.4	7.9	418	401	596
3	17	8.5	413	397	5.6	5.0	5.4	7.4	7.9	475	508	613
4	17	8.6	406	397	5.6	5.0	5.4	7.4	7.9	564	700	613
5	17	199	411	399	5.6	5.1	5.4	7.5	7.9	583	783	322
6	17	463	392	397	5.6	5.1	5.4	7.5	7.9	678	780	22
7	16	521	408	401	5.5	5.1	5.4	7.5	7.9	777	759	22
8	16	583	436	404	5.5	5.1	5.4	7.6	7.9	834	756	22
9	15	580	413	399	5.5	5.1	5.5	7.6	7.9	915	741	22
10	15	487	413	394	5.5	5.1	5.6	7.6	7.9	913	781	22
11	14	413	408	397	5.4	5.1	5.7	7.6	7.9	934	896	21
12	13	415	413	397	5.4	5.1	5.8	7.6	7.9	892	964	20
13	13	418	418	401	5.4	5.2	5.9	7.7	7.9	912	1,070	20
14	12	415	413	406	5.4	5.2	6.0	7.7	7.9	980	1,110	19
15	12	411	411	408	5.3	5.2	6.2	7.7	7.9	997	1,120	18
16	11	408	408	401	5.3	5.2	6.3	7.7	7.9	987	1,110	18
17	10	404	408	408	5.3	5.2	6.4	7.7	7.9	974	1,100	18
18	9.8	401	413	413	5.2	5.2	6.5	7.7	7.9	974	1,110	17
19	9.2	410	415	399	5.2	5.2	6.6	7.8	7.9	970	1,140	17
20	8.6	411	420	228	5.2	5.2	6.7	7.8	7.9	957	1,050	17
21	8.0	408	422	6.0	5.2	5.2	6.8	7.8	7.9	967	1,010	17
22	8.0	411	431	6.0	5.1	5.2	6.8	7.8	7.9	957	980	17
23	8.1	404	427	5.9	5.1	5.2	6.9	7.8	7.9	990	987	17
24	8.1	408	415	5.9	5.1	5.2	7.0	7.9	7.9	984	1,000	16
25	8.1	413	399	5.9	5.1	5.3	7.0	7.9	7.9	977	947	16
26	8.2	418	404	5.9	5.0	5.3	7.0	7.9	136	977	830	16
27	8.2	418	397	5.8	5.0	5.3	7.1	7.9	313	876	724	16
28	8.3	422	400	5.8	5.0	5.3	7.2	7.9	446	666	683	16
29	8.3	418	400	5.8	-----	5.3	7.2	7.9	448	572	637	16
30	8.4	413	400	5.8	-----	5.3	7.2	7.9	429	503	580	16
31	8.4	-----	400	5.7	-----	5.3	-----	7.9	-----	427	585	-----
TOTAL	366.7	11,106.0	12,758	7,920.5	149.5	160.3	186.4	238.4	1,969.5	25,057	26,262	3,190
MEAN	11.8	370	412	256	5.34	5.17	6.21	7.69	65.7	808	847	106
MAX	17	583	436	413	5.7	5.3	7.2	7.9	448	997	1,140	613
MIN	8.0	8.4	392	5.7	5.0	5.0	5.3	7.3	7.9	418	401	16
AC-FT	727	22,030	25,310	15,710	297	318	370	473	3,910	49,700	52,090	6,330
CAL YR 1969	TOTAL	135,531.7	MEAN	371	MAX	1,560	MIN	5.0	ACFT	268,800		
WAT YR 1970	TOTAL	89,364.3	MEAN	245	MAX	1,140	MIN	5.0	ACFT	177,300		

NOTE.--No gage-height record Oct. 1 to Nov. 4 and Jan. 21 to June 25.

BEAR RIVER BASIN

10068500 Bear River at Pescadero, Idaho

LOCATION.--Lat 42°24'30", long 111°21'30", in SE¼ sec.6, T.12 S., R.44 E., Bear Lake County, on left bank at Pescadero, 400 ft downstream from road bridge, 2 miles downstream from Bennington Creek, and 6.5 miles north-west of Montpelier.

PERIOD OF RECORD.--June 1969 to current year. October 1921 to September 1954. Monthly discharge only for some periods, published in WSP 1314.

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

AVERAGE DISCHARGE.--34 years (1921-54, 1970), 558 cfs (404,300 acre-ft per year).

EXTREMES.--June to September 1969: Maximum discharge during period, 1,790 cfs July 25 (gage height, 5.33 ft); minimum daily, 65 cfs Sept. 29, 30.

Current year: Maximum discharge, 1,220 cfs July 15 (gage height, 4.64 ft); minimum daily, 53 cfs Oct. 13.

Period of record: Maximum daily discharge, 3,840 cfs June 10, 1923; minimum daily, 23 cfs Mar. 14-17, 1936.

REMARKS.--Many diversions above station for irrigation. Flow regulated by Bear Lake (see sta 10055000).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									430	358	407	776
2									360	384	514	660
3									360	438	555	400
4									420	407	565	300
5									480	384	677	390
6									469	407	694	470
7									460	392	682	490
8									446	379	699	500
9									446	358	896	450
10									438	312	936	350
11									442	413	942	200
12									433	1,230	942	100
13									428	1,390	936	97
14									442	1,370	922	95
15									420	1,510	910	92
16									433	1,560	910	89
17									505	1,580	903	86
18									532	1,630	903	83
19									570	1,690	890	82
20									456	1,700	890	79
21									433	1,690	936	77
22									411	1,680	922	75
23									399	1,700	903	73
24									469	1,760	878	72
25									451	1,740	872	70
26									396	1,520	860	68
27									388	1,320	836	67
28									372	1,170	830	66
29					-----				365	728	824	65
30					-----				351	590	806	65
31		-----			-----		-----		-----	451	788	-----
TOTAL									13,005	32,241	25,228	6,487
MEAN									434	1,040	814	216
MAX									570	1,760	942	776
MIN									351	312	407	65
AC-FT									25,800	63,950	50,040	12,870

10068500 Bear River at Pescadero, Idaho--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	65	496	520	140	110	122	192	403	699	464	644
2	60	66	496	520	130	110	125	200	411	682	446	644
3	60	74	496	520	120	110	120	166	411	682	433	677
4	60	78	496	520	110	110	120	182	396	800	638	688
5	60	80	528	520	110	110	128	190	362	836	818	677
6	60	366	523	520	110	110	134	194	362	903	854	258
7	60	518	585	520	110	110	139	197	344	1,010	836	104
8	60	616	585	520	110	110	137	187	358	1,030	812	85
9	60	655	590	520	110	110	135	152	456	1,140	806	74
10	57	655	550	520	110	110	139	164	518	1,120	788	72
11	57	532	570	520	110	110	156	190	514	1,170	903	72
12	58	500	575	525	110	110	166	243	474	1,130	988	69
13	53	496	570	525	110	110	156	305	446	1,100	1,080	66
14	62	496	518	525	110	110	150	258	442	1,180	1,150	59
15	68	496	500	530	110	110	152	238	396	1,210	1,160	61
16	70	496	505	530	110	110	143	220	358	1,210	1,180	65
17	72	482	565	530	110	120	137	200	322	1,180	1,180	64
18	81	474	518	530	110	150	134	190	288	1,160	1,200	63
19	85	523	510	550	110	140	135	180	272	1,140	1,210	63
20	83	550	518	550	110	139	141	197	326	1,100	1,200	63
21	80	500	518	375	110	139	137	305	358	1,090	1,120	64
22	75	496	532	175	110	139	134	340	333	1,100	1,080	63
23	71	492	532	160	110	150	135	308	258	1,100	1,070	63
24	69	518	528	170	110	160	139	269	227	1,080	1,080	65
25	66	492	525	170	110	148	148	258	207	1,080	1,080	65
26	64	492	525	170	110	158	146	272	330	1,070	994	66
27	63	492	525	170	110	150	148	319	514	1,060	872	65
28	63	523	525	155	110	144	144	336	740	848	782	63
29	66	541	525	155	-----	141	130	330	770	682	758	64
30	68	500	525	155	-----	137	134	344	728	611	699	61
31	65	-----	525	155	-----	127	-----	388	-----	500	655	-----
TOTAL	2,036	13,264	16,479	12,525	3,140	3,902	4,164	7,514	12,324	30,703	28,336	5,207
MEAN	65.7	442	532	404	112	126	139	242	411	990	914	174
MAX	85	655	590	550	140	160	166	388	770	1,210	1,210	688
MIN	53	65	496	155	110	110	120	152	207	500	433	59
AC-FT	4,040	26,310	32,690	24,840	6,230	7,740	8,260	14,900	24,440	60,900	56,200	10,330
WAT YR 1970	TOTAL	139,594	MEAN	382	MAX	1,210	MIN	53	AC-FT	276,900		

BEAR RIVER BASIN

10072800 Eightmile Creek near Soda Springs, Idaho

LOCATION.--Lat 42°32'15", long 111°34'20", in SE¼ sec.20, T.10 S., R.42 E., Bear Lake County, on right bank just below Wilson Creek, 15 ft downstream from road bridge, 0.3 mile north of Eightmile ranger station, and 8.4 miles south of Soda Springs.

DRAINAGE AREA.--23.3 sq mi.

PERIOD OF RECORD.--October 1960 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 6,170 ft (from topographic map).

AVERAGE DISCHARGE.--10 years, 15.0 cfs (10,870 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 116 cfs June 9 (gage height, 2.53 ft); minimum, 1.4 cfs Apr. 4.
Period of record: Maximum discharge, 144 cfs June 13, 14, 1965 (gage height, 2.57 ft); minimum, 0.98 cfs Mar. 3-5, 10, 20, 21, 1969.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	4.3	2.1	2.5	2.5	2.1	1.9	5.5	86	34	12	6.8
2	4.8	4.0	2.1	2.5	2.5	1.9	1.6	6.8	85	32	12	6.4
3	4.5	4.0	1.9	2.5	2.1	1.8	1.8	11	88	30	12	6.3
4	4.5	4.0	2.1	2.5	2.1	1.8	1.8	18	94	28	12	6.1
5	4.3	4.0	2.1	2.3	2.1	1.8	1.8	24	100	26	12	6.7
6	4.3	4.0	1.9	2.3	2.1	1.9	3.2	32	104	26	11	7.6
7	4.0	4.3	1.9	2.1	2.1	1.8	5.0	36	105	25	11	6.6
8	4.0	4.0	1.9	2.1	1.9	1.8	5.2	30	106	24	10	6.1
9	4.0	3.8	1.9	2.1	1.9	1.8	6.0	29	107	23	10	5.9
10	4.0	3.8	1.9	2.1	2.1	1.8	7.8	31	105	23	9.9	5.8
11	4.0	3.8	2.3	2.3	2.3	1.8	8.1	26	100	22	9.2	5.7
12	4.0	3.8	2.3	2.3	2.5	1.8	6.5	24	93	21	9.0	5.7
13	4.3	3.6	2.3	2.3	2.5	1.7	5.7	23	87	20	8.8	5.7
14	4.3	3.6	2.3	2.3	2.1	1.7	5.5	22	82	19	8.7	5.7
15	4.3	3.8	2.3	2.1	2.1	1.7	5.0	23	78	19	8.6	5.7
16	4.3	3.8	2.3	2.1	2.1	1.7	4.5	27	72	18	8.4	5.7
17	4.3	3.4	2.5	2.1	2.1	1.8	4.5	36	67	18	8.2	5.6
18	4.3	2.6	2.5	2.1	2.1	1.8	4.3	46	64	17	8.1	5.6
19	4.3	2.7	2.5	2.1	2.1	1.7	4.8	55	63	17	8.0	5.5
20	4.0	2.9	2.7	2.1	2.1	1.8	4.3	66	60	16	7.7	6.0
21	4.0	3.0	3.0	2.1	1.9	1.7	4.3	73	57	17	7.7	6.0
22	4.0	2.7	3.2	3.0	1.9	1.7	4.0	73	56	18	7.5	5.9
23	4.0	2.5	2.8	4.5	1.9	1.7	3.8	76	54	16	7.3	5.8
24	4.0	2.4	2.8	4.3	1.9	1.7	4.3	76	51	15	7.1	5.7
25	4.0	2.4	2.7	3.6	1.9	1.9	4.8	78	47	15	7.0	5.7
26	4.0	2.4	2.7	3.2	1.9	1.8	5.7	91	45	15	6.9	5.7
27	4.0	2.3	2.5	3.0	1.9	1.8	5.7	102	43	15	6.7	5.5
28	4.3	2.3	2.3	2.8	1.9	1.8	5.5	105	40	14	6.6	5.4
29	4.0	2.2	2.5	2.7	-----	1.6	5.2	105	39	14	6.6	5.4
30	4.3	2.2	2.7	2.5	-----	1.8	5.2	100	36	14	6.5	5.3
31	4.3	-----	2.5	2.3	-----	1.8	-----	89	-----	13	6.3	-----
TOTAL	129.4	98.6	73.5	78.8	58.6	55.3	137.8	1,539.3	2,214	624	272.8	177.6
MEAN	4.17	3.29	2.37	2.54	2.09	1.78	4.59	49.7	73.8	20.1	8.80	5.92
MAX	4.8	4.3	3.2	4.5	2.5	2.1	8.1	105	107	34	12	7.6
MIN	4.0	2.2	1.9	2.1	1.9	1.6	1.6	5.5	36	13	6.3	5.3
AC-FT	257	196	146	156	116	110	273	3,050	4,390	1,240	541	352
CAL YR 1969	TOTAL 5,842.9		MEAN 16.0		MAX 100		MIN 1.2		AC-FT 11,590			
WTR YR 1970	TOTAL 5,459.7		MEAN 15.0		MAX 107		MIN 1.6		AC-FT 10,830			

BEAR RIVER BASIN

23

10075000 Bear River at Soda Springs, Idaho

LOCATION.--Lat 42°36'50", long 111°34'58", in NW¼SW¼NW¼ sec.29, T.9 S., R.42 E., Caribou County, on left bank 800 ft upstream from Bailey Creek road bridge and 2 miles south of Soda Springs.

DRAINAGE AREA.--3,970 sq mi, approximately.

PERIOD OF RECORD.--May to September 1896, May, June 1898, and October 1953 to current year in reports of Geological Survey. Irrigation season only during 1944-49, 1951-53 in reports of Bear River Hydrometric Data (Geological Survey open-file report).

GAGE.--Water-stage recorder. Altitude of gage is 5,760 ft (from topographic map). May 25 to Oct. 2, 1896, May 22 to July 1, 1898, nonrecording gage at different datum. During irrigation season 1944-49, 1950-53, water-stage recorder at site 800 ft downstream at different datum.

AVERAGE DISCHARGE.--17 years, 528 cfs (382,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,170 cfs Aug. 20 (gage height, 4.40 ft); minimum, 79 cfs Oct. 13. Period of record: Maximum discharge, 6,380 cfs June 9, 15, 1896 (gage height, 8.40 ft, datum then in use); minimum daily, 60 cfs Dec. 6, 1960.

REMARKS.--Records good except those for winter period, which are fair. Many diversions for irrigation above station. Flow regulated by storage in Bear Lake. (See sta 10055500.)

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	128	152	537	510	248	212	232	252	606	758	543	665
2	130	147	548	485	235	212	235	304	606	745	526	671
3	137	152	541	680	255	228	232	307	594	726	505	665
4	137	163	504	600	241	225	232	300	594	771	577	695
5	142	165	484	500	235	209	307	331	577	838	784	726
6	140	236	458	495	218	200	370	352	554	880	859	588
7	140	560	447	580	222	225	344	374	571	964	866	277
8	140	635	453	525	228	241	288	374	577	999	838	188
9	140	702	484	600	235	255	273	352	629	1,060	824	168
10	144	708	521	520	228	252	277	348	683	1,120	817	152
11	140	647	570	530	222	238	307	370	720	1,130	845	150
12	142	574	596	580	194	232	307	370	683	1,130	950	144
13	134	584	647	530	197	235	288	444	665	1,080	1,030	142
14	157	549	604	580	218	248	284	429	671	1,080	1,100	134
15	154	536	588	520	209	266	273	392	671	1,150	1,130	134
16	163	514	569	535	217	280	273	378	577	1,150	1,140	140
17	177	501	559	575	215	296	266	378	538	1,140	1,150	144
18	182	493	570	560	215	168	255	392	489	1,130	1,150	147
19	191	503	589	580	203	270	255	401	448	1,110	1,160	140
20	185	510	588	600	209	255	262	415	458	1,090	1,160	142
21	177	519	594	548	222	245	259	494	500	1,080	1,120	144
22	174	526	588	495	222	248	266	571	500	1,130	1,070	144
23	171	534	577	400	215	270	255	571	468	1,090	1,040	140
24	165	529	571	405	209	315	252	538	388	1,080	1,030	140
25	160	515	549	331	209	280	255	516	361	1,070	1,030	140
26	157	514	508	319	209	284	248	494	365	1,050	985	140
27	154	517	463	380	209	266	262	538	526	1,050	901	140
28	163	518	433	284	200	262	270	606	702	950	797	130
29	157	524	415	262	-----	252	262	600	817	778	764	132
30	154	529	413	307	-----	252	245	571	784	702	733	134
31	157	-----	429	255	-----	248	-----	594	-----	617	671	-----
TOTAL	4,792	14,256	16,397	15,071	6,139	7,669	8,134	13,356	17,322	30,648	28,095	7,596
MEAN	155	475	529	486	219	247	271	431	577	989	906	253
MAX	191	708	647	680	255	315	370	606	817	1,150	1,160	726
MIN	128	147	413	255	194	168	232	252	361	617	505	130
AC-FT	9,500	28,280	32,520	29,890	12,180	15,210	16,130	26,490	34,360	60,790	55,730	15,070
CAL YR 1969	TOTAL	226,579	MEAN	621	MAX	1,590	MIN	121	ACFT	449,400		
WAT YR 1970	TOTAL	169,475	MEAN	464	MAX	1,160	MIN	128	ACFT	336,200		

BEAR RIVER BASIN

10076400 Soda Creek at Fivemile Meadows, near Soda Springs, Idaho

LOCATION.--Lat 42°43'45", long 111°36'55", in SE¼NW¼ sec.13, T.8 S., R.41 E., Caribou County, on right bank 100 ft southeast of Lau ranchhouse, 150 ft downstream from Schmidt ditch, and 5 miles north of Soda Springs.

DRAINAGE AREA.--49 sq mi, approximately.

PERIOD OF RECORD.--October 1964 to current year. April 1923 to October 1926 at this site published as "at Lau ranch;" records not equivalent owing to diversion in Schmidt ditch during irrigation season.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,980 ft (from topographic map). April 1923 to October 1926 at different datum and Oct. 1, 1964, to Aug. 26, 1965, at site 400 ft upstream at different datum.

AVERAGE DISCHARGE.--6 years (1964-70), 13.1 cfs (9,490 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 64 cfs Apr. 7 (gage height, 1.88 ft); minimum, 0.44 cfs Sept. 4. Period of record: Maximum discharge, 98 cfs Apr. 2, 1965 (gage height, 4.01 ft, site and datum then in use); no flow Dec. 24, 1966.

REMARKS.--Records good except those for winter months, which are fair. Records herein include flow of Schmidt ditch.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	12	8.4	8.0	10	7.9	12	21	16	16	16	12
2	12	12	8.1	8.0	10	7.6	12	19	16	16	16	11
3	12	12	8.1	8.0	7.6	7.1	12	18	16	16	15	10
4	12	12	8.1	8.0	10	6.9	13	18	16	16	15	10
5	12	12	7.9	8.0	10	6.9	17	17	17	15	15	13
6	12	12	7.9	8.0	9.4	6.9	33	17	17	16	15	13
7	11	12	7.9	8.0	9.4	7.9	56	18	17	16	15	13
8	11	12	7.9	8.0	9.4	9.7	38	18	17	16	14	11
9	14	12	7.9	7.9	9.4	9.4	30	19	18	16	14	11
10	13	12	8.1	7.9	9.4	8.7	29	21	18	16	13	10
11	13	12	8.1	7.9	9.4	8.1	28	21	18	16	13	10
12	13	11	8.1	8.1	9.4	8.4	25	20	18	16	12	10
13	13	11	8.1	8.1	9.2	8.9	25	20	18	16	12	11
14	14	11	8.1	8.4	8.7	10	25	21	18	16	12	12
15	13	11	8.1	8.4	8.4	12	25	20	18	15	11	12
16	14	11	8.1	7.6	8.4	16	25	19	18	15	11	12
17	14	11	8.1	8.7	6.5	11	26	19	18	15	11	12
18	15	10	8.1	8.1	7.0	12	25	19	16	15	11	11
19	14	9.7	8.1	8.1	7.0	13	25	18	16	15	11	12
20	14	10	8.4	8.4	7.0	13	25	18	16	17	11	13
21	13	11	9.4	8.4	7.1	13	24	20	16	16	11	13
22	13	11	9.7	9.7	7.1	13	21	19	16	17	11	13
23	13	10	8.9	10	6.9	14	21	19	16	17	11	13
24	13	10	8.9	11	6.7	17	20	19	16	16	11	13
25	13	9.4	8.1	10	6.7	15	19	18	16	17	11	13
26	13	9.4	8.1	10	6.7	16	20	18	16	17	11	13
27	13	8.9	7.9	11	6.9	14	22	19	16	17	11	13
28	13	8.9	7.9	11	7.1	14	23	18	16	17	11	12
29	13	8.9	8.1	9.7	-----	13	21	18	17	16	11	12
30	13	8.9	8.1	9.2	-----	13	21	18	17	17	12	12
31	13	-----	8.1	10	-----	13	-----	18	-----	16	11	-----
TOTAL	401	324.1	254.8	271.6	230.8	346.4	718	585	504	498	385	356
MEAN	12.9	10.8	8.22	8.76	8.24	11.2	23.9	18.9	16.8	16.1	12.4	11.9
MAX	15	12	9.7	11	10	17	56	21	18	17	16	13
MIN	11	8.9	7.9	7.6	6.5	6.9	12	17	16	15	11	10
AC-FT	795	643	505	539	458	687	1,420	1,160	1,000	988	764	706
CAL YR 1969	TOTAL	5,857.7	MEAN	16.0	MAX	82	MIN	4.0	AC-FT	11,620		
WAT YR 1970	TOTAL	4,874.7	MEAN	13.4	MAX	56	MIN	6.5	AC-FT	9,670		

25

LOCATION.--Lat 42°38'42", long 111°41'51", in NE¼SW¼ sec.17, T.9 S., R.41 E., Caribou County, on right bank 600 ft downstream from Soda hydroelectric plant of Utah Power & Light Co., 0.5 mile southeast of Alexander and 5 miles downstream from Soda Creek.

EXTREMES.--Current year: Maximum discharge, 1,610 cfs July 22 (gage height, 3.78 ft); minimum, 47 cfs Feb. 20.
Period of record: Maximum discharge observed, 4,740 cfs Mar. 31, 1911; maximum gage height, 15.95 ft
Dec. 11, 1919 (backwater from ice); minimum discharge, 28 cfs at times when reservoir gates were closed.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	286	310	656	609	349	238	359	290	578	530	519	787
2	163	326	726	684	380	364	225	314	624	872	612	722
3	179	305	699	684	315	349	344	259	702	728	831	792
4	189	305	638	684	325	344	257	452	620	835	846	778
5	208	301	699	684	325	349	347	452	565	856	869	633
6	212	605	568	684	325	335	503	404	589	1,090	894	261
7	212	792	361	691	320	201	589	470	507	1,090	943	264
8	217	807	521	691	325	344	318	488	561	1,100	951	264
9	221	792	637	691	305	344	338	472	586	1,110	1,040	242
10	331	755	552	684	301	444	342	370	599	1,110	1,030	250
11	180	726	705	678	296	292	397	555	599	1,110	993	255
12	176	741	684	678	296	296	403	637	748	1,120	1,070	260
13	519	689	691	678	305	292	383	627	721	1,130	1,120	277
14	121	478	712	678	305	305	484	445	686	1,120	1,070	268
15	361	473	698	656	266	316	396	372	629	1,120	1,150	268
16	264	478	691	604	349	392	440	558	707	1,120	1,110	273
17	211	510	671	684	268	379	430	421	549	1,130	1,030	273
18	316	488	671	585	370	304	415	489	507	1,130	915	264
19	319	503	671	505	268	270	415	467	440	1,120	931	268
20	308	534	684	586	282	395	435	395	495	1,130	939	268
21	302	521	712	526	225	232	420	569	507	1,140	1,070	264
22	267	726	734	678	165	315	435	894	501	1,160	1,070	268
23	232	683	734	463	334	347	425	679	531	1,140	1,060	268
24	275	514	719	589	238	390	415	617	513	1,140	1,010	255
25	293	670	691	413	320	422	420	506	507	1,060	891	238
26	153	530	671	412	250	357	415	501	486	816	778	233
27	301	715	652	486	315	334	425	516	462	862	755	225
28	310	648	574	439	185	341	435	558	543	890	784	229
29	305	627	610	320	-----	323	347	720	537	748	782	229
30	310	433	215	334	-----	349	367	546	734	707	708	128
31	305	-----	464	349	-----	334	-----	675	-----	686	790	-----
TOTAL	8,046	16,985	19,711	18,127	8,307	10,297	11,924	15,718	17,333	30,900	28,561	10,004
MEAN	260	566	636	585	297	332	397	507	578	997	921	333
MAX	519	807	734	691	380	444	589	894	748	1,160	1,150	792
MIN	121	301	215	320	165	201	225	259	440	530	519	128
AC-FT	15,960	33,690	39,100	35,950	16,480	20,420	23,650	31,180	34,380	61,290	56,650	19,840
CAL YR 1969	TOTAL	256,862	MEAN	704	MAX	1,590	MIN	56	ACFT	509,500		
WAT YR 1970	TOTAL	195,913	MEAN	537	MAX	1,160	MIN	121	ACFT	388,600		

BEAR RIVER BASIN

10084500 Cottonwood Creek near Cleveland, Idaho

LOCATION.--Lat 42°19'57", long 111°46'27", in SW¼ sec.34, T.12 S., R.40 E., Franklin County, on right bank 500 ft upstream from Cleveland irrigation canal, 2.5 miles west of Cleveland, and 4 miles downstream from proposed Cottonwood Dam.

DRAINAGE AREA.--61.7 sq mi.

PERIOD OF RECORD.--November 1938 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,150 ft (from topographic map). Prior to Dec. 29, 1944, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--31 years (1939-70), 29.2 cfs (21,160 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 303 cfs May 21 (gage height, 3.22 ft); minimum, 2.3 cfs Sept. 4.
Period of record: Maximum discharge, 773 cfs Apr. 27, 1952 (gage height, 3.83 ft); minimum, 0.1 cfs Aug. 11, 1961.

REMARKS.--Records good. A few small diversions for irrigation of meadowland in Cottonwood Valley above station. Treasureton Canal diverts from Cottonwood Creek 10.1 miles above station in SE¼ sec.8, T.12 S., R.39 E., for irrigation in Battle Creek basin in vicinity of Treasureton.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.4	9.1	7.1	12	13	17	15	47	67	6.8	7.1	3.8
2	6.0	8.7	7.1	12	13	19	16	54	50	6.8	6.3	3.8
3	6.6	8.3	7.4	11	14	16	15	86	45	6.6	6.0	3.2
4	6.6	8.3	7.7	11	14	15	16	128	36	6.0	5.7	2.7
5	6.6	9.1	8.3	11	13	15	24	152	30	5.7	5.7	4.0
6	6.6	8.3	7.7	11	14	13	45	175	28	6.0	5.7	4.9
7	6.6	11	7.7	11	13	15	58	211	28	6.8	5.7	5.4
8	6.6	11	8.3	11	13	16	55	147	31	7.1	5.4	4.0
9	6.6	9.9	8.7	11	13	14	66	147	61	7.1	5.2	3.4
10	6.8	9.5	9.5	11	13	13	80	182	53	11	4.9	3.2
11	7.1	9.5	9.9	11	14	14	83	123	45	8.3	4.9	3.0
12	7.4	9.5	11	11	15	14	60	101	44	8.3	4.7	2.9
13	8.3	9.1	12	12	16	15	52	100	66	8.7	4.5	3.0
14	9.5	9.1	12	12	15	14	49	90	59	8.3	4.5	3.2
15	9.1	9.1	11	12	14	16	44	94	50	8.7	4.3	3.4
16	9.1	9.1	11	12	14	15	38	128	45	8.7	3.8	3.6
17	11	6.6	11	12	14	16	43	188	38	8.3	3.8	3.8
18	11	6.8	12	12	12	14	54	222	23	8.3	3.6	4.3
19	11	6.8	12	12	12	14	55	225	20	7.7	3.6	4.3
20	11	7.1	12	12	15	14	45	200	16	8.7	3.6	5.7
21	9.9	8.7	14	12	14	14	44	230	13	8.7	3.8	6.3
22	9.1	8.3	16	16	13	14	45	161	11	12	3.6	5.7
23	8.7	6.8	13	22	13	15	45	143	13	9.5	3.4	5.7
24	8.3	7.4	12	24	12	19	45	128	10	8.7	3.2	5.4
25	8.3	8.0	9.9	22	13	18	49	117	9.5	8.0	3.0	5.7
26	8.3	7.7	12	22	13	21	54	115	8.7	8.3	3.0	5.7
27	8.3	6.8	12	19	13	17	53	110	8.7	7.7	3.0	5.7
28	9.1	6.3	12	11	15	18	48	103	8.3	7.4	3.0	6.0
29	9.1	6.0	12	12	-----	16	45	86	7.1	6.6	3.2	6.0
30	8.7	6.6	12	12	-----	16	46	94	7.1	7.1	3.2	6.0
31	9.1	-----	12	13	-----	15	-----	86	-----	7.7	3.0	-----
TOTAL	255.8	248.5	330.3	415	380	482	1,387	4,173	931.4	245.6	134.4	133.8
MEAN	8.25	8.28	10.7	13.4	13.6	15.5	46.2	135	31.0	7.92	4.34	4.46
MAX	11	11	16	24	16	21	83	230	67	12	7.1	6.3
MIN	5.4	6.0	7.1	11	12	13	15	47	7.1	5.7	3.0	2.7
AC-FT	507	493	655	823	754	956	2,750	8,280	1,850	487	267	265

CAL YR 1969 TOTAL 13,927.7 MEAN 38.2 MAX 342 MIN 3.2 AC-FT 27,630

WAT YR 1970 TOTAL 9,116.8 MEAN 25.0 MAX 230 MIN 2.7 AC-FT 18,080

PEAK DISCHARGE (BASE, 150 CFS).--May 7 (0730) 227 cfs (2.98 ft); May 21 (1000) 303 cfs (3.22 ft).

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	364	324	540	538	547	331	310	822	590	573	596	879
2	326	371	695	663	813	520	748	160	695	538	670	822
3	334	635	1,060	837	397	549	483	651	623	832	805	884
4	440	363	618	590	637	600	378	483	678	982	830	715
5	293	423	888	755	397	519	376	882	480	798	760	479
6	287	414	750	840	679	589	645	661	287	893	836	450
7	367	855	720	761	472	546	831	919	368	711	611	375
8	304	1,020	768	946	541	393	711	709	216	912	551	260
9	375	880	545	643	584	562	573	825	446	829	544	322
10	330	1,020	586	1,040	535	627	538	804	374	771	775	303
11	412	870	947	747	467	587	556	695	439	987	844	314
12	367	810	745	967	624	402	602	899	391	299	946	319
13	344	941	998	787	456	483	574	858	576	1,010	875	390
14	613	914	826	987	428	490	541	870	631	826	1,020	270
15	396	437	1,020	1,010	589	563	736	771	547	921	1,110	459
16	599	684	665	744	611	643	496	495	566	1,020	947	406
17	360	882	965	855	502	500	722	819	511	611	980	303
18	613	688	800	930	545	541	497	871	381	751	978	202
19	255	568	887	1,190	434	571	357	791	391	587	822	397
20	629	657	816	595	705	577	583	918	358	1,080	893	203
21	511	715	904	892	400	673	893	760	329	617	1,020	306
22	476	733	908	1,000	417	230	398	1,220	462	1,030	963	437
23	490	903	934	1,180	345	480	369	873	130	927	793	248
24	434	1,040	1,100	717	530	610	551	1,250	425	937	1,050	353
25	418	758	998	897	644	545	567	587	238	1,260	793	388
26	402	737	921	653	312	608	574	844	345	456	645	296
27	512	778	682	458	595	558	619	723	264	847	734	378
28	418	799	979	844	540	607	528	881	281	456	659	334
29	322	849	359	595	-----	482	668	1,050	310	760	594	373
30	476	774	471	552	-----	602	392	512	265	664	541	382
31	513	-----	686	532	-----	410	-----	834	-----	460	688	-----
TOTAL	12,980	21,842	24,781	24,745	14,746	16,398	16,816	24,437	12,597	24,345	24,873	12,247
MEAN	419	728	799	798	527	529	561	788	420	785	802	408
MAX	629	1,040	1,100	1,190	813	673	893	1,250	695	1,260	1,110	884
MIN	255	324	359	458	312	230	310	160	130	299	541	202
AC-FT	25,750	43,320	49,150	49,080	29,250	32,530	33,350	48,470	24,990	48,290	49,340	24,290
CAL YR 1969	TOTAL	303,512	MEAN	832	MAX	2,040	MIN	158	ACFT	602,000		
WAT YR 1970	TOTAL	230,807	MEAN	632	MAX	1,260	MIN	130	ACFT	457,800		

BEAR RIVER BASIN

10090500 Bear River near Preston, Idaho

LOCATION.--Lat 42°10'05", long 111°50'59", in NW¼ sec.36, T.14 S., R.39 E., Franklin County, on left bank 600 ft downstream from headgates of West Cache Canal, 5 miles downstream from Mink Creek, 5 miles north of Preston, and 5.5 miles upstream from Battle Creek.

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

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

GAGE.--Water-stage recorder. Altitude of gage is 4,540 ft (from topographic map). October 1889 to September 1917 nonrecording gages at several sites within 5 miles downstream at different datums.

AVERAGE DISCHARGE.--27 years (1943-70), 784 cfs (568,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,770 cfs Jan. 22 (gage height, 4.48 ft); minimum, 1.8 cfs Apr. 22 (gage height, 0.19 ft); minimum daily, 27 cfs May 2.

Period of record: (1889-1917), Maximum discharge, about 8,500 cfs June 9, 10, 1907, estimated on basis of records for station near Collinston, Utah; maximum gage height observed, 9.04 ft Jan. 17, 18, 1917 (backwater from ice), site and datum then in use; minimum discharge not determined; (1943-70), Maximum discharge, 4,420 cfs Apr. 17, 1950 (gage height, 5.61 ft); minimum, 0.6 cfs June 14, 1949; minimum daily, 2.0 cfs May 11, 1968.

REMARKS.--Records good. Station is below all irrigation diversions from Bear River in Idaho except Cub River pumps in SE¼ sec.20, T.16 S., R.39 E. Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	409	404	537	648	603	300	374	490	661	484	418	799
2	340	409	694	770	822	513	687	27	776	303	553	663
3	350	531	1,030	783	331	543	462	440	729	738	450	481
4	350	378	567	424	715	573	374	398	815	709	506	791
5	279	255	828	922	393	525	331	507	585	658	680	319
6	259	409	750	796	722	561	729	468	414	826	524	320
7	304	880	783	770	446	603	667	648	440	367	419	347
8	350	861	802	936	531	359	783	340	359	818	452	121
9	283	802	609	591	573	531	635	591	615	685	274	242
10	388	978	603	1,080	484	579	567	796	701	531	579	204
11	304	861	880	848	404	615	567	674	609	677	582	236
12	414	783	628	985	715	409	628	736	519	372	779	278
13	331	867	1,120	783	369	484	585	936	597	613	685	239
14	479	880	848	964	398	457	555	854	701	652	861	265
15	369	430	978	1,020	603	641	743	680	597	662	1,070	231
16	603	635	715	828	648	591	531	479	667	843	792	298
17	267	880	915	887	473	567	513	722	543	508	692	307
18	667	579	861	985	513	513	622	750	354	439	824	157
19	208	573	776	1,230	388	549	519	854	340	444	661	212
20	654	635	943	628	573	585	446	971	409	828	716	212
21	404	628	796	1,060	414	750	531	789	331	408	851	199
22	462	597	985	971	457	255	93	1,200	468	836	895	328
23	451	861	950	1,120	295	490	198	887	208	788	729	228
24	419	1,080	1,030	929	435	567	537	1,400	359	776	886	258
25	374	525	822	809	609	473	409	468	112	1,110	757	307
26	374	796	957	743	327	573	519	943	288	318	445	226
27	519	715	783	430	451	641	585	867	101	770	561	307
28	340	809	901	936	750	661	468	874	187	165	504	256
29	440	802	561	680	-----	364	615	1,170	255	620	456	293
30	473	708	462	484	-----	585	322	708	74	439	258	390
31	369	-----	573	490	-----	537	-----	887	-----	253	505	-----
TOTAL	12,233	20,551	24,687	25,530	14,442	16,394	15,595	22,554	13,814	18,640	19,364	9,514
MEAN	395	685	796	824	516	529	520	728	460	601	625	317
MAX	667	1,080	1,120	1,230	822	750	783	1,400	815	1,110	1,070	799
MIN	208	255	462	424	295	255	93	27	74	165	258	121
AC-FT	24,260	40,760	48,970	50,640	28,650	32,520	30,930	44,740	27,400	36,970	38,410	18,870
CAL YR 1969	TOTAL 295,173		MEAN 809		MAX 2,330		MIN 66		AC-FT 585,500			
WTR YR 1970	TOTAL 213,318		MEAN 584		MAX 1,400		MIN 27		AC-FT 423,100			

29

LOCATION.--Lat 42°12'00", long 111°59'05", in SE¼SW¼ sec.14, T.14 S., R.38 E., Franklin County, on right bank 40 ft above county road culvert, and 1.3 miles northeast of Clifton.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder and road culvert for medium and high stages. Altitude of gage is 4,705 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 35 cfs Jan. 27 (gage height, 3.39 ft); minimum, 0.57 cfs Sept. 29.
Period of record: Maximum discharge, 152 cfs Mar. 31, 1969 (gage height, 6.80 ft, from high-water mark on
outside of well); minimum, 0.57 cfs Nov. 26, 27, 1966, Sept. 29, 1970.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.5	1.2	1.4	1.1	17	15	8.6	7.7	4.4	2.3	1.7	1.5
2	2.4	1.2	1.4	1.1	17	17	8.2	7.2	4.1	2.7	1.6	1.6
3	2.1	1.2	1.4	1.1	18	17	8.2	6.6	4.4	3.1	1.5	2.1
4	1.8	1.2	1.4	1.1	19	17	7.7	6.2	4.3	2.5	1.5	2.1
5	1.5	1.2	1.4	1.2	19	16	7.4	5.5	3.7	2.3	2.6	1.3
6	1.3	1.3	1.4	1.2	19	16	7.1	4.9	4.0	2.3	3.0	1.6
7	1.2	1.4	1.4	1.2	19	15	6.8	5.0	4.5	2.4	2.4	1.3
8	1.2	1.5	1.4	1.2	19	15	6.4	5.5	4.4	2.4	1.7	1.2
9	1.1	1.5	1.4	1.5	21	15	6.1	5.9	4.9	2.4	1.5	1.2
10	1.1	1.5	1.6	1.6	22	14	5.9	7.7	6.1	3.6	1.3	1.1
11	1.0	1.5	2.0	1.9	23	14	5.9	7.8	5.0	3.4	1.2	1.0
12	1.0	1.5	2.1	2.5	24	13	5.9	7.2	4.9	3.9	1.2	.94
13	.99	1.5	2.3	2.6	24	13	5.8	6.6	4.8	3.5	1.3	.90
14	.99	1.4	2.5	2.7	24	13	5.6	6.6	5.6	3.1	1.4	.86
15	.99	1.5	2.4	2.8	23	13	5.6	6.2	5.6	2.4	1.7	.81
16	.99	1.5	2.3	3.0	22	13	5.9	5.8	5.8	3.1	1.4	.81
17	1.0	1.5	2.1	7.0	21	13	5.9	5.3	5.3	2.6	1.2	.81
18	1.2	1.3	2.1	13	20	14	5.8	4.9	4.1	3.7	1.3	.76
19	1.2	1.2	2.1	21	20	12	5.8	4.5	4.0	2.5	1.2	.76
20	1.2	1.1	2.5	19	19	11	6.4	4.4	3.9	3.1	1.4	1.2
21	1.2	1.4	3.0	17	19	11	6.5	5.2	3.5	3.2	1.2	1.3
22	1.2	1.5	2.5	25	19	11	6.2	5.6	3.4	2.5	.99	1.3
23	1.2	1.5	2.2	27	18	10	5.9	6.1	4.9	2.7	.94	1.3
24	1.2	1.4	1.6	27	18	10	5.6	6.2	4.7	2.2	.94	.68
25	1.2	1.4	1.2	27	17	10	5.6	6.5	4.0	2.3	.86	.72
26	1.2	1.4	1.1	25	17	10	6.1	6.4	4.1	2.8	.90	.63
27	1.2	1.4	1.0	32	17	9.8	7.1	5.3	3.1	2.6	.94	.60
28	1.2	1.4	1.0	23	16	9.1	7.6	6.4	3.3	2.5	1.1	.60
29	1.2	1.4	1.0	29	-----	9.3	7.7	6.6	3.5	2.4	1.7	.60
30	1.2	1.4	1.0	21	-----	9.1	7.7	6.4	3.6	2.3	2.1	1.5
31	1.2	-----	1.0	18	-----	8.8	-----	5.2	-----	2.1	1.3	-----
TOTAL	39.96	41.4	53.2	358.8	551	394.1	197.0	187.4	131.9	84.9	45.07	33.08
MEAN	1.29	1.38	1.72	11.6	19.7	12.7	6.57	6.05	4.40	2.74	1.45	1.10
MAX	2.5	1.5	3.0	32	24	17	8.6	7.8	6.1	3.9	3.0	2.1
MIN	.99	1.1	1.0	1.1	16	8.8	5.6	4.4	3.1	2.1	.86	.60
AC-FT	79	82	106	712	1,090	782	391	372	262	168	89	66
CAL YR 1969	TOTAL	5,188.36	MEAN	14.2	MAX	150	MIN	.99	AC-FT	10,290		
WAT YR 1970	TOTAL	2,117.81	MEAN	5.80	MAX	32	MIN	.60	AC-FT	4,200		

LOCATION.--Lat 42°08'28", long 111°41'19", in SW¼ sec.5, T.15 S., R.41 E., Franklin County, on right bank 0.2 mile upstream from headgates of Cub River-Worm Creek Canal, 0.7 mile upstream from forest boundary, and 10 miles east of Preston.

EXTREMES.--Current year: Maximum discharge, 719 cfs June 9 (gage height, 2.99 ft); minimum, 18 cfs several days.
Period of record: Maximum discharge, 719 cfs June 9, 1970 (gage height, 2.99 ft); maximum gage height, 3.83 ft June 2, 1943; no flow for part of Jan. 29, 1965, result of snowslide.

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

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	27	24	21	18	21	25	23	32	480	181	62	40
2	28	23	21	18	20	25	22	34	500	166	59	40
3	27	23	21	18	20	24	22	40	552	155	58	39
4	27	23	21	18	19	23	22	53	608	149	57	39
5	27	23	21	18	19	22	23	74	672	143	56	40
6	27	23	21	18	19	22	27	98	679	139	56	42
7	26	24	21	18	19	22	33	115	692	130	54	39
8	26	23	21	18	19	23	32	104	679	123	53	38
9	26	23	21	18	20	23	34	101	686	120	52	37
10	26	23	20	18	20	23	39	110	653	115	51	37
11	26	23	20	18	22	22	43	101	546	113	52	37
12	26	23	20	18	23	22	38	94	455	106	51	36
13	26	22	20	18	26	22	35	89	379	101	50	36
14	26	23	20	18	25	22	33	83	346	98	50	35
15	26	23	20	18	24	23	32	81	322	94	49	35
16	26	23	20	18	23	22	32	90	322	89	49	34
17	26	22	20	19	23	23	32	128	334	88	48	34
18	26	22	19	18	22	22	32	205	338	85	47	34
19	26	22	19	18	21	22	32	277	350	82	47	34
20	25	22	20	19	21	21	32	358	354	79	46	34
21	24	22	20	19	21	21	31	366	354	79	47	34
22	24	22	20	26	21	21	31	326	354	79	45	34
23	24	22	20	27	21	21	31	358	338	75	44	34
24	24	22	19	24	21	22	31	402	314	72	43	34
25	24	22	19	22	22	23	32	485	295	71	42	34
26	24	22	19	22	22	23	33	540	280	71	43	34
27	24	22	19	23	23	23	34	577	260	70	42	34
28	25	21	19	22	23	23	33	634	244	66	41	34
29	24	21	18	21	-----	23	32	640	223	65	40	33
30	24	21	18	21	-----	23	32	590	200	65	40	33
31	24	-----	18	21	-----	22	-----	510	-----	63	39	-----
TOTAL	791	674	616	610	600	698	938	7,695	12,809	3,132	1,513	1,078
MEAN	25.5	22.5	19.9	19.7	21.4	22.5	31.3	248	427	101	48.8	35.9
MAX	28	24	21	27	26	25	43	640	692	181	62	42
MIN	24	21	18	18	19	21	22	32	200	63	39	33
AC-FT	1,570	1,340	1,220	1,210	1,190	1,380	1,860	15,260	25,410	6,210	3,000	2,140
CAL YR 1969	TOTAL 27,304		MEAN 74.8	MAX 485	MIN 18	AC-FT 54,160						
WAT YR 1970	TOTAL 31,154		MEAN 85.4	MAX 692	MIN 18	AC-FT 61,790						

BEAR RIVER BASIN

31

10125500 Malad River at Woodruff, Idaho

LOCATION.--Lat 42°01'48", long 112°13'45", in NE¼NE¼ sec.22, T.16 S., R.36 E., Oneida County, at left abutment of highway bridge at Woodruff, 2.1 miles north of Idaho-Utah State line.

DRAINAGE AREA.--485 sq mi, approximately.

PERIOD OF RECORD.--November 1938 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,355 ft (by barometer). Prior to Mar. 6, 1951, nonrecording gage at site 300 ft downstream at datum 0.27 ft lower. Mar. 6, 1951, to Sept. 30, 1960, nonrecording gage at same site and datum.

AVERAGE DISCHARGE.--31 years (1939-70), 57.8 cfs (41,880 acre-ft per year); 15-year base period (1952-67), 48.7 cfs.

EXTREMES.--Current year: Maximum discharge, 197 cfs Jan. 21 (gage height, 4.43 ft); minimum, 16 cfs July 20, Aug. 14, 15.

Period of record: Maximum discharge, 2,530 cfs Feb. 12, 1962 (gage height, 8.93 ft); minimum, 1.8 cfs July 14, 1964 (gage height, 1.30 ft).

REMARKS.--Records excellent. Flow regulated by several small reservoirs above station. Diversions above station for irrigation of 25,000 to 30,000 acres. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.8	15	4.0	163
2.0	23	5.0	246
3.0	94		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	18	33	43	47	85	69	48	69	23	19	18	18
2	19	32	42	47	83	80	50	57	23	19	18	18
3	18	31	44	46	79	80	47	48	22	19	18	18
4	18	31	46	44	80	71	46	43	21	19	18	19
5	18	32	44	41	79	70	45	39	21	19	18	20
6	19	32	41	39	76	66	45	35	20	19	18	20
7	19	36	46	37	78	64	41	35	21	18	18	21
8	19	39	44	37	80	63	40	36	21	18	18	21
9	19	39	46	37	81	62	39	38	22	19	18	19
10	20	37	45	40	81	60	40	34	22	18	18	19
11	19	36	46	40	80	58	40	41	25	18	17	19
12	19	39	47	41	80	58	40	46	27	18	17	19
13	19	38	49	48	82	59	42	44	29	18	17	19
14	20	38	54	63	85	65	42	40	31	17	17	19
15	20	39	56	66	86	67	41	39	30	18	17	19
16	20	40	54	68	83	64	44	35	30	18	17	19
17	20	39	49	76	81	63	46	32	29	18	18	19
18	22	33	51	112	77	54	46	29	25	18	17	19
19	24	31	53	153	70	54	45	27	25	17	17	19
20	25	38	56	186	69	55	51	25	25	17	17	19
21	25	41	67	196	70	56	56	26	24	18	17	20
22	24	39	75	194	70	54	57	26	24	18	17	20
23	24	42	78	193	70	52	54	30	23	17	18	20
24	24	45	75	195	68	51	45	30	23	17	18	20
25	24	47	70	175	66	45	45	29	22	18	18	20
26	26	48	66	150	66	48	44	26	21	18	18	20
27	31	47	65	140	66	47	52	25	22	18	18	19
28	33	44	51	160	66	47	77	25	21	18	18	20
29	33	41	50	150	-----	51	92	25	21	18	18	20
30	33	43	51	120	-----	53	86	24	19	19	18	19
31	33	-----	48	92	-----	49	-----	23	-----	18	18	-----
TOTAL	705	1,150	1,652	3,033	2,137	1,835	1,486	1,081	712	561	547	581
MEAN	22.7	38.3	53.3	97.8	76.3	59.2	49.5	34.9	23.7	18.1	17.6	19.4
MAX	33	48	78	196	86	80	92	69	31	19	18	21
MIN	18	31	41	37	66	45	39	23	19	17	17	18
AC-FT	1,400	2,280	3,280	6,020	4,240	3,640	2,950	2,140	1,410	1,110	1,080	1,150
CAL YR 1969	TOTAL 22,000		MEAN 60.3		MAX 468		MIN 16		AC-FT 43,640			
WTR YR 1970	TOTAL 15,480		MEAN 42.4		MAX 196		MIN 17		AC-FT 30,700			

UPPER COLUMBIA RIVER BASIN

KOOTENAI RIVER BASIN

12303000 Kootenai River at Libby, Mont.

LOCATION.--Lat 48°24'03", long 115°33'08", in SW¼SE¼SW¼ sec.34, T.31 N., R.31 W., Lincoln County, on right bank 1,800 ft downstream from highway bridge at Libby, 0.8 mile downstream from Libby Creek, and at mile 204.3.

DRAINAGE AREA.--10,240 sq mi, approximately.

PERIOD OF RECORD.--October 1910 to current year. Monthly discharge only for some periods, published in WSP 1316.

GAGE.--Water-stage recorder. Datum of gage is 2,041.54 ft above mean sea level. Prior to Apr. 28, 1931, non-recording gages at site 1,800 ft upstream at different datum.

AVERAGE DISCHARGE.--60 years, 12,070 cfs (16.00 inches per year, 8,745,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 57,100 cfs June 6 (gage height, 13.29 ft); minimum daily, 1,650 cfs Jan. 6.

Period of record: Maximum discharge, 121,000 cfs June 21, 1916 (gage height, 20.7 ft, present datum, derived from gage-relation study); minimum observed, 895 cfs Jan. 11, 1930 (discharge measurement).

REMARKS.--Records excellent. Diversions for irrigation of about 14,500 acres from tributaries above station in Canada and the United States. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1042: 1933. WSP 1246: 1912(M), 1915(M), 1916, 1918-19(M), 1924-27(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,120	4,580	3,110	1,950	2,960	2,960	3,380	4,190	27,100	21,800	9,730	5,340
2	8,120	4,450	2,920	1,900	3,000	2,690	3,400	4,480	27,800	21,400	9,450	5,130
3	8,720	4,400	2,950	1,850	3,050	2,780	3,400	5,470	33,400	20,200	9,110	5,100
4	8,360	4,470	2,960	1,800	3,010	2,720	3,400	7,740	43,600	18,900	8,840	5,370
5	7,790	4,390	3,080	1,700	3,030	2,680	3,420	10,800	52,000	18,100	8,560	5,600
6	7,290	4,640	3,210	1,650	3,070	2,820	3,630	15,200	55,900	18,200	8,350	5,520
7	6,930	5,080	3,170	1,700	3,020	2,990	4,290	19,400	56,200	18,200	8,230	5,430
8	6,590	5,210	3,150	1,800	3,030	3,170	4,790	21,300	53,800	17,100	8,110	5,330
9	6,500	5,040	3,180	1,900	3,020	3,210	4,730	21,300	50,200	16,100	8,050	5,370
10	6,430	4,860	3,220	2,000	3,030	3,250	4,770	20,700	46,700	15,400	7,920	5,490
11	6,440	4,760	3,110	2,100	3,090	3,260	4,970	19,800	42,000	15,000	7,610	5,310
12	6,290	4,610	3,230	2,200	3,040	3,130	5,050	18,300	35,600	14,400	7,150	5,150
13	6,100	4,580	3,370	2,300	3,040	3,050	4,930	16,500	29,800	13,900	6,840	4,960
14	5,810	4,480	3,500	2,400	3,010	3,040	4,680	15,000	27,100	13,200	6,660	4,900
15	5,770	4,400	3,590	2,500	3,030	3,100	4,390	13,900	27,800	12,600	6,610	4,770
16	5,580	4,340	3,720	2,500	3,170	3,170	4,200	14,200	31,400	11,800	6,490	4,630
17	5,450	4,330	3,730	2,450	3,490	3,270	4,040	18,600	35,600	11,400	6,240	4,520
18	5,330	4,390	3,630	2,440	3,550	3,310	3,930	27,300	38,700	11,200	6,020	4,430
19	5,140	4,190	3,500	2,290	3,490	3,270	3,930	30,900	38,000	11,200	5,940	4,420
20	5,070	4,110	3,460	2,290	3,450	3,210	4,040	30,100	36,200	10,900	5,840	4,860
21	5,050	4,170	3,420	2,370	3,330	3,190	4,230	29,400	34,500	10,500	5,630	6,060
22	4,960	4,150	3,450	2,460	3,220	3,200	4,340	30,000	32,500	10,300	5,480	6,230
23	4,910	4,100	3,510	2,880	3,160	3,250	4,460	31,500	31,400	10,200	5,410	6,180
24	4,930	4,040	3,580	3,340	3,110	3,350	4,600	33,600	29,800	10,200	5,360	6,210
25	4,950	3,980	3,410	3,470	3,080	3,390	4,770	35,000	27,200	9,710	5,380	6,130
26	4,910	3,890	3,210	3,490	3,010	3,430	4,770	37,500	25,200	9,310	5,390	5,890
27	4,850	3,740	2,730	3,450	2,950	3,370	4,640	43,900	23,600	9,180	5,350	5,590
28	4,810	3,470	2,330	3,380	3,030	3,420	4,460	46,600	22,700	9,240	5,310	5,320
29	4,670	3,270	2,100	3,220	-----	3,460	4,300	39,700	22,900	9,620	5,240	5,180
30	4,620	3,110	2,050	2,990	-----	3,460	4,200	33,200	22,200	10,000	5,230	5,110
31	4,590	-----	2,000	2,830	-----	3,410	-----	29,200	-----	9,950	5,330	-----
TOTAL	184,080	129,230	97,580	75,600	87,470	98,010	128,140	724,780	1,060,9M	419,210	210,860	159,530
MEAN	5,938	4,308	3,148	2,439	3,124	3,162	4,271	23,380	35,360	13,520	6,802	5,318
MAX	8,720	5,210	3,730	3,490	3,550	3,460	5,050	46,600	56,200	21,800	9,730	6,230
MIN	4,590	3,110	2,000	1,650	2,950	2,680	3,380	4,190	22,200	9,180	5,230	4,420
CFSM	.58	.42	.31	.24	.31	.31	.42	2.28	3.45	1.32	.66	.52
IN.	.67	.47	.35	.27	.32	.36	.47	2.63	3.85	1.52	.77	.58
AC-FT	365,100	256,300	193,500	150,000	173,500	194,400	254,200	1,438M	2,104M	831,500	418,200	316,400
CAL YR 1969	TOTAL 5,345,570			MEAN 14,650		MAX 69,500		MIN 2,000		CFSM 1.43	IN 19.41	AC-FT 10,600,000
WTR YR 1970	TOTAL 3,375,390			MEAN 9,248		MAX 56,200		MIN 1,650		CFSM .90	IN 12.26	AC-FT 6,695,000

M Expressed in thousands.

KOOTENAI RIVER BASIN

33

12304500 Yaak River near Troy, Mont.

LOCATION.--Lat 48°33'43", long 115°58'09", in NE¼SE¼SE¼ sec.5, T.32 N., R.34 W., Lincoln County, Kootenai National Forest, on right bank 500 ft upstream from bridge on U.S. Highway 2, 0.2 mile upstream from mouth, and 7.7 miles northwest of Troy.

DRAINAGE AREA.--766 sq mi.

PERIOD OF RECORD.--October 1910 to September 1916 (fragmentary record), March 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,839.2 ft above mean sea level. Oct. 15, 1910, to Sept. 30, 1916, nonrecording gage at several sites within 11 miles of present site at various datums.

AVERAGE DISCHARGE.--14 years, 916 cfs (16.24 inches per year, 663,600 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,760 cfs May 18 (gage height, 7.58 ft); minimum daily, 95 cfs Jan. 5.

Period of record: Maximum discharge, 12,100 cfs May 21, 1956 (gage height, 9.70 ft in gage well, 10.8 ft from outside gage); minimum daily, 80 cfs Jan. 19, 1957, Jan. 2, 1958, Dec. 13, 1967.

Flood in May to June 1948 reached a stage of 11.0 ft from floodmarks (discharge, 12,500 cfs). Flood in May 1954 reached a stage of 11.4 ft from floodmarks (discharge, 13,400 cfs).

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation of about 30 acres above station. Records of water temperatures for the water year 1970 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	382	191	110	115	150	229	365	874	2,760	617	216	105
2	493	190	120	110	150	242	383	1,240	3,010	567	220	108
3	388	185	130	105	160	246	374	1,990	3,300	524	304	109
4	311	186	140	100	160	235	377	2,850	3,390	489	256	149
5	262	342	150	95	160	245	398	3,920	3,200	458	230	154
6	238	445	160	100	160	250	597	4,730	2,800	429	209	139
7	224	365	170	110	170	271	974	4,730	2,460	404	195	138
8	218	307	180	120	170	280	869	4,320	2,090	384	181	137
9	259	283	190	130	170	269	764	4,170	2,030	366	172	156
10	269	267	200	140	170	254	1,170	3,820	1,820	349	168	156
11	255	255	210	150	190	254	1,200	3,360	1,530	334	163	146
12	237	243	220	160	210	254	1,030	2,860	1,350	324	157	135
13	220	235	230	170	234	251	891	2,430	1,230	329	150	130
14	209	225	237	190	225	255	798	2,170	1,230	326	144	128
15	205	221	251	210	225	266	716	2,180	1,280	312	140	126
16	199	225	220	200	265	290	651	2,910	1,930	296	138	125
17	191	214	208	190	338	309	603	4,670	1,740	310	132	123
18	180	190	195	185	329	299	603	5,210	1,420	305	128	125
19	179	190	187	180	297	289	640	4,740	1,260	283	125	130
20	184	197	183	175	281	287	739	4,600	1,140	264	123	137
21	190	214	183	170	262	283	821	4,660	1,030	248	121	136
22	185	218	189	165	261	285	864	4,830	939	238	118	152
23	183	207	185	160	254	290	934	4,740	857	234	115	250
24	186	197	179	180	248	315	983	4,730	778	231	113	222
25	199	165	168	200	248	329	1,000	4,730	712	232	110	200
26	191	165	161	190	248	318	909	5,240	658	246	105	166
27	180	130	154	180	252	313	836	5,000	619	250	105	152
28	179	125	130	170	226	334	767	4,300	729	270	103	143
29	183	120	125	160	-----	369	748	3,430	689	280	103	136
30	183	115	125	150	-----	374	767	2,950	632	255	100	131
31	184	-----	120	150	-----	360	-----	2,700	-----	231	100	-----
TOTAL	7,146	6,612	5,410	4,810	6,213	8,845	22,771	115,084	48,613	10,385	4,744	4,344
MEAN	231	220	175	155	222	285	759	3,712	1,620	335	153	145
MAX	493	445	251	210	338	374	1,200	5,240	3,390	617	304	250
MIN	179	115	110	95	150	229	365	874	619	231	100	105
CFSM	.30	.29	.23	.20	.29	.37	.99	4.85	2.12	.44	.20	.19
IN.	.35	.32	.26	.23	.30	.43	1.11	5.59	2.36	.50	.23	.21
AC-FT	14,170	13,110	10,730	9,540	12,320	17,540	45,170	228,300	96,420	20,600	9,410	8,620

CAL YR 1969 TOTAL 417,781 MEAN 1,145 MAX 7,620 MIN 110 CFSM 1.49 IN 20.28 AC-FT 828,700
WTR YR 1970 TOTAL 244,977 MEAN 671 MAX 5,240 MIN 95 CFSM .88 IN 11.89 AC-FT 485,900

PEAK DISCHARGE (BASE, 5,000 CFS).--May 7 (0010) 5,000 cfs (7.29 ft); May 18 (0030) 5,760 cfs (7.58 ft).

KOOTENAI RIVER BASIN

12305000 Kootenai River at Leonia, Idaho

LOCATION.--Lat 48°37'04", long 116°02'47", in NW¼NW¼ sec.20, T.33 N., R.34 W., Principal meridian, Lincoln County, Mont., on right bank at Leonia, 450 ft east of Montana-Idaho State line, 0.5 mile upstream from Boulder Creek, and at mile 171.6.

DRAINAGE AREA.--11,740 sq mi, approximately.

PERIOD OF RECORD.--March 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,700.25 ft above mean sea level. Prior to Nov. 13, 1928, non-recording gage on bridge 250 ft upstream at datum 0.41 ft lower.

AVERAGE DISCHARGE.--42 years, 13,970 cfs (16.16 inches per year, 10,120,000 acre-ft per year); 15-year base period (1952-67), 15,290 cfs.

EXTREMES.--Current year: Maximum discharge, 61,900 cfs June 7 (gage height, 114.74 ft); minimum daily, 1,850 cfs Jan. 5, 6.

Period of record: Maximum discharge, 123,000 cfs May 28, 1948 (gage height, 123.40 ft); minimum, 996 cfs Dec. 9, 1936; minimum gage height, 97.56 ft Dec. 10, 1929.

Floods of June 1894 and 1916 reached stages of 124.6 and 121.6 ft, respectively, from information by Great Northern Railway.

REMARKS.--Records excellent except those for winter periods, which are good. Diversions above station for irrigation of about 14,600 acres. Records of water temperatures for water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 29 to Sept. 30; stage-discharge relation affected
by ice Dec. 1-13; Dec. 28 to Feb. 3)

100.3	3,000	110.0	34,700
102.0	5,750	114.0	56,700
104.0	11,400	118.0	84,700
107.0	21,800		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,860	5,530	3,750	2,150	3,510	3,370	4,470	5,980	32,600	23,100	10,600	6,120
2	8,620	5,490	3,700	2,050	3,410	3,220	4,470	6,480	33,100	22,700	10,500	6,000
3	9,180	5,410	3,700	1,950	3,430	3,220	4,510	6,680	37,900	21,700	10,200	5,850
4	8,950	5,370	3,750	1,900	3,470	3,060	4,470	11,100	47,100	20,600	9,900	6,010
5	8,590	5,470	3,770	1,850	3,470	3,070	4,510	15,900	56,300	19,600	9,620	6,320
6	8,230	5,670	3,850	1,850	3,520	3,150	4,890	21,800	60,600	19,200	9,350	6,360
7	7,780	5,900	3,900	1,900	3,540	3,370	5,980	27,000	61,000	19,300	9,150	6,310
8	7,470	6,030	3,850	2,000	3,540	3,680	6,630	28,700	58,000	18,700	9,040	6,230
9	7,410	6,000	3,700	2,100	3,540	3,820	6,680	28,700	54,300	17,700	8,930	6,170
10	7,330	5,880	3,700	2,200	3,500	3,780	6,990	27,700	50,400	17,000	8,810	6,270
11	7,270	5,730	3,650	2,350	3,470	3,800	7,410	26,200	45,700	16,500	8,700	6,240
12	7,220	5,630	3,600	2,450	3,400	3,760	7,330	23,700	39,700	16,000	8,370	6,040
13	7,020	5,530	3,700	2,600	3,400	3,720	7,110	21,300	33,600	15,500	7,970	5,860
14	6,830	5,470	3,840	2,750	3,370	3,720	6,750	19,100	30,300	14,900	7,810	5,710
15	6,680	5,370	4,040	2,850	3,370	3,740	6,410	17,900	30,400	14,300	7,690	5,650
16	6,580	5,330	4,150	2,700	3,590	3,900	6,030	18,700	34,400	13,500	7,580	5,460
17	6,460	5,250	4,240	2,400	4,170	4,080	5,750	25,500	37,900	12,900	7,360	5,310
18	6,320	5,210	4,150	2,300	4,520	4,180	5,550	34,700	40,600	12,600	7,130	5,120
19	6,230	5,210	3,980	2,400	4,390	4,180	5,450	38,800	40,600	12,500	6,970	5,040
20	6,090	5,070	3,820	2,500	4,290	4,120	5,590	38,400	38,700	12,400	6,860	5,120
21	6,030	5,040	3,770	2,700	4,120	4,040	5,860	38,100	36,900	11,900	6,680	6,110
22	5,960	5,090	3,770	2,900	3,950	4,010	6,050	38,800	34,700	11,600	6,480	7,060
23	5,920	5,060	3,830	3,130	3,770	4,070	6,230	39,800	33,300	11,400	6,340	7,220
24	5,880	5,000	3,960	3,680	3,700	4,240	6,410	42,000	32,100	11,300	6,250	7,210
25	5,940	4,920	3,840	4,010	3,590	4,390	6,650	43,200	29,600	11,000	6,200	7,160
26	5,920	4,850	3,570	4,070	3,520	4,440	6,650	46,000	27,400	10,600	6,180	6,950
27	5,830	4,730	3,240	4,080	3,510	4,410	6,530	50,400	25,600	10,300	6,140	6,670
28	5,710	4,490	2,860	4,020	3,450	4,410	6,320	53,800	24,300	10,300	6,070	6,340
29	5,690	4,170	2,690	3,980	-----	4,560	6,110	46,700	24,100	10,400	6,030	6,080
30	5,610	4,000	2,450	3,740	-----	4,590	5,940	39,400	23,800	10,800	5,970	5,930
31	5,550	-----	2,300	3,540	-----	4,540	-----	34,800	-----	10,900	5,960	-----
TOTAL	212,160	157,900	113,120	85,100	102,510	120,640	179,730	917,340	1,155,000	461,200	240,840	183,920
MEAN	6,844	5,263	3,649	2,745	3,661	3,892	5,991	29,590	38,500	14,880	7,769	6,131
MAX	9,180	6,030	4,240	4,080	4,520	4,590	7,410	53,800	61,000	23,100	10,600	7,220
MIN	5,550	4,000	2,300	1,850	3,370	3,060	4,470	5,980	23,800	10,300	5,960	5,040
CFSM	.58	.45	.31	.23	.31	.33	.51	2.52	3.28	1.27	.66	.52
IN.	.67	.50	.36	.27	.32	.38	.57	2.91	3.66	1.46	.76	.58
AC-FT	420,800	313,200	224,400	168,800	203,300	239,300	356,500	1,820M	2,291M	914,800	477,700	364,800
CAL YR 1969	TOTAL 6,245,350			MEAN 17,110		MAX 74,500	MIN 2,300	CFSM 1.46	IN 19.78	AC-FT 12,390,000		
WTR YR 1970	TOTAL 3,929,460			MEAN 10,770		MAX 61,000	MIN 1,850	CFSM .92	IN 12.45	AC-FT 7,794,000		

M Expressed in thousands.

12305500 Boulder Creek near Leonia, Idaho

LOCATION.--Lat 48°35'54", long 116°05'30", in NE¼ sec.32, T.61 N., R.3 E., Boundary County, on right bank 0.8 mile downstream from McGinty Creek, 0.8 mile upstream from building of the Idamont Lead-Zinc Mines Co., 2.5 miles southwest of Leonia, and at mile 2.8.

DRAINAGE AREA.--53 sq mi, approximately.

PERIOD OF RECORD.--April 1928 to current year. Monthly discharge only for some periods, published in WSP 1316.

GAGE.--Water-stage recorder. Altitude of gage is 2,600 ft (from topographic map). Prior to Nov. 20, 1928, non-recording gage at site 1 mile downstream at different datum. Nov. 20, 1928, to Nov. 29, 1933, and Oct. 13, 1934, to Sept. 27, 1946, water-stage recorder, and Dec. 30, 1933, to Oct. 12, 1934, nonrecording gage at site 0.2 mile upstream at different datum.

AVERAGE DISCHARGE.--42 years, 118 cfs (30.23 inches per year, 85,490 acre-ft per year); 15-year base period (1952-67), 128 cfs.

EXTREMES.--Current year: Maximum discharge, 1,610 cfs May 26 (gage height, 5.31 ft); minimum, 7.8 cfs Aug. 28, 29, 31, Sept. 1-3; minimum gage height, 2.73 ft Aug. 13-15.
Period of record: Maximum discharge, 2,720 cfs May 30, 1969 (gage height, 5.81 ft); minimum, 2 cfs Aug. 25, Sept. 5, 1931.

REMARKS.--Records good except those for winter periods and no gage-height record, which are fair. No regulation or diversion.

REVISIONS (WATER YEARS).--WSP 1736: 1936(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 28 to Sept. 1; stage-discharge relation affected by ice
Nov. 27 to Dec. 12, Dec. 26, 28, 29, Jan. 1 to Feb. 3, Feb. 28 to Mar. 12)

2.6	5.0	3.2	55	4.3	420
2.7	9.0	3.5	108	4.8	860
2.8	14.5	3.8	183	5.3	1,590
3.0	29.5				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	27	26	27	25	25	46	106	570	80	18	8.2
2	124	25	26	26	24	24	47	173	650	71	33	8.4
3	51	25	27	25	24	23	45	289	705	64	34	12
4	38	25	27	24	24	23	45	428	731	59	22	29
5	32	98	28	22	24	23	54	712	659	53	19	16
6	29	72	28	21	24	23	113	758	560	48	18	12
7	27	57	29	22	24	25	126	638	460	44	17	17
8	44	50	30	22	23	27	98	513	490	41	16	14
9	61	46	31	23	23	30	101	561	420	37	15	14
10	44	45	32	24	23	29	182	425	380	34	15	12
11	38	42	32	25	23	28	140	360	345	34	14	11
12	34	41	33	25	23	29	117	291	315	33	13	10
13	31	40	33	26	23	30	104	255	295	36	12	11
14	30	39	45	26	23	31	96	244	280	32	12	11
15	29	39	57	26	25	32	90	297	360	29	12	11
16	28	38	40	25	31	36	85	527	500	28	11	11
17	26	35	36	24	35	36	81	975	410	33	11	11
18	25	35	34	23	31	35	84	791	300	27	11	12
19	25	34	32	23	29	36	91	728	255	25	11	15
20	25	35	31	23	28	36	94	765	225	24	11	15
21	25	39	35	24	27	35	92	842	205	22	10	13
22	24	36	38	25	27	35	93	890	185	22	10	18
23	24	34	36	27	27	36	97	980	165	21	10	31
24	24	33	33	28	27	39	105	916	145	20	9.7	18
25	25	31	32	28	27	40	99	971	130	22	9.2	15
26	24	28	31	28	27	39	93	1,180	120	25	9.0	15
27	24	27	30	28	27	39	90	855	110	23	8.7	14
28	24	26	30	27	26	44	84	648	130	26	8.7	14
29	24	26	29	26	-----	48	85	500	105	22	8.2	13
30	24	26	28	26	-----	45	86	465	90	20	8.5	13
31	26	-----	28	25	-----	44	-----	494	-----	19	8.2	-----
TOTAL	1,108	1,154	1,007	774	724	1,025	2,763	18,577	10,295	1,074	425.2	424.6
MEAN	35.7	38.5	32.5	25.0	25.9	33.1	92.1	599	343	34.6	13.7	14.2
MAX	124	98	57	28	35	48	182	1,180	731	80	34	31
MIN	24	25	26	21	23	23	45	106	90	19	8.2	8.2
CFSM	.67	.73	.61	.47	.49	.62	1.74	11.3	6.47	.65	.26	.27
IN.	.78	.81	.71	.54	.51	.72	1.94	13.04	7.22	.75	.30	.30
AC-FT	2,200	2,290	2,000	1,540	1,440	2,030	5,480	36,850	20,420	2,130	843	842

CAL YR 1969 TOTAL 49,094 MEAN 135 MAX 1,530 MIN 11 CFSM 2.54 IN 34.45 AC-FT 97,380
WTR YR 1970 TOTAL 39,350.8 MEAN 108 MAX 1,180 MIN 8.2 CFSM 2.03 IN 27.61 AC-FT 78,050

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5- 5	2000	4.95	1,040	6- 3	1830	4.85	920
5-26	1630	5.31	1,610				

NOTE.--No gage-height record June 6 to July 9.

KOOTENAI RIVER BASIN

12306500 Moyie River at Eastport, Idaho
(International gaging station)

LOCATION.--Lat 48°59'58", long 116°10'43", in NE¼SE¼ sec.10, T.65 N., R.2 E., Boundary County, on left bank at Eastport, 1,000 ft downstream from international boundary, and at mile 25.0.

DRAINAGE AREA.--570 sq mi, approximately.

PERIOD OF RECORD.--January to December 1915, March to December 1916, August 1929 to current year in reports of Geological Survey. Monthly discharge only for some periods, published in WSP 1736.

GAGE.--Water-stage recorder. Datum of gage is 2,620.06 ft above mean sea level. January 1915 to December 1916 nonrecording gage at site 0.2 mile upstream at different datum.

AVERAGE DISCHARGE.--41 years (1929-70), 706 cfs (16.82 inches per year, 511,500 acre-ft per year); 15-year base period (1952-67), 756 cfs.

EXTREMES.--Current year: Maximum discharge, 4,400 cfs May 26 (gage height, 7.79 ft); minimum, 50 cfs Sept. 18 (gage height, 3.41 ft); minimum gage height, 3.39 ft Aug. 30, 31.
Period of record: Maximum discharge observed, 10,600 cfs June 19, 1916; maximum gage height, 10.55 ft May 20, 1954; minimum discharge, 23 cfs Nov. 7, 1936 (gage height, 3.20 ft).

REMARKS.--Records excellent except those for winter period, which are fair. No regulation or diversion above station.

COOPERATION.--This station is one of the international gaging stations maintained by the United States under agreement with Canada.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 26 to Dec. 12, Dec. 25 to Feb. 5, Feb. 9-12, 19, Feb. 21 to Mar. 11)

3.4	50	4.5	495
3.6	95	5.0	860
3.8	155	6.0	1,900
4.0	230	8.0	4,760

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	169	109	92	80	110	105	163	415	2,600	456	116	53
2	183	109	102	72	108	102	169	575	2,660	414	118	54
3	162	109	113	67	106	98	167	924	2,730	384	130	55
4	145	112	126	65	105	90	172	1,360	2,760	360	121	66
5	142	202	130	66	104	84	186	2,010	2,650	337	115	68
6	139	186	130	71	103	90	260	2,570	2,480	309	107	60
7	136	176	130	76	101	97	356	2,740	2,290	286	103	56
8	139	176	130	85	101	100	315	2,570	2,040	270	99	71
9	162	172	130	90	101	103	295	2,690	1,960	251	94	89
10	155	172	128	98	101	105	381	2,630	1,800	236	91	73
11	145	172	126	105	100	103	372	2,480	1,590	223	87	68
12	142	172	126	112	99	101	347	2,220	1,430	210	84	66
13	136	169	126	118	98	102	325	2,010	1,310	203	81	63
14	133	166	133	120	95	106	308	1,840	1,260	200	78	61
15	129	162	139	120	98	114	296	1,860	1,230	183	78	59
16	126	162	136	117	106	127	281	2,410	1,540	175	77	57
17	123	158	129	115	112	129	272	3,550	1,380	175	73	52
18	120	152	123	112	109	125	279	3,700	1,220	168	70	53
19	120	158	123	110	107	126	293	3,530	1,100	160	67	57
20	120	152	123	110	106	126	322	3,550	996	152	67	63
21	117	158	123	114	105	126	360	3,650	904	148	66	59
22	117	155	123	118	107	127	370	3,790	819	148	64	62
23	115	149	123	120	108	131	400	3,740	740	144	62	99
24	115	149	120	122	110	141	434	3,800	671	136	61	84
25	117	136	115	125	112	143	433	3,880	607	132	59	68
26	115	110	110	125	110	141	415	4,240	553	133	58	63
27	115	100	105	127	108	141	399	4,010	521	135	57	60
28	115	90	100	122	106	147	377	3,640	561	142	56	58
29	112	87	96	120	-----	158	373	3,230	497	139	54	56
30	112	85	91	118	-----	160	377	2,960	479	128	54	54
31	109	-----	85	112	-----	160	-----	2,680	-----	121	53	-----
TOTAL	4,085	4,365	3,686	3,232	2,936	3,708	9,497	85,254	43,378	6,658	2,500	1,906
MEAN	132	146	119	104	105	120	317	2,750	1,446	215	80.6	63.5
MAX	183	202	139	127	112	160	434	4,240	2,760	456	130	99
MIN	109	85	85	65	95	84	163	415	479	121	53	52
CFSM	.23	.26	.21	.18	.18	.21	.56	4.82	2.54	.38	.14	.11
IN.	.27	.28	.24	.21	.19	.24	.62	5.56	2.83	.43	.16	.12
AC-FT	8,100	8,660	7,310	6,410	5,820	7,350	18,840	169,100	86,040	13,210	4,960	3,780

CAL YR 1969 TOTAL 353,878 MEAN 970 MAX 6,470 MIN 67 CFSM 1.70 IN 23.09 AC-FT 701,900
WTR YR 1970 TOTAL 171,205 MEAN 469 MAX 4,240 MIN 52 CFSM .82 IN 11.17 AC-FT 339,600

PEAK DISCHARGE (BASE, 2,900 CFS).--May 26 (2200) 4,400 cfs (7.79 ft).

KOOTENAI RIVER BASIN

37

12307500 Moyie River at Eileen, Idaho

LOCATION.--Lat 48°46'27", long 116°09'26", in NE¼NE¼ sec.35, T.63 N., R.2 E., Boundary County, on right bank 800 ft downstream from Skin Creek, 0.3 mile southeast of Eileen, and at mile 5.0.

DRAINAGE AREA.--755 sq mi.

PERIOD OF RECORD.--October 1925 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,124.5 ft above mean sea level (river-profile survey). Prior to June 1, 1928, nonrecording gage and June 1, 1928, to Sept. 30, 1944, water-stage recorder at same site at datum 1.0 ft higher.

AVERAGE DISCHARGE.--45 years, 878 cfs (15.80 inches per year, 636,100 acre-ft per year); 15-year base period (1952-67), 954 cfs.

EXTREMES.--Current year: Maximum discharge, 5,430 cfs May 27 (gage height, 5.41 ft); minimum daily, 93 cfs Jan. 5; minimum gage height, 1.58 ft Aug. 31.

Period of record: Maximum discharge, 11,000 cfs May 20, 1954 (gage height, 6.99 ft); minimum, 40 cfs Nov. 27, 1936, and Dec. 17, 1964, both the result of freezeup; minimum gage height, 0.50 ft Feb. 22, 1944, present datum.

Flood of June 19, 1916, was about 12,000 cfs.

REMARKS.--Records excellent except those for winter period, which are fair. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 4 to Sept. 30; stage-discharge relation affected by ice
Nov. 28 to Dec. 13, Dec. 29 to Feb. 8, Mar. 1-6)

1.5	52	2.5	469	4.0	2,120
1.7	98	3.0	845	5.0	4,260
2.0	203	3.5	1,380	6.0	7,450

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	262	179	140	105	140	140	308	616	3,090	637	209	110		
2	297	175	145	100	140	140	313	782	3,200	588	233	109		
3	267	175	150	96	140	140	324	1,200	3,330	552	246	116		
4	238	183	165	94	140	135	324	1,770	3,350	529	229	130		
5	221	272	180	93	140	135	367	2,620	3,180	499	212	136		
6	216	308	185	98	138	155	501	3,410	2,930	467	200	126		
7	212	272	190	110	138	175	574	3,570	2,710	438	192	122		
8	216	267	190	115	138	163	520	3,320	2,370	422	184	128		
9	247	262	190	125	138	160	567	3,430	2,260	399	177	156		
10	252	262	185	130	138	160	675	3,320	2,070	378	175	149		
11	234	252	185	135	135	160	645	3,120	1,820	359	169	132		
12	225	252	190	140	132	163	601	2,760	1,620	343	162	129		
13	216	247	190	140	149	163	567	2,480	1,480	336	157	125		
14	212	243	199	140	142	171	533	2,250	1,420	326	152	122		
15	207	243	212	140	146	179	501	2,230	1,420	308	149	120		
16	203	243	175	135	171	199	475	2,880	1,860	299	145	119		
17	199	234	191	135	191	216	457	4,440	1,690	295	141	113		
18	195	225	187	130	183	216	469	4,740	1,470	288	137	113		
19	191	225	179	130	171	221	495	4,440	1,340	272	132	116		
20	191	225	179	130	171	221	533	4,470	1,220	262	131	124		
21	191	229	183	135	156	221	560	4,580	1,120	248	128	124		
22	183	225	179	140	160	225	581	4,720	1,030	244	129	124		
23	179	216	179	145	160	238	601	4,690	932	240	125	157		
24	183	216	171	145	160	262	638	4,720	852	232	122	173		
25	187	203	167	145	160	262	645	4,770	775	227	121	140		
26	183	191	156	140	160	262	631	5,280	721	231	116	129		
27	179	163	149	140	167	267	608	4,980	681	233	116	124		
28	195	150	135	140	146	292	574	4,410	797	253	113	119		
29	195	140	130	140	-----	308	567	3,850	692	248	111	117		
30	183	135	120	140	-----	302	567	3,510	659	229	110	113		
31	179	-----	115	140	-----	302	-----	3,180	-----	219	109	-----		
TOTAL	6,538	6,612	5,291	3,971	4,250	6,353	15,721	106,538	52,089	10,601	4,832	3,815		
MEAN	211	220	171	128	152	205	524	3,437	1,736	342	156	127		
MAX	297	308	212	145	191	308	675	5,280	3,350	637	246	173		
MIN	179	135	115	93	132	135	308	616	659	219	109	109		
CFSM	.28	.29	.23	.17	.20	.27	.69	4.55	2.30	.45	.21	.17		
IN.	.32	.33	.26	.20	.21	.31	.77	5.25	2.57	.52	.24	.19		
AC-FT	12,970	13,110	10,490	7,880	8,430	12,600	31,180	211,300	103,300	21,030	9,580	7,570		
CAL YR 1969	TOTAL 427,345		MEAN 1,171		MAX 7,340		MIN 110		CFSM 1.55		IN 21.05		AC-FT 847,600	
WTR YR 1970	TOTAL 226,611		MEAN 621		MAX 5,280		MIN 93		CFSM .82		IN 11.16		AC-FT 449,500	

PEAK DISCHARGE (BASE, 3,500 CFS).--May 7 (0400) 3,740 cfs (4.74 ft); May 27 (0100) 5,430 cfs (5.41 ft).

KOOTENAI RIVER BASIN

12309500 Kootenai River at Bonners Ferry, Idaho

LOCATION.--Lat 48°42'00", long 116°18'45", in NE¼ sec.27, T.62 N., R.1 E., Boundary County, on left bank 43 ft downstream from highway bridge at Bonners Ferry, and at mile 152.8.

DRAINAGE AREA.--13,000 sq mi, approximately.

PERIOD OF RECORD.--May to October 1904, October 1927 to current year (elevations only prior to March 1928 and October 1960 to current year). Gage heights collected in this vicinity since 1904 are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 1,743.00 ft above mean sea level with respect to Geological Survey bench mark V-3-1929 at elevation 1,777.08 ft. Gage heights have been reduced to elevations above mean sea level. Datum of 1929, supplementary adjustment of 1947, is 0.02 ft higher. May 1 to Oct. 15, 1904, nonrecording gage on railroad bridge 0.8 mile downstream at different datum. Oct. 1, 1927, to Nov. 30, 1929, nonrecording gage near left bank. Dec. 1, 1929, to June 12, 1933, nonrecording gages on old highway bridge 40 ft downstream. Nonrecording gage near right bank on downstream side of highway bridge at Bonners Ferry June 13, 1933, to Sept. 30, 1960, and supplementary gage thereafter. Datum of gages Oct. 1, 1927, to Jan. 2, 1931, was about 0.23 ft lower.

EXTREMES.--Current year: Maximum elevation, 1,767.79 ft June 7; minimum daily, 1,742.90 ft Apr. 2, 3, 4, 5. Period of record: Maximum elevation, 1,780.13 ft May 29, 1961; minimum, 1,741.14 ft Dec. 5, 1929, Dec. 29, 1930, datum then in use. Flood of June 1894 reached a stage of 1,777.2 ft, present datum.

REMARKS.--Elevations affected by backwater from Kootenay Lake. No drainage district dike failed during year.

REVISIONS (WATER YEARS).--WSP 1716: 1959 (maximum elevation).

ELEVATION, IN FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47.85	46.93	46.69	45.64	46.40	44.25	42.95	43.80	59.88	54.91	47.82	45.61
2	48.10	46.93	46.65	45.60	46.35	44.20	42.90	44.05	59.83	54.64	47.69	45.56
3	43.25	46.95	46.64	45.25	45.60	44.15	42.90	45.15	60.94	54.18	47.52	45.50
4	48.21	46.85	46.70	45.40	45.60	44.15	42.90	46.73	63.19	53.64	47.33	45.65
5	48.08	46.80	46.57	45.60	45.70	43.65	42.90	48.80	65.67	53.15	47.19	45.73
6	47.88	46.85	46.47	45.60	45.55	44.30	43.05	51.85	67.11	52.87	47.06	45.76
7	47.68	46.85	46.39	45.40	45.50	44.05	43.80	54.00	67.69	52.76	46.95	45.87
8	47.56	46.80	46.32	45.10	45.30	44.30	44.30	55.15	67.35	52.50	46.94	45.83
9	47.48	47.10	46.28	45.70	45.30	43.75	44.25	55.55	66.63	51.92	46.94	45.74
10	47.48	47.10	46.27	45.70	45.20	43.90	44.55	55.55	65.81	51.53	46.88	45.82
11	47.46	46.90	46.28	45.55	45.15	43.90	45.00	55.15	64.49	51.22	46.76	45.91
12	47.42	46.90	46.33	45.60	45.15	43.55	44.85	54.45	62.89	50.92	46.54	45.72
13	47.34	46.90	46.42	45.65	45.15	43.75	44.65	53.45	60.92	50.64	46.37	45.58
14	47.31	46.90	46.40	45.75	44.95	43.75	44.45	52.55	59.48	50.29	46.38	45.53
15	47.29	46.85	46.56	45.75	44.95	43.65	44.15	51.85	58.97	49.99	46.31	45.53
16	47.27	46.85	46.64	45.65	44.90	43.75	43.90	51.90	59.88	49.63	46.23	45.50
17	47.24	46.88	46.68	45.55	44.90	43.75	43.70	53.85	60.85	49.30	46.16	45.46
18	47.21	46.88	46.60	45.60	45.25	43.65	43.55	57.40	61.44	49.07	46.10	45.53
19	47.18	46.88	46.51	45.55	45.05	43.85	43.55	59.65	61.58	48.92	46.02	45.60
20	47.11	46.85	46.38	46.15	44.90	43.85	43.65	60.15	61.08	48.77	45.98	45.66
21	47.09	46.87	46.36	46.35	44.85	43.85	43.80	60.30	60.52	48.53	45.93	45.95
22	47.08	46.90	46.30	46.45	44.60	44.00	43.95	60.70	59.80	48.36	45.86	46.23
23	47.06	46.86	46.32	46.45	44.50	43.85	44.00	61.15	59.22	48.19	45.80	46.53
24	47.01	46.85	46.39	46.55	44.35	43.05	44.10	61.93	58.66	48.17	45.80	46.61
25	47.01	46.79	46.39	46.60	44.30	43.10	44.45	62.55	57.83	48.03	45.76	46.63
26	47.01	46.77	46.29	46.50	44.25	43.10	44.40	63.45	57.02	47.82	45.77	46.61
27	47.01	46.69	46.09	46.45	44.15	43.00	44.30	64.70	56.28	47.68	45.75	46.61
28	46.99	46.60	45.85	46.55	44.20	42.95	44.25	65.88	55.77	47.70	45.69	46.57
29	46.97	46.63	45.75	46.45	-----	43.00	43.95	64.73	55.53	47.72	45.83	46.53
30	46.96	46.74	45.64	46.40	-----	43.00	43.80	62.47	55.19	47.93	45.66	46.53
31	46.93	-----	45.64	46.40	-----	43.00	-----	60.82	-----	47.97	45.62	-----
MEAN	47.37	46.86	46.35	45.90	45.07	43.68	43.90	56.12	61.05	50.29	46.41	45.93
MAX	48.25	47.10	46.70	46.60	46.40	44.30	45.00	65.88	67.69	54.91	47.82	46.63
MIN	46.93	46.60	45.64	45.10	44.15	42.95	42.90	43.80	55.19	47.68	45.62	45.46

NOTE.--Add 1,700 ft to obtain elevation above mean sea level.

12311000 Deep Creek at Moravia, Idaho

LOCATION.--Lat 48°37'49", long 116°23'10", in NE¼NE¼NW¼ sec.19, T.61 N., R.1 E., Boundary County, on left bank 50 ft downstream from highway bridge, 1 mile downstream from Ruby Creek, 1 mile southwest of Moravia, and at mile 6.1.

DRAINAGE AREA.--133 sq mi.

PERIOD OF RECORD.--May 1928 to current year. Monthly discharge only for some periods, published in WSP 1316.

GAGE.--Water-stage recorder. Altitude of gage is 1,800 ft (from topographic map). May 1928 to Sept. 19, 1959, nonrecording gages 50 ft upstream. Prior to Aug. 2, 1949, at datum 2.00 ft higher.

AVERAGE DISCHARGE.--42 years, 145 cfs (14.80 inches per year, 105,100 acre-ft per year); 15-year base period (1952-67), 160 cfs.

EXTREMES.--Current year: Maximum discharge, 1,010 cfs May 6 (gage height, 7.08 ft); minimum, 10 cfs Aug. 28, 29-31, Sept. 2, 3 (gage height, 3.56 ft).

Period of record: Maximum discharge, 1,670 cfs May 18, 1954 (gage height, 7.40 ft, from graph based on gage readings); maximum gage height, 7.52 ft May 11, 1969; minimum discharge observed, 5 cfs Aug. 14, 22, 1940.

REMARKS.--Records excellent except those for periods of ice effect, which are fair. Small diversions above station for irrigation. Occasional regulation above station at migratory waterfowl refuge near Elmira.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 19 to May 2, May 12 to June 5; stage-discharge relation affected by ice Nov. 26 to Dec. 9, Dec. 29 to Feb. 7, Mar. 1-11)

3.6	8.4	4.6	120
3.8	18	5.0	216
4.0	32	6.0	520
4.3	66	7.0	1,010

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	39	31	45	53	70	191	335	351	62	21	11
2	110	36	30	43	53	67	195	421	358	58	26	11
3	54	35	30	41	53	63	195	535	353	53	41	13
4	44	37	30	40	53	61	197	633	332	49	29	33
5	40	122	31	39	53	60	216	817	294	47	24	28
6	39	105	32	39	53	58	355	869	261	43	23	21
7	38	77	33	40	53	58	355	783	238	40	21	21
8	41	65	35	40	53	61	291	649	207	37	19	21
9	50	61	37	41	54	68	303	652	238	34	18	21
10	44	58	40	43	54	75	529	586	205	32	17	20
11	39	53	41	44	52	80	436	577	189	29	16	18
12	38	52	68	45	50	87	375	508	165	28	15	16
13	36	49	70	46	54	99	339	457	151	32	14	16
14	36	48	93	48	61	117	315	434	154	38	14	17
15	36	50	125	47	85	123	289	457	194	30	13	17
16	35	48	83	46	157	176	276	563	257	27	13	17
17	34	44	75	44	251	178	272	716	218	27	12	18
18	33	45	66	43	202	153	287	660	186	26	12	21
19	34	46	63	43	161	145	297	615	165	24	12	23
20	35	46	62	44	148	141	307	608	148	22	12	23
21	35	59	67	46	179	136	288	614	131	20	12	23
22	35	55	76	48	136	138	303	607	121	20	11	33
23	35	52	82	51	113	153	324	576	105	20	11	53
24	34	53	75	52	97	173	326	568	92	20	11	32
25	39	45	67	54	89	171	310	561	82	20	11	27
26	38	40	63	55	85	163	287	577	73	27	11	25
27	37	37	59	56	84	162	275	469	72	27	11	24
28	38	35	52	56	75	186	264	427	70	36	11	23
29	38	33	50	56	-----	213	275	377	65	31	11	23
30	37	32	49	54	-----	201	285	356	68	26	11	22
31	39	-----	47	54	-----	192	-----	350	-----	23	11	-----
TOTAL	1,298	1,557	1,762	1,443	2,611	3,828	8,957	17,357	5,543	1,008	494	671
MEAN	41.9	51.9	56.8	46.5	93.3	123	299	560	185	32.5	15.9	22.4
MAX	110	122	125	56	251	213	529	869	358	62	41	53
MIN	33	32	30	39	50	58	191	335	65	20	11	11
CFSM	.31	.39	.43	.35	.70	.93	2.24	4.21	1.39	.24	.12	.17
IN.	.36	.44	.49	.40	.73	1.07	2.50	4.85	1.55	.28	.14	.19
AC-FT	2,570	3,090	3,490	2,860	5,180	7,590	17,770	34,430	10,990	2,000	980	1,330
CAL YR 1969	TOTAL 67,844			MEAN 186	MAX 1,180	MIN 14	CFSM 1.40	IN 18.97	AC-FT 134,600			
WTR YR 1970	TOTAL 46,529			MEAN 127	MAX 869	MIN 11	CFSM .96	IN 13.01	AC-FT 92,290			

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
4-10	0615	6.28	600	5-17	0215	6.78	805
5-6	0115	7.08	1,010				

KOOTENAI RIVER BASIN

12314000 Kootenai River at Klockmann Ranch, near Bonners Ferry, Idaho

LOCATION.--Lat 48°47'38", long 116°22'51", in SE¼NW¼SE¼ sec.19, T.63 N., R.1 E., Boundary County, on right bank, 0.3 mile downstream from dike of drainage district No. 5, 8 miles north of Bonners Ferry, and at mile 139.7.

DRAINAGE AREA.--13,300 sq mi, approximately.

PERIOD OF RECORD.--May to July, September to November 1928, April to September, December 1929, April 1930 to current year (elevations only, fragmentary prior to April 1930).

GAGE.--Water-stage recorder. Datum of gage is 1,700.00 ft above mean sea level, levels by Topographic Division in 1928. Gage readings have been reduced to elevations above mean sea level. Datum of 1929 is about 0.03 ft higher. Prior to Sept. 12, 1928, several nonrecording gages within 300 ft at different datums.

EXTREMES.--Current year: Maximum elevation, 1,764.76 ft June 7; minimum, 1,741.05 ft Apr. 3-5.
Period of record: Maximum elevation, 1,776.41 ft June 7, 1961; minimum, 1,738.76 ft Apr. 1, 1944.

REMARKS.--Elevations affected by backwater from Kootenay Lake. No drainage district dike failed during year.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46.89	46.41	46.03	45.19	44.87	43.36	41.10	41.64	57.64	52.92	46.21	44.60
2	47.06	46.42	46.02	45.12	44.82	43.24	41.14	41.78	57.45	52.64	46.10	44.59
3	47.19	46.35	45.94	45.03	44.78	43.15	41.12	42.56	58.34	52.24	45.97	44.54
4	47.19	46.31	45.87	44.96	44.70	43.08	41.07	44.01	60.41	51.76	45.81	44.67
5	47.07	46.44	45.81	44.80	44.70	42.99	41.09	46.18	62.64	51.33	45.71	44.70
6	46.97	46.46	45.79	44.68	44.69	42.96	41.20	49.14	64.05	51.00	45.61	44.73
7	46.84	46.47	45.75	44.57	44.70	42.96	41.60	51.32	64.69	50.85	45.55	44.85
8	46.71	46.50	45.72	44.42	44.68	42.99	41.95	52.32	64.49	50.56	45.53	44.80
9	46.70	46.48	45.67	44.33	44.67	42.94	41.96	52.68	63.92	50.12	45.55	44.72
10	46.69	46.48	45.67	44.39	44.67	42.85	42.13	52.70	63.24	49.71	45.49	44.75
11	46.66	46.47	45.67	44.43	44.63	42.73	42.47	52.35	62.15	49.39	45.40	44.86
12	46.59	46.47	45.72	44.51	44.63	42.64	42.42	51.72	60.67	49.12	45.26	44.68
13	46.52	46.43	45.83	44.58	44.58	42.51	42.31	50.84	58.97	48.88	45.11	44.58
14	46.53	46.41	45.84	44.68	44.52	42.42	42.17	50.00	57.63	48.55	45.15	44.56
15	46.52	46.38	45.94	44.81	44.52	42.35	41.92	49.41	57.03	48.29	45.10	44.57
16	46.52	46.40	46.03	44.86	44.53	42.35	41.71	49.53	57.54	48.04	45.03	44.56
17	46.53	46.39	46.07	44.77	44.50	42.33	41.55	51.46	58.40	47.74	44.99	44.56
18	46.56	46.32	46.05	44.78	44.44	42.19	41.46	54.69	58.95	47.50	44.96	44.67
19	46.53	46.30	45.98	44.79	44.35	42.02	41.46	56.65	59.12	47.32	44.92	44.75
20	46.48	46.30	45.92	44.83	44.28	41.90	41.52	57.23	58.71	47.16	44.88	44.82
21	46.43	46.34	45.87	44.86	44.17	41.83	41.61	57.44	58.19	47.00	44.86	45.00
22	46.43	46.36	45.82	44.90	44.09	41.75	41.73	57.86	57.59	46.82	44.82	45.21
23	46.44	46.32	45.85	44.94	44.02	41.65	41.72	58.36	57.00	46.66	44.79	45.49
24	46.45	46.31	45.88	44.99	43.88	41.75	41.78	59.11	56.49	46.60	44.80	45.59
25	46.46	46.26	45.88	45.01	43.76	41.72	42.01	59.70	55.75	46.51	44.79	45.63
26	46.52	46.24	45.80	45.03	43.64	41.63	42.10	60.75	54.96	46.30	44.75	45.66
27	46.50	46.17	45.64	45.10	43.59	41.47	42.05	61.89	54.32	46.17	44.76	45.70
28	46.42	46.13	45.47	45.14	43.47	41.40	41.98	62.83	53.85	46.16	44.71	45.72
29	46.39	46.10	45.39	45.05	-----	41.37	41.79	62.08	53.53	46.15	44.87	45.73
30	46.37	46.05	45.29	44.96	-----	41.29	41.67	60.13	53.27	46.29	44.70	45.75
31	46.39	-----	45.25	44.87	-----	41.17	-----	58.55	-----	46.33	44.64	-----
MAX	47.19	46.50	46.07	45.19	44.87	43.36	42.47	62.83	64.69	52.92	46.21	45.75
MIN	46.37	46.05	45.25	44.33	43.47	41.17	41.07	41.64	53.27	46.15	44.64	44.54
MEAN	46.63	46.35	45.79	44.82	44.39	42.29	41.73	53.45	58.70	48.58	45.19	44.97

NOTE.--Add 1,700 ft to obtain elevation above mean sea level.

KOOTENAI RIVER BASIN

41

12316800 Mission Creek near Copeland, Idaho

LOCATION.--Lat 48°55'54", long 116°20'00", in SW¼NE¼NE¼ sec.4, T.64 N., R.1 E., Boundary County, on left bank, 0.1 mile upstream from bridge crossing, 4 miles northeast of Copeland, at mile 6.0, and 17 miles north of Bonners Ferry.

DRAINAGE AREA.--23 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 2,814.5 ft, unadjusted.

AVERAGE DISCHARGE.--12 years, 37.9 cfs (22.38 inches per year, 27,460 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 258 cfs May 21 (gage height, 4.13 ft); minimum daily, 3.1 cfs Dec.

1-3. Period of record: Maximum discharge, 528 cfs May 26, 1961 (gage height, 5.52 ft); from rating curve extended above 250 cfs on basis of indirect measurement of peak flow; minimum daily, 1.6 cfs Jan. 10-13, 1968.

REMARKS.--Records good except those for winter periods, which are fair. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Dec. 1 to Mar. 21)

1.9	3.4	2.5	27
2.0	5.3	3.0	67
2.1	8.1	3.5	132
2.3	16	4.1	240

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
1	12	6.1	3.1	3.5	6.4	3.8	7.9	33	120	35	8.2	3.7			
2	13	5.9	3.1	3.5	5.6	3.8	8.2	55	121	32	10	3.9			
3	9.2	5.9	3.1	3.4	5.6	3.6	8.4	88	125	29	11	4.6			
4	7.5	7.0	3.2	3.3	5.1	4.0	8.9	120	126	27	8.4	8.7			
5	7.0	13	3.2	3.2	4.8	4.2	9.6	166	118	25	7.5	6.1			
6	7.0	10	3.3	3.3	4.6	4.0	20	190	107	23	7.2	4.9			
7	6.4	8.5	3.4	3.5	4.4	5.2	22	176	96	22	6.8	4.7			
8	6.4	7.8	3.5	3.7	4.4	4.4	19	153	86	21	6.5	7.7			
9	10	7.8	3.6	3.9	4.4	3.9	19	161	84	19	6.4	7.8			
10	7.8	7.5	3.8	4.2	4.3	3.8	24	148	85	18	6.1	5.0			
11	7.0	7.0	4.0	4.6	4.3	3.9	23	135	74	17	5.9	5.0			
12	7.0	7.0	4.1	5.0	4.4	4.0	21	114	66	16	5.5	4.5			
13	6.4	6.7	4.3	5.4	4.4	4.1	19	103	58	16	5.3	4.4			
14	6.4	6.4	4.5	5.6	4.4	4.3	18	97	56	15	5.1	4.6			
15	6.1	6.4	4.7	5.6	5.1	4.8	17	103	73	14	5.1	4.5			
16	5.9	6.0	4.8	5.3	7.6	5.8	16	147	153	14	4.9	4.5			
17	5.9	5.8	4.9	5.0	8.2	6.0	16	215	126	13	4.7	4.5			
18	5.6	5.6	4.8	4.9	6.0	5.8	17	217	106	12	4.7	5.1			
19	5.9	5.5	4.7	5.1	5.1	5.4	20	210	93	12	4.5	6.0			
20	5.9	5.4	4.6	5.3	4.4	5.2	23	216	82	11	4.4	6.2			
21	6.1	5.3	4.5	5.8	4.6	5.4	24	226	73	11	4.3	5.0			
22	5.9	5.1	4.4	6.6	5.8	5.8	25	232	65	11	4.2	5.5			
23	5.9	4.9	4.2	7.2	5.6	6.1	27	226	57	11	4.1	9.4			
24	5.9	4.7	4.1	7.8	5.2	6.4	30	216	51	9.9	4.0	5.7			
25	5.9	4.3	4.0	8.3	5.0	6.3	28	216	46	9.9	3.9	5.0			
26	5.6	3.9	3.9	8.4	4.4	6.1	25	232	42	11	3.8	5.0			
27	5.6	3.7	3.8	8.2	3.6	6.2	24	216	39	11	3.9	4.6			
28	5.9	3.5	3.8	7.7	4.3	7.2	22	191	43	12	3.8	4.5			
29	5.6	3.3	3.7	7.2	-----	7.8	23	167	37	10	3.8	4.4			
30	5.9	3.2	3.7	6.8	-----	7.3	25	146	39	9.4	3.9	4.3			
31	6.1	-----	3.6	6.4	-----	7.2	-----	128	-----	8.8	3.7	-----			
TOTAL	212.8	183.2	122.4	167.7	142.0	161.8	590.0	5,043	2,447	506.0	171.6	159.8			
MEAN	6.86	6.11	3.95	5.41	5.07	5.22	19.7	163	81.6	16.3	5.54	5.33			
MAX	13	13	4.9	8.4	8.2	7.8	30	232	153	35	11	9.4			
MIN	5.6	3.2	3.1	3.2	3.6	3.6	7.9	33	37	8.8	3.7	3.7			
CFSM	.30	.27	.17	.24	.22	.23	.86	7.07	3.55	.71	.24	.23			
IN.	.34	.30	.20	.27	.23	.26	.95	8.15	3.96	.82	.28	.26			
AC-FT	422	363	243	333	282	321	1,170	10,000	4,850	1,000	340	317			
CAL YR 1969	TOTAL	16,493.5		MEAN	45.2	MAX	372	MIN	3.1	CFSM	1.96	IN	26.67	AC-FT	32,710
WTR YR 1970	TOTAL	9,907.3		MEAN	27.1	MAX	232	MIN	3.1	CFSM	1.18	IN	16.02	AC-FT	19,650

KOOTENAI RIVER BASIN

12318500 Kootenai River near Copeland, Idaho
(International gaging station)

LOCATION.--Lat 48°54'43", long 116°24'59", in NW¼NW¼SW¼ sec.12, T.64 N., R.1 W., Boundary County, on right bank at Andrews Ranch, 0.8 mile downstream from Mission Creek, 1.5 miles northwest of Copeland, and at mile 123.2.

DRAINAGE AREA.--13,400 sq mi, approximately.

PERIOD OF RECORD.--October 1927 to current year (elevation record only prior to May 1929). Published as "at Copeland" 1927-29. April 1925 to September 1927 (gage heights only) in reports of Water Survey of Canada, Department of Energy, Mines and Resources.

GAGE.--Water-stage recorder. Datum of gage is 1,700.00 ft above mean sea level, referred to bench mark T-10-1914, elevation, 1,791.49 ft (datum of 1929 is about 0.04 ft higher). Prior to Nov. 20, 1929, nonrecording or recording gage at site 0.8 mile upstream; datum 40.77 ft higher prior to Apr. 18, 1929. Gage readings have been reduced to elevations above mean sea level.

AVERAGE DISCHARGE.--41 years, 15,670 cfs (15.87 inches per year, 11,350,000 acre-ft per year); 15-year base period (1952-67), 16,960 cfs.

EXTREMES.--Current year: Maximum daily discharge, 64,000 cfs June 7; maximum elevation, 1,761.29 ft June 7, 8; minimum daily discharge, 2,560 cfs Jan. 9; minimum elevation, 1,740.44 ft Apr. 3.

Period of record: Maximum daily discharge, 124,000 cfs May 30, 1948; maximum elevation, 1,772.55 ft June 6, 1961; minimum daily discharge, 1,350 cfs Feb. 8, 1936; minimum elevation, 1,738.52 ft Apr. 2, 3, 1944.

REMARKS.--Records excellent except for those during the winter period, which are good. Stage-discharge relation affected by backwater from Kootenay Lake. No drainage district dike failed during year. Discharge computed from slope and conveyance of the reach between stations at Klockmann Ranch and at Porthill, and discharge measurements made at station near Copeland. Records of water temperatures and suspended sediment loads for the water year 1970 are published in Part 2 of this report.

COOPERATION.--The station is maintained by the United States under agreement with Canada.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8,250	5,140	4,170	3,060	4,100	3,780	4,930	7,070	38,100	24,700	10,900	5,820
2	9,300	5,020	4,440	2,990	4,140	3,700	4,980	7,280	37,300	24,200	10,900	5,710
3	9,950	5,090	4,560	2,900	4,200	3,550	5,140	9,020	40,400	23,200	10,700	5,630
4	9,850	4,840	4,730	2,870	4,160	3,620	4,900	12,400	48,600	21,900	10,100	5,810
5	9,260	5,080	4,780	2,730	4,180	3,400	5,010	18,200	57,400	20,700	9,730	6,000
6	8,740	5,390	4,640	2,630	4,180	3,650	5,170	26,100	62,300	20,200	9,270	5,830
7	8,400	5,480	4,680	2,690	4,280	3,760	6,100	31,900	64,000	20,400	9,000	6,120
8	7,940	5,740	4,520	2,630	4,220	4,040	7,240	34,200	62,200	19,800	8,600	5,980
9	7,790	5,630	4,420	2,560	4,240	3,920	7,420	34,600	58,900	18,600	8,720	5,880
10	7,670	5,530	4,330	2,580	4,300	3,810	7,650	34,000	55,400	17,600	8,660	5,960
11	7,720	5,490	4,250	2,650	4,260	3,750	8,650	32,600	50,700	17,100	8,520	6,250
12	7,460	5,400	4,130	2,760	4,320	3,850	8,520	30,300	44,800	16,600	8,220	6,030
13	7,200	5,310	4,320	2,940	4,320	3,860	8,300	27,300	38,200	16,000	7,490	5,770
14	6,830	5,350	4,460	3,320	4,500	3,920	8,070	24,500	33,600	15,300	7,310	5,410
15	6,720	5,310	4,330	3,370	4,490	4,140	7,550	22,600	32,200	14,600	7,260	5,420
16	6,600	5,200	4,370	3,600	4,650	4,330	7,040	22,600	35,100	14,000	7,110	5,240
17	6,330	5,250	4,510	3,390	4,710	4,590	6,660	27,900	39,400	13,300	6,830	5,040
18	6,270	5,250	4,540	3,490	4,810	4,560	6,360	38,100	42,500	13,000	6,660	4,890
19	6,230	5,190	4,350	3,390	4,730	4,480	6,200	44,100	43,300	12,600	6,610	4,870
20	6,130	5,150	4,220	3,510	4,610	4,370	6,470	45,200	41,600	12,400	6,410	4,880
21	5,870	5,140	4,160	3,560	4,540	4,330	6,630	45,200	39,600	12,000	6,380	5,540
22	5,830	5,380	3,980	3,680	4,540	4,430	7,060	45,600	37,500	11,700	6,130	6,290
23	5,790	5,240	4,000	3,740	4,440	4,500	7,310	46,500	35,600	11,400	5,980	6,570
24	5,630	5,070	4,010	3,880	4,230	4,670	7,330	48,900	34,100	11,200	5,870	6,490
25	5,650	5,230	3,970	4,000	4,170	5,150	7,710	50,100	31,800	11,200	6,040	6,510
26	5,870	5,270	3,800	4,040	3,900	5,080	8,000	53,200	29,200	10,800	5,790	6,310
27	5,710	4,900	3,670	4,080	3,920	5,010	7,870	57,000	27,300	10,400	5,900	6,030
28	5,580	4,800	3,470	4,260	3,820	4,970	7,670	60,400	25,900	10,300	5,600	5,780
29	5,410	4,650	3,430	4,180	-----	5,170	7,260	56,200	25,500	10,300	6,210	5,580
30	5,200	4,320	3,270	4,140	-----	5,230	6,990	47,800	25,300	10,600	5,770	5,520
31	5,080	-----	3,150	4,020	-----	5,140	-----	41,700	-----	11,000	5,670	-----
TOTAL	216,160	155,840	129,660	103,640	120,960	132,760	206,190	1,082.6M	1,237.8M	477,100	234,340	173,170
MEAN	6,973	5,195	4,183	3,343	4,320	4,283	6,873	34,920	41,260	15,390	7,559	5,772
MAX	9,850	5,740	4,780	4,260	4,810	5,230	8,650	60,400	64,000	24,700	10,900	6,570
MIN	5,080	4,320	3,150	2,560	3,820	3,400	4,900	7,070	25,300	10,300	5,600	4,870
CFSM	.52	.39	.31	.25	.32	.32	.51	2.61	3.08	1.15	.56	.43
IN.	.60	.43	.36	.29	.34	.37	.57	3.00	3.44	1.32	.65	.48
AC-FT	428,800	309,100	257,200	205,600	239,900	263,300	409,000	2,147M	2,455M	946,300	464,800	343,500

CAL YR 1969 TOTAL 7,150,880 MEAN 19,590 MAX 88,300 MIN 2,770 CFSM 1.46 IN 19.85 AC-FT 14,180,000
WTR YR 1970 TOTAL 4,270,190 MEAN 11,700 MAX 64,000 MIN 2,560 CFSM .87 IN 11.85 AC-FT 8,470,000

M Expressed in thousands.

12318500 Kootenai River near Copeland, Idaho--Continued

ELEVATION, IN FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46.51	46.24	45.98	45.12	44.60	43.15	40.51	40.66	55.29	51.32	45.41	44.37
2	46.56	46.25	45.96	45.04	44.55	43.04	40.55	40.76	55.12	51.03	45.29	44.38
3	46.62	46.16	45.86	44.96	44.50	42.92	40.49	41.25	55.75	50.71	45.16	44.33
4	46.63	46.16	45.78	44.89	44.42	42.88	40.47	42.15	57.23	50.30	45.05	44.44
5	46.58	46.28	45.70	44.73	44.41	42.79	40.49	43.67	59.11	49.96	45.00	44.46
6	46.53	46.26	45.69	44.62	44.40	42.77	40.52	46.05	60.44	49.62	44.96	44.50
7	46.43	46.26	45.64	44.52	44.40	42.75	40.78	48.06	61.14	49.42	44.94	44.60
8	46.34	46.26	45.61	44.36	44.38	42.76	40.93	49.08	61.25	49.18	44.95	44.56
9	46.33	46.25	45.56	44.28	44.37	42.72	40.86	49.50	60.96	48.83	44.98	44.49
10	46.34	46.28	45.56	44.35	44.34	42.63	41.03	49.65	60.51	48.48	44.94	44.51
11	46.31	46.28	45.57	44.38	44.32	42.50	41.18	49.42	59.67	48.17	44.87	44.59
12	46.25	46.28	45.62	44.44	44.31	42.39	41.15	48.96	58.52	47.93	44.77	44.42
13	46.21	46.25	45.70	44.52	44.27	42.24	41.08	48.30	57.09	47.72	44.68	44.36
14	46.25	46.23	45.69	44.56	44.18	42.13	40.96	47.67	55.88	47.44	44.72	44.36
15	46.25	46.21	45.80	44.72	44.16	42.01	40.81	47.22	55.22	47.24	44.72	44.37
16	46.26	46.23	45.87	44.75	44.18	41.96	40.69	47.33	55.39	47.03	44.67	44.38
17	46.30	46.23	45.90	44.66	44.15	41.90	40.60	48.87	55.99	46.79	44.64	44.40
18	46.33	46.15	45.88	44.65	44.09	41.77	40.58	51.54	56.33	46.58	44.64	44.53
19	46.31	46.13	45.83	44.65	44.01	41.61	40.62	53.29	56.53	46.40	44.61	44.62
20	46.26	46.15	45.77	44.68	43.96	41.50	40.62	53.92	56.32	46.24	44.58	44.69
21	46.23	46.18	45.73	44.69	43.85	41.45	40.68	54.20	55.90	46.12	44.58	44.81
22	46.23	46.21	45.69	44.73	43.78	41.36	40.71	54.63	55.43	45.96	44.56	44.95
23	46.24	46.17	45.71	44.75	43.73	41.25	40.66	55.15	54.92	45.82	44.54	45.22
24	46.26	46.17	45.76	44.79	43.62	41.32	40.71	55.77	54.47	45.79	44.55	45.32
25	46.28	46.11	45.76	44.79	43.51	41.20	40.93	56.37	53.92	45.70	44.56	45.36
26	46.31	46.10	45.64	44.81	43.42	41.09	40.97	57.26	53.24	45.52	44.53	45.42
27	46.29	46.06	45.53	44.87	43.36	40.92	40.96	58.25	52.69	45.41	44.54	45.49
28	46.22	46.03	45.36	44.90	43.25	40.85	40.91	59.07	52.26	45.42	44.52	45.55
29	46.20	46.02	45.28	44.81	-----	40.76	40.79	59.03	51.91	45.40	44.62	45.58
30	46.20	46.00	45.19	44.71	-----	40.65	40.72	57.53	51.64	45.50	44.50	45.61
31	46.23	-----	45.16	44.61	-----	40.55	-----	56.10	-----	45.51	44.44	-----
MAX	46.63	46.28	45.98	45.12	44.60	43.15	41.18	59.07	61.25	51.32	45.41	45.61
MIN	46.20	46.00	45.16	44.28	43.25	40.55	40.47	40.66	51.64	45.40	44.44	44.33
MEAN	46.33	46.19	45.67	44.69	44.09	41.93	40.77	50.67	56.34	47.50	44.76	44.76

NOTE.--Add 1,700 ft to obtain elevation above mean sea level.

12321500 Boundary Creek near Porthill, Idaho
(International gaging station)

LOCATION.--Lat 48°59'50", long 116°34'05", in SW¼ sec.11, T.65 N., R.2 W., Boundary County, on left bank near mouth of canyon, 0.2 mile south of international boundary, 3 miles west of Porthill, and at mile 3.5.

DRAINAGE AREA.--97 sq mi, approximately.

PERIOD OF RECORD.--May 1928 to current year (no winter records 1929, 1930).

GAGE.--Water-stage recorder. Altitude of gage is 1,770 ft (from topographic map). Prior to Apr. 24, 1929, non-recording gage at site 140 ft upstream at different datum.

AVERAGE DISCHARGE.--40 years (1930-70), 193 cfs (27.02 inches per year, 139,800 acre-ft per year); 15-year base period (1952-67), 208 cfs.

EXTREMES.--Current year maximum discharge, 1,850 cfs May 25 (gage height, 4.55 ft); minimum, 18 cfs Sept. 2, 3 (gage height, 0.88 ft).

Period of record: Maximum discharge, 3,540 cfs June 2, 1968 (gage height, 6.00 ft); from rating curve extended above 2,000 cfs; minimum, 5 cfs sometime between Nov. 10 and Dec. 3, 1936; minimum gage height, 0.24 ft Nov. 22, 1952.

REMARKS.--Records excellent except those for winter periods, which are good. No regulation or diversion above station.

COOPERATION.--This station is maintained by the United States under agreement with Canada.

REVISIONS (WATER YEARS).--WSP 1446: 1930(M). WSP 1736: 1943(M), 1945(M), 1950(M). WSP 1933: 1946. WSP 1396: 1953(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 22 to Apr. 3, Aug. 11 to Sept. 30; stage-discharge relation affected by ice Nov. 27 to Dec. 12, Dec. 29 to Jan. 14, Jan. 31 to Feb. 13, Feb. 13 to Mar. 5)

0.7	17	2.5	365
1.0	37	3.0	585
1.5	94	4.0	1,310
2.0	203	4.3	1,600

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	155	66	42	46	34	30	50	118	939	250	49	19
2	178	63	42	46	33	30	50	189	1,150	220	52	19
3	96	62	42	44	33	30	49	308	1,300	198	58	23
4	77	98	43	42	32	30	53	454	1,310	179	49	56
5	69	326	43	41	31	31	55	711	1,160	163	44	40
6	66	185	44	38	31	31	93	838	1,040	148	42	28
7	64	140	45	37	31	32	111	752	930	135	40	26
8	68	117	46	38	31	32	100	668	710	125	37	41
9	106	111	47	39	31	32	101	733	930	115	36	36
10	88	106	48	40	31	31	123	618	726	106	36	28
11	79	99	49	41	31	32	111	531	559	97	34	26
12	74	92	50	42	31	33	104	441	469	93	32	24
13	66	86	52	42	32	34	93	405	462	88	32	23
14	65	85	56	42	33	35	87	407	453	85	31	22
15	60	86	73	42	34	36	82	509	497	79	29	22
16	58	80	77	41	35	40	80	861	583	75	29	22
17	54	71	63	39	36	37	80	1,260	449	72	28	22
18	54	72	59	39	36	37	83	1,040	396	68	27	27
19	57	77	58	39	34	39	83	974	361	66	27	36
20	60	75	57	40	34	41	89	1,020	323	63	26	37
21	59	75	57	42	31	41	95	1,120	290	63	25	32
22	60	71	55	44	30	41	99	1,230	257	68	24	45
23	59	68	54	45	30	42	111	1,250	226	60	24	65
24	59	66	51	45	30	44	111	1,270	200	57	23	41
25	60	57	51	45	30	45	113	1,420	180	54	23	34
26	57	52	50	44	30	46	109	1,550	164	65	21	30
27	57	50	48	42	30	46	107	1,190	165	66	24	28
28	57	47	48	39	30	46	101	1,010	811	79	21	27
29	56	44	48	37	-----	49	104	875	339	63	20	26
30	56	43	47	36	-----	49	103	789	295	56	20	24
31	62	-----	47	35	-----	47	-----	808	-----	53	20	-----
TOTAL	2,236	2,670	1,592	1,272	895	1,169	2,730	25,349	17,674	3,109	983	929
MEAN	72.1	89.0	51.4	41.0	32.0	37.7	91.0	818	589	100	31.7	31.0
MAX	178	326	77	46	36	49	123	1,550	1,310	250	58	65
MIN	54	43	42	35	30	30	49	118	164	53	20	19
CFSM	.74	.92	.53	.42	.33	.39	.94	8.43	6.07	1.03	.33	.32
IN.	.86	1.02	.61	.49	.34	.45	1.05	9.72	6.78	1.19	.38	.36
AC-FT	4,440	5,300	3,160	2,520	1,780	2,320	5,410	50,280	35,060	6,170	1,950	1,840

CAL YR 1969 TOTAL 89,766 MEAN 246 MAX 2,020 MIN 25 CFSM 2.54 IN 34.42 AC-FT 178,100
WTR YR 1970 TOTAL 60,608 MEAN 166 MAX 1,550 MIN 19 CFSM 1.71 IN 23.24 AC-FT 120,200

PEAK DISCHARGE (BASE, 1,300 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5-25	1915	4.55	1,850	6-28	0315	4.47	1,770
6-3	2015	4.36	1,660				

12322000 Kootenai River at Porthill, Idaho
(International gaging station)

LOCATION.--Lat 49°00'00", long 116°30'10", in SW¼ sec.8, T.65 N., R.1 W., Boundary County, on right bank, 300 ft south of international boundary at Porthill, and at mile 105.63.

DRAINAGE AREA.--13,700 sq mi, approximately.

PERIOD OF RECORD.--May to July 1904 and October 1927 to March 1928 (elevations only), and April 1928 to current year in reports of Geological Survey. October 1924 to September 1927 (gage heights only) in reports of Water Survey of Canada, Department of Energy, Mines and Resources.

GAGE.--Water-stage recorder. Datum of gage is 1,700.00 ft above mean sea level referred to bench mark "10-M-1928", at elevation 1,767.68 ft. Gage readings have been reduced to elevations above mean sea level. Datum of 1929 and datum of Geodetic Survey of Canada, Pub. 24, 1951 edition, are 0.03 ft higher. Prior to May 17, 1928, non-recording gages at approximately same site. Datum of gages prior to July 28, 1928, 38.34 ft higher, except in 1904 when different datum was used.

AVERAGE DISCHARGE.--42 years, 16,030 cfs (15.89 inches per year, 11,610,000 acre-ft per year); 15-year base period (1952-67), 17,490 cfs.

EXTREMES.--Current year: Maximum daily discharge, 65,800 cfs June 7; maximum elevation, 1,757.96 ft June 8; minimum daily discharge, 2,650 cfs Jan. 10; minimum elevation, 1,740.10 ft Apr. 3, 5.
Period of record: Maximum daily discharge, 125,000 cfs June 1, 1948; maximum elevation, 1,767.61 ft June 7, 1961; minimum daily discharge, 1,380 cfs Feb. 8, 1936; minimum elevation, 1,738.21 ft Apr. 3, 1944.
Maximum elevation known, 1,772.7 ft in June 1894, present datum.

REMARKS.--Records excellent. Daily discharge represents entire flow passing international boundary, and is computed by adding tributary inflow for intervening area to flow at station near Copeland and correcting for channel storage between stations near Copeland and at Porthill. Boundary dike of Reclamation Farm and U.S. Forest Service roadway dike (south side of Boundary Creek) remained intact and flow of river was confined throughout year to main channel on which gage is located. Elevations affected by backwater from Kootenay Lake. No drainage dike failed during year. Records of water temperatures for water year 1970 are published in Part 2 of this report.

COOPERATION.--This station is maintained by the United States under agreement with Canada.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8,620	5,310	4,270	3,210	4,190	3,910	5,060	7,430	41,000	25,500	11,100	5,900
2	9,780	5,170	4,560	3,140	4,250	3,830	5,090	7,760	40,300	24,900	11,100	5,750
3	10,100	5,300	4,710	3,050	4,310	3,660	5,300	9,680	43,200	23,900	10,900	5,700
4	10,100	5,110	4,890	3,010	4,270	3,740	5,030	13,200	50,900	22,600	10,300	5,900
5	9,450	5,880	4,930	2,900	4,250	3,500	5,160	19,500	59,000	21,300	9,860	6,100
6	8,920	5,900	4,750	2,780	4,260	3,770	5,380	27,400	63,800	20,800	9,380	5,860
7	8,610	5,860	4,820	2,850	4,360	3,850	6,320	33,100	65,800	20,900	9,100	6,140
8	8,160	6,060	4,650	2,800	4,290	4,130	7,500	35,500	64,000	20,300	8,660	6,100
9	8,070	5,930	4,560	2,700	4,320	4,000	7,730	36,300	61,500	19,100	8,810	6,010
10	7,900	5,800	4,450	2,650	4,380	3,910	7,910	35,500	57,600	18,000	8,770	6,010
11	7,960	5,760	4,370	2,740	4,350	3,880	8,920	34,100	52,800	17,500	8,640	6,290
12	7,680	5,640	4,220	2,830	4,400	3,980	8,920	31,600	46,900	17,000	8,350	6,160
13	7,390	5,550	4,420	3,020	4,420	4,010	8,580	28,600	40,300	16,300	7,570	5,850
14	6,970	5,590	4,610	3,410	4,630	4,060	8,360	25,800	35,600	15,700	7,350	5,440
15	6,880	5,550	4,460	3,410	4,570	4,290	7,840	24,100	33,900	14,900	7,350	5,460
16	6,740	5,390	4,540	3,700	4,750	4,460	7,300	24,800	36,600	14,300	7,200	5,280
17	6,440	5,440	4,660	3,520	4,820	4,720	6,910	30,500	40,400	13,600	6,890	5,070
18	6,390	5,480	4,710	3,580	4,940	4,720	6,590	39,800	43,400	13,300	6,720	4,880
19	6,390	5,400	4,520	3,480	4,850	4,660	6,400	45,800	44,200	12,900	6,690	4,910
20	6,310	5,340	4,400	3,590	4,710	4,510	6,730	47,500	42,700	12,600	6,480	4,930
21	6,040	5,310	4,330	3,650	4,660	4,460	6,860	47,900	40,700	12,200	6,440	5,560
22	5,990	5,570	4,140	3,780	4,650	4,580	7,330	48,400	38,500	12,000	6,190	6,340
23	5,940	5,430	4,120	3,840	4,540	4,670	7,660	49,400	36,500	11,600	6,030	6,610
24	5,770	5,240	4,120	3,980	4,360	4,740	7,600	51,700	34,900	11,400	5,910	6,530
25	5,810	5,410	4,090	4,110	4,300	5,360	7,940	53,300	32,600	11,400	6,110	6,570
26	6,000	5,410	3,960	4,150	4,000	5,240	8,290	56,400	30,000	11,100	5,840	6,340
27	5,860	5,040	3,870	4,150	4,020	5,210	8,170	59,300	28,000	10,600	5,960	6,050
28	5,760	4,930	3,660	4,360	3,950	5,120	7,960	62,400	28,200	10,500	5,650	5,810
29	5,560	4,760	3,590	4,310	-----	5,350	7,590	58,700	26,600	10,500	6,220	5,620
30	5,340	4,440	3,430	4,280	-----	5,420	7,300	50,800	26,200	10,700	5,870	5,560
31	5,230	-----	3,280	4,140	-----	5,310	-----	44,600	-----	11,200	5,740	-----
TOTAL	222,160	163,000	134,090	107,120	123,800	137,050	213,730	1,140,9M	1,286.1M	488,600	237,180	174,730
MEAN	7,166	5,433	4,325	3,455	4,421	4,421	7,124	36,800	42,870	15,760	7,651	5,824
MAX	10,100	6,060	4,930	4,360	4,940	5,420	8,920	62,400	65,800	25,500	11,100	6,610
MIN	5,230	4,440	3,280	2,650	3,950	3,500	5,030	7,430	26,200	10,500	5,650	4,880
CFSM	.52	.40	.32	.25	.32	.32	.52	2.69	3.13	1.15	.56	.43
IN.	.60	.44	.36	.29	.34	.37	.58	3.10	3.49	1.33	.64	.47
AC-FT	440,700	323,300	266,000	212,500	245,600	271,800	423,900	2,263M	2,551M	969,100	470,400	346,600
CAL YR 1969	TOTAL 7,385,220	MEAN 20,230	MAX 91,400	MIN 2,800	CFSM 1.48	IN 20.05	ACFT 14,650,000					
WAT YR 1970	TOTAL 4,428,430	MEAN 12,130	MAX 65,800	MIN 2,650	CFSM .89	IN 12.02	ACFT 8,784,000					

M Expressed in thousands.

KOOTENAI RIVER BASIN

12322000 Kootenai River at Porthill, Idaho--Continued

ELEVATION, IN FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46.13	45.97	45.75	44.88	44.33	42.84	40.18	40.20	53.12	50.02	44.84	44.07
2	46.13	45.99	45.71	44.82	44.27	42.73	40.21	40.29	53.07	49.75	44.73	44.08
3	46.17	45.90	45.62	44.74	44.21	42.66	40.15	40.66	53.63	49.47	44.61	44.04
4	46.17	45.89	45.52	44.67	44.14	42.57	40.16	41.32	54.77	49.15	44.55	44.15
5	46.15	45.98	45.44	44.53	44.14	42.52	40.15	42.44	56.17	48.87	44.52	44.15
6	46.13	45.95	45.43	44.42	44.13	42.43	40.23	44.23	57.22	48.58	44.51	44.21
7	46.05	45.95	45.37	44.29	44.12	42.41	40.39	45.75	57.81	48.37	44.50	44.29
8	45.98	45.94	45.35	44.14	44.12	42.38	40.44	46.59	57.90	48.14	44.56	44.26
9	45.99	45.94	45.30	44.06	44.11	42.37	40.37	47.02	57.72	47.85	44.55	44.19
10	46.00	45.97	45.30	44.12	44.09	42.32	40.50	47.22	57.44	47.54	44.50	44.21
11	45.95	45.97	45.30	44.15	44.06	42.20	40.60	47.11	56.83	47.28	44.43	44.27
12	45.91	45.98	45.36	44.21	44.05	42.10	40.57	46.84	55.97	47.07	44.34	44.12
13	45.88	45.96	45.43	44.26	44.00	41.95	40.53	46.40	54.97	46.88	44.32	44.06
14	45.94	45.94	45.41	44.29	43.90	41.85	40.45	45.98	54.10	46.65	44.39	44.09
15	45.94	45.92	45.53	44.42	43.91	41.73	40.33	45.70	53.59	46.49	44.35	44.10
16	45.96	45.96	45.60	44.43	43.88	41.67	40.24	45.84	53.71	46.33	44.30	44.12
17	46.01	45.95	45.62	44.37	43.83	41.59	40.18	47.08	53.99	46.12	44.31	44.15
18	46.05	45.88	45.59	44.37	43.75	41.45	40.18	49.04	54.14	45.94	44.31	44.28
19	46.02	45.87	45.55	44.39	43.67	41.29	40.24	50.42	54.24	45.77	44.28	44.37
20	45.98	45.88	45.49	44.42	43.63	41.22	40.22	51.03	54.04	45.62	44.27	44.44
21	45.95	45.93	45.45	44.44	43.53	41.15	40.27	51.35	53.73	45.51	44.26	44.54
22	45.95	45.92	45.42	44.46	43.45	41.05	40.28	51.84	53.39	45.38	44.25	44.65
23	45.96	45.90	45.45	44.49	43.40	40.92	40.19	52.35	52.99	45.26	44.25	44.90
24	45.99	45.91	45.48	44.51	43.29	41.00	40.25	52.93	52.61	45.23	44.28	45.02
25	45.99	45.85	45.49	44.51	43.18	40.83	40.42	53.49	52.15	45.13	44.25	45.06
26	46.02	45.83	45.42	44.52	43.12	40.75	40.45	54.36	51.64	44.97	44.24	45.13
27	46.01	45.80	45.27	44.59	43.06	40.58	40.44	55.20	51.21	44.91	44.23	45.21
28	45.94	45.78	45.13	44.59	42.95	40.51	40.41	55.83	50.91	44.91	44.22	45.27
29	45.93	45.77	45.05	44.51	-----	40.41	40.32	55.67	50.59	44.91	44.29	45.31
30	45.93	45.75	44.97	44.42	-----	40.29	40.26	54.63	50.31	44.99	44.19	45.34
31	45.96	-----	44.94	44.35	-----	40.19	-----	53.65	-----	44.95	44.14	-----
MAX	46.17	45.99	45.75	44.88	44.33	42.84	40.60	55.83	57.90	50.02	44.84	45.34
MIN	45.88	45.75	44.94	44.06	42.95	40.19	40.15	40.20	50.31	44.91	44.14	44.04
MEAN	46.01	45.91	45.41	44.43	43.80	41.61	40.32	48.47	54.13	46.71	44.38	44.47

NOTE.--Add 1,700 ft to obtain elevation above mean sea level.

12322500 Kootenay Lake at Kuskonook, British Columbia

LOCATION.--Lat 49°17'56", long 116°39'31", on east shore of lake at Kuskonook and at mile 74.5.

PERIOD OF RECORD.--April 1936 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,735.20 ft above mean sea level, Geodetic Survey of Canada, datum of Pub. 24-A (1961), which is the same at Porthill as datum of 1929, supplementary adjustment of 1947, and 0.03 ft higher than datum in use at station Kootenai River at Porthill. Gage heights have been reduced to elevations above datum in use at station Kootenai River at Porthill. Prior to Apr. 25, 1938, nonrecording gage at same site at datum 3.00 ft higher.

EXTREMES.--Current year: Maximum elevation, 1,752.36 ft June 10; minimum daily, 1,739.62 ft Apr. 23.
Period of record: Maximum elevation, 1,762.42 ft June 9, 1961; minimum daily, 1,737.86 ft Apr. 5, 6, 1944.

REMARKS.--Elevation is subject to partial regulation by Corra Linn Dam below outlet. Diversions for irrigation of about 14,600 acres above Kootenay Lake.

COOPERATION.--This station is maintained by Canada under agreement with the United States.

ELEVATION, IN FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45.76	45.72	45.58	44.71	44.09	42.57	39.82	39.64	49.29	48.21	44.19	43.85
2	45.69	45.72	45.56	44.63	44.03	42.47	39.83	39.66	49.29	47.95	44.09	43.84
3	45.69	45.65	45.46	44.57	43.97	42.39	39.81	39.74	49.47	47.72	44.01	43.84
4	45.73	45.65	45.32	44.53	43.92	42.34	39.82	39.87	49.82	47.53	44.00	43.88
5	45.76	45.70	45.26	44.39	43.89	42.29	39.83	40.04	50.30	47.35	44.02	43.90
6	45.75	45.66	45.24	44.22	43.87	42.26	39.85	40.37	50.80	47.16	44.06	43.97
7	45.71	45.66	45.20	44.15	43.86	42.21	39.88	40.80	51.35	46.94	44.09	44.00
8	45.67	45.65	45.17	44.04	43.86	42.15	39.81	41.28	51.78	46.74	44.13	43.99
9	45.66	45.65	45.11	43.95	43.86	42.11	39.77	41.73	52.11	46.55	44.11	43.93
10	45.65	45.66	45.12	43.96	43.83	42.01	39.80	42.17	52.32	46.35	44.06	43.96
11	45.63	45.69	45.15	43.97	43.82	41.91	39.79	42.50	52.30	46.17	44.00	43.95
12	45.61	45.69	45.21	44.01	43.81	41.81	39.80	42.77	52.12	45.99	43.95	43.86
13	45.60	45.69	45.24	44.05	43.74	41.68	39.79	42.93	51.78	45.88	43.96	43.83
14	45.63	45.67	45.26	44.06	43.65	41.58	39.76	43.03	51.43	45.69	44.01	43.85
15	45.65	45.68	45.34	44.12	43.66	41.46	39.70	43.07	51.07	45.58	44.02	43.87
16	45.67	45.72	45.38	44.14	43.61	41.38	39.68	43.12	50.81	45.47	43.99	43.88
17	45.74	45.70	45.39	44.11	43.52	41.28	39.66	43.33	50.66	45.32	43.98	43.93
18	45.78	45.63	45.36	44.15	43.42	41.12	39.71	43.69	50.55	45.16	43.98	44.05
19	45.75	45.62	45.32	44.19	43.35	40.98	39.77	44.16	50.49	44.98	43.98	44.15
20	45.71	45.66	45.28	44.22	43.32	40.91	39.75	44.66	50.47	44.86	43.97	44.22
21	45.68	45.69	45.24	44.23	43.23	40.85	39.75	45.14	50.40	44.81	43.98	44.29
22	45.69	45.69	45.23	44.24	43.18	40.75	39.71	45.63	50.31	44.68	43.99	44.39
23	45.72	45.69	45.27	44.26	43.13	40.66	39.62	46.14	50.13	44.61	43.98	44.57
24	45.74	45.68	45.27	44.26	43.03	40.62	39.67	46.61	49.91	44.57	44.02	44.70
25	45.76	45.64	45.28	44.25	42.90	40.50	39.77	47.10	49.67	44.49	44.02	44.76
26	45.78	45.62	45.21	44.28	42.86	40.37	39.77	47.73	49.42	44.39	44.02	44.84
27	45.75	45.61	45.08	44.36	42.79	40.24	39.78	48.30	49.18	44.35	43.99	44.94
28	45.70	45.59	44.95	44.34	42.68	40.12	39.78	48.76	48.95	44.38	43.97	45.03
29	45.68	45.60	44.87	44.26	-----	40.00	39.76	49.15	48.71	44.36	43.98	45.06
30	45.69	45.58	44.80	44.18	-----	39.90	39.71	49.35	48.47	44.35	43.94	45.11
31	45.70	-----	44.75	44.11	-----	39.82	-----	49.36	-----	44.29	43.87	-----
MEAN	45.70	45.66	45.22	44.22	43.53	41.31	39.77	43.93	50.45	45.71	44.01	44.21
MAX	45.78	45.72	45.58	44.71	44.09	42.57	39.88	49.36	52.32	48.21	44.19	45.11
MIN	45.60	45.58	44.75	43.95	42.68	39.82	39.62	39.64	48.47	44.29	43.87	43.83

NOTE.--Add 1,700 ft to obtain elevation above mean sea level.

PEND OREILLE RIVER BASIN

12392000 Clark Fork at Whitehorse Rapids, near Cabinet, Idaho

LOCATION.--Lat 48°05'10", long 116°03'50", in NE¼SW¼ sec.27, T.55 N., R.3 E., Bonner County, on left bank at Cabinet, 0.4 mile downstream from Cabinet Gorge Dam, 1.7 miles downstream from Blue Creek, 6.5 miles south-east of Clark Fork, and at mile 149.5. Measuring cableway 0.4 mile downstream. Discharge computed at Whitehorse Rapids, 2.7 miles downstream.

DRAINAGE AREA.--22,067 sq mi, based on revised area of 22,006 sq mi for site near Heron.

PERIOD OF RECORD.--September 1928 to current year. Prior to October 1952, published as "near Heron, Mont."

GAGE.--Water-stage recorder. Datum of gage is 2,060.00 ft above mean sea level, levels by Washington Water Power Co. Prior to Oct. 30, 1928, nonrecording gage, and Oct. 30, 1928, to Apr. 8, 1952, water-stage recorder at site near Heron, 4 miles upstream at datum 28.00 ft higher prior to Jan. 2, 1931, and 18.00 ft higher thereafter. Apr. 9 to Sept. 30, 1952, nonrecording gage just upstream from present site at datum approximately 60.0 ft lower, and Oct. 1, 1952, to Sept. 30, 1964, water-stage recorder at datum 60.00 ft lower.

AVERAGE DISCHARGE.--42 years, 21,980 cfs (15,920,000 acre-ft per year); 15-year base period (1952-67), 24,140 cfs.

EXTREMES.--Current year: Maximum discharge, 109,100 cfs June 7 or 8 (gage height, 26.58 ft); minimum, 390 cfs Jan. 12 (gage height, 3.10 ft); minimum daily, 3,400 cfs Jan. 11.

Period of record: Maximum discharge, 153,000 cfs May 29 to June 1, 1948; maximum gage height, 50.97 ft May 31, 1948, site and datum then in use; minimum observed, 270 cfs Aug. 12, 1952 (discharge measurement), at present site during filling of Cabinet Gorge reservoir; minimum daily since reservoir filled, 762 cfs Sept. 2, 1962.

Maximum discharge known, 195,000 cfs June 1894 (elevation of floodmark at site about 4 miles upstream and 0.1 mile below "near Heron" site, 2,137.1 ft).

REMARKS.--Records excellent except those for period of no gage-height record, which are good. Flow regulated by Hungry Horse Reservoir and Flathead Lake. Extreme diurnal fluctuation caused by powerplant at Cabinet Gorge Dam. Diversions above station for irrigation of about 354,000 acres. Discharge measurements indicate about 800 cfs ground-water inflow between Cabinet Gorge Dam and Whitehorse Rapids. Records given herein represent flow at Whitehorse Rapids, computed by adding 600 cfs to observed flows at the measuring cableway, and are considered comparable to records at former site near Heron, except for minor surface inflow from additional drainage area. To determine flow at Cabinet Gorge Dam, 800 cfs should be deducted from discharges published herein.

REVISIONS (WATER YEARS).--WSP 1182: 1936. WSP 1736: 1931, 1936(m), 1937.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17,500	6,980	13,200	11,700	7,010	7,550	17,600	23,300	60,200	46,200	17,000	13,100
2	17,700	11,900	14,000	11,100	13,300	16,800	20,100	12,400	56,800	45,000	12,200	15,400
3	13,100	13,200	10,400	8,530	12,400	16,700	19,700	16,300	62,200	40,600	17,900	18,800
4	10,200	16,100	12,900	5,600	13,500	16,800	16,100	21,000	77,300	37,600	19,900	17,900
5	12,900	14,600	14,800	9,580	12,000	19,400	12,500	28,400	91,700	33,400	12,100	13,300
6	16,700	12,300	15,400	11,900	13,600	14,000	17,100	30,500	96,100	33,000	14,300	5,450
7	16,400	10,300	16,600	13,700	12,300	9,700	19,500	32,400	100,000	31,400	15,500	8,310
8	17,200	11,000	17,900	10,400	9,190	6,760	17,600	34,200	100,000	30,100	11,000	11,400
9	17,200	7,620	16,300	5,190	12,400	15,800	20,500	32,400	98,500	30,600	10,200	12,300
10	17,800	11,200	19,600	4,110	13,800	16,000	19,200	29,900	95,500	30,400	14,900	14,300
11	15,200	10,700	18,400	3,400	12,300	17,300	19,800	32,900	84,100	20,600	16,200	19,400
12	15,100	10,200	15,700	15,400	10,200	15,200	12,800	38,400	68,100	15,400	17,700	15,800
13	17,900	10,500	16,100	14,900	11,000	15,300	20,000	37,100	59,800	24,600	15,100	10,400
14	17,500	10,900	15,200	17,000	10,600	14,000	20,100	38,100	53,500	24,800	15,200	11,600
15	18,700	10,000	14,900	17,500	7,010	8,590	19,200	32,300	54,600	25,200	10,100	16,000
16	16,000	8,030	14,700	14,700	9,310	16,700	19,500	30,800	67,300	25,900	10,300	15,900
17	19,100	18,500	11,600	8,410	10,300	17,200	19,500	24,500	72,200	23,600	14,800	13,500
18	11,000	14,000	13,300	8,620	11,800	17,800	16,400	32,700	47,800	15,500	10,400	15,200
19	10,300	13,100	18,000	8,920	10,900	17,900	11,500	46,200	66,400	15,800	16,000	8,550
20	14,700	13,800	18,500	8,500	11,900	18,400	19,500	54,700	62,800	19,100	13,900	13,300
21	15,400	13,100	15,900	9,040	7,410	16,100	19,600	61,300	65,900	13,500	12,100	14,200
22	15,700	15,200	13,500	11,300	4,900	14,300	20,200	62,300	61,900	13,700	9,540	15,200
23	17,500	14,800	14,900	16,800	9,010	19,700	22,200	62,900	60,900	16,600	6,880	19,200
24	19,600	16,600	9,160	9,310	10,800	17,300	24,700	64,500	57,800	17,100	14,200	18,800
25	14,500	17,000	9,400	10,200	9,250	17,600	22,700	72,300	61,000	9,570	13,100	16,500
26	17,200	15,200	7,990	15,300	11,100	16,600	18,000	68,700	53,200	16,000	15,000	11,800
27	18,400	11,200	8,560	15,400	11,900	16,500	23,300	70,300	48,600	16,300	12,400	11,000
28	19,300	14,800	9,160	14,300	12,100	14,500	21,300	71,600	50,000	15,600	10,800	15,000
29	18,200	8,020	11,500	13,300	-----	11,300	23,500	75,200	41,600	18,300	8,050	16,600
30	13,300	7,100	9,400	15,200	-----	15,500	24,400	78,100	48,700	16,800	6,430	15,100
31	11,400	-----	8,470	12,100	-----	15,900	-----	69,700	-----	22,800	10,500	-----
TOTAL	492,700	367,950	425,440	351,410	301,290	473,200	578,100	1,385,4M	2,024.5M	745,070	403,700	423,310
MEAN	15,890	12,270	13,720	11,340	10,760	15,260	19,270	44,690	67,480	24,030	13,020	14,110
MAX	19,600	18,500	19,600	17,500	13,800	19,700	24,700	78,100	100,000	46,200	19,900	19,400
MIN	10,200	6,980	7,990	3,400	4,900	6,760	11,500	12,400	41,600	9,570	6,430	5,450
AC-FT	977,300	729,800	843,900	697,000	597,600	938,600	1,147M	2,748M	4,016M	1,478M	800,700	839,600

CAL YR 1969 TOTAL 9,375,310 MFAN 25,690 MAX 76,600 MIN 6,270 AC-FT 18,600,000

WTR YR 1970 TOTAL 7,972,070 MEAN 21,840 MAX 100,000 MIN 3,400 AC-FT 15,810,000

M Expressed in thousands.

NOTE.--No gage-height record June 4 to July 17.

PEND OREILLE RIVER BASIN

49

12392300 Pack River near Colburn, Idaho

LOCATION.--Lat 48°25'12", long 116°30'02", in NW¼SW¼ sec.32, T.59 N., R.1 W., Bonner County, on left bank, 50 ft downstream from bridge on U.S. Highway 95, 2.2 miles northeast of Colburn, 10 miles north of Sandpoint, and at mile 28.07.

DRAINAGE AREA.--124 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 2,130 ft (from topographic map).

AVERAGE DISCHARGE.--12 years, 326 cfs (35.70 inches per year, 236,200 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,110 cfs May 26 (gage height, 9.82 ft); minimum, 22 cfs Sept. 1 (gage height, 0.82 ft).

Period of record: Maximum discharge, 4,370 cfs May 30, 1969 (gage height, 13.69 ft); minimum, 15 cfs Sept. 2, 3, 1967 (gage height, 0.86 ft).

REMARKS.--Records good except those for ice affected periods, which are fair. No regulation or diversion above station.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 23 to Apr. 10, July 7-29; stage-discharge relation affected by ice Nov. 28 to Dec. 10; Dec. 29 to Feb. 1)

0.8	20	3.0	256
1.1	38	5.0	654
1.5	68	7.0	1,150
2.0	117	10.0	2,170

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	274	71	60	60	83	93	229	424	1,020	188	52	23
2	355	68	58	59	82	91	244	583	1,230	174	53	22
3	196	67	58	58	82	87	235	805	1,430	164	64	25
4	150	77	58	58	85	82	237	1,050	1,490	155	56	59
5	125	341	59	58	78	83	262	1,440	1,400	145	50	50
6	110	243	59	59	76	88	422	1,620	1,260	133	48	37
7	100	190	60	60	76	134	456	1,480	1,140	124	45	39
8	110	162	61	60	77	136	364	1,140	924	116	43	40
9	156	149	62	61	78	118	374	1,200	1,080	109	42	36
10	124	139	63	62	79	117	650	1,080	813	105	40	34
11	109	128	65	63	82	115	532	974	652	100	38	33
12	99	123	83	64	78	114	440	813	551	98	37	31
13	90	116	83	65	81	121	398	721	526	98	36	30
14	85	112	106	66	82	132	372	676	539	109	34	31
15	82	111	143	66	89	138	343	733	683	93	33	31
16	78	108	103	65	110	166	330	1,010	1,520	84	33	30
17	75	101	94	63	129	176	328	1,590	897	84	31	31
18	72	97	88	62	116	163	349	1,630	707	79	30	33
19	70	97	87	61	105	162	370	1,460	654	73	29	33
20	68	94	85	62	98	163	398	1,490	593	70	28	34
21	67	104	101	65	95	156	368	1,550	530	65	28	37
22	63	98	111	68	94	160	360	1,700	478	62	28	44
23	62	94	103	71	93	171	376	1,560	416	60	26	105
24	63	91	94	74	93	195	386	1,660	364	57	27	63
25	65	80	89	77	94	202	356	1,690	324	57	26	51
26	63	74	87	80	93	191	339	1,990	282	73	25	45
27	61	73	82	83	94	198	315	1,690	262	69	25	42
28	63	70	69	84	93	220	300	1,310	241	74	25	40
29	61	66	66	84	-----	246	326	1,000	215	70	24	39
30	62	63	64	83	-----	235	349	897	205	61	25	38
31	66	-----	62	83	-----	232	-----	872	-----	55	24	-----
TOTAL	3,224	3,407	2,463	2,084	2,515	4,685	10,808	37,838	22,426	3,004	1,105	1,186
MEAN	104	114	79.5	67.2	89.8	151	360	1,221	748	96.9	35.6	39.5
MAX	355	341	143	84	129	246	650	1,990	1,520	188	64	105
MIN	61	63	58	58	76	82	229	424	205	55	24	22
CFSM	.84	.92	.64	.54	.72	1.22	2.91	9.84	6.03	.78	.29	.32
IN.	.97	1.02	.74	.63	.75	1.41	3.24	11.35	6.73	.90	.33	.36
AC-FT	6,390	6,760	4,890	4,130	4,990	9,290	21,440	75,050	44,480	5,960	2,190	2,350

CAL YR 1969	TOTAL 126,948	MEAN 348	MAX 3,180	MIN 29	CFSM 2.80	IN 38.07	AC-FT 251,800
WTR YR 1970	TOTAL 94,745	MEAN 260	MAX 1,990	MIN 22	CFSM 2.09	IN 28.42	AC-FT 187,900

PEAK DISCHARGE (BASE, 1,450 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5-6	0500	8.96	1,790	6-4	0400	8.72	1,700
5-26	0600	9.82	2,110	6-16	1100	9.11	1,840

PEND OREILLE RIVER BASIN

12392500 Pend Oreille Lake at Hope, Idaho

LOCATION.--Lat 48°14'50", long 116°18'30", in lot 2, NW¼ sec.35, T.57 N., R.1 E., Bonner County, near Burlington Northern siding at Hope.

DRAINAGE AREA.--22,900 sq mi, approximately (natural drainage area above mouth of lake at Sandpoint).

PERIOD OF RECORD.--March 1914 to current year. Published as "at Sandpoint" 1914-22. Records published for both sites September 1921 to September 1922.

GAGE.--Water-stage recorder. Datum of gage is 2,000.00 ft above mean sea level; gage readings have been reduced to elevations above mean sea level. Prior to Oct. 1, 1921, nonrecording gage at Sandpoint at datum 42.18 ft higher. Oct. 1, 1921, to Sept. 30, 1929, nonrecording gage at present site at datum 45.47 ft higher than present datum. Oct. 1, 1929, to Sept. 30, 1950, water-stage recorder at present site at datum 0.20 ft lower than present datum.

EXTREMES.--Current year: Maximum elevation, 2,062.74 ft Aug. 1 (contents, 1,584,000 acre-ft); minimum, 2,050.85 ft Dec. 1 (contents, 505,600 acre-ft).

Period of record: Maximum elevation, 2,071.62 ft, present datum, June 9, 1948 (contents, 2,462,000 acre-ft); minimum, 2,046.27 ft, present datum, Feb. 17, 1936 (contents, 117,700 acre-ft).

Maximum elevation known, 2,075.88 ft, present datum, June 1894 (contents, 2,905,000 acre-ft).

REMARKS.--Regulation at Albeni Falls Dam beginning June 4, 1952. Contents shown is that above elevation 2,044.8 ft but does not include storage in Pend Oreille River above Albeni Falls Dam.

REVISIONS (WATER YEARS).--WSP 1122: 1946.

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

2,050	432,000
2,055	871,600
2,060	1,327,000
2,065	1,801,000

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60.11	54.62	50.93	51.25	51.29	51.35	51.20	54.92	59.43	62.23	62.70	62.18
2	60.12	54.30	51.04	51.30	51.28	51.46	51.35	54.78	59.33	62.26	62.63	62.25
3	60.07	54.01	51.07	51.28	51.26	51.52	51.45	54.69	59.48	62.21	62.56	62.44
4	59.94	53.75	51.11	51.21	51.20	51.49	51.48	54.75	59.78	62.14	62.58	62.51
5	59.80	53.49	51.17	51.20	51.17	51.52	51.45	54.99	60.25	62.07	62.44	62.47
6	59.64	53.14	51.21	51.20	51.18	51.53	51.52	55.13	60.72	62.11	62.34	62.28
7	59.49	52.80	51.26	51.24	51.20	51.43	51.64	55.18	61.07	62.16	62.35	62.17
8	59.41	52.50	51.26	51.27	51.15	51.23	51.73	55.18	61.39	62.17	62.27	62.13
9	59.30	52.16	51.24	51.28	51.18	51.20	51.91	55.12	61.61	62.24	62.16	61.98
10	59.17	51.91	51.24	51.26	51.23	51.23	52.04	54.95	61.78	62.34	62.20	61.88
11	58.97	51.70	51.30	51.15	51.28	51.24	52.16	54.90	61.80	62.25	62.27	61.79
12	58.79	51.48	51.31	51.30	51.28	51.22	52.12	54.95	61.73	62.21	62.38	61.68
13	58.68	51.32	51.32	51.50	51.35	51.22	52.17	54.91	61.75	62.23	62.39	61.55
14	58.55	51.29	51.31	51.63	51.42	51.28	52.24	54.88	61.96	62.32	62.38	61.39
15	58.47	51.30	51.27	51.67	51.50	51.19	52.28	54.84	62.20	62.32	62.31	61.32
16	58.30	51.28	51.23	51.60	51.67	51.30	52.39	54.82	62.48	62.39	62.22	61.25
17	58.22	51.42	51.11	51.42	51.64	51.35	52.51	54.78	62.58	62.40	62.22	61.13
18	57.91	51.40	51.08	51.27	51.58	51.37	52.59	54.93	62.11	62.24	62.16	61.08
19	57.57	51.32	51.22	51.20	51.50	51.38	52.58	55.33	62.18	62.10	62.27	60.91
20	57.30	51.25	51.35	51.17	51.47	51.43	52.71	55.82	62.35	62.13	62.33	60.83
21	57.07	51.22	51.47	51.23	51.39	51.42	52.87	56.23	62.46	62.10	62.36	60.79
22	56.82	51.23	51.42	51.30	51.27	51.35	53.00	56.62	62.40	62.11	62.35	60.80
23	56.62	51.23	51.42	51.47	51.22	51.42	53.10	56.97	62.30	62.24	62.28	60.81
24	56.47	51.22	51.37	51.50	51.25	51.43	53.36	57.36	62.23	62.41	62.36	60.80
25	56.19	51.22	51.34	51.52	51.25	51.44	53.59	57.83	62.24	62.40	62.40	60.73
26	55.98	51.15	51.31	51.58	51.29	51.37	53.74	58.19	62.18	62.42	62.40	60.51
27	55.86	51.03	51.26	51.62	51.33	51.33	53.97	58.53	62.19	62.50	62.37	60.27
28	55.74	51.01	51.22	51.55	51.36	51.30	54.18	58.83	62.21	62.43	62.37	60.14
29	55.58	50.95	51.25	51.45	-----	51.20	54.42	59.14	62.13	62.45	62.22	60.02
30	55.32	50.87	51.23	51.46	-----	51.18	54.67	59.44	62.20	62.47	62.13	59.88
31	55.01	-----	51.21	51.45	-----	51.15	-----	59.55	-----	62.61	62.12	-----
MEAN	57.95	51.92	51.24	51.37	51.33	51.34	52.55	56.08	61.62	62.28	62.34	61.33
MAX	60.12	54.62	51.47	51.67	51.67	51.53	54.67	59.55	62.58	62.61	62.70	62.51
MIN	55.01	50.87	50.93	51.15	51.15	51.15	51.20	54.69	59.33	62.07	62.12	59.88
(†)	872.5	507.3	536.9	557.8	549.9	531.6	842.1	1,285	1,533	1,572	1,525	1,316
(‡)	-467.5	-365.2	+29.6	+20.9	-7.9	-18.3	+310.5	+442.9	+248.0	+39.0	-47.0	-209.0

CAL YR 1969..... † -432.7

WAT YR 1970..... † -24.0

† Contents, in thousands of acre-feet, at end of month.

‡ Change in contents, in thousands of acre-feet.

NOTE.--Add 2,000 ft to obtain elevation above mean sea level.

PEND OREILLE RIVER BASIN

51

12393000 Priest Lake at outlet, near Coolin, Idaho

LOCATION.--Lat 48°29'30", long 116°53'00", in SE¼ sec.5, T.59 N., R.4 W., Bonner County, 0.5 mile east of outlet, 1.8 miles northwest of Coolin, and 44 miles upstream from mouth of Priest River.

DRAINAGE AREA.--572 sq mi.

PERIOD OF RECORD.--June 1911 to September 1913 (fragmentary gage-height records at Coolin, published as part of records for Priest River at outlet of Priest Lake, at Coolin), April 1928 to July 1950 (gage-height record only), August 1950 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,434.64 ft above mean sea level. June 18, 1911, to Sept. 30, 1913, nonrecording gages at Coolin at different datums. Apr. 21, 1928, to Oct. 18, 1939, nonrecording gage at site 400 ft north of lake outlet at present datum.

EXTREMES.--Current year: Maximum gage height, 4.04 ft May 28 (contents, 144,100 acre-ft); minimum, -0.03 ft Jan. 8, 9 (contents, 47,600 acre-ft).

Period of record: Maximum gage height, 6.46 ft May 29, 30, 1948 (contents, 202,200 acre-ft); minimum, -0.23 ft Mar. 18, 1962 (contents, 42,900 acre-ft).

REMARKS.--Flow from Priest Lake is regulated to hold lake at heights desirable for recreation interests during summer months and storage is released for power use downstream during winter months. Storage began Aug. 9, 1950. Prior to Aug. 9, 1950, some regulation resulted from logging operations in the outlet channel. Figures given herein represent contents above gage height of about -2 ft. Capacity table is based on area measured from Priest Lake quadrangle (scale 1:250,000) and reconnaissance survey of marginal areas and is only approximate.

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

-0.1	46,000
0.0	48,000
5.0	167,000

GAGE HEIGHT, IN FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.34	1.80	.39	.11	.12	.03	.06	.82	3.80	2.95	3.18	2.87
2	3.37	1.68	.36	.09	.12	.02	.07	.85	3.80	2.97	3.21	2.87
3	3.36	1.58	.33	.08	.08	.02	.07	.93	3.83	2.97	3.21	2.93
4	3.32	1.54	.30	.05	.08	.00	.08	1.03	3.87	2.96	3.21	2.95
5	3.29	1.53	.27	.03	.06	-.01	.12	1.25	3.90	2.95	3.20	2.98
6	3.26	1.48	.24	.01	.06	.04	.13	1.50	3.89	2.94	3.19	2.98
7	3.24	1.42	.23	-.01	.05	.05	.16	1.71	3.85	2.94	3.15	3.00
8	3.21	1.34	.21	-.02	.03	.02	.20	1.89	3.80	2.93	3.15	3.00
9	3.20	1.29	.20	-.02	.02	.03	.27	2.06	3.77	2.94	3.12	3.01
10	3.18	1.23	.18	.00	.00	.01	.36	2.19	3.73	2.94	3.11	3.02
11	3.17	1.17	.23	-.01	.00	.00	.41	2.34	3.63	2.94	3.09	3.00
12	3.13	1.12	.23	.00	.00	-.01	.44	2.38	3.51	2.95	3.06	2.99
13	3.10	1.05	.24	.07	.00	-.02	.45	2.40	3.39	2.95	3.05	2.94
14	3.07	.98	.26	.07	.00	.00	.45	2.40	3.28	2.97	3.04	2.93
15	3.05	.94	.25	.07	.05	-.01	.48	2.39	3.25	2.98	3.02	2.94
16	3.02	.88	.27	.05	.14	.03	.49	2.45	3.32	3.00	2.98	2.94
17	3.00	.83	.25	.07	.16	.02	.50	2.61	3.27	3.01	2.97	2.94
18	2.98	.79	.25	.05	.17	.02	.51	2.77	3.20	3.03	2.96	2.95
19	2.95	.74	.23	.07	.14	.01	.54	2.90	3.10	3.05	2.96	2.98
20	2.93	.71	.22	.07	.14	.01	.57	3.04	3.08	3.05	2.95	3.00
21	2.93	.69	.24	.09	.11	.02	.60	3.16	3.09	3.08	2.95	3.00
22	2.89	.66	.26	.08	.12	.00	.63	3.32	3.09	3.08	2.94	3.05
23	2.86	.64	.26	.07	.10	.01	.65	3.45	3.05	3.09	2.93	3.08
24	2.82	.61	.25	.10	.09	.00	.69	3.57	3.02	3.07	2.92	3.09
25	2.70	.58	.23	.11	.09	.00	.72	3.70	3.01	3.11	2.90	3.09
26	2.53	.54	.22	.13	.06	.00	.76	3.86	3.01	3.15	2.91	3.10
27	2.39	.50	.21	.13	.08	.02	.77	3.96	2.97	3.17	2.89	3.10
28	2.26	.47	.17	.13	.02	.03	.78	4.00	2.98	3.18	2.87	3.11
29	2.16	.44	.16	.12	-----	.04	.78	3.98	2.97	3.17	2.89	3.11
30	2.01	.40	.14	.10	-----	.04	.79	3.91	2.93	3.19	2.89	3.13
31	1.90	-----	.14	.14	-----	.06	-----	3.85	-----	3.20	2.87	-----
MEAN	2.92	.99	.24	.07	.07	.02	.45	2.60	3.38	3.03	3.02	3.00
MAX	3.37	1.80	.39	.14	.17	.06	.79	4.00	3.90	3.20	3.21	3.13
MIN	1.90	.40	.14	-.02	0	-.02	.06	.82	2.93	2.93	2.87	2.87
(†)	93,200	57,700	51,600	51,600	48,800	49,700	66,900	139,500	117,600	124,000	116,200	122,400
(‡)	-32,700	-35,500	-6,100	0	-2,800	+900	+17,200	+72,600	-21,900	+6,400	-7,800	+6,200

CAL YR 1969..... ‡ -18,200

WTR YR 1970..... ‡ -3,500

† Contents, in acre-feet, at end of month.

‡ Change in contents, in acre-feet.

PEND OREILLE RIVER BASIN

12394000 Priest River near Coolin, Idaho

LOCATION.--Lat 48°26'50", long 116°53'50", in SE¼ sec.19, T.59 N., R.4 W., Bonner County, on left bank 190 ft downstream from Dickensheet Bridge, 2.5 miles downstream from Binarch Creek, 3 miles southwest of Coolin, 5.2 miles downstream from outlet of Priest Lake, and at mile 38.8.

DRAINAGE AREA.--611 sq mi.

PERIOD OF RECORD.--October 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,338.24 ft above mean sea level. Prior to Feb. 23, 1949, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--22 years, 1,320 cfs (29.34 inches per year, 956,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,700 cfs May 28 (gage height, 6.32 ft); minimum, 80 cfs Sept. 19 (gage height, 1.63 ft).

Period of record: Maximum discharge, 8,130 cfs May 27, 1956 (gage height, 8.15 ft); minimum observed, 26 cfs Sept. 25, 1958 (gage height, 1.16 ft), but may have been less Sept. 11, 1953, Sept. 24, 1958, when stage was below intake.

Maximum stage known since at least 1913, 8.40 ft on May 29, 1948 (discharge, 8,670 cfs).

REMARKS.--Records excellent. No diversion above station. Flow partly regulated by Priest Lake (see sta 12393000).

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.6	76	4.0	1,400
2.0	152	5.0	2,690
2.5	315	6.0	4,190
3.0	570	7.0	5,850
3.5	930		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	600	1,770	709	509	491	490	552	1,150	4,450	1,010	181	101
2	710	1,840	688	495	485	490	560	1,180	4,410	848	254	100
3	800	1,720	667	486	479	489	565	1,240	4,430	848	324	103
4	810	1,620	649	470	469	479	577	1,340	4,470	805	326	112
5	800	1,600	634	451	462	469	589	1,500	4,520	801	323	110
6	790	1,580	625	441	459	472	628	1,730	4,540	792	319	108
7	780	1,520	613	431	451	499	653	1,950	4,490	791	338	110
8	750	1,450	596	421	450	498	672	2,140	4,450	709	399	108
9	740	1,390	589	427	443	495	714	2,320	4,390	521	393	103
10	720	1,330	578	434	437	488	795	2,480	4,350	403	384	94
11	700	1,280	577	426	429	480	837	2,660	4,260	399	377	93
12	681	1,230	601	424	424	478	861	2,720	4,110	401	366	90
13	655	1,190	599	442	429	482	876	2,760	3,960	404	349	85
14	635	1,150	608	469	433	481	890	2,760	3,800	410	347	84
15	616	1,100	621	471	446	486	891	2,750	3,710	383	338	84
16	603	1,070	616	464	499	500	895	2,770	3,740	270	324	84
17	583	1,040	621	451	537	505	900	2,890	3,750	200	307	82
18	570	1,000	603	457	544	500	909	3,100	3,660	140	249	82
19	558	966	600	460	538	504	925	3,270	3,570	145	189	82
20	540	939	597	465	530	503	962	3,400	2,680	146	184	82
21	534	922	604	473	522	502	991	3,630	1,920	141	182	82
22	661	898	606	474	515	496	1,010	3,860	1,920	145	181	84
23	858	874	607	474	507	499	1,040	4,040	1,890	146	178	84
24	906	866	601	477	500	507	1,080	4,190	1,850	147	177	84
25	1,800	855	587	486	502	510	1,100	4,260	1,540	144	174	84
26	2,390	827	581	489	508	511	1,130	4,380	1,300	158	173	84
27	2,240	799	569	509	515	513	1,140	4,550	1,270	165	171	84
28	2,120	771	558	505	514	530	1,140	4,660	1,250	170	136	84
29	1,980	750	547	492	-----	539	1,140	4,670	1,250	171	104	85
30	1,860	729	530	481	-----	542	1,150	4,620	1,230	175	103	85
31	1,740	-----	518	489	-----	546	-----	4,530	-----	179	103	-----
TOTAL	30,730	35,076	18,699	14,443	13,518	15,483	26,172	93,500	97,160	12,167	7,953	2,737
MEAN	991	1,169	603	466	483	499	872	3,016	3,239	392	257	91.2
MAX	2,390	1,840	709	509	544	546	1,150	4,670	4,540	1,010	399	112
MIN	534	729	518	421	424	469	552	1,150	1,230	140	103	82
CFSM	1.62	1.91	.99	.76	.79	.82	1.43	4.94	5.30	.64	.42	.15
IN.	1.87	2.13	1.14	.88	.82	.94	1.59	5.69	5.91	.74	.48	.17
AC-FT	60,950	69,570	37,090	28,650	26,810	30,710	51,910	185,500	192,700	24,130	15,770	5,430
CAL YR 1969	TOTAL 557,415		MEAN 1,527		MAX 6,560		MIN 128		CFSM 2.50	IN 33.93	AC-FT 1,106,000	
WTR YR 1970	TOTAL 367,638		MEAN 1,007		MAX 4,670		MIN 82		CFSM 1.65	IN 22.38	AC-FT 729,200	

LOCATION.--Lat 48°12'31", long 116°54'49", in NW¼SW¼NW¼ sec.12, T.56 N., R.5 W., Bonner County, on right bank 500 ft downstream from Saddler Creek, 0.4 mile downstream from Lower West Branch, 2.7 miles north of Priest River, and at mile 3.8.

PERIOD OF RECORD.--June 1903 to April 1905, November 1910 to April 1911, May to December 1923, February 1929 to current year. Prior to October 1930, published as "at Priest River."

AVERAGE DISCHARGE.--42 years (1903-4, 1929-70), 1,663 cfs (1,205,000 acre-ft per year); 15-year base period (1952-67), 1,787 cfs.

REMARKS.--Records excellent. No diversion above station. Some regulation on tributary and, since Aug. 9, 1950, flow partly regulated by Priest Lake (see sta 12393000).

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 6-9, 16-21)

0.6	205	3.0	1,910
1.0	375	4.0	3,000
1.5	680	5.0	4,260
2.0	1,040	6.2	5,920

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	855	1,860	876	701	785	820	1,230	1,770	5,260	1,510	345	233
2	1,020	2,010	855	687	764	799	1,250	1,840	5,190	1,160	355	233
3	1,070	1,940	834	674	736	785	1,240	2,030	5,220	1,140	484	248
4	1,030	1,860	813	648	701	750	1,270	2,280	5,300	1,100	496	350
5	995	1,940	792	628	694	729	1,320	2,620	5,370	1,050	490	330
6	972	1,940	785	610	687	743	1,480	2,990	5,400	1,020	484	284
7	935	1,810	771	600	674	862	1,620	3,200	5,320	1,010	472	280
8	935	1,730	757	610	667	890	1,550	3,290	5,210	1,000	520	268
9	935	1,660	743	650	660	869	1,600	3,430	5,230	862	550	268
10	920	1,590	729	687	648	841	2,080	3,530	5,140	654	538	256
11	898	1,530	729	701	641	827	2,010	3,690	4,950	615	532	240
12	876	1,480	799	701	634	820	1,870	3,700	4,760	608	526	236
13	855	1,410	820	701	641	855	1,760	3,640	4,550	628	508	233
14	827	1,370	869	820	660	912	1,720	3,570	4,380	622	496	233
15	813	1,320	942	869	722	950	1,650	3,510	4,440	615	490	230
16	799	1,280	869	840	965	1,080	1,580	3,520	4,490	532	478	230
17	778	1,250	841	790	1,230	1,130	1,560	3,710	4,460	460	460	230
18	771	1,200	813	740	1,200	1,060	1,550	3,990	4,320	365	454	226
19	757	1,190	806	730	1,120	1,040	1,570	4,200	4,180	330	360	226
20	743	1,160	799	730	1,060	1,020	1,640	4,350	3,860	325	340	230
21	729	1,150	855	730	995	1,000	1,660	4,520	2,460	320	330	230
22	722	1,120	905	743	942	1,030	1,730	4,720	2,400	316	325	236
23	935	1,090	898	750	898	1,080	1,750	4,900	2,340	320	312	244
24	1,090	1,080	883	785	869	1,140	1,840	5,080	2,280	316	312	236
25	1,210	1,050	834	806	848	1,150	1,890	5,230	2,150	325	312	230
26	2,560	1,020	820	813	848	1,120	1,870	5,440	1,700	340	312	226
27	2,430	965	792	827	848	1,120	1,850	5,610	1,660	345	312	226
28	2,320	950	764	806	827	1,260	1,800	5,710	1,610	360	312	226
29	2,180	942	750	792	-----	1,310	1,770	5,670	1,590	365	316	226
30	2,060	912	743	764	-----	1,260	1,760	5,600	1,580	350	272	222
31	1,960	-----	729	778	-----	1,230	-----	5,420	-----	345	272	-----
TOTAL	35,980	41,809	25,215	22,711	22,964	30,482	49,470	122,760	116,800	19,308	12,765	7,366
MEAN	1,161	1,394	813	733	820	983	1,649	3,960	3,893	623	412	246
MAX	2,560	2,010	942	869	1,230	1,310	2,080	5,710	5,400	1,510	550	350
MIN	722	912</										

PEND OREILLE RIVER BASIN

12395500 Pend Oreille River at Newport, Wash.

LOCATION.--Lat 48°11'00", long 117°02'00", in SE&SW¼ sec.24, T.56 N., R.6 W. (Boise meridian), Bonner County, on left bank at Newport, 0.2 mile upstream from bridge on U.S. Highway 2, 0.2 mile east of Idaho-Washington State line, 1.6 miles downstream from Albeni Falls Dam, and at mile 88.5.

DRAINAGE AREA.--24,200 sq mi, approximately.

PERIOD OF RECORD.--June 1903 to September 1941, October 1952 to current year. Prior to October 1921, published as Clark Fork at Newport, Wash., October 1921 to September 1937, as Clark Fork at Priest River, Idaho, and October 1937 to September 1941, as Pend Oreille River at Priest River, Idaho.

GAGE.--Water-stage recorder. Datum of gage is 1,999.7 ft above mean sea level. Prior to Sept. 22, 1928, non-recording gages at Priest River, Newport, or Metaline Falls at various datums (see description, WSP 532, p. 92). Sept. 22, 1928, to Sept. 30, 1935, at datum 2,040.14 ft above mean sea level, and Oct. 1, 1935, to Sept. 30, 1941, at datum 2,000 ft above mean sea level, water-stage recorder at Priest River. Since December 1952, auxiliary water-stage recorder 2.74 miles downstream from base gage.

AVERAGE DISCHARGE.--56 years (1903-41, 1952-70), 25,710 cfs (18,630,000 acre-ft per year); 15-year base period (1952-67), 27,700 cfs.

EXTREMES.--Current year: Maximum discharge, 98,900 cfs June 10; maximum gage height, 46.80 ft June 10; minimum discharge, 8,810 cfs Feb. 13; minimum gage height, 29.71 ft Feb. 16.

Period of record: Maximum discharge, 136,000 cfs June 15, 1913, June 21, 1933; minimum, 1,280 cfs Sept. 1, 1961.

Maximum stage known, about 64.0 ft in June 1894, present site and datum, from water-surface profiles (discharge, about 200,000 cfs).

REMARKS.--Records excellent except those for July 4-27, which are good. Flow regulated at Albeni Falls Dam and affected by storage in Pend Oreille Lake (see sta 12392500), Flathead Lake, Hungry Horse Reservoir, and several smaller reservoirs. Diversions above station for irrigation of about 354,000 acres. Records of chemical quality for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 532: 1903-11.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19,600	28,400	10,800	10,500	16,200	12,200	19,500	16,700	75,900	46,200	17,200	10,600
2	18,800	28,100	9,920	10,300	15,400	13,400	18,600	24,500	72,000	45,800	20,000	10,500
3	17,600	28,200	10,800	10,400	15,200	17,100	19,500	25,000	68,000	45,200	21,400	12,900
4	17,600	31,100	12,000	10,300	16,400	19,400	19,600	25,500	73,200	44,700	21,900	14,000
5	21,700	31,200	13,100	11,500	15,500	19,500	19,500	25,600	79,100	39,400	21,700	15,600
6	24,500	29,900	13,800	12,700	14,400	19,400	19,100	34,900	85,100	32,800	21,100	15,200
7	24,800	28,400	15,700	12,800	13,100	19,300	18,600	40,200	91,400	30,800	18,400	13,600
8	24,600	26,600	18,800	12,800	13,100	19,400	19,200	43,900	94,100	31,400	16,500	14,200
9	24,800	26,200	20,200	11,100	12,800	18,600	20,900	45,900	96,000	29,300	16,400	17,900
10	24,600	25,300	20,300	9,750	12,100	18,300	20,600	46,000	94,400	26,800	15,700	19,400
11	24,600	22,200	18,900	9,990	12,100	19,300	20,900	44,400	90,500	26,700	14,500	19,600
12	24,500	22,200	19,000	10,300	12,100	18,900	22,200	44,500	80,400	23,300	14,500	18,900
13	24,500	18,600	18,800	13,400	11,000	18,000	21,500	46,700	65,700	21,000	16,200	18,700
14	24,700	12,100	18,600	17,400	10,200	16,000	22,900	45,400	54,800	22,100	16,400	18,900
15	24,700	10,800	19,000	19,200	9,900	16,300	21,400	41,800	55,100	25,800	16,100	18,900
16	25,100	10,700	18,800	20,000	12,000	17,100	19,500	38,300	64,500	25,900	16,100	18,700
17	25,200	11,100	19,000	19,800	18,700	19,100	18,700	36,200	77,000	24,500	15,300	18,900
18	26,900	17,600	16,600	18,000	18,400	20,300	17,800	35,600	77,400	24,200	14,100	18,600
19	27,900	18,600	14,000	14,500	18,000	20,900	17,500	37,600	70,500	24,400	13,200	16,400
20	28,400	18,400	13,700	11,100	16,500	20,500	17,700	43,000	62,400	19,500	12,000	16,600
21	28,600	16,300	16,700	9,820	14,400	20,200	17,600	53,300	64,500	17,600	11,900	16,700
22	27,500	16,400	18,700	9,670	14,100	20,600	19,600	56,200	69,100	13,900	11,600	16,700
23	27,400	16,200	17,600	10,900	13,100	20,500	21,300	58,300	71,000	11,900	11,500	17,000
24	28,800	18,000	14,900	12,200	11,700	21,000	18,400	60,600	65,500	11,900	11,500	18,600
25	28,700	18,800	12,400	13,500	12,700	22,100	17,100	63,200	63,600	12,700	12,300	20,400
26	27,600	18,600	12,700	15,400	12,400	23,300	16,400	65,600	60,100	16,000	14,200	21,700
27	29,000	18,300	12,200	18,400	12,400	22,900	16,500	67,900	52,100	18,100	14,300	21,900
28	28,800	15,700	12,100	18,700	12,100	20,500	16,700	70,500	50,200	20,900	13,000	21,700
29	29,800	12,600	12,100	18,700	-----	20,300	16,700	72,100	49,200	19,300	13,000	21,700
30	28,400	11,600	11,900	16,600	-----	20,400	17,000	74,400	46,100	18,400	12,000	21,700
31	28,500	-----	10,600	16,500	-----	20,500	-----	76,000	-----	17,200	10,700	-----
TOTAL	787,200	609,200	473,720	426,230	386,000	595,300	572,500	1,459.8M	2,118.9M	787,700	474,700	526,200
MEAN	25,390	20,310	15,280	13,750	13,790	19,200	19,080	47,090	70,630	25,410	15,310	17,540
MAX	29,000	31,200	20,300	20,000	18,700	23,300	22,900	76,000	96,000	46,200	21,900	21,900
MIN	17,600	10,700	9,920	9,670	9,900	12,200	16,400	16,700	46,100	11,900	10,700	10,500
AC-FT	1,561M	1,209M	939,600	845,400	765,600	1,181M	1,136M	2,896M	4,203M	1,562M	941,600	1,044M

CAL YR 1969 TOTAL 11,200,220 MEAN 30,690 MAX 82,800 MIN 9,920 ACFT 22,220,000
WAT YR 1970 TOTAL 9,217,450 MEAN 25,250 MAX 96,000 MIN 9,670 ACFT 18,280,000

M Expressed in thousands.

12411000 Coeur d'Alene River above Shoshone Creek, near Prichard, Idaho

LOCATION.--Lat 47°42'30", long 115°58'35", in NE¼SW¼ sec.5, T.50 N., R.4 E., Shoshone County, in Coeur d'Alene National Forest, on left bank at Shoshone Creek ranger station, 0.1 mile downstream from Uranus Creek, 0.5 mile upstream from Shoshone Creek, 3.5 miles north of Prichard, and 200.0 miles upstream from mouth of Spokane River.

DRAINAGE AREA.--335 sq mi.

PERIOD OF RECORD.--December 1950 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,485 ft (from river-profile map).

AVERAGE DISCHARGE.--19 years (1951-70), 738 cfs (29.92 inches per year, 534,700 acre-ft per year); 15-year base period 1952-67), 750 cfs.

EXTREMES.--Current year: Maximum discharge, 5,880 cfs May 6 (gage height, 6.29 ft); minimum, 69 cfs Nov. 27 (gage height, 0.66 ft).

Period of record: Maximum discharge, 11,900 cfs Dec. 23, 1964 (gage height, 8.37 ft); maximum gage height, 11.55 ft Feb. 4, 1963 (backwater from ice); minimum discharge, 34 cfs Dec. 26, 1952 (gage height, 0.69 ft), but may have been less during period of ice effect.

REMARKS.--Records excellent except those for winter period, which are fair. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 27 to Dec. 11, Dec. 27 to Jan. 13, Feb. 1-3, Feb. 23 to Mar. 5)

0.6	66	2.0	555	4.0	2,480
0.8	100	2.5	890	5.0	3,840
1.0	147	3.0	1,340	6.2	5,700
1.5	310				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	140	95	76	115	285	375	775	1,070	1,350	350	145	91
2	166	93	75	110	265	350	810	1,610	1,400	330	171	89
3	155	89	76	100	255	325	740	2,680	1,470	310	217	87
4	125	89	77	92	251	300	719	3,670	1,450	299	169	118
5	109	107	78	84	240	275	768	4,640	1,300	287	152	121
6	102	135	79	100	237	310	1,030	5,620	1,180	272	145	105
7	98	116	82	115	234	494	1,870	4,790	1,030	265	135	123
8	100	105	84	125	220	670	1,690	3,770	906	254	130	133
9	123	96	90	140	214	677	1,480	3,390	866	248	125	114
10	145	98	105	150	211	640	2,280	3,660	782	240	125	102
11	130	98	130	170	211	599	2,530	3,150	677	234	121	96
12	112	96	195	200	244	572	2,020	2,560	616	230	118	93
13	100	93	254	300	276	544	1,650	2,230	572	248	112	91
14	98	91	280	522	291	538	1,440	2,000	555	251	112	91
15	97	93	346	1,420	306	604	1,280	2,040	733	220	109	91
16	95	91	220	550	538	726	1,140	2,640	898	211	107	91
17	92	89	152	467	1,100	803	1,130	4,220	988	207	102	91
18	90	87	137	382	906	782	1,220	4,380	898	198	102	91
19	89	87	133	338	691	740	1,270	3,620	796	192	102	89
20	86	87	140	295	566	726	1,240	3,360	705	183	98	89
21	86	96	183	295	500	698	1,170	3,280	634	177	96	91
22	87	107	306	322	462	646	1,120	3,310	588	174	96	96
23	86	105	280	599	440	640	1,080	3,070	538	171	95	112
24	89	102	237	754	425	658	1,200	2,920	500	169	93	100
25	93	95	195	646	415	677	1,250	2,820	467	171	91	93
26	98	91	171	544	410	691	1,190	2,860	435	177	89	89
27	95	86	160	500	410	670	1,080	2,650	440	174	87	87
28	98	82	150	456	395	747	979	2,170	420	174	87	87
29	102	79	140	386	-----	842	946	1,810	386	171	87	86
30	98	77	130	330	-----	850	938	1,560	368	160	87	86
31	96	-----	120	306	-----	796	-----	1,410	-----	155	87	-----
TOTAL	3,280	2,855	4,881	10,913	10,998	18,965	38,035	92,960	23,948	6,902	3,592	2,923
MEAN	106	95.2	157	352	393	612	1,268	2,999	798	223	116	97.4
MAX	166	135	346	1,420	1,100	850	2,530	5,620	1,470	350	217	133
MIN	86	77	75	84	211	275	719	1,070	368	155	87	86
CFSM	.32	.28	.47	1.05	1.17	1.83	3.79	8.95	2.38	.67	.35	.29
IN.	.36	.32	.54	1.21	1.22	2.11	4.22	10.32	2.66	.77	.40	.32
AC-FT	6,510	5,660	9,680	21,650	21,810	37,620	75,440	184,400	47,500	13,690	7,120	5,800

CAL YR 1969 TOTAL 258,963 MEAN 709 MAX 5,700 MIN 75 CFSM 2.12 IN 28.76 ACFT 513,700
WAT YR 1970 TOTAL 220,252 MEAN 603 MAX 5,620 MIN 75 CFSM 1.80 IN 24.46 ACFT 436,900

PEAK DISCHARGE (BASE, 3,600 CFS).--May 6 (1230) 5,880 cfs (6.29 ft); May 17 (1900) 4,630 cfs (5.57 ft).

12413000 Coeur d'Alene River at Enaville, Idaho

LOCATION.--Lat 47°34'20", long 116°15'10", in NW¼NE¼ sec.30, T.49 N., R.2 E., Shoshone County, on right bank 800 ft upstream from highway bridge, 0.2 mile northwest of Enaville Post Office, 1.1 miles upstream from South Fork, 3.5 miles downstream from North Fork, and 168.9 miles upstream from mouth of Spokane River.

DRAINAGE AREA.--895 sq mi.

PERIOD OF RECORD.--March 1911 to April 1913 (fragmentary), October 1939 to current year. Published as North Fork of Coeur d'Alene River at Enaville 1911-13.

GAGE.--Water-stage recorder. Datum of gage is 2,100.00 ft above mean sea level. Mar. 3, 1911, to Apr. 12, 1913, nonrecording gage at site 0.2 mile downstream at different datum. Oct. 18 to Dec. 22, 1939, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--31 years (1939-70), 1,942 cfs (29.46 inches per year, 1,407,000 acre-ft per year); 15-year base period 1952-67), 2,027 cfs.

EXTREMES.--Current year: Maximum discharge, 15,300 cfs May 6 (gage height, 70.55 ft); minimum, 120 cfs Jan. 6 (gage height, 61.15 ft).

Period of record: Maximum discharge, 34,800 cfs Dec. 23, 1964 (gage height, 77.15 ft); minimum, 104 cfs Dec. 26, 1952 (gage height, 60.10 ft).

Flood in December 1933 reached a stage of 79.47 ft and that in April 1938 a stage of 78.16 ft, from local information concerning high-water marks.

REMARKS.--Records excellent. No appreciable regulation or diversion above station.

REVISIONS (WATER YEARS).--WSP 1396: 1945.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 13 to Sept. 30; stage-discharge relation affected by ice
Nov. 29 to Dec. 3, Dec. 30 to Jan. 12)

61.2	110	66.0	5,260
61.4	210	68.0	9,050
62.0	565	70.0	13,800
63.0	1,340	71.1	16,600
64.0	2,380		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	337	254	170	330	1,260	1,540	2,440	2,790	3,360	1,040	429	255
2	474	243	160	280	1,150	1,440	2,620	3,740	3,640	986	474	259
3	423	238	160	240	1,070	1,310	2,430	6,040	4,070	930	600	255
4	364	243	155	190	990	1,180	2,360	8,610	4,260	874	526	289
5	315	309	210	150	917	1,090	2,460	11,300	4,040	835	461	345
6	287	370	232	150	864	1,050	3,190	14,000	3,710	790	429	323
7	265	353	221	170	818	1,480	5,280	12,700	3,470	768	411	391
8	271	315	221	220	790	2,170	5,240	9,670	3,020	740	399	407
9	331	287	221	270	776	2,270	4,400	8,170	2,830	712	381	366
10	435	276	215	300	782	2,180	5,820	8,520	2,540	698	375	323
11	399	276	212	320	810	2,070	6,920	7,510	2,190	684	359	297
12	342	271	259	330	873	1,930	5,800	6,120	1,940	663	348	276
13	304	265	357	344	1,020	1,810	4,700	5,340	1,780	705	337	266
14	282	260	440	575	1,180	1,820	4,040	4,730	1,720	754	331	269
15	265	254	577	2,070	1,310	2,090	3,520	4,610	2,130	670	320	266
16	254	254	541	1,950	2,400	2,580	3,130	5,580	2,750	621	320	265
17	249	254	459	1,530	5,950	3,020	2,970	9,010	3,050	607	315	265
18	243	243	415	1,230	4,840	2,900	3,050	10,500	2,770	579	304	265
19	249	238	397	1,020	3,340	2,650	3,150	8,590	2,440	559	304	266
20	243	238	439	1,050	2,560	2,480	3,120	7,690	2,190	533	298	265
21	238	260	582	1,130	2,170	2,360	2,880	7,370	2,000	520	291	266
22	238	293	1,030	1,360	1,920	2,200	2,880	7,470	1,810	507	285	273
23	232	298	1,040	2,820	1,780	2,120	2,800	7,040	1,660	500	280	300
24	238	309	919	3,730	1,710	2,210	3,100	6,650	1,520	481	274	301
25	243	293	755	3,160	1,680	2,260	3,480	6,480	1,390	481	269	276
26	249	265	650	2,530	1,660	2,300	3,410	6,700	1,300	500	263	261
27	249	243	574	2,340	1,670	2,230	3,130	6,480	1,300	494	259	253
28	260	210	523	2,130	1,600	2,440	2,860	5,370	1,310	494	255	249
29	271	200	464	1,780	-----	2,710	2,710	4,440	1,180	494	253	244
30	265	185	429	1,530	-----	2,760	2,630	3,890	1,110	468	249	241
31	260	-----	370	1,390	-----	2,560	-----	3,450	-----	448	249	-----
TOTAL	9,075	7,997	13,397	36,619	47,890	65,210	106,520	220,560	72,480	20,135	10,648	8,577
MEAN	293	267	432	1,181	1,710	2,104	3,551	7,115	2,416	650	343	286
MAX	474	370	1,040	3,730	5,950	3,020	6,920	14,000	4,260	1,040	600	407
MIN	232	185	155	150	776	1,050	2,360	2,790	1,110	448	249	241
CFSM	.33	.30	.48	1.32	1.91	2.35	3.97	7.95	2.70	.73	.38	.32
IN.	.38	.33	.56	1.52	1.99	2.71	4.43	9.16	3.01	.84	.44	.36
AC-FT	18,000	15,860	26,570	72,630	94,990	129,300	211,300	437,500	143,800	39,940	21,120	17,010

CAL YR 1969 TOTAL 703,623 MEAN 1,928 MAX 16,600 MIN 155 CFSM 2.15 IN 29.24 AC-FT 1,396,000
WTR YR 1970 TOTAL 619,108 MEAN 1,696 MAX 14,000 MIN 150 CFSM 1.90 IN 25.73 AC-FT 1,228,000

PEAK DISCHARGE (BASE, 8,000 CFS).--May 6 (1600) 15,300 cfs (70.55 ft); May 18 (0900) 10,900 cfs (68.75 ft).

SPOKANE RIVER BASIN

57

12413140 Placer Creek at Wallace, Idaho

LOCATION.--Lat 47°27'50", long 115°56'10", in NE¼SW¼ sec.34, T.48 N., R.4 E., Shoshone County, on right bank about 400 ft upstream from county road bridge, 0.3 mile downstream from West Fork, 0.4 mile south of Wallace city limits, and at mile 1.0.

DRAINAGE AREA.--14.9 sq mi.

PERIOD OF RECORD.--November 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,840 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 292 cfs May 6 (gage height, 3.46 ft); minimum daily, 3.1 cfs Nov. 29, 30, Dec. 1, 2.

Period of record: Maximum discharge, 486 cfs Apr. 23, 1969 (gage height, 3.73 ft); minimum daily, 3.1 cfs Nov. 29, 30, Dec. 1, 2, 1969.

Flood of Dec. 23, 1964, estimated at 1,300 cfs by Idaho Department of Highways on basis of observed depths in concrete flume downstream. Flood in December 1933 reported slightly higher than 1964.

REMARKS.--Records good. Water for town of Wallace is diverted above the station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 28 to Dec. 2, Dec. 29 to Jan. 11)

1.7	2.2	2.2	19	3.0	121
1.8	3.9	2.4	34	3.3	200
2.0	9.1	2.7	68	3.8	420

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	3.9	3.1	5.0	21	26	26	42	123	26	11	6.7
2	8.2	3.7	3.1	4.6	19	23	26	65	156	25	13	6.5
3	5.7	3.7	3.2	4.3	17	21	24	109	184	23	12	6.5
4	5.2	3.9	3.3	4.0	16	19	26	161	184	22	11	7.9
5	5.0	6.2	3.5	3.8	15	17	30	236	166	21	10	7.3
6	4.8	4.8	3.5	4.0	14	19	43	244	154	20	10	6.5
7	4.5	3.9	3.5	4.4	14	34	59	216	128	19	9.5	8.2
8	5.2	3.7	3.5	4.7	13	34	49	169	109	18	9.5	6.7
9	7.9	3.7	3.7	5.0	14	31	53	164	99	17	9.5	6.2
10	7.6	3.7	3.7	5.2	14	29	107	154	85	17	8.8	5.9
11	5.7	3.7	4.3	5.5	15	28	88	119	72	17	8.5	5.7
12	5.2	3.7	8.8	5.7	17	26	66	97	64	17	8.2	5.7
13	4.8	3.5	7.3	8.7	18	26	58	83	60	20	8.2	5.7
14	4.5	3.3	9.5	45	18	27	51	75	61	17	8.2	5.9
15	4.5	3.5	9.1	58	21	30	47	90	68	16	7.9	5.9
16	4.5	3.9	6.5	30	84	36	43	154	68	16	7.9	5.4
17	4.5	3.7	5.9	20	119	36	43	240	65	16	7.6	5.9
18	4.3	3.5	5.4	16	65	33	47	212	60	14	7.6	5.7
19	4.3	3.3	5.7	14	46	30	49	197	53	14	7.3	6.2
20	3.9	3.3	6.2	16	36	30	47	197	49	13	7.3	5.7
21	3.9	3.9	18	19	34	28	41	197	44	14	7.0	5.7
22	3.9	3.9	16	27	31	26	38	200	41	13	7.0	6.2
23	3.9	4.1	12	83	30	26	36	197	38	13	7.0	6.2
24	3.9	4.1	9.1	62	30	26	41	200	36	12	6.7	5.4
25	3.9	3.9	7.6	47	30	25	42	216	33	13	6.7	5.2
26	3.9	3.5	7.0	36	29	25	41	212	32	12	6.2	5.0
27	3.9	3.3	6.7	41	30	26	39	197	36	14	6.5	5.0
28	4.3	3.2	6.2	34	27	29	38	154	31	15	6.2	4.8
29	4.1	3.1	5.8	28	-----	29	37	123	29	13	6.2	5.0
30	3.9	3.1	5.5	25	-----	26	37	115	28	12	6.2	4.5
31	3.9	-----	5.2	23	-----	26	-----	109	-----	12	6.5	-----
TOTAL	151.1	112.7	201.9	688.9	837	847	1,372	4,944	2,356	511	255.2	179.2
MEAN	4.87	3.76	6.51	22.2	29.9	27.3	45.7	159	78.5	16.5	8.23	5.97
MAX	8.2	6.2	18	83	119	36	107	244	184	26	13	8.2
MIN	3.9	3.1	3.1	3.8	13	17	24	42	28	12	6.2	4.5
AC-FT	300	224	400	1,370	1,660	1,680	2,720	9,810	4,670	1,010	506	355

CAL YR 1969 TOTAL 15,234.1 MEAN 41.7 MAX 410 MIN 3.1 ACFT 30,220
WAT YR 1970 TOTAL 12,456.0 MEAN 34.1 MAX 244 MIN 3.1 ACFT 24,710

PEAK DISCHARGE (BASE, 175 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5- 6	0100	3.46	292	6- 4	0100	3.25	197
5-17	2030	3.42	268				

SPOKANE RIVER BASIN

12413150 South Fork Coeur d'Alene River at Silverton, Idaho

LOCATION.--Lat 47°28'20", long 115°57'00", in SW¼SE¼ sec.21, T.48 N., R.4 E., Shoshone County, on upstream side of State road bridge at Silverton, 500 ft upstream from Lake Creek, 0.2 mile upstream from Revenue Gulch, 1.2 miles northwest of Wallace, and at mile 17.8.

DRAINAGE AREA.--103 sq mi.

PERIOD OF RECORD.--November 1967 to current year.

GAGE.--Nonrecording and crest-stage gages. Altitude of gage is 2,640 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 1,560 cfs May 6 (gage height, 7.34 ft); minimum daily, 43 cfs Jan. 5; minimum gage height observed, 3.23 ft Dec. 6.

Period of record: Maximum discharge, 1,750 cfs May 11, 1969 (gage height, 7.32 ft); minimum daily, 43 cfs Jan. 5, 1970; minimum gage height observed, 3.23 ft Dec. 6, 1969.

REMARKS.--Records good. Some flow is diverted through smelters and returned to stream above station.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 26 to Dec. 10, Dec. 29 to Jan. 15)

Oct. 1 to Nov. 13

Nov. 14 to Sept. 30

3.2 45
3.5 78

3.2 49 4.5 305
3.4 75 5.0 450
3.6 107 6.0 830
4.0 185 7.5 1,660

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	70	53	45	56	112	139	145	183	770	262	104	64
2	66	53	45	53	107	139	147	268	980	248	107	64
3	66	52	45	50	99	139	139	396	1,090	232	109	64
4	59	52	45	46	95	131	145	598	1,310	232	97	69
5	59	60	45	43	88	109	149	980	1,370	230	97	81
6	56	53	45	47	85	130	191	1,120	1,400	222	97	74
7	54	51	46	50	86	163	282	1,050	1,160	212	99	89
8	56	51	48	53	86	141	260	778	995	195	93	68
9	63	50	50	55	83	137	290	770	860	191	91	60
10	65	51	54	57	86	131	302	734	730	185	93	61
11	64	51	62	58	86	137	357	566	646	181	85	62
12	58	51	97	59	89	127	322	518	543	181	89	61
13	57	49	86	66	105	133	302	447	540	210	88	61
14	54	45	81	110	101	141	272	393	642	179	88	60
15	54	49	85	180	104	155	248	444	690	169	86	59
16	51	49	68	161	325	175	212	642	746	163	86	59
17	54	51	71	99	414	159	208	1,100	654	153	87	59
18	53	51	71	85	285	141	225	1,120	590	151	88	65
19	54	53	69	89	215	145	218	1,090	586	145	62	64
20	51	48	71	97	189	141	215	1,080	570	133	71	67
21	50	55	101	100	179	141	197	1,000	574	131	69	64
22	51	54	112	111	165	141	195	1,060	554	127	69	65
23	47	54	101	218	157	137	195	1,070	480	123	69	67
24	52	54	89	252	157	143	248	1,120	423	116	67	61
25	52	53	86	191	151	133	238	1,140	378	133	65	59
26	51	51	85	161	149	135	215	1,260	345	114	64	57
27	53	49	81	181	149	135	197	1,130	480	127	62	60
28	53	47	71	151	141	145	193	925	318	149	62	57
29	52	46	66	137	-----	150	185	802	318	121	64	56
30	50	46	61	127	-----	143	175	750	305	116	65	53
31	50	-----	58	123	-----	137	-----	690	-----	111	67	-----
TOTAL	1,725	1,532	2,140	3,266	4,088	4,353	6,667	25,224	21,047	5,242	2,540	1,910
MEAN	55.6	51.1	69.0	105	146	140	222	814	702	169	81.9	63.7
MAX	70	60	112	252	414	175	357	1,260	1,400	262	109	89
MIN	47	45	45	43	83	109	139	183	305	111	62	53
CFSM	.54	.50	.67	1.02	1.42	1.36	2.16	7.90	6.82	1.64	.80	.62
IN.	.62	.55	.77	1.18	1.48	1.57	2.41	9.11	7.60	1.89	.92	.69
AC-FT	3,420	3,040	4,240	6,480	8,110	8,630	13,220	50,030	41,750	10,400	5,040	3,790
CAL YR 1969	TOTAL 93,040	MEAN 255	MAX 1,750	MIN 45	CFSM 2.48	IN 33.60	ACFT 184,500					
WAT YR 1970	TOTAL 79,734	MEAN 218	MAX 1,400	MIN 43	CFSM 2.12	IN 28.80	ACFT 158,200					

12413300 South Fork Coeur d'Alene River at Smelterville, Idaho

LOCATION.--Lat 47°32'55", long 116°10'25", in SW¼ sec.35, T.49 N., R.2 E., Shoshone County, on left bank 490 ft downstream from county road bridge, 0.2 mile downstream from Government Gulch, 0.6 mile northwest of Smelterville Post Office, and at mile 5.

DRAINAGE AREA.--202 sq mi.

PERIOD OF RECORD.--December 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,220 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 2,370 cfs May 6 (gage height, 6.98 ft); minimum, 75 cfs Dec. 3 (gage height, 3.13 ft); minimum gage height, 3.13 ft Dec. 3, Jan. 5 or 6.
Period of record: Maximum discharge, 3,570 cfs Apr. 23, 1969 (gage height, 7.72 ft); minimum, 75 cfs Dec. 3, 1969; minimum gage height, 3.13 ft Dec. 3, 1969, Jan. 5 or 6, 1970.

REMARKS.--Records good except those for December to March, which are fair. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 27-29, Feb. 17-20; stage-discharge relation affected by ice Feb. 22 to Mar. 2)

3.2	81	5.0	660
3.5	130	5.5	964
4.0	248	6.0	1,360
4.5	420	7.0	2,390

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	125	98	85	100	245	280	337	448	1,080	412	178	119
2	143	96	82	96	230	275	369	545	1,390	380	242	119
3	123	96	81	86	215	275	351	750	1,770	362	217	125
4	116	98	86	82	205	270	376	1,070	1,970	340	178	139
5	108	125	86	72	195	250	448	1,810	1,960	326	164	141
6	105	114	82	76	190	300	589	2,220	1,980	308	164	135
7	101	107	84	82	185	390	738	1,970	1,810	292	158	158
8	107	101	82	88	180	370	654	1,510	1,540	279	150	139
9	125	98	81	93	175	360	599	1,380	1,390	270	144	130
10	143	93	82	98	170	340	710	1,270	1,190	265	141	126
11	123	93	100	103	175	335	705	1,080	984	256	141	121
12	114	94	155	106	180	330	632	916	871	254	132	121
13	108	94	145	112	200	340	574	840	822	312	125	119
14	105	91	130	125	205	360	539	784	828	273	132	119
15	103	93	140	180	250	390	491	791	950	245	128	116
16	103	98	135	310	734	460	448	1,050	1,010	237	125	116
17	99	93	125	285	840	435	432	2,050	971	240	128	116
18	99	88	120	220	574	412	436	2,090	896	217	125	117
19	99	89	120	225	440	388	444	1,770	834	214	117	121
20	99	90	130	234	355	373	428	1,770	803	203	117	116
21	99	96	150	251	322	355	400	1,680	766	214	121	116
22	99	98	165	340	315	337	396	1,820	738	203	121	119
23	98	98	160	569	305	326	384	1,730	705	198	121	125
24	99	99	150	509	300	337	432	1,780	660	185	121	114
25	98	94	138	440	295	319	467	1,870	594	198	119	112
26	98	90	133	384	290	326	464	2,140	559	198	119	112
27	98	88	128	456	285	305	464	2,050	594	214	119	108
28	101	88	124	369	280	337	452	1,600	564	240	119	108
29	99	88	117	305	-----	348	448	1,270	491	226	119	107
30	98	88	112	280	-----	344	444	1,120	444	203	119	105
31	99	-----	107	265	-----	326	-----	1,020	-----	178	119	-----
TOTAL	3,334	2,876	3,615	6,943	8,335	10,593	14,651	44,194	31,164	7,942	4,323	3,639
MEAN	108	95.9	117	224	298	342	488	1,426	1,039	256	139	121
MAX	143	125	165	569	840	460	738	2,220	1,980	412	242	158
MIN	98	88	81	72	170	250	337	448	444	178	117	105
CFSM	.53	.47	.58	1.11	1.48	1.69	2.42	7.06	5.14	1.27	.69	.60
IN.	.61	.53	.67	1.28	1.53	1.95	2.70	8.14	5.74	1.46	.80	.67
AC-FT	6,610	5,700	7,170	13,770	16,530	21,010	29,060	87,660	61,810	15,750	8,570	7,220

CAL YR 1969 TOTAL 175,932 MEAN 482 MAX 2,780 MIN 81 CFSM 2.39 IN 32.40 ACFT 349,000
WAT YR 1970 TOTAL 141,609 MEAN 388 MAX 2,220 MIN 72 CFSM 1.92 IN 26.08 ACFT 280,900

PEAK DISCHARGE (BASE, 1,600 CFS)

NOTE.--No gage-height record Dec. 9 Jan. 20.

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5- 6	0715	6.98	2,370	6- 6	0300	6.80	2,100
5-18	0300	6.95	2,280				

SPOKANE RIVER BASIN

12413400 West Fork Pine Creek near Pinehurst, Idaho

LOCATION.--Lat 47°25'30", long 116°17'50", in NE¼ sec.14, T.47 N., R.1 E., Shoshone County, on left bank 200 ft south of B.L.M. road, 1 mile upstream from Middle Fork, 5.5 miles upstream from the East Fork, 8.5 miles southwest of Pinehurst, and at mile 9.5.

DRAINAGE AREA.--10.8 sq mi.

PERIOD OF RECORD.--December 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,040 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 424 cfs May 18 (gage height, 3.43 ft); minimum, 2.2 cfs Dec. 11; minimum gage height, 1.53 ft Sept. 16, 17, 20, 28, 29, 30.

Period of record: Maximum discharge, 436 cfs May 11, 1969; maximum gage height, 3.51 ft Feb. 20, 1968; minimum discharge, 2.2 cfs Sept. 14, 16, 17, Dec. 11, 1969; minimum gage height, 1.53 ft Sept. 16, 17, 20, 28, 29, 30, 1970.

REMARKS.--Records excellent.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.5	1.7	2.4	78
1.6	3.5	2.7	144
1.8	13	3.0	243
2.1	36	3.3	375

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.6	2.4	2.6	5.4	18	18	19	25	132	16	5.4	2.4
2	4.6	2.4	2.6	5.0	16	16	19	43	162	15	5.9	2.4
3	3.9	2.6	2.4	5.0	16	15	18	107	184	14	5.0	2.4
4	3.9	2.9	2.6	4.6	15	14	18	190	190	13	5.0	2.9
5	3.5	3.9	2.4	4.3	15	13	20	278	174	13	4.6	2.4
6	3.5	3.2	2.4	4.3	13	13	28	308	156	12	5.0	2.4
7	3.2	2.9	2.4	4.3	13	17	46	239	129	11	5.0	3.5
8	3.5	2.9	2.4	4.3	12	20	44	187	99	11	4.6	2.9
9	4.3	2.9	2.4	4.6	12	21	45	190	87	11	4.6	2.9
10	4.6	3.2	2.4	4.6	12	20	71	177	70	10	4.3	2.9
11	3.9	2.9	2.6	4.3	12	20	73	129	53	9.8	4.3	2.6
12	3.9	2.9	4.6	4.3	13	18	57	99	43	9.2	3.9	2.6
13	3.5	2.9	4.3	5.0	15	18	49	78	40	9.2	3.9	2.4
14	3.5	3.2	6.3	21	15	18	43	70	44	8.7	3.5	2.4
15	3.2	3.2	7.2	29	16	20	37	91	87	8.2	3.5	2.6
16	3.2	3.2	5.4	19	41	24	34	196	104	7.7	3.9	2.4
17	2.9	3.2	5.4	16	57	24	36	360	82	7.7	3.9	2.4
18	2.6	2.9	5.4	14	36	23	39	291	68	7.7	3.9	2.6
19	2.6	2.9	5.0	13	28	21	43	221	58	7.2	3.5	2.6
20	2.6	2.9	5.4	14	24	20	40	221	49	6.8	3.5	2.4
21	2.6	3.2	14	17	22	19	37	236	43	6.8	3.5	2.9
22	2.6	2.9	15	23	20	18	34	229	38	6.3	3.5	2.9
23	2.6	2.9	12	58	20	18	32	200	34	6.3	3.2	2.9
24	2.6	2.9	11	45	19	18	32	207	31	6.3	3.2	2.6
25	2.6	2.9	9.8	38	19	17	31	229	28	6.3	2.9	2.6
26	2.6	2.9	9.2	33	18	17	29	255	25	5.9	2.6	2.6
27	2.6	2.9	8.2	32	20	18	27	200	24	6.3	2.9	2.6
28	2.9	2.9	7.2	28	19	18	25	147	23	6.8	2.9	2.4
29	2.6	2.9	6.8	24	-----	20	24	119	20	6.3	2.6	2.4
30	2.6	2.6	6.3	21	-----	20	22	110	18	5.9	2.4	2.4
31	2.6	-----	5.4	20	-----	20	-----	108	-----	5.4	2.4	-----
TOTAL	100.4	88.5	181.1	525.0	556	576	1,072	5,540	2,295	276.8	119.3	78.4
MEAN	3.24	2.95	5.84	16.9	19.9	18.6	35.7	179	76.5	8.93	3.85	2.61
MAX	4.6	3.9	15	58	57	24	73	360	190	16	5.9	3.5
MIN	2.6	2.4	2.4	4.3	12	13	18	25	18	5.4	2.4	2.4
CFSM	.30	.27	.54	1.56	1.84	1.72	3.31	16.6	7.08	.83	.36	.24
IN.	.35	.30	.62	1.81	1.92	1.98	3.69	19.08	7.91	.95	.41	.27
AC-FT	199	176	359	1,040	1,100	1,140	2,130	10,990	4,550	549	237	156

CAL YR 1969 TOTAL 13,260.4 MEAN 36.3 MAX 360 MIN 2.2 CFSM 3.36 IN 45.67 ACFT 26,300
WAT YR 1970 TOTAL 11,408.5 MEAN 31.3 MAX 360 MIN 2.4 CFSM 2.90 IN 39.30 ACFT 22,630

PEAK DISCHARGE (BASE, 200 CFS).--May 5 (2445) 397 cfs (3.38 ft); May 18 (0100) 424 cfs (3.43 ft).

12413500 Coeur d'Alene River near Cataldo, Idaho

LOCATION.--Lat 47°33'50", long 116°18'25", in NW¼SW¼ sec.26, T.49 N., R.1 E., Shoshone County, on left bank 1.5 miles upstream from Cataldo, 3.6 miles downstream from South Fork, and 164.2 miles upstream from mouth of Spokane River.

DRAINAGE AREA.--1,220 sq mi, approximately.

PERIOD OF RECORD.--April 1911 to December 1912, July 1920 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,097.16 ft above mean sea level. Apr. 25, 1911, to Dec. 31, 1912, nonrecording at site 300 ft downstream at different datum. July 29, 1920, to Oct. 10, 1925, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--51 years, 2,522 cfs (28.07 inches per year, 1,827,000 acre-ft per year); 15-year base period (1952-67), 2,696 cfs.

EXTREMES.--Current year: Maximum discharge, 16,900 cfs May 5 (gage height, 46.48 ft); minimum, 282 cfs Jan. 6 (gage height, 38.67 ft).

Period of record: Maximum discharge, 67,000 cfs Dec. 22 or 23, 1933 (gage height, 56.9 ft, from floodmark), from rating curve extended above 24,000 cfs; minimum, 122 cfs Dec. 4, 1929; minimum gage height, 37.03 ft Sept. 6, 1931.

REMARKS.--Records good except those for January to March, which are fair. No appreciable regulation or diversion above station.

REVISIONS (WATER YEARS).--WSP 1396: 1945. WSP 1736: 1934(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 15-20, Apr. 6 to June 8; stage-discharge relation affected by ice Nov. 30 to Dec. 2, Jan. 7-11)

38.7	282	42.0	5,180
39.0	450	43.0	8,150
39.5	850	44.0	10,800
40.0	1,380	46.3	16,600
41.0	2,920		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	450	379	350	576	1,700	1,960	2,970	3,300	4,330	1,490	614	390
2	590	373	345	555	1,520	1,830	3,220	4,160	4,880	1,400	697	390
3	555	361	332	520	1,430	1,700	3,080	7,340	5,880	1,310	805	384
4	501	361	332	450	1,330	1,560	3,030	12,000	6,500	1,240	724	420
5	450	432	373	350	1,200	1,460	3,160	13,700	6,140	1,180	638	469
6	426	494	402	321	1,130	1,390	3,940	16,400	5,820	1,140	606	456
7	396	462	390	340	1,110	1,900	6,690	15,200	5,260	1,110	583	520
8	408	432	390	375	1,040	2,700	6,800	12,300	4,420	1,050	562	527
9	462	402	390	410	1,040	2,830	5,530	10,800	4,090	1,020	548	488
10	576	390	390	450	1,060	2,720	7,550	10,900	3,640	990	527	450
11	548	390	396	470	1,080	2,580	9,020	9,710	3,140	970	514	414
12	482	390	450	488	1,160	2,420	7,740	7,770	2,780	940	501	396
13	438	384	555	507	1,370	2,270	6,020	6,300	2,560	1,030	494	390
14	420	384	654	1,120	1,560	2,330	5,070	5,400	2,520	1,050	488	390
15	396	384	814	2,920	1,740	2,650	4,350	5,210	2,990	940	482	390
16	384	390	751	2,490	3,400	3,160	3,920	6,800	3,660	886	475	390
17	379	402	662	1,900	8,780	3,600	3,720	11,600	3,990	850	469	390
18	373	384	630	1,600	6,630	3,500	3,790	13,200	3,640	814	462	390
19	373	379	606	1,310	4,180	3,220	3,900	11,300	3,300	778	456	402
20	367	379	646	1,380	3,260	3,030	3,850	10,400	3,060	751	438	396
21	367	408	859	1,500	2,780	2,870	3,660	9,980	2,850	724	438	402
22	367	438	1,400	1,880	2,470	2,650	3,620	10,200	2,650	706	432	402
23	361	444	1,430	3,880	2,270	2,580	3,520	9,680	2,430	697	414	444
24	373	462	1,260	4,880	2,200	2,650	3,830	9,170	2,220	679	396	432
25	373	444	1,040	4,090	2,150	2,690	4,300	8,990	2,020	670	390	402
26	373	420	904	3,260	2,090	2,700	4,230	9,680	1,860	697	384	390
27	379	402	814	3,260	2,100	2,670	3,900	9,350	1,860	706	379	384
28	390	379	742	2,900	2,010	2,880	3,560	7,460	1,880	715	379	373
29	390	379	679	2,380	-----	3,180	3,400	5,790	1,670	715	373	361
30	384	365	630	2,020	-----	3,240	3,300	4,910	1,580	679	379	355
31	379	-----	614	1,830	-----	3,080	-----	4,300	-----	646	379	-----
TOTAL	13,110	12,093	20,230	50,412	63,790	80,000	134,670	283,300	103,620	28,573	15,426	12,387
MEAN	423	403	653	1,626	2,278	2,581	4,489	9,139	3,454	922	498	413
MAX	590	494	1,430	4,880	8,780	3,600	9,020	16,400	6,500	1,490	805	527
MIN	361	361	332	321	1,040	1,390	2,970	3,300	1,580	646	373	355
CFSM	.35	.33	.54	1.33	1.87	2.12	3.68	7.49	2.83	.76	.41	.34
IN.	.40	.37	.62	1.54	1.95	2.44	4.11	8.64	3.16	.87	.47	.38
AC-FT	26,000	23,990	40,130	99,990	126,500	158,700	267,100	561,900	205,500	56,670	30,600	24,570
CAL YR 1969	TOTAL 945,004	MEAN 2,589	MAX 18,000	MIN 332	CFSM 2.12	IN 28.81	ACFT 1,874,000					
WAT YR 1970	TOTAL 817,611	MEAN 2,240	MAX 16,400	MIN 321	CFSM 1.84	IN 24.93	ACFT 1,622,000					

PEAK DISCHARGE (BASE, 11,000 CFS).--May 6 (1530) 16,900 cfs (46.48 ft); May 18 (0800) 13,500 cfs (45.27 ft).

SPOKANE RIVER BASIN

12413700 Latour Creek near Cataldo, Idaho

LOCATION.--Lat 47°28'10", long 116°26'15", in NE¼ sec.34, T.48 N., R.1 W., Kootenai County, on right bank 5 ft upstream from B.L.M. road bridge, 0.4 mile upstream from Baldy Creek, at mile 6.5, and 7.8 miles southwest of Cataldo.

DRAINAGE AREA.--24.8 sq mi.

PERIOD OF RECORD.--January 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,620 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 682 cfs May 17 (gage height, 5.95 ft); minimum discharge, 6.3 cfs Aug. 25, 26 (gage height, 3.48 ft).

Period of record: Maximum discharge, 1,400 cfs Feb. 19, 1968 (gage height, 7.46 ft); minimum, 3.9 cfs Sept. 4-8, 1967 (gage height, 3.75 ft).

REMARKS.--Records good.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

3.4	4.45	4.5	108
3.5	6.8	5.0	272
3.7	14.2	5.5	475
3.9	25.6	6.0	700
4.2	54		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	7.8	7.1	11	33	35	47	57	234	22	9.7	7.1
2	13	7.8	6.8	10	29	32	48	104	272	21	9.7	7.1
3	10	7.4	6.7	9.7	28	29	44	202	299	20	9.4	7.4
4	9.4	8.1	6.8	9.2	26	26	44	284	307	18	9.4	9.4
5	9.0	12	7.1	9.1	24	24	48	470	272	17	9.0	9.0
6	8.4	9.7	7.1	9.2	23	25	79	520	268	17	9.0	8.7
7	8.1	9.0	7.1	9.5	22	53	140	374	227	15	8.7	12
8	9.7	8.7	7.1	9.8	22	58	116	245	191	15	8.7	9.7
9	12	8.4	7.4	10	21	53	111	323	188	15	8.7	9.0
10	13	8.4	7.4	11	22	47	174	319	126	15	8.7	8.1
11	10	8.4	8.4	11	22	46	178	205	104	14	8.7	7.8
12	9.4	8.1	13	12	23	44	152	158	86	14	8.1	7.8
13	9.0	8.1	12	17	27	42	113	126	81	14	8.1	7.8
14	8.7	8.1	19	101	30	44	97	118	99	13	8.1	7.8
15	8.7	8.1	18	107	36	51	79	124	245	12	8.1	8.1
16	8.7	8.4	14	42	173	73	73	261	280	12	8.1	8.1
17	8.4	8.4	12	30	303	81	73	551	216	12	8.1	8.1
18	8.1	7.8	12	24	152	73	75	524	191	12	8.1	8.1
19	7.4	7.8	11	22	88	61	79	382	149	11	7.8	8.4
20	7.8	7.8	14	35	70	48	67	378	121	11	7.8	8.4
21	7.4	9.0	29	49	52	45	57	378	104	11	7.4	9.4
22	7.1	8.7	33	75	45	45	60	394	88	11	6.8	9.7
23	7.8	8.7	25	272	44	42	55	364	67	10	6.8	9.7
24	8.1	9.0	20	164	41	42	68	382	58	10	6.8	8.7
25	8.1	8.4	17	113	39	38	73	394	48	11	6.6	8.4
26	7.8	8.1	16	77	36	37	67	418	42	11	6.6	8.4
27	8.4	7.4	16	101	37	38	60	354	40	11	6.8	8.4
28	9.4	7.4	14	73	36	46	53	276	35	11	6.8	8.7
29	8.7	7.4	14	53	-----	49	51	220	28	10	6.8	9.0
30	8.4	7.4	13	42	-----	49	51	209	26	10	6.8	9.0
31	8.1	-----	12	37	-----	47	-----	202	-----	9.7	7.1	-----
TOTAL	280.1	249.8	413.0	1,555.5	1,504	1,423	2,432	9,316	4,492	415.7	247.3	257.3
MEAN	9.04	8.33	13.3	50.2	53.7	45.9	81.1	301	150	13.4	7.98	8.58
MAX	13	12	33	272	303	81	178	551	307	22	9.7	12
MIN	7.1	7.4	6.7	9.1	21	24	44	57	26	9.7	6.6	7.1
CFSM	.36	.34	.54	2.02	2.17	1.85	3.27	12.1	6.05	.54	.32	.35
IN.	.42	.37	.62	2.33	2.26	2.13	3.65	13.97	6.74	.62	.37	.39
AC-FT	556	495	819	3,090	2,980	2,820	4,820	18,480	8,910	825	491	510

CAL YR 1969 TOTAL 23,275.6 MEAN 63.8 MAX 494 MIN 5.5 CFSM 2.57 IN 34.91 ACFT 46,170
WAT YR 1970 TOTAL 22,585.7 MEAN 61.9 MAX 551 MIN 6.6 CFSM 2.50 IN 33.88 ACFT 44,800

PEAK DISCHARGE (BASE, 350 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
1-23	0630	5.31	382	5-6	0100	5.90	664
2-17	0300	5.32	390	5-17	2100	5.95	682

12414500 St. Joe River at Calder, Idaho

LOCATION.--Lat 47°16'30", long 116°11'15", in NW¼SE¼ sec.3, T.45 N., R.2 E., Shoshone County, on right bank 150 ft southwest of Chicago, Milwaukee, St. Paul, and Pacific Railroad station at Calder, and at mile 42.9.

DRAINAGE AREA.--1,030 sq mi, approximately.

PERIOD OF RECORD.--April 1911 to September 1912 (published as "near Calder"), July 1920 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,156.76 ft above mean sea level, or 2,160 ft above mean sea level, datum of Geological Survey as given in Bulletin 567. Apr. 14, 1911, to Sept. 30, 1912, nonrecording gage at site 2.5 miles downstream at different datum. July 13 to Dec. 21, 1920, nonrecording gage at present site and at datum 60 ft lower. Dec. 22, 1920, to Sept. 30, 1966, water-stage recorder at present site at datum 60 ft lower.

AVERAGE DISCHARGE.--51 years, 2,343 cfs (30.88 inches per year, 1,698,000 acre-ft per year); 15-year base period (1952-67), 2,480 cfs.

EXTREMES.--Current year: Maximum discharge, 14,700 cfs May 27 (gage height, 27.10 ft); minimum discharge, 142 cfs Nov. 29; minimum gage height, 19.63 ft Sept. 30.

Period of record: Maximum discharge, 53,000 cfs Dec. 23, 1933, computed on basis of slope between gages downstream; maximum gage height, 33.1 ft Apr. 18, 1938, from floodmark, present datum; minimum discharge, 91 cfs Nov. 27, 1952; minimum gage height, 18.43 ft Dec. 5, 1928, present datum.

REMARKS.--Records good except for winter periods, which are fair. No diversion above gage.

REVISIONS.--WSP 1182: Drainage area.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 19-23; stage-discharge relation affected by ice Nov. 26 to Dec. 9, Dec. 27 to Jan. 12)

Oct. 1 to May 24				May 25 to Sept. 30			
19.8	215	22.0	2,380	19.6	330	22.0	3,260
20.0	320	24.0	6,010	20.0	680	24.0	8,680
20.5	670	27.0	14,200	21.0	1,830	27.0	14,200
21.0	1,130						

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	622	387	250	360	1,010	1,290	1,640	2,410	7,660	3,040	1,000	485
2	849	380	250	340	894	1,180	1,680	3,480	8,700	2,860	1,050	442
3	622	362	255	320	831	1,070	1,520	5,550	10,300	2,710	1,010	430
4	485	362	260	305	759	1,020	1,470	7,710	11,800	2,570	924	549
5	422	527	265	290	718	921	1,730	10,600	11,900	2,450	880	616
6	394	548	275	310	702	912	2,230	13,000	11,700	2,330	860	564
7	380	450	285	325	670	1,500	3,400	12,300	11,400	2,220	820	936
8	401	408	300	345	654	1,830	2,990	9,140	9,540	2,120	790	771
9	555	387	320	375	662	1,660	2,710	8,660	8,770	2,030	770	595
10	686	387	362	400	694	1,560	3,680	8,310	7,700	1,930	740	517
11	520	394	541	430	734	1,470	3,890	6,830	6,690	1,880	720	474
12	443	394	408	470	804	1,420	3,400	5,700	5,970	1,790	690	443
13	387	394	583	520	1,000	1,400	2,940	4,990	5,640	1,960	671	438
14	374	380	606	903	1,140	1,480	2,710	4,490	6,290	1,950	644	438
15	374	374	670	1,960	1,160	1,800	2,440	4,770	7,680	1,700	626	437
16	368	422	576	1,290	2,180	2,210	2,250	6,650	7,780	1,600	617	429
17	374	408	429	876	3,790	2,250	2,280	11,800	7,180	1,570	590	426
18	368	344	415	646	2,890	2,000	2,410	13,300	6,690	1,490	572	441
19	350	362	429	622	2,180	1,840	2,480	11,400	6,330	1,410	554	529
20	356	356	527	894	1,820	1,770	2,350	11,700	6,020	1,350	554	495
21	356	368	750	1,130	1,630	1,690	2,160	10,100	5,700	1,350	538	476
22	356	394	1,350	1,380	1,510	1,590	2,200	11,100	5,410	1,270	531	504
23	350	374	980	3,330	1,480	1,540	2,160	10,500	5,050	1,220	516	676
24	387	362	726	3,060	1,460	1,600	2,440	11,200	4,680	1,180	501	609
25	450	303	513	2,620	1,440	1,620	2,770	11,800	4,340	1,200	487	479
26	387	265	485	1,960	1,440	1,600	2,600	13,300	4,020	1,220	476	440
27	368	260	460	1,880	1,470	1,540	2,420	13,300	4,030	1,250	462	432
28	429	255	440	1,630	1,390	1,770	2,300	10,400	3,780	1,280	451	417
29	429	255	430	1,320	-----	1,880	2,230	8,680	3,430	1,390	439	403
30	394	250	405	1,100	-----	1,830	2,210	8,060	3,250	1,130	433	390
31	387	-----	390	1,080	-----	1,700	-----	7,440	-----	1,050	458	-----
TOTAL	13,623	11,112	14,935	32,471	37,112	48,943	73,690	278,670	209,430	54,500	20,374	15,281
MEAN	439	370	482	1,047	1,325	1,579	2,456	8,989	6,981	1,758	657	509
MAX	849	548	1,350	3,330	3,790	2,250	3,890	13,300	11,900	3,040	1,050	936
MIN	350	250	250	290	654	912	1,470	2,410	3,250	1,050	433	390
CFSM	.43	.36	.47	1.02	1.29	1.53	2.38	8.73	6.78	1.71	.64	.49
IN.	.49	.40	.54	1.17	1.34	1.77	2.66	10.06	7.56	1.97	.74	.55
AC-FT	27,020	22,040	29,620	64,410	73,610	97,080	146,200	552,700	415,400	108,100	40,410	30,310
CAL YR 1969	TOTAL 907,213			MEAN 2,486		MAX 15,200		MIN 250		CFSM 2.41		IN 32.76
WTR YR 1970	TOTAL 810,141			MEAN 2,220		MAX 13,300		MIN 250		CFSM 2.15		IN 29.25
AC-FT 1,799,000												
AC-FT 1,607,000												

PEAK DISCHARGE (BASE, 8,500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
5- 6	0500	26.90	14,100	6- 5	0445	26.42	12,400
5-27	0545	27.10	14,700				

SPOKANE RIVER BASIN

12414900 St. Maries River near Santa, Idaho

LOCATION.--Lat 47°10'35", long 116°29'30", in SE¼NW¼ sec.8, T.44 N., R.1 W., Benewah County, on right bank 450 ft upstream from bridge on U.S. Highway 95 Alternate, 0.3 mile upstream from Santa Creek, 2.7 miles northwest of Santa, and at mile 24.6.

DRAINAGE AREA.--275 sq mi.

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

GAGE.--Water-stage recorder. Datum of gage is 2,574.56 ft above mean sea level.

AVERAGE DISCHARGE.--5 years, 301 cfs (14.86 inches per year, 218,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,190 cfs Jan. 23 (gage height, 8.69 ft); minimum, 30 cfs Nov. 27 (gage height, 3.47 ft).

Period of record: Maximum discharge, 4,340 cfs Feb. 20, 1968 (gage height, 9.90 ft); minimum, 23 cfs Nov. 26, 1967 (gage height, 3.42 ft).

REMARKS.--Records good except those for October to January, which are fair.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 9 to Dec. 8, Dec. 26 to Jan. 14, Feb. 1)

3.7	41	6.0	900
4.0	78	7.0	1,650
4.5	160	8.0	2,520
5.0	305		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	53	43	56	225	318	526	520	478	214	100	62
2	126	54	44	54	205	291	622	640	466	200	99	62
3	102	60	46	51	185	252	538	858	466	188	105	58
4	82	75	47	49	166	249	490	1,070	484	178	98	67
5	68	105	48	46	154	220	514	1,260	484	170	92	94
6	62	84	49	48	148	223	646	1,400	484	162	90	81
7	60	70	50	52	148	574	921	1,390	490	154	86	118
8	59	65	52	54	150	664	754	1,170	438	150	82	130
9	90	63	59	60	152	496	706	1,180	466	144	82	87
10	86	62	63	64	150	427	1,100	1,150	460	138	80	74
11	80	60	100	70	152	378	1,050	998	372	137	77	70
12	65	58	98	82	158	350	872	893	328	132	74	65
13	57	58	116	120	165	366	730	823	310	154	71	64
14	56	57	134	300	180	508	658	724	383	182	68	62
15	54	58	140	624	210	748	556	688	830	140	67	62
16	53	58	113	388	500	935	490	767	830	132	67	62
17	54	60	92	208	1,700	998	460	956	652	127	64	62
18	53	54	87	152	1,400	748	438	977	544	121	63	62
19	52	52	86	152	984	628	444	928	478	118	62	65
20	53	50	116	336	730	556	466	872	422	113	62	67
21	53	50	182	598	604	502	427	830	372	111	60	67
22	54	50	280	688	520	466	416	788	341	110	60	68
23	55	49	178	1,560	460	454	432	754	314	106	60	82
24	55	47	137	1,590	405	454	628	730	298	105	58	80
25	55	44	99	1,520	378	460	865	706	270	104	57	67
26	55	39	80	935	361	432	706	712	249	113	56	64
27	55	33	74	1,110	361	410	616	700	277	118	56	63
28	54	36	70	767	336	774	562	646	323	124	56	62
29	54	39	64	478	-----	893	514	580	246	152	54	60
30	54	41	60	314	-----	724	502	628	229	121	54	59
31	54	-----	58	260	-----	598	-----	544	-----	108	54	-----
TOTAL	2,009	1,684	2,865	12,786	11,287	16,096	18,649	26,882	12,784	4,326	2,214	2,146
MEAN	64.8	56.1	92.4	412	403	519	622	867	426	140	71.4	71.5
MAX	126	105	280	1,590	1,700	998	1,100	1,400	830	214	105	130
MIN	52	33	43	46	148	220	416	520	229	104	54	58
CFSM	.24	.20	.34	1.50	1.47	1.89	2.26	3.15	1.55	.51	.26	.26
IN.	.27	.23	.39	1.73	1.53	2.18	2.52	3.64	1.73	.59	.30	.29
AC-FT	3,980	3,340	5,680	25,360	22,390	31,930	36,990	53,320	25,360	8,580	4,390	4,260

CAL YR 1969 TOTAL 145,507 MEAN 399 MAX 2,400 MIN 33 CFSM 1.45 IN 19.68 ACFT 288,600
WAT YR 1970 TOTAL 113,728 MEAN 312 MAX 1,700 MIN 33 CFSM 1.13 IN 15.38 ACFT 225,600

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-23	1200	8.69	3,190	5- 7	1200	6.81	1,460
2-18	1315	6.75	1,450				

12415500 Coeur d'Alene Lake at Coeur d'Alene, Idaho

LOCATION.--Lat 47°39'55", long 116°46'05", in NW¼SE¼ sec.24, T.50 N., R.4 W., Kootenai County, 500 ft southwest of south end of Eleventh Street, Coeur d'Alene, and 113.1 miles upstream from mouth of Spokane River.

DRAINAGE AREA.--3,700 sq mi, approximately.

PERIOD OF RECORD.--April 1903 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,100.00 ft above mean sea level, referred to originally accepted elevation (2,157.40 ft) of Geological Survey bench mark in southeast corner of Idaho First National Bank Building (see WSP 882). Gage heights reduced to elevations above mean sea level, based on the above datum. Datum of gage is 2,097.00 ft above mean sea level. Apr. 26, 1903, to Feb. 14, 1905, nonrecording gage at mouth of St. Joe River at datum about 18.7 ft higher. Feb. 15, 1905, to Mar. 23, 1921, nonrecording gage and Mar. 24, 1921, to Dec. 22, 1930, water-stage recorder, at Johnson Wharf 800 ft southeast of railroad station and 1 mile northwest of present site at datum 19.75 ft higher. Dec. 23, 1930, to Feb. 9, 1931, nonrecording gage at present site and datum.

EXTREMES.--Current year: Maximum contents, 380,300 acre-ft May 28 (elevation, 2,130.77 ft); minimum, 49,900 acre-ft Mar. 3 (elevation, 2,123.07 ft).

Period of record: Maximum contents, 834,900 acre-ft Dec. 25, 1933 (elevation, 2,139.05 ft); minimum, 2,700 acre-ft below zero of contents table Oct. 10-12, 1904, Sept. 24, 25, 1905, Oct. 14 to Nov. 3, 1906 (elevation, 2,119.9 ft).

Maximum contents known prior to 1903, 753,300 acre-ft May 31, 1894 (elevation, 2,137.6 ft, from high-water marks).

REMARKS.--The Washington Water Power Co. stores water in Coeur d'Alene Lake by regulation at Post Falls Dam for power generation at Post Falls and other plants on Spokane River. Storage is within natural range of lake stage. Contents given herein are those above elevation 2,120.0 ft. Capacity of lake between elevations 2,120 and 2,140 ft, 889,000 acre-ft.

COOPERATION.--Water-stage-recorder graph furnished by Washington Water Power Co.

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

2,122.0	53,700	2,128.0	238,500
2,124.0	107,900	2,130.0	339,700
2,126.0	162,900	2,133.0	500,000

ELEVATION, IN FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26.23	24.96	23.56	22.45	26.31	25.85	25.41	25.94	29.81	27.49	27.94	27.30
2	26.20	24.92	23.50	22.39	26.24	25.66	25.41	25.94	29.59	27.63	27.98	27.26
3	26.17	24.87	23.45	22.33	26.14	25.44	25.39	26.16	29.52	27.79	27.98	27.23
4	26.15	24.88	23.38	22.27	26.01	25.25	25.34	26.61	29.50	27.85	27.98	27.20
5	26.10	24.82	23.33	22.17	25.89	25.03	25.31	27.29	29.55	27.87	27.99	27.19
6	26.04	24.79	23.29	22.08	25.76	24.89	25.40	28.02	29.58	27.87	27.99	27.19
7	25.99	24.73	23.24	22.00	25.62	24.99	25.64	28.75	29.62	27.88	27.97	27.19
8	26.00	24.69	23.23	21.94	25.49	25.13	25.87	29.30	29.57	27.90	27.94	27.17
9	25.96	24.62	23.19	21.95	25.38	25.19	26.07	29.58	29.45	27.93	27.89	27.12
10	25.94	24.57	23.12	21.90	25.27	25.22	26.28	29.80	29.23	27.97	27.87	27.05
11	25.89	24.50	23.12	21.88	25.15	25.20	26.55	29.85	28.93	27.98	27.86	26.98
12	25.84	24.44	23.09	21.90	25.04	25.18	26.73	29.84	28.58	27.98	27.84	26.89
13	25.80	24.38	23.06	21.97	25.06	25.12	26.80	29.73	28.28	28.04	27.82	26.89
14	25.78	24.34	23.08	22.05	25.13	25.13	26.86	29.46	28.09	28.00	27.78	26.86
15	25.71	24.28	23.07	22.30	25.34	25.21	26.80	29.22	28.03	27.98	27.76	26.81
16	25.68	24.22	23.05	22.53	26.25	25.43	26.70	29.07	27.98	27.99	27.75	26.78
17	25.62	24.16	23.00	22.63	27.28	25.67	26.61	29.16	27.94	27.96	27.70	26.75
18	25.59	24.10	22.97	22.70	27.61	25.78	26.57	29.52	27.86	27.91	27.66	26.72
19	25.53	24.05	22.97	22.72	27.69	25.80	26.41	29.87	27.72	27.91	27.62	26.70
20	25.49	24.03	22.93	22.75	27.63	25.78	26.32	30.13	27.56	27.89	27.60	26.65
21	25.44	24.01	23.02	22.88	27.47	25.74	26.23	30.30	27.37	27.89	27.58	26.65
22	25.40	23.98	23.08	23.14	27.28	25.67	26.21	30.39	27.19	27.85	27.55	26.70
23	25.35	23.97	23.05	23.77	27.06	25.58	26.13	30.46	26.97	27.84	27.52	26.68
24	25.30	23.92	23.02	24.68	26.83	25.48	26.11	30.51	26.76	27.87	27.50	26.66
25	25.24	23.87	22.93	25.16	26.61	25.40	26.17	30.56	26.51	27.89	27.49	26.61
26	25.19	23.83	22.85	25.61	26.39	25.33	26.21	30.62	26.54	27.90	27.48	26.58
27	25.18	23.78	22.79	26.05	26.16	25.28	26.21	30.65	26.84	27.91	27.45	26.54
28	25.15	23.73	22.70	26.34	25.97	25.31	26.18	30.74	27.05	27.94	27.40	26.50
29	25.10	23.68	22.62	26.45	-----	25.36	26.10	30.62	27.22	27.96	27.37	26.48
30	25.15	23.62	22.57	26.45	-----	25.41	26.02	30.38	27.34	27.97	27.32	26.44
31	25.01	-----	22.50	26.39	-----	25.44	-----	30.07	-----	27.95	27.30	-----
MEAN	25.65	24.29	23.06	23.28	26.22	25.39	26.13	29.31	28.21	27.90	27.71	26.86
MAX	26.23	24.96	23.56	26.45	27.69	25.85	26.86	30.74	29.81	28.04	27.99	27.30
MIN	25.01	23.62	22.50	21.88	25.04	24.89	25.31	25.94	26.51	27.49	27.30	26.44
(+)	135,500	97,500	67,200	174,500	162,100	147,200	163,500	343,300	208,600	236,100	206,900	176,000
(-)	-33,500	-38,000	-30,300	+107,300	-12,400	-14,900	+16,300	-179,800	-134,700	+27,500	-29,200	-30,900

CAL YR 1969..... ±98,600

WAT YR 1970..... ±7,000

† Contents, in acre-feet, at end of month.

‡ Change in contents, in acre-feet.

NOTE.--Add 2,100 ft to obtain elevation above mean sea level.

SPOKANE RIVER BASIN

12416000 Hayden Creek below North Fork, near Hayden Lake, Idaho
(Hydrologic bench-mark station)

LOCATION.--Lat 46°49'22", long 116°39'10", in NW¼SW¼ sec.25, T.52 N., R.3 W., Kootenai County, on right bank 0.3 mile downstream from confluence of East Fork and North Fork, and 7.5 miles northeast of Hayden Lake Post Office.

DRAINAGE AREA.--22.0 sq mi.

PERIOD OF RECORD.--April 1948 to December 1953, October 1958 to September 1959, September 1961 to September 1965 (annual maximum), October 1965 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,370 ft (from topographic map). April 22, 1948, to Nov. 1, 1948, nonrecording gage and Nov. 2, 1948, to June 26, 1951, water-stage recorder at site 200 ft downstream at datum 0.98 ft lower. June 27, 1951, to Dec. 4, 1953, Oct. 1, 1958, to Sept. 30, 1959, water-stage recorder, Sept. 16, 1961, to Sept. 30, 1965, crest-stage gage, at datum 0.41 ft higher.

AVERAGE DISCHARGE.--11 years (1948-53, 1958-59, 1965-70), 31.5 cfs (19.44 inches per year, 22,820 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 423 cfs Feb. 17 (gage height, 3.93 ft); minimum, 2.4 cfs Dec. 2 (gage height, 2.26 ft).

Period of record: Maximum discharge, 790 cfs Dec. 23, 1964 (gage height, 4.56 ft, present site and datum), from rating curve extended above 270 cfs on basis of slope-area measurement; maximum gage height, 4.93 ft Feb. 11, 1951 (ice jam), site and datum then in use; minimum discharge recorded, 2.4 cfs Dec. 2, 1969 (gage height, 2.26 ft).

REMARKS.--Records good. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 28 to Dec. 9, Jan. 3-11)

2.3	3.0	3.0	48
2.4	4.7	3.2	89
2.6	11	3.5	182
2.8	23	3.8	328

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.0	4.0	2.9	4.5	16	30	50	37	28	15	7.0	4.4
2	6.5	3.8	2.7	4.2	14	28	52	47	26	14	8.7	4.4
3	5.2	3.8	2.8	3.9	14	26	47	82	25	14	7.3	5.5
4	4.5	4.2	2.9	3.5	13	23	47	124	25	13	6.8	6.3
5	4.4	8.3	3.0	3.0	12	21	50	164	24	13	6.8	5.5
6	4.2	5.2	3.1	3.0	10	23	65	157	23	12	6.5	5.2
7	4.0	4.4	3.2	3.1	9.7	38	102	118	23	12	6.0	6.5
8	5.0	4.2	3.3	3.2	9.0	50	99	94	23	11	6.0	5.5
9	6.3	4.0	3.4	3.4	8.7	58	99	92	26	11	5.7	5.2
10	7.0	4.2	3.5	3.7	9.0	54	199	94	23	11	5.7	5.0
11	5.0	4.0	3.8	3.9	9.3	48	168	78	20	10	5.5	4.7
12	4.4	4.0	6.5	4.2	10	43	121	63	20	10	5.2	4.7
13	4.2	3.8	6.3	4.5	12	41	97	54	20	13	5.2	4.7
14	4.2	3.8	9.7	13	14	41	80	47	20	10	5.2	4.7
15	4.2	3.8	8.7	23	24	50	65	47	46	10	5.2	4.7
16	4.0	3.7	5.7	14	167	71	56	56	38	9.7	4.7	4.7
17	4.0	3.7	5.0	11	317	89	50	78	34	9.7	4.7	4.7
18	3.8	3.7	4.7	9.7	130	82	48	74	31	9.3	4.5	4.7
19	3.8	3.7	5.5	8.7	74	69	47	63	28	9.3	4.5	5.0
20	3.8	3.7	8.3	8.7	52	61	44	60	25	9.0	4.5	5.0
21	3.8	6.5	14	10	41	54	43	56	23	9.0	4.5	5.2
22	3.8	5.0	14	15	35	47	43	54	22	9.0	4.4	5.0
23	3.8	4.5	10	21	33	44	41	48	20	9.0	4.2	5.0
24	3.8	4.7	8.7	24	32	43	43	44	20	8.7	4.2	5.0
25	4.0	4.2	7.3	28	31	40	43	43	18	8.7	4.2	5.0
26	3.8	3.8	6.8	26	30	40	43	40	17	9.0	4.0	5.0
27	4.2	3.5	6.0	32	31	38	41	37	18	8.3	4.0	5.0
28	5.0	3.2	4.7	30	30	47	40	34	17	9.3	4.2	4.7
29	4.5	3.1	5.7	23	-----	56	37	33	16	8.3	4.4	4.5
30	4.2	3.0	5.2	20	-----	60	35	30	15	7.6	4.2	4.5
31	4.2	-----	5.0	18	-----	54	-----	28	-----	7.3	4.4	-----
TOTAL	140.6	125.5	182.4	383.2	1,187.7	1,469	1,995	2,076	714	320.2	162.4	150.0
MEAN	4.54	4.18	5.88	12.4	42.4	47.4	66.5	67.0	23.8	10.3	5.24	5.00
MAX	7.0	8.3	14	32	317	89	199	164	46	15	8.7	6.5
MIN	3.8	3.0	2.7	3.0	8.7	21	35	28	15	7.3	4.0	4.4
CFSM	.21	.19	.27	.56	1.93	2.15	3.02	3.05	1.08	.47	.24	.23
IN.	.24	.21	.31	.65	2.01	2.48	3.37	3.51	1.21	.54	.27	.25
AC-FT	279	249	362	760	2,360	2,910	3,960	4,120	1,420	635	322	298

CAL YR 1969 TOTAL 11,925.1 MEAN 32.7 MAX 283 MIN 2.7 CFSM 1.49 IN 20.16 ACFT 23,650
WAT YR 1970 TOTAL 8,906.0 MEAN 24.4 MAX 317 MIN 2.7 CFSM 1.11 IN 15.06 ACFT 17,670

PEAK DISCHARGE (BASE, 200 CFS).--Feb. 17 (0900) 423 cfs (3.93 ft), Apr. 10 (1100) 224 cfs (3.59 ft).

12417000 Hayden Lake at Hayden Lake, Idaho

LOCATION.--Lat 47°46'02", long 116°45'12", 300 ft north of center of sec.18, T.51 N., R.3 W., Kootenai County, at Avondale pumping plant, 1.6 miles northeast of Hayden Lake Post Office.

DRAINAGE AREA.--62.3 sq mi.

PERIOD OF RECORD.--May 1920 to current year.

GAGE.--Nonrecording gage read once daily. Datum of gage is 2,200.21 ft above mean sea level. Prior to Oct. 1, 1925, at datum 30.35 ft higher. Oct. 1, 1925, to Mar. 26, 1931, at datum 21.60 ft higher.

EXTREMES.--Current year: Maximum gage height observed, 39.24 ft May 20, 21, 22; minimum observed, 33.56 ft Dec. 8, 9, Jan. 11, 12, 13.

Period of record: Maximum gage height observed, 42.46 ft Apr. 22, 1956; minimum observed, 19.38 ft Dec. 16, 1931.

REMARKS.--Water is pumped from lake for irrigation and domestic supply. Lake has no natural surface outlet; but, due to the permeability of the lakebed, a considerable part of the total inflow leaves the lake by infiltration to the ground water of the Rathdrum Prairie.

GAGE HEIGHT, IN FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	34.52	34.04	33.64	33.68	34.26	35.92	37.24	38.52	39.10	38.42	37.06	35.64
2	34.52	34.02	33.62	33.68	34.26	35.94	37.28	38.52	39.08	38.40	37.02	35.60
3	34.50	34.00	33.62	33.68	34.28	35.98	37.36	38.54	39.06	38.36	37.00	35.54
4	34.50	34.00	33.60	33.66	34.28	35.98	37.38	38.56	39.00	38.32	36.96	35.56
5	34.46	34.00	33.60	33.64	34.30	36.00	37.42	38.66	38.98	38.26	36.92	35.54
6	34.44	34.00	33.58	33.64	34.30	36.00	37.46	38.76	38.94	38.22	36.88	35.52
7	34.44	33.98	33.58	33.62	34.28	36.08	37.50	38.86	38.90	38.16	36.84	35.50
8	34.42	33.96	33.56	33.60	34.28	36.12	37.58	38.92	38.86	38.12	36.80	35.46
9	34.42	33.96	33.56	33.60	34.28	36.18	37.64	38.98	38.88	38.08	36.76	35.42
10	34.40	33.94	33.58	33.58	34.28	36.22	37.76	39.06	38.86	38.04	36.72	35.36
11	34.40	33.94	33.58	33.56	34.26	36.28	37.90	39.10	38.84	37.98	36.68	35.32
12	34.38	33.92	33.58	33.56	34.28	36.30	38.00	39.14	38.82	37.94	36.62	35.28
13	34.36	33.92	33.60	33.56	34.28	36.34	38.08	39.16	38.78	37.90	36.56	35.24
14	34.32	33.90	33.60	33.60	34.32	36.38	38.14	39.16	38.78	37.86	36.52	35.20
15	34.30	33.90	33.62	33.66	34.36	36.44	38.18	39.18	38.86	37.82	36.46	35.16
16	34.28	33.88	33.62	33.70	34.62	36.50	38.22	39.20	38.88	37.78	36.40	35.14
17	34.26	33.86	33.62	33.70	35.10	36.60	38.24	39.20	38.88	37.74	36.36	35.10
18	34.24	33.84	33.60	33.74	35.40	36.68	38.26	39.22	38.88	37.70	36.30	35.08
19	34.22	33.82	33.60	33.76	35.54	36.76	38.28	39.22	38.88	37.64	36.24	35.04
20	34.20	33.80	33.62	33.78	35.64	36.80	38.30	39.24	38.86	37.58	36.20	35.02
21	34.18	33.78	33.66	33.80	35.68	36.86	38.32	39.24	38.84	37.50	36.16	35.02
22	34.16	33.78	33.66	33.80	35.74	36.88	38.36	39.24	38.82	37.44	36.12	35.00
23	34.16	33.76	33.68	33.86	35.78	36.92	38.38	39.22	38.78	37.40	36.06	34.98
24	34.14	33.78	33.68	33.92	35.82	36.96	38.40	39.22	38.74	37.36	36.00	34.94
25	34.12	33.76	33.70	33.98	35.84	37.00	38.42	39.20	38.70	37.32	35.94	34.92
26	34.10	33.74	33.70	34.04	35.86	37.02	38.44	39.18	38.64	37.26	35.90	34.90
27	34.08	33.72	33.70	34.14	35.88	37.02	38.46	39.16	38.60	37.22	35.86	34.88
28	34.08	33.70	33.70	34.20	35.90	37.08	38.48	39.14	38.54	37.22	35.82	34.86
29	34.06	33.68	33.70	34.22	-----	37.14	38.50	39.12	38.50	37.18	35.78	34.84
30	34.06	33.66	33.68	34.22	-----	37.16	38.50	39.12	38.46	37.14	35.74	34.82
31	34.04	-----	33.68	34.24	-----	37.20	-----	39.10	-----	37.10	35.70	-----
MEAN	34.28	33.87	33.63	33.79	34.90	36.54	38.02	39.04	38.82	37.76	36.40	35.20
MAX	34.52	34.04	33.70	34.24	35.90	37.20	38.50	39.24	39.10	38.42	37.06	35.64
MIN	34.04	33.66	33.56	33.56	34.26	35.92	37.24	38.52	38.46	37.10	35.70	34.82

SPOKANE RIVER BASIN

12418000 Rathdrum Prairie Canal at Huetter, Idaho

LOCATION.--Lat 47°42'35", long 116°52'05", in SE¼NE¼ sec.6, T.50 N., R.4 W., Kootenai County, on left bank 815 ft downstream from outlet of discharge pipe, 0.6 mile north of pumping plant, and 0.8 mile northwest of Huetter.

PERIOD OF RECORD.--October 1945 to current year. Monthly discharge only for October 1945 to March 1946, published in WSP 1316.

GAGE.--Water-stage recorder. Datum of gage is 2,272.02 ft above mean sea level (Bureau of Reclamation bench mark). Prior to Oct. 5, 1967, water-stage recorder at site 365 ft upstream at datum 1.00 ft higher.

EXTREMES.--Period of record: Maximum daily discharge, 66 cfs June 29 to July 2, 1947; no flow for long periods in each year.

REMARKS.--Records good except those for September, which are fair. Canal carries water which is pumped from Spokane River in sec.7, T.50 N., R.4 W., for irrigation of first unit of Rathdrum Prairie project (about 3,000 acres).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							0	14	53	55	55	50
2							0	23	45	57	55	50
3							0	23	54	58	55	45
4							0	18	55	57	55	49
5							0	24	56	57	55	49
6							0	24	56	57	55	49
7							0	24	56	58	55	49
8							0	25	56	59	55	49
9							0	25	55	59	55	48
10							0	25	53	49	54	48
11							0	25	54	53	55	48
12							0	25	53	53	54	48
13							0	26	53	54	54	48
14							0	25	53	53	55	47
15							0	35	51	53	54	47
16							0	47	50	48	53	47
17							0	46	50	49	53	47
18							0	46	50	53	53	47
19							0	46	50	47	53	47
20							0	46	50	55	53	15
21							0	47	49	55	47	0
22							0	48	48	55	52	0
23							5.6	49	48	54	52	0
24							7.4	49	48	53	52	0
25							0	50	32	53	51	0
26							0	50	22	52	51	0
27							0	51	53	52	47	0
28							0	53	54	53	53	0
29					-----		0	52	55	54	53	0
30					-----		0	53	55	54	53	0
31		-----			-----		-----	53	-----	55	46	-----
TOTAL	0	0	0	0	0	0	13.0	1,147	1,517	1,674	1,643	927
MEAN	0	0	0	0	0	0	.43	37.0	50.6	54.0	53.0	30.9
MAX	0	0	0	0	0	0	7.4	53	56	59	55	50
MIN	0	0	0	0	0	0	0	14	22	47	46	0
AC-FT	0	0	0	0	0	0	26	2,280	3,010	3,320	3,260	1,840
CAL YR 1969	TOTAL 6,274.4		MEAN 17.2		MAX 54		MIN 0		ACFT 12,450			
WAT YR 1970	TOTAL 6,921.0		MEAN 19.0		MAX 59		MIN 0		ACFT 13,730			

12419000 Spokane River near Post Falls, Idaho

LOCATION.--Lat 47°42'10", long 116°58'40", in SW¼SW¼ sec.4, T.50 N., R.5 W., Kootenai County, on right bank 1 mile downstream from powerplant of Washington Water Power Co., 1.5 miles southwest of Post Falls, and at mile 100.7.

DRAINAGE AREA.--3,840 sq mi, approximately, of which about 122 sq mi in the vicinity of Hayden Lake is noncontributing to this station.

PERIOD OF RECORD.--October 1912 to current year (prior to January 1913 monthly discharge only, published in WSP 870 and 1736). Prior to October 1949, published as "at Post Falls".

GAGE.--Water-stage recorder. Datum of gage is 2,050 ft above mean sea level, referenced to same datum as gage on Coeur d'Alene Lake at Coeur d'Alene (see sta 12415500). Datum of gage is 2,053 ft above mean sea level. Jan. 1, 1913, to Nov. 21, 1920, nonrecording gage and Nov. 22, 1920, to Sept. 30, 1964, water-stage recorder at present site or 0.6 or 0.8 mile upstream at datum 50 ft lower than present datum.

AVERAGE DISCHARGE.--River only, 58 years, 6,229 cfs (4,513,000 acre-ft per year); 15-year base period (1952-67), 6,697 cfs; combined river and diversions above gage, 58 years, 6,328 cfs (4,585,000 acre-ft per year); 15-year base period (1952-67), 6,794 cfs.

EXTREMES.--Current year: Maximum discharge, 23,800 cfs May 29 (gage height, 18.93 ft); minimum, 80 cfs Sept. 23 (gage height, 4.95 ft).

Period of record: Maximum discharge, 50,100 cfs when recorder was not operating Dec. 25, 1933 (determined from unpublished records collected by Washington Water Power Co. for station at Liberty Bridge); minimum, 78 cfs Aug. 15, 1968 (gage height, 4.95 ft).

REMARKS.--Records excellent. Rathdrum Prairie Canal (see sta 12418000) diverts water above gage for irrigation. Figures of daily discharge do not include water diverted by this canal. Flow regulated by dam at Post Falls and affected by storage in Coeur d'Alene Lake (see sta 12415500).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,630	1,690	1,600	2,060	6,380	9,010	8,180	9,460	20,700	1,380	1,200	1,210
2	1,630	1,690	1,590	2,060	5,660	8,840	8,140	9,360	19,800	772	1,010	1,190
3	1,620	1,690	1,600	2,050	5,980	8,510	8,140	9,520	19,500	772	1,410	1,190
4	1,630	1,690	1,600	2,050	6,010	8,110	8,110	9,580	19,100	1,840	1,260	1,170
5	1,630	1,800	1,600	2,060	6,070	7,770	8,010	11,800	19,200	2,800	1,270	1,200
6	1,650	1,950	1,590	2,060	5,990	7,140	8,030	13,900	19,200	2,810	1,370	1,190
7	1,670	1,960	1,600	2,050	5,920	7,070	8,210	16,400	19,300	2,510	1,500	1,180
8	1,670	1,960	1,610	2,050	5,860	7,200	8,930	18,200	19,500	2,040	1,490	1,240
9	1,670	1,950	1,610	1,940	5,450	7,310	9,440	19,500	19,400	1,780	1,420	1,410
10	1,670	1,950	1,610	1,670	5,420	7,390	9,760	20,100	18,900	1,780	1,250	1,410
11	1,660	1,960	1,610	1,660	5,740	7,330	10,200	20,500	18,300	2,050	1,260	1,410
12	1,660	1,980	1,840	1,640	5,660	7,120	10,700	20,500	17,000	1,790	1,250	1,420
13	1,670	1,850	2,010	1,940	5,660	7,390	10,800	20,400	16,100	2,480	1,240	1,420
14	1,670	1,810	2,000	2,200	5,680	7,310	10,900	19,800	15,300	3,250	1,240	1,410
15	1,680	1,960	2,010	2,410	5,720	7,380	10,900	19,100	15,200	2,650	1,230	1,390
16	1,660	1,960	2,000	2,650	6,260	7,550	10,800	18,500	15,000	2,280	1,240	1,400
17	1,680	1,830	2,000	2,810	11,000	7,820	10,600	18,300	14,800	2,280	1,250	1,410
18	1,680	1,570	2,010	3,020	13,700	8,500	10,400	18,900	14,700	2,260	1,230	1,400
19	1,680	1,590	2,010	3,310	13,000	8,770	10,200	20,000	14,400	2,270	1,220	1,390
20	1,680	1,570	2,010	3,360	12,700	8,750	10,100	20,900	13,900	2,060	1,230	1,400
21	1,670	1,580	2,070	3,640	12,600	8,710	9,840	21,500	13,400	1,800	1,220	1,280
22	1,670	1,580	3,240	4,010	12,300	8,640	9,700	22,000	13,000	1,810	1,210	340
23	1,690	1,580	3,490	3,540	11,900	8,510	9,620	22,400	12,500	1,540	1,210	740
24	1,680	1,590	3,500	5,010	11,400	8,280	9,660	22,600	12,100	1,080	1,210	930
25	1,680	1,600	3,510	5,230	11,000	8,140	9,720	22,700	11,500	1,030	931	1,440
26	1,660	1,580	3,300	4,390	10,600	7,970	9,820	22,900	4,890	1,280	570	1,420
27	1,670	1,570	2,740	4,430	10,100	7,910	9,860	23,100	1,360	1,280	1,060	1,430
28	1,680	1,580	2,700	4,450	9,440	7,870	9,840	23,300	1,360	1,280	1,200	1,430
29	1,680	1,590	2,720	5,200	-----	7,960	9,820	23,200	1,650	1,300	1,190	1,430
30	1,680	1,600	2,300	6,340	-----	8,030	9,600	22,700	1,820	1,600	1,190	1,420
31	1,690	-----	2,060	6,980	-----	7,380	-----	21,900	-----	1,500	1,200	-----
TOTAL	51,640	52,260	67,140	98,270	233,200	245,670	288,030	583,020	422,880	57,354	37,761	38,300
MEAN	1,666	1,742	2,166	3,170	8,329	7,925	9,601	18,810	14,100	1,850	1,218	1,277
MAX	1,690	1,980	3,510	6,980	13,700	9,010	10,900	23,300	20,700	3,250	1,500	1,440
MIN	1,620	1,570	1,590	1,640	5,420	7,070	8,010	9,360	1,360	772	570	340
AC-FT	102,400	103,700	133,200	194,900	462,600	487,300	571,300	1,156M	838,800	113,800	74,900	75,970
MEAN†	1,666	1,742	2,166	3,170	8,329	7,925	9,601	18,840	14,150	1,904	1,271	1,308
AC-FT†	102,400	103,700	133,200	194,900	462,600	487,300	571,300	1,159M	841,800	117,100	78,160	77,810
CAL YR 1969	TOTAL 2,610,465		MEAN 7,152		MAX 29,800		MIN 714		AC-FT 5,178,000			
WTR YR 1970	TOTAL 2,175,525		MEAN 5,960		MAX 23,300		MIN 340		AC-FT 4,315,000			
CAL YR 1969†	TOTAL 2,616,739.4		MEAN 7,169		CFSM 1.87		IN 25.35		AC-FT 5,190,000			
WTR YR 1970†	TOTAL 2,182,446		MEAN 5,979		CFSM 1.56		IN 21.14		AC-FT 4,329,000			

M Expressed in thousands.

† Adjusted for diversion through Rathdrum Prairie Canal.

SNAKE RIVER BASIN

SNAKE RIVER MAIN STEM

13010500 Jackson Lake near Moran, Wyo.

LOCATION.--Lat 43°51'33", long 110°35'23", in SE¼SW¼ sec.18, T.45 N., R.114 W., Teton County, in Grand Teton National Park, near left end of spillway over dam on Snake River, 4.3 miles west of Moran, and at mile 1,000.2.

DRAINAGE AREA.--824 sq mi.

PERIOD OF RECORD.--July 1908 to current year (1908-10 fragmentary). Prior to October 1968, published as "at Moran".

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (Bureau of Reclamation datum). Datum of Geological Survey, unadjusted, is 2.08 ft lower. Prior to June 1, 1941, at site 300 ft upstream at same datum.

EXTREMES.--Current year: Maximum contents, 850,600 acre-ft June 30 (elevation, 6,769.14 ft); minimum, 566,600 acre-ft Oct. 4-6 (elevation, 6,757.57 ft).

Period of record: Maximum contents, 859,530 acre-ft July 11, 1965 (elevation, 6,769.49 ft); no usable contents for several days during period August to October 1919.

REMARKS.--Reservoir was formed by log crib dam built in the outlet of the natural lake in 1906. Usable capacity was 300,000 acre-ft. This dam washed out in July 1910 and was replaced by an earth dam, forming a reservoir with a usable capacity of 380,000 acre-ft. The earth dam was raised in 1916, increasing the usable capacity to 790,000 acre-ft. In 1917, by dredging the outlet, the capacity was further increased to 847,000 acre-ft between elevations 6,730 (top of baffles to sluices) and 6,769 ft (top of spillway gates). Reservoir is used to store water for irrigation in Snake River valley, Idaho. Figures given herein represent usable contents.

COOPERATION.--Reservoir elevations and capacity table furnished by Bureau of Reclamation.

REVISIONS.--WSP 1217: Drainage area.

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

6,750	392,900
6,760	624,360
6,770	872,600

CONTENTS, IN ACRE-FEET, AT 0800, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	568,500	585,300	601,000	606,400	625,100	627,700	629,900	619,800	656,600	850,000	802,100	686,500
2	567,300	585,800	600,700	606,200	625,600	628,200	630,100	617,700	656,400	849,300	798,500	683,400
3	567,100	586,500	600,500	606,000	625,800	628,400	630,400	615,800	657,800	849,300	795,000	679,700
4	566,600	587,000	600,200	605,700	626,000	628,400	630,100	614,000	667,700	849,000	791,800	677,000
5	566,600	587,700	600,000	605,700	626,000	628,700	630,100	611,700	672,400	848,500	788,200	673,800
6	566,600	588,400	599,500	605,500	626,000	628,900	629,900	609,100	683,100	848,000	785,200	670,900
7	566,800	589,100	599,300	605,200	626,300	628,900	629,900	606,700	694,800	848,000	782,000	667,500
8	567,300	589,800	599,000	605,200	626,300	629,200	629,600	605,500	708,000	847,700	778,500	663,900
9	568,300	590,700	599,000	605,200	626,300	629,200	629,600	603,800	720,300	847,500	775,000	658,100
10	569,400	591,500	599,000	605,500	626,000	629,400	629,400	602,900	731,900	847,200	771,200	654,000
11	570,200	592,400	599,000	605,700	626,000	629,400	629,400	601,400	737,900	847,500	767,200	650,100
12	570,900	593,400	599,500	606,000	626,300	629,400	629,600	599,000	741,800	847,200	763,700	646,200
13	571,300	594,300	600,500	606,400	626,300	629,400	629,600	596,200	744,300	847,000	760,000	642,600
14	571,800	594,800	601,000	606,900	626,500	629,600	629,900	592,900	746,300	845,400	756,000	638,800
15	572,000	595,200	601,000	607,400	626,500	630,400	630,400	589,800	748,000	843,700	752,500	635,200
16	572,500	596,000	601,000	608,100	626,500	630,400	630,800	587,000	750,500	842,100	748,800	631,100
17	573,200	596,900	600,700	610,000	626,800	630,600	630,800	583,200	753,800	840,600	745,000	626,800
18	573,700	597,400	600,700	613,400	627,200	630,800	630,600	579,600	760,000	838,800	738,900	622,000
19	574,400	598,100	600,700	616,000	627,500	630,800	630,600	577,700	767,000	837,000	734,900	617,700
20	574,900	598,600	601,400	617,200	627,500	630,800	630,400	577,200	775,200	835,000	731,400	613,600
21	575,800	599,300	602,400	617,700	627,500	630,800	629,900	577,900	785,000	832,500	727,500	610,500
22	577,000	599,800	604,000	618,100	627,200	630,600	629,200	580,300	795,500	829,700	723,800	606,900
23	577,900	600,200	604,800	619,600	627,200	630,600	628,700	582,000	807,400	827,600	720,100	602,600
24	578,400	600,700	606,900	620,100	627,200	630,400	628,000	585,300	817,500	824,600	716,200	599,800
25	579,600	601,000	607,200	620,500	627,200	630,400	627,000	592,200	826,900	821,500	710,300	594,500
26	580,300	601,200	607,200	620,800	627,000	630,100	626,500	604,000	834,800	818,500	707,100	589,300
27	581,000	601,200	606,900	622,400	627,000	630,400	625,600	617,400	841,400	815,700	703,900	585,300
28	582,200	601,200	606,900	623,600	627,000	630,400	624,800	632,800	846,200	813,200	701,400	581,500
29	583,400	601,000	606,700	623,900	-----	630,100	623,200	646,200	850,000	810,900	697,500	577,900
30	583,900	601,000	606,700	623,900	-----	630,100	621,200	654,000	850,600	808,400	693,600	573,900
31	584,600	-----	606,400	624,100	-----	629,900	-----	656,600	-----	805,600	689,700	-----
MAX	584,600	601,200	607,200	624,100	627,500	630,800	630,800	656,600	850,600	850,000	802,100	686,500
MIN	566,600	585,300	599,000	605,200	625,100	627,700	621,200	577,200	656,400	805,600	689,700	573,900
(†)	6,758.33	6,759.02	6,759.25	6,759.99	6,760.11	6,760.23	6,759.87	6,761.34	6,769.14	6,767.37	6,762.70	6,757.88
(‡)	+14,900	+16,400	+5,400	+17,700	+2,900	+2,900	-8,700	+35,400	+194,000	-45,000	-115,900	-115,800
CAL YR 1969	MAX 850,600	MIN 566,600	‡ -14,600									
WAT YR 1970	MAX 850,600	MIN 566,600	‡ -4,200									

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

71

LOCATION.--Lat 43°51'31", long 110°35'09", in SW₄SE₄ sec.18, T.45 N., R.114 W., Teton County, in Grand Teton National Park, on left bank, 1,000 ft downstream from Jackson Lake Dam, 4.1 miles west of Moran, and at mile 1,000.1.

PERIOD OF RECORD.--September 1903 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "South Fork Snake River at Moran" prior to October 1910 and as "Snake River at Moran" October 1910 to September 1968.

GAGE.--Water-stage recorder. Datum of gage is 6,727.84 ft above mean sea level, unadjusted. Prior to June 13, 1917, nonrecording gage, and June 14, 1917, to May 20, 1940, water-stage recorder, at site 1.5 miles downstream at different datums.

EXTREMES.--Current year: Maximum discharge, 5,760 cfs June 29 (gage height, 7.70 ft); minimum, 0.30 cfs Oct. 26, 27, 28 (gage height, 0.89 ft).

Period of record: Maximum discharge, 15,100 cfs June 12, 1918 (gage height, 10.41 ft, site and datum then in use); minimum, 0.30 cfs Oct. 26, 27, 28, 1969 (gage height, 0.89 ft).

Flood during early June 1894 was considerably higher than that of June 12, 1918.

REMARKS.--Records excellent. Flow regulated by Jackson Lake (see sta 13010500).

COOPERATION.--Gage-height record furnished by Bureau of Reclamation.

REVISIONS (WATER YEARS).--WSP 1217: 1944(m), drainage area. WSP 1347: 1906-10.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 16 to Apr. 11; stage-discharge relation affected by ice Nov. 17-24)

1.0	3.0	1.6	70	3.0	580	6.0	3,250
1.1	8.3	2.0	168	4.0	1,210	7.0	4,670
1.3	28	2.5	345	5.0	2,110	8.0	6,300

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	986	2.2	386	390	399	399	394	1,480	5,080	3,750	2,740	2,580
2	818	2.2	386	390	399	399	399	1,480	5,080	3,640	2,720	2,580
3	618	2.2	386	390	399	399	399	1,490	5,090	4,070	2,710	2,570
4	412	2.2	386	390	399	399	399	1,850	5,110	4,520	2,710	2,560
5	208	2.4	386	390	399	399	399	2,110	4,920	4,010	2,700	2,550
6	97	2.4	386	390	399	399	399	2,100	3,810	3,610	2,700	2,540
7	15	2.4	386	390	399	399	394	2,100	3,670	3,600	2,700	2,560
8	4.1	2.4	386	390	399	399	399	2,100	3,740	3,350	2,690	2,650
9	2.4	2.6	386	390	399	399	394	2,090	4,060	3,130	2,690	2,640
10	2.2	2.6	381	390	399	399	399	2,090	4,740	2,840	2,680	2,630
11	2.4	2.6	381	390	399	399	399	2,310	5,110	2,830	2,690	2,620
12	2.4	2.6	381	390	399	399	399	2,530	4,420	2,830	2,650	2,610
13	2.6	2.4	381	390	399	399	399	2,520	4,600	2,830	2,640	2,600
14	2.0	2.6	386	390	399	399	404	2,520	4,580	2,820	2,640	2,580
15	2.0	2.6	386	390	399	399	404	2,630	4,280	2,810	2,630	2,650
16	2.0	2.8	386	394	399	399	404	3,180	3,700	2,810	2,620	2,750
17	2.0	2.6	386	394	399	399	404	3,890	3,220	2,810	2,610	2,780
18	2.2	2.6	386	399	399	399	404	4,130	3,060	2,820	2,610	2,780
19	2.2	2.6	386	399	399	399	404	4,120	3,060	2,820	2,610	2,780
20	2.0	2.6	386	399	399	399	676	4,100	3,080	2,820	2,620	2,770
21	2.2	2.6	386	399	399	399	958	4,100	3,110	2,820	2,600	2,560
22	2.4	2.6	386	399	399	399	965	4,080	3,150	2,810	2,600	2,760
23	2.4	2.6	386	399	399	399	965	3,490	3,470	2,810	2,580	2,750
24	2.2	89	386	399	399	399	958	1,300	3,630	2,800	2,610	2,740
25	2.0	151	386	399	399	399	958	602	3,960	2,770	2,630	2,720
26	1.4	307	386	399	399	399	958	602	4,280	2,770	2,630	2,710
27	1.0	386	386	399	399	399	1,150	608	4,930	2,770	2,620	2,700
28	.30	386	386	399	399	399	1,480	613	5,330	2,770	2,620	2,710
29	1.0	386	386	399	-----	399	1,480	1,820	5,570	2,760	2,620	2,700
30	2.2	386	386	399	-----	399	1,480	4,330	5,080	2,760	2,610	2,620
31	2.2	-----	390	399	-----	399	-----	5,110	-----	2,740	2,600	-----
TOTAL	3,203.80	2,148.4	11,950	12,224	11,172	12,369	19,624	77,475	126,920	55,300	82,040	79,750
MEAN	103	71.6	385	394	399	399	654	2,499	4,231	3,074	2,646	2,658
MAX	986	386	390	399	399	399	1,480	5,110	5,570	4,520	2,740	2,780
MIN	.30	2.2	381	390	399	399	394	602	3,060	2,740	2,580	2,540
AC-FT	6,350	4,260	23,700	24,250	22,160	24,530	38,920	153,700	251,700	189,000	162,700	158,200
CAL YR 1969	TOTAL	506,502.20	MEAN	1,388	MAX	4,360	MIN	.30	ACFT	1,005,000		
WAT YR 1970	TOTAL	534,176.20	MEAN	1,463	MAX	5,570	MIN	.30	ACFT	1,060,000		

PACIFIC CREEK BASIN

13011500 Pacific Creek at Moran, Wyo.

LOCATION.--Lat 43°51'04", long 110°30'59", in SW¼NW¼ sec.23, T.45 N., R.114 W., Teton County, in Grand Teton National Park, on right bank 6 ft upstream from bridge on U.S. Highway 287, at Moran, and at mile 0.5.

DRAINAGE AREA.--160 sq mi. Mean altitude, 8,160 ft.

PERIOD OF RECORD.--July to November 1906 (gage heights only), July 1917 to September 1918 (no winter records), September 1944 to current year. Published as "near Moran" prior to October 1968.

GAGE.--Water-stage recorder. Altitude of gage is 6,720 ft (from topographic map). July 31 to Nov. 11, 1906, nonrecording gage at site 0.4 mile downstream at different datum. July 20, 1917, to Sept. 30, 1918, nonrecording gage at site 0.1 mile downstream at different datum. Sept. 23, 1944, to Nov. 13, 1959, at site 100 ft upstream at same datum.

AVERAGE DISCHARGE.--26 years (1944-70), 262 cfs (22.24 inches per year, 189,800 acre-ft per year); 15-year base period (1952-67), 258 cfs.

EXTREMES.--Current year: Maximum discharge, 2,600 cfs June 5 (gage height, 5.84 ft); minimum daily, 22 cfs Nov. 18.

Period of record: Maximum discharge, 3,470 cfs May 21, 1954; maximum gage height, 5.84 ft, June 5, 1970; minimum daily discharge, 22 cfs Nov. 18, 1969.

REMARKS.--Records good except those for December to April, which are fair. No diversion or regulation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	78	57	30	34	37	46	50	52	1,200	770	131	93		
2	76	48	29	33	39	46	50	55	1,470	694	124	85		
3	84	46	29	32	41	46	50	71	1,780	662	118	80		
4	80	51	29	31	43	47	54	91	2,020	632	114	76		
5	74	52	29	30	44	47	56	113	2,130	604	114	85		
6	74	52	29	29	45	48	60	138	2,070	578	112	100		
7	74	55	29	28	46	49	62	159	1,830	534	108	120		
8	74	54	29	30	46	49	60	218	1,690	485	102	94		
9	76	52	29	34	46	49	58	218	1,860	450	96	84		
10	74	54	29	36	46	49	57	203	1,680	420	94	78		
11	71	55	30	38	46	49	54	173	1,410	405	91	74		
12	60	59	31	39	46	49	50	170	1,170	386	87	76		
13	54	52	33	40	46	49	50	173	1,070	354	84	77		
14	62	52	32	41	46	49	52	159	1,240	327	82	78		
15	60	48	31	41	47	49	51	181	1,230	292	78	77		
16	59	54	30	41	48	49	48	260	1,250	253	77	74		
17	62	45	31	41	50	49	49	436	1,340	236	76	71		
18	60	22	32	41	47	49	51	688	1,320	228	72	70		
19	60	24	33	42	45	49	51	891	1,460	212	71	70		
20	59	26	35	42	45	49	51	1,060	1,500	203	70	74		
21	59	27	37	42	45	50	51	1,210	1,470	193	70	78		
22	60	28	38	42	46	50	51	1,100	1,520	187	68	77		
23	59	28	38	43	46	50	55	1,180	1,560	181	68	76		
24	60	30	36	45	46	50	52	1,240	1,590	170	66	78		
25	62	29	36	45	46	50	52	1,500	1,500	162	65	74		
26	60	28	35	45	46	50	57	1,760	1,390	154	64	74		
27	59	28	35	45	46	50	57	1,920	1,340	144	68	72		
28	60	28	34	42	46	50	55	2,050	1,360	139	116	72		
29	59	29	34	40	-----	50	52	1,720	1,120	162	98	71		
30	55	30	34	38	-----	50	52	1,540	940	146	89	70		
31	57	-----	34	36	-----	50	-----	1,190	-----	139	85	-----		
TOTAL	2,021	1,243	1,000	1,186	1,266	1,516	1,598	21,919	44,510	10,502	2,758	2,378		
MEAN	65.2	41.4	32.3	38.3	45.2	48.9	53.3	707	1,484	339	89.0	79.3		
MAX	84	59	38	45	50	50	62	2,050	2,130	770	131	120		
MIN	54	22	29	28	37	46	48	52	940	139	64	70		
CFSM	.41	.26	.20	.24	.28	.31	.33	4.42	9.28	2.12	.56	.50		
IN.	.47	.29	.23	.28	.29	.35	.37	5.10	10.35	2.44	.64	.55		
AC-FT	4,010	2,470	1,980	2,350	2,510	3,010	3,170	43,480	88,290	20,830	5,470	4,720		
CAL YR 1969	TOTAL	87,697	MEAN	240	MAX	1,900	MIN	22	CFSM	1.50	IN	20.39	ACFT	173,900
WAT YR 1970	TOTAL	91,897	MEAN	252	MAX	2,130	MIN	22	CFSM	1.58	IN	21.37	ACFT	182,300

PEAK DISCHARGE (BASE, 1,300 CFS)

NOTE.--No gage-height record Nov. 29 to Dec. 31, Jan. 4 to Feb. 5, and Mar. 9 to Apr. 14.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-28	0130	5.59	2,360	6-24	0200	5.46	1,880
6-5	0100	5.84	2,600				

BUFFALO FORK BASIN

73

13011900 Buffalo Fork above Lava Creek, near Moran, Wyo.

LOCATION.--Lat 43°50'14", long 110°26'21", in SE¼NE¼ sec.29, T.45 N., R.113 W., Teton County, in Grand Teton National Park, on right bank, underneath bridge on U.S. Highway 26, 287, about 2 miles upstream from Lava Creek, 3.5 miles east of Moran, and 4 miles upstream from mouth.

DRAINAGE AREA.--355 sq mi.

PERIOD OF RECORD.--September 1965 to current year. July to November 1906, July 1917 to September 1918, and September 1944 to September 1960 at sites about 4 miles downstream.

GAGE.--Water-stage recorder. Datum of gage is 6,772.78 ft above mean sea level (U.S. Bureau of Public Roads bench mark).

AVERAGE DISCHARGE.--5 years (1965-70), 543 cfs (393,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,860 cfs June 28 (gage height, 7.36 ft); minimum daily, 119 cfs May 1.

Period of record: Maximum discharge, 4,860 cfs June 28, 1970 (gage height, 7.36 ft); minimum daily, 82 cfs Jan. 28-31, 1969.

REMARKS.--Records good except those for winter period, which are fair. No regulation or significant diversions above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 13 to Apr. 18)

Oct. 1 to Apr. 18				Apr. 19 to Sept. 30			
1.1	140	1.0	104	2.5	670	5.0	2,630
1.3	189	1.3	177	3.0	975	6.0	3,530
1.6	285	1.6	272	4.0	1,750	7.0	4,500
2.0	458	2.0	425				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	224	192	132	135	130	120	125	119	1,250	2,040	575	279
2	224	168	130	135	130	120	125	126	1,630	2,140	550	276
3	231	176	130	135	132	120	125	145	2,280	2,420	520	272
4	224	189	130	133	133	120	125	183	2,950	2,400	495	262
5	218	189	130	125	126	120	125	222	3,370	2,560	480	308
6	221	184	130	120	128	122	130	269	3,490	2,500	475	366
7	212	186	130	120	128	123	140	316	3,450	2,140	456	405
8	218	181	130	125	128	125	140	286	3,120	1,970	443	316
9	224	179	130	130	128	125	138	241	3,600	1,930	425	283
10	218	181	130	130	128	125	132	225	3,100	1,770	413	269
11	212	181	130	130	125	125	130	194	2,500	1,780	401	258
12	192	184	130	130	125	125	128	194	2,010	1,540	389	248
13	184	184	130	130	125	125	124	180	1,650	1,410	377	252
14	209	182	130	130	123	125	124	180	1,740	1,360	366	262
15	195	180	130	130	123	125	124	192	1,660	1,150	358	252
16	198	175	132	130	123	125	122	265	1,570	1,070	350	252
17	201	140	135	130	122	125	121	425	1,590	1,040	342	245
18	198	126	140	133	120	122	122	670	2,000	1,050	331	241
19	198	130	142	135	120	122	126	853	2,520	996	323	235
20	195	133	145	138	120	122	126	1,040	3,220	879	316	241
21	198	135	145	140	120	122	124	1,200	3,610	828	316	269
22	195	135	143	140	120	122	126	1,160	3,980	780	301	262
23	195	135	140	145	120	122	131	1,210	4,000	742	294	252
24	195	135	140	145	120	122	126	1,160	4,000	686	283	252
25	201	135	135	140	120	122	126	1,630	4,300	660	276	232
26	195	135	133	140	120	125	128	2,130	4,220	660	272	238
27	192	135	132	135	120	125	128	2,500	4,130	650	276	235
28	201	135	132	132	120	125	128	2,530	4,520	645	338	232
29	195	135	132	128	-----	125	124	1,900	3,940	720	308	232
30	189	135	132	125	-----	125	122	1,650	3,060	660	286	228
31	195	-----	135	120	-----	125	-----	1,290	-----	620	279	-----
TOTAL	6,347	4,790	4,145	4,094	3,477	3,821	3,815	24,685	88,460	41,796	11,614	7,954
MEAN	205	160	134	132	124	123	127	796	2,949	1,348	375	265
MAX	231	192	145	145	133	125	140	2,530	4,520	2,560	575	405
MIN	184	126	130	120	120	120	121	119	1,250	620	272	228
CFSM	.58	.45	.38	.37	.35	.35	.36	2.24	8.31	3.80	1.06	.75
IN.	.67	.50	.43	.43	.36	.40	.40	2.59	9.27	4.38	1.22	.83
AC-FT	12,590	9,500	8,220	8,120	6,900	7,580	7,570	48,960	175,500	82,900	23,040	15,780

CAL YR 1969 TOTAL 183,461 MEAN 503 MAX 3,190 MIN 82 CFSM 1.42 IN 19.22 ACFT 363,900
WAT YR 1970 TOTAL 204,998 MEAN 562 MAX 4,520 MIN 119 CFSM 1.58 IN 21.48 ACFT 406,600

PEAK DISCHARGE (BASE, 3,100 CFS).--June 6 (0500) 3,840 cfs (6.34 ft), June 29 (1230) 4,860 cfs (7.36 ft).

NOTE.--No gage-height record Nov. 13 to Dec. 31.

SNAKE RIVER MAIN STEM

13022500 Snake River above reservoir, near Alpine, Wyo.

LOCATION.--Lat 43°11'47", long 110°53'18", Lincoln County, on right bank 0.3 mile downstream from Wolf Creek, 6.4 miles upstream from Greys River, 7.4 miles east of Alpine, and at mile 928.0.

DRAINAGE AREA.--3,465 sq mi.

PERIOD OF RECORD.--March 1937 to March 1939 (published as "above Greys River, near Alpine"), July 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,683.90 ft above mean sea level, unadjusted. Mar. 16, 1937, to Mar. 31, 1939, at site 6.0 miles downstream at different datum.

AVERAGE DISCHARGE.--18 years (1937-38, 1953-70), 4,401 cfs (3,189,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 21,600 cfs June 10 (gage height, 10.19 ft); minimum daily, 1,030 cfs Nov. 20.

Period of record: Maximum discharge, 26,800 cfs June 28, 1954 (gage height, 11.68 ft); minimum, 740 cfs Nov. 16, 1955 (gage height, 2.19 ft).

REMARKS.--Records excellent except those for winter period, which are fair. Flow partly regulated by Jackson Lake (see sta 13010500). Some diversions from tributaries above station. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 18 to Jan. 20, Jan. 30 to Feb. 4, Feb. 18-23)

Oct. 1 to May 25				May 26 to Sept. 30			
2.6	1,140	5.0	5,000	4.5	3,840	9.0	17,200
3.0	1,540	7.0	10,400	5.0	4,870	10.5	23,000
3.5	2,120	9.0	16,600	7.0	10,200		
4.0	2,920						

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,750	1,470	1,200	1,180	1,400	1,480	1,400	2,790	13,000	13,700	6,070	4,430
2	2,500	1,430	1,200	1,180	1,420	1,480	1,450	2,900	13,600	11,000	5,880	4,410
3	2,300	1,390	1,200	1,180	1,450	1,450	1,450	3,300	15,000	11,200	5,710	4,390
4	2,150	1,380	1,200	1,180	1,490	1,450	1,420	3,740	16,800	11,800	5,610	4,280
5	2,000	1,410	1,180	1,180	1,520	1,440	1,440	4,680	18,200	12,200	5,520	4,390
6	1,970	1,400	1,150	1,180	1,530	1,400	1,530	5,310	18,400	11,800	5,520	4,660
7	1,910	1,410	1,130	1,180	1,520	1,430	1,680	5,970	17,600	11,500	5,380	4,870
8	1,790	1,390	1,110	1,180	1,490	1,470	1,680	6,070	17,400	10,800	5,270	4,720
9	1,760	1,370	1,110	1,200	1,480	1,490	1,670	5,670	18,300	10,200	5,290	4,620
10	1,740	1,360	1,110	1,250	1,570	1,420	1,770	5,740	19,100	9,650	5,090	4,560
11	1,720	1,380	1,160	1,250	1,600	1,390	2,000	5,140	17,300	9,350	5,020	4,450
12	1,680	1,370	1,200	1,280	1,530	1,410	1,920	5,240	15,900	9,110	4,870	4,430
13	1,610	1,370	1,260	1,300	1,510	1,440	1,800	5,260	14,200	8,860	4,810	4,450
14	1,570	1,340	1,230	1,330	1,490	1,450	1,770	5,190	13,500	8,520	4,760	4,430
15	1,560	1,320	1,220	1,350	1,480	1,490	1,720	5,340	13,300	8,110	4,720	4,390
16	1,560	1,330	1,200	1,380	1,470	1,500	1,630	6,400	12,300	7,700	4,680	4,450
17	1,580	1,310	1,230	1,400	1,500	1,510	1,630	8,230	11,600	7,520	4,640	4,510
18	1,630	1,100	1,300	1,430	1,400	1,380	1,660	10,400	11,600	7,460	4,530	4,510
19	1,600	1,050	1,340	1,470	1,330	1,440	1,720	11,400	12,400	7,330	4,470	4,510
20	1,560	1,030	1,340	1,500	1,300	1,420	1,680	12,100	13,900	7,200	4,490	4,510
21	1,520	1,100	1,340	1,540	1,330	1,440	1,850	12,800	15,200	6,990	4,450	4,580
22	1,500	1,130	1,340	1,700	1,380	1,440	2,120	12,600	16,400	7,040	4,410	4,600
23	1,500	1,150	1,340	1,740	1,400	1,450	2,220	12,800	17,200	6,780	4,370	4,580
24	1,500	1,250	1,340	1,770	1,450	1,480	2,260	11,900	17,900	6,520	4,300	4,560
25	1,540	1,200	1,250	1,660	1,430	1,460	2,260	11,100	17,900	6,320	4,320	4,530
26	1,510	1,200	1,250	1,600	1,420	1,460	2,400	12,100	18,100	6,240	4,260	4,490
27	1,490	1,200	1,250	1,660	1,420	1,430	2,490	13,300	17,700	6,240	4,260	4,490
28	1,530	1,200	1,250	1,560	1,450	1,440	2,670	14,900	18,500	6,170	4,450	4,470
29	1,520	1,200	1,250	1,510	-----	1,450	2,790	13,500	18,500	6,420	4,530	4,430
30	1,470	1,200	1,240	1,430	-----	1,440	2,790	13,500	16,700	6,400	4,430	4,410
31	1,460	-----	1,190	1,350	-----	1,430	-----	13,500	-----	6,320	4,370	-----
TOTAL	53,480	38,440	38,110	43,100	40,760	44,860	56,870	262,870	477,500	266,450	150,480	135,110
MEAN	1,725	1,281	1,229	1,390	1,456	1,447	1,896	8,480	15,920	8,595	4,854	4,504
MAX	2,750	1,470	1,340	1,770	1,600	1,510	2,790	14,900	19,100	13,700	6,070	4,870
MIN	1,460	1,030	1,110	1,180	1,300	1,380	1,400	2,790	11,600	6,170	4,260	4,280
AC-FT	106,100	76,250	75,590	85,490	80,850	88,980	112,800	521,400	947,100	528,500	298,500	268,000

CAL YR 1969 TOTAL 1,592,670 MEAN 4,363 MAX 15,300 MIN 1,030 ACFT 3,159,000
WAT YR 1970 TOTAL 1,608,030 MEAN 4,406 MAX 19,100 MIN 1,030 ACFT 3,190,000

NOTE.--No gage-height record Nov. 19 to Dec. 30.

13023000 Greys River above reservoir, near Alpine, Wyo.

LOCATION.--Lat 43°08'35", long 110°58'34", in SW¼SE¼ sec.34, T.37 N., R.118 W. (unsurveyed), Lincoln County, on right bank at Bridge Campground, 3 miles upstream from mouth, and 3.6 miles southeast of Alpine.

DRAINAGE AREA.--448 sq mi. Mean altitude, 8,080 ft.

PERIOD OF RECORD.--July to September 1917, June to September 1918, March 1937 to March 1939, October 1953 to current year. Published as Greys River near Alpine, Idaho, 1917-18 and as Greys River near Alpine, Wyo., 1937-39.

GAGE.--Water-stage recorder. Altitude of gage is 5,720 ft (from topographic map). July 6 to Sept. 30, 1917, and June 4 to Sept. 30, 1918, nonrecording gage and Mar. 17, 1937, to Mar. 31, 1939, water-stage recorder, at site 1.8 miles downstream, and October 1953 to Sept. 22, 1965, water-stage recorder at site 1 mile downstream at different datums.

AVERAGE DISCHARGE.--18 years (1937-38, 1953-70), 623 cfs (18.88 inches per year, 451,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,250 cfs June 9 (gage height, 4.67 ft); minimum daily discharge, 140 cfs Jan. 4-9.

Period of record: Maximum discharge observed, 5,200 cfs June 14, 1918 (gage height, 4.85 ft, former site and datum); maximum gage height observed, 19.1 ft (former site and datum) about Dec. 18, 1965 (ice jam); minimum discharge, 111 cfs Dec. 7, 1960 (gage height, 2.45 ft, former site and datum).

REMARKS.--Records good except those for December to February, which are fair. Less than 500 acres irrigated by diversions from Greys River and tributaries above station.

REVISIONS (WATER YEAR).--WRD Idaho 1967: 1966.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 6 to July 3; stage-discharge relation affected
by ice Nov. 19 to Feb. 28)

1.2	140	3.0	1,110
1.6	264	3.5	1,710
2.0	440	4.0	2,650
2.5	743	4.5	4,050

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	314	264	165	145	175	186	174	254	2,630	1,630	665	473
2	330	240	165	145	175	186	189	318	2,840	1,530	653	473
3	343	244	165	145	175	183	186	518	3,460	1,490	634	462
4	326	247	165	140	175	186	177	770	3,550	1,480	609	451
5	318	244	165	140	175	183	183	973	3,860	1,480	601	462
6	314	244	160	140	175	171	198	1,200	3,610	1,470	583	530
7	314	244	160	140	175	177	237	1,430	3,520	1,390	583	589
8	301	240	160	140	175	189	254	1,370	3,700	1,300	570	495
9	301	240	160	140	175	195	254	1,070	3,990	1,230	577	451
10	301	247	160	145	170	174	305	1,030	3,700	1,200	536	451
11	297	244	160	145	170	162	371	878	3,100	1,160	530	435
12	297	250	165	150	170	171	309	851	2,750	1,090	501	425
13	275	247	170	150	170	183	282	837	2,370	1,040	501	420
14	305	247	165	155	170	192	279	810	2,220	1,020	490	420
15	279	240	165	160	170	195	254	921	2,070	981	473	420
16	297	261	165	160	170	192	227	1,310	2,030	950	473	414
17	294	244	170	170	170	198	237	1,980	1,960	936	473	404
18	297	211	170	175	170	180	227	2,670	2,010	921	478	404
19	297	190	175	180	170	183	250	2,920	2,180	892	468	399
20	290	160	175	185	165	171	247	3,230	2,520	878	473	404
21	286	160	175	190	170	183	227	3,320	2,650	844	501	414
22	286	165	180	195	170	186	237	2,920	2,940	844	495	414
23	279	170	175	195	170	186	244	3,050	2,990	817	484	399
24	279	170	170	190	170	195	247	2,990	3,020	770	478	394
25	279	175	160	190	170	180	247	3,050	3,020	750	473	394
26	275	175	160	190	170	183	282	3,290	2,790	717	473	384
27	268	170	155	190	170	183	318	3,350	2,650	691	473	380
28	294	170	150	185	170	183	294	3,370	2,580	704	490	380
29	275	170	150	180	-----	177	264	3,260	2,180	736	495	371
30	268	165	145	180	-----	186	254	3,100	1,860	743	473	371
31	264	-----	145	175	-----	192	-----	2,540	-----	698	468	-----
TOTAL	9,143	6,438	5,070	5,110	4,800	5,691	7,454	59,580	84,750	32,382	16,174	12,883
MEAN	295	215	164	165	171	184	248	1,922	2,825	1,045	522	429
MAX	343	264	180	195	175	198	371	3,370	3,990	1,630	665	589
MIN	264	160	145	140	165	162	174	254	1,860	691	468	371
CFSM	.66	.48	.37	.37	.38	.41	.55	4.29	6.31	2.33	1.17	.96
IN.	.76	.53	.42	.42	.40	.47	.62	4.95	7.04	2.69	1.34	1.07
AC-FT	18,140	12,770	10,060	10,140	9,520	11,290	14,790	118,200	168,100	64,230	32,080	25,550

CAL YR 1969 TOTAL 200,858 MEAN 550 MAX 2,350 MIN 145 CFSM 1.23 IN 16.68 ACFT 398,400
WAT YR 1970 TOTAL 249,475 MEAN 683 MAX 3,990 MIN 140 CFSM 1.52 IN 20.72 ACFT 494,800

PEAK DISCHARGE (BASE, 2,000 CFS).--June 9 (1200) 4,250 cfs (4.67 ft); June 25 (0500) 3,210 cfs (4.36 ft).

NOTE.--No gage-height record Jan. 23 to Feb. 23.

SALT RIVER BASIN

13027500 Salt River above reservoir, near Etna, Wyo.

LOCATION.--Lat 43°04'47", long 111°02'12", in SW¼NE¼ sec.28, T.36 N., R.119 W., Lincoln County, on right bank, 3.4 miles northwest of Etna, and at mile 8.0.

DRAINAGE AREA.--829 sq mi.

PERIOD OF RECORD.--October 1953 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,675.78 ft above mean sea level.

AVERAGE DISCHARGE.--17 years, 705 cfs (510,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,340 cfs May 28 (gage height, 4.17 ft); minimum, 245 cfs Jan. 5, result of freezeup (gage height, 1.72 ft).
Period of record: Maximum discharge, 2,790 cfs June 9, 1964 (gage height, 4.77 ft); minimum, 245 cfs Jan. 5, 1970 (gage height, 1.72 ft).

REMARKS.--Records excellent. Diversions above station for power developments, industry, municipal supply, and irrigation of about 66,000 acres (for details on adjudication of diversions, see Remarks for this station in WSP 1347). Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Dec. 29 to Jan. 4)

1.7	245	3.5	1,685
2.1	500	4.0	2,160
2.5	795	4.6	2,740
3.0	1,230		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	598	591	494	350	461	383	371	609	1,790	1,080	850	679
2	605	577	480	360	454	396	385	665	1,760	985	817	683
3	612	577	480	370	454	383	385	869	1,720	941	802	690
4	612	584	480	370	448	383	377	1,120	1,650	920	786	676
5	612	577	480	338	435	383	385	1,280	1,600	882	767	713
6	619	577	468	331	448	376	422	1,390	1,580	876	751	784
7	619	570	474	376	442	383	492	1,610	1,540	903	737	812
8	612	570	468	370	435	390	540	1,520	1,590	882	714	754
9	605	570	468	402	428	390	556	1,320	1,580	868	668	745
10	605	570	468	416	416	383	625	1,400	1,580	861	656	740
11	591	570	468	409	422	383	799	1,230	1,470	874	654	736
12	598	563	474	409	435	384	787	1,140	1,530	907	630	726
13	591	563	474	409	428	390	704	1,100	1,520	901	617	725
14	591	556	474	416	428	390	664	1,070	1,550	904	602	723
15	598	549	474	422	428	396	604	1,090	1,510	885	595	715
16	598	549	468	422	422	386	556	1,280	1,490	857	591	718
17	598	542	461	428	428	400	550	1,660	1,420	836	581	716
18	605	521	454	435	422	396	599	1,960	1,370	786	579	715
19	605	521	461	435	409	389	703	2,140	1,330	747	581	708
20	598	528	487	442	396	380	632	2,230	1,300	730	577	711
21	598	528	487	442	402	385	576	2,290	1,290	731	579	727
22	591	528	528	500	396	380	569	2,170	1,240	820	593	728
23	591	514	521	542	396	378	605	2,110	1,230	821	597	726
24	591	514	500	528	383	384	646	2,050	1,190	797	600	735
25	584	507	487	507	383	383	663	2,130	1,200	794	584	731
26	584	507	487	494	376	396	709	2,220	1,200	776	589	729
27	591	500	487	514	376	384	753	2,280	1,200	772	587	730
28	612	494	454	507	376	385	686	2,280	1,200	852	596	724
29	605	494	420	480	-----	386	631	2,200	1,190	940	640	716
30	591	494	390	461	-----	377	611	2,110	1,140	921	651	704
31	591	-----	350	454	-----	376	-----	1,910	-----	900	667	-----
TOTAL	18,601	16,305	14,566	13,339	11,727	11,958	17,585	50,433	42,960	26,749	20,238	21,719
MEAN	600	544	470	430	419	386	586	1,627	1,432	863	653	724
MAX	619	591	528	542	461	400	799	2,290	1,790	1,080	850	812
MIN	584	494	350	331	376	376	371	609	1,140	730	577	676
AC-FT	36,900	32,340	28,890	26,460	23,260	23,720	34,880	100,000	85,210	53,060	40,140	43,080
CAL YR 1969	TOTAL 259,041			MEAN 710	MAX 2,010	MIN 350	AC-FT 513,800					
WTR YR 1970	TOTAL 266,180			MEAN 729	MAX 2,290	MIN 331	AC-FT 528,000					

BEAR CREEK BASIN

77

13032000 Bear Creek above reservoir, near Irwin, Idaho

LOCATION.--Lat 43°17'00", long 111°13'17", in SE¼SE¼ sec.31, T.1 S., R.45 E., Bonneville County, on left bank 0.5 mile downstream from Elk Creek, 0.2 mile upstream from maximum flow line of Palisades Reservoir, and 6.4 miles south of Irwin.

DRAINAGE AREA.--77.1 sq mi. Mean altitude, 7,130 ft.

PERIOD OF RECORD.--July to September 1917, June to September 1918, May to July 1934, April to October 1935, April to October 1936, August 1953 to current year. Published as Bear Creek near Irwin, 1917-18, 1934-36.

GAGE.--Water-stage recorder. Altitude of gage is 5,626.0 ft, unadjusted (planetable survey). Prior to Nov. 1, 1936, nonrecording gage at site 4 miles downstream at different datum.

AVERAGE DISCHARGE.--17 years (1953-70), 75.9 cfs (13.36 inches per year, 54,990 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 720 cfs May 21 (gage height, 5.40 ft); minimum daily, 16 cfs Dec. 30, Feb. 20; minimum gage height, 2.88 ft Sept. 10.

Period of record: Maximum discharge observed, 784 cfs May 5, 1936; minimum, about 1.0 cfs Jan. 20, 1954 (gage height, 1.08 ft), result of freezeup.

REMARKS.--Records excellent except those for winter period, which are good. No diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 16; stage-discharge relation affected by ice Nov. 17-20,
23-25, Nov. 27 to Dec. 3, Dec. 5-8, 15-17, 28-29, Jan. 4-11, Jan. 28 to Feb. 2, Feb. 5,
8-11, 18-27, Mar. 6, 10-12)

Oct. 1 to May 16				May 17 to Sept. 30			
3.0	17	4.0	190	2.7	16	4.5	380
3.2	38	4.5	350	3.0	42	5.0	560
3.5	86			3.5	115	5.5	770
				4.0	230		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP		
1	30	27	20	18	21	23	22	46	362	135	66	43		
2	32	26	20	18	21	23	24	52	368	130	64	41		
3	32	26	21	20	22	22	23	74	392	126	63	41		
4	32	26	22	20	22	22	24	112	407	122	61	40		
5	31	27	21	20	21	22	25	150	395	118	61	47		
6	30	26	20	18	21	21	33	200	365	114	60	51		
7	30	28	21	18	20	22	40	236	356	113	58	46		
8	30	28	22	19	19	23	41	215	353	108	56	42		
9	30	27	23	20	19	23	46	190	353	104	54	40		
10	30	27	24	21	20	22	58	190	329	103	53	38		
11	30	27	23	23	21	21	61	165	298	101	52	39		
12	28	27	23	24	22	22	55	150	285	97	50	39		
13	28	26	22	24	22	23	52	139	273	94	49	39		
14	28	24	22	23	21	23	48	133	263	90	48	39		
15	28	23	21	22	20	23	46	158	257	88	47	39		
16	30	24	20	22	20	23	42	260	250	86	47	38		
17	31	22	21	22	22	23	42	392	241	86	45	37		
18	32	20	22	22	20	23	42	528	235	86	44	37		
19	31	21	22	22	18	23	47	560	230	87	44	37		
20	30	22	24	22	16	22	46	636	225	86	44	39		
21	30	23	26	22	20	22	46	704	221	86	43	39		
22	28	23	28	30	20	22	44	624	218	86	42	38		
23	28	20	25	30	20	22	44	556	212	81	41	37		
24	28	21	24	26	20	23	44	488	206	78	41	37		
25	28	21	23	22	21	23	46	544	192	76	41	36		
26	28	22	24	22	20	24	50	572	180	74	40	36		
27	28	20	22	24	21	25	48	592	173	75	41	35		
28	31	20	20	23	23	24	47	540	163	75	43	35		
29	28	20	17	21	-----	23	46	473	152	74	42	34		
30	27	20	16	21	-----	23	44	424	142	71	41	34		
31	27	-----	18	21	-----	23	-----	380	-----	68	41	-----		
TOTAL	914	714	677	680	573	703	1,276	10,483	8,096	2,918	1,522	1,173		
MEAN	29.5	23.8	21.8	21.9	20.5	22.7	42.5	338	270	94.1	49.1	39.1		
MAX	32	28	28	30	23	25	61	704	407	135	66	51		
MIN	27	20	16	18	16	21	22	46	142	68	40	34		
CFSM	.38	.31	.28	.28	.27	.29	.55	4.39	3.50	1.22	.64	.51		
IN.	.44	.34	.33	.33	.28	.34	.62	5.06	3.91	1.41	.73	.57		
AC-FT	1,810	1,420	1,340	1,350	1,140	1,390	2,530	20,790	16,060	5,790	3,020	2,330		
CAL YR 1969	TOTAL 31,855		MEAN 87.3		MAX 506		MIN 16		CFSM 1.13		IN 15.37		AC-FT 63,180	
WTR YR 1970	TOTAL 29,729		MEAN 81.4		MAX 704		MIN 16		CFSM 1.06		IN 14.34		AC-FT 58,970	

PEAK DISCHARGE (BASE, 350 CFS).--May 21 (0100) 720 cfs (5.40 ft).

SNAKE RIVER MAIN STEM

13032450 Palisades Reservoir near Irwin, Idaho

LOCATION.--Lat 43°19'49", long 111°12'20", in NW¼SE¼ sec.17, T.1 S., R.45 E., Bonneville County, on Snake River 3.5 miles upstream from Palisades Creek, 7 miles southeast of Irwin, and at mile 902.0.

DRAINAGE AREA.--5,208 sq mi.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Outside staff gages attached to concrete headwalls upstream from power and outlet tunnels. Datum of gage is at mean sea level (Bureau of Reclamation datum). Datum of Geological Survey is 0.10 ft lower.

EXTREMES.--Current year: Maximum contents, 1,404,000 acre-ft July 3-6; maximum elevation, 5,620.21 ft July 5; minimum, 842,000 acre-ft Oct. 9 (elevation, 5,578.89 ft).

Period of record: Maximum contents, 1,421,000 acre-ft June 17, 18, 1963 (elevation, 5,621.17 ft); minimum observed, 565 acre-ft Jan. 31, 1956 (prior to filling of reservoir); minimum after first filling of reservoir in June 1958, 224,000 acre-ft Sept. 24, 25, 1960 (elevation, 5,502.3 ft).

REMARKS.--Reservoir is formed by earth-fill, rock-faced dam; partial storage began in October 1955; full storage began in November 1956. Capacity, 1,400,000 acre-ft between elevations 5,372 (river level at original outlet tunnels) and 5,620 ft. Dead storage 44,100 acre-ft at elevation 5,452.43 ft, elevation of completed outlet tunnels. Inactive storage for minimum power head, 199,600 acre-ft at elevation 5,497.5 ft. Water is used for irrigation in Snake River valley. Figures given herein represent total storage.

COOPERATION.--Reservoir elevations and capacity table furnished by Bureau of Reclamation.

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

5,570	748.2
5,580	855.1
5,600	1,101
5,620	1,401

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	847.8	873.4	916.9	997.5	1,076	1,128	1,192	1,059	1,074	1,394	1,305	1,094
2	846.2	874.9	918.6	999.0	1,078	1,130	1,193	1,049	1,082	1,401	1,298	1,089
3	844.3	876.8	923.1	1,001	1,081	1,133	1,196	1,040	1,094	1,404	1,291	1,086
4	844.1	878.6	927.0	1,003	1,083	1,135	1,198	1,032	1,111	1,404	1,284	1,081
5	843.6	879.9	930.0	1,004	1,086	1,136	1,200	1,024	1,131	1,404	1,276	1,079
6	842.7	881.5	932.8	1,005	1,088	1,138	1,202	1,019	1,153	1,404	1,268	1,080
7	842.7	883.3	934.2	1,006	1,090	1,140	1,204	1,017	1,172	1,403	1,260	1,081
8	842.5	884.9	935.9	1,006	1,092	1,143	1,208	1,013	1,191	1,402	1,252	1,080
9	842.0	886.2	937.8	1,006	1,094	1,145	1,206	1,005	1,212	1,400	1,245	1,082
10	842.5	887.5	939.6	1,009	1,096	1,147	1,201	996.9	1,234	1,400	1,237	1,084
11	843.1	888.9	941.6	1,011	1,098	1,149	1,197	985.6	1,251	1,400	1,230	1,085
12	843.6	890.4	943.7	1,015	1,100	1,151	1,193	975.3	1,264	1,399	1,223	1,087
13	843.7	892.2	946.6	1,018	1,102	1,152	1,188	963.0	1,273	1,398	1,215	1,089
14	844.3	893.8	949.6	1,021	1,105	1,154	1,183	949.8	1,281	1,398	1,208	1,090
15	845.1	895.2	952.5	1,024	1,107	1,156	1,178	936.0	1,289	1,398	1,200	1,092
16	846.0	896.6	955.4	1,027	1,108	1,158	1,172	925.0	1,294	1,397	1,192	1,093
17	847.2	898.3	958.4	1,030	1,108	1,160	1,167	920.4	1,297	1,394	1,184	1,095
18	848.5	899.8	961.3	1,033	1,108	1,163	1,161	922.8	1,301	1,390	1,177	1,097
19	849.9	901.2	964.2	1,037	1,108	1,166	1,156	928.3	1,305	1,386	1,170	1,098
20	851.0	902.6	967.1	1,040	1,110	1,168	1,151	936.7	1,314	1,380	1,163	1,100
21	852.0	904.1	970.0	1,043	1,113	1,170	1,146	947.2	1,325	1,374	1,157	1,102
22	853.6	905.4	972.6	1,047	1,115	1,171	1,141	955.2	1,339	1,367	1,150	1,104
23	855.7	904.1	975.6	1,051	1,117	1,173	1,133	964.8	1,353	1,360	1,144	1,106
24	857.6	906.0	978.5	1,054	1,119	1,175	1,125	973.5	1,363	1,354	1,137	1,108
25	859.8	906.7	981.5	1,058	1,120	1,177	1,117	983.4	1,372	1,348	1,131	1,110
26	862.0	909.0	984.4	1,061	1,122	1,179	1,109	996.8	1,382	1,342	1,125	1,112
27	864.1	910.5	987.4	1,064	1,124	1,182	1,100	1,014	1,389	1,335	1,119	1,114
28	866.3	912.0	990.4	1,067	1,126	1,184	1,091	1,033	1,394	1,330	1,113	1,115
29	868.2	913.6	993.1	1,069	-----	1,186	1,080	1,046	1,396	1,324	1,108	1,117
30	869.9	915.2	994.5	1,071	-----	1,188	1,070	1,059	1,394	1,318	1,103	1,119
31	871.6	-----	996.0	1,073	-----	1,190	-----	1,068	-----	1,312	1,099	-----
MAX	871.6	915.2	996.0	1,073	1,126	1,190	1,208	1,068	1,396	1,404	1,305	1,119
MIN	842.0	873.4	916.9	997.5	1,076	1,128	1,070	920.4	1,074	1,312	1,099	1,079
(†)	5,581.55	5,585.36	5,592.06	5,598.03	5,601.87	5,606.30	5,597.74	5,597.59	5,619.56	5,614.38	5,599.90	5,601.37
(‡)	+22.7	+43.6	+80.8	+77.0	+53	+64	-120	-2	+326	-82	-213	+20
CAL YR 1969	MAX 1,402	MIN 842.0	† -255									
WAT YR 1970	MAX 1,404	MIN 842.0	† +270									

† Elevation, in feet, at end of month.

‡ Change in contents, in thousands of acre-feet.

13032500 Snake River near Irwin, Idaho

LOCATION.--Lat 43°21'03", long 111°13'06", in NE¼NE¼ sec.7, T.1 S., R.45 E., Bonneville County, on right bank at Bureau of Reclamation headquarters, 1.5 miles downstream from Palisades Dam, 2 miles upstream from Palisades Creek, 5 miles southeast of Irwin, and at mile 900.2.

DRAINAGE AREA.--5,225 sq mi.

PERIOD OF RECORD.--March to October 1935, April to October 1936, May 1949 to current year. Records for station "at Calamity Point, near Irwin" April to August 1934, April to October 1935, April to October 1936, March 1939 to September 1941 are equivalent to those for this station.

GAGE.--Water-stage recorder. Datum of gage is 5,353.00 ft above mean sea level. Mar. 30, 1935, to Oct. 31, 1936, water-stage recorder at site 3.5 miles downstream at different datum. May 1, 1949, to Mar. 22, 1950, non-recording gage at site 1,100 ft downstream at datum 1.9 ft higher.

AVERAGE DISCHARGE.--21 years (1949-70), 6,344 cfs (4,596,000 acre-ft per year); 15-year base period (1952-67), 6,075 cfs.

EXTREMES.--Current year: Maximum discharge, 24,000 cfs June 29 (gage height, 11.89 ft); minimum, 862 cfs Nov. 30 (gage height, 4.43 ft).
Period of record: Maximum discharge, 31,800 cfs June 4-6, 1956; maximum gage height, 13.31 ft June 4, 1956; minimum discharge, 19 cfs Nov. 8, 1956 (gage height, 2.43 ft).
Flood in early June 1894 probably was much higher than that of June 4-6, 1956.

REMARKS.--Records excellent. Flow partly regulated by Jackson Lake (see sta 13010500) and Palisades Reservoir (see sta 13032450). About 93,000 acres in Wyoming and Idaho irrigated by diversions from tributaries above station.

COOPERATION.--Gage-height record furnished by Bureau of Reclamation.

REVISIONS.--WSP 1217: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 2)

4.5	910	8.0	8,740
5.0	1,520	10.0	15,800
6.0	3,280	12.0	24,100
7.0	5,770		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,850	1,760	1,040	1,090	1,100	1,120	1,110	9,640	15,100	18,500	11,900	8,580
2	4,850	1,760	1,040	1,080	1,110	1,120	1,120	9,640	15,200	12,400	11,700	8,430
3	4,850	1,640	1,050	1,080	1,100	1,120	1,110	9,640	15,200	13,700	11,500	8,040
4	3,910	1,640	1,050	1,080	1,100	1,110	1,110	10,600	15,200	15,800	11,400	7,810
5	3,800	1,710	1,100	1,080	1,100	1,160	1,100	11,600	15,200	16,100	11,600	7,380
6	3,800	1,650	1,050	1,080	1,130	1,180	1,110	11,600	15,200	15,900	11,600	6,590
7	3,180	1,640	1,070	1,430	1,160	1,110	1,120	11,600	15,100	15,300	11,400	6,520
8	3,180	1,690	1,070	1,480	1,180	1,120	1,110	12,000	15,200	15,100	11,300	6,560
9	3,160	1,650	1,080	1,480	1,140	1,120	3,290	13,000	15,200	14,000	11,100	5,610
10	2,680	1,660	1,080	1,120	1,120	1,120	5,370	13,400	15,200	13,100	10,800	5,090
11	2,680	1,650	1,090	1,080	1,100	1,120	5,570	13,400	15,200	12,800	10,600	5,090
12	2,680	1,650	1,090	1,080	1,110	1,120	5,580	13,400	15,200	12,800	10,600	5,090
13	2,680	1,640	1,090	1,080	1,120	1,130	5,580	13,900	15,200	12,400	10,700	5,090
14	2,400	1,640	1,090	1,070	1,110	1,130	5,580	14,300	15,200	11,300	10,700	5,100
15	2,400	1,640	1,090	1,070	1,110	1,120	5,570	14,900	15,200	10,800	10,700	5,100
16	2,400	1,640	1,110	1,070	1,950	1,130	5,580	15,300	15,100	11,000	10,700	5,100
17	2,320	1,620	1,110	1,060	2,220	1,130	5,580	15,300	15,200	11,600	10,500	5,130
18	2,180	1,630	1,100	1,060	2,370	1,120	5,570	15,300	15,200	12,000	10,200	5,110
19	2,190	1,620	1,100	1,070	1,860	1,110	5,570	15,300	15,200	12,500	9,960	5,130
20	2,180	1,250	1,100	1,070	1,110	1,120	5,590	15,300	15,200	12,400	9,860	5,130
21	2,190	1,210	1,090	1,070	1,120	1,120	5,580	15,300	15,200	12,600	9,740	5,140
22	1,860	1,210	1,090	1,080	1,120	1,120	5,570	15,200	15,200	13,000	9,660	5,110
23	1,720	2,720	1,090	1,070	1,120	1,130	7,610	15,200	16,200	12,900	9,700	5,120
24	1,680	1,130	1,090	1,080	1,110	1,140	7,840	14,100	18,400	12,000	9,540	5,140
25	1,550	1,090	1,090	1,070	1,120	1,130	7,840	13,300	19,700	11,900	9,390	5,010
26	1,530	1,030	1,100	1,080	1,120	1,120	7,860	13,300	19,700	12,000	9,370	5,000
27	1,560	1,030	1,090	1,070	1,120	1,110	8,320	13,200	20,300	11,900	9,240	5,000
28	1,740	1,030	1,090	1,150	1,120	1,110	9,090	13,200	21,800	11,900	9,300	5,000
29	1,740	1,030	1,090	1,090	-----	1,110	9,650	13,800	23,200	11,900	9,100	5,020
30	1,750	1,040	1,080	1,110	-----	1,110	9,640	14,200	22,800	11,900	8,920	4,760
31	1,740	-----	1,090	1,100	-----	1,110	-----	14,800	-----	11,900	8,720	-----
TOTAL	81,430	45,300	33,590	34,680	35,250	34,820	152,320	414,720	496,200	403,400	321,500	171,980
MEAN	2,627	1,510	1,084	1,119	1,259	1,123	5,077	13,384	16,540	13,010	10,370	5,733
MAX	4,850	2,720	1,110	1,480	2,370	1,180	9,650	15,300	23,200	18,500	11,900	8,580
MIN	1,530	1,030	1,040	1,060	1,100	1,110	1,100	9,640	15,100	10,800	8,720	4,760
AC-FT	161,500	89,850	66,630	68,790	69,920	69,070	302,100	822,600	984,200	800,100	637,700	341,100
CAL YR 1969	TOTAL 2,370,460			MEAN 6,494		MAX 15,000		MIN 1,030		AC-FT 4,702,000		
WTR YR 1970	TOTAL 2,225,190			MEAN 6,096		MAX 23,200		MIN 1,030		AC-FT 4,414,000		

13037500 Snake River near Heise, Idaho

LOCATION.--Lat 43°36'45", long 111°39'33", in SE¼SW¼ sec.5, T.3 N., R.41 E., Bonneville County, on left bank 850 ft upstream from Anderson canal headgate, 2.4 miles upstream from Heise, 6 miles east of Ririe, 24 miles upstream from Henrys Fork, and at mile 861.6.

DRAINAGE AREA.--5,752 sq mi. Mean altitude, 7,770 ft.

PERIOD OF RECORD.--September 1910 to current year. Monthly discharge only for some periods, published in WSP 1317. Prior to 1911, published as South Fork of Snake River near Heise.

GAGE.--Water-stage recorder. Datum of gage is 5,015.3 ft above mean sea level. Prior to July 9, 1913, nonrecording gage and July 9, 1913, to Sept. 29, 1922, water-stage recorder, at datum 2.65 ft higher. Sept. 30, 1922, to Oct. 5, 1933, water-stage recorder at datum 2.0 ft higher.

AVERAGE DISCHARGE.--60 years, 6,806 cfs (4,931,000 acre-ft per year); 15-year base period (1952-67), 6,596 cfs.

EXTREMES.--Current year: Maximum discharge, 25,500 cfs June 30 (gage height, 8.05 ft); minimum, 1,270 cfs Dec. 4 (gage height, 1.03 ft).

Period of record: Maximum discharge, about 60,000 cfs May 19, 1927, result of washing out of landslide on Gros Ventre River (gage height, about 16.0 ft, present datum); minimum, 460 cfs Nov. 10, 12, 1956 (gage height, -0.18 ft).

Flood in early June 1894 was estimated as 65,000 cfs by Corps of Engineers.

REMARKS.--Records excellent. Flow partly regulated by Jackson Lake (see sta 13010500) and Palisades Reservoir (see sta 13032450). Some diurnal fluctuations during winter from powerplant operations at Palisades. Station is above all irrigation diversions from main river except Riley ditch (6,500 acre-ft diverted during year) which diverts 1.5 miles upstream from station. About 107,000 acres in Wyoming and Idaho irrigated by diversions from tributaries above station. Records of chemical analysis and water temperatures for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1217: Drainage area. WSP 1347: 1912.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 24 to Nov. 17, Apr. 10 to June 24, July 2 to Aug. 7; stage-discharge relation affected by ice Dec. 29, Jan. 1, 2, 5-10)

1.1	1,280	3.0	5,370	6.0	15,700
1.5	1,900	4.0	8,470	8.0	25,610
2.0	2,900				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,260	2,180	1,420	1,420	1,520	1,670	1,520	10,000	16,800	20,300	12,200	8,950
2	5,230	2,160	1,420	1,420	1,520	1,600	1,540	10,000	16,800	14,200	12,100	8,880
3	5,290	2,100	1,410	1,480	1,510	1,560	1,520	10,100	16,900	13,100	11,800	8,610
4	4,740	2,060	1,410	1,380	1,500	1,540	1,540	10,700	16,900	16,300	11,600	8,300
5	4,240	2,100	1,440	1,380	1,480	1,520	1,590	12,300	16,800	16,400	11,800	8,070
6	4,240	2,060	1,420	1,360	1,480	1,600	1,700	12,500	16,900	16,700	11,900	7,420
7	3,840	2,060	1,440	1,600	1,540	1,600	1,630	12,700	16,800	15,900	11,800	7,070
8	3,570	2,080	1,420	1,800	1,540	1,600	1,590	12,600	16,800	15,800	11,600	7,040
9	3,550	2,080	1,440	1,800	1,540	1,570	3,090	13,400	16,900	14,900	11,500	6,400
10	3,300	2,080	1,450	1,600	1,480	1,520	5,430	14,200	16,800	13,900	11,200	5,680
11	3,050	2,080	1,480	1,520	1,460	1,510	6,280	14,100	16,500	13,400	10,900	5,450
12	3,050	2,060	1,450	1,520	1,460	1,510	6,250	14,100	16,300	13,400	11,000	5,450
13	3,030	2,060	1,440	1,520	1,460	1,520	6,220	14,400	16,200	13,200	10,900	5,510
14	2,900	2,060	1,450	1,510	1,480	1,520	6,250	14,900	16,300	12,000	10,900	5,510
15	2,750	2,040	1,450	1,520	1,500	1,620	6,220	15,200	16,300	11,300	10,900	5,510
16	2,750	2,060	1,450	1,540	1,920	1,570	6,160	15,900	16,200	11,300	10,900	5,510
17	2,750	2,040	1,460	1,570	2,770	1,570	6,190	16,400	16,200	11,800	10,800	5,510
18	2,600	1,990	1,450	1,540	2,830	1,540	6,220	17,000	16,200	12,400	10,500	5,480
19	2,530	2,010	1,440	1,560	2,750	1,510	6,250	17,100	16,200	12,700	10,200	5,510
20	2,510	1,780	1,460	1,600	1,710	1,500	6,250	17,200	16,100	12,700	10,000	5,540
21	2,510	1,600	1,500	1,570	1,520	1,540	6,220	17,400	16,100	12,800	9,990	5,510
22	2,370	1,590	1,520	1,710	1,520	1,540	6,220	17,300	16,000	13,200	9,850	5,510
23	2,160	2,290	1,510	1,670	1,520	1,560	7,490	17,200	16,500	13,100	9,880	5,510
24	2,060	2,310	1,450	1,600	1,520	1,570	8,240	16,500	16,000	12,300	9,780	5,510
25	2,060	1,510	1,450	1,500	1,520	1,570	8,240	15,300	21,000	12,100	9,600	5,430
26	1,920	1,460	1,450	1,460	1,520	1,570	8,300	15,500	20,900	12,100	9,570	5,370
27	1,920	1,420	1,480	1,520	1,510	1,520	8,570	15,700	21,300	12,200	9,640	5,340
28	2,040	1,420	1,450	1,540	1,540	1,570	9,360	15,500	22,500	12,100	9,460	5,340
29	2,120	1,410	1,450	1,460	-----	1,540	10,000	15,600	24,400	12,200	9,400	5,340
30	2,120	1,420	1,440	1,460	-----	1,520	10,000	16,100	25,000	12,200	9,260	5,170
31	2,130	-----	1,420	1,460	-----	1,520	-----	16,100	-----	12,200	9,120	-----
TOTAL	94,640	57,570	44,920	47,590	46,620	48,170	166,080	453,000	533,300	418,200	330,050	185,430
MEAN	3,053	1,919	1,449	1,535	1,665	1,554	5,536	14,610	17,780	13,490	10,650	6,181
MAX	5,290	2,310	1,520	1,800	2,830	1,670	10,000	17,400	25,000	20,300	12,200	8,950
MIN	1,920	1,410	1,410	1,360	1,460	1,500	1,520	10,000	16,000	11,300	9,120	5,170
AC-FT	187,700	114,200	89,100	94,390	92,470	95,550	329,400	898,500	1,058M	829,500	654,700	367,800
MEAN†	3,664	2,928	2,851	3,075	2,671	2,642	3,373	15,160	26,520	11,420	5,298	4,571
AC-FT†	225,300	174,200	175,300	189,100	148,400	162,400	200,700	931,900	1,578M	702,500	325,800	272,000
CAL YR 1969	TOTAL 2,577,390			MEAN 7,061		MAX 16,000	MIN 1,410	ACFT 5,112M	MEAN† 6,689		AC-FT† 4,842M	
WAT YR 1970	TOTAL 2,425,570			MEAN 6,645		MAX 25,000	MIN 1,360	ACFT 4,811M	MEAN† 7,012		AC-FT† 5,077M	

† Adjusted for storage in Jackson Lake and Palisades Reservoir; no account taken for time of travel between reservoirs and Heise gaging station.

M Expressed in thousands.

HENRYS FORK BASIN

81

13039500 Henrys Fork near Lake, Idaho

LOCATION.--Lat 44°35'42", long 111°20'57", in NE¼SW¼ sec.26, T.15 N., R.43 E., Fremont County, on left bank 0.2 mile downstream from Henrys Lake Dam, 5.4 miles south of former Lake Post Office, and at mile 123.7.

DRAINAGE AREA.--99.3 sq mi including 6.2 sq mi of Dry Creek Basin.

PERIOD OF RECORD.--May 1920 to current year (prior to October 1929, irrigation seasons only). Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 6,450.62 ft above mean sea level, levels by Bureau of Reclamation (Corps of Engineers bench mark). Prior to September 1922, nonrecording gage at site 3 miles downstream and below mouth of Dry Creek at different datum.

AVERAGE DISCHARGE.--41 years (1929-70), 50.4 cfs (36,510 acre-ft per year); 15-year base period (1952-67), 52.8 cfs.

EXTREMES.--Current year: Maximum discharge, 343 cfs June 16 (gage height, 2.39 ft); minimum daily, 15 cfs Oct. 13-24, Nov. 26 to Dec. 3.

Period of record: Maximum discharge, 907 cfs June 13, 1926 (gage height, 5.40 ft); no flow for part of each day Sept. 17, 18, 1952, Sept. 5, 7-30, Oct. 1, 2, 1966. Outflow from Henrys Lake was reported to have ceased entirely late in summer of 1889.

REMARKS.--Records good except those for period of no gage-height record, which are fair. Flow regulated by Henrys Lake (see sta 13039000). Since 1923, floodwaters of Dry (Tyghee) Creek have been diverted at times into Henrys Lake (some diverted during 1970).

REVISIONS.--WSP 1217: Drainage area.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	16	15	20	24	26	28	94	132	208	193	181
2	18	17	15	20	24	27	28	94	130	206	189	181
3	18	17	15	20	24	27	28	94	117	199	187	181
4	17	17	16	20	24	27	28	95	101	193	185	181
5	17	18	16	21	24	27	27	95	104	183	183	181
6	17	18	17	21	24	26	28	95	112	179	181	181
7	16	18	17	21	24	26	30	97	104	175	183	163
8	16	18	17	21	24	27	30	98	93	169	181	87
9	16	18	18	21	24	27	30	101	112	165	181	88
10	17	18	18	21	24	27	31	103	146	161	181	88
11	17	18	18	21	24	27	61	103	149	153	181	88
12	16	18	17	22	25	27	101	104	193	140	181	88
13	15	18	17	22	25	27	101	104	246	140	181	88
14	15	18	17	22	25	27	101	106	258	136	181	88
15	15	18	18	22	25	27	100	107	314	130	181	88
16	15	18	18	22	25	27	100	107	316	126	181	88
17	15	18	18	22	25	27	100	95	321	125	181	88
18	15	18	18	22	25	27	100	81	280	123	181	87
19	15	18	18	23	25	27	100	81	262	121	181	70
20	15	18	18	23	25	27	100	81	257	117	181	27
21	15	18	18	23	25	27	100	83	255	114	181	27
22	15	18	19	23	25	27	100	86	239	117	181	27
23	15	18	19	23	25	27	100	86	202	115	181	27
24	15	17	19	23	25	28	98	88	202	112	181	27
25	16	16	19	23	25	28	97	98	206	109	181	27
26	16	15	19	24	25	28	95	138	204	106	181	27
27	16	15	19	24	25	28	94	138	206	103	181	27
28	16	15	19	24	25	28	94	140	213	98	181	26
29	16	15	20	24	-----	28	94	138	208	88	181	25
30	16	15	20	24	-----	28	94	144	210	110	181	25
31	16	-----	20	24	-----	28	-----	138	-----	199	181	-----
TOTAL	521	517	552	686	689	842	2,218	3,212	5,892	4,420	5,645	2,577
MEAN	16.8	17.2	17.8	22.1	24.6	27.2	73.9	104	196	143	182	85.9
MAX	44	18	20	24	25	28	101	144	321	208	193	181
MIN	15	15	15	20	24	26	27	81	93	88	181	25
AC-FT	1,030	1,030	1,090	1,360	1,370	1,670	4,400	6,370	11,690	8,770	11,200	5,110

CAL YR 1969 TOTAL 33,235 MEAN 91.1 MAX 302 MIN 15 ACFT 65,920
WAT YR 1970 TOTAL 27,771 MEAN 76.1 MAX 321 MIN 15 ACFT 55,080

NOTE.--No gage-height record Dec. 12 to Feb. 27.

HENRYS FORK BASIN

13042000 Island Park Reservoir near Island Park, Idaho

LOCATION.--Lat 44°25'11", long 111°23'50", in NE¼SE¼ sec.29, T.13 N., R.43 E., Fremont County, in gatehouse shaft at dam on Henrys Fork, 0.5 mile upstream from Buffalo River, 1.3 miles west of Island Park Post Office, and at mile 93.0.

DRAINAGE AREA.--481 sq mi.

PERIOD OF RECORD.--November 1938 to current year.

GAGE.--Electric tape gage read once daily. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

EXTREMES.--Current year: Maximum contents, 142,300 acre-ft May 24 (elevation, 6,303.86 ft); minimum, 51,300 acre-ft Oct. 13 (elevation, 6,289.13 ft).

Period of record: Maximum contents, 142,300 acre-ft May 24, 1970 (elevation, 6,303.86 ft); minimum after first filling of reservoir in May 1939, 5,280 acre-ft Sept. 29, 1966 (elevation, 6,260.77 ft).

REMARKS.--Reservoir is formed by earth-fill rock-faced dam. Storage began Nov. 15, 1938. Capacity, 127,300 acre-ft between elevations 6,239 ft (normal low-water level with outlet gates open) and 6,302 ft (crest of spillway). Natural flow passing through reservoir when outlet gates are open limits withdrawal of storage to elevation 6,230 ft (sill of lower outlet). Dead storage negligible. Water is used for irrigation of lands in Fremont-Madison irrigation district between Ashton and Rexburg. Figures given herein represent usable contents.

COOPERATION.--Reservoir elevations and capacity table furnished by Bureau of Reclamation.

REVISIONS.--WSP 1217: Drainage area.

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

6,289	50,800
6,295	79,600
6,300	112,200
6,304	143,400

CONTENTS, IN ACRE-FEET, AT 700, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52,200	53,000	71,000	95,300	123,900	133,000	133,000	133,800	139,400	137,200	116,800	77,000
2	52,200	53,000	72,000	95,700	124,900	133,400	133,000	133,800	139,000	137,100	115,400	76,400
3	52,400	53,100	72,900	96,100	125,600	133,300	133,000	133,800	138,900	136,900	114,100	75,700
4	52,200	53,100	73,900	96,500	126,700	133,200	133,000	133,800	138,800	136,700	112,700	75,000
5	52,100	53,200	74,900	96,800	127,500	133,100	133,000	134,000	138,900	136,400	111,500	74,500
6	52,000	53,200	75,900	97,100	128,400	133,000	133,000	134,200	138,900	136,300	110,200	74,500
7	51,900	53,400	76,900	98,100	129,100	133,000	132,900	134,300	139,000	135,900	108,900	74,400
8	51,700	53,600	77,800	99,100	129,800	133,000	133,000	134,700	139,500	135,900	107,600	74,200
9	51,600	53,800	78,900	100,000	130,300	133,400	133,000	135,000	140,200	135,800	106,200	74,000
10	51,800	53,900	80,000	101,100	130,900	133,300	133,000	135,200	141,800	135,600	104,700	73,900
11	51,600	54,000	81,000	102,100	131,200	133,100	133,200	135,400	142,200	135,600	103,400	73,700
12	51,500	54,000	82,000	103,100	131,400	133,000	133,200	135,400	141,800	135,600	102,000	73,400
13	51,300	54,200	83,300	104,300	132,000	133,000	133,400	135,300	141,300	135,600	100,800	73,200
14	51,500	54,200	84,400	105,300	132,200	133,000	133,400	135,100	141,000	135,400	99,400	73,000
15	51,500	54,200	85,400	106,500	132,300	133,000	133,800	135,000	140,800	135,300	98,000	72,900
16	51,600	55,500	86,400	107,500	132,400	133,000	133,800	135,000	141,000	135,200	96,800	72,800
17	51,700	56,600	87,400	108,700	132,500	133,400	133,800	135,400	141,000	135,100	95,500	72,700
18	51,900	57,700	88,300	109,700	132,600	133,000	133,800	136,100	140,700	134,700	94,100	72,600
19	52,000	58,700	89,200	110,800	132,600	133,000	133,800	136,900	140,400	133,800	92,700	72,700
20	52,000	59,800	90,000	111,800	132,600	133,000	134,200	138,700	139,900	132,900	91,400	72,700
21	52,100	60,800	90,400	112,900	132,600	132,900	134,000	140,000	139,500	131,800	90,200	72,800
22	52,100	61,800	91,100	113,900	132,700	132,900	133,900	141,500	139,400	130,500	88,700	72,800
23	52,200	62,900	91,600	115,000	132,700	132,900	134,000	142,100	139,000	129,600	87,400	72,800
24	52,300	63,900	92,100	116,100	132,700	133,000	134,000	142,300	138,900	128,400	86,300	72,900
25	52,300	64,900	92,400	117,100	132,700	132,900	133,800	141,800	138,300	127,000	85,000	72,700
26	52,300	65,800	92,800	118,100	132,700	133,000	134,000	141,600	137,900	125,600	83,800	72,600
27	52,400	66,900	93,400	119,200	132,800	132,900	134,200	141,500	137,700	124,300	82,400	72,500
28	52,700	67,900	93,700	120,500	132,700	132,900	134,200	141,300	137,700	122,800	81,200	72,400
29	52,700	68,900	94,100	121,000	-----	133,000	133,800	140,800	137,500	121,300	80,000	72,300
30	52,800	70,000	94,500	122,000	-----	132,900	133,800	140,300	137,200	119,800	78,700	72,200
31	52,900	-----	94,800	122,900	-----	133,000	-----	140,000	-----	118,100	77,500	-----
MAX	52,900	70,000	94,800	122,900	132,800	133,400	134,200	142,300	142,200	137,200	116,800	77,000
MIN	51,300	53,000	71,000	95,300	123,900	132,900	132,900	133,800	137,200	118,100	77,500	72,200
(†)	6,289.54	6,293.25	6,297.47	6,301.43	6,302.69	6,302.72	6,302.83	6,303.59	6,303.25	6,300.80	6,294.63	6,293.68
(‡)	+770	+17,100	+24,800	+28,100	+9,800	+300	+800	+6,200	-2,800	-19,100	-40,600	-5,300
CAL YR 1969	MAX 138,400	MIN 51,300	‡ -13,600									
WAT YR 1970	MAX 142,300	MIN 51,300	‡ +20,100									

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

83

LOCATION.--Lat 44°24'59", long 111°23'41", in SW₄SW₄ sec.28, T.13 N., R.43 E., Fremont County, on left bank 0.2 mile downstream from Island Park Dam, 0.2 mile upstream from Buffalo River, 1 mile southwest of Island Park Post Office, and at mile 92.9.

PERIOD OF RECORD.--January 1933 to current year.

AVERAGE DISCHARGE.--37 years, 571 cfs (413,700 acre-ft per year); 15-year base period (1952-67), 590 cfs.

EXTREMES.--Current year: Maximum discharge, 2,130 cfs May 23 (gage height, 5.25 ft); minimum daily discharge, 10 cfs Nov. 16 to Dec. 16.
Period of record: Maximum discharge, 2,770 cfs Apr. 26, 1946 (gage height, 6.15 ft); minimum daily, 1 cfs Nov. 16 to Dec. 7, 1938.

COOPERATION.--Gage-height record furnished by Bureau of Reclamation.

REVISIONS.--WSP 1217: Drainage area.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	658	558	10	362	17	531	447	584	1,500	1,110	1,390	1,110
2	658	563	10	362	17	573	452	584	1,420	1,080	1,390	1,130
3	658	558	10	362	17	547	447	589	1,380	1,050	1,390	1,130
4	653	547	10	362	17	531	443	600	1,380	1,020	1,390	1,140
5	653	552	10	362	17	516	443	621	1,380	980	1,390	1,040
6	653	552	10	208	95	501	447	658	1,400	950	1,400	914
7	653	547	10	15	145	491	447	696	1,420	938	1,380	896
8	648	547	10	15	194	511	457	728	1,520	920	1,390	884
9	542	542	10	15	229	547	462	767	1,700	890	1,390	866
10	610	536	10	15	255	531	467	812	1,990	866	1,390	860
11	605	536	10	15	288	511	491	830	2,080	866	1,400	860
12	600	536	10	15	320	491	496	824	1,970	872	1,400	860
13	573	536	10	15	362	486	511	806	1,890	866	1,400	860
14	542	531	10	15	380	486	552	778	1,860	818	1,400	866
15	542	183	10	15	399	501	579	762	1,810	800	1,400	836
16	547	10	10	15	409	501	579	778	1,870	772	1,390	812
17	547	10	12	15	428	521	573	842	1,860	914	1,390	784
18	547	10	12	15	438	491	573	968	1,800	1,150	1,390	756
19	552	10	182	15	438	476	579	1,120	1,700	1,150	1,400	756
20	552	10	362	15	443	467	600	1,370	1,630	1,160	1,400	762
21	547	10	362	15	443	462	600	1,720	1,540	1,150	1,410	756
22	552	10	362	15	447	452	605	1,940	1,500	1,150	1,410	756
23	552	10	362	15	452	447	610	2,070	1,430	1,210	1,410	762
24	547	10	362	15	457	452	589	2,060	1,360	1,310	1,410	750
25	552	10	362	15	462	447	584	2,010	1,300	1,400	1,420	750
26	552	10	362	17	471	447	626	1,960	1,240	1,350	1,420	745
27	552	10	362	17	467	443	637	1,930	1,220	1,360	1,420	745
28	552	10	362	17	471	457	632	1,900	1,210	1,380	1,420	734
29	558	10	362	17	-----	462	610	1,820	1,150	1,390	1,420	718
30	563	10	362	17	-----	452	595	1,720	1,150	1,390	1,420	690
31	558	-----	362	17	-----	447	-----	1,590	-----	1,390	1,280	-----
TOTAL	18,078	7,974	4,710	2,405	8,578	15,178	16,133	36,437	46,660	33,652	43,310	25,528
MEAN	583	266	152	77.6	306	490	538	1,175	1,555	1,086	1,397	851
MAX	658	563	362	362	471	573	637	2,070	2,080	1,400	1,420	1,140
MIN	542	10	10	15	17	443	443	584	1,150	772	1,280	690
AC-FT	35,860	15,820	9,340	4,770	17,010	30,110	32,000	72,270	92,550	6		

HENRYS FORK BASIN

13046000 Henrys Fork near Ashton, Idaho

LOCATION.--Lat 44°04'30", long 111°29'58", in SE¼SE¼ sec.28, T.9 N., R.42 E., Fremont County, on right bank 0.3 mile downstream from powerplant, 2.6 miles west of Ashton, and at mile 43.8.

DRAINAGE AREA.--1,040 sq mi. Mean altitude, 6,710 ft.

PERIOD OF RECORD.--April 1890 to June 1891, August 1902 to June 1909, April 1920 to current year (seasonal records only 1920-26). Monthly discharge only for some periods, published in WSP 1317. Published as Henrys Fork in canyon, above Fall River 1890-91, and as North Fork of Snake River near Ora 1902-9.

GAGE.--Water-stage recorder. Altitude of gage is 5,095 ft (from river-profile map). April 1890 to June 1891, nonrecording gage at site 6 miles downstream at different datum. August 1902 to Apr. 15, 1921, nonrecording gage and Apr. 16, 1921, to May 3, 1930, water-stage recorder at site 1½ miles downstream at different datum.

AVERAGE DISCHARGE.--50 years (1902-8, 1926-70), 1,394 cfs (1,010,000 acre-ft per year); 15-year base period (1952-67), 1,442 cfs.

EXTREMES.--Current year: Maximum discharge, 5,140 cfs May 23, 24 (gage height, 7.43 ft); maximum gage height, 8.10 ft Aug. 27; minimum discharge, 316 cfs Oct. 13 (gage height, 6.08 ft); minimum gage height, 5.24 ft Mar. 17; minimum daily, 716 cfs Jan. 29, 31.

Period of record: Maximum discharge, 6,220 cfs May 7, 1925 (gage height, 3.11 ft, site and datum then in use); minimum, 53 cfs Sept. 20, 1960 (gage height, 5.45 ft); minimum daily, 171 cfs Oct. 18, 1961.

REMARKS.--Records good. Diurnal fluctuation caused by powerplant above station. Flow regulated by Henrys Lake (see sta 13039000) and Island Park Reservoir (see sta 13042000). About 18,000 acres irrigated by diversions above station.

REVISIONS (WATER YEARS).--WSP 1217: Drainage area. WSP 1347: 1890-91.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,540	1,500	814	935	728	1,220	1,280	1,400	3,490	2,320	2,410	2,370
2	1,640	1,480	827	1,130	728	1,420	1,260	1,430	3,400	2,190	2,430	2,230
3	1,600	1,480	814	1,100	827	1,350	1,260	1,490	3,460	2,130	2,410	2,230
4	1,560	1,480	894	1,050	752	1,220	1,260	1,620	3,440	2,050	2,420	2,230
5	1,540	1,500	814	922	728	1,220	1,280	1,740	3,360	2,080	2,420	2,320
6	1,540	1,500	814	1,010	814	1,240	1,310	1,900	3,300	2,030	2,440	2,110
7	1,520	1,540	776	922	840	1,180	1,350	2,080	3,240	2,020	2,440	1,930
8	1,520	1,560	868	728	894	1,190	1,330	2,070	3,210	1,980	2,450	1,870
9	1,560	1,520	894	840	908	1,330	1,340	2,120	3,610	1,940	2,440	1,850
10	1,520	1,520	894	908	950	1,280	1,420	2,340	4,200	1,920	2,420	1,830
11	1,520	1,540	868	854	1,010	1,280	1,480	2,270	4,030	1,950	2,380	1,780
12	1,500	1,540	881	840	1,050	1,260	1,430	2,200	3,720	1,970	2,440	1,780
13	1,260	1,480	894	854	1,070	1,280	1,420	2,110	3,440	1,940	2,390	1,840
14	1,380	1,480	894	827	1,110	1,180	1,440	2,010	3,420	1,920	2,400	1,850
15	1,380	1,460	854	840	1,110	1,280	1,420	2,040	3,430	1,830	2,380	1,850
16	1,400	935	827	814	1,140	1,310	1,390	2,320	3,440	1,820	2,390	1,780
17	1,400	814	840	814	1,160	1,350	1,410	2,980	3,370	1,800	2,400	1,720
18	1,400	728	881	827	1,160	1,260	1,420	3,730	3,200	2,110	2,360	1,660
19	1,440	800	827	827	1,130	1,260	1,490	4,160	3,080	2,220	2,340	1,650
20	1,440	800	1,100	827	1,160	1,260	1,470	4,230	2,930	2,210	2,310	1,780
21	1,460	827	1,210	827	1,180	1,240	1,440	4,620	2,840	2,310	2,310	1,810
22	1,440	840	1,220	840	1,180	1,240	1,440	4,620	2,750	2,360	2,310	1,680
23	1,440	788	1,130	814	1,190	1,240	1,450	4,900	2,740	2,220	2,360	1,690
24	1,440	800	1,140	827	1,210	1,260	1,450	4,890	2,600	2,310	2,350	1,670
25	1,460	752	1,110	827	1,180	1,240	1,450	4,850	2,570	2,490	2,380	1,630
26	1,440	827	1,130	776	1,180	1,280	1,540	4,950	2,420	2,450	2,410	1,650
27	1,440	752	1,100	814	1,180	1,260	1,560	4,860	2,450	2,400	2,380	1,620
28	1,540	764	993	776	1,190	1,260	1,520	4,960	2,510	2,420	2,640	1,650
29	1,520	827	993	716	-----	1,310	1,420	4,550	2,430	2,430	2,490	1,600
30	1,440	854	1,050	776	-----	1,280	1,500	4,090	2,380	2,460	2,490	1,560
31	1,460	-----	1,130	716	-----	1,220	-----	3,680	-----	2,430	2,510	-----
TOTAL	45,740	34,688	29,481	26,578	28,759	39,200	42,230	97,210	94,460	66,710	74,700	55,220
MEAN	1,475	1,156	951	857	1,027	1,265	1,408	3,136	3,149	2,152	2,410	1,841
MAX	1,640	1,560	1,220	1,130	1,210	1,420	1,560	4,960	4,200	2,490	2,640	2,370
MIN	1,260	728	776	716	728	1,180	1,260	1,400	2,380	1,800	2,310	1,560
AC-FT	90,730	68,800	58,480	52,720	57,040	77,750	83,760	192,800	187,400	132,300	148,200	109,500
CAL YR 1969	TOTAL 668,329		MEAN 1,831		MAX 4,740		MIN 728		AC-FT 1,326,000			
WTR YR 1970	TOTAL 634,976		MEAN 1,740		MAX 4,960		MIN 716		AC-FT 1,259,000			

13047000 Diversions from Falls River above gaging station near Squirrel, Idaho

Above Squirrel gaging station, two canals divert water from Falls River for irrigation. Records available for part of each irrigation season from 1919 to current year. Discharge of canals computed from daily or twice-weekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									54	159	238	127
2									54	159	237	133
3									54	159	227	119
4									54	226	227	99
5									54	226	219	102
6									54	226	223	62
7									54	220	223	62
8									54	215	210	62
9									54	215	208	62
10									54	222	208	60
11									52	223	206	60
12									50	222	208	63
13									49	221	202	66
14									49	207	199	66
15									49	201	199	66
16									52	217	201	63
17									54	220	199	65
18									56	219	202	63
19									60	218	203	63
20									70	217	191	66
21									80	216	191	69
22									90	219	192	67
23									90	231	191	64
24									90	232	183	66
25									102	232	174	66
26									102	229	174	66
27									113	240	176	66
28									122	239	117	66
29					-----				136	239	114	66
30					-----				151	238	114	65
31		-----			-----		-----		-----	240	127	-----
TOTAL									2,157	6,747	5,983	2,190
MEAN									71.9	218	193	73.0
MAX									151	240	238	133
MIN									49	159	114	60
AC-FT									4,280	13,380	11,870	4,340

THE PERIOD: AC-FT 33,870

HENRYS FORK BASIN

13047500 Falls River near Squirrel, Idaho

LOCATION.--Lat 44°04'07", long 111°14'25", in NW¼NE¼ sec.34, T.9 N., R.44 E., Fremont County, on right bank 0.2 mile upstream from road bridge, 0.5 mile downstream from headgates of Marysville Canal, 4 miles northeast of Squirrel, 10.8 miles upstream from Conant Creek, and at mile 19.8.

DRAINAGE AREA.--351 sq mi. Mean altitude, 7,520 ft.

PERIOD OF RECORD.--August 1902 to June 1909 (gage heights only prior to October 1904), May 1918 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as Fall River at Wilson's Mill, near Marysville 1902, as Fall River near Marysville 1903, as Fall River at Fremont 1904-9, and as Fall River near Squirrel 1918-59.

GAGE.--Water-stage recorder. Datum of gage is 5,589 ft above mean sea level. Prior to Jan. 1, 1904, nonrecording gages at site 3 miles upstream at different datum, Jan. 1, 1904 to Nov. 6, 1937, nonrecording gage at site 200 ft upstream at different datum, and Nov. 7, 1937, to Oct. 7, 1948, nonrecording gage at site 100 ft downstream at datum 0.29 ft lower.

AVERAGE DISCHARGE.-- 56 years (1904-8, 1918-70), 758 cfs (549,200 acre-ft per year); 15-year base period (1952-67), 762 cfs.

EXTREMES.--Current year: Maximum discharge, 4,950 cfs June 10, (gage height, 4.96 ft); minimum daily, 350 cfs Jan. 5, 6.

Period of record: Maximum discharge observed, 6,440 cfs June 27, 1927; minimum observed, 72 cfs Feb. 9, 1930.

REMARKS.--Records excellent. Flow since October 1939 partly regulated by Grassy Lake (see sta 13046500). About 16,000 acres irrigated from two diversions above station.

REVISIONS (WATER YEARS).--WSP 1217: Drainage area. WSP 1517: 1908. WSP 1347: 1905.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 27-29; stage-discharge relation affected by ice Nov. 16-19,
Dec. 28 to Jan. 9, Jan. 29 to Feb. 2, Feb. 19, 20)

1.0	305	3.0	2,210
1.2	408	4.0	3,560
1.5	610	5.0	4,940
2.0	1,030		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	526	512	458	400	430	427	397	397	2,660	1,960	685	625
2	568	505	458	400	420	433	403	408	2,960	1,790	678	640
3	582	505	458	390	439	427	392	451	3,390	1,830	678	596
4	561	512	458	370	445	420	392	526	3,760	1,890	678	596
5	547	512	451	350	433	414	387	603	3,960	1,910	685	640
6	554	505	445	350	439	408	403	725	3,960	1,890	701	632
7	547	526	445	390	433	408	439	842	3,900	1,620	685	632
8	547	540	451	430	433	439	427	790	3,840	1,500	678	610
9	561	519	458	460	433	433	420	765	4,300	1,460	662	596
10	561	526	464	491	433	414	458	733	4,720	1,400	655	589
11	540	526	464	477	427	408	464	678	3,710	1,450	648	582
12	519	533	477	477	427	408	439	655	3,160	1,450	648	575
13	505	526	477	477	445	408	427	618	2,760	1,330	603	589
14	519	519	464	477	433	408	427	589	2,820	1,150	596	589
15	512	512	451	470	433	414	414	625	2,820	1,070	589	582
16	519	490	445	477	433	414	408	790	2,750	994	575	568
17	519	470	445	464	445	427	403	1,150	2,810	985	575	561
18	512	460	445	458	427	408	414	1,690	2,970	940	561	554
19	512	480	445	464	415	403	420	2,040	3,030	842	561	547
20	505	498	470	451	410	397	420	2,180	3,210	774	568	618
21	505	512	464	451	420	397	408	2,650	3,440	765	568	625
22	512	498	505	470	420	397	408	2,860	3,630	757	561	596
23	512	477	484	458	420	397	414	3,010	3,780	725	554	575
24	512	491	451	477	420	403	408	2,990	3,790	709	561	575
25	540	477	451	458	420	397	408	3,510	3,820	709	554	547
26	519	484	464	451	414	408	427	3,860	3,790	709	533	533
27	512	470	435	484	414	397	420	3,910	3,780	717	547	533
28	540	512	435	445	427	408	414	4,100	3,660	717	632	526
29	526	554	430	430	-----	403	403	3,640	3,570	733	596	526
30	512	484	420	420	-----	397	403	3,250	2,670	709	603	519
31	512	-----	420	420	-----	397	-----	2,630	-----	701	603	-----
TOTAL	16,418	15,135	14,088	13,687	11,988	12,719	12,467	53,665	103,420	36,186	19,021	17,476
MEAN	530	505	454	442	428	410	416	1,731	3,447	1,167	614	583
MAX	582	554	505	491	445	439	464	4,100	4,720	1,960	701	640
MIN	505	460	420	350	410	397	387	397	2,660	701	533	519
AC-FT	32,570	30,020	27,940	27,150	23,780	25,230	24,730	106,400	205,100	71,770	37,730	34,660

CAL YR 1969 TOTAL 295,503 MEAN 810 MAX 2,780 MIN 368 ACFT 586,100
WAT YR 1970 TOTAL 326,270 MEAN 894 MAX 4,720 MIN 350 ACFT 647,200

HENRYS FORK BASIN

87

13049000 Diversions from Falls River between Squirrel and Chester gaging stations, Idaho

Between Squirrel and Chester gaging stations, nine canals divert water from Falls River for irrigation. Records available for part of each irrigation season from 1919 to current year. Discharge of canals computed from daily or twice-weekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								62	445	610	610	483
2								63	441	605	607	452
3								64	521	617	606	442
4								65	544	622	539	427
5								70	588	669	589	426
6								75	618	716	600	376
7								71	623	689	594	328
8								101	653	718	592	311
9								101	641	693	585	307
10								82	629	691	574	299
11								82	529	657	568	301
12								131	633	657	575	301
13								128	497	675	545	298
14								116	489	651	538	301
15								108	474	687	537	301
16								185	485	684	535	295
17								190	509	675	530	293
18								206	513	671	532	293
19								255	545	623	525	293
20								299	566	632	491	293
21								323	579	636	536	296
22								386	601	645	537	296
23								385	621	641	517	263
24								389	643	630	516	263
25								389	673	628	516	260
26								408	704	614	508	260
27								402	693	640	507	264
28								401	689	654	497	231
29					-----			399	663	601	544	231
30					-----			372	636	588	492	201
31		-----			-----		-----	344	-----	625	483	-----
TOTAL								6,652	17,445	20,144	16,925	9,385
MEAN								215	582	650	546	313
MAX								408	704	718	610	483
MIN								62	441	588	483	201
AC-FT								13,190	34,600	39,960	33,570	18,620

THE PERIOD: AC-FT 139,940

HENRYS FORK BASIN

13049500 Falls River near Chester, Idaho

LOCATION.--Lat 44°01'06", long 111°33'57", in NW¼SE¼ sec.13, T.8 N., R.41 E., Fremont County, on right bank 0.2 mile upstream from highway bridge, at mile 0.8, and 1.5 miles north of Chester.

DRAINAGE AREA.--520 sq mi, approximately. Mean altitude, 6,970 ft.

PERIOD OF RECORD.--April 1920 to current year (irrigation seasons only prior to 1962). Prior to October 1959, published as Fall River near Chester.

GAGE.--Water-stage recorder. Datum of gage is 5,051.9 ft above mean sea level. Prior to Aug. 9, 1920, nonrecording gage at site 200 ft downstream at same datum. Aug. 9, 1920, to Apr. 28, 1921, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--9 years (1961-70), 690 cfs (499,900 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,730 cfs June 10 (gage height, 6.20 ft); maximum gage height, 6.91 ft Dec. 29; minimum discharge, 83 cfs Aug. 19 (gage height, 1.41 ft).

Period of record: Maximum discharge recorded, 6,380 cfs June 27, 1927 (gage height, 6.60 ft); maximum gage height recorded, 7.93 ft Jan. 18, 1966 (backwater from ice); minimum discharge recorded, 7 cfs June 27, 1961 (gage height, 0.74 ft).

REMARKS.--Records excellent except those for winter period, which are fair. Flow since October 1939 partly regulated by Grassy Lake (see sta 13046500). About 42,000 acres of land irrigated by diversions above station. Station is below all diversions from Falls River.

REVISIONS.--WSP 1217: Drainage area.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 16 to Feb. 12, Feb. 20-24, Mar. 10-12, 19, 20)

Oct. 1 to May 25				May 26 to Sept. 30			
2.0	265	4.0	2,130	1.4	81	4.0	1,930
2.5	540	4.5	2,850	1.7	155	5.0	3,420
3.0	950	5.0	3,650	2.0	260	6.0	5,290
3.5	1,500	5.5	4,540	2.5	520	6.5	6,440
				3.0	880		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	301	410	500	450	490	477	434	440	2,850	1,620	182	282
2	325	410	480	450	485	484	446	440	3,040	1,340	173	300
3	410	410	475	460	480	464	434	505	3,470	1,350	176	260
4	422	410	475	460	480	458	434	623	3,890	1,380	213	264
5	422	410	475	440	480	458	440	719	4,140	1,400	196	350
6	428	410	480	400	485	446	464	826	4,140	1,360	216	406
7	422	434	470	430	485	452	519	1,010	4,080	1,150	196	424
8	416	452	465	470	485	484	498	970	3,810	988	179	395
9	428	428	470	490	485	491	498	932	4,190	943	170	385
10	395	428	480	505	485	450	578	923	5,330	898	170	375
11	380	464	480	520	485	440	600	818	4,120	979	155	370
12	365	464	485	520	490	445	526	800	3,250	1,010	158	370
13	355	464	490	520	519	452	505	735	2,710	907	135	395
14	375	440	490	520	484	452	505	671	2,790	744	130	412
15	370	446	490	520	477	464	477	671	2,760	622	124	395
16	370	450	490	525	470	464	464	800	2,640	532	122	385
17	375	450	490	520	484	491	464	1,400	2,620	520	117	380
18	375	450	490	510	470	452	470	1,950	2,760	502	110	365
19	375	460	490	510	446	440	484	2,200	2,790	370	98	375
20	375	480	490	510	440	440	477	2,400	2,950	305	112	424
21	370	480	490	515	445	446	458	2,750	3,200	244	110	502
22	365	480	485	505	445	446	452	2,900	3,420	228	117	478
23	365	480	485	505	450	440	458	3,150	3,560	213	117	442
24	365	480	485	510	450	458	458	3,100	3,560	185	130	442
25	380	485	485	500	452	452	458	3,800	3,520	192	130	412
26	380	490	485	510	452	458	491	4,430	3,470	176	120	395
27	360	500	485	520	452	446	491	4,840	3,350	179	117	436
28	375	520	480	510	464	458	484	4,840	3,270	179	210	430
29	380	540	450	485	-----	446	458	4,550	3,230	228	199	430
30	380	520	465	485	-----	446	440	3,870	2,340	210	199	430
31	410	-----	470	480	-----	440	-----	3,070	-----	192	213	-----
TOTAL	11,814	13,745	14,920	15,255	13,215	14,140	14,365	61,133	101,250	21,146	4,794	11,709
MEAN	381	458	481	492	472	456	479	1,972	3,375	682	155	390
MAX	428	540	500	525	519	491	600	4,840	5,330	1,620	216	502
MIN	301	410	450	400	440	440	434	440	2,340	176	98	260
AC-FT	23,430	27,260	29,590	30,260	26,210	28,050	28,490	121,300	200,800	41,940	9,510	23,220
CAL YR 1969	TOTAL	242,003	MEAN	663	MAX	2,580	MIN	98	ACFT	480,000		
WAT YR 1970	TOTAL	297,486	MEAN	815	MAX	5,330	MIN	98	ACFT	590,100		

13050000 Diversions from Henrys Fork between Ashton and St. Anthony gaging stations, Idaho

Between Ashton and St. Anthony gaging stations, seven canals divert water from Henrys Fork for irrigation. Records available each irrigation season from 1919 to current year. Discharge of canals computed from daily or twice-weekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								537	1,230	1,110	1,340	984
2								558	1,340	1,160	1,270	817
3								629	1,550	1,190	1,260	700
4								721	1,680	1,180	1,250	667
5								744	1,700	1,200	1,230	666
6												
7								781	1,730	1,220	1,220	524
8								766	1,750	1,120	1,240	513
9								775	1,750	1,070	1,220	511
10								779	1,700	1,060	1,230	503
11								764	1,410	1,080	1,220	508
12												
13								715	1,370	1,080	1,220	503
14								710	1,280	1,030	1,250	507
15								719	1,260	1,030	1,260	513
16								720	1,150	1,030	1,250	517
17								722	1,110	1,070	1,240	517
18												
19								768	1,070	1,190	1,230	555
20								858	1,040	1,320	1,200	555
21								909	1,120	1,320	1,160	511
22								945	1,250	1,330	1,140	511
23								979	1,430	1,250	1,130	513
24												
25								1,050	1,440	1,230	1,100	516
26								1,090	1,560	1,240	1,090	516
27								1,090	1,560	1,230	1,050	500
28								1,040	1,430	1,340	1,060	500
29								1,050	1,400	1,410	994	455
30												
31								1,110	1,390	1,430	1,030	455
								1,140	1,350	1,410	1,020	397
								1,160	1,290	1,400	1,090	389
								1,170	1,090	1,390	1,100	387
								1,210	1,070	1,330	1,070	385
								1,100	-----	1,390	1,020	-----
TOTAL								27,309	41,500	37,840	36,184	16,095
MEAN								881	1,383	1,221	1,167	537
MAX								1,210	1,750	1,430	1,340	984
MIN								537	1,040	1,030	994	385
AC-FT								54,170	82,320	75,060	71,770	31,920

THE PERIOD: AC-FT 315,240

LOCATION.--Lat 43°58'00", long 111°40'20", in NW¼ sec.6, T.7 N., R.41 E., Fremont County, on right bank 0.5 mile upstream from bridge on main street of St. Anthony, 6.4 miles downstream from Falls River, and at mile 33.6.

PERIOD OF RECORD.--March 1919 to current year (irrigation seasons only prior to 1962).

GAGE.--Water-stage recorder. Datum of gage is 4,950.7 ft above mean sea level. March 1919 to May 7, 1922, non-recording gages and May 8, 1922, to Aug. 14, 1931, water-stage recorder, at site 150 ft downstream at datum 0.08 ft lower.

AVERAGE DISCHARGE.--9 years (1961-70), 1,731 cfs (1,254,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 9,670 cfs May 28 (gage height, 7.32 ft); minimum, 720 cfs Oct. 13 (gage height, 3.18 ft).
Period of record: Maximum discharge recorded, 9,670 cfs May 28, 1970 (gage height, 7.32 ft, present datum); maximum gage height recorded, 7.62 ft Dec. 14, 1967; minimum discharge recorded, 118 cfs Oct. 21, 1965 (gage height, 2.27 ft).

REMARKS.--Records good. Diversions above station for irrigation. Flow regulated by powerplant 17 miles above station and by Henrys Lake (see sta 13039000), Island Park Reservoir (see sta 13042000), and Grassy Lake (see sta 13046500).

REVISIONS (WATER YEARS).--WSP 1217: Drainage area. WSP 1317: 1923(M).

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 18-20, 29-31; stage-discharge relation affected by ice Jan. 1-20)

	Oct. 1 to May 20				May 21 to Sept. 30			
3.4	1,010	5.0	3,870	3.6	1,250	6.0	6,040	
3.8	1,550	6.0	6,790	4.0	1,800	7.0	8,900	
4.5	2,760			5.0	3,710	7.4	10,200	

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	DCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,340	1,670	1,200	1,320	1,260	1,660	1,400	1,360	5,040	3,030	1,380	1,760
2	1,460	1,670	1,160	1,480	1,260	1,800	1,390	1,320	4,970	2,520	1,410	1,700
3	1,600	1,670	1,160	1,450	1,330	1,800	1,370	1,330	5,180	2,350	1,430	1,720
4	1,580	1,680	1,210	1,400	1,260	1,610	1,370	1,550	5,530	2,290	1,480	1,720
5	1,580	1,680	1,170	1,320	1,250	1,610	1,370	1,750	5,680	2,310	1,470	1,960
6	1,600	1,680	1,130	1,420	1,290	1,580	1,430	1,910	5,560	2,290	1,510	1,960
7	1,600	1,700	1,090	1,250	1,320	1,560	1,550	2,270	5,400	2,170	1,470	1,800
8	1,580	1,780	1,210	1,200	1,370	1,560	1,540	2,240	5,180	2,030	1,440	1,740
9	1,610	1,680	1,220	1,220	1,370	1,730	1,500	2,250	5,960	1,930	1,420	1,720
10	1,580	1,670	1,220	1,300	1,370	1,620	1,600	2,480	8,250	1,830	1,430	1,680
11	1,520	1,680	1,210	1,350	1,460	1,610	1,730	2,310	7,010	1,940	1,380	1,650
12	1,520	1,660	1,250	1,350	1,520	1,610	1,610	2,240	5,780	2,030	1,380	1,650
13	1,210	1,610	1,270	1,330	1,560	1,610	1,520	2,100	4,990	1,900	1,340	1,710
14	1,620	1,560	1,230	1,340	1,600	1,560	1,500	1,940	5,040	1,720	1,340	1,700
15	1,600	1,540	1,210	1,340	1,550	1,580	1,550	1,960	5,110	1,480	1,350	1,660
16	1,600	1,270	1,180	1,340	1,580	1,580	1,500	2,270	4,990	1,260	1,380	1,620
17	1,600	1,120	1,180	1,350	1,600	1,620	1,480	3,290	4,920	1,190	1,380	1,570
18	1,600	1,010	1,200	1,350	1,620	1,540	1,430	5,060	4,900	1,300	1,410	1,520
19	1,620	1,080	1,170	1,340	1,540	1,500	1,540	6,120	4,670	1,370	1,390	1,510
20	1,610	1,140	1,420	1,330	1,580	1,490	1,460	6,180	4,540	1,290	1,420	1,650
21	1,620	1,180	1,560	1,320	1,610	1,500	1,440	6,730	4,560	1,370	1,440	1,800
22	1,620	1,200	1,640	1,400	1,600	1,480	1,430	6,980	4,630	1,370	1,440	1,700
23	1,610	1,140	1,550	1,390	1,610	1,480	1,460	7,540	4,740	1,280	1,470	1,680
24	1,600	1,160	1,520	1,420	1,620	1,480	1,420	7,320	4,740	1,260	1,500	1,660
25	1,660	1,120	1,490	1,390	1,580	1,460	1,400	8,010	4,700	1,340	1,480	1,660
26	1,620	1,160	1,500	1,320	1,580	1,460	1,520	8,680	4,490	1,320	1,500	1,660
27	1,600	1,080	1,490	1,400	1,580	1,480	1,550	8,780	4,470	1,300	1,460	1,700
28	1,670	1,110	1,340	1,340	1,600	1,460	1,500	9,220	4,540	1,320	1,650	1,710
29	1,670	1,200	1,270	1,210	-----	1,480	1,400	8,340	4,540	1,350	1,550	1,680
30	1,600	1,210	1,420	1,300	-----	1,430	1,430	6,840	3,790	1,410	1,590	1,650
31	1,640	-----	1,490	1,130	-----	1,330	-----	5,560	-----	1,370	1,620	-----
TOTAL	48,940	42,110	40,360	41,400	41,470	48,270	44,390	135,930	153,900	52,920	44,910	50,900
MEAN	1,579	1,404	1,302	1,335	1,481	1,557	1,480	4,385	5,130	1,707	1,449	1,697
MAX	1,670	1,780	1,640	1,480	1,620	1,800	1,730	9,220	8,250	3,030	1,650	1,960
MIN	1,210	1,010	1,090	1,130	1,250	1,330	1,370	1,320	3,790	1,190	1,340	1,510
AC-FT	97,070	83,530	80,050	82,120	82,260	95,740	88,050	269,600	305,300	105,000	89,080	101,000
CAL YR 1969	TOTAL	732,670	MEAN	2,007	MAX	6,310	MIN	1,010	ACFT	1,453,000		
WAT YR 1970	TOTAL	745,500	MEAN	2,042	MAX	9,220	MIN	1,010	ACFT	1,479,000		

HENRYS FORK BASIN

91

13052200 Teton River above South Leigh Creek, near Driggs, Idaho

LOCATION.--Lat 43°46'54", long 111°12'30", in NW¼NE¼ sec.12, T.5 N., R.44 E., Teton County, on right bank 75 ft upstream from county road bridge, 3.5 miles southwest of Teton, 6.5 miles northwest of Driggs, and at mile 56.3.

DRAINAGE AREA.--335 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 5,952.9 ft above mean sea level.

AVERAGE DISCHARGE.--9 years, 376 cfs (272,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,720 cfs June 29 (gage height, 3.82 ft); minimum daily discharge, 140 cfs Dec. 29; minimum gage height, 0.46 ft Mar. 18.
Period of record: Maximum discharge, 2,050 cfs June 18, 1964 (gage height, 4.36 ft); maximum gage height, 6.37 ft Feb. 1, 1963; minimum daily discharge, 75 cfs Jan. 11, 1963.

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

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 28 to June 16; stage-discharge relation affected by ice Nov. 18 to Dec. 17, Dec. 25 to Jan. 20, Jan. 28 to Feb. 12, Feb. 21-23, Mar. 10-12)

Oct. 1 to Feb. 12			Feb. 13 to Sept. 30		
1.0	140		1.1	155	3.0 1,190
1.5	260		1.5	305	4.0 1,890
2.0	440		2.0	555	

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	282	292	230	170	180	188	173	260	516	1,160	588	511
2	289	286	220	170	180	196	179	296	475	865	572	490
3	312	279	220	170	180	185	170	440	480	858	555	455
4	309	282	220	170	180	182	170	544	588	910	550	445
5	295	282	220	165	180	179	206	572	696	995	555	511
6	295	276	215	160	190	176	341	560	774	1,070	560	544
7	292	289	220	160	195	185	405	500	852	1,130	538	550
8	295	289	210	160	190	206	336	430	872	1,080	533	495
9	292	289	210	165	190	210	365	380	950	1,040	511	455
10	292	286	205	180	185	180	490	385	1,030	1,020	511	445
11	286	292	205	200	190	180	560	336	865	1,120	506	440
12	286	286	205	200	195	180	410	323	820	1,050	500	425
13	286	276	205	200	202	182	336	314	670	982	490	445
14	286	276	205	200	185	185	314	323	676	924	480	445
15	289	276	205	200	185	210	274	292	616	852	480	430
16	286	282	205	200	188	220	244	287	599	794	475	425
17	292	276	210	200	199	196	269	328	566	787	475	420
18	295	260	214	200	199	164	305	385	594	761	455	410
19	289	270	211	200	199	216	318	440	676	728	450	405
20	282	260	230	208	196	196	278	460	800	716	450	425
21	282	260	266	211	190	196	252	495	950	670	445	460
22	282	265	366	251	185	185	256	511	1,110	696	440	460
23	282	245	270	279	178	192	278	500	1,270	670	430	445
24	286	240	257	289	173	199	278	506	1,410	640	420	430
25	299	235	225	273	173	202	264	506	1,420	616	420	420
26	289	230	200	270	173	210	346	582	1,460	594	420	410
27	289	235	175	239	173	185	346	683	1,470	599	430	400
28	306	235	155	190	173	196	314	832	1,560	640	533	400
29	309	240	140	180	-----	188	274	761	1,700	696	500	385
30	292	240	180	180	-----	182	260	664	1,570	640	470	380
31	292	-----	170	180	-----	179	-----	594	-----	616	455	-----
TOTAL	9,038	8,029	6,669	6,220	5,206	5,930	9,011	14,489	28,035	25,919	15,197	13,361
MEAN	292	268	215	201	186	191	300	467	935	836	490	445
MAX	312	292	366	289	202	220	560	832	1,700	1,160	588	550
MIN	282	230	140	160	173	164	170	260	475	594	420	380
AC-FT	17,930	15,930	13,230	12,340	10,330	11,760	17,870	28,740	55,610	51,410	30,140	26,500
CAL YR 1969	TOTAL 131,200		MEAN 359	MAX 882	MIN 140	ACFT 260,200						
WAT YR 1970	TOTAL 147,104		MEAN 403	MAX 1,700	MIN 140	ACFT 291,800						

13055500 Diversions from Teton River between St. Anthony gaging station and mouth, Idaho

Between St. Anthony gaging station and mouth, 20 canals divert water from Teton River for irrigation of 30,000 acres of land. Records available for part of each irrigation season from 1919 to current year. Discharge of canals computed from daily or twice-weekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								51	1,150	1,170	1,070	723
2								51	1,350	1,130	944	687
3								51	1,550	1,040	959	614
4								51	1,590	1,120	936	601
5								52	1,680	1,200	989	619
6								76	1,700	1,240	968	603
7								101	1,690	1,220	965	563
8								115	1,600	1,200	971	555
9								129	1,420	1,080	863	531
10								133	1,370	1,150	864	527
11								130	1,180	1,250	851	475
12								129	1,080	1,200	898	462
13								173	1,050	1,090	867	463
14								174	974	1,060	837	471
15								310	900	1,080	841	472
16								335	930	1,170	830	456
17								357	922	1,220	849	451
18								402	945	1,190	797	451
19								495	1,040	1,100	795	458
20								553	1,190	1,080	777	436
21								647	1,300	1,130	786	494
22								734	1,520	1,210	774	437
23								748	1,580	1,210	777	424
24								951	1,640	1,210	754	401
25								947	1,730	1,240	666	394
26								955	1,710	927	661	394
27								1,020	1,680	999	669	383
28								1,060	1,500	1,130	713	371
29					-----			1,050	1,360	1,200	715	404
30					-----			1,070	1,260	1,180	728	394
31		-----			-----		-----	975	-----	1,110	628	-----
TOTAL								14,025	40,591	35,536	25,742	14,714
MEAN								452	1,353	1,146	830	490
MAX								1,070	1,730	1,250	1,070	723
MIN								51	900	927	628	371
AC-FT								27,820	80,510	70,490	51,060	29,190

THE PERIOD: AC-FT 259,070

HENRYS FORK BASIN

13056000 Diversions from Henrys Fork between St. Anthony and Rexburg gaging stations, Idaho

Between St. Anthony and Rexburg gaging stations, four canals divert water from Henrys Fork for irrigation. Records available for part of each irrigation season from 1919 to current year. Discharge of canals computed from daily or twice-weekly staff-gage readings, or interpolated, and combined to show total diverted flow. Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								624	1,020	707	822	611
2								620	1,100	690	841	602
3								656	1,220	713	851	614
4								676	1,320	736	851	596
5								710	1,330	719	854	440
6								740	1,340	703	838	446
7								759	1,240	657	793	438
8								777	1,240	722	799	433
9								786	1,030	733	788	430
10								787	897	790	808	449
11								776	880	772	819	414
12								758	862	733	794	427
13								766	837	717	795	427
14								727	805	706	760	431
15								692	826	856	751	431
16								730	740	867	789	427
17								796	809	882	787	427
18								848	772	941	771	395
19								873	835	946	752	395
20								904	1,040	939	764	390
21								951	1,050	929	774	373
22								959	1,070	909	747	373
23								955	919	866	711	316
24								949	820	872	684	316
25								909	883	885	683	312
26								953	913	882	683	312
27								1,010	854	866	675	323
28								995	791	847	644	318
29					-----			977	761	830	629	318
30					-----			970	727	830	616	330
31	-----				-----		-----	967	-----	819	615	-----
TOTAL								25,600	28,931	25,064	23,488	12,514
MEAN								826	964	809	758	417
MAX								1,010	1,340	946	854	614
MIN								620	727	657	615	312
AC-FT								50,780	57,380	49,710	46,590	24,820

THE PERIOD: AC-FT 229,800

95

LOCATION.--Lat 43°49'34", long 111°54'15", in NW¼NE¼ sec.30, T.6 N., R.39 E., Madison County, on right bank 200 ft downstream from highway bridge, 6 miles west of Rexburg, and at mile 9.3.

PERIOD OF RECORD.--April 1909 to current year. Monthly discharge only for some periods, published in WSP 1317.
Prior to 1911, published as North Fork of Snake River near Rexburg.

GAGE.--Water-stage recorder. Datum of gage is 4,807.03 ft above mean sea level. Apr. 13, 1909, to Sept. 28, 1912, nonrecording gage at datum 0.67 ft higher. Sept. 29, 1912, to Apr. 4, 1913, nonrecording gage at present datum.

EXTREMES.--Current year: Maximum discharge, 11,200 cfs May 29 (gage height, 10.30 ft); minimum discharge, 934 cfs Jan. 7; minimum gage height, 3.58 ft Jan. 1.
Period of record: Maximum discharge, 11,200 cfs May 29, 1970 (gage height, 10.30 ft); minimum, 183 cfs Mar. 24-28, 1934 (gage height, 1.45 ft).

REMARKS.--Records good except those for winter periods, which are fair. Flow regulated by operation of powerplant near Ashton, and by Henrys Lake (see sta 13039000), Island Park Reservoir (see sta 13042000), and Grassy Lake (see sta 13046500). Diversions for irrigation of about 172,000 acres above station. Station is downstream from all tributaries except inflow from ground water and irrigation waste. Part of ground-water flow escapes westward beneath the Snake River plains above gaging station. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,700	2,370	1,610	1,490	1,500	1,970	1,630	1,600	7,520	6,480	1,430	2,030
2	1,760	2,390	1,560	1,260	1,550	2,100	1,630	1,520	6,320	5,260	1,470	2,180
3	2,000	2,360	1,560	1,240	1,620	2,250	1,610	1,480	5,760	4,240	1,440	2,200
4	2,060	2,350	1,580	1,180	1,720	2,010	1,570	1,690	5,960	3,680	1,390	2,120
5	2,060	2,360	1,630	1,050	1,610	1,960	1,540	2,010	6,530	3,460	1,400	2,270
6	2,070	2,310	1,540	1,100	1,600	1,940	1,580	2,260	6,880	3,570	1,440	2,600
7	2,070	2,310	1,510	1,050	1,630	1,920	1,860	2,560	6,850	3,730	1,470	2,530
8	2,050	2,360	1,530	1,140	1,660	1,900	1,900	2,730	6,850	3,690	1,440	2,460
9	2,080	2,280	1,650	1,200	1,660	2,030	1,800	2,670	7,000	3,530	1,430	2,350
10	2,160	2,230	1,650	1,320	1,660	2,080	1,820	2,770	8,380	3,180	1,410	2,280
11	2,090	2,160	1,640	1,400	1,700	1,960	2,260	2,820	10,700	3,100	1,370	2,230
12	2,100	2,140	1,630	1,450	1,760	1,940	2,270	2,620	10,200	3,330	1,340	2,180
13	2,080	2,060	1,630	1,500	1,840	1,940	1,940	2,470	8,720	3,380	1,340	2,210
14	2,160	1,950	1,580	1,550	1,890	1,920	1,820	2,300	7,660	3,100	1,340	2,310
15	2,220	1,930	1,550	1,600	1,870	1,920	1,780	2,140	7,520	2,540	1,370	2,280
16	2,220	1,900	1,530	1,600	1,880	1,960	1,720	2,120	7,490	1,960	1,410	2,230
17	2,260	1,640	1,520	1,600	1,900	2,000	1,660	2,560	7,260	1,610	1,430	2,160
18	2,270	1,520	1,520	1,600	1,950	1,980	1,620	3,500	6,940	1,520	1,470	2,120
19	2,270	1,450	1,540	1,600	1,890	1,870	1,670	4,770	6,590	1,550	1,430	2,030
20	2,290	1,580	1,560	1,600	1,840	1,870	1,720	5,960	6,110	1,520	1,410	2,100
21	2,270	1,540	1,840	1,600	1,870	1,860	1,670	6,790	5,840	1,460	1,480	2,280
22	2,280	1,560	1,950	1,600	1,900	1,840	1,600	7,740	5,910	1,460	1,540	2,370
23	2,260	1,550	2,050	1,620	1,920	1,800	1,610	8,610	6,040	1,410	1,580	2,330
24	2,240	1,520	1,960	1,600	1,930	1,760	1,600	8,950	6,370	1,320	1,610	2,280
25	2,250	1,540	1,850	1,600	1,930	1,770	1,580	9,030	6,670	1,340	1,630	2,280
26	2,280	1,500	1,850	1,580	1,890	1,740	1,600	9,520	6,700	1,430	1,630	2,240
27	2,270	1,520	1,880	1,580	1,900	1,760	1,760	10,000	6,590	1,370	1,610	2,230
28	2,270	1,480	1,790	1,570	1,900	1,740	1,770	10,300	6,790	1,320	1,740	2,200
29	2,350	1,520	1,630	1,550	-----	1,760	1,730	10,900	7,160	1,350	1,890	2,190
30	2,350	1,600	1,700	1,500	-----	1,720	1,580	10,400	7,260	1,430	1,870	2,130
31	2,350	-----	1,720	1,450	-----	1,650	-----	9,140	-----	1,430	1,870	-----
TOTAL	67,140	56,980	51,740	44,780	49,970	58,920	51,900	153,930	212,570	79,750	46,680	67,400
MEAN	2,166	1,899	1,669	1,445	1,785	1,901	1,730	4,965	7,086	2,573	1,506	2,247
MAX	2,350	2,390	2,050	1,620	1,950	2,250	2,270	10,900	10,700	6,480	1,890	2,600
MIN	1,700	1,450	1,510	1,050	1,500	1,650	1,540	1,480	5,760	1,320	1,340	2,030
AC-FT	133,200	113,000	102,600	88,820	99,120	116,900	102,900	305,300	421,600	158,200	92,590	133,700
CAL YR 1969	TOTAL 861,783		MEAN 2,361	MAX 6,560	MIN 818	ACFT 1,709,000						
WAT YR 1970	TOTAL 941,760		MEAN 2,580	MAX 10,900	MIN 1,050	ACFT 1,868,000						

HENRYS FORK BASIN

Smaller reservoirs in Henrys Fork Basin

13039000 HENRYS LAKE.--Lat 44°35'51", long 111°21'10", in SW¼NW¼ sec.26, T.15 N., R.43 E., Fremont County, at dam on Henrys Fork, 5.2 miles south of former Lake, Idaho, Post Office. Drainage area, 99.0 sq mi, including 6.2 sq mi of Dry Creek basin. Period of record, June 1923 to current year (fragmentary). Nonrecording gage. Datum of gage is 6,457.16 ft above mean sea level (levels by Bureau of Reclamation). Current year: Maximum contents observed, 91,200 acre-ft June 17 (gage height, 16.81 ft); minimum observed, 72,600 acre-ft Oct. 1 (gage height, 13.92 ft). Period of record: Maximum contents observed, 92,100 acre-ft June 26, 1969; minimum observed, 140 acre-ft Nov. 8, 1934 (gage height, 0.03 ft).

Reservoir is formed on natural lake by concrete dam supported by downstream earth-fill dam; storage began Sept. 21, 1922; dam completed July 1923. Capacity, 90,420 acre-ft between gage heights 0.0 (low-water level of Henrys Lake prior to construction of dam) and 16.7 ft (top of 4.7-ft flashboards on spillway). Floodwaters of Dry Creek are diverted into Henrys Lake at times (some diverted during water year 1969). Water used for irrigation near St. Anthony. Gage read occasionally. Records given herein represent usable contents, except an allowance of 3,000 acre-ft is usually made for loss and dead storage for maximum contents. Capacity table furnished by North Fork Reservoir Co.

13046500 GRASSY LAKE.--Lat 44°07'45", long 110°49'05", in NE¼ sec.18, T.48 N., R.116 W., Teton County, in gate-house at dam on Grassy Creek, 0.4 mile upstream from mouth and 25.4 miles northwest of Moran, Wyo. Drainage area, 10.4 sq mi, including basin of Cascade Creek, from which water is diverted into Grassy Lake. Period of record, October 1939 to current year. Mercury pressure gage. Datum of gage is mean sea level (levels by Bureau of Reclamation). Current year: Maximum contents observed, 15,100 acre-ft July 4 (elevation, 7,209.85 ft); minimum contents observed, 6,950 acre-ft Oct. 1, 8 (elevation, 7,179.70 ft). Period of record: Maximum contents observed, 15,446 acre-ft July 2, 1943 (elevation, 7,210.85 ft); no contents Oct. 2-5, 1940.

Reservoir is formed by earth-fill, rock-faced dam; storage began Oct. 18, 1939. Capacity, 15,200 acre-ft between elevations 7,135.0 ft (sill of trashrack) and 7,210.0 ft (crest of spillway). Water is used for irrigation of lands in Fremont-Madison irrigation district, Idaho. Gage read about twice monthly. Records given herein represent usable contents. Gage-height record and capacity table furnished by Bureau of Reclamation.

MONTHEND ELEVATION AND CONTENTS, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

	GAUGE HEIGHT (FEET)	CONTENTS (ACRE- FEET)	CHANGE IN CONTENTS (ACRE-FEET)	ELEVATION (FEET)	CONTENTS (ACRE- FEET)	CHANGE IN CONTENTS (ACRE-FEET)
	HENRYS LAKE				GRASSY LAKE	
SEPT. 30.....	-	a72,600	-	-	a6,950	-
OCT. 31.....	-	a75,200	+2,600	-	a6,970	+20
NOV. 30.....	-	a77,500	+2,300	-	a7,220	+250
DEC. 31.....	-	a80,000	+2,500	-	a7,730	+510
CALENDAR YEAR 1969.....	-	-	-1,700	-	-	-1,900
JAN. 31.....	-	a82,300	+2,300	-	a8,380	+650
FEB. 28.....	-	a82,600	+300	-	a8,730	+350
MAR. 31.....	-	a84,300	+1,700	-	a9,030	+300
APR. 30.....	-	a84,300	0	7,189.90	9,440	+410
MAY 31.....	-	a87,000	+2,700	-	a11,000	+1,560
JUNE 30.....	-	a90,100	+3,100	-	a14,900	+3,900
JULY 31.....	-	a86,700	-3,400	7,205.30	13,700	-1,200
AUG. 31.....	-	a75,500	-11,200	7,196.85	11,300	-2,400
SEPT. 30.....	-	a73,700	-1,800	-	a11,400	+100
WATER YEAR 1969-70.....			+1,100			+4,450

a No gage-height record.

WILLOW CREEK BASIN

97

13057300 Grays Lake Diversion to Blackfoot River basin, near Wayan, Idaho

LOCATION.--Lat 43°00'21", long 111°29'35", in NE¼NE¼ sec.11, T.5 S., R.42 E., Caribou County, on left bank, 0.5 mile downstream from control headgates, 3 miles upstream from Meadow Creek, and 6.7 miles west of Wayan.

PERIOD OF RECORD.--1927-43, 1945, 1947, 1949-50 (irrigation season only), June 1966 to October 1970 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 6,369.34 ft above mean sea level.

EXTREMES.--Period of record: Maximum daily discharge, 420 cfs May 22, 23, 1970; no flow at times most years.

REMARKS.--Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, 1970

Oct. 1.....	.2	Oct. 12.....	.2
2.....	.2	13.....	.2
3.....	.2	14.....	.2
4.....	.2	15.....	.2
5.....	.2	16.....	.2
6.....	.2	17.....	.2
7.....	.2	18.....	.2
8.....	.2	19.....	.2
9.....	.2	20.....	.2
10.....	.2	21.....	.2
11.....	.2		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.20	.20	.20	.20	.20	.10	.30	1.5	393	172	.80	.20
2	.20	.20	.20	.20	.20	.10	.30	1.6	390	160	.80	.20
3	.20	.20	.20	.20	.20	.10	.30	1.6	390	151	.80	.20
4	.20	.20	.20	.20	.20	.10	.30	1.7	390	139	.70	.20
5	.20	.20	.20	.20	.20	.10	.50	1.7	388	131	.70	.20
6	.20	.20	.20	.20	.20	.20	.60	1.7	380	124	.60	.20
7	.20	.20	.20	.20	.20	.20	.60	41	378	118	.60	.20
8	.20	.20	.20	.20	.20	.20	.70	104	370	111	.60	.20
9	.20	.20	.20	.20	.20	.20	.80	101	368	58	.50	.20
10	.20	.20	.20	.20	.20	.20	.80	101	368	2.0	.50	.20
11	.20	.20	.20	.20	.20	.20	.80	156	360	1.9	.40	.20
12	.20	.20	.20	.20	.20	.20	.80	223	375	1.8	.40	.20
13	.20	.20	.20	.20	.20	.20	.80	217	398	1.7	.30	.20
14	.20	.20	.20	.20	.20	.20	.80	263	390	1.6	.30	.20
15	.20	.20	.20	.20	.20	.20	.90	311	385	1.5	.30	.20
16	.20	.20	.20	.20	.20	.20	.90	311	378	1.5	.20	.20
17	.20	.20	.20	.20	.20	.20	1.0	342	368	1.4	.20	.20
18	.20	.20	.20	.20	.20	.20	1.0	345	362	1.4	.20	.20
19	.20	.20	.20	.20	.20	.20	1.1	348	355	1.4	.20	.20
20	.20	.20	.20	.20	.20	.20	1.1	348	340	1.3	.20	.20
21	.20	.20	.20	.20	.10	.20	1.1	385	328	1.3	.20	.20
22	.20	.20	.20	.20	.10	.20	1.1	420	313	1.2	.20	.20
23	.20	.20	.20	.20	.10	.20	1.2	420	299	1.2	.20	.20
24	.20	.20	.20	.20	.10	.30	1.2	418	273	1.2	.20	.20
25	.20	.20	.20	.20	.10	.30	1.2	415	257	1.1	.20	.20
26	.20	.20	.20	.20	.10	.30	1.4	410	241	1.1	.20	.20
27	.20	.20	.20	.20	.10	.30	1.4	405	227	1.0	.20	.20
28	.20	.20	.20	.20	.10	.30	1.4	405	211	1.0	.20	.20
29	.20	.20	.20	.20	-----	.30	1.4	400	196	1.0	.20	.20
30	.20	.20	.20	.20	-----	.30	1.5	395	180	.90	.20	.20
31	.20	-----	.20	.20	-----	.30	-----	398	-----	.90	.20	-----
TOTAL	6.20	6.00	6.20	6.20	4.80	6.50	27.30	7,691.8	10,051	1,193.40	11.50	6.00
MEAN	.20	.20	.20	.20	.17	.21	.91	248	335	38.5	.37	.20
MAX	.20	.20	.20	.20	.20	.30	1.5	420	398	172	.80	.20
MIN	.20	.20	.20	.20	.10	.10	.30	1.5	180	.90	.20	.20
AC-FT	12	12	12	12	9.5	13	54	15,260	19,940	2,370	23	12

CAL YR 1969 TOTAL 17,451.90 MEAN 47.8 MAX 374 MIN .10 ACFT 34,620
WAT YR 1970 TOTAL 19,016.90 MEAN 52.1 MAX 420 MIN .10 ACFT 37,720

13057400 Grays Lake near Wayan, Idaho

LOCATION.--Lat 42°59'53", long 111°26'33", in NE¼SW¼ sec.8, T.5 S., R.43 E., Caribou County, at Beavertail Point, 3.5 miles west of Wayan.

DRAINAGE AREA.--137 sq mi.

RECORDS AVAILABLE.--June 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,380 ft above mean sea level.

EXTREMES.--Current year: Maximum elevation, 6,387.70 ft May 22; minimum elevation, 6,385.24 ft Oct. 1, 2.
Period of record: Maximum elevation, 6,388.01 ft Apr. 25-28, 1969; water below elevation 6,384.5 ft for long periods each year prior to 1969.

REMARKS.--Since 1924 lake level has been regulated by means of a dam across the outlet to Willow Creek, and by a cut, controlled by headgates, diverting water to the Blackfoot River Reservoir.

GAGE HEIGHT, IN FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.25	5.51	5.61	5.98	6.35	-	-	7.23	7.50	6.16	5.99	5.49
2	5.26	5.50	5.62	5.99	6.35	-	-	7.26	7.46	6.11	5.97	5.50
3	5.27	5.50	5.63	6.00	6.34	-	-	7.31	7.43	6.06	5.95	5.46
4	5.28	5.46	5.65	6.02	6.34	-	-	7.34	7.38	6.01	5.93	5.45
5	5.28	5.43	5.67	6.01	6.33	-	-	7.41	7.33	5.96	5.91	5.55
6	5.28	5.44	5.68	6.01	6.33	-	-	7.55	7.29	5.91	5.91	5.56
7	5.27	5.49	5.69	6.00	6.34	-	-	7.64	7.27	5.85	5.89	5.55
8	5.27	5.54	5.71	5.98	6.34	-	-	7.66	7.22	5.79	5.86	5.53
9	5.26	5.55	5.73	5.99	6.34	-	-	7.65	7.21	5.78	5.86	5.58
10	5.27	5.54	5.74	6.03	6.34	-	-	7.68	7.20	5.85	5.84	5.55
11	5.29	5.54	5.75	6.00	6.34	-	-	7.65	7.19	5.91	5.82	5.50
12	5.29	5.52	5.75	6.00	6.36	-	-	7.63	7.16	5.94	5.78	5.57
13	5.29	5.59	5.75	6.00	6.36	-	-	7.63	7.13	5.97	5.75	5.57
14	5.29	5.57	5.76	6.00	6.36	-	-	7.63	7.12	6.00	5.74	5.56
15	5.30	5.56	5.78	6.01	6.35	-	-	7.62	7.08	6.03	5.73	5.56
16	5.32	5.55	5.79	6.04	6.35	-	-	7.62	7.05	6.03	5.69	5.54
17	5.35	5.59	5.79	6.10	6.35	-	-	7.62	7.01	6.04	5.64	5.53
18	5.38	5.59	5.80	6.11	6.36	-	-	7.65	6.95	6.04	5.63	5.51
19	5.37	5.59	5.83	6.13	6.35	6.51	-	7.62	6.91	6.05	5.63	5.52
20	5.38	5.59	5.86	6.13	6.36	-	-	7.62	6.85	6.05	5.62	5.56
21	5.42	5.60	5.91	6.15	6.35	-	-	7.69	6.78	6.04	5.62	5.59
22	5.42	5.60	5.91	6.25	6.35	-	-	7.69	6.71	6.04	5.60	5.57
23	5.40	5.60	5.91	6.29	6.34	-	7.06	7.69	6.65	6.05	5.58	5.53
24	5.39	5.61	5.91	6.34	6.33	-	7.08	7.67	6.59	6.03	5.57	5.58
25	5.40	5.61	5.92	6.32	6.35	-	7.10	7.65	6.52	6.02	5.52	5.57
26	5.43	5.61	5.93	6.29	6.37	-	7.16	7.60	6.44	6.01	5.50	5.58
27	5.43	5.61	5.93	6.34	-	-	7.18	7.65	6.37	6.02	5.51	5.59
28	5.46	5.62	5.93	6.34	-	-	7.19	7.62	6.32	6.02	5.51	5.59
29	5.48	5.62	5.94	6.33	-----	-	7.20	7.59	6.25	6.02	5.52	5.59
30	5.49	5.63	5.96	6.33	-----	-	7.22	7.58	6.18	6.03	5.50	5.59
31	5.50	-----	5.97	6.34	-----	-	-----	7.54	-----	6.02	5.48	-----
MEAN	5.35	5.56	5.80	6.12	-	-	-	7.58	6.95	5.99	5.71	5.55
MAX	5.50	5.63	5.97	6.34	-	-	-	7.69	7.50	6.16	5.99	5.59
MIN	5.25	5.43	5.61	5.98	-	-	-	7.23	6.18	5.78	5.48	5.45

CAL YR 1969 MEAN 1.40 MAX 8.01 MIN 5.25
WTR YR 1970 MEAN - MAX 7.69 MIN 5.25

WILLOW CREEK BASIN

99

13057500 Grays Lake Outlet near Herman, Idaho

LOCATION.--Lat 43°08'05", long 111°29'40", in NW¼NE¼ sec.26, T.3 S., R.42 E., Bonneville County, on right bank 200 ft upstream from road crossing, 3.5 miles west of Herman, and 8 miles upstream from Brockman Creek.

DRAINAGE AREA.--137 sq mi.

PERIOD OF RECORD.--1916-25 (irrigation seasons only), June 1966 to October 1970 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 6,377.53 ft above mean sea level. Prior to Oct. 18, 1917, non-recording gage, and Oct. 18, 1917, to Sept. 30, 1925, water-stage recorder at site 2 miles downstream at different datum.

EXTREMES.--Current year: Maximum discharge, 56 cfs May 17 (gage height, 3.55 ft); minimum, 0.1 cfs on many days. Period of record: Maximum discharge observed, 1,350 cfs May 15, 1917 (gage height, 5.9 ft, site and datum then in use); no flow Apr. 25, 1917.

REMARKS.--Some diversions for irrigation above lake. On May 25, 1924, Office of Indian Affairs completed a dam at outlet of lake and after that water has been diverted from south end of lake into Meadow Creek basin and thence into Blackfoot River Reservoir.

REVISIONS (WATER YEAR).--WRD Idaho 1969: 1967.

DISCHARGE, IN CUBIC FEET PER SECOND, 1970

Oct. 1	.....	.4	Oct. 12	.....	.6
2	.....	.4	13	.....	.6
3	.....	.4	14	.....	.5
4	.....	.3	15	.....	.5
5	.....	.5	16	.....	.5
6	.....	.5	17	.....	.5
7	.....	.6	18	.....	.5
8	.....	.5	19	.....	.5
9	.....	.7	20	.....	.5
10	.....	.9	21	.....	.5
11	.....	.8			

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.30	.30	.30	.20	.20	.10	.10	2.3	38	25	.70	.60
2	.30	.30	.30	.20	.20	.10	.10	2.8	37	25	.60	.50
3	.40	.30	.30	.20	.20	.10	.10	2.9	36	24	.60	.50
4	.40	.30	.30	.20	.20	.10	.10	3.6	36	24	.60	.50
5	.40	.30	.30	.20	.20	.10	.10	3.6	35	23	.60	.80
6	.30	.30	.30	.20	.20	.10	.10	3.9	35	23	.60	1.1
7	.30	.30	.30	.20	.20	.10	.50	3.9	35	22	.60	.90
8	.30	.30	.30	.20	.20	.10	.70	3.7	35	22	.60	.70
9	.30	.30	.30	.10	.20	.10	1.0	4.1	34	16	.50	.50
10	.30	.30	.30	.10	.20	.10	3.7	3.9	34	1.8	.50	.50
11	.30	.30	.20	.10	.20	.10	11	3.7	33	1.5	.50	.50
12	.30	.30	.20	.10	.20	.10	11	3.9	34	1.3	.50	.40
13	.30	.30	.20	.10	.20	.10	9.0	4.7	34	1.1	.40	.40
14	.40	.30	.20	.10	.20	.10	7.9	5.2	35	1.0	.40	.50
15	.30	.30	.20	.10	.20	.10	6.2	6.6	35	1.0	.40	.40
16	.30	.30	.20	.10	.20	.10	5.2	11	36	1.0	.40	.50
17	.40	.30	.20	.10	.20	.10	3.6	26	34	.90	.40	.40
18	.50	.20	.20	.10	.20	.10	2.8	38	33	.90	.40	.40
19	.50	.20	.20	.10	.20	.10	2.6	40	32	.90	.40	.40
20	.50	.20	.20	.10	.20	.10	2.6	23	32	.90	.40	.50
21	.30	.30	.20	.10	.20	.10	2.3	26	31	.90	.50	.50
22	.30	.30	.30	.10	.20	.10	2.2	23	30	.90	.50	.50
23	.30	.20	.30	.10	.10	.10	2.3	22	30	.90	.50	.50
24	.30	.30	.20	.20	.10	.10	2.3	22	29	.80	.50	.50
25	.30	.30	.20	.20	.10	.10	2.5	21	29	.70	.50	.50
26	.30	.30	.20	.20	.10	.10	2.6	21	28	.70	.50	.50
27	.30	.30	.20	.20	.10	.10	2.5	29	27	.80	.50	.50
28	.30	.30	.20	.20	.10	.10	2.3	39	27	.90	.50	.50
29	.30	.30	.20	.20	-----	.10	2.5	39	26	.90	.50	.50
30	.30	.30	.20	.20	-----	.10	2.3	38	25	.90	.60	.50
31	.30	-----	.20	.20	-----	.10	-----	38	-----	.90	.50	-----
TOTAL	10.40	8.60	7.40	4.70	5.00	3.10	92.20	514.8	975	225.60	15.70	16.00
MEAN	.34	.29	.24	.15	.18	.10	3.07	16.6	32.5	7.28	.51	.53
MAX	.50	.30	.30	.20	.20	.10	11	40	38	25	.70	1.1
MIN	.30	.20	.20	.10	.10	.10	.10	2.3	25	.70	.40	.40
AC-FT	21	17	15	9.3	9.9	6.2	183	1,020	1,930	447	31	32

CAL YR 1969 TOTAL 1,741.80 MEAN 4.77 MAX 128 MIN .20 ACFT 3,450
WAT YR 1970 TOTAL 1,878.50 MEAN 5.15 MAX 40 MIN .10 ACFT 3,730

WILLOW CREEK BASIN

13058000 Willow Creek near Ririe, Idaho

LOCATION.--Lat 43°35'35", long 111°46'30", in SE¼NW¼ sec.17, T.3 N., R.40 E., Bonneville County, on left bank, about 1 mile upstream from mouth of canyon, 1.5 miles upstream from Eagle Rock Canal, and 2.6 miles south of Ririe.

DRAINAGE AREA.--627 sq mi.

PERIOD OF RECORD.--April 1903 to September 1904, October 1916 to September 1925, May to August 1928, October 1962 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Altitude of gage is 4,940 ft (from topographic map). Prior to September 1904, non-recording gage at site about 1.5 miles downstream at different datum. October 1916 to June 1921, nonrecording gage, and after June 1921 water-stage recorder at sites about 2 and 2.2 miles upstream at different datums.

AVERAGE DISCHARGE.--18 years (1903-4, 1916-25, 1962-70), 175 cfs (126,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,010 cfs May 19 (gage height, 13.57 ft); minimum daily, 23 cfs Dec. 6-11.

Period of record: Maximum discharge observed, 4,200 cfs May 15, 1917 (gage height, 16.3 ft); minimum, 5.8 cfs Aug. 30, 1963, and Mar. 7, 1967.

Maximum discharge known, 5,080 cfs Feb. 11, 1962, from estimate based on field survey (gage height, 15.0 ft, from floodmarks); stream reported practically dry during summers of 1899 and 1934.

REMARKS.--Records excellent except those for winter period, which are fair. Diversions for irrigation of several thousand acres above station. Since the spring of 1924, water has sometimes been diverted from Grays Lake 40 miles upstream to Blackfoot River Reservoir (see sta 13057300). Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 5-16, May 26 to Sept. 30; stage-discharge relation affected by ice Nov. 17 to Feb. 10)

1.3	31	5.0	377	12.0	1,310
2.0	84	8.0	720	13.0	1,700
3.0	175	11.0	1,120	14.0	2,270

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	37	50	24	25	60	62	49	122	617	192	73	47
2	40	49	24	27	66	78	51	130	566	180	68	41
3	44	49	24	28	66	58	51	171	530	169	65	42
4	46	48	24	30	64	55	51	280	501	159	61	40
5	48	48	24	30	62	55	66	438	478	151	61	44
6	47	48	23	31	66	51	99	579	445	145	61	61
7	46	48	23	32	66	51	155	698	439	150	62	75
8	46	51	23	34	65	59	108	739	470	145	58	66
9	46	54	23	35	64	60	101	647	475	142	54	63
10	44	55	23	39	62	49	132	728	514	154	52	57
11	44	54	23	41	77	45	197	831	450	150	51	51
12	45	54	24	45	101	48	187	731	425	153	48	52
13	46	51	25	47	140	54	155	721	454	140	47	54
14	46	50	26	49	83	54	142	687	467	126	46	56
15	46	49	27	50	78	62	130	638	450	114	45	52
16	47	49	27	51	74	118	114	733	411	104	46	48
17	49	43	27	52	73	74	112	1,000	373	97	42	47
18	51	33	27	52	51	52	133	1,530	353	92	39	47
19	54	28	27	54	48	57	158	1,820	333	86	39	47
20	53	30	28	56	50	56	173	1,520	310	84	39	48
21	51	30	28	58	54	53	140	1,290	289	79	39	51
22	50	29	28	61	51	55	127	1,550	273	79	38	56
23	51	29	28	90	52	54	122	1,580	261	86	38	55
24	48	28	28	120	52	58	127	1,150	242	81	35	54
25	48	27	27	114	49	53	131	944	225	78	35	54
26	50	26	27	110	51	53	136	849	213	74	36	54
27	49	26	25	105	49	52	152	807	203	70	35	51
28	49	25	25	75	54	54	148	813	201	72	37	51
29	51	25	24	60	-----	52	134	787	199	77	39	51
30	52	25	24	58	-----	56	125	766	192	82	42	50
31	51	-----	24	57	-----	53	-----	669	-----	75	42	-----
TOTAL	1,475	1,211	784	1,716	1,828	1,791	3,706	25,948	11,359	3,586	1,473	1,565
MEAN	47.6	40.4	25.3	55.4	65.3	57.8	124	837	379	116	47.5	52.2
MAX	54	55	28	120	140	118	197	1,820	617	192	73	75
MIN	37	25	23	25	48	45	49	122	192	70	35	40
AC-FT	2,930	2,400	1,560	3,400	3,630	3,550	7,350	51,470	22,530	7,110	2,920	3,100

CAL YR 1969 TOTAL 68,714 MEAN 188 MAX 2,300 MIN 23 ACFT 136,300
WAT YR 1970 TOTAL 56,442 MEAN 155 MAX 1,820 MIN 23 ACFT 112,000

PEAK DISCHARGE (BASE, 850 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5-11	1300	9.40	871	5-22	1930	13.23	1,820
5-19	0700	13.57	2,010				

13059500 Diversions from Snake River between Heise and Shelley gaging stations, Idaho

Between Heise and Shelley gaging stations, 47 canals divert water from Snake River for irrigation; of these, 36 divert above mouth of Henrys Fork. Records available during each irrigation season from 1919 to current year. Three of the canals are equipped with water-stage recorders, the others with nonrecording gages, which are read once daily. Discharge combined to show total diverted flow. Records include Riley ditch which diverts 1.5 miles above Heise gaging station. Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								299	8,000	8,950	10,400	8,070
2								318	8,880	8,910	10,100	7,820
3								337	9,700	9,500	10,100	7,630
4								337	10,500	9,840	10,200	7,250
5								413	11,200	9,810	9,620	6,700
6								595	11,400	10,200	10,100	6,080
7								946	11,400	9,600	9,980	5,990
8								1,060	11,300	9,310	9,710	5,840
9								1,140	10,100	9,460	9,440	5,750
10								1,460	9,630	9,300	9,500	5,460
11								1,570	9,510	8,820	9,620	5,260
12								1,440	9,100	8,840	9,560	5,420
13								1,530	8,190	9,090	9,600	5,560
14								1,740	7,660	9,130	9,650	5,670
15								1,940	7,400	9,710	9,320	5,730
16								2,320	7,220	10,300	9,250	5,720
17								2,600	7,620	10,400	9,300	5,730
18								3,430	7,990	10,600	9,040	5,800
19								3,420	8,370	10,700	8,830	5,750
20								3,990	9,190	10,900	8,770	5,820
21								4,290	9,500	11,100	8,560	5,850
22								4,240	10,300	11,300	8,300	5,780
23								4,450	10,700	10,900	8,070	5,720
24								4,480	11,100	9,970	8,160	5,590
25								4,650	10,900	10,300	8,180	5,390
26								5,420	10,700	10,300	8,180	5,390
27								5,760	10,400	10,500	8,270	5,150
28								5,980	9,990	10,500	8,240	5,190
29					-----			6,420	9,600	10,500	8,230	5,220
30					-----			6,670	9,340	10,400	7,920	5,300
31		-----			-----		-----	6,840	-----	10,400	8,080	-----
TOTAL								90,085	286,890	309,540	282,280	177,630
MEAN								2,906	9,563	9,985	9,106	5,921
MAX								6,840	11,400	11,300	10,400	8,070
MIN								299	7,220	8,820	7,920	5,150
AC-FT								178,700	569,000	614,000	559,900	352,300

THE PERIOD: AC-FT 2,274,000

SNAKE RIVER MAIN STEM

13060000 Snake River near Shelley, Idaho

LOCATION.--Lat 43°24'47", long 112°08'02", in SE¼SW¼ sec.17, T.1 N., R.37 E., Bingham County, on right bank 0.3 mile southeast of Woodville, 2.5 miles north of Shelley, at mile 791.7.

DRAINAGE AREA.--9,790 sq mi, approximately, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.--March 1915 to current year (prior to October 1931, irrigation seasons only).

GAGE.--Water-stage recorder. Datum of gage is 4,599.0 ft above mean sea level.

AVERAGE DISCHARGE.--39 years (1931-70), 5,267 cfs (3,816,000 acre-ft per year); 15-year base period (1952-67), 5,232 cfs.

EXTREMES.--Current year: Maximum discharge, 24,000 cfs July 1 (gage height, 11.78 ft); minimum daily, 1,400 cfs Jan. 6.

Period of record: Maximum discharge, 47,200 cfs June 17, 1918 (gage height, 16.97 ft); minimum, 288 cfs Nov. 5, 1934 (gage height, 2.22 ft).

Maximum discharge known, 75,000 cfs (estimated) June 6, 1894, at former station at Eagle Rock (now Idaho Falls), 7 miles upstream from present site.

REMARKS.--Records excellent except those for winter periods, which are good. Some regulation by Jackson Lake (see sta 13010500), Palisades Reservoir (see sta 13032450), Island Park Reservoir (see sta 13042000), Henrys Lake (see sta 13039000), and Grassy Lake (see sta 13046500). Many diversions above station for irrigation.

REVISIONS (WATER YEARS).--WSP 1317: 1916.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 23 to June 5; stage-discharge relation affected by ice
Nov. 29 to Jan. 12, Jan. 30 to Feb. 5)

4.5	1,320	8.0	9,680
5.0	1,810	10.0	17,000
6.0	3,540	12.0	24,800

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,670	3,070	2,380	2,150	2,520	2,990	2,550	10,100	19,000	23,500	4,660	4,730
2	2,760	3,190	2,350	2,050	2,400	3,110	2,570	10,200	16,900	19,700	4,880	4,890
3	3,220	3,190	2,400	1,950	2,900	3,240	2,670	10,200	14,900	12,000	4,910	5,170
4	4,160	3,150	2,450	1,850	3,020	3,300	2,610	10,300	13,600	10,400	4,290	5,200
5	3,990	3,150	2,450	1,650	3,000	3,070	2,560	11,500	12,900	11,900	4,230	5,350
6	3,820	3,240	2,450	1,400	2,820	3,010	2,560	13,000	13,000	12,200	4,630	5,950
7	3,820	3,240	2,350	1,500	2,830	2,950	2,570	13,000	13,300	12,700	4,730	6,040
8	3,520	3,260	2,300	1,850	2,850	3,010	3,070	13,500	13,600	12,400	4,760	5,740
9	3,320	3,240	2,500	2,300	2,890	2,990	2,980	13,800	14,200	12,000	5,110	5,670
10	3,360	3,170	2,550	2,700	2,870	3,070	4,010	14,600	15,800	10,800	5,030	5,060
11	3,260	3,130	2,600	2,900	2,830	2,990	6,340	15,300	17,000	10,000	4,470	4,480
12	3,130	3,130	2,650	3,000	2,870	2,910	7,160	15,100	18,700	9,910	4,160	4,230
13	3,260	3,050	2,650	3,090	2,950	2,890	7,180	15,000	19,000	9,930	4,080	4,250
14	3,300	3,030	2,600	3,190	3,030	2,890	6,990	15,200	19,100	9,210	4,080	4,220
15	3,320	3,030	2,550	3,240	3,070	2,890	6,920	15,300	18,700	7,390	4,180	4,110
16	3,280	2,970	2,500	3,260	3,010	2,920	6,820	15,500	18,600	5,450	4,600	3,970
17	3,320	3,050	2,450	3,260	3,220	3,120	6,740	16,200	18,400	4,400	4,750	3,800
18	3,360	2,800	2,500	3,260	3,870	2,990	6,660	17,000	17,900	4,220	4,590	3,630
19	3,240	2,590	2,500	3,300	4,040	2,900	6,690	18,200	17,000	4,470	4,460	3,450
20	3,190	2,490	2,500	3,410	3,870	2,800	6,850	19,000	15,900	4,740	4,360	3,460
21	3,190	2,510	2,600	3,500	3,240	2,830	6,850	19,600	14,600	4,300	4,330	3,710
22	3,190	2,510	2,850	3,470	3,050	2,770	6,690	20,300	13,600	4,410	4,450	3,840
23	3,110	2,700	3,100	3,540	3,030	2,740	6,620	20,900	12,700	4,910	4,640	3,940
24	2,950	3,110	3,100	3,680	3,030	2,770	7,970	21,500	13,200	5,510	4,780	4,070
25	2,890	3,190	3,100	3,700	3,010	2,650	8,520	21,200	15,600	5,360	4,610	4,170
26	2,830	2,720	3,050	3,540	3,010	2,750	8,640	20,000	17,500	5,540	4,450	4,220
27	2,740	2,590	2,800	3,320	2,930	2,620	8,820	20,100	17,900	5,580	4,400	4,230
28	2,720	2,490	2,600	3,410	2,990	2,670	9,270	20,400	19,000	4,600	4,410	4,230
29	2,850	2,300	2,000	3,150	-----	2,650	9,770	20,300	20,800	4,430	4,670	4,070
30	2,930	2,350	2,000	2,900	-----	2,730	10,300	20,700	22,700	4,530	4,890	3,950
31	3,010	-----	2,050	2,850	-----	2,600	-----	20,400	-----	4,630	4,730	-----
TOTAL	99,710	87,640	78,930	88,370	85,150	89,820	179,950	507,400	495,100	261,120	141,320	133,830
MEAN	3,216	2,921	2,546	2,851	3,041	2,897	5,998	16,370	16,500	8,423	4,559	4,461
MAX	4,160	3,260	3,100	3,700	4,040	3,300	10,300	21,500	22,700	23,500	5,110	6,040
MIN	2,670	2,300	2,000	1,400	2,400	2,600	2,550	10,100	12,700	4,220	4,080	3,450
AC-FT	197,800	173,800	156,600	175,300	168,900	178,200	356,900	1,006M	982,000	517,900	230,300	265,500
CAL YR 1969	TOTAL	2,245,230	MEAN	6,151	MAX	18,600	MIN	2,000	AC-FT	4,453,000		
WTR YR 1970	TOTAL	2,248,340	MEAN	6,160	MAX	23,500	MIN	1,400	AC-FT	4,460,000		

BLACKFOOT RIVER BASIN

103

13063000 Blackfoot River above reservoir, near Henry, Idaho

LOCATION.--Lat 42°49'00", long 111°30'35", in SE¼NE¼ sec.14, T.7 S., R.42 E., Caribou County, on right bank 70 ft upstream from railroad bridge immediately upstream from the Monsanto Chemical Company "Haul Road", 5 miles upstream from Blackfoot Reservoir flow line, 6 miles south of Henry, and 11 miles north of Soda Springs.

DRAINAGE AREA.--350 sq mi, approximately.

PERIOD OF RECORD.--April 1914 to September 1925 (no winter records except water year 1915), August 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,260 ft (from topographic map). Mar. 25, 1914, to Sept. 30, 1914, nonrecording gage at site 3.3 miles downstream at different datum. Oct. 1, 1915, to Sept. 30, 1925, nonrecording gage at site 4 miles downstream at different datum.

EXTREMES.--Current year: Maximum discharge, 1,440 cfs May 18 (gage height, 7.44 ft); minimum daily, 37 cfs Dec. 7.

Period of record: Maximum discharge, 2,060 cfs May 16, 1917 (gage height, 6.85 ft, from floodmark), from rating curve extended above 1,000 cfs; minimum observed, 23 cfs Aug. 17, 1919.

REMARKS.--Records excellent except those for periods of ice effect, which are fair. Some diversions above station for irrigation of hay meadow.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 19 to Apr. 11)

1.7	35	5.0	560
2.1	60	6.0	860
2.5	94	7.0	1,250
3.0	152	7.5	1,460
4.0	320		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	74	55	39	52	55	52	133	398	116	125	76
2	62	73	55	39	53	54	52	159	363	126	107	76
3	71	69	55	39	54	53	52	240	345	126	99	72
4	73	68	52	39	55	52	53	377	314	103	94	70
5	70	69	49	39	55	51	54	508	304	116	92	78
6	66	68	42	39	55	50	54	560	304	115	91	95
7	65	69	37	39	55	49	55	658	300	125	89	117
8	64	71	41	39	55	49	57	718	324	128	85	100
9	64	70	42	40	55	50	100	646	370	123	83	83
10	65	69	43	41	55	48	165	691	365	115	81	77
11	68	70	43	42	56	47	200	760	339	120	80	74
12	67	70	43	42	56	48	170	590	318	117	79	73
13	64	69	44	42	56	49	139	540	345	114	77	73
14	64	66	45	43	56	51	126	515	354	108	73	73
15	71	65	45	44	56	52	112	452	370	105	73	71
16	70	66	47	45	55	53	98	478	359	101	73	71
17	76	63	48	47	54	53	103	679	343	99	73	71
18	83	56	48	48	53	53	112	1,180	308	97	72	69
19	84	54	49	48	52	53	129	1,180	278	93	71	69
20	81	54	49	50	52	53	125	998	248	92	72	70
21	78	55	50	51	53	53	115	864	231	95	73	77
22	75	55	50	54	53	53	119	775	218	119	73	81
23	73	52	49	58	52	53	117	646	210	121	72	79
24	72	53	47	58	52	53	120	572	202	106	70	77
25	71	54	46	57	52	53	132	535	183	98	69	77
26	70	54	44	56	51	53	160	488	182	94	69	75
27	69	55	43	55	51	53	172	470	179	93	68	75
28	72	54	41	50	52	53	156	472	172	94	69	76
29	76	54	40	45	-----	53	138	475	160	112	70	76
30	70	54	40	50	-----	53	129	445	117	151	72	77
31	70	-----	40	51	-----	53	-----	420	-----	149	76	-----
TOTAL	2,183	1,873	1,422	1,429	1,506	1,606	3,366	18,224	8,503	3,471	2,470	2,328
MEAN	70.4	62.4	45.9	46.1	53.8	51.8	112	588	283	112	79.7	77.6
MAX	84	74	55	58	56	55	200	1,180	398	151	125	117
MIN	59	52	37	39	51	47	52	133	117	92	68	69
CFSM	.20	.18	.13	.13	.15	.15	.32	1.68	.81	.32	.23	.22
IN.	.23	.20	.15	.15	.16	.17	.36	1.94	.90	.37	.26	.25
AC-FT	4,330	3,720	2,820	2,830	2,990	3,190	6,680	36,150	16,870	6,880	4,900	4,620
CAL YR 1969	TOTAL 47,421		MEAN 131	MAX 1,170	MIN 37	CFSM .37	IN 5.08	ACFT 94,850				
WAT YR 1970	TOTAL 48,381		MEAN 133	MAX 1,180	MIN 37	CFSM .38	IN 5.14	ACFT 95,960				

BLACKFOOT RIVER BASIN

13065000 Blackfoot Reservoir near Henry, Idaho
(Formerly published as "Blackfoot River Reservoir")

LOCATION.--Lat 43°00'20", long 111°43'00", in sec.12, T.5 S., R.40 E., Caribou County, near spillway at right end of dam, 12 miles northwest of Henry, and at mile 78.0.

DRAINAGE AREA.--581 sq mi.

PERIOD OF RECORD.--January 1912 to September 1925, January 1929 to current year (no winter records (1949-59). Monthend contents only for January 1929 to September 1960, published in WSP 1317, 1737. Prior to October 1950 and October 1960 to September 1961, published as Blackfoot-Marsh Reservoir near Henry.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Indian Field Service).

EXTREMES.--Current year: Maximum contents observed during year, 344,800 acre-ft June 22 (elevation, 6,120.28 ft); minimum observed, 228,100 acre-ft Oct. 4 (elevation, 6,113.42 ft).
Period of record: Maximum contents observed, 349,800 acre-ft Apr. 22, 23, 1951 (elevation, 6,120.56 ft); minimum observed, 610 acre-ft Sept. 12-15, 19, 21, 22, 1934; minimum elevation observed, 6,088.59 ft Sept. 22, 1934.

REMARKS.--Water diverted from reservoir for irrigation of about 50,000 acres near Pocatello and on Fort Hall Indian Reservation. Capacity is 313,000 acre-ft between elevations 6,086 ft (bottom of outlet tunnel) and 6,118.5 ft (crest of spillway) with provision for additional storage of 100,000 acre-ft to elevation 6,124 ft by means of flashboards. Storage supplemented by water from Grays Lake beginning May 1924. Storage began in spring of 1910.

COOPERATION.--Capacity table, gage readings and daily contents furnished by Office of Indian Affairs.

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

6,113	221,200	6,118	304,700
6,114	237,500	6,120	339,800
6,116	270,600		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	229,700	232,300		-		-	-	-	341,000	338,000	298,900	272,300
2	228,700	232,600		-		-	-	-	341,600	337,100	297,900	271,500
3	228,400	232,900		-		-	-	-		336,200	297,000	270,600
4	228,100	233,200		-		-	-	-		335,400	296,300	269,600
5	228,200	233,600		-		-	-	-		332,700	295,500	268,800
6	228,400	233,900		-		-	-	-		331,800	294,800	268,000
7	228,500	234,200		-		-	-	-		331,000	294,300	267,000
8	228,700	234,500		-		-	-	305,300	341,600	330,100	293,600	266,000
9	228,900	234,900		-		-	287,100	-	341,200	329,200	292,900	264,600
10	229,000	235,200		-		-	-	-	340,100	328,300	291,900	263,000
11	229,200	235,300		-		-	-	-	338,900	328,000	291,700	261,300
12	229,400	235,500		-		-	-	313,800	338,700	327,400	291,000	259,600
13	229,500	235,700		-		-	-	315,500	338,500	326,900	290,300	257,900
14	229,500	235,800		-		-	-	316,700	339,300	326,000	289,300	256,300
15	229,700	236,000		256,100		-	-	317,800	340,500	324,800	288,600	254,600
16	229,700	236,300		-		-	-	318,800	341,700	323,400	287,900	253,000
17	229,900	-		-		-	-	319,900	343,000	321,400	287,400	251,600
18	229,800	-		-		-	-	321,300	343,400	319,700	286,400	249,700
19	230,000	-		-		-	-	324,300	343,700	318,000	285,200	248,800
20	230,200	-		-		-	-	326,000	344,100	316,200	284,300	248,000
21	230,200	-		-		-	-	330,400	344,400	314,500	283,500	247,200
22	230,200	-		-		-	-	332,000	344,800	312,700	282,500	246,700
23	230,300	-		-		-	294,800	334,500	344,600	311,000	281,600	245,700
24	230,600	-		-		-	-	335,900	343,500	309,300	280,500	245,000
25	230,800	-		-		280,500	-	336,400	343,000	307,900	279,100	244,000
26	230,800	-		-		-	-	337,700	342,100	306,100	277,900	242,900
27	231,000	-		-		-	-	338,700	340,500	304,700	276,600	241,700
28	231,300	-		-	a273,100	-	-	340,300	339,600	303,000	275,500	240,600
29	231,500	-		-	-----	-	-	341,200	339,100	302,200	274,900	239,600
30	231,600	a240,900		-	-----	-	a299,700	341,200	339,100	301,300	274,000	238,600
31	231,800	-----	a251,000	a262,300	-----	a283,100	-----	341,000	-----	300,400	273,200	-----
MAX	231,800	-	-	-	-	-	-	-	-	338,000	298,900	272,300
MIN	228,100	-	-	-	-	-	-	-	-	300,400	273,200	238,600
(†)	6,113.65	-	-	-	-	-	-	6,120.07	6,119.96	6,117.75	6,116.15	6,114.07
(‡)	+1,600	+9,100	+10,100	+11,300	+10,800	+10,000	+16,600	+41,300	-1,900	-38,700	-27,200	-34,600

CAL YR 1969..... ‡ -21,300

WTR YR 1970..... ‡ +8,400

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

a No gage-height record.

13068500 Blackfoot River near Blackfoot, Idaho

LOCATION.--Lat 43°07'50", long 112°28'35", near E ¼ cor. sec.28, T.3 S., R.34 E., Bingham County, on left bank 11 ft upstream from highway bridge, at mile 2.3, and 8 miles southwest of Blackfoot.

DRAINAGE AREA.--1,295 sq mi, including that of Sand Creek whose flow is diverted to Blackfoot River through the Idaho Canal.

PERIOD OF RECORD.--July 1913 to current year (prior to October 1931, summer months only). Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Altitude of gage is 4,420 ft (from river-profile survey). Prior to May 8, 1926, nonrecording gage and May 8, 1926, to June 25, 1937, water-stage recorder at site 0.5 mile upstream at different datum. June 26, 1937, to Aug. 16, 1963, water-stage recorder at site 175 ft downstream at same datum.

AVERAGE DISCHARGE.--39 years (1931-70), 159 cfs (115,200 acre-ft per year); 15-year base period (1952-67), 153 cfs.

EXTREMES.--Current year: Maximum discharge, 518 cfs May 22 (gage height, 4.61 ft); minimum, 6.8 cfs June 7 (gage height, 1.28 ft).

Maximum combined daily discharge during year (Blackfoot River and Blackfoot River bypass), 1,210 cfs

May 24.

Period of record: Maximum discharge, 1,710 cfs Feb. 11, 1962 (gage height, 7.68 ft); no flow on many days.

REMARKS.--Records good except those for winter periods, which are poor. Flow regulated by Blackfoot Reservoir (see sta 13065000). Many diversions above station for irrigation. Part of flow is supplied by waste from Snake River canals.

Figures of daily discharge do not include discharge in bypass channel which diverts 5.5 miles upstream from station. Average discharge is for combined flow of river and bypass. Diversions to bypass channel started in April 1964. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

REVISIONS.--WSP 1217: Drainage area.

Rating table (gage height, in feet, and discharge in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 26; stage-discharge relation affected by ice
Nov. 27 to Dec. 5, Dec. 27 to Jan. 17, Jan. 30 to Feb. 2)

1.3	8	2.5	131
1.5	17	3.5	296
1.7	31	4.5	504
2.0	61		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	215	98	58	80	72	62	117	269	155	86	118
2	142	209	100	56	85	82	60	132	196	111	128	123
3	253	207	100	64	92	85	69	130	95	97	104	168
4	238	207	100	70	95	72	64	150	67	95	60	166
5	136	207	100	66	78	71	62	194	68	154	41	144
6	76	202	104	65	97	67	81	233	19	205	88	173
7	104	212	88	63	89	60	143	324	9.0	212	124	204
8	114	220	89	72	86	67	174	417	48	220	131	207
9	132	210	93	83	82	75	148	448	232	213	140	209
10	152	205	90	90	82	68	144	426	275	213	146	213
11	142	202	86	100	85	59	178	402	220	247	172	215
12	117	205	82	98	86	60	207	430	245	253	149	212
13	99	202	88	98	103	65	204	444	292	260	137	221
14	100	201	86	96	93	62	193	470	340	218	143	226
15	99	193	79	96	82	74	188	459	313	144	161	228
16	97	179	74	97	83	81	174	468	311	128	190	228
17	180	178	82	100	85	89	194	472	309	118	188	237
18	294	156	79	100	85	76	74	472	307	93	197	232
19	294	128	79	100	74	62	127	468	296	88	193	201
20	249	140	83	106	65	65	178	433	210	97	156	188
21	283	142	89	103	61	64	176	450	173	76	125	194
22	264	146	97	109	71	67	170	497	212	62	109	218
23	258	124	97	152	69	64	155	439	193	56	142	249
24	245	113	89	125	74	67	109	495	167	56	131	277
25	238	107	82	114	69	71	137	483	201	76	106	313
26	233	103	81	106	68	67	109	396	233	85	104	298
27	233	100	66	127	68	72	131	364	233	100	71	288
28	233	100	53	111	65	62	155	348	240	49	53	264
29	230	99	46	74	-----	69	128	360	244	28	56	232
30	225	94	38	76	-----	71	89	330	223	34	96	197
31	218	-----	58	80	-----	65	-----	304	-----	62	107	-----
TOTAL	5,740	5,006	2,576	2,855	2,252	2,151	4,083	11,555	6,240.0	4,005	3,834	6,443
MEAN	185	167	83.1	92.1	80.4	69.4	136	373	208	129	124	215
MAX	294	220	104	152	103	89	207	497	340	260	197	313
MIN	62	94	38	56	61	59	60	117	9.0	28	41	118
AC-FT	11,390	9,930	5,110	5,660	4,470	4,270	8,100	22,920	12,380	7,940	7,600	12,780
MEAN†	238	187	83.1	92.1	80.4	69.4	139	816	324	151	128	288
AC-FT†	14,610	11,120	5,110	5,660	4,470	4,270	8,300	50,130	19,300	9,310	7,860	17,140

CAL YR 1969 TOTAL 61,100.0 MEAN 167 MAX 518 MIN 6.0 AC-FT 121,200
WAT YR 1970 TOTAL 56,740.0 MEAN 155 MAX 497 MIN 9.0 AC-FT 112,500

CAL YR 1969† TOTAL 92,959.9 MEAN 255 MAX 1,390 MIN 6.0 AC-FT 184,400
WAT YR 1970† TOTAL 79,295.4 MEAN 217 MAX 1,210 MIN 9.0 AC-FT 157,300

† Adjusted for flow in flood bypass.

SNAKE RIVER MAIN STEM

13069000 Diversions from Snake River between Shelley and Blackfoot gaging stations, Idaho

Between Shelley and Blackfoot gaging stations, 13 canals divert water from Snake River for irrigation of 158,000 acres of land. Records available during each irrigation season from 1919 to current year. The two largest canals are equipped with recorders, the others with nonrecording gages which are read once daily. Discharge combined to show total diverted flow. Records good.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								398	3,110	3,260	3,720	2,940
2								433	3,440	3,300	3,660	2,890
3								478	3,860	3,340	3,650	2,800
4								623	4,060	3,610	3,600	2,660
5								644	4,160	3,800	3,640	2,500
6								679	4,270	3,870	3,560	2,260
7								657	4,380	4,010	3,340	2,010
8								656	4,420	3,990	3,080	1,970
9								863	3,940	3,500	3,120	1,970
10								969	3,530	3,640	3,080	2,030
11								1,060	3,510	3,510	3,150	2,050
12								1,120	3,360	3,170	3,300	2,050
13								1,130	3,160	3,020	3,360	2,010
14								1,280	2,950	3,170	3,290	1,960
15								1,510	2,750	3,300	3,180	1,960
16								1,590	2,780	3,430	3,080	1,950
17								1,790	2,810	3,640	3,070	1,940
18								2,070	2,750	3,690	3,050	1,940
19								2,540	2,800	3,910	3,050	1,930
20								2,750	3,040	4,040	3,090	1,940
21								2,810	3,300	4,070	3,170	1,960
22								2,710	3,520	4,110	3,220	1,920
23								2,720	3,760	4,040	3,270	1,820
24								2,740	3,590	4,040	3,170	1,830
25								2,750	4,140	4,040	3,220	1,830
26								2,730	4,100	3,910	3,270	1,800
27								2,820	3,920	3,720	3,260	1,700
28								2,880	3,710	3,720	3,240	1,690
29								2,950	3,480	3,750	3,140	1,700
30								2,970	3,210	3,750	3,040	1,710
31		-----			-----		-----	2,990	-----	3,750	2,990	-----
TOTAL								54,390	106,210	114,140	101,060	61,720
MEAN								1,755	3,540	3,682	3,260	2,057
MAX								2,990	4,420	4,110	3,720	2,940
MIN								398	2,750	3,020	2,990	1,690
AC-FT								107,900	210,700	226,400	200,500	122,400

THE PERIOD AC-FT 867,700

SNAKE RIVER MAIN STEM

107

13069500 Snake River near Blackfoot, Idaho

LOCATION.--Lat 43°07'31", long 112°31'06", in SE¼SE¼ sec.30, T.3 S., R.34 E., Bingham County, on right bank 0.3 mile downstream from highway bridge, 0.7 mile downstream from Blackfoot River, 10 miles southwest of Blackfoot, and at mile 750.8.

DRAINAGE AREA.--11,310 sq mi, approximately, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.--June 1910 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "at Clough ranch, near Blackfoot" 1924-45.

GAGE.--Water-stage recorder. Datum of gage is 4,399.83 ft above mean sea level. Prior to July 6, 1913, nonrecording gages about 0.1 mile upstream at datum about 1.00 ft higher. July 6, 1913, to Aug. 19, 1962, water-stage recorder at site 0.1 mile upstream at datum 1.00 ft higher.

AVERAGE DISCHARGE.--44 years (1926-70), 4,054 cfs (2,937,000 acre-ft per year); 15-year base period (1952-67) 3,977 cfs.

EXTREMES.--Current year: Maximum discharge, 21,600 cfs July 1 (gage height, 10.42 ft); minimum, 446 cfs July 22 (gage height, 1.48 ft).

Period of record: Maximum discharge, 46,200 cfs June 18, 1918 (gage height, 14.80 ft, site and datum then in use); minimum, 111 cfs Nov. 10, 1934 (gage height, 0.80 ft, site and datum then in use).

Late in summer of 1905 there was no flow in Snake River for a distance of 10 miles in vicinity of Blackfoot. Aug. 9, 1905, discharge of Snake River just below mouth of Blackfoot River was 39 cfs, supplied by ground-water inflow a short distance upstream.

REMARKS.--Records excellent. Flow regulated by Jackson Lake (see sta 13010500), Palisades Reservoir (see sta 13032450), Henrys Lake (see sta 13039000), Grassy Lake (see sta 13046500), Island Park Reservoir (see sta 13042000), and Blackfoot Reservoir (see sta 13065000), having a combined capacity of 2,883,000 acre-ft. About 694,000 acres of land irrigated by diversions above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 30 to Dec. 16, June 5 to July 4)

1.4	355	6.0	7,100
2.0	730	8.0	12,600
3.0	1,660	10.0	19,600
4.0	3,000	11.0	23,500

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	938	3,060	2,340	2,240	2,590	2,950	2,480	9,440	17,300	20,900	1,460	2,180
2	1,130	3,210	2,370	2,140	2,390	2,980	2,420	9,430	14,600	20,100	1,630	2,280
3	1,940	3,260	2,430	2,000	2,830	3,140	2,530	9,330	11,800	12,300	1,950	2,620
4	2,740	3,230	2,430	1,950	3,040	3,190	2,500	9,280	9,730	7,290	1,410	3,000
5	3,230	3,240	2,430	1,710	3,000	3,140	2,460	9,630	8,860	8,810	978	3,080
6	2,670	3,160	2,430	1,510	2,950	2,980	2,440	11,400	8,490	9,030	1,320	4,020
7	2,710	3,300	2,420	1,400	2,850	2,950	2,500	12,100	8,740	9,280	1,820	4,730
8	2,580	3,310	2,350	1,620	2,850	2,910	2,680	12,900	9,110	9,110	2,140	4,540
9	2,290	3,240	2,360	1,960	2,850	2,980	2,890	13,300	10,400	9,210	2,390	4,370
10	2,390	3,210	2,460	2,620	2,880	2,980	2,950	13,800	12,400	8,610	2,690	4,080
11	2,500	3,110	2,580	2,890	2,840	2,990	4,970	14,500	13,400	7,750	2,190	3,460
12	2,420	3,050	2,580	2,960	2,830	2,900	6,560	14,700	15,100	7,670	1,600	2,890
13	2,430	3,030	2,610	3,010	2,890	2,820	6,910	14,500	16,900	7,840	1,320	2,980
14	2,630	2,940	2,610	3,150	2,960	2,850	6,850	14,500	17,600	7,300	1,310	3,100
15	2,570	2,980	2,600	3,250	3,000	2,870	6,750	14,600	17,600	5,380	1,390	3,010
16	2,600	2,940	2,530	3,240	2,940	2,830	6,640	14,400	17,100	3,300	1,870	2,890
17	2,810	2,920	2,510	3,310	2,990	3,000	6,480	14,900	17,000	1,710	2,320	2,720
18	3,160	2,820	2,520	3,340	3,620	2,930	6,360	15,200	16,500	1,040	2,200	2,510
19	3,160	2,650	2,540	3,410	3,850	2,850	6,450	15,900	15,700	828	2,010	2,220
20	3,050	2,440	2,560	3,570	3,930	2,760	6,650	16,700	14,000	943	1,820	2,090
21	3,430	2,490	2,610	3,500	3,510	2,730	6,650	17,500	12,300	749	1,600	2,290
22	3,380	2,460	2,760	3,520	3,060	2,730	6,550	18,800	11,100	484	1,520	2,610
23	3,360	2,540	2,970	3,490	3,020	2,680	6,350	19,300	9,590	818	1,690	2,950
24	3,130	2,580	3,100	3,640	3,020	2,620	6,560	20,300	9,270	1,410	1,990	3,000
25	3,050	3,260	3,020	3,680	3,010	2,650	7,580	20,500	10,900	1,770	1,830	3,370
26	2,960	2,650	2,960	3,600	2,990	2,580	7,840	19,000	13,300	1,930	1,580	3,440
27	2,880	2,490	2,910	3,520	2,960	2,640	7,970	18,300	14,400	2,290	1,490	3,380
28	2,840	2,370	2,860	3,370	2,910	2,540	8,410	18,400	15,200	1,860	1,490	3,340
29	2,900	2,210	2,610	3,290	-----	2,600	9,020	18,300	17,100	1,140	1,600	3,040
30	3,000	2,220	2,010	2,920	-----	2,570	9,560	18,200	19,300	1,110	2,090	2,780
31	3,000	-----	2,230	2,860	-----	2,570	-----	18,700	-----	1,270	2,290	-----
TOTAL	83,878	86,370	79,700	88,670	84,560	87,910	166,960	467,810	404,790	173,232	54,988	92,970
MEAN	2,706	2,879	2,571	2,860	3,020	2,836	5,565	15,090	13,490	5,588	1,774	3,099
MAX	3,430	3,310	3,100	3,680	3,930	3,190	9,560	20,500	19,300	20,900	2,690	4,730
MIN	938	2,210	2,010	1,400	2,390	2,540	2,420	9,280	8,490	484	978	2,090
AC-FT	166,400	171,300	158,100	175,900	167,700	174,400	331,200	927,900	802,900	343,600	109,100	184,400
CAL YR 1969	TOTAL	1,818,114	MEAN	4,981	MAX	19,300	MIN	355	AC-FT	3,606,000		
WTR YR 1970	TOTAL	1,871,838	MEAN	5,128	MAX	20,900	MIN	484	AC-FT	3,713,000		

LOCATION.--Lat 42°47'12", long 111°58'47", in SE¼NW¼ sec.26, T.7 S., R.38 E., Caribou County, on right bank, 90 ft downstream from county bridge, 4.8 miles upstream from Pebble Creek, and 3.5 miles north of Pebble.

PERIOD OF RECORD.--October 1910 to July 1913, October 1968 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,301.27 ft above mean sea level. October 1910 to July 1913 nonrecording gage 0.5 mile downstream at different datum.

EXTREMES.--Current year: Maximum discharge, 330 cfs June 1 (gage height, 3.12 ft); minimum daily discharge, 30 cfs Jan. 4-8.

Period of record: Maximum discharge observed, 624 cfs Jan. 31, 1911 (gage height, 6.00 ft, site and datum then in use); minimum daily discharge, 21 cfs Dec. 30, 1969; minimum recorded gage height, 1.56 ft June 26, 1970.

REMARKS.--Records good. Flow regulated by Portneuf Reservoir (capacity, 23,695 acre-ft) and Chesterfield Reservoir on Twenty-Four Mile Creek (capacity, 685 acre-ft). Diversions for irrigation above station.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	39	47	35	49	38	76	50	50	318	82	118	112
2	41	45	35	49	38	86	50	47	278	80	104	112
3	41	45	35	41	38	74	50	47	250	84	102	112
4	41	47	35	30	38	54	49	47	286	102	102	114
5	41	49	37	30	38	61	49	45	324	102	108	120
6	39	47	35	30	38	56	50	45	310	102	106	128
7	38	52	38	30	39	59	49	50	292	102	104	128
8	38	52	39	30	39	65	49	52	284	104	102	124
9	41	58	41	32	39	61	47	59	280	104	100	120
10	42	56	44	33	39	56	47	65	270	112	100	92
11	41	54	45	34	39	56	49	58	234	114	106	69
12	41	54	50	36	42	54	49	67	226	112	110	67
13	41	52	50	37	45	56	49	65	240	114	112	69
14	41	50	52	37	45	59	47	61	252	124	112	69
15	41	50	52	37	49	65	49	58	222	124	112	71
16	42	52	52	37	50	67	49	58	210	122	112	72
17	45	49	56	41	54	61	49	59	184	124	110	67
18	49	45	58	44	47	50	49	63	152	116	112	42
19	47	45	59	49	49	58	49	63	114	114	114	41
20	45	47	65	67	44	58	50	74	61	69	116	44
21	47	49	74	78	45	61	50	116	54	112	114	45
22	47	49	76	114	45	61	52	204	42	120	118	45
23	47	47	72	130	47	61	52	262	39	118	118	44
24	49	44	71	114	47	59	49	236	38	118	120	44
25	49	44	69	84	49	56	49	222	34	118	124	42
26	49	41	69	74	49	58	50	226	32	120	120	39
27	50	38	69	69	52	54	54	240	56	122	102	39
28	54	37	63	49	56	56	58	278	94	124	104	38
29	52	35	52	47	-----	56	58	298	94	130	108	38
30	47	35	54	42	-----	56	54	300	94	128	108	38
31	47	-----	49	39	-----	52	-----	302	-----	126	108	-----
TOTAL	1,372	1,415	1,631	1,613	1,238	1,862	1,505	3,817	5,364	3,443	3,406	2,185
MEAN	44.3	47.2	52.6	52.0	44.2	60.1	50.2	123	179	111	110	72.8
MAX	54	58	76	130	56	86	58	302	324	130	124	128
MIN	38	35	35	30	38	50	47	45	32	69	100	38
AC-FT	2,720	2,810	3,240	3,200	2,460	3,690	2,990	7,570	10,640	6,830	6,760	4,330
CAL YR 1969	TOTAL 38,045		MEAN 104	MAX 498	MIN 23	ACFT 75,460						
WAT YR 1970	TOTAL 28,851		MEAN 79.0	MAX 324	MIN 30	ACFT 57,230						

PORTNEUF RIVER BASIN

109

13073000 Portneuf River at Topaz, Idaho

LOCATION.--Lat 42°37'30", long 112°05'20", in SE¼ sec.23, T.9 S., R.37 E., Bannock County, on right bank 200 ft upstream from Bob Smith Creek, 800 ft downstream from Topaz siding, 1.5 miles upstream from diversion dam of Portneuf-Marsh Valley Canal Co., 4 miles west of Lava Hot Springs, and at mile 47.3.

DRAINAGE AREA.--570 sq mi, approximately (includes that of Bob Smith Creek). Mean altitude, 6,080 ft.

PERIOD OF RECORD.--January 1913 to September 1915, July 1919 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 4,918.00 ft above mean sea level, preliminary, unadjusted. Prior to July 20, 1919, nonrecording gage at site 0.3 mile downstream at datum 3.0 ft lower. July 20, 1919, to June 22, 1954, nonrecording gage at site 0.3 mile downstream at datum 2.00 ft lower than present datum.

AVERAGE DISCHARGE.--53 years, 190 cfs (137,700 acre-ft per year); 15-year base period (1952-67), 169 cfs.

EXTREMES.--Current year: Maximum discharge, 557 cfs May 29 (gage height, 4.34 ft); minimum, 102 cfs Oct. 1, 2, (gage height, 2.37 ft).

Period of record: Maximum discharge, 7,120 cfs Feb. 1, 1963 (gage height, 8.22 ft), result of highway fill failure 2 miles upstream; minimum, 64 cfs Sept. 23, 1966 (gage height, 2.27 ft).

REMARKS.--Records good. Flow regulated by Portneuf Reservoir (capacity, 23,695 acre-ft) and Chesterfield Reservoir on Twenty-Four Mile Creek (capacity, 685 acre-ft). Diversions above station for irrigation of about 22,000 acres. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1347: 1920-22, 1924-25(M). WSP 1567: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 7-31)

2.3	93
3.0	295
4.0	504
5.0	762

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	136	139	138	171	187	157	171	487	220	200	179
2	109	140	138	136	166	218	160	169	470	199	183	180
3	114	139	139	139	163	203	159	169	425	188	174	179
4	114	139	141	141	160	190	157	176	420	206	168	175
5	113	139	139	135	159	179	159	198	464	207	170	202
6	111	138	134	127	161	172	164	211	469	206	173	199
7	110	144	139	126	159	174	166	242	457	203	172	204
8	109	144	137	130	159	180	161	224	446	205	170	196
9	111	142	140	136	157	179	158	225	468	209	169	191
10	116	145	138	144	158	172	162	248	473	217	170	182
11	115	141	138	137	157	169	171	233	425	229	175	151
12	115	139	138	137	165	170	165	226	390	213	184	140
13	120	137	139	140	175	169	162	222	399	203	182	140
14	126	136	139	145	169	171	164	215	409	206	180	139
15	136	135	141	152	168	184	160	209	378	202	179	141
16	138	140	141	155	170	182	157	221	365	201	182	141
17	145	137	141	197	178	186	158	247	352	202	182	140
18	147	132	141	211	167	163	155	282	311	197	187	128
19	143	131	142	217	164	167	159	338	297	193	187	126
20	138	134	155	237	160	168	163	330	231	189	190	131
21	137	142	160	229	159	174	160	430	212	155	190	131
22	138	143	173	306	159	174	163	478	204	205	186	134
23	138	140	162	331	160	170	163	524	187	200	191	133
24	135	142	154	297	159	171	161	521	180	202	192	132
25	134	140	148	249	160	168	160	488	169	198	210	127
26	134	141	151	223	162	172	167	487	162	195	223	129
27	134	138	148	266	164	165	176	505	162	203	209	127
28	143	138	136	216	172	168	175	538	220	206	201	125
29	143	138	133	196	-----	168	175	545	225	215	184	125
30	138	139	137	181	-----	168	174	529	222	215	179	124
31	136	-----	139	168	-----	163	-----	508	-----	207	177	-----
TOTAL	3,944	4,169	4,440	5,742	4,581	5,444	4,891	10,109	10,079	6,296	5,719	4,551
MEAN	127	139	143	185	164	176	163	326	336	203	184	152
MAX	147	145	173	331	178	218	176	545	487	229	223	204
MIN	104	131	133	126	157	163	155	169	162	155	168	124
AC-FT	7,820	8,270	8,810	11,390	9,090	10,800	9,700	20,050	19,990	12,490	11,340	9,030
CAL YR 1969	TOTAL	84,911		MEAN	233	MAX	887	MIN	104	AC-FT	168,400	
WTR YR 1970	TOTAL	69,965		MEAN	192	MAX	545	MIN	104	AC-FT	138,800	

PORTNEUF RIVER BASIN

13075000 Marsh Creek near McCammon, Idaho

LOCATION.--Lat 42°37'50", long 112°13'30", in NE¼ sec.22, T.9 S., R.36 E., Bannock County, on left bank 10 ft downstream from abandoned highway bridge, 70 ft upstream from county road crossing, 2 miles southwest of McCammon, and at mile 11.0.

DRAINAGE AREA.--355 sq mi. Mean altitude, 5,630 ft.

PERIOD OF RECORD.--September 1954 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,610 ft (by barometer). Prior to July 14, 1965, nonrecording gage 10 ft upstream at datum.

AVERAGE DISCHARGE.--16 years, 76.8 cfs (55,640 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 246 cfs Jan. 17 (gage height, 4.69 ft); minimum, 45 cfs June 6; minimum gage height, 2.33 ft Apr. 8.

Period of record: Maximum discharge observed, 1,120 cfs Feb. 12, 1962 (gage height, 13.25 ft); minimum observed, 20 cfs Aug. 5, 1961.

REMARKS.--Records good. Diversions above station for irrigation. Part of Birch Creek (tributary to Marsh Creek) diverted into Devil Creek in Bear River basin.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	90	100	85	78	101	101	71	82	80	65	53	91
2	91	98	85	75	99	115	71	84	72	60	52	90
3	94	98	86	74	98	113	69	79	67	63	54	90
4	94	98	86	73	96	106	68	72	60	62	52	84
5	94	97	86	70	98	104	70	66	53	61	56	98
6	98	88	84	74	102	97	75	62	46	60	61	107
7	96	103	86	75	106	96	80	68	48	57	54	106
8	94	108	84	75	106	94	65	75	56	55	52	103
9	95	103	85	74	106	91	62	82	69	60	52	114
10	94	100	85	72	104	90	65	97	72	101	54	117
11	96	99	85	67	105	86	70	96	66	71	50	112
12	98	98	86	66	112	89	68	92	63	70	51	108
13	103	96	91	76	117	90	68	94	69	70	51	104
14	105	95	93	100	109	90	70	102	75	63	54	102
15	102	95	92	118	108	96	73	93	77	58	58	98
16	106	95	90	114	106	93	72	86	77	52	66	93
17	110	91	88	175	105	90	72	89	72	54	59	93
18	118	90	87	221	95	85	72	86	72	54	58	100
19	110	87	88	217	95	86	78	82	64	54	59	98
20	104	87	100	219	94	83	80	77	70	55	55	102
21	102	89	115	169	94	85	77	83	75	50	54	82
22	102	91	117	187	94	82	75	99	78	50	55	82
23	99	88	108	172	94	82	73	96	71	51	57	76
24	98	88	103	145	93	79	70	91	73	50	66	69
25	100	92	100	126	93	78	70	86	66	51	62	65
26	100	92	98	118	91	83	70	86	62	52	52	68
27	100	90	97	160	91	80	79	99	60	54	48	69
28	102	88	92	127	94	82	87	95	63	61	50	74
29	104	86	82	109	-----	86	89	86	65	68	59	80
30	102	86	86	104	-----	87	86	85	63	59	69	80
31	101	-----	86	102	-----	75	-----	86	-----	62	74	-----
TOTAL	3,102	2,816	2,836	3,632	2,806	2,794	2,195	2,656	2,004	1,853	1,747	2,755
MEAN	100	93.9	91.5	117	100	90.1	73.2	85.7	66.8	59.8	56.4	91.8
MAX	118	108	117	221	117	115	89	102	80	101	74	117
MIN	90	86	82	66	91	75	62	62	46	50	48	55
AC-FT	6,150	5,590	5,630	7,200	5,570	5,540	4,350	5,270	3,970	3,680	3,470	5,460

CAL YR 1969 TOTAL 38,650 MEAN 106 MAX 508 MIN 40 ACFT 76,660
 WAT YR 1970 TOTAL 31,196 MEAN 85.5 MAX 221 MIN 46 ACFT 61,880

13075500 Portneuf River at Pocatello, Idaho

LOCATION.--Lat 42°52'20", long 112°28'05", in SE¼NW¼ sec.27, T.6 S., R.34 E., Bannock County, on left bank 1,400 ft downstream from Carson Street Bridge, at Pocatello, 1.2 miles upstream from Pocatello Creek and at mile 15.8.

DRAINAGE AREA.--1,250 sq mi, approximately. Mean altitude, 5,850 ft.

PERIOD OF RECORD.--May to September 1897, March 1898 to October 1899, August 1911 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,418.41 ft above mean sea level (U.S. Corps of Engineers datum). May 18, 1897, to Oct. 1899, nonrecording gage at site 1.6 miles upstream at different datum. Aug. 31, 1911, to May 13, 1927, and Oct. 13, 1927, to June 13, 1928, nonrecording gage 0.3 mile upstream at different datum. May 14 to Oct. 12, 1927, water-stage recorder near present site at different datum. June 14, 1928, to Sept. 28, 1950, water-stage recorder near Carson Street Bridge, 0.3 mile upstream at same datum as former nonrecording gages at this site. Sept. 29, 1950, to May 20, 1968, water-stage recorder at Fremont Street site, 1.0 mile upstream at datum 18.57 ft higher.

AVERAGE DISCHARGE.--57 years (1912-16, 1917-70), 252 cfs (182,600 acre-ft per year); 15-year base period (1952-67), 228 cfs.

EXTREMES.--Current year: Maximum discharge, 860 cfs May 23 (gage height, 6.46 ft); maximum gage height, 11.34 ft Jan. 9 (backwater from ice jam); minimum discharge, 32 cfs July 25 (gage height, 2.03 ft).
Period of record: Maximum discharge, 2,990 cfs Feb. 14, 1962 (gage height, 11.35 ft); minimum, 0.4 cfs July 3, 1961 (gage height, 2.90 ft).

REMARKS.--Records good except those for winter period, which are fair. Flow regulated by Portneuf Reservoir formed by earth dam completed in 1912 and raised 7 ft in 1950 (capacity, 23,695 acre-ft; 16,410 acre-ft prior to 1950) and Chesterfield Reservoir (capacity, 685 acre-ft). Diversions above station for irrigation of about 33,000 acres (1948 determination). Records of chemical analysis for the water year 1970 are published in Part 2 of this report.

REVISIONS.--WSP 1567: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Dec. 18-28, Jan. 15 to Mar. 11, May 1-26, June 5-21; stage-discharge relation affected by ice Dec. 29 to Jan. 15)

2.0	30	5.0	500
2.4	80	7.0	955
3.0	170		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	106	245	280	270	346	347	301	375	584	168	95	88
2	117	246	275	265	338	401	303	378	530	152	86	95
3	126	246	278	270	327	400	302	415	484	126	74	97
4	129	242	266	280	324	380	298	460	421	114	75	98
5	129	243	264	280	318	364	301	479	425	90	76	106
6	140	244	256	265	324	349	327	531	440	91	83	108
7	147	257	263	255	322	339	356	588	440	89	81	112
8	150	278	266	260	322	345	341	563	425	79	75	116
9	152	271	263	270	319	345	331	555	430	61	74	112
10	158	263	264	275	318	336	353	560	440	110	76	113
11	160	260	266	270	319	329	369	542	415	114	79	125
12	156	258	266	270	330	325	351	480	380	76	80	138
13	157	259	269	270	362	324	337	442	405	67	77	144
14	168	258	276	280	348	331	335	433	420	71	79	152
15	195	255	274	300	333	345	335	406	400	70	77	151
16	200	267	269	332	331	347	324	405	400	66	80	138
17	222	267	269	361	341	354	323	469	384	69	83	113
18	246	262	272	461	334	332	326	561	367	69	81	116
19	233	250	271	513	326	314	341	621	325	45	91	121
20	218	252	282	532	330	315	352	652	304	53	87	113
21	218	270	311	539	328	320	343	758	241	63	81	125
22	218	280	338	590	324	324	338	843	216	62	75	137
23	223	282	328	658	328	323	330	833	205	69	77	146
24	222	282	322	639	328	324	325	805	187	42	72	141
25	219	285	322	557	328	322	335	730	167	38	72	139
26	217	285	314	454	329	320	345	690	158	39	72	144
27	216	282	304	494	331	318	358	690	149	43	74	144
28	233	280	287	539	334	318	374	720	144	53	76	139
29	244	280	260	427	-----	322	378	750	144	61	74	141
30	243	280	270	381	-----	324	377	695	161	86	82	143
31	238	-----	270	351	-----	317	-----	620	-----	104	83	-----
TOTAL	5,800	7,929	8,715	11,908	9,242	10,454	10,109	18,049	10,191	2,440	2,447	3,753
MEAN	187	264	281	384	330	337	337	582	340	78.7	78.9	125
MAX	246	285	338	658	362	401	378	843	584	168	95	152
MIN	106	242	256	255	318	314	298	375	144	38	72	88
AC-FT	11,500	15,730	17,290	23,620	18,330	20,740	20,050	35,800	20,210	4,840	4,850	7,440
CAL YR 1969	TOTAL 123,406		MEAN 338		MAX 1,120		MIN 58		AC-FT 244,800			
WTR YR 1970	TOTAL 101,037		MEAN 277		MAX 843		MIN 38		AC-FT 200,400			

PORTNEUF RIVER BASIN

13075900 Fort Hall Michaud Canal near Pocatello, Idaho

LOCATION.--Lat 42°56'10", long 112°32'45", in SE¼SW¼ sec.36, T.5 S., R.33 E., Power County, 5 miles downstream from Pocatello Creek and 6 miles northwest of Pocatello.

RECORDS AVAILABLE.--April 1964 to current year.

GAGE.--Sparling meters at pumping plant.

AVERAGE DISCHARGE.--7 years, 38.3 cfs (27,750 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 224 cfs July 14, 1969; no flow for many days.

REMARKS.--Records good. First diversion to this project started April 1964. Flow controlled by pumping plant which lifts water 90 ft for irrigation of 8,690 acres of land in Bureau of Indian Affairs project. Sparling meters rated by current-meter measurements.

COOPERATION.--Sparling-meter readings furnished by Bureau of Indian Affairs.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	74							0	56	191	101	130
2	74							0	69	191	105	120
3	79							0	97	176	119	120
4	73							13	105	113	105	118
5	69							32	105	119	139	78
6	69							10	105	186	148	78
7	63							16	108	185	140	88
8	55							35	144	189	121	70
9	55							18	118	193	124	70
10	55							13	82	156	137	74
11	53							20	89	92	149	72
12	50							14	144	71	149	64
13	51							23	120	176	146	56
14	52							14	120	176	123	48
15	52							35	127	169	98	49
16	0							18	125	173	110	55
17	0							27	98	166	151	58
18	0							29	98	111	151	60
19	0							37	98	120	153	68
20	0							35	97	171	152	79
21	0							0	108	173	149	81
22	0							0	164	173	108	67
23	0							0	185	170	108	55
24	0							36	188	152	152	52
25	0							14	181	111	161	52
26	0							11	184	101	161	52
27	0							110	194	162	156	43
28	0							110	188	171	151	39
29	0				-----			110	145	164	138	41
30	0				-----			105	191	163	125	39
31	0	-----			-----		-----	27	-----	157	144	-----
TOTAL	924	0	0	0	0	0	0	912	3,833	4,821	4,174	2,076
MEAN	29.8	0	0	0	0	0	0	29.4	128	156	135	69.2
MAX	79	0	0	0	0	0	0	110	194	193	161	130
MIN	0	0	0	0	0	0	0	0	56	71	98	39
AC-FT	1,830	0	0	0	0	0	0	1,810	7,600	9,560	8,280	4,120
CAL YR 1969	TOTAL 20,922	MEAN 57.3	MAX 224	MIN 0	ACFT 41,500							
WAT YR 1970	TOTAL 16,740	MEAN 45.9	MAX 194	MIN 0	ACFT 33,200							

113

LOCATION.--Lat 42°46'45", long 112°52'20", in SE¼SE¼ sec.30, T.7 S., R.31 E., Power County, 800 ft downstream from dam at American Falls.

GAGE.--Sparling meter in pipeline at pumping plant.

AVERAGE DISCHARGE.--13 years, 27.8 cfs (20,140 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 140 cfs July 9, 1970; no flow for many days each year.

REMARKS.--Records good. Flow controlled by pumping plant which lifts water from American Falls Reservoir to point in NE 1/4 sec.32. Project irrigated 8,000 acres from this canal and 3,810 acres by pumping from ground water in 1970.

COOPERATION.--Record of pump operation furnished by Falls Irrigation District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36							0	39	122	75	80
2	36							0	49	125	70	92
3	36							0	66	121	70	74
4	36							0	70	111	70	69
5	36							0	70	108	86	62
6	36							0	70	122	75	60
7	36							16	70	126	70	60
8	36							20	85	134	70	60
9	36							20	90	140	70	60
10	36							20	75	136	69	60
11	36							20	70	101	69	60
12	36							20	56	93	80	60
13	25							20	51	93	88	60
14	18							20	51	106	90	59
15	18							20	40	111	74	59
16	18							31	37	111	68	59
17	6.0							35	48	111	84	59
18	0							35	66	111	90	59
19	0							39	70	111	90	59
20	0							41	70	111	90	59
21	0							41	70	111	90	50
22	0							24	82	111	74	40
23	0							18	90	111	69	40
24	0							18	102	110	85	40
25	0							18	116	110	91	40
26	0							18	122	110	91	40
27	0							28	122	110	91	40
28	0							32	122	110	91	40
29	0							37	122	98	74	40
30	0							39	122	92	68	40
31	0							39		92	68	
TOTAL	517.0	0	0	0	0	0	0	669	2,313	3,469	2,440	1,680
MEAN	16.7	0	0	0	0	0	0	21.6	77.1	112	78.7	56.0
MAX	36	0	0	0	0	0	0	41	122	140	91	92
MIN	0	0	0	0	0	0	0	0	37	92	68	40
AC-FT	1,030	0	0	0	0	0	0	1,330	4,590	6,880	4,840	3,330
CAL YR 1969	TOTAL 12,424.0	MEAN 34.0	MAX 135	MIN 0	ACFT 24,640							
WAT YR 1970	TOTAL 11,088.0	MEAN 30.4	MAX 140	MIN 0	ACFT 21,990							

SNAKE RIVER MAIN STEM

13076500 American Falls Reservoir at American Falls, Idaho

LOCATION.--Lat 42°46'45", long 112°52'45", in SE¼SW¼ sec.30, T.7 S., R.31 E., Power County, near right end of dam at outlet gates of reservoir on Snake River at American Falls and at mile 714.0.

DRAINAGE AREA.--13,580 sq mi, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.--March 1926 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

EXTREMES.--Current year: Maximum contents, 1,727,000 acre-ft Apr. 13 (elevation, 4,354.97 ft); maximum gage height, 4,355.19 ft Apr. 13 (wind effect); minimum contents, 220,300 acre-ft Oct. 5 (elevation, 4,314.56 ft).
Period of record: Maximum contents, 1,748,000 acre-ft June 21, 1963 (elevation, 4,355.34 ft); minimum since full capacity was attained July 13, 1927, 2,000 acre-ft Sept. 9, 1961 (elevation, 4,296.26 ft).

REMARKS.--Reservoir is formed by concrete gravity dam with earth dikes at each end; partial storage began in 1926, full storage in 1927. Capacity, 1,700,000 acre-ft between elevations 4,295.66 ft (bottom of outlet gate) and 4,354.50 ft (top of spillway radial gates). Small amount of dead storage. Water is used for irrigation by canals diverting from Snake River at Minidoka and Milner Dams.

COOPERATION.--Reservoir elevations and capacity table furnished by Bureau of Reclamation.

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

4,310.0	135.8	4,340.0	983.5
4,315.0	229.3	4,350.0	1,457
4,320.0	340.9	4,355.0	1,728
4,330.0	616.2		

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	233.9	444.7	769.3	1,044	1,249	1,457	1,703	1,715	1,714	1,712	1,356	893.9
2	226.8	455.7	778.7	1,050	1,254	1,467	1,706	1,713	1,708	1,711	1,340	883.7
3	225.2	468.1	786.6	1,054	1,259	1,478	1,705	1,711	1,701	1,706	1,328	875.1
4	222.4	479.2	795.9	1,057	1,270	1,489	1,705	1,709	1,695	1,697	1,305	858.3
5	220.5	491.1	804.8	1,064	1,276	1,498	1,706	1,707	1,694	1,689	1,290	856.8
6	222.6	505.1	814.0	1,067	1,283	1,507	1,705	1,706	1,692	1,686	1,278	846.9
7	223.8	521.4	822.6	1,070	1,291	1,514	1,700	1,712	1,688	1,684	1,267	846.9
8	222.2	534.2	831.3	1,075	1,298	1,520	1,706	1,711	1,686	1,680	1,249	847.7
9	226.6	544.4	840.0	1,080	1,306	1,537	1,707	1,708	1,684	1,677	1,236	846.9
10	234.3	557.4	850.3	1,084	1,315	1,544	1,703	1,703	1,693	1,675	1,223	843.1
11	244.0	568.3	859.8	1,089	1,323	1,552	1,708	1,706	1,708	1,672	1,207	843.8
12	245.3	578.3	866.8	1,095	1,327	1,561	1,719	1,703	1,717	1,666	1,192	843.1
13	249.9	590.0	876.6	1,102	1,334	1,572	1,721	1,700	1,714	1,659	1,173	829.0
14	254.6	599.0	885.7	1,108	1,340	1,579	1,725	1,699	1,716	1,654	1,159	824.4
15	262.2	608.4	895.5	1,116	1,347	1,589	1,720	1,701	1,712	1,644	1,142	820.7
16	272.2	617.8	905.4	1,123	1,347	1,600	1,715	1,702	1,711	1,631	1,127	816.6
17	280.8	629.1	913.5	1,132	1,355	1,615	1,706	1,703	1,706	1,611	1,112	815.1
18	292.0	642.0	921.6	1,140	1,366	1,622	1,699	1,704	1,704	1,595	1,097	812.9
19	303.6	653.4	930.5	1,149	1,376	1,628	1,692	1,704	1,706	1,576	1,082	808.5
20	314.9	663.4	939.0	1,157	1,385	1,637	1,698	1,704	1,706	1,556	1,067	805.5
21	327.9	670.0	948.9	1,164	1,392	1,645	1,701	1,702	1,704	1,539	1,053	803.6
22	339.5	681.0	958.5	1,174	1,398	1,655	1,699	1,695	1,704	1,517	1,037	800.7
23	351.2	690.5	969.8	1,182	1,407	1,658	1,706	1,700	1,705	1,499	1,014	796.6
24	360.9	701.5	981.4	1,188	1,417	1,675	1,708	1,703	1,703	1,483	1,009	802.2
25	371.3	711.0	990.8	1,198	1,425	1,678	1,711	1,708	1,703	1,466	992.5	802.2
26	383.4	722.5	996.4	1,209	1,434	1,700	1,712	1,706	1,704	1,451	976.8	804.4
27	392.4	732.3	1,008	1,214	1,444	1,693	1,708	1,704	1,703	1,436	961.0	806.2
28	401.6	742.1	1,017	1,226	1,451	1,700	1,717	1,704	1,711	1,418	946.4	808.5
29	413.7	751.3	1,026	1,234	-----	1,705	1,712	1,708	1,711	1,405	931.3	810.0
30	423.9	760.3	1,033	1,241	-----	1,711	1,717	1,711	1,715	1,387	917.9	810.7
31	433.9	-----	1,040	1,245	-----	1,703	-----	1,713	-----	1,374	906.2	-----
MAX	433.9	760.3	1,040	1,245	1,451	1,711	1,725	1,715	1,717	1,712	1,356	893.9
MIN	220.5	444.7	769.3	1,044	1,249	1,457	1,692	1,695	1,684	1,374	906.2	796.6
(†)	4,323.68	4,334.26	4,341.30	4,345.75	4,349.89	4,354.55	4,354.80	4,354.74	4,354.76	4,348.37	4,338.12	4,335.64
(‡)	+195.1	+326.4	+279.7	+205	+206	+252	+14	-4	+2	-341	-467.8	-95.5
CAL YR 1969	MAX 1,720	MIN 220.5	† -227									
WAT YR 1970	MAX 1,725	MIN 220.5	† +571.7									

† Elevation, in feet, at end of month.

‡ Change in contents, in thousands of acre-feet.

13077000 Snake River at Neeley, Idaho

LOCATION.--Lat 42°46'06", long 112°52'42", in NE¼SW¼ sec.31, T.7 S., R.31 E., Power County, on right bank 400 ft upstream from fish hatchery buildings, 0.9 mile downstream from American Falls Dam, at mile 713.0. Records computed to show flow at former site in sec.11, T.8 S., R.30 E., 0.5 mile north of Neeley and 2.5 miles downstream from present site, by adding inflow between sites.

DRAINAGE AREA.--13,600 sq mi, approximately, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.--March 1906 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 4,241.6 ft above mean sea level (levels by Bureau of Reclamation). Prior to Aug. 8, 1910, nonrecording gages and Aug. 8, 1910, to June 6, 1930, water-stage recorder at site 2.5 miles downstream at different datum. June 7, 1930, to Mar. 19, 1945, water-stage recorder at site 0.4 mile upstream at datum 0.4 ft higher.

AVERAGE DISCHARGE.--44 years (1926-70), 6,777 cfs (4,910,000 acre-ft per year); 15-year base period (1952-67), 6,704 cfs.

EXTREMES.--Current year: Maximum discharge, 24,500 cfs May 21; maximum gage height, 8.87 ft July 1; minimum discharge, 50 cfs Nov. 6, 7 (gage height, 1.00 ft).

Period of record: Maximum daily discharge, 48,400 cfs June 20, 1918 (gage height, 13.5 ft, site and datum then in use); minimum, 50 cfs Oct. 22, 23, Nov. 14-16, 1941, Oct. 29, 1961, Nov. 6, 1970.

REMARKS.--Records excellent. Flow regulated by American Falls Reservoir (see sta 13076500) and other reservoirs, having a combined usable capacity of 4,600,000 acre-ft. About 740,000 acres of land irrigated by water diverted from river and tributaries above station. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

COOPERATION.--Gage-height record furnished by Bureau of Reclamation.

REVISIONS (WATER YEARS).--WSP 1317: 1910.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 4 to Aug. 3)

0.8	48	2.5	510	5.0	5,240
1.0	68	3.0	840	7.0	14,700
1.5	135	3.5	1,370	9.0	26,100
2.0	290	4.0	2,220		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,040	864	610	2,590	2,520	974	5,050	12,800	19,600	23,100	11,700	10,700
2	7,040	669	798	2,590	2,390	1,030	4,860	13,200	20,000	22,400	11,800	9,970
3	6,790	149	920	2,610	2,300	1,080	4,860	13,200	18,600	18,500	11,800	9,730
4	6,470	52	920	2,590	2,280	1,080	4,900	13,100	15,200	13,600	11,800	9,720
5	6,150	56	1,040	2,520	2,140	1,090	4,900	13,100	11,500	12,700	12,000	9,670
6	5,630	56	1,140	2,410	1,890	920	4,860	13,100	13,100	12,700	12,300	9,230
7	5,200	190	1,130	2,410	1,760	974	4,860	13,100	13,000	12,600	12,100	8,440
8	5,010	679	1,040	2,540	1,800	974	4,790	15,100	13,200	12,500	12,200	7,900
9	3,880	686	1,000	2,590	1,820	896	4,720	16,600	12,600	12,500	12,000	7,560
10	3,170	700	1,000	2,590	1,850	798	4,680	17,400	11,800	12,600	11,900	7,430
11	2,870	707	965	2,590	1,890	791	5,010	18,400	11,400	12,600	11,900	7,700
12	2,610	714	920	2,590	2,110	791	5,550	18,600	14,400	12,300	12,000	7,970
13	2,610	714	920	2,590	2,260	938	7,560	18,400	18,200	12,400	12,100	8,050
14	2,640	714	920	2,590	2,260	1,030	9,950	17,600	19,600	12,600	12,100	7,750
15	2,430	721	929	2,540	2,280	1,050	11,600	16,600	21,600	12,600	12,100	7,450
16	1,510	721	840	2,370	2,300	992	12,200	16,300	22,300	13,100	11,700	7,070
17	848	644	938	2,220	2,320	974	12,100	16,300	22,200	13,300	11,700	6,690
18	848	584	1,100	2,240	2,350	983	11,400	16,900	20,100	13,300	11,800	6,610
19	864	584	992	2,450	2,350	920	11,000	17,000	18,300	13,200	11,900	6,590
20	864	591	965	2,660	2,370	833	9,700	16,400	17,400	13,300	11,900	6,480
21	872	578	965	2,640	2,370	826	8,380	20,700	16,400	13,400	11,900	6,200
22	872	578	974	2,570	1,800	833	7,780	22,900	13,900	13,300	11,900	6,120
23	833	584	983	2,450	1,420	840	6,910	20,100	12,200	12,500	11,700	5,830
24	864	584	983	2,370	1,280	880	7,040	20,100	12,200	12,300	11,600	5,480
25	888	578	983	2,410	1,010	872	8,140	20,900	13,000	12,200	11,600	5,390
26	888	578	983	2,430	1,000	1,340	9,850	21,500	13,900	12,100	12,000	5,270
27	864	456	983	2,450	983	1,870	11,400	21,500	14,100	12,000	13,000	5,200
28	856	164	983	2,480	956	2,710	11,700	19,800	15,400	12,000	12,000	5,020
29	864	559	983	2,540	-----	3,470	11,700	18,800	15,500	12,000	11,800	4,940
30	864	610	992	2,540	-----	4,900	12,100	18,800	20,000	11,900	11,500	5,330
31	864	-----	1,650	2,520	-----	5,240	-----	19,000	-----	11,800	11,100	-----
TOTAL	84,003	16,064	30,549	77,680	54,059	42,899	239,550	537,300	480,700	417,400	368,900	217,490
MEAN	2,710	535	985	2,506	1,931	1,384	7,985	17,330	16,020	13,460	11,900	7,250
MAX	7,040	864	1,650	2,660	2,520	5,240	12,200	22,900	22,300	23,100	13,000	10,700
MIN	833	52	610	2,220	956	791	4,680	12,800	11,400	11,800	11,100	4,940
AC-FT	166,600	31,860	60,590	154,100	107,200	85,090	475,100	1,066M	953,500	827,900	731,700	431,400
CAL YR 1969	TOTAL 2,996,436			MEAN 8,209		MAX 23,300	MIN 52	AC-FT 5,943,000				
WTR YR 1970	TOTAL 2,566,594			MEAN 7,032		MAX 23,100	MIN 52	AC-FT 5,091,000				

RAFT RIVER BASIN

13077700 George Creek near Yost, Utah

LOCATION.--Lat 41°55'07", long 113°28'51", in SE¼SW¼SW¼ sec.20, T.14 N., R.14 W., Box Elder County, on right bank 1,000 ft upstream from section corner and boundary of Sawtooth National Forest, 4.5 miles southeast of Yost, 5 miles south of Utah-Idaho State line, and 16 miles southwest of Strevell, Idaho.

DRAINAGE AREA.--7.84 sq mi.

PERIOD OF RECORD.--July 1959 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 7,000 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 7.12 cfs (5,160 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 73 cfs June 9 (gage height, 1.57 ft); minimum, 1.7 cfs several days during November and December.

Period of record: Maximum discharge, 146 cfs June 10, 1963 (gage height, 1.96 ft); minimum daily, 1.1 cfs several days in January and February 1962.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	2.9	1.8	2.0	2.2	2.1	2.6	3.7	40	19	5.8	3.5
2	3.1	2.7	1.7	2.0	2.2	2.0	2.6	4.5	43	17	5.8	3.4
3	3.2	2.8	1.9	2.0	2.2	2.0	2.6	6.5	50	16	5.6	3.2
4	3.4	2.8	2.2	2.0	2.2	2.0	2.6	9.6	54	15	5.6	3.2
5	3.3	2.8	2.2	2.0	2.2	1.9	2.6	12	55	15	6.4	3.5
6	3.2	2.9	2.2	1.9	2.2	1.9	3.0	14	52	15	5.5	4.0
7	3.2	3.8	2.2	1.9	2.2	1.9	3.3	14	54	14	5.2	3.7
8	3.2	3.0	2.2	1.9	2.2	2.0	3.4	10	58	13	4.9	3.4
9	3.2	2.8	2.2	1.9	2.2	2.2	3.5	9.9	65	13	4.9	3.2
10	3.4	2.5	2.2	2.0	2.2	2.1	4.1	9.4	55	13	4.8	3.2
11	3.4	2.6	2.2	1.9	2.2	2.1	4.6	8.4	42	13	4.6	3.2
12	3.2	2.5	2.2	2.0	2.4	2.2	4.1	8.1	32	12	4.6	3.0
13	3.4	2.4	2.2	2.0	2.4	2.2	3.8	7.9	31	11	4.6	3.0
14	3.4	2.4	2.2	2.2	2.2	2.2	3.7	7.5	30	10	4.3	3.0
15	3.1	2.4	2.2	2.2	2.2	2.2	3.5	8.2	29	10	4.2	3.0
16	3.0	2.3	2.2	2.1	2.2	2.2	3.4	12	36	10	4.1	3.0
17	3.2	2.1	2.2	2.0	2.2	2.1	3.2	19	39	9.9	4.1	2.9
18	3.2	2.2	2.2	2.2	2.2	2.2	3.4	24	45	11	3.9	2.8
19	3.2	2.0	2.2	2.2	1.9	2.2	3.4	26	46	10	4.1	2.8
20	3.0	2.0	2.2	2.2	2.0	2.2	3.4	27	48	9.0	4.6	3.0
21	3.0	2.1	2.3	2.2	2.0	2.2	3.4	27	49	8.6	4.3	3.0
22	3.0	2.0	2.2	2.4	2.0	2.2	3.2	23	51	8.5	3.9	3.0
23	3.0	1.9	2.2	2.4	2.0	2.4	3.2	24	48	7.7	3.8	2.8
24	3.2	2.0	2.2	2.2	2.0	2.4	3.3	32	44	7.3	3.8	2.8
25	3.2	2.0	2.1	2.2	1.9	2.4	3.4	50	42	7.2	3.7	2.8
26	3.0	1.9	2.2	2.2	1.9	2.4	3.4	59	38	7.2	3.4	2.8
27	3.0	1.8	2.2	2.2	1.9	2.4	3.4	58	35	7.0	3.4	2.8
28	3.2	1.8	2.2	2.1	2.0	2.4	3.7	55	30	7.3	3.5	2.8
29	2.9	1.7	2.0	2.2	-----	2.6	3.6	47	26	6.5	3.4	2.6
30	2.8	1.7	2.0	2.2	-----	2.6	3.4	42	22	6.2	3.3	2.6
31	2.9	-----	2.0	2.2	-----	2.6	-----	38	-----	6.1	3.3	-----
TOTAL	97.5	70.8	66.4	65.1	59.6	68.5	100.8	696.7	1,289	335.5	137.4	92.0
MEAN	3.15	2.36	2.14	2.10	2.13	2.21	3.36	22.5	43.0	10.8	4.43	3.07
MAX	3.4	3.8	2.3	2.4	2.4	2.6	4.6	59	65	19	6.4	4.0
MIN	2.8	1.7	1.7	1.9	1.9	1.9	2.6	3.7	22	6.1	3.3	2.6
AC-FT	193	140	132	129	118	136	200	1,380	2,560	665	273	182

CAL YR 1969 TOTAL 4,036.5 MEAN 11.1 MAX 80 MIN 1.6 AC-FT 8,010
WTR YR 1970 TOTAL 3,079.3 MEAN 8.44 MAX 65 MIN 1.7 AC-FT 6,110

PEAK DISCHARGE (BASE, 40 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5-26	1900	1.48	65	6-9	0600	1.57	73
6-22	1500	1.43	54				

13078000 Raft River at Peterson Ranch, near Bridge, Idaho

LOCATION.--Lat 42°04'00", long 113°26'50", in NW¼NW¼ sec.5, T.16 S., R.26 E., Cassia County, on left bank 100 ft upstream from Onemile Creek, 7.5 miles southwest of Bridge Post Office, 16 miles south of Malta, and at mile 45.6.

DRAINAGE AREA.--412 sq mi. Mean altitude, 6,300 ft.

PERIOD OF RECORD.--September 1946 to December 1953, May 1955 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,980 ft (by barometer).

AVERAGE DISCHARGE.--22 years, 16.7 cfs (12,100 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 233 cfs Jan. 23 (gage height, 3.11 ft); minimum, 3.1 cfs Nov. 28, 29 (gage height, 1.18 ft).

Period of record: Maximum discharge, 1,090 cfs Feb. 5, 1951 (gage height, 4.52 ft), from rating curve extended above 200 cfs on basis of slope-area measurement of peak flow; minimum, 0.8 cfs Jan. 23, 1961 (gage height, 1.02 ft), result of ice jam upstream.

REMARKS.--Records good. Diversions above station for irrigation. Records of chemical analysis for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.2	5.1	1.7	27
1.3	7.7	2.0	51
1.4	11	2.5	112
1.5	16	2.9	188

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.7	7.2	9.1	10	21	19	13	26	78	25	9.1	9.5
2	5.8	7.2	9.2	8.5	20	20	15	24	68	21	8.7	7.7
3	6.3	7.3	9.1	8.0	20	20	15	25	61	18	8.3	8.1
4	6.4	7.7	8.9	7.6	22	19	15	27	59	17	8.5	9.5
5	6.6	7.7	8.8	8.2	20	19	14	31	59	15	9.7	9.1
6	6.9	7.6	8.2	8.4	23	18	14	38	66	14	9.5	9.8
7	6.8	9.3	8.8	8.2	23	17	14	43	63	14	8.6	12
8	7.2	10	9.0	8.4	23	17	14	46	75	15	8.2	8.8
9	7.3	10	9.9	9.0	22	16	15	48	77	14	8.2	8.3
10	7.2	9.7	9.6	9.8	22	16	15	46	100	15	7.7	8.0
11	7.2	9.6	9.5	9.9	23	15	17	51	99	16	7.6	7.9
12	7.3	9.5	10	10	25	16	23	51	77	18	7.4	7.4
13	7.4	8.8	11	12	28	16	24	49	82	15	8.7	7.1
14	7.8	9.4	11	13	27	16	23	46	148	14	8.2	7.1
15	7.7	10	11	15	23	17	23	43	97	14	7.7	7.3
16	8.6	10	11	18	22	17	22	40	78	11	6.9	7.8
17	9.3	9.6	10	23	22	17	22	41	67	10	6.8	7.8
18	9.0	8.3	11	36	21	18	22	44	88	9.5	6.6	7.7
19	8.2	8.2	12	40	19	15	21	50	65	19	6.7	7.5
20	7.8	8.3	13	37	19	16	24	64	48	13	7.5	9.2
21	7.9	9.8	14	46	19	18	23	81	41	12	7.4	8.8
22	9.5	11	16	53	20	18	24	99	36	11	7.0	8.1
23	9.0	9.8	16	182	20	17	21	81	35	10	7.2	7.7
24	10	9.3	15	86	20	16	20	78	27	12	7.0	7.5
25	10	10	14	43	19	13	21	66	20	11	6.8	7.4
26	7.8	10	15	33	19	14	23	64	19	10	6.6	7.6
27	8.7	9.4	13	36	19	13	26	81	23	10	6.8	7.7
28	7.8	8.7	13	58	20	12	26	92	24	10	7.3	7.7
29	7.7	8.5	9.8	30	-----	13	25	91	24	11	7.2	7.7
30	7.8	8.9	11	23	-----	15	27	92	23	10	7.1	7.8
31	7.2	-----	11	21	-----	14	-----	87	-----	9.8	7.9	-----
TOTAL	239.9	270.8	347.9	911.0	601	507	601	1,745	1,827	424.3	238.9	245.6
MEAN	7.74	9.03	11.2	29.4	21.5	16.4	20.0	56.3	60.9	13.7	7.71	8.19
MAX	10	11	16	182	28	20	27	99	148	25	9.7	12
MIN	5.7	7.2	8.2	7.6	19	12	13	24	19	9.5	6.6	7.1
AC-FT	476	537	690	1,810	1,190	1,010	1,190	3,460	3,620	842	474	487

CAL YR 1969 TOTAL 4,952.9
WTR YR 1970 TOTAL 7,959.4

MEAN 13.6
MEAN 21.8

MAX 54
MAX 182

MIN 3.0
MIN 5.7

AC-FT 9,820
AC-FT 15,790

RAFT RIVER BASIN

13079000 Clear Creek near Naf, Idaho

LOCATION.--Lat 41°58'01", long 113°17'09", in SE¼NW¼SW¼ sec.1, T.14 N., R.13 W. (Salt Lake meridian), Box Elder County, on right bank 2 miles south of Utah-Idaho State line, 3 miles south of Naf, and 20 miles upstream from mouth.

DRAINAGE AREA.--20.2 sq mi.

PERIOD OF RECORD.--January 1910 to June 1911, June to December 1912 (gage heights only), October 1944 to September 1970 (discontinued). Monthly discharge only for October and November 1944, published in WSP 1317.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 5,840 ft (by barometer). Prior to Jec. 31, 1912, nonrecording gage at site 30 ft upstream at different datum. Nov. 23, 1944, to Mar. 28, 1950, water-stage recorder at site 600 ft upstream at different datum, above one small diversion.

AVERAGE DISCHARGE.--26 years, 10.6 cfs (7,680 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 197 cfs June 10 (gage height, 1.77 ft); minimum daily, 2.1 cfs Dec. 6 to Feb. 28.

Period of record: Maximum discharge, 386 cfs June 15, 1967 (gage height, 2.26 ft); minimum, 0.1 cfs several times in summers of 1952-54, 1956, 1959-61, 1963.

REMARKS.--Records good except those for winter periods and periods of no gage-height record, which are fair. Three small diversions for irrigation above station.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.6	3.4	3.5	2.1	2.1	2.2	2.5	3.6	73	57	4.1	3.7
2	3.0	3.1	3.5	2.1	2.1	2.2	2.2	4.6	76	53	5.8	3.6
3	3.9	3.3	3.8	2.1	2.1	2.2	2.2	5.9	83	51	6.8	3.3
4	4.4	3.4	3.1	2.1	2.1	2.2	2.5	7.2	99	50	6.6	3.0
5	4.4	3.4	2.4	2.1	2.1	2.2	2.5	9.9	97	39	8.9	3.9
6	4.4	3.6	2.1	2.1	2.1	2.2	3.2	13	117	42	7.8	3.1
7	4.4	6.3	2.1	2.1	2.1	2.2	3.2	14	117	36	7.2	3.2
8	4.4	4.0	2.1	2.1	2.1	2.2	2.8	11	94	28	6.6	3.4
9	4.2	3.6	2.1	2.1	2.1	2.2	2.8	10	142	25	5.4	3.4
10	4.9	3.8	2.1	2.1	2.1	2.2	3.6	9.7	149	25	5.4	3.3
11	4.6	3.6	2.1	2.1	2.1	2.2	4.0	9.3	138	25	4.9	3.0
12	4.3	3.6	2.1	2.1	2.1	2.2	3.4	9.0	115	21	4.9	2.8
13	4.8	3.6	2.1	2.1	2.1	2.2	3.5	8.5	109	18	3.2	2.8
14	4.9	3.6	2.1	2.1	2.1	2.3	3.5	7.8	100	16	4.0	2.8
15	4.7	3.6	2.1	2.1	2.1	2.2	3.2	8.0	104	15	4.9	2.8
16	5.0	3.6	2.1	2.1	2.1	2.2	3.5	11	113	14	4.4	2.8
17	5.2	2.9	2.1	2.1	2.1	2.3	3.2	18	118	14	4.4	2.8
18	5.2	2.9	2.1	2.1	2.1	2.2	3.0	26	112	18	4.0	2.8
19	4.9	2.9	2.1	2.1	2.1	2.2	3.2	35	110	18	4.0	2.8
20	4.0	3.5	2.1	2.1	2.1	2.2	3.0	46	112	14	6.6	2.8
21	4.0	3.5	2.1	2.1	2.1	2.2	3.0	50	126	14	4.0	2.8
22	4.0	3.5	2.1	2.1	2.1	2.2	2.9	61	125	13	3.6	2.8
23	4.0	3.5	2.1	2.1	2.1	2.2	2.8	76	125	11	4.4	2.8
24	4.0	3.5	2.1	2.1	2.1	2.2	2.9	79	120	10	4.0	2.8
25	4.2	3.5	2.1	2.1	2.1	2.2	3.2	94	125	12	4.0	2.8
26	3.9	3.5	2.1	2.1	2.1	2.2	3.6	81	126	11	3.6	2.7
27	3.9	3.5	2.1	2.1	2.1	2.5	3.2	77	121	10	4.0	2.7
28	4.1	3.5	2.1	2.1	2.1	2.2	3.2	98	105	10	4.0	2.7
29	3.5	3.5	2.1	2.1	-----	2.2	3.2	79	89	8.8	2.5	2.7
30	3.4	3.5	2.1	2.1	-----	2.2	3.2	78	66	5.9	2.8	2.7
31	3.5	-----	2.1	2.1	-----	2.5	-----	73	-----	4.6	3.2	-----
TOTAL	130.7	106.7	70.9	65.1	58.8	69.0	92.2	1,113.5	3,306	689.3	150.0	89.6
MEAN	4.22	3.56	2.29	2.10	2.10	2.23	3.07	35.9	110	22.2	4.84	2.99
MAX	5.2	6.3	3.8	2.1	2.1	2.5	4.0	98	149	57	8.9	3.9
MIN	2.6	2.9	2.1	2.1	2.1	2.2	2.2	3.6	66	4.6	2.5	2.7
AC-FT	259	212	141	129	117	137	183	2,210	6,560	1,370	298	178

CAL YR 1969 TOTAL 7,247.24

MEAN 19.9

MAX 162

MIN .70

AC-FT 14,370

WTR YR 1970 TOTAL 5,941.8

MEAN 16.3

MAX 149

MIN 2.1

AC-FT 11,790

PEAK DISCHARGE (BASE, 70 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5-25	1900	1.60	117	6-22	1300	1.68	147
6-10	1000	1.77	197				

NOTE.--No gage-height record Dec. 7 to Jan. 23.

RAFT RIVER BASIN

119

13079100 Cassia Creek above Stinson Creek, near Elba, Idaho

LOCATION.--Lat 42°15'10", long 113°39'15", in lot 2 NE¼ sec.33, T.13 S., R.24 E., Cassia County, Sawtooth National Forest, on right bank 300 ft upstream from Stinson Creek, and 5 miles west of Elba.

DRAINAGE AREA.--7.2 sq mi, approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 5,900 ft (from topographic map).

AVERAGE DISCHARGE.--5 years, 2.74 cfs (5.17 inches per year, 1,990 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 32 cfs May 7 (gage height, 2.36 ft); minimum, 0.57 cfs Jan. 12.
Period of record: Maximum discharge, 32 cfs June 24, 1969, May 7, 1970 (gage height, 2.36 ft); minimum, 0.19 cfs July 23, 1968 (gage height, 1.17 ft).

REMARKS.--Records good.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.2	0.64	1.7	11
1.3	1.6	2.0	20
1.4	3.4	2.3	30

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.89	.72	.78	1.2	2.9	3.9	4.6	9.3	8.6	3.9	1.8	1.4
2	1.1	.72	.74	1.2	2.7	4.1	4.6	13	7.8	3.6	1.8	1.3
3	1.1	.72	.78	1.2	2.5	4.1	4.4	17	7.3	3.4	1.7	1.3
4	1.1	.64	.78	1.1	2.0	3.7	4.6	19	6.8	3.2	1.8	1.3
5	1.1	.72	.74	1.1	2.2	3.4	6.6	22	6.6	3.1	1.9	1.7
6	.99	.64	.84	1.1	2.2	3.4	11	24	6.3	3.6	1.8	2.0
7	.99	1.3	1.0	1.1	2.2	3.9	13	27	6.6	3.2	1.7	1.6
8	.99	.89	.96	1.1	2.2	4.1	13	22	6.1	2.9	1.7	1.4
9	1.1	.89	.94	.90	2.2	4.1	15	24	8.6	2.9	1.6	1.4
10	1.2	.80	.90	.72	2.3	3.9	19	24	6.3	3.4	1.6	1.4
11	1.1	.80	.80	.64	2.9	3.7	18	21	5.6	3.1	1.6	1.3
12	.99	.89	.80	.57	3.4	3.7	15	20	5.5	2.8	1.5	1.3
13	1.1	.89	.89	.64	4.4	3.9	13	19	6.9	2.5	1.5	1.3
14	1.1	.80	.89	.80	4.1	4.1	12	17	8.3	2.4	1.5	1.3
15	1.1	.80	.89	.89	3.7	4.1	11	16	9.7	2.3	1.5	1.4
16	1.3	.72	.80	1.6	3.4	3.9	10	17	9.5	2.3	1.5	1.4
17	1.3	.80	.82	2.9	2.9	3.9	9.7	21	9.3	2.2	1.4	1.3
18	1.2	.72	.86	2.2	2.9	4.4	9.7	23	8.6	2.2	1.4	1.3
19	1.2	.72	.95	2.5	2.3	3.7	9.4	23	7.9	2.2	1.5	1.4
20	1.1	.80	1.1	3.7	2.3	3.9	8.6	22	7.3	2.1	1.5	1.8
21	1.1	.80	1.5	6.3	2.3	4.1	8.9	24	6.8	2.4	1.4	1.6
22	.99	.80	2.0	16	2.2	4.4	8.5	22	6.2	2.2	1.3	1.5
23	.99	.72	1.3	14	2.3	5.1	8.6	22	5.8	2.0	1.3	1.5
24	.99	.72	1.3	9.4	2.3	6.1	9.6	19	5.4	2.0	1.3	1.5
25	.80	.72	1.2	6.6	2.3	6.3	10	16	5.0	1.9	1.3	1.5
26	.80	.76	1.1	5.3	2.3	6.1	10	15	4.7	1.9	1.3	1.5
27	.80	.72	1.1	9.4	2.5	6.3	9.2	14	5.1	2.1	1.6	1.5
28	.80	.74	1.1	7.6	3.2	6.1	7.5	13	4.6	2.1	1.5	1.5
29	.89	.78	1.1	5.8	-----	5.8	8.0	11	4.5	2.0	1.5	1.5
30	.80	.78	1.2	4.1	-----	5.3	7.8	10	4.2	1.9	1.4	1.5
31	.80	-----	1.2	3.7	-----	4.6	-----	9.5	-----	1.8	1.3	-----
TOTAL	31.81	23.52	31.36	115.36	75.1	138.1	300.3	575.8	201.9	79.6	47.5	43.7
MEAN	1.03	.78	1.01	3.72	2.68	4.45	10.0	18.6	6.73	2.57	1.53	1.46
MAX	1.3	1.3	2.0	16	4.4	6.3	19	27	9.7	3.9	1.9	2.0
MIN	.80	.64	.74	.57	2.0	3.4	4.4	9.3	4.2	1.8	1.3	1.3
CFSM	.14	.11	.14	.52	.37	.62	1.39	2.58	.93	.36	.21	.20
IN.	.16	.12	.16	.60	.39	.71	1.55	2.97	1.04	.41	.25	.23
AC-FT	63	47	62	229	149	274	596	1,140	400	158	94	87
CAL YR 1969	TOTAL 1,175.23	MEAN 3.22	MAX 24	MIN .64	CFSM .45	IN 6.07	AC-FT 2,330					
WTR YR 1970	TOTAL 1,664.05	MEAN 4.56	MAX 27	MIN .57	CFSM .63	IN 8.60	AC-FT 3,300					

13080000 North Side Minidoka Canal near Minidoka, Idaho

LOCATION.--Lat 42°40'15", long 113°29'00", in SE¼NW¼ sec.1, T.9 S., R.25 E., Minidoka County, on left bank 600 ft downstream from headgates at Minidoka Dam and 6 miles south of Minidoka.

PERIOD OF RECORD.--April 1908 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 4,180.33 ft above mean sea level (Bureau of Reclamation bench mark). April to November 1910 at datum 0.08 ft higher.

AVERAGE DISCHARGE.--29 years (1941-70), 616 cfs (446,300 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 1,920 cfs July 14-18, 1969; no flow in winters.

REMARKS.--Records excellent. Flow controlled by headgates. Canal diverts water from Lake Walcott at right end of Minidoka Dam for irrigation of 64,000 acres under North Side Minidoka project. Diversion began in June 1907.

COOPERATION.--Gage-height record furnished by Bureau of Reclamation.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	834						0	546	1,380	1,890	1,430	1,370
2	827						0	614	1,600	1,880	1,430	1,170
3	805						0	632	1,810	1,880	1,520	1,120
4	731						0	825	1,850	1,880	1,560	1,110
5	686						0	1,040	1,850	1,880	1,560	1,000
6	688						0	1,280	1,850	1,870	1,550	773
7	674						0	1,340	1,850	1,860	1,500	710
8	638						0	1,290	1,790	1,860	1,500	684
9	634						0	1,260	1,460	1,860	1,500	686
10	600						0	1,240	1,080	1,860	1,470	686
11	544						0	1,220	907	1,870	1,510	704
12	546						0	1,130	909	1,870	1,570	720
13	526						205	1,060	737	1,880	1,640	716
14	490						388	1,060	616	1,890	1,680	716
15	490						514	1,100	576	1,890	1,670	718
16	449						530	1,300	501	1,890	1,650	716
17	176						528	1,420	501	1,900	1,650	750
18	0						528	1,570	499	1,900	1,620	766
19	0						524	1,750	550	1,900	1,580	766
20	0						539	1,810	748	1,890	1,580	761
21	0						562	1,720	900	1,870	1,560	680
22	0						698	1,590	1,110	1,700	1,520	604
23	0						768	1,390	1,390	1,540	1,530	570
24	0						882	1,210	1,460	1,480	1,580	550
25	0						968	1,140	1,590	1,450	1,590	548
26	0						1,070	1,140	1,720	1,490	1,610	548
27	0						1,070	1,190	1,860	1,520	1,630	548
28	0						593	1,230	1,890	1,540	1,610	612
29	0						434	1,260	1,900	1,470	1,520	678
30	0						492	1,280	1,900	1,410	1,420	718
31	0	-----					-----	1,290	-----	1,430	1,420	-----
TOTAL	10,338	0	0	0	0	0	11,293	37,927	38,784	54,500	48,160	22,698
MEAN	333	0	0	0	0	0	376	1,223	1,293	1,758	1,554	757
MAX	834	0	0	0	0	0	1,070	1,810	1,900	1,900	1,680	1,370
MIN	0	0	0	0	0	0	0	546	499	1,410	1,420	548
AC-FT	20,510	0	0	0	0	0	22,400	75,230	76,930	108,100	95,530	45,020
CAL YR 1969	TOTAL 250,699		MEAN 687	MAX 1,920	MIN 0	ACFT 497,300						
WAT YR 1970	TOTAL 223,700		MEAN 613	MAX 1,900	MIN 0	ACFT 443,700						

121

LOCATION.--Lat 42°39'45", long 113°29'20", in SW¼NW¼ sec.12, T.9 S., R.25 E., Cassia County, on right bank 900 ft downstream from headgates at Minidoka Dam and 6 miles south of Minidoka.

GAGE.--Water-stage recorder. Datum of gage is 4,184 ft above mean sea level (Bureau of Reclamation bench mark).
Prior to 1910 at site 600 ft upstream at same datum.

EXTREMES.--Period of record: Maximum daily discharge, 1,490 cfs July 12-16, 1967, July 11-20, 1969; no flow for long periods during nonirrigation seasons.

COOPERATION.--Gage-height record furnished by Bureau of Reclamation.

REVISIONS (WATER YEARS).--WSP 1347: 1910.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	614						0	376	1,020	1,360	1,160	1,120
2	646						0	374	1,180	1,350	1,160	1,060
3	609						0	384	1,330	1,350	1,220	1,020
4	554						0	434	1,410	1,340	1,300	1,000
5	532						0	479	1,420	1,350	1,280	919
6	514						0	578	1,410	1,360	1,280	802
7	496						0	652	1,400	1,370	1,340	710
8	522						0	654	1,390	1,370	1,330	627
9	536						0	660	1,310	1,400	1,320	601
10	504						0	662	1,120	1,400	1,320	599
11	455						0	657	1,010	1,380	1,330	654
12	404						0	657	904	1,380	1,340	684
13	356						228	657	732	1,400	1,330	625
14	356						382	657	588	1,410	1,340	636
15	356						390	673	549	1,410	1,370	641
16	346						380	738	438	1,430	1,370	622
17	114						380	862	392	1,420	1,370	617
18	0						384	1,030	390	1,420	1,380	604
19	0						396	1,080	390	1,420	1,370	604
20	0						396	1,140	390	1,420	1,340	593
21	0						382	1,150	464	1,420	1,320	534
22	0						382	1,120	588	1,410	1,290	464
23	0						376	1,040	749	1,370	1,250	445
24	0						376	970	919	1,360	1,280	398
25	0						376	973	1,130	1,360	1,320	364
26	0						378	976	1,320	1,350	1,330	376
27	0						380	973	1,390	1,340	1,340	372
28	0						384	970	1,390	1,340	1,270	407
29	0				-----		378	973	1,370	1,330	1,210	502
30	0				-----		376	982	1,350	1,290	1,160	544
31	0	-----			-----		-----	979	-----	1,220	1,140	-----
TOTAL	7,914	0	0	0	0	0	6,724	24,510	29,443	42,530	40,160	19,144
MEAN	255	0	0	0	0	0	224	791	981	1,372	1,295	638
MAX	646	0	0	0	0	0	396	1,150	1,420	1,430	1,380	1,120
MIN	0	0	0	0	0	0	0	374	390	1,220	1,140	364
AC-FT	15,700	0	0	0	0	0	13,340	48,620	58,400	84,360	79,660	37,970
CAL YR 1969	TOTAL 203,573		MEAN 558	MAX 1,490	MIN 0	ACFT 403,800						
WAT YR 1970	TOTAL 170,425		MEAN 467	MAX 1,430	MIN 0	ACFT 338,000						

SNAKE RIVER MAIN STEM

13081000 Lake Walcott near Minidoka, Idaho

LOCATION.--Lat 42°40'15", long 113°29'00", near center of sec.1, T.9 S., R.25 E., Minidoka County, on south wall in powerhouse at Minidoka Dam on Snake River, 6 miles southeast of Minidoka, and at mile 675.0.

DRAINAGE AREA.--15,700 sq mi, approximately, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.--April 1909 to current year.

GAGE.--Nonrecording gage. Datum of gage is datum of Bureau of Reclamation, which is 49.52 ft below mean sea level.

EXTREMES.--Current year: Maximum contents, 99,800 acre-ft June 14 (elevation, 4,245.38 ft); minimum, 26,600 acre-ft Mar. 12 (elevation, 4,238.70 ft).

Period of record: Maximum contents, 110,740 acre-ft Aug. 8, 1922 (elevation, 4,246.28 ft); minimum, -101,410 acre-ft Nov. 17, 1941 (elevation, 4,215.19 ft).

REMARKS.--Reservoir is formed by rock-fill dam with concrete core; storage began in 1906. Capacity, 107,240 acre-ft between elevations 4,236.00 ft (sill of powerhouse penstock) and 4,246.00 ft (top of flashboards). Dead storage below elevation 4,236.00 ft about 115,000 acre-ft. Water used for power development and irrigation on Minidoka project of Bureau of Reclamation. Contents given herein are above elevation 4,236.00 ft. Figures of daily contents computed from daily readings.

COOPERATION.--Daily elevations and capacity table furnished by Bureau of Reclamation.

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

4,239.0	29,600	4,244.0	83,500
4,240.0	40,000	4,246.0	107,200

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	91,900	81,800	43,300	42,100	39,300	28,900	60,200	95,000	98,200	97,100	97,000	97,400
2	90,900	82,300	41,000	43,600	39,600	27,400	65,700	95,000	97,000	96,400	96,300	97,000
3	92,600	83,300	41,200	43,100	40,500	28,900	72,700	94,700	96,400	96,400	96,400	95,800
4	93,100	80,700	41,000	42,700	40,000	28,900	78,900	94,700	95,200	95,800	96,600	95,800
5	94,100	76,600	40,500	42,300	40,000	28,900	83,500	94,700	95,800	97,000	95,200	95,200
6	94,600	72,600	40,700	42,700	38,900	28,900	89,400	95,800	95,200	97,500	96,200	95,200
7	95,200	69,000	41,000	41,900	37,400	28,600	89,900	95,200	96,200	97,000	96,200	95,300
8	94,700	68,100	41,000	41,500	36,300	28,800	91,700	97,400	95,000	97,000	95,200	95,200
9	93,800	67,300	41,000	40,200	35,000	28,400	91,700	97,400	95,200	97,000	96,400	95,200
10	92,600	67,400	41,000	41,200	33,500	28,400	90,500	99,400	94,900	97,000	96,300	95,200
11	93,800	66,300	41,000	41,200	32,400	28,400	88,800	97,400	94,900	97,600	96,400	94,800
12	94,700	65,100	41,000	40,800	30,900	26,600	90,500	96,200	95,800	97,200	96,200	95,000
13	94,700	63,700	41,000	41,200	29,800	27,000	93,400	96,600	97,000	94,600	96,200	94,800
14	94,600	62,600	41,000	41,500	29,800	28,200	95,200	96,400	99,800	95,000	95,800	95,000
15	95,400	60,800	40,800	42,400	29,000	27,800	98,600	95,900	98,600	95,100	95,200	95,200
16	95,700	60,000	41,200	42,900	29,400	29,000	96,400	95,900	97,000	94,400	96,600	95,200
17	94,500	58,900	40,200	41,900	28,400	29,100	95,200	96,200	96,200	94,700	95,700	95,200
18	94,200	58,900	40,200	41,400	28,600	29,300	95,200	95,900	96,200	94,700	95,200	95,200
19	92,900	57,800	40,600	41,000	28,900	29,900	96,500	96,600	97,100	95,200	95,200	94,400
20	92,500	56,900	40,400	41,200	28,400	30,300	94,400	96,200	97,100	96,400	95,200	95,200
21	91,900	55,300	40,600	41,400	28,400	30,000	97,400	95,700	97,800	96,400	95,200	94,400
22	91,100	53,300	38,700	41,600	29,000	30,100	96,400	98,600	97,400	96,000	95,200	95,200
23	90,800	53,200	40,800	42,100	29,400	30,000	95,200	96,400	95,400	97,600	96,400	95,200
24	89,000	52,200	41,200	42,100	29,000	28,400	95,200	98,300	95,800	97,000	96,600	94,200
25	87,800	51,400	41,000	41,900	29,000	29,600	95,800	98,900	96,200	97,000	96,400	95,200
26	88,400	49,500	41,000	41,800	28,800	29,900	96,200	99,600	96,600	97,800	95,200	95,200
27	89,700	49,200	40,600	41,000	29,400	31,700	96,500	98,800	97,000	97,400	95,200	95,200
28	86,100	46,500	40,600	38,900	28,900	32,600	94,800	98,200	97,600	97,000	97,400	95,400
29	85,800	44,200	41,000	41,500	-----	37,700	95,200	98,800	95,200	97,400	97,400	95,200
30	85,200	43,700	40,800	41,400	-----	41,400	94,600	97,600	98,800	97,000	97,600	93,800
31	83,400	-----	40,600	41,000	-----	52,700	-----	98,800	-----	97,000	97,400	-----
MAX	95,700	83,300	43,300	43,600	40,500	52,700	98,600	99,600	99,800	97,800	97,600	97,400
MIN	83,400	43,700	38,700	38,900	28,400	26,600	60,200	94,700	94,900	94,400	95,200	93,800
(†)	4,243.99	4,240.35	4,240.06	4,240.10	4,238.93	4,241.20	4,244.95	4,245.30	4,245.30	4,245.15	4,245.18	4,244.88
(‡)	-8,900	-39,700	-3,100	+400	-12,100	+23,800	+41,900	+4,200	0	-1,800	+400	+1,500
CAL YR 1969:	MAX	100,100	MIN	38,700	‡	-4,960						
WAT YR 1970:	MAX	99,800	MIN	26,600	‡	+1,500						

† Elevation, in feet, at end of month.
‡ Change in contents, in acre-feet.

SNAKE RIVER MAIN STEM

123

13081500 Snake River near Minidoka, Idaho

LOCATION.--Lat 42°40'23", long 113°29'58", in SW¼NE¼ sec.2, T.9 S., R.25 E., Minidoka County, on right bank 1 mile downstream from Minidoka Dam, 6 miles south of Minidoka, at mile 673.7.

DRAINAGE AREA.--15,700 sq mi, approximately, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.--August 1895 to current year. Monthly discharge only for some periods, published in WSP 1317. Published as "below Minidoka dam, at Howell's Ferry" 1911. Records for August 1895 to Apr. 20, 1910, at site 6 miles downstream "at Montgomery Ferry."

GAGE.--Water-stage recorder. Datum of gage is 4,132.2 ft above mean sea level (river-profile survey). Prior to Apr. 21, 1910, nonrecording gage at site 6 miles downstream at different datum. Apr. 21, 1910, to Aug. 28, 1911, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--44 years (1926-70), 5,738 cfs (4,157,000 acre-ft per year); 15-year base period (1952-67), 5,655 cfs.

EXTREMES.--Current year: Maximum discharge, 21,400 cfs June 15 (gage height, 11.04 ft); minimum, 264 cfs Nov. 3 (gage height, 2.19 ft).

Period of record: Maximum discharge, 47,500 cfs May 29, 30, 1897 (gage height, 12.6 ft, former site and datum); minimum, 37 cfs Jan. 28, Feb. 4, 11, 18, 1962.

REMARKS.--Records good. Flow regulated by American Falls Reservoir (see sta 13076500), Lake Walcott (see sta 13081000) and other reservoirs, having a combined usable capacity of about 4,700,000 acre-ft; many diversions above station for irrigation.

COOPERATION.--Gage-height record furnished by Bureau of Reclamation.

REVISIONS (WATER YEARS).--WSP 1347: 1911.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5,500	755	1,530	1,420	3,150	1,400	1,500	12,200	17,400	20,200	8,920	8,530
2	5,770	296	1,360	3,110	3,040	1,420	1,890	12,800	17,200	19,900	9,100	8,250
3	5,270	1,550	1,330	3,210	2,990	1,420	2,000	12,500	16,000	16,700	9,020	7,940
4	4,880	1,880	1,370	3,200	3,000	1,410	2,130	12,000	12,300	11,100	8,870	7,980
5	4,680	2,110	1,370	3,200	2,950	1,420	2,170	11,500	8,640	9,270	8,900	8,080
6	4,410	2,110	1,380	3,270	2,960	1,420	2,700	11,100	8,630	9,640	8,930	7,950
7	4,230	1,440	1,390	3,260	2,970	1,410	5,050	11,300	9,390	9,510	8,900	7,400
8	4,160	1,270	1,350	3,250	2,960	1,440	4,710	12,800	9,460	9,300	9,240	7,120
9	4,140	807	1,420	3,200	2,960	1,440	4,650	15,200	9,270	9,250	9,100	6,670
10	2,390	1,440	1,390	3,210	2,970	1,140	4,570	16,400	8,670	9,320	8,920	6,430
11	1,900	1,410	1,310	3,160	2,940	1,490	5,010	17,300	8,220	9,490	8,780	6,620
12	1,790	1,430	1,290	3,110	2,890	935	4,690	17,100	10,300	9,350	8,820	6,660
13	1,690	1,480	1,300	3,000	2,910	1,090	5,170	17,200	15,100	9,470	9,020	6,680
14	1,640	1,550	1,300	3,020	2,920	1,040	7,540	16,800	17,600	9,340	9,100	6,600
15	1,650	1,330	1,300	3,150	2,890	1,060	11,600	15,500	19,900	9,260	9,050	6,270
16	1,500	988	1,330	3,200	2,870	1,050	12,700	14,300	20,800	9,620	8,930	5,960
17	1,460	1,500	1,340	3,190	3,030	1,060	11,900	14,100	20,500	9,620	8,900	5,700
18	1,500	1,490	1,350	3,140	2,880	1,030	11,300	14,200	18,700	9,720	8,950	5,650
19	1,480	1,480	1,320	3,100	2,890	1,040	11,000	14,500	16,500	9,630	8,910	5,600
20	1,360	1,480	1,330	3,150	2,870	1,060	9,690	14,300	15,600	9,470	8,930	5,590
21	1,350	1,500	1,430	3,130	2,890	1,070	7,970	16,400	14,700	9,660	8,960	5,410
22	1,350	1,320	1,500	3,150	1,940	1,050	7,870	20,500	12,600	9,860	8,910	5,280
23	1,600	1,190	1,370	3,190	1,910	1,060	6,820	18,300	9,730	9,590	8,860	5,350
24	1,730	1,510	1,380	3,180	1,890	1,200	6,050	17,500	8,580	9,370	8,810	5,070
25	819	1,500	1,390	3,140	1,340	1,040	6,810	18,900	8,940	9,200	8,740	4,680
26	324	1,480	1,380	3,160	1,380	1,030	8,350	19,600	9,770	9,050	9,000	4,510
27	1,610	1,510	1,390	3,300	1,400	1,030	10,700	19,700	10,500	9,040	9,190	4,500
28	1,740	1,490	1,360	3,290	1,400	1,060	11,800	18,300	11,900	8,990	9,080	4,500
29	1,680	1,330	1,370	3,140	-----	1,030	11,800	16,800	12,000	9,030	9,080	4,330
30	1,650	1,190	1,360	3,200	-----	1,060	11,700	16,700	15,400	9,140	9,020	4,330
31	1,630	-----	1,370	3,230	-----	1,250	-----	17,200	-----	8,990	8,850	-----
TOTAL	76,883	41,816	42,360	96,660	73,190	36,655	211,840	483,000	394,300	321,070	277,790	185,640
MEAN	2,480	1,394	1,366	3,118	2,614	1,182	7,061	15,580	13,140	10,360	8,961	6,188
MAX	5,770	2,110	1,530	3,300	3,150	1,490	12,700	20,500	20,800	20,200	9,240	8,530
MIN	324	296	1,290	1,420	1,340	935	1,500	11,100	8,220	8,990	8,740	4,330
AC-FT	152,500	82,940	84,020	191,700	145,200	72,710	420,200	958,000	782,100	636,800	551,000	368,200
CAL YR 1969	TOTAL 2,564,979		MEAN 7,027		MAX 20,200		MIN 296		AC-FT 5,088,000			
WTR YR 1970	TOTAL 2,241,204		MEAN 6,140		MAX 20,800		MIN 296		AC-FT 4,445,000			

MARSH CREEK BASIN

13082300 Marsh Creek near Albion, Idaho

LOCATION.--Lat 42°27'20", long 113°31'10", in NE¼ sec.22, T.11 S., R.25 E., Cassia County, on left bank 750 ft upstream from concrete diversion dam and 5 miles northeast of Albion.

DRAINAGE AREA.--86 sq mi, approximately.

PERIOD OF RECORD.--September 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,500 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 483 cfs Jan. 27 (gage height, 5.51 ft); minimum, 4.5 cfs Oct. 1 (gage height, 2.21 ft).

Period of record: Maximum discharge, 483 cfs Jan. 27, 1970 (gage height, 5.51 ft, from floodmarks); minimum, 1.0 cfs Dec. 14, 1967 (gage height, 2.00 ft).

REMARKS.--Records good. Several small diversions for irrigation above station.

REVISIONS (WATER YEARS).--WRD Idaho 1969: 1968(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second)

2.2	4.5	3.5	59
2.3	7.3	4.0	96
2.5	14	4.5	155
3.0	35	4.7	191

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.5	6.5	7.0	8.6	35	15	14	35	53	37	12	6.3
2	4.8	6.5	6.7	8.6	30	16	14	33	49	35	11	6.5
3	5.1	6.5	7.0	8.3	25	15	14	34	51	32	9.9	6.3
4	5.6	6.7	7.0	8.0	22	15	16	35	57	28	9.8	6.1
5	5.9	6.7	6.7	7.6	21	15	14	35	58	27	10	7.1
6	5.6	7.0	7.0	7.3	21	14	14	34	58	24	9.8	8.5
7	5.6	11	7.6	7.3	22	15	15	50	61	22	9.2	7.8
8	5.6	9.0	7.3	7.3	20	15	15	45	68	19	8.7	7.1
9	5.9	8.3	7.3	8.0	20	14	16	56	107	19	8.6	6.8
10	6.5	8.0	7.0	12	20	14	18	57	103	19	8.2	7.1
11	6.5	8.0	7.0	14	20	14	24	50	81	18	7.6	6.9
12	6.2	8.6	8.3	13	21	17	20	40	66	16	6.7	6.1
13	6.5	7.0	10	20	23	17	19	38	107	14	6.7	6.3
14	6.5	7.3	9.0	20	20	17	19	36	107	14	6.4	6.3
15	6.5	7.5	9.0	22	19	17	16	32	135	14	6.7	6.4
16	6.2	8.0	8.3	22	19	16	16	30	101	12	6.0	6.8
17	7.0	6.7	8.0	51	18	13	15	32	84	10	6.0	6.7
18	8.3	6.7	8.3	37	17	17	14	35	74	9.6	6.1	6.8
19	7.0	6.2	8.6	37	16	16	15	43	68	9.0	6.6	7.1
20	6.5	6.7	9.6	34	17	16	16	47	64	9.0	7.6	8.1
21	6.5	7.0	12	30	18	17	16	81	61	17	6.9	7.9
22	6.5	6.7	14	53	18	16	14	91	60	18	6.1	7.7
23	6.5	5.9	12	47	17	16	13	85	55	13	6.1	7.6
24	6.5	6.7	12	34	17	16	13	87	51	13	6.0	7.3
25	6.2	6.7	10	28	16	15	11	78	46	14	5.7	7.5
26	6.2	7.0	9.3	25	16	14	12	73	42	12	6.3	7.6
27	6.2	6.5	8.3	175	16	13	14	94	42	12	6.2	7.3
28	5.9	6.7	8.3	105	15	15	12	94	47	16	6.9	7.3
29	6.2	6.7	8.3	76	-----	15	32	86	42	22	6.2	7.3
30	6.5	7.0	8.6	58	-----	16	35	72	40	14	6.4	7.3
31	6.5	-----	8.6	45	-----	15	-----	58	-----	13	5.9	-----
TOTAL	192.0	214.8	258.1	1,029.0	559	476	496	1,696	2,038	551.6	232.3	211.9
MEAN	6.19	7.16	8.65	33.2	20.0	15.4	16.5	54.7	67.9	17.8	7.49	7.06
MAX	8.3	11	14	175	35	17	35	94	135	37	12	8.5
MIN	4.5	5.9	6.7	7.3	15	13	11	30	40	9.0	5.7	6.1
AC-FT	381	426	537	2,040	1,110	944	984	3,360	4,040	1,090	461	420
CAL YR 1969	TOTAL 4,314.4		MEAN 11.8		MAX 47		MIN 3.6		AC-FT 3,560			
WTR YR 1970	TOTAL 7,964.7		MEAN 21.8		MAX 175		MIN 4.5		AC-FT 15,800			

13082500 Goose Creek above Trapper Creek, near Oakley, Idaho

LOCATION.--Lat 42°07'30", long 113°56'20", in sec.13, T.15 S., R.21 E., Cassia County, on right bank 0.2 mile upstream from maximum flowline of Oakley Reservoir, 5 miles upstream from Trapper Creek, 5 miles south of Oakley Dam, and 9 miles southwest of Oakley.

DRAINAGE AREA.--633 sq mi. Mean altitude, 6,030 ft.

PERIOD OF RECORD.--April 1911 to September 1916, March 1919 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Altitude of gage is 4,770 ft (by barometer). Prior to Aug. 29, 1912, at site 200 ft downstream at different datum.

AVERAGE DISCHARGE.--56 years, 43.9 cfs (31,810 acre-ft per year); 15-year base period (1952-67), 38.0 cfs.

EXTREMES.--Current year: Maximum discharge, 380 cfs May 22 (gage height, 4.08 ft); minimum, 5.7 cfs Nov. 22 (gage height, 1.24 ft).

Period of record: Maximum discharge, 3,240 cfs Feb. 11, 1962 (gage height, 9.3 ft), from rating curve extended above 200 cfs on basis of slope-area measurement of peak flow; no flow July 22 to Aug. 10, Aug. 22-30, 1934, Aug. 15 to Oct. 3, 1935, July 22 to Sept. 25, 1940, Sept. 14, 1947.

REMARKS.--Records good except those for December and January, which are fair. Decreed water rights are reported to apply to about 2,700 acres above station. Diversions for irrigation are made as flow permits to a major part of this acreage. Flow of artesian well, completed in 1935, enters below station. Pumps on four wells above and one below gage discharged into the channel during 1961-64. Pumps were not operated during the current year. Practically entire flow passing station is stored in Oakley Reservoir (sta. 13083500). Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

REVISIONS.--WSP 1567: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 19-29, Dec. 1, 2, 7, 10-16, 19-27, 29, Dec. 31 to Jan. 16)

1.3	6.8	3.0	153
1.5	12	3.5	241
2.0	36	4.0	357
2.5	86	4.5	491

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.7	17	17	18	41	41	35	67	247	42	21	11
2	9.2	17	17	17	39	47	35	64	219	34	19	11
3	10	17	16	16	39	37	34	67	194	31	18	11
4	11	17	16	15	43	35	32	83	177	29	17	12
5	12	17	13	14	39	34	33	104	171	26	19	15
6	12	17	14	14	39	33	36	128	167	28	20	17
7	12	20	16	14	48	33	40	159	153	30	22	14
8	12	22	16	15	55	34	46	182	146	28	21	14
9	13	22	17	17	55	34	53	198	156	26	19	14
10	13	20	17	19	55	33	57	198	153	27	18	14
11	14	19	17	19	63	31	65	205	143	31	17	13
12	14	19	18	19	72	32	77	217	128	52	16	12
13	14	19	17	22	74	34	80	212	120	34	15	12
14	15	18	20	45	59	36	78	192	129	28	15	13
15	15	18	22	50	48	39	65	179	128	25	14	13
16	16	19	21	70	43	39	57	166	112	23	13	14
17	16	18	18	95	43	37	59	164	107	22	12	14
18	16	15	16	120	41	35	61	179	112	21	12	14
19	17	15	19	140	35	31	60	208	104	28	11	14
20	16	15	21	135	33	34	61	265	88	48	12	16
21	16	18	22	160	33	34	61	339	82	53	12	18
22	16	18	23	190	36	33	59	375	72	37	12	18
23	16	18	25	195	37	33	55	375	67	31	11	17
24	16	17	28	180	36	34	53	357	67	28	11	14
25	16	18	26	170	37	35	53	344	53	26	10	12
26	16	18	24	150	36	39	58	336	45	25	8.2	12
27	17	17	21	155	36	39	65	336	39	25	17	13
28	16	16	21	170	36	39	67	326	41	25	11	16
29	16	16	20	120	-----	43	66	324	43	23	11	16
30	16	16	16	70	-----	43	71	305	43	22	12	16
31	16	-----	18	50	-----	39	-----	274	-----	23	12	-----
TOTAL	442.9	533	592	2,484	1,251	1,120	1,672	6,928	3,506	931	458.2	420
MEAN	14.3	17.8	19.1	80.1	44.7	36.1	55.7	223	117	30.0	14.8	14.0
MAX	17	22	28	195	74	47	80	375	247	53	22	18
MIN	8.7	15	13	14	33	31	32	64	39	21	8.2	11
AC-FT	878	1,060	1,170	4,930	2,480	2,220	3,320	13,740	6,950	1,850	909	833
CAL YR 1969	TOTAL 15,263.3			MEAN 41.8	MAX 221	MIN 4.1	ACFT 30,270					
WAT YR 1970	TOTAL 20,338.1			MEAN 55.7	MAX 375	MIN 8.2	ACFT 40,340					

13083000 Trapper Creek near Oakley, Idaho

LOCATION.--Lat 42°10'10", long 113°58'20", in sec.34, T.14 S., R.21 E., Cassia County, on left bank 4 miles upstream from Oakley Dam and 7 miles southwest of Oakley.

DRAINAGE AREA.--53.7 sq mi. Mean altitude, 6,360 ft.

PERIOD OF RECORD.--May 1911 to September 1916, March 1919 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,820 ft (by barometer). Prior to Sept. 1, 1912, water-stage recorder at approximately present site at different datum, Apr. 8, 1913, to Sept. 30, 1916, and Mar. 28, 1919, to Aug. 15, 1931, at site 1 mile upstream at different datum. Sept. 1, 1912, to Apr. 7, 1913, nonrecording gage at site 0.8 mile downstream at different datum.

AVERAGE DISCHARGE.--56 years, 14.3 cfs (10,360 acre-ft per year); 15-year base period (1952-67), 13.1 cfs.

EXTREMES.--Current year: Maximum discharge, 131 cfs Aug. 27 (gage height, 5.77 ft); minimum, 1.3 cfs Jan. 1 (gage height, 4.53 ft).

Period of record: Maximum discharge recorded, 270 cfs Aug. 17, 1941 (gage height, 6.99 ft) during cloudburst, from rating curve extended above 100 cfs on basis of velocity-area studies and peak flow over weir (a higher flow may have occurred during cloudburst Aug. 15, 1931); minimum discharge, 1.3 cfs Jan. 1, 1970 (gage height, 4.53 ft).

REMARKS.--Records good. A few small diversions above station. Flow of artesian well, completed in 1936, enters above. Practically entire flow passing station is stored in Oakley Reservoir (see sta 13-0835). Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1063: 1941, 1943. WSP 1567: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

4.7	4.8
4.8	8.3
5.0	20
5.2	38
5.5	80

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	10	9.3	5.5	10	11	12	16	44	19	10	11
2	8.8	10	9.3	7.6	9.9	11	13	17	42	18	10	10
3	8.3	10	9.3	8.3	10	11	12	19	41	17	10	10
4	9.3	10	9.3	7.6	10	11	13	21	40	16	10	10
5	9.9	10	9.3	9.9	10	11	13	25	40	16	10	11
6	9.9	10	8.8	5.8	11	11	14	27	39	16	11	11
7	9.3	12	9.9	5.8	11	11	15	29	38	16	10	11
8	9.3	11	9.9	8.0	11	11	14	28	38	15	10	11
9	9.3	11	9.9	11	11	11	15	30	36	15	10	10
10	9.9	11	9.3	11	11	11	16	33	36	16	10	9.9
11	9.9	11	9.3	10	11	12	18	32	34	16	10	9.9
12	9.9	11	9.9	9.3	12	12	17	30	32	16	10	9.9
13	9.3	10	9.3	9.3	12	12	17	28	33	14	10	9.9
14	9.9	10	9.3	10	12	12	16	26	34	13	10	9.9
15	9.9	11	9.3	9.9	12	12	16	26	33	13	10	10
16	10	11	9.3	11	12	12	15	28	29	13	10	10
17	11	10	9.3	14	12	12	14	33	28	13	10	9.9
18	11	9.9	9.3	11	11	12	14	42	27	12	10	9.9
19	11	9.9	9.3	11	11	12	15	51	25	13	10	9.9
20	10	10	10	11	11	12	15	59	24	12	10	10
21	10	10	11	11	11	12	15	62	22	12	10	10
22	10	11	11	14	11	12	15	58	21	12	10	10
23	10	9.3	10	14	11	12	15	62	20	12	10	10
24	10	9.9	10	12	11	12	15	58	20	11	10	11
25	10	9.9	9.9	11	11	12	16	59	20	12	10	11
26	9.9	9.9	9.9	11	11	13	16	61	20	11	10	11
27	9.9	8.8	9.9	16	11	12	16	68	21	11	25	11
28	9.9	8.0	9.9	12	11	12	16	65	21	14	12	11
29	10	8.3	5.5	9.9	-----	13	17	59	20	14	10	11
30	10	9.3	11	11	-----	13	17	55	20	11	10	9.9
31	10	-----	10	9.9	-----	12	-----	49	-----	10	10	-----
TOTAL	304.4	303.2	296.7	318.8	308.9	365	452	1,256	898	429	328	310.1
MEAN	9.82	10.1	9.57	10.3	11.0	11.8	15.1	40.5	29.9	13.8	10.6	10.3
MAX	11	12	11	16	12	13	18	68	44	19	25	11
MIN	8.3	8.0	5.5	5.5	9.9	11	12	16	20	10	10	9.9
AC-FT	604	601	589	632	613	724	897	2,490	1,780	851	651	615
CAL YR 1969	TOTAL 4,590.2		MEAN 12.6		MAX 34		MIN 5.5		AC-FT 9,100			
WTR YR 1970	TOTAL 5,570.1		MEAN 15.3		MAX 68		MIN 5.5		AC-FT 11,050			

GOOSE CREEK BASIN

127

13083500 Oakley Reservoir near Oakley, Idaho

LOCATION.--Lat 42°11'50", long 113°54'50", in sec.19, T.14 S., R.22 E., Cassia County, just upstream from right abutment of dam on Goose Creek, 4 miles southwest of Oakley, and at mile 26.0.

DRAINAGE AREA.--729 sq mi.

PERIOD OF RECORD.--October 1912 to current year.

GAGE.--Nonrecording gage. Altitude of gage is 4,630 ft (by barometer).

EXTREMES.--Current year: Maximum contents observed, 35,400 acre-ft June 22 (gage height, 94.4 ft); minimum observed, 6,600 acre-ft Oct. 14 (gage height, 40.86 ft).

Period of record: Maximum contents observed, 74,600 acre-ft June 15, 1921 (gage height, 136.2 ft); reservoir drained at close of irrigation season in 1915, 1919-20, 1926, 1933, 1950, 1959.

REMARKS.--Reservoir is formed by earth dam constructed in 1911-13; storage began in 1911. Capacity, 74,350 acre-ft between gage heights 0.0 (bottom of diversion tunnel) and 136.0 ft (crest of spillway). Dead storage negligible. Water is used for irrigation of lands along Goose Creek in Oakley Canal Co. project. Figures given herein represent usable contents.

COOPERATION.--Gage readings and capacity table furnished by Oakley Canal Co.

REVISIONS.--WSP 1567: Drainage area.

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

40.8	6,580	80.0	25,200
50.0	9,900	90.0	32,100
60.0	14,100	94.4	35,400
70.0	19,300		

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	-	-	9,120	-	16,800	19,600	-	-	33,000	-	-	-
2	-	-	-	-	-	-	22,100	-	-	-	26,400	-
3	-	-	-	-	-	20,000	-	-	-	33,700	-	-
4	-	7,820	-	-	17,000	-	-	26,000	-	-	-	-
5	-	-	-	11,100	-	-	-	26,000	-	-	26,000	-
6	-	-	-	-	-	-	22,200	-	-	-	-	-
7	-	-	-	11,200	-	-	-	-	-	34,100	-	20,900
8	-	-	9,570	-	17,400	-	-	-	34,000	34,100	-	-
9	-	-	-	-	-	20,200	-	-	34,000	-	-	-
10	-	8,140	-	-	-	-	-	-	-	-	25,000	20,800
11	-	-	9,730	-	-	-	-	27,500	-	-	-	-
12	-	-	-	11,200	-	-	-	-	-	-	-	-
13	-	-	-	-	-	-	23,300	-	-	32,700	-	-
14	6,600	-	-	11,300	-	-	-	-	-	-	-	20,400
15	-	-	9,860	-	-	-	-	27,800	34,600	31,900	23,800	-
16	-	-	-	-	18,600	20,800	-	-	-	-	-	-
17	-	8,590	-	-	-	-	-	-	-	-	-	-
18	-	-	-	-	-	-	-	28,100	-	-	-	-
19	-	-	-	11,800	-	-	-	-	-	-	-	-
20	-	-	-	-	-	-	24,200	-	-	-	-	-
21	-	-	-	-	-	-	-	-	-	29,400	22,800	19,300
22	-	-	10,300	-	-	-	-	-	35,400	-	-	-
23	-	-	-	13,900	19,000	21,200	-	-	-	-	-	-
24	-	8,880	-	-	-	-	-	-	-	-	-	-
25	-	-	-	-	-	-	-	30,300	-	-	-	-
26	-	-	-	15,200	-	-	-	-	-	-	-	-
27	-	-	-	-	-	-	25,300	-	-	27,600	-	-
28	-	-	-	-	19,500	-	-	-	-	-	-	18,200
29	-	-	-	-	-	-	-	-	34,900	-	-	-
30	-	9,090	10,700	-	-	21,800	25,800	-	34,400	-	-	18,000
31	7,530	-----	10,800	16,500	-----	21,900	-----	32,600	-----	26,800	21,900	-----
MAX	7,530	9,090	10,800	16,500	19,500	21,900	25,800	32,600	35,400	34,100	-	-
MIN	-	-	9,120	-	16,800	19,600	-	-	33,000	26,800	21,900	18,000
(†)	43.6	-	-	-	-	-	80.8	-	93.1	-	74.7	67.6
(‡)	+1,530	+1,560	+1,710	+5,700	+3,000	+2,400	+3,900	+6,800	+1,800	-7,600	-4,900	-3,900
CAL YR 1969	MAX	28,500	MIN	-	‡	-300						
WAT YR 1970	MAX	35,400	MIN	-	‡	+12,000						

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

DIVERSIONS FROM SNAKE RIVER BETWEEN GOOSE CREEK AND SNAKE RIVER AT MILNER

13085500 Minidoka North Side Pump Canal near Burley, Idaho

LOCATION.--Lat 42°32'01", long 113°56'49", in SW¼SW¼ sec.24, T.10 S., R.21 E., Jerome County, at head of canal, 4 miles east of Milner, and 8 miles west of Burley.

PERIOD OF RECORD.--October 1956 to current year.

GAGE.--Sparling meter at pumping plant.

AVERAGE DISCHARGE.--14 years, 72.7 cfs (52,670 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 267 cfs June 26 to July 25, 1958; no flow for many days each year.

REMARKS.--Records good. Flow controlled by pumping plant which lifts water from Snake River for irrigation of 14,500 acres of land in Minidoka North Side project.

COOPERATION.--Record of pump operation and 8 discharge measurements furnished by A and B Irrigation District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67						0	0	134	217	204	165
2	62						0	0	167	217	204	155
3	62						0	0	181	237	209	148
4	39						0	0	200	237	215	131
5	39						0	23	215	237	221	115
6	39						0	43	226	243	220	115
7	41						0	43	226	255	216	104
8	41						0	44	218	255	209	87
9	32						0	44	221	255	209	75
10	25						0	44	174	255	211	64
11	25						0	50	142	255	220	61
12	25						0	54	117	255	223	58
13	18						0	52	105	230	226	58
14	18						41	52	105	215	218	58
15	20						41	52	86	222	219	64
16	16						36	63	68	228	220	76
17	6.0						31	63	62	229	224	80
18	0						31	88	58	229	232	80
19	0						31	102	54	229	232	70
20	0						23	110	58	238	227	70
21	0						23	111	58	238	227	70
22	0						23	105	83	238	213	56
23	0						23	98	151	235	213	56
24	0						23	98	188	229	198	61
25	0						31	105	200	220	206	61
26	0						31	112	212	220	206	58
27	0						37	120	217	220	206	58
28	0						29	120	217	227	200	55
29	0				-----		0	124	222	222	187	52
30	0				-----		0	127	222	215	187	52
31	0	-----			-----		-----	127	-----	222	187	-----
TOTAL	575.0	0	0	0	0	0	454	2,174	4,587	7,224	6,589	2,413
MEAN	18.5	0	0	0	0	0	15.1	70.1	153	233	213	80.4
MAX	67	0	0	0	0	0	41	127	226	255	232	165
MIN	0	0	0	0	0	0	0	0	54	215	187	52
AC-FT	1,140	0	0	0	0	0	901	4,310	9,100	14,330	13,070	4,790
CAL YR 1969	TOTAL 27,913.0		MEAN 76.5	MAX 252	MIN 0	ACFT 55,370						
WAT YR 1970	TOTAL 24,016.0		MEAN 65.8	MAX 255	MIN 0	ACFT 47,640						

129

LOCATION.--Lat 42°32'10", long 113°58'20", in SE₄SE₄ sec.22, T.10 S., R.21 E., Jerome County, on left bank 600 ft downstream from pumping station and 2.8 miles northeast of Milner, and 9 miles west of Burley.

GAGE.--Nonrecording gage read daily. Altitude of gage is 4,196 ft (river survey).

AVERAGE DISCHARGE.--22 years (1948-70), 25.6 cfs (18,550) acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge observed, 78 cfs July 13, 1965, July 13, 1966, July 14 to Aug. 4, 1967, and July 12-14, 1970; no flow for many days each year.

REMARKS.--Records excellent. Flow regulated by pumping plant which lifts water 65.3 ft from Snake River for irrigation on North Side Twin Falls tract.

COOPERATION.--Gage-height record furnished by North Side Canal Co.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							0	0	61	66	72	66
2							0	0	60	66	72	66
3							0	0	60	66	72	62
4							0	40	60	69	68	62
5							0	47	62	70	67	60
6							0	34	61	70	67	60
7							0	48	63	72	66	60
8							0	48	65	73	66	59
9							0	48	65	73	66	59
10							0	46	65	75	64	58
11							0	46	63	77	64	51
12							0	46	63	78	64	51
13							0	53	63	78	64	51
14							0	53	61	78	65	51
15							0	53	61	77	65	51
16							0	53	54	77	66	51
17							0	55	43	77	66	51
18							0	55	43	77	66	51
19							0	56	43	77	66	51
20							0	58	43	77	66	51
21							0	61	43	31	66	51
22							0	61	59	0	66	49
23							0	61	59	53	66	49
24							0	61	59	75	67	49
25							0	61	65	75	67	45
26							0	61	67	75	67	41
27							22	61	67	75	68	41
28							11	61	67	74	68	41
29					-----		0	61	67	74	68	38
30					-----		0	61	67	73	68	38
31		-----			-----		-----	61	-----	73	68	-----
TOTAL	0	0	0	0	0	0	33	1,510	1,779	2,151	2,071	1,564
MEAN	0	0	0	0	0	0	1.10	48.7	59.3	69.4	66.8	52.1
MAX	0	0	0	0	0	0	22	61	67	78	72	66
MIN	0	0	0	0	0	0	0	0	43	0	64	38
AC-FT	0	0	0	0	0	0	65	3,000	3,530	4,270	4,110	3,100
CAL YR 1969	TOTAL 9,839		MEAN 27.0	MAX 74	MIN 0	ACFT 19,520						
WAT YR 1970	TOTAL 9,108		MEAN 25.0	MAX 78	MIN 0	ACFT 18,070						

DIVERSIONS FROM SNAKE RIVER BETWEEN GOOSE CREEK AND SNAKE RIVER AT MILNER

13086000 Milner low-lift canal near Milner, Idaho

LOCATION.--Lat 42°31'10", long 114°00'36", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.29, T.10 S., R.21 E., Twin Falls County, at head of canal, 0.6 mile east of Milner.

PERIOD OF RECORD.--October 1919 to current year. Monthly discharge only for some periods, published in WSP 1317. Prior to October 1922, published as Murtaugh canal near Milner.

GAGE.--Rated pumps. Prior to May 1, 1945, water-stage recorder at site 600 ft downstream.

AVERAGE DISCHARGE.--26 years (1944-70), 81.4 cfs (58,970 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 301 cfs July 16-18, 1964; no flow for many days each year.

REMARKS.--Records excellent. Flow controlled by pumping plant which lifts water from Snake River above Milner Dam for irrigation of 13,400 acres of land in Milner low-lift irrigation district. Pumps rated by current-meter measurements.

COOPERATION.--Record of pump operation furnished by Milner low-lift irrigation district.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120						0	0	196	186	238	224
2	120						0	0	190	186	238	224
3	114						0	28	200	186	238	216
4	99						0	44	216	186	234	213
5	93						0	80	214	186	235	209
6	86						0	114	212	215	235	199
7	76						0	140	212	225	235	196
8	65						0	147	212	227	235	166
9	65						0	147	206	242	235	153
10	65						0	147	188	253	235	150
11	59						0	147	170	260	235	136
12	59						0	152	161	262	242	125
13	59						0	155	131	261	251	122
14	59						0	155	97	260	252	115
15	42						0	168	85	260	252	110
16	0						0	173	75	267	252	110
17	0						9.4	173	58	269	259	110
18	0						15	211	53	258	255	110
19	0						15	224	66	252	251	110
20	0						22	224	71	252	243	110
21	0						25	224	71	253	236	103
22	0						25	217	121	253	229	96
23	0						25	214	144	253	225	91
24	0						25	214	197	254	215	91
25	0						25	204	239	249	221	91
26	0						25	202	247	247	224	81
27	0						43	204	247	240	224	81
28	0						22	203	223	237	224	87
29	0				-----		0	202	200	238	224	89
30	0				-----		0	192	188	238	224	84
31	0	-----			-----		-----	189	-----	238	224	-----
TOTAL	1,181	0	0	0	0	0	276.4	4,894	4,890	7,393	7,320	4,002
MEAN	38.1	0	0	0	0	0	9.21	158	163	238	236	133
MAX	120	0	0	0	0	0	43	224	247	269	259	224
MIN	0	0	0	0	0	0	0	0	53	186	215	81
AC-FT	2,340	0	0	0	0	0	548	9,710	9,700	14,660	14,520	7,940

CAL YR 1969 TOTAL 35,345.0 MEAN 96.8 MAX 287 MIN 0 ACFT 70,110
WAT YR 1970 TOTAL 29,956.4 MEAN 82.1 MAX 269 MIN 0 ACFT 59,420

DIVERSIONS FROM SNAKE RIVER BETWEEN GOOSE CREEK AND SNAKE RIVER AT MILNER

131

13086500 Gooding Canal at Milner, Idaho

LOCATION.--Headgates of canal, lat 42°31'36", long 114°00'34", in SW¼NW¼ sec.28, T.10 S., R.21 E., Jerome County, at Milner Dam.

PERIOD OF RECORD.--October 1929 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder on Milner-Gooding Canal at site 3.4 miles downstream from headgates. Nonrecording gage on A lateral 1.9 miles downstream from headgates and differential recorder on control gates of diversion 3.4 miles downstream from headgates.

AVERAGE DISCHARGE.--35 years (1935-70), total 1,031 cfs (747,000 acre-ft per year); Milner-Gooding project, 594 cfs; North Side Canal Co. project, 437 cfs.

EXTREMES.--Period of record: Maximum daily discharge, 2,770 cfs July 22, 1964, and July 18, 1967; no flow for many days.

REMARKS.--Records excellent. Gooding Canal diverts water from Snake River for Milner-Gooding project of Bureau of Reclamation and in part for project of North Side Canal Co. The latter project also receives water through the North Side Twin Falls canal and P. A. lateral. Discharge of canal is computed by combining the discharge of Milner-Gooding diversion and that of North Side Canal Co. diversions below their division point and adding 35 cfs to that sum for loss between headgates and division point.

COOPERATION.--Gage-height record furnished by North Side Canal Co. and American Falls Reservoir District No. 2.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,030	930	270				0	1,410	2,470	2,330	2,600	2,450
2	2,020	920	0				0	1,510	2,480	2,320	2,600	2,420
3	2,020	870	0				0	1,610	2,500	2,340	2,610	2,420
4	2,020	850	0				0	1,860	2,500	2,330	2,610	2,410
5	2,020	880	0				0	2,090	2,490	2,380	2,620	2,420
6	2,030	930	0				0	2,120	2,480	2,420	2,620	2,420
7	2,020	930	0				0	2,130	2,460	2,410	2,620	2,380
8	2,020	920	0				0	2,120	2,500	2,410	2,620	2,360
9	2,020	920	0				0	2,120	2,510	2,410	2,610	2,340
10	1,370	890	0				0	2,110	2,510	2,410	2,610	2,310
11	1,040	890	0				0	2,110	2,500	2,420	2,610	2,300
12	1,040	870	0				0	2,130	2,500	2,430	2,610	2,300
13	1,120	890	0				0	2,130	2,380	2,430	2,600	2,300
14	1,190	900	0				0	2,140	2,310	2,440	2,570	2,310
15	1,200	910	0				0	2,130	2,240	2,440	2,540	2,300
16	1,220	900	0				0	2,210	2,040	2,450	2,530	2,300
17	1,180	870	0				270	2,260	2,090	2,430	2,490	2,290
18	940	880	0				910	2,270	2,090	2,430	2,460	2,290
19	940	900	0				1,140	2,360	2,100	2,420	2,470	2,250
20	950	920	0				1,110	2,400	2,100	2,520	2,480	2,210
21	950	920	0				1,110	2,430	2,100	2,650	2,480	2,220
22	940	900	0				1,130	2,460	2,170	2,630	2,480	2,200
23	940	900	0				1,130	2,460	2,230	2,650	2,480	2,140
24	940	860	0				1,130	2,460	2,230	2,630	2,480	2,110
25	940	770	0				1,310	2,460	2,290	2,620	2,480	2,100
26	940	690	0				1,410	2,460	2,320	2,610	2,490	2,100
27	920	720	0				1,420	2,460	2,320	2,610	2,490	2,100
28	890	730	0				1,420	2,460	2,320	2,610	2,480	2,110
29	920	730	0		-----		1,420	2,460	2,320	2,610	2,490	2,110
30	920	730	0		-----		1,390	2,460	2,320	2,610	2,490	2,110
31	930	-----	0		-----		-----	2,470	-----	2,610	2,490	-----
TOTAL	40,620	25,920	270	0	0	0	16,300	68,260	69,870	77,010	78,810	68,080
MEAN	1,310	864	8.71	0	0	0	543	2,202	2,329	2,484	2,542	2,269
MAX	2,030	930	270	0	0	0	1,420	2,470	2,510	2,650	2,620	2,450
MIN	890	690	0	0	0	0	0	1,410	2,040	2,320	2,460	2,100
AC-FT	80,570	51,410	536	0	0	0	32,330	135,400	138,600	152,700	156,300	135,000
(†)	28,130	11,700	139	0	0	0	16,660	85,110	89,040	97,390	93,440	77,040
(‡)	52,400	39,710	397	0	0	0	15,670	50,280	49,550	55,360	62,880	58,000

CAL YR 1969 TOTAL 437,580 MEAN 1,199 MAX 2,600 MIN 0 ACFT 867,900
WAT YR 1970 TOTAL 445,140 MEAN 1,220 MAX 2,650 MIN 0 ACFT 882,900

† To Milner-Gooding project, in acre-feet; total for water year, 498,700

‡ To North Side Canal Co. project, in acre-feet; total for water year, 384,200.

DIVERSIONS FROM SNAKE RIVER BETWEEN GOOSE CREEK AND SNAKE RIVER AT MILNER

13087000 North Side Twin Falls Canal at Milner, Idaho

LOCATION.--Lat 42°31'47", long 114°01'11", in NE¼NW¼ sec.29, T.10 S., R.21 E., Jerome County, on right bank 0.6 mile downstream from headgates at Milner Dam and 0.8 mile north of Milner.

PERIOD OF RECORD.--May 1909 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 4,123.4 ft above mean sea level. Prior to Apr. 1, 1916, non-recording gages at two sites within 0.5 mile of present site at slightly different datum.

AVERAGE DISCHARGE.--35 years (1935-70), 1,231 cfs (891,900 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 3,240 cfs July 22, 1964; no flow at times when headgates were closed.

REMARKS.--Records excellent. Flow controlled by headgates. Water diverted by this canal and by P. A. lateral and part of that diverted by Gooding Canal, all at Milner, is used for irrigation of 160,000 acres of land under the North Side Canal Co. system. Diversions began in April 1908.

COOPERATION.--Gage-height record furnished by North Side Canal Co.

REVISIONS (WATER YEARS).--WSP 1347: 1912, 1917.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,210					0	622	1,470	2,540	2,680	2,790	2,630
2	1,150					0	771	1,720	2,570	2,680	2,840	2,590
3	1,140					0	896	1,790	2,580	2,680	2,820	2,520
4	1,010					0	908	1,800	2,580	2,780	2,810	2,400
5	952					0	916	1,810	2,640	2,840	2,810	2,410
6	876					0	936	1,990	2,640	2,920	2,790	2,240
7	848					0	924	2,080	2,650	2,960	2,740	2,180
8	845					0	912	2,040	2,740	3,030	2,720	2,100
9	842					0	884	2,040	2,810	3,050	2,740	1,910
10	282					38	880	2,020	2,770	3,060	2,700	1,830
11	0					77	860	2,050	2,640	3,070	2,710	1,710
12	0					77	924	2,010	2,580	3,060	2,700	1,720
13	0					77	1,150	2,050	2,450	3,040	2,700	1,710
14	0					77	1,040	2,120	2,320	3,040	2,710	1,620
15	0					77	880	2,090	2,220	2,990	2,720	1,610
16	0					77	936	2,070	2,190	2,980	2,720	1,440
17	0					77	824	2,070	2,220	3,000	2,720	1,370
18	0					77	764	2,180	2,230	2,960	2,740	1,360
19	0					77	758	2,260	2,220	3,000	2,740	1,340
20	0					77	772	2,440	2,320	3,000	2,730	1,340
21	0					77	782	2,510	2,340	3,000	2,730	1,280
22	0					77	768	2,500	2,500	2,960	2,730	1,260
23	0					38	992	2,390	2,630	2,890	2,720	1,150
24	0					0	1,060	2,350	2,770	2,860	2,720	956
25	0					0	1,060	2,370	2,800	2,790	2,720	928
26	0					0	1,100	2,490	2,850	2,780	2,710	807
27	0					0	1,140	2,560	2,900	2,780	2,720	747
28	0					363	1,180	2,540	2,940	2,780	2,720	744
29	0				-----	545	1,150	2,540	2,880	2,790	2,720	897
30	0				-----	605	1,280	2,530	2,710	2,800	2,720	948
31	0	-----			-----	628	-----	2,560	-----	2,800	2,720	-----
TOTAL	9,155	0	0	0	0	3,141	28,069	67,440	77,230	90,050	84,880	47,747
MEAN	295	0	0	0	0	101	936	2,175	2,574	2,905	2,738	1,592
MAX	1,210	0	0	0	0	628	1,280	2,560	2,940	3,070	2,840	2,630
MIN	0	0	0	0	0	0	622	1,470	2,190	2,680	2,700	744
AC-FT	18,160	0	0	0	0	6,230	55,670	133,800	153,200	178,600	168,400	94,710
CAL YR 1969	TOTAL 431,869		MEAN 1,183		MAX 3,000		MIN 0	ACFT 856,600				
WAT YR 1970	TOTAL 407,712		MEAN 1,117		MAX 3,070		MIN 0	ACFT 808,700				

13087500 South Side Twin Falls Canal at Milner, Idaho

LOCATION.--Lat 42°31'19", long 114°00'59", in SW¼SE¼ sec.29, T.10 S., R.21 E., Twin Falls County, on right bank 30 ft upstream from highway bridge and 900 ft downstream from headgates at Milner Dam.

PERIOD OF RECORD.--May 1909 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 4,121.5 ft above mean sea level. Prior to May 13, 1913, non-recording gage and May 13, 1913, to Apr. 24, 1914, water-stage recorder near present site, and Apr. 25, 1914, to May 13, 1960, water-stage recorder at site 50 ft upstream, all at same datum.

AVERAGE DISCHARGE.--44 years (1926-70), 1,743 cfs (1,263,000 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 4,600 cfs Aug. 12, 1918, including about 1,200 cfs wasted through spillway below station and returned to river; maximum daily discharge for irrigation use, 3,970 cfs July 26, 1964; no flow Sept. 20, 1920, Oct. 14-17, 1956, Feb. 7-15, 1963, Jan. 11-17, Jan. 20 to Apr. 7, 1964, and Feb. 1-7, 1965.

REMARKS.--Records excellent except those below 20 cfs, which are fair. Flow controlled by headgates. Diversions began in March 1905 when 30,000 acres was reported as irrigated. By 1912 this had increased to 147,000 acres, and in 1965 the irrigated area was reported to be 203,000 acres.

COOPERATION.--Gage-height record furnished by Twin Falls Canal Co.

REVISIONS (WATER YEARS).--WSP 1347: 1910-16.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,050	715	348	2.3	1.6	1.6	392	2,220	3,480	3,360	3,780	3,500
2	2,000	694	312	2.0	1.6	1.6	470	2,640	3,560	3,440	3,790	3,460
3	2,020	583	252	2.0	1.6	1.6	592	2,790	3,580	3,550	3,780	3,380
4	1,880	553	211	2.0	1.6	1.6	748	2,880	3,600	3,560	3,740	3,300
5	1,610	586	162	2.0	1.6	1.6	820	2,730	3,610	3,570	3,760	3,230
6	1,490	643	198	2.0	1.6	1.6	856	3,310	3,670	3,660	3,760	3,130
7	1,450	682	211	2.0	1.6	1.6	915	3,020	3,740	3,710	3,760	2,910
8	1,450	685	162	2.0	1.6	1.6	960	2,940	3,630	3,690	3,780	2,750
9	1,330	670	215	1.9	1.6	1.6	946	3,270	3,400	3,660	3,810	2,700
10	1,280	634	272	1.9	1.6	1.6	982	3,000	3,210	3,700	3,780	2,660
11	1,220	619	294	1.9	1.6	1.6	1,080	2,860	3,130	3,690	3,740	2,590
12	1,190	577	315	1.9	1.6	1.6	1,150	2,990	3,030	3,690	3,750	2,600
13	1,120	547	320	1.8	1.6	1.6	1,190	3,080	2,870	3,720	3,780	2,560
14	974	517	320	1.8	1.6	1.6	1,230	3,090	2,770	3,750	3,890	2,430
15	736	499	320	1.8	1.6	1.6	1,240	3,140	2,630	3,750	3,850	2,370
16	550	511	324	1.7	1.6	1.6	1,250	3,160	2,630	3,770	3,760	2,210
17	448	478	328	1.7	1.6	1.6	1,270	3,220	2,650	3,780	3,760	2,080
18	470	432	325	1.7	1.6	1.6	1,330	3,380	2,710	3,780	3,760	2,080
19	574	402	325	1.6	1.6	1.6	1,380	3,360	2,780	3,780	3,750	2,040
20	625	382	182	1.6	1.6	1.6	1,510	3,210	2,810	3,810	3,740	2,040
21	718	390	115	1.6	1.6	1.6	1,720	3,200	2,810	3,820	3,740	2,040
22	748	392	104	1.6	1.6	1.6	1,800	3,290	3,060	3,840	3,730	1,980
23	751	390	76	1.6	1.6	1.6	1,920	3,290	3,390	3,870	3,740	1,900
24	730	385	76	1.6	1.6	1.6	2,090	3,300	3,480	3,850	3,730	1,890
25	712	360	76	1.6	1.6	1.6	2,270	3,350	3,570	3,780	3,720	1,900
26	664	355	76	1.6	1.6	1.6	2,230	3,490	3,640	3,740	3,730	1,900
27	598	362	46	1.6	1.6	1.6	2,120	3,620	3,690	3,750	3,720	1,880
28	634	372	30	1.6	1.6	1.6	1,980	3,530	3,680	3,770	3,720	1,750
29	721	378	2.3	1.6	-----	268	1,830	3,490	3,570	3,780	3,680	1,700
30	745	375	2.3	1.6	-----	270	1,980	3,460	3,390	3,780	3,680	1,660
31	733	-----	2.3	1.6	-----	365	-----	3,460	-----	3,780	3,620	-----
TOTAL	32,221	15,168	6,001.9	55.2	44.8	3,400.6	40,251	97,770	97,770	115,180	116,330	72,620
MEAN	1,039	506	194	1.78	1.60	110	1,342	3,154	3,259	3,715	3,753	2,421
MAX	2,050	715	348	2.3	1.6	365	2,270	3,620	3,740	3,870	3,890	3,500
MIN	448	355	2.3	1.6	1.6	1.6	392	2,220	2,630	3,360	3,620	1,660
AC-FT	63,910	30,090	11,900	109	89	6,750	79,840	193,900	193,900	228,500	230,700	144,000
CAL YR 1969	TOTAL 639,529.9		MEAN 1,752		MAX 3,880		MIN 1.0		ACFT 1,269,000			
WAT YR 1970	TOTAL 596,812.5		MEAN 1,635		MAX 3,890		MIN 1.6		ACFT 1,184,000			

SNAKE RIVER MAIN STEM

13088000 Snake River at Milner, Idaho

LOCATION.--Lat 42°31'41", long 114°01'04", in SW¼NE¼ sec.29, T.10 S., R.21 E., Twin Falls County, on left bank 200 ft downstream from highway bridge at Milner, 0.4 mile downstream from Milner Dam, at mile 639.70.

DRAINAGE AREA.--17,180 sq mi, approximately, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.--May 1909 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 4,062.9 ft above mean sea level. Prior to May 28, 1919, nonrecording gages at slightly different sites and datums.

AVERAGE DISCHARGE.--44 years (1926-70), 2,009 cfs (1,456,000 acre-ft per year); 15-year base period (1952-67), 1,750 cfs.

EXTREMES.--Current year: Maximum discharge, 15,200 cfs June 16 (gage height, 17.00 ft); minimum, 11 cfs Aug. 14. Period of record: Maximum discharge, 40,000 cfs June 21, 1918 (gage height, 19.9 ft, site and datum then in use); minimum, 2 cfs Mar. 17-28, 1936, Aug. 9 to Sept. 7, 1961.

REMARKS.--Records good. Flow regulated by American Falls Reservoir (see sta 13076500), Lake Walcott (see sta 13081000), and other reservoirs having a combined usable capacity of about 4,700,000 acre-ft. About 1,340,000 acres of land irrigated by diversions from river and its tributaries above station, from which the return flow in large part enters Snake River between Milner and King Hill stations. Flow includes some stored water released for use downstream by Idaho Power Co.

COOPERATION.--Gage-height record furnished by Twin Falls Canal Co. and North Side Canal Co.

REVISIONS (WATER YEARS).--WSP 1347: 1909-12, 1915-16, 1942-44, 1946-48.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 15-19, July 2-12)

1.6	10	3.5	219	8.0	3,400
2.0	26	4.0	350	11.0	6,490
2.5	60	5.0	726	14.0	10,200
3.0	124	6.0	1,400	17.0	15,000

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	293	301	1,800	1,540	3,240	1,420	226	7,170	9,580	11,400	16	310
2	282	269	2,440	1,700	3,270	1,430	161	7,000	8,920	12,300	15	310
3	307	166	2,430	2,880	3,320	1,490	127	7,120	8,460	9,540	15	318
4	310	242	1,620	3,350	3,210	1,320	129	5,920	5,370	3,550	18	318
5	310	301	1,500	3,350	3,270	1,110	130	4,620	758	594	17	315
6	318	315	1,460	3,180	3,200	912	329	3,340	304	313	17	315
7	327	350	1,400	3,100	3,190	1,340	1,520	3,460	266	122	17	315
8	318	363	1,420	3,210	3,200	1,590	3,370	5,320	271	94	15	315
9	315	350	1,380	3,480	3,200	1,460	3,360	7,290	277	73	16	313
10	321	313	1,380	3,550	3,200	1,020	3,140	8,230	288	54	19	313
11	333	293	1,300	3,710	3,190	694	2,400	11,900	293	48	21	304
12	327	285	1,090	4,000	3,090	513	2,880	10,400	1,440	48	17	304
13	318	307	1,200	3,740	3,050	410	2,760	9,880	6,170	44	13	307
14	313	296	1,140	3,420	2,980	439	4,260	10,100	10,100	40	11	307
15	310	313	1,130	3,440	3,100	449	8,350	9,140	13,000	39	12	310
16	310	290	1,160	3,370	3,080	483	11,100	7,520	15,200	37	13	310
17	315	252	1,160	3,490	2,880	509	9,700	6,710	14,600	36	13	307
18	321	264	1,180	3,460	3,100	524	7,780	6,400	14,200	39	12	307
19	548	285	1,180	3,420	3,080	548	6,840	5,740	10,400	37	13	304
20	686	296	942	3,370	3,090	555	6,510	6,090	9,210	34	13	304
21	662	307	1,080	3,400	3,080	555	5,210	7,170	8,480	28	13	304
22	846	304	1,170	3,450	3,000	590	3,760	12,400	5,480	26	13	301
23	924	310	1,410	3,450	2,330	828	3,480	11,900	3,080	24	14	301
24	846	299	1,530	3,320	1,980	775	1,990	9,350	572	14	16	304
25	810	304	1,530	3,430	1,750	840	1,800	11,300	205	12	16	307
26	718	324	1,420	3,350	1,500	852	2,300	11,300	321	12	15	307
27	393	327	1,380	3,280	1,340	714	4,740	12,100	918	15	154	304
28	472	341	1,420	3,230	1,420	360	6,740	11,200	2,120	13	304	296
29	315	338	1,460	3,480	-----	288	8,570	9,050	2,870	12	304	290
30	299	1,030	1,500	3,530	-----	288	7,660	8,270	6,060	12	307	285
31	296	-----	1,580	3,480	-----	282	-----	9,440	-----	13	304	-----
TOTAL	13,463	9,735	43,792	102,160	79,340	24,688	121,322	256,830	159,213	38,623	1,763	9,205
MEAN	434	325	1,413	3,295	2,834	796	4,044	8,285	5,307	1,246	56.9	307
MAX	924	1,030	2,440	4,000	3,320	1,590	11,100	12,400	15,200	12,300	307	318
MIN	282	166	942	1,540	1,340	282	127	3,340	205	12	11	285
AC-FT	26,700	19,310	86,860	202,600	157,400	48,970	240,600	509,400	315,800	76,610	3,500	18,260
CAL YR 1969	TOTAL	1,120,067	MEAN	3,069	MAX	13,400	MIN	11	ACFT	2,222,000		
WAT YR 1970	TOTAL	860,134	MEAN	2,357	MAX	15,200	MIN	11	ACFT	1,706,000		

13090000 Snake River near Kimberly, Idaho

LOCATION.--Lat 42°35'28", long 114°21'34", in NE¼NW¼ sec.4, T.10 S., R.18 E., Twin Falls County, on left bank 1,200 ft downstream from Twin Falls powerplant, 2.2 miles upstream from Shoshone Falls, 4 miles north of Kimberly, and at mile 617.5.

PERIOD OF RECORD.--July 1923 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,362.67 ft above mean sea level (levels by Idaho Power Co.). Prior to Aug. 31, 1938, at site 2,000 ft downstream at different datum.

AVERAGE DISCHARGE.--47 years, 2,476 cfs (1,794,000 acre-ft per year); 15-year base period (1952-67), 2,121 cfs.

EXTREMES.--Current year: Maximum discharge, 15,400 cfs June 16 (gage height, 17.14 ft); minimum, 110 cfs July 18 (gage height, 2.60 ft); minimum daily, 358 cfs July 11.

Period of record: Maximum discharge, 27,200 cfs June 4, 1927 (gage height, 14.76 ft, site and datum then in use), from rating curve extended above 20,000 cfs; minimum recorded, 10 cfs May 17, 1944 (gage height, 1.15 ft); minimum daily recorded, 110 cfs Apr. 6, 1959.

REMARKS.--Records good. Flow regulated by American Falls Reservoir 96.5 miles upstream beginning in 1926 (see sta 13076500) and other reservoirs having a combined usable capacity of 4,700,000 acre-ft. Diurnal fluctuation caused by hydroelectric powerplant 1,200 ft upstream. At times practically entire flow is diverted at Milner during irrigation season; no diversions between Milner and Kimberly. About 1,340,000 acres of land irrigated by diversions from river and its tributaries above station.

REVISIONS (WATER YEARS).--WSP 1347: 1924-26, 1928-30, 1942-44, 1946-48.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

4.0	332	12.0	5,750
6.0	925	15.0	10,700
8.0	1,840	17.0	15,000
10.0	3,400		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FFB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	751	719	1,970	1,880	3,550	1,740	563	7,450	9,810	11,000	432	751
2	751	719	2,580	1,840	3,580	1,730	510	7,150	9,330	12,500	437	751
3	744	698	3,160	2,790	3,670	1,770	440	7,360	8,900	10,300	437	755
4	751	640	2,260	3,670	3,460	1,730	411	6,440	6,320	5,100	440	775
5	758	684	1,870	3,640	3,570	1,540	410	5,090	2,230	1,540	439	783
6	712	728	1,880	3,580	3,470	1,360	408	3,840	864	882	442	796
7	761	775	1,820	3,380	3,450	1,300	915	3,280	630	623	443	792
8	761	775	1,810	3,520	3,460	1,890	3,210	5,240	628	491	441	791
9	761	768	1,780	3,780	3,460	1,800	3,660	7,160	654	459	445	784
10	766	750	1,760	3,880	3,440	1,610	3,460	8,150	653	428	443	791
11	779	730	1,760	4,020	3,460	1,100	2,880	11,600	646	358	441	785
12	768	716	1,640	4,290	3,390	945	2,910	10,900	776	367	445	780
13	768	694	1,610	4,100	3,300	706	3,090	10,200	5,530	419	445	789
14	765	691	1,600	3,810	3,300	700	3,720	10,100	9,620	417	456	789
15	751	702	1,560	3,720	3,370	723	7,770	9,540	12,700	417	445	792
16	747	705	1,570	3,770	3,330	746	11,200	7,920	15,000	420	455	787
17	744	677	1,540	3,780	3,160	770	10,100	6,990	14,600	420	455	787
18	751	664	1,550	3,780	3,350	788	8,290	6,640	13,900	385	455	791
19	768	661	1,570	3,750	3,400	811	7,070	5,990	10,700	446	448	785
20	1,110	754	1,500	3,660	3,380	826	6,780	6,300	9,410	427	454	801
21	1,110	646	1,350	3,710	3,340	836	5,770	6,600	8,650	430	449	783
22	1,150	702	1,460	3,700	3,280	843	4,220	12,000	6,310	434	456	782
23	1,410	702	1,720	3,750	2,780	1,090	3,770	12,700	4,060	434	452	785
24	1,350	702	1,810	3,650	2,380	1,110	2,800	9,700	1,760	432	455	781
25	1,310	698	1,840	3,690	2,140	1,090	2,140	11,200	705	434	457	787
26	1,240	698	1,790	3,700	1,910	1,140	2,090	11,400	565	425	455	782
27	1,150	700	1,750	3,600	1,680	1,140	4,360	12,100	846	427	455	781
28	1,130	720	1,770	3,430	1,710	884	6,420	11,600	1,600	415	621	772
29	782	736	1,800	3,810	-----	616	8,830	9,370	3,390	427	742	764
30	719	786	1,810	3,910	-----	575	8,030	8,620	4,740	426	751	759
31	716	-----	1,850	3,780	-----	571	-----	9,500	-----	428	750	-----
TOTAL	27,534	21,340	55,740	111,370	87,770	34,480	126,227	262,130	165,527	52,111	14,941	23,431
MEAN	888	711	1,798	3,593	3,135	1,112	4,208	8,456	5,518	1,681	482	781
MAX	1,410	786	3,160	4,290	3,670	1,890	11,200	12,700	15,000	12,500	751	801
MIN	712	640	1,350	1,840	1,680	571	408	3,280	565	358	432	751
AC-FT	54,610	42,330	110,600	220,900	174,100	68,390	250,400	519,900	328,300	103,400	29,640	46,480
CAL YR 1969	TOTAL	1,245,814	MEAN	3,413	MAX	13,800	MIN	280	AC-FT	2,471,000		
WTR YR 1970	TOTAL	982,601	MEAN	2,692	MAX	15,000	MIN	358	AC-FT	1,949,000		

BLUE LAKES SPRING BASIN

13091000 Blue Lakes Spring near Twin Falls, Idaho

LOCATION.--Lat 42°36'53", long 114°28'06", in NE¼NW¼SE¼ sec.28, T.9 S., R.17 E., Jerome County, on left bank at outlet of upper Blue Lake, 1.2 miles northwest of Perrine Memorial Bridge, 3.5 miles north of Twin Falls, and 610.8 miles upstream from mouth of Snake River.

PERIOD OF RECORD.--April 1950 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,300 ft (from topographic map).

AVERAGE DISCHARGE.--20 years, 217 cfs (157,200 acre-ft per year); 15-year base period (1952-67), 216 cfs.

EXTREMES.--Period of record: Maximum daily discharge, 256 cfs Nov. 10, 11, 1951, Oct. 24 to Nov. 13, 1952, Sept. 29, 30, 1953, Oct. 23, 24, 1957; minimum daily, 178 cfs May 30 to June 6, 1965.

REMARKS.--Records good. No regulation or diversion above station. Records of chemical analysis for the water year 1970 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	216	224	220	220	216	212	208	205	189	202	216	220
2	216	224	220	224	216	212	205	205	189	202	216	216
3	216	220	220	224	216	212	205	202	188	202	216	216
4	216	220	224	224	216	212	205	204	188	205	216	216
5	216	220	224	224	216	212	205	205	187	205	217	220
6	216	220	220	224	216	212	205	204	188	205	218	220
7	216	220	220	224	216	211	205	204	188	205	219	220
8	220	220	224	224	216	208	205	203	189	208	220	216
9	220	220	220	228	216	208	205	203	190	208	221	216
10	216	220	220	228	216	208	205	202	190	208	219	216
11	216	224	220	228	216	208	205	202	189	208	220	216
12	220	224	224	228	216	208	205	201	190	208	220	218
13	220	224	224	228	216	208	204	200	190	208	220	220
14	220	224	220	228	215	208	205	200	190	208	220	216
15	220	224	220	228	212	208	205	199	190	208	220	216
16	220	224	220	228	212	208	205	199	190	210	217	216
17	220	220	220	228	212	208	205	198	190	212	220	214
18	224	220	224	228	212	208	205	197	190	212	220	216
19	224	216	224	224	212	208	205	197	190	212	220	216
20	224	216	224	224	212	208	205	196	190	212	220	212
21	224	220	224	224	212	208	205	196	193	212	220	212
22	224	220	220	224	212	208	205	195	193	212	216	208
23	224	220	220	224	212	208	205	195	193	212	217	208
24	224	220	220	224	212	208	205	194	193	213	219	206
25	224	220	224	220	212	208	205	193	197	216	220	207
26	224	220	224	220	212	208	205	193	199	216	220	208
27	228	220	224	220	212	208	205	192	199	216	216	205
28	228	220	224	220	212	208	205	192	199	216	216	205
29	228	220	224	220	-----	208	205	191	199	216	217	202
30	224	224	220	220	-----	208	205	190	202	216	217	202
31	224	-----	220	220	-----	208	-----	190	-----	216	220	-----
TOTAL	6,852	6,628	6,876	6,952	5,991	6,475	6,152	6,147	5,752	6,509	6,773	6,399
MEAN	221	221	222	224	214	209	205	198	192	210	218	213
MAX	228	224	224	228	216	212	208	205	202	216	221	220
MIN	216	216	220	220	212	208	204	190	187	202	216	202
AC-FT	13,590	13,150	13,640	13,790	11,880	12,840	12,200	12,190	11,410	12,910	13,430	12,690

CAL YR 1969 TOTAL 76,182 MEAN 209 MAX 228 MIN 196 AC-FT 151,100
WTR YR 1970 TOTAL 77,506 MEAN 212 MAX 228 MIN 187 AC-FT 153,700

NOTE.--No gage-height record May 6 to June 8.

ROCK CREEK BASIN

137

13092000 Rock Creek near Rock Creek, Idaho

LOCATION.--Lat 42°21'23", long 114°18'12", NW¼NW¼ sec.25, T.12 S., R.18 E., Twin Falls County, on right bank 0.1 mile downstream from road bridge, 0.8 mile downstream from Fifth Fork Rock Creek, 5 miles south of Rock Creek settlement, and 12 miles south of Hansen.

DRAINAGE AREA.--80 sq mi, approximately. Mean altitude, 6,330 ft.

PERIOD OF RECORD.--November 1909 to August 1913, November 1938 to July 1939, November 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,347.0 ft (levels by Topographic Division). Nov. 20, 1943, to Sept. 30, 1963, at datum 1.00 ft higher. Nonrecording gage Nov. 28, 1909, to Aug. 16, 1913, at site 2 miles downstream at different datum and Nov. 23, 1938, to July 21, 1939, at present site at datum 2.25 ft higher.

AVERAGE DISCHARGE.--28 years (1910-12, 1944-70), 31.8 cfs (23,040 acre-ft per year); 15-year base period (1952-67), 27.5 cfs.

EXTREMES.--Current year: Maximum discharge, 461 cfs May 19 (gage height, 3.81 ft); minimum, 5.7 cfs Oct. 1, Dec. 29; minimum gage height, 0.43 ft Sept. 3, 4, 5.

Period of record: Maximum discharge, 461 cfs May 19, 1970 (gage height, 3.81 ft), but may have been more May 21, 1912; minimum, 2.7 cfs July 23, 1961 (gage height, 0.76 ft, present datum); minimum gage height, 0.43 ft Sept. 3, 4, 5, 1970.

REMARKS.--Records good. Small ranch diversion above station.

Rating tables(gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 6-12, 23, 24)

Oct. 1 to May 24				May 25 to Sept. 30			
1.1	5.7	2.0	62	0.4	7.0	1.5	83
1.2	8.5	2.5	127	0.6	13	2.0	142
1.3	12	3.0	224	0.8	22	3.0	289
1.5	23	3.5	356	1.0	35	3.4	358
1.7	36	3.8	448				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.0	10	9.6	8.7	38	20	21	41	193	38	14	8.0
2	6.8	10	9.3	8.7	33	21	21	48	175	35	14	7.8
3	7.4	10	9.3	8.4	30	20	21	66	162	33	13	7.7
4	8.5	10	9.4	8.3	27	20	21	90	151	31	13	7.5
5	8.9	10	9.3	8.2	26	19	22	123	142	29	13	7.6
6	8.5	10	9.1	8.0	25	18	25	172	132	29	13	8.9
7	8.2	13	9.7	8.2	24	18	31	224	122	28	12	10
8	7.7	11	9.4	9.4	23	19	33	211	112	26	12	9.8
9	8.2	11	9.7	13	22	18	37	210	116	25	12	9.0
10	10	11	9.6	13	22	18	45	236	104	26	11	8.7
11	10	10	9.9	12	23	18	55	221	94	25	11	8.4
12	9.5	10	11	12	24	18	54	193	86	24	10	9.3
13	9.4	10	10	12	26	17	51	170	84	23	10	9.6
14	9.5	10	9.9	13	26	19	49	149	81	22	9.9	9.9
15	9.2	10	9.8	15	25	19	46	143	81	21	9.6	10
16	10	11	9.6	18	24	19	42	171	77	20	9.4	9.9
17	11	10	10	34	24	20	41	259	73	20	9.2	9.3
18	12	9.8	10	31	23	19	40	366	70	20	9.0	8.8
19	10	9.9	10	29	22	19	41	405	67	19	9.0	9.1
20	10	10	11	33	21	18	39	429	64	19	9.1	11
21	10	10	12	34	21	19	39	408	60	19	8.7	11
22	10	10	14	58	21	19	38	384	57	19	8.7	10
23	10	9.7	14	66	20	19	38	387	55	18	8.5	9.9
24	9.9	9.9	12	58	20	20	38	362	52	18	8.5	9.9
25	10	9.8	12	50	20	20	39	345	49	18	8.2	10
26	10	9.7	12	43	20	22	42	328	45	17	8.1	9.9
27	10	9.4	12	68	20	21	42	338	47	16	7.9	9.9
28	10	8.8	10	63	20	22	42	313	45	16	8.0	9.6
29	10	9.0	8.3	55	-----	22	42	276	43	17	8.0	9.6
30	10	9.7	12	48	-----	22	41	241	42	15	8.1	9.3
31	10	-----	11	42	-----	21	-----	214	-----	14	8.0	-----
TOTAL	290.7	302.7	324.9	887.9	670	604	1,136	7,523	2,681	700	313.9	279.4
MEAN	9.38	10.1	10.5	28.6	23.9	19.5	37.9	243	89.4	22.6	10.1	9.31
MAX	12	13	14	68	38	22	55	429	193	38	14	11
MIN	6.0	8.8	8.3	8.0	20	17	21	41	42	14	7.9	7.5
AC-FT	577	600	644	1,760	1,330	1,200	2,250	14,920	5,320	1,390	623	554

CAL YR 1969 TOTAL 10,389.4 MEAN 28.5 MAX 231 MIN 4.9 AC-FT 20,610
WTR YR 1970 TOTAL 15,713.5 MEAN 43.1 MAX 429 MIN 6.0 AC-FT 31,170

PEAK DISCHARGE (BASE, 130 CFS).--May 7 (1800) 246 cfs (3.20 ft); May 19 (1200) 461 cfs (3.81 ft).

NIAGARA SPRINGS BASIN

13093700 Niagara Springs near Buhl, Idaho

LOCATION.--Lat 42°39'46", long 114°40'24", in NW¼SW¼NW¼ sec.11, T.9 S., R.15 E., Gooding County, in spring outlet channel 120 ft upstream from mouth, 880 ft downstream from source, 6 miles northeast of Buhl, and 599.1 miles upstream from mouth of Snake River.

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

GAGE.--Water-stage recorder. Altitude of gage is 3,000 ft (from topographic map). Prior to July 26, 1966, at site 180 ft upstream at datum 3.19 ft higher.

AVERAGE DISCHARGE.--12 years, 263 cfs (190,500 acre-ft per year); adjusted for diversions, 313 cfs (226,800 acre-ft per year).

EXTREMES.--Period of record: Maximum daily discharge, 355 cfs (estimated) Oct. 1-10, 1958; minimum daily, 198 cfs May 24, 25, June 4-6, 1964.

REMARKS.--Records fair. Figures of daily discharge do not include discharge in the diversions between springs and gage.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	290	248	261	255	244	235	231	220	222	229	233	290
2	290	248	264	255	244	235	231	220	222	229	233	290
3	288	246	264	255	242	235	229	220	222	229	246	292
4	283	246	264	253	242	233	227	220	220	229	259	290
5	281	246	264	253	242	235	227	218	220	231	259	292
6	281	244	261	253	242	235	227	218	220	231	259	295
7	281	244	261	253	242	236	227	218	220	231	261	295
8	279	244	261	250	242	236	227	218	222	229	261	299
9	279	250	261	250	240	236	225	220	222	229	261	302
10	279	248	261	250	242	235	227	220	222	229	261	302
11	277	250	261	250	242	235	225	220	222	229	261	302
12	277	250	261	250	238	235	223	220	223	231	261	297
13	279	253	259	250	238	235	223	220	223	231	264	304
14	283	250	259	250	240	233	223	222	223	231	266	308
15	275	253	259	250	240	235	223	222	223	233	266	308
16	272	253	259	250	240	235	223	222	223	233	266	308
17	270	255	259	248	238	235	223	222	223	233	268	308
18	268	255	259	248	238	231	223	222	225	231	268	308
19	268	257	259	248	240	231	223	222	225	233	270	308
20	266	257	257	248	240	231	227	220	225	233	270	308
21	266	257	255	248	240	231	231	220	225	235	266	308
22	261	259	255	248	238	231	227	220	222	235	261	311
23	259	257	257	246	238	233	223	220	222	231	261	311
24	259	259	257	246	240	233	220	220	223	231	264	311
25	257	259	257	246	240	233	220	220	223	231	268	311
26	255	261	257	246	236	231	220	218	223	231	277	311
27	253	261	257	246	235	231	220	218	223	231	277	311
28	253	261	257	246	236	231	220	220	225	233	275	308
29	250	261	257	244	-----	231	220	222	227	233	277	308
30	248	261	257	244	-----	231	220	223	227	233	277	308
31	248	-----	257	244	-----	231	-----	229	-----	235	283	-----
TOTAL	8,375	7,593	8,037	7,723	6,719	7,234	6,735	6,834	6,687	7,173	8,179	9,104
MEAN	270	253	259	249	240	233	225	220	223	231	264	303
MAX	290	261	264	255	244	236	231	229	227	235	283	311
MIN	248	244	255	244	235	231	220	218	220	229	233	290
AC-FT	16,610	15,060	15,940	15,320	13,330	14,350	13,360	13,560	13,260	14,230	16,220	18,060
MEAN†	377	345	350	328	311	302	297	313	315	318	343	360
AC-FT†	23,160	20,510	21,500	20,160	17,290	18,580	17,670	19,230	18,730	19,540	21,120	21,450
CAL YR 1969	TOTAL 93,246	MEAN 255	MAX 295	MIN 227	ACFT 185,000	MEAN† 337	AC-FT† 243,900					
WAT YR 1970	TOTAL 90,393	MEAN 248	MAX 311	MIN 218	ACFT 179,300	MEAN† 330	AC-FT† 238,900					

† Adjusted for diversions between springs and gage.

139

LOCATION.--Lat 42°39'58", long 114° 42'41", in NW¼NW¼ sec.9, T.9 S., R.15 E., Twin Falls County, on left bank, 2 miles downstream from Niagara Springs, 3.8 miles upstream from outlet of Clear Lakes, 6 miles northeast of Buhl, and at mile 597.2.

GAGE.--Water-stage recorder. Datum of gage is 2,951.9 ft above mean sea level (stadia levels). Jan. 17, 1947, to July 12, 1965, at datum 1.00 ft higher. Prior to Jan. 17, 1947, nonrecording gage at datum 1.0 ft higher.

EXTREMES.--Current year: Maximum discharge, 17,500 cfs June 16 (gage height, 9.56 ft); minimum, 1,820 cfs Apr. 7 (gage height, 1.18 ft).

Period of record: Maximum discharge, 23,700 cfs June 24, 1964 (gage height, 11.54 ft, present datum); minimum, 1,580 cfs Mar. 28, 1963 (gage height, 0.83 ft, present datum).

REMARKS.--Records excellent. Flow regulated by American Falls Reservoir 116.8 miles upstream (see sta 13076500). Diurnal fluctuation caused by hydroelectric plants upstream. No diversion except by small ranch ditches between this station and station at Milner, where at times practically entire flow is diverted during irrigation seasons.

1.3	1,840	6.0	8,500
2.0	2,380	8.0	13,400
4.0	4,760	10.0	19,000

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,830	2,600	2,760	3,450	5,240	3,160	2,000	9,300	11,700	11,900	2,270	2,760
2	2,820	2,560	3,860	3,370	5,140	3,180	2,010	8,730	11,300	14,400	2,280	2,780
3	2,860	2,550	4,690	3,810	5,180	3,180	1,960	8,950	10,700	12,400	2,290	2,780
4	2,860	2,530	4,210	5,040	5,060	3,210	1,870	8,490	8,840	8,750	2,340	2,790
5	2,860	2,490	3,600	5,210	5,090	3,050	1,920	6,790	5,080	3,760	2,290	2,880
6	2,870	2,510	3,450	5,200	5,030	2,880	1,940	5,020	3,070	2,940	2,270	2,970
7	2,890	2,610	3,460	4,940	4,980	2,710	1,940	5,730	2,540	2,720	2,270	2,980
8	2,920	2,610	3,420	5,050	4,970	3,030	3,450	6,550	2,570	2,330	2,240	2,980
9	2,910	2,590	3,430	5,250	4,980	3,260	5,300	8,370	2,690	2,230	2,270	2,970
10	2,900	2,580	3,360	5,510	4,960	3,150	5,180	10,000	2,740	2,230	2,280	2,980
11	2,870	2,550	3,370	5,590	4,960	2,830	4,870	12,800	2,720	2,180	2,280	2,970
12	2,850	2,520	3,360	5,770	4,930	2,490	4,360	13,400	2,700	2,110	2,260	2,980
13	2,840	2,500	3,250	5,860	4,850	2,320	4,890	12,200	5,140	2,120	2,250	2,960
14	2,830	2,470	3,210	5,520	4,820	2,150	4,910	12,000	11,100	2,140	2,250	2,960
15	2,750	2,470	3,190	5,410	4,830	2,150	8,330	11,800	14,500	2,160	2,260	2,940
16	2,760	2,490	3,170	5,450	4,860	2,150	13,000	10,300	17,000	2,160	2,260	2,910
17	2,730	2,470	3,170	5,490	4,780	2,190	12,600	8,950	16,800	2,160	2,270	2,900
18	2,730	2,430	3,130	5,420	4,710	2,190	10,600	8,490	16,300	2,140	2,260	2,860
19	2,720	2,400	3,170	5,370	4,890	2,190	9,180	8,020	13,400	2,120	2,270	2,880
20	2,810	2,390	3,200	5,310	4,840	2,200	8,740	8,030	11,500	2,170	2,300	2,960
21	3,020	2,480	3,020	5,300	4,830	2,200	7,910	8,150	10,600	2,220	2,280	2,950
22	3,020	2,380	3,060	5,330	4,780	2,230	6,250	12,400	8,990	2,260	2,300	2,940
23	3,150	2,380	3,190	5,420	4,660	2,290	5,490	15,100	5,990	2,250	2,310	2,930
24	3,270	2,400	3,410	5,380	3,970	2,470	4,830	12,200	4,110	2,260	2,320	2,910
25	3,210	2,360	3,460	5,280	3,670	2,480	3,800	12,500	2,900	2,250	2,310	2,930
26	3,160	2,380	3,450	5,360	3,440	2,500	3,900	13,500	2,370	2,230	2,310	2,960
27	3,100	2,360	3,350	5,400	3,230	2,510	5,210	13,700	2,340	2,230	2,320	3,020
28	3,050	2,360	3,330	5,080	3,110	2,480	7,540	13,900	2,920	2,200	2,350	3,020
29	2,900	2,360	3,340	5,340	-----	2,230	10,600	11,700	4,840	2,230	2,530	2,900
30	2,630	2,370	3,370	5,460	-----	2,070	10,700	10,800	5,390	2,230	2,650	2,810
31	2,590	-----	3,390	5,410	-----	1,990						

BOX CANYON SPRINGS BASIN

13095500 Box Canyon Springs near Wendell, Idaho

LOCATION.--Lat 42°42'25", long 114°48'45", in NW¼SE¼NE¼ sec.28, T.8 S., R.14 E., Gooding County, on left bank 150 ft downstream from waterfall, at mile 0.5, 0.7 mile downstream from source, 7.5 miles southwest of Wendell, and 588.8 miles upstream from mouth of Snake River.

PERIOD OF RECORD.--April 1950 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,950 ft (from topographic map).

AVERAGE DISCHARGE.--20 years, 408 cfs (295,600 acre-ft per year); 15-year base period (1952-67), 407 cfs.

EXTREMES.--Period of record: Maximum daily discharge, 483 cfs Oct. 9, 14, 15, 18, 19, 1965; minimum daily, 346 cfs Jan. 10, 1962.

REMARKS.--Records excellent. No regulation or surface diversion above station. Discharge affected by variable surface waste from irrigation, which flows over rimrocks into springs above station. Waste flow estimated Oct. 8 (0.5 cfs); Apr. 15 (0.25 cfs); May 8 (2.0 cfs); July 10 (0.25 cfs); no waste flow Nov. 7, Dec. 1, Jan. 12, Feb. 12, Mar. 6, Aug. 8, Sept. 17. Records of chemical analyses for the water year 1970 are published in part 2 of this report.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	443	440	430	420	404	392	377	372	390	414	422	414
2	443	437	430	420	404	392	377	372	390	414	420	417
3	443	437	432	420	404	390	374	374	392	414	420	420
4	440	437	432	420	402	390	374	374	392	417	420	422
5	437	440	430	417	402	390	374	372	394	420	420	422
6	437	440	432	417	402	387	374	372	394	420	420	422
7	437	440	432	417	400	387	374	374	397	420	420	422
8	440	437	432	417	400	387	374	374	400	420	420	422
9	443	437	430	420	400	387	374	374	402	420	420	420
10	443	437	430	417	400	387	377	377	402	420	417	420
11	445	435	427	417	400	387	377	380	404	420	417	422
12	443	435	427	414	400	387	377	380	407	417	420	422
13	443	435	427	414	400	384	380	380	407	417	420	422
14	443	435	427	414	400	384	377	380	407	417	417	420
15	443	435	427	414	400	384	377	382	410	414	414	420
16	445	435	427	414	400	384	377	382	410	414	417	420
17	445	432	424	412	397	384	377	382	412	414	417	417
18	443	432	424	412	397	384	377	384	412	414	412	417
19	443	435	424	412	394	382	374	387	412	414	414	420
20	440	435	424	412	394	382	374	387	412	417	414	420
21	443	435	424	410	394	382	374	384	414	417	414	417
22	443	435	424	410	394	382	374	384	414	417	414	420
23	443	432	424	410	394	382	374	387	414	420	412	422
24	440	435	424	410	390	380	374	387	412	417	412	422
25	440	432	422	410	390	380	374	384	412	420	412	420
26	440	430	422	410	390	377	374	384	412	420	412	420
27	443	430	422	410	390	377	374	387	412	420	412	420
28	440	430	420	407	392	377	374	387	414	422	412	420
29	440	430	420	404	-----	377	374	387	414	424	412	417
30	437	430	420	404	-----	377	374	390	414	422	414	417
31	437	-----	422	404	-----	377	-----	390	-----	422	412	-----
TOTAL	13,685	13,045	13,212	12,809	11,134	11,899	11,256	11,810	12,178	12,958	12,899	12,596
MEAN	441	435	426	413	398	384	375	381	406	418	416	420
MAX	445	440	432	420	404	392	380	390	414	424	422	422
MIN	437	430	420	404	390	377	374	372	390	414	412	414
AC-FT	27,140	25,870	26,210	25,410	22,080	23,600	22,330	23,430	24,160	25,700	25,590	24,980

CAL YR 1969 TOTAL 149,616 MEAN 410 MAX 445 MIN 370 ACFT 296,800
WAT YR 1970 TOTAL 149,481 MEAN 410 MAX 445 MIN 372 ACFT 296,500

SALMON FALLS CREEK BASIN

141

13105000 Salmon Falls Creek near San Jacinto, Nev.

LOCATION.--Lat 41°56'40", long 114°41'15", in NE¼SW¼ sec.23, T.47 N., R.64 E., Elko County, on right bank in canyon, 630 ft downstream from bridge on U.S. Highway 93, 550 ft downstream from Shoshone Creek, and 5 miles north of San Jacinto.

DRAINAGE AREA.--1,450 sq mi, approximately. Mean altitude, 6,350 ft.

PERIOD OF RECORD.--September 1909 to June 1910 (gage heights only), June 1910 to September 1916, October 1918 to current year. Monthly discharge only for some periods published in WSP 1317. Prior to October 1910, published as Salmon Falls "River."

GAGE.--Water-stage recorder. Altitude of gage is 5,120 ft (by barometer). Prior to June 6, 1910, nonrecording gage at nearby site at different datum. June 6, 1910, to Sept. 30, 1916, Oct. 1, 1918, to Aug. 28, 1964, water-stage recorder at site 35 ft upstream at same datum.

AVERAGE DISCHARGE.--58 years (1910-16, 1918-70), 133 cfs (96,360 acre-ft per year); 15-year base period (1952-67), 123 cfs.

EXTREMES.--Current year: Maximum discharge, 1,120 cfs May 22 (gage height, 8.19 ft); minimum, 2.7 cfs Aug. 26, 27 (gage height, 4.19 ft).

Period of record: Maximum discharge, 1,970 cfs Feb. 12, 1962 (gage height, 12.65 ft, from floodmark), from rating extended above 900 cfs on basis of contracted-opening measurement of peak flow, but may have been exceeded by peak of Feb. 24, 1943; minimum, 2.6 cfs Sept. 4, 1961 (gage height, 3.37 ft).

REMARKS.--Records good. Many diversions above station for irrigation. Salmon Dam of Salmon River Canal Co. is 15 miles downstream (sta. 13106500).

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 23, June 12 to Sept. 30)

4.3	33	7.0	663
4.6	63	8.0	1,010
5.0	128	8.3	1,120
6.0	366		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	42	50	51	53	147	125	131	198	659	231	36	31
2	42	50	51	45	133	144	126	189	612	198	31	35
3	45	50	45	43	128	140	130	221	598	173	30	33
4	48	51	43	44	123	125	125	298	603	153	28	30
5	48	51	49	46	118	117	149	396	634	144	29	37
6	47	52	42	42	113	111	217	507	626	135	43	42
7	46	57	55	41	110	104	290	635	605	141	56	41
8	46	57	54	43	112	147	301	713	596	125	54	44
9	46	55	57	48	115	144	289	687	583	114	53	45
10	48	54	55	52	119	128	308	675	588	112	52	44
11	49	54	54	55	124	116	354	709	558	117	49	44
12	49	54	58	58	129	107	382	699	478	123	45	45
13	49	53	61	62	165	111	338	642	456	103	42	45
14	49	53	61	65	161	121	306	585	472	87	41	46
15	49	53	59	67	142	139	276	499	419	82	40	47
16	51	54	55	72	135	146	253	466	382	74	39	52
17	53	54	53	99	134	134	225	502	363	70	37	57
18	55	49	55	119	130	118	214	636	340	61	34	61
19	54	48	59	112	111	125	211	796	321	60	34	61
20	52	52	62	161	105	119	225	944	313	58	35	63
21	51	52	66	159	108	121	209	1,050	319	58	34	63
22	50	53	69	356	112	126	200	1,090	329	61	36	63
23	49	51	66	439	113	131	189	1,010	329	56	38	63
24	49	50	67	323	111	186	178	986	311	52	40	62
25	49	51	66	268	111	258	180	953	292	48	29	62
26	49	50	64	226	108	222	200	925	275	47	4.6	62
27	49	48	60	214	110	182	225	930	257	44	3.5	64
28	50	48	49	197	115	165	221	970	263	43	7.2	64
29	51	48	35	148	-----	169	211	926	257	47	9.4	65
30	50	52	46	152	-----	158	202	826	253	50	14	64
31	50	-----	50	145	-----	145	-----	723	-----	43	16	-----
TOTAL	1,515	1,554	1,717	3,954	3,442	4,384	6,865	21,386	13,091	2,910	1,039.7	1,535
MEAN	48.9	51.8	55.4	128	123	141	229	690	436	93.9	33.5	51.2
MAX	55	57	69	439	165	258	382	1,090	659	231	56	65
MIN	42	48	35	41	105	104	125	189	253	43	3.5	30
AC-FT	3,010	3,080	3,410	7,840	6,830	8,700	13,620	42,420	25,970	5,770	2,060	3,040
CAL YR 1969	TOTAL 60,933		MEAN 167		MAX 852		MIN 11		AC-FT 120,900			
WTR YR 1970	TOTAL 63,392.7		MEAN 174		MAX 1,090		MIN 3.5		AC-FT 125,700			

SALMON FALLS CREEK BASIN

13106000 Salmon River Canal Co. canal near Rogerson, Idaho

LOCATION.--Lat 42°13'10", long 114°44'20", in sec.7, T.14 S., R.15 E., Twin Falls County, on left bank 0.5 mile downstream from Salmon River Canal Co. reservoir and 7 miles west of Rogerson.

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

GAGE.--Water-stage recorder. Altitude of gage is 4,940 ft (by barometer). Oct. 1, 1953, to Sept. 30, 1954, non-recording gage at same site and datum.

AVERAGE DISCHARGE.--33 years, 102 cfs (73,900 acre-ft per year); 15-year base period (1952-67), 94.0 cfs.

EXTREMES.--Period of record: Maximum daily discharge, 660 cfs July 21-24, 1944; no flow for long periods in each year.

REMARKS.--Records excellent. Canal diverts from Salmon River Canal Co. reservoir (see sta 13106500) for irrigation of land in Salmon River Canal Co. project.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								0	429	318	370	.92
2								0	430	313	366	.92
3								0	434	311	375	.92
4								0	437	330	391	.92
5								0	446	351	385	.92
6								0	448	372	372	.92
7								0	461	408	370	.92
8								0	460	421	367	.92
9								0	445	481	368	.92
10								0	419	488	371	.92
11								0	338	505	373	.92
12								0	313	503	377	.92
13								170	257	487	375	.92
14								202	248	492	374	.92
15								210	229	505	380	.92
16								229	214	513	382	.92
17								248	178	520	390	.92
18								303	177	516	414	.92
19								321	172	503	410	.92
20								374	182	509	406	.92
21								386	199	526	403	.92
22								396	222	516	397	.92
23								398	299	477	390	.92
24								396	332	454	395	161
25								389	363	443	395	171
26								402	384	455	395	156
27								412	436	451	396	144
28								425	412	445	396	134
29								430	383	430	387	126
30								420	365	405	373	128
31		-----					-----	432	-----	372	272	-----
TOTAL	0	0	0	0	0	0	0	0	10,117	13,820	11,815	1,041.16
MEAN	0	0	0	0	0	0	0	0	337	446	381	34.7
MAX	0	0	0	0	0	0	0	0	461	526	414	171
MIN	0	0	0	0	0	0	0	0	172	311	272	.92
AC-FT	0	0	0	0	0	0	0	0	20,070	27,410	23,440	2,070
CAL YR 1969	TOTAL	42,591	MEAN	117	MAX	437	MIN	0	AC-FT	84,480		
WAT YR 1970	TOTAL	43,336.16	MEAN	119	MAX	526	MIN	0	AC-FT	85,960		

13106500 Salmon River Canal Co. reservoir near Rogerson, Idaho

LOCATION.--Lat 42°12'40", long 114°44'00", in NE¼ sec.18, T.14 S., R.15 E., Twin Falls County, at dam on Salmon Falls Creek, 7.5 miles west of Rogerson, and at mile 46.0.

DRAINAGE AREA.--1,610 sq mi, approximately.

PERIOD OF RECORD.--January 1922 to current year.

GAGE.--Nonrecording gage. Datum of gage is 4,945.8 ft above mean sea level.

EXTREMES.--Current year: Maximum contents observed, 78,500 acre-ft June 23 (gage height, 43.75 ft); minimum observed, 17,900 acre-ft Oct. 1 (gage height, 12.75 ft).

Period of record: Maximum contents observed, 123,700 acre-ft May 30, 31, 1922 (gage height, 61.1 ft); minimum observed, 125 acre-ft Sept. 21 to Oct. 5, 1934 (gage height, 0.1 ft).

REMARKS.--Reservoir is formed by gravity-section concrete-arch dam completed in 1911; storage began in 1910. Usable capacity, 182,650 acre-ft between gage heights 0.0 (bottom of outlet tunnel) and 80.0 ft (maximum operating level). Dead storage, 48,000 acre-ft. Water is used for irrigation of lands in Salmon River Canal Co. project. Figures given herein represent usable contents.

COOPERATION.--Gage readings and capacity table furnished by Salmon River Canal Co.

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

10.0	13,800	30.0	48,800
15.0	21,500	40.0	69,800
20.0	30,000	44.0	79,000

CONTENTS IN ACRE-FEET, AT 0800, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17,900	20,200	21,800	24,000	30,000	-	41,000	51,600	75,100	75,000	51,900	29,000
2	18,000	20,300	21,900	24,000	30,200	-	-	51,900	75,500	74,700	51,100	-
3	18,200	20,300	22,000	24,100	-	-	41,500	52,200	75,800	74,700	50,500	-
4	18,200	20,300	22,000	24,100	30,300	-	-	52,400	75,800	74,200	49,800	29,000
5	18,200	20,400	22,000	24,200	30,500	35,300	-	52,900	75,900	73,900	48,800	-
6	18,300	20,400	22,100	24,200	-	-	42,100	53,600	76,100	73,100	48,300	-
7	18,300	20,500	22,100	24,200	-	35,800	-	54,600	76,200	72,600	47,700	-
8	18,300	20,500	22,100	24,200	31,000	-	42,700	55,300	76,200	71,800	46,800	29,100
9	18,400	20,700	22,200	24,200	-	-	-	56,700	76,300	71,100	46,100	-
10	18,500	20,700	22,300	24,300	31,400	-	43,800	58,200	76,400	70,200	45,500	-
11	18,600	20,800	22,400	24,400	31,600	36,600	43,900	59,100	76,600	69,400	44,700	-
12	18,700	20,800	22,500	24,500	-	-	-	60,500	76,800	68,700	43,900	-
13	18,700	20,900	22,600	24,500	-	-	45,500	62,000	76,900	67,800	43,100	-
14	18,800	20,900	22,700	24,600	32,300	37,200	46,000	62,400	77,100	66,800	42,400	29,100
15	18,800	21,000	22,800	24,700	-	-	46,500	63,200	77,300	65,600	41,600	-
16	18,800	21,100	22,900	24,900	32,600	-	47,200	63,600	77,600	65,100	41,000	-
17	18,800	21,200	22,900	25,100	-	-	-	63,900	77,900	64,300	40,200	-
18	18,900	21,200	22,900	25,200	-	37,900	47,900	64,300	78,000	63,400	39,300	29,200
19	19,200	21,300	23,000	25,400	33,300	-	-	64,700	78,200	62,600	38,500	29,200
20	19,300	21,300	23,100	25,700	-	-	48,500	65,300	78,400	61,500	37,800	-
21	19,200	21,400	23,200	25,900	33,600	38,500	-	65,900	78,200	61,000	36,900	-
22	19,300	21,400	23,300	26,400	-	-	-	67,000	78,400	59,800	36,200	29,300
23	19,400	21,400	23,400	27,100	-	-	49,400	67,700	78,500	58,800	35,500	29,300
24	19,500	21,500	23,500	27,900	34,000	38,800	-	68,900	78,400	57,900	34,600	29,300
25	19,600	21,600	23,600	28,300	-	-	49,900	70,000	78,000	56,700	33,600	29,000
26	19,700	21,600	23,800	28,600	-	39,600	-	71,100	77,600	56,000	33,000	28,600
27	19,800	21,700	23,800	29,000	-	-	50,500	71,700	77,100	55,400	31,800	28,300
28	19,900	21,700	23,800	29,200	34,600	40,200	-	72,300	76,500	54,600	31,200	28,100
29	19,900	21,700	23,900	29,500	-----	-	51,300	73,200	75,900	54,000	30,500	27,800
30	20,000	21,800	23,900	29,700	-----	40,700	51,600	74,100	75,600	53,300	29,700	27,700
31	20,200	-----	23,900	29,800	-----	40,900	-----	74,700	-----	52,500	29,000	-----
MAX	20,200	21,800	23,900	29,800	34,600	40,900	51,600	74,700	78,500	75,000	51,900	-
MIN	17,900	20,200	21,800	24,000	30,000	-	41,000	51,600	75,100	52,500	29,000	27,700
(†)	14.18	15.15	16.43	19.90	22.55	25.97	31.40	42.10	42.50	31.85	19.40	18.63
(‡)	+2,300	+1,600	+2,100	+5,900	+4,800	+6,300	+10,700	+23,100	+900	-23,100	-23,500	-1,300

CAL YR 1969 MAX 71,200 MIN 13,500 (‡) +10,500
WTR YR 1970 MAX 78,500 MIN 17,900 (‡) +9,800

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

SALMON FALLS CREEK BASIN

13108150 Salmon Falls Creek near Hagerman, Idaho

LOCATION.--Lat 42°41'47", long 114°51'15", in SW¼SE¼SE¼ sec.30, T.8 S., R.14 E., Gooding County, on left bank 25 ft upstream from U.S. Highway 30, at mile 1.9, and 8.5 miles south of Hagerman.

DRAINAGE AREA.--2,120 sq mi, approximately.

PERIOD OF RECORD.--April to September 1970.

GAGE.--Water-stage recorder. Altitude of gage is 2,900 ft (from topographic map).

EXTREMES.--Maximum discharge during period, 254 cfs June 17 (gage height, 5.10 ft); minimum, 32 cfs July 15 (gage height, 3.07 ft).

REMARKS.--Records excellent. Flow completely regulated by Salmon River Canal Co. reservoir 44 miles upstream (see sta 13106500). Entire available supply is diverted above the dam for irrigation. Flow below the dam is derived from leakage past the dam and return flow from adjacent land. Several diversions by pumping from the left bank below the dam are used for irrigation of land most of which lies outside the basin.

Discharge measurements made prior to beginning of continuous discharge record

Date	Discharge (cfs)	Date	Discharge (cfs)
Nov. 5, 1968....	206	Feb. 27, 1970....	159
Apr. 14, 1969....	166	Apr. 2.....	140
Sept. 15.....	172		

NOTE.--Discharge measurements made prior to 1968 are listed in "Miscellaneous Streamflow Measurements in Idaho, 1894-1967", p. 147.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

3.1	36	4.0	121
3.5	70	4.8	216

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							-	150	105	133	97	160
2							-	144	90	111	105	154
3							-	143	87	89	98	167
4							-	150	82	84	92	167
5							-	138	86	85	92	185
6							172	147	75	81	92	208
7							182	192	78	71	89	203
8							205	183	108	82	83	196
9							197	172	130	70	86	185
10							190	200	167	64	90	180
11							188	211	169	53	85	175
12							185	195	170	59	78	176
13							184	195	196	61	81	182
14							183	195	215	52	84	186
15							180	178	212	52	74	178
16							178	177	192	49	72	184
17							177	156	203	55	74	198
18							180	147	174	48	70	203
19							192	144	155	41	83	205
20							199	139	146	54	83	220
21							195	148	98	67	78	224
22							186	148	82	68	82	223
23							167	139	81	71	89	215
24							163	151	72	75	101	213
25							159	148	54	68	111	216
26							191	119	58	77	96	208
27							228	100	70	97	99	202
28							205	109	98	104	102	201
29							196	99	125	105	110	207
30							155	89	135	120	112	207
31								101		113	167	
TOTAL							-	4,707	3,713	2,359	2,855	5,828
MEAN							-	152	124	76.1	92.1	194
MAX							-	211	215	133	167	224
MIN							-	89	54	41	70	154
AC-FT							-	9,340	7,360	4,680	5,660	11,560

13108500 Camas Creek at Eighteenmile Shearing Corral, near Kilgore, Idaho

LOCATION.--Lat 44°17'50", long 111°54'20", in NW¼ sec.7, T.11 N., R.39 E., Clark County, on right bank at old bridge immediately downstream from Eighteenmile Shearing Corral, 7 miles south of Kilgore, and 18.5 miles northeast of Dubois.

DRAINAGE AREA.--210 sq mi, approximately.

PERIOD OF RECORD.--May 1937 to October 1953 (no winter records prior to 1947), April 1969 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,260 ft (by barometer). Prior to Sept. 23, 1938, at datum 1.21 ft higher.

EXTREMES.--Current year: Maximum discharge, 1,010 cfs May 18 (gage height, 5.10 ft); minimum, 15 cfs Aug. 27 (gage height, 1.20 ft).

Period of record: Maximum discharge, 2,590 cfs May 8, 1969 (gage height, 7.04 ft); no flow for short periods in February 1949.

REMARKS.--Records good. Diversions above and below station for irrigation and stock water.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	40	48	34	26	22	33	32	47	348	177	50	28
2	44	46	38	26	22	33	32	88	304	157	46	29
3	48	44	38	26	22	33	32	130	306	126	39	27
4	48	49	35	25	22	33	35	181	335	108	37	26
5	47	51	32	25	23	33	50	214	356	102	37	30
6	45	54	30	24	23	34	55	235	348	100	48	36
7	46	61	28	22	24	34	60	296	330	97	55	36
8	46	50	28	23	25	34	62	312	345	94	46	35
9	46	47	28	24	26	34	64	430	424	86	41	35
10	47	49	28	24	29	33	66	507	672	84	37	37
11	44	53	28	24	32	32	64	389	621	92	38	37
12	40	54	28	24	33	32	63	356	470	108	36	36
13	38	51	28	24	33	32	62	392	412	91	34	40
14	40	51	28	24	33	32	60	260	507	89	32	45
15	42	48	28	24	33	32	54	304	611	82	30	44
16	46	45	28	24	33	32	45	479	564	74	26	40
17	48	40	28	24	33	32	45	686	504	71	22	39
18	50	35	28	24	33	32	45	747	389	68	19	37
19	49	32	29	24	33	32	47	758	335	65	19	37
20	46	33	29	24	33	32	48	711	292	62	21	49
21	46	33	29	24	33	32	45	658	254	59	23	57
22	46	33	29	24	33	32	45	672	229	61	21	51
23	47	33	29	24	33	32	45	581	207	70	18	48
24	47	33	29	23	33	32	47	740	199	65	17	46
25	46	33	29	23	33	32	52	607	173	57	17	42
26	46	33	29	23	33	32	56	594	142	55	16	40
27	39	33	27	22	33	32	51	628	129	51	16	40
28	40	33	26	22	33	32	48	631	140	53	18	39
29	44	33	26	22	-----	32	46	538	148	61	22	35
30	41	33	26	22	-----	32	46	451	148	57	22	33
31	42	-----	26	22	-----	32	-----	424	-----	53	24	-----
TOTAL	1,384	1,271	906	736	831	1,006	1,502	14,046	10,242	2,575	927	1,154
MEAN	44.6	42.4	29.2	23.7	29.7	32.5	50.1	453	341	83.1	29.9	38.5
MAX	50	61	38	26	33	34	66	758	672	177	55	57
MIN	38	32	26	22	22	32	32	47	129	51	16	26
AC-FT	2,750	2,520	1,800	1,460	1,650	2,000	2,980	27,860	20,320	5,110	1,840	2,290
CAL YR 1969	TOTAL	—	MEAN	—	MAX	—	MIN	—	ACFT	—		
WAT YR 1970	TOTAL	36,580	MEAN	100	MAX	758	MIN	16	ACFT	72,560		

MUD LAKE-LOST RIVER BASINS

13112000 Camas Creek at Camas, Idaho

LOCATION.--Lat 44°00'10", long 112°13'12", in SE¼SE¼ sec.21, T.8 N., R.36 E., Jefferson County, on left bank 150 ft upstream from county road bridge, 250 ft upstream from Union Pacific Railroad bridge at Camas, and about 1.1 miles upstream from Beaver Creek.

DRAINAGE AREA.--400 sq mi, approximately. Mean altitude, 6,450 ft.

PERIOD OF RECORD.--April 1925 to October 1970 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 4,806.84 ft above mean sea level (unadjusted). Prior to Aug. 21, 1925, nonrecording gage at site 0.1 mile downstream at different datum. Aug. 21, 1925, to Mar. 25, 1927, nonrecording gage and Mar. 26, 1927, to Sept. 14, 1938, water-stage recorder at site 250 ft upstream at datum 2.01 ft higher.

AVERAGE DISCHARGE.--44 years (1926-70), 32.6 cfs (23,620 acre-ft per year); 15-year base period (1952-67), 37.5 cfs.

EXTREMES.--Current year: Maximum discharge, 708 cfs May 19 (gage height, 5.67 ft); minimum discharge, 6.2 cfs Aug. 26.

Period of record: Maximum discharge, 1,220 cfs May 2 or 3, 1952 (gage height, 6.53 ft); from rating curve extended above 510 cfs; no flow at times in many years.

REMARKS.--Records good except those for winter period, which are fair. Diversions above and below station for irrigation and stock water and 5,880 acre-ft diverted into flood channel about 25 miles upstream May 18-28. Records of chemical analyses for the 1970 water year are published in Part 2 of this report.

COOPERATION.--Water-stage recorder inspected by employees of Water District 31 (formerly Water District 66).

REVISIONS (WATER YEARS).--WSP 813: 1935. WSP 1123: 1947. WSP 1567: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 17 to Apr. 9)

1.8	6.2	3.0	121
2.0	14	4.0	271
2.2	27	5.0	480
2.5	56	6.0	795

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	19	14	11	14	25	20	26	273	64	28	10
2	13	21	14	11	14	25	20	34	227	85	25	12
3	15	21	14	10	14	25	20	56	198	71	22	12
4	18	18	14	10	15	26	20	81	198	50	19	12
5	20	21	12	10	15	26	21	111	209	41	18	13
6	19	23	11	9.0	16	26	21	156	198	38	18	15
7	19	30	10	10	17	29	22	206	197	37	21	18
8	18	32	10	11	20	29	22	250	168	34	26	19
9	18	27	10	12	25	27	21	286	220	33	23	19
10	18	22	10	14	27	24	20	397	286	32	19	20
11	19	25	10	15	27	23	19	397	420	30	18	21
12	19	26	10	15	26	22	17	341	359	34	16	19
13	12	27	10	15	25	22	17	280	281	40	19	19
14	13	26	14	15	25	22	21	228	276	26	16	19
15	16	24	13	15	25	22	21	220	373	26	15	21
16	16	24	13	15	25	22	21	288	405	23	15	22
17	19	20	13	15	25	21	21	430	365	21	14	19
18	19	10	13	15	25	20	19	529	299	19	11	18
19	21	10	13	15	25	20	20	464	239	18	9.2	18
20	21	11	13	15	25	20	20	357	204	26	9.2	14
21	20	12	13	15	25	20	21	293	170	29	8.9	15
22	18	12	13	15	25	21	23	285	143	29	11	20
23	19	12	12	15	25	23	27	257	127	29	11	17
24	19	12	12	15	25	23	27	258	111	35	8.5	14
25	18	12	12	15	25	23	27	285	104	34	7.3	14
26	19	12	11	15	25	22	29	227	84	29	7.7	13
27	19	12	11	15	25	21	29	230	66	28	9.2	12
28	20	12	11	15	25	20	32	244	61	26	10	12
29	19	12	11	15	-----	20	27	337	55	26	8.1	11
30	21	13	11	14	-----	20	29	343	50	31	9.2	10
31	16	-----	11	14	-----	20	-----	299	-----	32	10	-----
TOTAL	553	558	369	421.0	630	709	674	8,195	6,366	1,076	462.3	478
MEAN	17.8	18.6	11.9	13.6	22.5	22.9	22.5	264	212	34.7	14.9	15.9
MAX	21	32	14	15	27	29	32	529	420	85	28	22
MIN	12	10	10	9.0	14	20	17	26	50	18	7.3	10
AC-FT	1,100	1,110	732	835	1,250	1,410	1,340	16,250	12,630	2,130	917	948

CAL YR 1969 TOTAL 32,327.7 MEAN 88.6 MAX 784 MIN 2.0 ACFT 64,120
WAT YR 1970 TOTAL 20,491.3 MEAN 56.1 MAX 529 MIN 7.3 ACFT 40,640

MUD LAKE-LOST RIVER BASIN

147

13113000 Beaver Creek at Spencer, Idaho

LOCATION.--Lat 44°21'20", long 112°10'45", in NW¼SE¼ (revised) sec.23, T.12 N., R.36 E., Clark County, on left bank 62 ft upstream from State Highway 22, 0.4 mile southeast of Spencer Post Office, and 2.5 miles upstream from Rattlesnake Creek.

DRAINAGE AREA.--120 sq mi, approximately.

PERIOD OF RECORD.--October 1940 to November 1952, October 1968 to current year (no winter records 1942-52).

GAGE.--Water-stage recorder. Altitude of gage is 5,850 ft (by barometer). October 1940 to November 1952 non-recording gage.

EXTREMES.--Current year: Maximum discharge, 546 cfs May 7 (gage height, 6.89 ft); minimum, 8.8 cfs Aug. 26.
Period of record: Maximum discharge, 642 cfs Apr. 24, 1969 (gage height, 7.63 ft); minimum observed, 0.5 cfs Jan. 26, 1942, Feb. 22, 1944.

REMARKS.--Records good except those for winter period, which are fair. Diversions for irrigation above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Oct. 12-16, 30, Nov. 3, 9, Nov. 17 to Apr. 7,
Apr. 11-13, 15-18, 21, 22)

Oct. 1 to Apr. 5		Apr. 6 to Sept. 30	
2.3	14	2.1	6
2.5	30	2.5	38
3.0	79	3.0	86
		4.0	190
		5.0	310
		6.0	430

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	33	27	19	17	26	23	30	100	104	27	19
2	34	29	28	19	17	26	23	52	89	71	25	18
3	34	28	28	19	17	26	24	91	84	61	25	19
4	32	31	26	18	17	26	25	135	82	55	24	16
5	31	31	24	17	18	26	30	189	80	62	25	19
6	32	31	22	16	18	27	48	272	75	57	28	21
7	31	44	20	15	19	28	49	396	72	59	26	19
8	30	36	19	17	22	28	49	252	92	58	23	19
9	31	33	19	18	25	26	50	244	159	49	22	21
10	31	34	19	18	24	24	53	222	212	52	21	19
11	29	34	19	18	22	24	55	170	172	148	19	18
12	25	35	19	18	22	24	51	148	142	84	19	17
13	26	34	20	18	22	25	47	110	159	69	17	19
14	28	33	21	18	22	26	39	107	257	62	15	21
15	29	34	21	18	22	26	35	135	201	49	15	21
16	30	34	21	18	22	25	31	192	180	43	15	20
17	31	30	21	18	22	25	32	212	145	42	14	20
18	32	22	21	18	22	25	37	171	124	39	12	19
19	32	23	21	18	22	24	35	154	117	36	12	21
20	30	24	21	18	22	24	30	136	104	36	12	39
21	31	25	21	18	23	24	29	161	92	34	12	31
22	31	25	21	18	23	25	30	165	83	52	12	27
23	30	25	21	18	23	25	30	159	81	73	11	27
24	30	25	21	18	23	25	27	158	78	45	12	25
25	30	25	21	18	23	24	35	122	70	37	11	23
26	30	25	20	18	23	24	44	117	64	33	10	23
27	30	25	20	17	23	23	33	124	62	31	10	23
28	32	25	19	17	24	23	27	125	81	37	12	23
29	29	25	19	17	-----	23	27	113	70	34	11	23
30	28	25	19	17	-----	23	25	109	109	30	13	23
31	33	-----	19	17	-----	23	-----	113	-----	29	15	-----
TOTAL	942	883	658	549	599	773	1,073	4,884	3,436	1,671	525	653
MEAN	30.4	29.4	21.2	17.7	21.4	24.9	35.8	158	115	53.9	16.9	21.8
MAX	34	44	28	19	25	28	55	396	257	148	28	39
MIN	25	22	19	15	17	23	23	30	62	29	10	16
AC-FT	1,870	1,750	1,310	1,090	1,190	1,530	2,130	9,690	6,820	3,310	1,040	1,300

CAL YR 1969 TOTAL 31,731 MEAN 86.9 MAX 554 MIN 12 ACFT 62,940
WAT YR 1970 TOTAL 16,646 MEAN 45.6 MAX 396 MIN 10 ACFT 33,020

MUD LAKE-LOST RIVER BASIN

13113500 Beaver Creek at Dubois, Idaho

LOCATION.--Lat 44°11'10", long 112°14'08", in NW¼NW¼ sec.21, T.10 N., R.36 E., Clark County, on left bank 0.7 mile north of Dubois.

DRAINAGE AREA.--220 sq mi, approximately. Mean altitude, 6,760 ft.

PERIOD OF RECORD.--April 1921 to current year (no winter records 1925-28, 1930).

GAGE.--Water-stage recorder. Datum of gage is 5,158.87 ft above mean sea level. Prior to May 8, 1927, non-recording gage at site 175 ft downstream at datum 1.16 ft lower. May 8, 1927, to Sept. 15, 1957, at same site at datum 0.92 ft higher.

AVERAGE DISCHARGE.--44 years (1921-24, 1928-29, 1930-70), 19.8 cfs (14,350 acre-ft per year); 15-year base period (1952-67), 18.5 cfs.

EXTREMES.--Current year: Maximum discharge, 525 cfs May 7 (gage height, 5.09 ft); minimum discharge, 5.4 cfs Aug. 26.

Period of record: Maximum discharge, 858 cfs Apr. 7, 1930; maximum gage height, 6.39 ft Apr. 24, 1969; no flow for long periods in most years.

REMARKS.--Records good except those for winter period, which are poor. Diversions for irrigation above station.

COOPERATION.--Water-stage recorder inspected occasionally by Watermaster of Water District 31.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-11, May 6-9; stage-discharge relation affected by ice Oct. 12-16, Nov. 16 to Apr. 9)

0.8	5.7	3.0	196
1.0	13	4.0	340
1.5	42	5.0	495
2.0	83		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	31	22	18	16	15	16	36	104	88	22	13
2	25	30	23	18	16	15	17	50	98	70	20	14
3	27	28	23	18	16	15	17	79	96	55	20	13
4	25	30	21	17	16	15	18	113	93	52	18	14
5	25	30	20	16	16	15	19	170	88	56	18	13
6	25	30	18	14	17	15	30	247	84	55	20	16
7	25	36	17	15	18	17	42	384	81	54	20	16
8	25	37	17	16	18	17	41	239	84	52	17	14
9	25	31	17	17	17	17	41	200	143	45	16	15
10	25	33	17	17	17	16	47	191	197	43	15	15
11	24	33	17	17	16	15	54	140	178	102	15	14
12	18	33	17	17	16	15	44	129	129	80	14	13
13	20	33	17	17	16	15	37	90	144	55	13	14
14	22	32	22	17	16	15	38	80	223	57	12	14
15	25	32	21	17	16	16	30	99	282	41	11	14
16	28	30	21	17	16	20	28	145	230	33	10	15
17	31	26	21	17	16	19	28	170	140	35	9.9	15
18	31	17	21	17	16	17	31	142	130	34	9.1	14
19	31	18	21	17	16	16	36	124	115	31	8.1	14
20	30	19	21	17	16	16	34	113	94	31	8.1	22
21	30	20	21	17	16	17	31	130	84	30	8.8	26
22	30	20	21	17	16	18	33	172	75	32	8.1	22
23	30	20	21	17	16	20	34	151	70	60	7.4	20
24	30	20	21	17	16	20	36	170	66	41	7.4	18
25	30	20	21	17	16	19	37	132	62	31	7.4	18
26	30	20	20	16	16	18	47	128	56	27	6.4	18
27	30	20	19	16	16	17	39	143	55	26	6.4	18
28	30	20	18	16	16	17	36	153	70	27	7.4	17
29	30	20	18	16	-----	16	33	137	64	30	7.4	17
30	28	20	18	16	-----	16	34	124	90	25	7.4	16
31	31	-----	18	16	-----	16	-----	129	-----	23	9.9	-----
TOTAL	839	789	610	517	455	515	1,008	4,510	3,425	1,421	380.2	482
MEAN	27.1	26.3	19.7	16.7	16.3	16.6	33.6	145	114	45.8	12.3	16.1
MAX	31	37	23	18	18	20	54	384	282	102	22	26
MIN	18	17	17	14	16	15	16	36	55	23	6.4	13
AC-FT	1,660	1,560	1,210	1,030	902	1,020	2,000	8,950	6,790	2,820	754	956

CAL YR 1969 TOTAL 35,403.7 MEAN 97.0 MAX 680 MIN 4.0 ACFT 70,220
WAT YR 1970 TOTAL 14,951.2 MEAN 41.0 MAX 384 MIN 6.4 ACFT 29,660

MUD LAKE-LOST RIVER BASINS

149

13114000 Beaver Creek at Camas, Idaho

LOCATION.--Lat 44°00'27", long 112°13'25", in NW¼SW¼ sec.21, T.8 N., R.36 E., Jefferson County, on right bank 0.1 mile west of railroad crossing at Camas and about 1.4 miles upstream from mouth.

DRAINAGE AREA.--510 sq mi, approximately. Mean altitude, 6,190 ft.

PERIOD OF RECORD.--April 1921 to October 1970 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 4,790 ft (by barometer). Prior to Dec. 22, 1949, nonrecording gages at nearby sites at present datum.

AVERAGE DISCHARGE.--49 years, 6.00 cfs (4,350 acre-ft per year); 15-year base period (1952-67), 7.02 cfs.

EXTREMES.--Current year: Maximum discharge, 193 cfs May 7 (gage height, 3.73 ft); no flow for long periods.
Period of record: Maximum discharge, 229 cfs Apr. 21, 1962, May 11, 1969; maximum gage height, 4.03 ft May 11, 1969; no flow for long periods in each year; no flow for entire water years 1929, 1931-37, 1940, 1963.

REMARKS.--Records excellent. Flow affected by irrigation diversions above Dubois, 14 miles above station, and by heavy channel losses below Dubois.

COOPERATION.--Occasional inspections of recorder by Watermaster of Water District 31.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 16, 17)

1.2	0	2.0	22
1.3	.5	2.5	57
1.5	3.5	3.0	106
1.7	8.0	4.0	225

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.10	12			0	.20	0	3.2	70	63	.40	
2	1.0	12			0	.10	0	6.0	55	40	.02	
3	4.5	8.4			0	.10	0	3.7	45	24	0	
4	6.8	8.7			0	.30	0	53	38	17	0	
5	6.5	11			0	0	0	75	39	16	0	
6	5.8	12			0	0	0	119	39	21	0	
7	5.8	15			.20	0	1.5	169	38	20	0	
8	4.7	23			.40	0	8.0	176	40	20	0	
9	4.7	20			.60	0	6.8	133	70	16	0	
10	5.3	17			.40	0	11	132	112	12	0	
11	5.8	18			.30	0	20	100	118	29	0	
12	2.6	18			.20	0	20	87	84	58	0	
13	.20	19			0	0	14	63	91	29	0	
14	3.0	18			0	0	14	51	118	30	0	
15	4.3	17			0	.60	7.0	52	148	19	0	
16	10	15			.30	3.2	3.8	74	100	11	0	
17	10	11			.20	1.4	4.5	96	95	8.0	0	
18	11	5.0			.10	0	3.9	86	73	6.8	0	
19	10	3.5			0	0	5.8	70	66	3.7	0	
20	10	2.7			.20	0	8.7	64	59	2.8	0	
21	8.7	2.3			.30	0	6.5	65	51	2.8	0	
22	8.7	2.0			.20	0	3.5	98	43	2.0	0	
23	8.4	1.4			.10	1.3	4.9	85	39	14	0	
24	7.5	1.0			.10	1.8	5.8	104	37	20	0	
25	7.8	.70			.10	.10	7.2	80	30	7.8	0	
26	9.0	0			.10	.80	11	72	24	3.7	0	
27	9.4	0			.10	.10	12	80	19	2.2	0	
28	9.8	0			.10	0	8.0	92	28	1.7	0	
29	11	0			-----	0	5.1	90	33	3.2	0	
30	9.0	0			-----	0	3.4	79	37	2.6	0	
31	9.0	-----			-----	0	-----	81	-----	.80	0	-----
TOTAL	210.40	273.70	0	0	4.00	10.00	196.4	2,538.9	1,839	507.10	.42	0
MEAN	6.79	9.12	0	0	.14	.32	6.55	81.9	61.3	16.4	.014	0
MAX	11	23	0	0	.60	3.2	20	176	148	63	.40	0
MIN	.10	0	0	0	0	0	0	3.2	19	.80	0	0
AC-FT	417	543	0	0	7.9	20	390	5,040	3,650	1,010	.8	0

CAL YR 1969 TOTAL 16,703.10 MEAN 45.8 MAX 225 MIN 0 ACFT 33,130
WAT YR 1970 TOTAL 5,579.92 MEAN 15.3 MAX 176 MIN 0 ACFT 11,070

MUD LAKE-LOST RIVER BASINS

13115000 Mud Lake near Terretton, Idaho

LOCATION.--Lat 43°53'30", long 112°21'30", in NE¼SE¼ sec.32, T.7 N., R.35 E., Jefferson County, 670 ft north of mouth of Camas Creek, 4.4 miles northeast of First Owsley pumphouse, and 5.5 miles northeast of Terretton.

DRAINAGE AREA.--1,130 sq mi, approximately, not including Medicine Lodge Creek.

PERIOD OF RECORD.--April 1921 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,774.99 ft above mean sea level, unadjusted. Prior to Oct. 31, 1931, nonrecording gages at or near pumphouse (now used as a supplementary gage) at same datum. Oct. 31, 1931, to Sept. 30, 1954, water-stage recorder at site 2.7 miles southwest and 2 miles north of First Owsley pumphouse at same datum.

EXTREMES.--Current year: Maximum contents, 38,100 acre-ft May 16; maximum gage height, 8.12 ft May 12 (affected by wind); minimum contents, 12,400 acre-ft Oct. 25 (gage height, 3.20 ft).
Period of record: Maximum contents observed, 61,660 acre-ft May 5, 1923 (gage height, 9.20 ft); practically no contents Oct. 1 to Nov. 15, 1937, due to bypassing Camas Creek (see Remarks).

REMARKS.--Mud Lake is a perched body of water confined by earth dikes and fed by ground water and surface tributaries augmented by well flows and surface inflow from North Lake. Water for irrigation is diverted from lake by pumping. During low-lake stages, inflow from Camas Creek may be bypassed through Camas Creek diversion canal directly to lake outlet channel leading to First Owsley pumping plant. Bypass was not used during 1970. Other irrigation diversions are made by various means from adjacent lakes and wells and Camas Creek above lake. Area of Mud Lake is varied from time to time by changes in dikes. Figures given herein represent contents above gage height -4.0 ft. Capacity table prepared from surveys made by Geological Survey and adjusted for changes in dikes. High winds are frequent, and stage at recorder during wind does not usually represent the mean for the lake. For complete description of Mud Lake region, see WSP 818. Records of chemical analyses for the 1970 water year are published in Part 2 of this report.

COOPERATION.--Water-stage recorder inspected by employees of Water District 31 (formerly Water District 66).

REVISIONS.--WSP 1567: Drainage area.

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

2.3	9,130	4.0	15,800	8.0	37,900
3.0	11,600	6.0	25,700	9.0	44,700

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15,000	12,700	17,600	22,700	26,900	30,200	32,500	34,800	34,500	24,000	18,500	13,400
2	14,800	12,800	17,700	22,800	27,000	30,200	32,600	34,800	34,400	23,900	17,900	13,500
3	14,600	12,900	17,900	22,900	27,200	30,100	32,600	34,800	33,900	24,000	17,300	13,800
4	14,300	13,000	18,100	22,900	27,300	30,200	32,600	35,000	33,300	24,100	16,800	14,000
5	14,200	13,100	18,200	22,900	27,300	30,300	32,800	35,100	32,800	24,300	16,300	14,300
6	14,200	13,300	18,400	22,900	27,400	30,400	32,800	35,500	32,200	24,400	15,800	14,600
7	14,100	13,900	18,600	22,900	27,500	30,500	32,800	35,700	31,600	24,500	15,500	14,800
8	13,900	14,000	18,700	22,900	27,600	30,700	32,800	36,000	30,800	24,500	15,100	14,900
9	13,500	14,200	19,000	22,900	27,700	30,700	32,900	36,400	30,200	24,600	14,700	15,100
10	13,300	14,300	19,100	22,900	27,800	30,800	32,800	36,700	29,500	24,700	14,400	15,300
11	13,100	14,500	19,300	23,000	28,000	31,100	33,100	37,000	28,900	24,700	14,200	15,300
12	13,000	14,600	19,400	23,000	28,100	31,200	33,100	37,300	28,500	24,700	14,000	15,500
13	13,100	14,800	19,600	23,300	28,200	31,300	33,100	37,500	28,600	24,500	13,700	15,800
14	13,100	14,900	19,700	23,800	28,400	31,500	33,400	37,800	28,800	24,500	13,400	15,900
15	13,100	15,100	19,900	24,100	28,500	31,600	33,400	38,000	28,800	24,400	13,200	16,100
16	13,100	15,200	20,000	24,400	28,600	31,800	33,500	38,000	28,700	24,300	13,000	16,300
17	13,000	15,400	20,200	25,100	28,700	31,800	33,600	37,900	28,600	24,200	12,900	16,500
18	12,900	15,500	20,300	24,900	28,800	31,900	33,700	37,500	28,500	23,900	12,700	16,600
19	13,000	15,700	20,500	25,100	28,900	32,000	33,800	37,000	28,400	23,700	12,700	16,900
20	12,900	15,800	20,700	25,400	29,000	32,100	33,800	36,500	28,200	23,500	12,600	17,000
21	12,900	16,000	20,900	25,700	29,100	32,200	33,900	36,200	28,000	22,900	12,500	17,400
22	12,800	16,200	21,100	25,800	29,200	32,300	33,900	35,800	27,700	22,500	12,500	17,600
23	12,700	16,300	21,200	25,900	29,400	32,300	34,100	35,500	27,300	22,200	12,500	17,500
24	12,700	16,500	21,400	26,000	29,500	32,400	34,100	35,100	26,800	21,800	12,500	17,500
25	12,500	16,700	21,500	26,100	29,500	32,400	33,900	35,000	26,300	21,300	12,600	17,400
26	12,600	16,800	21,700	26,100	29,700	32,300	34,100	34,800	25,700	20,800	12,700	17,300
27	12,600	17,000	21,900	26,300	29,800	32,400	34,200	34,600	25,400	20,400	12,800	17,200
28	12,600	17,200	22,100	26,400	29,900	32,400	34,500	34,500	25,100	20,100	12,900	17,100
29	12,600	17,300	22,300	26,500	-----	32,400	34,500	34,400	24,800	19,900	13,000	16,900
30	12,700	17,400	22,400	26,600	-----	32,400	34,600	34,300	24,200	19,500	13,100	16,800
31	12,700	-----	22,500	26,700	-----	32,400	-----	34,400	-----	19,000	13,300	-----
MAX	15,000	17,400	22,500	26,700	29,900	32,400	34,600	38,000	34,500	24,700	18,500	17,600
MIN	12,500	12,700	17,600	22,700	26,900	30,100	32,500	34,300	24,200	19,000	12,500	13,400
(+)	3.26	4.35	5.40	6.17	6.72	7.14	7.48	7.45	5.71	4.69	3.41	4.21
(-)	-2,400	+4,700	+5,100	+4,200	+3,200	+2,500	+2,200	-200	-10,200	-5,200	-5,700	+3,500
CAL YR 1969	MAX 31,800	MIN 12,500	±	+6,900								
WAT YR 1970	MAX 38,000	MIN 12,500	±	+1,700								

† Gage height, in feet, at end of month.

± Change in contents, in acre-feet.

MUD LAKE-LOST RIVER BASINS

151

13117020 Birch Creek at Blue Dome Inn, near Reno, Idaho

LOCATION.--Lat 44°09'14", long 112°54'24", in sec.32, T.10 N., R.30 E., Clark County, on right bank on upstream side of highway bridge, 0.2 mile downstream from Blue Dome Inn, 9 miles southeast of former Reno Post Office, and 34 miles west of Dubois.

DRAINAGE AREA.--380 sq mi, approximately.

PERIOD OF RECORD.--June 1967 to current year (no winter records).

Gage.--Water-stage recorder. Altitude of gage is 6,050 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 111 cfs Oct. 12 (gage height, 1.28 ft); minimum, 97 cfs May 17 (gage height, 0.95 ft).

Period of record: Maximum discharge, 149 cfs July 30, 1969 (gage height, 1.56 ft); minimum, 53 cfs June 29, 30, July 1-5, 1968 (gage height, 0.88 ft).

REMARKS.--Records excellent. Small diversions above station for stock ranches and hay meadows.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

0.9	57
1.0	69
1.1	83
1.2	98

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	69							-	68	60	73	65
2	76							-	65	63	73	65
3	80							-	59	65	72	64
4	79							-	60	63	71	63
5	79							82	63	63	79	65
6	79							83	63	64	83	65
7	79							83	64	65	79	65
8	79							83	68	65	78	65
9	79							83	71	64	75	67
10	79							84	67	68	75	65
11	79							84	65	72	75	65
12	82							83	67	72	73	65
13	80							83	71	72	73	67
14	-							83	69	69	73	68
15	-							82	67	69	72	68
16	-							80	69	71	65	69
17	-							72	68	71	65	69
18	-							69	67	71	65	69
19	-							69	64	69	64	69
20	-							69	63	69	65	69
21	-							72	62	72	67	71
22	-							69	62	78	67	69
23	-							73	62	76	65	69
24	-							71	62	75	65	69
25	-							69	60	75	65	69
26	-							68	60	76	63	69
27	-							72	62	76	63	69
28	-							72	59	78	63	68
29	-							69	58	76	63	67
30	-							69	60	75	63	64
31	-	-----					-----	69	-----	73	65	-----
TOTAL	-							-	1,925	2,175	2,157	2,011
MEAN	-							-	64.2	70.2	69.6	67.0
MAX	-							-	71	78	83	71
MIN	-							-	58	60	63	63
AC-FT	-							-	3,820	4,310	4,280	3,990

13117030 Birch Creek at Eight-Mile Canyon Road near Reno, Idaho

LOCATION.--Lat 44°04'49", long 112°52'30", in sec.28, T.9 N., R.30 E., Clark County, 300 ft downstream from Eight-Mile Canyon road crossing, 5.5 miles downstream from Blue Dome Inn, 14 miles southeast of Reno.

DRAINAGE AREA.--400 sq mi, approximately.

PERIOD OF RECORD.--June 1967 to current year (no winter records).

GAGE.--Water-stage recorder. Altitude of gage is 5,770 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 91 cfs July 22 (gage height, 1.50 ft); minimum, 37 cfs Oct. 12; minimum gage height, 1.22 ft June 3.

Period of record: Maximum discharge, 108 cfs July 31, 1969 (gage height, 1.62 ft); minimum, 11 cfs July 5, 1967 (gage height, 0.97 ft).

REMARKS.--Records good. Diversions above station for stock ranches and hay meadows. Records of chemical analyses for the 1970 water year are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.25	32
1.3	38
1.4	50
1.5	70

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48							-	42	46	60	49
2	52							-	41	48	60	49
3	56							-	40	48	58	49
4	56							-	41	48	56	49
5	56							58	42	48	58	50
6	56							60	43	50	66	49
7	56							60	44	52	60	49
8	56							60	47	50	58	49
9	56							58	50	50	58	49
10	56							60	48	54	58	48
11	56							60	47	56	56	48
12	56							58	48	56	56	48
13	60							58	50	58	56	49
14	-							56	50	56	56	49
15	-							52	48	54	54	49
16	-							52	49	54	49	50
17	-							47	49	54	49	50
18	-							44	48	54	48	49
19	-							42	47	54	48	49
20	-							42	47	56	48	49
21	-							44	46	56	47	50
22	-							44	44	64	47	49
23	-							46	43	58	48	48
24	-							44	43	60	48	47
25	-							43	42	60	47	48
26	-							42	42	60	46	48
27	-							42	43	60	47	47
28	-							44	43	64	47	46
29	-				-----			42	44	64	47	44
30	-				-----			42	44	62	47	43
31	-	-----			-----		-----	42	-----	60	49	-----
TOTAL	-							-	1,355	1,714	1,632	1,450
MEAN	-							-	45.2	55.3	52.6	48.3
MAX	-							-	50	64	66	50
MIN	-							-	40	46	46	43
AC-FT	-							-	2,690	3,400	3,240	2,880

MUD LAKE-LOST RIVER BASINS

153

13117300 Sawmill Creek near Goldburg, Idaho

LOCATION.--Lat 44°18'40", long 113°20'20", in NE¼SE¼ sec.3, T.11 N., R.26 E., Lemhi County, on left bank 25 ft downstream from bridge, 0.4 mile upstream from Warm Creek, 2 miles southeast of Fairview guard station, and 16 miles east of Goldburg.

DRAINAGE AREA.--74.3 sq mi.

PERIOD OF RECORD.--July 1960 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,600 ft (from topographic map).

AVERAGE DISCHARGE.--10 years, 48.5 cfs (8.86 inches per year, 35,140 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 417 cfs May 27 (gage height, 3.52 ft); minimum daily discharge, 12 cfs Mar. 15 (gage height, 1.85 ft).
Period of record: Maximum discharge, 651 cfs June 12, 1965 (gage height, 4.45 ft); minimum, 3.9 cfs Apr. 2, 1967 (gage height, 1.68 ft).

REMARKS.--Records good except those for winter periods, which are poor. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 4 to Aug. 7, Sept. 8-30; stage-discharge relation affected by ice Oct. 17, 19, 29, 30, Nov. 2-4, Nov. 16 to Dec. 17, Dec. 22-28, Jan. 17-20, 25-28, Feb. 11, 13-15, 17, Mar. 12, 14, 16, 17, Apr. 15-23)

1.8	10	2.6	100
2.0	25	3.0	188
2.3	57	3.5	386

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	21	17	15	17	18	15	19	169	103	40	29
2	23	19	18	15	17	18	17	25	210	95	39	27
3	23	19	18	14	17	17	16	35	278	92	37	24
4	23	19	17	14	17	17	16	43	338	88	36	24
5	22	20	17	13	17	17	17	52	382	85	43	25
6	23	20	16	13	17	16	19	61	377	84	47	26
7	23	23	16	13	17	16	18	67	346	82	38	25
8	23	22	16	14	17	18	17	65	360	78	37	29
9	23	20	16	15	17	18	18	67	355	75	35	28
10	23	20	16	15	18	17	19	66	312	84	35	26
11	22	21	16	15	18	17	17	58	253	82	34	25
12	21	21	16	15	18	15	16	54	227	72	31	25
13	21	21	17	16	17	13	16	48	198	67	27	26
14	22	21	17	16	16	12	18	46	201	63	27	27
15	23	21	17	16	16	12	16	54	201	61	27	26
16	23	20	17	16	16	13	15	78	198	60	28	25
17	23	19	16	16	16	13	16	120	188	60	27	25
18	20	18	16	16	15	13	17	210	185	56	27	25
19	20	18	16	16	15	15	18	217	188	54	25	27
20	20	18	16	16	16	16	19	217	194	55	25	24
21	21	18	16	16	16	16	17	231	198	58	26	28
22	21	18	16	16	16	15	18	242	188	62	25	28
23	21	17	15	16	17	15	18	265	174	56	24	27
24	21	17	15	16	18	16	19	253	164	52	24	26
25	20	17	15	16	18	14	19	282	150	50	24	24
26	19	17	15	16	18	16	19	351	140	48	24	25
27	20	17	15	16	18	16	17	346	138	48	27	25
28	20	17	15	16	18	17	17	295	134	51	28	24
29	19	16	15	17	-----	17	17	224	132	51	25	23
30	19	17	15	17	-----	16	18	201	114	44	24	23
31	20	-----	15	17	-----	14	-----	169	-----	42	27	-----
TOTAL	663	572	498	478	473	483	519	4,461	6,692	2,058	943	771
MEAN	21.4	19.1	16.1	15.4	16.9	15.6	17.3	144	223	66.4	30.4	25.7
MAX	23	23	18	17	18	18	19	351	382	103	47	29
MIN	19	16	15	13	15	12	15	19	114	42	24	23
CFSM	.29	.26	.22	.21	.23	.21	.23	1.94	3.00	.89	.41	.35
IN.	.33	.29	.25	.24	.24	.24	.26	2.23	3.35	1.03	.47	.39
AC-FT	1,320	1,130	988	948	938	958	1,030	8,850	13,270	4,080	1,870	1,530

CAL YR 1969 TOTAL 16,518 MEAN 45.3 MAX 308 MIN 14 CFSM .61 IN 8.27 ACFT 32,760
WAT YR 1970 TOTAL 18,611 MEAN 51.0 MAX 382 MIN 12 CFSM .69 IN 9.32 ACFT 36,910

PEAK DISCHARGE (BASE, 130 CFS).--May 27 (0130) 417 cfs (3.52 ft); June 5 (0430) 395 cfs (3.42 ft).

MUD LAKE-LOST RIVER BASINS

13118700 Little Lost River below Wet Creek, near Howe, Idaho

LOCATION.--Lat 44°08'19", long 113°14'39", in NW¼SE¼ sec.4, T.9 N., R.27 E., Butte County, on right bank at Clyde School, 0.6 mile downstream from Wet Creek, and 27 miles northwest of Howe.

DRAINAGE AREA.--440 sq mi, approximately.

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

GAGE.--Water-stage recorder. Altitude of gage is 5,880 ft (from topographic map).

AVERAGE DISCHARGE.--12 years, 62.6 cfs (45,350 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 356 cfs June 9 (gage height, 3.39 ft); minimum, 21 cfs Feb. 20 (gage height, 1.95 ft), but may have been less during period of no gage-height record.

Period of record: Maximum daily discharge, 475 cfs June 12, 1965, but may have been more during period of doubtful gage-height record in 1958; maximum gage height recorded, 4.75 ft Jan. 12, 1968 (ice jam); minimum discharge recorded, 2.8 cfs Dec. 13, 1962.

REMARKS.--Records good except those for December to January, which are fair. A few small diversions above station for irrigation.

Rating table (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used July 3 to Aug. 18; stage-discharge relation affected by ice
Nov. 17-20, 25, 27, 28, Dec. 3, 5-8, 11, Dec. 25 to Jan. 3, Jan. 29-31)

1.9	18	2.7	118
2.0	24	3.0	197
2.2	39	3.4	351
2.4	62		

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	66	26	26	30	34	39	50	182	171	108	70
2	62	64	26	26	29	34	47	52	207	163	103	67
3	64	62	27	25	29	34	43	53	247	158	101	64
4	64	64	27	24	29	33	43	61	286	152	95	64
5	62	66	27	23	29	33	49	72	298	152	92	67
6	62	66	26	23	29	33	56	80	281	150	90	70
7	64	70	25	22	29	32	58	92	286	150	90	67
8	64	66	24	23	28	38	52	93	320	147	90	67
9	66	56	24	24	28	37	53	93	333	140	90	69
10	66	56	24	25	30	35	58	97	302	145	86	67
11	64	58	24	25	30	32	57	88	261	171	84	66
12	54	58	24	24	30	34	47	88	247	158	84	64
13	50	57	24	25	30	36	47	82	233	147	78	69
14	48	57	25	26	31	36	52	75	223	145	75	69
15	52	57	25	26	31	37	43	75	216	137	75	67
16	49	62	26	26	31	37	41	86	207	130	75	70
17	53	39	26	26	32	34	44	112	197	125	74	70
18	53	34	27	27	31	32	47	158	194	118	74	67
19	52	29	28	27	30	33	50	182	203	114	72	70
20	52	27	28	28	32	39	45	177	223	110	72	77
21	54	27	29	28	32	41	50	182	229	108	72	74
22	61	28	30	28	32	40	50	182	226	112	70	74
23	62	26	30	29	34	39	52	213	233	120	69	72
24	66	25	27	29	35	46	52	200	236	120	69	72
25	67	26	26	29	35	40	52	191	223	114	69	70
26	66	26	26	28	34	44	54	223	213	106	66	70
27	67	26	26	29	34	44	53	236	203	103	66	67
28	67	29	26	28	35	46	53	229	213	103	69	67
29	62	24	26	28	-----	46	50	216	200	106	67	66
30	61	25	26	29	-----	44	50	213	188	108	66	66
31	67	-----	26	29	-----	38	-----	197	-----	110	66	-----
TOTAL	1,863	1,376	811	815	869	1,161	1,487	4,148	7,110	4,093	2,457	2,059
MEAN	60.1	45.9	26.2	26.3	31.0	37.5	49.6	134	237	132	79.3	68.6
MAX	67	70	30	29	35	46	58	236	333	171	108	77
MIN	48	24	24	22	28	32	39	50	182	103	66	64
AC-FT	3,700	2,730	1,610	1,620	1,720	2,300	2,950	8,230	14,100	8,120	4,870	4,080
CAL YR 1969	TOTAL 31,504	MEAN 86.3	MAX 320	MIN 24	ACFT 62,490							
WAT YR 1970	TOTAL 28,249	MEAN 77.4	MAX 333	MIN 22	ACFT 56,030							

13119000 Little Lost River near Howe, Idaho

LOCATION.--Lat 43°53'10", long 113°06'00", in SW¼SE¼ sec.34, T.7 N., R.28 E., Butte County, on left bank 0.2 mile upstream from diversion dam of Blaine County Investment Co. and 7 miles northwest of Howe.

DRAINAGE AREA.--703 sq mi. Mean altitude, 7,370 ft.

PERIOD OF RECORD.--April 1921 to current year (no winter records prior to October 1940). Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Altitude of gage is 5,020 ft (by barometer). Prior to Sept. 2, 1938, nonrecording gage at site 120 ft downstream at datum 1.39 ft higher.

AVERAGE DISCHARGE.--30 years (1940-70), 72.2 cfs (52,310 acre-ft per year); 15-year base period (1952-67), 69.0 cfs.

EXTREMES.--Current year: Maximum discharge, 238 cfs June 15 (gage height, 3.66 ft); maximum recorded gage height, 4.83 ft (ice jam) Jan. 6; minimum discharge, 36 cfs Dec. 8, 11, but may have been less during period of no gage-height record; minimum gage height, 2.27 ft Dec. 11.
Period of record: Maximum discharge, about 450 cfs Aug. 11, 1936, during cloudburst (gage height, 5.4 ft, present site and datum), from rating curve extended above 220 cfs; maximum gage height observed, 6.63 ft Jan. 23, 1957 (backwater from ice); minimum discharge observed, 4.1 cfs Dec. 12, 1940.

REMARKS.--Records good except those for January, which are fair. Records of chemical analysis for the water year 1970 are published in Part 2 of this report.

REVISIONS.--WSP 1637: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-20; stage-discharge relation affected by ice Nov. 18-29,
Dec. 3, 5, 6, 8, 11, 25, 26, Dec. 28 to Jan. 6)

2.2	34	3.0	134
2.5	68	3.8	246

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	87	96	48	44	52	78	78	81	212	207	122	103
2	88	96	48	44	52	78	82	88	217	201	119	99
3	92	95	48	43	54	77	82	88	225	194	118	96
4	90	96	48	41	54	75	82	92	228	190	115	95
5	83	98	45	39	54	74	83	103	231	189	116	96
6	95	96	44	38	54	75	77	110	231	184	133	98
7	96	102	42	36	56	74	83	116	231	187	119	98
8	92	103	42	37	56	79	81	122	233	184	112	96
9	95	92	42	39	56	79	79	122	233	175	111	96
10	96	91	42	41	58	75	79	126	231	176	111	94
11	98	92	42	40	62	73	82	130	231	200	108	92
12	92	91	44	39	63	77	78	126	231	189	107	82
13	86	91	44	40	65	78	79	127	233	177	107	83
14	87	91	45	41	67	78	91	119	235	173	106	83
15	91	90	44	42	68	79	90	112	235	165	107	83
16	91	90	44	42	69	79	86	116	235	158	107	83
17	90	77	46	42	72	78	86	134	232	155	104	87
18	88	60	48	42	72	77	87	161	231	149	102	90
19	87	58	50	42	69	78	90	183	232	144	100	85
20	85	54	52	43	68	81	88	193	233	141	102	94
21	87	54	56	45	73	82	86	198	232	135	100	92
22	91	54	60	46	73	82	83	201	232	154	98	94
23	95	50	63	47	74	82	82	204	229	162	96	92
24	99	48	58	48	74	82	81	211	231	142	96	91
25	99	46	48	50	75	81	81	211	229	135	98	91
26	98	45	48	50	74	82	81	219	221	130	96	90
27	96	45	46	49	75	81	81	225	218	127	98	85
28	98	45	46	49	75	83	81	231	226	142	104	85
29	92	44	45	50	-----	83	79	226	224	147	98	83
30	92	46	44	51	-----	85	82	222	217	138	98	82
31	96	-----	44	51	-----	78	-----	221	-----	129	99	-----
TOTAL	2,852	2,236	1,466	1,351	1,814	2,443	2,480	4,818	6,859	5,079	3,307	2,718
MEAN	92.0	74.5	47.3	43.6	64.8	78.8	82.7	155	229	164	107	90.6
MAX	99	103	63	51	75	85	91	231	235	207	133	103
MIN	83	44	42	36	52	73	77	81	212	127	96	82
AC-FT	5,660	4,440	2,910	2,680	3,600	4,850	4,920	9,560	13,600	10,070	6,560	5,390
CAL YR 1969	TOTAL 38,142		MEAN 104	MAX 304	MIN 39	ACFT 75,650						
WAT YR 1970	TOTAL 37,423		MEAN 103	MAX 235	MIN 36	ACFT 74,230						

13119500 Blaine County Investment Co.'s canal near Howe, Idaho

LOCATION.--Lat 43°52'50", long 113°05'40", in NE¼NE¼ sec.3, T.6 N., R.28 E., Butte County, on left end of weir, 900 ft downstream from headgates, and 8 miles northwest of Howe.

PERIOD OF RECORD.--April 1924 to current year (prior to 1938, irrigation seasons only).

GAGE.--Nonrecording gage and sharp-crested weir. Altitude of gage is 5,020 ft (from nearby barometric determination). Prior to June 26, 1927, at site 700 ft upstream at different datum. June 26, 1927, to May 6, 1945, at site 180 ft upstream at present datum.

EXTREMES.--Period of record: Maximum daily discharge, 146 cfs April 26, 1966; no flow for long periods in each year.

REMARKS.--Records good. Canal diverts from Little Lost River in NE¼NE¼ sec.3, T.6 N., R.28 E., for irrigation of lands in project of Blaine County Investment Co.

COOPERATION.--Gage readings furnished by Water District 33 (formerly Water District 9).

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	32					0	45	114	109	30	11
2	12	32					0	39	114	104	24	11
3	11	32					0	36	114	102	21	11
4	11	33					0	34	114	100	21	11
5	11	34					0	30	114	95	21	11
6	9.7	34					0	28	114	96	20	11
7	9.2	37					0	24	115	93	20	11
8	9.2	45					0	30	115	88	20	11
9	9.2	46					0	31	115	88	20	11
10	9.2	46					0	28	115	82	20	11
11	11	46					0	28	116	83	20	11
12	13	46					0	30	118	86	20	11
13	12	46					17	32	120	79	20	11
14	12	46					36	24	120	74	18	11
15	12	46					34	26	120	77	17	11
16	12	25					37	24	120	76	17	11
17	12	0					38	27	120	65	17	11
18	11	0					38	39	120	59	17	11
19	11	0					37	54	120	53	17	11
20	11	0					37	77	118	46	13	11
21	11	0					37	96	116	45	11	11
22	11	0					37	103	116	44	11	16
23	14	0					37	105	118	48	11	20
24	19	0					37	110	120	44	11	20
25	21	0					37	109	120	37	10	22
26	23	0					37	110	120	35	9.7	23
27	26	0					41	113	118	35	10	23
28	26	0					46	116	116	35	11	23
29	27	0					45	116	117	35	11	20
30	31	0					45	114	117	35	11	17
31	32	-----					-----	114	-----	35	11	-----
TOTAL	464.5	626	0	0	0	0	673	1,892	3,514	2,083	510.7	415
MEAN	15.0	20.9	0	0	0	0	22.4	61.0	117	67.2	16.5	13.8
MAX	32	46	0	0	0	0	46	116	120	109	30	23
MIN	9.2	0	0	0	0	0	0	24	114	35	9.7	11
AC-FT	921	1,240	0	0	0	0	1,330	3,750	6,970	4,130	1,010	823

CAL YR 1969 TOTAL 8,758.5 MEAN 24.0 MAX 122 MIN 0 ACFT 17,370
WAT YR 1970 TOTAL 10,178.2 MEAN 27.9 MAX 120 MIN 0 ACFT 20,190

13120000 North Fork Big Lost River at Wild Horse, near Chilly, Idaho

LOCATION.--Lat 43°55'59", long 114°06'47", in NE¼SE¼ sec.17, T.7 N., R.20 E., Custer County, in Lemhi National Forest, on right bank 0.2 mile upstream from East Fork, 2 miles downstream from Wild Horse damsite, and 16 miles southwest of Chilly.

DRAINAGE AREA.--114 sq mi. Mean altitude, 8,540 ft.

PERIOD OF RECORD.--March 1944 to current year. Prior to October 1967, published as Big Lost River at Wild Horse, near Chilly.

GAGE.--Water-stage recorder. Altitude of gage is 6,820 ft (from topographic map).

AVERAGE DISCHARGE.--26 years, 104 cfs (12.39 inches per year, 75,350 acre-ft per year); 15-year base period (1952-67), 102 cfs.

EXTREMES.--Current year: Maximum discharge, 885 cfs June 9 (gage height, 4.88 ft); minimum, 12 cfs Feb. 22 (gage height, 1.16 ft).

Period of record: Maximum discharge, 1,420 cfs June 12, 1965 (gage height, 6.39 ft); minimum, 6.5 cfs Mar. 15, 1962 (gage height, 1.05 ft).

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Dec. 25 to Jan. 12, Jan. 26 to Feb. 3, Mar. 2-12)

1.2	14	3.0	232
1.5	29	4.0	537
2.0	68	5.0	917
2.5	132		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	47	36	24	20	21	24	21	31	356	321	99	60
2	48	35	23	21	21	22	22	45	440	304	95	56
3	48	35	23	21	21	21	22	66	564	320	92	52
4	48	35	23	20	22	20	22	87	683	337	88	50
5	46	35	23	20	23	20	23	122	675	329	96	60
6	46	35	21	20	23	21	29	166	616	320	99	58
7	45	36	23	21	23	23	33	187	665	303	89	55
8	46	34	20	21	21	21	31	162	754	275	85	53
9	47	33	21	22	21	19	36	176	808	257	81	52
10	45	33	22	23	22	17	45	185	635	302	78	51
11	44	33	21	23	23	18	42	149	493	341	74	50
12	42	33	23	23	24	21	35	133	432	284	71	49
13	39	32	24	25	23	23	32	113	391	268	69	52
14	39	33	24	25	23	22	33	98	373	234	68	52
15	39	32	24	25	23	22	30	100	367	211	65	50
16	40	32	22	25	23	22	28	157	356	199	63	49
17	40	25	24	25	23	22	29	314	362	202	61	48
18	40	26	25	24	21	22	29	470	367	189	60	46
19	39	28	25	24	21	21	31	495	401	177	59	49
20	38	27	25	24	22	22	29	482	466	169	58	53
21	38	28	28	24	22	23	29	452	572	177	57	50
22	39	27	28	24	22	22	30	406	617	190	57	49
23	38	24	27	25	23	22	30	459	571	158	56	48
24	37	26	22	25	23	22	30	463	594	140	55	47
25	37	25	21	24	22	22	31	538	591	133	54	46
26	36	24	22	23	22	23	32	650	546	128	53	46
27	36	22	23	23	23	21	30	668	629	123	55	45
28	37	22	22	22	24	23	30	522	643	131	55	44
29	35	23	22	19	-----	22	29	448	472	121	53	43
30	35	24	22	20	-----	22	29	395	388	113	52	43
31	36	-----	21	20	-----	21	-----	344	-----	106	55	-----
TOTAL	1,270	893	718	701	625	666	902	9,083	15,827	6,862	2,152	1,506
MEAN	41.0	29.8	23.2	22.6	22.3	21.5	30.1	293	528	221	69.4	50.2
MAX	48	36	28	25	24	24	45	668	808	341	99	60
MIN	35	22	20	19	21	17	21	31	356	106	52	43
CFSM	.36	.26	.20	.20	.20	.19	.26	2.57	4.63	1.94	.61	.44
IN.	.41	.29	.23	.23	.20	.22	.29	2.96	5.16	2.24	.70	.49
AC-FT	2,520	1,770	1,420	1,390	1,240	1,320	1,790	18,020	31,390	13,610	4,270	2,990
CAL YR 1969	TOTAL 52,707		MEAN 144		MAX 926		MIN 20		CFSM 1.27	IN 17.19	AC-FT 104,500	
WTR YR 1970	TOTAL 41,205		MEAN 113		MAX 808		MIN 17		CFSM .99	IN 13.44	AC-FT 81,730	

PEAK DISCHARGE (BASE, 300 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-27	0200	4.49	730	6-27	2400	4.86	865
6- 9	0900	4.88	885				

13120500 Big Lost River at Howell Ranch, near Chilly, Idaho

LOCATION.--Lat 43°59'54", long 114°01'12", in NE¼NW¼ sec.30, T.8 N., R.21 E., Custer County, on left bank at Howell Ranch, 2.1 miles downstream from Burnt Creek, 7.7 miles downstream from East Fork, 9 miles southwest of Chilly, and 21 miles northwest of Mackay.

DRAINAGE AREA.--450 sq mi. Mean altitude, 8,590 ft.

PERIOD OF RECORD.--April 1904 to November 1914, May 1920 to current year (no winter records 1904, 1906-14, 1920-48).

GAGE.--Water-stage recorder. Datum of gage is 6,621.95 ft above mean sea level. Nonrecording gage prior to Apr. 20, 1906, at site 1.2 miles downstream at different datum, Apr. 20, 1906, to June 6, 1912, at site 100 ft downstream at different datum, June 7, 1912, to Nov. 14, 1914, at present site at datum 2.07 ft lower, and May 11 to June 16, 1920, at present site and datum.

AVERAGE DISCHARGE.--23 years (1904-5, 1948-70), 319 cfs (9.63 inches per year, 231,100 acre-ft per year); 15-year base period (1952-67), 311 cfs.

EXTREMES.--Current year: Maximum discharge, 3,240 cfs June 28 (gage height, 5.03 ft); minimum daily, 78 cfs Dec. 8, Jan. 6, Mar. 19.

Period of record: Maximum discharge, 4,420 cfs May 25, 1967 (gage height, 6.02 ft); minimum observed, 19 cfs Dec. 12, 1939 (discharge measurement).

REMARKS.--Records good except those for winter periods, which are poor. No regulation. Several small diversions above station. Hammerly ditch (capacity, about 20 cfs) diverts 0.2 mile downstream.

REVISIONS (WATER YEARS).--WSP 1287: Drainage area. WSP 1317: 1905.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 16-27, Mar. 11-13)

1.1	67	3.0	934
1.5	158	4.0	1,900
2.0	326	4.6	2,630
2.5	583		

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	142	127	88	84	90	120	80	97	1,070	990	306	208
2	148	122	85	82	92	115	85	132	1,400	974	298	195
3	153	122	83	82	94	110	85	198	1,840	1,080	282	178
4	155	122	82	80	98	105	85	272	2,220	1,140	268	166
5	150	122	82	80	107	100	88	374	2,150	1,110	286	180
6	150	125	82	78	108	106	102	489	1,910	1,080	322	183
7	150	132	87	80	108	112	120	553	2,100	1,210	282	175
8	150	125	78	82	105	104	115	501	2,250	990	272	169
9	158	120	83	84	105	92	135	512	2,590	887	257	172
10	153	120	90	88	110	84	160	512	2,020	1,150	243	164
11	148	130	88	88	115	86	140	388	1,510	1,300	234	161
12	137	127	96	88	120	88	115	356	1,280	1,010	227	155
13	135	120	100	92	118	88	105	318	1,170	911	217	164
14	132	122	100	92	118	88	110	290	1,140	797	208	166
15	135	118	102	92	118	88	100	294	1,070	712	202	161
16	135	118	95	92	118	86	90	402	1,020	672	192	155
17	130	92	105	92	118	86	92	740	1,070	666	189	153
18	130	96	110	90	110	86	93	1,190	1,190	627	183	145
19	127	103	110	90	110	78	97	1,410	1,360	571	180	153
20	125	98	110	90	115	82	91	1,400	1,650	541	180	178
21	130	103	125	90	115	87	86	1,280	2,080	553	178	166
22	130	98	120	90	115	82	89	1,130	2,200	621	178	161
23	127	88	115	97	118	82	89	1,280	2,150	529	178	155
24	130	96	98	94	118	82	93	1,290	2,270	452	178	153
25	130	92	94	94	112	80	97	1,550	2,230	416	175	148
26	125	88	92	92	112	85	104	1,980	2,020	402	172	145
27	127	82	92	90	116	84	95	2,120	2,350	392	172	142
28	130	82	92	88	120	85	93	1,670	2,400	397	178	140
29	122	84	90	84	-----	86	91	1,380	1,630	378	175	140
30	120	87	88	90	-----	83	93	1,180	1,250	356	172	137
31	125	-----	86	90	-----	80	-----	1,020	-----	326	178	-----
TOTAL	4,239	3,261	2,948	2,725	3,103	2,820	3,018	26,308	52,590	23,240	6,762	4,868
MEAN	137	109	95.1	87.9	111	91.0	101	849	1,753	750	218	162
MAX	158	132	125	97	120	120	160	2,120	2,590	1,300	322	208
MIN	120	82	78	78	90	78	80	97	1,020	326	172	137
CFSM	.30	.24	.21	.20	.25	.20	.22	1.89	3.90	1.67	.48	.36
IN.	.35	.27	.24	.23	.26	.23	.25	2.17	4.35	1.92	.56	.40
AC-FT	8,410	6,470	5,850	5,410	6,150	5,590	5,990	52,180	104,300	46,100	13,410	9,660

CAL YR 1969	TOTAL	173,044	MEAN	474	MAX	2,970	MIN	78	CFSM	1.05	IN	14.30	ACFT	343,200
WAT YR 1970	TOTAL	135,882	MEAN	372	MAX	2,590	MIN	78	CFSM	.83	IN	11.23	ACFT	269,500

PEAK DISCHARGE (BASE, 900 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-27	0430	4.32	2,270	6-28	0100	5.03	3,240
6-9	0900	4.69	2,760	7-10	2330	3.92	1,810

NOTE.--No gage-height record Nov. 28 to Mar. 10, Mar. 14 to Apr. 17.

13126000 Mackay Reservoir near Mackay, Idaho

LOCATION.--Lat 43°57'05", long 113°40'28", in NW¼NE¼SW¼ sec.12, T.7 N., R.23 E., Custer County, on gate-control tower of dam on Big Lost River, 4 miles northwest of Mackay.

DRAINAGE AREA.--788 sq mi.

PERIOD OF RECORD.--January 1919 to current year.

GAGE.--Water-stage recorder. Datum of gage is 6,000 ft above mean sea level, Utah Construction Co. datum, or 6,000.4 ft above mean sea level. Prior to Oct. 15, 1959, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 45,400 acre-ft June 28 (gage height, 67.25 ft); minimum, 2,020 acre-ft Oct. 1 (gage height, 15.29 ft).

Period of record: Maximum contents, 45,580 acre-ft June 15, 1963 (gage height, 67.38 ft); no available contents during periods in 1919-20, 1924, 1926, 1929, 1931-35; minimum gage height observed, 6.3 ft Aug. 5, 1934.

REMARKS.--Reservoir is formed by earth- and rock-fill dam, which was reconstructed in 1917-18; storage impounded by original dam not recorded. Crest of spillway was raised 5 ft in September 1956. Capacity is 44,370 acre-ft between gage heights 7.0 and 66.5 ft (crest of spillway). Dead storage reported to be about 125 acre-ft. Water is used for irrigation of about 33,000 acres in Big Lost River irrigation district. About 12,700 acres irrigated from Big Lost River and tributaries above reservoir by surface diversions, and about 10,200 acres irrigated by subirrigation. Considerable seepage around dam because of its porous foundation, but the greater part of this water returns to Big Lost River between reservoir and station below reservoir, near Mackay. Prior to Oct. 1, 1959, contents below 1,000 acre-ft may be in error at times as readings at gage were too low because of fall in outlet channel. Figures given herein represent usable contents.

COOPERATION.--Capacity table furnished by Water District 34 (formerly Water District 27).

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

15.4	2,060	40.0	15,800
20.0	3,740	60.0	35,900
30.0	8,730	67.3	45,500

CONTENTS IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,060	11,300	20,600	26,700	31,200	34,500	37,300	40,000	40,000	44,700	35,000	14,900
2	2,110	11,700	20,800	26,800	31,300	34,600	37,400	40,100	39,900	44,500	34,100	14,800
3	2,170	12,100	21,000	27,000	31,800	34,700	37,500	40,100	40,300	44,400	33,200	14,700
4	2,250	12,500	21,300	27,100	31,600	34,800	37,600	40,100	41,100	44,400	32,200	14,700
5	2,330	12,800	21,500	27,300	31,700	34,900	37,700	40,200	42,100	44,300	31,300	14,600
6	2,420	13,200	21,700	27,400	31,800	35,000	37,700	40,100	42,700	44,300	30,400	14,700
7	2,580	13,600	21,900	27,600	31,900	35,100	37,800	40,100	43,400	44,300	29,400	14,600
8	2,790	13,900	22,100	27,800	32,000	35,200	37,900	40,200	44,200	44,300	28,700	14,600
9	3,010	14,300	22,300	27,900	32,200	35,300	38,000	40,300	45,000	44,000	27,800	14,600
10	3,280	14,700	22,600	28,100	32,300	35,400	38,100	40,400	45,200	44,000	27,000	14,600
11	3,530	15,000	22,800	28,200	32,400	35,500	38,200	40,400	44,000	44,500	26,200	14,600
12	3,770	15,400	23,000	28,400	32,500	35,600	38,200	40,500	44,400	44,400	25,400	14,600
13	4,030	15,700	23,100	28,300	32,600	35,700	38,300	40,400	44,400	44,100	24,600	14,600
14	4,300	16,000	23,300	28,700	32,700	35,800	38,500	40,200	44,400	43,800	23,700	14,600
15	4,610	16,400	23,500	28,800	32,900	35,900	38,600	39,900	44,300	43,600	23,400	14,700
16	4,990	16,700	23,800	28,900	33,000	36,000	38,600	39,500	44,100	43,500	22,500	14,700
17	5,400	17,000	23,900	29,100	33,100	36,100	38,800	39,000	44,000	43,400	21,700	14,800
18	5,820	17,300	24,100	29,200	33,200	36,100	38,800	38,600	44,100	43,100	20,500	14,800
19	6,220	17,600	24,300	29,400	33,300	36,200	39,000	38,200	44,300	42,900	19,900	14,900
20	6,600	17,800	24,500	29,400	33,400	36,300	39,100	38,000	44,500	42,600	19,200	14,900
21	7,000	18,100	24,700	29,700	33,500	36,400	39,200	37,900	45,000	42,000	18,600	15,000
22	7,400	18,400	24,800	29,800	33,600	36,500	39,200	37,800	45,200	41,600	18,000	15,000
23	7,780	18,700	25,000	30,000	33,700	36,600	39,300	37,800	45,200	41,000	17,500	15,100
24	8,170	18,900	25,200	30,100	33,800	36,700	39,400	37,900	45,200	40,500	17,000	15,100
25	8,560	19,200	25,400	30,300	33,900	36,700	39,500	37,900	45,200	39,900	16,600	15,100
26	8,950	19,500	25,600	30,400	34,100	36,800	39,600	38,600	45,000	39,300	16,200	15,100
27	9,350	19,700	25,900	30,600	34,200	36,900	39,700	39,600	45,100	38,700	15,900	15,200
28	9,770	19,900	26,000	30,700	34,300	37,000	39,800	40,200	45,400	38,200	15,600	15,200
29	10,200	20,100	26,200	30,800	-----	37,100	39,800	40,400	45,100	37,600	15,400	15,300
30	10,600	20,400	26,400	30,900	-----	37,200	39,900	40,400	44,800	36,800	15,200	15,300
31	11,000	-----	26,500	31,100	-----	37,300	-----	40,200	-----	35,900	15,000	-----
MAX	11,000	20,400	26,500	31,100	34,300	37,300	39,900	40,500	45,400	44,700	35,000	15,300
MIN	2,060	11,300	20,600	26,700	31,200	34,500	37,300	37,800	39,900	35,900	15,000	14,600
(†)	33.48	45.49	51.77	55.94	58.70	61.10	63.18	63.40	66.84	60.02	39.04	39.44
(‡)	+8,980	+9,400	+6,100	+4,600	+3,200	+3,000	+2,600	+300	+4,600	-8,900	-20,900	+300

CAL YR 1969 MAX 44,300 MIN - ‡ -6,800
WAT YR 1970 MAX 45,400 MIN 2,060 ‡ +13,300

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

MUD LAKE-LOST RIVER BASINS

13127000 Big Lost River below Mackay Reservoir, near Mackay, Idaho

LOCATION.--Lat 43°56'20", long 113°38'50", in SW¼NE¼ sec.18, T.7 N., R.24 E., Custer County, on left bank 1 mile downstream from head of Sharp ditch, 1.5 miles downstream from Mackay Reservoir, and 2.5 miles north-west of Mackay.

DRAINAGE AREA.--813 sq mi.

PERIOD OF RECORD.--December 1903 to August 1906 and May 1912 to March 1915 (published as "near Mackay"), January 1919 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,946.39 ft above mean sea level. Nonrecording gage prior to May 12, 1912, and June 5, 1912, to Apr. 28, 1913, at sites within 1 mile upstream at different datums, May 12 to June 4, 1912, at site 1.5 miles upstream (above Sharp ditch) at different datum, Apr. 29, 1913, to Mar. 15, 1915, at site 1 mile downstream (below Streeter ditch) at different datum.

AVERAGE DISCHARGE.--54 years (1904-5, 1912-14, 1919-70), 294 cfs (213,000 acre-ft per year); 15-year base period (1952-67), 317 cfs.

EXTREMES.--Current year: Maximum discharge, 2,150 cfs June 28 (gage height, 5.24 ft); minimum, 37 cfs Oct. 20, (gage height, 1.30 ft).
Period of record: Maximum discharge, 2,990 cfs June 10, 1921 (gage height, 5.79 ft); minimum, 16 cfs Oct. 27, 1967 (gage height, 1.11 ft).

REMARKS.--Records good. Flow completely regulated by Mackay Reservoir (see sta 13-1260). Sharp ditch is only diversion between station and reservoir; about 12,700 acres of land are irrigated by diversions from river and tributaries above reservoir by surface diversions, and 10,200 acres irrigated by subirrigation. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1347: 1904-6.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 6-13)

1.2	29	3.0	568
1.5	65	4.0	1,210
2.0	163	5.0	1,910
2.5	333	5.2	2,060

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	192	50	83	105	111	120	120	129	886	1,210	800	303
2	189	51	82	106	112	120	120	129	885	1,040	789	288
3	186	53	81	106	114	118	120	131	916	994	774	263
4	181	54	81	106	117	119	120	128	976	1,010	767	243
5	178	55	82	106	118	119	120	126	1,090	1,020	782	235
6	174	56	84	106	117	120	121	161	1,190	1,010	778	232
7	135	58	84	105	116	120	121	194	1,230	1,010	746	236
8	120	58	84	105	114	121	120	197	1,360	1,020	712	239
9	110	58	86	105	114	120	121	206	1,520	1,010	708	238
10	90	59	86	104	114	120	122	213	1,780	975	726	230
11	70	60	90	104	116	120	121	213	1,730	1,030	718	219
12	62	61	94	103	116	120	121	216	1,450	1,130	690	219
13	58	61	96	102	117	121	123	251	1,180	1,130	689	208
14	54	62	98	101	118	122	123	303	1,110	1,030	700	199
15	50	63	100	102	118	122	123	359	1,100	908	698	190
16	46	64	100	104	118	123	123	401	1,060	788	666	187
17	42	69	98	104	119	122	122	453	965	712	619	186
18	42	73	96	105	118	121	123	609	918	707	589	186
19	43	73	96	104	118	121	124	760	919	677	572	188
20	41	74	98	106	118	123	126	774	1,040	659	569	188
21	38	76	99	110	118	122	125	808	1,220	761	541	188
22	39	76	99	110	119	122	125	801	1,640	796	504	188
23	39	77	99	110	119	123	126	806	1,790	801	487	188
24	40	77	99	112	119	123	129	806	1,890	779	459	188
25	41	78	100	112	119	123	128	845	1,940	760	430	188
26	42	79	103	112	119	123	128	827	1,840	742	410	188
27	44	80	103	112	120	123	127	919	1,830	720	384	188
28	46	80	104	110	120	123	127	995	2,030	750	361	188
29	48	81	105	110	-----	123	129	998	1,910	770	348	188
30	49	82	105	109	-----	120	129	963	1,550	779	337	188
31	50	-----	105	109	-----	120	-----	912	-----	800	320	-----
TOTAL	2,539	1,998	2,920	3,305	3,276	3,757	3,707	15,633	40,945	27,528	18,673	6,357
MEAN	81.9	66.6	94.2	107	117	121	124	504	1,365	888	607	212
MAX	192	82	105	112	120	123	129	998	2,030	1,210	800	303
MIN	38	50	81	101	111	118	120	126	885	659	320	186
AC-FT	5,040	3,960	5,790	6,560	6,500	7,450	7,350	31,010	81,210	54,600	37,040	12,610

CAL YR 1969 TOTAL 181,514 MEAN 497 MAX 1,530 MIN 38 AC-FT 360,000
WTR YR 1970 TOTAL 130,638 MEAN 358 MAX 2,030 MIN 38 AC-FT 259,100

NOTE.--No gage-height record Dec. 1 to Feb. 11.

13128900 Lower Cedar Creek above diversions, near Mackay, Idaho

LOCATION.--Lat 43°57'57", long 113°34'40", in NW¼SW¼ sec.2, T.7 N., R.24 E., Custer County, on right bank at abandoned powerplant site, approximately 1,000 ft upstream from the heading of Nielson diversion, and 3.9 miles northeast of Mackay.

DRAINAGE AREA.--8.26 sq mi.

PERIOD OF RECORD.--Annual maximum, water years 1963, 1964-66, published as Cedar Creek near Mackay and Cedar Creek above diversions, near Mackay, respectively, August 1966 to current year. Combination of discharge records for Clark ditch near Mackay and Cedar Creek (below powerplant) near Mackay for May 1920 to September 1922 (seasonal records only) is equivalent to this record.

GAGE.--Water-stage recorder. Altitude of gage is 6,800 ft (from topographic map). May 1, 1920, to Oct. 21, 1922, nonrecording gage at present site at different datums. Sept. 26, 1963, to Aug. 13, 1966, crest-stage gage at site 20 ft downstream at datum 9.32 ft lower.

EXTREMES.--Current year: Maximum discharge, 177 cfs June 21 (gage height, 3.06 ft); minimum, 2.0 cfs Mar. 7 (gage height, 1.30 ft).

Period of record: Maximum discharge, 297 cfs June 7, 1921 (gage height, 2.8 ft, datum then in use, Clark ditch reported dry). Minimum discharge observed, 0.4 cfs Nov. 21 to Dec. 1, 1921 (gage height, 0.18 ft, site and datum then in use).

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.3	1.6	1.8	26
1.4	3.2	2.0	42
1.5	7.0	2.4	84
1.6	12	2.8	141

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	10	7.0	6.2	3.7	5.1	3.5	3.5	3.0	42	54	30	18
2	10	7.0	6.6	3.7	5.1	3.2	3.5	3.0	72	59	30	18
3	11	7.0	6.2	3.7	5.1	3.2	3.5	5.5	93	66	28	18
4	11	7.0	6.2	3.7	4.7	3.0	3.5	12	105	73	27	17
5	10	7.0	6.2	3.5	4.7	3.0	3.5	18	105	69	29	17
6	9.7	7.0	6.2	3.5	4.7	3.0	3.5	18	100	65	35	16
7	9.7	7.0	5.8	3.5	4.7	3.0	3.5	18	108	69	33	16
8	9.7	7.0	5.8	3.7	4.7	3.0	3.5	12	103	59	31	16
9	9.7	7.0	5.8	3.7	4.7	3.0	3.5	14	96	56	29	15
10	10	7.0	5.8	3.9	4.7	3.0	3.9	14	74	70	27	14
11	9.7	7.0	5.5	3.9	3.9	3.2	3.9	11	50	97	25	14
12	9.7	7.0	5.5	4.2	3.5	3.2	3.9	8.6	41	68	24	14
13	9.2	7.0	5.5	4.2	3.5	3.2	3.5	12	37	60	23	14
14	9.2	7.0	5.5	4.6	3.5	3.2	3.5	9.2	33	55	23	14
15	8.6	7.0	5.1	4.8	3.5	3.2	3.5	6.6	30	52	22	13
16	8.6	7.0	5.1	4.9	3.5	3.2	3.5	24	29	50	22	13
17	8.1	6.6	5.1	4.9	3.5	3.2	3.5	53	37	50	22	12
18	7.5	6.6	5.1	5.1	3.5	3.2	3.5	79	46	47	21	12
19	7.0	6.2	4.7	5.1	3.5	3.0	3.9	64	64	45	20	12
20	7.0	6.2	4.7	5.1	3.5	3.0	3.9	53	90	43	20	12
21	7.0	6.2	4.7	5.1	3.2	3.2	3.9	53	129	43	20	12
22	7.0	6.2	4.7	5.1	3.2	3.2	3.5	40	114	44	20	12
23	7.0	6.2	4.7	5.1	3.2	3.2	3.5	44	117	43	19	12
24	7.0	6.2	4.7	5.1	3.2	3.2	3.5	44	111	46	19	12
25	7.0	5.8	4.3	5.1	3.2	3.2	3.2	76	130	35	19	12
26	7.0	6.2	4.3	5.1	3.2	3.2	3.2	101	128	34	18	12
27	7.0	6.2	4.3	5.1	3.2	3.2	3.2	78	141	33	18	11
28	7.0	6.2	3.9	5.1	3.2	3.2	3.0	47	129	33	18	11
29	7.0	6.2	3.9	5.1	-----	3.2	3.0	38	88	33	18	11
30	7.0	6.2	3.9	5.1	-----	3.2	3.0	30	61	33	18	11
31	7.0	-----	3.9	5.1	-----	3.5	-----	24	-----	31	18	-----
TOTAL	262.4	199.2	159.9	139.5	109.2	98.0	105.0	1,012.9	2,503	1,615	726	411
MEAN	8.46	6.64	5.16	4.50	3.90	3.16	3.50	32.7	83.4	52.1	23.4	13.7
MAX	11	7.0	6.6	5.1	5.1	3.5	3.9	101	141	97	35	18
MIN	7.0	5.8	3.9	3.5	3.2	3.0	3.0	3.0	29	31	18	11
CFSM	1.02	.80	.62	.54	.47	.38	.42	3.96	10.1	6.31	2.83	1.66
IN.	1.18	.90	.72	.63	.49	.44	.47	4.56	11.27	7.27	3.27	1.85
AC-FT	520	395	317	277	217	194	208	2,010	4,960	3,200	1,440	815
CAL YR 1969	TOTAL 6,366.5	MEAN 17.4	MAX 104	MIN 3.9	CFSM 2.11	IN 28.67	ACFT 12,630					
WAT YR 1970	TOTAL 7,341.1	MEAN 20.1	MAX 141	MIN 3.0	CFSM 2.43	IN 33.06	ACFT 14,560					

MUD LAKE-LOST RIVER BASINS

13130900 Antelope Creek above Willow Creek, near Darlington, Idaho

LOCATION.--Lat 43°40'43", long 113°37'45", in NE¼SW¼NW¼ sec.17, T.4 N., R.24 E., Custer County, at Marcroft Ranch, 0.2 mile upstream from Willow Creek, and 14 miles southwest of Darlington.

DRAINAGE AREA.--93.4 sq mi.

PERIOD OF RECORD.--May 1966 to current year. May 1913 to September 1916, May 1920 to September 1922 at site 4 miles downstream, published as "near Darlington;" records not equivalent owing to diversions and inflow.

GAGE.--Water-stage recorder. Altitude of gage is 6,240 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 400 cfs June 9 (gage height, 4.27 ft); minimum, 16 cfs Mar. 17 (gage height, 1.69 ft).

Period of record: Maximum discharge, 829 cfs May 24, 1967 (gage height, 6.86 ft); minimum, 13 cfs Feb. 19, 20, Mar. 7, 1967 (gage height, 1.88 ft).

REMARKS.--Records good. Diversions above station for irrigation of about 800 acres.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 26 to July 7, July 11 to Aug. 3; stage-discharge relation affected by ice Dec. 8, 25, 26, Dec. 28 to Jan. 8, Jan. 29, 31, Feb. 19, 20, Mar. 4-6, 11, 17, 19)

1.8	21	3.0	162
2.0	33	4.0	336
2.5	88	4.1	354

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	31	26	24	25	23	23	30	215	144	37	32
2	33	30	26	24	25	23	23	37	248	136	35	28
3	34	30	26	24	25	23	23	50	295	138	35	28
4	33	31	25	24	24	22	24	66	313	128	34	27
5	32	31	24	24	23	21	28	88	307	124	36	28
6	33	30	24	23	23	21	39	100	298	124	38	30
7	33	32	23	23	23	22	45	101	302	115	34	29
8	34	30	22	23	23	24	40	93	300	99	32	28
9	35	30	22	23	23	23	44	100	347	92	32	27
10	35	30	22	23	23	22	54	100	284	105	32	27
11	33	31	23	24	23	22	44	76	229	111	30	26
12	30	31	24	25	23	23	35	68	207	94	31	28
13	30	30	24	25	23	23	32	60	209	86	30	28
14	32	30	25	26	23	24	32	53	234	78	30	28
15	31	30	25	26	22	23	30	54	243	72	29	28
16	33	30	25	26	22	23	28	82	244	66	28	28
17	33	21	25	26	23	23	30	135	251	66	27	28
18	33	22	26	26	21	23	34	204	269	61	26	28
19	32	24	26	26	21	22	35	227	275	58	26	29
20	32	25	27	26	21	22	32	220	302	55	26	33
21	32	26	30	25	21	23	31	243	329	55	26	30
22	32	25	35	26	21	23	31	210	311	62	28	30
23	32	25	32	27	22	23	30	251	302	57	28	29
24	32	25	28	28	22	24	31	246	305	52	28	28
25	32	25	27	28	22	24	30	277	287	48	28	28
26	31	25	27	27	22	24	30	336	259	43	27	28
27	31	24	26	26	22	24	28	336	275	42	27	28
28	31	24	25	26	23	24	27	289	289	42	28	28
29	30	25	25	26	-----	24	26	248	210	41	28	28
30	30	26	25	25	-----	23	27	227	172	40	27	27
31	31	-----	24	25	-----	23	-----	205	-----	39	28	-----
TOTAL	997	829	794	780	634	711	966	4,812	8,111	2,473	931	852
MEAN	32.2	27.6	25.6	25.2	22.6	22.9	32.2	155	270	79.8	30.0	28.4
MAX	35	32	35	28	25	24	54	336	347	144	38	33
MIN	30	21	22	23	21	21	23	30	172	39	26	26
CFSM	.34	.30	.27	.27	.24	.25	.34	1.66	2.39	.85	.32	.30
IN	.40	.33	.32	.31	.25	.23	.38	1.92	3.23	.98	.37	.34
AC-FT	1,980	1,640	1,570	1,550	1,260	1,410	1,920	9,540	16,090	4,910	1,850	1,690

CAL YR 1969	TOTAL	41,427	MEAN	113	MAX	639	MIN	18	CFSM	1.21	IN	16.50	ACFT	82,170
WAT YR 1970	TOTAL	22,890	MEAN	62.7	MAX	347	MIN	21	CFSM	.67	IN	9.12	ACFT	45,400

PEAK DISCHARGE (BASE, 220 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-27	0030	4.10	361	6-21	0630	4.08	367
6-9	0930	4.27	400				

MUD LAKE-LOST RIVER BASINS

163

13132500 Big Lost River near Arco, Idaho

LOCATION.--Lat 43°35'00", long 113°16'10", in SW¼ sec.17, T.3 N., R.27 E., Butte County, on right bank 0.4 mile downstream from slough entering from left bank, and 4 miles southeast of Arco.

DRAINAGE AREA.--1,410 sq mi, approximately.

PERIOD OF RECORD.--August 1946 to September 1961, May 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,240 ft (by barometer). Prior to Oct. 14, 1952, at site 800 ft upstream at datum 3.08 ft higher.

AVERAGE DISCHARGE.--19 years, 91.0 cfs (65,930 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 738 cfs June 30 (gage height, 5.59 ft); minimum, 7.4 cfs May 19 (gage height, 2.40 ft).

Period of record: Maximum discharge, 1,890 cfs July 5, 1967 (gage height, 7.68 ft); no flow on many days.

Flood of June 29, 1965, reached a stage of 8.03 ft, from floodmarks (discharge, 2,500 cfs).

REMARKS.--Records good. Flow regulated by Mackay Reservoir (see sta 13-1260). Station is below all large diversions for irrigation in Big Lost River valley. About 57,500 acres of land irrigated by diversions from river and tributaries and by ground-water withdrawals above station. About 10,200 acres irrigated by subirrigation above Mackay Reservoir. Records of chemical analysis for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used Feb. 4-27; stage-discharge relation affected by ice Dec. 5, 6, 25, Dec. 27 to Jan. 13, Jan. 18, Jan. 29 to Feb. 3)

2.6	13	4.5	293
3.0	34	5.0	478
3.5	80	5.6	743
4.0	158		

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	130	119	120	120	120	66	70	61	710	41	80
2	147	127	119	120	125	122	62	62	36	623	41	101
3	143	127	118	115	130	116	58	58	28	523	39	100
4	150	125	118	115	134	113	57	56	25	450	38	112
5	156	124	119	113	137	110	54	54	23	426	40	127
6	156	120	120	110	136	94	53	54	21	446	47	141
7	156	130	122	110	134	92	51	52	25	482	59	156
8	143	134	125	110	132	89	49	46	36	507	54	160
9	136	134	129	113	132	89	48	45	59	507	53	169
10	136	132	127	115	132	88	50	48	119	553	48	176
11	137	124	127	112	132	88	51	54	192	618	45	169
12	134	125	130	110	130	88	54	52	296	636	47	162
13	132	122	129	110	132	86	54	42	392	664	51	162
14	139	120	129	110	130	84	57	36	418	668	58	173
15	145	120	130	108	129	84	58	30	395	614	63	169
16	158	119	129	113	129	84	59	26	422	490	58	160
17	154	116	129	116	137	84	61	18	407	362	47	152
18	150	114	132	113	132	83	63	17	380	237	47	139
19	148	113	132	114	127	83	65	16	341	165	51	134
20	141	113	134	119	129	83	69	17	303	136	40	147
21	145	120	134	122	127	81	69	31	290	106	44	152
22	150	120	134	120	125	79	67	36	313	88	43	150
23	147	119	137	119	125	78	66	28	358	101	43	145
24	145	116	136	124	124	73	65	28	466	88	99	134
25	139	118	136	124	118	70	64	32	523	81	99	132
26	137	116	137	124	113	70	65	56	565	67	62	137
27	136	116	133	125	113	69	68	53	565	59	57	137
28	134	116	129	120	112	69	76	70	540	56	55	136
29	134	118	125	118	-----	70	74	66	605	48	64	124
30	134	118	120	115	-----	69	73	71	705	43	70	110
31	134	-----	120	115	-----	65	-----	72	-----	42	68	-----
TOTAL	4,443	3,646	3,958	3,592	3,576	2,673	1,826	1,396	8,909	10,596	1,671	4,246
MEAN	143	122	128	116	128	86.2	60.9	45.0	297	342	53.9	142
MAX	158	134	137	125	137	122	76	72	705	710	99	176
MIN	132	113	118	108	112	65	48	16	21	42	38	80
AC-FT	8,810	7,230	7,850	7,120	7,090	5,300	3,620	2,770	17,670	21,020	3,310	8,420

CAL YR 1969	TOTAL	125,047	MEAN	343	MAX	1,060	MIN	77	ACFT	248,000
WAT YR 1970	TOTAL	50,532	MEAN	138	MAX	710	MIN	16	ACFT	100,200

SNAKE RIVER MAIN STEM

13135000 Snake River below Lower Salmon Falls, near Hagerman, Idaho

LOCATION.--Lat 42°50'55", long 114°54'02", in NW¼ sec.2, T.7 S., R.13 E., Gooding County, on right bank 0.5 mile downstream from Lower Salmon Falls powerplant, 1 mile upstream from Big Wood River, 2.2 miles north of Hagerman, and at mile 572.4.

PERIOD OF RECORD.--October 1937 to current year. Monthly discharge only for October 1937, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 2,727.7 ft above mean sea level (stadia levels). Prior to Jan. 3, 1950, at site 340 ft upstream.

AVERAGE DISCHARGE.--33 years, 8,554 cfs (6,197,000 acre-ft per year); 15-year base period (1952-67), 8,092 cfs.

EXTREMES.--Current year: Maximum discharge, 23,500 cfs May 11 (gage height, 13.42 ft); minimum, 1,280 cfs Feb. 25 (gage height, 3.38 ft); minimum daily, 5,290 cfs Mar. 22.

Period of record: Maximum discharge, 31,200 cfs June 24, 1964 (gage height, 15.73 ft); minimum, probably less than 100 cfs Jan. 10, 11, 1950, when river was below intake pipes; minimum daily, 3,970 cfs July 8, 1951.

REMARKS.--Records excellent. Flow regulated by American Falls Reservoir 141.6 miles upstream (see sta 13076500). Diurnal fluctuation caused by hydroelectric plants upstream. At times, practically entire flow is diverted at Milner during irrigation seasons; only minor diversions below Milner.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

6.2	5,180	10.0	13,800
6.5	5,750	12.0	19,300
7.0	6,760	13.0	22,300
8.0	8,930		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7,560	7,430	7,800	7,090	9,140	6,570	5,480	13,600	15,300	15,600	6,130	7,550
2	7,830	7,100	7,890	7,140	8,870	6,790	5,560	12,700	15,000	19,000	6,330	7,100
3	7,510	7,260	8,610	7,250	8,700	6,740	5,630	12,400	14,300	17,100	6,330	7,180
4	7,790	7,360	8,620	8,910	8,890	6,560	5,700	12,800	14,800	14,000	6,470	7,600
5	7,910	7,000	8,360	9,220	8,850	6,740	5,870	9,050	10,000	7,900	6,420	7,500
6	7,680	7,170	7,200	8,740	8,980	6,660	5,700	11,200	6,220	7,580	6,450	8,090
7	7,880	7,290	7,260	8,640	8,660	6,400	5,800	9,070	6,550	6,630	6,410	7,660
8	7,400	7,280	8,150	8,720	8,560	6,490	7,220	10,500	5,550	6,090	6,330	8,010
9	7,620	7,270	7,600	8,900	8,950	6,850	8,890	11,400	6,740	6,010	6,250	7,460
10	7,800	7,260	7,530	9,250	8,630	6,870	9,810	13,200	7,060	6,140	6,460	7,800
11	7,770	7,240	7,470	9,260	8,770	6,670	9,310	17,500	7,060	6,070	6,480	7,720
12	7,560	7,160	7,590	8,810	8,690	6,180	7,880	18,000	7,070	5,950	6,370	7,630
13	7,800	7,170	7,410	10,000	8,650	6,020	8,830	16,200	8,640	5,840	6,310	7,670
14	7,320	7,030	7,380	9,920	8,610	5,820	8,810	16,300	15,300	5,960	6,280	7,960
15	7,660	7,100	7,360	9,180	8,510	5,750	10,300	16,300	18,900	5,950	6,320	7,660
16	7,400	7,110	7,530	9,380	8,480	5,880	15,300	14,800	21,600	5,920	6,220	7,730
17	7,690	7,050	7,010	9,250	8,480	5,700	17,000	12,800	21,900	5,980	6,470	7,650
18	7,460	7,050	7,470	9,420	8,510	5,850	14,700	13,900	21,300	5,990	6,170	7,370
19	7,730	6,950	7,010	9,150	8,480	5,820	12,400	11,800	18,500	5,920	6,300	7,660
20	7,550	7,100	7,380	9,090	8,170	6,370	13,800	12,200	16,300	6,780	6,150	7,910
21	8,150	6,720	7,350	9,100	8,930	6,010	12,000	11,200	15,100	6,060	6,230	7,750
22	7,530	6,940	6,900	9,150	8,710	5,290	11,400	15,600	13,900	6,330	6,510	7,920
23	7,530	6,850	7,300	9,470	8,260	5,890	7,920	19,600	10,100	6,200	6,410	7,880
24	8,020	6,730	7,760	9,120	7,810	6,040	8,710	16,100	8,380	6,190	6,320	7,910
25	8,050	6,780	7,290	9,220	7,240	6,050	7,510	15,600	7,010	6,250	6,230	7,790
26	7,970	6,950	7,720	9,030	7,400	6,020	7,090	17,900	6,370	6,250	6,390	7,960
27	7,920	6,730	7,050	9,200	7,130	6,130	9,170	17,600	6,280	6,110	6,510	7,920
28	7,600	6,840	7,380	9,220	6,750	6,100	10,900	17,900	6,920	6,220	6,430	7,850
29	7,790	6,710	7,380	9,070	-----	5,960	13,900	16,400	8,810	6,150	6,790	7,880
30	7,450	6,670	7,210	8,680	-----	5,650	15,300	15,600	9,800	6,650	6,520	7,650
31	7,200	-----	7,420	9,240	-----	5,630	-----	14,600	-----	6,360	7,400	-----
TOTAL	238,130	211,300	233,390	277,820	235,810	191,500	287,890	443,820	350,760	235,180	198,390	231,420
MFAN	7,682	7,043	7,529	8,962	8,422	6,177	9,596	14,320	11,690	7,586	6,400	7,714
MAX	8,150	7,430	8,620	10,000	9,140	6,870	17,000	19,600	21,900	19,000	7,400	8,090
MIN	7,200	6,670	6,900	7,090	6,750	5,290	5,480	9,050	5,550	5,840	6,130	7,100
AC-FT	472,300	419,100	462,900	551,100	467,700	379,800	571,000	880,300	695,700	466,500	393,500	459,000
CAL YR 1969	TOTAL 3,382,600		MEAN 9,267		MAX 19,800		MIN 5,060		AC-FT 6,709,000			
WTR YR 1970	TOTAL 3,135,410		MEAN 8,590		MAX 21,900		MIN 5,290		AC-FT 6,219,000			

13135500 Big Wood River near Ketchum, Idaho

LOCATION.--Lat 43°47'11" long 114°25'27" in sec.4, T.5 N., R.17 E. (unsurveyed), Blaine County, in Sawtooth National Forest, on left bank 0.35 mile upstream from North Fork, 8 miles northwest of Ketchum, and at mile 105.5.

DRAINAGE AREA.--137 sq mi. Mean altitude, 8,120 ft.

PERIOD OF RECORD.--May 1948 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 6,240 ft (from topographic map). Prior to Nov. 7, 1950, non-recording gage at site 560 ft upstream at different datum.

AVERAGE DISCHARGE.--22 years, 164 cfs (16.26 inches per year, 118,800 acre-ft per year); 15-year base period (1952-67), 159 cfs.

EXTREMES.--Current year: Maximum discharge, 1,030 cfs June 9 (gage height, 4.90 ft); minimum, 13 cfs Mar. 19 (gage height, 1.91 ft).

Period of record: Maximum discharge, 1,690 cfs May 24, 1967 (gage height, 5.92 ft); maximum gage height, 7.53 ft Jan. 20, 1964 (avalanche); minimum discharge, 8.5 cfs Mar. 18, 1966 (gage height, 2.08 ft), but may have been less at time of avalanche Jan. 20, 1964.

REMARKS.--Records good. Minor diversions for nonconsumptive uses on Boulder Creek. About 97 acre-ft of storage in ponds on Prairie Creek.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 30 to Feb. 8, Feb. 20-26)

2.2	30	3.5	288
2.5	61	4.0	482
3.0	154	5.0	1,090

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	73	58	43	35	44	51	41	79	514	419	144	97
2	76	57	43	35	47	49	44	108	599	395	141	94
3	74	57	43	35	47	49	43	168	748	395	137	92
4	73	57	43	35	46	49	46	235	849	393	134	95
5	72	57	43	35	45	42	49	325	869	370	142	107
6	70	63	41	35	49	43	58	383	838	356	137	100
7	70	62	41	35	48	55	73	374	882	336	131	95
8	73	59	40	40	46	54	76	335	921	313	127	95
9	74	58	40	46	46	49	80	352	963	303	125	93
10	71	58	39	52	48	45	84	328	838	408	122	92
11	69	58	41	50	53	41	90	260	709	379	119	90
12	65	57	43	50	57	47	82	227	615	331	117	90
13	62	57	43	50	57	49	78	199	566	298	115	92
14	61	57	44	50	52	46	75	182	532	273	113	92
15	61	57	43	49	52	45	70	208	492	255	111	90
16	63	57	40	49	52	43	67	302	455	244	110	89
17	61	44	44	49	51	41	66	460	444	240	108	88
18	61	45	48	48	43	39	68	598	442	226	107	86
19	60	52	47	50	36	38	71	653	482	215	106	93
20	60	50	47	50	39	41	70	629	558	208	105	97
21	61	56	49	50	40	43	68	561	672	207	103	91
22	61	49	49	51	41	40	68	555	707	210	102	89
23	60	41	43	51	43	41	68	667	726	192	101	88
24	60	50	39	52	44	43	69	663	737	182	99	88
25	60	45	35	49	45	44	68	719	710	174	98	87
26	59	45	42	50	46	45	70	831	674	169	96	86
27	59	39	41	48	48	42	68	881	706	167	96	84
28	60	40	40	43	55	44	67	738	674	172	96	82
29	58	41	38	35	-----	44	67	624	581	163	96	81
30	58	43	37	38	-----	43	70	547	491	155	96	80
31	58	-----	36	41	-----	42	-----	500	-----	149	98	-----
TOTAL	2,003	1,569	1,305	1,386	1,320	1,387	2,014	13,691	19,994	8,297	3,532	2,723
MEAN	64.6	52.3	42.1	44.7	47.1	44.7	67.1	442	666	268	114	90.8
MAX	76	63	49	52	57	55	73	881	963	419	144	107
MIN	58	39	35	35	36	38	41	79	442	149	96	80
CFSM	.47	.38	.31	.33	.34	.33	.49	3.22	4.86	1.95	.83	.66
IN.	.54	.43	.35	.38	.36	.38	.55	3.72	5.43	2.25	.96	.74
AC-FT	3,970	3,110	2,590	2,750	2,620	2,750	3,990	27,160	39,660	16,460	7,010	5,400
CAL YR 1969	TOTAL 79,690			MEAN 218		MAX 1,290	MIN 35	CFSM 1.59	IN 21.63	AC-FT 158,100		
WTR YR 1970:	TOTAL 59,221			MEAN 162		MAX 963	MIN 35	CFSM 1.18	IN 16.08	AC-FT 117,500		

PEAK DISCHARGE (BASE, 400 CFS)

NOTE.--No gage-height record Nov. 27 to Jan. 13.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5- 5	2200	3.94	454	6-27	2300	4.61	854
5-26	2300	4.76	922	7-10	1700	4.15	594
6- 9	0800	4.90	1,030				

LOCATION.--Lat 43°31'05", long 114°19'10", in NE¼SW¼ sec.9, T.2 N., R.18 E., Blaine County, is the location of two gauging stations at Hailey, used for this combined record.

PERIOD OF RECORD.--July to December 1889, June 1915 to current year. Published as Wood River at Hailey in 1889.

Big Wood River: Water-stage recorder. Datum of gage is 5,297.23 ft above mean sea level, unadjusted. Only to December 1889 nonrecording gage at nearby site at different datum. June 11, 1915, to Nov. 15, 1915, nonrecording gages at bridge 35 ft upstream at different datum.

EXTREMES (Combined flow).--Current year: Maximum daily discharge, 2,250 cfs May 27; minimum daily, 134 cfs Feb. 20. 21. 22.

Period of record: Maximum daily discharge, 4,520 cfs May 25, 1958; minimum daily, 15 cfs Dec. 27, 1931. (River only)--Current year: Maximum discharge, 2,650 cfs June 28 (gage height, 2.90 ft); minimum, 108 cfs Dec. 25 (gage height, -0.40 ft).

Period of record: Maximum discharge, 4,790 cfs May 25, 1967 (gage height, 5.72 ft); maximum gage height, 8.66 ft, present datum, June 12, 1921; no flow Sept. 15-23, Nov. 20, 22, 23, 1931, Oct. 25, 1937.

REMARKS.--Diversions above stations for irrigation of about 12,100 acres (1950 determination) of which about 1,800 acres are below stations. Storage above stations is negligible.

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	248	232	172	138	144	203	189	314	1,290	1,230	384	245
2	261	227	172	138	144	194	206	353	1,450	1,180	354	234
3	257	226	172	138	150	181	200	469	1,720	1,220	364	231
4	254	222	173	138	150	181	208	594	1,910	1,220	354	233
5	253	219	172	138	154	166	227	754	1,950	1,160	359	263
6	251	226	164	138	155	158	269	876	1,830	1,170	374	263
7	253	234	169	138	160	182	332	888	2,050	1,140	354	249
8	256	227	168	155	159	185	332	815	2,190	1,080	325	244
9	260	222	168	172	159	179	347	831	2,160	974	313	244
10	271	217	161	194	168	165	378	864	1,910	1,180	278	238
11	286	220	173	186	179	163	392	762	1,620	1,380	297	231
12	282	217	186	180	185	179	353	720	1,420	1,120	294	232
13	272	215	188	181	186	180	336	672	1,330	1,020	287	241
14	271	212	191	184	170	181	334	625	1,390	922	277	245
15	271	211	188	184	170	184	311	616	1,260	842	280	246
16	274	213	176	191	172	184	289	708	1,160	800	278	240
17	271	183	188	184	177	180	282	961	1,150	780	274	237
18	263	165	202	183	156	169	291	1,400	1,160	750	268	236
19	251	175	197	181	139	164	305	1,490	1,240	684	264	246
20	250	183	202	185	134	174	297	1,470	1,440	648	260	279
21	250	186	211	182	134	186	293	1,410	1,790	628	252	266
22	253	188	212	190	134	179	295	1,360	1,890	618	252	263
23	252	171	210	196	137	183	293	1,560	1,920	588	249	272
24	249	175	167	220	140	193	300	1,610	2,020	557	246	274
25	246	175	135	201	145	197	303	1,760	2,000	515	239	276
26	243	172	149	194	145	205	310	1,990	1,840	484	232	274
27	245	163	149	201	145	191	299	2,250	2,010	474	232	268
28	241	154	143	168	151	205	295	1,930	2,070	474	232	261
29	239	158	142	144	-----	205	288	1,600	1,640	454	232	257
30	235	168	140	143	-----	201	299	1,430	1,430	434	229	254
31	234	-----	137	143	-----	192	-----	1,320	-----	414	233	-----
TOTAL	7,942	5,956	5,377	5,308	4,342	5,689	8,853	34,402	50,240	26,140	8,866	7,543
MAX	256	199	173	171	155	184	295	1,110	1,675	843	286	251
MIN	286	234	212	220	186	205	392	2,250	2,190	1,380	384	279
MIN	234	154	135	138	134	158	189	314	1,150	414	229	231
AC-FT	15,750	11,810	10,670	10,530	8,610	11,280	17,560	68,240	99,650	51,850	17,590	14,960

167

LOCATION.--Lat 43°19'40", long 114°20'25", in NW 1/4 sec.20, T.1 S., R.18 E., Blaine County, on right bank at downstream end of Mahoney Flat, 1.5 miles upstream from flow line of Magic Reservoir, 2.8 miles upstream from Camas Creek, 10.5 miles southwest of Bellevue, and at mile 65.7.

PERIOD OF RECORD.--July 1911 to current year (no winter records prior to October 1943 except water years 1916, 1921-22, 1940-41).

GAGE.--Water-stage recorder. Altitude of gage is 4,800 ft (from topographic map). Prior to July 8, 1921, at site 0.1 mile downstream at different datum. July 8, 1921, to Oct. 5, 1954, at site 0.2 mile upstream at different datum. Oct. 6, 1954, to Oct. 25, 1965, at site 1 mile upstream at different datum.

AVERAGE DISCHARGE.--32 years (1915-16, 1921-22, 1939-41, 1942-70), 295 cfs (213,700 acre-ft per year); 15-year base period (1952-67), 280 cfs.

EXTREMES.--Current year: Maximum discharge, 2,220 cfs June 28 (gage height, 5.02 ft); minimum daily, 65 cfs Jan. 5-8.

Period of record: Maximum discharge, 4,130 cfs May 25, 1956; maximum gage height, 6.43 ft May 12, 1958, site and datum then in use; minimum discharge recorded, 7 cfs Apr. 14, 1932 (gage height, 1.10 ft, site and datum then in use).

REMARKS.--Records good. Diversions for irrigation of about 36,400 acres (1950 determination) above station. Storage above station is negligible. Records of chemical analysis for the water year 1970 are published in Part 2 of this report.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	164	136	78	84	134	164	182	690	923	112	112
2	104	167	136	68	84	151	167	185	705	760	110	110
3	104	164	136	68	84	136	170	220	952	792	104	110
4	112	164	136	66	85	132	167	299	1,210	800	100	110
5	114	162	141	65	85	130	173	477	1,360	760	104	118
6	123	159	134	65	86	123	173	744	1,300	728	110	139
7	134	167	134	65	88	120	204	851	1,370	624	112	127
8	136	173	130	65	90	127	230	792	1,690	610	112	116
9	141	164	130	68	90	134	249	792	1,820	556	112	116
10	141	164	120	78	93	132	271	876	1,600	569	118	116
11	151	164	122	80	96	127	299	826	1,170	990	125	114
12	146	164	135	88	98	125	291	744	932	817	120	110
13	146	159	140	95	100	130	275	596	868	705	114	104
14	146	159	140	110	104	144	283	448	914	610	112	102
15	146	159	135	174	104	164	279	361	817	531	106	102
16	146	159	130	114	104	170	260	376	736	482	104	99
17	146	154	127	112	108	164	245	519	668	459	106	94
18	154	141	130	110	108	151	237	938	631	421	104	91
19	157	139	132	104	104	144	241	1,190	645	380	102	95
20	151	139	141	95	100	141	241	1,180	728	345	106	104
21	151	141	146	93	100	149	234	990	1,020	310	104	102
22	157	146	157	95	102	162	223	885	1,260	275	106	100
23	159	146	154	100	102	170	217	976	1,350	245	108	104
24	164	141	141	108	102	200	214	1,040	1,460	230	106	106
25	162	141	112	116	106	200	210	1,100	1,500	200	104	110
26	167	144	116	114	108	185	214	1,290	1,360	182	102	112
27	167	141	108	114	110	179	214	1,560	1,650	170	96	118
28	164	134	100	100	110	182	200	1,520	1,760	154	96	120
29	164	136	88	93	-----	188	191	1,170	1,360	144	100	120
30	167	136	80	83	-----	176	185	923	1,160	132	102	118
31	167	-----	78	83	-----	170	-----	760	-----	123	106	-----
TOTAL	4,489	4,591	3,945	2,807	2,735	4,740	6,721	24,810	34,686	15,027	3,323	3,299
MEAN	145	153	127	90.5	97.7	153	224	800	1,156	485	107	110
MAX	167	173	157	116	110	200	299	1,560	1,820	990	125	139
MIN	102	134	78	65	84	120	164	182	631	123	96	91
AC-FT	8,900	9,110	7,820	5,570	5,420	9,400	13,330	49,210	68,800	29,810	6,590	6,540
CAL YR 1969	TOTAL 223,740		MEAN 613	MAX 3,430	MIN 65	ACFT 443,800						
WAT YR 1970	TOTAL 111,173		MEAN 305	MAX 1,820	MIN 65	ACFT 220,500						

13141500 Camas Creek near Blaine, Idaho

LOCATION.--Lat 43°19'59", long 114°32'27", in NW¼SE¼ sec.15, T.1 S., R.16 E., Camas County, on left bank 0.2 mile north of Macon siding on Hill City branch of Union Pacific Railroad, 0.2 mile downstream from Willow Creek, 2.6 miles upstream from backwater of Magic Reservoir, 4 miles southeast of Blaine, and at mile 7.1.

DRAINAGE AREA.--648 sq mi. Mean altitude, 5,600 ft.

PERIOD OF RECORD.--May 1912 to September 1921 and April 1923 to October 1925 (fragmentary), March 1926 to September 1944 (no winter records), October 1944 to current year. Published as Malad River near Blaine 1912-14.

GAGE.--Water-stage recorder. Altitude of gage is 4,870 ft (by barometer). Prior to June 22, 1966, at site 600 ft downstream at datum 0.66 ft lower.

AVERAGE DISCHARGE.--26 years, 178 cfs (129,000 acre-ft per year); 15-year base period (1952-67), 165 cfs.

EXTREMES.--Current year: Maximum discharge, 2,410 cfs Apr. 6 (gage height, 9.47 ft); minimum, 5.0 cfs Aug. 25-31 (gage height, 3.06 ft).

Period of record: Maximum discharge recorded, 9,780 cfs Apr. 8, 1943; maximum gage height, 16.2 ft (site and datum then in use) Feb. 3, 1963, from floodmark; minimum discharge recorded, 1.2 cfs Aug. 11, 12, 1959; minimum gage height, 1.04 ft (site and datum then in use) Aug. 23, 25, 1963.

REMARKS.--Records good except those for May and July, which are fair. Flow regulated by Twin Lakes Reservoir on Lake Creek (capacity, 31,240 acre-ft) and three minor reservoirs (combined capacity, 580 acre-ft). Water diverted for irrigation of about 9,300 acres (1950 determination) above station. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

REVISIONS.--WSP 1217: Drainage area.

COOPERATION.--One discharge measurement furnished by Water District 37 (formerly Water District 7AB).

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Mar. 28 to Apr. 20)

Oct. 1 to Apr. 20

Apr. 21 to Sept. 30

3.3	7.7	4.5	172	3.0	3.7	4.0	88
3.5	19	5.0	319	3.1	5.9	4.5	195
3.7	37	7.0	1,090	3.3	13	5.0	356
4.0	77	9.0	2,070	3.5	26	6.0	723
				3.7	45		

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.2	19	21	21	31	55	988	413	300	182	11	5.5
2	8.2	19	20	21	30	60	1,030	402	290	153	10	5.5
3	7.7	19	20	22	30	63	1,150	423	274	131	10	5.5
4	7.7	19	21	21	30	73	1,480	492	252	112	10	5.2
5	7.7	20	19	20	29	72	1,740	566	246	93	10	5.2
6	7.7	22	19	19	29	74	1,930	628	236	85	9.3	5.5
7	7.7	23	23	17	28	82	2,020	666	218	78	9.3	5.7
8	8.2	23	21	18	28	81	1,820	640	260	72	7.4	5.5
9	8.7	22	20	20	32	85	1,540	595	300	68	7.1	5.5
10	8.7	21	19	21	35	87	1,560	580	330	69	8.6	5.9
11	9.2	21	18	23	35	97	1,690	577	280	85	8.3	5.9
12	10	21	20	23	34	102	1,460	540	230	100	7.4	5.7
13	11	21	20	23	35	106	1,050	490	192	90	7.1	6.2
14	11	22	19	23	36	115	900	400	252	70	6.8	6.8
15	12	21	19	24	37	134	892	340	294	60	6.5	7.4
16	13	22	20	24	37	163	1,190	310	304	53	6.5	7.7
17	13	21	22	24	41	191	1,120	340	258	47	6.5	7.7
18	14	19	21	23	42	196	940	400	227	42	6.5	7.7
19	15	19	21	23	41	196	764	450	204	36	6.2	8.9
20	17	17	23	25	42	196	700	500	192	30	6.2	11
21	19	17	25	26	43	220	610	540	187	28	5.9	11
22	19	19	27	30	43	250	536	540	182	28	5.7	13
23	18	19	28	35	45	269	477	520	177	25	5.5	12
24	17	19	23	36	45	333	431	500	169	22	5.2	12
25	18	19	26	33	43	457	405	470	158	20	5.2	12
26	18	19	32	32	45	540	427	450	142	17	5.0	12
27	17	19	24	33	47	497	485	460	131	15	5.0	12
28	17	19	19	35	50	585	525	420	151	13	5.0	11
29	17	19	20	34	-----	704	503	360	164	11	5.0	8.6
30	18	22	21	33	-----	684	445	330	185	11	5.0	8.0
31	20	-----	23	32	-----	872	-----	310	-----	11	5.2	-----
TOTAL	403.7	602	674	794	1,043	7,639	30,808	14,652	6,785	1,857	218.4	241.6
MEAN	13.0	20.1	21.7	25.6	37.3	246	1,027	473	226	59.9	7.05	8.05
MAX	20	23	32	36	50	872	2,020	666	330	182	11	13
MIN	7.7	17	18	17	28	55	405	310	131	11	5.0	5.2
AC-FT	801	1,190	1,340	1,570	2,070	15,150	61,110	29,060	13,460	3,680	433	479

CAL YR 1969 TOTAL 119,694.9 MEAN 328 MAX 5,520 MIN 3.5 ACFT 237,400
WAT YR 1970 TOTAL 65,717.7 MEAN 180 MAX 2,020 MIN 5.0 ACFT 130,400

PEAK DISCHARGE (BASE, 500 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
4-6	1930	9.47	2,410	5-21	-	Unknown	-
5-7	0630	5.83	670				

13142000 Magic Reservoir near Richfield, Idaho

LOCATION.--Lat 43°15'19", long 114°21'25", in SE¼NE¼NE¼ sec.18, T.2 S., R.18 E., Blaine County, at dam on Big Wood River, 18 miles northwest of Richfield, and at mile 60.0.

DRAINAGE AREA.--1,600 sq mi, approximately.

PERIOD OF RECORD.--February 1909 to current year. Monthend contents only for some periods, published in WSP 1317.

GAGE.--Nonrecording gage. Datum of gage is 4,800 ft above datum of Idaho Irrigation Co., which is reported to be about 137 ft below mean sea level. Datum of gages prior to Oct. 1, 1942, was 4,800 ft lower.

EXTREMES.--Current year: Maximum contents observed, 193,100 acre-ft June 9, 25 (gage height, 135.4 ft); minimum observed, 85,700 acre-ft Oct. 5 (gage height, 99.1 ft).

Period of record: Maximum contents observed, 195,400 acre-ft May 11-13, 1969 (gage height, 136.0 ft); no storage for several days in 1909, 1919-20, 1924, 1928, 1935.

REMARKS.--Reservoir is formed by earth- and rock-fill dam, completed in 1909, and raised 5 ft in 1917. Capacity is 191,500 acre-ft between gage heights 21.4 ft (2.9 ft above bottom of outlet pipe) and 135.0 ft (top of 5-ft flashboards). Dead storage unknown. Water is used for irrigation of about 68,000 acres (1952 determination) of land in Carey Act project of Big Wood Canal Co. About 45,000 acres (1952 determination) irrigated by diversions from river and tributary streams above reservoir. Figures given herein represent usable contents including bank storage. Gage read in the morning.

COOPERATION.--Gage readings and capacity table furnished by Water District 37 (formerly Water District 7AB).

REVISIONS.--WSP 1217: Drainage area.

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

99.0	85,500
100.0	87,700
120.0	139,500
136.0	195,400

CONTENTS, IN ACRE-FEET, AT 0800, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	89,100	95,600	102,800	112,900	121,900	130,800	160,000	189,500	190,300	191,900	166,200	117,600
2	88,400	96,000	103,000	113,200	122,200	131,100	162,400	190,300	190,300	191,500	164,800	116,300
3	87,500	96,300	103,500	113,200	122,500	131,600	164,800	191,100	189,900	191,500	163,000	114,700
4	86,600	96,700	103,800	113,400	122,700	132,200	167,200	191,900	190,300	191,500	161,300	113,400
5	85,700	97,000	104,000	113,700	123,000	132,800	170,400	192,300	190,700	191,500	160,000	111,900
6	86,000	97,500	104,500	113,700	123,300	133,100	174,100	192,700	191,500	191,100	158,300	110,600
7	86,400	97,900	104,800	113,900	123,600	133,600	178,100	192,300	192,300	191,100	156,600	109,300
8	86,600	98,200	105,000	114,200	123,800	134,200	178,500	192,300	192,700	190,700	155,300	108,000
9	87,100	98,700	105,500	114,500	124,100	134,500	178,900	191,900	193,100	189,900	153,600	106,800
10	87,300	99,100	105,800	114,700	124,400	135,100	179,200	191,900	192,700	189,200	152,000	105,800
11	87,500	99,400	106,000	115,000	124,700	135,700	178,900	191,900	192,300	188,800	150,400	104,500
12	88,000	99,900	106,300	115,300	124,900	136,200	178,100	191,500	191,500	189,200	148,800	103,500
13	88,200	100,100	106,800	115,500	125,500	136,500	177,400	191,100	191,500	189,200	147,200	102,000
14	88,600	100,300	107,000	115,800	125,800	137,100	175,900	190,700	191,900	189,200	145,600	101,300
15	88,900	100,800	107,300	116,000	126,000	137,700	175,200	190,700	192,300	188,800	144,100	100,300
16	89,300	100,600	107,800	116,600	126,300	138,600	174,400	191,100	188,000	187,600	142,200	99,400
17	89,500	100,100	108,000	116,800	126,600	139,500	175,900	191,100	191,500	186,800	140,700	98,700
18	90,000	99,600	108,500	117,100	126,900	140,400	178,100	191,100	191,500	186,100	139,200	97,700
19	90,500	98,900	108,800	117,600	127,200	141,300	180,700	192,300	191,500	185,300	137,700	96,700
20	90,700	99,100	109,300	117,900	127,700	141,900	183,400	192,700	191,100	184,100	136,200	95,800
21	91,100	99,400	109,800	118,200	128,000	142,800	184,900	192,300	191,500	183,000	134,500	95,100
22	91,600	99,900	110,100	118,700	128,300	143,500	186,100	191,900	191,900	181,500	133,100	94,400
23	91,800	100,100	110,600	119,000	128,500	144,400	187,200	191,500	192,300	180,000	131,400	93,700
24	92,300	100,300	110,800	119,200	128,800	145,600	188,800	191,500	192,700	178,500	129,900	92,800
25	92,500	100,800	111,100	119,800	129,400	147,800	189,900	191,500	193,100	177,400	128,300	92,100
26	93,000	101,100	111,400	120,000	129,700	149,100	191,500	191,500	192,700	175,900	126,900	91,400
27	93,400	101,600	111,600	120,600	129,900	150,700	190,300	191,900	192,300	174,100	125,200	90,700
28	93,900	101,800	111,900	120,900	130,200	152,300	188,800	192,300	192,700	172,600	122,500	90,000
29	94,400	102,300	112,100	121,100	-----	154,000	188,800	191,900	192,700	171,200	122,200	89,300
30	94,600	102,500	112,400	121,400	-----	155,900	189,200	191,100	192,300	169,400	120,000	88,600
31	95,100	-----	112,600	121,700	-----	157,900	-----	190,300	-----	168,000	119,000	-----
MAX	95,100	102,500	112,600	121,700	130,200	157,900	191,500	192,700	193,100	191,900	166,200	117,600
MIN	85,700	95,600	102,800	112,900	121,900	130,800	160,000	189,500	188,000	168,000	119,000	88,600
(†)	103.2	106.3	110.3	113.7	116.8	125.8	134.4	134.7	135.2	128.7	102.7	100.4
(‡)	+5,100	+7,400	+10,100	+9,100	+8,500	+27,700	+31,300	+1,100	+2,000	-24,300	-49,000	-30,400
CAL YR 1969	MAX 195,400	MIN 54,700	‡ +58,100									
WAT YR 1970	MAX 193,100	MIN 85,700	‡ -1,400									

† Gage-height, in feet, at end of month.

‡ Change in contents, in acre-feet.

LOCATION.--Lat 43°15'00", long 114°21'30", in NE¹/₄SE¹/₄ sec.18, T.2 S., R.18 E., Blaine County, on right bank 0.5 mile downstream from Magic Dam, 18 miles northwest of Richfield, and at mile 59.5.

PERIOD OF RECORD.--April 1911 to current year (no winter records 1912).

AVERAGE DISCHARGE.--58 years (1912-70), 446 cfs (323,100 acre-ft per year); 15-year base period (1952-67), 480 cfs.

EXTREMES.--Current year: Maximum discharge, 2,210 cfs May 28 (gage height, 6.02 ft); minimum, 5.9 cfs Nov. 25, 27, 28 (gage height, 1.83 ft).
Period of record: Maximum discharge, 10,000 cfs Apr. 26, 1952 (gage height, 15.68 ft, from floodmark); no flow Feb. 3, 1915.

REMARKS.--Records good. Flow regulated by Magic Reservoir 0.5 mile upstream (see sta 13-1420), Twin Lakes Reservoir on tributary of Camas Creek (capacity, 31,240 acre-ft), and smaller reservoirs having combined capacity of about 680 acre-ft. Diversions for irrigation of about 47,100 acres (1950 determination) above station.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 26 to July 24)

					1.8	4.0	3.0	218				
					1.9	7.8	3.5	392				
					2.0	15	4.0	627				
					2.2	42	5.0	1,260				
					2.5	95	6.0	2,200				
DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	571	7.5	6.7	7.5	7.5	12	11	319	1,030	1,300	962	862
2	571	7.5	6.7	7.5	7.5	10	11	239	1,080	994	962	856
3	571	7.5	6.7	7.5	7.8	10	11	254	1,110	936	962	827
4	566	7.8	7.1	7.5	7.8	10	11	644	1,090	936	962	804
5	242	7.8	7.1	7.5	7.8	9.3	11	910	1,080	942	956	798
6	6.7	7.8	7.1	7.5	8.6	9.3	15	1,270	1,130	942	956	798
7	7.1	7.5	7.5	7.5	8.6	9.3	966	1,570	1,220	930	949	764
8	6.7	7.5	7.5	7.5	8.6	10	1,500	1,520	1,490	898	949	741
9	7.1	7.5	7.5	7.5	8.6	10	1,850	1,490	1,860	886	942	696
10	7.5	7.5	7.5	7.5	8.6	10	2,190	1,470	1,890	892	936	669
11	7.5	7.5	8.6	7.5	8.6	10	2,100	1,420	1,770	898	942	669
12	7.8	7.1	8.6	8.6	9.3	10	2,150	1,420	1,230	910	942	648
13	8.6	6.7	7.8	8.6	9.3	9.3	2,190	1,250	982	930	942	638
14	8.6	7.1	7.8	8.6	10	10	2,190	988	1,010	930	930	612
15	8.6	137	7.5	7.8	10	9.3	1,850	886	1,140	923	923	566
16	7.8	374	7.5	7.8	10	9.3	1,700	898	1,090	923	910	552
17	7.5	513	7.8	7.8	9.3	8.6	860	910	956	916	898	566
18	7.8	494	7.8	7.8	10	8.6	23	936	904	956	886	561
19	7.8	344	7.8	7.8	10	8.6	23	1,450	898	975	880	561
20	8.6	6.7	7.8	7.8	11	8.6	23	1,850	833	982	874	552
21	7.8	6.3	7.8	8.6	11	8.6	23	1,950	827	1,010	880	552
22	8.6	6.3	7.5	8.6	10	9.3	23	1,820	1,030	1,010	886	532
23	8.6	6.3	8.6	8.6	10	9.3	26	1,610	1,220	1,000	892	522
24	7.8	6.3	7.8	8.6	10	9.3	28	1,590	1,450	975	892	522
25	7.8	6.3	7.8	8.6	10	8.6	37	1,580	1,650	975	880	518
26	7.8	6.3	7.8	9.3	10	9.3	1,050	1,620	1,660	982	874	513
27	7.8	6.3	7.8	8.6	10	9.3	1,520	1,660	1,650	982	874	513
28	7.5	6.3	7.5	7.8	10	9.3	909	2,030	1,740	975	868	513
29	7.8	6.7	7.5	7.8	-----	10	480	2,050	1,730	968	868	513
30	7.8	6.7	7.5	7.5	-----	10	485	1,700	1,630	968	862	513
31	7.8	-----	7.5	7.5	-----	10	-----	1,220	-----	968	862	-----
TOTAL	2,723.8	2,036.8	235.5	246.6	259.9	245.2	24,266	40,524	38,330	29,812	28,301	18,951
MEAN	87.9	67.9	7.60	7.95	9.28	9.52	809	1,307	1,279	962	913	632
MAX	571	513	8.6	9.3	11	12	2,190	2,050	1,890	1,300	962	862
MIN	6.7	6.3	6.7	7.5	7.5	8.6	11	239	827	886	862	513
AC-FT	5,400	4,040	467	489	516	586	48,130	80,380	76,130	59,130	56,140	37,590
CAL YR 1969	TOTAL 330,062.0		MEAN 904		MAX 4,910		ACFT 654,700					
WAT YR 1970	TOTAL 186,031.8		MEAN 510		MAX 2,190		ACFT 369,000					

BIG WOOD RIVER BASIN

171

13147900 Little Wood River above High Five Creek, near Carey, Idaho

LOCATION.--Lat 43°29'30", long 114°03'30", about center of sec.22, T.2 N., R.20 E., Blaine County, on left bank above maximum flow line of Little Wood Reservoir, 0.4 mile downstream from Copper Creek, 0.6 mile upstream from High Five Creek, 13.5 miles northwest of Carey, and at mile 73.0.

DRAINAGE AREA.--248 sq mi. Mean altitude, 7,220 ft.

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

GAGE.--Water-stage recorder. Altitude of gage is 5,320 ft (by barometer).

AVERAGE DISCHARGE.--12 years, 153 cfs (110,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 683 cfs June 27 (gage height, 4.00 ft); maximum gage height, 4.48 ft Jan. 8 (ice jam); minimum discharge, 25 cfs Jan. 28 (gage height, 1.19 ft).
Period of record: Maximum discharge, 2,480 cfs Apr. 22, 1969 (gage height, 7.01 ft); minimum, 16 cfs Aug. 20, 1961 (gage height, 1.38 ft); minimum gage height, 1.19 ft Jan. 28, 1970.

REMARKS.--Records good except those for December to February, which are fair. Diversions above station for irrigation of about 5,250 acres (1950 determination).

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 27 to Dec. 11, Dec. 16, Dec. 24 to Jan. 5,
Jan. 28 to Feb. 11, Feb. 14, 18-23, 25-27, Mar. 3, 5, 6, 10, 11, 18-20)

1.3	34	2.5	219
1.5	56	3.0	340
2.0	124	3.8	615

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	71	61	45	68	90	98	124	352	259	88	59
2	69	71	61	45	68	86	108	148	403	255	84	53
3	69	70	62	45	69	75	113	204	472	264	82	51
4	76	70	57	45	63	75	127	271	524	264	79	51
5	78	70	53	45	67	70	176	329	486	257	86	61
6	78	71	49	44	60	72	252	364	451	250	86	65
7	78	79	49	44	59	76	276	370	468	252	80	61
8	78	75	49	45	64	79	255	321	476	230	75	59
9	80	73	50	47	68	79	274	318	551	204	74	57
10	78	73	52	50	68	75	316	349	448	306	71	55
11	75	73	54	54	68	74	259	296	376	324	70	53
12	74	73	64	56	67	76	204	269	329	252	67	51
13	73	71	68	60	67	74	170	239	349	226	63	55
14	74	71	65	62	62	79	167	211	434	204	63	58
15	74	71	63	61	62	86	159	202	430	180	61	59
16	76	70	61	59	63	88	152	230	412	176	57	58
17	76	57	65	59	69	84	174	346	388	184	55	58
18	74	48	64	58	58	79	174	507	397	170	53	57
19	73	59	64	59	56	80	172	521	397	155	53	65
20	73	63	67	59	64	80	155	500	421	150	51	83
21	73	69	71	61	70	86	143	493	479	148	51	73
22	74	64	75	65	70	91	143	437	479	172	48	68
23	74	57	71	68	70	94	134	462	468	146	48	65
24	73	62	48	75	70	110	136	462	496	132	48	65
25	73	62	50	67	71	118	134	504	476	119	48	64
26	71	58	50	67	74	121	143	563	421	111	47	64
27	71	54	49	68	78	113	136	583	465	107	48	64
28	71	57	47	47	83	119	129	507	472	108	48	63
29	70	61	47	63	-----	118	126	427	364	102	49	61
30	69	62	47	68	-----	108	121	379	303	96	48	59
31	71	-----	45	69	-----	105	-----	349	-----	94	53	-----
TOTAL	2,281	1,985	1,778	1,760	1,876	2,760	5,126	11,285	12,987	5,897	1,934	1,815
MEAN	73.6	66.2	57.4	56.8	67.0	89.0	171	364	433	190	62.4	60.5
MAX	80	79	75	75	83	121	316	583	551	324	88	83
MIN	65	48	45	44	56	70	98	124	303	94	47	51
AC-FT	4,520	3,940	3,530	3,490	3,720	5,470	10,170	22,380	25,760	11,700	3,840	3,600

CAL YR 1969	TOTAL	110,226	MEAN	302	MAX	2,150	MIN	45	ACFT	218,600
WAT YR 1970	TOTAL	51,484	MEAN	141	MAX	583	MIN	44	ACFT	102,100

BIG WOOD RIVER BASIN

13148200 Little Wood Reservoir near Carey, Idaho

LOCATION.--Lat 43°25'30", long 114°01'30", in SW¼ sec.12, T.1 N., R.20 E., Blaine County, at gate-control structure near right end of dam on Little Wood River, 8.5 miles northwest of Carey, and at mile 71.0.

DRAINAGE AREA.--279 sq mi.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Nonrecording gage. Datum of gage is 5,100 ft above mean sea level (levels by Bureau of Reclamation).

EXTREMES.--Current year: Maximum contents observed, 30,200 acre-ft June 22, 23, 28; maximum gage height observed, 137.72 ft June 28; minimum contents observed, 8,530 acre-ft Sept. 16 (gage height, 87.91 ft).

Period of record: Maximum contents observed, 30,940 acre-ft June 10, 1963 (gage height, 138.99 ft); minimum observed, 66 acre-ft Aug. 17, 1959 (gage height, 30.22 ft), but may have been less during period Aug. 14 to Sept. 13, 1959.

REMARKS.--Reservoir is formed by earth- and rock-fill dam constructed in 1939 and raised 39.9 ft in 1959. Storage began Feb. 12, 1941. Capacity of reservoir is 29,960 acre-ft between gage heights 27.4 (0.4 ft below bottom of outlet gates) and 137.3 ft (spillway crest). Water is used for irrigation of land near Carey. Contents shown for days when readings were furnished and at monthend. Readings are made at various times of the day.

COOPERATION.--Gage readings furnished by Water District 37N (formerly Water District 11C). Capacity table furnished by Bureau of Reclamation.

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

87.5	8,410
90.0	9,160
100.0	12,500
120.0	20,900
138.0	30,400

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11,600	-	14,800	17,300	18,700	20,600	25,400	28,200	29,700	30,000	22,400	9,000
2	-	-	-	-	-	-	25,400	28,400	29,700	30,000	-	9,000
3	-	-	-	-	-	-	25,300	28,600	29,700	30,000	-	-
4	-	-	-	-	-	-	25,300	29,000	29,800	30,000	20,600	8,800
5	-	-	-	-	18,700	-	25,300	29,200	29,800	30,000	-	-
6	11,600	12,700	-	-	-	21,200	25,300	29,400	29,800	29,900	-	8,800
7	-	-	15,200	17,500	-	-	25,600	29,200	29,800	29,900	19,800	8,800
8	-	-	-	-	-	-	26,000	29,500	29,900	30,000	-	8,800
9	-	-	-	-	-	-	26,200	29,500	29,900	30,000	17,600	-
10	-	13,100	-	-	-	-	26,800	29,500	30,000	30,000	17,600	-
11	-	-	-	-	-	-	27,000	29,500	30,000	30,100	17,100	8,800
12	-	-	-	-	18,700	22,200	27,000	29,300	30,000	30,100	-	-
13	11,400	-	-	-	-	-	26,900	29,300	29,900	30,100	-	-
14	-	13,500	-	18,000	-	-	26,800	29,300	30,000	30,000	-	-
15	-	-	-	-	-	-	26,700	29,100	30,100	30,000	15,000	-
16	-	-	-	-	-	22,900	27,000	29,200	30,100	29,800	-	8,530
17	11,500	-	-	-	-	-	26,900	29,400	30,000	29,500	-	-
18	-	-	-	-	-	-	26,800	29,600	30,000	-	-	8,900
19	-	-	-	-	-	23,400	26,700	29,600	30,000	-	-	-
20	-	13,900	-	-	-	-	26,600	29,600	30,000	-	-	-
21	-	13,900	-	-	19,200	-	26,600	29,700	30,100	-	12,600	-
22	-	-	16,500	18,600	19,200	-	26,700	29,800	30,200	27,900	-	-
23	11,900	-	-	-	-	24,200	26,800	29,900	30,200	-	11,600	-
24	-	-	-	-	-	24,400	26,900	30,000	30,100	26,300	-	-
25	-	-	-	-	19,900	-	27,100	30,000	30,100	-	11,000	9,100
26	-	14,400	-	-	19,900	24,900	27,300	30,000	30,100	-	11,000	-
27	-	-	-	-	-	-	27,600	29,900	30,000	25,200	-	-
28	-	-	-	-	20,400	-	27,800	29,900	30,200	24,600	-	-
29	-	-	-	-	-----	-	27,900	30,000	30,100	-	9,900	-
30	-	14,700	-	-	-----	25,400	28,100	29,900	30,000	-	-	9,200
31	12,400	-----	17,100	18,700	-----	25,400	-----	29,800	-----	23,000	9,000	-----
MAX	-	-	-	-	20,400	25,400	28,100	30,000	30,200	30,100	22,400	-
MIN	-	-	-	-	-	20,600	25,300	28,200	29,700	23,000	9,000	-
(†)	-	-	111.79	115.22	-	128.95	133.99	137.10	137.44	124.23	89.50	90.31
(‡)	+800	+2,300	+2,400	+1,600	+1,700	+5,000	+2,700	+1,700	+200	-7,000	-14,000	+200

CAL YR 1969..... ‡ +1,900

WTR YR 1970..... ‡ -2,400

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

13148500 Little Wood River near Carey, Idaho

LOCATION.--Lat 43°23'20", long 114°00'99", in E½ sec.30, T.1 N., R.21 E., Blaine County, on right bank, 0.3 mile upstream from West Canal, 1.3 miles upstream from East Canal, 2 miles downstream from Little Fish Creek, 3 miles downstream from Little Wood Reservoir, 6 miles northwest of Carey, and at mile 68.0.

DRAINAGE AREA.--312 sq mi.

PERIOD OF RECORD.--April 1904 to May 1905 (gage heights and discharge measurements only), September 1926 to November 1942, April 1943 to current year. Monthly discharge only for some periods, published in WSP 1317. Records for February 1920 to September 1926 at site 6 miles upstream not equivalent owing to diversion and inflow.

GAGE.--Water-stage recorder. Datum of gage is 4,990.59 ft above mean sea level, unadjusted (levels by Bureau of Reclamation). Apr. 28, 1904, to May 31, 1905, nonrecording gage, Sept. 20, 1926, to Apr. 22, 1938, water-stage recorder, and Apr. 23 to Aug. 17, 1938, nonrecording gage, all at datum 0.74 ft higher.

AVERAGE DISCHARGE.--43 years (1926-42, 1943-70), 146 cfs (105,800 acre-ft per year); 15-year base period (1952-67), 156 cfs.

EXTREMES.--Current year: Maximum discharge, 654 cfs May 19 (gage height, 4.75 ft); minimum, 6.2 cfs Feb. 23 (gage height, 1.71 ft).

Period of record: Maximum discharge, 6,000 cfs (due to failure of reservoirs on Little Fish Creek) Apr. 20, 1938 (gage height, 12.81 ft, present datum, from floodmark), from rating curve extended above 1,800 cfs; minimum, 1 cfs Jan. 26, 1945, Jan. 20, 1948.

REMARKS.--Records good. Flow regulated by Little Wood Reservoir 3 miles upstream (see sta 13-1482) and Campbell, Cameron, and Howard Reservoirs on South Fork Muldoon and Little Fish Creeks (combined capacity, 690 acre-ft). Diversions above station for irrigation of about 6,450 acres (1950 determination).

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 16-20, Dec. 5, 6, 10, 11, 24, 25, Dec. 27 to Jan. 10, Jan. 29, 31)

Oct. 1 to Apr. 14				Apr. 15 to Sept. 30			
1.7	5.4	2.6	65	2.3	34	3.5	249
2.0	15	3.0	127	2.6	65	4.0	391
2.3	34	3.5	233	3.0	127	4.7	628

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	41	21	20	69	12	138	67	423	304	379	153
2	68	41	21	20	69	11	138	64	442	263	376	114
3	65	41	21	20	69	10	138	64	475	265	376	90
4	65	41	21	20	70	8.7	139	109	475	304	382	90
5	65	42	21	19	70	7.9	141	257	475	293	413	92
6	71	37	21	19	70	7.5	142	388	475	265	410	83
7	87	25	21	19	70	7.7	140	304	475	227	404	65
8	87	24	21	20	69	9.7	139	341	478	212	401	57
9	86	24	21	20	69	11	140	420	495	214	379	45
10	85	24	21	21	71	9.2	187	379	478	219	344	45
11	85	24	21	22	70	8.1	233	379	426	335	301	45
12	85	24	22	22	61	7.2	231	347	376	298	298	45
13	73	24	22	22	28	7.8	209	307	370	254	296	45
14	58	24	22	22	27	11	169	304	426	241	296	45
15	57	24	22	21	27	15	148	263	458	287	279	48
16	53	24	22	21	26	16	196	225	455	312	263	84
17	39	23	22	22	29	14	249	273	426	367	263	85
18	39	24	22	22	27	9.9	249	401	420	401	257	85
19	39	24	22	22	27	8.9	249	592	404	401	254	86
20	39	24	22	22	27	9.3	194	550	413	401	252	82
21	39	25	23	22	26	12	144	481	465	397	249	47
22	40	25	22	34	9.7	14	120	433	491	376	252	46
23	40	24	22	68	6.5	14	96	404	488	352	230	45
24	40	24	22	69	6.8	21	77	488	495	349	212	45
25	40	24	21	68	6.9	14	61	529	512	347	209	45
26	40	25	21	68	7.0	20	72	599	468	347	230	42
27	40	21	21	68	7.0	51	70	599	455	347	246	41
28	40	22	21	67	7.4	52	69	540	526	373	246	41
29	40	21	20	67	-----	50	66	462	442	385	230	40
30	40	21	20	69	-----	75	65	433	358	385	201	40
31	40	-----	20	69	-----	138	-----	423	-----	382	196	-----
TOTAL	1,752	811	662	1,085	1,122.3	662.9	4,409	11,425	13,565	9,903	9,124	1,916
MEAN	56.5	27.0	21.4	35.0	40.1	21.4	147	369	452	319	294	63.9
MAX	87	42	23	69	71	138	249	599	526	401	413	153
MIN	39	21	20	19	6.5	7.2	61	64	358	212	196	40
AC-FT	3,480	1,610	1,310	2,150	2,230	1,310	8,750	22,660	26,910	19,640	18,100	3,800
CAL YR 1969	TOTAL 122,394			MEAN 335		MAX 1,380	MIN 20	AC-FT 242,800				
WTR YR 1970	TOTAL 56,437.2			MEAN 155		MAX 599	MIN 6.5	AC-FT 111,900				

13151000 Little Wood River near Richfield, Idaho

LOCATION.--Lat 43°03'00", long 114°07'30", in sec.30, T.4 S., R.20 E., Lincoln County, on right bank 0.5 mile upstream from Byrns Slough and heading of Dietrich Canal, 1 mile east of railroad station at Richfield, 14 miles downstream from Silver Creek, and at mile 40.1.

DRAINAGE AREA.--570 sq mi, approximately.

PERIOD OF RECORD.--January 1911 to current year (irrigation seasons only prior to 1955 except 1913, 1921).

GAGE.--Water-stage recorder. Altitude of gage is 4,270 ft (by barometer). Prior to Sept. 5, 1918, nonrecording gage at site 500 ft downstream at datum 0.92 ft lower. Sept. 5, 1918, to Apr. 13, 1920, nonrecording gage and Apr. 14, 1920, to May 20, 1954, water-stage recorder, at site 500 ft downstream at datum 0.08 ft higher.

AVERAGE DISCHARGE.--18 years (1912-13, 1920-21, 1954-70), 157 cfs (113,700 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 240 cfs Mar. 26 (gage height, 3.33 ft); maximum gage height, 4.85 ft Jan. 10 (ice jam); minimum discharge, 45 cfs June 3 (gage height, 2.03 ft).

Period of record: Maximum discharge recorded, 868 cfs May 3, 1938 (gage height, 3.97 ft, site and datum then in use); maximum gage height recorded, 8.60 ft Feb. 21, 1956 (ice jam); minimum discharge recorded, 7.6 cfs June 24, 25, 1920 (gage height, 0.52 ft, site and datum then in use).

REMARKS.--Records good except those for January, which are poor. Flow regulated by Little Wood Reservoir 30.9 miles upstream (see sta 13-1482), Fish Creek Reservoir (capacity, 14,400 acre-ft), and three small reservoirs on tributaries (combined capacity, 690 acre-ft). River above Silver Creek is dry a large part of the time because of channel losses and irrigation diversions above Carey. Diversions for irrigation of about 38,300 acres (1950 determination) above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 28, 29, Dec. 5-7, Dec. 26 to Jan. 22, Jan. 30, 31)

2.0	45	3.0	169
2.5	92	3.3	232

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	165	169	166	132	172	158	186	150	51	152	120	101
2	167	171	166	132	183	201	181	147	49	139	117	106
3	169	172	165	132	179	194	177	144	47	128	115	113
4	169	172	165	132	180	178	174	141	50	124	111	116
5	174	172	164	125	181	171	171	141	48	125	110	120
6	179	174	164	125	156	164	170	149	54	128	111	127
7	181	180	164	126	155	161	167	167	60	139	114	136
8	183	180	164	132	155	166	161	173	65	140	115	150
9	182	183	165	132	154	173	156	179	71	148	108	153
10	188	181	166	140	154	176	154	209	77	149	102	144
11	188	180	166	140	154	173	155	217	83	160	99	144
12	186	179	168	142	155	171	152	208	86	183	94	143
13	188	177	168	142	159	169	150	200	89	181	90	144
14	183	177	168	142	159	179	152	184	98	168	90	145
15	184	176	167	140	156	198	162	175	141	160	90	148
16	188	178	167	140	153	209	167	163	161	156	87	150
17	184	177	167	142	159	218	169	144	162	152	85	154
18	181	175	166	145	162	208	169	145	156	143	85	149
19	179	173	167	148	156	195	167	137	153	135	86	149
20	176	171	172	151	153	187	165	145	140	128	79	153
21	176	171	176	155	152	184	159	134	128	127	80	166
22	175	171	181	160	152	186	156	97	135	120	79	169
23	177	170	184	171	151	198	152	71	130	119	79	177
24	177	171	179	181	151	205	148	57	95	125	82	177
25	176	170	173	186	150	213	145	63	89	129	80	177
26	175	169	173	180	151	231	147	56	89	120	80	180
27	175	168	168	188	152	216	147	60	91	117	79	181
28	173	168	165	176	153	200	148	67	99	113	81	181
29	174	166	150	162	-----	197	147	62	119	120	88	180
30	171	165	110	165	-----	195	152	53	143	125	95	181
31	169	-----	132	170	-----	191	-----	51	-----	122	95	-----
TOTAL	5,512	5,206	5,116	4,634	4,447	5,865	4,806	4,089	2,959	4,275	2,926	4,514
MEAN	178	174	165	149	159	189	160	132	98.6	138	94.4	150
MAX	188	183	184	188	183	231	186	217	162	183	120	181
MIN	165	165	110	125	150	158	145	51	47	113	79	101
AC-FT	10,930	10,330	10,150	9,190	8,820	11,630	9,530	8,110	5,870	8,480	5,800	8,950
CAL YR 1969	TOTAL 97,303		MEAN 267		MAX 229		MIN 93		AC-FT 193,000			
WTR YR 1970	TOTAL 54,349		MEAN 149		MAX 231		MIN 47		AC-FT 107,800			

13152500 Big Wood River near Gooding, Idaho

LOCATION.--Lat 42°53'12", long 114°48'08", in NE¼NE¼SW¼ sec.21, T.6 S., R.14 E., Gooding County, on right bank at Hudson Ranch, 3.1 miles downstream from bridge on Bliss-Gooding highway, 4.2 miles downstream from Little Wood River, 5.5 miles upstream from diversion dam for King Hill project, 6 miles southwest of Gooding, and at mile 7.8.

DRAINAGE AREA.--2,990 sq mi, approximately.

PERIOD OF RECORD.--March 1916 to current year (fragmentary October 1923 to September 1926; no winter records for water years 1923, 1936-37, 1942; irrigation seasons only for water years 1927-35). October 1950 to September 1959, published as Malad River near Gooding.

GAGE.--Water-stage recorder. Altitude of gage is 3,345 ft (from topographic map). Prior to Apr. 13, 1921, non-recording gage at present site and datum.

AVERAGE DISCHARGE.--38 years (1916-22, 1937-41, 1942-70), 250 cfs (181,100 acre-ft per year); 15-year base period (1952-67), 250 cfs.

EXTREMES.--Current year: Maximum discharge, 1,760 cfs Apr. 10 (gage height, 6.88 ft); maximum gage height, 6.93 ft Jan. 15 (ice jam); minimum discharge, 20 cfs Feb. 24 (gage height, 1.07 ft).
Period of record: Maximum discharge, 8,860 cfs Dec. 22, 1964 (gage height, 12.15 ft, from floodmarks); no flow at times in many years.

REMARKS.--Records good except those for December to January, which are fair. Flow regulated by Magic Reservoir (see sta 13-1420) and by several smaller reservoirs on tributaries and affected by deliveries from canals diverting from Snake River at Milner. Diversions for irrigation of about 155,000 acres (1950 determination) above station. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1347: 1934.

Rating table (gage height, in feet, and discharge, in cubic feet per second).
(Shifting-control method used June 2-9, July 2-13, stage-discharge relation affected by ice Dec. 4-18, Dec. 25 to Jan. 16, Feb. 7, 8)

1.1	20	2.0	109	5.0	752
1.3	33	3.0	250	6.0	1,170
1.6	60	4.0	450	7.0	1,830

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	297	273	319	45	102	58	122	574	354	1,140	58	167
2	321	288	323	40	105	198	335	459	163	959	64	204
3	354	288	254	35	109	176	249	288	179	743	73	207
4	466	288	130	30	112	186	189	280	205	549	98	239
5	525	276	120	27	112	166	257	191	166	456	109	245
6	592	253	110	26	112	142	282	582	136	403	109	322
7	569	261	100	26	115	130	275	930	124	332	96	373
8	547	242	90	26	118	139	352	1,150	148	289	84	386
9	571	296	80	27	118	141	1,420	1,110	305	242	69	407
10	614	298	70	65	125	137	1,710	1,080	708	193	88	398
11	569	306	65	80	130	133	1,660	1,200	835	183	93	338
12	194	308	65	90	143	135	1,660	1,110	782	172	121	370
13	155	335	70	109	199	130	1,700	1,070	633	184	114	388
14	207	321	70	110	168	150	1,710	879	550	144	99	397
15	225	298	65	110	141	161	1,400	625	560	147	117	415
16	283	300	70	110	136	177	1,300	470	606	125	121	468
17	340	305	80	110	135	174	991	373	665	99	121	462
18	332	371	100	110	153	180	303	358	556	80	103	450
19	766	436	108	110	136	165	229	294	456	44	57	432
20	237	478	115	115	126	156	420	478	373	29	76	515
21	220	445	123	120	109	142	549	832	287	30	69	494
22	229	377	130	125	101	142	529	914	212	56	57	525
23	231	368	133	130	94	141	490	843	165	69	58	634
24	227	372	133	134	29	136	496	709	182	89	68	652
25	231	368	115	137	23	145	502	611	351	82	70	596
26	235	357	100	145	27	157	403	512	466	63	71	619
27	244	337	90	150	37	164	774	518	575	62	74	627
28	253	310	80	130	39	155	1,470	556	744	63	69	604
29	259	291	70	115	-----	143	1,070	738	962	53	80	569
30	264	306	60	105	-----	131	685	778	1,170	52	73	559
31	268	-----	55	100	-----	133	-----	576	-----	52	115	-----
TOTAL	10,325	9,752	3,493	2,792	3,054	4,623	23,532	21,088	13,618	7,184	2,674	13,062
MEAN	333	325	113	90.1	109	149	784	680	454	232	86.3	435
MAX	614	478	323	150	199	198	1,710	1,200	1,170	1,140	121	652
MIN	155	242	55	26	23	58	122	191	124	29	57	167
AC-FT	20,480	19,340	6,930	5,540	6,060	9,170	46,680	41,830	27,010	14,250	5,300	25,910
CAL YR 1969	TOTAL 217,623.8		MEAN 596		MAX 3,950		MIN 5.8		AC-FT 431,700			
WTR YR 1970	TOTAL 115,197		MEAN 316		MAX 1,710		MIN 23		AC-FT 228,500			

LOCATION.--Lat 42°52'05", long 114°54'40", in SE¼SE¼ sec.28, T.6 S., R.13 E., Twin Falls County, on left bank 600 ft below outlet of inverted siphon crossing Snake River, 0.8 mile west of highway bridge over Big Wood River, and 3.6 miles north of Hagerman.

GAGE.--Water-stage recorder. Altitude of gage is 2,850 ft (from topographic map). Prior to June 1, 1949, non-recording gages at several sites within 0.6 mile of present site at various datums. June 1, 1949, to May 22, 1951, nonrecording gage at present site and datum. May 23, 1951, to Sept. 30, 1961, water-stage recorder 0.5 mile upstream at different datum.

REMARKS.--Records excellent. This canal, which is operated by King Hill Irrigation District to provide water for irrigation of about 10,000 acres, diverts from Idaho Power Co.'s canal, which diverts from Big Wood River (Malad Springs water).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	323					0	144	333	336	328	334	332
2	323					0	182	335	335	327	334	332
3	323					0	209	335	335	328	334	332
4	324					0	226	336	333	329	334	332
5	324					0	233	336	333	328	335	332
6	325					0	266	337	333	329	335	332
7	324					0	282	339	332	329	336	332
8	324					0	282	341	333	329	336	332
9	323					0	283	343	331	330	336	332
10	323					0	284	343	334	331	0	333
11	323					0	284	344	335	331	0	333
12	322					0	284	343	332	331	0	333
13	321					0	284	343	331	331	326	334
14	323					0	277	342	330	331	330	333
15	134					0	273	340	330	332	332	334
16	0					0	272	341	331	332	335	334
17	0					0	271	339	331	332	335	336
18	0					0	271	339	331	333	335	336
19	0					0	271	338	331	333	334	336
20	0					0	274	338	140	334	334	335
21	0					0	275	338	97	333	333	335
22	0					0	275	338	97	333	332	335
23	0					0	276	338	312	332	332	336
24	0					0	277	338	312	333	332	330
25	0					0	299	338	318	333	332	326
26	0					0	307	337	320	332	332	326
27	0					0	310	336	327	333	332	327
28	0					0	314	335	327	333	332	327
29	0				-----	0	321	336	327	334	332	326
30	0				-----	86	332	337	328	333	332	326
31	0	-----			-----	141	-----	336	-----	333	332	-----
TOTAL	4,659	0	0	0	0	227	8,138	10,492	9,222	10,270	9,328	9,959
MEAN	150	0	0	0	0	7.32	271	338	307	331	301	332
MAX	325	0	0	0	0	141	332	344	336	334	336	336
MIN	0	0	0	0	0	0	144	333	97	327	0	326
AC-FT	9,240	0	0	0	0	450	16,140	20,810	18,290	20,370	18,500	19,750
CAL YR 1969	TOTAL 61,830		MEAN 169	MAX 351	MIN 0	ACFT 122,600						
WAT YR 1970	TOTAL 62,295		MEAN 171	MAX 344	MIN 0	ACFT 123,600						

13154500 Snake River at King Hill, Idaho

LOCATION.--Lat 43°00'08", long 115°12'06", in NW¼NW¼SW¼ sec.7, T.5 S., R.11 E., Elmore County, on right bank 300 ft east of railroad station at King Hill, 20 miles downstream from Big Wood River, and at mile 545.6.

DRAINAGE AREA.--35,800 sq mi, approximately. Mean altitude, 6,040 ft.

PERIOD OF RECORD.--May 1909 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,492.3 ft above mean sea level, by stadia levels. Nonrecording gage May 13, 1909, to Mar. 1, 1910, on left bank at present site at datum 2.20 ft higher, Mar. 7 to Aug. 16, 1910, 0.8 mile upstream at different datum, and Aug. 17, 1910, to Oct. 7, 1928, at present site and datum.

AVERAGE DISCHARGE.--61 years, 10,490 cfs (7,600,000 acre-ft per year); 15-year base period (1952-67), 9,723 cfs.

EXTREMES.--Current year: Maximum discharge, 24,800 cfs May 11 (gage height, 11.31 ft); minimum, 3,220 cfs Feb. 25 (gage height, 3.63 ft); minimum daily, 6,630 cfs Mar. 31.
Period of record: Maximum discharge observed, 47,200 cfs June 22, 1918 (gage height, 16.3 ft), from rating curve extended above 30,000 cfs; minimum observed, 1,250 cfs Jan. 10, 1950 (gage height, 1.75 ft); minimum daily, 4,760 cfs June 7-9, Aug. 15, 16, 1910.

REMARKS.--Records excellent. Flow regulated by American Falls Reservoir 168.4 miles upstream (see sta 13076500). Diurnal fluctuation caused by hydroelectric plants upstream. At times, practically entire flow is diverted at Milner during irrigation seasons; only minor diversions below Milner; flow at King Hill is then derived largely from springs and seepage entering below Milner. Surface-water diversions and ground-water withdrawals for irrigation of about 2,100,000 acres (1960 determination) above station. Records of chemical analysis and water temperatures for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1317: 1935(M).

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 2 to Feb. 16, Mar. 14 to Apr. 20)

5.5	6,540	10.0	19,800
6.0	7,630	12.0	27,600
8.0	13,000		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8,750	9,260	9,810	9,200	11,200	8,240	6,950	15,500	16,800	16,300	7,530	8,950
2	10,000	9,520	10,300	9,310	11,000	8,820	6,880	14,000	16,400	20,700	7,530	9,070
3	9,020	9,530	10,200	9,120	10,500	8,580	7,020	13,500	15,700	19,700	7,700	8,860
4	10,200	9,180	10,900	9,870	11,000	8,020	7,010	13,900	16,000	16,600	8,090	9,000
5	9,890	9,030	10,500	11,200	10,800	8,370	7,250	11,100	12,400	10,800	7,820	9,040
6	10,200	9,190	8,860	10,500	10,700	8,120	7,100	12,700	8,060	9,220	7,920	9,680
7	9,750	9,800	9,540	10,700	10,500	8,000	7,300	11,700	7,690	8,140	7,760	9,670
8	9,740	9,270	10,200	10,500	10,700	7,940	8,320	11,900	7,310	7,780	7,880	9,770
9	9,800	9,270	9,920	10,700	10,600	8,330	10,400	13,200	7,890	7,590	7,680	9,390
10	9,730	9,530	8,890	10,900	10,600	8,290	12,900	15,400	8,950	7,540	8,020	9,410
11	10,100	9,210	9,640	11,400	10,700	8,130	11,200	18,500	9,150	7,520	8,240	9,510
12	9,510	9,380	9,440	10,900	10,700	7,720	10,500	21,000	9,050	7,420	8,010	9,430
13	9,350	9,140	9,550	11,800	11,000	7,450	11,000	18,300	9,800	7,350	7,900	9,490
14	9,660	9,400	9,450	12,200	10,600	7,440	11,800	18,300	16,100	7,290	7,690	9,650
15	9,310	9,410	9,320	12,400	10,400	7,410	12,300	18,200	20,000	7,370	7,720	9,730
16	9,630	9,260	9,410	12,700	10,400	7,510	16,600	16,700	22,800	7,270	7,710	9,520
17	9,800	9,350	9,420	12,100	10,400	7,340	18,900	14,500	23,800	7,330	7,520	9,670
18	9,620	9,340	9,130	12,600	10,400	7,420	16,300	14,500	23,100	7,380	7,910	9,470
19	9,940	9,340	9,300	12,200	10,200	7,280	13,700	13,400	20,700	7,270	7,330	9,400
20	9,800	9,330	9,030	12,000	10,200	7,890	14,700	13,500	18,300	7,670	7,720	9,780
21	9,860	9,270	9,480	12,400	10,200	7,480	13,900	13,000	17,000	7,610	7,570	9,840
22	9,840	9,120	9,370	13,700	10,300	6,650	12,700	16,400	15,800	7,620	7,670	9,890
23	9,390	9,200	9,050	13,000	9,830	7,120	9,620	21,200	12,000	7,770	7,850	10,200
24	10,100	9,030	9,270	13,500	10,100	7,180	9,810	18,500	10,300	7,450	7,850	10,100
25	10,100	9,120	9,810	11,900	8,940	7,430	9,660	17,400	8,710	7,570	7,670	10,200
26	9,810	9,170	9,450	11,200	8,590	7,410	8,940	19,100	8,090	7,600	7,810	9,810
27	10,100	8,950	9,470	14,000	9,110	7,410	9,480	19,000	7,980	7,620	7,880	10,100
28	10,000	9,000	9,300	14,400	7,880	7,660	12,800	19,600	8,650	7,430	7,840	10,000
29	9,730	8,930	9,020	11,500	-----	7,390	15,300	18,600	10,300	7,650	7,860	10,100
30	9,790	8,850	9,290	10,700	-----	6,950	16,800	17,400	12,200	7,940	8,190	9,750
31	9,500	-----	9,170	11,300	-----	6,630	-----	16,000	-----	7,720	8,410	-----
TOTAL	302,020	277,380	295,490	359,900	287,550	237,610	337,140	496,000	401,030	282,220	242,280	288,480
MEAN	9,743	9,246	9,532	11,610	10,270	7,665	11,240	16,000	13,370	9,104	7,815	9,616
MAX	10,200	9,900	10,900	14,400	11,200	8,820	18,900	21,200	23,800	20,700	8,410	10,200
MIN	8,750	8,850	8,860	9,120	7,880	6,630	6,880	11,100	7,310	7,270	7,330	8,860
AC-FT	599,100	550,200	586,100	713,900	570,400	471,300	668,700	983,800	795,400	559,800	480,600	572,200
CAL YR 1969	TOTAL 4,155,180			MEAN 11,380			MAX 23,300			MIN 7,020		
WTR YR 1970	TOTAL 3,807,100			MEAN 10,430			MAX 23,800			MIN 6,630		
							AC-FT 8,242,000					
							AC-FT 7,551,000					

LITTLE CANYON CREEK BASIN

13155300 Little Canyon Creek at Stout Crossing, near Glenns Ferry, Idaho

LOCATION.--Lat 43°09'14", long 115°18'32", in NE¼NW¼NE¼ sec.19, T.3 S., R.10 E., Elmore County, on left bank at county road crossing 13.8 miles north of Glenns Ferry.

DRAINAGE AREA.--14.2 sq mi.

PERIOD OF RECORD.--Annual maximum, water years 1961-65, November 1965 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,918.44 ft above mean sea level. Nov. 3, 1960, to Nov. 4, 1965, crest-stage gage at same site at datum 7.28 ft lower.

EXTREMES.--Current year: Maximum discharge, 102 cfs May 21 (gage height, 3.44 ft); minimum, 0.78 cfs Dec. 3, 5 (gage height, 2.13 ft).

Period of record: Maximum discharge, 500 cfs December 23, 1964 (gage height, 7.44 ft, present datum; no flow Sept. 7, 1967.

REMARKS.--Records good.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

2.1	0.45	2.6	11
2.2	1.2	2.8	26
2.3	2.4	3.0	45
2.4	4.4	3.2	68
2.5	7.3	3.5	111

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	
1	.99	1.2	1.1	1.2	8.8	29	12	16	42	7.0	2.4	1.2	
2	1.2	1.2	1.1	1.1	8.8	26	11	21	41	6.4	2.4	1.2	
3	1.4	1.3	1.1	1.1	7.7	21	11	28	39	6.1	2.4	1.2	
4	1.3	1.3	1.1	1.1	6.7	17	12	35	37	5.8	2.4	1.3	
5	1.2	1.3	.98	1.1	5.8	14	15	41	33	5.5	2.6	1.6	
6	1.1	1.3	1.1	1.1	5.5	12	26	47	31	5.3	2.8	1.8	
7	1.1	1.3	1.1	1.1	5.5	13	30	57	27	5.0	2.4	1.7	
8	1.1	1.2	1.1	1.1	5.8	19	26	53	26	4.7	2.3	1.6	
9	1.2	1.1	1.1	1.1	6.7	19	25	49	25	4.7	2.2	1.5	
10	1.3	1.1	1.2	1.1	8.4	17	34	56	21	5.3	2.2	1.2	
11	1.2	1.2	1.6	1.2	12	16	34	49	18	4.7	2.1	1.2	
12	1.2	1.1	1.1	1.2	21	14	28	46	18	4.2	1.9	1.3	
13	1.2	1.1	1.3	1.3	25	14	25	41	17	4.0	1.9	1.5	
14	1.2	1.1	1.2	1.6	21	20	23	36	15	3.8	1.9	1.5	
15	1.2	1.1	1.1	1.7	17	25	19	35	14	3.6	1.9	1.5	
16	1.5	1.2	1.1	1.7	15	27	17	37	14	3.6	1.8	1.5	
17	1.3	1.1	1.1	2.3	17	25	15	53	13	3.4	1.8	1.3	
18	1.3	1.1	1.1	4.4	13	20	16	76	12	3.2	1.8	1.1	
19	1.3	1.1	1.1	11	11	17	18	82	11	3.2	1.7	1.3	
20	1.2	1.1	1.5	11	10	15	16	79	11	3.0	1.7	1.6	
21	1.2	1.1	1.9	40	10	15	15	88	10	3.4	1.6	1.3	
22	1.3	1.1	1.8	49	10	16	14	89	10	3.4	1.6	1.3	
23	1.3	1.1	1.6	52	11	18	14	75	9.2	3.2	1.5	1.3	
24	1.2	1.1	1.3	45	12	22	15	79	8.4	3.0	1.5	1.3	
25	1.2	1.1	1.2	30	14	23	15	79	8.1	2.8	1.5	1.3	
26	1.2	1.1	1.3	21	16	21	16	78	7.7	2.8	1.5	1.3	
27	1.3	1.1	1.2	49	16	18	15	79	9.6	2.8	1.5	1.2	
28	1.2	.98	1.1	30	17	17	14	62	9.6	2.8	1.5	1.2	
29	1.2	1.1	1.1	20	-----	15	14	52	10	2.8	1.3	1.2	
30	1.2	1.1	1.1	15	-----	14	15	47	8.4	2.6	1.2	1.2	
31	1.2	-----	1.1	11	-----	13	-----	44	-----	2.6	1.2	-----	
TOTAL	37.99	34.38	37.88	410.5	337.7	572	560	1,709	556.0	124.7	58.5	40.7	
MEAN	1.23	1.15	1.22	13.2	12.1	18.5	18.7	55.1	18.5	4.02	1.89	1.36	
MAX	1.5	1.3	1.9	52	25	29	34	89	42	7.0	2.8	1.8	
MIN	.99	.98	.98	1.1	5.5	12	11	16	7.7	2.6	1.2	1.1	
CFSM	.09	.08	.09	.93	.85	1.30	1.31	3.88	1.31	.28	.13	.10	
IN.	.10	.09	.10	1.08	.88	1.50	1.47	4.48	1.46	.33	.15	.11	
AC-FT	75	68	75	814	670	1,130	1,110	3,390	1,100	247	116	81	
CAL YR 1969	TOTAL 4,917.13		MEAN 13.5		MAX 120		MIN .82		CFSM .95		IN 12.88		AC-FT 9,750
WTR YR 1970	TOTAL 4,479.35		MEAN 12.3		MAX 89		MIN .98		CFSM .86		IN 11.73		AC-FT 8,880

PEAK DISCHARGE (BASE, 40 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
1-21	2130	3.26	76	5-7	0730	3.17	64
3-1	0700	2.96	41	5-21	2000	3.44	102
4-10	1730	2.96	40				

13161500 Bruneau River at Rowland, Nev.

LOCATION.--Lat 41°56'00", long 115°40'25", in NW¼SE¼ sec.29, T.47 N., R.56 E., Elko County, on left bank 2 miles upstream from McDonald Creek and 0.5 mile south of Rowland.

DRAINAGE AREA.--382 sq mi. Area at crest-stage site, 380 sq mi.

PERIOD OF RECORD.--June 1913 to September 1918, water years 1963-66 (annual maximum), October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,500 ft (from topographic map). June 1913 to September 1918, nonrecording gage at different site and datum. October 1961 to September 1966, crest-stage gage at site 3 miles upstream at different datum.

AVERAGE DISCHARGE.--9 years, 108 cfs (78,250 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 828 cfs May 18 (gage height, 6.70 ft); minimum, 11 cfs Oct. 1. Period of record: Maximum discharge, 2,120 cfs Feb. 11, 1962 (gage height, 13.0 ft, site and datum then in use); minimum, 5 cfs Aug. 12, 13, 1918.

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

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	22	15	27	82	106	107	175	427	186	40	14
2	13	22	14	26	75	121	114	207	425	162	38	13
3	14	22	15	27	68	107	111	286	441	145	36	12
4	15	22	16	25	67	100	115	421	445	132	34	12
5	15	22	18	24	60	97	135	551	423	126	35	16
6	15	22	20	27	63	86	191	624	392	118	32	34
7	15	22	22	35	60	90	254	736	377	114	31	31
8	15	23	24	39	60	104	228	606	372	107	28	23
9	15	23	24	40	64	102	245	708	366	104	27	20
10	18	23	24	43	68	99	292	682	350	108	25	20
11	19	22	23	41	81	91	324	554	312	104	23	18
12	20	22	24	41	107	94	261	468	270	94	21	17
13	20	23	25	41	126	94	232	419	268	86	21	18
14	20	22	24	36	137	104	209	386	264	80	19	19
15	19	22	20	31	134	112	193	386	250	74	20	21
16	21	24	20	49	126	110	177	461	234	70	19	22
17	24	23	21	68	123	119	169	614	232	66	18	22
18	26	18	22	59	99	108	161	750	221	64	17	22
19	24	18	25	55	92	101	169	797	219	67	17	23
20	22	19	29	57	85	103	162	744	234	61	17	26
21	22	19	35	65	86	105	158	691	243	77	17	28
22	22	18	41	264	85	103	148	652	241	65	16	28
23	22	17	38	257	81	111	145	646	228	62	16	28
24	22	16	37	194	80	135	145	688	214	58	16	27
25	22	17	33	158	78	156	148	685	198	55	14	27
26	22	17	30	139	80	161	166	685	190	51	14	26
27	22	17	30	151	82	137	159	685	198	48	14	27
28	22	16	28	100	95	137	153	627	214	47	14	26
29	22	15	27	85	-----	129	150	562	250	48	14	26
30	22	15	29	90	-----	125	170	504	227	46	14	25
31	22	-----	29	86	-----	115	-----	456	-----	44	14	-----
TOTAL	603	603	782	2,380	2,444	3,462	5,391	17,456	8,725	2,669	681	671
MEAN	19.5	20.1	25.2	76.8	87.3	112	180	563	291	86.1	22.0	22.4
MAX	26	24	41	264	137	161	324	797	445	186	40	34
MIN	11	15	14	24	60	86	107	175	190	44	14	12
AC-FT	1,200	1,200	1,550	4,720	4,850	6,870	10,690	34,620	17,310	5,290	1,350	1,330

CAL YR 1969 TOTAL 49,361 MEAN 135 MAX 1,100 MIN 7.2 ACFT 97,910
WAT YR 1970 TOTAL 45,867 MEAN 126 MAX 797 MIN 11 ACFT 90,980

PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-22	1800	4.70	367	5-7	0200	6.61	803
4-11	0100	4.82	352	5-18	2200	6.70	828

BRUNEAU RIVER BASIN

13162500 East Fork Jarbidge River near Three Creek, Idaho

LOCATION.--Lat 42°02'00", long 115°22'20", in SE&SE& sec.14, T.16 S., R.9 E., Owyhee County, on left bank 0.2 mile downstream from Murphy Hot Springs, 2 miles upstream from mouth, and 11 miles southwest of Three Creek.

DRAINAGE AREA.--84.6 sq mi. Mean altitude, 7,600 ft.

PERIOD OF RECORD.--October 1928 to March 1933, September 1953 to current year. Monthly discharge only for October 1928, published in WSP 1317.

GAGE.--Water-stage recorder. Altitude of gage is 5,150 ft (by barometer). Prior to Sept. 23, 1953, at present site at datum about 1.6 ft higher.

AVERAGE DISCHARGE.--21 years (1928-32, 1953-70), 57.3 cfs (41,510 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 602 cfs May 27 (gage height, 5.76 ft); minimum, 3.3 cfs Dec. 29 (gage height, 3.42 ft).

Period of record: Maximum discharge, 693 cfs June 24, 1962 (gage height, 4.95 ft); minimum, 0.7 cfs Dec. 23, 25, 1962 (gage height, 2.82 ft).

REMARKS.--Records good. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 14 to June 23)

3.4	3.7	4.3	90
3.6	11	4.6	153
3.7	16	5.0	270
3.8	24	5.4	458
4.0	44	5.7	640

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.4	14	9.9	8.5	21	25	25	34	336	203	43	20
2	9.6	14	9.5	6.5	17	25	28	48	367	200	42	18
3	10	13	9.3	8.0	18	22	30	89	437	215	41	17
4	10	13	9.2	8.0	17	22	33	136	509	226	40	18
5	10	14	9.8	8.2	16	22	40	191	447	227	40	22
6	11	14	8.3	7.2	16	19	56	217	413	225	39	37
7	11	14	11	8.3	16	21	75	228	425	206	36	38
8	12	14	10	9.6	18	23	67	185	417	180	35	37
9	12	13	11	10	21	22	67	189	414	170	34	34
10	14	12	11	10	24	22	81	187	334	159	32	30
11	14	14	11	9.7	29	20	88	162	248	151	30	27
12	14	13	11	9.6	38	22	75	144	197	135	29	24
13	14	13	11	9.5	36	21	66	134	182	124	28	24
14	14	12	11	9.9	32	22	60	121	165	107	27	24
15	13	12	10	9.7	28	24	54	121	162	95	27	22
16	16	14	9.8	12	26	23	50	165	162	89	25	22
17	16	9.7	9.9	15	27	23	46	280	166	84	24	21
18	17	11	9.7	13	24	23	43	380	188	81	24	19
19	15	12	10	12	22	21	44	414	236	79	24	19
20	15	13	11	14	20	23	40	383	285	76	24	20
21	16	13	13	15	23	25	40	335	378	79	25	20
22	18	12	17	57	22	25	38	347	398	75	22	19
23	19	8.7	15	70	21	27	37	399	377	70	21	18
24	18	12	13	44	21	29	35	407	399	65	21	18
25	17	11	9.7	33	20	32	35	442	397	60	20	17
26	16	10	12	28	21	33	39	528	376	56	20	17
27	16	8.1	10	32	22	31	37	565	380	52	20	17
28	16	8.3	9.2	24	24	31	35	455	348	49	20	16
29	15	9.7	7.0	18	-----	30	35	399	342	47	20	15
30	15	11	13	25	-----	28	37	367	253	45	19	15
31	14	-----	11	18	-----	26	-----	339	-----	44	19	-----
TOTAL	436.0	362.5	333.3	562.7	640	762	1,436	8,391	9,738	3,674	871	665
MEAN	14.1	12.1	10.8	18.2	22.9	24.6	47.9	271	325	119	28.1	22.2
MAX	19	14	17	70	38	33	88	565	509	227	43	38
MIN	8.4	8.1	7.0	6.5	16	19	25	34	162	44	19	15
CFSM	.17	.14	.13	.21	.27	.29	.57	3.20	3.84	1.40	.33	.26
IN.	.19	.16	.15	.25	.28	.33	.63	3.69	4.28	1.62	.38	.29
AC-FT	865	719	661	1,120	1,270	1,510	2,850	16,640	19,320	7,290	1,730	1,320

CAL YR 1969 TOTAL 25,736.5 MEAN 70.5 MAX 451 MIN 7.0 CFSM .83 IN 11.31 AC-FT 51,050
WTR YR 1970 TOTAL 27,871.5 MEAN 76.4 MAX 565 MIN 6.5 CFSM .90 IN 12.25 AC-FT 55,280
PEAK DISCHARGE (BASE, 200 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-7	0100	5.02	250	6-4	0400	5.65	522
5-27	0500	5.76	602	6-22	0400	5.44	425

13167500 East Fork Bruneau River near Hot Spring, Idaho

LOCATION.--Lat 42°33'25", long 115°30'35", in SW¼SW¼NW¼ sec.15, T.10 S., R.8 E., Owyhee County, on right bank at Winter Camp Ranch, at mile 10, and 20 miles southeast of Hot Spring.

DRAINAGE AREA.--620 sq mi, approximately.

PERIOD OF RECORD.--August 1910 to November 1914, February to April 1915, December 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,864.8 ft. Prior to Dec. 10, 1948, nonrecording gage at approximately present site at different datum. Dec. 10, 1948, to Nov. 18, 1964, water-stage recorder at site 50 ft upstream at datum 0.1 ft lower.

AVERAGE DISCHARGE.--25 years (1910-14, 1949-70), 30.2 cfs (21,880 acre-ft per year); 15-year base period (1952-67), 26.0 cfs.

EXTREMES.--Current year: Maximum discharge, 224 cfs May 25 (gage height, 4.34 ft); minimum, 3.0 cfs Oct. 1 (gage height, 1.12 ft).

Period of record: Maximum discharge, 619 cfs June 8, 1963 (gage height, 8.29 ft); maximum gage height observed, 10.8 ft Mar. 8, 1911, datum then in use (ice jam) no flow for long periods during irrigation seasons in 1954, 1955, 1961, 1966, and shorter periods in 1959, 1968.

Maximum stage known, 16.9 ft, from floodmark, datum then in use, during spring of 1910.

REMARKS.--Records good except those for November to January, which are fair. Diversions for irrigation above station. Water diverted from Deadwood Creek, a tributary of East Fork, to Cedar Creek Reservoir in Salmon Falls Creek basin for irrigation.

REVISIONS (WATER YEARS).--WSP 1397: 1949.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 16 to Dec. 17, Dec. 26 to Jan. 9,
Jan. 28, 29, Jan. 31 to Feb. 9)

1.0	2.2	2.0	33
1.1	3.5	3.0	94
1.3	7.2	4.0	182
1.5	13	4.4	231

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.2	10	6.4	8.0	17	14	19	51	155	100	10	9.3
2	3.3	10	6.8	7.8	17	15	18	50	143	75	9.4	8.7
3	3.4	10	7.2	7.9	17	15	20	46	132	57	8.5	8.6
4	3.7	10	7.6	8.0	17	15	19	48	122	47	7.4	8.4
5	4.7	10	7.6	8.0	16	14	18	59	117	41	7.6	9.0
6	6.6	10	9.0	7.8	16	13	18	78	112	43	7.6	12
7	5.6	11	10	7.8	16	13	20	107	112	38	7.3	14
8	5.7	11	12	11	16	13	24	146	114	35	8.5	13
9	6.0	11	13	15	17	14	27	163	113	32	7.6	11
10	6.3	11	13	20	17	14	28	170	107	31	6.7	10
11	7.0	11	13	22	17	14	31	179	109	32	6.7	10
12	7.3	11	15	25	17	14	35	197	118	33	6.5	11
13	7.2	11	16	28	17	13	39	173	103	29	6.7	9.7
14	7.2	10	16	28	18	13	41	154	102	25	6.4	10
15	7.3	10	15	32	18	14	41	143	110	21	6.4	11
16	8.1	9.6	14	32	17	14	41	131	117	19	6.7	11
17	10	9.5	15	40	17	15	41	124	122	18	7.5	11
18	11	9.4	16	41	18	15	40	124	110	17	7.6	10
19	11	9.6	17	29	17	13	38	146	91	16	7.6	11
20	11	9.6	18	25	17	14	37	177	80	15	7.5	12
21	10	9.0	17	21	16	15	37	194	72	16	8.0	12
22	9.3	8.4	23	23	18	16	36	205	63	18	9.1	12
23	10	8.0	20	29	17	16	34	208	60	17	10	11
24	9.6	8.4	15	37	17	15	32	208	64	15	8.5	11
25	9.6	8.4	17	24	15	15	33	222	57	14	7.5	10
26	9.5	7.6	12	20	15	15	36	206	50	13	5.8	10
27	9.5	7.0	11	19	14	15	36	196	52	13	7.3	11
28	10	6.6	10	22	14	16	42	188	55	12	7.7	11
29	10	6.2	9.0	20	-----	16	41	195	80	13	8.1	11
30	10	5.6	8.0	18	-----	19	39	183	90	13	6.9	8.9
31	11	-----	8.0	18	-----	19	-----	168	-----	10	8.6	-----
TOTAL	244.1	279.9	397.6	654.3	465	456	961	4,639	2,932	878	237.7	318.6
MEAN	7.87	9.33	12.8	21.1	16.6	14.7	32.0	150	97.7	28.3	7.67	10.6
MAX	11	11	23	41	18	19	42	222	155	100	10	14
MIN	3.2	5.6	6.4	7.8	14	13	18	46	50	10	5.8	8.4
AC-FT	484	555	789	1,300	922	904	1,910	9,200	5,820	1,740	471	632
CAL YR 1969	TOTAL	9,762.2	MEAN	26.7	MAX	135	MIN	1.1	AC-FT	19,360		
WTR YR 1970	TOTAL	12,463.2	MEAN	34.1	MAX	222	MIN	3.2	AC-FT	24,720		

BRUNEAU RIVER BASIN

13168500 Bruneau River near Hot Spring, Idaho

LOCATION.--Lat 42°46'16", long 115°43'10", in NE¼NE¼SE¼ sec.34, T.7 S., R.6 E., Owyhee County, on right bank at Dunham Ranch, 1 mile downstream from Hot Creek, 1.5 miles south of Hot Spring, 9 miles southeast of Bruneau, 16 miles downstream from East Fork, and at mile 22.0.

DRAINAGE AREA.--2,630 sq mi, approximately. Mean altitude, 5,600 ft.

PERIOD OF RECORD.--July 1909 to March 1915, October 1943 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,598.5 ft above mean sea level. Prior to Mar. 12, 1910, non-recording gage at site 0.2 mile upstream at different datum. Mar. 12, 1910, to Mar. 15, 1915, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--32 years (1909-14, 1943-70), 376 cfs (272,400 acre-ft per year); 15-year base period (1952-67), 318 cfs.

EXTREMES.--Current year: Maximum discharge, 2,730 cfs Jan. 23 (gage height, 8.46 ft); minimum, 52 cfs Nov. 29, 30, Dec. 1, 29, Jan. 2, 3, 4 (gage height, 3.24 ft).

Period of record: Maximum discharge, 6,500 cfs Mar. 1, 1910 (gage height, 13.0 ft, from floodmark, present site and datum), from rating curve extended above 1,200 cfs; minimum daily, 25 cfs Dec. 18, 1964.

REMARKS.--Records good. Several small reservoirs on tributaries above station. Diversions above station for irrigation of about 8,500 acres.

REVISIONS (WATER YEARS).--WSP 1063: 1913. WSP 1517: 1910(M). WSP 1567: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 4-5, July 19-25)

3.2	46	6.0	1,010
3.4	68	7.0	1,610
3.7	114	8.0	2,340
4.0	180	8.3	2,580
5.0	532		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	64	99	67	92	279	232	280	479	1,740	1,100	161	83
2	65	98	75	58	273	246	263	570	1,700	881	154	84
3	66	98	77	57	236	269	248	709	1,790	790	145	83
4	70	97	81	55	246	242	262	918	1,910	762	139	81
5	72	97	85	70	221	234	267	1,370	1,890	725	134	80
6	75	96	85	69	212	226	281	1,510	1,760	695	135	87
7	76	100	89	66	216	208	411	1,800	1,670	663	135	116
8	77	103	91	74	208	215	545	1,820	1,670	606	127	144
9	77	102	97	92	213	238	527	1,710	1,650	555	122	129
10	78	101	94	121	220	250	561	2,100	1,630	527	119	124
11	82	100	95	132	237	234	688	2,240	1,480	509	116	117
12	85	98	96	122	261	218	732	1,750	1,270	486	110	109
13	84	99	98	120	331	220	628	1,500	1,150	445	107	105
14	86	98	102	126	370	217	593	1,350	1,170	416	103	102
15	85	98	100	131	360	246	534	1,200	1,150	390	101	100
16	89	98	96	136	332	298	491	1,190	1,070	361	98	100
17	91	99	91	141	313	288	466	1,430	1,040	337	98	100
18	102	99	94	244	313	279	459	1,880	1,040	330	96	101
19	112	86	94	295	278	255	454	2,260	1,050	317	95	100
20	105	82	99	267	240	238	466	2,360	1,120	305	93	105
21	99	92	109	318	219	242	443	2,220	1,210	298	91	105
22	97	98	119	427	248	255	435	2,080	1,270	319	91	108
23	104	93	139	2,090	249	251	410	2,090	1,320	292	91	106
24	108	84	155	1,280	229	250	391	2,240	1,260	270	90	104
25	106	82	140	819	221	268	390	2,360	1,200	244	89	107
26	105	94	124	571	214	306	430	2,410	1,120	225	87	107
27	103	85	109	472	211	330	462	2,540	1,090	215	85	106
28	102	73	89	685	216	319	451	2,530	1,170	202	85	105
29	101	63	61	397	-----	308	438	2,300	1,210	191	83	104
30	103	61	74	302	-----	306	420	2,050	1,350	178	83	103
31	100	-----	100	311	-----	295	-----	1,850	-----	171	85	-----
TOTAL	2,769	2,773	3,025	10,140	7,166	7,983	13,426	54,816	41,150	13,805	3,348	3,105
MEAN	89.3	92.4	97.6	327	256	258	448	1,768	1,372	445	108	104
MAX	112	103	155	2,090	370	330	732	2,540	1,910	1,100	161	144
MIN	64	61	61	55	208	208	248	479	1,040	171	83	80
AC-FT	5,490	5,500	6,000	20,110	14,210	15,830	26,630	108,700	81,620	27,380	6,640	6,160
CAL YR 1969	TOTAL 157,276		MEAN 431		MAX 2,170		MIN 54		AC-FT 312,000			
WTR YR 1970	TOTAL 163,506		MEAN 448		MAX 2,540		MIN 55		AC-FT 324,300			

BRUNEAU RIVER BASIN

183

13169500 Big Jacks Creek near Bruneau, Idaho
(Hydrologic bench-mark station)

LOCATION.--Lat 42°47'06", long 115°59'00", in NW¼SE¼ sec.28, T.7 S., R.4 E., Owyhee County, on left bank 0.2 mile upstream from confluence with Little Jacks Creek and 11.5 miles southwest of Bruneau.

DRAINAGE AREA.--253 sq mi.

PERIOD OF RECORD.--December 1938 to October 1949, July 1965 to current year. Prior to October 1968, published as W-ckahoney Creek near Bruneau.

GAGE.--Water-stage recorder and a self-cleaning broad-crested concrete weir. Altitude of gage is 2,810 ft (by barometer). December 1938 to October 1949 at site 145 ft upstream at different datum.

AVERAGE DISCHARGE.--15 years (1939-49, 1965-70), 2.39 cfs (1,730 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 132 cfs Jan. 27 (gage height, 3.15 ft); no flow for long periods. Period of record: Maximum discharge, 2,100 cfs Jan. 22, 1943 (gage height, 12.4 ft, from high-water mark, site and datum then in use), by slope-area measurement of peak flow; no flow for long periods each year.

REMARKS.--Records good. No diversion or regulation. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

REVISIONS.--1967 WRD for Idaho: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.6	.01	2.0	3.4
1.7	.08	2.2	10
1.8	.45	2.5	27
1.9	1.4	2.8	68

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.03	.31	0	0	10	.40	0	0	0	12	0	0
2	.35	.31	0	0	8.2	.40	0	0	0	5.6	0	0
3	.94	.31	0	0	7.1	.47	0	0	0	2.6	0	0
4	.84	.31	0	0	6.0	.37	0	0	0	1.4	0	0
5	.66	.16	0	0	5.6	.27	0	0	0	1.6	.56	0
6	.51	.19	0	0	4.9	.23	0	0	0	3.4	.26	0
7	.40	.40	0	0	4.3	.08	0	0	0	9.5	0	0
8	.31	.58	0	0	8.6	.15	0	0	0	6.1	0	0
9	.31	.45	0	0	15	.39	0	0	0	3.7	0	0
10	.58	.40	0	0	15	.28	0	0	0	3.2	0	0
11	1.0	.31	0	0	15	.28	0	0	0	3.1	0	0
12	.75	.23	0	0	14	.30	0	0	0	2.7	0	0
13	.75	.23	0	0	14	.10	0	0	0	1.8	0	0
14	.75	.23	0	0	9.5	0	0	.88	0	1.3	0	0
15	.66	.31	0	0	6.9	.03	0	.21	0	.88	0	0
16	.84	.40	0	0	4.0	.04	0	0	0	.54	0	0
17	1.4	.51	0	0	2.8	.50	0	0	0	.30	0	0
18	1.4	.35	0	0	3.3	.41	0	0	0	.19	0	0
19	1.2	.16	0	0	2.4	.29	0	0	0	.11	0	0
20	.84	.08	0	0	1.4	.15	0	0	0	.03	0	0
21	.58	.19	0	0	1.6	.02	0	0	0	.20	0	0
22	.45	.16	0	17	1.3	0	0	0	0	.69	0	0
23	.40	.06	0	57	1.1	0	0	0	0	.45	0	0
24	.35	.08	0	42	.80	0	0	0	0	.11	0	0
25	.31	.17	0	27	.67	0	0	0	0	0	0	0
26	.35	.09	0	12	.56	0	0	0	0	0	0	0
27	.35	0	0	34	.52	0	0	0	0	0	0	0
28	.27	0	0	62	.41	0	0	0	0	0	0	0
29	.35	0	0	23	-----	0	0	0	2.8	0	0	0
30	.40	0	0	17	-----	.05	0	0	23	0	0	0
31	.35	-----	0	12	-----	.05	-----	0	-----	0	0	-----
TOTAL	18.68	6.98	0	303	164.96	5.26	0	1.09	25.8	61.50	0.82	0
MEAN	.60	.23	0	9.77	5.89	.17	0	.035	.86	1.98	.027	0
MAX	1.4	.58	0	62	15	.50	0	.88	23	12	.56	0
MIN	.03	0	0	0	.41	0	0	0	0	0	0	0
AC-FT	37	14	0	601	327	10	0	2.2	51	122	1.6	0
CAL YR 1969	TOTAL	2,674.47	MEAN	7.33	MAX	155	MIN	0	AC-FT	5,300		
WTR YR 1970	TOTAL	588.09	MEAN	1.61	MAX	62	MIN	0	AC-FT	1,170		

13176000 Owyhee River above China diversion dam, near Owyhee, Nev.

LOCATION.--Lat 41°55'20", long 116°04'10", in NW¼ sec.6, T.46 N., R.53 E., Elko County, on right bank 1,000 ft downstream from Skull Creek, 1 mile upstream from China diversion dam, and 2 miles southeast of Owyhee, and at mile 262.0.

DRAINAGE AREA.--458 sq mi.

PERIOD OF RECORD.--March 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,425 ft above mean sea level, unadjusted. Prior to Oct. 1, 1939, at datum 1.48 ft higher.

AVERAGE DISCHARGE.--31 years, 135 cfs (97,810 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,410 cfs Jan. 23 (gage height, 9.24 ft); minimum, 16 cfs Oct. 1.

Period of record: Maximum discharge, 2,710 cfs May 3 or 4, 1952 (gage height, 10.07 ft); minimum, 1.8 cfs Nov. 16, 1961.

REMARKS.--Records good except those for winter months, which are fair. Numerous diversions above station for irrigation. Flow partly regulated by Wild Horse Reservoir.

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	17	28	23	19	100	95	99	275	384	150	103	110
2	20	28	22	18	95	99	106	345	346	124	102	108
3	20	28	22	19	90	88	94	375	315	109	97	108
4	19	28	20	19	85	86	92	446	301	95	92	109
5	21	27	19	20	84	83	99	550	301	94	95	97
6	23	27	18	20	87	76	117	653	294	92	115	97
7	22	29	17	22	93	80	150	733	268	86	122	98
8	22	30	17	25	92	96	152	692	257	81	120	98
9	25	28	18	28	95	94	164	869	281	80	118	63
10	28	27	18	30	95	90	204	944	280	117	118	47
11	28	28	19	31	105	80	251	864	260	98	142	45
12	28	27	21	32	135	88	214	701	232	83	145	45
13	28	27	23	35	145	91	206	611	235	73	145	46
14	29	27	24	40	124	100	187	545	236	64	147	46
15	29	27	22	56	110	111	173	515	214	56	147	47
16	30	25	21	130	107	111	161	555	196	55	145	47
17	35	24	21	219	124	114	166	681	182	53	140	48
18	36	23	22	211	107	103	181	848	159	60	134	48
19	33	23	23	185	95	107	196	911	152	69	136	51
20	32	25	25	181	103	110	177	887	144	73	138	55
21	31	27	27	221	110	117	180	825	133	110	138	53
22	30	26	28	870	95	105	158	781	134	104	132	52
23	30	25	27	910	93	106	152	749	225	95	130	36
24	29	25	27	432	87	112	151	774	230	90	135	24
25	29	26	25	286	82	116	150	739	229	85	135	22
26	28	27	24	220	80	124	180	686	225	82	133	22
27	28	26	22	260	82	119	178	657	242	82	135	20
28	28	24	21	200	87	123	175	589	260	80	124	20
29	28	23	19	150	-----	116	170	530	409	75	111	20
30	28	24	20	130	-----	115	201	475	218	72	109	19
31	28	-----	20	110	-----	104	-----	424	-----	98	113	-----
TOTAL	842	789	675	5,139	2,791	3,159	4,884	20,229	7,346	2,685	3,657	1,701
MEAN	27.2	26.3	21.8	166	99.7	102	163	653	245	86.6	126	56.7
MAX	36	30	28	910	145	124	251	944	409	150	147	110
MIN	17	23	17	18	80	76	92	275	133	53	53	19
AC-FT	1,670	1,560	1,340	10,190	5,540	6,270	9,690	40,120	14,570	5,330	7,730	3,370

CAL YR 1969 TCTAL 71,523 MEAN 196 MAX 1,220 MIN 17 ACFT 141,900
WAT YR 1970 TOTAL 54,137 MEAN 148 MAX 944 MIN 17 ACFT 107,400

OWYHEE RIVER BASIN

13177800 South Fork Owyhee River near Whiterock, Nev.

LOCATION.--Lat 41°48'00", long 116°29'00", in NE¼ sec.16, T.45 N., R.49 E., Elko County, on left bank 500 ft downstream from Rye Grass Creek, 1.8 miles upstream from Chimney Creek, and 17 miles northwest of Whiterock, and at mile 54.0.

DRAINAGE AREA.--1,080 sq mi, approximately.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,900 ft (from topographic map).

AVERAGE DISCHARGE.--15 years, 147 cfs (106,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,320 cfs May 11 (gage height, 4.73 ft); minimum, 8.8 cfs Oct. 5.
Period of record: Maximum discharge, 3,830 cfs June 5, 1963 (gage height, 7.55 ft); no flow Oct. 1-12, 1955, part of Sept. 17, 28 1960, Aug. 27, 31, 1961.

REMARKS.--Records good except those for winter months, which are fair. Many diversions for irrigation of hay meadows above station. Flow partly regulated by four small reservoirs (total capacity, about 16,100 acre-ft).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	42	45	45	145	109	144	232	526	526	47	23
2	59	45	46	47	130	112	135	258	453	364	51	22
3	57	46	48	50	120	112	127	334	414	261	52	21
4	21	48	50	50	110	109	101	386	399	222	48	22
5	11	49	55	48	110	109	92	418	407	208	41	33
6	48	50	58	48	112	106	100	467	430	248	48	50
7	49	53	58	52	112	112	95	610	425	294	46	59
8	44	55	55	55	112	129	102	744	434	219	49	56
9	42	58	55	60	115	153	118	790	454	213	42	39
10	43	58	53	70	115	160	137	1,040	511	259	40	34
11	44	57	56	75	115	153	155	1,240	537	304	39	30
12	48	55	58	85	136	146	169	1,030	483	240	52	28
13	44	53	58	95	150	160	170	882	568	191	51	31
14	45	52	58	120	139	160	190	814	669	161	44	35
15	46	53	55	170	129	173	184	718	611	147	42	38
16	48	55	53	220	122	175	191	639	454	126	41	41
17	55	53	47	250	122	167	194	596	377	109	39	42
18	77	45	50	210	122	159	193	658	352	110	37	40
19	75	47	56	170	106	165	199	748	278	105	34	39
20	58	48	61	160	106	162	208	784	229	95	31	53
21	49	53	73	220	112	158	187	862	192	113	30	53
22	46	55	90	510	109	148	179	853	183	141	28	51
23	43	50	78	393	103	144	145	787	187	123	27	50
24	41	51	69	264	103	135	117	790	183	87	26	48
25	41	54	64	210	97	123	101	765	177	71	25	46
26	40	53	65	178	94	121	114	730	166	71	22	49
27	39	50	60	199	91	128	190	730	220	69	15	53
28	41	47	55	216	109	129	206	742	335	64	15	55
29	42	45	51	150	-----	139	193	720	876	58	18	54
30	42	45	47	140	-----	150	209	654	881	46	23	52
31	42	-----	45	150	-----	150	-----	591	-----	47	22	-----
TOTAL	1,435	1,525	1,772	4,710	3,246	4,356	4,645	21,612	12,419	5,292	1,125	1,247
MEAN	46.3	50.8	57.2	152	116	141	155	697	414	171	36.3	41.6
MAX	77	58	90	510	150	175	209	1,240	881	526	52	59
MIN	11	42	45	45	91	106	92	232	166	46	15	21
AC-FT	2,850	3,020	3,510	9,340	6,440	8,640	9,210	42,870	24,630	10,500	2,230	2,470
CAL YR 1969	TOTAL 103,345.5		MEAN 283		MAX 2,480		MIN 2.2		AC-FT 205,000			
WTR YR 1970	TOTAL 63,384		MEAN 174		MAX 1,240		MIN 11		AC-FT 125,700			

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-22	1200	3.81	648	6-29	1700	4.51	1,150
5-11	0900	4.73	1,320				

13178000 Jordan Creek above Lone Tree Creek, near Jordan Valley, Oreg.

LOCATION.--Lat 42°52'27", long 116°57'12", in SW¼NE¼ sec.29, T.6 S., R.5 W., Boise meridian, Owyhee County, on right bank 0.2 mile upstream from Morgan Ranchhouse, 0.9 mile downstream from proposed damsite, 1.4 miles downstream from Williams Creek, 3.6 miles upstream from Lone Tree Creek, 4 miles east of the Idaho-Oregon State line, 9 miles southeast of Jordan Valley, and at mile 54.4.

DRAINAGE AREA.--440 sq mi, approximately. Mean altitude, 5,780 ft.

PERIOD OF RECORD.--April 1955 to current year. October 1945 to January 1953 at site 1.6 miles downstream; records equivalent except during late summer months when considerable difference may result from irrigation and return flow between sites.

GAGE.--Water-stage recorder. Datum of gage is 4,499.73 ft above mean sea level, unadjusted. Apr. 23, 1955, to Jan. 31, 1965, at site 0.4 mile upstream at datum 5.73 ft higher. Prior to June 14, 1952, water-stage recorder, and June 14, 1952, to Jan. 31, 1953, nonrecording gage, at site 1.6 miles downstream at different datum. Nonrecording gage at site 3.6 miles downstream at datum 4,404.78 ft above mean sea level, used as supplementary gage Feb. 3 to Aug. 31, 1965.

AVERAGE DISCHARGE.--22 years (1945-52, 1955-70), 186 cfs (134,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 2,000 cfs Jan. 22 (gage height, 7.38 ft); minimum daily, 0.50 cfs Aug. 19; minimum gage height, 3.10 ft Aug. 19.
Period of record: Maximum discharge, 7,530 cfs Dec. 24, 1964 (gage height, 11.05 ft, site and datum then in use), from rating curve extended above 4,210 cfs; no flow part of each day Oct. 4, 5, 1948.

REMARKS.--Records fair except those for August and September, which are poor. Diversions above station for irrigation. Records of suspended sediment loads for the water year 1970 are published in Part 2 of this report.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.1	21	18	27	245	208	245	370	565	146	12	3.1
2	5.4	21	13	26	203	205	242	520	550	104	6.2	5.4
3	7.0	21	12	27	205	200	226	660	560	88	5.8	1.4
4	7.8	21	15	28	178	194	230	800	550	75	5.4	1.1
5	9.2	21	13	28	170	178	262	1,050	540	73	6.2	1.7
6	11	27	13	30	166	168	347	1,300	510	78	6.2	1.0
7	11	30	19	40	158	173	458	1,230	466	83	6.2	.80
8	12	29	17	55	160	273	440	1,140	449	73	5.4	1.0
9	6.6	26	21	75	168	256	458	1,410	462	72	4.2	2.2
10	7.0	25	19	83	178	245	515	1,380	431	68	3.1	4.2
11	9.2	24	20	85	194	223	565	1,080	396	58	1.7	7.4
12	21	23	21	80	223	214	500	915	355	48	1.7	18
13	22	21	23	83	269	220	450	810	328	45	1.2	17
14	19	22	24	75	259	242	420	740	339	51	1.2	13
15	19	22	21	88	242	298	400	1,520	308	51	.50	13
16	20	27	21	106	230	294	380	873	294	46	1.2	7.0
17	27	27	22	208	236	372	360	1,220	290	44	1.2	7.0
18	28	26	19	214	220	347	350	1,540	301	43	.80	7.0
19	25	26	22	189	186	328	370	1,540	249	33	.50	11
20	27	22	35	236	191	324	360	1,410	200	21	1.1	29
21	28	27	68	441	197	312	350	1,220	170	28	.80	34
22	24	21	106	1,450	186	290	340	1,140	176	27	.70	27
23	23	21	68	1,060	173	290	330	1,180	176	23	.70	21
24	22	22	45	750	170	308	320	1,080	163	21	.80	20
25	23	22	36	535	170	324	310	1,040	151	14	.80	18
26	22	21	33	448	170	335	300	1,020	142	11	1.1	19
27	22	20	27	1,270	180	308	300	1,070	166	15	1.3	21
28	22	18	26	575	191	298	290	901	226	16	1.7	21
29	24	16	26	405	-----	287	290	774	256	16	1.3	21
30	22	16	27	339	-----	276	290	684	208	8.5	1.1	21
31	21	-----	29	266	-----	266	-----	610	-----	5.8	1.3	-----
TOTAL	550.3	686	879	9,322	5,518	8,256	10,698	32,227	9,977	1,485.3	83.80	374.30
MEAN	17.8	22.9	28.4	301	197	266	357	1,040	333	47.9	2.70	12.5
MAX	28	30	106	1,450	269	372	565	1,540	565	146	12	34
MIN	3.1	16	12	26	158	168	226	370	142	5.8	.50	.80
AC-FT	1,090	1,360	1,740	18,490	10,940	16,380	21,220	63,920	19,790	2,950	166	742

CAL YR 1969	TOTAL	102,608.70	MEAN	281	MAX	908	MIN	2.2	ACFT	203,500
WAT YR 1970	TOTAL	80,056.70	MEAN	219	MAX	1,540	MIN	.50	ACFT	158,800

PEAK DISCHARGE (BASE, 700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
1-22	1200	7.38	2,000	5-19	0100	7.03	1,680
5-9	0600	6.85	1,500				

OWYHEE RIVER BASIN

13181000 Owyhee River near Rome, Oreg.

LOCATION.--Lat 42°52'00", long 117°39'00", in SE¼NE¼ sec.14, T.31 S., R.41 E., Malheur County, on right bank 0.5 mile downstream from Jordan Creek, 2.6 miles north of Rome, and at mile 117.0.

DRAINAGE AREA.--About 8,000 sq mi.

PERIOD OF RECORD.--October 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,344.20 ft above mean sea level. Prior to Feb. 10, 1960, at datum 0.24 ft lower.

AVERAGE DISCHARGE.--21 years, 821 cfs (594,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 16,700 cfs Jan. 23 (gage height, 12.68 ft); minimum, 108 cfs Oct. 1. Period of record: Maximum discharge, 33,500 cfs Dec. 24, 1964 (gage height, 16.7 ft, from floodmark); minimum, 42 cfs Aug. 12, 1954, July 28, Aug. 5, 1961, July 31, 1968.

REVISIONS.--The maximum discharge for water year 1969 has been revised to 17,800 cfs Apr. 6, 1969 (gage height, 13.11 ft), superseding figure published in WRD Idaho, 1969.

REMARKS.--Records good. Flow regulated by Antelope Reservoir (capacity, 55,000 acre-ft), Wild Horse Reservoir (capacity, 32,690 acre-ft), and numerous small reservoirs. Diversions above station for irrigation.

REVISIONS.--Revised figures of discharge, in cubic feet per second, for the water year 1969, superseding those published in WRD Idaho, 1969, are given herewith:

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1968 TO SEPTEMBER 1969

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	132	246	324	1,060	502	13,700	3,390	815	600	127	122
2	106	132	231	338	1,070	514	14,100	3,190	760	522	127	140
3	106	140	219	370	935	526	14,700	3,000	720	474	125	131
4	104	150	237	464	825	546	12,800	2,820	680	434	127	142
5	106	165	222	668	785	538	13,600	2,710	600	398	114	148
6	108	170	234	656	755	538	15,200	2,640	530	378	108	158
7	111	168	222	604	740	518	12,900	2,630	502	362	105	150
8	113	180	216	576	680	522	11,200	2,660	462	346	112	155
9	116	183	240	460	650	510	10,100	2,670	446	343	114	155
10	118	318	219	412	645	490	10,300	2,800	434	354	118	160
11	118	261	228	380	675	462	10,200	2,890	518	350	122	160
12	120	234	228	388	870	426	9,640	2,950	590	329	136	158
13	123	252	213	580	1,210	438	9,760	2,960	635	304	133	162
14	125	276	192	805	1,070	438	9,320	3,030	880	287	136	165
15	132	255	189	870	986	438	7,920	3,280	1,010	266	142	140
16	132	240	249	1,020	835	482	6,880	3,060	1,020	252	140	138
17	132	237	225	900	775	565	6,640	2,780	875	252	140	160
18	132	231	216	648	775	2,340	6,490	2,470	830	239	142	160
19	132	264	234	568	760	4,090	6,330	2,260	745	218	145	162
20	135	405	231	2,800	670	3,150	5,730	2,050	665	200	148	160
21	138	321	201	8,900	610	2,260	5,490	2,000	595	190	145	155
22	138	468	168	11,400	625	1,840	5,340	1,820	530	172	148	148
23	135	422	198	6,950	615	2,380	5,480	1,700	506	170	145	142
24	135	352	225	3,920	630	3,080	5,490	1,580	534	160	142	138
25	135	307	422	2,690	655	2,200	5,280	1,470	542	160	131	136
26	135	279	448	2,510	560	2,130	4,880	1,360	575	148	129	133
27	135	314	394	2,760	522	3,260	4,450	1,280	715	148	122	131
28	135	276	492	2,540	518	5,310	4,010	1,230	705	152	127	129
29	132	255	480	1,660	-----	6,700	3,730	1,120	670	140	127	125
30	132	240	360	1,330	-----	10,000	3,660	956	660	133	125	122
31	132	-----	346	1,090	-----	13,600	-----	870	-----	131	122	-----
TOTAL	3,859	7,627	8,225	59,581	21,506	70,793	255,320	71,626	19,749	8,612	4,024	4,385
MEAN	124	254	265	1,922	768	2,284	8,511	2,311	658	278	130	146
MAX	138	468	492	11,400	1,210	13,600	15,200	3,390	1,020	600	148	165
MIN	104	132	168	324	518	426	3,660	870	434	131	105	122
AC-FT	7,650	15,130	16,310	118,200	42,660	140,400	506,400	142,100	39,170	17,080	7,980	8,700

CAL YR 1968 TOTAL 92,071 MEAN 252 MAX 5,010 MIN 44 AC-FT 182,600
WAT YR 1969 TOTAL 535,307 MEAN 1,467 MAX 15,200 MIN 104 AC-FT 1,062,000

PEAK DISCHARGE (BASE, 5,400 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-21	2200	11.46	13,600	4- 3	1500	12.95	17,400
3-18	2100	7.39	5,360	4- 6	1600	13.11	17,800
3-31	1600	12.34	15,800				

13181000 Owyhee River near Rome, Oreg.--Continued

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	120	162	168	190	1,230	890	700	1,030	1,550	2,170	172	133
2	122	165	168	190	1,070	1,020	670	1,270	1,360	1,510	170	136
3	133	162	172	158	980	1,360	640	1,340	1,200	1,050	168	133
4	148	162	168	138	968	1,110	615	1,180	1,050	825	152	148
5	150	162	178	142	940	845	595	1,400	950	640	155	160
6	148	180	182	150	890	725	590	1,660	915	560	155	160
7	150	185	185	150	870	655	630	1,910	935	490	160	168
8	150	182	188	168	845	700	705	2,110	950	474	155	168
9	138	182	190	175	986	1,660	745	2,360	986	542	150	158
10	133	180	195	198	1,300	1,540	700	2,800	1,010	486	150	155
11	148	182	195	198	1,340	1,120	725	3,470	974	402	162	180
12	155	182	239	198	1,550	930	760	4,220	998	390	158	180
13	150	182	227	205	1,830	810	860	3,670	1,000	454	150	170
14	150	185	202	218	1,880	730	850	3,090	945	466	145	162
15	150	185	202	294	1,600	1,030	805	2,580	1,090	402	142	165
16	155	188	205	343	1,290	1,500	825	2,260	1,180	343	140	158
17	162	185	205	1,170	1,110	1,430	870	2,090	1,060	304	150	155
18	165	182	202	3,240	1,160	1,250	835	2,100	880	284	148	150
19	170	200	198	2,400	1,360	1,170	870	2,260	740	273	142	170
20	168	200	208	1,720	1,050	930	930	2,560	685	252	136	180
21	178	198	218	1,740	845	855	940	2,840	645	233	133	180
22	192	185	248	5,920	780	805	870	2,770	538	224	131	175
23	190	182	315	13,900	740	850	800	2,690	470	210	133	182
24	185	175	312	6,890	720	915	755	2,640	414	208	131	172
25	180	172	284	5,070	695	974	710	2,580	378	222	131	178
26	172	182	290	3,260	725	1,020	695	2,390	370	224	133	178
27	170	175	273	2,700	765	910	735	2,240	382	208	136	172
28	168	168	245	6,090	810	845	795	2,210	394	195	148	165
29	168	168	200	3,260	-----	750	850	2,120	414	178	145	170
30	165	165	175	2,140	-----	735	1,050	1,960	914	175	150	165
31	165	-----	178	1,540	-----	720	-----	1,760	-----	172	142	-----
TOTAL	4,898	5,363	6,615	64,155	30,329	30,784	23,120	71,560	25,377	14,566	4,573	4,926
MEAN	158	179	213	2,070	1,083	993	771	2,308	846	470	148	164
MAX	192	200	315	13,900	1,880	1,660	1,050	4,220	1,550	2,170	172	182
MIN	120	162	168	138	695	655	590	1,030	370	172	131	133
AC-FT	9,720	10,640	13,120	127,300	60,160	61,060	45,860	141,900	50,340	28,890	9,070	9,770

CAL YR 1969 TOTAL 532,472 MEAN 1,459 MAX 15,200 MIN 105 AC-FT 1,056,000
WAT YR 1970 TOTAL 286,266 MEAN 784 MAX 13,900 MIN 120 AC-FT 567,800

PEAK DISCHARGE (BASE, 5,400 CFS).--Jan. 23 (0730) 16,700 cfs (12.68 ft); Jan. 28 (0700) 7.270 cfs (8.57 ft).

BOISE RIVER BASIN

13185000 Boise River near Twin Springs, Idaho

LOCATION.--Lat 43°39'22", long 115°43'34", in NW¼NE¼ sec.27, T.4 N., R.6 E., Boise County, on right bank 0.7 mile upstream from Birch Creek, 1.8 miles upstream from maximum flow line of Arrowrock Reservoir, 3.2 miles downstream from Twin Springs, 13 miles upstream from Arrowrock Dam, and at mile 98.1.

DRAINAGE AREA.--830 sq mi, approximately. Mean altitude, 6,350 ft.

PERIOD OF RECORD.--March 1911 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,256.34 ft (U.S.C. & G.S., preliminary, unadjusted). March 1911 to Apr. 3, 1915, nonrecording gage, and Apr. 4, 1915, to Sept. 30, 1965, water-stage recorder at site 0.3 mile downstream at datum 5.26 ft lower.

AVERAGE DISCHARGE.--59 years, 1,181 cfs (19.32 inches per year, 855,600 acre-ft per year); 15-year base period (1952-67), 1,252 cfs.

EXTREMES.--Current year: Maximum discharge, 7,460 cfs May 27 (gage height, 9.01 ft); minimum, 226 cfs Nov. 28 (gage height, 4.02 ft).

Period of record: Maximum discharge, 18,800 cfs Dec. 23, 1964 (gage height, 12.20 ft, from floodmark, site and datum then in use); minimum, 109 cfs Dec. 10, 1944; minimum gage height, 1.48 ft Dec. 6, 7, 1960 (site and datum then in use).

REMARKS.--Records good.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 30 to Sept. 30; stage-discharge relation affected by ice Nov. 27 to Dec. 6, Dec. 26 to Jan. 14)

4.0	226	6.0	2,100
4.5	505	7.0	3,610
5.0	930	9.0	7,440

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	368	385	315	310	614	930	813	921	4,140	3,180	759	429
2	404	379	305	315	566	960	813	1,110	4,640	2,850	733	423
3	429	379	305	350	558	867	777	1,650	5,510	2,920	706	406
4	398	379	325	370	505	795	786	2,420	6,320	3,030	680	407
5	385	379	310	390	477	733	867	3,470	6,510	2,850	715	468
6	379	423	290	390	498	689	1,160	4,170	6,280	2,850	733	461
7	379	463	341	410	484	698	1,660	4,730	6,400	2,560	663	449
8	385	423	373	420	477	960	1,510	3,860	6,120	2,340	630	449
9	435	392	373	450	491	960	1,800	3,500	6,280	2,170	614	476
10	416	379	368	450	551	912	1,710	3,400	5,460	2,210	597	429
11	392	379	357	460	606	867	1,890	2,900	4,480	2,180	581	415
12	385	373	362	460	680	840	1,640	2,580	3,860	1,920	566	406
13	368	368	398	460	822	786	1,470	2,240	3,470	1,780	543	410
14	357	362	392	460	813	813	1,360	2,020	3,270	1,650	535	411
15	362	351	373	477	750	885	1,230	1,970	3,400	1,510	520	416
16	392	368	357	456	698	912	1,110	2,420	3,310	1,420	513	416
17	392	346	351	470	813	903	1,060	3,860	3,160	1,360	505	411
18	379	309	351	581	804	822	1,060	5,880	3,290	1,280	491	400
19	379	304	357	680	706	786	1,130	6,650	3,730	1,220	484	435
20	373	324	416	741	647	768	1,090	5,960	4,140	1,160	484	517
21	379	319	449	768	638	768	1,030	5,800	4,680	1,140	477	479
22	379	324	589	1,090	663	777	1,030	5,780	5,120	1,100	463	449
23	379	285	505	1,300	698	795	990	6,180	5,290	1,040	456	434
24	379	324	410	1,710	733	840	970	6,080	5,100	980	449	421
25	385	324	341	1,470	750	885	950	6,200	4,880	940	442	410
26	379	294	380	1,110	777	912	950	6,820	4,480	912	435	409
27	373	270	350	1,080	813	912	912	7,090	4,500	885	429	403
28	392	250	295	960	858	921	885	5,980	4,660	876	429	396
29	398	260	260	804	-----	912	876	5,130	4,930	867	423	389
30	385	295	230	706	-----	867	885	4,530	4,020	831	423	383
31	385	-----	255	581	-----	840	-----	4,140	-----	795	423	-----
TOTAL	11,970	10,410	11,083	20,679	18,490	26,315	34,094	129,441	141,430	52,806	16,901	12,807
MEAN	386	347	358	667	660	849	1,136	4,176	4,714	1,703	545	427
MAX	435	463	589	1,710	858	960	1,890	7,090	6,510	3,180	759	517
MIN	357	250	230	310	477	689	777	921	3,160	795	423	383
CFSM	.47	.42	.43	.80	.80	1.02	1.37	5.03	5.68	2.05	.66	.51
IN.	.54	.47	.50	.93	.83	1.18	1.53	5.80	6.34	2.37	.76	.57
AC-FT	23,740	20,650	21,980	41,020	36,670	52,200	67,630	256,700	280,500	104,700	33,520	25,400

CAL YR 1969 TOTAL 516,586 MEAN 1,415 MAX 6,530 MIN 230 CFSM 1.70 IN 23.15 ACFT 1,025,000
WAT YR 1970 TOTAL 486,426 MEAN 1,333 MAX 7,090 MIN 230 CFSM 1.61 IN 21.80 ACFT 964,800

PEAK DISCHARGE (BASE, 3,700 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-17	0300	7.76	4,950	6-5	0330	8.75	6,840
5-27	0500	9.01	7,460	6-23	0600	8.23	5,680

13186000 South Fork Boise River near Featherville, Idaho

LOCATION.--Lat 43°29'40", long 115°18'20", in lot 6, NE¼ sec.19, T.2 N., R.10 E., Elmore County, on right bank 2.5 miles upstream from Deer Creek, 8 miles southwest of Featherville, and at mile 59.0.

DRAINAGE AREA.--635 sq mi. Mean altitude, 6,840 ft.

PERIOD OF RECORD.--April 1945 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,220 ft (from topographic map of Bureau of Reclamation).

AVERAGE DISCHARGE.--25 years, 785 cfs (16.79 inches per year, 568,700 acre-ft per year); 15-year base period (1952-67), 765 cfs.

EXTREMES.--Current year: Maximum discharge, 5,020 cfs May 27 (gage height, 6.42 ft); minimum, 93 cfs Nov. 29 (gage height, 1.02 ft).

Period of record: Maximum discharge, 7,580 cfs May 24, 1956 (gage height, 8.62 ft); minimum, 30 cfs Feb. 10, 1949 (gage height, 0.60 ft), result of snowslide upstream.

REMARKS.--Records excellent. No regulation. Small ranch diversions above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 11 to July 24)

1.1	110	4.0	2,050
1.5	226	6.0	4,650
2.0	425	7.0	6,270
3.0	1,070		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	229	226	191	163	245	373	452	633	2,710	1,670	399	241
2	246	227	188	167	243	377	467	797	3,080	1,510	374	236
3	253	226	181	184	256	341	455	1,190	3,750	1,460	369	233
4	246	226	189	195	248	320	477	1,630	4,350	1,430	359	231
5	243	229	183	206	238	295	558	2,130	4,460	1,330	365	251
6	240	246	169	204	248	286	767	2,580	4,260	1,270	382	258
7	240	256	206	214	260	307	1,000	2,670	4,420	1,180	357	250
8	240	243	224	220	248	354	900	2,220	4,620	1,060	341	243
9	260	235	212	238	238	359	913	2,110	4,480	976	331	245
10	250	231	214	234	240	347	1,080	2,040	3,790	1,150	328	244
11	243	231	207	247	254	344	1,120	1,670	3,150	1,160	318	244
12	236	229	215	246	275	346	942	1,460	2,680	964	313	233
13	226	227	237	243	287	342	846	1,250	2,380	870	304	237
14	243	225	241	245	278	369	796	1,090	2,300	796	297	243
15	235	225	226	247	269	401	702	1,100	2,160	737	294	245
16	249	230	205	243	270	419	646	1,440	2,010	685	289	250
17	244	209	209	239	287	407	631	2,260	1,990	675	282	238
18	242	181	233	246	277	379	648	3,350	2,030	624	280	234
19	239	180	231	254	251	368	703	3,750	2,310	585	277	248
20	236	185	238	273	226	362	665	3,720	2,610	551	274	286
21	236	187	257	279	248	382	626	3,470	3,000	565	269	270
22	236	218	295	317	262	397	630	3,530	3,200	567	264	262
23	234	169	268	359	269	417	622	3,880	3,210	522	261	258
24	233	185	213	400	283	467	616	3,910	3,100	504	257	247
25	232	194	162	374	292	518	607	4,100	2,860	504	250	246
26	228	174	207	338	299	525	610	4,550	2,620	483	248	247
27	227	155	226	300	310	501	580	4,750	2,600	465	242	247
28	231	125	158	268	337	508	567	3,970	2,670	463	237	245
29	229	138	138	245	-----	504	567	3,340	2,560	456	236	238
30	226	173	120	200	-----	488	581	2,930	2,020	434	236	235
31	228	-----	135	206	-----	470	-----	2,670	-----	417	239	-----
TOTAL	7,380	6,185	6,378	7,794	7,438	12,273	20,774	80,190	91,380	26,063	9,272	7,385
MEAN	238	206	206	251	266	396	692	2,587	3,046	841	299	246
MAX	260	256	295	400	337	525	1,120	4,750	4,620	1,670	399	286
MIN	226	125	120	163	226	286	452	633	1,990	417	236	231
CFSM	.37	.32	.32	.40	.42	.62	1.09	4.07	4.80	1.32	.47	.39
IN.	.43	.36	.37	.46	.44	.72	1.22	4.70	5.35	1.53	.54	.43
AC-FT	14,640	12,270	12,650	15,460	14,750	24,340	41,210	159,100	181,300	51,700	18,390	14,650

CAL YR 1969 TOTAL 371,234 MEAN 1,017 MAX 5,760 MIN 120 CFSM 1.60 IN 21.74 AC-FT 736,300
WTR YR 1970 TOTAL 282,512 MEAN 774 MAX 4,750 MIN 120 CFSM 1.22 IN 16.55 AC-FT 560,400

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-7	0500	4.73	2,850	6-8	0200	6.39	4,990
5-27	0500	6.42	5,020	6-23	0400	5.32	3,440

BOISE RIVER BASIN

13189000 Little Camas Canal at heading, near Bennett, Idaho

LOCATION.--Lat 43°21'10", long 115°23'20", in sec.9, T.1 S., R.9 E., Elmore County, Boise National Forest, on right bank 400 ft downstream from Little Camas Reservoir, 4 miles northeast of Bennett, and 22 miles north-east of Mountain Home.

PERIOD OF RECORD.--June to November 1917, October 1923 to current year.

GAGE.--Nonrecording gage read during periods of flow. Datum of gage is 4,926 ft above mean sea level (datum of Mountain Home Irrigation District). June 1 to Nov. 29, 1917, water-stage recorder and Apr. 16 to May 11, 1924, nonrecording gage, at datum 6.00 ft lower. May 12, 1924, to Sept. 30, 1929, water-stage recorder at present datum.

EXTREMES.--Period of record: Maximum daily discharge, 77 cfs Apr. 27-30, May 1, 3, 9, 1924; no flow during nonirrigation seasons and at times during irrigation seasons.

REMARKS.--Records fair except those for August to September, which are poor. Flow regulated by Little Camas Reservoir 400 ft upstream (capacity, 22,300 acre-ft). No diversion above station. Canal is an interbasin diversion and diverts from Little Camas Reservoir (South Fork Boise River drainage) in sec.9, T.1 S., R.9 E., and discharges into Long Tom Creek basin, where water is stored in Long Tom Reservoir for irrigation of 5,000 acres of land near Mountain Home.

COOPERATION.--Gage readings furnished by Mountain Home Irrigation District.

DISCHARGE IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1							0	63	27	46	47	24
2							0	63	27	46	47	47
3							0	63	40	17	47	47
4							0	63	49	0	47	47
5							0	63	55	0	47	47
6							0	64	60	0	47	47
7							0	61	60	0	47	47
8							0	59	60	0	47	47
9							0	59	60	25	47	47
10							11	59	60	47	47	47
11							33	59	60	47	47	47
12							33	59	60	47	47	47
13							33	59	60	47	47	47
14							33	59	60	47	47	47
15							33	60	60	47	47	47
16							33	60	60	47	47	47
17							33	60	59	47	47	47
18							33	22	59	47	47	47
19							33	0	59	47	47	47
20							33	13	47	47	47	47
21							33	22	26	47	47	27
22							38	22	26	47	47	4.8
23							43	22	38	47	47	0
24							43	22	46	47	47	0
25							49	22	46	47	47	0
26							54	22	46	47	47	0
27							59	22	46	47	47	0
28							63	22	46	47	47	0
29					-----		63	25	46	47	47	0
30					-----		63	27	46	47	29	0
31		-----			-----		-----	27	-----	47	0	-----
TOTAL	0	0	0	0	0	0	849	1,323	1,494	1,168	1,392	948.8
MEAN	0	0	0	0	0	0	28.3	42.7	49.8	37.7	44.9	31.6
MAX	0	0	0	0	0	0	63	64	60	47	47	47
MIN	0	0	0	0	0	0	0	0	26	0	0	0
AC-FT	0	0	0	0	0	0	1,680	2,620	2,960	2,320	2,760	1,880

CAL YR 1969 TOTAL 5,860.0 MEAN 16.1 MAX 53 MIN 0 ACFT 11,620
 WAT YR 1970 TOTAL 7,174.8 MEAN 19.7 MAX 64 MIN 0 ACFT 14,230

BOISE RIVER BASIN

193

13190000 Anderson Ranch Reservoir at Anderson Ranch Dam, Idaho

LOCATION.--Lat 43°21'30", long 115°26'40", in SE¼ sec.1, T.1 S., R.8 E., Elmore County, Boise National Forest, at inlet structure of outlet works of dam on South Fork Boise River, 1.5 miles downstream from Camas Creek, 3 miles northwest of Bennett (Dixie Store), and at mile 43.5.

DRAINAGE AREA.--980 sq mi, approximately.

PERIOD OF RECORD.--December 1945 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Prior to June 8, 1962, nonrecording gage or supplementary gage in powerhouse read once daily.

EXTREMES.--Current year: Maximum contents, 465,400 acre-ft June 30 (elevation, 4,196.26 ft); minimum, 302,300 acre-ft May 2 (elevation, 4,156.66 ft).
Period of record: Maximum contents observed, 472,800 acre-ft June 1, 1956 (elevation, 4,197.81 ft); no usable contents prior to Jan. 27, 1946; minimum since full capacity was attained June 21, 1951, 63,830 acre-ft Jan. 6, 1962 (elevation, 4,058.35 ft).

REMARKS.--Reservoir is formed by earth-fill dam. Storage began Dec. 15, 1945. Usable contents, 464,200 acre-ft between elevations 3,992 and 4,196 ft (top of spillway gates). Elevation of spillway crest, 4,174 ft, and of top of dam, 4,206 ft. Dead storage below 3,992 ft is 28,980 acre-ft. Figures given herein represent usable contents. Water is used for irrigation in Boise valley and for power production.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

REVISIONS (WATER YEARS).--WRD Idaho 1969: 1968(m).

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

4,156.0	300,000	4,180.0	392,400
4,160.0	314,400	4,190.0	436,300
4,170.0	352,000	4,196.3	465,600

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	384,300	375,600	367,600	354,200	345,500	318,500	304,700	302,900	408,700	464,900	452,900	434,100
2	384,300	375,800	366,900	353,300	345,400	318,200	304,200	302,400	409,300	464,500	453,100	432,800
3	384,300	374,100	366,000	352,600	345,400	317,700	303,500	303,000	411,300	464,300	452,800	431,500
4	383,800	372,500	365,200	352,600	345,200	317,000	303,000	304,800	414,500	464,400	452,200	430,200
5	383,800	371,000	364,200	351,700	344,400	316,400	302,700	307,800	417,800	464,500	451,600	429,500
6	383,100	370,000	363,600	350,600	343,100	315,700	303,100	312,200	420,600	464,200	451,000	428,600
7	382,700	368,900	363,500	349,500	341,800	314,900	304,200	316,900	423,800	464,100	450,300	427,800
8	382,600	369,200	362,600	347,900	340,600	314,500	305,000	320,000	428,600	463,800	449,900	425,700
9	382,700	369,300	362,200	347,200	339,300	314,100	305,800	323,100	433,500	463,400	449,500	423,900
10	382,100	369,500	361,200	346,200	338,000	313,600	307,500	326,100	436,800	463,700	448,800	422,100
11	381,500	369,500	360,800	346,100	336,800	313,200	309,100	327,900	439,000	464,000	448,300	420,200
12	381,300	369,600	360,100	344,900	335,600	312,600	310,000	329,300	441,400	463,300	447,600	419,000
13	380,600	369,700	359,400	344,200	334,500	311,900	310,900	330,100	443,500	462,600	446,700	418,400
14	380,600	369,800	359,300	343,500	333,300	311,700	311,600	330,300	445,200	461,700	445,800	416,800
15	379,900	370,100	358,500	342,700	332,200	311,300	311,800	330,500	446,300	460,800	445,400	415,200
16	379,100	370,500	357,800	342,400	331,100	310,900	311,900	331,600	447,500	459,700	445,400	413,700
17	379,000	370,800	357,200	342,200	330,200	310,300	311,800	335,100	449,400	459,300	444,300	412,200
18	379,100	370,800	356,600	342,500	328,900	309,100	312,000	341,200	451,400	459,100	443,300	410,800
19	379,300	370,500	356,400	341,800	327,700	308,100	312,500	348,300	453,800	459,400	442,400	410,000
20	378,800	370,000	356,300	341,100	326,500	307,100	312,600	355,200	456,900	458,700	441,500	409,900
21	378,300	369,700	356,700	341,200	325,200	306,600	312,200	361,600	460,700	458,300	440,800	408,500
22	377,800	369,500	356,700	341,300	324,000	306,300	311,800	367,700	463,600	457,800	440,600	407,100
23	377,700	369,600	356,700	341,500	322,800	305,600	311,400	374,900	464,000	457,400	440,700	405,800
24	377,600	369,000	356,700	342,000	321,600	305,100	311,100	381,700	464,100	456,600	440,000	404,600
25	377,400	368,700	356,800	342,700	320,500	305,300	310,100	388,500	464,100	456,100	439,300	403,200
26	377,400	368,600	356,900	343,200	319,800	304,900	309,100	395,600	464,200	456,200	438,600	402,400
27	376,900	368,600	356,800	344,300	319,200	304,700	307,900	402,600	464,800	455,500	437,900	402,400
28	376,900	368,400	356,900	344,900	318,700	304,800	306,500	407,200	464,000	454,700	437,100	401,500
29	376,500	368,300	356,300	344,900	-----	304,800	305,100	408,300	464,200	454,000	436,500	400,500
30	376,000	368,200	355,400	344,900	-----	304,800	303,900	408,700	465,300	453,400	436,300	399,200
31	375,500	-----	354,300	345,200	-----	304,800	-----	408,800	-----	453,000	435,300	-----
MAX	384,300	375,800	367,600	354,200	345,500	318,500	312,600	408,800	465,300	464,900	453,100	434,100
MIN	375,500	368,200	354,300	341,100	318,700	304,700	302,700	302,400	408,700	453,000	435,300	399,200
(†)	4,175.91	4,174.09	4,170.60	4,168.26	4,161.20	4,157.36	4,157.11	4,183.83	4,196.24	4,193.63	4,189.80	4,181.61
(‡)	-9,000	-7,300	-13,900	-9,100	-26,500	-13,900	-900	+104,900	+56,500	-12,300	-17,700	-36,100
CAL YR 1969	MAX 465,500	MIN 215,100	‡ +128,800									
WAT YR 1970	MAX 465,300	MIN 302,400	‡ +14,700									

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

BOISE RIVER BASIN

13190500 South Fork Boise River at Anderson Ranch Dam, Idaho

LOCATION.--Lat 43°20'30", long 115°28'40", in NW¼ sec.14, T.1 S., R.8 E., Elmore County, Boise National Forest, on right bank 600 ft upstream from Dixie Creek, 1.8 miles downstream from Anderson Ranch Reservoir, 2.2 miles northwest of Bennett (Dixie Store), and at mile 41.5.

DRAINAGE AREA.--982 sq mi.

PERIOD OF RECORD.--April 1943 to current year (includes flow of Dixie Creek prior to October 1946).

GAGE.--Water-stage recorder. Altitude of gage is 3,850 ft (from topographic map of Bureau of Reclamation).

AVERAGE DISCHARGE.--27 years, 973 cfs (704,900 acre-ft per year); 15-year base period (1952-67), 977 cfs.

EXTREMES.--Current year: Maximum discharge, 3,640 cfs June 5 (gage height, 6.84 ft); minimum, 88 cfs Jan. 27 (gage height, 2.16 ft).

Period of record: Maximum discharge, 9,850 cfs May 25, 1956 (gage height, 10.56 ft); minimum, 0.1 cfs Nov. 13, 1959; minimum gage height, 0.99 ft Feb. 16, 1950.

REMARKS.--Records excellent. Flow regulated by Anderson Ranch Reservoir 1.8 miles upstream (see sta 13190000) beginning Dec. 15, 1945. Flow of Little Camas Creek is stored in Little Camas Reservoir (capacity, 22,300 acre-ft, no spill most years) and diverted out of basin through Little Camas Canal (see sta 13189000) for irrigation of about 5,000 acres of land in vicinity of Mountain Home.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 8 to Sept. 30)

2.2	107	4.0	900
2.5	188	5.0	1,780
3.0	367	6.0	2,840
3.5	593	6.6	3,550

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	261	237	492	307	201	754	767	1,640	3,440	2,150	468	886
2	313	220	609	665	337	759	987	1,650	3,440	2,030	306	881
3	301	1,060	680	567	372	758	985	1,640	3,480	1,770	579	882
4	501	1,150	669	275	484	758	987	1,640	3,550	1,530	681	883
5	244	1,150	709	690	687	757	986	1,620	3,530	1,660	682	627
6	657	837	543	844	962	757	986	1,620	3,460	1,650	714	688
7	492	928	283	818	960	759	991	1,620	3,520	1,390	747	712
8	375	227	771	874	962	761	986	1,600	3,030	1,380	558	1,260
9	298	217	810	848	966	761	983	1,590	2,550	1,380	496	1,210
10	620	217	921	740	964	762	988	1,590	2,580	1,390	689	1,180
11	553	217	830	365	964	761	986	1,580	2,330	1,390	597	1,180
12	421	237	746	997	965	764	983	1,570	1,970	1,390	680	853
13	625	251	568	729	968	764	982	1,560	2,000	1,390	727	521
14	170	247	320	750	968	766	985	1,560	2,010	1,390	769	1,120
15	709	201	734	754	970	768	984	1,560	2,010	1,390	498	1,060
16	697	204	630	680	971	988	983	1,550	1,810	1,400	323	1,040
17	344	210	563	482	960	992	986	1,540	1,380	1,080	788	1,000
18	237	227	566	263	1,020	1,130	986	1,530	1,380	826	765	962
19	214	336	529	768	981	1,090	990	1,540	1,380	532	729	747
20	520	434	401	747	974	1,050	986	1,540	1,380	1,030	675	422
21	529	379	213	590	975	766	1,180	1,520	1,370	948	658	979
22	553	359	465	514	975	765	1,220	1,510	2,070	1,020	358	925
23	375	204	407	531	970	986	1,210	1,510	3,340	817	223	917
24	344	438	317	383	968	990	1,220	1,490	3,450	908	615	918
25	379	355	198	214	970	763	1,560	1,660	3,140	791	600	912
26	351	313	248	525	755	969	1,640	2,050	2,760	482	579	664
27	510	220	330	123	752	967	1,640	2,340	3,100	882	648	277
28	340	258	209	136	725	767	1,640	2,830	3,440	913	596	749
29	510	247	486	402	-----	768	1,640	3,440	3,100	861	536	751
30	524	227	669	296	-----	767	1,640	3,440	1,850	717	278	908
31	553	-----	682	193	-----	766	-----	3,320	-----	656	865	-----
TOTAL	13,520	11,807	16,598	17,070	23,726	25,933	34,087	56,850	77,850	37,143	18,427	26,114
MEAN	436	394	535	551	847	837	1,136	1,834	2,595	1,198	594	870
MAX	709	1,150	921	997	1,020	1,130	1,640	3,440	3,550	2,150	865	1,260
MIN	170	201	198	123	201	754	767	1,490	1,370	482	223	277
AC-FT	26,820	23,420	32,920	33,860	47,060	51,440	67,610	112,800	154,400	73,670	36,550	51,800
CAL YR 1969	TOTAL 404,863.4		MEAN 1,109		MAX 4,430		MIN 4.4		AC-FT 803,000			
WTR YR 1970	TOTAL 359,125		MEAN 984		MAX 3,550		MIN 123		AC-FT 712,300			

13194000 Arrowrock Reservoir at Arrowrock Dam, Idaho

LOCATION.--Lit 43°35'40", long 115°55'19", in E½ sec.13, T.3 N., R.4 E., Elmore County, Boise National Forest, at Arrowrock Dam on Boise River, 14 miles east of Boise, and at mile 74.0.

DRAINAGE AREA.--2,210 sq mi, approximately.

PERIOD OF RECORD.--October 1917 to current year. Published as "at Arrowrock" October 1917 to September 1962.

GAGE.--Nonrecording gage. Datum of gage is at mean sea level (levels by Bureau of Reclamation).

EXTREMES.--Current year: Maximum contents observed, 289,200 acre-ft July 11 (elevation, 3,216.85 ft); minimum observed, 20 acre-ft Oct. 9 (elevation, 2,975.00 ft).

Period of record: Maximum contents observed, 301,200 acre-ft May 29, 1948 (elevation, 3,219.1 ft); no usable contents during period in each of several years when sluice gates were open and natural flow was passing through reservoir.

REMARKS.--Reservoir is formed by gravity-section concrete-arch dam completed in 1915 and raised 5 ft in 1937; storage began in 1915. Capacity, 286,600 acre-ft between elevations 2,974 ft (9.5 ft above sluice gate sill) and 3,216 ft (highest position of movable crest of spillway). Silt deposition at dam has raised the lower storage level and decreased the capacity of the reservoir. Prior to Oct. 1, 1952, contents in publications of the Geological Survey applied from original capacity table and no silt corrections were made. Beginning Oct. 1, 1952, contents applied from revised table, which is the original table reduced by amounts varying from 347 acre-ft at elevation 2,974 to 5,000 acre-ft at elevation 3,085 ft and above. Water is used for irrigation in Boise valley.

COOPERATION.--Gage readings and capacity table furnished by Bureau of Reclamation.

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

2,975.0	20	3,020.0	3,800	3,130.0	90,500
2,980.0	120	3,040.0	8,270	3,160.0	146,000
2,985.0	270	3,060.0	16,800	3,200.0	240,000
2,990.0	500	3,080.0	30,000	3,217.0	289,700
3,000.0	1,160	3,100.0	49,000		
3,010.0	2,210				

CONTENTS, IN ACRE-FEET, AT 0800, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,420	47,700	97,200	158,900	265,600	278,000	278,100	280,200	272,100	285,200	201,600	18,100
2	4,080	49,300	98,900	160,000	268,500	278,400	278,000	280,300	272,100	287,700	196,000	16,300
3	4,130	51,100	100,900	162,000	271,200	278,400	278,200	280,800	273,300	288,300	189,500	15,100
4	4,110	53,900	103,000	163,500	273,800	278,200	278,200	282,200	275,700	288,200	184,000	14,200
5	4,310	57,200	105,000	165,000	276,400	278,000	278,300	282,100	278,300	288,100	178,800	13,500
6	4,060	59,200	107,200	167,100	276,500	277,800	278,600	281,600	277,000	288,100	173,600	12,600
7	4,450	63,000	108,800	169,500	276,800	277,600	279,500	280,500	276,300	287,800	168,400	12,000
8	4,280	66,200	110,500	171,700	277,000	277,800	280,300	280,200	276,200	286,700	163,200	10,800
9	20	67,700	112,900	174,400	277,200	278,300	280,400	279,300	276,600	287,900	157,900	11,700
10	4,580	68,700	115,200	176,700	277,300	278,400	280,500	279,000	276,800	288,600	151,800	11,400
11	7,330	70,400	118,100	179,100	277,400	278,400	281,200	278,600	274,900	289,200	145,900	11,100
12	9,540	71,500	120,900	181,500	277,600	278,300	281,400	278,000	271,600	287,700	140,000	10,700
13	12,000	72,900	123,000	184,600	278,100	278,200	281,100	277,500	269,800	285,500	134,200	9,920
14	14,700	74,000	125,100	187,200	278,300	278,100	280,800	279,200	267,700	282,800	128,300	9,070
15	16,300	75,200	127,200	190,100	278,600	278,300	280,400	279,600	265,400	279,800	122,700	9,320
16	18,700	76,500	129,500	193,500	278,500	278,400	280,000	279,800	265,200	276,700	116,900	9,040
17	21,400	77,800	131,700	196,400	278,500	278,900	279,600	281,100	266,100	273,300	109,500	8,750
18	23,300	79,300	133,700	199,500	278,600	279,000	279,300	284,100	266,200	269,200	103,800	8,450
19	24,800	80,400	135,800	202,700	278,600	279,100	279,300	281,700	266,700	265,000	97,900	8,140
20	26,300	82,000	137,800	207,000	278,400	279,000	279,400	281,000	268,400	259,500	91,900	7,760
21	28,200	83,700	139,800	211,200	278,200	278,800	279,300	280,500	270,800	255,100	85,100	7,190
22	30,300	85,300	141,800	216,400	278,100	278,500	279,400	280,300	274,600	250,600	78,500	10,800
23	32,400	86,700	144,100	222,300	278,100	278,200	279,500	280,400	278,600	246,000	71,400	14,600
24	34,000	88,000	146,200	229,300	278,100	278,300	279,500	280,700	281,800	241,000	65,000	18,000
25	36,000	89,700	147,900	234,600	278,200	278,600	279,500	280,700	283,700	236,400	58,500	21,100
26	37,800	91,100	149,300	239,900	278,200	278,600	279,900	274,500	285,000	231,800	51,700	23,900
27	38,900	92,700	150,800	245,600	278,000	278,700	280,100	273,800	287,300	226,000	45,200	26,300
28	40,800	93,900	152,200	251,400	278,000	278,600	280,100	273,600	288,200	221,100	38,800	28,200
29	42,500	95,100	153,700	255,700	-----	278,600	280,200	272,800	287,500	216,400	32,700	30,800
30	44,300	96,100	154,700	259,800	-----	278,500	280,200	273,400	286,700	211,700	27,400	33,300
31	46,100	-----	156,600	262,700	-----	278,200	-----	273,100	-----	206,700	21,300	-----
MAX	46,100	96,100	156,600	262,700	278,600	279,100	281,400	284,100	288,200	289,200	201,600	33,300
MIN	20	47,700	97,200	158,900	265,600	277,600	278,000	272,800	265,200	206,700	21,300	7,190
(+)	3,097.34	3,133.32	3,165.07	3,208.00	3,213.15	3,213.25	3,213.90	3,211.52	3,216.02	3,187.07	3,067.83	3,084.10
(+)	+41,540	+50,000	+60,500	+106,100	+15,300	+200	+2,000	-7,100	+13,600	-80,000	-185,400	+12,000
CAL YR 1969	MAX 287,900			MIN 20	±	-30,100						
WAT YR 1970	MAX 289,200		MIN 20	±	+28,740							

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

BOISE RIVER BASIN

13196500 Bannock Creek near Idaho City, Idaho

LOCATION.--Lat 43°48'30", long 115°46'25", in NW¼NW¼ sec.5, T.5 N., R.6 E., Boise County, Boise National Forest, on right bank 0.8 mile upstream from West Fork, at mile 2, and 3.2 miles southeast of Idaho City.

DRAINAGE AREA.--5.75 sq mi. Mean altitude, 5,240 ft.

PERIOD OF RECORD.--January 1939 to November 1941, October 1950 to current year. Monthly discharge only October and November 1950 published in WSP 1737.

GAGE.--Water-stage recorder and sharp-crested concrete control with V-notch. Altitude of gage is 4,090 ft (from topographic map). Prior to Sept. 10, 1966, at datum 0.06 ft lower.

AVERAGE DISCHARGE.--22 years (1939-41, 1950-70), 2.11 cfs (4.98 inches per year, 1,530 acre-ft per year); 15-year base period (1952-67), 2.08 cfs.

EXTREMES.--Current year: Maximum discharge, 18 cfs May 19 (gage height, 1.60 ft); minimum, 0.10 cfs Jan. 1 (gage height, 0.16 ft).

Period of record: Maximum discharge, 46 cfs Apr. 22, 1965 (gage height, 2.07 ft); minimum discharge, 0.07 cfs Aug. 23, 1940.

REMARKS.--Records good except those below 1.0 cfs, which are fair. No regulation or diversion.

REVISIONS (WATER YEARS).--WSP 1447: 1952. WSP 1567: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Dec. 29-31, Jan. 2-16)

.3	.19	.7	2.2
.4	.40	1.0	5.6
.5	.78	1.5	15
.6	1.4	1.6	18

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	.56	.72	.57	.19	2.5	3.3	3.3	3.8	7.0	2.8	.73	.44
2	.68	.70	.44	.45	2.2	3.3	3.3	4.3	6.4	2.5	.70	.41
3	.63	.69	.54	.36	2.2	3.1	3.2	5.3	6.0	2.4	.67	.39
4	.61	.76	.74	.34	2.1	3.0	3.3	7.0	5.6	2.2	.65	.55
5	.60	.78	.54	.30	2.0	2.9	3.8	9.5	5.2	2.1	.70	.58
6	.58	1.3	.65	.27	1.8	2.8	4.7	12	4.8	2.1	.62	.56
7	.57	1.1	.80	.22	1.8	3.2	5.1	13	4.7	1.9	.58	.54
8	.72	.97	.74	.70	1.7	4.3	4.9	12	4.5	1.8	.56	.59
9	.73	.88	.78	.76	1.7	4.0	5.0	12	5.0	1.7	.55	.54
10	.67	.81	.72	.78	1.7	4.0	5.8	12	4.4	2.2	.53	.52
11	.64	.80	.71	.82	1.7	3.9	6.2	11	4.1	1.8	.51	.50
12	.64	.78	.82	.86	1.9	3.8	5.9	11	4.0	1.6	.49	.51
13	.64	.78	.82	.92	2.1	3.8	5.6	10	3.9	1.6	.48	.57
14	.64	.78	.80	.98	2.0	4.1	5.4	9.1	3.9	1.5	.44	.58
15	.64	.78	.78	1.0	2.0	4.2	5.1	8.7	3.8	1.4	.43	.60
16	.70	.79	.73	1.1	2.1	4.2	4.9	9.0	3.5	1.3	.41	.58
17	.69	.70	.75	1.6	2.9	4.1	4.7	11	3.2	1.3	.40	.57
18	.68	.79	.75	2.2	2.6	4.0	4.5	16	3.0	1.2	.40	.54
19	.66	.82	.84	2.3	2.6	3.9	4.5	18	2.8	1.2	.40	.71
20	.64	.80	.99	2.4	2.5	3.8	4.3	17	2.7	1.1	.39	.80
21	.64	.80	1.6	2.6	2.5	3.8	4.2	16	2.5	1.2	.37	.73
22	.69	.75	1.4	4.0	2.4	3.7	4.1	15	2.4	1.1	.39	.68
23	.68	.79	1.1	4.7	2.3	3.7	4.0	15	2.2	1.1	.38	.67
24	.68	.78	.98	6.5	2.3	3.9	3.9	15	2.1	1.0	.37	.64
25	.68	.77	1.0	4.6	2.2	3.8	3.9	14	2.0	.95	.37	.64
26	.68	.75	.96	3.8	2.2	3.8	3.9	13	1.9	.92	.37	.66
27	.68	.75	.92	4.4	2.3	3.7	3.8	13	2.3	.90	.35	.70
28	.81	.72	.55	3.6	2.3	3.7	3.7	11	2.3	.86	.35	.69
29	.75	.65	1.1	3.2	-----	3.6	3.6	9.8	4.5	.86	.38	.68
30	.73	.67	.64	2.8	-----	3.4	3.6	8.7	3.2	.79	.37	.67
31	.73	-----	.90	2.8	-----	3.3	-----	7.7	-----	.75	.40	-----
TOTAL	20.67	23.96	25.66	61.55	60.6	114.1	132.2	349.9	113.9	46.13	14.74	17.84
MEAN	.67	.80	.83	1.99	2.16	3.68	4.41	11.3	3.80	1.49	.48	.59
MAX	.81	1.3	1.6	6.5	2.9	4.3	6.2	18	7.0	2.8	.73	.80
MIN	.56	.65	.44	.19	1.7	2.8	3.2	3.8	1.9	.75	.35	.39
CFSM	.12	.14	.14	.35	.38	.64	.77	1.96	.66	.26	.08	.10
IN.	.13	.15	.17	.40	.39	.74	.86	2.26	.74	.30	.10	.12
AC-FT	41	48	51	122	120	226	262	694	226	91	29	35

CAL YR 1969 TOTAL 1,128.28 MEAN 3.09 MAX 20 MIN .37 CFSM .54 IN 7.30 AC-FT 2,240
WTR YR 1970 TOTAL 981.25 MEAN 2.69 MAX 18 MIN .19 CFSM .47 IN 6.35 AC-FT 1,950

PEAK DISCHARGE (BASE, 4.5 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
1-24	0600	1.11	7.9	5-7	0730	1.42	14
3-8	0030	0.95	5.1	5-19	1630	1.60	18
4-11	0030	1.04	6.4	6-29	1200	1.00	5.6

13200000 Mores Creek above Robie Creek, near Arrowrock Dam, Idaho

LOCATION.--Lat 43°38'53", long 115°59'20", in SE¼ sec.28, T.4 N., R.4 E., Boise County, on left bank at State roadside park, 1.7 miles upstream from Robie Creek, 5 miles northwest of Arrowrock Dam, and at mile 5.8.

DRAINAGE AREA.--399 sq mi.

PERIOD OF RECORD.--October 1950 to current year. Prior to October 1958, published as Moore Creek above Robie Creek, near Arrowrock, and October 1958 to September 1962, published as "near Arrowrock."

GAGE.--Water-stage recorder. Altitude of gage is 3,120 ft (from topographic map).

AVERAGE DISCHARGE.--20 years, 288 cfs (9.80 inches per year, 208,700 acre-ft per year); 15-year base period (1952-67), 277 cfs.

EXTREMES.--Current year: Maximum discharge, 1,400 cfs Jan. 24 (gage height, 5.51 ft); minimum, 25 cfs Sept. 4 (gage height, 2.07 ft).
Period of record: Maximum discharge, 5,440 cfs Dec. 23, 1955 (gage height, 9.55 ft); minimum, 8.9 cfs Aug. 9, 1968 (gage height, 2.00 ft).

REMARKS.--Records good except those for December and January, which are fair. Diversions above station and from Robie Creek for irrigation of about 900 acres. Records of water temperatures for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 14 to June 10; stage-discharge relation affected by ice
Nov. 30 to Dec. 2, Dec. 4-31, Jan. 10-15)

2.0	21	3.5	310
2.2	40	4.0	498
2.5	79	5.0	1,020
3.0	173	6.0	1,790

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	61	76	50	371	460	469	405	784	378	75	30
2	52	56	76	60	323	532	464	456	801	336	72	30
3	62	56	81	82	301	477	444	563	840	304	69	27
4	58	56	84	78	256	432	448	725	881	279	67	29
5	53	56	72	74	247	397	494	946	892	262	66	42
6	52	73	76	74	247	374	626	1,100	863	253	70	43
7	52	89	67	72	234	382	762	1,190	852	231	65	45
8	52	75	67	72	226	599	694	1,030	818	218	61	44
9	60	68	67	70	220	576	674	958	892	202	60	51
10	60	65	67	100	228	545	795	928	834	215	58	47
11	57	62	68	130	236	520	846	834	704	220	55	44
12	55	62	70	170	264	485	746	762	641	187	53	41
13	55	61	71	210	346	469	694	689	590	171	50	43
14	51	60	70	250	360	511	660	626	581	158	48	44
15	51	60	69	300	357	599	599	594	599	151	46	47
16	57	61	68	264	346	636	545	655	576	143	45	47
17	60	60	68	279	469	617	507	863	524	138	43	47
18	58	47	68	469	477	559	498	1,120	511	129	41	45
19	57	56	74	665	416	524	524	1,270	502	124	39	52
20	56	56	100	626	393	498	494	1,190	502	117	38	69
21	55	57	120	650	374	498	464	1,170	498	116	38	73
22	55	53	140	1,060	360	502	456	1,150	490	110	37	64
23	53	53	130	1,050	357	502	440	1,240	469	107	35	61
24	56	69	100	1,320	350	537	436	1,230	448	105	34	59
25	56	56	90	940	346	563	424	1,200	420	100	32	56
26	56	53	90	710	354	559	420	1,220	382	94	32	56
27	56	51	58	875	360	545	401	1,230	378	89	31	56
28	58	53	44	704	374	550	397	1,100	405	86	30	56
29	62	68	44	541	-----	541	386	983	537	84	29	53
30	58	72	44	456	-----	507	389	881	490	81	28	52
31	58	-----	45	374	-----	485	-----	812	-----	78	28	-----
TOTAL	1,726	1,825	2,364	12,775	9,192	15,981	16,196	29,120	18,704	5,266	1,475	1,453
MEAN	55.7	60.8	76.3	412	328	516	540	939	623	170	47.6	48.4
MAX	62	89	140	1,320	477	636	846	1,270	892	378	75	73
MIN	45	47	44	50	220	374	386	405	378	78	28	27
CFSM	.14	.15	.19	1.03	.82	1.29	1.35	2.35	1.56	.43	.12	.12
IN.	.16	.17	.22	1.19	.86	1.49	1.51	2.71	1.74	.49	.14	.14
AC-FT	3,420	3,620	4,690	25,340	18,230	31,700	32,120	57,760	37,100	10,450	2,930	2,880
CAL YR 1969	TOTAL 129,508			MEAN 355	MAX 2,600	MIN 23	CFSM .89	IN 12.07	AC-FT 256,900			
WTR YR 1970	TOTAL 116,077			MEAN 318	MAX 1,320	MIN 27	CFSM .80	IN 10.82	AC-FT 230,200			

PEAK DISCHARGE (BASE, 800 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-24	1400	5.51	1,400	5-7	1430	5.21	1,220
4-11	0230	4.73	886	5-19	0730	5.30	1,330

13200500 Robie Creek near Arrowrock Dam, Idaho

LOCATION.--Lat 43°37'49", long 115°59'55", in NE¼ sec.5, T.3 N., R.4 E., Boise County, on left bank at mile 0.5 and 5 miles northwest of Arrowrock Dam.

DRAINAGE AREA.--15.8 sq mi. Mean altitude, 4,960 ft.

PERIOD OF RECORD.--October 1950 to current year. Published as "near Arrowrock" prior to October 1962.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 3,080 ft (from topographic map).

AVERAGE DISCHARGE.--20 years, 7.79 cfs (6.70 inches per year, 5,640 acre-ft per year); 15-year base period (1952-67), 7.25 cfs.

EXTREMES.--Current year: Maximum discharge, 68 cfs Jan. 23 (gage height, 2.46 ft); minimum, 0.04 cfs Aug. 30 (gage height, 0.79 ft).

Period of record: Maximum discharge, 274 cfs Jan. 29, 1965 (gage height, 3.07 ft); no flow on some days during summers of 1961, 1963, 1966-68.

REMARKS.--Records good except those below 2 cfs, which are fair. Small diversions above station for irrigation.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 24 to May 2, June 28 to July 1; backwater from debris on control Nov. 13-23; stage-discharge relation affected by ice Nov. 25 to Dec. 6, Dec. 28 to Jan. 5)

0.8	0.03	1.2	1.5	1.8	18
.9	.09	1.3	2.9	2.0	29
1.0	.26	1.4	4.8	2.2	46
1.1	.68	1.6	10	2.4	73

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	2.1	2.5	2.2	18	14	12	12	8.7	3.6	.94	.47
2	1.3	2.1	2.5	2.5	16	13	12	14	8.1	3.3	.85	.51
3	1.3	2.1	2.6	3.0	15	13	12	17	7.2	2.9	.85	.47
4	1.3	2.1	2.6	2.9	13	13	12	20	6.9	2.6	.94	.68
5	1.3	2.1	2.3	2.8	12	12	12	23	6.7	2.3	.85	.77
6	1.3	3.5	2.3	2.7	11	11	14	25	6.2	2.3	.85	.85
7	1.3	3.3	2.2	2.6	10	12	16	25	6.2	2.1	.77	.85
8	1.3	2.6	2.2	2.6	9.9	16	15	23	6.9	2.0	.77	1.0
9	1.5	2.5	2.2	2.6	9.9	16	15	22	11	1.7	.85	1.0
10	1.4	2.4	2.2	3.5	10	15	16	22	8.4	2.6	.85	1.0
11	1.3	2.2	2.2	5.0	11	14	17	20	6.9	2.5	.64	.94
12	1.4	2.2	3.1	7.0	13	14	16	22	6.9	2.3	.51	.94
13	1.5	2.2	3.5	9.0	16	13	16	20	7.5	2.3	.47	1.0
14	1.5	2.2	3.1	11	16	15	16	19	7.5	2.3	.51	1.2
15	1.5	2.2	2.8	19	15	16	14	18	7.2	2.2	.51	1.3
16	2.0	2.3	2.6	17	14	17	13	18	6.5	2.2	.47	1.8
17	2.0	2.2	2.6	18	21	17	13	20	6.0	1.9	.43	1.7
18	2.0	1.8	2.6	27	19	16	12	21	5.4	1.7	.47	1.5
19	2.0	2.1	4.0	47	17	16	13	21	4.6	1.8	.47	2.2
20	1.8	2.1	5.8	35	16	15	12	18	4.3	1.5	.43	2.5
21	1.8	2.2	9.6	43	16	15	12	17	4.1	1.6	.43	2.1
22	2.0	2.0	9.3	61	15	15	12	16	3.4	1.5	.43	1.8
23	2.0	2.0	6.5	58	14	14	11	18	3.2	1.5	.47	1.7
24	2.0	2.5	5.0	52	13	14	12	15	3.0	1.7	.47	1.7
25	2.0	2.2	4.4	37	13	14	12	14	2.6	1.4	.43	1.7
26	2.0	1.8	4.4	31	13	14	12	13	2.3	1.5	.39	1.7
27	2.0	1.4	2.9	48	13	14	12	13	2.8	1.0	.34	1.5
28	2.4	1.6	2.5	35	13	14	12	11	3.2	1.4	.34	1.5
29	2.2	2.1	2.0	29	-----	14	11	11	6.6	1.4	.34	1.5
30	2.2	2.5	2.0	25	-----	13	12	9.9	4.8	1.3	.30	1.3
31	2.1	-----	2.0	21	-----	13	-----	9.3	-----	1.2	.34	-----
TOTAL	52.7	66.6	106.5	662.4	392.8	442	396	547.2	175.1	61.6	17.71	39.18
MEAN	1.70	2.22	3.44	21.4	14.0	14.3	13.2	17.7	5.84	1.99	.57	1.31
MAX	2.4	3.5	9.6	61	21	17	17	25	11	3.6	.94	2.5
MIN	1.0	1.4	2.0	2.2	9.9	11	11	9.3	2.3	1.0	.30	.47
CFSM	.11	.14	.22	1.35	.89	.90	.84	1.12	.37	.13	.04	.08
IN.	.12	.16	.25	1.56	.92	1.04	.93	1.29	.41	.14	.04	.09
AC-FT	105	132	211	1,310	779	877	785	1,090	347	122	35	78
CAL YR 1969	TOTAL 3,322.55			MEAN 9.10		MAX 66		MIN .21		CFSM .58	IN 7.82	AC-FT 6,590
WTR YR 1970	TOTAL 2,959.79			MEAN 8.11		MAX 61		MIN .30		CFSM .51	IN 6.97	AC-FT 5,870

PEAK DISCHARGE (BASE, 35 CFS).--Jan. 23 (1200) 68 cfs (2.46 ft).

1320150Q Lucky Peak Reservoir near Boise, Idaho

LOCATION.--Lat 43°31'31", long 116°03'15", in SW¼NW¼ sec.12, T.2 N., R.3 E., Ada County, at outlet control tower at dam on Boise River, 2 miles upstream from diversion dam for New York Canal, 7 miles downstream from Mores Creek, 9 miles southeast of Boise, and at mile 63.8.

DRAINAGE AREA.--2,680 sq mi, approximately.

PERIOD OF RECORD.--October 1954 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Corps of Engineers). Prior to May 13, 1955, nonrecording gage at same site and datum.

EXTREMES.--Current year: Maximum contents, 302,600 acre-ft June 30 (elevation, 3,058.40 ft); minimum, 58,200 acre-ft May 18 (elevation, 2,934.75 ft).

Period of record: Maximum contents, 305,130 acre-ft June 25, 1955 (elevation, 3,059.32 ft); minimum since near-full capacity was attained on June 25, 1955, 28,630 acre-ft Dec. 21, 1961 (elevation, 2,904.83 ft).

REMARKS.--Reservoir is formed by earth-fill dam. Storage began Oct. 16, 1954. Dam completed in February 1955. Capacity, 307,040 acre-ft between elevations 2,827.0 ft (sill of outlet gates) and 3,060.0 ft (spillway crest). Minimum proposed operating level, 2,905.0 ft (28,770 acre-ft), but all storage can be released. Water is stored for flood control and irrigation of lands in Boise valley.

COOPERATION.--Gage-height record and capacity table furnished by Corps of Engineers.

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

2,930.0	52,700	3,000.0	162,800
2,940.0	64,600	3,020.0	205,600
2,960.0	92,400	3,040.0	253,600
2,980.0	125,100	3,060.0	307,000

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	129,800	86,900	85,500	85,700	108,000	101,800	137,500	112,300	163,700	298,200	294,400	288,400
2	126,000	86,900	85,400	85,700	107,800	103,100	137,500	106,700	169,700	297,700	294,500	284,700
3	122,400	86,800	85,400	85,700	107,500	104,300	138,200	101,800	176,300	298,600	294,500	280,900
4	118,900	86,700	85,300	85,600	107,300	105,300	139,300	100,100	184,300	299,300	294,200	277,300
5	115,700	86,700	85,200	85,600	108,800	106,100	140,600	100,400	195,900	299,800	294,200	273,900
6	112,300	86,700	85,200	85,600	110,900	106,700	142,400	102,300	207,100	300,200	294,300	270,700
7	109,600	86,800	85,100	85,500	112,800	107,200	145,300	104,800	218,000	300,600	294,100	267,600
8	108,400	86,800	85,100	85,400	114,600	108,400	148,400	104,700	227,900	298,900	294,000	264,800
9	105,200	86,700	85,100	85,500	115,200	109,800	151,000	102,600	237,700	296,400	293,900	262,800
10	101,200	86,700	85,100	85,600	114,000	111,100	153,700	99,900	247,000	294,700	294,000	260,600
11	97,500	86,700	85,100	85,600	112,200	112,300	157,100	96,300	254,900	294,300	294,200	258,500
12	94,000	86,600	85,100	85,800	110,800	113,500	160,300	91,700	260,100	294,200	294,300	256,300
13	90,400	86,600	85,100	85,900	109,700	114,500	162,800	84,500	264,000	294,200	294,200	253,600
14	88,100	86,600	85,100	86,100	108,900	115,600	164,700	77,200	267,900	294,400	294,100	250,500
15	86,100	86,500	85,100	86,500	108,100	116,900	166,000	69,900	270,600	294,500	294,000	248,200
16	88,100	86,500	85,100	87,000	107,000	118,500	166,900	63,400	272,300	294,500	294,000	246,000
17	88,000	86,500	85,100	87,600	106,400	120,400	166,300	58,900	273,500	294,500	294,200	243,900
18	87,900	86,400	85,100	88,900	105,900	122,200	164,800	63,300	274,500	294,500	294,200	241,600
19	87,900	86,400	85,100	90,500	105,300	123,900	163,400	70,300	275,200	294,400	294,200	239,400
20	87,800	86,300	85,200	91,900	104,500	125,500	161,900	76,100	275,900	294,200	294,100	237,000
21	87,700	86,200	85,300	93,500	103,500	126,900	158,600	81,100	276,600	294,300	294,200	232,800
22	87,700	86,200	85,600	95,900	102,400	128,100	154,400	85,600	278,600	294,300	294,500	227,600
23	87,600	86,100	85,800	98,400	101,300	129,300	150,100	90,700	280,900	294,300	294,500	222,700
24	87,500	86,100	85,900	101,100	100,200	130,600	145,600	96,100	284,000	294,300	294,300	217,700
25	87,500	86,000	85,900	103,200	99,100	132,100	141,300	106,900	286,600	294,400	294,200	213,300
26	87,400	86,000	86,000	104,900	99,300	134,700	137,300	117,400	287,100	294,500	294,300	208,400
27	87,200	85,900	85,900	106,600	100,000	136,300	133,300	128,000	290,100	294,500	294,500	203,500
28	87,200	85,800	85,900	107,500	100,800	136,800	129,200	137,700	296,500	294,600	294,800	198,500
29	87,100	85,700	85,800	107,900	-----	137,200	123,900	145,000	301,200	294,600	294,400	193,600
30	87,100	85,600	85,800	108,000	-----	137,500	118,100	151,700	301,600	294,500	293,700	188,800
31	87,000	-----	85,800	108,000	-----	137,600	-----	157,800	-----	294,400	291,500	-----
MAX	129,800	86,900	86,000	108,000	115,200	137,600	166,900	157,800	301,600	300,600	294,800	288,400
MIN	87,000	85,600	85,100	85,400	99,100	101,800	118,100	58,900	163,700	294,200	291,500	188,800
(†)	2,956.38	2,955.43	2,955.56	2,969.93	2,965.45	2,986.92	2,975.95	2,997.52	3,058.07	3,055.45	3,054.39	3,012.43
(‡)	-46,000	-1,400	+200	+22,200	-7,200	+36,800	-19,500	+39,700	+143,800	-7,200	-2,900	-102,700

CAL YR 1969..... † +35,900

WTR YR 1970..... † +55,800

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

13202000 Boise River near Boise, Idaho

LOCATION.--Lat 43°31'40", long 116°03'31", in NE¼ sec.11, T.2 N., R.3 E., Ada County, at gate-control house at outlet works of Lucky Peak Reservoir, 1.8 miles upstream from diversion dam for New York Canal, 7.5 miles downstream from mouth of Mores Creek, 9 miles southeast of Boise, and at mile 63.6.

DRAINAGE AREA.--2,680 sq mi, approximately. Mean altitude, 5,910 ft.

PERIOD OF RECORD.--January 1895 to September 1916 (no winter records 1904-5, 1907), November 1950 to September 1954 (discharge measurements only), October 1954 to current year. Published as "near Highland" 1905-15 and as "below Moore Creek, near Arrowrock" 1916.

GAGE.--Remote gate-opening recorder and nonrecording gage on each of six slide gates, remote recorder and non-recording gage on hollow-jet valve, and remote water-stage recorder on Lucky Peak Reservoir. Elevation of sills of six slide gates, 2,827.0 ft (levels by Corps of Engineers). Prior to Mar. 18, 1905, nonrecording gages at sites about 1 mile downstream at different datums. Mar. 18, 1905, to Mar. 20, 1915, nonrecording gages, and Mar. 21, 1915, to Sept. 30, 1916, water-stage recorders at sites 5 to 7 miles upstream at different datums.

AVERAGE DISCHARGE.--33 years (1895-96, 1897-1903, 1905-6, 1907-16, 1954-70), 2,914 cfs (2,111,000 acre-ft per year).

EXTREMES.--Current year: Maximum daily discharge, 8,500 cfs June 30; minimum daily, 96 cfs Nov. 4 to Jan. 16. Period of record: Maximum discharge observed, 35,500 cfs June 14, 1896; no flow on several days in 1954, 1955, 1957-59, 1961, 1969, when gates were closed.

REMARKS.--Records excellent except those for Oct. 15 to Jan. 26, which are good. Daily discharge computed from relations between discharge, head, and gate openings adjusted on the basis of current-meter measurements. Unadjusted discharges furnished by U.S. Corps of Engineers except Nov. 3 to Jan. 26 when flow was through jet valve. Flow regulated by Lucky Peak Reservoir (see sta 13201500), Arrowrock Reservoir (see sta 13194000), and Anderson Ranch Reservoir (see sta 13190000). Small diversions from tributaries upstream for irrigation. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

COOPERATION.--Records of gate operation, discharge, stage in Lucky Peak Reservoir, and gate rating curves furnished by Corps of Engineers.

REVISIONS (WATER YEARS).--WSP 1347: 1895-1901, 1904.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,000	114	96	96	500	2,050	2,560	6,350	6,350	7,100	4,430	4,060
2	3,000	114	96	96	500	2,050	2,560	6,350	6,350	5,500	4,430	3,980
3	3,000	104	96	96	500	2,050	2,230	6,350	6,350	5,120	4,430	3,890
4	2,760	96	96	96	500	2,050	1,950	6,350	6,350	5,120	4,430	3,740
5	2,710	96	96	96	500	2,050	1,950	7,030	6,350	5,120	4,430	3,520
6	2,640	96	96	96	838	2,050	1,950	7,370	6,350	5,120	4,430	3,270
7	2,570	96	96	96	1,020	2,050	1,950	7,370	6,350	4,990	4,430	3,160
8	2,310	96	96	96	1,020	2,050	2,010	8,060	5,890	4,950	4,430	3,110
9	2,150	96	96	96	1,710	2,050	2,250	8,400	5,630	5,000	4,430	3,090
10	2,140	96	96	96	2,730	2,050	2,360	8,400	5,630	5,020	4,430	3,040
11	2,000	96	96	96	3,070	2,050	2,360	8,400	5,630	4,970	4,410	3,020
12	1,930	96	96	96	3,070	2,050	2,360	8,400	5,630	4,940	4,400	3,020
13	1,930	96	96	96	3,070	2,050	2,520	8,400	5,630	4,960	4,400	3,020
14	1,290	96	96	96	3,070	2,050	2,730	8,400	5,630	4,960	4,400	2,990
15	114	96	96	96	3,070	2,050	2,790	8,400	5,630	4,960	4,400	2,970
16	114	96	96	96	3,070	2,050	2,790	8,400	5,150	4,960	4,400	2,920
17	114	96	96	97	3,070	2,050	3,470	8,400	4,980	4,960	4,400	2,890
18	114	96	96	97	3,070	2,050	3,810	8,400	5,120	4,910	4,400	2,890
19	114	96	96	97	3,070	2,050	3,810	7,710	5,270	4,890	4,400	2,890
20	114	96	96	98	3,070	2,050	4,720	7,370	5,320	4,890	4,400	2,860
21	114	96	96	98	3,070	2,050	5,170	7,370	5,320	4,820	4,400	2,780
22	114	96	96	99	3,070	2,050	5,220	7,370	5,360	4,790	4,400	2,740
23	114	96	96	99	3,070	2,050	5,250	7,370	6,500	4,750	4,400	2,670
24	114	96	96	99	3,070	2,050	5,300	7,370	7,170	4,700	4,370	2,640
25	114	96	96	99	3,070	2,050	5,320	7,370	7,170	4,620	4,350	2,640
26	114	96	96	100	2,390	1,370	5,320	6,690	7,170	4,580	4,320	2,640
27	114	96	96	283	2,050	2,050	5,320	6,350	6,570	4,520	4,300	2,640
28	114	96	96	500	2,050	2,560	5,320	6,350	6,140	4,480	4,270	2,640
29	114	96	96	500	-----	2,560	6,010	6,350	7,380	4,480	4,220	2,640
30	114	96	96	500	-----	2,560	6,350	6,350	8,500	4,450	4,140	2,640
31	114	-----	96	500	-----	2,560	-----	6,350	-----	4,430	4,120	-----
TOTAL	35,368	2,924	2,976	4,802	62,358	64,910	107,710	229,600	182,870	153,060	135,600	91,000
MEAN	1,141	97.5	96.0	155	2,227	2,094	3,590	7,406	6,096	4,937	4,374	3,033
MAX	3,000	114	96	500	3,070	2,560	6,350	8,400	8,500	7,100	4,430	4,060
MIN	114	96	96	96	500	1,370	1,950	6,350	4,980	4,430	4,120	2,640
AC-FT	70,150	5,800	5,900	9,520	123,700	128,700	213,600	455,400	362,700	303,600	269,000	180,500
CAL YR 1969	TOTAL	1,212,841	MEAN	3,323	MAX	8,660	MIN	67	ACFT	2,406,000		
WAT YR 1970	TOTAL	1,073,178	MEAN	2,940	MAX	8,500	MIN	96	ACFT	2,129,000		

13203500 Lake Lowell near Caldwell, Idaho

LOCATION.--Lat 43°34'42", long 116°44'28", in NW¼SE¼ sec.19, T.3 N., R.3 W., Canyon County, on outlet structure at lower embankment, 5.5 miles southwest of Caldwell; and lat 43°33'30", long 116°38'55", in NW¼NW¼ sec.36, T.3 N., R.3 W., Canyon County, on outlet structure at upper embankment 5 miles west of Nampa.

PERIOD OF RECORD.--October 1917 to current year. Prior to October 1945, published as Deer Flat Reservoir near Caldwell.

GAGE.--Nonrecording gage. Datum of gages is 2,500.5 ft above mean sea level (levels by Bureau of Reclamation).

EXTREMES.--Current year: Maximum contents observed, 174,100 acre-ft Apr. 29 (gage height, 29.69 ft); minimum observed, 66,900 acre-ft Sept. 5 (gage height, 16.13 ft).

Period of record: Maximum contents observed, 178,900 acre-ft Apr. 27, 38, 1922, Apr. 24, 1932 (gage height, 30.18 ft); minimum observed, 5,390 acre-ft Oct. 22, 1924 (gage height, 3.27 ft, upper pool; 0.85 ft, lower pool).

REMARKS.--Reservoir is formed by two earth embankments; dams were completed and storage began in 1908. Capacity, 177,150 acre-ft, between gage heights 0.0 ft (sill of outlet gates) and 30.0 ft (maximum operating level). Dead storage, about 13,000 acre-ft. Below gage height 12.0 ft, reservoir divides into two pools. In addition to water received from local drainage, reservoir receives water from Boise River through New York Canal of Boise project. Water is used for irrigation of lower project lands. Figures given herein represent usable contents.

COOPERATION.--Gage readings and capacity table furnished by Water District 63 (formerly Water District 12A).

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

16.0	66,100
20.0	93,000
30.0	177,200

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	119,700	142,600	141,900	142,600	145,000	143,900	145,500	173,200	166,200	154,000	107,700	69,100
2	119,900	142,500	141,900	142,600	144,800	143,900	146,400	172,200	166,400	153,900	106,500	68,400
3	121,400	142,500	141,900	142,500	144,700	143,900	147,200	171,700	165,400	153,900	105,300	67,700
4	122,500	142,400	141,800	142,500	144,600	143,900	148,100	171,000	163,800	153,400	104,800	67,200
5	124,300	142,400	141,700	142,400	144,600	143,900	149,400	169,600	163,100	151,900	102,400	66,900
6	125,800	142,400	141,700	142,400	144,600	143,900	150,100	168,500	162,700	151,400	101,200	67,800
7	127,400	142,400	141,800	142,300	144,600	143,900	152,000	167,200	161,600	148,600	99,300	68,300
8	129,400	142,400	141,800	142,300	144,600	143,800	154,100	166,900	161,300	147,400	97,300	68,900
9	130,700	142,400	141,900	142,400	144,600	143,700	155,900	166,500	160,700	145,300	96,000	69,500
10	132,200	142,500	142,000	142,500	144,600	143,600	157,100	166,100	163,300	142,900	94,900	70,200
11	134,000	142,500	142,000	142,600	144,500	143,500	158,200	165,600	163,500	141,600	94,300	70,700
12	135,900	142,500	142,000	142,600	144,500	143,500	159,700	165,200	165,400	141,100	93,000	71,300
13	137,700	142,400	142,000	142,800	144,500	143,400	161,200	165,100	166,400	137,100	90,500	72,000
14	139,400	142,400	142,000	142,900	144,500	143,300	162,300	165,000	167,800	135,800	88,500	72,500
15	141,400	142,400	142,100	143,000	144,500	143,300	163,500	165,000	169,100	134,000	87,600	73,000
16	142,900	142,300	142,100	143,100	144,500	143,200	164,900	164,800	169,600	131,500	86,300	73,700
17	142,800	142,300	142,100	143,200	144,500	143,100	165,200	165,200	170,100	129,600	84,800	74,500
18	142,800	142,300	142,200	143,300	144,500	143,000	165,600	165,600	169,100	128,000	83,300	75,700
19	142,700	142,200	142,200	143,400	144,500	142,900	166,000	165,500	168,500	127,200	81,300	76,200
20	142,700	142,200	142,200	143,600	144,500	142,800	167,400	164,500	167,800	125,600	79,400	77,600
21	142,700	142,200	142,300	143,900	144,400	142,700	168,000	163,700	166,800	123,900	77,800	78,400
22	142,700	142,100	142,300	144,200	144,300	142,700	168,700	163,700	165,600	121,300	77,000	80,200
23	142,700	142,100	142,400	144,700	144,100	142,600	169,600	162,900	165,200	119,500	76,700	81,700
24	142,600	142,100	142,500	144,700	144,000	142,600	170,600	162,800	162,500	119,400	75,800	83,200
25	142,600	142,000	142,500	144,600	144,000	142,500	171,400	163,000	158,900	118,300	74,800	84,900
26	142,600	142,000	142,600	144,600	144,000	142,400	172,600	163,100	155,900	117,400	73,500	86,900
27	142,600	142,000	142,600	144,800	143,900	142,200	173,400	163,700	154,800	116,200	72,700	88,800
28	142,600	142,000	142,600	145,000	143,900	142,200	173,700	163,700	153,100	114,400	71,800	90,700
29	142,600	142,000	142,600	145,100	-----	142,200	174,100	164,500	151,000	113,100	70,400	92,600
30	142,600	142,000	142,600	145,200	-----	142,900	173,900	165,200	152,400	111,400	69,600	94,500
31	142,600	-----	142,600	145,200	-----	144,200	-----	165,700	-----	109,100	69,200	-----
MAX	142,900	142,600	142,600	145,200	145,000	144,200	174,100	173,200	170,100	154,000	107,700	94,500
MIN	119,700	142,000	141,700	142,300	143,900	142,200	145,500	162,800	151,000	109,100	69,200	66,900
(+)	2,526.24	2,526.17	2,526.24	2,526.54	2,526.39	2,526.43	2,529.67	2,528.81	2,527.36	2,522.16	2,516.49	2,520.20
(+)	+24,500	-600	+600	+2,600	-1,300	+300	+29,800	-8,300	-13,300	-43,300	-39,900	+25,300
CAL YR 1969	MAX 173,500	MIN 93,800	±	-1,300								
WAT YR 1970	MAX 174,100	MIN 66,900	±	-23,600								

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

BOISE RIVER BASIN

13204500 Diversions from Boise River between near Boise and at Boise gaging stations, Idaho

Between near Boise and at Boise gaging stations (prior to 1955 water year, published as between Dowling Ranch and Boise gaging stations), six principal canals and several small farm laterals divert water from Boise River for irrigation.

Records of total diversion during April to September for each canal for years 1919-46, combined daily diversion covering period April to September for years 1947-67, combined daily diversions covering periods October and April to September for water years 1968-70 and daily flow of New York Canal February 1939 to October 1948 are published in reports of Geological Survey. Records of daily diversion for each canal from 1916-70 are on file in office of Idaho Department of Water Administration. Prior to October 1967, there was no record of October to March diversions except for New York Canal. No diversions through New York Canal for period November to March as reported by watermaster for Water District 12A for current year. There are also diversions by pumping from the Boise River between "near Boise" and "at Notus." The watermaster reported the portion of these diversions between "near Boise" and "at Boise" to be approximately as follows (in acre-ft): October, 31; April, 19; May, 186; June, 132; July, 296; August, 290; and September, 167.

Records show summation of discharge for the recorded diversions. Staff gages on canals are read daily or several times weekly and discharge measurements are made frequently. Records furnished by watermaster for Boise River.

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,210						800	2,040	3,360	3,160	3,160	3,060
2	2,200						818	2,260	3,360	3,160	3,160	2,990
3	2,210						815	2,510	3,350	3,140	3,170	2,950
4	2,150						1,020	2,700	3,370	3,140	3,160	2,830
5	2,150						1,220	2,880	3,340	3,160	3,160	2,710
6	2,100						1,300	3,110	3,340	3,180	3,170	2,530
7	2,030						1,410	3,230	3,340	3,180	3,140	2,300
8	1,700						1,410	3,240	3,330	3,190	3,150	2,230
9	1,690						1,510	3,250	3,340	3,260	3,150	2,230
10	1,700						1,660	3,250	3,290	3,280	3,160	2,210
11	1,700						1,670	3,250	3,190	3,270	3,160	2,290
12	1,700						1,730	3,250	3,010	3,270	3,160	2,280
13	1,670						1,740	3,020	3,000	3,270	3,160	2,270
14	1,670						1,780	3,030	2,980	3,330	3,240	2,290
15	384						1,780	3,090	2,900	3,310	3,240	2,240
16	-						1,760	3,100	2,780	3,320	3,230	2,220
17	-						1,550	3,350	2,780	3,350	3,240	2,210
18	-						1,960	3,390	2,910	3,350	3,240	2,210
19	-						2,020	3,420	2,990	3,350	3,210	2,190
20	-						2,240	3,410	3,140	3,350	3,220	2,180
21	-						1,860	3,400	3,170	3,350	3,160	2,180
22	-						2,060	3,400	3,200	3,340	3,170	2,090
23	-						2,000	3,400	3,260	3,340	3,180	2,090
24	-						2,280	3,400	3,360	3,350	3,190	2,070
25	-						2,300	3,380	3,360	3,300	3,180	2,070
26	-						2,280	3,380	3,330	3,180	3,180	2,070
27	-						2,290	3,410	3,360	3,190	3,170	2,090
28	-						2,090	3,390	3,320	3,130	3,180	2,100
29	-						1,870	3,340	3,260	3,140	3,110	2,080
30	-						1,810	3,350	3,180	3,150	3,130	2,080
31	-	-----			-----		-----	3,350	-----	3,160	3,060	-----
TOTAL	-						51,033	97,980	95,900	100,650	98,390	69,340
MEAN	-						1,701	3,161	3,197	3,247	3,174	2,311
MAX	-						2,300	3,420	3,370	3,350	3,240	3,060
MIN	-						800	2,040	2,780	3,130	3,060	2,070
AC-FT	-						101,200	194,300	190,200	199,600	195,200	137,500

BOISE RIVER BASIN

203

13205500 Boise River at Boise, Idaho

LOCATION.--Lat 43°36'33", long 116°12'27", in NE¼SW¼ sec.10, T.3 N., R.2 E., Ada County, on right bank at Capitol Boulevard Bridge at Boise and at mile 52.8.

DRAINAGE AREA.--2,760 sq mi, approximately.

PERIOD OF RECORD.--March 1938 to September 1939 (gage heights only), February 1940 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,675.46 ft above mean sea level (datum of Corps of Engineers, Boise River Surveys). Prior to Apr. 30, 1943, at site 1 mile upstream at datum 13.69 ft higher. Apr. 30 to July 10, 1943, at site 400 ft downstream at present datum.

AVERAGE DISCHARGE.--16 years (1954-70), 1,143 cfs (828,100 acre-ft per year), since completion of Lucky Peak Dam.

EXTREMES.--Current year: Maximum discharge, 5,300 cfs June 30 (gage height, 6.65 ft); minimum, 23 cfs Jan. 6 (gage height, 2.54 ft, result of ice jam upstream).

Period of record: Maximum discharge, 21,000 cfs Apr. 20, 1943 (gage height, 10.00 ft, site and datum then in use); minimum, 1.3 cfs Feb. 3, 1955 (gage height, 2.21 ft); minimum daily, 3.5 cfs Jan. 19-23, 1961.

REMARKS.--Records good. Flow regulated by Anderson Ranch Reservoir (see sta 13190000). Arrowrock Reservoir (see sta 13194000), and Lucky Peak Reservoir (see sta 13201500). New York, Ridengaugh, and four small canals (see preceding page) divert between station near Boise and this station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Dec. 29-30, Jan. 1-4, 6-8)

2.9	67	4.5	1,520
3.0	90	5.0	2,400
3.2	159	6.0	4,130
3.5	334	6.6	5,130
4.0	816		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	600	117	93	80	541	2,090	1,740	3,990	2,830	4,120	1,130	964
2	610	117	93	83	531	2,070	1,740	3,710	2,830	2,340	1,130	938
3	621	114	93	85	531	2,050	1,390	3,550	2,850	1,820	1,130	914
4	590	102	93	83	522	2,070	840	3,350	2,850	1,760	1,110	889
5	561	102	93	80	522	2,070	683	3,700	2,870	1,760	1,110	828
6	561	111	93	87	738	2,050	571	3,950	2,870	1,760	1,110	794
7	541	108	93	102	1,030	2,070	484	3,910	2,890	1,660	1,110	794
8	590	105	93	96	1,040	2,070	484	4,350	2,550	1,570	1,110	782
9	551	105	96	90	1,220	2,050	610	4,760	2,250	1,540	1,110	771
10	531	102	93	85	2,500	2,050	673	4,770	2,300	1,540	1,100	738
11	417	105	99	83	2,980	2,050	662	4,760	2,480	1,500	1,080	715
12	293	99	96	83	3,010	2,030	694	4,930	2,550	1,470	1,080	726
13	307	99	93	87	3,030	2,030	794	4,980	2,570	1,460	1,070	726
14	280	99	93	93	3,030	2,030	1,060	4,960	2,630	1,420	1,070	715
15	225	99	90	99	3,030	2,030	1,200	4,930	2,760	1,420	1,080	694
16	151	99	90	102	3,030	2,030	1,210	4,790	2,400	1,420	1,080	673
17	143	96	90	120	3,070	2,010	1,520	4,690	2,030	1,420	1,080	662
18	136	96	90	140	3,050	2,010	1,870	4,650	2,010	1,390	1,080	673
19	128	99	99	147	3,050	2,030	1,830	4,230	1,990	1,380	1,100	694
20	128	99	102	140	3,050	2,050	1,760	3,750	1,980	1,380	1,100	673
21	128	99	99	136	3,070	2,030	2,350	3,750	1,980	1,330	1,100	642
22	128	99	99	164	3,090	2,050	2,920	3,750	1,980	1,280	1,100	631
23	124	99	96	159	3,090	2,050	2,870	3,760	2,890	1,270	1,100	600
24	124	99	93	147	3,090	2,050	2,800	3,760	3,680	1,240	1,070	561
25	124	99	93	136	3,090	2,050	2,780	3,760	3,680	1,220	1,060	571
26	124	99	93	136	2,530	1,540	2,760	3,250	3,670	1,240	1,030	551
27	124	99	87	278	2,090	1,730	2,830	2,820	3,270	1,210	1,020	551
28	124	99	85	571	2,090	2,050	3,030	2,820	2,700	1,180	1,020	541
29	120	96	87	571	-----	2,050	3,710	2,820	3,780	1,170	991	531
30	117	93	87	561	-----	1,890	4,150	2,830	5,030	1,140	964	551
31	117	-----	85	541	-----	1,740	-----	2,830	-----	1,130	964	-----
TOTAL	9,318	3,054	2,879	5,365	61,645	62,170	52,015	122,860	83,150	47,540	33,389	21,093
MEAN	301	102	92.9	173	2,202	2,005	1,734	3,963	2,772	1,534	1,077	703
MAX	621	117	102	571	3,090	2,090	4,150	4,980	5,030	4,120	1,130	964
MIN	117	93	85	80	522	1,540	484	2,820	1,980	1,130	964	531
AC-FT	18,480	6,060	5,710	10,640	122,300	123,300	103,200	243,700	164,900	94,300	66,230	41,840
CAL YR 1969	TOTAL 626,114		MEAN 1,715	MAX 5,280	MIN 74	AC-FT 1,242,000						
WTR YR 1970	TOTAL 504,478		MEAN 1,382	MAX 5,030	MIN 80	AC-FT 1,001,000						

BOISE RIVER BASIN

13207000 Spring Valley Creek near Eagle, Idaho

LOCATION.--Lat 43°44'20", long 116°18'00", in SW¼SE¼ sec.26, T.5 N., R.1 E., Ada County, on right bank at mile 0.5 and 4 miles northeast of Eagle.

DRAINAGE AREA.--20.9 sq mi.

PERIOD OF RECORD.--June 1954 to September 1959, October 1960 to current year.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,721.70 ft above mean sea level, unadjusted.

AVERAGE DISCHARGE.--15 years, 2.40 cfs (1,740 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 106 cfs Jan. 27 (gage height, 2.33 ft); no flow for long periods.
Period of record: Maximum discharge, 244 cfs Feb. 26, 1957 (gage height, 2.85 ft); no flow for long periods each year.

REMARKS.--Records good except those below 1 cfs, which are fair. Diversions above station for irrigation. The flow of an artesian well enters the creek upstream from gage for long periods.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.0	0	1.5	6.8
1.1	.13	1.7	17
1.2	.63	2.0	43
1.3	1.8	2.2	71
1.4	3.8		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	0	0	0	21	6.5	6.1	2.7	1.8	0	0	0
2	0	0	0	0	18	6.5	5.8	2.3	1.5	0	0	0
3	0	0	0	0	18	5.8	5.5	2.2	1.2	0	0	0
4	0	0	0	0	15	6.1	5.2	1.0	1.1	0	0	0
5	0	0	0	0	14	6.1	4.9	1.2	.90	0	0	0
6	0	0	0	0	13	6.3	4.9	1.4	.09	0	0	0
7	0	0	0	0	12	7.5	4.4	1.2	.02	0	0	0
8	0	0	0	0	11	9.0	3.4	1.1	.01	0	0	0
9	0	0	0	0	10	8.4	1.7	1.5	.04	0	0	0
10	0	0	0	0	9.3	8.0	.49	1.7	1.6	0	0	0
11	0	0	0	.02	8.8	7.5	.63	1.5	1.1	0	0	0
12	0	0	0	.06	9.3	7.2	.55	2.3	.90	0	0	0
13	0	0	0	.49	11	7.0	1.0	4.6	.37	0	0	0
14	0	0	0	.63	8.4	8.1	2.9	4.1	.03	0	0	0
15	0	0	0	.18	7.2	9.0	2.9	3.6	0	0	0	0
16	0	0	0	.21	7.2	9.5	2.7	3.6	0	0	0	0
17	0	0	0	21	8.4	9.2	2.5	3.1	0	0	0	0
18	0	0	0	27	7.6	8.4	2.7	3.1	0	0	0	0
19	0	0	0	30	7.2	7.6	3.8	3.1	0	0	0	0
20	0	0	0	29	7.2	7.2	2.9	3.1	0	0	0	0
21	0	0	0	26	6.8	7.4	3.4	2.7	0	0	0	0
22	0	0	0	43	6.5	7.6	2.2	.80	0	0	0	0
23	0	0	0	38	6.5	8.0	.80	1.0	0	0	0	0
24	0	0	0	40	5.8	8.0	.55	.80	0	0	0	0
25	0	0	0	28	5.8	8.0	.63	.55	0	0	0	0
26	0	0	0	29	5.5	8.0	.71	.49	0	0	0	0
27	0	0	0	63	5.2	7.2	.71	2.2	0	0	0	0
28	0	0	0	42	5.2	6.8	1.2	2.9	0	0	0	0
29	0	0	0	33	-----	7.2	2.5	2.7	.01	0	0	0
30	0	0	0	30	-----	6.5	2.3	2.5	0	0	0	0
31	0	-----	0	24	-----	6.1	-----	2.2	-----	0	0	-----
TOTAL	0	0	0	504.59	270.9	231.7	79.97	67.24	10.67	0	0	0
MEAN	0	0	0	16.3	9.68	7.47	2.67	2.17	.36	0	0	0
MAX	0	0	0	63	21	9.5	6.1	4.6	1.8	0	0	0
MIN	0	0	0	0	5.2	5.8	.49	.49	0	0	0	0
AC-FT	0	0	0	1,000	537	460	159	133	21	0	0	0
CAL YR 1969	TOTAL 1,735.72			MEAN 4.76		MAX 85		MIN 0		AC-FT 3,440		
WTR YR 1970	TOTAL 1,165.07			MEAN 3.19		MAX 63		MIN 0		AC-FT 2,310		

13212000 Diversions from Boise River between at Boise and Notus gaging stations, Idaho

Between at Boise and at Notus gaging stations, 21 principal canals and several small farm laterals divert water from Boise River for irrigation.

Records of total diversions during period April to September for each canal for years 1919-46 and combined daily diversions covering period April to September for years 1947-67, and periods October and April to September for water years 1968-70 are published in reports of Geological Survey. Records of daily diversions for each canal 1916-70 are on file in office of Idaho Department of Water Administration. Prior to October 1967, no record available of diversions that are usually made during October and March. Miscellaneous diversions by pumping from Boise River below "at Boise" was reported by watermaster as follows (in acre-ft): April, 19; May, 186; June, 132; July, 296; August, 290; September, 167.

Records show summation of discharge for the recorded diversions. Staff gages on diversions are read daily or several times weekly, and discharge measurements are made frequently. Records furnished by watermaster for Boise River.

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,390						165	1,910	2,200	2,020	2,210	2,000
2	1,380						165	2,040	2,260	1,930	2,200	1,980
3	1,260						165	2,130	2,290	2,080	2,180	1,960
4	1,220						165	2,200	2,400	2,000	2,170	1,960
5	1,200						165	2,210	2,400	2,050	2,150	1,750
6	1,180						165	2,390	2,370	2,130	2,110	1,700
7	1,150						348	2,400	2,330	2,260	2,140	1,680
8	1,090						479	2,310	2,360	2,320	2,170	1,620
9	1,090						495	2,310	2,200	2,350	2,140	1,570
10	1,090						591	2,280	2,040	2,370	2,160	1,560
11	991						579	2,270	1,920	2,380	2,210	1,530
12	890						582	2,150	1,920	2,380	2,230	1,520
13	618						595	2,250	1,890	2,360	2,220	1,500
14	542						718	2,180	1,900	2,250	2,220	1,460
15	518						844	2,200	1,890	2,360	2,200	1,440
16	-						1,080	2,220	1,940	2,350	2,210	1,470
17	-						1,210	2,220	1,960	2,350	2,220	1,450
18	-						1,280	2,300	2,000	2,340	2,190	1,450
19	-						1,320	2,340	2,120	2,360	2,180	1,460
20	-						1,370	2,380	2,240	2,360	2,180	1,460
21	-						1,390	2,400	2,350	2,330	2,170	1,390
22	-						1,650	2,400	2,370	2,310	2,150	1,360
23	-						1,680	2,340	2,500	2,310	2,180	1,300
24	-						1,800	2,360	2,580	2,320	2,140	1,260
25	-						1,850	2,360	2,600	2,310	2,120	1,230
26	-						1,860	2,330	2,570	2,290	2,120	1,220
27	-						1,880	2,290	2,510	2,300	2,040	1,190
28	-						1,940	2,290	2,110	2,240	2,090	1,160
29	-				-----		1,880	2,280	1,960	2,240	2,100	1,160
30	-				-----		1,920	2,270	1,770	2,220	2,040	1,140
31	-	-----			-----		-----	2,260	-----	2,210	2,010	-----
TOTAL	-						30,331	70,270	65,950	70,080	66,850	44,930
MEAN	-						1,011	2,267	2,198	2,261	2,156	1,498
MAX	-						1,940	2,400	2,600	2,380	2,230	2,000
MIN	-						165	1,910	1,770	1,930	2,010	1,140
AC-FT	-						60,160	139,400	130,800	139,000	132,600	89,120

13212500 Boise River at Notus, Idaho

LOCATION.--Lat 43°43'21", long 116°47'34", in SE¼SE¼ sec.34, T.5 N., R.4 W., Canyon County, on right bank 1,100 ft upstream from county road bridge, 0.4 mile southeast of Notus, 7 miles northwest of Caldwell, and at mile 14.0.

DRAINAGE AREA.--3,820 sq mi, approximately.

PERIOD OF RECORD.--April 1920 to current year (irrigation seasons only 1923-24 water years).

GAGE.--Water-stage recorder. Datum of gage is 2,288.55 ft above mean sea level (levels by Corps of Engineers, Boise River Surveys). Prior to Aug. 26, 1936, nonrecording gage at site 1,100 ft downstream at same datum.

AVERAGE DISCHARGE.--48 years (1920-22, 1924-70), 1,160 cfs (unadjusted for storage) (840,400 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 5,170 cfs July 1 (gage height, 7.21 ft); minimum, 348 cfs Aug. 14 (gage height, 1.97 ft).
Period of record: Maximum discharge, 20,500 cfs Apr. 20, 1943 (gage height, 10.43 ft); minimum observed, 10 cfs Aug. 18, 21, 1920.

REMARKS.--Records good. Flow regulated by Anderson Ranch Reservoir beginning December 1945 (see sta 13190000), Arrowrock Reservoir beginning April 1920 (see sta 13194000). and Lucky Peak Reservoir 49.8 miles upstream beginning October 1954 (see sta 13201500). Diversions above station for irrigation of about 309,300 acres (1946 determination). Diversions between station and mouth for irrigation of about 5,300 acres (1946 determination). Records of chemical analysis and water temperatures for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1347: 1930.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Feb. 4 to Mar. 30, May 20, May 23-25)

2.0	340	4.0	1,800
2.5	569	6.0	3,930
3.0	894	7.0	5,110

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	609	923	754	689	1,400	2,820	2,170	3,590	2,360	5,100	558	616
2	717	912	752	690	1,350	2,810	2,140	3,270	2,280	3,470	506	605
3	845	913	748	690	1,320	2,760	1,990	2,990	2,180	1,890	543	614
4	917	914	753	691	1,280	2,740	2,120	2,770	2,070	1,500	516	826
5	920	902	734	678	1,240	2,710	1,250	2,860	2,050	1,420	511	1,230
6	908	896	740	665	1,210	2,710	1,140	3,010	2,070	1,320	454	1,180
7	933	922	736	647	1,580	2,710	879	3,140	2,120	1,040	427	1,120
8	914	886	740	678	1,680	2,760	745	3,460	2,260	766	401	1,080
9	917	871	749	700	1,670	2,710	822	3,920	2,280	720	401	1,090
10	842	859	740	717	2,140	2,680	851	4,180	2,490	700	431	1,090
11	843	858	746	695	3,390	2,670	919	4,220	2,600	687	414	1,040
12	798	847	783	696	3,550	2,660	956	4,450	2,710	650	376	968
13	928	836	760	706	3,650	2,650	1,040	4,500	2,750	620	376	921
14	921	828	737	730	3,700	2,670	1,130	4,610	2,810	580	372	947
15	971	823	725	814	3,750	2,680	1,240	4,590	2,850	586	393	939
16	970	823	726	840	3,770	2,680	1,100	4,460	2,810	537	418	865
17	983	802	722	1,050	3,800	2,700	1,160	4,310	2,040	548	440	854
18	946	793	717	1,130	3,800	2,660	1,460	4,130	1,610	543	463	794
19	898	789	733	1,310	3,790	2,650	1,600	3,860	1,370	537	472	805
20	952	801	812	1,310	3,800	2,660	1,530	3,200	1,160	532	482	1,030
21	1,030	797	819	1,170	3,810	2,630	1,800	3,120	1,110	564	494	1,160
22	1,050	793	785	1,540	3,800	2,600	2,150	3,070	1,070	527	511	1,180
23	1,020	782	801	1,560	3,790	2,610	2,410	3,160	971	501	490	1,230
24	1,020	787	795	1,390	3,770	2,600	2,260	3,270	2,280	501	552	1,160
25	1,000	780	756	1,200	3,760	2,590	2,190	3,240	2,530	487	526	1,090
26	995	777	761	1,130	3,750	2,580	2,190	3,110	2,580	477	499	1,070
27	979	762	753	1,650	2,850	1,690	2,230	2,350	2,690	496	498	1,040
28	992	753	703	1,610	2,840	2,490	2,330	2,320	2,650	506	483	983
29	961	753	739	1,580	-----	2,460	2,850	2,340	3,010	553	513	884
30	955	750	709	1,520	-----	2,460	3,400	2,370	4,680	511	543	830
31	949	-----	714	1,440	-----	2,200	-----	2,380	-----	521	578	-----
TOTAL	28,683	24,932	23,242	31,916	80,240	81,000	50,052	106,250	68,441	29,390	14,641	29,241
MEAN	925	831	750	1,030	2,866	2,613	1,668	3,427	2,281	948	472	975
MAX	1,050	923	819	1,650	3,810	2,820	3,400	4,610	4,680	5,100	578	1,230
MIN	609	750	703	647	1,210	1,690	745	2,320	971	477	372	605
AC-FT	56,890	49,450	46,100	63,310	159,200	160,700	99,280	210,700	135,800	58,300	29,040	58,000
CAL YR 1969	TOTAL 657,156			MEAN 1,800			MAX 5,770			MIN 174		
WTR YR 1970	TOTAL 568,028			MEAN 1,556			MAX 5,100			MIN 372		
							AC-FT 1,303,000			AC-FT 1,127,000		

NOTE.--No gage-height record Apr. 2 to May 19.

13235000 South Fork Payette River at Lowman, Idaho

LOCATION.--Lat 44°05'05", long 115°37'10", in SW¼ sec.27, T.9 N., R.7 E., Boise County, Boise National Forest, on right bank 1,200 ft upstream from Rock Creek, 0.5 mile northwest of Lowman, 4,100 ft downstream from Clear Creek, and at mile 28.2.

DRAINAGE AREA.--456 sq mi. Mean altitude, 6,780 ft.

PERIOD OF RECORD.--May 1941 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,790 ft (from river-profile map). Prior to Dec. 18, 1941, nonrecording gage at site 900 ft upstream at different datum.

AVERAGE DISCHARGE.--29 years, 866 cfs (25.79 inches per year, 627,400 acre-ft per year); 15-year base period (1952-67), 852 cfs.

EXTREMES.--Current year: Maximum discharge, 4,870 cfs June 6 (gage height, 6.49 ft); minimum, 195 cfs Dec. 28 (gage height, 2.52 ft).

Period of record: Maximum discharge, 7,050 cfs May 24, 1956 (gage height, 7.45 ft); minimum, 135 cfs Sept. 10, 1966 (gage height, 2.22 ft).

REMARKS.--Records good. No regulation. Several small diversions for irrigation and placer mining, the return flow from which enters river above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 28 to Dec. 13, Dec. 29 to Jan. 7)

2.6	216	5.0	2,320
3.0	378	6.0	3,940
3.5	705	6.5	4,890
4.0	1,120		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	343	317	270	225	374	471	371	497	2,710	2,900	759	484
2	384	313	275	255	342	458	366	601	3,090	2,560	735	446
3	377	310	275	285	334	420	356	837	3,700	2,540	716	434
4	362	310	280	295	308	399	365	1,130	4,410	2,630	697	463
5	352	311	270	300	321	380	402	1,520	4,650	2,530	718	506
6	347	363	275	260	321	370	527	1,820	4,730	2,520	717	471
7	349	347	310	300	312	392	695	2,030	4,780	2,350	679	458
8	357	327	305	350	310	478	626	1,710	4,590	2,150	656	505
9	379	317	305	368	316	439	644	1,590	4,640	2,000	641	493
10	359	316	285	370	331	423	750	1,530	4,170	1,980	622	461
11	348	315	275	356	340	412	771	1,350	3,490	1,910	604	444
12	338	312	290	334	366	405	694	1,240	3,080	1,730	589	436
13	330	308	295	329	402	388	646	1,100	2,800	1,630	574	433
14	329	305	291	327	384	401	612	1,020	2,720	1,530	563	431
15	333	304	281	309	366	422	571	1,010	2,770	1,410	552	427
16	340	307	275	311	358	423	539	1,240	2,690	1,330	539	422
17	335	295	275	323	400	408	530	1,910	2,600	1,290	526	414
18	332	277	273	347	376	382	545	2,860	2,770	1,250	515	411
19	327	290	282	368	349	373	569	3,240	3,110	1,180	506	478
20	324	290	312	401	345	372	553	3,040	3,430	1,130	502	495
21	324	294	373	406	357	375	530	2,950	3,810	1,110	489	460
22	324	285	451	504	359	378	523	2,980	4,160	1,070	481	441
23	323	291	358	598	370	381	512	3,250	4,330	1,020	478	432
24	322	297	313	778	387	399	503	3,240	4,220	967	470	423
25	323	276	272	622	396	406	499	3,390	4,070	921	461	417
26	319	279	325	514	410	406	500	3,860	3,800	893	455	419
27	317	262	300	503	418	401	483	4,100	3,920	870	448	412
28	328	250	231	441	439	415	485	3,670	3,990	858	442	406
29	322	255	235	397	-----	409	475	3,210	4,220	843	439	400
30	319	265	240	371	-----	395	474	2,890	3,550	814	440	392
31	318	-----	245	333	-----	378	-----	2,670	-----	786	448	-----
TOTAL	10,484	8,988	9,042	11,880	10,091	12,559	16,116	67,485	111,000	48,702	17,461	13,314
MEAN	338	300	292	383	360	405	537	2,177	3,700	1,571	563	444
MAX	384	363	451	778	439	478	771	4,100	4,780	2,900	759	506
MIN	317	250	231	225	308	370	356	497	2,600	786	439	392
CFSM	.74	.66	.64	.84	.79	.89	1.18	4.77	8.11	3.45	1.24	.97
IN.	.86	.73	.74	.97	.82	1.02	1.31	5.50	9.05	3.97	1.42	1.09
AC-FT	20,800	17,830	17,930	23,560	20,020	24,910	31,970	133,900	220,200	96,600	34,630	26,410
CAL YR 1969	TOTAL 350,621			MEAN 961	MAX 4,420	MIN 231	CFSM 2.11	IN 28.60	AC-FT 695,500			
WTR YR 1970	TOTAL 337,122			MEAN 924	MAX 4,780	MIN 225	CFSM 2.03	IN 27.49	AC-FT 668,700			

PAYETTE RIVER BASIN

13236000 Deadwood Reservoir near Lowman, Idaho

LOCATION.--Lat 44°17'38", long 115°38'41", in SW¼SE¼ sec.8, T.11 N., R.7 E., Valley County, Boise National Forest, at dam on Deadwood River, 15 miles north of Lowman, and at mile 24.4.

DRAINAGE AREA.--112 sq mi.

PERIOD OF RECORD.--October 1935 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Datum of Geological Survey levels (1952, preliminary) is 22.8 ft higher. Prior to July 1, 1964, nonrecording gage.

EXTREMES.--Current year: Maximum elevation, 5,336.85 ft June 10; minimum, 5,294.48 ft Oct. 1.

Period of record: Maximum elevation observed, 5,337.1 ft June 1, 2, 1943; minimum observed, 5,205.0 ft Sept. 18 to Oct. 11, 1951, when reservoir was drained for repairs.

REMARKS.--Reservoir is formed by concrete-arch dam completed in 1930; storage began Njv. 2, 1930. Reported capacity, 160,400 acre-ft between elevations 5,230.0 ft (minimum operating level because of fish protections, 27 ft above sill of emergency gate in front of needle valve) and 5,334.0 ft (crest of spillway). Storage below elevation 5,230 ft, about 1,500 acre-ft. Water is used to augment flow of Payette River at Black Canyon powerplant near Emmett and, since 1956, as supplemental irrigation supply for Emmett Irrigation District and other users. Small diversion from a tributary of Johnson Creek in Salmon River basin to Deadwood River basin for supplemental storage in Deadwood Reservoir.

COOPERATION.--Gage readings furnished by Bureau of Reclamation.

REVISIONS.--WSP 1567: Drainage area.

ELEVATION, IN FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	294.76	296.94	298.75	300.99	303.92	305.70	307.83	310.71	329.89	336.09	329.63	309.95
2	294.87	297.00	298.80	301.05	304.02	305.82	307.90	310.84	330.76	335.94	329.09	309.18
3	294.95	297.07	298.83	301.11	304.09	305.92	307.97	311.03	331.85	335.83	328.51	308.40
4	295.02	297.16	298.90	301.16	304.14	306.00	308.01	311.28	333.05	335.73	327.88	307.65
5	295.10	297.22	298.93	301.22	304.21	306.07	308.10	311.49	334.38	335.67	327.45	306.95
6	295.18	297.34	299.00	301.26	304.29	306.12	308.18	311.91	335.45	335.60	326.89	306.00
7	295.26	297.42	299.05	301.31	304.34	306.22	308.27	312.40	336.26	335.50	326.32	305.29
8	295.36	297.50	299.10	301.39	304.40	306.34	308.35	312.79	336.61	335.42	325.77	304.62
9	295.42	297.56	299.18	301.49	304.46	306.40	308.48	313.20	336.83	335.36	325.20	303.75
10	295.49	297.62	299.23	301.64	304.52	306.45	308.65	313.61	336.83	335.36	324.63	303.00
11	295.54	297.70	299.36	301.69	304.59	306.50	308.79	313.93	336.68	335.30	324.03	302.15
12	295.60	297.75	299.49	301.76	304.65	306.54	308.91	314.21	336.53	335.24	323.50	301.55
13	295.65	297.80	299.54	301.88	304.74	306.59	309.03	314.48	336.40	335.18	322.94	300.83
14	295.70	297.87	299.60	302.01	304.80	306.67	309.13	314.70	336.35	335.13	322.38	300.15
15	295.77	297.95	299.66	302.09	304.86	306.77	309.23	314.99	336.32	335.09	321.77	299.47
16	295.84	298.00	299.70	302.19	304.91	306.83	309.34	315.35	336.23	335.04	321.18	298.79
17	295.90	298.06	299.78	302.29	305.02	306.93	309.42	315.89	336.17	335.00	320.60	298.09
18	295.97	298.10	299.83	302.40	305.11	306.98	309.52	316.67	336.16	334.95	319.97	297.36
19	296.05	298.15	299.77	302.49	305.15	307.05	309.62	317.51	336.21	334.92	319.25	296.57
20	296.12	298.20	300.05	302.61	305.21	307.10	309.75	318.29	336.29	334.88	318.78	296.03
21	296.20	298.24	300.21	302.70	305.26	307.16	309.85	319.16	336.38	334.80	318.08	295.41
22	296.25	298.29	300.32	302.81	305.32	307.22	309.95	320.07	336.43	334.62	317.35	295.12
23	296.32	298.34	300.44	302.94	305.39	307.28	310.06	321.12	336.47	334.25	316.68	295.21
24	296.39	298.40	300.50	303.15	305.45	307.35	310.14	322.17	336.47	333.78	315.95	295.32
25	296.45	298.45	300.56	303.26	305.51	307.41	310.21	323.26	336.40	333.28	315.22	295.47
26	296.52	298.50	300.62	303.40	305.56	307.46	310.30	324.44	336.30	332.78	314.48	295.58
27	296.60	298.54	300.72	303.52	305.62	307.50	310.39	325.65	336.33	332.27	313.74	295.68
28	296.69	298.60	300.76	303.67	305.68	307.65	310.49	326.67	336.31	331.74	312.90	295.78
29	296.75	298.64	300.82	303.75	-----	307.65	310.55	327.58	336.38	331.23	312.05	295.86
30	296.80	298.70	300.87	303.80	-----	307.70	310.64	328.35	336.27	330.70	311.45	295.96
31	296.88	-----	300.94	303.86	-----	307.75	-----	329.09	-----	330.17	310.74	-----
MEAN	295.85	297.90	299.78	302.29	304.83	306.81	309.24	317.51	335.63	334.41	320.79	300.37
MAX	296.88	298.70	300.94	303.86	305.68	307.75	310.64	329.09	336.83	336.09	329.63	309.95
MIN	294.76	296.94	298.75	300.99	303.92	305.70	307.83	310.71	329.89	330.17	310.74	295.12

NOTE.--Add 5,000 ft to obtain elevation above mean sea level.

PAYETTE RIVER BASIN

209

13236500 Deadwood River below Deadwood Reservoir, near Lowman, Idaho

LOCATION.--Lat 44°17'30", long 115°38'33", in SE¼NE¼ sec.17, T.11 N., R.7 E., Valley County, Boise National Forest, on right bank 300 ft upstream from Wilson Creek, 0.2 mile downstream from Deadwood Dam at lower end of Deadwood basin, 15 miles north of Lowman, and at mile 23.4.

DRAINAGE AREA.--112 sq mi. Mean altitude, 6,630 ft.

PERIOD OF RECORD.--October 1926 to current year. Monthly discharge only prior to May 1927, published in WSP 1317. Published as "at Beaver Creek ranger station, near Lowman" prior to October 1934.

GAGE.--Water-stage recorder. Datum of gage is 5,180.52 ft above mean sea level (levels by Bureau of Reclamation). Datum of 1929, supplementary adjustment of 1947, is 29.19 ft higher. Prior to June 22, 1935, at site 600 ft upstream at datum 5.85 ft higher and Oct. 1, 1935, to Aug. 3, 1955, at present site at datum 1.00 ft higher. June 22 to Sept. 30, 1935, nonrecording gage at site 20 ft upstream at datum 2.00 ft higher.

AVERAGE DISCHARGE.--44 years, 228 cfs (165,200 acre-ft per year); 15-year base period (1952-67), 249 cfs.

EXTREMES.--Current year: Maximum discharge, 1,670 cfs June 10 (gage height, 7.85 ft); minimum, 0.90 cfs Oct. 15 (gage height, 0.83 ft).

Period of record: Maximum discharge, 2,580 cfs July 14, 1953, maximum gage height, 8.93 ft June 7, 1956; no flow or small amount of leakage from reservoir for long periods in 1934-37, when gates in dam were closed.

REMARKS.--Records good except those below 6.5 cfs, which are fair. Flow regulated by Deadwood Reservoir (see sta 13236000).

REVISIONS (WATER YEARS).--WSP 1123: 1943. WSP 1517: 1956. WSP 1567: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from Wilson Creek May 2-12, May 16 to June 4)

1.0	2.0	1.5	19	3.0	171	6.0	903
1.1	3.3	2.0	58	4.0	325	7.0	1,300
1.2	5.8	2.5	110	5.0	574	7.8	1,650

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	2.7	3.1	3.2	3.2	4.1	4.6	4.8	6.4	1,100	1,000	1,020
2	2.3	2.7	3.1	3.2	3.2	4.1	4.3	5.0	6.4	988	1,000	1,020
3	2.3	2.7	3.1	3.2	3.2	4.1	4.6	5.0	6.4	888	1,010	1,010
4	2.3	2.7	3.1	3.2	3.2	4.1	4.6	5.0	6.4	806	1,010	1,010
5	2.1	2.9	3.1	3.2	3.2	4.1	4.8	5.0	32	741	1,010	1,000
6	2.1	3.1	3.1	3.2	3.2	4.1	5.3	5.2	306	680	1,010	1,000
7	2.1	2.9	3.1	3.2	3.3	4.1	5.1	5.3	859	622	1,000	1,000
8	2.3	2.9	3.1	3.2	3.5	4.3	4.8	5.3	1,290	568	1,000	992
9	2.3	3.1	3.1	3.2	3.6	4.3	5.1	5.3	1,550	520	1,010	988
10	2.3	3.1	3.1	3.3	3.6	4.3	5.1	5.3	1,640	500	1,040	983
11	2.4	3.1	3.2	3.3	3.6	4.3	4.8	5.3	1,560	484	949	877
12	2.4	3.2	3.6	3.3	3.7	4.3	4.6	5.3	1,440	444	899	773
13	2.3	3.2	3.6	3.3	3.7	4.3	4.6	5.3	1,330	409	903	770
14	2.4	3.2	3.6	3.4	3.7	4.3	4.6	5.3	1,270	377	918	767
15	2.0	3.2	3.6	3.5	3.9	4.3	4.3	5.3	1,240	353	941	764
16	2.0	3.2	3.5	3.6	4.0	4.3	4.3	5.3	1,200	329	941	762
17	2.0	3.2	3.5	3.7	4.1	4.6	4.3	5.3	1,140	312	937	758
18	2.1	3.1	3.5	3.8	4.1	4.6	4.8	5.3	1,110	293	937	756
19	2.3	3.1	3.5	3.9	4.1	4.3	4.6	5.3	1,120	278	933	751
20	2.1	3.1	3.6	3.9	4.1	4.3	4.6	5.3	1,150	266	976	751
21	2.1	3.1	3.7	3.9	4.1	4.3	4.6	5.3	1,210	310	1,060	634
22	2.3	3.1	3.7	3.9	4.1	4.6	4.6	5.3	1,260	481	1,050	304
23	2.3	3.1	3.7	3.9	4.1	4.6	4.3	5.6	1,290	781	1,050	2.4
24	2.3	3.1	3.7	3.9	4.1	4.3	4.8	5.8	1,290	960	1,050	2.3
25	2.4	3.1	3.7	3.9	4.1	4.3	4.6	5.8	1,250	1,010	1,040	2.3
26	2.4	3.1	3.7	3.7	4.1	4.6	4.6	5.8	1,200	1,010	1,040	2.3
27	2.4	3.1	3.6	3.6	4.1	4.6	4.6	6.0	1,170	1,010	1,040	2.4
28	2.4	3.1	2.6	3.5	4.1	4.6	4.6	6.2	1,230	1,000	1,040	2.4
29	2.5	3.1	3.6	3.4	-----	4.6	4.6	6.2	1,260	1,000	1,030	2.3
30	2.5	3.1	3.5	3.3	-----	4.6	4.8	6.2	1,230	1,000	1,030	2.3
31	2.5	-----	3.3	3.2	-----	4.6	-----	6.4	-----	1,000	1,020	-----
TOTAL	70.5	91.4	106.0	107.9	105.0	134.9	139.9	168.8	30,652.6	20,520	30,874	18,708.7
MEAN	2.27	3.05	3.42	3.48	3.75	4.35	4.66	5.45	1,022	662	996	624
MAX	2.5	3.2	3.7	3.9	4.1	4.6	5.3	6.4	1,640	1,100	1,060	1,020
MIN	2.0	2.7	3.1	3.2	3.2	4.1	4.3	4.8	6.4	266	899	2.3
AC-FT	140	181	210	214	209	268	277	335	60,800	40,700	61,240	37,110

CAL YR 1969 TOTAL 97,723.5 MEAN 268 MAX 1,050 MIN 1.8 ACFT 193,800
WAT YR 1970 TOTAL 101,679.7 MEAN 279 MAX 1,640 MIN 2.0 ACFT 201,700

NOTE.--No gage-height record Nov. 27 to Mar. 5.

PAYETTE RIVER BASIN

13238000 Payette River near Banks, Idaho

LOCATION.--Lat 44°05'08", long 116°05'56", in NE¼SE¼ sec.28, T.9 N., R.3 E., Boise County, Boise National Forest, on right bank 1 mile upstream from North Fork Payette River, 1.5 miles northeast of Banks, and at mile 73.8.

DRAINAGE AREA.--1,200 sq mi, approximately. Mean altitude, 6,020 ft.

PERIOD OF RECORD.--August 1921 to current year. Prior to October 1960, published as South Fork Payette River near Banks.

GAGE.--Water-stage recorder. Altitude of gage is 2,805 ft (from river-profile map). Prior to Sept. 12, 1922, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--49 years, 1,780 cfs (1,290,000 acre-ft per year); 15-year base period (1952-67), 1,921 cfs.

EXTREMES.--Current year: Maximum discharge, 11,000 cfs June 9 (gage height, 11.02 ft); minimum, 317 cfs Dec. 29, result of freezeup (gage height, 0.40 ft).

Period of record: Maximum discharge, 20,800 cfs Dec. 23, 1964 (gage height, 15.46 ft, from floodmark); minimum daily, 220 cfs Dec. 15, 1967; minimum recorded gage height, 0.09 ft Dec. 17, 1967.

REMARKS.--Records good. Flow partly regulated since November 1930 by Deadwood Reservoir 55.6 miles upstream (see sta 13236000). Small diversions above station for irrigation.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 6 to June 2, Sept. 30; stage-discharge relation affected
by ice Nov. 28 to Dec. 7, Dec. 29 to Jan. 12)

0.5	370	6.0	3,950
1.0	549	8.0	6,260
2.0	994	10.0	9,290
4.0	2,250	10.8	10,700

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	601	589	490	490	1,050	1,250	1,090	1,160	5,600	6,090	2,200	1,720
2	672	581	510	480	998	1,310	1,080	1,370	6,100	5,380	2,150	1,680
3	698	577	520	550	944	1,190	1,040	1,880	7,230	5,060	2,130	1,650
4	643	573	520	580	852	1,110	1,040	2,640	8,530	4,960	2,110	1,670
5	622	581	510	600	829	1,050	1,110	3,680	9,390	4,750	2,110	1,800
6	614	659	500	560	843	999	1,400	4,640	9,640	4,560	2,150	1,730
7	610	694	530	540	910	999	1,900	5,190	10,300	4,320	2,070	1,710
8	618	618	553	580	790	1,210	1,820	4,460	10,300	3,950	2,020	1,780
9	689	597	550	630	790	1,170	1,770	4,120	10,600	3,680	2,000	1,810
10	655	585	548	690	805	1,120	2,030	4,070	9,950	3,580	1,990	1,690
11	626	585	548	620	830	1,100	2,280	3,540	8,340	3,540	1,970	1,660
12	610	581	572	590	884	1,080	2,030	3,140	7,240	3,210	1,830	1,460
13	597	577	633	674	1,110	1,040	1,840	2,770	6,550	3,010	1,810	1,450
14	581	569	600	847	1,080	1,090	1,720	2,520	6,530	2,860	1,790	1,450
15	589	565	574	900	1,020	1,220	1,580	2,440	6,630	2,680	1,810	1,440
16	614	573	549	838	981	1,250	1,460	2,840	6,350	2,530	1,790	1,440
17	614	561	540	987	1,300	1,230	1,400	4,260	5,960	2,450	1,770	1,420
18	605	514	539	1,330	1,240	1,140	1,410	6,170	5,970	2,330	1,750	1,400
19	601	518	552	1,600	1,110	1,100	1,490	7,390	6,350	2,230	1,730	1,510
20	597	541	652	1,560	1,050	1,080	1,430	6,850	6,870	2,130	1,720	1,590
21	597	526	720	1,560	1,040	1,070	1,350	6,710	7,470	2,080	1,800	1,510
22	597	526	1,020	2,070	1,020	1,080	1,320	6,700	8,060	2,150	1,800	1,250
23	593	480	809	2,280	1,020	1,090	1,270	7,370	8,350	2,330	1,780	874
24	593	541	678	3,630	1,020	1,120	1,250	7,560	8,190	2,430	1,760	721
25	597	510	587	2,790	1,020	1,150	1,220	7,690	7,820	2,480	1,750	698
26	585	491	597	2,050	1,030	1,160	1,210	8,520	7,270	2,430	1,730	691
27	585	469	584	2,110	1,050	1,160	1,170	9,110	7,200	2,380	1,720	684
28	618	440	477	1,770	1,090	1,190	1,140	8,220	7,840	2,370	1,700	673
29	610	450	370	1,440	-----	1,190	1,120	7,050	8,190	2,340	1,690	663
30	589	470	470	1,250	-----	1,140	1,120	6,250	7,480	2,290	1,680	650
31	585	-----	490	1,070	-----	1,100	-----	5,640	-----	2,230	1,690	-----
TOTAL	19,005	16,541	17,792	37,666	27,606	35,188	43,090	155,950	232,300	98,810	58,000	40,474
MEAN	613	551	574	1,215	986	1,135	1,436	5,031	7,743	3,187	1,871	1,349
MAX	698	694	1,020	3,630	1,300	1,310	2,280	9,110	10,600	6,090	2,200	1,810
MIN	581	440	370	480	790	999	1,040	1,160	5,600	2,080	1,680	650
AC-FT	37,700	32,810	35,290	74,710	54,760	69,800	85,470	309,300	460,800	196,000	115,000	80,280
CAL YR 1969	TOTAL 791,359			MEAN 2,168	MAX 10,000	MIN 370	AC-FT 1,570,000					
WTR YR 1970	TOTAL 782,422			MEAN 2,144	MAX 10,600	MIN 370	AC-FT 1,552,000					

13238500 Payette Lake at McCall, Idaho

LOCATION.--Lat 44°54'50", long 116°07'10", in NW¼ sec.8, T.18 N., R.3 E., Valley County, at outlet of lake on North Fork Payette River at McCall and at mile 75.4.

DRAINAGE AREA.--144 sq mi.

PERIOD OF RECORD.--August 1921 to current year (fragmentary prior to Nov. 23, 1943). Prior to October 1942, published as "at Lardo."

GAGE.--Water-stage recorder. Datum of gage is 4,982.73 ft above mean sea level, unadjusted. Prior to Aug. 26, 1931, nonrecording gage at site 25 ft downstream at datum 2.0 ft higher. Aug. 26, 1931, to Nov. 22, 1943, nonrecording gage at site 75 ft downstream at present datum.

EXTREMES.--Current year: Maximum gage height, 7.31 ft June 7; minimum, 1.37 ft Dec. 5-8.
Period of record: Maximum gage height observed, 8.75 ft July 13, 1935; minimum observed, 0.95 ft Oct. 3, 1931.

REMARKS.--Flow from Payette Lake is regulated within natural range by taintor gates and removable stoplogs of a buttress and slab-type dam completed in November 1943. During period 1923-43 lake was regulated by structure consisting of a series of concrete-filled cribs supporting removable flashboards. Some regulation is reported to have been affected by timber flashboards for several years prior to 1923. Lake area is approximately 5,000 acres. No capacity table has been developed. Water is used for irrigation in vicinity of Emmett. No diversion above station.

REVISIONS (WATER YEARS).--WSP 753: 1931. WSP 1013: Drainage area.

GAGE HEIGHT, IN FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.53	1.67	1.40	1.63	2.23	2.01	-	2.07	5.35	5.48	6.76	4.11
2	2.49	1.65	1.39	1.62	2.20	1.99	-	2.08	5.58	5.61	6.65	4.07
3	2.44	1.64	1.38	1.61	2.18	1.98	-	2.14	5.92	5.74	6.57	4.03
4	2.39	1.63	1.38	1.60	2.15	1.96	-	2.28	6.46	5.85	6.48	4.08
5	2.35	1.68	1.37	1.60	2.14	1.95	-	2.48	6.91	5.96	6.39	4.03
6	2.30	1.70	1.37	1.59	2.14	1.94	-	2.77	7.22	6.03	6.30	4.01
7	2.26	1.70	1.37	1.58	2.12	1.94	-	3.06	7.24	6.06	6.20	4.23
8	2.24	1.69	1.38	1.58	2.10	1.93	1.85	3.23	7.01	6.15	6.10	4.28
9	2.22	1.68	1.38	1.65	2.08	1.92	1.92	3.40	7.09	6.28	6.00	4.26
10	2.19	1.66	1.39	1.67	2.06	1.91	1.95	3.50	6.76	6.38	5.90	4.24
11	2.15	1.65	1.43	1.65	2.04	-	1.98	3.51	6.26	6.41	5.81	4.22
12	2.10	1.64	1.50	1.72	2.03	-	1.99	3.50	5.86	6.44	5.70	4.17
13	2.06	1.62	1.50	1.75	2.06	-	2.00	3.45	5.61	6.44	5.61	4.11
14	2.02	1.62	1.50	1.78	2.05	-	2.00	3.39	5.69	6.41	5.50	4.04
15	1.98	1.60	1.50	1.77	2.04	1.90	2.00	3.37	5.82	6.40	5.40	3.94
16	1.96	1.60	1.48	1.79	2.02	1.92	2.00	3.48	5.79	6.40	5.32	3.85
17	1.91	1.58	1.48	1.81	2.06	1.92	2.00	3.85	5.66	6.41	5.22	3.78
18	1.87	1.57	1.49	1.88	2.04	-	2.01	4.42	5.64	6.43	5.14	3.73
19	1.84	1.55	1.56	1.91	2.02	-	2.05	4.92	5.71	6.48	5.05	3.68
20	1.82	1.54	1.59	1.91	2.00	-	2.06	5.25	5.81	6.55	4.96	3.61
21	1.81	1.54	1.64	1.95	1.98	-	2.05	5.41	5.88	6.63	4.89	3.54
22	1.78	1.51	1.66	1.96	1.97	-	2.06	5.54	5.94	6.70	4.80	3.47
23	1.76	1.50	1.67	2.05	1.95	-	2.08	5.98	6.03	6.76	4.72	3.40
24	1.76	1.48	1.67	2.13	1.94	-	2.08	6.13	6.12	6.80	4.63	3.31
25	1.74	1.47	1.67	2.14	1.93	-	2.08	6.24	6.03	6.82	4.54	3.23
26	1.73	1.45	1.70	2.22	1.91	-	2.09	6.43	5.88	6.83	4.45	3.14
27	1.72	1.44	1.69	2.27	1.90	-	2.08	6.45	5.84	6.84	4.35	3.06
28	1.73	1.42	1.67	2.27	1.92	-	2.07	6.30	6.10	6.86	4.26	2.98
29	1.71	1.42	1.65	2.25	-----	-	2.06	5.94	5.88	6.85	4.20	2.93
30	1.70	1.41	1.65	2.22	-----	-	2.06	5.64	5.53	6.82	4.16	2.89
31	1.68	-----	1.64	2.23	-----	-	-----	5.38	-----	6.81	4.13	-----
MEAN	2.01	1.58	1.52	1.86	2.05	-	-	4.24	6.09	6.41	5.36	3.75
MAX	2.53	1.70	1.70	2.27	2.23	-	-	6.45	7.24	6.86	6.76	4.28
MIN	1.68	1.41	1.37	1.58	1.90	-	-	2.07	5.35	5.48	4.13	2.89

PAYETTE RIVER BASIN

13239000 North Fork Payette River at McCall, Idaho

LOCATION.--Lat 44°54'30", long 116°07'10", in SW¼ sec.8, T.18 N., R.3 E., Valley County, on left bank at McCall, 0.2 mile downstream from outlet of Payette Lake, and at mile 75.2.

DRAINAGE AREA.--144 sq mi. Mean altitude, 6,520 ft.

PERIOD OF RECORD.--September 1908 to June 1917, May 1919 to current year. Prior to October 1942, published as "at Lardo."

GAGE.--Water-stage recorder. Altitude of gage is 4,970 ft (by barometer). Nonrecording gage at site 1 mile downstream at different datum prior to Oct. 14, 1908, and Oct. 14, 1908, to Dec. 18, 1923, at sites near present gage at present datum.

AVERAGE DISCHARGE.--59 years (1908-16, 1919-70), 362 cfs (262,300 acre-ft per year); 15-year base period (1952-67), 377 cfs.

EXTREMES.--Current year: Maximum discharge, 3,820 cfs June 7 (gage height, 7.22 ft); minimum, 27 cfs Dec. 8 (gage height, 1.81 ft).

Period of record: Maximum discharge, 4,260 cfs June 10, 1933, June 4, 1948; maximum gage height, 7.71 ft June 4, 1948; no flow Nov. 5-8, 1931, Nov. 17-24, 1933, Nov. 14-27, 1935, Oct. 22 to Nov. 11, 1938.

REMARKS.--Records good. Flow regulated to some extent since several years prior to 1923 by gates at outlet of Payette Lake 0.2 miles upstream (see sta 13238500) and several smaller lakes upstream. Diversion for fish hatchery bypasses station and is returned below gage. Records of daily discharge of this diversion published in annual water-supply papers from October 1942 to February 1953.

REVISIONS.--WSP 963: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.7	23	4.0	740
2.0	48	5.0	1,490
2.5	129	6.0	2,460
3.0	273	7.0	3,560
3.5	475	7.2	3,800

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	54	31	70	164	125	102	132	1,930	1,400	201	119
2	146	52	31	69	162	131	101	136	2,020	626	270	116
3	144	51	30	68	158	130	101	144	2,310	643	269	116
4	139	49	30	68	155	129	97	159	2,670	659	266	115
5	135	51	29	68	152	127	97	183	3,100	553	270	114
6	130	56	29	66	151	125	97	213	3,530	323	275	112
7	124	57	28	65	149	125	101	315	3,780	308	275	114
8	121	56	28	64	146	123	102	455	3,640	290	275	115
9	121	55	28	68	143	121	106	504	3,570	229	273	116
10	119	54	28	76	140	119	115	545	3,480	235	270	114
11	115	53	30	76	137	117	120	559	3,000	235	268	113
12	109	52	38	79	136	116	124	557	2,550	234	271	112
13	104	51	44	86	140	115	125	547	2,210	232	273	107
14	98	49	43	89	139	116	127	532	2,160	228	267	182
15	97	48	44	91	137	117	127	521	2,260	228	263	252
16	97	48	43	92	135	118	125	543	2,330	185	280	248
17	92	47	42	96	140	117	125	703	2,250	137	276	244
18	87	46	43	102	137	116	126	923	2,170	110	273	237
19	80	45	46	109	135	114	130	1,150	2,200	51	270	233
20	77	44	53	112	132	112	133	1,570	2,280	52	264	250
21	73	43	59	116	129	110	133	1,930	2,360	53	261	265
22	70	41	64	121	126	110	132	2,070	2,410	50	264	257
23	68	40	68	127	124	108	133	2,320	2,480	50	263	248
24	66	39	68	144	122	108	135	2,590	2,580	50	260	240
25	65	37	69	149	120	106	135	2,700	2,590	51	261	242
26	63	36	71	154	118	104	136	2,840	2,440	51	267	247
27	61	35	73	166	117	103	135	2,960	2,340	52	272	239
28	61	35	71	167	116	104	134	2,840	2,490	94	268	245
29	60	34	70	165	-----	105	132	2,580	2,510	119	192	252
30	57	32	69	162	-----	105	132	2,350	2,210	119	119	247
31	56	-----	68	162	-----	103	-----	2,060	-----	115	119	-----
TOTAL	2,983	1,390	1,468	3,247	3,860	3,579	3,618	37,631	77,850	7,762	7,895	5,611
MEAN	96.2	46.3	47.4	105	138	115	121	1,214	2,595	250	255	187
MAX	148	57	73	167	164	131	136	2,960	3,780	1,400	280	265
MIN	56	32	28	64	116	103	97	132	1,930	50	119	107
AC-FT	5,920	2,760	2,910	6,440	7,660	7,100	7,180	74,640	154,400	15,400	15,660	11,130
CAL YR 1969	TOTAL 139,073		MEAN 381		MAX 2,850	MIN 19		AC-FT 275,900				
WTR YR 1970	TOTAL 156,894		MEAN 430		MAX 3,780	MIN 28		AC-FT 311,200				

PAYETTE RIVER BASIN

213

13240000 Lake Fork Payette River above Jumbo Creek, near McCall, Idaho

LOCATION.--Lat 44°54'50", long 115°59'10", in NE¼ sec.8, T.18 N., R.4 E., Valley County, on left bank 200 ft upstream from bridge at abandoned powerplant, 0.2 mile upstream from Jumbo Creek, 3.5 miles upstream from Lake Fork Reservoir dam, 5.5 miles east of McCall, and at mile 21.0.

DRAINAGE AREA.--48.9 sq mi. Mean altitude, 6,950 ft.

PERIOD OF RECORD.--October 1945 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,140 ft (from topographic map). Prior to Nov. 10, 1945, non-recording gage at site 200 ft downstream at different datum.

AVERAGE DISCHARGE.--25 years, 147 cfs (40.82 inches per year, 106,500 acre-ft per year); 15-year base period (1952-67), 143 cfs.

EXTREMES.--Current year: Maximum discharge, 1,690 cfs June 6 (gage height, 8.00 ft); minimum, 2.4 cfs part of each day Nov. 8-9 (gage height, 1.05 ft).

Period of record: Maximum discharge, 2,600 cfs June 3, 1948 (gage height, 9.19 ft), from rating curve extended above 1,000 cfs; minimum, 1.2 cfs Dec. 3, 1967; minimum gage height, 1.05 ft part of each day Nov. 8-9, 1969.

REMARKS.--Records good except those for period of no gage-height record, which are fair. No diversion above station. Flow regulated by Cruzen Reservoir, capacity 1,230 acre-ft.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Nov. 13 to Dec. 23, Dec. 26; stage-discharge relation affected by ice Dec. 24-25, Dec. 27 to Jan. 1, Feb. 19-27, Mar. 5)

1.0	2.5	2.5	24	5.0	228
1.2	3.2	3.0	41	6.0	438
1.5	5.7	3.5	66	7.0	860
2.0	12	4.0	104	7.8	1,470

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	20	15	22	52	41	36	47	631	447	45	20
2	33	20	14	25	51	42	36	54	805	441	43	19
3	28	19	13	24	49	40	34	83	1,170	479	42	19
4	23	19	13	23	46	40	35	143	1,420	479	40	26
5	21	24	14	22	44	39	36	254	1,460	467	39	31
6	20	27	14	19	44	39	38	367	1,460	405	38	25
7	20	26	14	21	43	40	49	424	1,300	360	37	39
8	22	15	14	22	41	41	48	333	1,030	309	35	170
9	26	2.6	14	21	40	39	49	335	1,180	114	34	130
10	24	3.5	14	22	39	39	66	303	805	73	33	59
11	22	4.3	15	22	38	39	73	250	631	207	32	42
12	20	4.7	15	22	39	39	65	220	560	198	31	38
13	17	5.0	17	23	42	38	61	195	508	183	30	36
14	19	5.3	17	23	42	39	59	179	648	159	29	35
15	19	9.5	17	23	41	40	56	191	772	143	28	34
16	20	16	16	24	40	41	54	301	719	131	27	33
17	19	17	16	25	43	43	54	627	640	122	26	32
18	19	17	16	26	40	41	55	955	676	111	26	31
19	18	18	17	28	40	39	58	1,000	772	98	25	57
20	19	18	18	30	39	38	56	977	867	91	25	67
21	19	18	24	33	39	38	54	887	907	232	24	62
22	20	16	43	40	38	37	52	873	927	286	24	57
23	20	16	44	80	38	37	52	1,100	962	206	23	75
24	22	17	36	130	37	37	51	998	1,020	93	22	70
25	22	16	32	90	36	36	50	1,030	860	64	22	58
26	20	15	30	70	36	37	49	1,250	766	59	21	52
27	20	14	27	66	38	36	49	1,140	805	57	21	49
28	22	13	22	60	39	37	48	788	1,150	56	20	46
29	20	14	26	56	-----	37	46	680	739	54	20	43
30	20	14	27	58	-----	36	46	610	567	50	20	41
31	20	-----	26	50	-----	36	-----	549	-----	47	20	-----
TOTAL	657	443.9	640	1,200	1,154	1,201	1,515	17,143	26,757	6,221	502	1,496
MEAN	21.2	14.8	20.6	38.7	41.2	38.7	50.5	553	892	201	29.1	49.9
MAX	33	27	44	130	52	43	73	1,250	1,460	479	45	170
MIN	17	2.6	13	19	36	36	34	47	508	47	20	19
CFSM	.43	.30	.42	.79	.84	.79	1.03	11.3	18.2	4.11	.60	1.02
IN.	.50	.34	.49	.91	.88	.91	1.15	13.04	20.36	4.73	.69	1.14
AC-FT	1,300	880	1,270	2,380	2,290	2,380	3,010	34,000	53,070	12,340	1,790	2,970

CAL YR 1969 TOTAL 54,151.9 MEAN 148 MAX 1,100 MIN 2.6 CFSM 3.03 IN 41.20 ACFT 107,400
WAT YR 1970 TOTAL 59,329.9 MEAN 163 MAX 1,460 MIN 2.6 CFSM 3.33 IN 45.13 ACFT 117,700

NOTE.--No gage-height record Jan. 2 to Feb. 11.

PAYETTE RIVER BASIN

13241000 Lake Fork Reservoir near McCall, Idaho

LOCATION.--Lat 44°54'10", long 116°02'20", in NW¼NW¼ sec.13, T.18 N., R.3 E., Valley County, at outlet gate near center of dam on Lake Fork Payette River, 3 miles east of McCall, and at mile 18.0.

DRAINAGE AREA.--64 sq mi, approximately.

PERIOD OF RECORD.--April 1926 to current year (fragmentary).

GAGE.--Nonrecording gage on concrete gate-control structure of dam. Datum of gage is at mean sea level (levels by Lake Irrigation District).

EXTREMES.--Current year: Maximum contents observed, 19,800 acre-ft July 8, 9; maximum elevation observed, 5,118.82 ft July 9; minimum observed, 0 acre-ft on Nov. 5, Dec. 6, Feb. 12; minimum elevation observed, 5,099.25 ft Dec. 6.

Period of record: Maximum contents observed, 21,060 acre-ft June 21, 1961 (elevation, 5,119.56 ft); no storage above elevation 5,101.0 ft for long periods during fall and winter of most years. Minimum elevation observed below 5,101.0 ft, 5,099.04 ft Dec. 9, 1936.

REMARKS.--Reservoir is formed by earth- and rock-fill dam completed in 1926. Capacity, 16,940 acre-ft between elevations 5,101.0 ft (lower limit of capacity table, 4.0 ft above gate sill of outlet) and 5,117.0 ft (top of flashboards, 5.0 ft above spillway crest). Dead storage unknown. Water is used for irrigation of about 6,800 acres of land near McCall and Norwood. Figures given herein represent contents above 5,101.0 ft. There is some usable storage below elevation 5,101.0 ft, but natural flow passing through reservoir when outlet gates are open prevents withdrawal of storage to elevation of sill of gates. Elevation, in feet, in reservoir during water year 1970 reported below 5,101.0 ft as follows: Nov. 5, 5,100.22 ft; Dec. 6, 5,099.25 ft; Feb. 12, 5,100.13.

COOPERATION.--Elevation record and capacity table furnished by Lake Irrigation District.

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

5,102.0	480	5,110.0	6,770
5,104.0	1,500	5,112.0	9,380
5,106.0	2,810	5,116.0	15,400
5,108.0	4,550	5,119.0	20,100

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1								-	15,400	18,700	14,900	3,990
2								-	15,300	18,700	14,600	3,670
3								-	15,800	18,700	14,200	3,400
4								-	16,600	19,100	13,900	3,130
5		0						-	17,500	19,400	13,700	2,970
6			0					-	18,000	19,600	13,300	2,720
7								-	18,200	19,700	-	2,680
8	1,140							-	18,000	19,800	12,700	2,890
9								-	17,800	19,800	12,400	3,050
10								-	17,900	19,500	12,200	3,130
11								-	17,300	19,300	11,700	3,050
12					0			-	17,200	19,200	11,400	3,020
13								-	17,100	19,200	11,100	2,950
14								-	17,400	19,000	10,800	2,890
15								-	17,800	18,900	10,400	2,860
16								-	18,200	18,700	-	2,790
17								-	18,200	18,500	9,640	2,760
18								-	18,100	18,300	9,240	-
19								-	18,600	18,100	8,890	-
20								-	18,700	17,900	8,510	-
21								-	18,800	17,600	8,140	-
22								12,700	18,700	17,700	7,780	-
23								14,900	18,800	17,800	7,300	-
24								-	18,900	17,600	6,870	-
25								15,800	19,000	17,300	6,540	-
26								16,500	18,800	17,000	6,070	-
27								17,100	19,000	16,800	5,680	-
28								17,000	19,600	16,300	5,330	-
29								16,600	19,700	16,000	4,970	-
30								16,200	18,800	15,600	4,530	-
31		-----						15,700	-----	15,300	4,280	-----
MAX	-	-	-	-	-	-	-	17,100	19,700	19,800	14,900	3,990
MIN	-	0	0	-	0	-	-	-	15,300	15,300	4,280	-
(†)	-	-	-	-	-	-	-	5,116.20	5,118.20	5,115.94	5,107.72	-
(‡)	-	-	-	-	-	-	-	-	+3,100	-3,500	-11,020	-

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

13242000 Lake Irrigation District Canal near McCall, Idaho

LOCATION.--Lat 44°53'50", long 116°02'20", in SW¼ sec.13, T.18 N., R.3 E., Valley County, on right bank 600 ft downstream from head of canal, 0.5 mile south of Lake Fork Reservoir, and 3 miles southeast of McCall.

PERIOD OF RECORD.--May 1926 to current year (irrigation seasons only 1927-34, 1942-46).

GAGE.--Nonrecording gage. Altitude of gage is 5,090 ft (from topographic map). Prior to May 1947, at different datum.

EXTREMES.--Period of record: Maximum daily discharge, 213 cfs June 14, 1965; no flow or small amount of leakage through headgate during nonirrigation seasons.

REMARKS.--Records good except those for October, November, and September, which are poor. No diversions between headgate and station. Canal diverts from right bank of Lake Fork Payette River in SW¼ sec.13, T.18 N., R.3 E., for irrigation of 6,800 acres near McCall and Norwood, in the Lake Irrigation District Project.

COOPERATION.--Gage readings furnished by Lake Irrigation District.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	45	16						0	75	161	138	113
2	45	16						0	92	161	128	108
3	45	16						0	113	159	123	108
4	45	16						0	140	157	128	101
5	45	16						0	157	155	140	90
6	45	16						0	165	161	140	78
7	28	16						0	165	165	137	67
8	18	16						0	166	165	137	66
9	18	16						0	168	165	133	62
10	18	6.0						0	163	157	131	55
11	18	0						0	159	151	127	44
12	18	0						0	159	151	130	42
13	18	0						0	168	147	128	39
14	18	0						0	166	142	128	39
15	18	0						0	161	140	135	39
16	17	0						0	161	133	135	37
17	17	0						0	168	135	135	26
18	17	0						0	166	133	135	20
19	17	0						0	176	133	140	20
20	17	0						0	180	138	140	20
21	17	0						0	174	142	138	20
22	17	0						14	178	144	138	20
23	17	0						18	190	144	140	20
24	17	0						14	201	144	140	20
25	17	0						24	201	144	138	20
26	17	0						41	201	142	130	20
27	17	0						54	199	140	128	21
28	17	0						66	190	147	120	21
29	17	0						72	183	147	118	21
30	16	0						72	172	147	113	21
31	16	-----			-----		-----	71	-----	138	113	-----
TOTAL	712	150.0	0	0	0	0	0	446	4,957	4,588	4,084	1,378
MEAN	23.0	5.00	0	0	0	0	0	14.4	165	148	132	45.9
MAX	45	16	0	0	0	0	0	72	201	165	140	113
MIN	16	0	0	0	0	0	0	0	75	133	113	20
AC-FT	1,410	299	0	0	0	0	0	885	9,830	9,100	8,100	2,730

CAL YR 1969 TOTAL 16,081.7 MEAN 44.1 MAX 201 MIN 0 ACFT 31,900
WAT YR 1970 TOTAL 16,315.0 MEAN 44.7 MAX 201 MIN 0 ACFT 32,360

NOTE.--No gage-height record Oct. 1 to May 22.

PAYETTE RIVER BASIN

13242500 Lake Fork Payette River below Lake Irrigation District Canal, near McCall, Idaho

LOCATION.--Lat 44°53'40", long 116°02'20", in SW¼ sec.13, T.18 N., R.3 E., Valley County, on right bank 300 ft downstream from diversion dam for Lake Irrigation District Canal, 0.5 mile downstream from Lake Fork Reservoir, 3 miles southeast of McCall, and at mile 17.5.

DRAINAGE AREA.--64 sq mi, approximately.

PERIOD OF RECORD.--October 1940 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 5,080 ft (from topographic map).

AVERAGE DISCHARGE.--30 years, 125 cfs (90,560 acre-ft per year); 15-year base period (1952-67), 120 cfs.

EXTREMES.--Current year: Maximum discharge, 1,200 cfs June 7 (gage height, 6.24 ft); minimum, 16 cfs Nov. 10 (gage height, 2.45 ft).

Period of record: Maximum discharge, 2,120 cfs June 3, 1948 (gage height, 7.09 ft), from rating curve extended above 1,200 cfs; minimum, 0.4 cfs Mar. 27, 28, 1944; minimum gage height, 1.76 ft Mar. 28, 1944.

REMARKS.--Records good. Flow regulated by McDowell Reservoir (capacity about 600 acre-ft) and by Lake Fork Reservoir (see sta 13241000). Lake Irrigation District Canal (see sta 13242000) diverts above station for irrigation of about 6,800 acres of land near McCall and Norwood.

REVISIONS (WATER YEARS).--WSP 963: 1941.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 1, 6, 7, Mar. 5, 10, 11, 19)

2.4	15	4.0	282
2.6	27	5.0	641
3.0	70	6.0	1,090
3.5	157	6.2	1,180

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	21	21	19	30	69	48	43	56	641	344	90	59
2	21	20	17	30	66	49	43	57	629	309	90	57
3	23	19	17	29	63	49	42	60	679	165	87	55
4	22	19	17	28	60	49	42	64	800	26	74	50
5	21	18	17	27	57	48	41	71	986	21	82	43
6	21	19	17	26	56	48	41	76	1,150	18	87	39
7	36	19	17	26	55	48	43	82	1,180	67	90	27
8	51	19	17	26	53	48	46	85	1,070	98	93	31
9	51	17	17	26	51	49	41	91	958	93	93	34
10	51	35	17	27	50	48	35	93	949	90	93	34
11	49	40	18	27	50	48	38	95	700	96	91	31
12	48	36	20	27	49	47	40	96	458	93	88	29
13	44	32	20	28	50	47	41	99	378	88	87	26
14	43	29	20	28	50	47	44	99	447	80	90	24
15	41	27	20	28	50	47	46	101	488	101	91	21
16	41	26	20	29	50	48	46	103	601	101	90	25
17	40	25	20	29	51	48	47	104	581	93	90	24
18	38	25	20	30	50	48	48	110	447	91	83	23
19	35	24	21	31	49	48	49	141	530	91	77	23
20	33	23	21	33	48	47	49	276	691	88	80	23
21	32	23	23	34	48	46	51	429	813	88	77	23
22	31	22	25	37	47	46	51	538	836	90	77	23
23	28	21	30	40	47	46	51	662	773	90	77	25
24	27	21	32	50	47	44	54	773	800	90	76	25
25	27	21	34	63	44	43	55	822	813	88	74	25
26	25	21	35	73	44	44	56	890	675	88	67	25
27	25	20	35	77	46	44	56	977	553	85	59	25
28	24	20	34	77	46	44	56	931	840	83	62	25
29	23	19	33	76	-----	44	56	844	890	87	63	24
30	20	19	32	76	-----	44	56	773	636	88	59	24
31	22	-----	31	70	-----	44	-----	696	-----	90	57	-----
TOTAL	1,014	700	716	1,238	1,446	1,448	1,407	10,294	21,992	3,120	2,494	922
MEAN	32.7	23.3	23.1	39.9	51.6	46.7	46.9	332	733	101	80.5	30.7
MAX	51	40	35	77	59	49	56	977	1,180	344	93	59
MIN	20	17	17	26	44	43	35	56	378	18	57	21
AC-FT	2,010	1,390	1,420	2,460	2,870	2,870	2,790	20,420	43,620	6,190	4,950	1,830

CAL YR 1969 TOTAL 42,575 MEAN 117 MAX 908 MIN 17 ACFT 84,450
WAT YR 1970 TOTAL 46,791 MEAN 128 MAX 1,180 MIN 17 ACFT 92,810

13243500 Gold Fork River near Roseberry, Idaho

LOCATION.--Lat 44°41'18", long 116°00'02", in SE¹⁶SW⁰⁵ sec. 29, T.16 N., R.4 E., Valley County, on left bank 350 ft upstream from county road bridge, 1 mile downstream from Gold Fork Dam, 4 miles southeast of Roseberry, and at mile 7.7.

DRAINAGE AREA.--143 sq mi.

PERIOD OF RECORD.--August 1920 to September 1921 (fragmentary, published as Gold Fork Payette River near Roseberry), October 1961 to September 1970 (discontinued).

GAGE.--Water-stage recorder. Datum of gage is 4,868.52 ft above mean sea level. Aug. 25, 1920, to Sept. 11, 1921, nonrecording gage at nearby site at different datum.

AVERAGE DISCHARGE.--Combined discharge of Gold Fork River and Canal: 9 years (1962-70), 230 cfs (166,600 acre-ft per year).

EXTREMES (River only).--Current year: Maximum discharge, 1,990 cfs June 6 (gage height, 6.48 ft); minimum, 2.8 cfs Aug. 15, 16, 17, 18, 19 (gage height, 0.96 ft).

Period of record: Maximum discharge observed, 2,260 cfs May 20, 1921 (gage height, 5.50 ft, site and datum then in use); minimum, 1.3 cfs Sept. 6, 1965, Aug. 30, 31, Sept. 1, 1966.

(Combined flow).--Current year: Maximum daily discharge, 1,860 cfs June 6; minimum daily, 50 cfs Nov. 28.

Period of record: Maximum daily discharge, 1,860 cfs June 6, 1970; minimum daily, 38 cfs Sept. 25, 30, Oct. 1, Nov. 9, 1966.

REMARKS.--Records good except those for winter periods, which are poor. Figures of daily discharge do not include discharge in the Gold Fork Canal, which diverts 1 mile above station. Records of daily discharge for Gold Fork Canal are on file in the office of the Geological Survey, Boise, Idaho.

REVISIONS.--WRD Idaho 1962: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 18 to Mar. 16, Mar. 20)

0.9	1.6	1.6	35	4.0	687
1.0	3.3	1.8	56	5.0	1,160
1.1	5.9	2.0	84	6.0	1,700
1.2	9.7	2.5	186	6.5	2,000
1.4	20	3.0	323		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	55	54	56	75	100	81	82	144	1,020	679	23	3.0
2	97	52	57	85	95	80	84	174	1,160	613	19	3.0
3	72	52	57	90	92	76	81	227	1,400	578	16	3.0
4	59	52	58	88	75	74	82	299	1,640	547	14	23
5	52	63	58	86	90	72	90	396	1,750	498	12	30
6	50	72	58	75	90	72	122	491	1,790	452	9.3	22
7	52	68	66	80	85	76	144	539	1,680	403	5.6	40
8	59	60	66	85	83	78	131	466	1,520	360	4.1	205
9	73	58	66	88	78	80	141	517	1,550	320	3.8	100
10	64	58	62	90	76	82	206	491	1,290	293	3.3	69
11	59	58	70	85	74	84	198	444	1,070	267	3.1	62
12	53	58	84	82	78	84	172	403	940	234	3.0	56
13	47	58	100	88	85	84	162	364	847	208	3.0	55
14	50	55	98	96	78	84	153	342	980	191	3.0	55
15	52	55	88	94	75	88	144	360	1,040	167	3.0	60
16	56	58	76	88	75	86	141	459	915	150	2.8	60
17	54	50	70	85	85	85	146	666	860	133	2.8	60
18	53	56	72	86	73	85	155	910	896	114	2.8	60
19	52	62	68	90	62	84	157	1,090	1,020	104	2.8	102
20	53	54	78	100	66	84	141	1,150	1,080	89	3.0	97
21	53	56	120	105	74	82	137	1,140	1,130	79	3.1	97
22	54	52	170	130	72	81	133	1,150	1,120	78	3.1	82
23	54	52	150	160	74	79	131	1,380	1,100	68	3.2	90
24	54	60	115	240	73	82	131	1,320	1,010	68	3.3	84
25	55	54	75	190	69	81	124	1,400	950	64	3.0	81
26	52	56	100	140	67	84	122	1,560	816	64	3.0	78
27	53	52	80	135	66	84	120	1,590	829	63	3.0	76
28	58	50	58	110	72	85	114	1,390	1,350	40	3.0	72
29	54	54	78	90	-----	84	114	1,220	1,030	38	3.0	64
30	53	55	90	95	-----	82	124	1,100	811	32	3.0	58
31	53	-----	95	84	-----	82	-----	975	-----	28	3.0	-----
TOTAL	1,755	1,694	2,539	3,215	2,182	2,525	3,982	24,157	34,594	7,022	173.2	1,947.0
MEAN	56.6	56.5	81.9	104	77.9	81.5	133	779	1,153	227	5.59	64.9
MAX	97	72	170	240	100	88	206	1,590	1,790	679	23	205
MIN	47	50	56	75	62	72	81	144	811	28	2.8	3.0
AC-FT	3,480	3,360	5,040	6,380	4,330	5,010	7,900	47,920	68,620	13,930	344	3,860
MEAN†	66.4	61.9	81.9	104	77.9	81.5	133	781	1,216	312	82.8	86.4
AC-FT†	4,080	3,680	5,040	6,380	4,330	5,010	7,900	48,020	72,330	19,200	5,090	5,140

CAL YR 1969 TOTAL 87,045.3 MEAN 238 MAX 1,690 MIN 1.4 ACFT 172,700 MEAN† 262 AC-FT† 189,700
WAT YR 1970 TOTAL 85,785.2 MEAN 235 MAX 1,790 MIN 2.8 ACFT 170,200 MEAN† 257 AC-FT† 186,200

† Adjusted for diversion in Gold Fork Canal.

PAYETTE RIVER BASIN

13244500 Cascade Reservoir at Cascade, Idaho

LOCATION.--Lat 44°31'30", long 116°03'00", in NE¼NE¼ sec.26, T.14 N., R.3 E., Valley County, in gate-control structure at south end of Cascade Dam on North Fork Payette River, 0.5 mile downstream from Willow Creek, 0.8 mile northwest of Cascade, and at mile 39.9.

DRAINAGE AREA.--620 sq mi. Mean altitude, 5,960 ft.

PERIOD OF RECORD.--January to December 1948 (fragmentary), January 1949 to current year.

GAGE.--Water-stage recorder. Datum of gage is at mean sea level (levels by Bureau of Reclamation). Datum of gage is 0.66 ft below mean sea level, datum of 1929, supplementary adjustment of 1961. Prior to Nov. 7, 1958, nonrecording gage at north end of dam at same datum.

EXTREMES.--Current year: Maximum contents, 713,000 acre-ft June 29 (elevation, 4,828.37 ft); minimum, 294,500 acre-ft Jan. 9 (elevation, 4,808.88 ft).

Period of record: Maximum contents observed, 727,000 acre-ft June 10, 11, 1957 (elevation, 4,828.89 ft); no contents at times during March and September 1948.

REMARKS.--Reservoir is formed by earth-fill dam completed in May 1949. Storage began Nov. 7, 1947. Capacity, 703,200 acre-ft between elevations 4,766 ft (4.0 ft above sill of outlet tunnel) and 4,828 ft (top of spillway gates). Figures given herein represent contents above elevation 4,766 ft. The Bureau of Reclamation attempts to limit withdrawal to elevation 4,787.5 ft, retaining 50,000 acre-ft capacity as dead storage. Contents table computed from tables furnished by Bureau of Reclamation (revised 1950). Water is used for irrigation of lands in the Payette Division of the Boise Project and for power at Black Canyon powerplant near Emmett.

COOPERATION.--Capacity table furnished by Bureau of Reclamation.

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

4,808.0	280,100	4,820.0	508,500
4,810.0	313,500	4,829.0	730,000

CONTENTS, IN ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	402,400	360,300	331,400	302,400	344,700	367,100	348,900	356,300	541,300	709,800	662,800	563,800
2	399,400	359,600	329,800	301,600	345,700	367,300	347,900	356,300	549,100	708,000	660,500	559,800
3	395,900	358,700	328,600	300,600	346,600	367,700	347,000	358,100	558,400	706,900	657,600	557,500
4	392,800	356,300	327,400	299,400	347,300	367,700	345,900	361,100	568,700	707,400	655,100	554,500
5	390,100	357,200	326,000	298,400	347,900	367,700	345,200	364,600	580,600	705,300	652,800	551,000
6	387,900	357,200	324,700	297,200	349,100	367,700	345,000	368,100	593,800	704,800	650,000	548,000
7	385,400	356,300	323,500	295,900	350,000	368,600	345,000	371,400	608,200	704,500	647,900	548,200
8	383,700	356,000	322,500	294,900	350,900	368,600	345,000	375,200	621,800	704,800	644,400	547,100
9	381,800	355,200	321,400	295,000	351,800	368,600	346,300	378,700	635,500	705,100	641,600	545,000
10	380,200	354,500	320,400	296,200	352,500	368,600	348,400	383,100	650,000	704,500	638,600	542,900
11	378,200	353,800	318,700	296,600	353,100	368,100	350,000	386,300	660,200	704,800	635,300	540,900
12	376,100	352,700	320,400	298,100	354,300	367,000	350,700	390,000	667,700	705,600	632,300	538,400
13	374,000	351,800	318,800	299,200	355,400	365,800	351,600	393,000	674,100	703,700	628,800	534,900
14	372,500	350,900	317,100	301,100	356,300	365,700	352,500	395,500	682,200	702,400	625,500	532,000
15	371,600	350,000	315,600	301,700	357,100	364,900	353,100	398,100	689,000	701,900	622,300	529,700
16	371,200	349,500	313,500	303,400	358,100	364,400	354,000	401,200	692,900	701,100	618,600	527,900
17	370,700	347,900	312,000	305,100	359,800	363,400	354,900	404,900	694,200	699,700	615,100	525,700
18	370,100	347,000	310,200	307,200	360,700	362,300	356,000	409,800	695,000	697,900	611,900	524,800
19	369,400	345,900	309,400	309,200	361,400	361,200	357,600	415,700	695,300	695,300	608,200	523,400
20	368,600	345,000	308,400	310,900	362,200	360,200	358,300	423,300	696,800	690,800	604,800	522,300
21	367,700	343,800	311,300	314,000	363,100	359,100	358,900	430,200	698,200	690,500	601,600	520,700
22	367,300	342,500	311,400	316,300	363,600	358,000	358,100	439,900	699,700	687,100	598,200	518,700
23	366,200	341,400	313,300	322,000	364,400	356,900	360,500	449,100	702,100	684,000	595,300	516,000
24	365,700	340,600	313,200	328,800	364,700	356,000	360,900	459,100	702,700	682,200	591,600	513,400
25	364,700	339,100	312,000	331,700	365,300	355,200	360,700	469,400	704,500	680,300	588,200	510,700
26	364,000	337,900	311,300	334,700	365,700	354,200	360,300	481,100	705,100	680,100	584,900	508,500
27	363,600	336,700	310,200	337,600	365,500	353,100	359,800	493,000	707,400	675,900	581,300	506,300
28	362,900	335,400	308,900	339,300	365,800	352,500	358,500	504,100	711,400	673,300	578,200	503,900
29	362,200	334,200	307,200	340,900	-----	351,800	357,600	514,400	710,900	670,500	574,600	501,700
30	361,600	332,800	305,300	342,000	-----	351,100	356,700	524,500	710,400	667,700	570,600	499,500
31	361,100	-----	303,600	343,400	-----	349,800	-----	532,900	-----	665,300	567,800	-----
MAX	402,400	360,300	331,400	343,400	365,800	368,600	360,900	532,900	711,400	709,800	662,800	563,800
MIN	361,100	332,800	303,600	294,900	344,700	349,800	345,000	356,300	541,300	665,300	567,800	499,500
(†)	4,812.69	4,811.11	4,809.42	4,811.71	4,812.95	4,812.07	4,812.45	4,821.09	4,828.27	4,826.55	4,822.60	4,819.59
(‡)	-43,200	-28,300	-29,200	+39,800	+22,400	-16,000	+6,900	+176,200	+177,500	-45,100	-97,500	-68,300
CAL YR 1969	MAX 705,600	MIN 254,400	‡ -89,600									
WAT YR 1970	MAX 711,400	MIN 294,900	‡ +95,200									

† Elevation, in feet, at end of month.

‡ Change in contents, in acre-feet.

13245000 North Fork Payette River at Cascade, Idaho

LOCATION.--Lat 44°30'44", long 116°01'52", in NE¼NE¼ sec.36, T.14 N., R.3 E., Valley County, 0.5 mile upstream from Beaver Creek, 1.6 miles downstream from Cascade Dam, and at mile 38.3.

DRAINAGE AREA.--626 sq mi. Mean altitude, 5,960 ft.

PERIOD OF RECORD.--May 1941 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,730 ft (from topographic map). Prior to Jan. 28, 1947, non-recording gages at present or nearby sites at present datum. Nov. 6, 1958, to Sept. 30, 1965, water-stage recorder at site 1.5 miles upstream at datum 4,734.59 ft above mean sea level (used as supplementary gage Oct. 1, 1965, to current year). Nov. 6, 1958, to Sept. 30, 1965, present gage used as supplementary gage.

AVERAGE DISCHARGE.--29 years, 1,016 cfs (736,100 acre-ft per year); 15-year base period (1952-67), 993 cfs.

EXTREMES.--Current year: Maximum discharge, 6,680 cfs June 29 (gage height, 5.23 ft); minimum, 138 cfs May 25 (gage height, 0.96 ft); minimum gage height, 0.88 ft Jan. 14.
Period of record: Maximum discharge, 7,320 cfs May 10, 1947 (gage height, 6.29 ft); minimum, 2 cfs or less in January 1948 when stage was below intake.

REMARKS.--Records good. Flow regulated by Payette Lake beginning May 1941 (see sta 13238500), Lake Fork Reservoir beginning May 1941 (see sta 13241000), and Cascade Reservoir 1.6 miles upstream beginning Nov. 1947 (see sta 13244500). Diversions for irrigation of about 37,000 acres above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 1-10)

Oct. 1 to Apr. 8				Apr. 9 to Sept. 30			
0.9	141	2.0	900	0.9	141	3.0	2,230
1.0	175	3.0	2,250	1.0	175	4.0	3,980
1.5	441			1.5	441	5.1	6,390
				2.0	900		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,070	566	912	878	155	520	1,080	1,340	152	4,330	1,510	1,980
2	2,030	672	972	867	157	524	1,090	1,260	152	3,180	1,500	1,980
3	1,920	780	936	867	155	524	1,090	698	154	2,440	1,650	1,970
4	1,800	770	889	856	155	524	1,110	180	155	2,050	1,690	1,910
5	1,650	700	856	900	155	524	1,120	180	157	2,040	1,660	1,800
6	1,520	617	834	845	155	524	1,160	179	159	1,850	1,620	1,580
7	1,480	533	823	835	155	518	1,140	181	159	1,190	1,650	1,460
8	1,460	549	812	823	155	522	955	184	163	880	1,730	1,400
9	1,430	617	812	461	155	524	524	183	166	744	1,730	1,370
10	1,340	710	801	203	155	572	549	183	169	749	1,740	1,310
11	1,290	750	750	199	155	757	535	186	450	750	1,840	1,470
12	1,270	750	878	201	156	996	535	184	1,070	750	1,940	1,600
13	1,250	740	1,210	183	158	1,040	538	185	1,360	802	1,930	1,600
14	1,080	740	1,200	146	158	1,040	529	185	1,380	973	1,930	1,530
15	663	730	1,190	145	158	1,050	508	183	1,730	972	1,910	1,440
16	558	730	1,200	146	159	1,070	518	184	2,770	975	1,920	1,400
17	617	720	1,200	148	163	1,060	524	185	3,680	1,120	1,940	1,400
18	617	710	1,190	150	162	1,060	526	170	4,010	1,310	1,930	1,400
19	617	730	1,190	153	163	1,050	534	163	4,260	1,460	1,930	1,330
20	617	801	1,100	156	163	1,040	541	159	4,270	1,460	1,920	1,200
21	617	790	617	160	162	1,050	541	160	4,280	1,540	1,930	1,250
22	617	780	229	163	161	1,060	543	161	4,300	1,580	1,920	1,590
23	635	790	247	186	162	1,060	549	161	4,330	1,470	1,910	1,760
24	690	801	608	233	162	1,070	705	161	4,340	1,230	1,900	1,700
25	690	801	1,040	185	188	1,070	1,020	155	4,360	1,190	1,900	1,650
26	681	801	1,100	171	340	1,060	1,140	149	4,370	1,180	1,920	1,600
27	681	812	845	165	509	1,070	1,170	153	4,480	1,310	1,940	1,590
28	654	812	878	165	512	1,070	1,280	153	5,200	1,410	1,920	1,590
29	582	814	1,070	163	-----	1,060	1,360	152	6,300	1,410	1,920	1,600
30	582	900	1,340	160	-----	1,070	1,350	153	5,580	1,400	1,970	1,610
31	582	-----	1,200	159	-----	1,080	-----	154	-----	1,440	1,990	-----
TOTAL	32,290	22,036	28,929	11,072	5,343	27,159	24,764	8,064	74,106	45,185	56,890	47,070
MEAN	1,042	735	933	357	191	876	825	260	2,470	1,458	1,835	1,569
MAX	2,070	900	1,340	900	512	1,080	1,360	1,340	6,300	4,330	1,990	1,980
MIN	558	533	229	145	155	518	508	149	152	744	1,500	1,200
AC-FT	64,050	43,710	57,380	21,960	10,600	53,870	49,120	15,990	147,000	89,620	112,800	93,360
CAL YR 1969	TOTAL 437,085			MEAN 1,197		MAX 3,030	MIN 132	AC-FT 867,000				
WTR YR 1970	TOTAL 382,908			MEAN 1,049		MAX 6,300	MIN 145	AC-FT 759,500				

PAYETTE RIVER BASIN

13246000 North Fork Payette River near Banks, Idaho

LOCATION.--Lat 44°06'50", long 116°06'25", in NW¼SE¼ sec.16, T.9 N., R.3 E., Boise County, on right bank 40 ft downstream from highway bridge, 2.5 miles north of Banks, and at mile 2.8.

DRAINAGE AREA.--933 sq mi. Mean altitude, 5,800 ft.

PERIOD OF RECORD.--April 1947 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,081.13 ft above mean sea level, unadjusted.

AVERAGE DISCHARGE.--23 years, 1,329 cfs (962,900 acre-ft per year); 15-year base period (1952-67), 1,299 cfs.

EXTREMES.--Current year: Maximum discharge, 6,770 cfs June 30 (gage height, 11.92 ft); minimum, 277 cfs Jan. 12, 13 (gage height, 4.27 ft).

Period of record: Maximum discharge, 8,830 cfs May 11, 1947 (gage height, about 13.5 ft), estimated on basis of records for station near Smiths Ferry; minimum recorded, 36 cfs Dec. 21, 1947 (gage height, 3.01 ft).

REMARKS.--Records good. Flow regulated by Payette Lake (see sta 13238500), Lake Fork Reservoir (see sta 13241000), and Cascade Reservoir 37.1 miles upstream, beginning November 1947 (see sta 13244500). Diversions for irrigation of about 45,900 acres above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

4.3	277	8.0	2,150
4.5	333	10.0	4,080
5.0	496	12.0	6,800
6.0	915		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,140	649	928	1,060	475	738	1,380	1,670	1,290	5,650	1,540	2,000
2	2,140	635	970	934	439	800	1,390	1,710	1,330	4,490	1,520	2,000
3	2,050	791	988	926	435	791	1,370	1,580	1,430	3,410	1,590	2,000
4	1,940	835	951	928	379	782	1,420	1,040	1,540	2,810	1,720	2,000
5	1,820	841	925	908	390	761	1,540	1,010	1,590	2,620	1,720	1,950
6	1,660	763	887	906	380	742	1,860	1,170	1,660	2,550	1,670	1,770
7	1,560	691	876	899	370	755	2,020	1,250	1,680	1,920	1,650	1,610
8	1,550	628	871	912	357	810	1,770	1,150	1,610	1,440	1,720	1,550
9	1,540	651	869	895	349	802	1,370	1,180	1,690	1,110	1,750	1,490
10	1,470	718	858	421	338	788	1,470	1,230	1,610	1,060	1,740	1,400
11	1,380	790	857	320	335	870	1,430	1,120	1,350	1,050	1,800	1,380
12	1,340	812	820	315	346	1,060	1,150	1,020	1,680	1,020	1,920	1,640
13	1,320	807	1,140	318	361	1,220	1,120	930	2,160	993	1,950	1,670
14	1,290	801	1,270	339	350	1,260	1,080	866	2,490	1,100	1,950	1,650
15	951	797	1,260	301	344	1,350	1,010	848	2,530	1,150	1,950	1,560
16	714	797	1,250	307	344	1,420	998	925	3,100	1,140	1,940	1,470
17	695	783	1,250	339	427	1,390	1,020	1,120	4,220	1,140	1,960	1,460
18	715	770	1,240	403	431	1,340	1,030	1,390	4,450	1,350	1,950	1,460
19	706	773	1,250	470	399	1,310	1,040	1,540	4,820	1,520	1,940	1,490
20	703	818	1,320	549	395	1,290	988	1,590	4,910	1,570	1,930	1,400
21	700	854	1,340	625	386	1,280	968	1,550	4,920	1,560	1,940	1,270
22	697	841	953	760	367	1,300	953	1,550	4,930	1,680	1,940	1,460
23	694	831	470	1,040	359	1,310	944	1,890	4,920	1,670	1,930	1,860
24	737	847	491	2,040	354	1,360	953	1,870	4,930	1,410	1,920	1,860
25	757	851	864	1,410	343	1,390	1,190	1,780	4,910	1,260	1,900	1,790
26	753	848	1,190	974	385	1,390	1,440	1,810	4,860	1,250	1,920	1,730
27	754	853	1,070	698	563	1,390	1,450	1,790	4,930	1,260	1,940	1,710
28	772	853	940	625	685	1,440	1,520	1,680	5,460	1,460	1,930	1,690
29	704	849	1,010	577	-----	1,430	1,610	1,540	6,260	1,460	1,930	1,700
30	657	907	1,290	545	-----	1,410	1,650	1,430	6,590	1,450	1,930	1,680
31	660	-----	1,370	480	-----	1,400	-----	1,320	-----	1,440	2,000	-----
TOTAL	35,569	23,684	31,768	22,224	11,086	35,379	39,134	42,549	99,850	54,993	57,190	49,700
MEAN	1,147	789	1,025	717	396	1,141	1,304	1,373	3,328	1,774	1,845	1,657
MAX	2,140	907	1,370	2,040	685	1,440	2,020	1,890	6,590	5,650	2,000	2,000
MIN	657	628	470	301	335	738	944	848	1,290	993	1,520	1,270
AC-FT	70,550	46,980	63,010	44,080	21,990	70,170	77,620	84,400	198,100	109,100	113,400	98,580
CAL YR 1969	TOTAL 561,697		MEAN 1,539		MAX 3,510		MIN 391		AC-FT 1,114,000			
WTR YR 1970	TOTAL 503,126		MEAN 1,378		MAX 6,590		MIN 301		AC-FT 998,000			

221

CAL YR 1969	TOTAL 1,369,400	MEAN 3,752	MAX 11,600	MIN 1,200	AC-FT 2,716,000
WTR YR 1970	TOTAL 1,307,061	MEAN 3,581	MAX 14,300	MIN 981	AC-FT 2,593,000

PAYETTE RIVER BASIN

13249500 Payette River near Emmett, Idaho

LOCATION.--Lat 43°55'50", long 116°26'30", in SW¼NE¼ sec.22, T.7 N., R.1 W., Gem County, on right bank 0.3 mile downstream from Black Canyon Dam, 5 miles northeast of Emmett, and at mile 38.4.

DRAINAGE AREA.--2,680 sq mi, approximately.

PERIOD OF RECORD.--June 1925 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,400 ft (from topographic map).

AVERAGE DISCHARGE.--45 years, 2,947 cfs (2,135,000 acre-ft per year); 15-year base period (1952-67), 2,916 cfs.

EXTREMES.--Current year: Maximum discharge, 15,200 cfs June 30 (gage height, 10.41 ft); minimum, 183 cfs Oct. 22 (gage height, 0.95 ft); minimum daily, 1,170 cfs Jan. 12.

Period of record: Maximum discharge, 32,700 cfs Dec. 23, 1964 (gage height, 15.88 ft); minimum daily discharge, 0.7 cfs Jan. 7, 1957 (gage height, -1.49 ft), when gates in dam were closed.

REMARKS.--Records excellent. Flow regulated by Payette Lake (see sta 13238500), Lake Fork Reservoir beginning April 1926 (see sta 13241000), Deadwood Reservoir beginning November 1930 (see sta 13236000), Cascade Reservoir beginning November 1947 (see sta 13244500), and to some extent by Black Canyon Dam 0.3 mile upstream where flow is regulated by diversion and gate operation at dam. Diversions above station for irrigation of about 135,000 acres (1952 determination), of which about 79,000 acres are below station.

REVISIONS (WATER YEARS).--WSP 1153: 1946(m), 1948 (m).

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used May 18 to June 10, July 1-7)

2.5	1,090	6.0	5,860
3.0	1,630	8.0	9,800
4.0	2,830	9.7	14,000

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,900	1,440	1,350	1,970	2,530	2,570	2,980	1,870	6,240	11,500	2,010	2,070
2	1,980	1,430	1,410	1,560	2,350	2,950	2,700	1,930	6,560	9,240	2,010	2,040
3	2,080	1,410	1,460	1,580	2,230	2,790	2,600	2,400	7,780	7,620	1,960	2,030
4	1,950	1,520	1,470	1,500	1,970	2,600	2,610	2,800	9,280	6,740	2,080	2,110
5	1,820	1,550	1,480	1,540	1,820	2,470	2,750	3,690	10,300	6,170	2,100	2,370
6	1,850	1,450	1,440	1,420	1,860	2,370	3,240	5,020	10,800	5,810	2,130	2,270
7	1,760	1,500	1,410	1,270	1,810	2,330	4,050	5,750	11,400	5,100	2,010	2,080
8	1,720	1,360	1,430	1,270	1,770	2,710	3,840	5,270	11,500	4,070	1,990	2,080
9	1,840	1,280	1,470	1,610	1,710	2,710	3,500	4,710	11,800	3,470	2,030	2,210
10	1,810	1,270	1,460	1,630	1,690	2,570	3,500	4,760	11,800	3,140	2,020	1,980
11	1,710	1,320	1,450	1,440	1,700	2,560	4,100	4,250	9,700	3,170	2,030	1,870
12	1,650	1,380	1,410	1,170	1,760	2,700	3,560	3,510	8,700	2,820	2,020	1,950
13	1,660	1,390	1,340	1,920	2,450	2,820	3,230	3,060	8,600	2,520	2,040	2,040
14	1,620	1,390	1,310	2,470	2,210	2,930	2,990	2,570	9,400	2,380	2,020	2,070
15	1,690	1,380	1,240	2,630	2,080	3,380	2,730	2,230	9,900	2,310	2,030	2,040
16	1,580	1,380	1,190	2,400	1,980	3,300	2,370	2,640	10,000	2,100	2,020	1,960
17	1,480	1,380	1,350	3,380	2,750	3,400	2,210	4,280	10,100	1,970	2,010	1,900
18	1,530	1,330	1,530	3,960	2,610	3,230	2,200	6,560	10,600	1,990	2,010	1,890
19	1,500	1,270	1,510	4,860	2,370	3,120	2,290	8,460	10,800	2,070	1,930	2,080
20	1,460	1,340	1,620	4,650	2,210	3,010	2,210	8,320	11,500	2,040	1,950	2,250
21	1,460	1,400	1,650	4,200	2,140	3,000	2,020	7,960	11,900	1,920	2,010	2,080
22	1,290	1,400	2,660	6,240	2,050	2,970	1,870	7,880	12,200	2,080	2,050	2,030
23	1,470	1,320	1,840	5,990	1,990	3,000	1,720	8,720	12,500	2,230	2,020	2,110
24	1,440	1,320	1,550	9,080	1,950	3,030	1,600	9,460	12,200	2,190	1,980	1,920
25	1,520	1,400	1,570	7,520	1,930	3,100	1,580	9,240	11,800	2,080	1,980	1,860
26	1,510	1,350	1,610	5,710	1,910	3,130	1,760	9,950	11,100	2,040	1,960	1,800
27	1,510	1,350	1,790	8,000	2,070	3,100	1,800	10,600	12,000	1,930	1,970	1,760
28	1,540	1,320	1,610	4,810	2,310	3,150	1,830	9,900	13,400	2,080	1,970	1,730
29	1,580	1,370	1,510	3,740	-----	3,200	2,140	8,340	13,800	2,150	1,960	1,700
30	1,510	1,300	1,510	3,230	-----	3,120	1,970	7,340	14,000	2,040	1,970	1,710
31	1,430	-----	1,930	2,730	-----	3,010	-----	6,240	-----	2,010	2,040	-----
TOTAL	50,850	41,250	47,560	105,480	58,210	90,330	77,950	179,710	321,660	108,980	62,310	59,990
MEAN	1,640	1,375	1,534	3,403	2,079	2,914	2,598	5,797	10,720	3,515	2,010	2,000
MAX	2,080	1,550	2,660	9,080	2,750	3,400	4,100	10,600	14,000	11,500	2,130	2,370
MIN	1,290	1,270	1,190	1,170	1,690	2,330	1,580	1,870	6,240	1,920	1,930	1,700
AC-FT	100,900	81,820	94,340	209,200	115,500	179,200	154,600	356,500	638,000	216,200	123,600	119,000

CAL YR 1969 TOTAL 1,256,580 MEAN 3,443 MAX 12,000 MIN 1,190 AC-FT 2,492,000
WTR YR 1970 TOTAL 1,204,280 MEAN 3,299 MAX 14,000 MIN 1,170 AC-FT 2,389,000

NOTE.--No gage-height record June 10-30.

PAYETTE RIVER BASIN

223

13250600 Big Willow Creek near Emmett, Idaho

LOCATION.--Lat 44°04'25", long 116°29'10", in SE¼NW¼ sec.32, T.9 N., R.1 W., Payette County, 62 ft downstream from bridge on Emmett-Council road, 500 ft upstream from mouth of Four-Mile Creek, 13.5 miles north of Emmett, and at mile 19.0.

DRAINAGE AREA.--47.4 sq mi.

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

GAGE.--Water-stage recorder. Altitude of gage is 2,810 ft (from topographic map).

AVERAGE DISCHARGE.--8 years, 21.6 cfs (15,650 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,450 cfs Jan. 27 (gage height, 6.88 ft); minimum, 2.3 cfs Aug. 30, minimum gage height, 2.20 ft July 14.

Period of record: Maximum discharge, 1,860 cfs Dec. 22, 1964 (gage height, 7.61 ft); minimum, 1.2 cfs July 16, 1968 (gage height, 2.13 ft).

Flood of Feb. 24, or 25, 1957, reached a peak of 2,100 cfs (gage height not determined).

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

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Aug. 6 to Sept. 25; stage-discharge relation affected by ice
Jan. 2-3, 6-8, 10)

2.1	2.2	2.6	17	4.0	231
2.2	3.6	2.8	32	4.5	374
2.3	5.4	3.0	54	5.0	559
2.4	8.0	3.5	127	5.1	601

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.2	5.9	5.2	8.7	69	59	15	8.0	5.8	12	3.8	3.2
2	6.7	5.9	5.2	7.9	63	66	15	7.8	5.7	10	4.0	4.2
3	6.2	5.9	5.1	7.3	62	60	13	7.4	6.1	8.4	4.2	4.2
4	5.9	5.7	5.1	7.2	49	65	13	7.0	5.8	7.5	4.2	5.2
5	5.9	6.2	5.1	6.7	42	56	12	5.8	5.8	7.0	4.2	4.8
6	5.9	6.7	5.2	6.3	53	49	12	6.5	5.7	7.0	4.0	4.3
7	6.2	6.4	5.2	6.2	63	48	11	6.4	5.8	6.4	4.0	4.1
8	6.4	5.9	5.2	6.4	54	52	11	6.2	5.8	5.7	4.0	4.5
9	6.7	5.7	5.4	7.0	44	44	11	7.2	7.7	5.4	4.0	4.1
10	6.2	5.7	5.4	30	38	41	11	7.6	6.9	4.7	4.0	4.0
11	6.2	5.7	5.7	48	34	38	11	6.7	6.0	4.4	4.0	4.0
12	6.2	5.7	8.4	113	47	35	10	7.5	6.0	4.0	3.8	4.0
13	6.2	5.7	9.1	252	155	31	10	7.4	6.6	3.7	4.0	4.1
14	6.4	5.7	6.2	293	101	45	11	6.9	16	4.2	3.7	4.2
15	6.4	5.7	5.7	168	85	58	10	7.0	12	4.2	3.6	3.6
16	6.4	6.2	5.4	307	74	56	9.8	6.9	9.2	3.8	3.4	3.5
17	6.2	5.7	5.4	428	179	66	9.5	6.7	8.1	4.0	3.3	3.5
18	6.2	5.7	5.4	397	91	51	9.2	6.7	7.6	4.2	3.4	3.5
19	5.9	5.7	5.9	453	75	45	11	6.9	7.3	4.4	3.3	5.2
20	5.9	5.7	27	299	64	42	10	7.2	7.0	4.2	3.4	4.8
21	5.9	5.4	41	301	57	38	10	6.7	6.4	4.0	3.3	4.4
22	5.9	5.4	29	464	48	33	9.4	5.9	6.1	3.8	3.2	4.4
23	5.9	5.4	53	301	41	29	8.7	8.4	5.8	4.0	3.1	4.5
24	5.9	5.4	27	371	34	26	8.8	6.7	5.7	4.2	3.1	4.6
25	5.9	5.4	19	212	28	22	8.8	6.3	5.6	4.2	3.1	4.6
26	5.9	5.4	17	304	25	22	9.3	6.1	5.6	4.0	3.1	4.5
27	6.2	5.2	13	597	23	19	10	6.2	7.9	3.7	3.1	4.5
28	7.0	5.2	12	239	24	19	9.3	6.0	23	3.7	3.2	4.4
29	6.2	5.2	14	136	-----	20	8.6	6.2	29	3.8	3.0	4.4
30	5.9	5.2	9.8	100	-----	19	8.3	6.2	18	3.8	2.9	4.3
31	5.9	-----	8.7	75	-----	16	-----	6.0	-----	3.5	3.0	-----
TOTAL	190.9	170.7	379.8	5,951.7	1,722	1,270	316.7	210.5	260.0	157.9	110.4	127.6
MEAN	6.16	5.69	12.3	192	61.5	41.0	10.6	6.79	8.67	5.09	3.56	4.25
MAX	7.0	6.7	53	597	179	66	15	8.4	29	12	4.2	5.2
MIN	5.9	5.2	5.1	6.2	23	16	8.3	5.8	5.6	3.5	2.9	3.2
AC-FT	379	339	753	11,810	3,420	2,520	628	418	516	313	219	253

CAL YR 1969 TOTAL 9,520.0 MEAN 26.1 MAX 618 MIN 3.5 AC-FT 18,880
WTR YR 1970 TOTAL 10,868.2 MEAN 29.8 MAX 597 MIN 2.9 AC-FT 21,560

PEAK DISCHARGE (BASE, 170 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-14	2130	4.87	506	1-27	0245	6.88	1,450
1-19	1915	5.94	990	2-17	0445	4.56	384

PAYETTE RIVER BASIN

13251000 Payette River near Payette, Idaho

LOCATION.--Lat 44°02'33", long 116°55'27", in NE¼SE¼SW¼ sec.10, T.8 N., R.5 W., Payette County, on right bank just upstream from bridge on U.S. Highway 95, 1.8 miles south of Payette, and at mile 4.1.

DRAINAGE AREA.--3,240 sq mi, approximately.

PERIOD OF RECORD.--August 1935 to current year. Records for January 1895 to July 1897 (published as "at Payette" in 18th and 19th Annual Reports) have been found to be unreliable and should not be used.

GAGE.--Water-stage recorder. Datum of gage is 2,138.44 ft above mean sea level, unadjusted. Aug. 1, 1935, to Aug. 7, 1939, nonrecording gage at site 50 ft downstream at present datum.

AVERAGE DISCHARGE.--35 years, 3,035 cfs (2,199,000 acre-ft per year); 15-year base period (1952-67), 2,934 cfs.

EXTREMES.--Current year: Maximum discharge, 15,700 cfs June 30 (gage height, 10.80 ft); minimum, 976 cfs Oct. 23 (gage height, 4.73 ft).

Period of record: Maximum discharge, 30,900 cfs Dec. 24, 1964 (gage height, 13.80 ft); minimum, 180 cfs Oct. 13, 20, 1935 (gage height, 2.04 ft); minimum daily, 220 cfs Oct. 5, 1935.

REMARKS.--Records excellent. Flow regulated by Payette Lake (see sta 13238500), Lake Fork Reservoir (see sta 13241000), Deadwood Reservoir (see sta 13236000), Cascade Reservoir beginning November 1947 (see sta 13244500), and to some extent by Black Canyon Dam 34.6 miles upstream where flow is regulated by diversion and gate operation at dam. Diversions above station for irrigation of about 188,000 acres (1952 determination). Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1397: 1949(m), 1952, 1953-54(m). See also PERIOD OF RECORD.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

4.9	1,160	8.0	6,920
5.0	1,280	9.0	9,670
6.0	2,770	10.0	12,800
7.0	4,620	10.7	15,300

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,960	1,820	1,640	2,340	3,090	2,720	3,160	1,540	6,080	13,000	1,470	1,620
2	2,060	1,820	1,690	2,020	2,940	3,250	2,960	1,440	6,150	10,500	1,570	1,690
3	2,250	1,790	1,760	1,840	2,720	3,200	2,800	1,690	6,990	8,280	1,480	1,690
4	2,180	1,760	1,790	1,810	2,540	3,010	2,840	2,090	8,390	6,970	1,510	1,940
5	2,050	1,900	1,790	1,810	2,300	2,870	2,940	2,580	9,790	6,170	1,580	2,380
6	2,000	1,870	1,790	1,780	2,230	2,700	3,220	3,950	10,500	5,640	1,580	2,380
7	1,960	1,880	1,740	1,580	2,250	2,650	3,710	4,960	11,000	5,150	1,520	2,190
8	1,930	1,820	1,740	1,530	2,200	2,840	4,050	5,220	11,600	3,860	1,440	2,070
9	1,940	1,680	1,780	1,760	2,120	3,040	3,730	4,340	11,700	3,150	1,520	2,210
10	2,050	1,640	1,780	2,030	2,090	2,920	3,330	4,360	12,700	2,670	1,510	2,130
11	1,970	1,670	1,790	2,060	2,060	2,840	4,110	4,160	10,900	2,650	1,490	1,950
12	1,850	1,720	1,820	1,680	2,080	2,890	3,800	3,430	9,160	2,410	1,480	1,960
13	1,880	1,750	1,750	2,470	2,670	3,060	3,340	2,990	8,700	2,090	1,500	2,040
14	1,870	1,750	1,670	2,960	2,740	3,130	3,080	2,490	8,650	1,860	1,500	2,050
15	1,780	1,750	1,610	3,840	2,490	3,560	2,800	2,140	9,580	1,800	1,500	2,100
16	1,870	1,740	1,530	3,180	2,380	3,520	2,460	2,110	9,720	1,650	1,530	2,020
17	1,760	1,740	1,580	4,480	2,820	3,710	2,140	3,080	9,860	1,460	1,510	1,930
18	1,710	1,710	1,750	4,440	3,150	3,540	2,030	5,240	10,300	1,360	1,470	1,920
19	1,670	1,640	1,850	6,130	2,820	3,400	2,060	7,600	10,500	1,500	1,450	2,090
20	1,680	1,640	1,970	6,300	2,600	3,290	2,120	8,370	10,800	1,500	1,420	2,370
21	1,710	1,740	2,050	4,680	2,490	3,270	1,870	7,840	11,600	1,580	1,430	2,320
22	1,610	1,760	2,790	7,440	2,420	3,220	1,650	7,680	12,000	1,270	1,550	2,200
23	1,690	1,690	2,440	7,260	2,310	3,200	1,530	8,060	12,400	1,440	1,620	2,240
24	1,670	1,650	2,080	8,870	2,230	3,240	1,320	9,650	12,400	1,600	1,580	2,150
25	1,710	1,710	1,930	9,900	2,260	3,310	1,260	9,330	12,100	1,530	1,530	2,090
26	1,720	1,710	1,940	6,550	2,220	3,330	1,370	9,630	11,400	1,520	1,510	2,020
27	1,790	1,690	2,080	10,800	2,300	3,310	1,540	10,400	11,100	1,470	1,560	1,960
28	1,940	1,650	2,030	6,800	2,500	3,330	1,530	10,400	12,200	1,440	1,550	1,880
29	1,940	1,640	1,880	4,830	-----	3,400	1,610	8,930	13,400	1,610	1,540	1,860
30	1,940	1,640	1,750	4,030	-----	3,380	1,680	7,630	15,000	1,570	1,590	1,840
31	1,840	-----	2,020	3,470	-----	3,220	-----	6,700	-----	1,520	1,580	-----
TOTAL	57,980	51,970	57,810	130,670	69,020	98,350	76,040	170,030	316,670	100,220	47,070	61,290
MEAN	1,870	1,732	1,865	4,215	2,465	3,173	2,535	5,485	10,560	3,233	1,518	2,043
MAX	2,250	1,900	2,790	10,800	3,150	3,710	5,110	10,400	15,000	13,000	1,620	2,380
MIN	1,610	1,640	1,530	1,530	2,060	2,650	1,260	1,440	6,080	1,270	1,420	1,620
AC-FT	115,000	103,100	114,700	259,200	136,900	195,100	150,800	337,300	628,100	198,800	93,360	121,600

CAL YR 1969	TOTAL 1,287,320	MEAN 3,527	MAX 11,600	MIN 1,310	AC-FT 2,553,000
WTR YR 1970	TOTAL 1,237,120	MEAN 3,389	MAX 15,000	MIN 1,260	AC-FT 2,454,000

13251300 West Branch Weiser River near Tamarack, Idaho

LOCATION.--Lat 45°01'14", long 116°26'06", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.34, T.20 N., R.1 W., Adams County, Payette National Forest, on left bank at Price Valley guard station, 0.1 mile upstream from East Branch Weiser River, and 5.2 miles northwest of Tamarack.

DRAINAGE AREA.--3.96 sq mi. Mean altitude, 4,900 ft.

PERIOD OF RECORD.--August 1959 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 4,200 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 4.96 cfs (17.01 inches per year, 3,590 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 57 cfs May 23 (gage height, 4.12 ft); minimum daily, 0.82 cfs Dec. 3, 4; minimum gage height, 2.03 ft Nov. 23.

Period of record: Maximum discharge, 84 cfs Apr. 21, 1965 (gage height, 4.59 ft); minimum daily, 0.4 cfs Nov. 22, 1964.

REMARKS.--Records good except those below 1.0 cfs, which are poor. No regulation or diversion above station. Records of water temperatures for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 25 to May 20; stage-discharge relation affected by ice
Nov. 20 to Dec. 10, Dec. 28 to Jan. 5, Jan. 8-20)

2.1	0.70	3.0	22
2.2	1.3	3.5	30
2.3	2.3	4.0	47
2.4	4.0	4.2	57
2.5	6.7		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.0	.88	.98	3.6	4.7	6.7	12	17	3.4	1.7	1.2
2	1.1	.99	.86	.98	3.2	5.8	6.7	15	16	3.2	1.6	1.2
3	1.0	.99	.82	.96	3.0	5.6	6.7	21	16	3.0	1.6	1.2
4	.99	.99	.82	.94	2.7	5.6	7.0	28	15	2.8	1.6	1.8
5	.99	1.3	.83	.90	2.4	5.0	7.9	38	14	2.7	1.6	1.6
6	.99	1.3	.84	.88	2.7	4.7	11	44	13	2.6	1.6	1.4
7	.99	1.3	.84	.84	2.6	4.7	13	42	12	2.3	1.6	1.8
8	1.1	1.2	.85	.86	2.5	4.4	14	37	11	2.3	1.6	1.9
9	1.1	1.1	.86	.88	2.4	4.0	14	36	11	2.3	1.6	1.4
10	1.1	1.1	.86	.90	2.4	3.8	17	37	9.7	2.2	1.6	1.3
11	1.0	1.0	.87	.92	2.4	3.6	19	32	8.5	2.3	1.5	1.3
12	1.0	1.0	1.3	.95	2.5	3.6	17	28	7.9	2.2	1.5	1.3
13	1.0	1.0	1.3	.98	3.2	3.4	16	25	7.3	2.3	1.4	1.3
14	1.0	1.0	1.1	1.1	3.4	3.6	14	23	9.1	2.1	1.4	1.3
15	1.0	1.0	1.0	1.2	3.6	4.7	14	22	8.2	2.0	1.3	1.3
16	1.0	1.0	.99	1.2	3.6	5.0	13	24	7.9	2.0	1.3	1.3
17	1.0	1.0	.99	1.2	4.4	5.2	12	32	7.3	1.9	1.3	1.3
18	1.0	.99	.99	2.2	4.4	5.2	12	44	6.7	1.9	1.2	1.3
19	1.0	1.0	1.3	4.0	4.2	5.0	12	48	6.1	1.9	1.2	1.5
20	1.0	1.0	1.0	3.2	4.2	5.2	12	50	5.6	1.9	1.2	1.6
21	1.0	.98	2.1	3.0	4.0	5.2	11	48	5.2	1.8	1.2	1.6
22	1.0	.95	1.7	3.6	3.8	5.0	11	45	4.7	1.8	1.2	1.6
23	1.0	1.0	1.3	6.4	3.6	5.0	11	53	4.4	1.8	1.2	1.5
24	1.0	.96	1.2	26	3.6	5.0	11	48	4.2	1.7	1.2	1.4
25	1.0	.96	1.1	19	3.4	5.0	10	42	3.6	1.6	1.2	1.4
26	1.0	.96	1.1	12	3.4	5.6	10	39	3.4	1.7	1.2	1.4
27	1.0	.94	1.0	8.8	3.6	6.1	9.7	34	4.2	1.7	1.2	1.4
28	1.2	.90	1.0	6.7	3.6	6.4	10	29	4.7	1.7	1.2	1.3
29	1.0	.90	1.0	5.2	-----	6.7	10	25	4.0	1.7	1.2	1.3
30	1.0	.90	1.0	4.4	-----	6.7	11	22	3.6	1.6	1.2	1.3
31	1.0	-----	1.0	4.2	-----	6.4	-----	19	-----	1.6	1.2	-----
TOTAL	31.56	30.71	32.80	125.37	92.4	155.9	349.7	1,042	251.3	66.0	42.6	42.5
MEAN	1.02	1.02	1.06	4.04	3.30	5.03	11.7	33.6	8.38	2.13	1.37	1.42
MAX	1.2	1.3	2.1	26	4.4	6.7	19	53	17	3.4	1.7	1.9
MIN	.99	.90	.82	.84	2.4	3.4	6.7	12	3.4	1.6	1.2	1.2
CFSM	.26	.26	.27	1.02	.83	1.27	2.95	8.48	2.12	.54	.35	.36
IN.	.30	.29	.31	1.18	.87	1.46	3.29	9.79	2.36	.62	.40	.40
AC-FT	63	61	65	249	183	309	694	2,070	498	131	85	84

CAL YR 1969 TOTAL 1,814.02 MEAN 4.97 MAX 36 MIN .82 CFSM 1.26 IN 17.04 ACFT 3,600
WAT YR 1970 TOTAL 2,262.84 MEAN 6.20 MAX 53 MIN .82 CFSM 1.57 IN 21.26 ACFT 4,490

13251500 Weiser River at Tamarack, Idaho

LOCATION.--Lat 44°56'49", long 116°22'53", in NW¼NE¼, sec.31, T.19 N., R.1 E., Adams County, on right bank 60 ft downstream from railroad bridge, 0.6 mile south of Tamarack, 1.5 miles upstream from Beaver Creek, and at mile 94.5.

DRAINAGE AREA.--36.5 sq mi. Mean altitude, 4,600 ft.

PERIOD OF RECORD.--September 1936 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,080 ft (by barometer). Oct. 16, 1949, to Oct. 14, 1964, at site 100 ft upstream at datum 1.42 ft higher. Prior to Oct. 16, 1949, nonrecording gage at site 0.2 mile upstream at different datum.

AVERAGE DISCHARGE.--34 years, 43.8 cfs (31,730 acre-ft per year); 15-year base period (1952-67), 44.3 cfs.

EXTREMES.--Current year: Maximum discharge, 567 cfs Jan. 24 (gage height, 5.07 ft); minimum, 1.4 cfs July 1 (gage height, 1.49 ft).

Period of record: Maximum discharge, 1,320 cfs Dec. 22, 1955 (gage height, 7.17 ft), from rating curve extended above 600 cfs on basis of slope-area measurement of peak flow; minimum, 0.48 cfs July 5, 1969 (gage height, 1.38 ft); minimum gage height, 0.89 ft Sept. 21, 1958, site and datum then in use.

REMARKS.--Records good. No diversion above station. Diurnal fluctuation caused by millpond 0.6 mile upstream at Tamarack. Small flow from Boulder Creek in Salmon River basin enters Weiser River above station through transmountain diversion during late irrigation season.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Dec. 27 to Jan. 2, Jan. 8-10, Feb. 3-4; stage-discharge relation indefinite Sept. 15-16, 27-30)

1.7	4.1	2.5	47
1.8	6.2	3.0	101
2.0	13	4.0	276
2.2	24	5.0	553

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.3	5.4	4.8	7.4	64	69	78	101	67	9.5	9.1	6.8
2	10	5.5	4.7	7.4	53	87	81	126	67	16	8.8	6.3
3	8.6	5.4	4.5	7.0	42	79	81	175	59	16	8.4	7.2
4	7.8	4.9	4.6	6.5	35	72	83	233	55	15	8.7	8.5
5	7.7	8.1	5.0	6.2	31	66	99	291	50	15	8.5	12
6	7.5	8.6	5.0	6.0	35	61	141	337	46	13	8.3	10
7	7.5	9.2	5.3	5.7	34	60	176	322	41	10	7.7	11
8	9.0	8.4	5.5	6.4	33	59	165	282	37	14	9.4	18
9	8.9	7.0	5.6	7.0	31	55	168	258	53	11	8.2	14
10	10	6.7	5.4	7.5	30	53	207	268	48	11	8.6	11
11	8.7	6.4	5.9	7.8	30	51	216	235	37	13	7.5	11
12	7.7	6.1	8.5	8.4	32	47	193	205	33	11	7.1	10
13	6.9	6.1	16	11	44	47	174	183	30	11	7.3	9.5
14	5.6	5.9	9.5	14	48	54	154	153	55	9.3	8.1	9.5
15	5.5	5.7	8.8	19	50	75	136	138	46	10	7.7	9.5
16	6.9	6.2	7.1	20	53	82	127	139	42	12	8.3	8.3
17	6.2	5.5	7.2	20	74	77	120	182	34	13	7.8	7.7
18	5.9	5.3	7.0	28	71	74	118	229	29	12	7.9	7.8
19	6.0	5.7	7.7	45	64	69	124	245	28	12	7.7	10
20	6.3	5.7	7.9	49	59	69	114	252	27	11	7.8	10
21	5.5	5.1	25	64	55	69	105	245	25	11	7.1	11
22	5.6	4.8	23	77	51	71	97	210	23	11	7.5	11
23	5.8	5.8	18	166	49	72	94	264	21	11	7.2	9.8
24	5.8	5.6	15	457	46	79	99	236	19	11	6.6	9.0
25	6.0	4.9	12	342	43	81	98	195	21	10	7.2	9.2
26	5.8	5.1	11	198	43	80	93	172	19	11	7.2	8.2
27	5.6	4.9	9.0	144	43	82	89	152	21	9.8	5.4	8.2
28	5.8	4.8	8.0	115	45	89	87	126	34	9.5	8.2	8.0
29	6.1	4.7	7.8	94	-----	88	87	112	37	9.8	7.3	8.0
30	5.9	4.8	7.8	83	-----	81	93	104	17	9.4	7.0	8.0
31	5.4	-----	7.8	86	-----	79	-----	87	-----	9.5	7.1	-----
TOTAL	213.3	178.3	280.4	2,115.3	1,288	2,177	3,697	6,257	1,121	357.8	240.7	288.5
MEAN	6.88	5.94	9.05	68.2	46.0	70.2	123	202	37.4	11.5	7.76	9.62
MAX	10	9.2	25	457	74	89	216	337	67	16	9.4	18
MIN	5.4	4.7	4.5	5.7	30	47	78	87	17	9.3	5.4	6.3
AC-FT	423	354	556	4,200	2,550	4,320	7,330	12,410	2,220	710	477	572

CAL YR 1969 TOTAL 17,174.8 MEAN 47.1 MAX 415 MIN 4.5 AC-FT 34,070
WTR YR 1970 TOTAL 18,214.3 MEAN 49.9 MAX 457 MIN 4.5 AC-FT 36,130

PEAK DISCHARGE (BASE, 280 CFS)

DATE	TIME	G.H.T.	DISCHARGE	DATE	TIME	G.H.T.	DISCHARGE
1-24	1700	5.07	567	5-21	1800	4.13	304
5-6	0900	4.35	361				

13258500 Weiser River near Cambridge, Idaho

LOCATION.--Lat 44°34'47", long 116°38'20", in SE¼NE¼ sec.1, T.14 N., R.3 W., Washington County, on left bank 100 ft upstream from road bridge, 2.2 miles northeast of Cambridge, 2.5 miles upstream from Rush Creek, and at mile 50.31.

DRAINAGE AREA.--605 sq mi. Mean altitude, 4,650 ft.

PERIOD OF RECORD.--March 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,650.00 ft above mean sea level (levels by Bureau of Reclamation). Aug. 29, 1956, to Aug. 19, 1966, at datum 2.0 ft higher. Apr. 23, 1939, to Dec. 21, 1955, at site 135 ft downstream at different datum. Nonrecording gage at different datum, prior to Apr. 23, 1939, at site 135 ft downstream and Dec. 22, 1955, to Aug. 28, 1956, at bridge 2.5 miles downstream.

AVERAGE DISCHARGE.--31 years, 646 cfs (468,000 acre-ft per year); 15-year base period (1952-67), 623 cfs.

EXTREMES.--Current year: Maximum discharge, 7,020 cfs Jan. 24 (gage height, 9.67 ft); minimum, 78 cfs Nov. 29 (gage height, 1.03 ft).

Period of record: Maximum discharge, 10,100 cfs Dec. 22, 1955 (gage height, 13.9 ft, from floodmark, site and datum then in use); minimum, 8.0 cfs Nov. 16, 1958 (gage height, 1.12 ft, ice jam upstream).

REMARKS.--Records good except those for November to January, which are fair. Flow regulated to some extent by Lost Valley Reservoir about 57 miles upstream (capacity reported to be 11,000 acre-ft) and other smaller reservoirs. Diversions for irrigation of about 9,200 acres (1948 determination) above station.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1-30; stage-discharge relation affected by ice Nov. 19-20, 22, Nov. 24 to Dec. 5, Dec. 28 to Jan. 9, Jan. 12-13)

Oct. 1 to Jan. 24				Jan. 25 to Sept. 30			
1.3	76	4.0	1,060	1.1	84	3.0	642
1.5	92	6.0	2,540	1.5	146	4.0	1,220
2.0	156	8.0	4,740	2.0	261	6.0	2,940
2.5	277	9.2	6,350	2.5	430	8.0	4,960
3.0	469						

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	108	94	81	120	980	1,230	572	580	1,960	787	134	94
2	123	93	82	100	836	1,650	575	690	2,030	716	131	99
3	124	92	84	94	748	1,400	545	985	2,140	665	130	101
4	115	93	86	92	632	1,250	545	1,450	2,260	618	123	119
5	111	98	88	90	609	1,080	554	2,050	2,340	588	123	170
6	111	118	89	90	574	954	695	2,590	2,350	530	121	146
7	113	119	90	80	591	932	980	2,600	2,230	479	119	156
8	117	108	91	100	650	937	942	2,310	1,980	438	118	296
9	146	102	92	140	661	825	927	2,390	2,290	398	118	199
10	131	97	92	199	676	772	1,140	2,310	2,020	369	114	172
11	128	97	92	208	666	722	1,250	2,040	1,650	358	112	161
12	124	96	103	230	792	687	1,120	1,760	1,450	333	111	157
13	121	96	184	870	1,690	640	1,020	1,580	1,320	303	108	154
14	119	95	150	2,430	1,390	651	935	1,360	1,890	279	104	152
15	121	94	121	1,990	1,180	842	837	1,250	2,030	250	101	150
16	122	94	107	2,030	1,060	825	770	1,390	1,750	230	100	150
17	124	91	102	2,250	1,400	823	730	1,980	1,610	225	99	148
18	121	87	101	2,150	1,170	750	739	2,680	1,520	194	96	146
19	116	87	110	3,090	1,010	702	779	3,060	1,510	178	95	168
20	115	87	402	2,990	919	674	770	3,220	1,490	171	95	177
21	118	87	652	3,190	835	648	731	3,120	1,440	173	94	181
22	129	87	640	3,650	776	624	694	3,030	1,350	181	93	164
23	126	86	489	3,580	720	611	662	3,650	1,280	174	93	168
24	120	87	375	6,310	680	610	644	3,610	1,250	163	94	153
25	116	87	271	4,670	642	608	637	3,370	1,130	157	97	133
26	107	88	249	3,270	633	616	626	3,350	1,020	153	99	130
27	99	87	200	4,750	633	611	610	3,130	1,060	154	99	126
28	99	85	150	2,600	647	644	583	2,840	1,430	146	100	125
29	101	80	135	1,770	-----	658	561	2,490	1,150	147	100	119
30	97	81	130	1,390	-----	634	556	2,250	926	143	97	116
31	95	-----	125	1,070	-----	592	-----	2,020	-----	140	96	-----
TOTAL	3,617	2,793	5,763	55,593	23,800	25,202	22,729	71,135	49,856	9,840	3,314	4,530
MEAN	117	93.1	186	1,793	850	813	758	2,295	1,662	317	107	151
MAX	146	119	652	6,310	1,690	1,650	1,250	3,650	2,350	787	134	296
MIN	95	80	81	80	574	592	545	580	926	140	93	94
AC-FT	7,170	5,540	11,430	110,300	47,210	49,990	45,080	141,100	98,890	19,520	6,570	8,990
CAL YR 1969	TOTAL 257,087			MEAN 704	MAX 4,290	MIN 78	AC-FT 509,900					
WTR YR 1970	TOTAL 278,172			MEAN 762	MAX 6,310	MIN 80	AC-FT 551,600					

PEAK DISCHARGE (BASE, 3,300 CFS).--Jan. 24 (1400) 7,020 cfs (9.67 ft); May 23 (1515) 3,940 cfs (7.02 ft).

WEISER RIVER BASIN

13261000 Little Weiser River near Indian Valley, Idaho

LOCATION.--Lat 44°29'35", long 116°23'45", in NE¼ sec.1, T.13 N., R.1 W., Adams County, on left bank 60 ft downstream from barn at Richardson Ranch, 1 mile upstream from diversion feeding into C. Ben Ross Reservoir, 4.8 miles southeast of Indian Valley, and at mile 21.0.

DRAINAGE AREA.--81.9 sq mi. Mean altitude, 5,300 ft.

PERIOD OF RECORD.--June 1920 to February 1921, March to June 1923, February 1924 to October 1927, and April 1938 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,250 ft (by barometer). See WSP 1317 or 1737 for history of changes prior to Aug. 12, 1950.

AVERAGE DISCHARGE.--35 years (1924-27, 1938-70), 104 cfs (17.24 inches per year, 75,350 acre-ft per year); 15-year base period (1952-67), 103 cfs.

EXTREMES.--Current year: Maximum discharge, 793 cfs June 6 (gage height, 3.79 ft); maximum gage height, 4.03 ft Jan. 24; minimum discharge, 5.2 cfs Nov. 29 (gage height, 0.05 ft).
Period of record: Maximum discharge observed, about 1,840 cfs Feb. 4, 1925; minimum, 2.6 cfs Nov. 27, 1967 (gage height, -0.18 ft).

REMARKS.--Records fair. One small diversion above station. Many diversions below station for irrigation including feeder canal to C. Ben Ross Reservoir.

REVISIONS (WATER YEARS).--WSP 1347: 1923. WSP 1637: 1942(M). WRD Idaho, 1969: 1966.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	14	11	15	117	114	64	66	527	338	34	12
2	17	14	11	17	99	121	65	90	582	310	33	12
3	14	14	11	16	90	105	62	146	618	283	33	11
4	13	13	12	16	81	101	63	222	672	259	31	18
5	13	16	12	16	75	96	67	325	716	233	27	18
6	13	17	12	16	72	95	99	362	731	217	24	14
7	13	16	13	17	74	104	129	345	722	198	23	21
8	14	15	13	16	81	109	110	292	691	179	23	30
9	16	14	13	16	85	98	122	343	731	160	21	17
10	15	14	13	24	85	95	181	310	669	144	20	15
11	14	14	13	21	84	89	179	271	585	138	20	14
12	14	14	16	38	99	84	150	240	527	124	19	12
13	13	14	20	168	154	78	140	217	492	107	18	12
14	13	14	17	295	128	90	119	202	564	96	18	13
15	13	14	15	168	114	105	101	217	579	90	18	13
16	14	14	13	179	105	109	92	292	532	82	17	12
17	14	12	13	271	164	104	88	402	506	78	16	12
18	14	12	14	343	131	98	92	461	512	72	15	12
19	14	14	16	430	116	90	98	495	518	58	15	19
20	14	13	31	312	105	86	90	524	518	51	15	16
21	14	13	66	343	96	85	85	506	509	50	14	18
22	14	11	62	367	89	82	81	506	509	48	14	16
23	14	11	43	482	85	78	77	630	500	46	13	17
24	14	13	32	564	82	78	75	630	472	45	13	16
25	14	12	27	356	80	76	72	633	438	43	13	16
26	14	12	25	302	78	75	72	675	399	40	12	16
27	14	10	20	378	80	74	67	654	410	38	12	16
28	15	9.7	13	249	81	76	64	612	538	37	12	15
29	14	9.2	17	196	-----	74	62	561	433	37	12	15
30	14	10	17	158	-----	70	62	532	372	36	12	14
31	15	-----	18	133	-----	66	-----	506	-----	34	12	-----
TOTAL	433	392.9	629	5,922	2,730	2,805	2,828	12,267	16,572	3,671	579	462
MEAN	14.0	13.1	20.3	191	97.5	90.5	94.3	396	552	118	18.7	15.4
MAX	17	17	66	564	164	121	181	675	731	338	34	30
MIN	12	9.2	11	15	72	66	62	66	372	34	12	11
CFSM	.17	.16	.25	2.33	1.19	1.10	1.15	4.83	6.74	1.45	.23	.19
IN.	.20	.18	.29	2.69	1.24	1.27	1.28	5.57	7.53	1.67	.26	.21
AC-FT	859	779	1,250	11,750	5,410	5,560	5,610	24,330	32,870	7,280	1,150	916
CAL YR 1969	TOTAL 44,924.3		MEAN 123		MAX 68	MIN 7.1	CFSM 1.50	IN 20.40	AC-FT 89,110			
WTR YR 1970	TOTAL 49,290.9		MEAN 135		MAX 731	MIN 9.2	CFSM 1.65	IN 22.38	AC-FT 97,770			

PEAK DISCHARGE (BASE, 400 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-19	1730	3.79	666	6- 6	0030	3.79	793
1-24	0730	4.03	734	6-28	0100	3.62	685
5-26	0100	3.85	731				

13265500 Crane Creek at mouth, near Weiser, Idaho

LOCATION.--Lat 44°17'28", long 116°46'48", in SW¼NE¼ sec.14, T.11 N., R.4 W., Washington County, on right bank just downstream from highway bridge at Harris Ranch, at mile 0.2, and 10 miles northeast of Weiser.

DRAINAGE AREA.--288 sq mi.

PERIOD OF RECORD.--July to September 1920, February 1921 to current year.

GAGE.--Water-stage recorder and concrete control. Altitude of gage is 2,240 ft (by barometer).

AVERAGE DISCHARGE.--49 years (1921-70), 83.2 cfs (60,280 acre-ft per year); 15-year base period (1952-67), 82.5 cfs.

EXTREMES.--Current year: Maximum discharge, 3,000 cfs Jan. 27 (gage height, 6.24 ft); minimum, 1.8 cfs June 21, (gage height, 1.66 ft).

Period of record: Maximum discharge, 3,170 cfs Feb. 26, 1957 (gage height, 6.23 ft); maximum gage height, 6.24 ft Jan. 21, 1970; no flow for part of May 1, 1956, Apr. 19-21, 1967, Apr. 21-22, 1968; minimum daily, 0.11 cfs Apr. 20, 1967.

A major flood occurred Dec. 3 or 4, 1910.

REMARKS.--Records good except those for flow under 30 cfs, which are fair. Flow regulated by Crane Creek Reservoir 12.3 miles upstream (see sta 13264000). Several small ditch diversions for irrigation above station.

REVISIONS --WSP 833: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 22 to Dec. 7, Dec. 28 to Jan. 9)

1.6	1.6	2.3	30	4.0	442
1.7	3.0	2.6	62	4.5	729
1.8	5.1	3.0	122	5.0	1,150
1.9	7.8	3.5	245	5.4	1,610
2.0	11				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.7	4.5	5.8	6.5	943	96	22	5.4	4.5	10	199	174
2	5.9	4.1	6.0	6.4	869	113	22	5.8	4.5	6.5	196	174
3	4.3	4.5	6.0	6.2	877	90	20	7.6	4.7	6.2	193	171
4	4.7	4.5	6.6	6.0	772	81	18	12	2.9	7.8	188	181
5	4.7	4.5	6.4	5.8	396	74	18	16	3.7	8.8	188	178
6	4.7	4.5	7.0	5.8	396	155	18	19	2.5	8.8	191	178
7	4.9	4.5	6.5	5.4	401	153	18	19	3.9	6.2	191	162
8	5.1	4.5	6.2	5.6	370	155	20	17	2.8	6.2	191	122
9	5.4	4.5	5.9	7.0	193	151	20	14	8.5	9.5	191	96
10	5.4	4.5	5.9	13	188	151	21	12	9.5	12	183	96
11	5.1	4.5	6.2	14	188	149	12	9.0	9.2	12	186	90
12	4.9	4.3	7.8	13	199	149	8.8	8.0	9.8	11	188	75
13	4.7	4.3	9.2	268	318	149	8.5	7.1	10	6.5	188	74
14	3.7	5.6	227	357	457	151	8.5	7.5	12	6.5	186	70
15	3.9	6.5	670	126	442	166	8.1	10	11	4.3	186	64
16	4.5	6.5	651	227	442	153	8.1	11	6.5	5.9	181	62
17	4.5	7.0	633	236	477	153	6.7	9.8	5.1	11	181	56
18	4.1	6.7	608	113	392	149	5.4	7.8	6.7	53	183	58
19	4.1	6.7	379	265	239	149	3.3	5.6	6.2	78	183	60
20	4.3	6.7	26	215	236	149	2.8	9.8	5.4	160	183	58
21	4.5	6.5	24	472	236	149	3.5	9.8	4.7	210	181	54
22	3.9	6.7	30	503	233	149	5.9	9.2	2.6	207	181	17
23	4.1	6.7	27	519	233	149	7.3	13	2.9	233	176	10
24	4.5	6.6	26	1,020	207	149	6.7	10	4.9	242	176	9.8
25	4.5	6.5	14	831	61	146	6.5	7.5	5.1	236	181	12
26	4.5	6.4	11	1,170	58	146	5.4	8.5	5.4	221	181	11
27	4.5	6.2	10	1,560	57	134	4.1	11	9.8	207	178	10
28	4.9	6.0	8.6	1,030	57	24	4.0	7.8	16	196	174	11
29	4.5	5.8	8.0	987	-----	23	4.0	7.0	14	199	176	11
30	4.5	5.8	7.2	978	-----	23	4.1	7.5	13	196	176	11
31	4.5	-----	6.6	969	-----	22	-----	4.7	-----	199	174	-----
TOTAL	144.5	166.6	3,451.9	11,940.7	9,937	3,850	320.7	309.4	207.8	2,776.2	5,710	2,355.8
MEAN	4.66	5.55	111	385	355	124	10.7	9.98	6.93	89.6	184	78.5
MAX	6.7	7.0	670	1,560	943	166	22	19	16	242	199	181
MIN	3.7	4.1	5.8	5.4	57	22	2.8	4.7	2.5	4.3	174	9.8
AC-FT	287	330	6,850	23,680	19,710	7,640	636	614	412	5,510	11,330	4,670

CAL YR 1969 TOTAL 57,521.0

MEAN 158

MAX 1,250

MIN 1.2

AC-FT 114,100

WTR YR 1970 TOTAL 41,170.6

MEAN 113

MAX 1,560

MIN 2.5

AC-FT 81,660

13266000 Weiser River near Weiser, Idaho

LOCATION.--Lat 44°16'23", long 116°46'23", in NE¼SE¼ sec.23, T.11 N., R.4 W., Washington County, on right bank 0.4 mile upstream from county road bridge, 1.8 miles downstream from Crane Creek, 10 miles east of Weiser, and at mile 15.1.

DRAINAGE AREA.--1,460 sq mi, approximately.

PERIOD OF RECORD.--March 1890 to June 1891, December 1894 to October 1896, April to September 1897, March 1898 to November 1899, March 1900 to December 1904, October 1910 to December 1914, October 1952 to current year. Published as "at Weiser" prior to 1900.

GAGE.--Water-stage recorder. Altitude of gage is 2,220 ft (by barometer). Prior to October 1952, nonrecording gages at several sites downstream within 1.5 miles of present site at various datums.

AVERAGE DISCHARGE.--27 years (1895-96, 1898-99, 1900-4, 1911-14, 1952-70), 1,134 cfs (821,600 acre-ft per year); 15-year base period 1952-67, 1,030 cfs.

EXTREMES.--Current year: Maximum discharge, 16,900 cfs Jan. 27 (gage height, 10.29 ft); minimum, 72 cfs Nov. 29 (gage height, 1.45 ft).

Period of record: Maximum discharge observed, 19,900 cfs Dec. 23, 1955 (gage height, 11.06 ft); maximum gage height, 12.83 ft Jan. 31, 1961 (ice jam); minimum observed, 14 cfs Aug. 7, 1911 (gage height, 2.80 ft, site and datum then in use); minimum gage height, 1.45 ft Nov. 29, 1970.

Flood of Mar. 19, 1932, reached a discharge of about 17,500 cfs.

REMARKS.--Records excellent except those for December and January, which are fair. Flow slightly regulated since 1911 by Crane Creek Reservoir 14.3 miles upstream (capacity about 51,700 acre-ft) and other small reservoirs. Diversions for irrigation of about 22,000 acres (1948 determination) above station. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1347: 1895-1905, 1953(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 14-23; stage-discharge relation affected by ice Nov. 23-25, 27, Nov. 29 to Dec. 11, Dec. 31, Jan. 3-8)

1.6	115	4.0	1,530
2.0	220	6.0	4,660
2.5	420	8.0	9,490
3.0	690	10.0	15,800

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	154	128	115	235	2,590	1,850	833	678	2,600	1,350	328	248
2	171	125	115	194	2,360	2,910	825	742	2,740	1,200	309	244
3	186	121	115	185	2,210	2,380	797	988	2,990	1,100	306	240
4	184	121	122	180	1,900	2,150	776	1,470	3,270	1,010	293	268
5	176	125	130	180	1,470	1,820	776	2,130	3,510	932	295	347
6	170	144	135	180	1,400	1,700	863	2,900	3,620	823	297	395
7	169	175	138	160	1,410	1,600	1,140	3,100	3,580	717	289	350
8	175	175	140	145	1,550	1,690	1,260	2,770	3,230	645	283	380
9	192	157	140	286	1,450	1,470	1,200	2,800	3,440	592	287	418
10	212	146	142	292	1,460	1,370	1,360	2,790	3,350	534	283	333
11	185	142	145	339	1,450	1,290	1,520	2,510	2,630	521	281	301
12	175	140	176	369	1,540	1,220	1,450	2,160	2,220	476	281	273
13	167	137	235	1,270	3,290	1,150	1,320	1,940	2,000	418	276	258
14	161	134	494	4,680	2,990	1,110	1,220	1,710	2,380	380	272	255
15	160	134	855	5,210	2,450	1,480	1,110	1,540	3,180	340	265	255
16	165	134	797	5,250	2,210	1,400	1,010	1,610	2,710	308	261	261
17	167	135	753	6,120	2,630	1,470	948	2,170	2,470	288	261	251
18	168	127	720	4,740	2,300	1,330	924	3,130	2,310	296	258	247
19	162	120	527	6,350	1,860	1,250	948	3,850	2,320	268	262	254
20	157	121	608	8,340	1,720	1,200	964	4,160	2,330	329	259	292
21	156	124	888	7,080	1,590	1,150	924	4,080	2,280	362	256	321
22	166	123	1,310	8,780	1,480	1,100	885	3,990	2,190	365	254	276
23	173	125	868	7,840	1,390	1,070	833	4,500	2,080	392	243	248
24	171	130	900	11,700	1,310	1,050	818	4,960	2,030	395	244	252
25	167	130	581	9,320	1,090	1,030	797	4,600	1,890	384	243	222
26	160	130	504	7,580	1,050	1,030	783	4,620	1,670	367	245	209
27	147	130	460	14,200	1,040	1,010	783	4,420	1,680	348	245	209
28	144	120	334	6,100	1,050	1,030	736	3,990	2,150	328	248	198
29	148	115	252	4,230	-----	1,040	710	3,440	2,060	321	248	185
30	147	115	252	3,480	-----	932	672	3,040	1,600	314	248	180
31	136	-----	250	2,880	-----	870	-----	2,710	-----	317	245	-----
TOTAL	5,171	3,983	13,201	127,895	50,240	43,152	29,185	89,498	76,510	16,420	8,365	8,170
MEAN	167	133	426	4,126	1,794	1,392	973	2,887	2,550	530	270	272
MAX	212	175	1,310	14,200	3,290	2,910	1,520	4,960	3,620	1,350	328	418
MIN	136	115	115	145	1,040	870	672	678	1,600	268	243	180
AC-FT	10,260	7,900	26,180	253,700	99,650	85,590	57,890	177,500	151,800	32,570	16,590	16,210
CAL YR 1969	TOTAL 455,389			MEAN 1,248		MAX 1,960		MIN 115		AC-FT 903,300		
WTR YR 1970	TOTAL 471,790			MEAN 1,293		MAX 14,200		MIN 115		AC-FT 935,800		

13266900 Mann Creek Reservoir, near Weiser, Idaho

LOCATION.--Lat 44°23'31", long 116°53'38", in SE¼NE¼ sec.11, T.12 N., R.5 W., Washington County, in slide gate control house at downstream toe of dam, 10.5 miles northeast of Weiser, and at mile 11.4.

DRAINAGE AREA.--56 sq mi, approximately.

PERIOD OF RECORD.--March 1967 to September 1970 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 2,800 ft (from topographic map). Prior to May 6, 1969, non-recording gage at same site and datum.

EXTREMES (at 0800).--Current year: Maximum contents observed, 11,300 acre-ft May 5-9, 17-26 (elevation, 2,889.8 ft); minimum observed, 3,210 acre-ft Sept. 30 (elevation, 2,852.5 ft).
Period of record: Maximum contents observed, 11,300 acre-ft May 9, 1969, and May 5-9, 17-26, 1970; maximum elevation observed, 2,889.8 ft May 5-9, 17-26, 1970; minimum contents observed since the 1967 fill, 2,610 acre-ft Oct. 10-13, 1967 (elevation, 2,848.4 ft).

REVISIONS.--The minimum contents observed for the water year 1968 has been revised to 2,610 acre-ft Oct. 10-13 (elevation, 2,848.4 ft), superseding figure published in WRD Idaho 1969.

REMARKS.--Reservoir is formed by earth-fill dam with rock face. Construction of dam began in 1965; completed in 1967; closure of dam was made Mar. 27, 1967. Usable contents, 13,510 acre-ft between elevations 2,825 and 2,897.1 ft (top of spillway outlet tower). Top of dam, 2,903.0 ft. Dead storage below 2,822 ft is 1,610 acre-ft. Water is used for irrigation and for conservation. Figures given herein represent usable contents.

COOPERATION.--Record collected in cooperation with and capacity table furnished by U.S.B.R.

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

2,850.0	2,840
2,860.0	4,440
2,870.0	6,390
2,880.0	8,690
2,890.0	11,400

CONTENTS, IN ACRE-FEET, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3,630	3,560	3,680	4,160	9,440	10,200	10,200	11,100	11,200	10,500	7,700	4,300
2	3,600	3,560	3,680	4,180	9,410	10,300	10,200	11,200	11,200	10,500	7,610	4,200
3	3,580	3,560	3,680	4,200	9,360	10,300	10,200	11,200	11,200	10,500	7,540	4,080
4	3,550	3,560	3,690	4,210	9,310	10,300	10,200	11,200	11,200	10,400	7,470	3,960
5	3,530	3,560	3,690	4,230	9,280	10,300	10,300	11,300	11,200	10,400	7,350	3,910
6	3,520	3,580	3,690	4,230	9,230	10,300	10,300	11,300	11,200	10,400	7,310	3,860
7	3,500	3,580	3,690	4,230	9,200	10,200	10,500	11,300	11,200	10,300	7,190	3,820
8	3,480	3,580	3,710	4,250	9,150	10,200	10,600	11,300	11,200	10,300	7,040	3,770
9	3,470	3,580	3,710	4,250	9,150	10,000	10,800	11,300	11,200	10,200	6,900	3,720
10	3,470	3,600	3,710	4,280	9,150	10,100	11,000	11,200	11,200	10,100	6,800	3,680
11	3,480	3,610	3,710	4,300	9,180	10,100	11,100	11,200	11,100	9,970	6,690	3,640
12	3,480	3,610	3,720	4,320	9,200	10,100	11,200	11,200	11,100	9,840	6,600	3,610
13	3,480	3,610	3,760	4,330	9,330	10,000	11,200	11,200	11,100	9,700	6,470	3,580
14	3,480	3,630	3,760	4,400	9,460	10,000	11,200	11,200	11,100	9,520	6,410	3,550
15	3,480	3,630	3,770	4,490	9,540	10,000	11,200	11,200	11,100	9,390	6,320	3,500
16	3,480	3,630	3,790	4,640	9,570	10,100	11,200	11,200	11,100	9,230	6,200	3,470
17	3,480	3,630	3,790	4,780	9,650	10,100	11,200	11,300	11,100	9,130	6,080	3,450
18	3,500	3,630	3,810	4,990	9,700	10,100	11,200	11,300	11,100	9,020	5,850	3,420
19	3,500	3,630	3,820	5,100	9,700	10,200	11,200	11,300	11,100	8,920	5,770	3,410
20	3,520	3,630	3,860	5,450	9,700	10,100	11,200	11,300	11,100	8,820	5,670	3,380
21	3,520	3,640	3,920	5,670	9,650	10,100	11,200	11,300	11,100	8,720	5,490	3,360
22	3,520	3,640	3,970	6,240	9,620	10,100	11,200	11,300	11,100	8,620	5,330	3,340
23	3,520	3,640	4,020	6,750	9,650	10,100	11,200	11,300	11,100	8,540	5,200	3,310
24	3,530	3,660	4,060	7,490	9,700	10,100	11,200	11,300	11,000	8,370	5,120	3,280
25	3,530	3,660	4,090	8,080	9,780	10,100	11,200	11,300	10,900	8,270	5,030	3,270
26	3,530	3,660	4,090	8,270	9,840	10,100	11,200	11,300	10,800	8,180	4,930	3,250
27	3,530	3,660	4,110	9,020	9,860	10,200	11,200	11,200	10,700	8,080	4,840	3,240
28	3,550	3,660	4,130	9,260	9,970	10,200	11,100	11,200	10,600	8,010	4,730	3,220
29	3,550	3,680	4,140	9,360	-----	10,200	11,100	11,200	10,600	7,910	4,640	3,220
30	3,550	3,680	4,140	9,410	-----	10,200	11,100	11,200	10,500	7,840	4,490	3,210
31	3,560	-----	4,160	9,410	-----	10,200	-----	11,200	-----	7,740	4,400	-----
MAX	3,630	3,680	4,160	9,410	9,970	10,300	11,200	11,300	11,200	10,500	7,700	4,300
MIN	3,470	3,560	3,680	4,160	9,150	10,000	10,200	11,100	10,500	7,740	4,400	3,210
(†)	54.8	55.5	58.4	82.8	84.9	85.8	89.1	89.3	87.0	76.1	59.8	52.5
(‡)	-70	+120	+480	+5,250	+560	+230	+900	+100	-700	-2,760	-3,340	-1,190
CAL YR 1969	MAX 11,300	MIN 3,470	‡ +350									
WAT YR 1970	MAX 11,300	MIN 3,210	‡ -420									

† Gage height, in feet, at end of month.

‡ Change in contents, in acre-feet.

13267050 Mann Creek below Mann Creek Dam, near Weiser, Idaho

LOCATION.--Lat 44°23'26", long 116°53'21", in SW¼NW¼ sec.12, T.12 N., R.5 W., Washington County, on left bank 800 ft downstream from spillway of Mann Creek Dam, 10.5 miles northeast of Weiser, and at mile 11.2.

DRAINAGE AREA.--56 sq mi, approximately. Mean altitude, 4,860 ft.

PERIOD OF RECORD.--April 1967 to November 1970 (discontinued). March 1911 to September 1913, July to November 1920, and April 1937 to September 1961, published as Mann Creek near Weiser. Records are not equivalent due to diversions.

GAGE.--Water-stage recorder and concrete control. Datum of gage is 2,750.49 ft above mean sea level (levels by Bureau of Reclamation).

EXTREMES.--Current year: Maximum daily discharge, 238 cfs May 6; maximum gage height, 2.21 ft May 6; minimum daily discharge, 0.39 cfs Oct. 10-24, 26-27, Dec. 28 to Jan. 9, Jan. 11.
 October to November 1970: Maximum daily discharge, 8.3 cfs Oct. 1-4, 7, 9-11; maximum gage height, 0.65 ft Oct. 9-11; minimum daily discharge, 0.18 cfs Oct. 21-22, Oct. 25 to Nov. 3.
 Period of record: Maximum daily discharge, 273 cfs Apr. 1, 1969; no flow May 5, 6, 1967.

REMARKS.--Records good except those below 2 cfs, which are poor. Mann Creek and Joslyn ditches divert from Mann Creek Reservoir for irrigation of land downstream from gage. Figures of daily discharge do not include water diverted by these canals.

DISCHARGE, IN CUBIC FEET PER SECOND, 1971

DAY	OCT	NOV	DAY	OCT	NOV	DAY	OCT	NOV	DAY	OCT	NOV	DAY	OCT	NOV
1	8.3	.18	7	8.3	.22	13	.39	.43	19	.35	.80	25	.18	-
2	8.3	.18	8	7.9	.26	14	.39	.80	20	.26	.80	26	.18	-
3	8.3	.18	9	8.3	.26	15	.39	.80	21	.18	.80	27	.18	-
4	8.3	.22	10	8.3	.22	16	.35	.80	22	.18	.80	28	.18	-
5	7.9	.26	11	8.3	.26	17	.35	.80	23	.26	.80	29	.18	-
6	7.9	.22	12	2.2	.26	18	.35	.80	24	.22	.88	30	.18	-
												31	.18	-
TOTAL.....													97.23	-
MAX.....													8.3	-
MIN.....													.18	-
MEAN.....													3.14	-
RUNOFF IN ACRE-FEET.....													193	-

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.5	2.1	1.2	.39	50	34	56	45	75	19	24	21
2	7.5	1.7	1.2	.39	50	70	56	58	72	21	24	25
3	7.5	2.2	1.2	.39	50	78	58	95	66	23	25	27
4	7.5	3.1	1.2	.39	50	80	58	149	61	23	28	21
5	7.5	2.9	1.2	.39	50	80	58	206	60	23	38	16
6	7.5	2.7	1.2	.39	50	80	58	238	54	24	46	16
7	7.5	2.7	1.2	.39	46	80	58	208	49	24	46	18
8	7.5	1.9	1.2	.39	40	75	37	188	47	37	43	19
9	2.1	1.2	1.2	.39	37	65	28	184	51	46	40	16
10	.39	1.2	1.2	.43	32	58	32	167	47	40	40	14
11	.39	1.2	1.2	.39	29	58	82	147	43	46	33	14
12	.39	1.2	1.2	.43	10	58	112	135	40	60	30	14
13	.39	1.1	1.2	.48	16	58	106	117	36	60	29	14
14	.39	1.1	1.2	.66	27	58	97	104	41	53	28	14
15	.39	1.2	1.2	.48	32	58	84	104	39	49	36	14
16	.39	1.2	1.2	.66	34	58	78	117	37	38	45	14
17	.39	1.2	1.2	.59	37	58	73	159	34	33	50	14
18	.39	1.2	.59	.52	45	58	75	210	32	29	51	14
19	.39	1.2	.43	.59	54	58	78	217	29	27	44	13
20	.39	1.2	.48	.59	66	58	72	206	27	28	44	13
21	.39	1.2	.48	.66	58	58	70	197	30	28	45	13
22	.39	1.2	.43	.66	40	58	66	191	38	27	38	13
23	.39	1.2	.48	.59	27	58	63	206	41	30	33	13
24	.39	1.2	.43	.59	24	58	63	197	58	30	26	13
25	.43	1.2	.43	.52	24	58	61	182	50	28	23	11
26	.39	1.2	.43	.88	24	58	63	167	50	25	21	9.1
27	.39	1.2	.43	.88	24	56	61	149	50	24	22	9.1
28	1.4	1.2	.39	17	25	56	53	127	45	25	22	9.1
29	3.1	1.2	.39	45	-----	56	49	108	25	27	22	8.7
30	3.1	1.2	.39	47	-----	56	44	93	20	25	22	8.3
31	3.1	-----	.39	50	-----	56	-----	80	-----	24	22	-----
TOTAL	79.86	45.5	26.57	173.11	1,051	1,908	1,949	4,751	1,347	996	1,040	438.3
MEAN	2.58	1.52	.86	5.58	37.5	61.5	65.0	153	44.9	32.1	33.5	14.6
MAX	7.5	3.1	1.2	50	66	80	112	238	75	60	51	27
MIN	.39	1.1	.39	.39	10	34	28	45	20	19	21	8.3
AC-FT	158	90	53	343	2,080	3,780	3,870	9,420	2,670	1,980	2,060	869
MEAN†	4.94	2.92	1.83	6.09	37.9	63.1	66.2	174	58.6	55.2	55.9	22.6
AC-FT†	304	174	113	374	2,110	3,880	3,940	10,680	3,490	3,390	3,430	1,340
CAL YR 1969 TOTAL	11,871.47											
MEAN 32.5												
MAX 273												
MIN .13												
ACFT 23,550												
MEAN† 41.8												
AC-FT† 29,530												
WAT YR 1970 TOTAL	13,805.34											
MEAN 37.8												
MAX 238												
MIN .39												
ACFT 27,380												
MEAN† 45.9												
AC-FT† 33,230												

† Adjusted for diversions upstream from station to Mann Creek and Joslyn ditches.

233

LOCATION.--Lat 44°14'44", long 116°58'48", in NW¼Sec 31, T.11 N., R.5 W., Washington County, on right bank at upstream side of U.S. Highway 30N bridge at Weiser, 0.7 mile downstream from Weiser River, and at mile 351.3.

PERIOD OF RECORD.--October 1910 to current year. Fragmentary gage-height record obtained by U.S. Weather Bureau since 1895. Monthly discharge only for October 1910, published in WSP 1317.

AVERAGE DISCHARGE.--60 years, 17,670 cfs (12,800,000 acre-ft per year); 15-year base period (1952-67), 16,720 cfs.

Period of record: Maximum discharge, 84,500 cfs Apr. 29, 1952 (gage height, 14.67 ft, site and datum then in use); minimum observed, 5,100 cfs Aug. 5, 1924 (gage height, 1.35 ft, site and datum then in use).

Flood of Mar. 3, 1910, reached a stage of 17.1 ft at site and datum 0.3 mile upstream, from reading on old U.S. Weather Bureau gage (discharge, 120,000 cfs). Flood in June 1894 was considerably higher.

REMARKS.--Records excellent. Flow regulated by many reservoirs above station. Diurnal fluctuation caused by Swan Falls powerplant. Diversions for irrigation of about 2,473,000 acres (1948 determination) above station. Records of water temperatures for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 1317: 1918. WSP 1567: 1910(M).

Rating table (gage height, in feet, and discharge, in cubic feet per second)

2.6	10,000	6.0	26,900
3.0	11,700	8.0	39,000
4.0	16,400	9.0	45,400

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13,700	13,700	12,500	13,200	20,900	15,900	15,800	22,900	32,100	33,000	11,000	11,500
2	14,000	13,700	12,300	13,500	20,200	17,500	14,900	23,700	30,700	32,200	11,100	12,200
3	14,200	13,900	13,000	13,200	20,100	16,900	15,300	21,200	31,400	31,500	11,100	12,400
4	14,200	13,300	13,800	13,200	20,300	16,500	14,500	21,900	31,800	31,900	10,900	13,100
5	14,600	13,500	14,300	13,000	18,600	17,000	13,800	22,100	32,400	30,400	11,000	14,400
6	14,500	13,700	13,700	13,300	18,000	15,400	14,700	24,300	34,400	25,700	10,900	14,900
7	15,300	13,200	13,900	14,000	18,000	17,100	14,900	26,000	30,300	19,000	10,700	15,000
8	15,100	13,400	14,100	13,700	18,500	18,200	15,200	25,700	28,700	16,500	10,700	15,400
9	15,000	12,900	12,500	14,200	18,200	17,600	15,700	24,100	27,300	14,400	10,600	16,100
10	15,100	13,400	13,400	13,800	17,600	17,100	16,100	26,700	29,400	13,500	10,600	14,600
11	14,900	12,600	14,000	15,400	18,200	16,800	19,000	28,300	26,500	13,200	10,600	15,400
12	15,000	13,000	13,800	14,500	19,600	17,700	21,200	29,300	26,400	11,700	10,500	14,000
13	15,000	13,200	13,600	16,200	23,300	17,200	20,600	31,300	26,700	11,100	10,600	14,400
14	14,900	13,600	13,400	21,000	25,100	18,200	19,500	34,200	26,200	11,800	10,800	15,000
15	14,800	12,700	13,600	23,200	24,400	18,800	15,500	28,100	27,800	11,000	10,800	14,100
16	14,600	13,000	13,600	23,000	24,000	18,800	17,900	29,400	34,100	10,600	10,900	14,700
17	14,500	12,900	13,400	27,100	22,100	19,000	18,800	30,200	36,800	10,300	11,000	15,200
18	14,700	13,000	13,500	25,600	23,300	18,800	23,100	32,300	39,100	10,200	10,600	14,700
19	14,400	13,000	13,300	28,200	21,500	18,400	24,400	32,000	39,400	10,500	10,600	15,100
20	14,400	13,000	13,500	32,100	21,000	18,300	23,200	33,800	38,200	10,800	10,400	16,200
21	14,800	13,100	14,200	27,700	21,400	17,200	20,900	32,300	36,900	10,600	10,400	16,100
22	14,300	13,000	15,300	32,700	20,500	16,800	19,600	32,200	34,300	10,400	10,600	16,400
23	14,600	13,000	14,700	34,300	19,600	17,000	19,600	33,900	33,400	10,500	10,800	16,100
24	15,000	13,000	14,700	40,700	19,500	17,300	18,500	39,600	32,500	10,600	11,000	16,600
25	14,500	12,900	13,800	40,300	18,300	17,100	17,100	43,600	29,200	10,700	10,800	16,000
26	14,900	12,600	13,500	32,700	18,600	15,800	15,600	41,000	27,200	10,800	10,700	15,800
27	14,600	12,400	13,900	42,100	17,000	15,600	15,400	40,000	25,900	11,000	10,700	16,200
28	13,900	12,500	13,800	35,400	15,100	16,600	15,600	40,700	28,200	11,000	10,800	16,000
29	14,500	12,100	13,300	30,700	-----	16,800	15,600	38,600	28,700	11,500	11,000	15,700
30	14,400	12,300	13,200	27,200	-----	16,800	18,800	37,800	31,000	11,000	11,300	15,600
31	14,400	-----	13,300	23,400	-----	16,500	-----	34,400	-----	11,000	11,500	-----
TOTAL	452,800	391,600	422,900	728,600	562,900	534,700	534,800	961,600	937,000	478,400	335,000	448,900
MEAN	14,610	13,050	13,640	23,500	20,100	17,250	17,830	31,020	31,230	15,430	10,810	14,960
MAX	15,300	13,900	15,300	42,100	25,100	19,000	24,400	43,600	39,400	33,000	11,500	16,600
MIN	13,700	12,100	12,300	13,000	15,100	15,400	13,800	21,200	25,900	10,200	10,400	11,500
AC=FT	898,100	776,700	838,800	1,445M	1,117M	1,061M	1,061M	1,907M	1,859M	548,900	664,500	890,400

CAL YR 1969	TOTAL	7,357,690	MEAN	20,160	MAX	47,500	MIN	9,650	ACFT	14,590,000
WAT YR 1970	TOTAL	6,789,200	MEAN	18,600	MAX	43,600	MIN	10,200	ACFT	13,470,000

SNAKE RIVER MAIN STEM

13289700 Brownlee Reservoir at Brownlee Dam, Idaho-Oregon State line

LOCATION.--Lat 44°50'08", long 116°53'58", in SE¼SE¼ sec.2, T.17 N., R.5 W., Washington County, at Brownlee Dam on Snake River near Idaho end of dam, 1.1 miles upstream from Wildhorse River, 3.5 miles downstream from Brownlee Creek, 10.5 miles east of Halfway, Oreg., and at mile 285.0.

DRAINAGE AREA.--72,590 sq mi, approximately.

PERIOD OF RECORD.--May 1958 to current year. Published as "at Idaho-Oregon State line" 1958-59.

GAGE.--Remote registering water-stage recorder. Datum of gage is mean sea level, Idaho Power Co. datum. Prior to Feb. 2, 1959, nonrecording gage or levels to water surface at present site and datum.

EXTREMES.--Current year: Maximum contents, 1,450,000 acre-ft Sept. 7 (elevation, 2,078.68 ft); minimum, 851,200 acre-ft Apr. 30 (elevation, 2,026.91 ft).

Period of record: Maximum contents, 1,453,500 acre-ft Aug. 6, 1962 (elevation, 2,078.91 ft); minimum since full capacity was attained June 23, 1959, 446,300 acre-ft May 11, 1965 (elevation, 1,975.98 ft).

REMARKS.--Reservoir is formed by earth-fill dam. Storage began May 5, 1958. Dam was completed in fall of 1958. Normal pool elevation, 2,077 ft. Water is used for power generation.

COOPERATION.--Water-stage recorder graph and capacity table furnished by Idaho Power Co.

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

2,026.0	823,800
2,040.0	977,100
2,060.0	1,198,000
2,080.0	1,469,000

CONTENTS, IN THOUSANDS OF ACRE-FEET, AT 2400, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,418	1,422	1,356	1,262	1,355	913.0	912.4	857.3	1,287	1,414	1,429	1,435
2	1,418	1,423	1,347	1,251	1,349	912.2	899.4	867.0	1,319	1,400	1,428	1,433
3	1,417	1,421	1,339	1,237	1,341	916.1	895.3	881.1	1,346	1,387	1,428	1,427
4	1,419	1,418	1,333	1,225	1,330	919.6	898.7	894.0	1,362	1,393	1,428	1,430
5	1,426	1,419	1,329	1,207	1,315	923.6	905.7	910.7	1,374	1,415	1,426	1,438
6	1,427	1,418	1,325	1,193	1,300	923.4	911.5	922.3	1,392	1,434	1,425	1,447
7	1,426	1,415	1,325	1,182	1,288	920.3	915.9	934.1	1,408	1,433	1,425	1,447
8	1,425	1,415	1,323	1,169	1,274	921.5	924.7	941.0	1,416	1,432	1,430	1,443
9	1,421	1,415	1,312	1,157	1,270	917.9	934.5	936.9	1,421	1,432	1,426	1,441
10	1,418	1,408	1,305	1,146	1,271	924.5	940.8	940.3	1,422	1,436	1,425	1,436
11	1,414	1,403	1,298	1,140	1,271	922.7	947.5	946.5	1,411	1,433	1,425	1,429
12	1,411	1,404	1,291	1,133	1,275	922.5	961.3	957.3	1,407	1,433	1,427	1,426
13	1,408	1,401	1,288	1,132	1,285	922.5	971.9	962.5	1,407	1,432	1,428	1,423
14	1,409	1,398	1,288	1,142	1,275	918.7	963.1	976.8	1,403	1,436	1,430	1,422
15	1,406	1,397	1,284	1,161	1,238	919.9	947.6	981.2	1,401	1,432	1,431	1,420
16	1,406	1,397	1,278	1,171	1,198	919.8	934.1	980.0	1,398	1,428	1,434	1,419
17	1,408	1,394	1,272	1,190	1,157	919.4	928.4	987.5	1,407	1,426	1,434	1,421
18	1,410	1,391	1,268	1,213	1,116	919.1	928.6	999.9	1,416	1,423	1,435	1,423
19	1,415	1,388	1,269	1,243	1,094	920.0	929.5	1,001	1,416	1,426	1,431	1,425
20	1,415	1,387	1,274	1,277	1,071	919.6	931.6	1,006	1,418	1,427	1,432	1,435
21	1,416	1,382	1,282	1,300	1,050	919.7	925.2	1,011	1,422	1,429	1,435	1,434
22	1,415	1,380	1,282	1,333	1,031	919.9	913.3	1,012	1,419	1,430	1,435	1,432
23	1,411	1,380	1,283	1,359	1,010	917.9	912.8	1,011	1,418	1,429	1,437	1,427
24	1,408	1,378	1,288	1,401	993.6	914.9	910.5	1,022	1,430	1,430	1,441	1,423
25	1,407	1,377	1,291	1,416	972.4	918.3	905.6	1,038	1,438	1,432	1,436	1,418
26	1,411	1,375	1,291	1,404	954.4	919.9	896.5	1,063	1,440	1,432	1,430	1,418
27	1,412	1,374	1,289	1,411	942.3	922.8	891.7	1,091	1,439	1,430	1,431	1,418
28	1,412	1,369	1,286	1,404	924.2	919.2	883.0	1,131	1,438	1,431	1,430	1,419
29	1,413	1,364	1,281	1,383	-----	917.7	862.6	1,178	1,432	1,433	1,430	1,419
30	1,418	1,363	1,275	1,365	-----	918.2	851.4	1,221	1,424	1,431	1,437	1,418
31	1,422	-----	1,266	1,359	-----	917.2	-----	1,258	-----	1,430	1,438	-----
MAX	1,427	1,423	1,356	1,416	1,355	924.5	971.9	1,258	1,440	1,436	1,441	1,447
MIN	1,406	1,363	1,266	1,132	924.2	912.2	851.4	857.3	1,287	1,387	1,425	1,418
(†)	2,076.66	2,072.38	2,065.25	2,072.09	2,034.55	2,033.82	2,026.93	2,064.66	2,076.83	2,077.21	2,077.80	2,076.40
(‡)	+7	-59	-97	+93	-434.8	-7	-65.8	+406.6	+166	+6	+8	-20

CAL YR 1969..... † +39

WTR YR 1970..... † +3

† Elevation, in feet, at end of month.

‡ Change in contents, in thousands of acre-feet.

SNAKE RIVER MAIN STEM

235

13290000 Snake River at Oxbow, Oreg.

LOCATION.--Lat 44°58'00", long 116°50'44", in SW¼SE¼ sec.9, T.7 S., R.48 E., Baker County, just upstream from intakes to Oxbow powerplant, 0.8 mile southeast of Oxbow, and at mile 273.5.

DRAINAGE AREA.--72,800 sq mi, approximately.

PERIOD OF RECORD.--May 1923 to March 1958, October 1967 to current year.

GAGE.--Foxboro Flow Meter with accumulating integrator on each of four penstocks, dial gage on each of three spillway gates, and water-stage recorder on Oxbow Reservoir. Prior to Dec. 20, 1923, nonrecording gage at site 0.6 mile upstream at different datum. Dec. 20, 1923, to Mar. 8, 1958, water-stage recorder at site 0.6 mile upstream at different datum.

AVERAGE DISCHARGE.--37 years (1923-57, 1967-70), 17,790 cfs (12,890,000 acre-ft per year).

EXTREMES.--Current year: Maximum daily discharge, 46,100 cfs Jan. 28; minimum daily, 7,940 cfs Aug. 13. Period of record: Maximum discharge, 89,700 cfs Apr. 28, 1952 (gage height, 23.10 ft); maximum gage height, about 29 ft (ice jam), from floodmark, sometime during period Jan. 17-27, 1949; minimum daily discharge, 3,250 cfs May 26, 1968.

REMARKS.--Flow regulated by many reservoirs above station, the most effective of which is Brownlee Reservoir 11.5 miles upstream (see sta 13289700). Oxbow Dam and powerplant started operation in 1958. Diversions for irrigation of about 2,609,000 acres (1958 determination) above station. Records of water temperatures for water year 1970 at site 0.6 mile downstream from tailrace of powerplant are published in Part 2 of this report (see sta 13290200).

COOPERATION.--Integrator charts, a log of gate and valve operation for spillway, and reservoir elevations furnished by Idaho Power Co.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14,000	13,800	16,200	16,200	24,100	20,300	19,200	15,400	18,100	37,700	11,600	14,200
2	16,300	13,700	16,800	18,800	24,400	16,100	21,700	17,700	18,700	39,400	11,100	12,200
3	12,500	14,600	16,500	19,000	25,400	16,800	14,700	14,600	22,800	35,200	11,200	14,500
4	13,600	15,200	16,800	20,800	25,500	15,300	13,500	15,000	27,000	37,000	13,100	11,200
5	12,200	13,900	16,200	19,500	22,300	15,900	11,700	14,400	30,000	21,100	12,500	10,600
6	14,000	14,800	14,400	19,500	24,800	16,800	13,400	23,300	26,100	20,200	11,100	10,700
7	16,400	14,100	13,400	21,000	24,500	18,900	14,000	20,700	24,200	16,800	8,870	16,000
8	18,400	14,100	16,400	19,300	23,500	20,100	9,370	23,300	28,500	18,500	11,300	18,000
9	17,200	15,200	17,200	17,400	19,500	15,800	11,600	28,800	28,800	13,200	10,300	17,700
10	18,600	15,700	17,200	18,100	18,300	17,200	14,400	28,900	29,300	14,800	11,000	17,500
11	17,900	13,900	18,100	19,600	17,700	19,300	15,400	28,300	32,800	13,600	11,300	16,700
12	17,000	14,600	15,400	16,700	20,200	18,100	15,900	26,100	29,000	12,600	10,300	16,300
13	15,800	15,300	14,100	15,200	21,700	18,300	20,500	29,400	25,800	11,400	7,540	18,100
14	15,800	16,000	14,400	17,800	30,300	22,500	24,200	23,800	29,700	12,500	13,500	13,200
15	16,000	12,900	15,500	14,300	37,600	18,100	25,600	23,800	30,200	15,200	5,640	14,400
16	15,400	12,500	18,800	17,400	43,100	19,000	23,800	29,300	35,700	11,900	10,600	16,100
17	12,800	15,000	15,000	17,400	41,700	21,000	22,700	29,300	35,100	12,200	10,800	12,800
18	13,100	14,400	14,200	15,400	43,800	19,300	21,300	32,500	35,100	10,600	11,200	13,800
19	13,200	15,800	12,600	14,500	32,400	19,200	27,100	31,700	38,900	11,400	11,800	12,300
20	13,400	14,100	11,800	18,900	32,400	18,000	25,100	35,800	34,500	11,700	10,100	13,800
21	14,700	14,900	10,900	17,100	31,100	18,000	24,800	30,600	36,400	7,950	10,600	16,600
22	15,300	14,400	15,300	20,500	30,200	18,100	25,900	32,200	41,300	10,900	11,100	17,600
23	16,100	13,600	15,700	28,500	29,300	18,800	18,600	38,900	35,200	10,300	10,200	20,700
24	15,600	13,800	11,900	22,300	30,000	17,900	21,100	31,200	30,000	9,430	12,900	17,800
25	14,900	16,100	12,900	37,500	29,800	15,300	20,600	43,900	25,600	12,400	14,500	16,600
26	14,400	13,500	14,000	42,000	25,300	16,100	15,200	31,800	26,000	10,000	10,600	18,200
27	14,700	12,900	15,700	35,400	24,900	14,800	18,700	28,900	22,400	12,000	10,800	12,400
28	12,300	15,100	14,500	46,100	22,500	21,900	21,700	22,600	30,000	9,850	10,700	17,200
29	13,700	14,800	15,900	42,000	-----	16,000	22,900	18,800	33,300	12,300	10,700	15,400
30	12,500	14,800	17,100	39,400	-----	19,100	21,000	18,100	34,100	12,300	8,720	15,200
31	13,500	-----	16,900	28,300	-----	18,100	-----	20,900	-----	12,100	12,200	-----
TOTAL	461,300	433,500	471,800	715,900	780,700	560,100	583,670	810,000	894,600	486,530	342,270	457,800
MEAN	14,880	14,450	15,220	23,090	27,880	18,070	19,460	26,130	29,820	15,690	11,040	15,260
MAX	18,600	16,100	18,800	46,100	43,800	22,500	25,600	43,900	41,300	25,400	14,500	20,700
MIN	12,200	12,500	10,900	14,300	17,700	14,800	9,370	14,400	18,100	7,950	7,540	10,600
AC-FT	915,000	859,800	935,800	1,420M	1,549M	1,111M	1,158M	1,607M	1,774M	965,000	678,900	908,000

CAL YR 1969 TOTAL 7,607,830 MEAN 20,840 MAX 52,500 MIN 5,400 ACFT 15,090,000
WAT YR 1970 TOTAL 6,998,170 MEAN 19,170 MAX 46,100 MIN 7,940 ACFT 13,880,000

M Expressed in thousands.

PINE CREEK BASIN

13290190 Pine Creek near Oxbow, Oreg.

LOCATION.--Lat 44°57'13", long 116°52'21", in NE¼SW¼ sec.17, T.7 S., R.48 E., Baker County, 1.8 miles south of Oxbow, and at mile 1.9.

DRAINAGE AREA.--230 sq mi, approximately.

PERIOD OF RECORD.--November 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,850.48 ft above mean sea level (levels by Idaho Power Co.). Prior to Aug. 24, 1967, nonrecording gage at site 1.7 miles downstream at different datum.

EXTREMES.--Current year: Maximum discharge, 6,630 cfs Jan. 23 (gage height, 9.60 ft); minimum, 29 cfs Sept. 2 (gage height, 2.99 ft).
Period of record: Maximum discharge, 7,110 cfs Feb. 21, 1968 (gage height, 9.82 ft); minimum, 26 cfs Aug. 25, 1969 (gage height, 3.19 ft).

REMARKS.--Records good. Diversions for irrigation of about 19,000 acres above station.

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Jan. 25 to Feb. 2; stage-discharge relation affected by ice Dec. 31 to Jan. 8)

Oct. 1 to Feb. 2				Feb. 3 to Sept. 30			
3.4	48	6.0	980	3.0	30	4.5	331
3.7	87	7.0	1,880	3.2	45	5.0	563
4.0	137	8.0	3,340	3.5	82	6.0	1,330
4.5	267	9.0	5,320	4.0	180	6.7	2,120
5.0	440						

DISCHARGE, IN CUBIC FEET PER SECCND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	61	68	115	540	552	343	202	1,000	468	57	31
2	59	61	70	106	480	552	343	272	1,130	440	54	30
3	62	61	71	98	440	498	320	399	1,320	412	54	30
4	59	61	72	93	395	458	317	563	1,550	404	54	45
5	57	68	71	89	374	417	324	778	1,680	391	52	57
6	56	74	71	82	370	395	399	936	1,740	358	50	47
7	53	71	72	72	370	417	514	850	1,910	320	46	48
8	55	70	72	104	362	449	458	743	1,620	285	47	118
9	58	67	71	116	358	404	449	743	2,060	232	44	78
10	57	67	71	155	366	387	478	771	1,570	210	43	66
11	55	68	74	133	366	383	503	678	1,200	247	39	62
12	53	67	86	141	399	370	468	630	1,030	218	36	62
13	51	67	102	184	806	366	440	563	960	198	34	64
14	52	66	103	318	792	453	412	503	993	164	33	66
15	52	66	96	456	710	596	378	488	1,040	138	33	78
16	55	67	86	575	648	585	339	618	952	128	33	79
17	58	66	85	746	813	568	309	920	944	120	32	81
18	57	65	92	1,020	704	514	306	1,210	968	96	31	75
19	55	70	115	1,720	618	473	324	1,470	1,080	88	31	76
20	55	67	264	1,720	558	453	317	1,470	1,140	79	31	79
21	58	67	396	1,950	515	430	299	1,430	1,140	73	31	88
22	61	67	370	2,170	493	408	282	1,470	1,160	65	31	78
23	63	66	297	2,820	473	391	269	2,040	1,180	65	31	79
24	63	70	258	5,070	449	383	256	1,860	1,140	62	32	76
25	65	65	222	1,670	430	378	244	1,730	1,030	54	32	73
26	62	67	213	1,220	421	374	221	1,830	912	49	31	72
27	59	62	184	1,660	421	366	210	1,660	904	47	31	72
28	62	59	164	1,010	430	383	208	1,350	704	58	32	66
29	62	59	145	779	-----	391	198	1,150	624	60	32	62
30	61	62	141	655	-----	370	190	1,040	536	58	33	57
31	61	-----	135	570	-----	354	-----	960	-----	57	33	-----
TOTAL	1,784	1,974	4,337	27,617	14,105	13,518	10,118	31,327	35,217	5,644	1,183	1,995
MEAN	57.5	65.8	140	891	504	436	337	1,011	1,174	182	38.2	66.5
MAX	65	74	396	5,070	813	596	514	2,040	2,060	468	57	118
MIN	48	59	68	72	358	354	190	202	536	47	31	30
AC-FT	3,540	3,920	8,600	54,780	27,980	26,810	20,070	62,140	69,850	11,190	2,350	3,960

CAL YR 1969 TOTAL 132,955 MEAN 364 MAX 1,720 MIN 27 ACFT 263,700
WAT YR 1970 TOTAL 148,819 MEAN 408 MAX 5,070 MIN 30 ACFT 295,200

PEAK DISCHARGE (BASE, 1,000 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
1-23	2400	9.60	6,630	6-7	0230	6.85	2,320
5-23	0600	6.88	2,360				

13290450 Snake River at Hells Canyon Dam, Idaho-Oregon State line

LOCATION.--Lat 45°15'05", long 116°41'50", in SE¼SE¼ sec.33, T.3 S., R.49 E. (Willamette meridian, unsurveyed), Wallowa County, Wallowa National Forest, on left bank 0.2 mile upstream from Hells Canyon Creek, 0.4 mile downstream from Deep Creek, 0.6 mile downstream from Hells Canyon Dam, 15.5 miles northeast of Homestead, Oreg., and at mile 247.0.

DRAINAGE AREA.--73,300 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 1,400 ft above mean sea level (levels by Idaho Power Co.).

AVERAGE DISCHARGE.--5 years, 17,980 cfs (13,030,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 50,600 cfs Jan. 29 (gage height, 76.24 ft); minimum, 7,730 cfs July 24 (gage height, 64.01 ft); minimum daily discharge, 9,600 cfs July 24.

Period of record: Maximum discharge, 55,600 cfs Apr. 10, 1969 (gage height, 77.16 ft); minimum, 1,580 cfs Mar. 19, 1967 (gage height, 59.9 ft); minimum daily, 4,950 cfs May 26, 1968.

REMARKS.--Records excellent. Flow regulated by many reservoirs above station with a total usable capacity of more than 10,000,000 acre-feet, the most effective of which is Brownlee Reservoir 38 miles upstream (see sta 13289700). Diurnal fluctuations caused by Hells Canyon powerplant. Diversions for irrigation of about 2,628,000 acres (1958 determination) above station. Records of chemical analyses for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

64.9	9,520	72.0	31,700
66.0	12,000	75.0	44,600
68.0	17,500	77.0	54,700
70.0	24,200		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15,700	14,700	17,300	16,700	27,600	24,100	20,300	24,500	22,200	42,000	12,400	13,000
2	14,000	13,700	17,200	20,100	27,700	22,100	24,700	20,300	22,600	45,200	12,400	13,900
3	14,500	14,500	18,100	22,900	29,000	21,600	21,800	14,800	25,300	41,700	12,200	13,100
4	14,100	15,600	19,800	16,600	30,500	20,200	15,500	19,300	30,900	32,600	12,100	14,200
5	11,700	15,900	18,000	24,000	29,000	17,200	15,400	19,300	32,700	32,100	12,100	11,300
6	14,200	15,000	15,300	23,000	28,100	17,200	14,000	19,600	32,100	21,200	12,200	10,700
7	14,700	14,800	13,800	22,000	27,500	20,200	14,100	24,700	32,100	21,000	12,100	11,700
8	15,900	14,100	18,500	21,200	26,800	22,300	13,400	30,200	32,100	20,200	11,600	18,000
9	18,000	13,600	19,200	21,200	22,800	20,600	12,500	30,000	34,400	17,900	11,200	20,600
10	19,000	16,000	17,300	17,400	21,800	20,700	15,400	29,900	37,800	14,500	10,600	19,000
11	18,000	17,500	18,700	18,600	21,700	21,300	15,100	29,800	37,800	13,400	10,200	19,300
12	16,500	15,100	18,000	21,100	21,100	19,800	15,500	31,100	34,000	13,400	10,300	16,700
13	19,200	14,200	15,000	17,700	24,100	20,000	23,500	31,400	31,700	13,400	10,100	16,400
14	17,700	14,200	14,200	16,600	34,800	22,100	25,400	31,700	31,300	13,500	10,100	18,600
15	16,700	15,000	16,300	16,500	46,700	21,800	29,700	31,500	35,200	13,300	9,960	14,200
16	16,800	14,600	18,800	21,700	49,400	22,600	29,600	31,300	39,200	12,800	10,000	16,900
17	15,300	15,400	17,700	20,500	49,200	22,000	26,400	31,100	39,700	12,400	10,100	13,900
18	14,500	15,700	17,300	15,900	48,000	22,600	26,600	34,200	41,300	12,600	10,500	14,200
19	12,800	14,800	14,700	19,400	37,800	22,300	26,600	37,800	41,900	12,000	10,700	13,800
20	14,600	15,000	11,700	21,000	36,900	21,400	27,400	38,300	42,300	11,600	11,200	11,800
21	16,100	15,800	11,300	21,800	34,800	20,200	27,500	38,300	42,000	11,300	11,300	16,700
22	15,900	14,600	17,700	24,100	34,300	19,600	28,600	39,700	41,900	10,400	10,900	17,800
23	16,100	13,800	16,600	30,300	34,100	21,400	25,600	41,300	42,000	9,780	10,400	21,000
24	15,400	14,900	14,100	30,000	33,000	21,700	22,800	41,300	35,900	9,600	10,300	20,600
25	14,600	15,400	13,400	42,400	32,400	19,400	21,000	45,200	28,900	9,770	12,800	18,700
26	16,200	14,200	14,800	49,000	28,900	14,900	22,500	41,200	29,100	9,770	12,900	16,900
27	16,700	13,600	15,800	49,700	27,000	17,900	22,100	31,500	30,800	10,800	13,100	16,300
28	16,100	14,300	15,800	49,500	26,800	18,100	24,200	27,400	32,900	11,500	12,100	16,700
29	15,200	15,000	16,000	49,700	-----	18,500	25,800	23,700	36,800	11,700	11,000	17,500
30	13,900	15,900	16,700	40,600	-----	21,400	23,600	22,300	38,900	12,200	10,800	15,200
31	13,900	-----	18,900	30,700	-----	19,400	-----	22,100	-----	12,300	10,300	-----
TOTAL	484,000	446,900	508,000	811,900	891,800	634,600	656,600	934,800	1,035,8M	526,920	347,960	478,700
MEAN	15,610	14,900	16,390	26,190	31,850	20,470	21,890	30,150	34,530	17,000	11,220	15,960
MAX	19,200	17,500	19,800	49,700	49,400	24,100	29,700	45,200	42,300	45,200	13,100	21,000
MIN	11,700	13,600	11,300	15,900	21,100	14,900	12,500	14,800	22,200	9,600	9,960	10,700
AC-FT	960,000	886,400	1,008M	1,610M	1,769M	1,259M	1,302M	1,854M	2,055M	1,045M	690,200	949,500

CAL YR 1969 TOTAL 8,355,650 MEAN 22,890 MAX 54,600 MIN 9,570 AC-FT 16,570,000
WTR YR 1970 TOTAL 7,757,980 MEAN 21,250 MAX 49,700 MIN 9,600 AC-FT 15,390,000

M Expressed in thousands.

SNAKE RIVER MAIN STEM

13290500 Snake River near Joseph, Idaho

LOCATION.--Lat 45°49'02", long 116°45'12", in NE¼NE¼ sec.24, T.4 N., R.48 E. (Willamette meridian, unsurveyed), Wallowa County, Wallowa National Forest, on left bank at China Gulch, 0.5 mile upstream from Imnaha River, 0.9 mile downstream from Divide Creek, 13 miles west of Joseph, 22 miles west of White Bird, and at mile 192.3.

DRAINAGE AREA.--73,800 sq mi, approximately.

PERIOD OF RECORD.--April 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 940.54 ft above mean sea level.

AVERAGE DISCHARGE.--15 years, 18,690 cfs (13,541,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 50,200 cfs Jan..27 (gage height, 14.25 ft); maximum gage height, 14.64 ft May 26 (backwater from Imnaha River); minimum discharge, 9,430 cfs July 27 (gage height, 1.00 ft).
Period of record: Maximum discharge, 80,800 cfs Dec. 26, 1964 (gage height, 20.16 ft); minimum daily, 1,050 cfs Sept. 1, 1958.

REMARKS.--Records good. Flow regulated by many reservoirs above station, the most effective of which is Brownlee Reservoir 92.7 miles upstream (see sta 13289700). Diurnal fluctuation caused by Hells Canyon powerplant 54.7 miles upstream. Diversions for irrigation of about 2,628,000 acres (1948 determination) above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Backwater from Imnaha River Jan. 24-27, May 3 to July 7, July 10-11)

1.0	9,430
5.0	18,800
10.0	33,500
14.0	49,200

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16,200	14,400	16,500	17,100	26,500	23,400	18,600	23,300	21,500	39,600	12,400	11,700
2	13,800	13,800	16,900	17,200	25,600	20,900	22,200	20,800	21,700	44,500	12,400	13,900
3	13,900	14,100	17,200	22,000	26,100	20,600	22,100	16,500	23,600	42,200	12,200	13,200
4	14,400	15,500	18,800	17,900	28,400	19,700	16,400	17,800	28,200	34,000	12,200	13,700
5	12,900	15,700	18,000	21,800	27,900	17,300	15,000	19,600	32,400	23,500	12,100	12,500
6	12,300	15,300	16,300	21,900	26,500	17,200	13,700	19,300	31,600	20,400	12,200	11,200
7	14,500	14,700	14,300	22,000	25,900	18,800	14,300	22,000	31,600	20,600	12,200	10,900
8	14,600	14,600	16,500	20,800	25,200	20,500	14,700	29,100	31,500	19,900	11,800	15,700
9	17,100	13,800	18,000	19,800	23,000	19,600	12,700	28,900	32,400	18,900	10,900	19,800
10	18,000	14,800	17,700	18,600	20,600	19,900	14,900	28,900	37,300	15,500	10,500	18,700
11	17,600	17,200	18,000	17,000	20,600	19,700	15,300	28,800	36,900	13,900	10,100	19,100
12	16,300	15,900	18,300	21,600	20,400	19,100	15,700	29,700	34,400	13,900	10,300	16,700
13	17,800	14,300	15,500	18,000	21,500	18,800	19,800	30,200	30,700	13,800	10,100	16,300
14	17,800	14,300	15,100	16,600	29,700	20,700	23,500	30,600	30,600	13,900	9,930	17,300
15	16,400	14,300	15,400	16,500	42,700	21,500	28,600	30,500	32,900	13,700	9,910	15,300
16	16,700	15,100	17,600	19,200	48,500	21,100	28,100	30,200	38,700	13,400	10,000	15,500
17	15,500	14,800	17,300	20,000	47,900	20,900	25,600	30,000	38,700	12,800	10,000	15,100
18	14,400	15,600	17,500	16,800	48,300	21,200	25,100	32,300	40,400	12,800	10,500	14,000
19	12,900	15,400	15,300	18,700	38,300	21,600	24,900	36,600	41,000	12,800	10,600	14,000
20	12,900	14,500	12,800	18,900	35,700	20,700	26,000	37,300	41,500	11,900	11,100	12,500
21	15,700	15,600	11,600	21,600	33,100	19,500	26,000	37,600	41,200	11,600	11,300	14,900
22	15,200	14,800	14,500	22,000	32,600	19,100	26,800	38,400	40,900	10,900	11,100	17,300
23	15,400	14,000	17,400	29,000	32,300	19,800	25,600	40,300	41,100	10,100	10,700	18,700
24	15,200	14,500	15,300	29,100	31,500	20,800	21,800	40,900	37,900	9,680	10,200	20,600
25	13,900	15,300	13,600	36,100	31,000	19,700	20,400	43,300	27,700	9,740	11,600	18,000
26	15,200	14,800	14,300	48,500	27,700	17,700	21,800	44,200	27,900	9,790	13,300	17,400
27	16,100	13,700	14,900	49,200	25,500	16,900	21,400	32,300	28,800	10,100	13,400	15,900
28	15,800	13,900	15,500	49,000	25,000	17,200	21,800	27,700	31,800	11,500	12,200	16,200
29	15,000	14,800	16,200	49,100	-----	19,100	24,600	23,900	34,700	11,500	11,400	16,800
30	14,000	15,400	15,700	43,500	-----	18,600	22,800	21,800	38,100	12,000	11,100	15,300
31	13,600	-----	18,700	30,100	-----	19,500	-----	21,600	-----	12,300	10,600	-----
TOTAL	471,100	444,900	500,700	789,600	848,000	611,100	630,200	914,400	1,007.7M	531,210	348,340	468,200
MEAN	15,200	14,830	16,150	25,470	30,290	19,710	21,010	29,500	33,590	17,140	11,240	15,610
MAX	18,000	17,200	18,800	49,200	48,500	23,400	28,600	44,200	41,500	44,500	13,400	20,600
MIN	12,300	13,700	11,600	16,500	20,400	16,900	12,700	16,500	21,500	9,680	9,910	10,900
AC-FT	934,400	882,500	993,100	1,566M	1,682M	1,212M	1,250M	1,814M	1,999M	1,054M	690,900	928,700
CAL YR 1969	TOTAL 8,218,290			MEAN 22,520	MAX 56,000	MIN 9,600	ACFT 16,300,000					
WAT YR 1970	TOTAL 7,565,450			MEAN 20,730	MAX 49,200	MIN 9,680	ACFT 15,010,000					

M Expressed in thousands.

13295000 Valley Creek at Stanley, Idaho

LOCATION.--Lat 44°13'21", long 114°55'49", in SE¼NW¼SW¼ sec.3, T.10 N., R.13 E., Custer County, on left bank at mile 0.2, 0.5 mile northeast of Stanley, and 0.8 mile southwest of Lower Stanley.

DRAINAGE AREA.--147 sq mi. Mean altitude, 7,400 ft.

PERIOD OF RECORD.--December 1910 to April 1911 (gage heights only), May 1911 to October 1913, May 1921 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 6,221.81 ft above mean sea level. Prior to May 28, 1911, nonrecording gage at site 0.2 mile upstream and May 28, 1911, to Oct. 31, 1913, at site 0.8 mile upstream, at different datums. May 2, 1921, to Apr. 30, 1949, nonrecording gage at present site and datum.

AVERAGE DISCHARGE.--51 years (1911-13, 1921-70), 199 cfs (18.38 inches per year, 144,200 acre-ft per year); 15-year base period (1952-67), 210 cfs.

EXTREMES.--Current year: Maximum discharge, 1,470 cfs June 29 (gage height, 3.38 ft); minimum, 49 cfs Nov. 28 (gage height, 0.72 ft).

Period of record: Maximum discharge, 2,000 cfs May 24, 1956; maximum gage height, 4.4 ft May 29, 1921; minimum discharge, 40 cfs (estimated) Nov. 17-30, 1929, Dec. 8-13, 1932.

REMARKS.--Records good except those for January to May, which are fair. Diversions for irrigation of about 590 acres (1948 determination) above station.

REVISIONS (WATER YEARS).--WSP 362: 1911-12. WSP 1567: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Dec. 28 to Jan. 13, Jan. 28-31, Feb. 4-5)

0.8	60	2.0	493
1.0	94	2.5	804
1.2	140	3.0	1,170
1.5	242	3.3	1,400

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	92	93	68	79	100	82	84	106	726	792	170	119
2	107	88	68	73	100	81	88	136	783	653	161	101
3	103	87	67	69	95	80	83	187	884	620	153	95
4	98	88	67	66	92	79	86	243	1,030	635	149	100
5	94	92	70	64	93	75	91	317	1,130	660	169	127
6	93	117	68	62	92	75	97	387	1,170	673	173	125
7	92	109	72	60	89	87	106	443	1,230	644	156	117
8	97	98	73	65	86	93	102	426	1,250	586	146	146
9	109	95	76	71	89	84	106	470	1,250	546	141	139
10	101	93	76	73	91	81	113	402	1,160	551	135	124
11	95	94	76	76	87	79	119	314	961	544	124	116
12	90	93	82	79	86	81	112	294	880	487	121	113
13	82	90	81	88	85	82	106	260	832	462	117	115
14	82	87	79	94	83	83	99	250	787	425	113	113
15	84	86	78	92	79	88	93	318	802	389	110	111
16	94	89	78	89	82	84	92	409	724	361	110	110
17	91	74	85	88	82	80	89	646	663	345	107	108
18	91	73	77	88	78	78	91	872	680	326	104	106
19	89	77	77	87	71	76	93	827	709	309	101	141
20	91	76	80	89	77	83	91	776	773	296	102	149
21	92	77	116	89	80	84	91	765	872	293	98	129
22	91	74	119	96	79	84	90	763	971	285	99	121
23	91	70	101	109	82	83	91	822	1,050	263	97	121
24	92	78	89	126	82	84	90	814	1,080	241	97	113
25	94	72	80	118	81	83	91	871	1,060	227	94	110
26	89	71	87	114	80	84	92	955	1,000	217	91	109
27	89	67	85	101	80	82	93	1,190	1,030	211	89	108
28	94	64	78	99	84	84	94	1,050	1,150	203	86	106
29	91	65	76	96	-----	84	93	909	1,330	209	85	104
30	92	67	77	94	-----	84	96	841	1,120	193	93	102
31	93	-----	85	93	-----	81	-----	722	-----	179	92	-----
TOTAL	2,883	2,504	2,491	2,687	2,385	2,548	2,862	17,845	29,087	12,825	3,683	3,498
MEAN	93.0	83.5	80.4	86.7	85.2	82.2	95.4	576	970	414	119	117
MAX	109	117	119	126	100	93	119	1,190	1,330	792	173	149
MIN	82	64	67	60	71	75	83	106	663	179	85	95
CFSM	.63	.57	.55	.59	.58	.56	.65	3.92	6.60	2.81	.81	.79
IN.	.73	.63	.63	.68	.60	.64	.72	4.51	7.36	3.24	.93	.88
AC-FT	5,720	4,970	4,940	5,330	4,730	5,050	5,680	35,400	57,690	25,440	7,310	6,940
CAL YR 1969	TOTAL 81,275			MEAN 223		MAX 1,070	MIN 64	CFSM 1.51	IN 20.56	AC-FT 161,200		
WTR YR 1970:	TOTAL 85,298			MEAN 234		MAX 1,330	MIN 60	CFSM 1.59	IN 21.58	AC-FT 169,200		

PEAK DISCHARGE (BASE, 600 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-27	1700	3.23	1,370	6-29	1800	3.38	1,470
6- 8	0800	3.13	1,290				

SALMON RIVER BASIN

13296500 Salmon River below Yankee Fork, near Clayton, Idaho

LOCATION.--Lat 44°16'06", long 114°43'55", in sec.20, T.11 N., R.15 E. (unsurveyed), Custer County, Challis National Forest, on left bank 700 ft downstream from Yankee Fork, 18 miles upstream from Clayton, and at mile 366.9.

DRAINAGE AREA.--802 sq mi. Mean altitude, 7,790 ft.

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Altitude of gage is 5,900 ft (by barometer). Sept. 3, 1927, to Nov. 5, 1934, at site 200 ft downstream at approximately present datum. Prior to Oct. 3, 1926, nonrecording gage at site 200 ft downstream at datum approximately 1.5 ft higher and Oct. 3, 1926, to Sept. 2, 1927, at site 200 ft downstream at approximately present datum.

AVERAGE DISCHARGE.--49 years, 990 cfs (16.76 inches per year, 717,300 acre-ft per year); 15-year base period (1952-67), 1,069 cfs.

EXTREMES.--Current year: Maximum discharge, 6,340 cfs June 8 (gage height, 9.20 ft); minimum, 327 cfs Mar. 18, 19 (gage height, 1.82 ft).

Period of record: Maximum discharge, 10,300 cfs May 24, 1956 (gage height, 11.60 ft); minimum, 160 cfs (estimated) Nov. 25-30, 1929.

REMARKS.--Records excellent. Diversions above station for irrigation of about 6,000 acres (1948 determination).

REVISIONS (WATER YEARS).--WSP 1347: 1931. WSP 1567: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 19-22, 24-26, Nov. 30 to Dec. 2, Dec. 4, 7, 9-10, Jan. 2-6, 30, Feb. 1)

1.9	354	6.0	2,910
2.5	584	8.0	4,880
3.0	818	9.1	6,210
4.0	1,380		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
1	550	526	400	403	470	438	381	461	3,440	4,000	885	563			
2	579	511	400	395	476	436	411	539	3,850	3,420	851	518			
3	584	507	400	392	475	430	381	739	4,550	3,170	820	504			
4	570	510	402	390	448	429	386	990	5,330	3,110	801	507			
5	557	510	405	384	456	411	411	1,320	5,840	3,050	850	617			
6	556	559	400	375	464	399	436	1,630	5,970	2,860	870	603			
7	553	566	400	355	460	442	486	1,820	6,090	2,750	799	577			
8	564	532	402	380	446	478	474	1,640	6,200	2,580	764	610			
9	616	517	405	415	432	442	490	1,670	5,980	2,430	742	609			
10	589	512	410	480	426	417	556	1,610	5,420	2,460	724	598			
11	562	516	425	450	436	408	566	1,320	4,630	2,470	696	612			
12	532	509	445	445	452	439	515	1,230	4,130	2,240	681	600			
13	513	496	451	442	448	429	498	1,120	3,770	2,080	659	608			
14	522	489	448	443	436	427	499	1,040	3,460	1,950	644	607			
15	534	484	440	441	424	430	475	1,160	3,340	1,820	628	596			
16	566	505	418	445	435	414	466	1,650	3,100	1,710	616	609			
17	548	450	443	453	445	417	455	2,490	2,890	1,620	597	601			
18	546	426	441	458	431	387	462	3,570	2,910	1,520	575	589			
19	538	425	437	462	386	392	478	3,860	3,170	1,430	569	654			
20	541	420	452	468	401	402	467	3,620	3,570	1,350	571	712			
21	539	415	530	471	410	423	460	3,470	4,030	1,350	557	649			
22	535	418	581	503	404	398	455	3,540	4,470	1,300	553	621			
23	533	419	532	531	408	401	455	3,820	4,840	1,240	547	623			
24	533	414	471	594	420	412	453	3,860	4,990	1,160	525	600			
25	537	408	428	559	403	387	448	4,190	4,920	1,100	517	580			
26	521	400	481	545	404	410	455	4,790	4,730	1,040	509	578			
27	520	400	471	542	404	389	445	5,480	4,760	1,010	503	574			
28	535	389	439	514	422	411	448	4,950	5,010	1,000	494	568			
29	519	396	413	475	-----	403	445	4,300	5,670	1,010	485	564			
30	519	400	403	470	-----	393	444	3,880	5,000	956	494	560			
31	533	-----	409	461	-----	381	-----	3,450	-----	915	492	-----			
TOTAL	16,944	14,029	13,582	14,141	12,122	12,875	13,801	79,209	136,060	60,101	20,018	17,811			
MEAN	547	468	438	456	433	415	460	2,555	4,535	1,939	646	594			
MAX	616	566	581	594	476	478	566	5,480	6,200	4,000	885	712			
MIN	513	389	400	355	386	381	381	461	2,890	915	485	504			
CFSM	.68	.58	.55	.57	.54	.52	.57	3.19	5.66	2.42	.81	.74			
IN.	.79	.65	.63	.66	.56	.60	.64	3.67	6.31	2.79	.93	.83			
AC-FT	33,610	27,830	26,940	28,050	24,040	25,540	27,370	157,100	269,900	119,200	39,710	35,330			
CAL YR 1969	TOTAL 419,666			MEAN 1,150		MAX 5,640		MIN 378		CFSM 1.43		IN 19.46		AC-FT 832,400	
WTR YR 1970	TOTAL 410,693			MEAN 1,125		MAX 6,200		MIN 355		CFSM 1.40		IN 19.04		AC-FT 814,600	

PEAK DISCHARGE (BASE, 2,350 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-27	1900	8.76	5,770	6-29	1800	8.84	5,870
6-8	0100	9.20	6,340				

SALMON RIVER BASIN

241

13297450 Little Boulder Creek near Clayton, Idaho

LOCATION.--Lat 44°05'57", long 114°26'56", in SW¼NE¼NW¼ sec.22, T.9 N., R.17 E., Custer County, on right bank 950 ft upstream from mouth and 11 miles south of Clayton.

DRAINAGE AREA.--18.4 sq mi.

PERIOD OF RECORD.--June to September 1970.

GAGE.--Water-stage recorder. Altitude of gage is 6,200 ft (from topographic map).

EXTREMES.--Maximum discharge during period June to September 1970, 240 cfs June 25 (gage height, 5.49 ft); minimum daily, 11 cfs (estimated) Sept. 28-30.

REMARKS.--Records fair.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

4.2	11	5.0	87
4.4	19	5.2	135
4.6	32	5.5	244
4.8	54		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1									-	95	30	13
2									-	85	27	13
3									-	93	26	13
4									-	106	25	13
5									-	108	26	15
6									-	113	26	15
7									-	108	26	14
8									-	98	25	14
9									-	95	23	14
10									-	104	22	14
11									-	112	20	14
12									66	93	20	13
13									59	84	19	14
14									51	80	18	13
15									46	73	17	13
16									42	68	17	13
17									40	65	16	12
18									42	63	15	14
19								†45.6	54	61	15	15
20									68	60	15	14
21									104	60	14	13
22									141	64	14	13
23									135	58	14	13
24									187	49	14	12
25									200	42	14	12
26									182	38	13	12
27									210	37	13	12
28									220	37	13	11
29					-----				190	37	13	11
30					-----				160	34	13	11
31		-----			-----		-----		-----	31	13	-----
TOTAL									-	2,251	576	393
MEAN									-	72.6	18.6	13.1
MAX									-	113	30	15
MIN									-	31	13	11
CFSM									-	3.95	1.01	.71
IN.									-	4.55	1.16	.79
AC-FT									-	4,460	1,140	780

PEAK DISCHARGE (BASE, 150 CFS).--June 25 (0445) 240 cfs (5.49 ft).

† Result of discharge measurement.

SALMON RIVER BASIN

13298500 Salmon River near Challis, Idaho

LOCATION.--Lat 44°22'43", long 114°15'18", in SE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.7, T.12 N., R.19 E., Custer County, on left bank 250 ft downstream from Bayhorse Creek, 9 miles south of Challis, and at mile 334.8.

DRAINAGE AREA.--1,800 sq mi, approximately. Mean altitude, 7,820 ft.

PERIOD OF RECORD.--October 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 5,163.92 ft above mean sea level.

AVERAGE DISCHARGE.--42 years, 1,472 cfs (11.10 inches per year, 1,066,000 acre-ft per year); 15-year base period (1952-67), 1,585 cfs.

EXTREMES.--Current year: Maximum discharge, 9,280 cfs June 8 (gage height, 8.50 ft); minimum, 412 cfs Jan. 7, result of freezeup (gage height, 1.57 ft).
Period of record: Maximum discharge, 15,400 cfs May 25, 1956 (gage height, 10.95 ft); minimum, 160 cfs Dec. 14, 1940 (gage height, 0.95 ft).

REMARKS.--Records excellent except those for December, which are good. No regulation. Diversions for irrigation of about 10,000 acres (1948 determination) above station.

REVISIONS.--WSP 1043: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 19 to Dec. 7, Dec. 9-13, Dec. 29 to Jan. 9, Feb. 1-3, 16-17, 21-23)

1.5	388	6.0	4,890
2.0	583	8.0	8,360
3.0	1,160	8.4	9,090
4.0	2,100		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	878	810	580	520	670	654	574	674	4,910	5,900	1,480	872
2	895	794	580	534	680	664	621	741	5,440	5,190	1,410	884
3	931	783	580	530	680	640	592	937	6,490	4,910	1,350	866
4	913	783	580	520	674	640	588	1,250	7,680	4,840	1,310	849
5	895	783	590	500	669	621	621	1,680	8,400	4,760	1,330	955
6	884	816	580	500	710	602	669	2,210	8,500	4,570	1,460	1,000
7	878	855	590	450	689	650	778	2,500	8,700	4,400	1,340	961
8	884	816	579	500	674	756	751	2,290	9,010	4,110	1,280	943
9	937	794	620	600	645	689	756	2,220	8,740	3,870	1,230	1,010
10	925	783	620	730	635	635	822	2,280	8,000	3,880	1,200	955
11	889	788	620	654	650	611	878	1,920	6,880	4,340	1,150	961
12	855	783	660	650	674	659	805	1,760	6,120	3,800	1,120	949
13	810	762	700	710	674	654	767	1,610	5,640	3,500	1,090	955
14	805	756	715	704	659	650	767	1,470	5,150	3,230	1,050	961
15	827	741	689	704	640	674	725	1,500	4,950	3,000	1,050	955
16	861	767	650	704	640	645	710	1,970	4,650	2,820	1,020	949
17	861	710	664	715	640	640	689	3,010	4,410	2,710	987	937
18	855	640	689	720	645	602	699	4,810	4,350	2,550	955	907
19	844	630	669	720	592	588	720	5,570	4,750	2,430	937	925
20	844	620	689	720	574	611	715	5,240	5,350	2,280	943	1,070
21	844	620	704	715	580	645	699	5,000	6,170	2,260	919	1,010
22	844	630	872	762	580	625	694	4,920	6,830	2,210	901	974
23	838	630	794	767	600	621	689	5,310	7,320	2,080	901	968
24	832	620	694	855	635	640	684	5,420	7,600	1,960	878	955
25	838	620	602	827	616	616	684	5,880	7,600	1,850	861	943
26	822	610	679	800	611	621	689	6,810	7,280	1,760	844	931
27	816	590	720	800	611	606	679	7,710	7,350	1,700	838	925
28	832	560	664	756	635	621	679	7,190	7,910	1,700	822	913
29	816	560	540	679	-----	621	674	6,240	7,870	1,680	816	889
30	800	560	530	660	-----	602	669	5,660	7,260	1,600	816	866
31	822	-----	540	640	-----	583	-----	5,020	-----	1,540	832	-----
TOTAL	26,575	21,214	19,983	20,646	17,982	19,686	21,087	110,802	201,310	97,430	33,120	28,238
MEAN	857	707	645	666	642	635	703	3,574	6,710	3,143	1,068	941
MAX	937	855	872	855	710	756	878	7,710	9,010	5,900	1,480	1,070
MIN	800	560	530	450	574	583	574	674	4,350	1,540	816	849
CFSM	.48	.39	.36	.37	.36	.35	.39	1.99	3.73	1.75	.59	.52
IN.	.55	.44	.41	.43	.37	.41	.44	2.29	4.16	2.01	.68	.58
AC-FT	52,710	42,080	39,640	40,950	35,670	39,050	41,830	219,800	399,300	193,300	65,690	56,010
CAL YR 1969	TOTAL 628,039	MEAN 1,721	MAX 8,140	MIN 497	CFSM .96	IN 12.98	ACFT 1,246,000					
WAT YR 1970	TOTAL 618,073	MEAN 1,693	MAX 9,010	MIN 450	CFSM .94	IN 12.77	ACFT 1,226,000					

SALMON RIVER BASIN

243

13299200 Challis Creek below Jeffs Creek, near Challis, Idaho

LOCATION.--Lat 44°33'43", long 114°16'40", in NW¼NE¼ sec.12, T.14 N., R.18 E., Custer County, 0.2 mile upstream from Mill Creek, 1.5 miles downstream from Jeffs Creek, 4.5 miles northwest of Challis, and at mile 4.9.

DRAINAGE AREA.--91.2 sq mi.

PERIOD OF RECORD.--August 1963 to November 1970 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 5,210 ft (from topographic map).

AVERAGE DISCHARGE.--7 years, 49.6 cfs (35,940 acre-ft per year).

EXTREMES.--Water year 1970: Maximum discharge, 300 cfs June 7 (gage height, 4.60 ft); minimum, 8.0 cfs Feb. 4 (gage height, 2.47 ft).

October to November 1970: Maximum discharge during period, 33 cfs Oct. 24 (gage height, 2.88 ft); minimum, 15 cfs Nov. 3 (gage height, 2.73 ft).

Period of record: Maximum discharge, 918 cfs June 12, 1965 (gage height, 5.55 ft); minimum, 0.88 cfs Dec. 6, 1966 (gage height, 2.46 ft); minimum gage height, 1.92 ft Mar. 16, 1964.

REMARKS.--Records good except those for November to March, which are poor. Flow is partly regulated by Mesquite Flat Reservoir (capacity, 1,050 acre-ft).

DISCHARGE, IN CUBIC FEET PER SECOND, 1970

DAY	OCT	NOV	DAY	OCT	NOV	DAY	OCT	NOV	DAY	OCT	NOV	DAY	OCT	NOV
1	22	20	7	20	19	13	20	17	19	20	-	25	21	-
2	22	20	8	20	18	14	19	16	20	20	-	26	21	-
3	23	19	9	21	18	15	19	17	21	19	-	27	19	-
4	22	19	10	22	19	16	19	18	22	20	-	28	20	-
5	20	19	11	21	17	17	20	-	23	20	-	29	22	-
6	20	19	12	21	17	18	20	-	24	23	-	30	21	-
												31	21	-
TOTAL													638	-
MAX													23	-
MIN													19	-
MEAN													20.6	-
RUNOFF IN ACRE-FEET													1,270	-

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	14	11	10	12	13	12	12	150	136	60	43
2	19	13	11	10	12	13	13	12	153	128	60	37
3	19	13	11	10	12	12	13	13	172	122	57	36
4	19	13	11	9.0	12	12	13	19	211	114	55	39
5	19	14	12	9.0	12	11	12	27	243	113	61	43
6	18	14	11	9.0	13	12	13	36	277	112	57	40
7	17	14	11	9.0	13	13	13	43	283	104	55	38
8	17	13	11	9.0	13	13	12	43	266	92	52	34
9	18	13	13	9.0	13	12	13	42	252	92	50	32
10	18	13	14	10	13	12	13	43	236	103	50	31
11	17	13	13	9.0	13	12	11	43	218	110	50	30
12	15	13	14	9.0	13	13	11	41	205	97	49	33
13	14	13	14	10	13	14	11	40	186	93	49	33
14	13	12	12	13	13	14	11	39	170	90	48	33
15	13	12	12	13	13	14	12	40	162	84	48	32
16	15	12	12	12	13	13	12	39	150	80	47	28
17	15	11	12	13	13	13	11	55	138	79	47	27
18	15	11	12	12	13	13	11	77	128	74	47	27
19	14	11	12	12	13	13	11	90	128	71	47	28
20	14	11	13	12	13	14	10	97	136	67	46	27
21	15	12	13	12	13	13	11	99	141	66	44	26
22	15	13	13	13	13	13	11	97	153	64	43	26
23	15	13	12	14	13	13	11	100	162	62	43	25
24	15	13	11	14	14	13	11	100	158	60	43	25
25	15	12	12	14	13	13	11	104	153	58	41	25
26	15	12	12	14	13	12	12	132	148	61	40	25
27	15	12	12	14	13	15	12	187	158	63	38	25
28	15	11	12	13	12	13	12	193	167	62	36	23
29	15	11	11	12	-----	13	11	182	170	60	37	22
30	15	11	11	12	-----	13	11	167	146	57	37	22
31	15	-----	11	11	-----	12	-----	152	-----	58	38	-----
TOTAL	493	373	372	352.0	359	399	351	2,364	5,420	2,632	1,475	912
MEAN	15.9	12.4	12.0	11.4	12.8	12.9	11.7	76.3	181	84.9	47.6	30.4
MAX	19	14	14	14	14	15	13	193	283	136	61	43
MIN	13	11	11	9.0	12	11	10	12	128	57	36	22
AC-FT	978	740	738	698	712	791	696	4,690	10,750	5,220	2,930	1,810

CAL YR 1969 TOTAL 17,660.0 MEAN 48.4 MAX 274 MIN 6.6 AC-FT 35,030
WTR YR 1970 TOTAL 15,502.0 MEAN 42.5 MAX 283 MIN 9.0 AC-FT 30,750

SALMON RIVER BASIN

245

13305000 Lemhi River near Lemhi, Idaho

LOCATION.--Lat 44°56'24", long 113°38'16", in NW¼NE¼ sec.32, T.19 N., R.24 E., Lemhi County, on right bank 35 ft upstream from bridge on State Highway 28, 1.4 miles south of Tendoy, 1.8 miles upstream from Agency Creek, 6.2 miles north of Lemhi, and at mile 28.8.

DRAINAGE AREA.--895 sq mi, approximately.

PERIOD OF RECORD.--November 1938 to August 1939, April 1955 to September 1963, water years 1964-67 (annual maximum), August 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 4,960 ft (from topographic map). Prior to Aug. 27, 1967, at site 1.5 miles upstream at different datum. November 1938 to August 1939, nonrecording gage, Apr. 29, 1955, to Sept. 30, 1963, nonrecording gage and supplemental crest-stage gage, Oct. 1, 1963, to Aug. 26, 1967, crest-stage gage only.

AVERAGE DISCHARGE.--11 years (1955-63, 1967-70), 264 cfs (191,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 1,410 cfs June 28 (gage height, 5.25 ft); minimum, 97 cfs about Sept. 4 (gage height, 2.93 ft, from recorded range in stage).

Period of record: Maximum discharge, 1,840 cfs probably June 7, 1957 (gage height, 4.48 ft, site and datum then in use, from crest-stage gage); minimum, 63 cfs Aug. 25, 1967 (gage height, 2.56 ft).

REMARKS.--Records good except those for January, August, and September, which are fair. State Fish Hatchery on Hayden Creek several miles upstream since fall of 1966 may affect maximums and minimums. Many diversions for irrigation above station.

REVISIONS (WATER YEARS).--WSP 1397: 1939.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used July 14 to Aug. 10; stage-discharge relation affected by ice Dec. 30 to Jan. 12)

3.0	116	4.4	662
3.3	169	5.0	1,170
3.6	260	5.3	1,490
4.0	433		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	144	264	198	178	201	228	210	236	323	779	195	125
2	161	256	204	178	201	232	219	239	327	669	187	123
3	177	256	201	179	204	225	213	260	443	630	172	122
4	192	253	201	170	201	225	210	268	630	624	156	120
5	207	260	201	160	201	222	225	275	756	604	158	145
6	213	268	198	160	204	222	283	306	843	586	213	143
7	204	271	201	160	207	228	318	306	884	540	185	150
8	219	283	204	160	210	242	268	287	1,100	464	172	250
9	232	275	204	168	213	232	250	271	1,160	438	167	230
10	242	279	201	180	213	216	275	268	1,090	480	172	215
11	250	279	198	189	213	216	279	268	918	546	169	205
12	246	279	207	200	216	216	242	260	826	529	164	200
13	253	275	207	207	219	228	225	246	772	459	156	210
14	271	271	210	195	219	228	222	232	690	414	150	205
15	275	268	210	198	219	242	210	219	643	380	145	200
16	275	268	207	198	222	236	207	219	604	362	140	187
17	275	236	207	198	228	225	207	246	552	357	138	190
18	275	216	210	201	219	219	213	339	524	323	134	182
19	268	213	216	201	219	216	219	380	586	294	133	187
20	264	216	222	204	216	222	219	352	683	283	131	232
21	264	213	232	204	222	225	222	335	810	287	129	232
22	268	210	250	210	222	222	222	294	909	253	128	236
23	264	204	239	216	225	222	216	331	901	222	127	246
24	260	213	222	225	225	232	216	362	901	201	122	250
25	264	207	222	216	225	216	219	357	876	201	127	242
26	256	207	232	216	225	225	219	469	851	195	125	239
27	256	201	213	216	225	213	216	617	909	195	124	239
28	260	198	201	210	228	222	219	581	1,230	207	123	236
29	256	195	198	198	-----	222	219	459	1,050	219	122	232
30	256	198	198	201	-----	216	236	413	953	201	121	239
31	264	-----	198	207	-----	213	-----	362	-----	195	130	-----
TOTAL	7,511	7,232	6,512	6,003	6,042	6,948	6,918	10,057	23,744	12,137	4,615	6,012
MEAN	242	241	210	194	216	224	231	324	791	392	149	200
MAX	275	283	250	225	228	242	318	617	1,230	779	213	250
MIN	144	195	198	160	201	213	207	219	323	195	121	120
AC-FT	14,900	14,340	12,920	11,910	11,980	13,780	13,720	19,950	47,100	24,070	9,150	11,920

CAL YR 1969 TOTAL 92,112 MEAN 252 MAX 876 MIN 68 AC-FT 182,700
WTR YR 1970 TOTAL 103,731 MEAN 284 MAX 1,230 MIN 120 AC-FT 205,800

NOTE.--No gage-height record Aug. 11 to Sept. 15.

SALMON RIVER BASIN

13306500 Panther Creek near Shoup, Idaho

LOCATION.--Lat 45°18'22", long 114°23'31", in sec.19, T.23 N., R.18 E., Lemhi County, Salmon National Forest, on right bank 100 ft downstream from bridge on private road, at mile 1.0, and 7 miles southwest of Shoup.

DRAINAGE AREA.--529 sq mi. Mean altitude, 7,030 ft.

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,264.96 ft above mean sea level, unadjusted (planetable survey). Prior to Nov. 6, 1959, nonrecording gage 75 ft upstream at datum 0.94 ft higher.

AVERAGE DISCHARGE.--26 years, 248 cfs (6.37 inches per year, 179,700 acre-ft per year); 15-year base period (1952-67), 250 cfs.

EXTREMES.--Current year: Maximum discharge, 2,190 cfs June 6 (gage height, 5.01 ft); minimum, 43 cfs Nov. 19 (gage height, 0.70 ft).

Period of record: Maximum discharge, 2,750 cfs (revised) June 12, 1965 (gage height, 5.65 ft); minimum observed, 22 cfs Nov. 17, 1958 (gage height, 0.57 ft, present datum).

REVISIONS.--The maximum discharge for the water year 1965 has been revised to 2,750 cfs June 12, 1965 (gage height, 5.65 ft), superseding figure published in WRD Idaho 1965.

REMARKS.--Records good except those for December to February, which are fair. Diversions for irrigation of about 1,000 acres (1950 determination) above station.

REVISIONS (WATER YEARS).--WSP 1063: 1945.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 20 to Dec. 19, Dec. 26 to Jan. 12, Jan. 15-25, Jan. 30 to Feb. 5, Feb. 11, 21-24)

0.7	43	3.0	763
1.0	80	4.0	1,410
1.5	178	5.0	2,160
2.0	327		

* 1944 also rev.
Max daily 2,410
Jun 8, 1964

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	93	75	64	72	80	73	85	922	904	196	105
2	96	90	75	62	73	79	82	98	1,090	801	193	101
3	103	88	75	62	74	73	74	134	1,440	727	183	101
4	100	88	75	62	74	74	74	186	1,800	688	176	100
5	98	91	80	60	74	74	83	254	2,060	646	178	124
6	96	93	76	58	76	70	94	296	2,060	604	196	122
7	96	100	76	56	77	80	126	349	1,960	564	173	124
8	96	91	72	60	74	83	101	296	1,900	516	166	376
9	100	85	80	65	72	77	101	302	1,810	486	160	242
10	101	91	84	70	70	66	114	296	1,610	486	157	183
11	98	90	84	68	73	72	122	251	1,330	499	153	157
12	90	90	88	66	80	85	100	222	1,150	482	144	147
13	74	88	94	70	80	80	93	200	1,030	424	138	147
14	76	88	92	76	79	79	94	186	940	395	134	144
15	88	83	90	80	77	85	80	196	886	368	130	140
16	98	91	88	78	79	80	79	282	840	349	126	136
17	96	73	92	78	80	77	85	508	790	342	122	134
18	94	56	88	78	74	70	90	812	774	313	118	128
19	90	53	84	78	73	67	91	947	834	292	118	132
20	98	58	80	78	64	80	86	874	904	279	118	142
21	94	66	85	79	69	83	85	840	947	273	116	136
22	94	78	93	80	74	77	86	801	953	282	114	134
23	93	90	88	81	79	76	85	904	898	263	112	136
24	93	84	79	82	84	80	85	922	863	245	109	134
25	96	80	60	82	79	76	86	1,060	795	233	110	130
26	93	80	66	80	83	79	86	1,360	727	230	109	128
27	93	78	65	80	85	72	83	1,610	753	222	107	126
28	94	76	64	74	88	80	86	1,380	953	222	103	122
29	91	75	63	59	-----	77	85	1,170	1,160	230	103	118
30	90	75	64	62	-----	76	85	1,060	1,020	211	103	114
31	93	-----	66	64	-----	67	-----	922	-----	198	109	-----
TOTAL	2,905	2,462	2,441	2,192	2,136	2,374	2,694	18,803	35,199	12,774	4,274	4,263
MEAN	93.7	82.1	78.7	70.7	76.3	76.6	89.8	607	1,173	412	138	142
MAX	103	100	94	82	88	85	126	1,610	2,060	904	196	376
MIN	74	53	60	56	64	66	73	85	727	198	103	100
CFSM	.18	.16	.15	.13	.14	.14	.17	1.15	2.22	.78	.26	.27
IN.	.20	.17	.17	.15	.15	.17	.19	1.32	2.48	.90	.30	.30
AC-FT	5,760	4,880	4,840	4,350	4,240	4,710	5,340	37,300	69,820	25,340	8,480	8,460

CAL YR 1969 TOTAL 88,749 MEAN 243 MAX 1,540 MIN 53 CFSM .46 IN 6.24 AC-FT 176,000
WTR YR 1970 TOTAL 92,517 MEAN 253 MAX 2,060 MIN 53 CFSM .48 IN 6.51 AC-FT 183,500

PEAK DISCHARGE (BASE, 1,200 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5-27	0330	4.36	1,680	6-29	1100	3.92	1,370
6- 6	0230	5.01	2,190				

SALMON RIVER BASIN

247

13307000 Salmon River near Shoup, Idaho

LOCATION.--Lat 45°19'20", long 114°26'23", in NE¼SW¼ sec.14, T.23 N., R.17 E., Lemhi County, Salmon National Forest, on right bank 0.6 mile upstream from Owl Creek, 2.3 miles downstream from Panther Creek, 9 miles southwest of Shoup, and at mile 207.8.

DRAINAGE AREA.--6,270 sq mi, approximately. Mean altitude, 7,140 ft.

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,153.7 ft above mean sea level, unadjusted. Prior to Sept. 18, 1951, nonrecording gage at different sites approximately 1.3 miles upstream at different datums.

AVERAGE DISCHARGE.--26 years, 2,982 cfs (2,160,000 acre-ft per year); 15-year base period (1952-67), 2,941 cfs.

EXTREMES.--Current year: Maximum discharge, 17,200 cfs June 9 (gage height, 10.14 ft); minimum, 1,110 cfs Dec. 30, result of freezeup (gage height, 2.02 ft).

Period of record: Maximum discharge, 24,900 cfs May 26, 1956 (gage height, 13.00 ft); minimum, 710 cfs Aug. 20, 21, 1966.

REMARKS.--Records good except those for December and January, which are fair. Diversions for irrigation of about 88,000 acres (1948 determination) above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used June 1-4; stage-discharge relation affected by ice Nov. 21-24,
Nov. 26 to Dec. 13, Jan. 2-6, 15-24)

2.0	1,090	7.0	9,200
3.0	2,200	9.0	13,900
4.0	3,560	10.2	16,900
5.0	5,230		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,730	1,960	1,540	1,400	1,570	1,490	1,370	1,300	8,800	12,000	2,370	1,370
2	1,750	1,950	1,530	1,390	1,640	1,570	1,380	1,280	8,820	10,000	2,330	1,390
3	1,820	1,930	1,520	1,380	1,680	1,560	1,390	1,290	10,200	8,800	2,220	1,520
4	1,940	1,900	1,530	1,370	1,640	1,520	1,400	1,440	12,500	8,230	2,140	1,510
5	2,010	1,910	1,550	1,350	1,610	1,500	1,390	1,830	14,700	7,970	2,060	1,550
6	2,010	1,910	1,560	1,320	1,540	1,480	1,440	2,280	16,000	7,650	2,170	1,620
7	1,960	1,950	1,600	1,290	1,620	1,480	1,620	3,040	16,100	7,300	2,280	1,750
8	1,960	1,990	1,630	1,500	1,660	1,520	1,680	3,500	16,500	6,810	2,180	2,430
9	1,970	1,960	1,650	1,700	1,610	1,650	1,680	3,340	16,800	6,260	2,050	2,340
10	2,010	1,930	1,740	2,100	1,550	1,590	1,690	3,240	16,100	5,900	1,980	2,150
11	2,020	1,910	1,800	2,000	1,530	1,490	1,760	3,330	14,300	6,320	1,910	2,060
12	1,970	1,900	1,850	1,900	1,540	1,470	1,790	2,930	12,300	6,570	1,890	1,970
13	1,940	1,880	1,900	2,020	1,580	1,490	1,690	2,670	11,100	5,930	1,780	1,980
14	1,980	1,860	2,010	2,030	1,590	1,550	1,610	2,450	10,100	5,480	1,700	2,020
15	2,000	1,830	1,960	2,000	1,560	1,590	1,550	2,340	9,490	5,070	1,640	2,050
16	2,040	1,830	1,880	1,930	1,560	1,640	1,510	2,380	8,960	4,680	1,600	2,000
17	2,100	1,800	1,780	1,900	1,570	1,580	1,460	3,070	8,330	4,390	1,560	1,970
18	2,120	1,720	1,690	1,900	1,570	1,500	1,460	4,940	7,900	4,100	1,500	1,920
19	2,080	1,610	1,720	1,980	1,540	1,450	1,430	7,490	7,860	3,800	1,460	1,860
20	2,070	1,610	1,710	2,000	1,480	1,450	1,450	8,400	8,430	3,570	1,430	1,930
21	2,050	1,600	1,720	2,000	1,420	1,470	1,460	8,220	9,250	3,400	1,440	2,050
22	2,040	1,600	1,800	2,030	1,450	1,470	1,440	7,910	10,300	3,410	1,400	2,070
23	1,990	1,610	1,890	2,100	1,470	1,480	1,420	8,120	10,900	3,300	1,360	2,090
24	1,970	1,620	1,840	2,160	1,480	1,470	1,390	8,890	11,400	3,140	1,360	2,040
25	1,970	1,660	1,660	2,210	1,490	1,470	1,380	9,130	11,500	2,960	1,360	2,000
26	1,950	1,630	1,540	1,970	1,500	1,470	1,370	10,400	11,300	2,810	1,320	2,020
27	1,950	1,570	1,520	1,860	1,470	1,420	1,380	12,600	11,000	2,710	1,300	2,040
28	1,960	1,550	1,570	1,810	1,490	1,440	1,350	13,700	12,200	2,630	1,280	2,010
29	1,960	1,520	1,500	1,720	-----	1,450	1,330	12,300	13,400	2,630	1,270	1,940
30	1,970	1,530	1,390	1,590	-----	1,440	1,310	10,900	13,600	2,530	1,250	1,920
31	1,950	-----	1,430	1,510	-----	1,390	-----	9,710	-----	2,440	1,310	-----
TOTAL	61,240	53,230	52,010	55,420	43,410	46,540	44,580	174,420	350,140	162,790	52,900	57,570
MEAN	1,975	1,774	1,678	1,788	1,550	1,501	1,486	5,626	11,670	5,251	1,706	1,919
MAX	2,120	1,990	2,010	2,210	1,680	1,650	1,790	13,700	16,800	12,000	2,370	2,430
MIN	1,730	1,520	1,390	1,290	1,420	1,390	1,310	1,280	7,860	2,440	1,250	1,370
AC-FT	121,500	105,600	103,200	109,900	86,100	92,310	88,420	346,000	694,500	322,900	104,900	114,200
CAL YR 1969	TOTAL 1,159,200		MEAN 3,176		MAX 13,200		MIN 1,110		AC-FT 2,299,000			
WTR YR 1970	TOTAL 1,154,250		MEAN 3,162		MAX 16,800		MIN 1,250		AC-FT 2,289,000			

SALMON RIVER BASIN

13308500 Middle Fork Salmon River near Cape Horn, Idaho

LOCATION.--Lat 44°24'30", long 115°10'20", in NW¼ sec.3, T.12 N., R.11 E., Custer County, Challis National Forest, on left bank 1,100 ft downstream from Little Beaver Creek, 0.5 mile downstream from confluence of Marsh and Beaver Creeks, 2 miles northwest of Cape Horn, and at mile 110.3.

DRAINAGE AREA.--138 sq mi. Mean altitude, 7,370 ft.

PERIOD OF RECORD.--September 1928 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Altitude of gage is 6,435 ft (by barometer).

AVERAGE DISCHARGE.--42 years, 238 cfs (23.42 inches per year, 172,400 acre-ft per year); 15-year base period (1952-67), 250 cfs.

EXTREMES.--Current year: Maximum discharge, 2,060 cfs June 6 (gage height, 6.12 ft); minimum, 28 cfs Apr. 4 (gage height, 2.10 ft).

Period of record: Maximum discharge, 2,980 cfs May 24, 1956 (gage height, 6.96 ft); minimum recorded, 31 cfs Apr. 14, 1945 (gage height, 2.12 ft).

REMARKS.--Records good except those for December to February and May, which are poor. No diversion above station.

REVISIONS.--WSP 738: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 18 to Dec. 13, Dec. 16, 17, 24-31, Feb. 18-28, Mar. 5, 6, 9, 10, 17-23.)

2.3	48	4.0	560
2.5	80	5.0	1,140
3.0	190	6.0	1,940
3.5	350		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	102	94	71	64	72	70	60	60	980	904	193	127
2	120	91	71	73	71	66	58	82	1,150	790	185	116
3	110	91	70	76	70	66	62	108	1,390	735	182	112
4	104	91	71	74	65	65	60	200	1,640	700	180	127
5	100	94	71	73	70	65	65	280	1,820	665	198	136
6	98	104	66	66	69	68	73	370	1,910	625	187	125
7	98	100	71	66	68	70	73	460	1,910	580	174	125
8	104	93	70	72	67	68	68	430	1,810	520	167	154
9	112	89	72	75	66	68	73	440	1,860	486	162	133
10	106	91	72	78	66	68	77	430	1,560	510	157	122
11	102	94	74	71	66	68	73	380	1,320	474	152	118
12	96	96	82	74	68	68	73	340	1,220	430	150	116
13	91	93	85	76	70	63	70	310	1,100	402	145	118
14	91	89	82	82	68	63	66	280	1,090	374	145	116
15	93	85	77	80	67	63	68	300	1,040	350	140	114
16	98	94	75	77	67	65	65	400	928	328	138	112
17	94	84	76	76	70	64	63	600	898	314	133	111
18	96	76	77	78	72	67	66	780	958	300	131	108
19	93	88	77	79	70	66	65	820	1,070	287	131	139
20	94	87	78	80	68	64	63	850	1,210	274	131	133
21	96	85	94	78	71	62	63	910	1,320	267	127	124
22	94	82	112	85	70	59	63	950	1,390	258	125	117
23	93	74	96	106	70	60	62	1,080	1,400	248	122	117
24	94	87	88	130	70	60	62	1,060	1,350	239	120	112
25	96	76	80	112	68	60	60	1,200	1,270	230	118	108
26	91	72	90	100	68	58	60	1,500	1,150	227	116	108
27	93	66	85	95	70	58	60	1,600	1,210	224	114	106
28	96	62	68	86	72	60	60	1,350	1,200	221	114	104
29	93	65	69	73	-----	58	58	1,100	1,430	212	112	102
30	89	70	67	74	-----	57	60	920	1,110	204	114	100
31	96	-----	74	63	-----	57	-----	820	-----	198	118	-----
TOTAL	3,033	2,563	2,411	2,492	1,929	1,974	1,949	20,410	39,694	12,576	4,481	3,560
MEAN	97.8	85.4	77.8	80.4	68.9	63.7	65.0	658	1,323	406	145	119
MAX	120	104	112	130	72	70	77	1,600	1,910	904	198	154
MIN	89	62	66	63	65	57	58	60	898	198	112	100
CFSM	.71	.62	.56	.58	.50	.46	.47	4.77	9.59	2.34	1.05	.86
IN.	.82	.69	.65	.67	.52	.53	.53	5.50	10.70	3.39	1.21	.96
AC-FT	6,020	5,080	4,780	4,940	3,830	3,920	3,870	40,480	78,730	24,940	8,890	7,060
CAL YR 1969	TOTAL 103,897		MEAN 285		MAX 1,850	MIN 61		CFSM 2.06	IN 28.00	AC-FT 206,100		
WTR YR 1970:	TOTAL 97,072		MEAN 266		MAX 1,910	MIN 57		CFSM 1.93	IN 26.16	AC-FT 192,500		

PEAK DISCHARGE (BASE, 930 CFS)

NOTE.--No gage-height record Jan. 1 to Feb. 17.

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-27	unknown	5.83	1,790	6-29	0700	5.65	1,630
6-6	2200	6.12	2,060				

13310700 South Fork Salmon River near Krassel ranger station, Idaho

LOCATION.--Lat 44°59'30", long 115°43'30", in NE¼ sec.16, T.19 N., R.6 E., Valley County, Payette National Forest, on right bank 0.6 mile upstream from Pitsum Creek, 1.4 miles downstream from Krassel ranger station, 2 miles upstream from mouth of East Fork of South Fork Salmon River, 20 miles east of McCall, and at mile 39.2.

DRAINAGE AREA.--330 sq mi, approximately.

PERIOD OF RECORD.--October 1966 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,750 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 4,720 cfs June 6 (gage height, 8.14 ft); minimum, 71 cfs Nov. 28 (gage height, 1.48 ft), result of freezeup.

Period of record: Maximum discharge, 4,720 cfs June 6, 1970 (gage height, 8.14 ft); minimum, 71 cfs Nov. 28, 1969 (gage height, 1.48 ft), result of freezeup.

REMARKS.--Records good except those for December to February, which are fair.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 18 to Jan. 18, Jan. 30 to Feb. 5, Feb. 11-12, 20-24, 26-28, Mar. 6-7, 9-12, 19-21, Mar. 31 to Apr. 2)

1.6	87	4.0	920
2.0	163	5.0	1,540
2.5	290	6.0	2,340
3.0	454	8.0	4,540

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	148	139	105	120	250	232	196	268	2,150	1,800	296	163
2	203	139	102	126	230	248	209	326	2,500	1,620	284	156
3	191	137	100	130	220	228	196	465	3,110	1,530	276	152
4	159	135	109	128	206	222	198	678	3,770	1,460	268	174
5	150	148	112	125	214	210	208	992	4,260	1,370	268	215
6	143	172	110	118	210	195	248	1,290	4,380	1,260	270	191
7	141	172	108	120	203	230	354	1,470	4,240	1,140	254	222
8	148	154	107	130	203	273	345	1,250	3,820	1,040	243	496
9	174	145	110	145	200	254	351	1,250	3,720	964	238	293
10	163	143	110	160	196	245	469	1,220	3,170	904	235	228
11	152	143	112	140	190	230	553	1,070	2,590	844	230	210
12	143	141	124	160	200	232	481	970	2,210	772	225	196
13	129	141	130	185	232	225	440	865	1,990	717	218	193
14	129	137	126	210	235	232	404	792	1,970	664	212	191
15	131	135	123	205	222	262	368	797	2,110	618	208	188
16	145	139	120	200	220	259	348	992	1,990	583	203	186
17	143	125	122	200	265	251	329	1,510	1,860	553	196	181
18	139	119	124	210	251	238	332	2,190	1,900	516	191	179
19	137	124	126	248	228	218	345	2,570	2,150	492	198	230
20	139	124	136	279	204	220	332	2,590	2,370	462	186	265
21	139	122	180	270	210	224	317	2,570	2,570	443	181	251
22	141	114	202	329	205	222	305	2,580	2,660	429	179	230
23	141	104	182	488	212	220	296	3,030	2,650	408	174	257
24	143	120	162	964	212	225	293	2,940	2,580	391	172	238
25	143	110	142	650	198	220	284	3,040	2,390	374	170	218
26	137	104	166	473	194	222	279	3,470	2,120	361	165	210
27	137	95	140	465	200	218	270	3,610	2,200	348	163	205
28	148	88	110	387	215	222	265	3,130	2,910	342	161	198
29	143	93	100	323	-----	222	257	2,730	2,470	332	159	191
30	139	100	110	300	-----	218	257	2,410	2,170	314	156	196
31	139	-----	124	250	-----	202	-----	2,120	-----	308	159	-----
TOTAL	4,557	3,861	3,933	8,238	6,025	7,119	9,529	55,185	80,980	23,359	6,528	6,493
MEAN	147	129	127	266	215	230	318	1,780	2,699	754	211	216
MAX	203	172	202	964	265	273	553	3,610	4,380	1,800	296	496
MIN	129	88	100	118	190	195	196	268	1,860	308	156	152
CFSM	.45	.39	.38	.81	.65	.70	.96	5.39	8.18	2.28	.64	.65
IN.	.51	.44	.44	.93	.68	.80	1.07	6.22	9.13	2.63	.74	.73
AC-FT	9,040	7,660	7,800	16,340	11,950	14,120	18,900	109,500	160,600	46,330	12,950	12,880

CAL YR 1969	TOTAL	215,454	MEAN	590	MAX	3,550	MIN	88	CFSM	1.79	IN	24.29	ACFT	427,400
WAT YR 1970	TOTAL	215,807	MEAN	591	MAX	4,380	MIN	88	CFSM	1.79	IN	24.33	ACFT	428,100

PEAK DISCHARGE (BASE, 1,500 CFS)

DATE	TIME	G.HT.	DISCHARGE	DATE	TIME	G.HT.	DISCHARGE
5-7	0630	5.07	1,590	6-6	0300	8.14	4,720
5-27	0300	7.41	3,830	6-28	0630	7.04	3,410

SALMON RIVER BASIN

13313000 Johnson Creek at Yellow Pine, Idaho

LOCATION.--Lat 44°57'44", long 115°29'58", in NE¼ sec.29, T.19 N., R.8 E., Valley County, Payette National Forest, on right bank 700 ft upstream from mouth and 0.2 mile southwest of Yellow Pine.

DRAINAGE AREA.--213 sq mi. Mean altitude, 7,170 ft.

PERIOD OF RECORD.--August 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 4,657.70 ft above mean sea level.

AVERAGE DISCHARGE.--42 years, 344 cfs (21.93 inches per year, 249,200 acre-ft per year); 15-year base period (1952-67), 371 cfs.

EXTREMES.--Current year: Maximum discharge, 4,050 cfs June 5 (gage height, 6.90 ft); minimum, 35 cfs Nov. 28 (gage height, 0.87 ft).

Period of record: Maximum discharge, 5,440 cfs May 27, 1956 (gage height, 7.64 ft); minimum, 21 cfs Nov. 30, 1954 (gage height, 0.66 ft).

REMARKS.--Records good. Small diversion from Johnson Creek basin to Deadwood River basin (see REMARKS for sta 13236000).

Rating table (gage height, in feet, and discharge, in cubic feet per second)

1.0	47	4.0	1,290
1.5	131	5.0	2,120
2.0	261	6.0	3,070
2.5	441	6.6	3,670
3.0	671		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP			
1	103	88	56	61	97	91	86	121	1,810	1,430	209	112			
2	122	81	54	72	96	88	91	138	2,230	1,260	200	102			
3	116	79	53	75	93	86	84	175	2,770	1,160	195	99			
4	103	79	58	72	81	86	88	225	3,230	1,080	190	108			
5	96	86	58	71	91	84	93	310	3,580	990	195	142			
6	94	96	55	65	90	84	102	421	3,510	897	206	127			
7	93	92	59	65	89	93	118	541	3,350	811	185	142			
8	94	82	58	75	87	95	114	487	2,960	745	172	280			
9	102	80	60	77	86	89	118	496	3,040	687	167	187			
10	99	86	60	80	85	84	142	496	2,460	666	163	144			
11	94	83	62	73	85	86	144	441	2,030	631	155	129			
12	86	82	67	75	87	88	135	409	1,820	559	151	121			
13	76	79	70	79	90	86	135	363	1,660	523	146	118			
14	80	78	68	83	88	89	133	338	1,680	487	142	118			
15	80	75	67	81	87	93	131	349	1,800	454	140	116			
16	91	83	65	79	88	89	131	462	1,650	425	135	112			
17	79	64	67	79	93	88	129	772	1,540	401	129	110			
18	84	59	68	80	87	88	133	1,160	1,640	374	125	106			
19	82	69	70	82	83	83	140	1,420	1,820	356	123	135			
20	87	69	74	83	81	89	135	1,440	1,990	334	121	155			
21	84	67	101	82	85	89	131	1,580	2,090	317	118	146			
22	86	63	111	88	84	86	127	1,600	2,130	310	116	135			
23	85	57	100	115	84	86	127	1,810	2,080	293	114	149			
24	87	67	88	157	85	88	127	1,810	1,990	280	112	142			
25	86	59	74	130	83	86	125	2,060	1,810	267	108	127			
26	82	56	92	116	83	88	123	2,560	1,630	258	106	123			
27	81	51	84	111	84	86	121	2,530	1,730	249	102	118			
28	85	48	65	101	86	89	118	2,080	2,290	243	101	114			
29	79	50	66	86	-----	88	121	1,890	2,160	237	99	110			
30	83	54	64	88	-----	86	121	1,690	1,780	225	99	106			
31	82	-----	72	78	-----	84	-----	1,540	-----	214	101	-----			
TOTAL	2,781	2,162	2,166	2,659	2,438	2,715	3,623	31,714	66,260	17,163	4,425	3,933			
MEAN	89.7	72.1	69.9	85.8	87.1	87.6	121	1,023	2,209	554	143	131			
MAX	122	96	111	157	97	95	144	2,560	3,580	1,430	209	280			
MIN	76	48	53	61	81	83	84	121	1,540	214	99	99			
CFSM	.42	.34	.33	.40	.41	.41	.57	4.80	10.4	2.60	.67	.62			
IN.	.49	.38	.38	.46	.43	.47	.63	5.54	11.57	3.00	.77	.69			
AC-FT	5,520	4,290	4,300	5,270	4,840	5,390	7,190	62,900	131,400	34,040	8,780	7,800			
CAL YR 1969	TOTAL 139,438			MEAN 382		MAX 2,910		MIN 48		CFSM 1.79		IN 24.35		AC-FT 276,600	
WTR YR 1970	TOTAL 142,039			MEAN 389		MAX 3,580		MIN 48		CFSM 1.83		IN 24.80		AC-FT 281,700	

PEAK DISCHARGE (BASE, 1,800 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5-26	2400	5.89	3,020	6-28	0300	6.07	3,200
6-5	2400	6.90	4,050				

13316500 Little Salmon River at Riggins, Idaho

LOCATION.--Lat 45°24'47", long 116°19'29", SE¼SW¼ sec.15, T.24 N., R.1 E., Idaho County, on right bank 250 ft upstream from highway bridge, at mile 0.5, and 0.8 mile southwest of Riggins.

DRAINAGE AREA.--576 sq mi. Mean altitude, 5,430 ft.

PERIOD OF RECORD.--February 1951 to February 1955, September 1956 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,760 ft (from topographic map). Prior to Feb. 25, 1966, at datum 5.00 ft higher.

AVERAGE DISCHARGE.--17 years (1951-54, 1956-70), 822 cfs (595,500 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,960 cfs June 6 (gage height, 11.00 ft); minimum, 124 cfs Jan. 7 (gage height, 3.62 ft).
Period of record: Maximum discharge, 6,960 cfs June 6, 1970; maximum gage height, 12.39 ft (present datum) June 13, 1953; minimum discharge observed, 110 cfs Oct. 25, 1961 (gage height, 5.41 ft, present datum).
Flood about June 1, 1948, reached an undetermined stage (discharge, 9,200 cfs by slope-area measurement).

REMARKS.--Records good except those for period of no gage-height record, which are fair. Diversions for irrigation of about 13,600 acres (1948 determination) above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

3.7	130	7.0	1,890
4.0	202	8.0	2,840
4.5	368	10.0	5,350
5.0	590	10.2	5,640
6.0	1,150		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	203	210	172	194	560	528	606	559	2,920	1,700	365	178
2	223	210	166	191	534	717	598	624	3,400	1,560	351	177
3	227	210	168	188	490	630	575	821	4,090	1,460	348	175
4	225	205	173	194	415	590	576	1,030	4,870	1,400	338	221
5	216	219	176	179	426	551	566	1,540	4,830	1,360	330	310
6	210	238	176	165	443	528	704	1,940	5,580	1,300	304	282
7	210	250	176	139	428	551	860	2,040	5,560	1,200	267	286
8	218	240	176	163	419	603	809	1,860	4,700	1,100	260	574
9	240	228	179	197	410	573	775	1,830	5,270	1,010	257	431
10	241	216	179	216	390	546	915	1,840	4,200	950	250	338
11	234	216	183	194	383	521	940	1,630	3,200	1,020	249	301
12	226	211	210	189	413	510	912	1,430	2,800	880	242	286
13	212	208	262	215	512	480	841	1,290	2,500	790	234	272
14	211	208	269	247	574	535	795	1,120	2,600	750	222	265
15	213	208	247	279	551	743	740	1,080	2,700	697	220	259
16	215	208	225	320	530	825	696	1,390	2,600	652	218	254
17	213	204	214	330	688	734	667	2,210	2,550	633	213	260
18	213	194	208	420	726	651	657	2,970	2,580	588	214	260
19	213	196	221	585	624	604	672	3,430	2,750	555	212	292
20	210	198	247	694	570	598	682	3,860	2,900	529	207	315
21	202	198	428	677	533	584	659	3,700	3,000	508	201	326
22	202	186	626	773	499	609	625	3,730	3,100	507	199	304
23	202	183	417	1,100	480	614	599	4,760	3,100	480	197	290
24	208	194	310	2,590	457	634	590	4,540	2,900	459	196	280
25	213	183	263	2,620	438	682	591	4,520	2,600	445	193	262
26	206	182	257	1,560	436	646	580	4,830	2,300	434	188	248
27	207	171	251	1,110	431	673	566	4,270	2,400	444	184	241
28	216	169	219	945	457	714	553	3,650	2,600	441	180	232
29	216	170	191	756	-----	738	545	3,240	2,320	415	178	224
30	215	172	203	669	-----	657	541	2,950	2,040	394	177	219
31	210	-----	206	557	-----	623	-----	2,660	-----	376	177	-----
TOTAL	6,670	6,085	7,398	18,656	13,817	19,192	20,435	77,344	98,960	25,037	7,371	8,362
MEAN	215	203	239	602	493	619	681	2,495	3,299	808	238	279
MAX	241	250	626	2,620	726	825	940	4,830	5,580	1,700	365	574
MIN	202	169	166	139	383	480	541	559	2,040	376	177	175
AC-FT	13,230	12,070	14,670	37,000	27,410	38,070	40,530	153,400	196,300	49,660	14,620	16,590
CAL YR 1969	TOTAL 309,878			MEAN 849		MAX 4,380		MIN 164		AC-FT 614,600		
WTR YR 1970	TOTAL 309,327			MEAN 847		MAX 5,580		MIN 139		AC-FT 613,600		

PEAK DISCHARGE (BASE, 2,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-24	2330	8.42	3,340	5-25	2400	9.99	5,420
5- 7	0230	7.18	2,100	6- 6	2330	11.00	6,960

NOTE.--No gage-height record June 11 to July 14.

13316800 North Fork Skookumchuck Creek near White Bird, Idaho

LOCATION.--Lat 45°43'34", long 116°12'16", in NE¼NE¼ sec.33, T.28 N., R.2 E., Idaho County, Nezperce National Forest, on right bank 22 ft upstream from 8-foot corrugated metal pipe culvert, 2.7 miles upstream from confluence with South Fork Skookumchuck Creek, and 5.2 miles southeast of White Bird.

DRAINAGE AREA.--15.3 sq mi. Mean altitude, 5,000 ft.

PERIOD OF RECORD.--August 1959 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 3,240 ft (from topographic map). Prior to Nov. 19, 1965, at site 118 ft downstream at different datum.

AVERAGE DISCHARGE.--11 years, 17.1 cfs (12,390 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 243 cfs May 20 (gage height, 6.16 ft); minimum, 0.70 cfs Dec. 13 (gage height, 2.08 ft).

Period of record: Maximum discharge, 471 cfs June 8, 1964 (gage height, 4.46 ft, site and datum then in use), from rating curve extended above 160 cfs on basis of contracted-opening measurement of peak flow; minimum daily, 0.2 cfs several days in 1960, 1961, and 1964.

REMARKS.--Records good. Ditch bypassing station diverts from left bank 0.2 mile upstream from station. Results of measurements or field estimates, in cubic feet per second, of ditch bypassing station, made October 1969 to September 1970, are given below.

Oct. 26, 1969.....	0.50	Mar. 30.....	0.75	July 18.....	0.18
Nov. 30.....	.37	May 2.....	.88	Aug. 29.....	0
Dec. 31.....	1.07	June 3.....	.75	Sept. 26.....	1.10
Feb. 7, 1970.....	1.05				

REVISIONS.--WRD Idaho 1967: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Oct. 1 to Nov. 19, June 29 to Sept. 30)

2.0	0.58	3.0	20	5.0	141
2.1	1.2	3.5	41	6.0	226
2.3	2.9	4.0	70	6.2	245
2.5	6.0				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FFB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	2.2	1.3	1.8	9.5	6.5	11	22	59	16	4.0	1.6
2	2.5	2.3	1.3	1.7	8.5	6.3	12	28	68	15	3.7	1.5
3	2.8	2.3	1.1	1.6	7.6	6.0	12	46	79	13	3.5	1.6
4	2.7	2.1	.93	1.5	6.8	5.7	11	74	89	12	3.3	2.2
5	2.4	2.3	1.0	1.6	6.1	5.3	11	133	87	11	3.1	3.6
6	2.1	2.6	1.1	1.6	5.8	5.1	14	147	83	11	3.0	3.7
7	1.9	2.8	1.1	1.4	5.5	5.2	25	107	73	9.8	2.9	4.1
8	2.0	2.6	1.0	1.4	5.5	5.8	26	79	61	9.3	2.8	6.3
9	2.2	2.4	1.1	1.6	6.0	6.6	24	85	56	8.7	2.6	7.0
10	2.6	2.2	1.1	1.9	6.7	7.2	42	89	49	8.3	2.6	5.8
11	2.5	2.0	.87	1.9	7.1	7.4	53	71	41	8.0	2.5	4.1
12	2.2	1.9	.78	1.8	7.5	7.4	42	63	39	7.9	2.4	2.9
13	2.0	2.0	.76	1.8	8.4	7.1	33	57	35	8.8	2.3	2.0
14	1.8	2.0	.80	1.8	11	7.0	27	51	47	7.9	2.2	1.9
15	1.7	1.9	.89	1.8	14	8.4	23	49	57	7.2	2.1	1.8
16	1.6	1.9	.93	2.0	15	11	19	74	59	6.8	2.0	1.7
17	1.6	1.8	.90	2.1	16	12	17	141	53	6.3	1.9	1.6
18	1.6	1.6	.90	2.6	16	12	15	164	47	5.9	1.8	1.6
19	1.6	1.5	.97	8.3	14	12	15	161	42	5.8	1.8	1.7
20	1.5	1.5	1.3	16	13	11	14	236	38	5.5	1.8	2.0
21	1.5	1.5	1.7	19	12	10	13	193	33	5.3	1.7	2.1
22	1.5	1.4	3.0	20	11	9.6	13	148	30	5.1	1.7	2.2
23	1.5	1.4	3.6	29	9.8	8.9	12	126	26	4.9	1.7	2.8
24	1.7	1.4	3.3	44	9.0	8.4	12	117	23	4.7	1.6	3.7
25	1.8	1.4	2.7	34	8.2	8.0	13	118	20	4.5	1.6	3.8
26	2.0	1.3	2.4	25	7.5	7.8	13	131	18	4.4	1.6	3.3
27	1.9	1.5	2.3	20	7.0	7.7	14	118	19	4.4	1.5	2.8
28	2.0	1.3	2.2	16	6.8	8.2	15	90	24	5.0	1.5	2.5
29	2.1	1.2	2.1	13	-----	8.7	16	75	20	5.2	1.5	2.2
30	2.2	1.2	1.9	12	-----	9.1	19	68	19	4.7	1.5	2.0
31	2.2	-----	1.9	11	-----	9.9	-----	60	-----	4.3	1.6	-----
TOTAL	61.8	55.5	47.18	299.2	261.3	251.3	586	3,121	1,394	236.7	69.8	86.1
MEAN	1.99	1.85	1.52	9.65	9.33	8.11	19.5	101	46.5	7.64	2.25	2.87
MAX	2.8	2.8	3.6	44	16	12	53	236	89	16	4.0	7.0
MIN	1.5	1.2	.76	1.4	5.5	5.1	11	22	18	4.3	1.5	1.5
AC-FT	123	110	94	593	518	498	1,160	6,190	2,760	469	138	171

CAL YR 1969	TOTAL 6,368.48	MEAN 17.4	MAX 123	MIN .76	AC-FT 12,630
WTR YR 1970	TOTAL 6,469.88	MEAN 17.7	MAX 236	MIN .76	AC-FT 12,830

13317000 Salmon River at White Bird, Idaho

LOCATION.--Lat 45°45'01", long 116°19'23", in NE¼NW¼ sec.22, T.28 N., R.1 E., Idaho County, on left bank 0.1 mile upstream from White Bird Creek, 0.6 mile downstream from Canfield-Joseph highway bridge, 1 mile south-west of White Bird, and at mile 53.7. Records include flow of White Bird Creek.

DRAINAGE AREA.--13,550 sq mi, approximately, includes that of White Bird Creek. Mean altitude, 6,720 ft.

PERIOD OF RECORD.--August 1910 to September 1917, October 1919 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,412.65 ft above mean sea level. Aug. 18, 1910, to Sept. 30, 1917, and Oct. 1, 1919, to Sept. 13, 1920, nonrecording gages at site 600 ft downstream at different datum. Sept. 14, 1920, to Jan. 2, 1931, nonrecording gage on highway bridge 200 ft upstream at datum 10 ft higher.

AVERAGE DISCHARGE.--58 years, 11,060 cfs (11.08 inches per year, 8,013,000 acre-ft per year); 15-year base period (1952-67), 11,880 cfs.

EXTREMES.--Current year: Maximum discharge, 84,800 cfs June 6 (gage height, 30.20 ft); minimum, 2,390 cfs Jan. 8 (gage height, 11.32 ft).

Period of record: Maximum discharge, 106,000 cfs May 24, 1956 (gage height, 33.05 ft); minimum, 1,580 cfs Dec. 11, 1932 (gage height, 10.23 ft), from rating curve extended below 2,200 cfs.

Maximum stage known, about 37.5 ft, June 1894, present datum (discharge, 120,000 cfs).

REMARKS.--Records excellent. Amount of water diverted above station for irrigation is a negligible percentage of total flow. Records of water temperatures and chemical analysis for the water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 753: 1932. WSP 1043: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

11.4	2,480	16.0	11,400	24.0	44,600
13.0	4,840	18.0	17,600	28.0	69,500
14.0	6,760	20.0	25,400	30.1	84,000

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,500	4,760	3,250	3,420	4,790	4,880	4,760	5,160	42,400	45,500	8,250	4,470
2	4,760	4,840	3,290	3,280	4,950	5,250	4,690	5,340	43,800	40,000	8,010	4,580
3	5,110	4,810	3,320	3,280	5,110	5,240	4,670	6,190	50,900	34,800	7,790	4,620
4	5,130	4,720	3,420	3,410	4,970	5,060	4,670	8,070	65,600	31,900	7,540	4,860
5	4,980	4,760	3,750	3,450	4,760	4,860	4,640	11,500	76,800	30,100	7,350	5,330
6	4,950	4,890	3,940	3,180	4,650	4,700	4,890	16,300	83,500	28,400	7,330	5,820
7	4,910	5,000	4,100	2,720	4,650	4,700	5,610	19,700	82,700	26,600	7,520	5,950
8	4,910	5,110	3,980	2,530	4,690	4,970	6,410	20,600	78,100	25,000	7,330	7,870
9	5,150	4,950	4,020	2,860	4,740	5,180	6,660	19,600	74,900	22,900	6,990	10,500
10	5,290	4,840	3,840	3,580	4,690	5,250	6,950	19,200	72,200	21,100	6,740	8,750
11	5,220	4,790	3,950	3,900	4,640	5,130	7,610	18,000	62,600	20,400	6,530	7,390
12	5,110	4,760	4,210	4,240	4,600	4,880	7,810	16,600	56,000	20,600	6,370	6,660
13	4,840	4,790	4,370	4,180	4,860	4,810	7,430	15,000	47,600	19,600	6,230	6,230
14	4,640	4,760	4,600	4,400	5,220	4,880	6,990	13,600	45,200	18,400	6,030	6,110
15	4,600	4,670	4,550	4,670	5,220	5,270	6,530	13,100	44,200	16,800	5,840	6,130
16	4,690	4,620	4,500	4,770	5,110	5,610	6,190	14,200	44,100	15,600	5,700	6,050
17	4,810	4,580	4,340	4,700	5,200	5,680	5,890	19,900	40,900	14,600	5,550	5,930
18	4,910	4,440	4,210	4,790	5,460	5,460	5,700	31,400	39,300	13,900	5,380	5,820
19	4,890	4,280	4,210	5,340	5,330	5,200	5,650	44,400	40,500	13,000	5,290	5,930
20	4,820	4,080	4,390	5,800	5,060	4,980	5,660	50,300	43,500	12,200	5,200	6,570
21	4,820	4,120	4,530	5,990	4,770	4,880	5,610	47,000	47,200	11,700	5,130	6,840
22	4,860	4,120	5,460	6,010	4,530	4,980	5,510	46,700	49,600	11,400	5,060	6,820
23	4,880	4,200	5,570	6,410	4,580	4,970	5,400	50,300	53,000	11,200	4,970	6,820
24	4,890	4,120	5,270	8,340	4,620	4,970	5,340	53,400	51,400	10,800	4,840	6,840
25	4,930	4,070	4,820	10,400	4,670	5,020	5,310	54,000	51,000	10,200	4,790	6,550
26	4,890	4,020	4,360	8,710	4,690	5,020	5,240	59,700	47,100	9,790	4,740	6,250
27	4,760	3,840	4,070	7,500	4,670	4,980	5,200	66,800	45,100	9,480	4,640	6,130
28	4,760	3,630	4,130	6,990	4,720	5,020	5,180	64,700	47,800	9,240	4,550	6,010
29	4,860	3,390	4,040	6,290	-----	5,070	5,150	59,600	50,400	9,050	4,470	5,860
30	4,810	3,300	3,750	5,650	-----	5,040	5,150	53,000	51,200	8,870	4,420	5,700
31	4,740	-----	3,570	5,040	-----	4,890	-----	46,800	-----	8,520	4,370	-----
TOTAL	151,420	133,260	129,850	155,830	135,550	156,830	172,500	970,160	1,628,600	581,650	184,950	189,390
MEAN	4,885	4,442	4,189	5,027	4,855	5,059	5,750	31,300	54,290	18,760	5,966	6,313
MAX	5,290	5,110	5,570	10,400	5,460	5,680	7,810	66,800	83,500	45,500	8,250	10,500
MIN	4,500	3,300	3,250	2,530	4,530	4,700	4,640	5,160	39,300	8,520	4,370	4,470
CFSM	.36	.33	.31	.37	.36	.37	.42	2.31	4.01	1.38	.44	.47
IN.	.42	.37	.36	.43	.37	.43	.47	2.66	4.47	1.60	.51	.52
AC-FT	300,300	264,300	257,600	309,100	269,700	311,100	342,200	1,924M	3,230M	1,154M	366,800	375,700
CAL YR 1969	TOTAL 4,582,930	MEAN 12,560	MAX 66,600	MIN 3,250	CFSM .93	IN 12.58	ACFT 9,090,000					
WAT YR 1970	TOTAL 4,590,390	MEAN 12,580	MAX 83,500	MIN 2,530	CFSM .93	IN 12.60	ACFT 9,105,000					

NOTE.--No gage-height record June 10 to July 18.

M Expressed in thousands.

SNAKE RIVER MAIN STEM

13334300 Snake River near Anatone, Wash.

LOCATION.--Lat 46°05'50", long 116°58'36", in SE¼NE¼ sec.12, T.7 N., R.46 E., Asotin County, on left bank 1.2 miles downstream from Grande Ronde River, 7.8 miles east of Anatone, 22 miles south of Clarkston, and at mile 167.2.

DRAINAGE AREA.--92,960 sq mi, approximately.

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

GAGE.--Water-stage recorder. Datum of gage is 806.78 ft above mean sea level.

AVERAGE DISCHARGE.--12 years, 33,100 cfs (23,980,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 131,000 cfs June 7 (gage height, 18.57 ft); minimum, 15,000 cfs Sept. 1 (gage height, 3.90 ft).

Period of record: Maximum discharge, 131,000 cfs June 7, 1970 (gage height, 18.57 ft); minimum, 6,010 cfs Sept. 2, 1958 (gage height, 1.29 ft).

REMARKS.--Records excellent. Flow regulated by many reservoirs above station with a total usable capacity of more than 10,000,000 acre-feet, the most effective of which is Brownlee Reservoir 106.3 miles upstream (see sta 13289700). Diurnal fluctuations caused by Hells Canyon powerplant. Records of water temperatures for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

3.8	14,600	10.0	54,000
4.0	15,500	12.0	70,800
6.0	25,600	16.0	107,000
8.0	38,500	18.5	131,000

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22,000	20,000	20,200	22,100	37,300	32,400	27,000	31,300	73,000	90,000	21,600	15,800
2	19,600	19,400	20,900	21,000	35,100	29,600	29,400	31,600	74,100	88,500	21,300	18,600
3	20,000	19,800	21,000	25,500	35,800	28,900	31,800	27,900	82,900	82,600	20,800	18,400
4	21,100	20,900	22,700	24,400	37,300	28,200	25,700	29,700	101,000	72,900	20,400	18,600
5	19,500	21,300	22,800	23,600	37,400	25,700	23,300	38,200	119,000	61,500	20,000	19,200
6	17,800	21,200	21,300	26,400	35,300	24,300	23,600	44,800	127,000	54,800	19,900	17,700
7	20,400	20,400	19,200	26,000	34,600	25,500	24,400	53,100	130,000	52,900	20,000	17,300
8	20,300	20,700	20,400	24,200	34,100	29,600	25,700	61,700	124,000	45,800	19,700	21,800
9	23,000	19,600	23,000	23,500	32,900	29,700	24,200	60,500	120,000	46,600	18,800	30,900
10	24,200	20,000	23,100	24,100	29,100	29,000	25,800	59,700	121,000	41,400	18,000	25,800
11	24,300	22,700	21,900	22,100	29,900	28,200	28,600	58,000	110,000	38,400	17,200	27,800
12	22,600	22,000	23,600	25,000	29,600	28,000	29,300	56,400	98,000	38,000	17,300	24,900
13	23,300	19,900	21,800	24,200	32,000	26,700	31,100	54,800	86,800	37,200	16,500	23,500
14	23,900	19,800	20,800	23,100	41,200	28,700	36,300	53,100	83,800	35,600	16,600	23,500
15	22,000	19,600	20,400	24,000	54,100	31,600	40,800	51,400	84,800	33,600	16,400	23,200
16	22,400	20,500	22,400	25,700	60,200	32,000	35,300	51,700	90,800	31,800	16,300	21,100
17	21,400	20,100	23,200	28,300	61,200	32,200	36,600	57,800	87,600	30,000	16,100	22,600
18	20,200	20,800	22,800	26,500	61,000	32,300	35,000	71,100	86,900	29,000	16,300	20,200
19	19,000	20,600	21,400	31,200	51,400	32,200	35,100	88,700	88,600	28,100	16,400	20,700
20	18,200	19,200	18,700	33,200	47,500	30,700	35,800	98,900	92,700	26,300	16,600	20,000
21	21,200	20,400	17,600	36,700	43,900	29,100	35,800	98,100	96,100	25,200	16,800	21,100
22	21,000	19,900	20,200	38,600	42,600	28,000	36,200	96,700	98,600	24,200	16,700	25,100
23	21,200	19,000	25,900	47,400	41,600	28,500	36,000	100,000	101,000	23,000	16,300	25,800
24	21,200	19,100	23,200	56,100	40,800	29,400	30,200	107,000	99,800	22,000	15,500	29,000
25	20,000	20,000	20,600	64,500	40,000	29,000	30,200	108,000	88,800	21,500	16,400	25,800
26	20,600	19,700	20,200	70,300	37,300	27,000	30,100	114,000	84,600	21,000	18,100	25,000
27	21,700	18,300	20,400	67,600	34,200	25,400	30,900	111,000	82,600	20,600	18,200	22,900
28	21,600	18,200	21,000	65,600	33,500	25,200	25,000	107,000	87,300	22,000	17,300	22,800
29	20,800	18,800	21,300	62,800	-----	28,200	33,100	95,400	91,600	21,900	16,600	23,300
30	20,000	19,300	20,600	57,700	-----	26,700	32,400	85,100	92,800	22,100	15,800	22,600
31	19,200	-----	23,000	42,500	-----	29,100	-----	77,500	-----	22,100	15,500	-----
TOTAL	653,700	601,200	665,600	1,113.9M	1,130.9M	891,100	932,700	2,180.2M	2,905.2M	1,214.6M	545,600	679,000
MEAN	21,090	20,040	21,470	35,930	40,390	28,750	31,090	70,330	96,840	35,180	17,740	22,630
MAX	24,300	22,700	25,900	70,300	61,200	32,400	40,800	114,000	130,000	50,000	21,600	30,900
MIN	17,800	18,200	17,600	21,000	29,100	24,300	23,300	27,900	73,000	20,600	15,500	15,800
AC-FT	1,297M	1,192M	1,320M	2,209M	2,243M	1,767M	1,850M	4,324M	5,762M	2,409M	1,051M	1,347M

CAL YR 1969 TOTAL 14,254,100 MEAN 35,050 MAX 109,000 MIN 14,200 ACFT 28,270,000
WAT YR 1970 TOTAL 13,517,900 MEAN 37,040 MAX 130,000 MIN 15,500 ACFT 26,810,000

M Expressed in thousands.

13334700 Asotin Creek below Kearney Gulch, near Asotin, Wash.

LOCATION.--Lat 46°19'29", long 117°09'03", in SW¼SE¼ sec.22, T.10 N., R.45 E., Asotin County, on left bank 0.3 mile downstream from Kearney Gulch, 2.2 miles upstream from George Creek, 5.0 miles west of Asotin, and at mile 5.3.

DRAINAGE AREA.--170 sq mi.

PERIOD OF RECORD.--October 1959 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 1,090 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 70.8 cfs (51,290 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 316 cfs June 27 (gage height, 3.48 ft); minimum, 28 cfs Aug. 23, 24, 25 (gage height, 1.72 ft).

Period of record: Maximum discharge, 2,720 cfs Dec. 23, 1964 (gage height, 7.95 ft, from rating curve extended above 250 cfs on basis of slope-area measurement of peak flow; minimum, 13 cfs Jan. 11, 1963 (gage height, 1.41 ft), result of freezeup.

REMARKS.--Records good. No regulation. Several diversions for irrigation. Prior to Nov. 20, 1959, at a point 3.3 miles upstream, the city of Clarkston diverted about 30 cfs for municipal use and irrigation. Natural low flows nearly equivalent to those of former station 3.3 miles upstream.

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	36	36	35	38	91	75	64	59	131	58	36	30
2	40	36	35	38	84	72	66	61	143	56	37	30
3	36	35	35	38	79	70	63	69	164	53	37	30
4	35	36	35	39	76	68	63	86	182	51	35	40
5	35	38	35	37	73	65	63	116	185	51	35	39
6	34	37	35	36	71	66	67	145	185	49	35	35
7	34	36	35	37	68	82	73	163	174	48	34	36
8	36	36	36	38	67	89	72	153	157	48	34	36
9	37	36	36	39	68	91	72	143	156	48	34	34
10	35	35	36	43	70	89	81	135	137	48	34	33
11	35	35	37	39	73	86	82	122	126	46	33	31
12	34	35	39	39	77	82	79	113	120	45	32	31
13	34	35	39	42	103	80	77	104	132	63	32	32
14	35	35	39	47	102	81	75	97	128	49	32	32
15	35	35	40	53	100	84	72	95	126	46	32	32
16	35	35	38	54	114	86	70	110	119	45	32	32
17	35	35	38	52	154	86	68	155	111	45	32	31
18	35	35	38	52	143	84	67	172	104	43	32	31
19	35	35	39	74	120	82	67	164	100	42	31	32
20	35	36	42	92	106	80	65	162	97	41	31	34
21	35	36	46	97	98	78	64	162	93	40	31	36
22	35	36	53	117	90	75	62	167	88	40	30	35
23	35	35	51	154	85	74	60	164	86	40	29	36
24	37	35	46	218	81	72	61	166	82	40	29	34
25	36	35	44	220	77	69	61	172	78	40	29	34
26	35	36	43	168	76	69	61	190	75	41	29	34
27	36	35	42	166	75	67	61	189	101	43	29	34
28	38	35	40	149	75	67	60	164	72	43	29	32
29	37	35	40	125	-----	67	60	146	63	42	29	32
30	36	35	40	108	-----	66	59	138	60	39	29	32
31	36	-----	39	98	-----	64	-----	128	-----	38	30	-----
TOTAL	1,102	1,065	1,226	2,547	2,496	2,366	2,015	4,210	3,575	1,421	993	1,000
MEAN	35.5	35.5	39.5	82.2	89.1	76.3	67.2	136	119	45.8	32.0	33.3
MAX	40	38	53	220	154	91	82	190	185	63	37	40
MIN	34	35	35	36	67	64	59	59	60	38	29	30
AC-FT	2,190	2,110	2,430	5,050	4,950	4,690	4,000	8,350	7,090	2,820	1,970	1,980
CAL YR 1969	TOTAL 31,130		MEAN 85.3		MAX 550		MIN 30		AC-FT 61,750			
WTR YR 1970	TOTAL 24,016		MEAN 65.8		MAX 220		MIN 29		AC-FT 47,640			

13336100 Meadow Creek near Lowell, Idaho

LOCATION.--Lat 46°01'51", long 115°17'23", in NE¼ sec.14, T.31 N., R.9 E. (unsurveyed), Idaho County, Nezperce National Forest, attached to bridge pier on right bank, at mile 1.1, and 16.5 miles southeast of Lowell.

DRAINAGE AREA.--241 sq mi. Mean altitude, 5,400 ft.

PERIOD OF RECORD.--October 1963 to September 1970 (discontinued).

GAGE.--Water-stage recorder. Altitude of gage is 1,770 ft (from river profile map).

AVERAGE DISCHARGE.--7 years, 440 cfs (24.79 inches per year, 318,800 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 3,580 cfs June 6 (gage height, 5.70 ft); minimum daily, 65 cfs Jan. 7.

Period of record: Maximum discharge, 5,650 cfs June 8, 1964 (gage height, 7.26 ft); minimum daily, 32 cfs Dec. 17, 1965.

REMARKS.--Records good. No regulation or diversion above station. Records of water temperatures for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 26 to Dec. 7, Jan. 4-17)

1.5	83	3.5	905
1.7	100	4.0	1,460
2.0	149	5.0	2,680
2.5	294	5.6	3,480
3.0	525		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	147	121	70	91	182	163	182	233	1,940	916	195	99
2	185	115	74	94	163	158	193	287	2,340	810	188	95
3	160	109	77	90	156	147	180	411	2,900	768	182	94
4	124	106	82	93	143	141	182	585	3,200	742	177	131
5	113	119	96	88	137	135	188	936	3,330	702	175	158
6	105	124	94	78	141	133	230	1,260	3,470	611	180	135
7	110	121	94	65	147	163	294	1,350	3,300	561	165	243
8	127	126	92	92	158	158	262	1,060	2,990	537	160	366
9	154	104	96	110	163	151	262	1,050	2,880	514	158	190
10	137	115	100	135	170	145	435	1,040	2,560	486	151	147
11	119	119	95	102	170	145	440	916	2,090	460	147	131
12	109	133	104	96	177	147	402	802	1,860	450	143	123
13	95	137	105	105	207	149	361	725	1,700	465	137	121
14	100	124	108	110	212	165	336	672	1,680	406	135	121
15	101	119	108	113	210	224	305	734	1,850	366	131	118
16	104	127	95	109	215	237	273	1,100	1,770	345	127	116
17	103	112	97	101	237	233	256	1,810	1,680	328	124	116
18	103	106	98	139	227	221	246	2,250	1,740	313	121	118
19	97	110	104	256	207	207	243	2,520	1,780	298	119	198
20	99	110	141	332	190	201	233	2,450	1,790	287	118	172
21	100	112	167	324	188	195	218	2,140	1,780	290	115	158
22	101	112	221	370	180	185	215	2,150	1,730	294	115	154
23	101	100	160	411	177	180	212	2,680	1,640	262	112	249
24	110	110	137	430	172	198	215	2,740	1,520	243	110	190
25	113	89	108	361	167	182	221	2,820	1,330	233	101	165
26	101	88	126	302	165	182	215	3,080	1,140	230	98	156
27	103	84	115	290	167	175	218	3,070	1,140	227	97	145
28	115	77	106	253	165	190	218	2,620	1,360	266	97	137
29	108	70	100	212	-----	195	215	2,330	1,120	240	96	129
30	106	66	105	182	-----	193	224	2,210	1,040	215	95	123
31	109	-----	101	165	-----	182	-----	1,900	-----	201	94	-----
TOTAL	3,559	3,265	3,376	5,699	4,993	5,480	7,674	49,931	60,650	13,066	4,163	4,598
MEAN	115	109	109	184	178	177	256	1,611	2,022	421	134	153
MAX	185	137	221	430	237	237	440	3,080	3,470	916	195	366
MIN	95	66	70	65	137	133	180	233	1,040	201	94	94
CFSM	.48	.45	.45	.76	.74	.73	1.06	6.68	8.39	1.75	.56	.63
IN.	.55	.50	.52	.88	.77	.85	1.18	7.71	9.36	2.02	.64	.71
AC-FT	7,060	6,480	6,700	11,300	9,900	10,870	15,220	99,040	120,300	25,920	8,260	9,120

CAL YR 1969 TOTAL 161,878 MEAN 444 MAX 2,680 MIN 66 CFSM 1.84 IN 24.99 ACFT 321,100
WAT YR 1970 TOTAL 166,454 MEAN 456 MAX 3,470 MIN 65 CFSM 1.89 IN 25.69 ACFT 330,200

PEAK DISCHARGE (BASE, 2,200 CFS).--May 26 (2145) 3,330 cfs (5.53 ft); June 6 (1830) 3,580 cfs (5.70 ft).

13336500 Selway River near Lowell, Idaho

LOCATION.--Lat 46°05'12", long 115°30'46", in SE¼NE¼ sec.25, T.32 N., R.7 E., Idaho County, Nezperce National Forest, on right bank 0.2 mile upstream from O'Hara Creek, 7 miles upstream from Lowell, 7.6 miles upstream from confluence with Lochsa River, and 150.2 miles upstream from mouth of Clearwater River.

DRAINAGE AREA.--1,910 sq mi, approximately. Mean altitude, 5,640 ft.

PERIOD OF RECORD.--April 1911 to September 1912 (gage heights or fragmentary discharge records only), October 1929 to current year. Monthly discharge only for October 1929, published in WSP 1317.

GAGE.--Water-stage recorder. Altitude of gage is 1,540 ft (from river-profile map). Apr. 11 to Sept. 2, 1911, nonrecording gage at site 2 miles downstream at different datum. Feb. 7 to Sept. 22, 1912, and Oct. 14, 1929, to Nov. 19, 1930, nonrecording gages at nearby sites at different datum.

AVERAGE DISCHARGE.--41 years (1929-70), 3,732 cfs (26.53 inches per year, 2,704,000 acre-ft per year); 15-year base period (1952-67), 3,914 cfs.

EXTREMES.--Current year: Maximum discharge, 35,800 cfs June 6 (gage height, 13.07 ft); minimum daily, 450 cfs Jan. 7; minimum gage height, 2.67 ft Jan. 6 (ice affected).

Period of record: Maximum discharge, 48,900 cfs May 29, 1948 (gage height, 16.04 ft); minimum, probably less than 100 cfs Jan. 8, 1937, during period of ice effect.

REMARKS.--Records good. Small diversions from headwaters.

REVISIONS.--WSP 1043: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 29 to Dec. 6, Jan. 6-10, 12-13)

Oct. 1 to May 16				May 17 to Sept. 30			
2.6	399	5.0	3,410	2.9	583	6.0	5,630
3.0	650	6.0	5,630	3.0	650	8.0	12,000
3.5	1,070	7.0	8,470	3.5	1,070	10.0	20,700
4.0	1,660	9.0	16,200	4.0	1,660	12.0	30,500
				5.0	3,410	12.3	32,000

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,040	910	580	824	1,630	1,760	1,830	2,270	15,500	8,760	1,540	650
2	1,610	931	600	779	1,620	1,700	1,950	2,540	19,000	7,870	1,470	642
3	1,500	869	640	766	1,500	1,590	1,850	3,470	24,800	7,750	1,390	624
4	1,120	843	680	745	1,400	1,520	1,840	4,950	29,700	7,630	1,330	729
5	969	882	810	614	1,310	1,460	1,920	7,690	31,800	7,160	1,280	937
6	872	955	790	480	1,320	1,400	2,190	10,500	31,600	6,520	1,380	927
7	855	967	787	450	1,330	1,540	2,890	12,400	30,000	5,810	1,270	1,290
8	916	914	759	570	1,380	1,630	2,850	10,500	26,500	5,210	1,180	2,330
9	1,130	862	742	820	1,450	1,550	2,730	10,300	25,800	4,840	1,140	1,920
10	1,220	870	742	1,150	1,520	1,520	3,910	10,200	21,900	4,530	1,100	1,330
11	1,080	914	752	972	1,580	1,490	4,420	8,900	17,000	4,330	1,060	1,100
12	956	1,030	759	840	1,650	1,500	4,060	8,000	14,300	4,090	1,020	968
13	843	1,210	841	930	1,970	1,530	3,690	7,200	13,400	4,220	983	905
14	783	1,060	847	1,050	2,170	1,590	3,410	6,600	13,200	4,110	949	887
15	792	996	844	1,140	2,120	2,010	3,090	10,000	14,500	3,470	922	867
16	780	1,030	760	1,130	2,330	2,200	2,810	14,000	13,900	3,170	901	844
17	799	999	733	1,060	2,810	2,220	2,640	18,000	13,100	3,050	871	826
18	772	906	753	1,160	2,810	2,090	2,580	19,900	14,000	2,840	836	807
19	758	843	793	1,610	2,500	1,980	2,550	22,500	15,700	2,590	817	1,010
20	733	887	1,000	2,170	2,220	1,900	2,450	21,600	16,500	2,430	802	1,240
21	755	834	1,250	2,370	2,040	1,870	2,310	18,700	16,700	2,320	782	1,190
22	773	912	2,100	2,890	1,930	1,780	2,270	19,500	16,600	2,400	761	1,120
23	795	860	1,640	3,210	1,890	1,720	2,220	22,600	15,800	2,190	740	1,900
24	843	836	1,320	3,970	1,860	1,900	2,250	23,400	14,900	2,010	723	2,000
25	910	798	1,080	3,770	1,820	1,880	2,390	24,000	14,000	1,890	707	1,550
26	866	713	997	3,040	1,800	1,860	2,320	27,600	12,200	1,820	688	1,370
27	818	686	1,090	2,710	1,820	1,800	2,300	27,600	12,500	1,750	673	1,260
28	889	592	989	2,390	1,820	1,920	2,270	21,600	14,700	2,080	661	1,180
29	879	580	887	2,040	-----	1,990	2,210	19,000	11,800	2,060	647	1,110
30	832	550	881	1,790	-----	1,970	2,240	18,000	10,500	1,810	641	1,050
31	829	-----	906	1,550	-----	1,870	-----	15,300	-----	1,640	636	-----
TOTAL	28,717	26,239	28,352	48,990	51,600	54,740	78,440	448,820	541,900	122,350	29,900	34,563
MEAN	926	875	915	1,580	1,843	1,766	2,615	14,480	18,060	3,947	965	1,152
MAX	1,610	1,210	2,100	3,970	2,810	2,220	4,420	27,600	31,800	8,760	1,540	2,330
MIN	733	550	580	450	1,310	1,400	1,830	2,270	10,500	1,640	636	624
CFSM	.49	.46	.48	.83	.96	.92	1.37	7.58	9.46	2.07	.50	.60
IN.	.56	.51	.55	.95	1.00	1.07	1.53	8.74	10.55	2.38	.58	.67
AC-FT	56,960	52,050	56,240	97,170	102,300	108,600	155,600	890,200	1,075M	242,700	59,310	68,560

CAL YR 1969 TOTAL 1,390,250 MEAN 3,809 MAX 21,600 MIN 485 CFSM 1.99 IN 27.07 AC-FT 2,758,000
WTR YR 1970 TOTAL 1,494,611 MEAN 4,095 MAX 31,800 MIN 450 CFSM 2.14 IN 29.10 AC-FT 2,965,000

PEAK DISCHARGE (BASE, 18,000 CFS).--May 27 (0245) 31,600 cfs (12.21 ft); June 6 (0145) 35,800 cfs (13.07 ft).

CLEARWATER RIVER BASIN

13337000 Lochsa River near Lowell, Idaho

LOCATION.--Lat 46°09'02", long 115°35'11", in SW¼SE¼ sec.33, T.33 N., R.7 E., Idaho County, Nezperce National Forest, on right bank 0.7 mile upstream from Lowell, 0.9 mile upstream from confluence with Selway River, 1.2 miles downstream from Pete King Creek, and 19 miles east of Kooskia.

DRAINAGE AREA.--1,180 sq mi, approximately. Mean altitude, 5,250 ft.

PERIOD OF RECORD.--October 1910 to September 1912, October 1929 to current year. Monthly discharge only for some periods, published in WSP 1317.

GAGE.--Water-stage recorder. Datum of gage is 1,452.98 ft above mean sea level, unadjusted. Prior to Nov. 21, 1930, nonrecording gages at site 1 mile upstream at different datums.

AVERAGE DISCHARGE.--43 years, 2,847 cfs (32.76 inches per year, 2,063,000 acre-ft per year); 15-year base period (1952-67), 3,047 cfs.

EXTREMES.--Current year: Maximum discharge, 23,400 cfs June 6 (gage height, 11.06 ft); minimum, 341 cfs Nov. 29 (gage height, 1.81 ft).

Period of record: Maximum discharge, 35,100 cfs June 8, 1964 (gage height, 13.50 ft), from rating curve extended above 17,000 cfs; minimum, probably less than 100 cfs Jan. 8, 1937, during period of ice effect.

REMARKS.--Records good.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 30 to Dec. 6, Jan. 6-11)

1.7	300	6.0	7,190
2.0	486	8.0	12,700
2.5	886	10.0	19,500
3.0	1,420	11.0	23,200
4.0	2,920		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	729	673	390	595	1,340	1,310	1,420	1,840	11,800	5,440	1,030	430
2	1,200	667	405	570	1,290	1,280	1,520	2,130	14,000	4,830	978	427
3	1,100	627	430	572	1,240	1,200	1,420	2,900	17,200	4,510	951	415
4	846	601	450	555	1,150	1,160	1,410	4,400	19,800	4,280	909	512
5	721	670	540	437	1,070	1,130	1,640	6,200	21,100	4,040	868	634
6	641	706	520	380	1,080	1,090	1,920	8,200	22,000	3,690	903	643
7	602	701	519	340	1,080	1,420	2,470	8,800	20,300	3,330	869	982
8	633	670	476	425	1,100	1,460	2,270	7,690	17,800	3,030	803	1,140
9	874	624	484	580	1,090	1,320	2,210	7,950	17,800	2,800	777	904
10	961	611	475	910	1,100	1,270	3,080	7,750	15,200	2,620	750	716
11	810	652	465	765	1,120	1,220	3,170	6,730	11,800	2,500	719	623
12	707	751	536	620	1,170	1,230	2,910	6,040	10,000	2,350	694	558
13	622	856	626	769	1,510	1,260	2,680	5,400	9,990	2,430	665	526
14	562	772	624	921	1,640	1,350	2,490	4,930	10,100	2,580	640	521
15	562	712	624	1,120	1,630	1,800	2,280	5,210	10,800	2,170	624	517
16	542	732	525	1,100	1,970	1,890	2,110	6,750	10,100	1,960	609	507
17	560	713	521	974	2,630	1,830	2,030	10,400	9,340	1,900	588	503
18	554	638	524	1,070	2,420	1,690	1,990	13,300	9,450	1,770	564	507
19	518	601	570	1,470	2,090	1,600	2,010	14,500	9,980	1,640	552	670
20	509	615	779	1,850	1,840	1,530	1,940	15,800	10,100	1,530	544	697
21	534	597	1,070	1,970	1,670	1,510	1,820	13,800	9,870	1,460	529	728
22	538	597	1,650	2,410	1,560	1,430	1,830	14,000	9,660	1,430	514	679
23	563	600	1,230	2,880	1,500	1,390	1,810	14,500	9,210	1,380	501	1,100
24	631	570	1,000	3,870	1,440	1,470	1,910	15,000	8,460	1,290	488	1,250
25	705	541	820	3,740	1,400	1,420	2,030	16,100	7,750	1,230	476	911
26	653	492	780	2,900	1,400	1,400	1,930	18,600	6,810	1,240	466	772
27	605	473	769	2,450	1,400	1,350	1,920	18,400	6,700	1,200	453	705
28	660	425	730	2,030	1,360	1,500	1,870	15,000	8,420	1,280	441	659
29	656	384	669	1,730	-----	1,570	1,790	13,500	6,810	1,360	431	620
30	617	370	654	1,500	-----	1,520	1,800	13,100	6,590	1,210	425	590
31	614	-----	646	1,330	-----	1,440	-----	11,400	-----	1,110	423	-----
TOTAL	21,029	18,641	20,501	42,833	41,290	44,040	61,680	310,320	358,940	73,590	20,184	20,446
MEAN	678	621	661	1,382	1,475	1,421	2,056	10,010	11,960	2,374	651	682
MAX	1,200	856	1,650	3,870	2,630	1,890	3,170	18,600	22,000	5,440	1,030	1,250
MIN	509	370	390	340	1,070	1,090	1,410	1,840	6,590	1,110	423	415
CFSM	.57	.53	.56	1.17	1.25	1.20	1.74	8.48	10.1	2.01	.55	.58
IN.	.66	.59	.65	1.35	1.30	1.39	1.94	9.78	11.31	2.32	.64	.64
AC-FT	41,710	36,970	40,660	84,960	81,900	87,350	122,300	615,500	712,000	146,000	40,030	40,550

CAL YR 1969 TOTAL 1,086,603 MEAN 2,977 MAX 16,900 MIN 343 CFSM 2.52 IN 34.25 AC-FT 2,155,000
WTR YR 1970 TOTAL 1,033,494 MEAN 2,831 MAX 22,000 MIN 340 CFSM 2.40 IN 32.57 AC-FT 2,050,000

PEAK DISCHARGE (BASE, 12,000 CFS).--May 27 (0215) 20,600 cfs (10.31 ft); June 6 (0415) 23,400 cfs (11.06 ft).

13337500 South Fork Clearwater River near Elk City, Idaho

LOCATION.--Lat 45°49'29", long 115°31'36", in SE¼NE¼ sec.25, T.29 N., R.7 E. (unsurveyed), Idaho County, Nezperce National Forest, on right bank just upstream from bridge on road to Orogrande, 0.2 mile upstream from Crooked River, 4.5 miles west of Elk City, and at mile 58.6.

DRAINAGE AREA.--261 sq mi. Mean altitude, 5,150 ft.

PERIOD OF RECORD.--September 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 3,816.27 ft above mean sea level. Prior to June 23, 1949, non-recording gage at site 24 ft downstream at datum 6.14 ft lower.

AVERAGE DISCHARGE.--26 years, 268 cfs (13.94 inches per year, 194,200 acre-ft per year); 15-year base period (1952-67), 260 cfs.

EXTREMES.--Current year: Maximum discharge, 2,440 cfs May 19 (gage height, 5.71 ft); minimum daily, 30 cfs Nov. 28-29; minimum gage height, 1.51 ft Oct. 15.

Period of record: Maximum discharge, 4,040 cfs June 8, 1964 (gage height, 7.48 ft); minimum daily, 10 cfs Nov. 28, 29, 1952.

REMARKS.--Records excellent except those for December to March, which are poor. No regulation or diversion above station except for mining operations.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 22 to Jan. 5, Feb. 1 to Mar. 6, Mar. 10-12)

1.3	23	3.0	394
1.6	48	3.5	649
2.0	104	4.0	1,000
2.5	220	5.5	2,300

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	93	77	37	60	115	118	153	277	1,120	416	97	46
2	110	69	41	55	110	116	162	369	1,090	370	91	44
3	116	64	44	52	110	114	148	565	1,100	333	88	41
4	95	63	47	50	105	112	161	840	1,120	310	85	67
5	82	75	62	47	102	110	184	1,320	1,110	304	83	111
6	71	90	60	43	110	110	263	1,660	1,080	277	85	79
7	68	84	58	38	120	165	346	1,650	989	257	75	139
8	75	74	56	51	120	168	285	1,350	910	241	72	295
9	115	62	54	80	114	149	293	1,460	864	233	71	128
10	98	75	54	93	110	130	542	1,540	838	223	68	85
11	86	80	55	80	112	125	519	1,210	699	217	65	71
12	72	83	59	76	116	128	417	1,090	633	210	62	63
13	53	87	62	74	160	134	371	963	574	232	60	60
14	58	75	65	75	175	151	340	841	593	212	58	60
15	56	69	67	77	160	196	302	944	704	185	56	59
16	62	80	63	78	155	206	278	1,260	627	170	55	58
17	59	64	58	75	177	182	272	1,800	549	161	53	57
18	64	60	58	90	170	171	272	2,080	502	152	51	57
19	57	71	70	300	155	159	271	2,240	462	145	50	122
20	59	66	82	310	140	166	253	2,240	436	152	49	134
21	60	62	91	265	140	170	239	1,950	405	150	48	119
22	59	57	150	260	140	162	236	1,850	374	161	47	106
23	58	56	125	510	125	166	239	2,110	351	135	45	163
24	64	54	100	560	122	191	250	1,970	336	124	44	126
25	77	52	74	400	120	172	271	1,920	304	118	43	102
26	66	47	72	300	117	175	251	1,930	280	116	42	88
27	64	37	71	280	115	163	248	1,820	321	113	41	81
28	74	30	68	190	120	179	239	1,580	553	140	42	75
29	73	30	62	145	-----	171	229	1,390	536	130	40	70
30	69	35	66	125	-----	160	255	1,520	522	116	40	66
31	74	-----	66	107	-----	150	-----	1,240	-----	105	41	-----
TOTAL	2,287	1,928	2,097	4,946	3,635	4,769	8,289	44,979	19,982	6,208	1,847	2,772
MEAN	73.8	64.3	67.6	160	130	154	276	1,451	666	200	59.6	92.4
MAX	116	90	150	560	177	206	542	2,240	1,120	416	97	295
MIN	53	30	37	38	102	110	148	277	280	105	40	41
CFSM	.28	.25	.26	.61	.50	.59	1.06	5.56	2.55	.77	.23	.35
IN.	.33	.27	.30	.70	.52	.68	1.18	6.41	2.85	.88	.26	.39
AC-FT	4,540	3,820	4,160	9,810	7,210	9,460	16,440	89,220	39,630	12,310	3,660	5,500

CAL YR 1969 TOTAL 117,663 MEAN 322 MAX 2,030 MIN 30 CFSM 1.24 IN 16.77 AC-FT 233,400
WTR YR 1970 TOTAL 103,739 MEAN 284 MAX 2,240 MIN 30 CFSM 1.09 IN 14.78 AC-FT 205,800

PEAK DISCHARGE (BASE, 1,300 CFS).--May 7 (0200) 1,880 cfs (5.10 ft; May 19 (2400) 2,440 cfs (5.71 ft).

NOTE.--No gage-height record Jan. 6-31.

CLEARWATER RIVER BASIN

13338500 South Fork Clearwater River at Stites, Idaho

LOCATION.--Lat 46°05'12", long 115°58'32", in SE¼NE¼ sec.29, T.32 N., R.4 E., Idaho County, on left bank at Stites, 0.4 mile upstream from county road bridge, 0.4 mile downstream from Cottonwood Creek, and at mile 4.0.

DRAINAGE AREA.--1,150 sq mi, approximately.

PERIOD OF RECORD.--October 1910 to April 1912, October 1964 to current year. Published as "at Kooskia" 1910-12.

GAGE.--Water-stage recorder. Altitude of gage is 1,300 ft (from topographic map). October 1910 to April 1912, nonrecording gage 3.6 miles downstream at different datum.

AVERAGE DISCHARGE.--7 years (1910-1911, 1964-70), 1,037 cfs (12.25 inches per year, 751,300 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 6,970 cfs May 20 (gage height, 7.07 ft); minimum, 106 cfs Nov. 29 (gage height, 2.51 ft).

Period of record: Maximum discharge observed, 10,700 cfs May 29, 1912 (gage height, 6.00 ft, site and datum then in use); minimum, 106 cfs Nov. 29, 1969 (gage height, 2.51 ft); minimum gage height, 2.40 ft Dec. 18, 1965 (ice affected).

Flood of June 8, 1964, reached a stage of 10.3 ft, present site and datum (discharge, 17,500 cfs).

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

REVISIONS.--WSP 1317: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 29 to Dec. 2, Jan. 4-8)

2.5	96	4.0	1,250
2.7	169	5.0	2,670
3.0	324	6.0	4,570
3.5	699	7.0	6,800

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	330	312	182	240	514	462	637	1,420	3,690	1,850	388	178
2	381	301	174	224	499	448	599	1,540	3,880	1,620	366	205
3	448	272	174	210	507	435	602	1,930	4,210	1,490	342	178
4	381	256	183	200	441	441	610	2,440	4,560	1,400	333	257
5	321	283	240	190	428	428	628	3,390	4,630	1,340	321	473
6	289	362	235	170	485	421	818	4,190	4,690	1,220	313	344
7	266	337	230	150	537	594	1,240	4,130	4,420	1,120	305	433
8	272	307	214	205	545	748	1,120	3,450	4,010	1,030	287	1,010
9	407	272	205	318	514	619	1,060	3,580	3,850	996	279	586
10	381	256	214	368	477	529	1,420	3,930	3,560	932	271	385
11	343	289	210	324	462	485	1,810	3,430	3,010	903	261	314
12	301	289	224	295	462	507	1,550	3,120	2,790	854	253	276
13	256	301	240	295	637	492	1,380	2,880	2,640	886	243	257
14	224	289	245	301	690	561	1,280	2,580	2,910	886	234	250
15	230	266	261	307	637	849	1,120	2,580	3,150	762	228	248
16	230	272	235	307	619	900	988	3,100	2,990	700	223	243
17	240	272	224	301	699	849	933	4,260	2,650	674	217	238
18	230	230	224	356	699	719	900	5,210	2,580	624	208	237
19	235	230	235	1,200	637	655	922	5,820	2,560	588	202	293
20	224	245	318	1,240	570	637	988	6,500	2,520	566	200	420
21	224	235	368	1,050	553	628	890	5,690	2,490	553	194	414
22	230	230	610	1,030	540	586	849	5,350	2,370	581	192	415
23	235	214	507	2,110	470	570	838	5,640	2,260	531	187	493
24	256	219	401	2,320	499	602	818	5,480	2,210	491	183	514
25	301	205	301	1,600	477	602	900	5,420	2,020	465	174	399
26	278	178	289	1,190	462	586	890	5,700	1,840	453	169	351
27	256	174	289	1,090	455	561	944	5,560	1,890	444	165	322
28	283	120	278	849	470	628	1,050	4,830	2,420	474	165	302
29	307	127	250	663	-----	728	1,100	4,320	2,140	495	161	282
30	283	174	261	570	-----	738	1,330	4,520	2,160	451	161	266
31	289	-----	261	477	-----	646	-----	3,930	-----	414	161	-----
TOTAL	8,931	7,517	8,282	20,150	14,985	18,654	30,314	125,920	91,100	25,793	7,386	10,583
MEAN	288	251	267	650	535	602	1,010	4,062	3,037	832	238	353
MAX	448	362	610	2,320	699	900	1,810	6,500	4,690	1,850	388	1,010
MIN	224	120	174	150	428	421	602	1,420	1,840	414	161	178
CFSM	.25	.22	.23	.57	.47	.52	.88	3.53	2.64	.72	.21	.31
IN.	.29	.24	.27	.65	.48	.60	.98	4.07	2.95	.83	.24	.34
AC-FT	17,710	14,910	16,430	39,970	29,720	37,000	60,130	249,800	180,700	51,160	14,650	20,990

CAL YR 1969 TOTAL 421,611 MEAN 1,155 MAX 7,040 MIN 120 CFSM 1.00 IN 13.63 AC-FT 836,300
WTR YR 1970 TOTAL 369,615 MEAN 1,013 MAX 6,500 MIN 120 CFSM .88 IN 11.95 AC-FT 733,103

PEAK DISCHARGE (BASE, 3,300 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-23	2230	5.50	3,600	5-20	1030	7.07	6,970
5-6	0930	5.90	4,360				

13338800 Lawyer Creek near Nezperce, Idaho

LOCATION.--Lat 46°09'48", long 116°14'24", in NW¼NW¼ sec.32, T.33 N., R.2 E., Idaho County, Nez Perce Indian Reservation, on right bank, 350 ft upstream from State Highway 7 bridge, 5.0 miles south of Nezperce, and at mile 15.6.

DRAINAGE AREA.--150 sq mi, approximately.

PERIOD OF RECORD.--August 1967 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,675 ft (from topographic map).

EXTREMES.--Current year: Maximum discharge, 1,310 cfs Jan. 24 (gage height, 6.07 ft); minimum, 1.4 cfs on many days in August; minimum gage height, 2.13 ft Nov. 25.

Period of record: Maximum discharge, 1,550 cfs Mar. 31, 1969 (gage height, 6.35 ft); minimum, 1.2 cfs Aug. 16-23, 1967, July 29 to Aug. 4, 1968 (gage height, 1.33 ft).

REMARKS.--Records good except those for July, which are poor. No regulation or diversion above station.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Shifting-control method used Apr. 22-26, Aug. 6 to Sept. 30; stage-discharge relation affected by ice Nov. 26-28, 30, Jan. 5-8)

2.0	0.9	4.0	175
2.5	7.4	4.5	356
3.0	27	5.0	632
3.5	74	6.0	1,280

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	7.0	3.4	7.0	42	38	45	42	13	8.5	3.0	1.9
2	5.3	6.6	3.0	7.4	37	29	70	39	11	7.0	2.8	2.0
3	5.5	6.4	3.0	6.1	36	32	66	37	4.8	6.4	2.7	2.0
4	5.9	6.1	4.0	6.8	24	34	62	35	8.8	5.5	2.6	3.4
5	5.5	7.4	4.2	6.4	29	29	64	34	7.9	5.0	2.5	3.7
6	4.7	8.8	4.6	6.2	33	37	78	34	13	4.7	2.5	3.6
7	4.4	7.9	4.7	5.4	55	104	99	40	13	4.3	2.3	3.8
8	4.4	7.0	5.2	8.0	76	131	84	38	11	4.1	2.2	3.7
9	5.7	6.6	5.2	8.8	64	77	73	43	12	4.8	2.2	3.6
10	5.3	6.6	5.2	9.0	52	61	83	48	15	5.2	2.1	3.1
11	4.8	6.4	5.0	8.2	45	51	77	45	12	11	2.0	2.8
12	4.6	6.4	6.1	7.7	64	49	64	44	14	15	2.0	2.6
13	4.0	6.1	6.6	10	178	53	58	59	16	54	1.9	2.6
14	4.1	5.9	8.2	13	126	76	55	47	29	18	1.9	2.8
15	4.1	5.9	9.3	28	94	106	48	34	26	11	1.8	2.9
16	4.8	5.9	7.0	25	144	99	44	29	21	7.9	1.8	2.9
17	5.0	5.3	7.7	18	184	80	42	26	17	6.8	1.7	3.0
18	4.7	4.7	7.2	25	89	61	41	25	13	6.5	1.7	3.8
19	4.7	5.7	8.5	296	65	55	49	23	11	6.0	1.7	5.4
20	4.6	5.3	16	300	54	52	60	23	9.6	5.6	1.7	5.6
21	4.6	5.5	24	204	52	50	60	22	8.5	6.0	1.7	5.7
22	4.6	5.0	27	230	49	47	51	21	7.4	5.4	1.7	5.3
23	4.7	5.2	18	430	47	46	50	23	6.6	4.6	1.7	5.8
24	8.5	5.5	12	940	44	53	49	21	7.2	3.8	1.6	5.5
25	9.6	3.7	7.9	409	42	49	52	18	7.4	4.1	1.5	4.7
26	7.4	4.3	11	147	42	48	52	16	5.9	3.7	1.5	4.3
27	7.0	3.4	11	147	42	43	51	14	6.4	4.6	1.5	4.1
28	9.0	3.7	8.8	76	40	60	48	14	9.8	14	1.5	3.9
29	9.8	3.8	7.9	49	-----	74	47	15	9.3	6.2	1.5	3.8
30	8.5	3.9	7.6	39	-----	61	45	17	9.0	4.2	1.6	3.7
31	7.4	-----	8.5	38	-----	47	-----	15	-----	3.5	1.8	-----
TOTAL	178.2	172.0	269.8	3,511.0	1,849	1,832	1,767	941	360.6	257.4	60.7	112.0
MEAN	5.75	5.73	8.70	113	66.0	59.1	58.9	30.4	12.0	8.30	1.96	3.73
MAX	9.8	8.8	27	940	184	131	99	59	29	54	3.0	5.8
MIN	4.0	3.4	3.0	5.4	24	29	41	14	5.9	3.5	1.5	1.9
CFSM	.04	.04	.06	.76	.44	.39	.39	.20	.08	.06	.01	.02
IN.	.04	.04	.07	.87	.46	.45	.44	.23	.09	.06	.02	.03
AC-FT	353	341	535	6,960	3,670	3,630	3,500	1,870	715	511	120	222

CAL YR 1969 TOTAL 20,390.9 MEAN 55.9 MAX 1,050 MIN 1.4 CFSM .37 IN 5.06 AC-FT 40,450
WTR YR 1970 TOTAL 11,310.7 MEAN 31.0 MAX 940 MIN 1.5 CFSM .21 IN 2.80 AC-FT 22,430

PEAK DISCHARGE (BASE, 300 CFS).--Jan. 24 (1600) 1,310 cfs (6.07 ft).

NOTE.--No gage-height record July 4 to Aug. 5.

CLEARWATER RIVER BASIN

13340000 Clearwater River at Orofino, Idaho

LOCATION.--Lat 46°28'43", long 116°15'23", in SW¼SE¼NW¼ sec.7, T.36 N., R.2 E., Clearwater County, on right bank 56 ft upstream from State Highway 7 bridge at Orofino, and at mile 44.6.

DRAINAGE AREA.--5,580 sq mi, approximately.

PERIOD OF RECORD.--October 1930 to September 1938, October 1964 to current year.

GAGE.--Water-stage recorder. Datum of gage is 990.80 ft above mean sea level (levels by Idaho Department of Highways). Prior to Sept. 30, 1938, nonrecording gage at site 0.1 mile downstream at different datum.

AVERAGE DISCHARGE.--14 years, 8,317 cfs (20.24 inches per year, 6,026,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 68,400 cfs June 6 (gage height, 16.44 ft); minimum, 862 cfs Nov. 30 (gage height, 2.78 ft).

Period of record: Maximum discharge, 81,500 cfs June 10, 1933 (gage height, 20.87 ft, site and datum then in use); minimum observed, probably less than 250 cfs Jan. 8, 1937, during period of ice effect; minimum gage height, 2.78 ft Sept. 29, 1967, Nov. 30, 1969.

Flood of June 8, 1964, reached a stage of 20.32 ft present site and datum (discharge, 99,700 cfs).

REMARKS.--Records excellent.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

2.8	846	8.0	15,200
3.0	1,160	10.0	24,500
4.0	2,920	12.0	36,300
5.0	5,120	14.0	50,000
6.0	7,920	16.0	64,700

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2,160	2,050	1,240	2,250	5,370	5,070	6,080	8,110	33,100	18,200	3,470	1,260
2	3,100	2,210	1,270	2,030	5,400	4,880	6,580	8,460	37,400	15,900	3,280	1,340
3	4,140	2,160	1,240	1,840	5,020	4,620	6,410	10,100	46,400	15,000	3,100	1,300
4	3,300	2,030	1,140	1,860	4,740	4,500	6,050	13,200	54,800	14,500	2,980	1,350
5	2,660	2,050	1,660	1,720	4,390	4,360	6,240	18,300	59,100	14,000	2,860	2,050
6	2,300	2,420	2,400	1,350	4,320	4,200	7,130	24,500	62,300	12,900	2,800	2,090
7	2,070	2,450	1,950	1,290	4,660	5,000	9,060	28,400	59,200	11,500	2,900	2,360
8	2,030	2,400	1,780	1,740	4,860	6,720	9,250	25,900	52,200	10,400	2,660	4,570
9	2,510	2,230	1,690	2,400	4,860	5,970	8,590	24,900	49,200	9,700	2,530	4,660
10	3,080	2,110	1,720	3,060	4,780	5,420	10,500	25,500	46,300	9,020	2,440	3,300
11	2,960	2,120	1,670	3,280	4,760	5,070	13,000	23,000	36,000	8,660	2,360	2,590
12	2,490	2,210	1,690	2,440	4,830	4,930	12,000	20,600	30,200	8,110	2,250	2,200
13	2,160	2,610	1,980	2,450	7,280	4,950	10,800	19,000	28,100	7,860	2,180	1,960
14	1,900	2,740	2,110	3,060	9,250	5,240	9,970	17,200	28,000	8,790	2,070	1,860
15	1,790	2,490	2,200	3,640	8,560	7,920	9,060	16,600	31,500	7,430	2,000	1,840
16	1,780	2,380	2,090	3,870	8,990	8,960	8,210	19,100	31,200	6,640	1,930	1,810
17	1,780	2,440	1,830	3,640	11,000	9,190	7,670	28,400	28,000	6,220	1,860	1,780
18	1,790	2,320	1,790	3,510	10,700	7,950	7,400	39,900	27,800	5,940	1,810	1,760
19	1,760	2,070	1,880	7,580	9,060	7,190	7,370	44,700	29,600	5,550	1,720	1,960
20	1,690	2,000	2,590	10,900	7,860	6,640	7,730	48,100	30,800	5,120	1,690	2,610
21	1,670	2,050	3,400	10,500	7,070	6,330	7,400	42,900	30,800	4,860	1,670	2,800
22	1,690	1,960	5,660	11,400	6,440	6,080	7,100	42,200	30,400	4,760	1,620	2,720
23	1,740	2,020	5,170	14,200	6,020	5,760	7,280	44,200	29,300	4,980	1,560	3,020
24	1,900	1,950	4,050	23,000	5,760	5,760	7,220	46,800	27,300	4,390	1,510	4,590
25	2,160	1,900	3,300	19,100	5,500	5,920	8,020	48,000	25,900	4,140	1,510	3,680
26	2,210	1,720	2,800	13,700	5,320	5,680	7,830	53,100	22,700	3,980	1,420	3,080
27	2,070	1,610	2,740	11,900	5,220	5,600	7,670	56,200	22,000	3,920	1,370	2,760
28	2,070	1,350	2,700	9,730	5,170	6,020	7,730	47,200	25,800	3,960	1,300	2,590
29	2,290	1,050	2,450	7,890	-----	7,220	7,670	40,700	22,500	4,550	1,270	2,420
30	2,180	986	2,300	6,720	-----	7,160	7,920	39,700	21,900	4,180	1,240	2,270
31	2,070	-----	2,290	5,790	-----	6,550	-----	34,300	-----	3,740	1,240	-----
TOTAL	69,500	62,086	72,780	197,840	177,190	186,860	244,940	959,270	1,059,8M	248,900	64,600	74,580
MEAN	2,242	2,070	2,348	6,382	6,328	6,028	8,165	30,940	35,330	8,029	2,084	2,486
MAX	4,140	2,740	5,660	23,000	11,000	9,190	13,000	56,200	62,300	18,200	3,470	4,660
MIN	1,670	986	1,140	1,290	4,320	4,200	6,050	8,110	21,900	3,740	1,240	1,260
CFSM	.40	.37	.42	1.14	1.13	1.08	1.46	5.54	6.33	1.44	.37	.45
IN.	.46	.41	.49	1.32	1.18	1.25	1.63	6.40	7.07	1.66	.43	.50
AC-FT	137,900	123,100	144,400	392,400	351,500	370,600	485,800	1,903M	2,102M	493,700	128,100	147,900

CAL YR 1969 TOTAL 3,470,316 MEAN 9,508 MAX 46,100 MIN 986 CFSM 1.70 IN 23.14 ACFT 6,883,000
WAT YR 1970 TOTAL 3,418,346 MEAN 9,365 MAX 62,300 MIN 986 CFSM 1.68 IN 22.79 ACFT 6,780,000

PEAK DISCHARGE (BASE, 30,000 CFS)

M Expressed in thousands.

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
5- 7	1530	10.99	30,200	6- 6	1000	16.44	68,400
5-27	0730	15.35	60,100				

CLEARWATER RIVER BASIN

263

13340600 North Fork Clearwater River near Canyon ranger station, Idaho

LOCATION.--Lat 46°50'26", long 115°37'11", in SE¼NE¼ sec.6, T.40 N., R.7 E., Clearwater County, Clearwater National Forest, on left bank immediately upstream from forest road bridge, 0.1 mile upstream from Beaver Creek, 1.7 miles downstream from Canyon ranger station, and at mile 58.0.

DRAINAGE AREA.--1,360 sq mi, approximately.

PERIOD OF RECORD.--April 1967 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,660.00 ft above mean sea level.

EXTREMES.--Current year: Maximum discharge, 20,500 cfs June 7 (gage height, 14.53 ft); minimum, 444 cfs Nov. 28 (gage height, 6.16 ft).

Period of record: Maximum discharge, 22,000 cfs May 23, 1967 (gage height, 15.28 ft); minimum, 444 cfs Nov. 28, 1969 (gage height, 6.16 ft).

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

Rating tables (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 30 to Dec. 6, Jan. 6-10)

Oct. 1 to Jan. 2			Jan. 3 to Sept. 30		
6.2	444		6.4	574	10.0 6,600
7.0	1,050		7.0	1,100	12.0 12,000
8.0	2,240		8.0	2,420	14.1 19,000
8.7	3,420				

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1,510	892	600	933	2,130	2,080	2,200	2,920	10,500	4,670	1,520	950
2	1,660	891	660	856	2,050	2,010	2,290	3,780	14,000	4,350	1,490	854
3	1,510	853	770	836	1,930	1,810	2,110	5,370	17,200	4,060	1,490	791
4	1,110	834	820	774	1,810	1,780	2,080	7,080	18,000	3,830	1,430	910
5	984	911	840	632	1,700	1,680	2,390	9,370	18,300	3,600	1,370	1,120
6	912	1,050	830	600	1,600	1,610	2,870	11,900	18,800	3,400	1,380	1,030
7	871	937	798	580	1,710	2,260	3,990	10,600	18,000	3,150	1,320	1,690
8	873	890	775	720	1,850	2,540	3,480	10,400	15,600	3,040	1,250	1,550
9	1,190	851	767	1,000	1,770	2,130	3,320	10,200	15,100	2,850	1,240	1,130
10	1,310	835	767	1,500	1,660	1,990	4,600	10,000	13,300	2,710	1,210	1,010
11	1,110	860	744	1,300	1,630	1,950	4,890	8,810	11,200	2,660	1,180	950
12	970	881	823	1,050	1,700	1,990	4,310	7,940	9,660	2,520	1,140	900
13	875	947	1,160	1,110	2,400	1,990	3,910	7,140	9,290	2,870	1,110	900
14	831	894	1,190	1,690	2,390	2,110	3,700	6,570	10,200	3,020	1,090	910
15	836	866	1,100	2,510	2,320	2,660	3,320	6,970	12,100	2,450	1,090	900
16	829	905	916	2,260	3,520	2,960	3,090	8,700	9,400	2,310	1,090	920
17	838	917	839	1,730	4,780	2,900	3,050	12,700	9,100	2,280	1,030	920
18	828	819	898	1,540	4,080	2,620	3,110	14,600	9,100	2,110	1,010	970
19	796	808	933	1,520	3,320	2,450	3,170	14,400	9,200	2,010	980	1,330
20	786	808	1,160	2,280	2,850	2,390	3,040	15,800	9,100	1,920	1,010	1,140
21	790	758	1,830	2,610	2,590	2,320	2,850	14,900	8,930	1,850	970	1,060
22	790	826	3,270	2,900	2,450	2,250	2,870	15,100	8,580	1,780	930	1,100
23	790	853	2,070	4,710	2,350	2,200	2,870	14,600	7,990	1,740	920	1,850
24	915	796	1,620	6,460	2,280	2,360	3,280	15,300	7,330	1,690	910	1,430
25	1,030	734	1,280	6,600	2,250	2,370	3,620	16,100	6,670	1,650	882	1,080
26	896	664	1,140	4,690	2,230	2,280	3,230	17,900	6,060	1,830	854	1,000
27	849	609	1,240	3,930	2,200	2,200	3,130	17,800	5,790	1,920	891	940
28	946	480	1,150	3,210	2,150	2,360	3,000	15,100	6,110	1,990	891	930
29	961	523	1,050	2,690	-----	2,450	2,830	13,300	5,260	1,930	872	910
30	900	560	1,030	2,310	-----	2,370	2,760	12,300	5,180	1,690	826	900
31	889	-----	1,020	2,040	-----	2,230	-----	11,400	-----	1,600	817	-----
TOTAL	30,385	24,452	34,090	67,571	65,700	69,300	95,360	349,050	325,050	79,480	34,193	32,075
MEAN	980	815	1,100	2,180	2,146	2,235	3,179	11,260	10,840	2,564	1,103	1,069
MAX	1,660	1,050	3,270	6,600	4,780	2,960	4,890	17,900	18,800	4,670	1,520	1,850
MIN	786	480	600	580	1,600	1,610	2,080	2,920	5,180	1,600	817	791
CFSM	.72	.60	.81	1.60	1.73	1.64	2.34	8.28	7.97	1.89	.81	.79
IN.	.83	.67	.93	1.85	1.80	1.90	2.61	9.54	8.89	2.17	.94	.88
AC-FT	60,270	48,500	67,620	134,000	130,300	137,500	189,100	692,300	644,700	157,600	67,820	63,620

CAL YR 1969 TOTAL 1,301,079 MEAN 3,565 MAX 16,800 MIN 480 CFSM 2.62 IN 35.58 AC-FT 2,581,000
WTR YR 1970 TOTAL 1,206,706 MEAN 3,306 MAX 18,800 MIN 480 CFSM 2.43 IN 33.00 AC-FT 2,394,000

PEAK DISCHARGE (BASE, 12,000 CFS).--May 27 (0115) 20,000 cfs (14.40 ft); June 7 (0145) 20,500 cfs (14.53 ft).

CLEARWATER RIVER BASIN

13341050 Clearwater River near Peck, Idaho

LOCATION.--Lat 46°30'00", long 116°23'30", in NE¼ sec.1, T.36 N., R.1 W., Nez Perce County, on left bank, 2 miles upstream from Big Canyon Creek, 2.2 miles northeast of Peck, 3 miles downstream from North Fork Clearwater River, and at mile 37.4.

DRAINAGE AREA.--8,040 sq mi, approximately.

PERIOD OF RECORD.--October 1964 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 930 ft (from topographic map).

AVERAGE DISCHARGE.--6 years, 15,100 cfs (25.50 inches per year, 10,940,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 94,900 cfs June 6 (gage height, 20.28 ft); minimum, 1,630 cfs Nov. 30 (gage height, 2.70 ft).

Period of record: Maximum discharge, 102,000 cfs Dec. 23, 1964 (gage height, 22.0 ft, from floodmark); maximum gage height, 25.00 ft Dec. 28, 1967 (ice jam); minimum discharge, 1,630 cfs Nov. 30, 1969, (gage height, 2.70 ft).

Flood of June 8, 1964, reached a stage of 23.95 ft, from floodmark (discharge, 118,000 cfs), from rating extended above 89,100 cfs.

REMARKS.--Records excellent. Records of water temperatures for the water year 1970 are published in Part 2 of this report.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Jan. 19)

2.9	1,860	12.0	34,100
4.0	3,540	15.0	53,200
6.0	8,300	18.0	75,700
8.0	14,800	20.0	92,500
10.0	23,700		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,420	3,450	2,080	3,880	9,190	9,190	10,800	13,300	50,100	25,000	5,780	2,600
2	5,630	3,580	2,160	3,500	9,050	8,850	11,400	14,700	55,300	22,200	5,510	2,800
3	6,670	3,490	2,020	3,260	8,490	8,300	11,000	18,500	66,800	20,900	5,340	2,620
4	5,270	3,330	2,020	3,170	8,030	7,980	10,500	24,300	79,400	20,100	5,130	2,720
5	4,280	3,500	2,730	2,760	7,410	7,680	10,900	32,900	85,600	19,200	4,970	3,670
6	3,730	4,240	3,790	2,150	7,270	7,380	12,800	42,500	89,400	17,700	4,840	3,940
7	3,400	4,080	3,280	2,070	7,570	8,460	16,900	48,300	86,900	16,000	4,900	4,400
8	3,340	3,840	3,050	2,840	7,790	12,000	16,600	42,500	75,900	14,800	4,600	7,360
9	4,040	3,600	2,940	4,000	7,840	10,400	15,100	41,200	71,500	13,600	4,380	6,750
10	5,150	3,400	2,970	4,840	7,790	9,580	19,100	42,500	66,700	12,900	4,260	4,970
11	4,900	3,430	2,940	5,730	7,840	9,070	23,100	37,300	53,200	12,200	4,120	4,060
12	4,100	3,540	2,970	4,200	8,030	8,820	20,500	33,400	44,900	11,600	4,020	3,580
13	3,620	3,960	3,640	3,920	10,900	9,020	18,200	31,000	41,600	11,400	3,880	3,290
14	3,240	4,100	4,160	5,300	14,900	9,840	16,900	28,000	43,100	13,100	3,730	3,170
15	3,120	3,790	4,240	7,920	14,000	14,100	15,300	27,300	52,600	11,100	3,650	3,160
16	3,100	3,690	3,860	8,600	17,700	16,200	13,800	31,700	50,400	10,100	3,560	3,100
17	3,090	3,860	3,340	7,190	24,200	16,500	13,100	45,500	44,500	9,660	3,450	3,050
18	3,120	3,620	3,240	6,340	22,000	14,100	12,800	61,200	42,900	9,270	3,310	3,090
19	3,040	3,280	3,430	10,000	17,300	12,700	12,900	65,800	44,300	8,650	3,220	3,560
20	2,970	3,220	4,530	14,900	14,400	11,700	13,200	70,800	45,100	8,140	3,170	4,400
21	2,910	3,290	6,160	15,900	12,700	11,200	12,500	65,300	44,500	7,730	3,140	4,320
22	2,970	3,210	11,100	17,100	11,600	10,800	12,100	64,300	43,600	7,570	3,090	4,280
23	3,020	3,330	9,410	22,000	10,900	10,300	12,400	65,500	41,800	7,460	3,000	5,180
24	3,380	3,280	7,270	36,400	10,400	10,300	12,700	69,100	38,600	7,060	2,920	7,140
25	3,820	3,190	5,880	34,000	9,980	10,700	14,900	70,700	36,200	6,700	2,860	5,580
26	3,710	2,890	4,950	24,000	9,660	10,200	14,000	78,400	32,000	6,670	2,780	4,600
27	3,380	2,660	4,790	20,100	9,610	9,980	13,400	83,300	30,600	6,670	2,720	4,180
28	3,470	2,320	4,680	16,500	9,490	11,200	13,300	69,500	35,000	6,670	2,660	3,960
29	3,880	1,900	4,240	13,200	-----	13,100	12,800	60,400	30,500	7,540	2,600	3,730
30	3,620	1,870	4,020	11,200	-----	12,700	13,000	58,800	29,000	6,930	2,560	3,520
31	3,410	-----	3,960	9,780	-----	11,500	-----	51,900	-----	6,200	2,550	-----
TOTAL	117,800	100,940	129,850	326,750	316,040	333,850	426,000	1,489.9M	1,552.0M	364,820	116,700	122,780
MEAN	3,800	3,365	4,189	10,540	11,290	10,770	14,200	48,060	51,730	11,770	3,765	4,093
MAX	6,670	4,240	11,100	36,400	24,200	16,500	23,100	83,300	89,400	25,000	5,780	7,360
MIN	2,910	1,870	2,020	2,070	7,270	7,380	10,500	13,300	29,000	6,200	2,550	2,600
CFSM	.47	.42	.52	1.31	1.40	1.34	1.77	5.98	6.43	1.46	.47	.51
IN.	.55	.47	.60	1.51	1.46	1.54	1.97	6.89	7.18	1.69	.54	.57
AC-FT	233,700	200,200	257,600	648,100	626,900	662,200	845,000	2,955M	3,078M	723,600	231,500	243,500
CAL YR 1969	TOTAL 5,583,720		MEAN 15,300		MAX 69,500		MIN 1,870	CFSM 1.90	IN 25.84	ACFT 11,080,000		
WAT YR 1970	TOTAL 5,397,430		MEAN 14,790		MAX 89,400		MIN 1,870	CFSM 1.84	IN 24.97	ACFT 10,710,000		

13341300 Bloom Creek near Bovill, Idaho

LOCATION.--Lat 46°51'28", long 116°17'22", in SE¼NE¼ sec.35, T.41 N., R.1 E., Clearwater County, on right bank 200 ft upstream from mouth and 4.8 miles east of Bovill.

DRAINAGE AREA.--3.15 sq mi. Mean altitude, 3,700 ft.

PERIOD OF RECORD.--August 1959 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,950 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 4.91 cfs (21.17 inches per year, 3,560 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 35 cfs Feb. 17 (gage height, 2.35 ft); maximum gage height, 3.05 ft May 16, 17 (backwater from manmade dam); minimum discharge, 0.54 cfs Dec. 8 (gage height, 1.63 ft)..
Period of record: Maximum discharge, 151 cfs Dec. 23, 1964 (gage height, 3.17 ft) by slope-area measurement of peak flow; maximum gage height, 3.32 ft Mar. 25, 1964 (ice jam); minimum discharge, 0.3 cfs Aug. 8, 1963 (gage height, 1.54 ft).

REMARKS.--Records good except those for December, January, May, and June, which are fair. No regulation or diversion above station.

REVISIONS.--WRD Idaho 1968: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 26 to Dec. 7, Dec. 25, 28, 29, Jan. 1-15, 19, 20;
backwater from manmade dam May 16 to June 21)

1.5	0.40	1.9	8.2
1.6	.92	2.0	15
1.7	2.3	2.2	36
1.8	4.5		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.3	1.2	1.0	1.2	6.6	6.2	8.2	9.3	4.3	2.7	1.2	.74
2	1.7	1.2	.95	1.2	5.9	5.9	8.6	12	3.9	2.6	1.3	.73
3	1.4	1.1	.98	1.1	5.5	5.5	7.5	15	3.7	2.4	1.2	.76
4	1.3	1.2	1.0	.94	5.2	5.2	7.5	17	3.5	2.4	1.2	1.3
5	1.3	2.0	1.0	.83	5.0	5.0	9.0	18	3.3	2.3	1.2	1.1
6	1.2	1.4	.96	.75	5.0	5.0	12	16	3.1	2.2	1.1	1.2
7	1.2	1.3	.94	.72	5.0	7.5	14	15	3.0	2.1	1.1	3.8
8	1.9	1.2	.93	.80	4.7	6.2	12	12	2.9	2.1	1.1	1.3
9	1.6	1.2	.93	1.2	5.0	5.9	12	14	4.7	2.0	1.1	1.1
10	2.0	1.2	.93	2.3	5.2	5.5	15	12	3.4	2.0	.97	1.0
11	1.4	1.1	1.1	3.4	5.5	5.5	14	10	2.9	1.8	.96	.98
12	1.3	1.1	1.7	3.8	6.2	5.2	12	11	2.8	1.7	.91	.93
13	1.3	1.0	1.4	4.0	11	5.9	11	10	2.8	2.4	.91	.93
14	1.2	1.0	2.2	4.2	11	7.9	9.9	9.4	11	1.9	.90	.93
15	1.2	1.0	1.6	4.4	12	11	9.0	9.4	18	1.8	.95	.93
16	1.1	1.0	1.9	4.5	23	13	8.2	11	10	1.7	.92	.93
17	1.1	1.0	1.3	4.5	30	12	7.9	10	7.0	1.6	.91	.91
18	1.1	1.0	1.3	4.5	20	11	7.5	9.5	6.0	1.4	.90	.99
19	1.1	1.0	1.6	4.5	15	9.9	7.9	9.0	5.3	1.4	.91	1.0
20	1.1	1.0	2.8	9.0	12	9.0	7.5	8.5	4.8	1.4	.90	.94
21	1.1	1.1	5.0	11	11	7.9	7.2	8.0	4.4	1.4	.89	1.1
22	1.1	1.1	2.9	12	9.0	7.5	7.2	7.5	4.0	1.3	.89	1.5
23	1.1	1.1	2.3	19	8.2	7.2	6.9	7.0	3.7	1.3	.88	1.3
24	1.2	1.1	1.9	24	7.5	7.2	9.9	6.6	3.5	1.3	.87	1.1
25	1.2	1.0	1.7	18	7.2	6.9	12	6.2	3.1	1.5	.84	1.0
26	1.1	.98	1.6	13	6.9	6.6	11	6.0	3.0	1.3	.83	1.0
27	1.3	.94	1.4	12	6.6	6.6	8.4	5.8	4.0	1.3	.82	1.0
28	1.6	.90	1.4	9.9	6.2	10	8.0	5.6	3.3	1.8	.82	.94
29	1.4	.92	1.4	8.6	-----	9.9	7.8	6.0	2.9	1.5	.83	.93
30	1.3	.96	1.4	7.6	-----	9.4	8.2	7.0	2.8	1.3	.83	.93
31	1.2	-----	1.3	6.9	-----	8.6	-----	5.0	-----	1.2	.87	-----
TOTAL	41.4	33.30	48.82	199.84	261.4	236.1	287.3	308.8	141.1	55.1	30.01	33.30
MEAN	1.34	1.11	1.57	6.45	9.34	7.62	9.58	9.96	4.70	1.78	.97	1.11
MAX	2.3	2.0	5.0	24	30	13	15	18	18	2.7	1.3	3.8
MIN	1.1	.90	.93	.72	4.7	5.0	6.9	5.0	2.8	1.2	.82	.73
CFSM	.004	.004	.005	.02	.03	.02	.03	.03	.01	.006	.003	.004
IN.	.005	.004	.006	.02	.03	.03	.03	.04	.02	.007	.004	.004
AC-FT	82	66	97	396	518	468	570	613	280	109	60	66

CAL YR 1969 TOTAL 1,964.71 MEAN 5.38 MAX 36 MIN .76 CFSM .02 IN .23 AC-FT 3,900
WTR YR 1970 TOTAL 1,676.47 MEAN 4.59 MAX 30 MIN .72 CFSM .01 IN .20 AC-FT 3,330

PEAK DISCHARGE (BASE, 35 CFS).--Feb. 17 (0230) 35 cfs (2.35 ft).

CLEARWATER RIVER BASIN

13341400 East Fork Potlatch River near Bovill, Idaho

LOCATION.--Lat 46°50'08", long 116°23'26", in SW¼SW¼ sec.6, T.40 N., R.1 E., Latah County, on left bank 60 ft upstream from highway bridge and 1.5 miles south of Bovill.

DRAINAGE AREA.--41.6 sq mi. Mean altitude, 3,600 ft.

PERIOD OF RECORD.--September 1959 to current year.

GAGE.--Water-stage recorder. Altitude of gage is 2,800 ft (from topographic map).

AVERAGE DISCHARGE.--11 years, 59.1 cfs (19.29 inches per year, 42,820 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 645 cfs Feb. 17 (gage height, 4.59 ft); minimum, 5.2 cfs Nov. 20 (gage height, 1.51 ft).

Period of record: Maximum discharge, 1,740 cfs Dec. 23, 1964 (gage height, 8.19 ft); minimum, 3.7 cfs Aug. 23, 24, 25, 1966 (gage height, 1.48 ft).

REMARKS.--Records excellent except those for December to January, which are poor. No regulation or diversion above station.

REVISIONS.--WRD Idaho 1968: Drainage area.

Rating table (gage height, in feet, and discharge, in cubic feet per second)
(Stage-discharge relation affected by ice Nov. 20, Nov. 25 to Dec. 13, Dec. 24 to Jan. 22,
Jan. 31 to Feb. 1, Mar. 3-5)

1.5	5.0	3.0	157
1.7	10	3.5	287
2.0	28	4.0	453
2.5	78	4.2	518

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	11	10	11	54	76	111	121	47	27	12	6.8
2	26	10	9.8	11	48	72	133	149	42	25	12	6.6
3	16	10	9.5	9.8	44	69	111	189	39	23	13	6.6
4	12	10	10	9.2	41	65	107	226	36	21	11	9.2
5	10	20	10	8.3	38	62	126	266	34	20	10	12
6	9.6	18	9.2	10	37	61	159	269	32	19	10	10
7	9.3	14	9.8	13	38	118	198	257	30	18	9.6	38
8	13	12	9.0	15	41	104	157	191	29	17	9.3	17
9	18	11	10	35	43	85	159	211	47	16	9.3	11
10	23	11	9.8	70	48	81	251	181	40	15	9.0	9.9
11	16	10	10	60	52	76	221	151	32	15	8.8	9.1
12	12	10	25	40	60	73	177	151	29	14	8.5	8.7
13	10	10	45	45	133	88	153	157	29	20	8.2	8.5
14	10	9.9	69	60	133	115	144	130	73	21	8.2	8.7
15	10	10	83	120	133	179	124	123	157	16	7.9	8.7
16	9.9	10	40	100	379	201	115	126	98	14	7.6	8.6
17	9.6	10	46	80	515	179	113	136	74	14	7.4	8.7
18	9.6	10	30	60	254	140	108	128	62	13	7.4	9.0
19	9.3	9.3	43	74	166	123	116	116	55	12	7.4	10
20	9.3	10	105	92	133	115	111	107	49	12	7.3	9.2
21	9.3	10	153	110	115	107	107	98	44	12	7.1	11
22	9.3	11	80	150	107	102	107	91	40	12	7.1	12
23	9.3	11	48	330	101	98	101	83	36	12	7.0	19
24	10	11	26	393	93	101	131	76	33	11	6.8	12
25	11	10	18	235	90	98	136	70	31	12	6.7	10
26	9.9	9.6	16	131	89	92	130	66	28	14	6.6	9.9
27	9.9	9.0	14	161	89	89	123	60	38	13	6.3	9.7
28	14	8.5	13	104	81	159	118	56	40	15	6.3	9.4
29	16	9.0	13	79	-----	153	111	55	31	21	6.2	9.2
30	13	9.6	13	68	-----	136	115	64	29	14	6.4	9.4
31	12	-----	12	61	-----	118	-----	54	-----	13	6.6	-----
TOTAL	380.3	324.9	999.1	2,745.3	3,155	3,335	4,073	4,158	1,384	501	257.0	327.9
MEAN	12.3	10.8	32.2	88.6	113	108	136	134	46.1	16.2	8.29	10.9
MAX	26	20	153	393	515	201	251	269	157	27	13	38
MIN	9.3	8.5	9.0	8.3	37	61	101	54	28	11	6.2	6.6
CFSM	.29	.26	.77	2.13	2.71	2.59	3.26	3.22	1.11	.39	.20	.26
IN.	.34	.29	.89	2.45	2.82	2.98	3.64	3.72	1.24	.45	.23	.29
AC-FT	754	644	1,980	5,450	6,260	6,610	8,080	8,250	2,750	994	510	650

CAL YR 1969	TOTAL 25,056.7	MEAN 68.6	MAX 650	MIN 5.5	CFSM 1.65	IN 22.40	AC-FT 49,700
WTR YR 1970	TOTAL 21,640.5	MEAN 59.3	MAX 515	MIN 6.2	CFSM 1.43	IN 19.35	AC-FT 42,920

PEAK DISCHARGE (BASE, 380 CFS).--Jan. 24 (1800) 410 cfs (3.87 ft); Feb. 17 (0630) 645 cfs (4.59 ft).

13342500 Clearwater River at Spalding, Idaho

LOCATION.--Lat 46°26'55", long 116°49'35", in Indian allotment 198, NE¼SW¼ sec.22, T.36 N., R.4 W., Nez Perce County, Nez Perce Indian Reservation, on left bank 0.4 mile downstream from Lapwai Creek, 0.5 mile west of Spalding Post Office, 3,100 ft downstream from bridge on U.S. Highway 12, and at mile 11.6.

DRAINAGE AREA.--9,570 sq mi, approximately. Mean altitude, 4,360 ft.

PERIOD OF RECORD.--August 1910 to October 1913, October 1924 to January 1925, April 1925 to current year. Published as "near Lewiston" 1910-13, 1924-27. Records published for both sites March 1926 to September 1927.

GAGE.--Water-stage recorder. Altitude of gage is 770.5 ft (estimated from datum of gage 3,100 ft upstream). See WRD for Idaho 1966-68 for history of changes prior to Oct. 1, 1962.

AVERAGE DISCHARGE.--48 years (1910-13, 1925-70), 15,320 cfs (21.74 inches per year, 11,100,000 acre-ft per year); 15-year base period (1952-67), 15,970 cfs.

EXTREMES.--Current year: Maximum discharge, 92,900 cfs June 6 (gage height, 16.27 ft); minimum, 1,610 cfs Nov. 30 (gage height, 2.20 ft).
Period of record: Maximum discharge, 177,000 cfs May 29, 1948 (gage height, 23.76 ft); maximum gage height, 27.77 ft Feb. 5, 1963, from floodmark (ice jam); minimum daily discharge, 500 cfs Jan. 9, 1937, Dec. 1, 1952.
Flood of June 1894 reached a stage of 20.8 ft, site and datum in use 1924-26 (discharge, 136,000 cfs).

REMARKS.--Records excellent. Small diversions from tributaries. Records of chemical analysis and water temperatures for the water year 1970 are published in Part 2 of this report.

CORRECTIONS (WATER YEARS).--WSP 1737: 1927, 1935, 1943.

Rating table (gage height, in feet, and discharge, in cubic feet per second)

2.2	1,610	10.0	36,400
3.0	3,250	12.0	52,400
4.0	5,710	14.0	70,200
6.0	12,900	16.0	90,200
8.0	23,200		

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4,030	3,580	1,970	4,120	10,200	9,840	11,900	14,100	50,400	25,700	5,830	2,650
2	5,250	3,720	2,260	3,800	9,980	9,470	12,800	14,900	54,600	22,400	5,550	2,820
3	6,580	3,700	2,110	3,520	9,410	8,880	12,600	18,200	64,800	20,600	5,370	2,790
4	5,680	3,470	2,090	3,400	8,850	8,470	11,800	23,800	76,900	20,000	5,210	2,740
5	4,560	3,470	2,420	3,070	8,130	8,140	11,900	32,100	83,700	19,100	5,010	3,380
6	3,930	4,150	3,760	2,440	7,900	7,860	13,800	42,700	87,800	17,700	4,840	4,090
7	3,590	4,290	3,580	1,960	8,390	9,530	17,500	49,100	86,600	16,100	4,920	4,160
8	3,450	4,000	3,220	2,120	8,810	14,600	18,200	45,800	76,200	14,700	4,690	6,920
9	3,790	3,770	3,080	2,900	8,790	12,600	16,200	42,400	70,300	13,600	4,450	7,070
10	5,010	3,560	3,070	4,540	8,680	11,100	19,000	43,500	68,000	12,800	4,340	5,440
11	5,140	3,490	3,050	5,910	8,640	10,300	24,500	39,300	55,000	12,200	4,200	4,370
12	4,390	3,630	3,040	4,610	8,790	9,830	22,100	34,500	46,700	11,700	4,080	3,810
13	3,840	3,820	3,490	4,240	12,400	9,860	19,400	32,300	42,700	11,300	3,940	3,500
14	3,450	4,240	4,270	5,140	18,000	11,000	17,800	28,900	42,600	12,800	3,800	3,330
15	3,210	3,930	4,430	7,820	16,600	16,000	16,200	27,500	51,200	11,400	3,710	3,280
16	3,180	3,770	4,210	9,510	21,200	18,700	14,700	31,000	52,600	10,100	3,640	3,260
17	3,160	3,880	3,640	7,950	30,600	19,500	13,800	43,900	46,200	9,620	3,540	3,210
18	3,180	3,820	3,420	6,920	26,400	16,400	13,400	59,800	43,900	9,250	3,430	3,220
19	3,160	3,430	3,530	10,300	20,100	14,300	13,300	64,600	45,000	8,630	3,320	3,480
20	3,070	3,320	4,260	17,500	16,500	13,100	14,100	69,400	46,000	8,100	3,270	4,370
21	2,990	3,360	5,910	18,900	14,400	12,400	13,700	65,900	45,400	7,690	3,230	4,510
22	3,030	3,320	10,400	19,800	13,000	11,800	13,100	63,400	44,600	7,420	3,160	4,450
23	3,070	3,360	10,400	26,100	12,100	11,200	13,300	64,200	42,900	7,390	3,090	4,840
24	3,290	3,470	7,820	46,200	11,400	11,000	13,400	68,100	39,700	7,010	3,020	6,930
25	3,820	3,270	6,350	43,400	10,900	11,500	15,800	69,400	37,200	6,670	2,940	6,100
26	3,880	3,120	5,290	28,800	10,500	11,000	15,300	75,400	33,000	6,560	2,870	4,920
27	3,590	2,750	5,020	24,300	10,400	10,700	14,400	82,000	30,700	6,610	2,800	4,430
28	3,470	2,600	4,930	19,600	10,200	11,800	14,300	70,600	34,300	6,530	2,730	4,200
29	3,880	2,030	4,570	15,400	-----	14,800	13,900	61,000	32,200	7,310	2,690	3,960
30	3,860	1,790	4,270	12,800	-----	14,600	13,800	58,000	29,500	7,000	2,650	3,760
31	3,590	-----	4,200	11,100	-----	13,000	-----	53,300	-----	6,270	2,640	-----
TOTAL	120,120	104,110	134,060	378,170	361,270	373,280	456,000	1,489,000	1,560,700	364,260	118,960	125,990
MEAN	3,875	3,470	4,325	12,200	12,900	12,040	15,200	48,030	52,020	11,750	3,837	4,200
MAX	6,580	4,290	10,400	46,200	30,600	19,500	24,500	82,000	87,800	25,700	5,830	7,070
MIN	2,990	1,790	1,970	1,960	7,900	7,860	11,800	14,100	29,500	6,270	2,640	2,650
CFSM	.40	.36	.45	1.27	1.35	1.26	1.59	5.02	5.43	1.23	.40	.44
IN	.47	.40	.52	1.47	1.40	1.45	1.77	5.78	6.06	1.41	.46	.49
AC-FT	238,300	206,500	265,900	750,100	716,600	740,400	924,500	2,953M	3,096M	722,500	236,000	249,900
CAL YR 1969	TOTAL 5,918,650		MEAN 16,220		MAX 71,100		MIN 1,790		CFSM 1.69	IN 22.99	AC-FT 11,740,000	
WTR YR 1970	TOTAL 5,585,920		MEAN 15,300		MAX 87,800		MIN 1,790		CFSM 1.60	IN 21.70	AC-FT 11,080,000	

PEAK DISCHARGE (BASE, 50,000 CFS)

DATE	TIME	G. H.	DISCHARGE	DATE	TIME	G. H.	DISCHARGE
1-24	2400	11.75	50,400	6- 6	1300	16.27	92,900
5-27	1130	15.64	86,600				

SNAKE RIVER MAIN STEM

13343500 Snake River near Clarkston, Wash.

LOCATION.--Lat 46°25'41", long 117°09'51", in SE¼SE¼ sec.16, T.11 N., R.45 E., Whitman County, on right bank 2.3 miles upstream from Alpowa Creek, 7.0 miles downstream from Clarkston, and at mile 132.9.

DRAINAGE AREA.--103,200 sq mi, approximately.

PERIOD OF RECORD.--October 1915 to current year. Monthly discharge only for some periods, published in WSP 1317. Prior to October 1935, published as "at Riparia." Monthly discharge only October 1909 to September 1915, published in State Water-Supply Bulletin 6. Gage-height records collected at Riparia 1900-16 (fragmentary) are contained in reports of U.S. Weather Bureau.

GAGE.--Water-stage recorder. Datum of gage is 670 ft above mean sea level (Corps of Engineers bench mark). Prior to Oct. 1, 1935, nonrecording gage at Riparia 65.8 miles downstream at different datum.

AVERAGE DISCHARGE.--55 years, 49,210 cfs (35,650,000 acre-ft per year); 15-year base period (1952-67), 50,970 cfs.

EXTREMES.--Current year: Maximum discharge, 233,000 cfs June 7 (gage height, 32.58 ft); minimum, 17,900 cfs Aug. 31, Sept. 1 (gage height, 10.26 ft).

Period of record: Maximum discharge, 369,000 cfs May 29, 1948 (gage height, 40.36 ft, from high-water mark in well); minimum, 6,660 cfs Sept. 2, 1958 (gage height, 6.79 ft).

Flood of June 5, 1894, reached a stage of 24.7 ft, Riparia site and datum, determined from floodmarks by U.S. Weather Bureau (discharge, 409,000 cfs).

REMARKS.--Records excellent. Over 2,840,000 acres are irrigated above the station. Regulation from many storage reservoirs above station and fluctuations during low-flow periods from powerplants on Clearwater River at Lewiston, Idaho, and Snake River at Hells Canyon Dam 114.1 miles upstream. Records of chemical analyses for water year 1970 are published in Part 2 of this report.

REVISIONS (WATER YEARS).--WSP 463: 1916. WSP 933: 1937. WSP 1447: 1931(M), 1934(M).

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25,900	23,100	21,700	26,600	48,500	42,900	39,400	45,200	125,000	117,000	27,500	18,300
2	25,000	23,500	23,100	24,700	45,400	39,800	41,400	46,900	128,000	112,000	26,900	20,800
3	26,300	23,300	22,900	27,700	45,600	37,800	45,600	46,900	147,000	106,000	26,200	21,700
4	26,800	24,000	24,000	29,700	45,800	36,800	39,700	51,000	178,000	95,600	25,700	21,400
5	24,400	24,700	25,400	23,900	45,800	34,800	35,300	67,100	208,000	83,000	25,100	23,000
6	21,400	25,400	25,400	29,600	43,100	31,900	37,900	84,500	223,000	73,100	24,800	21,700
7	23,700	24,800	23,000	27,800	42,900	33,200	41,000	99,100	227,000	69,300	24,800	21,600
8	23,800	24,900	22,300	25,600	43,000	43,700	44,400	107,000	210,000	64,900	24,600	26,000
9	25,800	23,600	26,100	26,000	42,600	43,800	40,600	103,000	197,000	60,800	23,400	36,300
10	28,500	23,100	26,500	29,100	37,700	41,100	43,200	103,000	197,000	55,000	22,600	36,600
11	29,800	25,700	24,300	27,700	38,300	39,000	53,000	98,000	172,000	51,000	21,500	32,000
12	27,000	26,000	26,200	28,000	38,100	38,000	51,600	91,100	149,000	50,000	21,300	29,700
13	26,200	24,100	25,600	29,700	42,100	37,000	49,000	87,700	131,000	48,900	21,100	27,100
14	27,800	24,300	24,700	27,800	55,700	38,800	54,200	82,700	127,000	48,700	20,500	26,300
15	25,300	23,600	24,000	30,600	67,900	47,000	56,800	79,000	135,000	46,000	20,300	27,600
16	25,300	24,200	26,100	33,900	80,000	49,400	54,200	81,400	145,000	42,500	20,000	23,700
17	25,000	23,900	26,800	37,100	90,700	52,600	50,700	97,300	135,000	39,900	19,900	26,700
18	23,500	24,400	26,000	34,900	88,500	49,400	48,500	127,000	131,000	38,500	19,900	23,500
19	22,600	24,300	25,200	37,300	74,900	47,400	48,700	153,000	133,000	36,900	19,800	24,200
20	21,200	22,800	23,700	50,200	64,900	44,500	49,700	172,000	138,000	34,700	19,900	24,400
21	23,400	23,400	23,300	55,100	59,300	42,700	49,700	171,000	141,000	33,100	20,100	24,000
22	24,100	23,700	27,700	57,800	56,100	40,400	49,100	165,000	143,000	31,700	20,100	28,900
23	23,900	22,600	36,300	69,900	54,100	39,500	50,100	168,000	144,000	30,400	19,600	29,900
24	24,500	22,200	31,800	98,700	52,800	40,500	43,900	181,000	142,000	29,200	19,000	35,600
25	24,000	23,100	27,500	107,000	51,000	41,400	46,900	183,000	128,000	28,200	19,000	32,700
26	24,400	23,000	25,200	102,000	48,900	38,500	45,500	198,000	119,000	27,500	20,900	30,600
27	25,100	21,400	25,400	94,400	45,400	36,600	45,100	202,000	114,000	27,100	20,900	27,700
28	25,200	21,000	25,900	87,400	44,100	37,400	43,400	186,000	120,000	28,100	20,500	27,000
29	25,100	20,900	25,500	79,500	-----	42,900	46,700	163,000	125,000	29,000	20,100	27,200
30	24,100	20,800	25,000	73,900	-----	41,100	46,600	148,000	123,000	29,100	18,400	27,100
31	23,000	-----	25,800	56,200	-----	42,900	-----	135,000	-----	28,300	18,700	-----
TOTAL	772,100	705,800	792,400	1,489.8M	1,493.2M	1,272.8M	1,391.9M	3,722.9M	4,535.0M	1,595.5M	673,100	803,300
MEAN	24,910	23,530	25,560	48,060	53,330	41,060	46,400	120,100	151,200	51,470	21,710	26,780
MAX	29,800	26,000	36,300	107,000	90,700	52,600	56,800	202,000	227,000	117,000	27,500	36,600
MIN	21,200	20,800	21,700	23,900	37,700	31,900	35,300	45,200	114,000	27,100	18,400	18,300
AC-FT	1,531M	1,400M	1,572M	2,955M	2,962M	2,525M	2,761M	7,384M	8,995M	3,165M	1,335M	1,593M

CAL YR 1969 TOTAL 20,171,900 MEAN 55,270 MAX 182,000 MIN 17,100 AC-FT 40,010,000
WTR YR 1970 TOTAL 19,247,800 MEAN 52,730 MAX 227,000 MIN 18,300 AC-FT 38,180,000

M Expressed in thousands.

13345000 Palouse River near Potlatch, Idaho

LOCATION.--Lat 45°54'55", long 116°57'00", in NE¼NW¼ sec.10, T.41 N., R.5 W., Latah County, on left bank 20 ft downstream from bridge on U.S. Highway 95, 1.0 mile downstream from Deep Creek, 2.0 miles west of Potlatch, and at mile 132.2.

DRAINAGE AREA.--317 sq mi.

PERIOD OF RECORD.--October 1914 to September 1919, December 1966 to current year.

GAGE.--Water-stage recorder. Datum of gage is 2,483.10 ft above mean sea level (Idaho Department of Highways bench mark). October 1914 to September 1919 water-stage recorder at site 0.2 mile upstream at different datum.

AVERAGE DISCHARGE.--8 years (1914-19, 1967-70), 265 cfs (11.35 inches per year, 192,000 acre-ft per year).

EXTREMES.--Current year: Maximum discharge, 4,740 cfs Feb. 17 (gage height, 16.40 ft); minimum, 2.1 cfs Oct. 26; minimum gage height, 4.07 ft Nov. 28.

Period of record: Maximum discharge, 5,910 cfs Feb. 20, 1968 (gage height, 18.08 ft); minimum daily, 1.2 cfs Sept. 23, 24, 1967.

REMARKS.--Records good except those for winter period, which are poor. Low flows regulated at millpond in Potlatch. Small amounts of water diverted for sprinkle irrigation systems above gage.

Rating table (gage height, in feet, and discharge in cubic feet per second)
(Shifting-control method used Oct. 1-20 and Aug. 15 to Sept. 19; stage-discharge relation affected by ice Dec. 29 to Jan. 6)

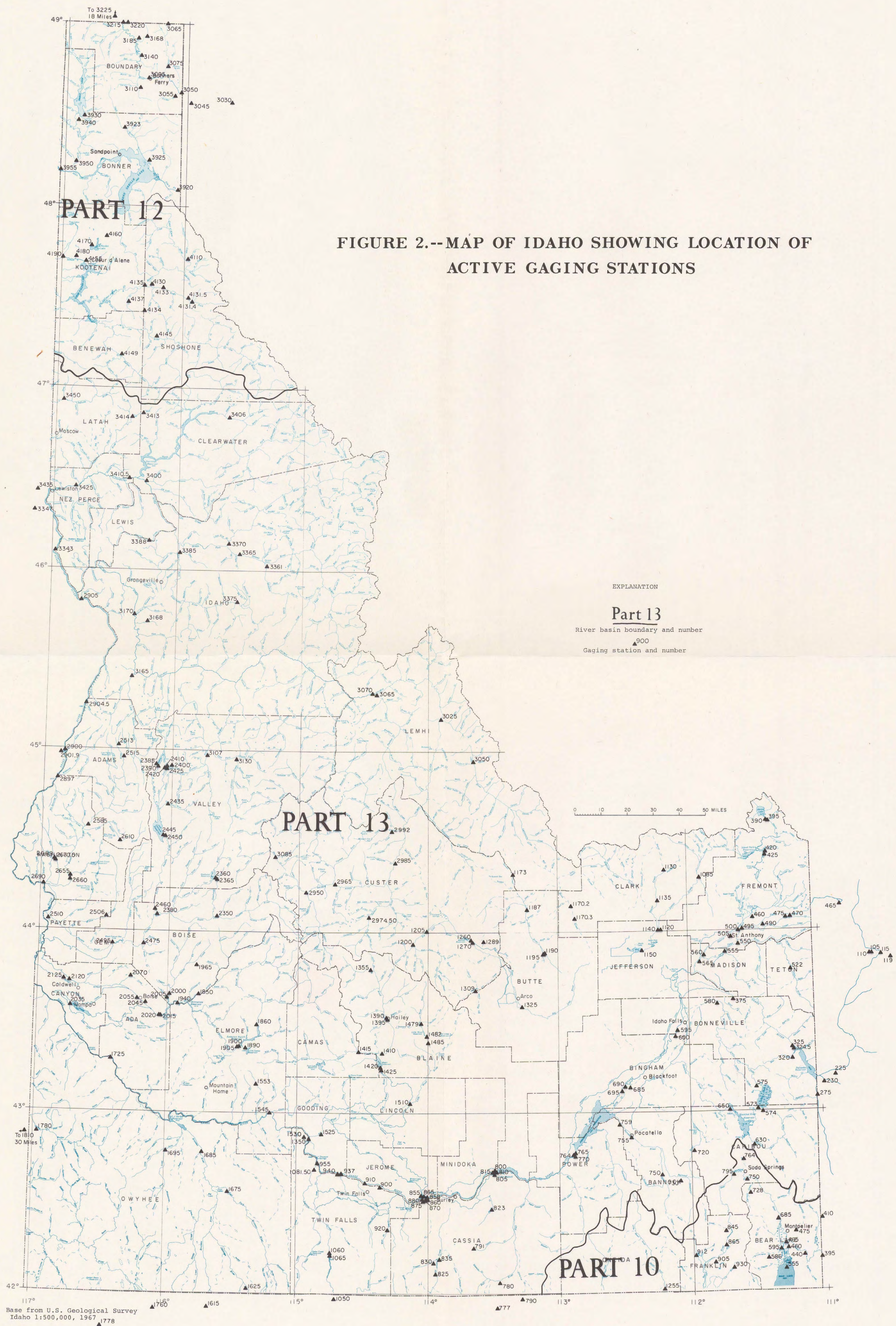
4.0	1.8	5.0	38.5	8.0	710
4.2	4.0	5.5	89.0	10.0	1,420
4.4	8.5	6.0	171	13.0	2,800
4.6	15.6	7.0	425	17.0	5,150

DISCHARGE, IN CUBIC FEET PER SECOND, WATER YEAR OCTOBER 1969 TO SEPTEMBER 1970

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.7	14	10	25	410	392	578	395	110	45	21	10
2	21	16	12	23	395	362	660	430	102	41	14	15
3	33	11	11	22	380	318	720	502	88	42	14	11
4	26	11	9.1	21	340	302	600	608	85	32	12	14
5	16	21	9.7	20	275	270	520	713	84	34	13	6.2
6	14	22	14	18	330	308	560	773	68	28	9.7	21
7	6.6	26	15	17	360	1,180	640	749	66	26	10	9.5
8	10	22	11	16	320	1,160	710	614	66	24	12	24
9	7.1	17	14	21	312	773	610	641	78	23	8.2	16
10	21	17	14	45	378	632	660	641	84	19	4.4	12
11	26	14	13	56	410	542	720	539	69	25	8.2	12
12	21	16	30	57	445	481	680	462	67	18	13	13
13	13	12	34	82	932	478	600	445	65	25	10	8.6
14	12	12	44	270	1,400	638	500	388	64	46	5.6	11
15	7.1	12	52	413	1,340	1,220	450	350	148	38	6.7	11
16	9.7	11	49	328	3,130	1,360	390	332	235	27	9.7	13
17	6.3	12	57	250	4,540	1,650	360	368	141	19	10	14
18	12	8.2	41	300	3,120	1,110	330	392	113	22	10	14
19	7.0	9.4	30	880	1,420	840	340	358	98	19	6.6	63
20	7.4	8.5	63	2,450	952	704	410	315	90	15	7.2	3.1
21	5.6	12	122	1,850	749	608	400	295	81	19	9.0	3.6
22	7.4	11	165	1,350	614	525	395	272	68	14	12	5.4
23	5.1	4.7	136	3,000	560	484	400	255	63	12	10	6.2
24	10	9.7	98	2,420	502	462	430	218	53	19	5.4	8.6
25	28	20	52	2,100	460	455	630	202	50	12	9.8	8.8
26	2.6	21	70	1,700	448	425	570	178	48	14	14	14
27	4.5	13	43	1,400	438	401	518	158	52	21	7.5	12
28	4.5	7.4	32	1,050	416	726	460	145	70	34	8.9	10
29	4.7	16	30	800	-----	1,020	413	134	58	41	9.3	10
30	18	12	28	560	-----	840	404	146	53	35	8.6	8.1
31	16	-----	27	450	-----	668	-----	136	-----	21	10	-----
TOTAL	387.3	418.9	1,335.8	21,994	25,376	21,334	15,658	12,154	2,517	810	309.8	388.1
MEAN	12.5	14.0	43.1	709	906	688	522	392	83.9	26.1	9.99	12.9
MAX	33	26	165	3,000	4,540	1,650	720	773	235	46	21	63
MIN	2.6	4.7	9.1	16	275	270	330	134	48	12	4.4	3.1
CFSM	.04	.04	.14	2.24	2.86	2.17	1.65	1.24	.26	.08	.03	.04
IN.	.05	.05	.16	2.58	2.98	2.50	1.84	1.43	.30	.10	.04	.05
AC-FT	768	831	2,650	43,630	50,330	42,320	31,060	24,110	4,990	1,610	614	770

CAL YR 1969 TOTAL 115,960.0 MEAN 318 MAX 2,840 MIN 2.6 CFSM 1.00 IN 13.60 AC-FT 230,000
WTR YR 1970: TOTAL 102,682.9 MEAN 281 MAX 4,540 MIN 2.6 CFSM .89 IN 12.05 AC-FT 203,700

PEAK DISCHARGE (BASE, 2,000 CFS).--Jan. 23 (1730) 3,190 cfs (13.71 ft); Feb. 17 (1700) 4,740 cfs (16.40 ft).



As the number of streams on which streamflow information is likely to be desired far exceeds the number of stream-gaging stations feasible to operate at one time, the Geological Survey collects limited streamflow data at sites other than stream-gaging stations. When limited streamflow data are collected on a systematic basis over a period of years for use in hydrologic analyses, the site at which the data are collected is called a partial-record station. Data collected at these partial-record stations are usable in low-flow or floodflow analyses, depending on the type of data collected. In addition, discharge measurements are made at other sites not included in the partial-record program. These measurements are generally made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

Records collected at partial-record stations are generally presented in two tables. However, no records at low-flow partial-record stations are available for the 1970 water year. A table of annual maximum discharge at crest-stage stations is given first, followed by a table of measurements made at miscellaneous sites for both low flow and high flow. In addition, two series of discharge measurements were made of Salmon Falls Creek during the year to determine the flow at various points on the creek. These measurements and computed gains in reaches are summarized in a third table.

Crest-stage partial-record stations

The following table contains annual maximum discharges for crest-stage stations. A crest-stage gage is a device which will register the peak stage occurring between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. Measurements made to rate the crest-stage stations are given in the list of miscellaneous measurements. The years given in the period of record represent water years for which the annual maximum has been determined.

Annual maximum discharge at crest-stage partial-record stations							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Bear River basin							
10043350	Sheep Creek tributary No. 2 near Border, Wyo.	Lat 42°13'05", long 111°06'43", near W½ corner sec.8, T.14 S., R.46 E., on relocated U.S. Highway 30N, 300 ft downstream from original crest-gage location, about 0.3 mile northwest of crest of hill, 2½ miles west of Border, Wyo., and 12 miles southeast of Montpelier.	0.34	1965-70	-	(a) 0.60 on Aux gage	1.4
10090800	Battle Creek tributary near Treasureton.	Lat 42°16'40", long 111°48'50", in SW¼ sec.20, T. 13 S., R.40 E., at mile 1.5, on side road from State Highway 34, and 2 miles northeast of Treasureton.	b4.5	1961-70	1-17-70	c6.84 D. gage	5
Tributaries between Great Salt Lake Desert and Bear River							
10172970	Rock Creek near Holbrook.	Lat 42°14', long 112°44', in NW¼ sec.9, T.14 S., R.32 E., at county road crossing 6.0 miles northwest of Holbrook.	44	1962-70	4-19-70	21.00	82
Kootenai River basin							
12310800	Trail Creek at Naples.	Lat 48°34'28", long 116°23'20", in SW¼SW¼ sec.6, T.60 N., R.1 E., at culvert crossing of Spokane International Railroad and ½ mile north of Naples School.	b16	1961-70	5- 6-70	c6.26	136
12321000	Smith Creek near Porthill.	Lat 48°57'40", long 116°33'20", in NE¼ sec.26, T.65 N., R.2 W., at U.S. Forest Service bridge, 1 mile south of Smith Creek ranger station, and 4 miles southwest of Porthill.	b70	1928-60+, 1962-70	5-25-70	b4.55	1,200
Pend Oreille River basin							
12392100	Trapper Creek near Clark Fork.	Lat 48°15'57", long 116°07'00", in NE¼ sec.30, T.57 N., R.3 E., at forest road and 9.8 miles north of Clark Fork.	1.12	1962-70	5-26-70	14.23	33
12392800	Hornby Creek near Dover	Lat 48°15'10", long 116°37'50", in SW¼SW¼ sec.30, T.57 N., R.2 W., at U.S. Highway 2 and 1.2 miles west of Dover.	b2.2	1961-70	4- 9-70	d10.89	d23
12393600	Binarch Creek near Coolin.	Lat 48°28'10", long 116°55'20", in NE¼ sec.13, T.59 N., R.5 W., at State Highway 57 and 3 miles west of Coolin.	10.4	1962-70	5- 6-70	d11.49	d49
Spokane River basin							
12413100	Boulder Creek at Mullan.	Lat 47°28'10", long 115°47'44", in NE¼ sec.34, T.48 N., R.5 E., at alley crossing and 150 ft above U.S. Highway 10 in Mullan.	3.13	1961-70	6-15-70	14.71	115
12413200	Montgomery Creek near Kellogg.	Lat 47°33'10", long 116°04'17", in SE¼NE¼ sec.33, T.49 N., R.3 E., at forest road and 2½ miles northeast of Kellogg.	4.53	1962-70	5- 6-70	-	e35
12415100	Cherry Creek near St. Maries.	Lat 47°19'00", long 116°36'47", in SE¼ sec.20, T.46 N., R.2 W., at State Highway 5 and 2 miles west of St. Maries.	7.07	1961-70	2-17-70	10.85	191
12415200	Plummer Creek tributary at Plummer.	Lat 47°20'20", long 116°53'14", in SW¼ sec.7, T.46 N., R.4 W., at U.S. Highway 95 and 0.2 mile north of Plummer.	2.10	1961-70	2-17-70	9.11	122
Salt River basin							
13027200	Bear Canyon Creek near Freedom, Wyo.	Lat 42°58'38", long 111°11'44", in SW¼ sec.16, T.5 S., R.45 E., Boise meridian, ½ mile upstream from confluence with Tincup River at State Highway 34, and 8 miles west of Freedom.	b3.3	1961-70	5-24-70	7.75	45
McCoy Creek basin							
13029500	McCoy Creek above reservoir near Alpine.	Lat 43°10'50", long 111°06'55", in SW¼ sec.6, T.3 S., R.46 E., at mile 1.5 and 5 miles west of Alpine.	108	1918+, 1934+, 1954-61+, 1962-70	5-21-70	6.70	1,430

Annual maximum discharge at crest-stage partial-record stations							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Indian Creek basin							
13030000	Indian Creek above reservoir, near Alpine.	Lat 43°15'35", long 111°04'00", near center of sec.9, T.2 S., R.46 E., ½ mile downstream from forks of creek, at mile 3.0, and 5½ miles north of Alpine.	36.8	1918†, 1954-61†, 1962-70	6-27-70	3.76	330
Elk Creek basin							
13030500	Elk Creek above reservoir, near Irwin.	Lat 43°19'25", long 111°06'40", in NW¼ sec.19, T.1 S., R.46 E., at mile 2.5 and 11 miles southeast of Irwin.	59.2	1918†, 1934†, 1954-61†, 1962-70	6- 4-70	4.53	669
Henry's Fork basin							
13038900	Targhee Creek near Macks Inn.	Lat 44°38'50", long 111°20'30", in NW¼NE¼ sec.11, T.15 N., R.43 E., at State Highway 87 crossing 1.5 miles west of junction of State Highway 87 and U.S. Highway 191 and 10.4 miles north of Macks Inn.	£20.8	1963-70	5-23-70 6	9.57	340 458 Revised 1975
13050700	Mail Cabin Creek near Victor.	Lat 43°29'50", long 110°59'00", in SW¼ sec.23, T.41 N., R.118 W., 6th P.M., Wyoming, above confluence with Trail Creek and 9.5 miles southeast of Victor.	3.27	1962-70	6-24-70	4.64	46
13050800	Moose Creek near Victor.	Lat 43°33'48", long 111°04'00", in NE¼ sec.30, T.3 N., R.46 E., at old highway bridge 3.7 miles southeast of Victor.	21.4	1962-70	6-27-70	11.31	370
13054400	Milk Creek near Tetonia.	Lat 43°53'00", long 111°20'40", in NE¼ sec.2, T.6 N., R.43 E., at State Highway 33 and 10.5 miles northwest of Tetonia.	£17.9	1962-70	5- 5-70	4.40	56
Willow Creek basin							
13057600	Homer Creek near Herman.	Lat 43°11'35", long 111°37'20", in NW¼ sec.2, T.3 S., R.41 E., at road crossing 11 miles west of Herman and 12 miles southeast of Bone.	26.4	1963-70	5-17-70	10.56	326
Snake River basin							
13061100	SNAKE River tributary near Osgood.	Lat 43°34'07", long 112°08'47", ½ mile west of northeast corner sec.30, T.3 N., R.37 E., 2.2 miles west of Osgood and 9 miles northwest of Idaho Falls.	7.64	1961-70	1-23-70	8.64	20
Blackfoot River basin							
13062700	Angus Creek near Henry.	Lat 42°49'43", long 111°20'15", in center of sec.8, T.7 S., R.44 E., at road crossing 1.1 miles northeast of Trail guard station and 11 miles southeast of Henry.	13.9	1964-70	5-18-70	12.94	342
Portneuf River basin							
13073700	Robbers Roost Creek near McCammon.	Lat 42°42'20", long 112°12'10", in SE¼ sec.23, T.8 S., R.36 E., at culvert on U.S. Highway 30N, 3.5 miles north of McCammon, and 6.5 miles south of Inkom.	b5.7	1961-70	5-21-70	7.82	23
13075300	East Fork Mink Creek near Pocatello.	Lat 42°44'20", long 112°23'30", in sec.8, T.8 S., R.35 E., 9 miles southeast of Pocatello.	14.7	1963-70	5-21-70	5.84	30
13075600	North Fork Pocatello Creek near Pocatello.	Lat 42°53'10", long 112°23'45", in NE¼ sec.20, T.6 S., R.35 E., 300 ft upstream from confluence with South Fork Pocatello Creek and 2 miles northeast of Idaho State University.	14.0	1961-70	5-21-70	7.25	16
Raft River basin							
13079070	Meadow Creek near Sublett.	Lat 42°14'30", long 113°05'06", in NW¼NE¼ sec.5, T.14 S., R.29 E., 1.2 miles downstream from Sweetzer Canyon and 6 miles southeast of Sublett.	37.7	1966-70	7-10-70	-	107
13079800	Heglar Canyon tributary near Rockland.	Lat 42°28'25", long 113°08'47", in SE¼SW¼ sec.11, T.11 S., R.28 E., 600 ft upstream from Heglar Canyon road crossing and 16 miles southwest of Rockland.	7.72	1958, 1962-70	7-22-70	12.60	300
Salmon Falls Creek basin							
13105300	Salmon Falls Creek tributary near Rogerson.	Lat 42°06'10", long 114°41'10", in SW¼ sec.22, T.15 S., R.15 E., at U.S. Highway 93, ½ mile north of railroad underpass, and 9 miles southwest of Rogerson.	b4	1961-70	-	-	(g)
Mud Lake-Lost River basins							
13112900	Huntley Canyon at Spencer.	Lat 44°21'50", long 112°11'00", in SW¼ sec.14, T.12 N., R.36 E., at railroad crossing opposite the Spencer Mercantile Store at Spencer.	3.91	1962-70	5-21-70	10.41	5
13117200	Main Fork near Goldburg.	Lat 44°24'06", long 113°24'18", in SW¼NE¼ sec.6, T.12 N., R.26 E., at forest road ½ mile upstream from confluence with Timber Creek and 12 miles east of Goldburg.	15.6	1960-61*, 1962-70	6- 5-70	4.69	178
13118400	Wet Creek below Coal Creek, near Mackay.	Lat 44°02'49", long 113°27'00", in SW¼ sec.2, T.8 N., R.25 E., at Pass Creek road 12 miles northeast of Mackay.	11.2	1959-61*, 1962-70	6- 5-70	-	e25

Annual maximum discharge at crest-stage partial-record stations							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Dis-charge (cfs)
Big Wood River basin							
13135200	Prairie Creek near Ketchum.	Lat 43°49'00", long 114°35'50", in NW¼ sec.31, T.6 N., R.16 E., at U.S. Highway 93 and 15 miles northwest of Ketchum.	b18	1962-70	6- 9-70	9.61	e19
13135800	Adams Gulch near Ketchum.	Lat 43°42'20", long 114°23'50", in SW¼ sec.2, T.4 N., R.17 E., 2.5 miles northwest of Ketchum.	10.9	1962-70	6- 2-70	-	e15
13141400	Deer Creek near Fairfield.	Lat 43°22'11", long 114°43'08", in SE¼SW¼ sec.31, T.1 N., R.15 E., at county road 4.1 miles northeast of Fairfield.	13.2	1961-70	5-22-70	-	e30
13145700	Schooler Creek near Gooding.	Lat 43°11'30", long 114°39'25", in SE¼NE¼ sec.3, T.3 S., R.15 E., at State Highway 46 and 18 miles north of Gooding.	2.22	1961-70	4- 7-70	3.01	17
13147300	Maldoon Creek near Garfield guard station.	Lat 43°34'08", long 113°54'50", in NE¼ sec.26, T.3 N., R.21 E., at road crossing 3 miles south of Garfield guard station.	12.2	1963-70	5-27-70	c3.83	82
Clover Creek basin							
13154000	Clover Creek near Bliss.	Lat 43°01'30", long 115°00'20", in SE¼SE¼ sec.34, T.4 S., R.12 E., just downstream from Calf Creek and 6½ miles northwest of Bliss.	140	1938-43†, 1957-62†, 1963-70	1-21-70	16.66	4,500
Little Canyon Creek basin							
13155200	Burns Gulch near Glenns Ferry.	Lat 43°11'42", long 115°19'59", in NE¼NW¼ sec.1, T.3 S., R.9 E., at road crossing 16 miles north of Glenns Ferry.	.76	1961-70	5-21-70	5.19	2.7
Bruneau River basin							
13170100	Sugar Creek tributary near Grasmere.	Lat 42°33'49", long 115°54'25", in NE¼ sec.18, T.10 S., R.5 E., at State Highway 51 and 13.5 miles north of Grasmere.	4.50	1961-70	6-30-70	13.45	85
Fossil Creek basin							
13172200	Fossil Creek near Oreana.	Lat 43°05'39", long 116°26'56", in NW¼NW¼ sec.10, T.4 S., R.1 W., at Murphy-Grand View road crossing 4 miles northwest of Oreana.	19.7	1961-70	-	-	(g)
Squaw Creek basin							
13172800	Little Squaw Creek tributary near Marsing.	Lat 43°21'50", long 116°55'17", in SW¼ sec.3, T.1 S., R.5 W., at Highway 95 and 14 miles southwest of Marsing.	1.81	1961-70	1-22-70	6.32	4
Boise River basin							
13184200	Roaring River near Rocky Bar.	Lat 43°42'20", long 115°27'50", in NE¼NE¼ sec.2, T.4 N., R.8 E., 6 miles upstream from mouth and 9 miles northwest of Rocky Bar.	23.3	1958, 1963-70	5-27-70	17.28	425
13184800	Beaver Creek near Lowman.	Lat 43°58'20", long 115°36'30", in SE¼ sec.3, T.7 N., R.7 E., at State Highway 21, at junction with road to Beaver Creek guard station, and 7½ miles south of Lowman.	b9.3	1962-70	5-19-70	8.55	155
13210300	Bryans Run near Boise.	Lat 43°27'02", long 116°04'08", in NE¼NW¼ sec.11, T.1 N., R.3 E., at U.S. Highway 30 crossing and 15 miles southeast of Boise.	f7.94	1961-70	1-22-70	10.08	44
Payette River basin							
13234300	Five Mile Creek near Lowman.	Lat 44°06'20", long 115°27'30", in NE¼ sec.24, T.9 N., R.8 E., at State Highway 21 and 8.5 miles east of Lowman.	b7.8	1962-70	6- 7-70	-	e180
13235100	Rock Creek at Lowman..	Lat 44°04'50", long 115°37'30", in NE¼ sec.33, T.9 N., R.7 E., on dirt road ½ mile west of Lowman.	14.6	1962-70	5-27-70	1.77	190
13237300	Danskin Creek near Grimes Pass.	Lat 44°03'36", long 115°49'06", in NW¼ sec.1, T.8 N., R.5 E., at Banks-Lowman road 2 miles northeast of Grimes Pass.	10.1	1962-70	1-24-70	10.83	38
13238300	Deep Creek near McCall.	Lat 45°06'00", long 116°02'18", in NW¼NE¼SW¼ sec.1, T.20 N., R.3 E., at forest road 13 miles north of McCall.	4.38	1962-70	6- 3-62 10-12-62 6- 7-64 6-11-65 5-28-66 6-20-67 6- 3-68 5-25-69 6- 6-70 5-23-70	14.26 14.32 15.16 14.61 14.23 14.66 13.70 14.47 16.07 -	f300 f305 f410 f340 f295 f350 f235 f320 540 e80
13245400	Tripod Creek at Smiths Ferry.	Lat 44°17'55", long 116°05'17", in SW¼ sec.10, T.11 N., R.3 E., at State Highway 15 at Smiths Ferry.	8.63	1962-70	5-23-70	-	e80
13248900	Cottonwood Creek near Horseshoe Bend.	Lat 43°53'35", long 116°12'09", in NW¼NE¼ sec.3, T.6 N., R.2 E., at Harris Creek road 1½ miles south of Horseshoe Bend.	6.53	1961-70	1-27-70	12.55	86
13250650	Fourmile Creek near Emmett.	Lat 44°04'40", long 116°29'10", in sec.32, T.9 N., R.1 W., 300 ft upstream from mouth and 14 miles north of Emmett.	b6.5	1962-70	1-27-70	5.38	350
13250700	Langley Gulch near New Plymouth.	Lat 44°53'59", long 116°48'30", in SE¼NW¼SW¼ sec.34, T.7 N., R.4 W., at Interstate 80N and 5 miles south of New Plymouth.	3.88	1961-70	-	-	(g)

Revised

Annual maximum discharge at crest-stage partial-record stations							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Weiser River basin							
13267100	Deer Creek near Midvale.	Lat 44°23'28", long 116°52'47", in NE¼ sec.12, T.12 N., R.5 W., at Mann Creek road 9 miles southwest of Midvale.	4.60	1962-70	1-27-70	16.50	156
Brownlee Creek basin							
13289600	East Brownlee Creek near Brownlee ranger station.	Lat 44°44'08", long 116°50'15", in SE¼ sec.8, T.16 N., R.4 W., at State Highway 71 and 0.2 mile west of Brownlee ranger station.	7.97	1962-70	6-24-65 1-29-67 5-26-70	15.77 12.58 14.07	f325 f114 207
Salmon River basin							
13292400	Beaver Creek near Stanley.	Lat 43°55'10", long 114°48'48", in NE¼NE¼SE¼ sec.21, T.7 N., R.14 E., at U.S. Highway 93 crossing about ¼ mile north of Beaver Creek store and 23.5 miles southeast of Stanley.	15.0	1963-70	6-29-70	12.81	155
13297100	Peach Creek near Clayton.	Lat 44°15'50", long 114°38'50", in SE¼SW¼ sec.24, T.11 N., R.15 E., 12.5 miles west of Clayton.	7.62	1962-70	6- 7-70	5.67	48
13297300	Holman Creek near Clayton.	Lat 44°14'52", long 114°31'43", in SE¼SW¼SW¼ sec.25, T.11 N., R.16 E., in Holman Creek campground 6.5 miles west of Clayton.	6.10	1962-70	6- 7-70	4.82	e9
13298300	Malm Gulch near Clayton.	Lat 44°21'18", long 114°15'45", in NE¼NE¼SW¼ sec.19, T.12 N., R.19 E., at U.S. Highway 93 and 9.5 miles northeast of Clayton.	9.38	1962-70	7-22-70	-	e40
13301700	Morse Creek above diversions, near May.	Lat 44°36'55", long 113°48'25", in SW¼ sec.24, T.15 N., R.22 E., 5.2 miles east of May.	18.0	1962-70	5-26-70	6.13	230
13301800	Morse Creek near May.	Lat 44°34'33", long 113°52'46", in NE¼ sec.5, T.14 N., R.22 E., at Pahsimeroi road crossing 2.5 miles southeast of May.	19.9	1962-70	5-27-70	4.82	81
13302200	Twelvemile Creek near Salmon.	Lat 45°00'39", long 113°55'36", in NE¼NW¼ sec.1, T.19 N., R.21 E., at U.S. Highway 93 and 12 miles south of Salmon.	22.0	1962-63*, 1964-70	5-27-70	5.88	48
13303100	Hood Gulch near Leadore.	Lat 44°46'25", long 113°15'05", in NW¼SW¼ sec.28, T.17 N., R.27 E., at State Highway 29 and 8.3 miles northeast of Leadore.	7.09	1962-70	(h)	(h)	(1)
13305700	Dahlonga Creek at Gibbonsville.	Lat 45°32'50", long 113°55'40", in NW¼ sec.36, T.26 N., R.21 E., at U.S. Highway 93 and 0.25 mile southwest of Gibbonsville.	b 32	1962-70	5-27-70	3.39	170
13305800	Hughes Creek near North Fork.	Lat 45°31'12", long 114°01'59", in SW¼NW¼SW¼ sec.6, T.25 N., R.21 E., above West Fork and Allen Creek and 8.0 miles northwest of North Fork.	15.7	1962-70	6- 6-70	5.35	194
13315500	Mud Creek near Tamarack.	Lat 44°59'48", long 116°20'54", in NW¼SW¼ sec.9, T.19 N., R.1 E., 0.5 mile upstream from Little Mud Creek and ¾ miles northeast of Tamarack.	15.1	1937-38†, 1946-59†, 1962-70	5- 6-70	-	e170
13316300	Indian Creek near Pollock.	Lat 45°16'50", long 116°21'12", in SE¼NE¼NE¼ sec.5, T.22 N., R.1 E., at forest road crossing 2½ miles south of Pollock.	2.66	1962-70	(h)	(h)	(h)
13317200	Johns Creek near Grangeville.	Lat 45°56'16", long 116°12'03", on section line, 0.4 mile north of southwest corner sec.15, T.30 N., R.2 E., at farm road 4 miles west of Grangeville.	6.67	1961-70	1-24-70	11.96	82
Clearwater River basin							
13336600	Swiftwater Creek near Lowell.	Lat 46°06'55", long 115°34'21", in SE¼SE¼NE¼ sec.16, T.32 N., R.7 E., at forest road 2¼ miles southeast of Lowell.	6.19	1962-70	1- 8-62 11-20-62 6- 8-64 1-29-65 2-20-68 5- 6-70 6- 6-70	13.50 13.40 13.45 14.29 13.56 12.84 12.87	f96 f90 f93 f150 f106 55 88
13336650	East Fork Papoose Creek near Powell ranger station.	Lat 46°32'07", long 114°45'52", in SE¼SW¼NE¼ sec.24, T.37 N., R.13 E., at forest road 3 miles northwest of Powell ranger station.	4.51	1962-70	5- 6-70 6- 6-70	12.84 12.87	55 88
13336850	Weir Creek near Powell ranger station.	Lat 46°27'31", long 115°01'51", near W¼ corner sec.13, T.36 N., R.11 E., 200 ft upstream from U.S. Highway 12 and 16 miles west of Powell ranger station.	12.2	1962-70	6- 6-70	17.24	207
13337200	Red Horse Creek near Elk City.	Lat 45°47'39", long 115°23'59", in SW¼SW¼NW¼ sec.6, T.28 N., R.9 E. (unsurveyed), at Elk City to Dixie road and 3.0 miles southeast of Elk City. At site 75 ft downstream at different datum prior to July 30, 1964.	9.13	1962-70	4-23-69 5-19-70	13.93 14.12	f95 116
13337700	Peasley Creek near Golden.	Lat 45°49'05", long 115°49'01", in SE¼ sec.27, T.29 N., R.5 E. (unsurveyed), at State Highway 14 and 6.6 miles west of Golden.	14.2	1962-70	5-19-70	9.93	95
13338200	Sally Ann Creek near Stites.	Lat 46°00'40", long 115°57'40", in SE¼ sec.21, T.31 N., R.4 E., at State Highway 13 and 5.8 miles south of Stites.	f13.9	1961-70	1-24-70	9.04	170
13339700	Canal Gulch Creek at Pierce ranger station.	Lat 46°29'50", long 115°47'30", in NW¼ sec.2, T.36 N., R.5 E., at Pierce ranger station ¼ mile north of Pierce.	f5.9	1962-70	2-17-70	13.69	128

Annual maximum discharge at crest-stage partial-record stations

Annual maximum discharge at crest-stage partial-record stations							
Station No.	Station name	Location	Drainage area (sq mi)	Period of record	Annual maximum		
					Date	Gage height (feet)	Discharge (cfs)
Clearwater River basin--Continued							
13339900	Deer Creek near Orofino.	Lat 46°29'30", long 116°10'30", in SW½ sec.3, T.36 N., R.2 E., at dirt road 3.0 miles east of Orofino.	b6.8	1962-70	2-19-68 1-24-70	7.94 7.96	f124 127
13341100	Cold Springs Creek near Craigmont.	Lat 46°14'10", long 116°31'06", NE¼ sec.1, T.33 N., R.2 W., at U.S. Highway 95 and 2.7 miles west of Craigmont.	8.07	1961-65, 1967-70	1-24-70	-	e21
13341500	Potlatch River at Kendrick.	Lat 46°37', long 116°39', in NW¼ sec.25, T.38 N., R.3 W., at Mill Street bridge in Kendrick.	425	1946-60+, 1961-70	1-24-70	10.57	7,920
Palouse River basin							
13344700	Deep Creek tributary near Potlatch.	Lat 47°01'28", long 116°52'57", in SE¼ sec.31, T.43 N., R.4 W., at U.S. Highway 95 and 7 miles north of Potlatch.	2.90	1961-70	2-17-70	12.03	69
13344800	Deep Creek near Potlatch.	Lat 46°57'38", long 116°56'04", in SW¼ sec.23, T.42 N., R.5 W., on farm road 3.3 miles north-west of Potlatch.	36.6	1961-70	1-23-70	11.16	830

* Miscellaneous measurements only.

† Operated as a continuous-record gaging station.

a Gage height 0.60 ft on auxiliary gage.

b Approximately.

c Referred to downstream gage.

d Maximum observed.

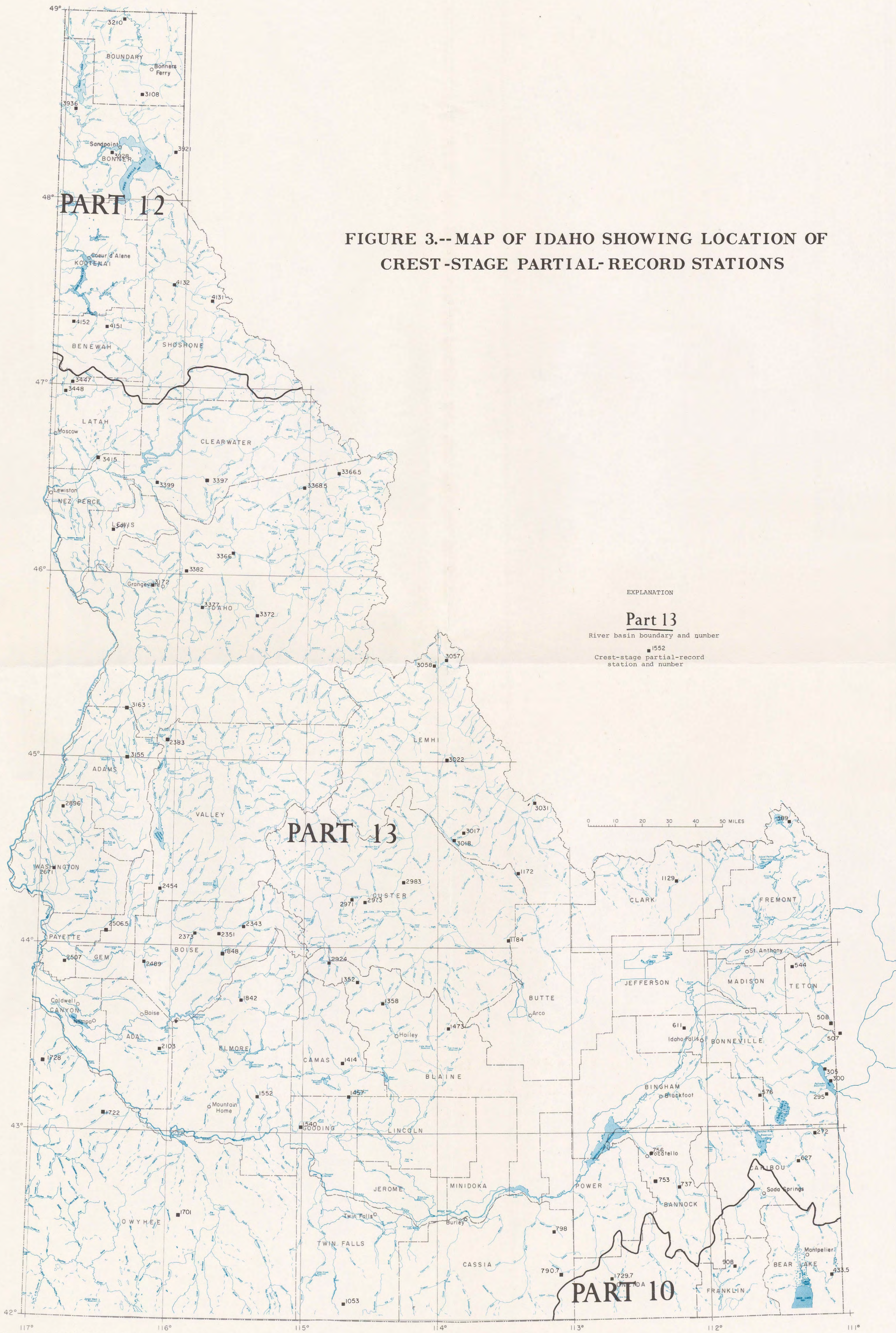
e Estimated.

f Revised.

g No evidence of flow during water year.

h Not determined.

i Less than 13 cfs, but greater than 2.1 cfs.



Measurements at miscellaneous sites

Measurements of streamflow at points other than gaging stations or partial-record stations are given in the following table. Those that are measurements of base flow are designated by an asterisk (*); measurements of peak flow by a dagger (†).

Discharge measurements made at miscellaneous sites during water year 1970.

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Bear River basin						
Thomas Fork 10042700	Bear River	Lat 42°12'56", long 111°04'17", in SW¼ sec.10, T.14 S., R.46 E., Bear Lake County, at U.S. Highway 30N crossing and 1.5 miles west of Border, Wyo.	-	-	4-23-70 6-25-70 8-17-70	a53.9 a38 a7.82
Sheep Creek tributary No. 2 10043350	Sheep Creek	Operated as a crest-stage station.	0.34	1965-69	4-23-70	0
Battle Creek tributary 10090800	Battle Creek	Operated as a crest-stage station.	c4.5	1961-69	12- 3-69 4-23-70 5-20-70 6-16-70	b.5 b1.5 b1.3 b.6
Malad River 10118200	Bear River	Lat 42°13'20", long 112°21'50", in sec.10, T.14 S., R.35 E., Oneida County, at springs 1 mile above dam on Samaria Reservoir No. 2, 5.8 miles northwest of Malad City, and 8.8 miles upstream from Little Malad River.	bd3.3	1932†, 1941-47†, 1948-69	10-24-69 12- 3-69 1-15-70 2-19-70 3-20-70 4-24-70 5-20-70 6-19-70 7-17-70 8-19-70 9-23-70	6.84 7.06 7.30 6.97 7.82 7.63 10.3 8.28 8.30 6.66 7.15
Tributaries between Great Salt Lake Desert and Bear River						
Rock Creek 10172970	Deep Creek	Operated as a crest-stage station.	44	1962-69	12- 3-69 5-20-70 6-19-70 7-17-70	b1.5 b2 b2 b1.5
Kootenai River basin						
Trail Creek 12310800	Deep Creek	Operated as a crest-stage station.	c16	1961-69	4-29-70 5- 7-70	30.2 105
Smith Creek 12321000	Kootenai River	Operated as a crest-stage station.	c70	1928-61†, 1963-69	5-27-70	1,020
Kootenai River 12322900	Columbia River	Lat 49°29'40", long 117°20'04", at Grohman Narrows, 2 miles below Nelson, British Columbia; measurements referred to gage No. 10 at Nelson (station 8NJ-9 of Water Survey of Canada).	17,700	1932-69	2-12-70 6-17-70 9-23-70	13,600 77,500 7,060
Pend Oreille River basin						
Trapper Creek 12392100	Lightning Creek	Operated as a crest-stage station.	1.12	1961-69	6- 4-70 7-17-70	27.6 b1.5
Dover Creek 12392800	Pend Oreille River	Operated as a crest-stage station.	c2.2	1961-69	3-16-70	16.4
Binarch Creek 12393600	Priest River	Operated as a crest-stage station.	10.4	1953, 1958, 1961-69	5- 6-70	45.0
Spokane River basin						
South Fork Coeur d'Alene River 12413080	Coeur d'Alene River	Lat 47°28'15", long 115°46'22", in NE¼NE¼ sec.35, T.48 N., R.5 E., Shoshone County, 0.9 mile east of Mullan at U.S. Highway 10 crossing and 1 mile upstream from mouth of Boulder Creek.	24.6	-	4- 2-70	22.8
Boulder Creek 12413100	South Fork Coeur d'Alene River	Operated as a crest-stage station.	3.13	1961-69	5-21-70	51.9
Canyon Creek 12413120	do.....	Lat 47°29'34", long 115°53'07", in NW¼SE¼ sec.24, T.48 N., R.4 E., Shoshone County, 2 miles north-east of Wallace and 2 miles upstream from mouth.	21.0	-	4- 2-70	21.5
Nine Mile Creek 12413130	do.....	Lat 47°28'33", long 115°55'12", in SW¼SW¼ sec.26, T.48 N., R.4 E., Shoshone County, 0.2 mile above mouth and 0.2 mile north of Wallace.	11.6	-	4- 2-70	15.5
Big Creek 12413185	do.....	Lat 47°31'48", long 116°03'05", in NE¼NE¼ sec.10, T.48 N., R.3 E., Shoshone County, 300 ft upstream from mouth, 2.8 miles northwest of Osborn, and 2.9 miles east of Kellogg.	30.7	-	4-20-70	44.6
Montgomery Creek 12413200	do.....	Operated as a crest-stage station.	4.53	1962-69	4-21-70	11.5
Cherry Creek 12415100	St. Joe River	Operated as a crest-stage station.	7.07	1961-69	1-22-70 1-23-70 3-17-70 6-22-70	16.3 41.0 32.4 a1.5
Plummer Creek tributary 12415200	Plummer Creek	Operated as a crest-stage station.	2.10	1961-69	1-22-70 1-23-70 2-18-70 3-17-70 6-22-70	6.4 23.9 a3.0 6.9 0
Salt River basin						
Bear Canyon Creek 13027200	Tincup River	Operated as a crest-stage station.	3.3	1961-69	5-25-70 6-22-70	23.5 b8

See footnotes at end of table, page 297.

Discharge measurements made at miscellaneous sites during water year 1970						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
McCoy Creek basin						
McCoy Creek 13029500	Snake River	Operated as a crest-stage station.	108	1917-18# 1934# 1953-61# 1962-69	6- 3-70	642
Indian Creek basin						
Indian Creek 13030000	Snake River	Operated as a crest-stage station.	36.8	1917-18# 1936, 1953-61# 1962-69	5-21-70 6-11-70 6-23-70	b18 125 253
Elk Creek basin						
Elk Creek 13030500	Snake River	Operated as a crest-stage station.	59.2	1904, 1917-18# 1934# 1953-61# 1962-69	6-11-70 6-24-70	416 518
Snake River basin						
Great Feeder Canal 13038000	Snake River	Lat 43°38'20", long 111°42'55", 800 ft south of N½ cor. of sec.35, T.4 N., R.40 E., Jefferson County, at head 3 miles east of Ririe.	-	1923-27#	4-27-70 5-22-70 7- 8-70 8-28-70	761 2,740 3,720 3,430
Snake River 13038500	Columbia River	Lat 43°43'50", long 111°52'05", in SE¼SE¼ sec.28, T.5 N., R.39 E., on the Madison-Jefferson County line, 0.3 mile northeast of Lorenzo.	5,810	1919, 1924-27#	4- 9-70 7- 8-70 8-28-70	1,150 10,500 3,960
Henrys Fork basin						
Targhee Creek 13038900	Henrys Lake	Operated as a crest-stage station.	20.5	1904,1924, 1929-34, 1962-69	5-14-70 6-17-70	b3.5 84.3
Big Springs 13040500	Henrys Fork	Lat 44°29'52", long 111°15'33", in NW¼SE¼NE¼ sec.33, T.14 N., R.44 E., Fremont County, Targhee National Forest, at site of former gaging station, 0.2 mile downstream from road bridge, and 0.5 mile southeast of Big Springs railroad station.	-	1922, 1924-25# 1926-28, 1931, 1946-50, 1959-65, 1967-69	9-28-70	178
Mail Cabin Creek 13050700	Trail Creek	Operated as a crest-stage station.	3.27	1962-69	5-26-70 6- 8-70 6-24-70	b13 37.1 45.8
Moose Creek 13050800	do.....	Operated as a crest-stage station.	21.4	1962-69	5-26-70 6- 8-70 6-24-70	118 182 280
Milk Creek 13054400	Teton River	Operated as a crest-stage station	14.1	1962-69	3-26-70 4- 8-70 5- 7-70 7-14-70	0 9.24 b.1 0
Teton River No. 1 13054820	Henrys Fork	Lat 43°54'30", long 111°32'19", in SE¼NE¼ sec.30, T.7 N., R.42 E., on Fremont-Madison County line, 3.5 miles northeast of Newdale.	-	-	8-12-70 9-14-70	727 689
Teton River No. 2 13054850	do.....	Lat 43°54'16", long 111°33'57", in NW¼SE¼ sec.25, T.7 N., R.41 E., Fremont County, 2.3 miles northeast of Newdale.	-	-	8-12-70 9-14-70	697 612
Teton River No. 3 13054870	do.....	Lat 43°56'02", long 111°36'31", near center of sec.15, T.7 N., R.41 E., Fremont County, 3.3 miles north of Newdale.	-	-	8-12-70 9-14-70	719 630
Hog Hollow 13054900	Teton River	Lat 43°56'04", long 111°36'46", in SW¼NW¼ sec.15, T.7 N., R.41 E., Fremont County, 3.4 miles north of Newdale.	-	-	8-12-70 9-14-70	23.0 19.7
Cross-Cut Canal 13054950	do.....	Lat 43°56'03", long 111°36'50", in SW¼NW¼ sec.15, T.7 N., R.41 E., Fremont County, 3.4 miles north of Newdale.	-	-	8-12-70 9-14-70	23.0 106
Texas Slough 13056600	Henrys Fork	Lat 43°47'17", long 111°53'44", in SE¼SW¼ sec.5, T.5 N., R.39 E., Madison County, 4.2 miles northwest of Thornton.	-	-	10-26-67 10-24-68 5-12-69 2- 6-70 6-11-70	b140 b100 184 34.5 310
Willow Creek basin						
Homer Creek 13057600	Grays Lake Outlet	Operated as a crest-stage station.	26.4	1962-69	6-15-70	32.8
Snake River basin						
Snake River tributary 13061100	Snake River	Operated as a crest-stage station.	7.64	1961-69	1-18-70 1-20-70 1-23-70 5- 5-70	b10 b14.4 b3.0 0
Blackfoot River basin						
Angus Creek 13062700	Blackfoot River	Operated as a crest-stage station.	13.9	1962-69	12- 1-69 5-19-70	b2 93.9

3-9-70 also

b=est.

Discharge measurements made at miscellaneous sites during water year 1970

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Snake River basin						
Danielsen Creek 13069540	Snake River	Lat 43°03'32", long 112°41'24", in NW¼SW¼ sec.23, T.4 S., R.32 E., Bingham County, 2.5 miles south of Springfield.	-	1926-29, 1932-67	4- 2-70 9- 5-70	a51.4 a66.4
Portneuf River basin						
Portneuf River 13072400	Snake River	Lat 42°45'00", long 112°00'00" in SW¼ sec.3, T.8 S., R.38 E., Caribou County, at Jim Mabey Ranch and 0.5 mile north of Pebble.	-	1923-25, 1968-69	10-23-69 12- 4-69 1-14-70 2-17-70 3-18-70 4-22-70 5-19-70 6-16-70 7-17-70 8-18-70 9-23-70	110 77.6 83.9 111 102 100 106 282 171 163 83.3
Robbers Roost Creek 13073700	Portneuf River	Operated as a crest-stage station.	c5.7	1961-69	4-24-70 5- 4-70 5-20-70 5-21-70 7-17-70	b3 6.88 13.5 18.4 b3
East Fork Mink Creek 13075300	Mink Creek	Operated as a crest-stage station.	14.7	1912, 1963-69	5- 4-70 5-21-70 6-19-70 7-17-70	b3.8 29.5 b6.5 b3
North Fork Pocatello Creek 13075600	Pocatello Creek	Operated as a crest-stage station.	14.0	1961-69	4-24-70 5- 4-70 5-21-70 7-17-70 6-10-70	2.69 7.77 12.0 b2.5 a45.9
Batise Springs 13075810	Portneuf River	Lat 42°54'55", long 112°31'19", in NW¼NE¼ sec.7, T.6 S., R.34 E., Power County, 5.0 miles northwest of Pocatello.	-	-	-	-
Wide Creek 13075920	do.....	Lat 42°57'30", long 112°34'10", in NW¼ sec.26, T.5 S., R.33 E., Power County, Fort Hall Indian Reservation, 8 miles northwest of Pocatello.	-	1926-29, 1932-67	4- 2-70 9- 5-70	a7.82 a54.7
Kinney Creek 13075970	do.....	Lat 42°59'10", long 112°35'05", near center of sec.15, T.5 S., R.33 E., Bannock County, 8 miles west of Fort Hall.	-	1926-29, 1932-67	4-14-70 9- 5-70	a20.0 a28.5
Spring Creek 13075981	do.....	Lat 43°05'45", long 112°30'15", in NE¼NW¼ sec.8, T.4 S., R.34 E., Bingham County, Fort Hall Indian Reservation, below Broncho road and 5 miles northwest of Fort Hall.	-	1968-69	12-18-69 3-20-70	320 310
Bannock Creek 13076200	Portneuf River	Lat. 42°53'10", long 112°38'30", near center of sec.20, T.6 S., R.33 E., Power County, Fort Hall Indian Reservation, at Highway 30N crossing, 10 miles west of Pocatello.	413	1962-63, 1965, 1969	12-15-69 6-10-70 8-11-70	a29.7 a52.8 a18
Snake River basin						
Aberdeen Wasteway 13076300	Snake River	Lat 42°55'27", long 112°48'38", in SE¼SE¼ sec.3, T.6 S., R.31 E., Bingham County, 1.5 miles southeast of Aberdeen.	-	-	3- 3-70 9- 5-70	a4.83 a64.0
Ruegar Springs 13076600	do.....	Lat 42°46'00", long 112°52'55", in SW¼ sec.31, T.8 S., R.31 E., Power County, at fish hatchery and 0.9 mile downstream from American Falls Dam	-	1927-29, 1932-53, 1961-69	5- 9-70 5-29-70 6-12-70 6-26-70 7-16-70 7-31-70 8-22-70 9- 4-70 9-25-70	b21 20 b20 21 b21 22 b21 21 b21
Rock Creek 13077650	do.....	Lat 42°39'10", long 113°01'00", in SW¼ sec.12, T.9 S., R.29 E., Power County, 1,000 ft from mouth in Register Rock State Park and 9 miles northwest of Rockland.	-	1969	12-15-69 6-10-70 8-11-70	39.7 b3 b4
Little Warm Creek 13077653	do.....	Lat 42°38'06", long 113°03'37", in NE¼SE¼SE¼ sec.16, Power County, at U.S. Highway 30N crossing and 15 miles west of American Falls.	-	-	7-16-70	350
Fall Creek 13077655	do.....	Lat 42°37'28", long 113°05'03", in NE¼SE¼ sec.20, T.9 S., R.29 E., Power County, 0.2 mile upstream from mouth, 4 miles southwest of Register Rock State Picnic Ground, and 16 miles southwest of American Falls.	-	1910,1929	7-10-70	†3,700
Raft River basin						
Stinson Creek 13079105	Raft River <i>Cassia Co</i>	Lat 42°15'05", long 113°39'20", in lot 2, sec.33, T.13 S., R.24 E., Cassia County, Sawtooth National Forest, at mouth, and 5 miles west of Elba.	4.5	1965-67	5-24-70	32.6
Heglar Canyon tributary 13079800	Heglar Canyon	Operated as a crest-stage station.	7.72	1961-69	2- 2-70 5- 5-70 6-10-70 7-15-70	0 0 0 0

Discharge measurements made at miscellaneous sites during water year 1970

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Raft River basin--Continued						
Raft River 13079900	Snake River	Lat 42°35'20", long 113°14'10", in NE¼NE¼ sec.1, T.10 S., R.27 E., Cassia County, 0.5 mile south of Yale (new townsite).	1,510	1929, 1965-69	2- 3-70 9-10-70	a1.53 a.88
Tributaries between Snake River at Milner and Salmon Falls Creek						
Devils Washbowl Spring 13089600	Snake River	Lat 42°35'18", long 114°20'45", in NE¼NE¼ sec.4, T.10 S., R.18 E., Jerome County, at old abandoned powerplant, about 0.2 mile upstream from mouth on right bank of Snake River, 0.5 mile upstream from Twin Falls, and 3.5 miles north of Kimberly.	-	1902, 1917, 1923-24, 1950-59, 1963-69	3-28-70 9-22-70	a15.7 a17.5
Unnamed Spring 13089900	do.....	Lat 42°35'17", long 114°21'12", in SW¼NW¼NE¼ sec.4, T.10 S., R.18 E., Twin Falls County, on left bank Snake River at boat ramp just above power plant and 3.2 miles north of Kimberly.	-	-	4- 9-70	ab1.2
Devils Corral Spring (upper outlet) 13090100	do.....	Lat 42°35'38", long 114°21'55", in SE¼SE¼ sec.32, T.9 S., R.18 E., Jerome County, 100 ft above point where flow cascades into right bank of Snake River at mile 617.1, about 2 miles upstream from Shoshone Falls and powerplant, and 4 miles north of Kimberly.	-	1902, 1923-24, 1939, 1950-59, 1963-69	3-23-70	a44.3
Devils Corral Spring (lower outlet) 13090250	do.....	Lat 42°36'01", long 114°22'30", in SE¼NW¼ sec.32, T.9 S., R.18 E., Jerome County, 0.1 mile upstream from mouth on right bank of Snake River, 0.7 mile northwest of upper outlet, and 4.5 miles north of Kimberly.	-	1902, 1923, 1950-59, 1963-69	3-23-70	a7.31
Unnamed Spring No. 1 13090300	do.....	Lat 42°36'03", long 114°23'36", in SW¼NE¼ sec.31, T.9 S., R.18 E., Jerome County, near mouth on right bank of Snake River, 0.5 mile upstream from Shoshone powerplant, and 4 miles northeast of Twin Falls.	-	1950-59, 1963-69	3-23-70	a1.81
Unnamed Spring No. 2 13090350	do.....	Lat 42°35'52", long 114°23'55", in NW¼SW¼ sec.31, T.9 S., R.18 E., Jerome County, on right bank of Snake River just above Shoshone Falls and 4 miles northeast of Twin Falls.	-	1950-59, 1963-69	3-23-70	ab4.80
Blue Lakes Spring Outlet 13091500	do.....	Lat 42°36'30", long 114°28'34", in SW¼SW¼ sec.28, T.9 S., R.17 E., Jerome County, at point of entry to right bank of Snake River at river mile 610.3 and 4 miles north of Twin Falls.	-	1902, 1910, 1913-14, 1917-47, 1950-59, 1963-69	3-28-70	be222
Warm Creek 13091700	do.....	Lat 42°37'15", long 114°29'55", in NW¼NW¼ sec.29, T.9 S., R.17 E., Jerome County, 0.6 mile upstream from point of entry to right bank of Snake River, 1.5 miles northwest of Blue Lakes Spring Outlet, and 4.6 miles northwest of Twin Falls.	-	1902, 1917, 1931, 1950-59, 1963-69	3-28-70	a14.7
Rock Creek 13093000	do.....	Lat 42°35'37", long 114°33'06", in SW¼SE¼SW¼ sec.36, T.9 S., R.16 E., Twin Falls County, just downstream of county road bridge at old station site, 2.7 miles south of mouth, 3.8 miles northwest of Twin Falls Post Office, and 4.2 miles east of Filer railroad station.	277	1922-47, 1968-69	3- 7-70 9-16-70	a46.5 a15.3
Ellisons Springs 13093300	do.....	Lat 42°38'13", long 114°33'40", in NE¼ sec.22, T.9 S., R.16 E., Jerome County, near entry to right bank of Snake River, 1.3 miles downstream from Rock Creek, and 6.5 miles south of Jerome.	-	1950-59, 1963-69	3-28-70	a2.13
Crystal Springs tributary No. 8 13093398	do.....	Lat 42°39'42", long 114°38'59", in NE¼SW¼NW¼ sec.12, T.9 S., R.15 E., Gooding County, 1 mile upstream from Niagara Springs, and 6.5 miles north of Filer.	-	-	3-27-70 9-21-70	a17.3 a25.3
Crystal Springs 13093400	do.....	Lat 42°37'36", long 114°38'32", in sec.12, T.9 S., R.15 E., Gooding County, a series of springs along a 0.6 mile reach of the right bank of Snake River, 1 mile upstream from Niagara Springs, and 6.5 miles north of Filer.	-	1902, 1917, 1919, 1924-25, 1931, 1950-59, 1963-69	3-27-70	487
Cedar Draw 13093500	do.....	Lat 42°37'25", long 114°39'12", in SW¼SW¼ sec.24, T.9 S., R.15 E., Twin Falls County, at road crossing, 2.5 miles upstream from mouth, 4.3 miles northwest of Filer and 5.6 miles east of Buhl.	-	1955-58, 1968-69	3- 7-70 9-15-70	a25.7 a88.8
Clear Lakes Springs Outlet 13094500	do.....	Lat 42°40'01", long 114°46'45", in SW¼SE¼ sec.2, T.9 S., R.14 E., Gooding County, at Clear Lakes powerplant of Idaho Power Co., and 4.5 miles north of Buhl.	-	1902, 1913-14, 1917-21, 1924, 1926, 1937, 1950-59, 1963-69	3-26-70	ae484

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1971
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Discharge measurements made at miscellaneous sites during water year 1970

Discharge measurements made at miscellaneous sites during water year 1970						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Tributaries between Snake River at Milner and Salmon Falls Creek--Continued						
Deep Creek 13095000	Snake River	Lat 42°37'05", long 114°50'40", in SE¼NW¼ sec.29, T.9 S., R.14 E., Twin Falls County, on right bank 0.2 mile downstream from Twin Falls Canal Co. diversion dam, 0.2 mile upstream from U.S. Highway 30, 4.5 miles northwest of Buhl, and 5 miles upstream from mouth.	-	1913, 1954, 1955-58†, 1968-69	3- 7-70 9-21-70	a7.49 a268
Briggs Creek 13095200	do.....	Lat 42°40'20", long 114°49'00", in NW¼SE¼ sec.4, T.9 S., R.14 E., Gooding County, 500 ft upstream from mouth on right bank of Snake River, 2 miles downstream from Clear Lakes Spring Outlet, and 6 miles northwest of Buhl.	-	1902, 1913, 1917-20, 1924-25, 1931, 1950-59, 1963-69	3-26-70 9-21-70	ae108 ae140
Banbury Springs 13095300	do.....	Lat 42°41'31", long 114°49'21", in SE¼NW¼ sec.33, T.8 S., R.14 E., Gooding County, at outlet on right bank of Snake River and 7 miles northwest of Buhl.	-	1902, 1913, 1917, 1919-20, 1924-25, 1950-59, 1963-69	3-24-70	abl18
Unnamed Spring 13095350	do.....	Lat 42°41'51", long 114°49'21", in SE¼SW¼ sec.28, T.8 S., R.14 E., Gooding County, on right bank of Snake River, 0.4 mile south of Blind Canyon Spring, and 7.5 miles northwest of Buhl.	-	1950-59, 1963-69	3-24-70	a4.26
Blind Canyon 13095400	do.....	Lat 42°42'12", long 114°49'20", in SE¼NW¼ sec.28, T.8 S., R.14 E., Gooding County, at outlet on right bank of Snake River, 1,300 ft upstream from Box Canyon Springs outlet, and 8 miles northwest of Buhl.	-	1902, 1917, 1919, 1950-59, 1963-69	3-24-70	all.7
Salmon Falls Creek basin						
Salmon Falls Creek tributary 13105300	Salmon Falls Creek	Operated as a crest-stage station.	c4	1962-69	3- 5-70	0
Mud Lake-Lost River basins						
Huntley Canyon 13112900	Beaver Creek	Operated as a crest-stage station.	3.91	1962-69	5- 7-70 6- 4-70 7- 7-70	b2.8 2.84 b2
Birch Creek diversion 13117023	from Birch Creek	Lat 44°08'40", long 112°54'10", in NE¼SE¼ sec.5, T.9 N., R.30 E., Clark County, near head on left bank, about 0.5 mile downstream from State Highway 28 bridge south of Blue Dome Inn and 33.4 miles west of Dubois.	-	1968-69	5- 5-70 7-10-70 8-11-70 9-18-70	5.64 6.49 6.42 6.32
Main Fork 13117200	Sawmill Creek	Operated as a crest-stage station.	15.6	1960-69	10-16-69 6- 4-70 7- 7-70	b4 128 28.4
Wet Creek 13118400	Little Lost River	Operated as a crest-stage station.	11.2	1959-69	5-14-70 6- 4-70 7- 7-70	6.46 19.0 9.38
Tributaries to Snake River from Thousand Springs to Big Wood River						
Sand Springs Creek 13132600	Snake River	Lat 42°43'36", long 114°50'00", in SE¼ sec.17, T.8 S., R.14 E., Gooding County, 0.5 mile upstream from mouth, on right bank of the Snake River, and 7 miles southeast of Hagerman.	-	1902, 1912-13, 1917-21, 1924-25, 1932, 1954-59, 1963-69	3-26-70	e85.8
Little Cottonwood Creek Springs Nos. 2 and 3 13132618	Little Cottonwood Creek	Lat 43°29'25", long 113°36'07", in SW¼NW¼ sec.21, T.2 N., R.24 E., Butte County, Craters of the Moon National Monument, at pipe in collection box approximately 1,000 ft northeasterly from springs and 2.8 miles northwest of Park Headquarters.	-	-	9-14-67 9-15-67 3-11-68 5-24-68	.050 .042 .053 .066
Little Cottonwood Creek Spring No. 1 13132619	do.....	Lat 43°29'25", long 113°36'07", in SW¼NE¼ sec.21, T.2 N., R.24 E., Butte County, Craters of the Moon National Monument, at pipe in collection box approximately 700 ft northerly from spring and 2.8 miles northwest of Park Headquarters.	-	-	9-14-67 9-15-67 3-11-68 5-24-68	.037 .090 .017 .066
Little Cottonwood Creek Spring No. 4 13132620	do.....	Lat 43°29'25", long 113°36'07", in SW¼NE¼ sec.21, T.2 N., R.24 E., Butte County, Craters of the Moon National Monument, at pipe in collection box approximately 900 ft southerly from spring and 2.8 miles northwest of Park Headquarters.	-	-	9-14-67 9-15-67 3- 1-68 3-11-68 5-24-68	.027 .022 .040 .027 .027
Little Cottonwood Creek Springs Nos. 1, 2, 3, and 4 bypass. 13132621	do.....	Lat 43°29'26", long 113°36'00", in SW¼NE¼ sec.21, T.2 N., R.24 E., Butte County, Craters of the Moon National Monument, at collection box 2.8 miles northwest of Park Headquarters.	-	-	3-11-68	.076

Discharge measurements made at miscellaneous sites during water year 1970						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Tributaries to Snake River from Thousand Springs to Big Wood River--Continued						
Little Cottonwood Creek 13132622	SNAKE RIVER	Lat 43°28'35", long 113°35'08", in SE¼NW¼ sec.27, T.2 N., R.24 E., Butte County, Craters of the Moon National Monument and 1.1 miles northwest of Park Headquarters.	-	-	9-14-68 3- 1-68 3-11-68 5-24-68	0.063 .218 .174 .380
Little Cottonwood Creek tributary 13132623	do.....	Lat 43°28'35", long 113°35'25", in SW¼NW¼ sec.27, T.2 N., R.24 E., Butte County, Craters of the Moon National Monument, 0.3 mile above mouth, and 1.8 miles northwest of Park Headquarters.	-	-	9-14-68 3- 1-68 3-11-68 5-24-68	.083 .170 .131 .189
Bickel Spring 13132790	do.....	Lat 42°45'29", long 114°51'19", in SE¼NW¼SE¼ sec.6, T.8 S., R.14 E., Gooding County, 0.2 mile upstream from mouth on right bank of Snake River and 4.6 miles southeast of Hagerman.	-	1968-69	3-30-70 9-21-70	ag20 ag18
Thousand Springs 13132800	do.....	Lat 42°45', long 114°51'. Springs enter right bank of Snake River between mile 154.05 on river profile, near line between secs.17 and 20, T.8 S., R.14 E., and mile 151.15 on river profile, about 200 ft upstream from line between sec.1, T.8 S., R.13 E., and sec.6, T.8 S., R.14 E., Gooding County, 6 miles southwest of Hagerman.	-	1950-59, 1963-69	3-25-70	f1,197
Riley Creek 13133800	do.....	Lat 42°45'46", long 114°51'31", in SW¼NE¼ sec.6, T.8 S., R.14 E., Gooding County, at Hagerman Hatchery of U.S. Fish & Wildlife Service, 100 ft downstream from small unnamed spring entering from right, 260 ft upstream from Riley Creek below Lewis Spring gaging station, 300 ft downstream from mouth of Lewis Creek, about 2 miles upstream from mouth, and 4.2 miles southeast of Hagerman.	-	1950-59, 1963-69	3-30-70	e60.9
Billingsley Creek 13134600	do.....	Lat 42°46'35", long 114°50'55", in SW¼SW¼NW¼ sec.32, T.7 S., R.14 E., Gooding County, 0.1 mile downstream from head of creek, 3.8 miles southeast of Hagerman, and about 7.5 miles upstream from mouth.	-	1902, 1917, 1931, 1950-59, 1963-69	3-29-70	e45.7
Do..... 13134800	do.....	Lat 42°50'10", long 114°53'40", in SW¼NE¼ sec.11, T.7 S., R.13 E., Gooding County, 700 ft northwest of U.S. Highway 30 bridge and 1.4 miles north of Hagerman.	-	1902, 1917, 1919, 1924-25, 1932, 1956-59, 1963-69	3-29-70	234
Birch Creek 13135100	do.....	Lat 42°51'10", long 114°53'30", in SE¼SE¼ sec.34, T.6 S., R.13 E., Gooding County, just downstream from left bank tributary, 0.5 mile upstream from entry to right bank of Snake River 0.8 mile south of Big Wood River, and 2.5 miles north of Hagerman.	-	1917, 1919, 1950-59, 1963-69	3-29-70	ae8.48
Big Wood River basin						
Prairie Creek 13135200	Big Wood River	Operated as a crest-stage station.	c18	1962-69	10-13-69 4-16-70 5-12-70 6- 2-70 7- 9-70	b10 9.66 16.8 81.9 57.8
Adams Gulch 13135800	do.....	Operated as a crest-stage station.	10.9	1962-69	10-14-69 6- 2-70 7- 9-70	b.2 10.9 2.72
Deer Creek 13141400	Camas Creek	Operated as a crest-stage station.	13.2	1961-69	10-18-70 4-17-70 5-11-70 6- 6-70 7-11-70	0 10.6 15.6 6.54 1.68
Schooler Creek 13145700	Thorn Creek	Operated as a crest-stage station.	2.22	1961-67, 1969	3-14-70 4-13-70 5-11-70	0 .96 .62
Muldoon Creek 13147300	Copper Creek	Operated as a crest-stage station.	12.2	1962-67, 1969	10-17-70 4-21-70 5-13-70 6- 5-70	b5 11.2 15.7 52.4
Cove Creek 13152900	Big Wood River	Lat 42°52'01", long 114°52'06", in SW¼SW¼SW¼ sec.25, T.6 S., R.13 E., Gooding County, at walkway across outlet of Cove Creek.	-	1969	4-10-70 9-21-70	ag22.6 ag1.5
Short Creek basin						
Short Creek 13153713	SNAKE RIVER	Lat 42°52'46", long 114°54'26", in NW¼NW¼NW¼ sec.27, T.6 S., R.13 E., Gooding County, on east side of new U.S. Highway 30 between Bliss and Malad Springs and approximately 1.5 miles north of Malad Springs.	-	-	3-18-70 9-21-70	al2.0 al3.3

Discharge measurements made at miscellaneous sites during water year 1970

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Clover Creek basin						
Clover Creek 13154000	Snake River	Operated as a crest-stage station.	140	1938-43, 1957-62, 1963-66, 1969	2-13-70 4-22-70	222 44.3
Little Canyon Creek basin						
Burns Gulch 13155200	Little Canyon Creek	Operated as a crest-stage station.	.76	1961-69	4- 6-70 4-30-70	1.72 bl.5
Snake River basin						
Snake River 13157100	Columbia River	Lat 42°56'35", long 115°31'52", in SE¼NE¼SW¼ sec. 32, T.5 S., R.8 E., Elmore County, at road bridge 4 miles west of Hammett.	-	-	7-31-69 9-16-69 10-27-69 11-26-69 12-30-69 1-21-70 2-16-70 4-20-70 5-11-70 6- 8-70	a6,810 a7,500 a9,620 a8,600 a8,990 a10,100 a7,120 a16,400 a18,500 a8,370
Bruneau River basin						
Sugar Creek tributary 13170100	Sugar Creek	Operated as a crest-stage station.	4.50	1961-69	11- 4-69 3-25-70 6-30-70	0 0 88
Fossil Creek basin						
Fossil Creek 13172200	Snake River	Operated as a crest-stage station.	19.7	1961-69	11- 4-69 3- 2-70	0 0
Snake River basin						
Snake River 13172645	Columbia River	Lat 43°20'28", long 116°36'02", in SE¼NE¼NW¼ sec. 17, T.1 S., R.2 W., Owyhee County, at Highway 45 crossing at Walters Ferry.	-	-	3-19-70 8- 5-70	8,890 7,200
Grouch Drain 13172652	Snake River	Lat 43°21'10", long 116°35'48", in SE¼SW¼NE¼ sec. 8, T.1 S., R.2 W., Canyon County, at Highway 45 crossing 0.8 mile north of Walters Ferry.	-	-	8- 4-70	8.6
Reynolds Creek basin						
Reynolds Creek 13172750	Snake River	Lat 43°21'36", long 116°39'07", in NW¼SE¼SE¼ sec. 2, T.1 S., R.3 W., Owyhee County, at State highway crossing 4.7 miles southeast of Givens Hot Springs.	-	-	3-19-70	16.2
Pumping diversion from Snake River near Givens Hot Springs						
Opalene ditch pump 13172780	Snake River	Lat 43°26'06", long 116°43'43", in SE¼NW¼SW¼ sec. 8, T.1 N., R.3 W., Owyhee County, 800 ft south-west of point of diversion, and 1.8 miles northwest of Givens Hot Springs.	-	-	8- 5-70	46.1
Squaw Creek basin						
Little Squaw Creek tributary 13172800	Squaw Creek	Operated as a crest-stage station.	1.81	1961-69	1-29-70	0
Snake River basin						
Snake River 13172850	Columbia River	Lat 43°32'54", long 116°47'57", in NW¼SW¼SE¼ sec. 34, T.3 N., R.4 W., Owyhee County, at State Highway 72 crossing at Marsing.	-	-	7-31-69 8-25-69 9-17-69 10-27-69 11-26-69 1-22-70 3-17-70 3-19-70 5-14-70 7-10-70 8- 5-70 9-25-70	7,750 6,970 9,250 10,700 9,650 15,000 8,600 9,090 18,200 8,700 6,540 10,500
Jump Creek 13172880	Snake River	Lat 43°33'59", long 116°55'13", in NE¼NE¼SW¼ sec. 27, T.3 N., R.5 W., Owyhee County, at U.S. Highway 95 crossing, and 3.5 miles south of Homedale.	-	-	3-19-70 8- 5-70	8.6 53.3
Horstman drain 13172885	Jump Creek	Lat 43°35'20", long 116°53'44", in SE¼SW¼SE¼ sec. 14, T.3 N., R.5 W., Owyhee County, 2.6 miles southeast of Homedale.	-	-	8- 5-70	28.9
Tributary drain to Horstman drain 13172888	Horstman drain	Lat 43°35'20", long 116°54'05", in SE¼SE¼SW¼ sec. 14, T.3 N., R.5 W., Owyhee County, 2.4 miles southeast of Homedale.	-	-	8- 5-70	39.0
Snake River 13172900	Columbia River	Lat 43°37'10", long 116°55'20", in SE¼SE¼SW¼ sec. 3, T.3 N., R.5 W., Owyhee County, at U.S. Highway 95 crossing at Homedale.	-	-	3-19-70 8- 5-70	9,080 6,700

Discharge measurements made at miscellaneous sites during water year 1970						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Snake River basin--Continued						
Fargo Wasteway 13172910	Snake River	Lat 43°37'24", long 116°55'14", in SE½NE½SW¼ sec. 3, T.3 N., R.5 W., at Highway 95 crossing 0.5 miles northeast of Homedale.	-	-	8- 4-70	14.4
Sucker Creek 13173500	do.....	Lat 43°37'04", long 116°57'14", in NE½NW½NE½ sec.8, T.3 N., R.5 W., Owyhee County, at State Highway 19 crossing and 0.7 mile west of Homedale.	-	-	3-19-70 8- 6-70	92.6 36.0
Allen drain 13173550	do.....	Lat 43°41'24", long 117°01'33", in NW½NW½NW¼ sec. 14, T.4 N., R.6 W., Canyon County, 6 miles west of Wilder.	-	-	8- 4-70	23.6
Snake River 13173600	Columbia River	Lat 43°43'52", long 117°04'15", in SE½SW½NW¼ sec. 23, T.21 S., R.46 E. (Willamette meridian), Malheur County, at bridge crossing, 0.5 mile south of Adrian, Ore., and at mile 402.	-	1969	3-19-70 8- 5-70	9,100 7,470
Owyhee River 13173620	do.....	Lat 43°47'03", long 117°03'16", in SW½NW½SW¼ sec. 36, T.20 S., R.46 E. (Willamette meridian), Malheur County, at State Highway 201 crossing, and 4.3 miles north of Adrian, Ore.	-	-	3-19-70 8- 5-70	1,650 40.9
South Boise drain 13173630	Snake River	Lat 43°46'27", long 117°00'40", in SW½SW½SW¼ sec. 12, T.5 N., R.6 W., Canyon County, 3.5 miles west of Parma.	-	-	8- 4-70	95.4
Boise River basin						
Roaring River 13184200	Middle Fork Boise River	Operated as a crest-stage station.	23.3	1958, 1963-69	5-27-70 7- 1-70	240 71.4
Beaver Creek 13184800	Crooked Creek	Operated as a crest-stage station.	c9.3	1961-69	5- 4-70 5-27-70 6-26-70	64.1 93.9 11.0
New York Canal 13203000	from Boise River	Lat 43°33'15", long 116°07'00", in SE½NE½ sec.32, T.3 N., R.3 E., Ada County, 1.8 miles downstream from head and 6 miles southeast of Boise Post Office.	-	1913, 1924, 1939-48+	3-31-70 3-31-70 4- 1-70	802 817 802
Do..... 13203100	do.....	Lat 43°34'19", long 116°15'10", in SW½SW½NW½NW¼ sec.29, T.3 N., R.2 E., Ada County, at South Curtis Road crossing and 4 miles southwest of Boise Post Office.	-	-	4- 1-70	799
Do..... 13203200	do.....	Lat 43°30'29", long 116°20'00", in SW½NW½SW¼ sec. 15, T.2 N., R.1 E., Ada County, at South Cloverdale Road crossing and 10 miles southwest of Boise Post Office.	-	-	4- 1-70	762
Do..... 13203300	do.....	Lat 43°29'28", long 116°25'33", in NW½SE½SW¼ sec. 23, T.2 N., R.1 W., Ada County, 0.3 mile downstream from State Highway 69 crossing and 0.4 mile west of Kuna Post Office.	-	-	4- 1-70	736
Do..... 13203400	do.....	Lat 43°30'15", long 116°34'19", in NW½SW½SW¼SW¼ sec. 15, T.2 N., R.2 W., Canyon County, at State Highway 45 crossing and 5.2 miles south of Nampa Post Office.	-	-	4- 1-70	758
Highland Valley Gulch near Boise 13203520	Boise River	Lat 43°33'15", long 116°05'15", in SE½SW¼ sec.23, T.3 N., R.3 E., Ada County, at old homestead 3 miles upstream from mouth and 7.4 miles southeast of Boise.	0.39	1959	1-26-70	h12
Bryans Run 13210300	Blacks Creek	Operated as a crest-stage station.	7.94 Revised 7.03	1961-68	2-27-69 7- 1-69 1-26-70	b.5 0 1.09
Tenmile Creek 13210655	Fifteenmile Creek	Lat 43°38'32", long 116°32'32", in SE½SE½NW¼ sec. 35, T.4 N., R.2 W., Canyon County, at road crossing 4 miles north of Nampa.	-	-	3-10-70	6.38
Fivemile Creek 13210780	Fifteenmile Creek	Lat 43°38'55", long 116°31'56", at SW corner of sec.25, T.4 N., R.2 W., Canyon County, 4.5 miles northeast of Nampa.	-	1965	12-28-69 2-16-70 3-10-70 7-31-70	a30.6 a35.0 29.9 a95.9
Mason Creek 13210970	Boise River	Lat 43°39'52", long 116°36'45", in NE½SE½SE½ sec.19, T.4 N., R.2 W., Canyon County, 2.8 miles south of Middleton.	-	-	3-10-70	54.8
Do..... 13210980	do.....	Lat 43°40'49", long 116°39'44", in NE½NE½SW¼ sec. 14, T.4 N., R.3 W., Canyon County, at county road crossing 1.0 mile northeast of Caldwell.	-	-	2-16-70 8- 3-70	a67.8 a219
Indian Creek 13211340	do.....	Lat 43°37'02", long 116°37'33", SW½SE½NW¼ sec.6, T.3 N., R.2 W., Canyon County, 4.5 miles northwest of Nampa.	-	-	3-10-70	56.1
Elijah drain 13211385	Wilson drain	Lat 43°36'52", long 116°37'55", in NE½SE½NE½ sec. 12, T.3 N., R.3 W., Canyon County, 4.0 miles northwest of Nampa.	-	-	3-10-70	38.0
Indian Creek 13211440	Boise River	Lat 37°39'59", long 116°41'25", in SW½NW½SW¼ sec. 22, T.4 N., R.3 W., Canyon County, at 6th Avenue crossing in Caldwell.	-	-	12-27-69 2-19-70 7-31-70	a218 a215 a241
Dixie Slough 13212880	do.....	Lat 43°42'45", long 116°52'15", in NW½NW½SW¼ sec. 6, T.4 N., R.4 W., Canyon County, 4 miles northeast of Wilder.	-	-	2-16-70 7-30-70	77.0 a112

Discharge measurements made at miscellaneous sites during water year 1970

Discharge measurements made at miscellaneous sites during water year 1970						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Boise River basin--Continued						
Boise River 13213000	Snake River	Lat 43°46'54", long 116°58'17", on line between sec.7 and 8, T.5 N., R.5 W., Canyon County, at road crossing 1.2 miles west of Parma.	-	1969	10-28-69 11-28-69 12-29-69 2-19-70 3-16-70 4-22-70 6-10-70 8-19-70	a1,140 a915 a860 a3,870 a2,840 a2,390 a2,790 a659
Do..... 13213030	do.....	Lat 43°48'55", long 117°01'10", in SE½SW¼NE¼ sec. 35, T.6 N., R.6 W., Canyon County, 150 ft above mouth and 3.5 miles northwest of Parma.	-	-	3-19-70 8- 5-70	2,630 787
Snake River basin						
Sand Hollow drain 13213080	Snake River	Lat 43°49'17", long 117°01'44", in NW¼NW¼NW¼ sec. 36, T.6 N., R.6 W., Canyon County, at Fort Boise Wildlife Management Headquarters and 4.3 miles northwest of Parma.	-	-	3-19-70 8- 5-70	201 183
Snake River 13213100	Columbia River	Lat 42°52'37", long 116°58'58", in SW¼NW¼NW¼ sec. 33, T.19 N., R.47 E., (Willamette meridian), Malheur County, at U.S. Highway 20-26 crossing on east edge of town at Nyssa, Ore.	-	-	3-19-70 8- 5-70	14,000 8,530
Do..... 13213150	do.....	Lat 44°01'31", long 116°56'03", in SE½SE½SW¼ sec. 2, T.18 S., R.47 E., (Willamette Meridian), Malheur County, at U.S. Highway 30 crossing about 1 mile east of Ontario, Ore.	-	-	3-19-70 8- 5-70	14,000 8,680
Malheur River basin						
Malheur River 13234000	Snake River	Lat 44°03'23", long 116°58'42", in NW¼SE½SW¼ sec. 28, T.17 S., R.47 E., (Willamette meridian), Malheur County, at Highway 201 crossing 1.5 miles north of Ontario, Ore.	-	1969	3-19-70 8- 5-70	267 249
Payette River basin						
Five Mile Creek 13234300	South Fork Payette River	Operated as a crest-stage station.	c7.8	1961-69	5-22-70 5-27-70	101 141
Rock Creek 13235100	do.....	Operated as a crest-stage station.	14.6	1961-69	5-22-70 6-29-70	85.3 59.1
Danskin Creek 13237300	do.....	Operated as a crest-stage station.	10.1	1961-69	2-24-70	9.03
Middle Fork Payette River 13237920	Payette River	Lat 44°6'50", long 115°58'20", in SE½ sec.16, T.9 N., R.4 E., Boise County, at Crouch.	-	-	7- 6-70	a751
Deep Creek 13238300	North Fork Payette River	Operated as a crest-stage station.	4.38	1961-69	10- 9-69 7-13-70 9-11-70	.89 20.6 1.05
Tripod Creek 13245400	do.....	Operated as a crest-stage station.	8.63	1961-68	10- 6-69 4- 9-70 5- 4-70 6- 1-70 9- 8-70 1-14-70	b.3 14.0 30.7 52.6 3.52 16.3
Cottonwood Creek 13248900	Harris Creek	Operated as a crest-stage station.	6.53	1961-69	1-14-70	16.3
Black Canyon Canal 13249400	from Payette River	Lat 43°56'36", long 116°26'20", in SE½ sec.22, T.7 N., R.1 W., Gem County, 0.2 mile downstream from Black Canyon Dam and 5 miles north-east of Emmett.	-	1925-31, 1950,1955, 1957-69	6-30-70 8-14-70 9-24-70	1,280 1,250 469
Payette River 13249600	Snake River	Lat 43°52'58", long 116°29'58", in NW¼SE½ sec.6, T.6 N., R.1 W., Gem County, at State Highway 52 crossing at Emmett.	-	-	6- 3-70 7-10-70	9,300 3,650
Do..... 13250000	do.....	Lat 43°53'50", long 116°37'30", in SE½SW¼ sec.31, T.7 N., R.2 W., Gem County, at State Highway 52A crossing, 1.2 miles east of Letha.	-	-	6- 3-70 7-10-70	8,070 1,930
Do..... 13250500	do.....	Lat 43°57'20", long 116°43'00", in SE½ sec. 8, T.7 N., R.3 W., Payette County, at county road crossing, 5 miles east of New Plymouth, and 5.3 miles northwest of Letha.	-	-	6- 3-70 7-10-70	7,120 2,400
Do..... 13250530	do.....	Lat 43°59'26", long 116°47'42", in NE½ sec.34, T.8 N., R.4 W., Payette County, at county road crossing 1.8 miles northeast of New Plymouth.	-	-	6- 3-70 7-13-70 9- 2-70	7,210 1,900 1,420
Fourmile Creek 13250650	Big Willow Creek	Operated as a crest-stage station.	c6.5	1962-69	1-15-70 1-29-70 2-25-70 4- 7-70 5-18-70 6-18-70	11.2 10.0 1.58 .42 b.06 .23
Rock Creek 13250660	do.....	Lat 44°03', long 116°29', in SE½ sec.5, T.8 N., R.1 W., Gem County, at crossing on Emmett-Council road and 12 miles north of Emmett.	4.24	1962-69	1-29-70	3.25
Langley Gulch 13250700	Payette River	Operated as a crest-stage station.	3.88	1961-69	3- 6-70 5-19-70	0 0

Discharge measurements made at miscellaneous sites during water year 1970

Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Snake River basin						
Snake River 13251010	Columbia River	Lat 44°05'44", long 116°56'22", in NE¼NE¼ sec. 28, T.9 N., R.5 W., Payette County, at State Highway 52 crossing about 0.6 mile north of Payette.	-	-	3-19-70 8- 5-70	18,000 10,700
Weiser River basin						
South Fork Crane Creek 13263950	Crane Creek	Lat 44°19'47", long 116°33'01", in NW¼SW¼ sec. 35, T.12 N., R.2 W., Washington County, at road crossing 8 miles southwest of South Crane School and 13.3 miles southeast of Midvale. Operated as a crest-stage station.	c52	1955	1-17-70	+1,240
Deer Creek 13267100	Mann Creek		4.60	1961-69	1-22-70 1-27-70 2- 2-70	5.02 +156 3.15
Weiser River 13267400	Snake River	Lat 44°14'36", long 116°57'26", in SW¼SW¼NE¼SE¼ sec. 32, T.11 N., R.5 W., Washington County, at U.S. Highway 95 at south edge of Weiser.	1,660	1935, 1948-50, 1969	3-19-70 8- 5-70	1,600 84.1
Monroe Creek 13268500	Weiser River	Lat 44°19'52", long 116°55'39", in NW¼SW¼ sec. 34, T.12 N., R.5 W., Washington County, at bridge on farm road, 0.2 mile downstream from old gage site, 0.2 mile above Sheep Creek, and 6 miles northeast of Weiser.	c32	1938, 1940-44, 1945-49, 1955	1-17-70	+496
Snake River basin						
Hog Creek 13269230	Snake River	Lat 44°16'48", long 117°05'43", in NE¼NE¼ sec. 19, T.11 N., R.6 W., Washington County, 0.1 mile upstream from mouth, at Union Pacific Railroad crossing, 5.8 miles east of Olds Ferry, and 6.8 miles northwest of Weiser.	-	-	1-17-70	+681
Brownlee Creek basin						
East Brownlee Creek 13289600	Snake River	Operated as a crest-stage station.	7.97	1961-69	2- 3-70 5-12-70 6- 5-70 7-15-70	3.78 20.1 72.6 6.92
Salmon River basin						
Beaver Creek 13292400	Salmon River	Operated as a crest-stage station.	15.0	1962-69	6- 1-70 7- 8-70	54.8 59.3
Peach Creek 13297100	do.....	Operated as a crest-stage station.	7.62	1962-69	4-13-70 5-11-70 6- 1-70 7- 7-70	b3.2 7.40 21.9 10.6
Holman Creek 13297300	do.....	Operated as a crest-stage station.	6.10	1962-69	4-13-70 5-11-70 6- 1-70 7- 7-70	b.9 1.63 3.87 1.92
Little Boulder Creek 13297440	East Fork Salmon River	Lat 44°03'30", long 114°34'24", in SE¼SE¼ sec. 33, T.9 N., R.16 E., (unsurveyed), Custer County, 0.6 mile west of Baker Lake, 8.5 miles upstream from mouth and 16.5 miles southeast of Clayton.	-	-	6-23-70 8-27-70	a72.9 a3.22
Do..... 13297445	do.....	Lat 44°04'01", long 114°32'15", in SE¼NE¼ sec. 35, T.9 N., R.16 E., (unsurveyed), Custer County, 0.3 mile downstream from Boulder Chain Lakes Outlet, 6 miles upstream from mouth, and 15.6 miles southwest of Clayton.	-	-	6-23-70 8-27-70	a170 a13.5
Big Boulder Creek 13297480	do.....	Lat 44°07'47", long 114°31'22", in NW¼NE¼ sec. 11, T.9 N., R.16 E., (unsurveyed), Custer County, 0.3 mile upstream from mouth of Jim Creek, 5.2 miles upstream from mouth, and 10 miles southwest of Clayton.	-	-	6-22-70 8-26-70	a165 a13.4
Jim Creek 13297485	Big Boulder Creek	Lat 44°07'54", long 114°31'43", in SW¼SW¼ sec. 1, T.9 N., R.16 E., (unsurveyed), Custer County, 0.6 mile upstream from mouth and 10 miles southwest of Clayton.	-	-	6-22-70 8-26-70	a25.8 a3.35
Malm Gulch 13298300	Salmon River	Operated as a crest-stage station.	9.38	1962-69	10-13-69 2-14-70 4-13-70 5-11-70 7-15-70	0 0 0 0 0
Morse Creek 13301700	Pahsimeroi River	Operated as a crest-stage station.	18.0	1962-69	5-12-70 6- 2-70 7-13-70	22.5 85.5 35.4
Do..... 13301800	do.....	Operated as a crest-stage station.	19.9	1962-69	10-14-69 4-14-70 5-12-70 6- 2-70 7-13-70	0 0 0 0 0
Pahsimeroi River 13301990	Salmon River	Lat 44°39'49", long 114°01'39", in NE¼SW¼ sec. 6, T.15 N., R.21 E., Custer County, at county road crossing 8.5 miles northwest of May.	b845	1968-69	4-14-70 8-11-70	a159 a112

See
13302000
1968-69

Discharge measurements made at miscellaneous sites during water year 1970

Discharge measurements made at miscellaneous sites during water year 1970						
Stream	Tributary to	Location	Drainage area (sq mi)	Measured previously (water years)	Measurements	
					Date	Discharge (cfs)
Salmon River basin--Continued						
Pahsimeroi River 13302000	Salmon River	Lat 44°41'22", long 114°02'34", in NE¼NE¼SW¼ sec.25, T.6 N., R.20 E., Lemhi County, 0.2 mile above mouth, and 10 miles northwest of May.	c845	1928, 1930-59†, 1968-69,	10- 9-68 12-17-69	aj80 aj324
Twelvemile Creek 13302200	do.....	Operated as a crest-stage station.	22.0	1962-69	3-11-70 4-14-70 5-12-70 6- 2-70 7-15-70	3.71 b3.4 10.0 35.7 8.92
Hood Gulch 13303100	Canyon Creek	Operated as a crest-stage station.	7.09	1962-69	4-16-70 5-12-70 7-14-70	b1.3 .95 2.14
Lemhi River 13305300	Salmon River	Lat 45°07'47", long 113°47'47", in SW¼SE¼ sec. 24, T.21 N., R.23 E., Lemhi County, at bridge on State Highway 28 and about 5 miles south-east of Salmon.	-	1911, 1913, 1968-69	5-12-70 6- 3-70 8-11-70	a167 a677 a109
Dahlonaga Creek 13305700	North Fork Salmon River	Operated as a crest-stage station.	c32	1962-69	4-15-70 5-13-70 6- 3-70 7-16-70	11.4 26.4 91.4 23.3
Hughes Creek 13305800	do.....	Operated as a crest-stage station.	15.7	1962-69	4-15-70 5-13-70 6- 3-70 7-14-70	b10.1 13.4 122 25.4
East Fork of the South Fork Salmon River 13312000	South Fork Salmon River	Lat 44°57'46", long 115°27'35", in NE¼NW¼NE¼ sec.27, T.19 N., R.8 E., Valley County, Payette National Forest, 1.5 miles east of Yellow Pine.	104	1928-43†	7- 7-70	a438
Mud Creek 13315500	Little Salmon River	Operated as a crest-stage station.	15.1	1937-39†, 1940-43, 1946-59†, 1961-69	4- 8-70 5-11-70 6- 4-70 7-14-70	62.5 116 28.8 4.60
Indian Creek 13316300	do.....	Operated as a crest-stage station.	2.66	1962-69	3- 4-70 5- 8-70	1.00 .33
Johns Creek 13317200	Salmon River	Operated as a crest-stage station.	6.67	1961-69	4-25-70 9-19-70	2.37 .37
Clearwater River basin						
Swiftwater Creek 13336600	Selway River	Operated as a crest-stage station.	6.19	1961-69	10-18-69 5- 7-70 6-27-70	2.70 31.5 7.45
East Fork Papoose Creek 13336650	Papoose Creek	Operated as a crest-stage station.	4.51	1961-69	10-18-69 6-18-70	1.65 12.3
Weir Creek 13336850	Lochsa River	Operated as a crest-stage station.	12.2	1961-69	10-18-69 6-18-70	3.73 51.0
Red Horse Creek 13337200	Red River	Operated as a crest-stage station.	9.13	1961-69	6- 2-70	29.0
Peasley Creek 13337700	South Fork Clearwater River	Operated as a crest-stage station.	14.2	1961-69	7-11-70	12.7
Sally Ann Creek 13338200	do.....	Operated as a crest-stage station.	13.9	1961-69	4-25-70 6-11-70	11.4 5.33
Canal Gulch 13339700	Orofino Creek	Operated as a crest-stage station.	c5.9	1961-69	4-11-70	26.8
Deer Creek 13339900	Wiskey Creek	Operated as a crest-stage station.	c6.8	1962-69	10-12-69 6-11-70 9-19-70	b.2 .35 b.2
Cold Springs Creek 13341100	Clearwater River	Operated as a crest-stage station.	8.07	1961-65, 1968-69	10-12-69 9-19-70	.20 .05
Potlatch River 13341500	do.....	Operated as a crest-stage station.	425	1946-60†, 1961-69	10-19-69 1-24-70 7- 5-70 9-16-70	15.8 5,510 35.0 11.1
Palouse River basin						
Deep Creek tributary 13344700	Deep Creek	Operated as a crest-stage station.	2.90	1961-69	1-23-70 6-13-70	31.4 .15
Deep Creek 13344800	Palouse River	Operated as a crest-stage station.	36.6	1961-69	1-23-70 6-13-70	550 1.36

† Peak flow.

* Operated as a continuous-record gaging station.

a Record of chemical analysis of sample taken at time of discharge determination is published in Part 2 of this report.

b Estimated.

c Approximately.

d Flow derived largely from springs.

e Discharge represents actual spring flow adjusted for diversions.

f Discharge obtained by measuring Snake River above and below spring outlets and adjusting for surface flow.

g Discharge from hatchery records.

h Estimate of peak flow on January 23, 1970.

i Records of chemical analyses at site about 0.5 mile west, in sec.32, 1948-50 published in WSP; 1966-67 in WRDI.

SALMON FALLS CREEK BASIN

Salmon Falls Creek seepage investigation--Roseworth crossing to Highway 30 near Hagerman, Idaho

A series of measurements was made on Feb. 27 and Aug. 7, 1970, in the reach of Salmon Falls Creek extending from Roseworth crossing to the gaging station Salmon Falls Creek near Hagerman (13108150), a distance of 24.8 miles. The entire available supply is diverted above Salmon Dam, about 20 miles above the head of the reach. Flow below the dam is derived from leakage past the dam and from return flow from adjacent land, mostly from irrigation. Several pumps divert water from the reach for irrigation of land, most of which lies outside the basin. Diversions or individual return flows were not measured. Measurements have been made previously at one or more sites in the reach in 1912, 1914, 1953-55, 1958, 1959, and 1967.

River mile	Stream	Location	Feb. 27, 1970		Aug. 7, 1970	
			Discharge (cfs)	Gain	Discharge (cfs)	Gain
26.7	Salmon Falls Creek	NE $\frac{1}{4}$ SE $\frac{1}{4}$ sec.19, T.11 S., R.14 E., at Roseworth crossing and 5 miles south of Castleford.	9.49	-	15.4	-
16.9	do.....	SE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.20, T.10 S., R.13 E., at Castleford crossing and 4.5 miles northwest of Castleford.	39.2	29.7	40.6	25.2
11.0	do.....	NE $\frac{1}{4}$ NW $\frac{1}{4}$ sec.1, T.10 S., R.13 E., 6 miles west of Buhl.	85.2	46.0	66.7	26.1
6.0	do.....	NE $\frac{1}{4}$ NE $\frac{1}{4}$ sec.14, T.9 S., R.13 E., at sheep bridge and 7.5 miles northwest of Buhl.	120	34.8	74.9	8.2
1.9	do.....	Gaging station near Hagerman (13108150).	159	39	87.4	12.5
Overall net gain			150		72.0	

INDEX

	Page		Page
Accuracy of data.....	7	Cascade Reservoir at Cascade.....	218
Acre-foot, definition of.....	2	Cassia Creek above Stinson Creek, near Elba....	119
American Falls Reservoir at American Falls.....	114	Cfs-day, definition of.....	2
Antelope Creek above Willow Creek, near		Challis Creek below Jeffs Creek, near Challis...	243
Darlington.....	162	Clark Fork at Whitehorse Rapids, near Cabinet...	48
Anderson Ranch Reservoir at Anderson Ranch Dam..	193	Clear Creek near Naf.....	118
Arrowrock Reservoir at Arrowrock Dam.....	195	Clearwater River, at Orofino.....	262
Asotin Creek below Kearney Gulch, near Asotin,		at Spalding.....	267
Wash.....	255	near Peck.....	264
Bannock Creek near Idaho City.....	196	North Fork, at Canyon ranger station.....	263
Bear Creek above reservoir, near Irwin.....	77	South Fork, at Stites.....	260
Bear Lake at Lifton, near St. Charles.....	17	near Elk City.....	259
Bear Lake outlet canal near Paris.....	19	Clearwater River basin, crest-stage stations in.....	276-277
Bear River, at Alexander.....	25	gaging-station records in.....	256-267
at Border, Wyo.....	11	measurements at miscellaneous sites in.....	291
at Harer.....	13	Clover Creek basin, crest-stage station in.....	275
at Pescader.....	20-21	measurements at miscellaneous sites in.....	287
at Soda Springs.....	23	Coeur d'Alene Lake at Coeur d'Alene.....	65
below Stewart Dam, near Montpelier.....	15	Coeur d'Alene River, above Shoshone Creek, near	
below Utah Power & Light Co.'s tailrace,		Prichard.....	55
at Oneida.....	27	at Enaville.....	56
near Preston.....	28	near Cataldo.....	61
Bear River basin, crest-stage stations in.....	273	South Fork, at Silverton.....	58
gaging-station records in.....	11-31	at Smelterville.....	59
measurements at miscellaneous sites in.....	281	Collection and computation of data.....	3
Beaver Creek, at Camas.....	149	Computations, accuracy of.....	7
at Dubois.....	148	Contents, definition of.....	2
at Spencer.....	147	Control, definition of.....	2
Big Lost River, at Howell Ranch, near Chilly....	158	Cooperation.....	1
below Mackay Reservoir, near Mackay.....	160	Cottonwood Creek near Cleveland.....	24
near Arco.....	163	Crane Creek, at mouth, near Weiser.....	229
North Fork, at Wild Horse, near Chilly.....	157	Cub River near Preston.....	30
Big Jacks Creek near Bruneau.....	183	Cubic feet per second per square mile, defini-	
Big Willow Creek near Emmett.....	223	tion of.....	2
Big Wood River, below Magic Dam, near Richfield.	170	Cubic foot per second, definition of.....	2
near Bellevue.....	167	Data, accuracy of.....	7
near Gooding.....	175	available, other.....	8
near Ketchum.....	165	collection and computation of.....	3
Big Wood River and Big Wood Slough, combined		explanation of surface-water.....	3
discharge of.....	166	Deadwood Reservoir near Lowman.....	208
Big Wood River basin, crest-stage stations in.....	275	Deadwood River below Deadwood Reservoir,	
gaging-station records in.....	165-177	near Lowman.....	209
measurements at miscellaneous sites in.....	286	Deep Creek (Kootenai River basin) at Moravia....	39
Birch Creek, at Blue Dome Inn, near Reno.....	151	Deep Creek (Bear River basin) near Clifton.....	27
at Eight-Mile Canyon Road, near Reno.....	152	Discharge, definition of.....	2
Blackfoot River Reservoir near Henry.....	104	Downstream order and station numbers.....	3
Blackfoot River, above reservoir, near Henry....	103	Drainage area, definition of.....	2
near Blackfoot.....	105	Eightmile Creek near Soda Springs.....	22
Blackfoot River basin, crest-stage station in...	274	Elk Creek basin, crest-stage station in.....	274
gaging-station records in.....	103-105	measurements at miscellaneous site in.....	282
measurements at miscellaneous site in.....	282	Explanation of surface-water data.....	3
Blaine County Investment Co.'s canal near Howe..	156	Falls River, diversions from.....	85,87
Bloom Creek near Bovill.....	265	near Chester.....	88
Bloomington Creek at Bloomington.....	18	near Squirrel.....	86
Blue Lakes Springs near Twin Falls.....	136	Fort Hall Michaud Canal near Pocatello.....	112
Boise River, at Boise.....	203	Fossil Creek basin, crest-stage station in.....	275
at Notus.....	206	measurements at miscellaneous site in.....	287
diversions from.....	202,205	Gage height, definition of.....	2
near Boise.....	200	Gaging station, definition of.....	2
near Twin Springs.....	190	list of, in downstream order.....	11
South Fork, at Anderson Ranch Dam.....	194	George Creek near Yost, Utah.....	116
near Featherville.....	191	Gold Fork River near Roseberry.....	217
Boise River basin, crest-stage stations in.....	275	Gooding Canal at Milner.....	131
gaging-station records in.....	190-206	Goose Creek above Trapper Creek, near Oakley....	125
measurements at miscellaneous sites in.....	288-289	Grassy Lake near Moran, Wyo.....	96
Boulder Creek near Leonia.....	35	Grays Lake Diversion to Blackfoot River basin,	
Boundary Creek near Porthill.....	44	near Wayan.....	97
Box Canyon Springs near Wendell.....	140	Grays Lake near Wayan.....	98
Brownlee Creek basin, crest-stage station in...	276	Grays Lake Outlet near Herman.....	99
measurements at miscellaneous site in.....	290	Greys River above reservoir, near Alpine, Wyo...	75
Brownlee Reservoir at Brownlee Dam, Idaho-Oregon		Hayden Creek below North Fork, near Hayden Lake.	66
State line.....	234	Hayden Lake at Hayden Lake.....	67
Bruneau River, at Rowland, Nev.....	179	Henrys Fork, at St. Anthony.....	90
East Fork, near Hot Spring.....	181	diversions from.....	89,94
near Hot Spring.....	182	near Ashton.....	84
Bruneau River basin, crest-stage station in.....	275	near Island Park.....	83
gaging-station records in.....	179-183	near Lake.....	81
measurements at miscellaneous site in.....	287	near Rexburg.....	95
Buffalo Fork above Lava Creek, near Moran, Wyo..	73		
Camas Creek (Big Wood River basin) near Blaine..	168		
Camas Creek (Mud Lake basin) at Camas.....	146		
at Eighteenmile shearing corral, near Kilgore.	145		

	Page		Page
Henrys Fork basin, crest-stage stations in.....	274	Little Wood River, above High Five Creek,	
gaging-station records in.....	81-96	near Carey.....	171
measurements at miscellaneous sites in.....	282	near Carey.....	173
smaller reservoirs in.....	96	near Richfield.....	174
Henrys Lake near Lake.....	96	Locha River near Lowell.....	258
Hydrologic bench-mark station, definition of....	3	Lost River-Mud Lake basins, crest-stage stations	
Hydrologic conditions.....	8	in.....	274
graph of.....	10	gaging-station records in.....	145-163
		measurements at miscellaneous sites in.....	285
Indian Creek basin, crest-stage station in.....	274	Lower Cedar Creek above diversions, near Mackay.	160
measurements at miscellaneous site in.....	282	Lucky Peak Reservoir near Boise.....	199
Introduction.....	1		
Island Park Reservoir near Island Park.....	82	McCoy Creek basin, crest-stage station in.....	273
		measurements at miscellaneous site in.....	282
Jackson Lake at Moran, Wyo.....	70	Mackay Reservoir near Mackay.....	159
Jarbridge River, East Fork, near Three Creek....	180	Magic Reservoir near Richfield.....	169
Johnson Creek at Yellow Pine.....	250	Malad River at Woodruff.....	31
Jordan Creek above Lone Tree Creek, near Jordan		Malheur River basin, measurements at	
Valley, Oreg.....	187	miscellaneous site in.....	289
		Mann Creek below Mann Creek Dam, near Weiser....	232
King Hill Canal near Hagerman.....	176	Mann Creek Reservoir near Weiser.....	231
Kootenai River, at Bonners Ferry.....	38	Map of Idaho showing location of crest-stage	
at Klockmann Ranch, near Bonners Ferry.....	40	stations.....	279
at Leonia.....	34	Map of Idaho showing location of gaging	
at Libby, Mont.....	32	stations.....	271
at Porthill.....	45-46	Marsh Creek (Marsh Creek basin) near Albion....	124
near Copeland.....	42-43	Marsh Creek (Portneuf River basin) near McCammon	110
Kootenai River basin, crest-stage stations in...	279	Meadow Creek near Lowell.....	256
gaging-station records in.....	32-47	Mean altitude, definition of.....	2
measurements at miscellaneous sites in.....	281	Michaud Canal at American Falls.....	113
Kootenay Lake at Kuskonook, British Columbia....	47	Milner low-lift canal near Milner.....	130
		Minidoka North Side Pump Canal near Burley....	128
Lake Fork. See Payette River, Lake Fork.		Mission Creek near Copeland.....	41
Lake Fork Reservoir near McCall.....	214	Montpelier Creek at irrigators weir, near	
Lake Irrigation District Canal near McCall.....	215	Montpelier.....	16
Lake Lowell near Caldwell.....	201	Mores Creek above Robie Creek, near Arrowrock Dam	197
Lake Walcott, diversions from.....	120, 121	Moyie River, at Eastport.....	36
near Minidoka.....	123	at Eileen.....	37
Lakes and reservoirs:		Mud Lake near Terreton.....	150
American Falls Reservoir at American Falls....	114	Mud Lake-Lost River basins, crest-stage	
Anderson Ranch Reservoir at Anderson Ranch Dam	193	stations in.....	274
Arrowrock Reservoir at Arrowrock Dam.....	195	gaging-station records in.....	145-163
Bear Lake at Lifton, near St. Charles.....	17	measurements at miscellaneous sites in.....	285
Blackfoot River Reservoir near Henry.....	104		
Brownlee Reservoir at Brownlee Dam, Idaho-		Niagara Springs near Buhl.....	138
Oregon State line.....	234	North Side Minidoka Canal near Minidoka.....	120
Cascade Reservoir at Cascade.....	218	North Side Twin Falls Canal at Milner.....	132
Coeur d'Alene Lake at Coeur d'Alene.....	65		
Deadwood Reservoir near Lowman.....	208	Oakley Reservoir near Oakley.....	127
Grassy Lake near Moran, Wyo.....	96	Order, downstream, and station numbers.....	3
Grays Lake near Wayan.....	98	Other data available.....	8
Hayden Lake at Hayden Lake.....	67	Owyhee River, above China diversion dam,	
Henrys Lake near Lake.....	96	near Owyhee, Nev.....	185
Island Park Reservoir near Island Park.....	82	near Rome, Oreg.....	188-189
Jackson Lake at Moran, Wyo.....	70	South Fork, near Whiterock, Nev.....	186
Kootenay Lake at Kuskonook, British Columbia..	47	Owyhee River basin, gaging-station records in...	185-189
Lake Fork Reservoir near McCall.....	214		
Little Wood Reservoir near Carey.....	172	P. A. lateral near Milner.....	129
Lowell, Lake, near Caldwell.....	201	Pacific Creek near Moran, Wyo.....	72
Lucky Peak Reservoir near Boise.....	199	Pack River near Colburn.....	49
Mackay Reservoir near Mackay.....	159	Palisades Reservoir near Irwin.....	78
Magic Reservoir near Richfield.....	169	Palouse River near Potlatch.....	269
Mann Creek Reservoir near Weiser.....	231	Palouse River basin, crest-stage stations in...	277
Mud Lake near Terreton.....	150	gaging-station record in.....	269
Oakley Reservoir near Oakley.....	127	measurements at miscellaneous sites in.....	291
Palisades Reservoir near Irwin.....	78	Panther Creek near Shoup.....	246
Payette Lake at McCall.....	211	Partial-record station, definition of.....	2
Pend Oreille Lake at Hope.....	50	Payette Lake at McCall.....	211
Priest Lake at outlet, near Coolin.....	51	Payette River, Lake Fork, above Jumbo Creek,	
Salmon River Canal Co. reservoir near Rogerson	143	near McCall.....	213
Walcott, Lake, diversions from.....	120, 121	Lake Fork, below Lake Irrigation District	
near Minidoka.....	123	Canal, near McCall.....	216
Latour Creek near Cataldo.....	62	near Banks.....	210
Lawyer Creek near Nezperce.....	261	near Emmett.....	222
Lemhi River near Lemhi.....	245	near Horseshoe Bend.....	221
Little Boulder Creek near Clayton.....	241	near Payette.....	224
Little Camas Canal at heading, near Bennett....	192	North Fork, at Cascade.....	219
Little Canyon Creek at Stout Crossing, near		at McCall.....	212
Glenns Ferry.....	178	near Banks.....	220
Little Canyon Creek basin, crest-stage station in	275	South Fork, at Lowman.....	207
gaging-station record in.....	178	Payette River basin, crest-stage stations in...	275
measurements at miscellaneous site in.....	287	gaging-station records in.....	207-224
Little Lost River, below Wet Creek, near Howe...	154	measurements at miscellaneous sites in.....	289
near Howe.....	155	Pend Oreille Lake at Hope.....	50
Little Salmon River at Riggins.....	251	Pend Oreille River at Newport, Wash.....	54
Little Weiser River near Indian Valley.....	228	Pend Oreille River basin, crest-stage stations in	273
Little Wood Reservoir near Carey.....	172	gaging-station records in.....	48-54
		measurements at miscellaneous sites in.....	281

INDEX

295

	Page		Page
Pine Creek (Snake River basin) near Oxbow, Oreg.	236	SNAKE River, at Morar, Wyo.....	134
Pine Creek, West Fork (Spokane River basin), near Pinehurst.....	60	at Neeley.....	115
Placer Creek at Wallace.....	57	at Oxbow, Oreg.....	235
Portneuf River, at Pocatello.....	111	at Weiser.....	233
at Topaz.....	109	below Lower Salmon Falls, near Hagerman.....	164
near Pebble.....	108	diversions from.....101,106,128-133	254
Portneuf River basin, crest-stage stations in...	274	near Anatone, Wash.....	254
gaging-station records in.....108-112		near Blackfoot.....	107
measurements at miscellaneous sites in.....	283	near Buhl.....	139
Potlatch River, East Fork, near Bovill.....	266	near Clarkston, Wash.....	268
Priest Lake at outlet, near Coolin.....	51	near Heise.....	80
Priest River, near Coolin.....	52	near Irwin.....	79
near Priest River.....	53	near Joseph.....	238
Publications.....	7	near Kimberly.....	135
Pumping diversion from Snake River near Givens Hot Springs, measurement at miscellaneous site in.....	287	near Minidoka.....	123
		near Murphy.....	184
		near Shelley.....	102
Quality of water data available.....	8	SNAKE River basin, crest-stage station in.....	274
		measurements at miscellaneous sites in.....282,287-288,289,290	
Raft River at Peterson Ranch, near Bridge.....	117	reservoirs in.....70,78,114,122,234	
Raft River basin, crest-stage stations in.....	274	Soda Creek at Fivemile Meadows, near Soda Springs	22
gaging-station records in.....116-119		South Side Minidoka Canal near Minidoka.....	121
measurements at miscellaneous sites in.....283-284		South Side Twin Falls Canal at Milner.....	133
Rainbow inlet canal near Dingle.....	14	Special networks and programs.....	3
Rathdrum Prairie Canal at Huetter.....	68	Spokane River near Post Falls.....	69
Reservoirs. See lakes and reservoirs.		Spokane River basin, crest-stage stations in...	273
Reynolds Creek basin, measurement at miscellan- eous site in.....	287	gaging-station records in.....	55-69
Robie Creek near Arrowrock Dam.....	198	measurements at miscellaneous sites in.....	281
Rock Creek near Rock Creek.....	137	Spring Valley Creek near Eagle.....	204
Runoff in inches, definition of.....	3	Squaw Creek basin, crest-stage station in.....	275
		measurements at miscellaneous site in.....	287
St. Joe River at Calder.....	63	Stage-discharge relation, definition of.....	3
St. Maries River near Santa.....	64	Station numbers and downstream order.....	3
Salmon Falls Creek, near Hagerman.....	144	Surface-water data, explanation of.....	3
near San Jacinto, Nev.....	141	Terms, definition of.....	2
Salmon Falls Creek basin, crest-stage station in	274	Teton River, above South Leigh Creek, near Driggs	91
gaging-station records in.....141-144		diversions from.....	93
measurement at miscellaneous site in.....	285	near St. Anthony.....	92
seepage investigation, Roseworth crossing to Highway 30 near Hagerman.....	292	Thomas Fork near Wyoming-Idaho State line.....	12
Salmon River, at Salmon.....	244	Trapper Creek near Oakley.....	126
at White Bird.....	253	Tributaries between Great Salt Lake Desert and Bear River, crest-stage station in.....	273
below Yankee Fork, near Clayton.....	240	measurements at miscellaneous site in.....	281
Middle Fork, near Cape Horn.....	248	Tributaries between Snake River at Milner and Salmon Falls Creek, measurements at miscellaneous sites in.....284-285	
near Challis.....	242	Tributaries to Snake River from Thousand Springs to Big Wood River, measurements at miscel- laneous sites in.....285-286	
near Shoup.....	247		
South Fork, near Krassel ranger station.....	249	Valley Creek at Stanley.....	239
Salmon River basin, crest-stage stations in....	276		
gaging-station records in.....239-253		WRD, definition of.....	3
measurements at miscellaneous sites in.....290-291		WSP, definition of.....	3
Salmon River Canal Co. canal near Rogerson.....	142	Weiser River, at Tamarack.....	226
Salmon River Canal Co. reservoir near Rogerson..	143	near Cambridge.....	227
Salt River above reservoir, near Etna, Wyo.....	76	near Weiser.....	230
Salt River basin, crest-stage station in.....	273	West Branch, near Tamarack.....	225
gaging-station record in.....	76	Weiser River basin, crest-stage station in....	276
measurements at miscellaneous site in.....	281	gaging-station records in.....225-232	
Sawmill Creek near Goldburg.....	153	measurements at miscellaneous sites in.....	290
Selected references.....	9	Willow Creek near Ririe.....	100
Selway River near Lowell.....	257	Willow Creek basin, crest-stage station in....	274
Short Creek basin, measurements at miscellaneous site in.....	286	gaging-station records in.....97-100	
Skookumchuck Creek, North Fork, near White Bird.	252	measurement at miscellaneous site in.....	282
SNAKE River, above reservoir, near Alpine, Wyo..	74		
at Hells Canyon Dam, Idaho-Oregon State line..	237	Yaak River near Troy, Mont.....	33
at King Hill.....	177		
at Milner.....	134		

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