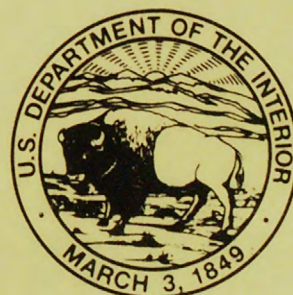
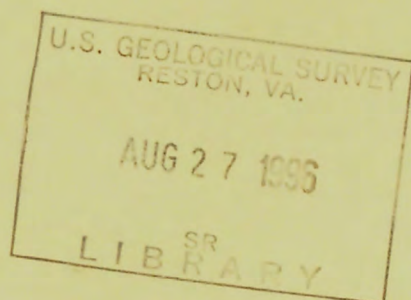


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no. 94-4069

# Statistical Summaries of Streamflow Data for Selected Gaging Stations in Idaho and Adjacent States Through September 1990—Volume 1: Gaging Stations with 10 or More Years of Record

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U.S. Geological Survey  
Water-Resources Investigations Report 94-4069





**Note:** This updated reprint of Volume 1 supersedes the version issued in 1995 (blue cover). Please discard the 1995 version.



# Statistical Summaries of Streamflow Data for Selected Gaging Stations in Idaho and Adjacent States Through September 1990—Volume 1: Gaging Stations with 10 or More Years of Record

By L.C. Kjelstrom, M.A.J. Stone, *and* W.A. Harenberg

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U.S. Geological Survey  
Water-Resources Investigations Report 94–4069

Boise, Idaho  
1996



U.S. DEPARTMENT OF THE INTERIOR  
BRUCE BABBITT, Secretary

U.S. GEOLOGICAL SURVEY  
GORDON P. EATON, Director

---

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## CONVERSION FACTORS, VERTICAL DATUM, AND ABBREVIATIONS

Multiply	By	To obtain
acre	4,047	square meter
cubic foot per second (ft <sup>3</sup> /s)	0.02832	cubic meter per second
foot (ft)	0.3048	meter
mile (mi)	1.609	kilometer
square mile (mi <sup>2</sup> )	2.590	square kilometer

**Sea level:** In this report, “sea level” refers to the National Geodetic Vertical Datum of 1929—a geodetic datum derived from a general adjustment of the first-order level nets of the United States and Canada, formerly called Sea Level Datum of 1929.

### Abbreviations

m, Instantaneous or daily minimum discharge	USGS, U.S. Geological Survey
M, Instantaneous maximum discharge	W, WATSTORE
P, Flood peaks above the base	WDR, Water-data report
SWD, Surface-water data for Idaho, 1971–75 (Cordes, 1980)	WSP, Water-Supply Paper





# Statistical Summaries of Streamflow Data for Selected Gaging Stations in Idaho and Adjacent States Through September 1990—Volume 1: Gaging Stations with 10 or More Years of Record

By L.C. Kjelstrom, M.A.J. Stone, and W.A. Harenberg

## Abstract

This volume presents statistical summaries of streamflow data for 257 gaging stations with 10 or more years of continuous record through September 1990. The gaging stations are located in Idaho and adjacent States. Volume 2 presents statistical summaries of streamflow data for 76 gaging stations with 5 to 9 years of continuous record, or with records of discharge measurements from springs, through September 1990. The gaging stations are located in Idaho and western Wyoming.

Streamflow statistics generated for gaging stations with 10 or more years of record were (1) magnitudes of monthly and annual flows; (2) magnitudes and frequencies of daily low, high, instantaneous peak (flood frequency), and annual mean flows; (3) duration of daily mean flows; and (4) maximum, median, and minimum daily mean flows. Streamflow statistics generated for gaging stations with 5 to 9 years of record or that measure discharge from springs (volume 2) were (1) magnitudes of monthly and annual flows; (2) duration of daily mean flows; and (3) maximum, median, and minimum daily mean flows.

## INTRODUCTION

Information concerning streamflow characteristics is essential for the development and management of surface-water resources. Statistical analysis of streamflow records provides information about the spatial and temporal characteristics of streamflow. Project designers, land-use managers, and hydrologists need information on all aspects of streamflow to evaluate various hydraulic and hydrologic designs or land-use alternatives.

This volume presents statistical summaries of streamflow data for 257 gaging stations with 10 or more years of continuous record. The gaging stations are located in Idaho, in the headwaters of the Snake River in Wyoming, and near the Idaho border in other adjacent States. Volume 2 presents statistical summaries of streamflow data for 76 gaging stations with 5 to 9 years of continuous record or with records of discharge measurements from springs. The gaging stations are located in Idaho and western Wyoming. Fewer statistical data are provided in volume 2 than in this volume because of the relatively steady flow of springs and the short period of record at other gaging stations in volume 2.

Streamflow statistics generated for gaging stations with 10 or more years of record are (1) magnitudes of monthly and annual flows; (2) magnitudes and frequencies of daily low, high, instantaneous peak (flood frequency), and annual mean flows; (3) duration of daily mean flows; and (4) maximum, median, and minimum daily mean flows. Streamflow statistics generated for gaging stations with 5 to 9 years of record or that measure discharge from springs (volume 2) were (1) magnitudes of monthly and annual flows; (2) duration of daily mean flows; and (3) maximum, median, and minimum daily mean flows.

Monthly and mean annual flows and high-flow frequency, flood-frequency, and flow-duration data were computed using records through the 1990 water year (October 1, 1989, through September 30, 1990). Low-flow frequency data were computed using records through the 1991 climatic year (April 1, 1990, through March 31, 1991). If a gaging station had been discontinued before 1990, records through September 30 or March 31 of the last year in which data were collected were used for analysis.

Gaging stations are assigned 8-digit numbers for identification (appendix 1, back of report). The first two digits are a part number and refer to a major drain-

age basin. Parts 6, 10, 12, and 13 refer to the Missouri River Basin, Great Basin, Pacific Slope Basins, and Snake River Basin, respectively. The six digits that follow are assigned to the gaging station on the basis of downstream order (numbers increase from headwaters to mouth).

## **EXPLANATION OF STATISTICAL SUMMARIES**

Statistical summaries of streamflow data are presented (appendix 2, back of report) for 257 gaging stations shown in figures 1–8 (back of report). The description of each gaging station includes the location of the gage, drainage area, period of record, description of the gage, remarks pertinent to the quality of streamflow records and to conditions that affect the flow, extremes for the period of record, and known extremes outside the period of record.

Water is diverted and regulated by storage reservoirs upstream from many gaging stations. The development of storage reservoirs and the diversion of water for irrigation affect monthly and annual means, low and high frequencies, peaks, and durations of streamflow. Streamflow may be affected not only by the construction of a storage reservoir, but also by changes in its operation. For example, a storage reservoir that originally was used only to store irrigation water later may be operated for flood control, power generation, and recreation. The amount of water diverted for irrigation varies with changes in climate, irrigated acreage, and irrigation practices.

Tabulations and graphs for each gaging station (appendix 2) include the statistics of monthly and annual flows; magnitudes and frequencies of annual low and high flows; magnitudes and frequencies of instantaneous peak flows; duration of daily mean flows; magnitudes and frequencies of annual mean flows; maximum, median, and minimum daily mean flows; and histograms of annual mean and mean annual flows. The statistical summaries are based on years of recorded streamflow at the gaging station shown in each table heading. Statistical summaries for specific periods of record can be obtained by contacting the USGS district office at the address shown on the back of the title page.

### **Monthly and Annual Flow**

Monthly and annual flow tabulations for the period of record include the maximum, minimum, and

mean monthly and mean annual flow, the standard deviation of the mean, the coefficient of variation (ratio of the standard deviation to the mean), and the percentage of average annual runoff for each month. Except for the low-flow frequency, annual flows are based on the water year, which ends September 30. The water year generally is used because the growing season is at an end, and surface-water storage is near a minimum on that date as a result of heavy water use during the preceding summer. In nonirrigated areas, ground-water and soil-moisture storage also is near minimum.

### **Low-Flow Frequency**

The low-flow tabulations show the data necessary to plot standard low-flow frequency curves, which are based on the log-Pearson Type III frequency distribution. The tabulations show annual minimum mean flows for periods of 1, 3, 7, 14, 30, 60, 90, 120, and 183 consecutive days for recurrence intervals of 2, 5, 10, 20, 50, and 100 years; the associated annual nonexceedance probabilities are 50, 20, 10, 5, 2, and 1 percent, respectively.

Recurrence intervals for low flows represent the average length of time between occurrences of annual minimum mean flows that are less than the stated flow magnitude. Nonexceedance probability is the probability, expressed as a percentage, that the annual minimum mean flow will be less than the stated magnitude in any given year. Recurrence intervals generally are reported only to twice the period of record, but tabulations based on records of more than 40 years are extended to the 100-year recurrence interval (1-percent probability). If the period of record is not longer than one-half of the reported recurrence interval for frequency calculations, the computer program automatically flags (#) the frequency column to indicate that the values shown may be unreliable. The annual minimum mean flows are based on a climatic year that ends March 31. The climatic year is used because the low-flow period often can extend through September and into the winter months.

### **High-Flow Frequency**

High-flow frequency tabulations show the data necessary to plot standard high-flow frequency curves, which are based on the log-Pearson Type III frequency distribution. The tabulations show the annual maximum mean flows for periods of 1, 3, 7, 15, 30, 60, and 90 consecutive days for recurrence intervals of 2, 5, 10,



25, 50, and 100 years; the associated annual exceedance probabilities are 50, 20, 10, 4, 2, and 1 percent, respectively.

Recurrence intervals for high flows represent the average length of time between occurrences of annual maximum mean flows equal to or greater than the stated flow magnitude. Exceedance probability is the probability, expressed as a percentage, that the annual maximum mean flow will equal or exceed the stated magnitude in any given year. Criteria for extending frequency curves for high-flow data were the same as for the low-flow data. If the period of record was less than half the length of the recurrence interval, the frequency column is flagged (#) to indicate that the values shown may be unreliable.

## Flood Frequency

Flood-frequency tabulations show the data necessary to plot standard flood-frequency curves, which are based on log-Pearson Type III frequency distribution. These data are magnitudes of instantaneous peak flows at selected recurrence intervals (annual exceedance probabilities). The log-Pearson Type III frequency distribution was fitted to recorded data for gaging stations with 10 or more years of record by using procedures recommended by the U.S. Interagency Advisory Committee on Water Data (1982). A log-Pearson Type III frequency distribution incorporates three factors—mean, standard deviation, and skew coefficient—which affect position, slope, and curvature of the distribution graph, respectively. Generalized skew coeffi-

cients are weighted with gaging station skew coefficients (determined from peak flow analysis) to obtain a more reliable flood-frequency distribution curve than could be obtained by using either generalized or gaging station skew coefficients. Generalized skew coefficients were determined by reference to a report by Kjelson and Moffatt (1981).

Flood-frequency tabulations in this volume list the magnitudes of annual instantaneous peak flows for recurrence intervals of 2, 5, 10, 25, 50, and 100 years; the associated annual exceedance probabilities are 50, 20, 10, 4, 2, and 1 percent, respectively.

## Flow Duration

Flow-duration tabulations show the data necessary to plot a standard flow-duration curve, which is a cumulative frequency curve that shows the percentage of time that specified daily flows were equaled or exceeded during the period of record. The tabulations show the flows, in cubic feet per second, that were equaled or exceeded for a given percentage of time.

## Annual Mean Discharge Frequency

The annual mean discharge frequency graph (fig. 9) shows the relation between annual mean flows and their associated exceedance probabilities at a specified gaging station. Annual mean flows were fitted with a log-Pearson Type III frequency distribution to derive exceedance probabilities.

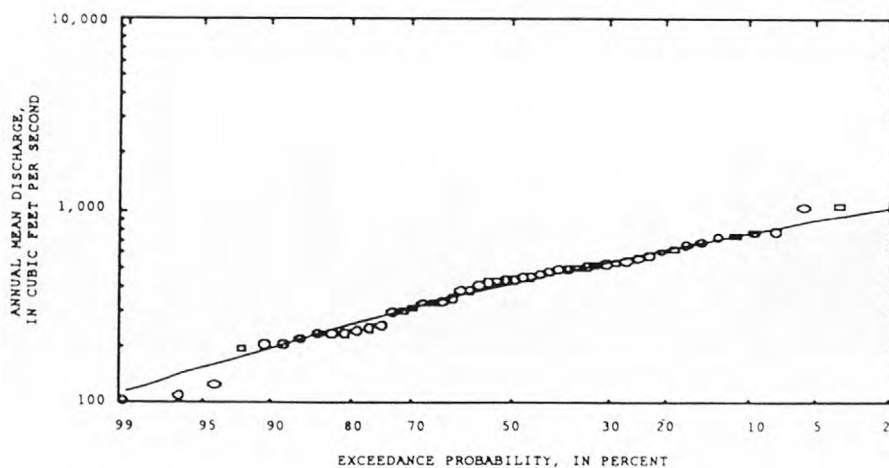


Figure 9. Annual mean discharge frequency for a selected streamflow-gaging station.

## Maximum-Median-Minimum Discharge

The maximum-median-minimum discharge graph (fig. 10) shows the highest, median, and lowest flow past the gaging station during the period of record for each day of the year. A minimum of 0.01 ft<sup>3</sup>/s, or five logarithmic cycles below the maximum flow, was the minimum discharge graphed.

## Annual Mean and Mean Annual Discharge

The annual mean and mean annual discharge graph (fig. 11) shows how annual mean flow differs from the long-term mean annual flow. For periods when partial records or no records were available, only the mean annual is shown.

## REFERENCES CITED

- Cordes, S.C., comp., 1980, Surface-water data for Idaho, 1971-75: U.S. Geological Survey Open-File Report 80-2041, 775 p.
- Kjelstrom, L.C., and Moffatt, R.L., 1981, A method of estimating flood-frequency parameters for streams in Idaho: U.S. Geological Survey Open-File Report 81-909, 99 p.
- U.S. Interagency Advisory Committee on Water Data, 1982, Guidelines for determining flood flow frequency, Bulletin 17B of the Hydrology Subcommittee: Reston, Va., U.S. Geological Survey, Office of Water Data Coordination [183 p.].

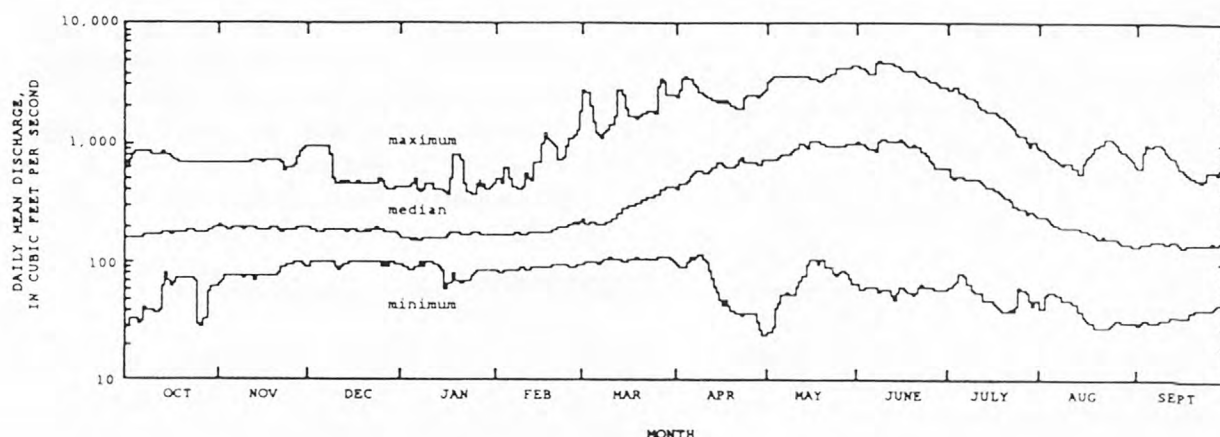


Figure 10. Maximum-median-minimum discharge for a selected streamflow-gaging station.

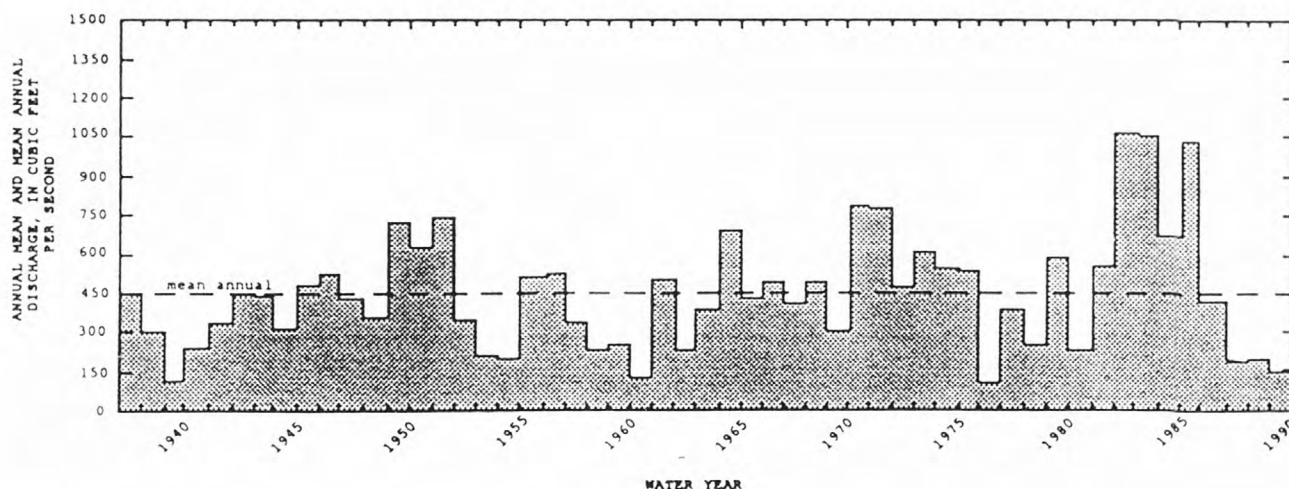


Figure 11. Annual mean and mean annual discharge for a selected streamflow-gaging station.

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## **FIGURES 1 – 8**

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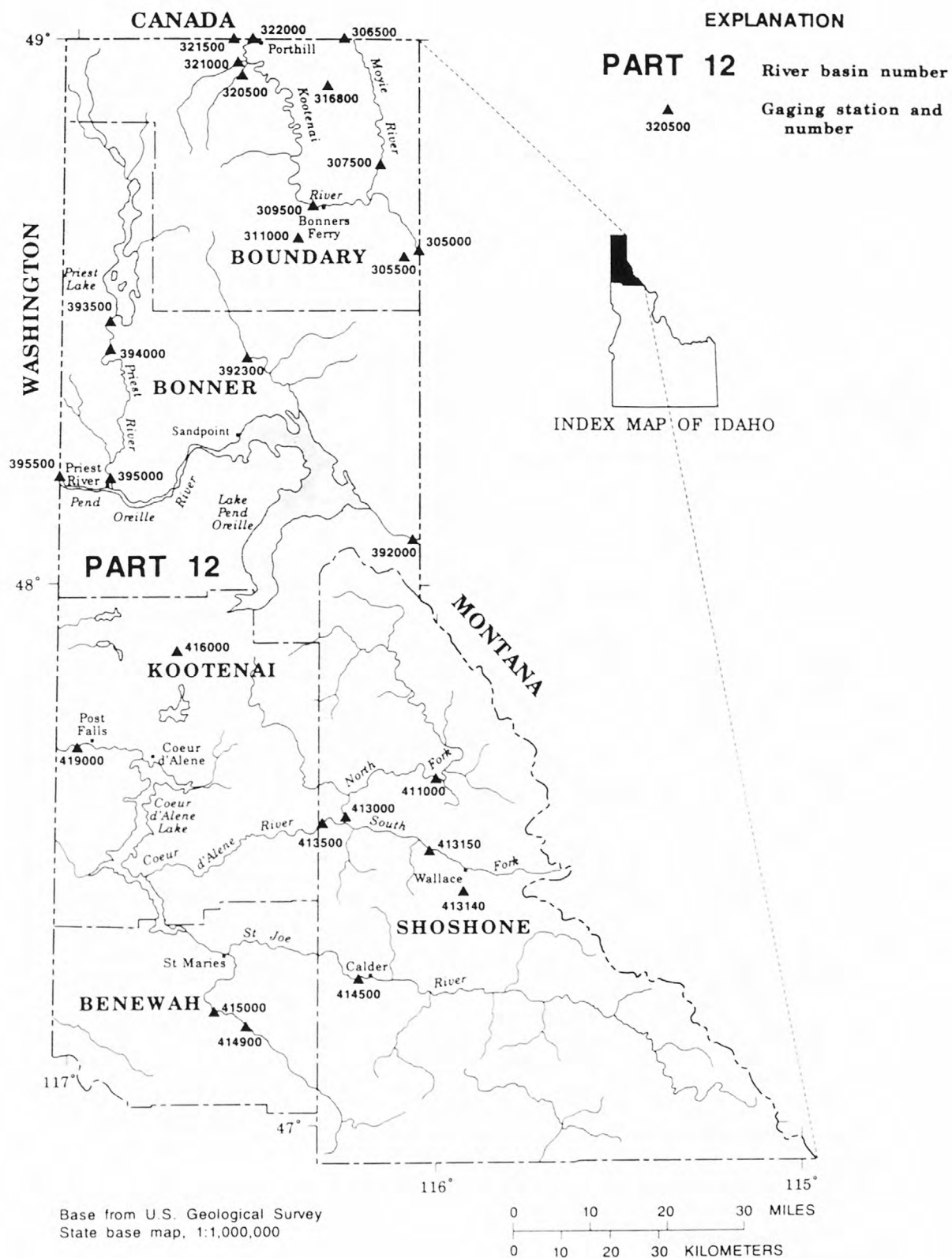


Figure 1. Locations of streamflow-gaging stations in north Idaho.

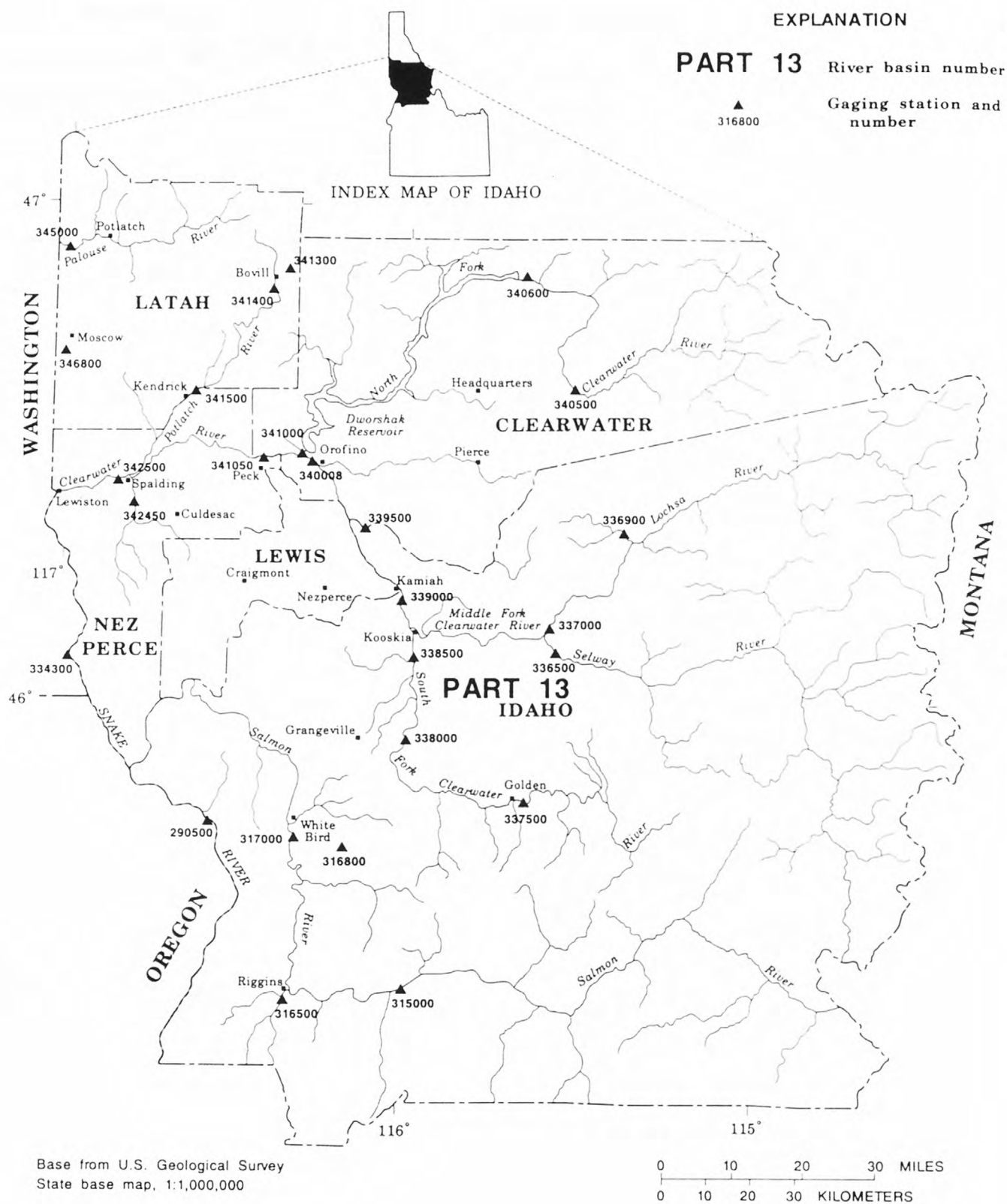


Figure 2. Locations of streamflow-gaging stations in north-central Idaho.



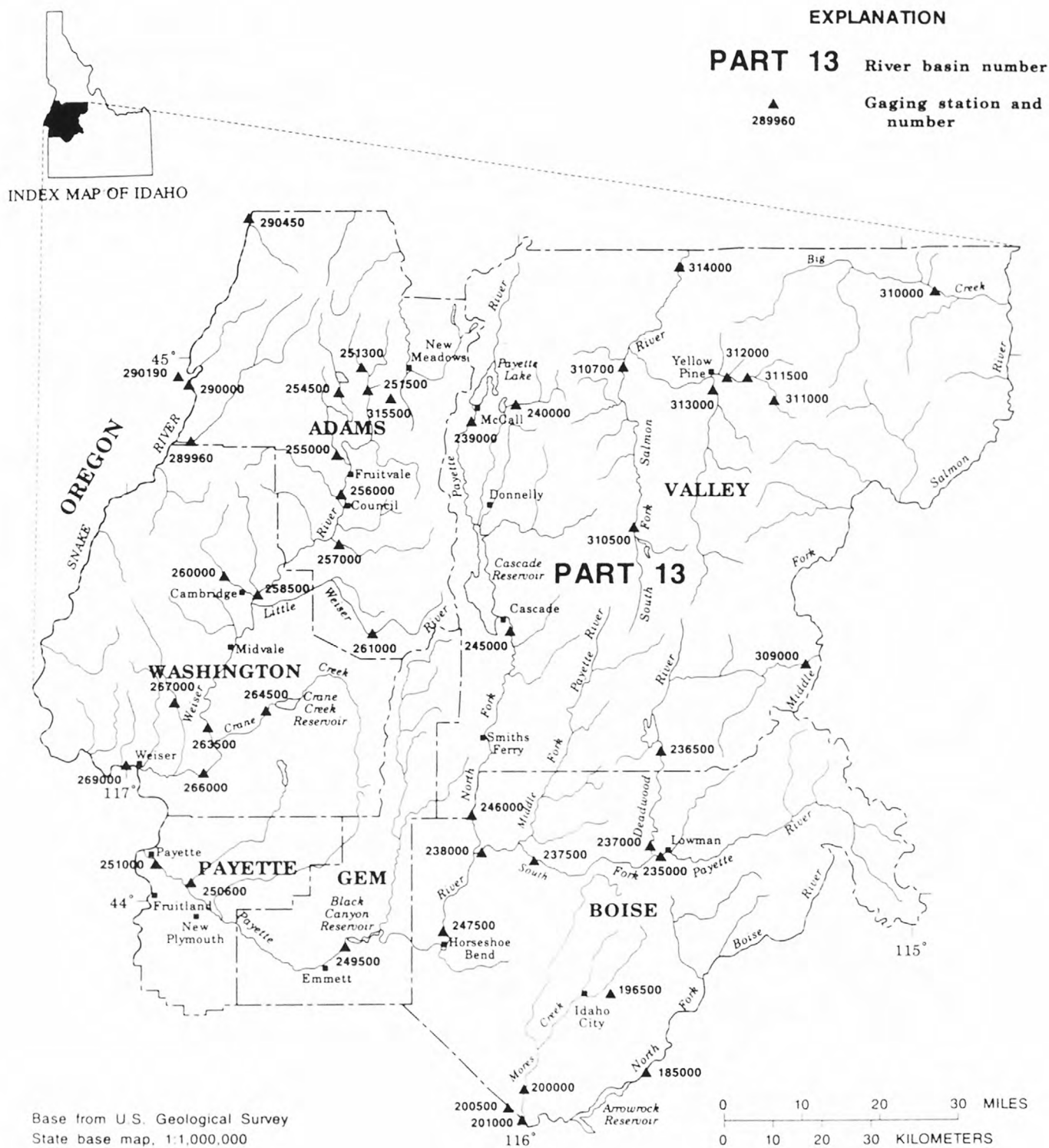
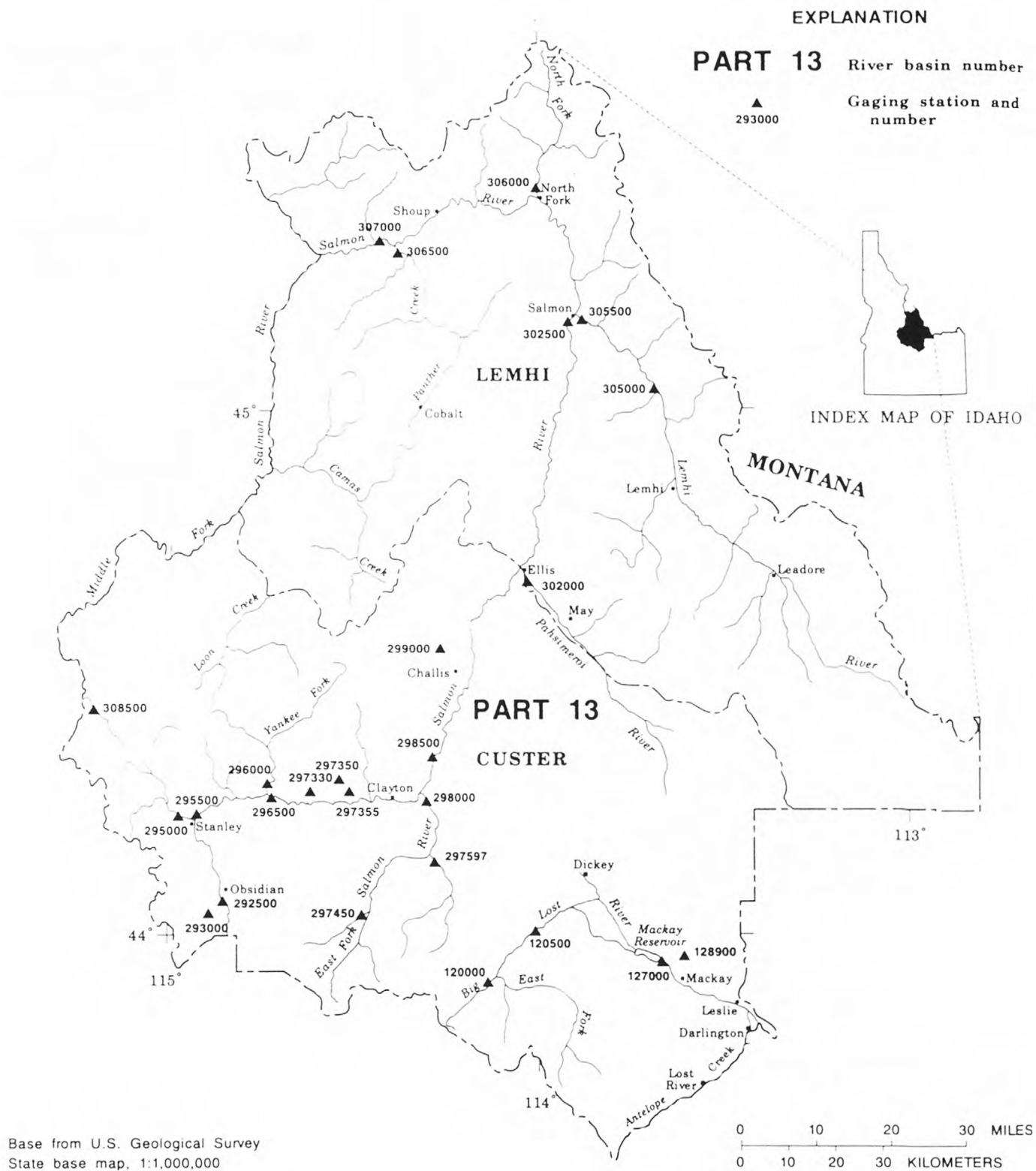


Figure 3. Locations of streamflow-gaging stations in west-central Idaho.



**Figure 4.** Locations of streamflow-gaging stations in east-central Idaho.

# EXPLANATION

## PART 13 River basin number

▲ Gaging station and number  
178000

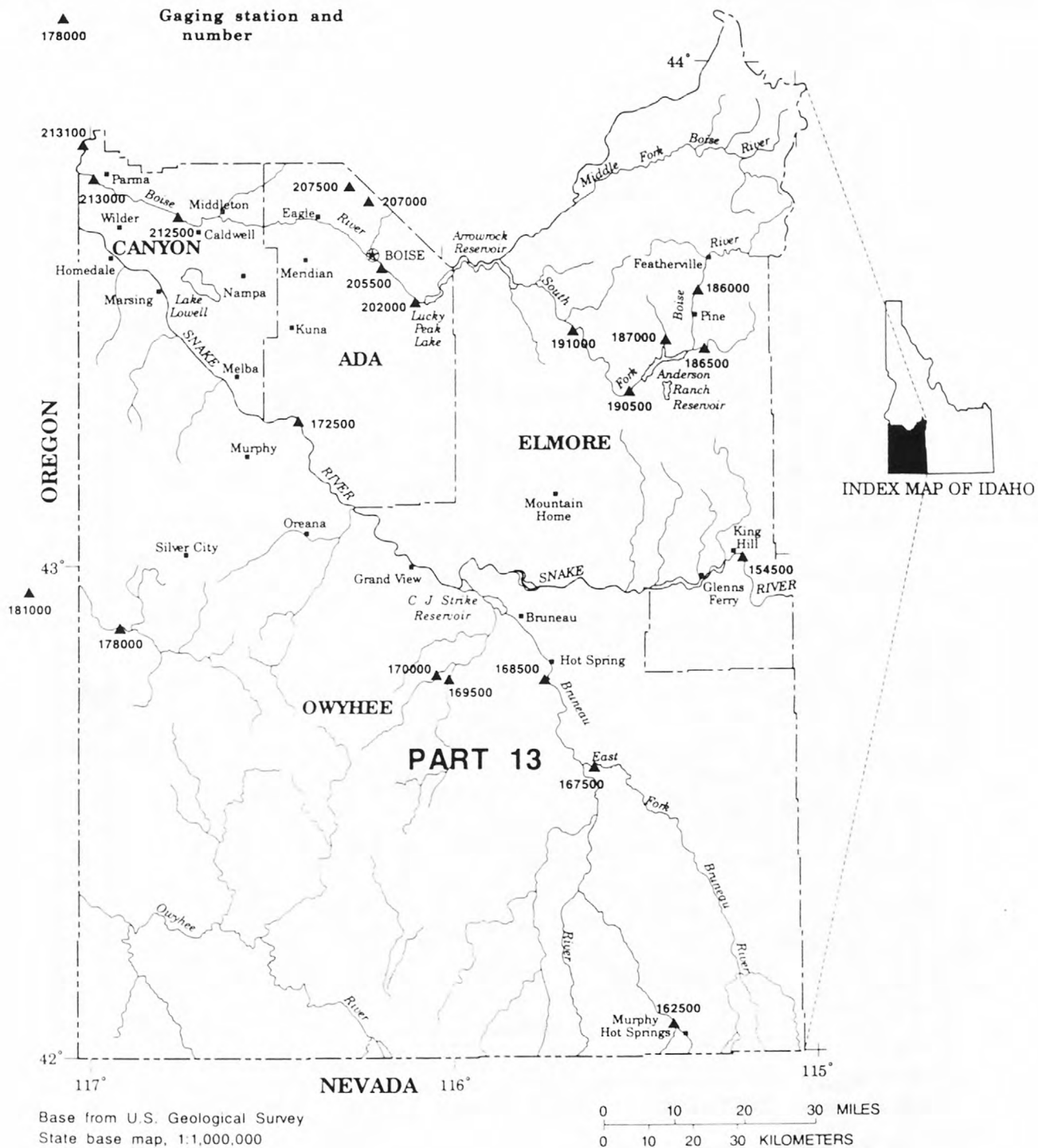


Figure 5. Locations of streamflow-gaging stations in southwest Idaho.



# EXPLANATION

## PART 13 River basin number

▲  
108150

Gaging station and  
number

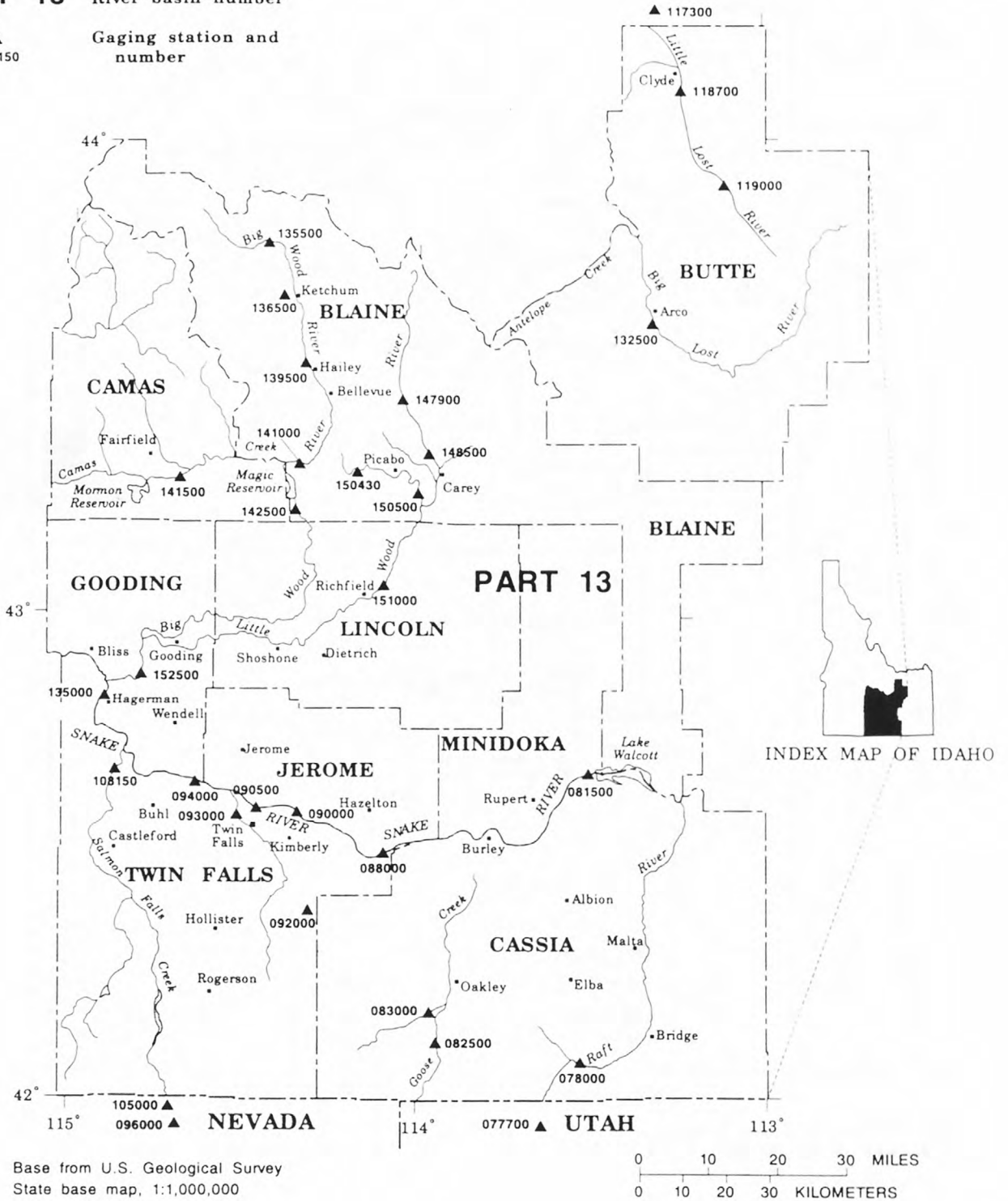


Figure 6. Locations of streamflow-gaging stations in south-central Idaho.

# EXPLANATION

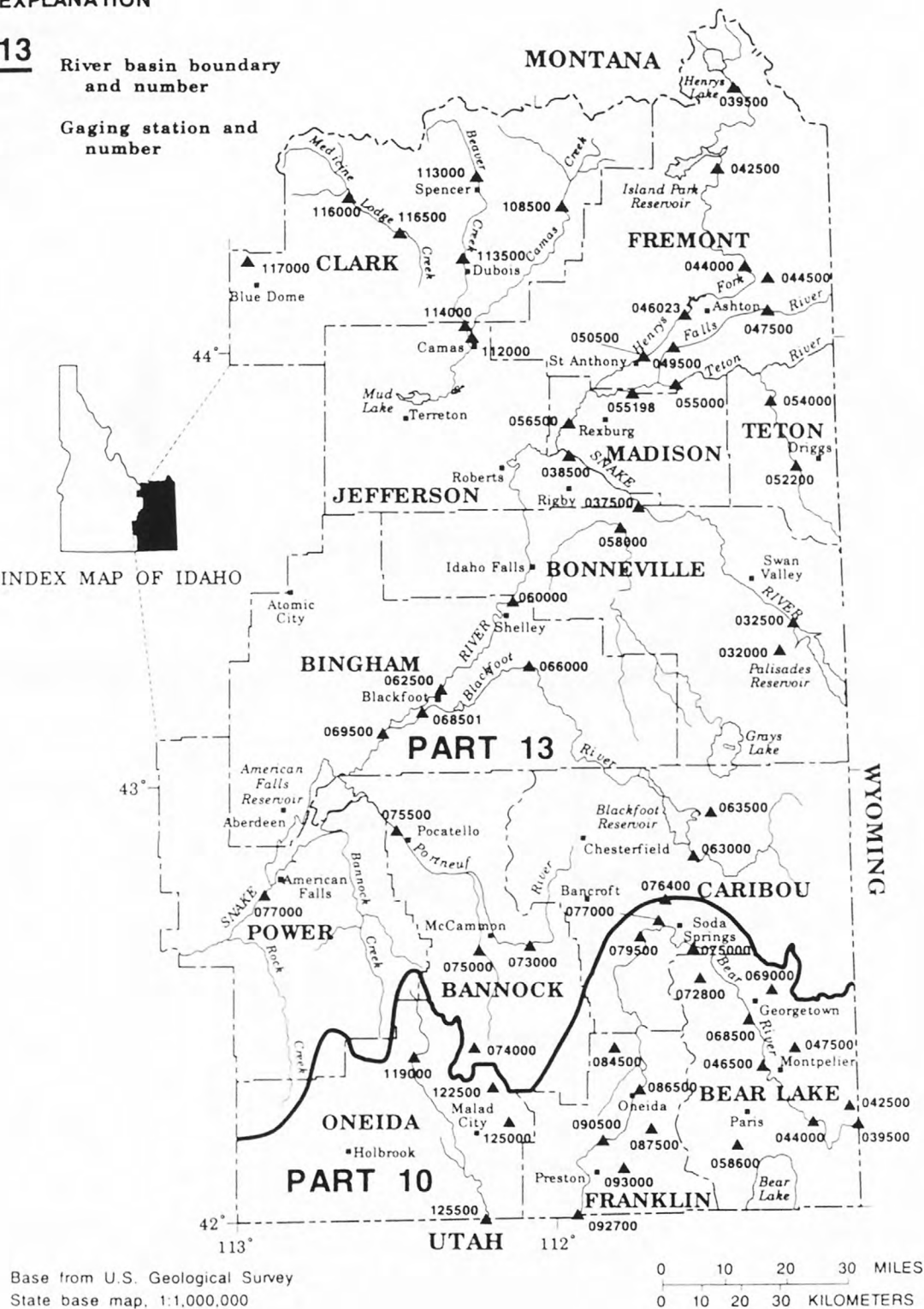
## PART 13

River basin boundary and number

Gaging station and number

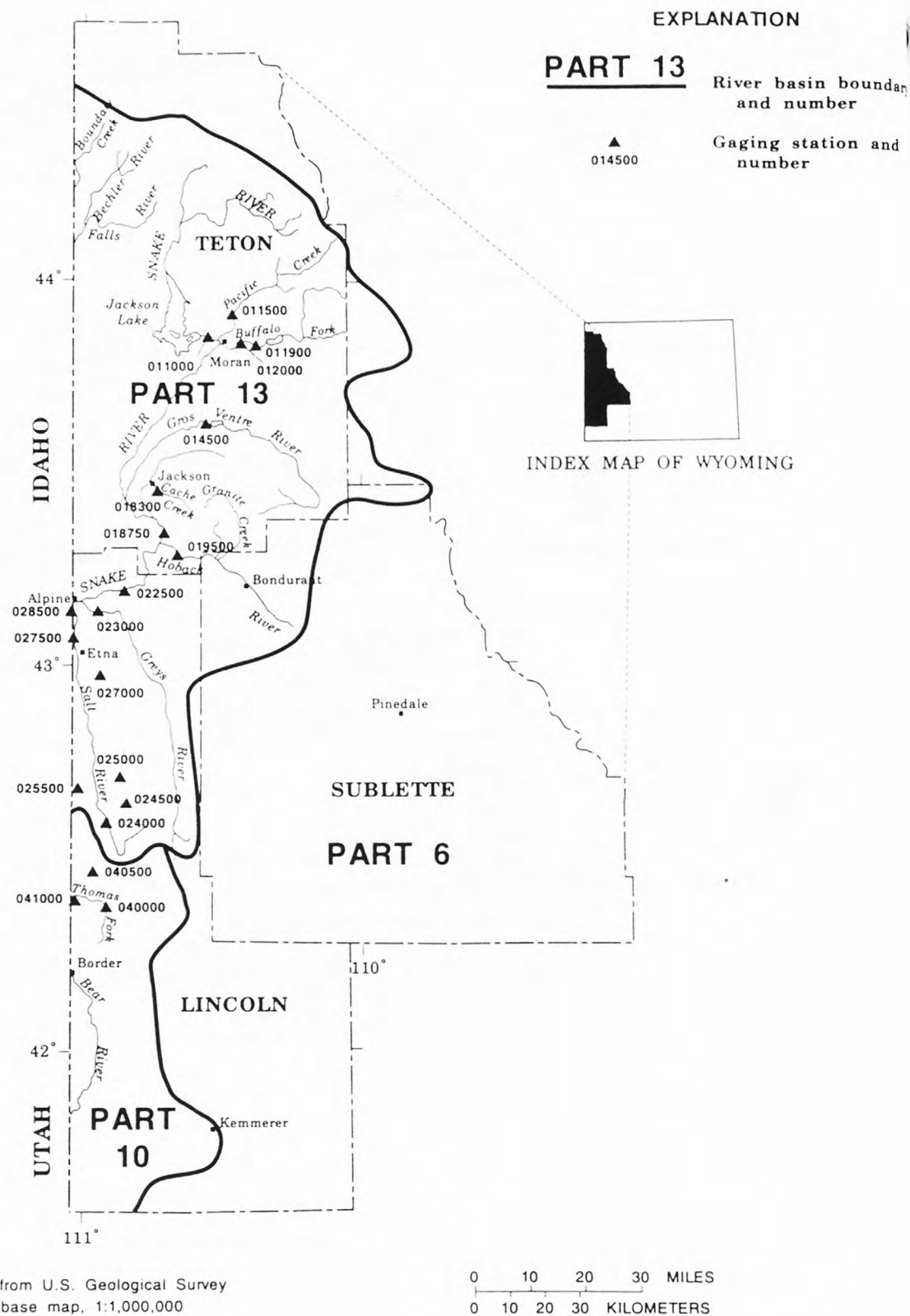
▲  
058600

INDEX MAP OF IDAHO



Base from U.S. Geological Survey  
State base map, 1:1,000,000

Figure 7. Locations of streamflow-gaging stations in southeast Idaho.



**Figure 8.** Locations of streamflow-gaging stations in western Wyoming.

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# **APPENDIX 1**

**LIST OF STREAMFLOW-GAGING STATIONS, IN DOWNSTREAM ORDER**

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Appendix 1. List of streamflow-gaging stations, in downstream order

Number	Name	Page	Number	Name	Page
10039500	Bear River at Border, WY.....	21	13027000	Strawberry Creek near Bedford, WY.....	155
10040000	Thomas Fork near Geneva, ID.....	23	13027500	Salt River above reservoir, near Etna, WY.....	157
10040500	Salt Creek near Geneva, ID.....	25	13028500	Salt River at Wyoming-Idaho State line.....	159
10041000	Thomas Fork near Wyoming-Idaho State line.....	27	13032000	Bear Creek above reservoir, near Irwin, ID.....	161
10042500	Thomas Fork near Raymond, ID.....	29	13032500	Snake River near Irwin, ID.....	163
10044000	Bear River at Harer, ID.....	31	13037500	Snake River near Heise, ID.....	165
10046500	Bear River below Stewart Dam, near Montpelier, ID.....	33	13038500	Snake River at Lorenzo, ID.....	167
10047500	Montpelier Creek at irrigators weir, near Montpelier, ID.....	35	13039500	Henrys Fork near Lake, ID.....	169
10058600	Bloomington Creek at Bloomington, ID.....	37	13042500	Henrys Fork near Island Park, ID.....	171
10068500	Bear River at Pescadero, ID.....	39	13044000	Henrys Fork at Warm River, ID.....	173
10069000	Georgetown Creek near Georgetown, ID.....	41	13044500	Warm River at Warm River, ID.....	175
10072800	Eightmile Creek near Soda Springs, ID.....	43	13046023	Henrys Fork near Ashton, ID.....	177
10075000	Bear River at Soda Springs, ID.....	45	13047500	Falls River near Squirrel, ID.....	179
10076400	Soda Creek at Fivemile Meadows, near Soda Springs, ID.....	47	13049500	Falls River near Chester, ID.....	181
10077000	Soda Creek near Soda Springs, ID.....	49	13050500	Henrys Fork at St. Anthony, ID.....	183
10079500	Bear River at Alexander, ID.....	51	13052200	Teton River above South Leigh Creek, near Driggs, ID.....	185
10084500	Cottonwood Creek near Cleveland, ID.....	53	13054000	Teton River near Teton, ID.....	187
10086500	Bear River below Utah Power & Light Co.'s tailrace, at Oneida, ID.....	55	13055000	Teton River near St. Anthony, ID.....	189
10087500	Mink Creek below Dry Fork, near Mink Creek, ID.....	57	13055198	North Fork Teton River at Teton, ID.....	191
10090500	Bear River near Preston, ID.....	59	13056500	Henrys Fork near Rexburg, ID.....	193
10092700	Bear River at Idaho-Utah State line.....	61	13058000	Willow Creek near Ririe, ID.....	195
10093000	Cub River near Preston, ID.....	63	13060000	Snake River near Shelley, ID.....	197
10119000	Little Malad River above Elkhorn Reservoir, near Malad City, ID.....	65	13062500	Snake River at Blackfoot, ID.....	199
10122500	Devil Creek above Campbell Creek, near Malad City, ID.....	67	13063000	Blackfoot River above reservoir, near Henry, ID.....	201
10125000	Deep Creek below First Creek, near Malad City, ID.....	69	13063500	Little Blackfoot River at Henry, ID.....	203
10125500	Malad River at Woodruff, ID.....	71	13066000	Blackfoot River near Shelley, ID.....	205
12305000	Kootenai River at Leona, ID.....	73	13068501	Combination Blackfoot River and bypass channel near Blackfoot, ID.....	207
12305500	Boulder Creek near Leona, ID.....	75	13069500	Snake River near Blackfoot, ID.....	209
12306500	Moyie River at Eastport, ID.....	77	13073000	Portneuf River at Topaz, ID.....	211
12307500	Moyie River at Eileen, ID.....	79	13074000	Birch Creek near Downey, ID.....	213
12309500	Kootenai River at Bonners Ferry, ID.....	81	13075000	Marsh Creek near McCammon, ID.....	215
12311000	Deep Creek at Moravia, ID.....	83	13075500	Portneuf River at Pocatello, ID.....	217
12316800	Mission Creek near Copeland, ID.....	85	13077000	Snake River at Neeley, ID.....	219
12320500	Long Canyon Creek near Porthill, ID.....	87	13077700	George Creek near Yost, UT.....	221
12321000	Smith Creek near Porthill, ID.....	89	13078000	Raft River above Onemile Creek, near Malta, ID.....	223
12321500	Boundary Creek near Porthill, ID.....	91	13081500	Snake River near Minidoka, ID.....	225
12322000	Kootenai River at Porthill, ID.....	93	13082500	Goose Creek above Trapper Creek, near Oakley, ID.....	227
12329200	Clark Fork at Whitehorse Rapids, near Cabinet, ID.....	95	13083000	Trapper Creek near Oakley, ID.....	229
12392300	Pack River near Colburn, ID.....	97	13088000	Snake River at Milner, ID.....	231
12393500	Priest River at Outlet of Priest Lake, near Coolin, ID.....	99	13090000	Snake River near Kimberly, ID.....	233
12394000	Priest River near Coolin, ID.....	101	13090500	Snake River near Twin Falls, ID.....	235
12395000	Priest River near Priest River, ID.....	103	13092000	Rock Creek near Rock Creek, ID.....	237
12395500	Pend Oreille River at Newport, WA.....	105	13093000	Rock Creek below Poleline Road, near Twin Falls, ID.....	239
12411000	North Fork Coeur d'Alene River above Shoshone Creek, near Prichard, ID.....	107	13094000	Snake River near Buhl, ID.....	241
12413000	North Fork Coeur d'Alene River at Enaville, ID.....	109	13096000	Salmon Falls Creek above Upper Vineyard Ditch, near Contact, NV.....	243
12413140	Placer Creek at Wallace, ID.....	111	13105000	Salmon Falls Creek near San Jacinto, NV.....	245
12413150	South Fork Coeur d'Alene River at Silverton, ID.....	113	13108150	Salmon Falls Creek near Hagerman, ID.....	247
12413500	Coeur d'Alene River at Cataldo, ID.....	115	13108500	Camas Creek at Eighteenmile Shearing Corral, near Kilgore, ID.....	249
12414500	St. Joe River at Calder, ID.....	117	13112000	Camas Creek at Camas, ID.....	251
12414900	St. Maries River near Santa, ID.....	119	13113000	Beaver Creek at Spencer, ID.....	253
12415000	St. Maries River at Lotus, ID.....	121	13113500	Beaver Creek at Dubois, ID.....	255
12416000	Hayden Creek below North Fork, near Hayden Lake, ID.....	123	13114000	Beaver Creek at Camas, ID.....	257
12419000	Spokane River near Post Falls, ID.....	125	13116000	Medicine Lodge Creek at Ellis Ranch, near Argora, ID.....	259
13011000	Snake River near Moran, WY.....	127	13116500	Medicine Lodge Creek near Small, ID.....	261
13011500	Pacific Creek at Moran, WY.....	129	13117000	Birch Creek near Reno, ID.....	263
13011900	Buffalo Fork above Lava Creek, near Moran, WY.....	131	13117300	Sawmill Creek near Goldburg, ID.....	265
13012000	Buffalo Fork near Moran, WY.....	133	13118700	Little Lost River below Wet Creek, near Howe, ID.....	267
13014500	Gros Ventre River at Kelly, WY.....	135	13119000	Little Lost River near Howe, ID.....	269
13018300	Cache Creek near Jackson, WY.....	137	13120000	North Fork Big Lost River at Wild Horse, near Chilly, ID.....	271
13018750	Snake River below Flat Creek, near Jackson, WY.....	139	13120500	Big Lost River at Howell Ranch, near Chilly, ID.....	273
13019500	Hoback River near Jackson, WY.....	141	13127000	Big Lost River below Mackay Reservoir, near Mackay, ID.....	275
13022500	Snake River above reservoir, near Alpine, WY.....	143	13128900	Lower Cedar Creek above diversion 3, near Mackay, ID.....	277
13023000	Greys River above reservoir, near Alpine, WY.....	145	13132500	Big Lost River near Arco, ID.....	279
13024000	Salt River near Smoot, WY.....	147	13135000	Snake River below Lower Salmon Falls, near Hagerman, ID.....	281
13024500	Cottonwood Creek near Smoot, WY.....	149	13135500	Big Wood River near Ketchum, ID.....	283
13025000	Swift Creek near Afton, WY.....	151			
13025500	Crow Creek near Fairview, WY.....	153			

Appendix 1. List of streamflow-gaging stations, in downstream order—Continued

Number	Name	Page	Number	Name	Page
13136500	Warm Springs Creek at Guyer Hot Springs, near Ketchum, ID .....	285	13267000	Mann Creek near Weiser, ID .....	409
13139500	Big Wood River at Hailey, ID .....	287	13269000	Snake River at Weiser, ID .....	411
13141000	Big Wood River near Bellevue, ID .....	289	13289960	Wildhorse River at Brownlee Dam, ID .....	413
13141500	Camas Creek near Blaine, ID .....	291	13290000	Snake River at Oxbow, OR .....	415
13142500	Big Wood River below Magic Dam, near Richfield, ID .....	293	13290190	Pine Creek near Oxbow, OR .....	417
13147900	Little Wood River above High Five Creek, near Carey, ID .....	295	13290450	Snake River at Hells Canyon Dam, Idaho-Oregon State line .....	419
13148500	Little Wood River near Carey, ID .....	297	13290500	Snake River near Joseph, ID .....	421
13150430	Silver Creek at sportsman access, near Picabo, ID .....	299	13292500	Salmon River near Obsidian, ID .....	423
13150500	Silver Creek near Picabo, ID .....	301	13293000	Alturas Lake Creek near Obsidian, ID .....	425
13151000	Little Wood River near Richfield, ID .....	303	13295000	Valley Creek at Stanley, ID .....	427
13152500	Malad River near Gooding, ID .....	305	13295500	Salmon River below Valley Creek, at Stanley, ID .....	429
13154500	Snake River at King Hill, ID .....	307	13296000	Yankee Fork Salmon River near Clayton, ID .....	431
13162500	East Fork Jarbidge River near Three Creek, ID .....	309	13296500	Salmon River below Yankee Fork, near Clayton, ID .....	433
13167500	East Fork Bruneau River near Hot Spring, ID .....	311	13297330	Thompson Creek near Clayton, ID .....	435
13168500	Bruneau River near Hot Spring, ID .....	313	13297350	Bruno Creek near Clayton, ID .....	437
13169500	Big Jacks Creek near Bruneau, ID .....	315	13297355	Squaw Creek below Bruno Creek, near Clayton, ID .....	439
13170000	Little Jacks Creek near Bruneau, ID .....	317	13297450	Little Boulder Creek near Clayton, ID .....	441
13172500	Snake River near Murphy, ID .....	319	13298000	East Fork Salmon River near Clayton, ID .....	443
13178000	Jordan Creek above Lone Tree Creek, near Jordan Valley, OR .....	321	13298500	Salmon River near Challis, ID .....	445
13181000	Owyhee River near Rome, OR .....	323	13299000	Challis Creek near Challis, ID .....	447
13185000	Boise River near Twin Springs, ID .....	325	13302000	Pahsimeroi River near May, ID .....	449
13186000	South Fork Boise River near Featherville, ID .....	327	13302500	Salmon River at Salmon, ID .....	451
13186500	Lime Creek near Bennett, ID .....	329	13305000	Lemhi River near Lemhi, ID .....	453
13187000	Fall Creek near Anderson Ranch Dam, ID .....	331	13305500	Lemhi River at Salmon, ID .....	455
13190500	South Fork Boise River at Anderson Ranch Dam, ID .....	333	13306000	North Fork Salmon River at North Fork, ID .....	457
13191000	South Fork Boise River near Lenox, ID .....	335	13306500	Panther Creek near Shoup, ID .....	459
13196500	Bannock Creek near Idaho City, ID .....	337	13307000	Salmon River near Shoup, ID .....	461
13200000	Mores Creek above Robie Creek, near Arrowrock Dam, ID .....	339	13308500	Middle Fork Salmon River near Cape Horn, ID .....	463
13200500	Robie Creek near Arrowrock Dam, ID .....	341	13309000	Bear Valley Creek near Cape Horn, ID .....	465
13201000	Mores Creek near Arrowrock, ID .....	343	13310000	Big Creek near Big Creek, ID .....	467
13202000	Boise River near Boise, ID .....	345	13310500	South Fork Salmon River near Knox, ID .....	469
13205500	Boise River at Boise, ID .....	347	13310700	South Fork Salmon River near Krassel Ranger Station, ID .....	471
13207000	Spring Valley Creek near Eagle, ID .....	349	13311000	East Fork South Fork Salmon River at Stibnite, ID .....	473
13207500	Dry Creek near Eagle, ID .....	351	13311500	East Fork South Fork Salmon River near Stibnite, ID .....	475
13212500	Boise River at Notus, ID .....	353	13312000	East Fork South Fork Salmon River near Yellow Pine, ID .....	477
13213000	Boise River near Parma, ID .....	355	13313000	Johnson Creek at Yellow Pine, ID .....	479
13213100	Snake River at Nyssa, OR .....	357	13314000	South Fork Salmon River near Warren, ID .....	481
13235000	South Fork Payette River at Lowman, ID .....	359	13315000	Salmon River near French Creek, ID .....	483
13236500	Deadwood River below Deadwood Reservoir, near Lowman, ID .....	361	13315500	Mud Creek near Tamarack, ID .....	485
13237000	Deadwood River near Lowman, ID .....	363	13316500	Little Salmon River at Riggins, ID .....	487
13237500	South Fork Payette River near Garden Valley, ID .....	365	13316800	North Fork Skookumchuck Creek near White Bird, ID .....	489
13238000	Payette River near Banks, ID .....	367	13317000	Salmon River at White Bird, ID .....	491
13239000	North Fork Payette River at McCall, ID .....	369	13334300	Snake River near Anatone, WA .....	493
13240000	Lake Fork Payette River above Jumbo Creek, near McCall, ID .....	371	13336500	Selway River near Lowell, ID .....	495
13245000	North Fork Payette River at Cascade, ID .....	373	13336900	Fish Creek near Lowell, ID .....	497
13246000	North Fork Payette River near Banks, ID .....	375	13337000	Locha River near Lowell, ID .....	499
13247500	Payette River near Horseshoe Bend, ID .....	377	13337500	South Fork Clearwater River near Elk City, ID .....	501
13249500	Payette River near Emmett, ID .....	379	13338000	South Fork Clearwater River near Grangeville, ID .....	503
13250600	Big Willow Creek near Emmett, ID .....	381	13338500	South Fork Clearwater River at Stites, ID .....	505
13251000	Payette River near Payette, ID .....	383	13339000	Clearwater River at Kamiyah, ID .....	507
13251300	West Branch Weiser River near Tamarack, ID .....	385	13339500	Lolo Creek near Greer, ID .....	509
13251500	Weiser River at Tamarack, ID .....	387	13340000	Clearwater River at Orofino, ID .....	511
13254500	Lost Creek near Tamarack, ID .....	389	13340500	North Fork Clearwater River at Bungalow Ranger Station, ID .....	513
13255000	West Fork Weiser River near Fruitvale, ID .....	391	13340600	North Fork Clearwater River near Canyon Ranger Station, ID .....	515
13256000	Weiser River near Council, ID .....	393	13341000	North Fork Clearwater River at Ahsahka, ID .....	517
13257000	Middle Fork Weiser River near Mesa, ID .....	395	13341050	Clearwater River near Peck, ID .....	519
13258500	Weiser River near Cambridge, ID .....	397	13341300	Bloom Creek near Bovill, ID .....	521
13260000	Pine Creek near Cambridge, ID .....	399	13341400	East Fork Potlatch River near Bovill, ID .....	523
13261000	Little Weiser River near Indian Valley, ID .....	401	13341500	Potlatch River at Kendrick, ID .....	525
13263500	Weiser River above Crane Creek, near Weiser, ID .....	403	13342450	Lapwai Creek near Lapwai, ID .....	527
13264500	Crane Creek near Midvale, ID .....	405	13342500	Clearwater River at Spalding, ID .....	529
13266000	Weiser River near Weiser, ID .....	407	13345000	Palouse River near Potlatch, ID .....	531
			13346800	Paradise Creek at University of Idaho, at Moscow, ID .....	533

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## **APPENDIX 2**

**DESCRIPTIONS OF STREAMFLOW-GAGING STATIONS AND TABLES  
AND GRAPHS OF FLOW STATISTICS**

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# BEAR RIVER BASIN

10039500 BEAR RIVER AT BORDER, WY

LOCATION.—Lat 42°12'40", long 111°03'11", in NE 1/4, NE 1/4, sec. 15, T. 14 S., R. 46 E., Bear Lake County, Idaho, Hydrologic Unit 16010102, on left bank 0.2 mi west of Wyoming-Idaho State line, 0.5 mi west of Border, and 2.1 mi upstream from Thomas Fork.

DRAINAGE AREA.—2,486 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1937 to September 1990.

REVISED RECORDS.—WRD UT-74-1: Drainage area.

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

REMARKS.—Natural flow of stream affected by regulation of upstream reservoirs, diversions for irrigation, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,880 ft<sup>3</sup>/s June 7, 1983, gage height, 9.69 ft; minimum, 24 ft<sup>3</sup>/s Apr. 29, 30, 1977.

Summary of monthly and annual discharges, 1938-89

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	751	51	215	136	0.63	4.0
November	693	81	231	120	0.52	4.2
December	563	106	205	90	0.44	3.8
January	381	94	189	74	0.39	3.5
February	479	89	217	91	0.42	4.0
March	1,290	105	400	248	0.62	7.4
April	1,980	71	804	530	0.66	14.8
May	3,160	74	1,070	709	0.66	19.6
June	3,830	62	1,190	870	0.73	21.8
July	1,670	54	519	376	0.72	9.5
August	752	42	225	143	0.63	4.1
September	671	39	182	120	0.66	3.3
Annual	1,070	103	454	228	0.50	100

Magnitude and frequency of annual low flow,  
based on period of record 1939-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	115	71	54	42	32	26
3	117	72	55	43	32	26
7	120	75	57	45	34	28
14	123	78	61	49	38	31
30	131	85	68	56	44	38
60	144	96	77	64	52	45
90	156	106	85	72	58	51
120	166	114	94	80	66	59
183	175	123	104	91	79	72

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1938-89

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,910	2,980	3,630	4,350	4,840	5,270

Magnitude and frequency of annual high flow,  
based on period of record 1938-89

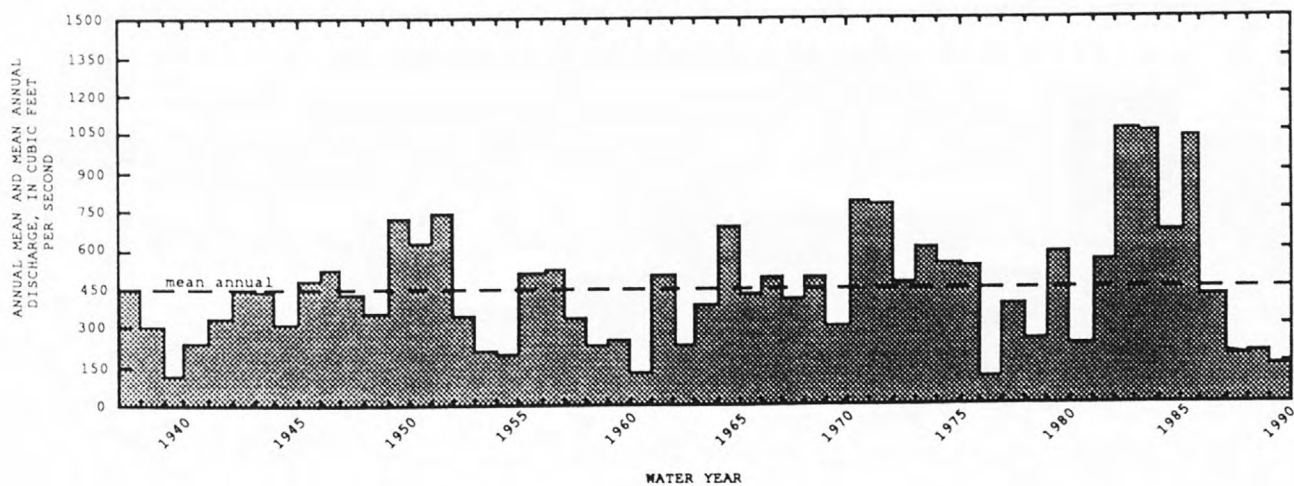
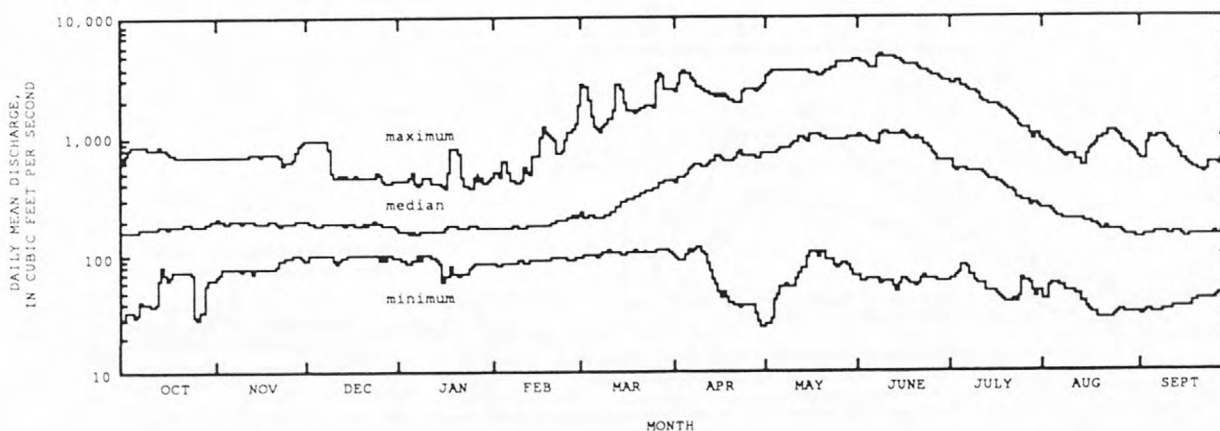
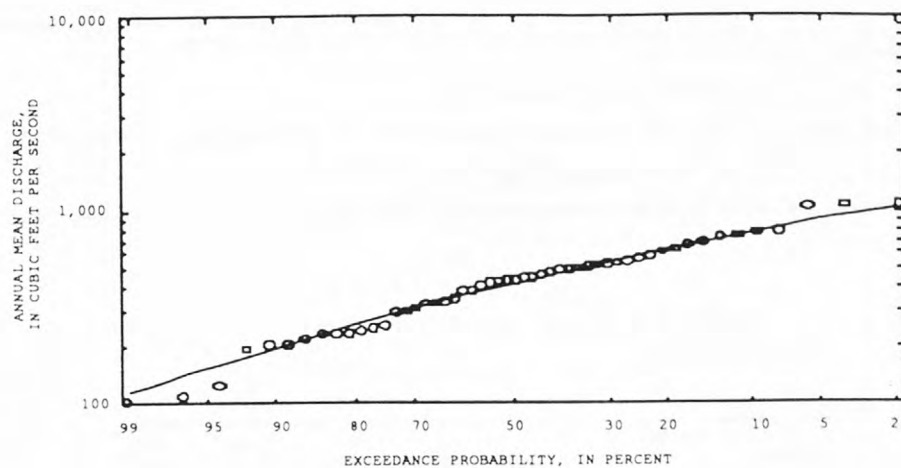
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,900	2,960	3,610	4,240	4,560	4,810
3	1,880	2,940	3,560	4,100	4,400	4,630
7	1,790	2,880	3,440	3,980	4,270	4,500
15	1,620	2,660	3,220	3,770	4,090	4,350
30	1,390	2,310	2,840	3,400	3,740	4,020
60	1,150	1,920	2,380	2,880	3,200	3,470
90	984	1,620	2,000	2,410	2,680	2,910

Duration table of daily mean flow for period of record 1938-89

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,770	1,700	1,190	816	598	392	294	236	198	170	144	116	96	69	57	44	31



LOCATION MAP





# BEAR RIVER BASIN

10040000 THOMAS FORK NEAR GENEVA, ID

LOCATION.—Lat 42°23'30", long 110°59'00", in NE 1/4, sec. 28, T. 28 N., R. 119 W., Lincoln County, Wyoming, Hydrologic Unit 17010102, 0.8 mi upstream from Salt Creek, 3.7 mi east of Wyoming-Idaho State line, and 5.4 mi northeast of Geneva Post Office.

DRAINAGE AREA.—45.3 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1939 to September 1951.

GAGE.—Water-stage recorder. Elevation of gage is 6,400 ft above sea level, from topographic map.

REMARKS.—Divisions for irrigation of about 124,000 acres above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,680 ft<sup>3</sup>/s May 11, 1952, gage height, 8.89 ft; minimum daily, 30 ft<sup>3</sup>/s Aug. 18-22, 1940.

Summary of monthly and annual discharges, 1941-51

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	6.1	2.2	4.3	1.3	0.31	2.1
November	7.3	1.9	4.1	1.5	0.36	2.0
December	5.1	1.7	3.5	1.2	0.34	1.7
January	6.6	1.6	3.4	1.5	0.44	1.6
February	4.6	1.6	3.0	1.0	0.33	1.5
March	21	2.1	5.2	5.4	1.0	2.5
April	110	8.8	49	32	0.66	23.8
May	156	23	74	43	0.58	35.8
June	70	15	35	16	0.45	17.2
July	23	5.5	13	5.1	0.39	6.4
August	9.6	2.7	6.6	2.3	0.34	3.2
September	6.7	1.9	4.6	1.5	0.32	2.2
Annual	30	8.2	17	7.4	0.43	100

Magnitude and frequency of annual low flow,  
based on period of record 1941-51

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	2.3	1.8	1.5	1.3	1.1	0.96
3	2.4	1.8	1.6	1.4	1.2	1.0
7	2.6	2.0	1.7	1.5	1.2	1.1
14	2.6	2.0	1.7	1.5	1.3	1.1
30	2.7	2.1	1.8	1.5	1.3	1.1
60	2.9	2.1	1.8	1.6	1.3	1.2
90	3.0	2.2	1.9	1.6	1.3	1.2
120	3.1	2.3	1.9	1.7	1.4	1.2
183	3.5	2.5	2.1	1.8	1.4	1.3

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1941-51

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
147	251	325	423	497	573

Magnitude and frequency of annual high flow,  
based on period of record 1941-51

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	127	215	284	384	469	561
3	118	201	267	363	443	531
7	108	182	239	323	392	467
15	94	162	214	287	347	411
30	79	132	170	221	259	298
60	61	97	122	154	178	203
90	49	75	92	115	133	150

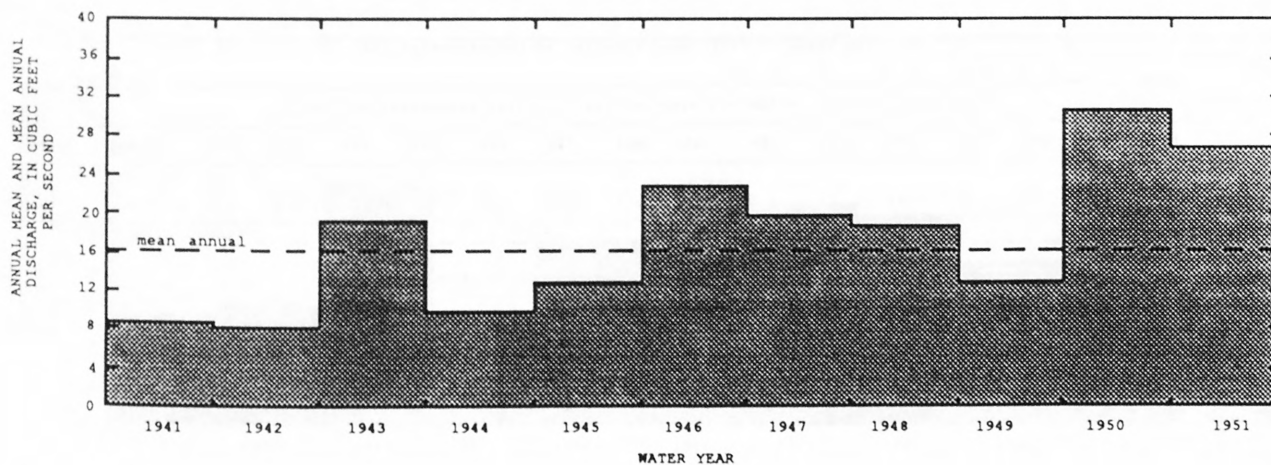
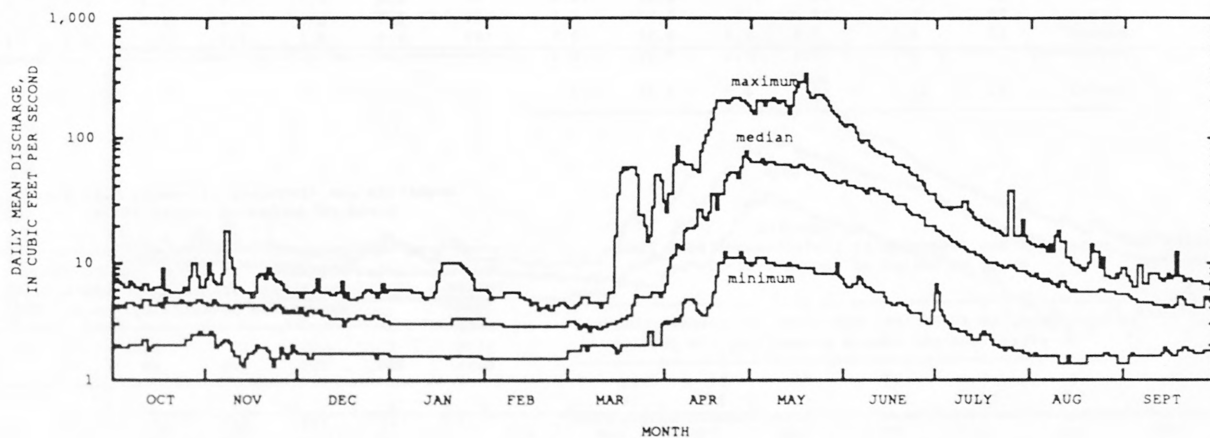
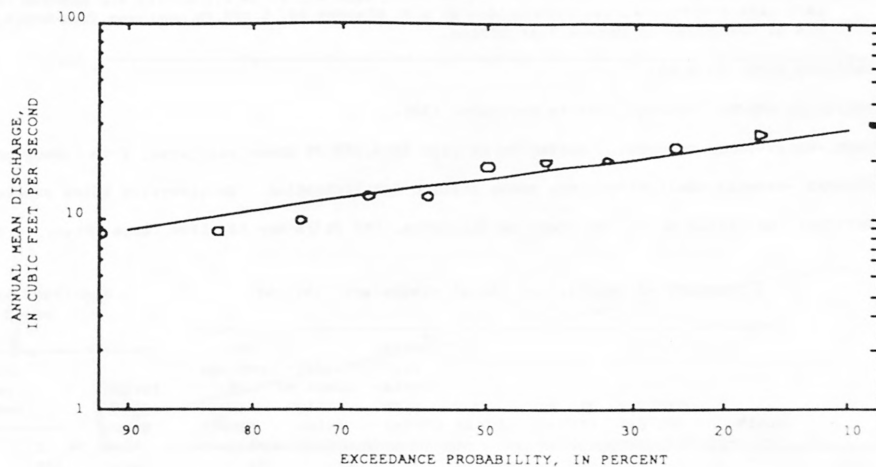
Duration table of daily mean flow for period of record 1941-51

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
162	76	49	33	22	11	6.3	5.1	4.3	3.7	3.1	2.2	1.9	1.7	1.6	1.5	1.5

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10040500 SALT CREEK NEAR GENEVA, ID

LOCATION.—Lat 42°24'00", long 110°59'30", in NW 1/4, sec. 21, T. 28 N., R. 119 W., Lincoln County, Wyoming, Hydrologic Unit 16010102, on left bank 800 ft upstream from bridge on U.S. Highway 89, 1,000 ft upstream from mouth, 3.0 mi east of Wyoming-Idaho State line, and 4.8 mi northeast of Geneva Post Office.

DRAINAGE AREA.—37.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1939 to September 1951.

GAGE.—Water-stage recorder. Elevation of gage is 6,350 ft above sea level, from topographic map.

REMARKS.—Several small diversions above station for irrigation. No diversion below station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 382 ft<sup>3</sup>/s May 18, 1950, gage height, 5.02 ft; minimum 0.5 ft<sup>3</sup>/s Aug. 18, 1940.

Summary of monthly and annual discharges, 1941-51

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	6.9	2.6	5.1	1.5	0.29	2.1
November	6.8	2.2	4.7	1.4	0.31	1.9
December	5.3	1.8	3.9	1.1	0.29	1.6
January	5.6	1.8	3.8	1.2	0.30	1.6
February	4.7	1.8	3.5	0.88	0.25	1.5
March	9.0	2.7	4.4	1.8	0.42	1.8
April	125	9.4	49	40	0.82	20.4
May	175	39	95	41	0.43	39.3
June	83	23	43	19	0.44	18.0
July	26	9.4	16	5.4	0.34	6.5
August	11	4.1	7.5	2.4	0.33	3.1
September	7.6	3.2	5.4	1.5	0.28	2.2
Annual	32	11	20	6.7	0.33	100

Magnitude and frequency of annual low flow,  
based on period of record 1941-51

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	2.9	1.9	1.4	0.99	0.62	0.42
3	3.1	2.0	1.4	1.0	0.62	0.43
7	3.2	2.1	1.5	1.0	0.62	0.44
14	3.3	2.2	1.6	1.1	0.70	0.49
30	3.4	2.3	1.8	1.3	0.90	0.67
60	3.6	2.6	2.0	1.6	1.2	0.93
90	3.6	2.7	2.3	1.9	1.5	1.2
120	3.7	2.8	2.3	2.0	1.6	1.3
183	4.2	3.1	2.5	2.1	1.6	1.4

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1941-51

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
164	294	388	511	605	699

Magnitude and frequency of annual high flow,  
based on period of record 1941-51

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	161	259	325	406	466	524
3	156	246	305	377	427	476
7	145	229	284	351	399	445
15	129	201	250	310	354	397
30	107	161	194	233	260	286
60	81	112	130	151	165	177
90	62	85	99	114	125	134

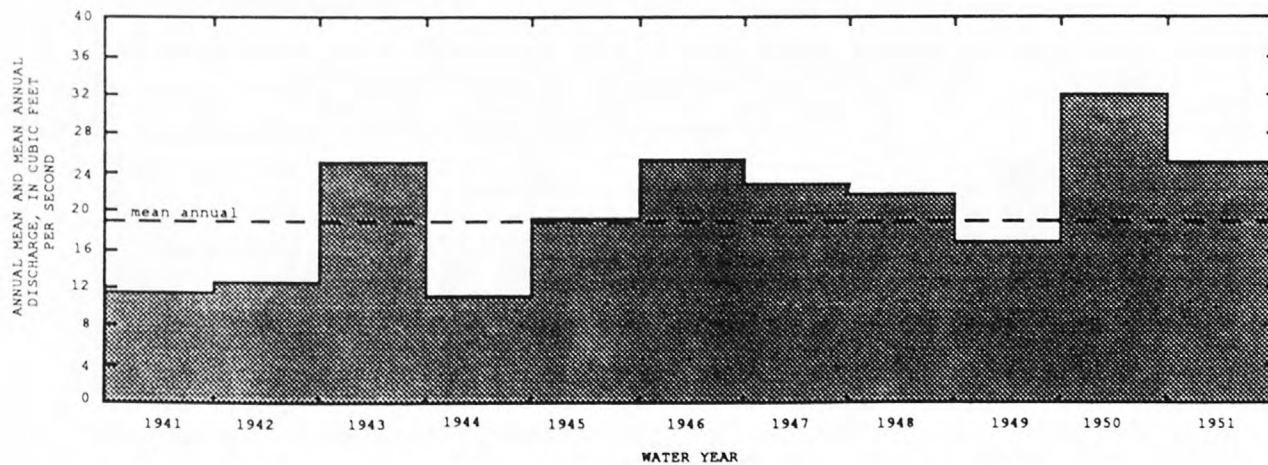
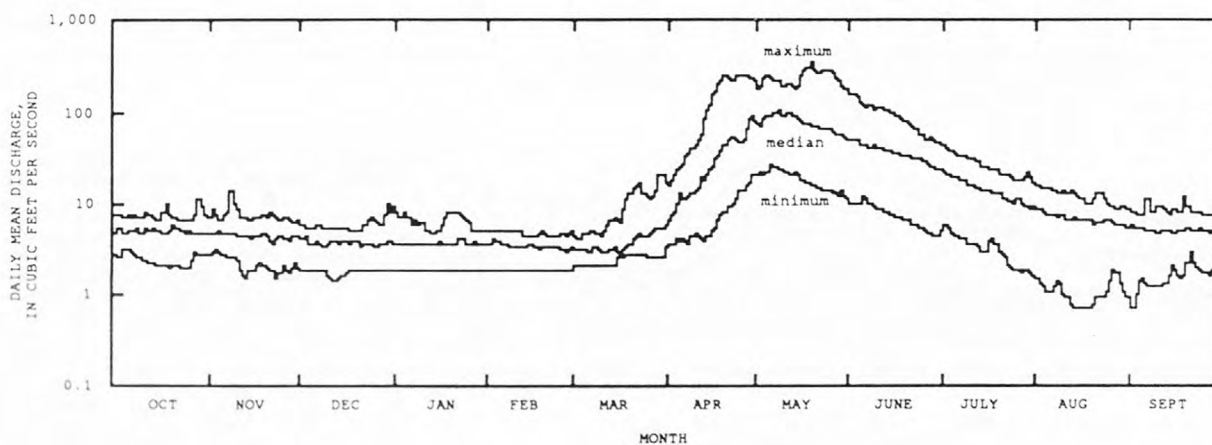
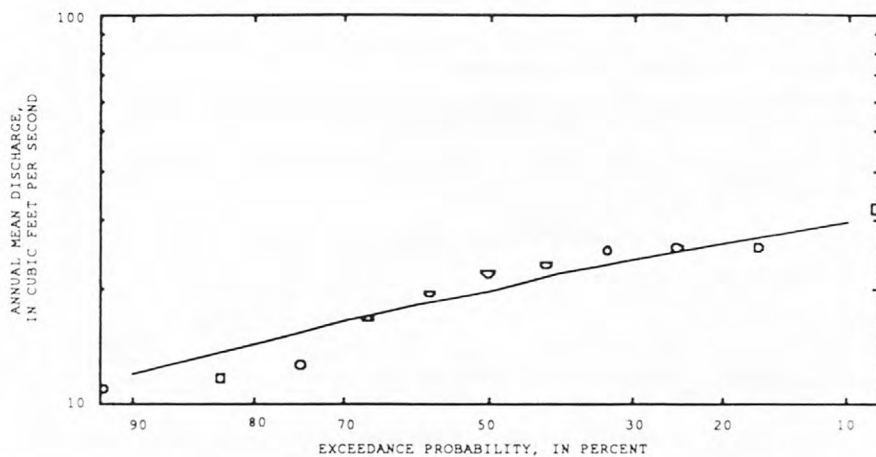
Duration table of daily mean flow for period of record 1941-51

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
203	93	57	39	26	12	7.2	5.6	4.8	4.2	3.6	2.9	2.5	2.0	1.9	1.8	1.6

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10041000 THOMAS FORK NEAR WYOMING-IDAHO STATE LINE

LOCATION.—Lat 42°24'10", long 111°01'30", in SE 1/4 NW 1/4, sec. 19, T. 28 N., R. 119 W., Lincoln County, Wyoming, Hydrologic Unit 16010102, on right bank 1.3 mi upstream from Wyoming-Idaho State line, 1.5 mi downstream from Giraffe Creek, and 3.5 mi northeast of Geneva, Idaho.

DRAINAGE AREA.—113 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1949 to September 1989.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 6,280 ft above sea level, from topographic map. Prior to Aug. 23, 1957, at site 0.2 mi upstream at different datum.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,860 ft<sup>3</sup>/s May 15, 1984, gage height, 5.00 ft; minimum, 2.6 ft<sup>3</sup>/s Mar. 2, 1956, result of freezeup.

Summary of monthly and annual discharges, 1950-89

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	35	7.9	19	6.2	0.33	2.7
November	28	8.6	17	4.6	0.27	2.5
December	29	9.2	16	4.8	0.30	2.4
January	21	9.4	15	3.4	0.23	2.2
February	27	9.0	15	3.6	0.24	2.2
March	54	9.1	19	7.8	0.41	2.8
April	379	18	104	79	0.76	15.3
May	630	15	271	178	0.66	39.8
June	275	9.6	114	71	0.62	16.8
July	85	7.2	46	23	0.50	6.7
August	48	7.0	25	11	0.44	3.7
September	38	6.9	20	8.3	0.41	2.9
Annual	130	13	57	28	0.50	100

Magnitude and frequency of annual low flow,  
based on period of record 1951-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>#</sup> 1%
1	11	8.3	7.0	6.0	5.0	4.4
3	11	8.7	7.4	6.4	5.4	4.7
7	12	9.2	7.8	6.8	5.7	5.0
14	12	9.6	8.2	7.2	6.1	5.4
30	13	10	8.7	7.7	6.6	5.9
60	13	11	9.3	8.2	7.0	6.3
90	14	11	9.7	8.6	7.4	6.7
120	15	12	10	8.9	7.7	7.0
183	16	12	11	9.4	8.1	7.3

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1950-89

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
429	841	1,150	1,560	1,880	2,190

Magnitude and frequency of annual high flow,  
based on period of record 1950-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>#</sup> 1%
1	382	736	978	1,270	1,470	1,660
3	362	696	920	1,180	1,360	1,530
7	336	644	843	1,070	1,220	1,350
15	301	570	740	931	1,050	1,160
30	257	473	604	748	837	913
60	193	338	425	520	580	630
90	151	257	322	393	439	479

Duration table of daily mean flow for period of record 1950-89

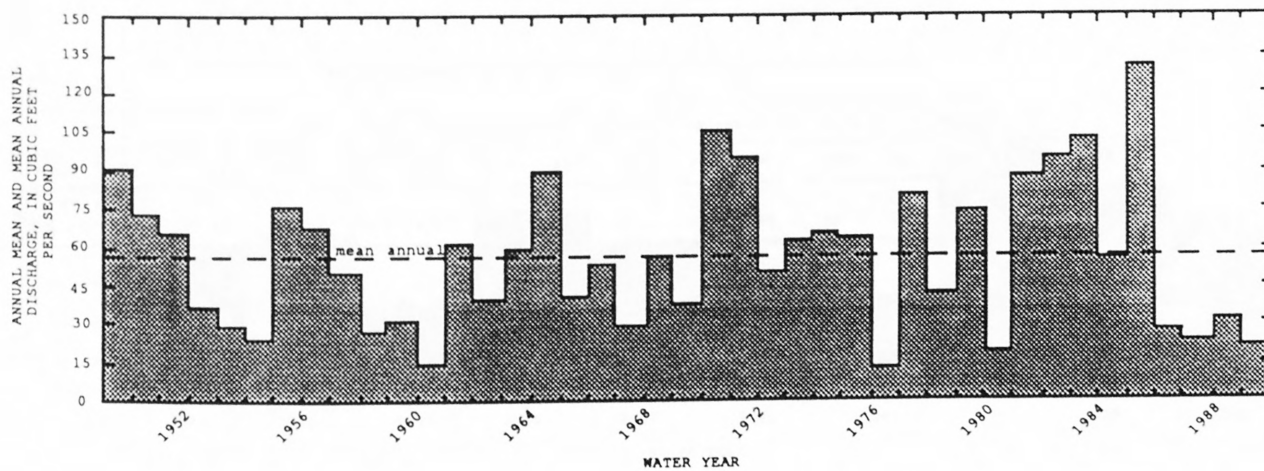
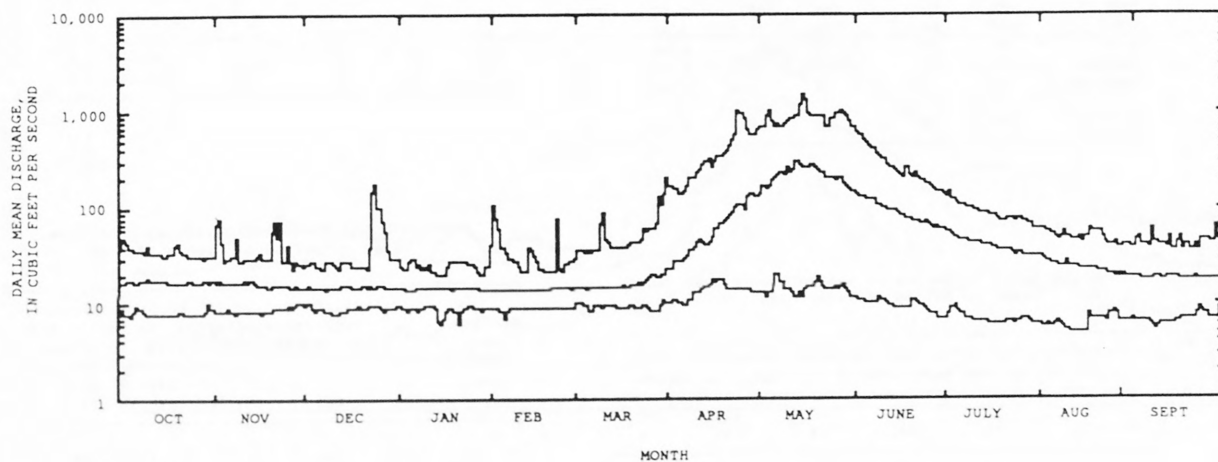
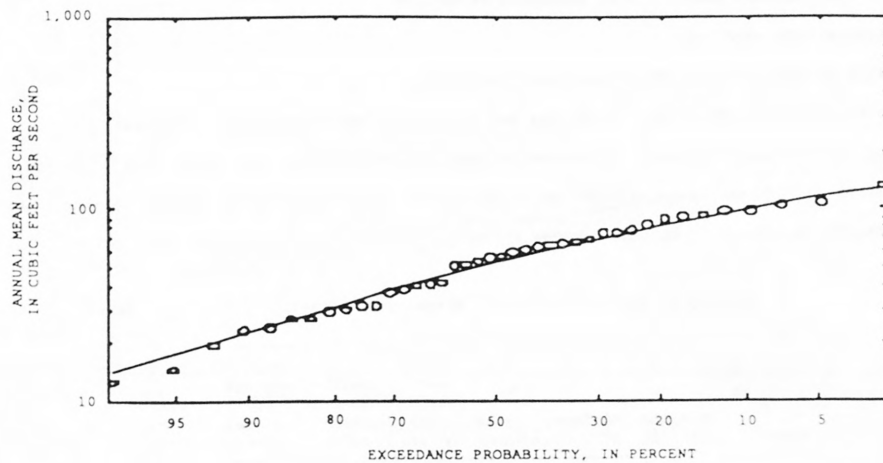
Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
557	262	136	87	60	35	25	21	18	16	14	12	10	8.5	7.5	6.7	5.8

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.





LOCATION MAP



# BEAR RIVER BASIN

10042500 THOMAS FORK NEAR RAYMOND, ID

LOCATION.—Lat 42°16', long 110°05', in SE 1/4, sec. 28, T. 13 S., R. 46 E., Bear Lake County, Hydrologic Unit 16010102, on left bank at J.W. Mumford Ranch, 1.5 mi southwest of Raymond.

DRAINAGE AREA.—202 mi<sup>2</sup>.

PERIOD OF RECORD.—May 1942 to September 1952.

REVISED RECORDS.—WSP 1180: Discharge and maximum for water years 1943, 1946-48.

GAGE.—Water-stage recorder. Elevation of gage is 6,080 ft above sea level, from topographic map.

REMARKS.—Diversion above station for irrigation of about 10,000 acres above and below station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,070 ft<sup>3</sup>/s May 19, 1950, gage height, 7.62 ft; minimum daily, 1.2 ft<sup>3</sup>/s Sept. 28, 1952.

Summary of monthly and annual discharges, 1943-52

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	26	3.5	14	6.8	0.47	2.1
November	31	3.8	17	7.8	0.46	2.3
December	26	3.9	17	7.1	0.43	2.3
January	23	5.1	16	5.7	0.36	2.2
February	23	5.0	14	5.3	0.38	1.9
March	61	6.4	19	16	0.82	2.7
April	339	19	147	105	0.71	20.3
May	527	55	275	146	0.53	38.0
June	303	46	119	72	0.60	16.4
July	89	20	42	21	0.49	5.9
August	49	14	27	11	0.42	3.7
September	33	7.8	17	7.6	0.45	2.3
Annual	109	22	61	25	0.41	100

Magnitude and frequency of annual low flow,  
based on period of record 1944-52

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20† 5%	50† 2%	100† 1%
1	9.5	6.5	5.2	4.4	3.5	3.1
3	9.9	6.8	5.5	4.7	3.9	3.5
7	11	7.3	6.0	5.2	4.4	3.9
14	11	8.2	6.8	5.9	5.0	4.5
30	13	9.1	7.5	6.4	5.3	4.6
60	14	9.7	7.9	6.7	5.4	4.6
90	15	11	8.8	7.4	5.8	4.9
120	16	11	9.2	7.5	5.9	5.0
183	17	12	9.6	7.9	6.2	5.2

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1943-52

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
450	800	1,030	1,220	1,450	1,680

Magnitude and frequency of annual high flow,  
based on period of record 1943-52

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	441	764	971	1,210	1,380	1,530
3	431	729	909	1,110	1,240	1,350
7	410	690	855	1,030	1,150	1,240
15	373	620	760	906	994	1,070
30	315	496	587	672	719	754
60	238	356	414	468	498	520
90	180	266	312	359	387	411

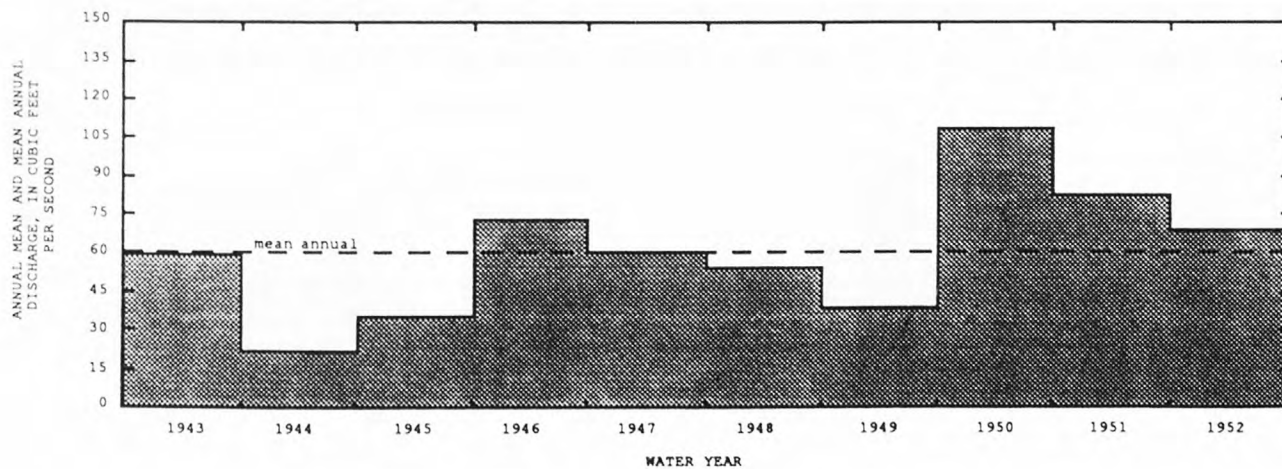
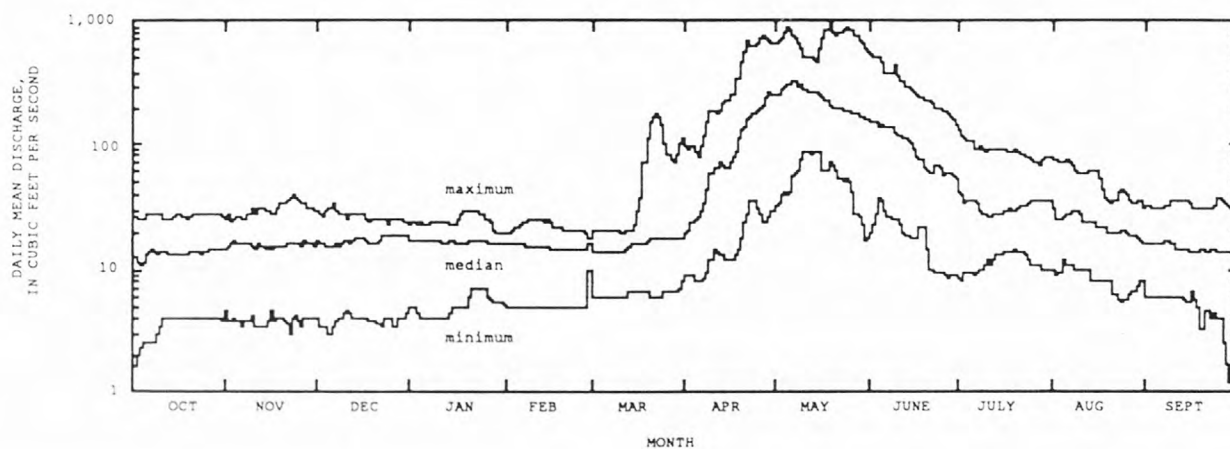
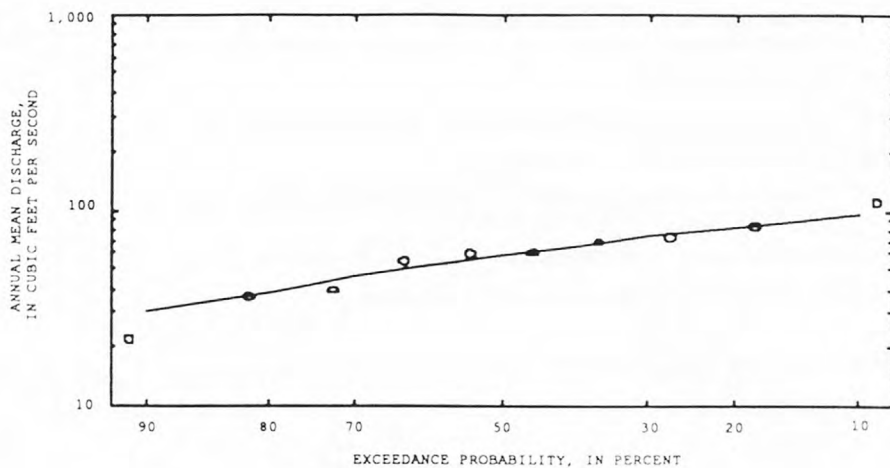
Duration table of daily mean flow for period of record 1943-52

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
588	295	168	105	66	35	25	21	18	16	14	8.4	6.1	4.4	3.8	3.3	1.7

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10044000 BEAR RIVER AT HARER, ID

LOCATION.—Lat 42°11'50", long 111°10'05", in NW 1/4, NW 1/4, NW 1/4, sec. 23, T. 14 S., R. 45 E., Bear Lake County, Hydrologic Unit 16010102, on right bank 400 ft downstream from Sheep Creek, 0.8 mi north of Harer siding on Union Pacific (Oregon Short Line) Railroad, and 5 mi southeast of Dingle.

DRAINAGE AREA.—2,839 mi<sup>2</sup>.

PERIOD OF RECORD.—June 1913 to September 1986. Monthly discharge only October 1916 to December 1918, published in WSP 1314.

REVISED RECORDS.—WDR UT-74-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 6,000 ft above sea level, from topographic map. Prior to Aug. 24, 1914, staff gage at site 1,500 ft downstream at different datum.

REMARKS.—Natural flow of stream affected by upstream reservoirs, diversions for irrigation, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 4,800 ft<sup>3</sup>/s June 9, 1983; minimum daily, 26 ft<sup>3</sup>/s Aug. 21-27, 1934.

Summary of monthly and annual discharges, 1943-65, 1967-84, 1986

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	820	82	249	138	0.55	3.6
November	777	111	266	122	0.46	3.9
December	622	102	230	96	0.42	3.3
January	397	117	211	68	0.32	3.1
February	496	121	248	87	0.35	3.6
March	1,380	161	462	277	0.60	6.7
April	2,150	125	984	591	0.60	14.3
May	3,670	116	1,480	912	0.62	21.5
June	4,050	94	1,530	973	0.64	22.2
July	1,940	80	681	442	0.65	9.9
August	904	76	301	174	0.58	4.4
September	831	80	240	155	0.65	3.5
Annual	1,240	140	574	274	0.48	100

Magnitude and frequency of annual low flow,  
based on period of record 1944-66, 1968-84, 1986

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	138	95	75	59	55	48
3	142	101	83	70	58	51
7	147	105	87	75	63	56
14	153	110	92	79	67	60
30	163	118	100	86	74	66
60	180	131	110	96	81	73
90	195	142	120	104	88	78
120	206	151	128	112	96	87
183	213	157	135	120	106	98

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1943-65, 1967-84, 1986.

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,360	3,520	4,390	5,520	6,350	7,150

Magnitude and frequency of annual high flow,  
based on period of record 1943-65, 1967-84, 1986

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2,350	3,510	4,070	4,530	4,750	4,910
3	2,330	3,490	4,000	4,450	4,670	4,820
7	2,230	3,370	3,890	4,350	4,580	4,750
15	2,050	3,160	3,710	4,210	4,480	4,690
30	1,820	2,860	3,400	3,920	4,220	4,450
60	1,530	2,450	2,950	3,460	3,760	4,010
90	1,310	2,080	2,510	2,940	3,200	3,420

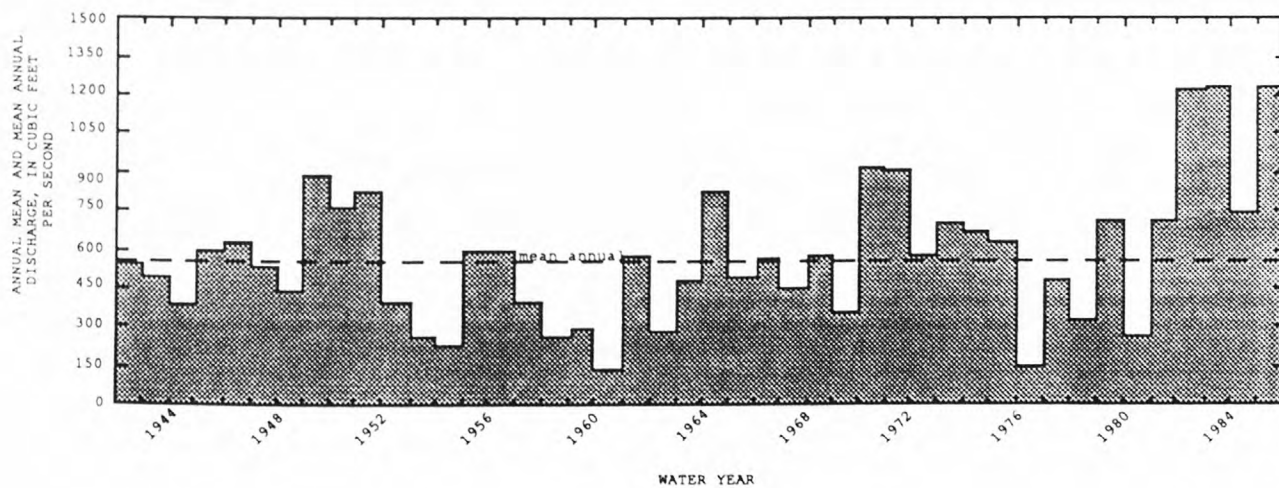
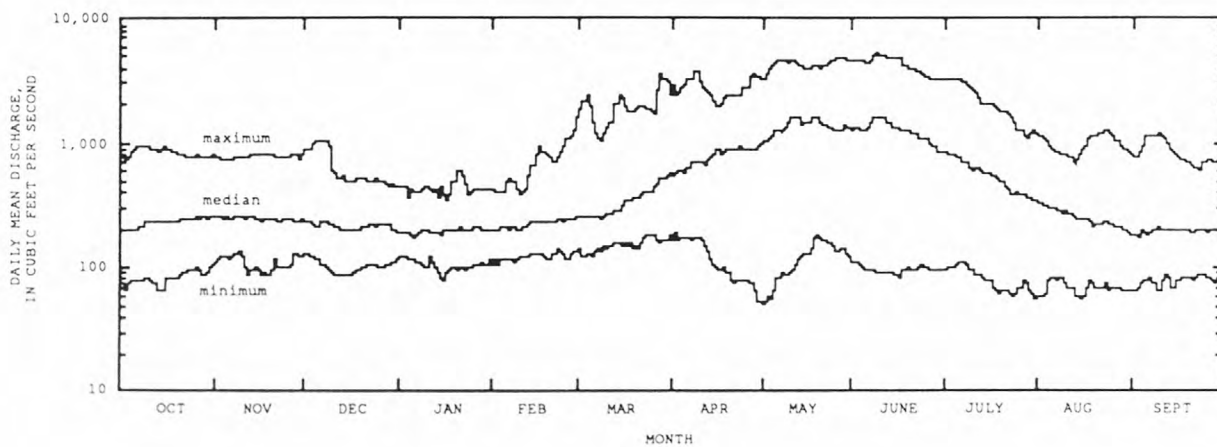
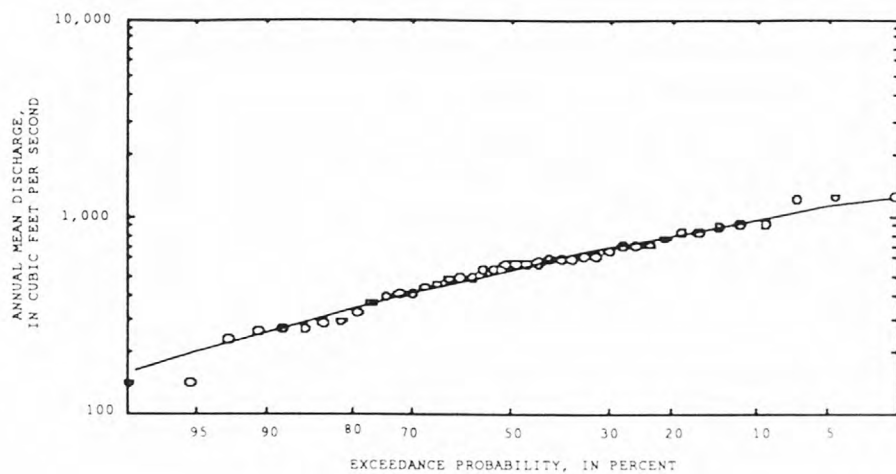
Duration table of daily mean flow for period of record 1943-65, 1967-84, 1986

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
3,300	2,120	1,570	1,100	799	487	348	283	244	211	178	145	121	97	83	73

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# BEAR RIVER BASIN

10046500 BEAR RIVER BELOW STEWART DAM, NEAR MONTPELIER, ID

LOCATION.—Lat 42°15'14", long 111°17'35", in NW 1/4, NW 1/4, NE 1/4, sec. 34, T. 13 S., R. 44 E., Bear Lake County, Hydrologic Unit 16010201, on right bank 300 ft downstream from Stewart Dam and 4.5 mi south of Montpelier.

DRAINAGE AREA.—2,853 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1922 to September 1989. Monthly discharge only January to September 1922, published in WSP 1314.

REVISED RECORDS.—WRD UT-74-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 5,950 ft above sea level, from topographic map.

REMARKS.—Water diverted at Stewart Dam through Rainbow Inlet Canal (station 10046000) for storage in Bear Lake.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 3,050 ft<sup>3</sup>/s June 3, 1923; no flow July 15, 1956, July 13, 1977.

Summary of monthly and annual discharges, 1943-89

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	130	0.76	16	22	1.3	7.6
November	115	0.63	13	18	1.3	6.1
December	45	0.66	10	9.3	0.89	4.8
January	29	1.2	8.9	6.8	0.76	4.1
February	42	1.6	9.4	7.6	0.81	4.3
March	26	2.3	11	6.6	0.59	5.2
April	27	2.4	9.9	5.6	0.57	4.6
May	31	2.5	14	7.6	0.55	6.4
June	717	1.0	51	129	2.5	23.6
July	646	0.10	35	101	2.9	16.4
August	156	0.52	21	32	1.5	9.8
September	139	0.36	15	21	1.4	7.1
Annual	125	2.6	18	21	1.2	100

Magnitude and frequency of annual low flow,  
based on period of record 1944-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	2.8	1.1	0.55	0.17	0.00	0.00
3	3.5	1.2	0.57	0.27	0.10	0.05
7	3.8	1.5	0.77	0.41	0.18	0.10
14	4.5	1.8	0.91	0.48	0.21	0.11
30	5.1	2.0	1.0	0.53	0.23	0.12
60	5.8	2.3	1.3	0.70	0.33	0.19
90	5.9	2.8	1.8	1.2	0.72	0.51
120	6.4	3.3	2.2	1.6	1.1	0.84
183	7.9	4.3	3.1	2.4	1.7	1.4

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1943-89

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
92	340	703	1,580	2,710	4,470

Magnitude and frequency of annual high flow,  
based on period of record 1943-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	42	137	281	663	1,210	2,150
3	38	124	258	624	1,170	2,120
7	34	108	226	551	1,040	1,920
15	29	88	183	442	833	1,540
30	23	69	142	346	657	1,230
60	19	52	99	223	398	701
90	17	42	77	160	271	454

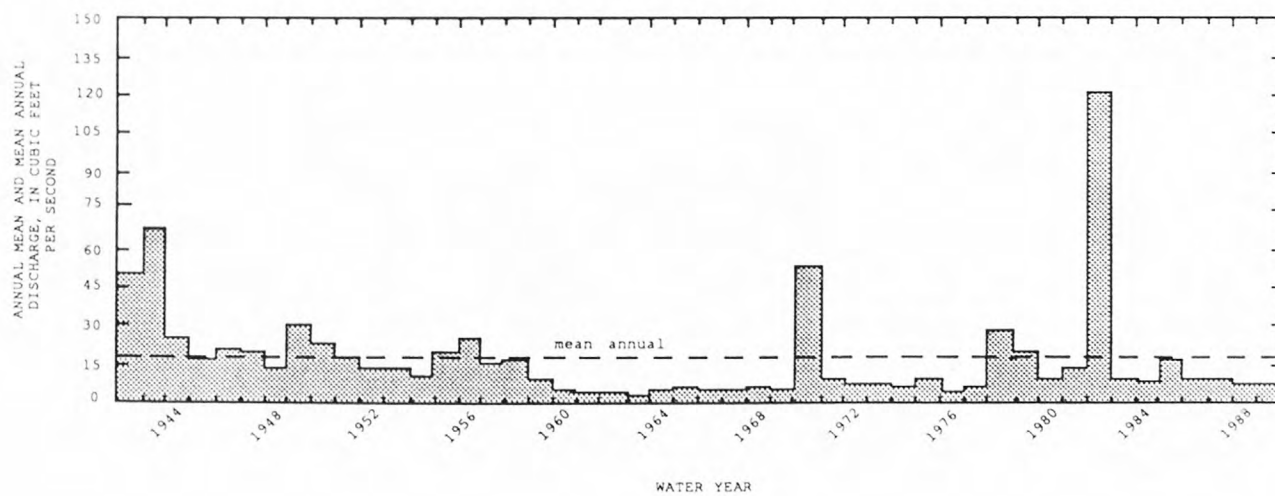
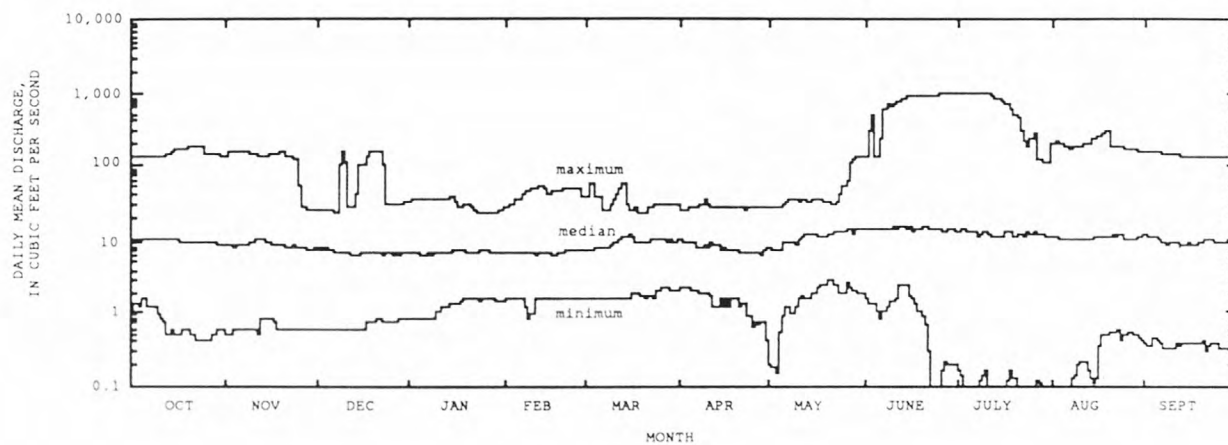
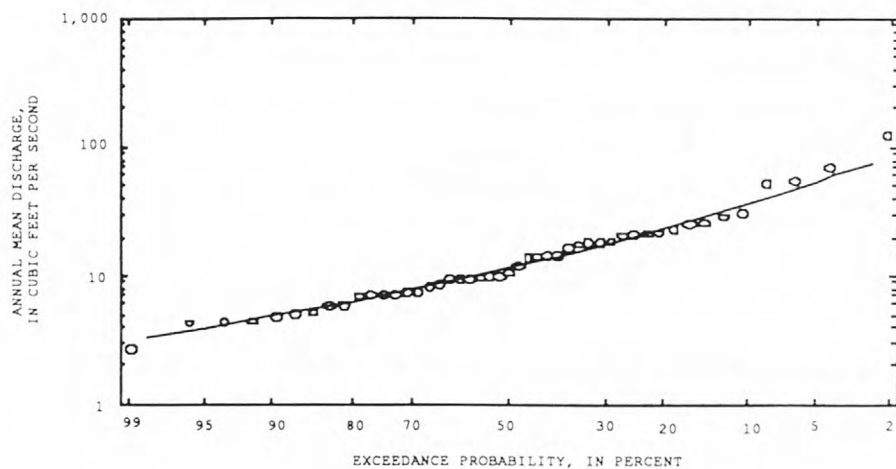
Duration table of daily mean flow for period of record 1943-89

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
171	35	26	22	19	15	12	9.6	7.5	6.2	4.8	3.3	2.2	1.2	0.60	0.37	0.08

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10047500 MONTPELIER CREEK AT IRRIGATORS WEIR, NEAR MONTPELIER, ID

LOCATION.—Lat 42°19'47", long 111°14'47", in SW 1/4, SE 1/4, sec. 31, T. 12 S., R. 45 E., Bear Lake County, Hydrologic Unit 16010201, Caribou National Forest, on right bank 3 mi east of Montpelier and 3.5 mi downstream from South Fork.

DRAINAGE AREA.—49.5 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1942 to September 1979. Monthly discharge only for some periods, published in WSP 1314.

REVISED RECORDS.—WDR ID 1974.

GAGE.—Water-stage recorder and sharp-crested weir. Elevation of gage is 6,210 ft above sea level, from topographic map.

REMARKS.—One small diversion above station for irrigation. Flow regulated by Montpelier Creek reservoir since December 1970.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 224 ft<sup>3</sup>/s May 18, 1950; maximum gage height, 3.06 ft, Apr. 28, 1962; minimum, 0.40 ft/s Jan. 28, 1961.

Summary of monthly and annual discharges, 1943-79

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	20	5.0	11	3.6	0.32	4.1
November	19	5.0	10	3.1	0.31	3.7
December	32	5.0	9.4	4.7	0.50	3.5
January	17	4.5	8.1	2.5	0.31	3.0
February	17	4.5	8.1	2.7	0.33	3.0
March	52	5.4	11	7.9	0.74	4.0
April	88	6.4	37	22	0.59	13.8
May	136	6.8	67	34	0.50	24.7
June	107	7.9	50	20	0.41	18.3
July	58	5.4	29	14	0.50	10.6
August	48	4.5	18	9.7	0.54	6.5
September	27	4.9	13	5.3	0.40	4.8
Annual	40	7.3	23	8.0	0.35	100

Magnitude and frequency of annual low flow,  
based on period of record 1944-79

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	5.6	4.1	3.4	2.8	2.2	1.9
3	6.0	4.8	4.2	3.7	3.2	2.9
7	6.5	5.2	4.6	4.1	3.7	3.3
14	6.6	5.4	4.8	4.4	3.9	3.6
30	6.8	5.6	5.1	4.7	4.3	4.1
60	7.2	5.9	5.4	5.0	4.6	4.3
90	7.5	6.2	5.7	5.3	5.0	4.8
120	7.9	6.4	5.9	5.5	5.1	4.9
183	9.0	7.2	6.5	5.9	5.4	5.0

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1943-79

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
99	140	166	198	222	245	

Magnitude and frequency of annual high flow,  
based on period of record 1943-79

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	92	134	160	188	207	224
3	89	130	154	180	198	213
7	86	126	149	175	191	206
15	80	119	142	166	182	196
30	72	107	127	149	163	175
60	62	89	104	120	129	138
90	53	76	88	100	108	114

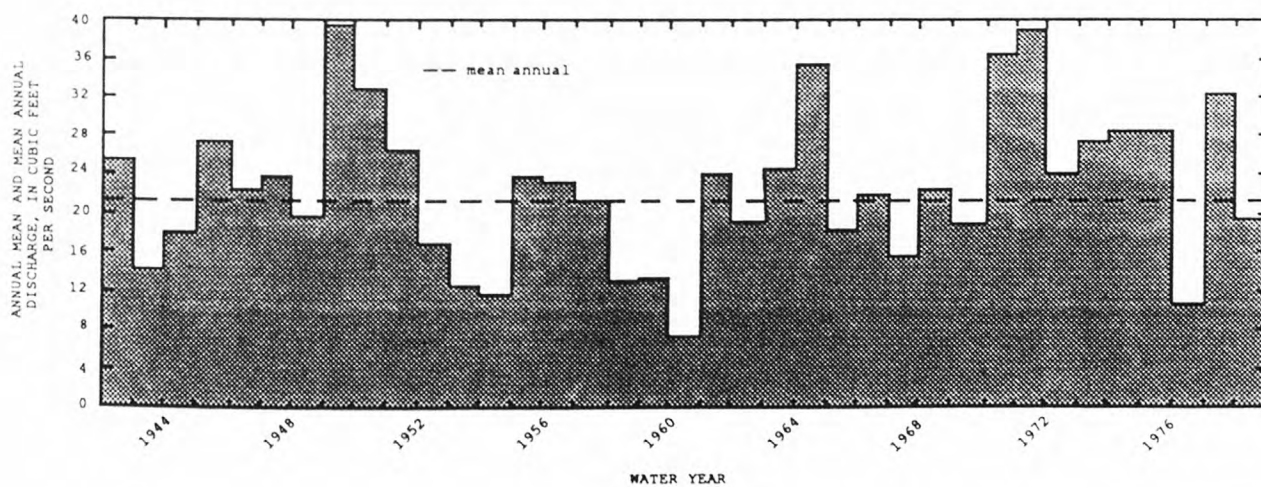
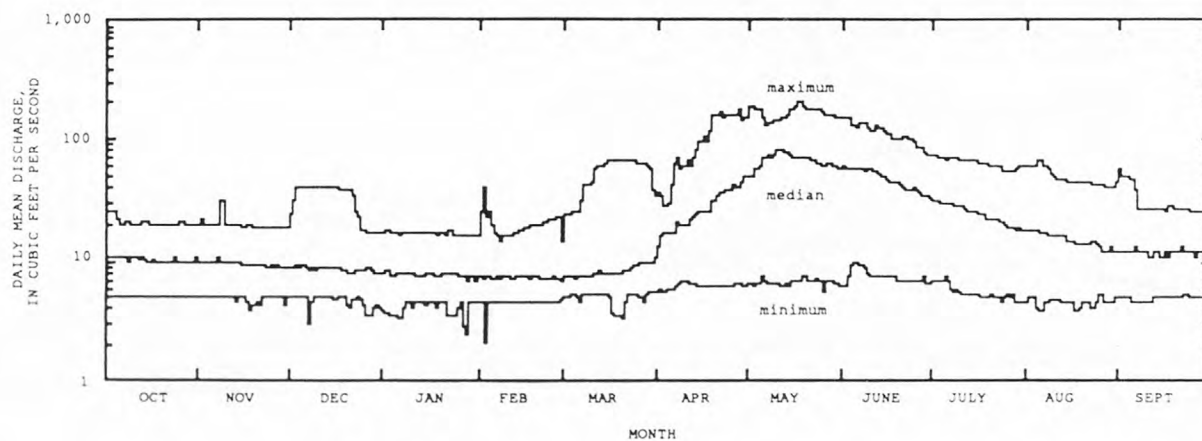
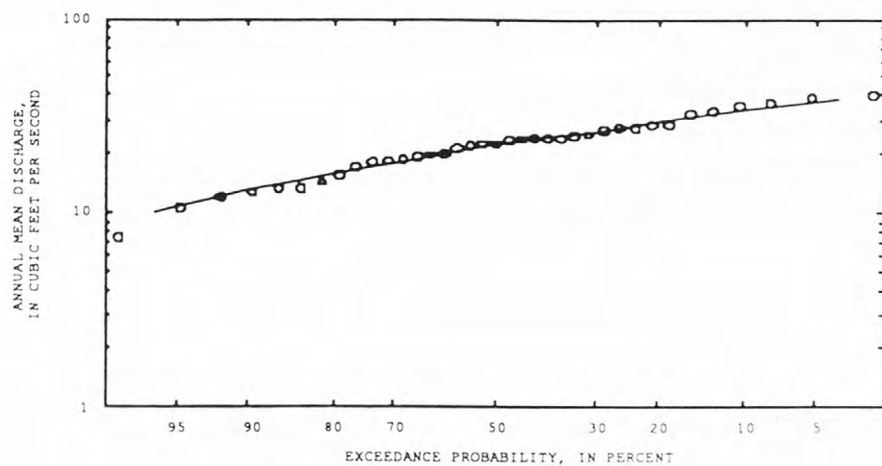
Duration table of daily mean flow for period of record 1943-79

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
125	79	57	44	33	21	16	12	10	8.8	7.6	6.3	5.5	4.9	4.5	4.2	3.5

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10058600 BLOOMINGTON CREEK AT BLOOMINGTON, ID

LOCATION.—Lat 42°34'08", long 111°25'48", in SE 1/4, SW 1/4, SE 1/4, sec. 21, T. 14 S., R. 43 E., Bear Lake County, Hydrologic Unit 16010201, on left bank 1 mi west of Bloomington.

DRAINAGE AREA.—24.0 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1960 to September 1986.

REVISED RECORDS.—WDR UT-74-1: Drainage area.

GAGE.—Water-stage recorder and concrete flume. Elevation of gage is 6,070 ft above sea level, from topographic map.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 249 ft<sup>3</sup>/s June 5, 1986, gage height, 4.47 ft; minimum, 9.4 ft<sup>3</sup>/s Jan. 27, 1961, Feb. 26, 1962.

Summary of monthly and annual discharges, 1961-84, 1986

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	28	13	21	3.9	0.19	5.5
November	24	13	19	3.0	0.16	5.0
December	22	12	17	2.6	0.15	4.6
January	20	12	16	2.2	0.14	4.3
February	24	13	16	2.5	0.15	4.3
March	36	12	17	4.8	0.28	4.5
April	58	16	27	10	0.37	7.2
May	94	18	63	22	0.34	16.7
June	167	15	83	45	0.54	22.1
July	81	14	44	21	0.48	11.7
August	44	14	29	9.3	0.32	7.7
September	34	13	24	6.1	0.26	6.4
Annual	51	16	31	9.4	0.30	100

Magnitude and frequency of annual low flow,  
based on period of record 1962-84

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 <sup>#</sup> 2%	100 <sup>#</sup> 1%
1	14	13	13	12	12	11
3	14	13	13	12	12	11
7	14	13	13	12	12	11
14	15	13	13	12	12	11
30	15	14	13	12	12	12
60	15	14	13	13	12	12
90	16	14	13	13	12	12
120	16	15	14	13	13	12
183	17	15	14	14	13	12

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1961-84, 1986

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
149	205	236	270	291	309

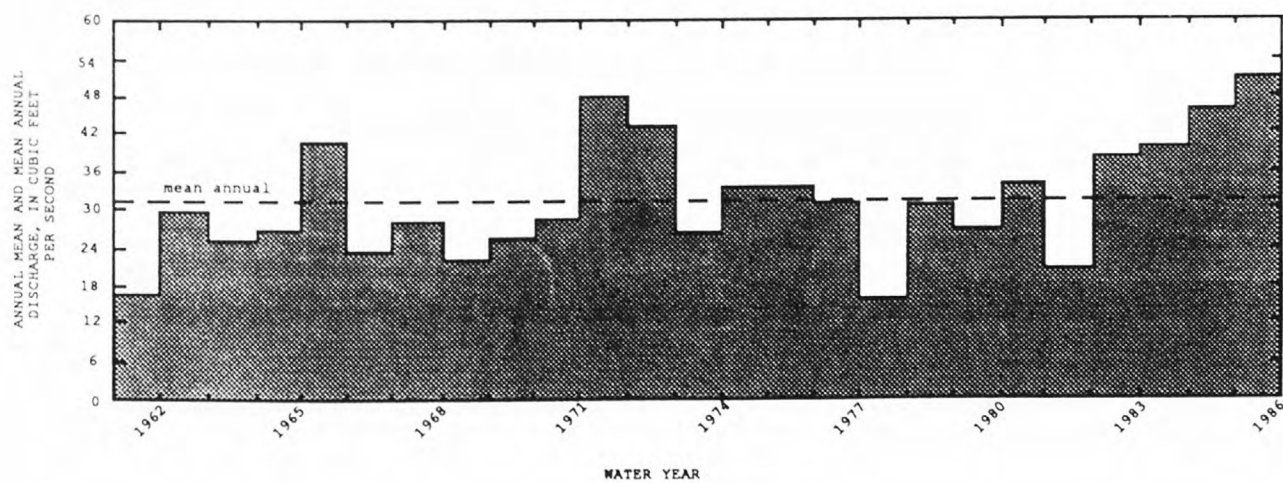
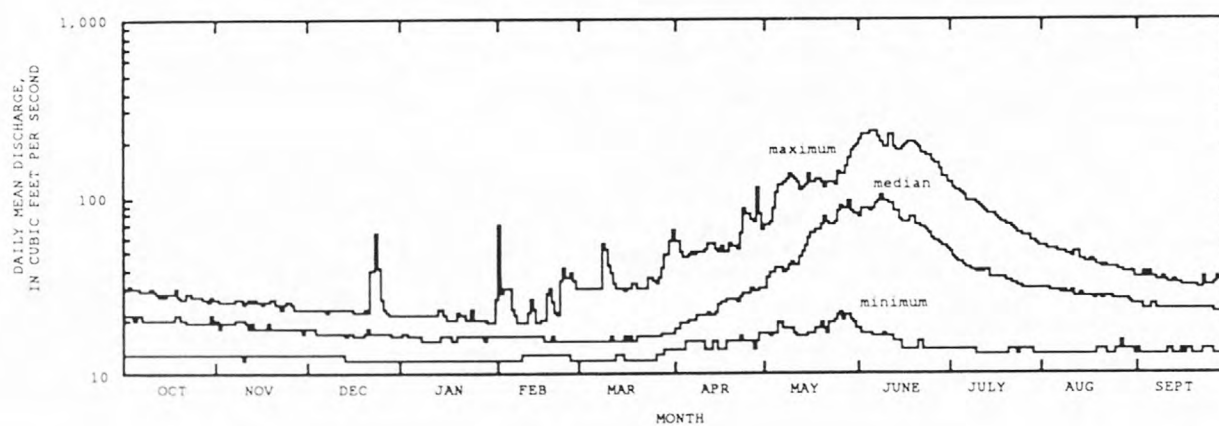
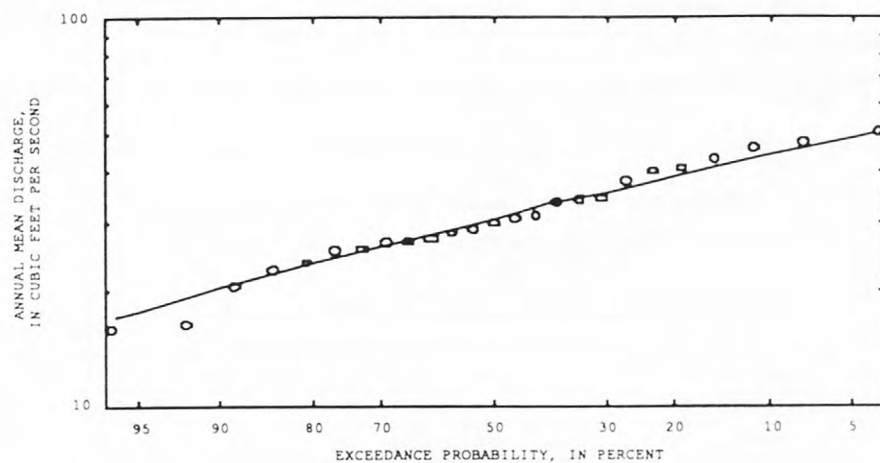
Magnitude and frequency of annual high flow,  
based on period of record 1961-84, 1986

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 <sup>#</sup> 2%	100 <sup>#</sup> 1%
1	133	177	193	206	211	214
3	123	167	185	199	206	211
7	116	159	177	192	200	205
15	107	148	167	183	192	198
30	93	133	152	171	182	190
60	74	107	125	144	156	166
90	62	88	104	120	130	139

Duration table of daily mean flow for period of record 1961-84, 1986

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
150	96	65	48	38	29	23	21	19	18	16	15	14	13	13	12

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.





# BEAR RIVER BASIN

10068500 BEAR RIVER AT PESCADERO, ID

LOCATION.—Lat 42°24'06", long 111°21'22", in SW 1/4, SW 1/4, SE 1/4, sec. 6, T. 12 S., R. 44 E., Bear Lake County, Hydrologic Unit 16010202, on left bank at Pescadero, 400 ft downstream from road bridge, 2 mi downstream from Bennington Creek, and 6.5 mi northwest of Montpelier.

DRAINAGE AREA.—3,705 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1921 to September 1954. June 1969 to September 1989. Monthly discharge only for some periods, published in WSP 1314.

GAGE.—Water-stage recorder. Elevation of gage is 5,900 ft above sea level, from topographic map. Prior to Oct. 1, 1988 at datum 0.35 ft lower.

REMARKS.—Flow regulated by Bear Lake (station 10055500) and diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 4,280 ft<sup>3</sup>/s June 21, 1986; minimum daily, 23 ft<sup>3</sup>/s Mar. 14-17, 1936.

Summary of monthly and annual discharges, 1925-54, 1970-89

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,040	36	489	501	1.0	6.5
November	2,130	58	494	512	1.0	6.6
December	1,790	58	498	452	0.91	6.6
January	1,230	36	456	390	0.85	6.1
February	1,710	30	402	430	1.1	5.3
March	1,710	25	395	433	1.1	5.3
April	1,680	94	445	355	0.80	5.9
May	2,110	184	543	368	0.68	7.2
June	3,410	340	912	674	0.74	12.1
July	2,920	516	1,180	426	0.36	15.7
August	1,960	511	1,010	350	0.35	13.4
September	1,700	43	702	410	0.58	9.3
Annual	1,730	266	628	360	0.57	100

Magnitude and frequency of annual low flow,  
based on period of record 1925-54, 1971-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	81	40	29	22	16	14
3	84	48	37	31	26	21
7	92	50	38	31	26	21
14	107	56	41	33	26	21
30	130	62	44	33	26	22
60	159	72	49	36	26	23
90	207	88	57	40	27	23
120	237	100	64	44	29	24
183	276	119	77	53	36	27

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1925-54, 1970-89

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,460	2,070	2,590	3,400	4,140	5,000

Magnitude and frequency of annual high flow,  
based on period of record 1925-54, 1970-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,390	1,920	2,370	3,080	3,730	4,490
3	1,370	1,890	2,340	3,050	3,690	4,450
7	1,340	1,850	2,290	2,990	3,620	4,370
15	1,290	1,790	2,220	2,880	3,480	4,170
30	1,220	1,700	2,090	2,690	3,220	3,830
60	1,110	1,530	1,860	2,340	2,740	3,190
90	1,010	1,400	1,700	2,150	2,520	2,930

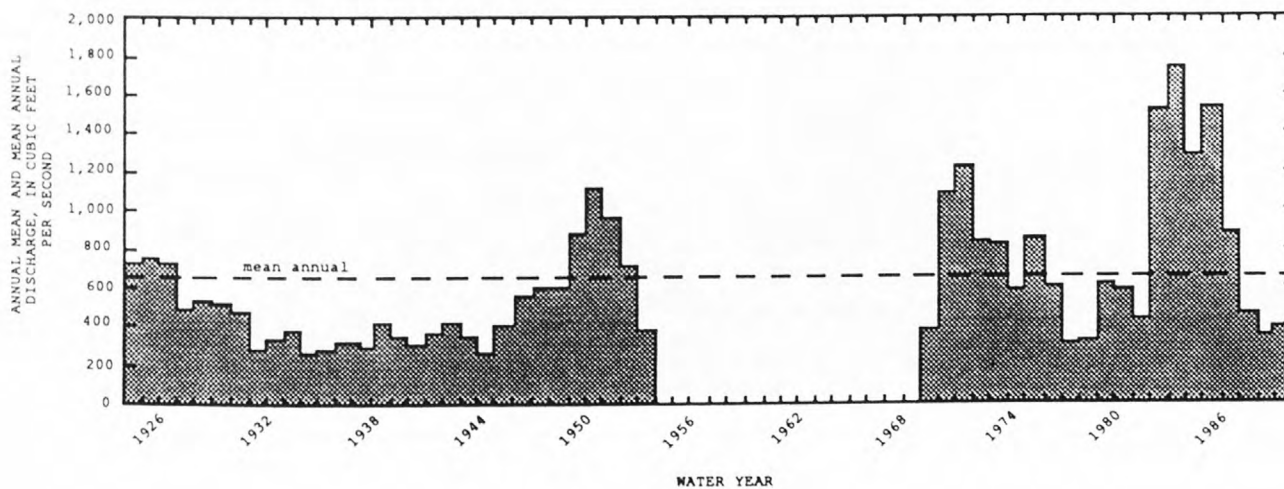
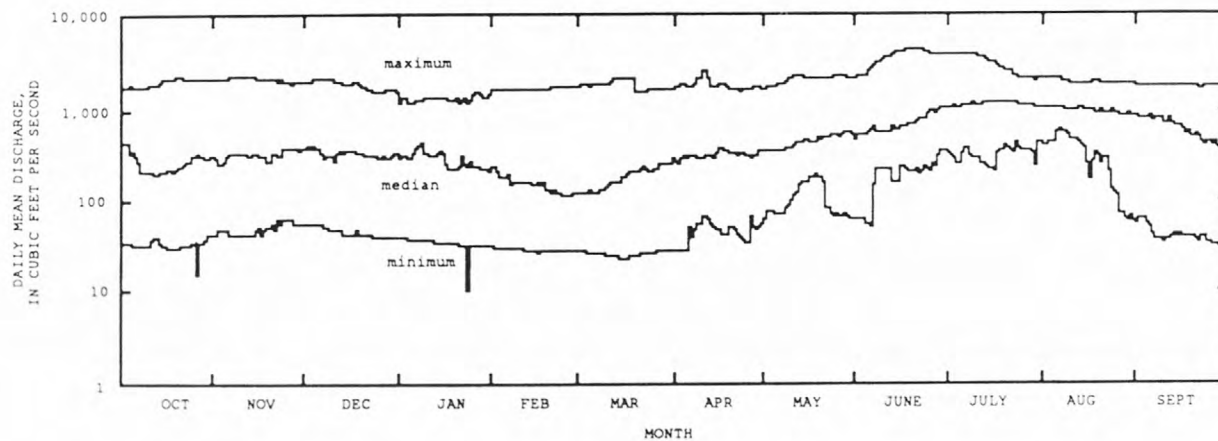
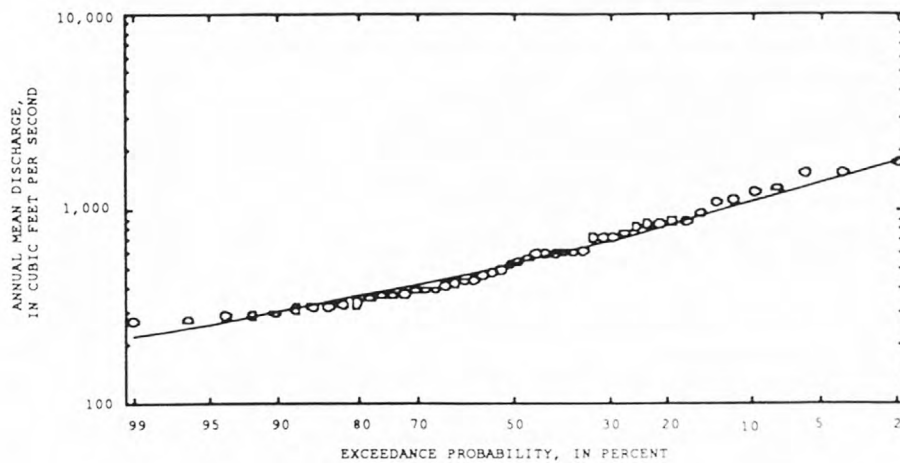
Duration table of daily mean flow for period of record 1925-54, 1970-89

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
2,330	1,650	1,350	1,180	1,070	860	683	513	348	226	122	83	63	50	41	35
															26

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10069000 GEORGETOWN CREEK NEAR GEORGETOWN, ID

LOCATION.—Lat 42°30', long 111°19', in NE 1/4, sec. 4, T. 11 S., R. 44 E., Bear Lake County, Hydrologic Unit 16010201, on left bank 150 ft downstream from Little Right Hand Fork and 3 mi northeast of Georgetown.

DRAINAGE AREA.—22.2 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1911 to September 1914 (fragmentary), November 1939 to September 1956.

GAGE.—Water-stage recorder. Elevation of gage is 6,350 ft above sea level, from topographic map. October 1911 to September 1914 staff gage at site 0.7 mi downstream at different datum.

REMARKS.—No diversion above station. At one time a small storage reservoir was operated about 1.5 mi above station, but dam is now breached and no longer operative.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 162 ft<sup>3</sup>/s June 8, 1912; minimum daily, 18 ft<sup>3</sup>/s for many days February to May 1941.

Summary of monthly and annual discharges, 1941-56

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	40	24	30	4.7	0.15	8.2
November	38	22	29	4.6	0.16	7.7
December	35	20	27	4.1	0.15	7.3
January	32	19	26	3.6	0.14	6.9
February	30	19	24	3.2	0.13	6.5
March	28	18	24	2.9	0.12	6.4
April	30	18	26	3.5	0.14	6.9
May	57	25	39	12	0.31	10.5
June	77	30	43	11	0.26	11.6
July	54	27	37	6.6	0.18	10.0
August	47	26	34	5.4	0.16	9.3
September	42	24	33	4.6	0.14	8.7
Annual	39	23	31	4.7	0.15	100

Magnitude and frequency of annual low flow,  
based on period of record 1941-56

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	23	20	19	18	17	16
3	23	20	19	18	17	16
7	23	20	19	18	17	16
14	23	21	19	18	17	16
30	23	21	19	18	17	16
60	24	21	20	19	17	17
90	24	22	20	19	18	17
120	25	23	21	20	18	17
183	27	23	22	21	19	18

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1941-56

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
50	67	80	101	119	140

Magnitude and frequency of annual high flow,  
based on period of record 1941-56

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	48	66	80	100	117	135
3	47	65	78	98	114	132
7	46	63	76	95	110	127
15	45	61	72	88	101	115
30	44	57	66	80	90	102
60	41	52	59	68	76	84
90	39	48	54	62	67	73

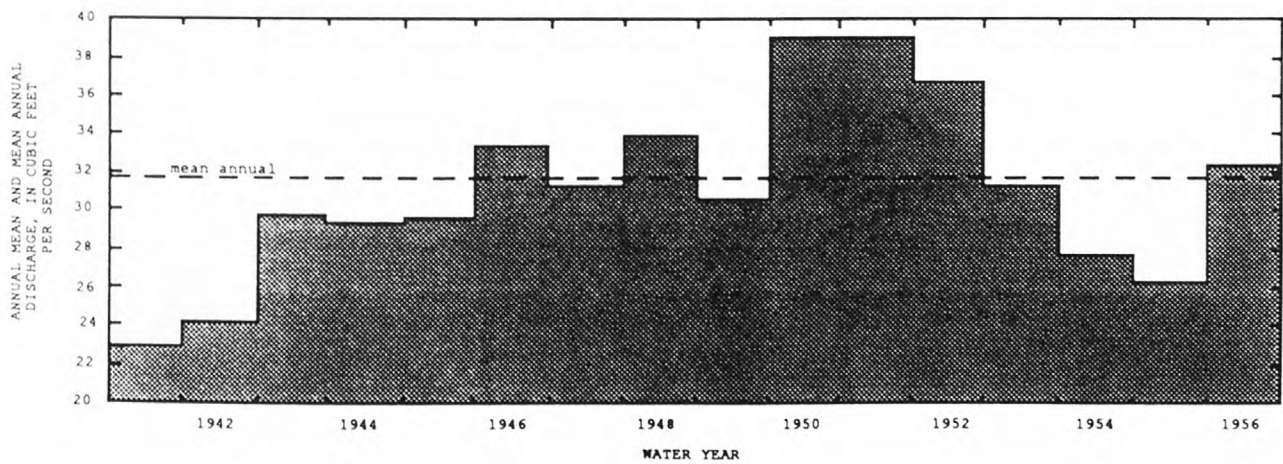
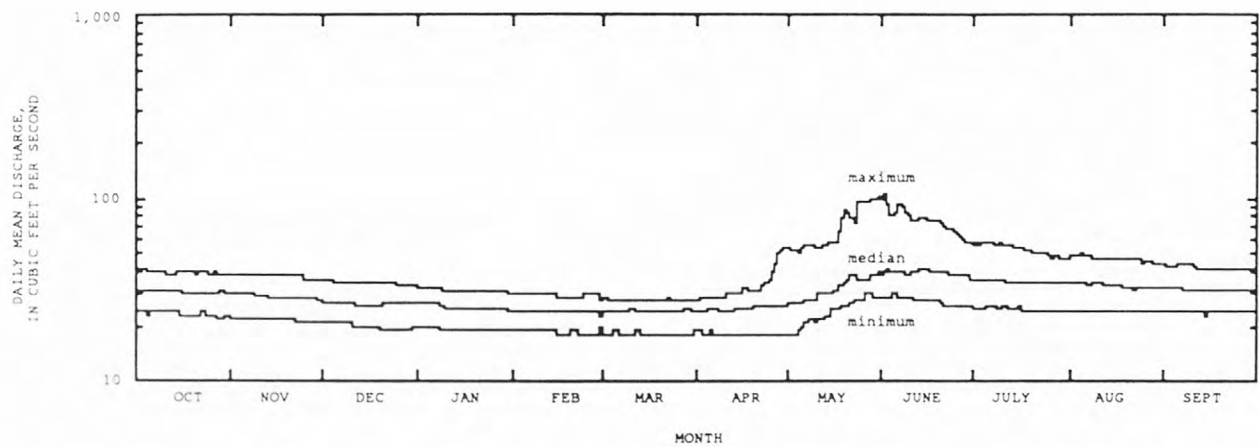
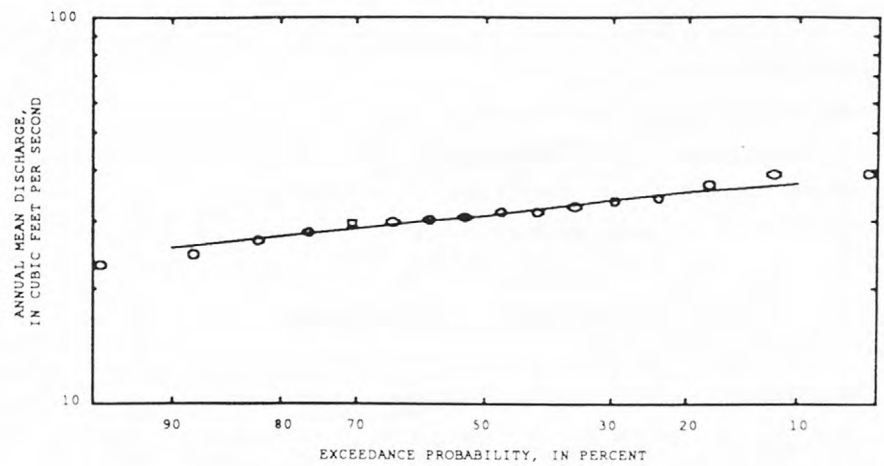
Duration table of daily mean flow for period of record 1941-56

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
67	48	42	39	36	34	32	30	28	26	25	23	21	20	19	18	18

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10072800 EIGHTMILE CREEK NEAR SODA SPRINGS, ID

LOCATION.—Lat 42°32'15", long 111°34'20", in NW 1/4, NW 1/4, SE 1/4, sec. 20, T. 10 S., R. 42 E., Bear Lake County, Hydrologic Unit 16010201, on right bank below Wilson Creek, 15 ft below road bridge, 0.3 mi north of Eightmile Ranger Station, and 8.4 mi south of Soda Springs.

DRAINAGE AREA.—22.6 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1960 to September 1986.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 6,170 ft above sea level, from topographic map.

REVISED RECORDS.—WDR UT-74-1: Drainage area.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 310 ft<sup>3</sup>/s June 6, 1986, gage height, 2.80 ft; minimum, 0.73 ft<sup>3</sup>/s Nov. 17, 18, 1977.

Summary of monthly and annual discharges, 1961-84, 1986

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	8.8	1.4	5.1	1.8	0.36	2.3
November	8.5	1.2	4.4	1.5	0.34	2.0
December	6.4	1.5	3.6	1.1	0.31	1.6
January	5.9	1.3	3.3	1.1	0.34	1.5
February	11	1.3	3.7	2.3	0.61	1.7
March	28	1.7	5.0	5.1	1.0	2.2
April	71	4.2	17	14	0.81	7.7
May	127	9.9	62	26	0.43	27.8
June	183	10	77	41	0.54	34.6
July	50	3.4	25	13	0.54	11.1
August	17	1.7	10	4.3	0.43	4.6
September	11	1.4	6.6	2.5	0.38	3.0
Annual	42	4.3	19	8.0	0.43	100

Magnitude and frequency of annual low flow,  
based on period of record 1962-84

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	2.1	1.5	1.3	1.1	0.90	0.79
3	2.2	1.6	1.3	1.2	0.96	0.84
7	2.3	1.7	1.4	1.2	1.0	0.89
14	2.4	1.8	1.5	1.3	1.1	0.95
30	2.7	2.0	1.6	1.4	1.2	1.0
60	2.9	2.1	1.8	1.5	1.3	1.2
90	3.1	2.3	2.0	1.7	1.5	1.3
120	3.3	2.4	2.1	1.8	1.5	1.3
183	3.9	2.8	2.4	2.0	1.6	1.4

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1961-84, 1986

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
121	171	206	253	290	328

Magnitude and frequency of annual high flow,  
based on period of record 1961-84, 1986

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	117	166	188	208	218	225
3	114	161	183	203	214	222
7	110	155	175	193	202	208
15	102	143	160	175	183	188
30	93	129	144	156	162	166
60	72	102	114	124	129	133
90	56	80	91	100	105	109

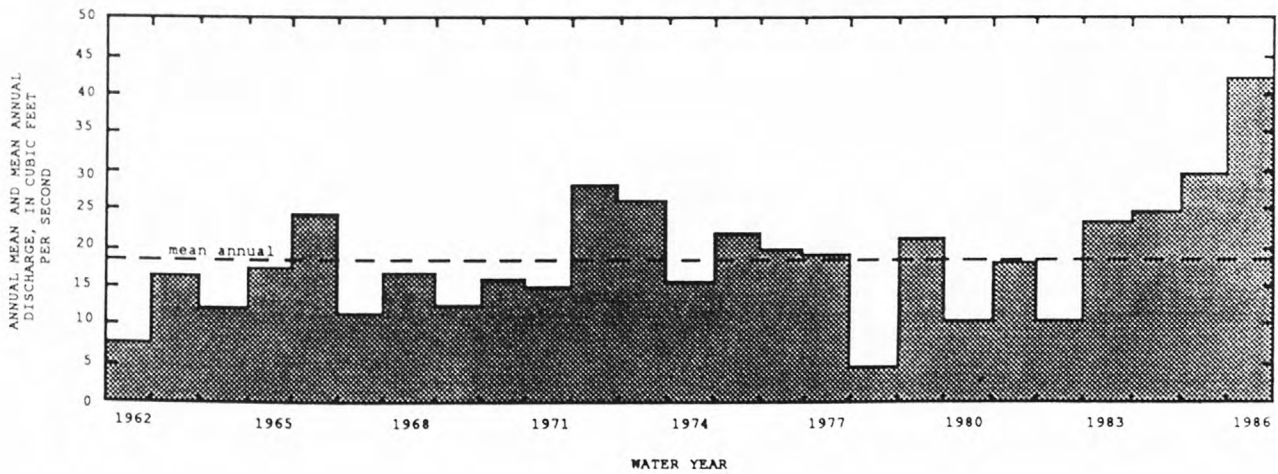
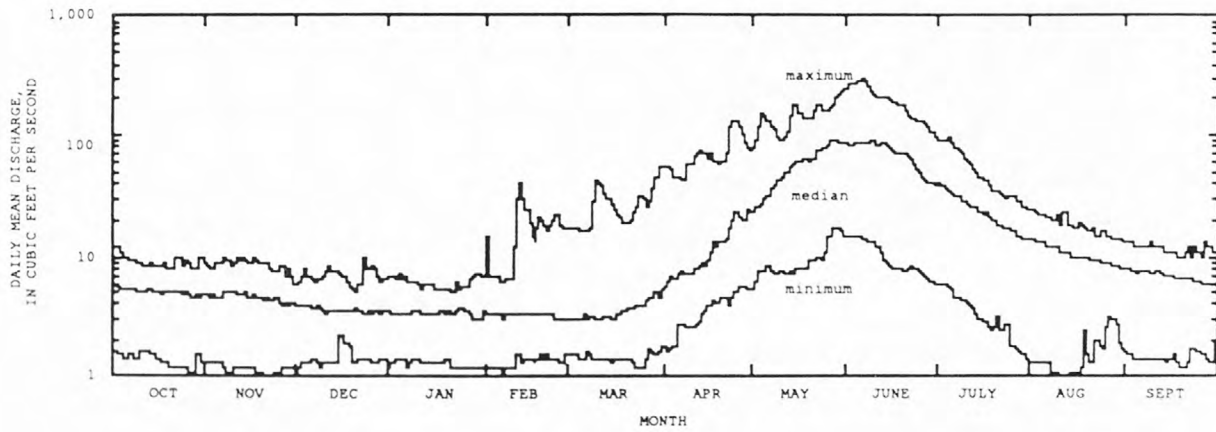
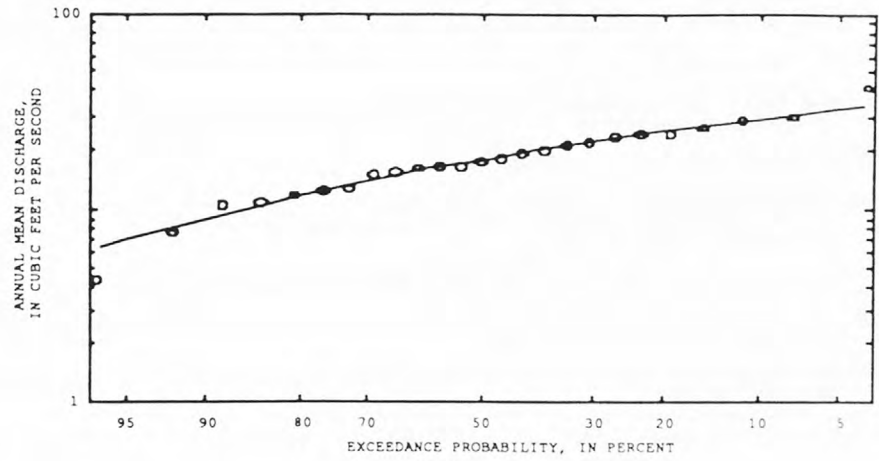
Duration table of daily mean flow for period of record 1961-84, 1986

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
143	89	58	37	24	13	7.8	5.8	4.6	3.9	3.2	2.5	2.0	1.5	1.3	1.2	1.1

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





**BEAR RIVER BASIN**

10075000 BEAR RIVER AT SODA SPRINGS, ID

LOCATION.—Lat 42°36'50", long 111°34'58", in NW 1/4, SW 1/4, NW 1/4, sec. 29, T. 9 S., R. 42 E., Caribou County, Hydrologic Unit 16010202, on left bank 800 ft upstream from Bailey Creek road bridge and 2 mi south of Soda Springs.

DRAINAGE AREA.—3,972 mi<sup>2</sup>.

PERIOD OF RECORD.—May to September 1896, May, June 1898, and October 1953 to September 1989 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).

REVISED RECORDS.—WRD UT-74-1: Drainage area.

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

REMARKS.—Natural flow of stream affected by upstream reservoirs, diversions for irrigation, and return flow from irrigated areas.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,380 ft<sup>3</sup>/s June 9, 15, 1896, gage height, 8.40 ft, datum then in use; minimum, 41 ft<sup>3</sup>/s Nov. 16, 1979.

Summary of monthly and annual discharges, 1954-89

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,190	90	560	600	1.1	6.2
November	2,300	108	599	618	1.0	6.5
December	1,780	94	568	495	0.87	6.3
January	2,380	91	546	514	0.94	6.0
February	1,540	102	513	478	0.93	5.7
March	2,090	87	544	505	0.93	6.0
April	2,570	161	696	502	0.72	7.7
May	2,760	323	783	500	0.64	8.6
June	3,850	535	1,110	820	0.74	12.3
July	3,250	728	1,340	459	0.34	14.7
August	2,140	553	1,080	389	0.36	12.0
September	1,830	101	726	480	0.66	8.0
Annual	1,900	393	757	423	0.56	100

Magnitude and frequency of annual low flow,  
based on period of record 1955-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	127	79	64	56	49	45
3	135	84	69	60	53	49
7	144	88	72	63	55	51
14	155	92	75	65	57	51
30	177	100	78	66	56	51
60	206	111	85	70	58	52
90	255	130	94	73	57	52
120	293	144	101	77	57	53
183	343	169	120	91	68	56

Magnitude and frequency of annual high flow,  
based on period of record 1954-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	1,600	2,240	2,790	3,680	4,500	5,490
3	1,580	2,160	2,700	3,600	4,450	5,480
7	1,540	2,100	2,640	3,530	4,380	5,430
15	1,480	2,020	2,530	3,380	4,210	5,230
30	1,390	1,900	2,380	3,170	3,930	4,870
60	1,260	1,730	2,130	2,780	3,370	4,060
90	1,140	1,570	1,950	2,530	3,060	3,690

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1954-89

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,620	2,280	2,890	3,900	4,860	6,030

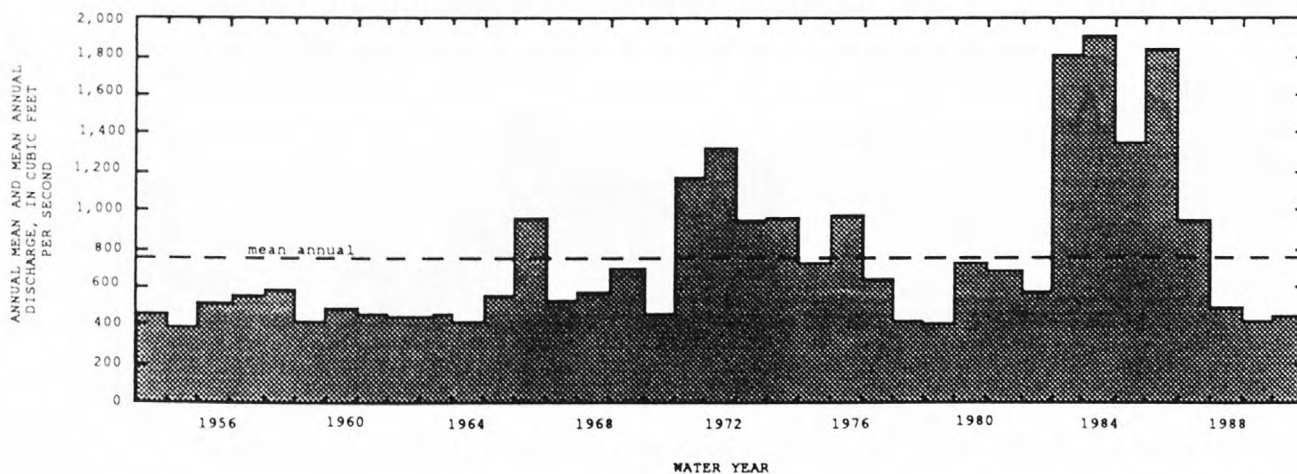
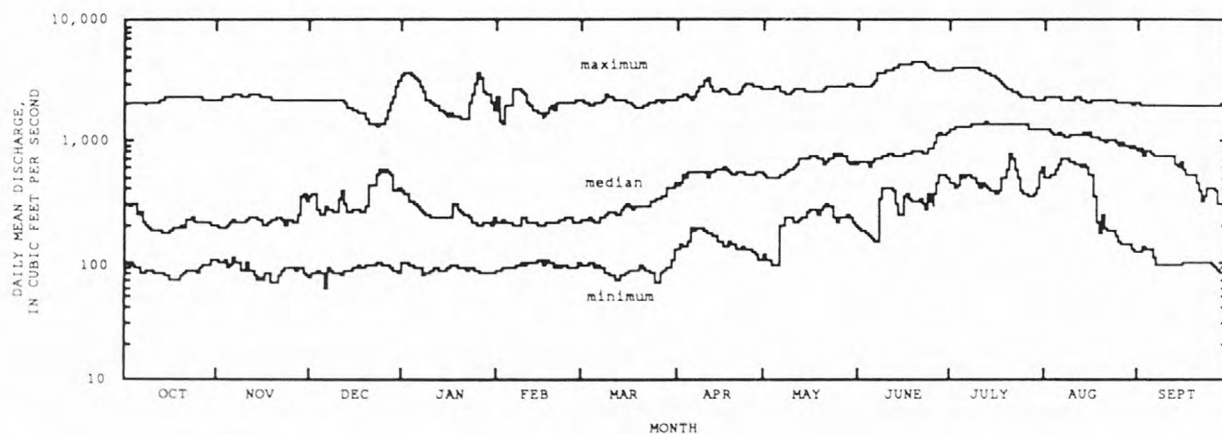
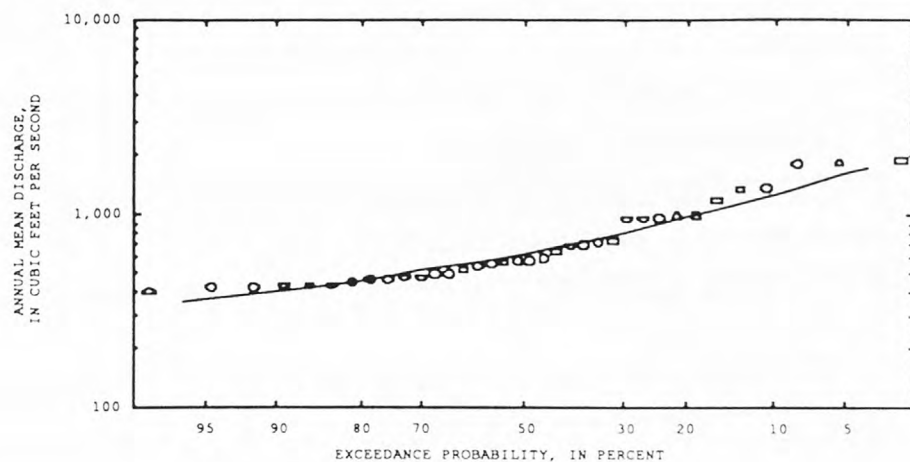
Duration table of daily mean flow for period of record 1954-89

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
2,910	1,920	1,500	1,350	1,230	1,010	840	657	457	264	168	130	110	96	89	82

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10076400 SODA CREEK AT FIVEMILE MEADOWS, NEAR SODA SPRINGS, ID

LOCATION.—Lat 42°43'45", long 111°36'55", in NW 1/4, NE 1/4, SW 1/4, sec. 13, T. 8 S., R. 41 S., Caribou County, Hydrologic Unit 16010202, on right bank 100 ft southeast of Lau ranchhouse, 150 ft downstream from Schmidt Ditch, and 5 mi north of Soda Springs.

DRAINAGE AREA.—51.7 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1964 to September 1986. April 1923 to October 1926, published as "at Lau Ranch." Records since October 1964 are equivalent, if Schmidt Ditch diversion is subtracted from flow past station.

REVISED RECORDS.—WDR UT-74-1: Drainage area.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 5,980 ft above sea level, 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.

REMARKS.—Records herein include flow in Schmidt Ditch.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 130 ft<sup>3</sup>/s Apr. 10, 1985, gage height, 2.43 ft; maximum gage height, 4.01 ft Apr. 2, 1965, site and datum then in use; no flow at times.

Summary of monthly and annual discharges, 1965-84, 1986

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	28	2.7	15	8.0	0.53	7.2
November	29	2.0	14	7.9	0.57	6.5
December	25	1.5	12	7.4	0.61	5.8
January	24	0.50	11	7.0	0.62	5.4
February	23	0.77	11	6.7	0.61	5.2
March	35	1.4	16	10	0.62	7.7
April	54	11	28	13	0.45	13.3
May	44	7.9	25	11	0.43	11.7
June	48	5.9	23	12	0.52	11.0
July	45	2.7	20	11	0.56	9.6
August	44	2.1	18	11	0.63	8.4
September	41	2.7	17	11	0.63	8.2
Annual	35	5.7	18	8.4	0.48	100

Magnitude and frequency of annual low flow,  
based on period of record 1966-84

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	3.4	0.80	0.00	0.00	0.00	0.00
3	4.4	1.3	0.57	0.00	0.00	0.00
7	5.3	1.8	0.94	0.53	0.27	0.16
14	6.1	2.1	1.1	0.61	0.30	0.18
30	7.6	2.7	1.4	0.73	0.33	0.19
60	8.5	3.1	1.6	0.89	0.42	0.24
90	8.9	3.4	1.9	1.1	0.54	0.33
120	9.4	3.8	2.2	1.3	0.69	0.44
183	11	4.9	3.1	2.0	1.2	0.84

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1965-84, 1986

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
72	108	130	154	171	186	

Magnitude and frequency of annual high flow,  
based on period of record 1965-84, 1986

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	66	95	110	124	133	140
3	60	87	102	117	126	134
7	48	70	83	96	105	112
15	37	52	61	71	77	83
30	31	42	49	57	63	67
60	27	38	44	51	56	60
90	25	36	43	50	55	60

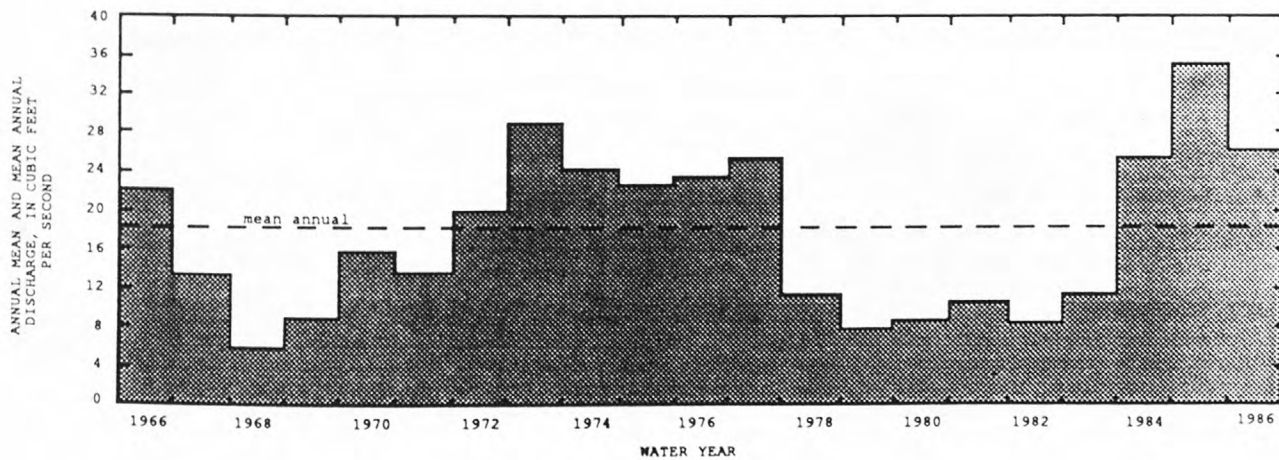
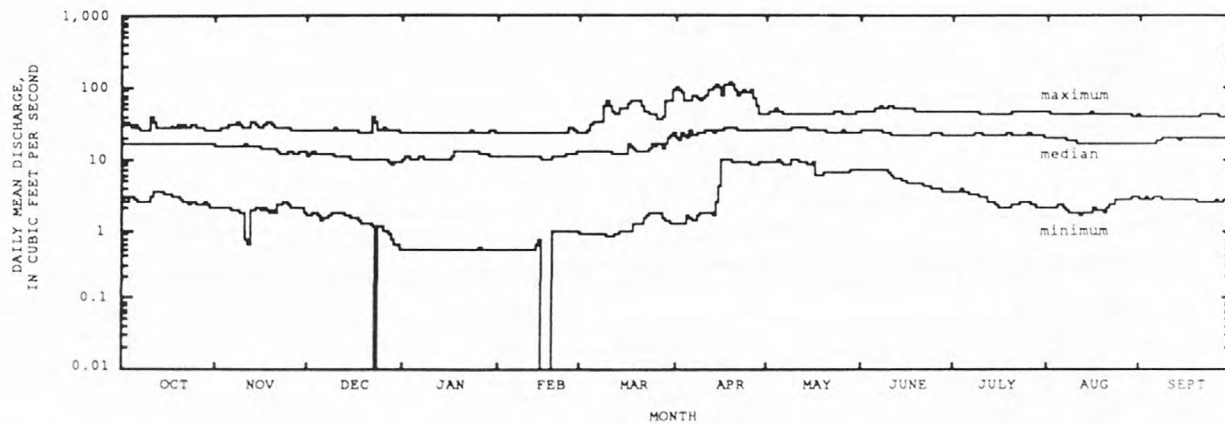
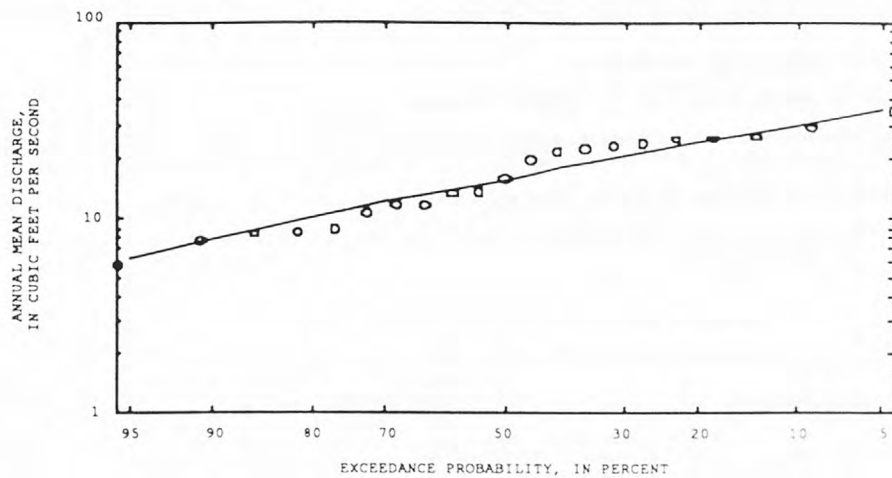
Duration table of daily mean flow for period of record 1965-84, 1986

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
55	38	33	30	28	23	19	16	13	10	7.1	3.8	2.1	1.1	0.97	0.57	0.51

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10077000 SODA CREEK NEAR SODA SPRINGS, ID

LOCATION.—Lat 42°42'35", long 111°37'15", in SW 1/4, SW 1/4, sec. 24, T.8 S., R. 41 E., Caribou County, Hydrologic Unit 16010201, at George Schmidt Ranch, 0.25 mi below unnamed tributary, and 4 mi north of Soda Springs.

DRAINAGE AREA.—52 mi<sup>2</sup> approximately.

PERIOD OF RECORD.—March 1913 to September 1929.

GAGE.—Nonrecording gage. Elevation of gage is 5,960 ft above sea level, from topographic map. Prior to Aug. 1, 1913, at site 30 ft upstream at datum about 3.10 ft lower. Aug. 1, 1913, to June 28, 1921, at datum 3.30 ft lower.

REMARKS.—Flow regulated by outlet of Fivemile Meadows. One small diversion for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 324 ft<sup>3</sup>/s Apr. 6, 1913, gage height, 5.30 ft; minimum observed, 38 ft<sup>3</sup>/s Jan. 8, 12-15, 1919.

Summary of monthly and annual discharges, 1914-26

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	82	45	60	11	0.19	8.1
November	76	45	59	9.5	0.16	7.9
December	65	45	54	6.7	0.12	7.4
January	71	41	52	10	0.19	7.1
February	69	41	51	7.9	0.15	6.9
March	71	46	59	9.4	0.16	8.0
April	123	55	86	21	0.24	11.6
May	99	53	72	14	0.19	9.8
June	99	51	65	12	0.18	8.9
July	88	47	62	12	0.19	8.4
August	82	47	59	12	0.20	8.0
September	88	44	58	13	0.22	7.9
Annual	80	49	62	8.6	0.14	100

Magnitude and frequency of annual low flow,  
based on period of record 1914-26

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	46	41	39	37	36	35
3	46	41	39	38	36	35
7	46	41	40	38	37	36
14	47	43	41	39	37	36
30	48	44	41	40	38	37
60	50	44	42	40	38	37
90	50	45	43	41	39	38
120	51	46	44	42	41	40
183	54	48	45	43	41	40

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1914-26

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
186	243	276	314	339	362	

Magnitude and frequency of annual high flow,  
based on period of record 1914-26

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	179	224	248	272	287	300
3	165	210	235	263	281	298
7	140	177	199	224	242	258
15	111	136	151	171	185	198
30	95	111	121	132	139	146
60	82	94	102	110	116	121
90	76	88	95	104	110	117

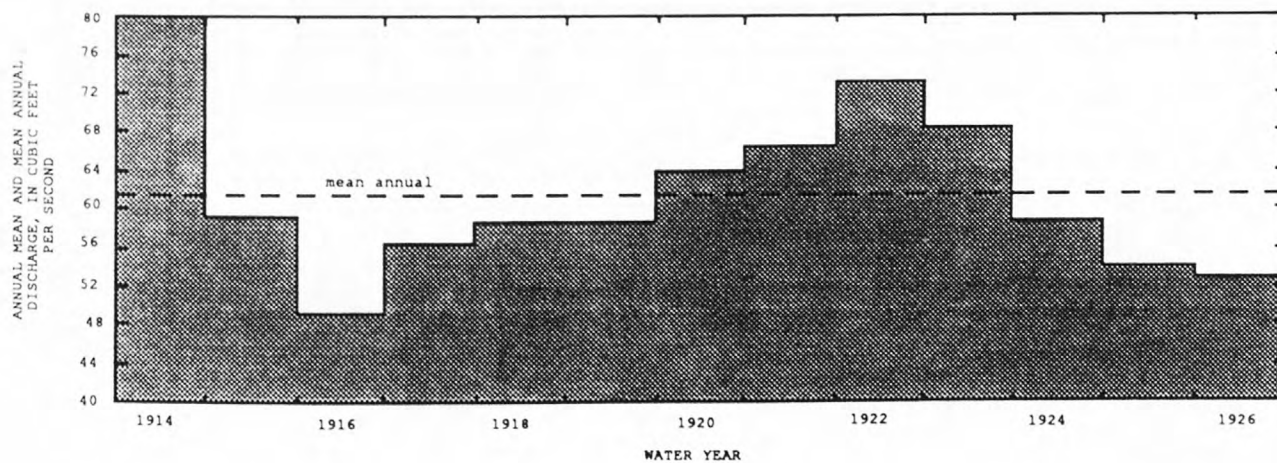
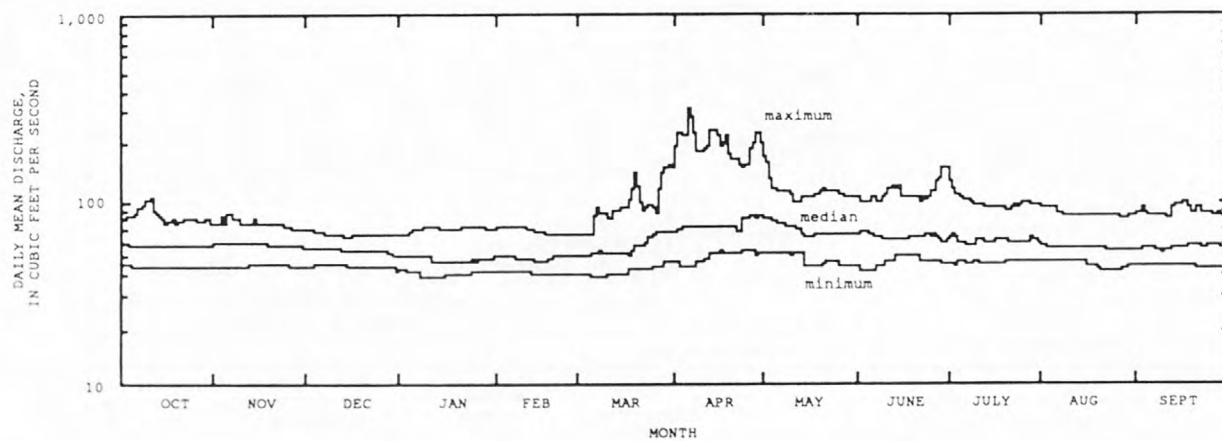
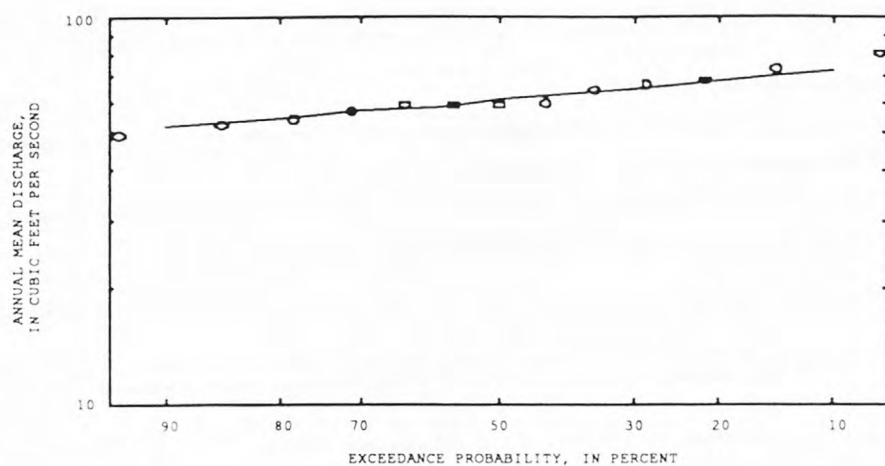
Duration table of daily mean flow for period of record 1914-26

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
146	88	80	74	71	66	61	58	55	52	49	46	44	42	41	40	39	

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# BEAR RIVER BASIN

10079500 BEAR RIVER AT ALEXANDER, ID

LOCATION.—Lat 42°38'42", long 111°41'51", in NE 1/4, SW 1/4, NW 1/4, sec. 17, T. 9 S., R. 41 E., Caribou County, Hydrologic Unit 16010202, on right bank 600 ft downstream from Soda hydroelectric plant of Utah Power & Light Co., 0.5 mi southeast of Alexander, and 5 mi downstream from Soda Creek.

DRAINAGE AREA.—4,099 mi<sup>2</sup>.

PERIOD OF RECORD.—March 1911 to September 1990. Monthly discharge only for some periods, published in WSP 1314.

REVISED RECORDS.—WRD UT-74-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 5,650 ft above sea level, from topographic map.

REMARKS.—Natural flow of stream affected by upstream reservoirs, power development, diversions for irrigation, and return flow from irrigated areas.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 4,740 ft<sup>3</sup>/s Mar. 31, 1911; maximum gage height, 15.95 ft Dec. 11, 1919 (backwater from ice); minimum, 15 ft<sup>3</sup>/s Aug. 24, 1979, when reservoir gates were closed.

Summary of monthly and annual discharges, 1943-89

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,380	99	640	563	0.88	6.4
November	2,450	62	669	574	0.86	6.7
December	1,940	65	661	485	0.73	6.6
January	1,490	155	644	420	0.65	6.5
February	1,480	193	602	413	0.69	6.0
March	2,090	198	666	451	0.68	6.7
April	2,340	252	822	437	0.53	8.2
May	2,750	283	831	458	0.55	8.4
June	3,720	534	1,110	727	0.65	11.2
July	2,950	751	1,330	413	0.31	13.3
August	2,230	571	1,150	387	0.34	11.5
September	2,110	185	846	485	0.57	8.5
Annual	2,050	432	833	393	0.47	100

Magnitude and frequency of annual low flow,  
based on period of record 1944-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	109	55	41	33	26	23
3	173	92	68	54	42	36
7	211	108	77	59	44	36
14	243	123	87	66	49	40
30	283	146	104	79	59	48
60	333	182	135	107	83	70
90	386	218	164	131	103	88
120	426	240	179	142	109	93
183	478	279	214	174	138	120

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1943-89

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,850	2,660	3,260	4,090	4,780	5,520

Magnitude and frequency of annual high flow,  
based on period of record 1943-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,640	2,190	2,680	3,450	4,160	4,990
3	1,590	2,140	2,620	3,400	4,120	4,980
7	1,530	2,060	2,520	3,270	3,950	4,770
15	1,470	1,970	2,420	3,120	3,770	4,550
30	1,380	1,850	2,260	2,920	3,530	4,250
60	1,260	1,700	2,070	2,630	3,130	3,700
90	1,170	1,580	1,920	2,440	2,890	3,410

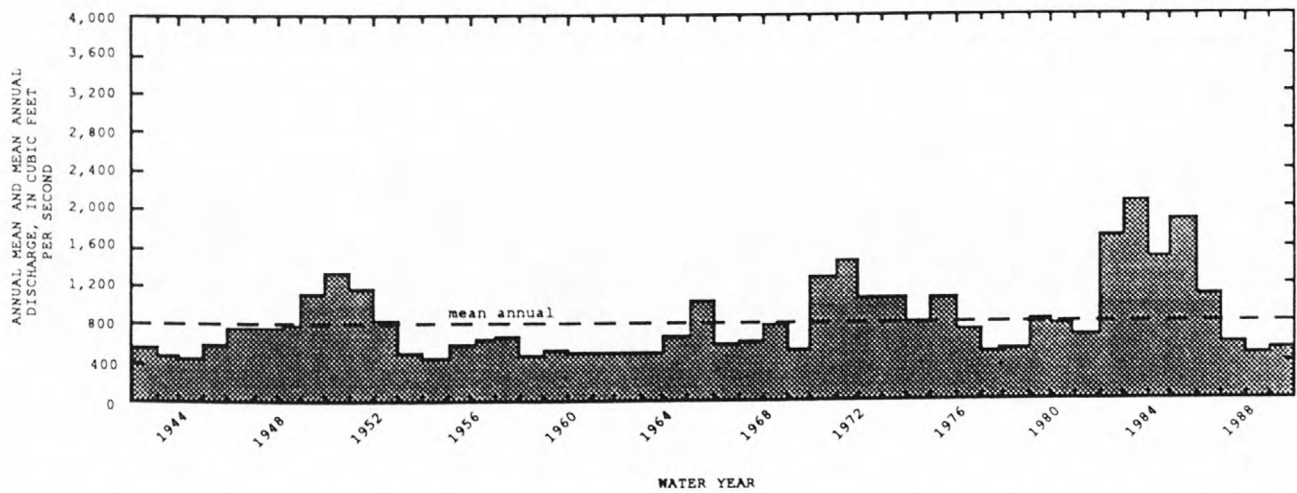
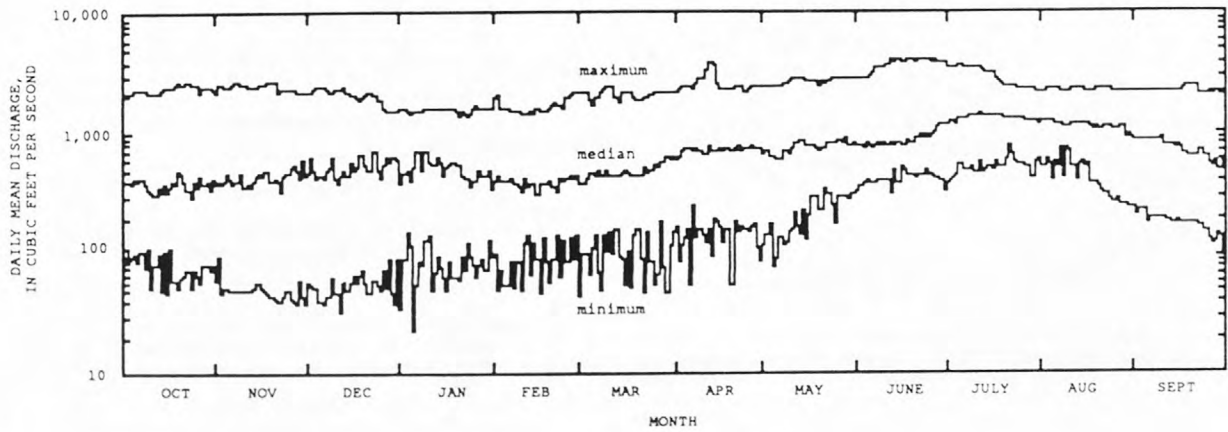
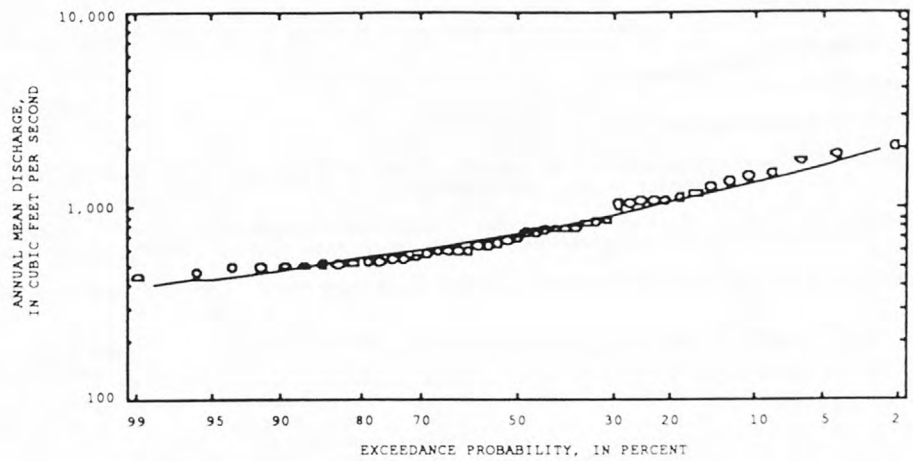
Duration table of daily mean flow for period of record 1943-89

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
2,640	1,880	1,510	1,360	1,270	1,090	925	759	585	430	299	210	156	103	79	61
															44

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10084500 COTTONWOOD CREEK NEAR CLEVELAND, ID

LOCATION.—Lat 42°19'57", long 111°46'27", in NW 1/4, SE 1/4, SW 1/4, sec. 34, T. 12 S., R. 40 E., Franklin County, Hydrologic Unit 16010202, on right bank 500 ft upstream from Cleveland irrigation canal, 2.5 mi west of Cleveland, and 4 mi downstream from proposed Cottonwood Dam.

DRAINAGE AREA.—61.7 mi<sup>2</sup>.

PERIOD OF RECORD.—November 1938 to September 1986.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 5,150 ft above sea level, from topographic map. Prior to Dec. 29, 1944, nonrecording gage at same site and datum.

REMARKS.—A few small diversions for irrigation of meadowland in Cottonwood Valley above station. Treasureton Canal diverts from Cottonwood Creek 10.1 mi above station for irrigation in Battle Creek basin in vicinity of Treasureton.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,090 ft<sup>3</sup>/s May 15, 1984, gage height, 4.34 ft; no flow Feb. 19–21, 1977.

Summary of monthly and annual discharges, 1940–84, 1986

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	26	2.7	8.4	4.9	0.58	2.0
November	29	4.9	10	4.2	0.41	2.5
December	28	5.4	11	4.1	0.37	2.7
January	27	6.1	12	4.4	0.36	2.9
February	61	5.8	15	9.1	0.62	3.6
March	168	7.7	31	29	0.92	7.6
April	287	15	132	68	0.51	32.1
May	341	11	127	78	0.62	30.9
June	148	5.3	39	36	0.91	9.7
July	37	0.89	11	7.9	0.74	2.6
August	26	0.39	7.3	5.3	0.73	1.8
September	23	1.5	6.7	5.0	0.75	1.6
Annual	75	7.9	34	16	0.46	100

Magnitude and frequency of annual low flow,  
based on period of record 1940–84

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	3.1	1.4	0.72	0.34	0.00	0.00
3	3.3	1.5	0.83	0.46	0.13	0.06
7	3.4	1.5	0.93	0.58	0.33	0.22
14	3.8	1.8	1.2	0.77	0.47	0.33
30	4.3	2.1	1.3	0.90	0.55	0.39
60	4.9	2.5	1.7	1.2	0.82	0.62
90	5.4	3.0	2.2	1.7	1.2	0.98
120	6.0	3.7	2.9	2.4	1.9	1.7
183	7.2	5.1	4.3	3.8	3.3	3.0

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1940–84, 1986

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
372	561	693	865	995	1,130

Magnitude and frequency of annual high flow,  
based on period of record 1940–84, 1986

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	299	434	506	581	626	665
3	269	395	465	538	583	622
7	241	353	412	472	508	537
15	211	308	355	398	422	440
30	177	257	294	326	342	353
60	134	198	229	257	272	283
90	102	151	175	199	213	223

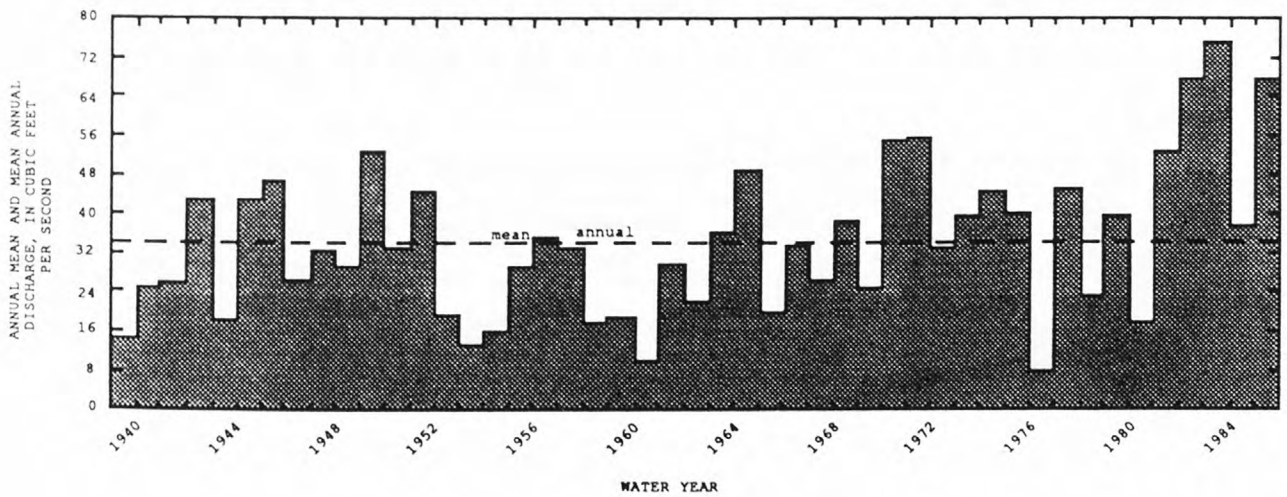
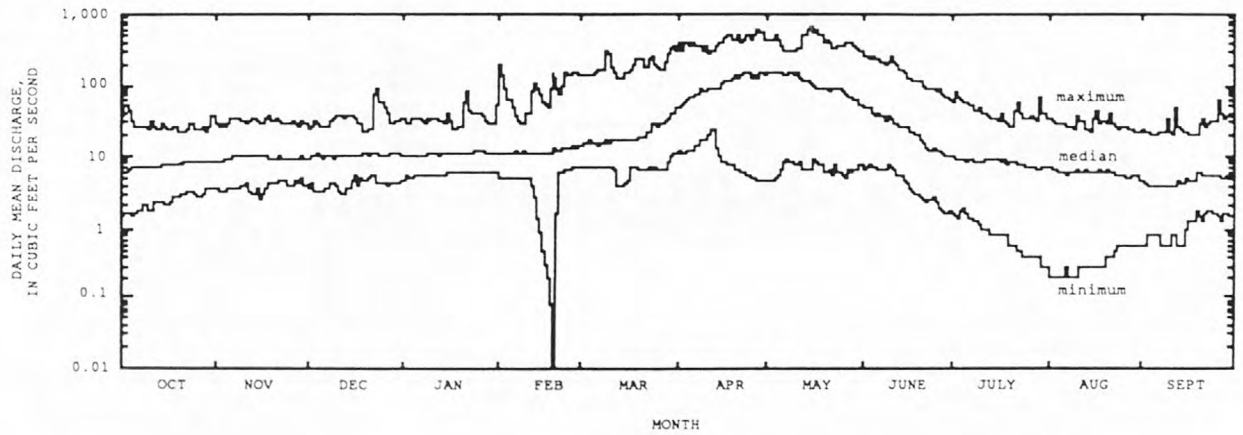
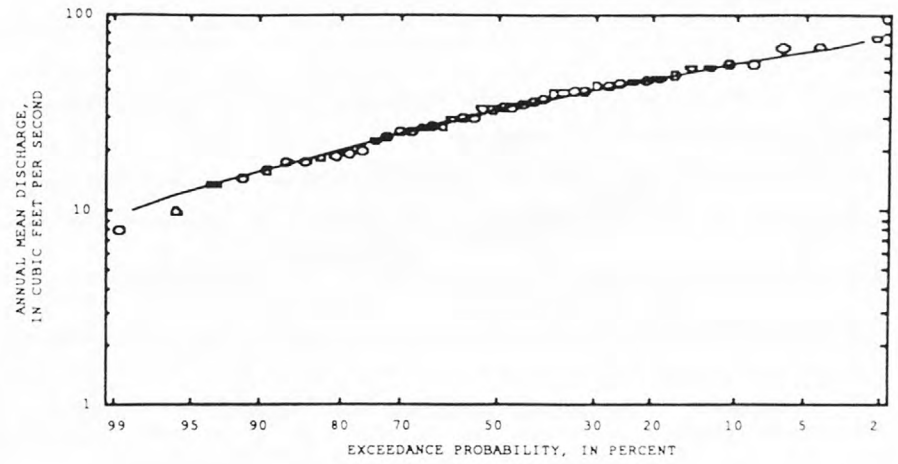
Duration table of daily mean flow for period of record 1940–84, 1986

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
317	178	99	58	34	19	14	12	9.9	8.2	6.4	4.2	2.9	1.9	1.4	0.78	0.26

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10086500 BEAR RIVER BELOW UTAH POWER & LIGHT CO.'S TAILRACE, AT ONEIDA, ID

LOCATION.—Lat 42°16'00", long 111°45'04", in NE 1/4 SE 1/4 NW 1/4, sec. 26, T. 13 S., R. 40 E., Franklin County, Hydrologic Unit 16010202, on right bank 200 ft downstream from tailrace of Oneida plant and 6 mi south of Cleveland.

DRAINAGE AREA.—4,456 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1921 to September 1990. Monthly discharge only October 1921 to September 1945, published in WSP 1314.

REVISED RECORDS.—WRD UT-74-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 4,800 ft above sea level, from topographic map.

REMARKS.—Natural flow of stream affected by upstream reservoirs, power development, diversions for irrigation, and return flow from irrigated areas.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 5,480 ft<sup>3</sup>/s May 8, 1922; minimum, 3.0 ft<sup>3</sup>/s June 13, 1978.

Summary of monthly and annual discharges, 1943-45, 1947-89

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,610	208	837	593	0.71	7.2
November	2,840	232	873	619	0.71	7.4
December	2,290	281	874	517	0.59	7.5
January	1,870	315	837	449	0.54	7.2
February	1,880	315	828	449	0.54	7.1
March	2,910	383	920	534	0.58	7.9
April	3,120	421	1,210	623	0.52	10.4
May	3,790	389	1,100	685	0.62	9.5
June	4,070	408	1,040	868	0.84	8.9
July	3,230	595	1,130	472	0.42	9.7
August	2,640	573	1,070	425	0.40	9.2
September	2,450	338	933	544	0.58	8.0
Annual	2,590	537	971	464	0.48	100

Magnitude and frequency of annual low flow, based on period of record 1944-45, 1948-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	54	23	16	12	8.5	7.0
3	178	69	40	24	13	8.8
7	317	146	90	59	34	23
14	395	209	145	104	71	54
30	426	286	242	215	192	180
60	504	332	276	241	210	193
90	566	371	305	263	225	204
120	610	396	322	274	231	207
183	659	435	359	310	265	241

Magnitude and frequency of instantaneous peak flow, based on period of record 1943-45, 1947-89

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,350	3,270	3,900	4,720	5,340	5,990

Magnitude and frequency of annual high flow, based on period of record 1943-45, 1947-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2,140	2,860	3,390	4,130	4,730	5,370
3	1,900	2,630	3,200	4,020	4,720	5,490
7	1,680	2,360	2,930	3,790	4,560	5,440
15	1,540	2,170	2,720	3,570	4,350	5,270
30	1,420	2,010	2,520	3,320	4,060	4,920
60	1,290	1,820	2,290	3,020	3,680	4,450
90	1,190	1,710	2,150	2,840	3,460	4,190

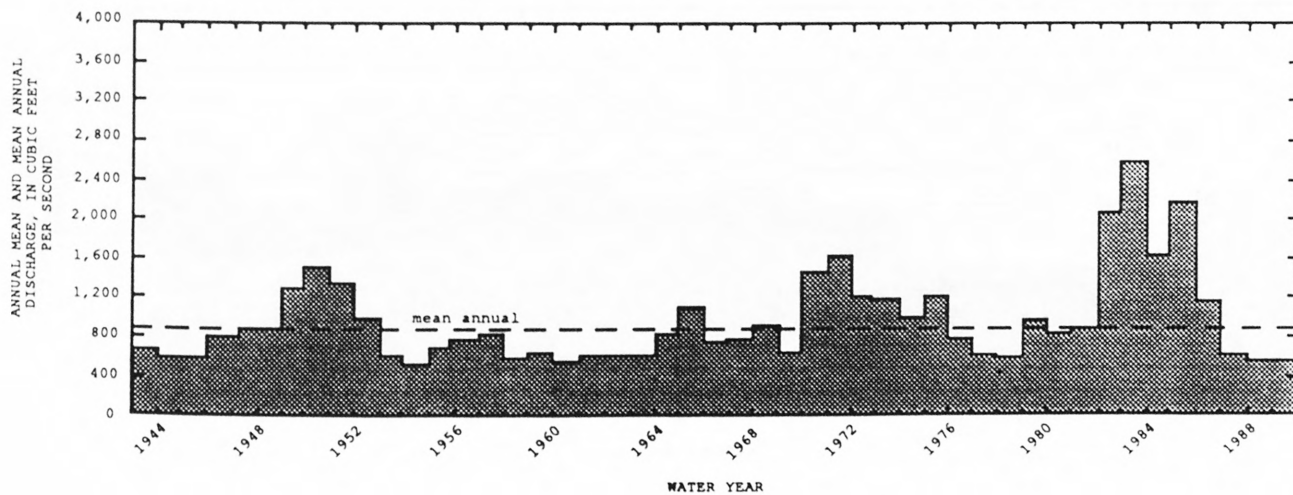
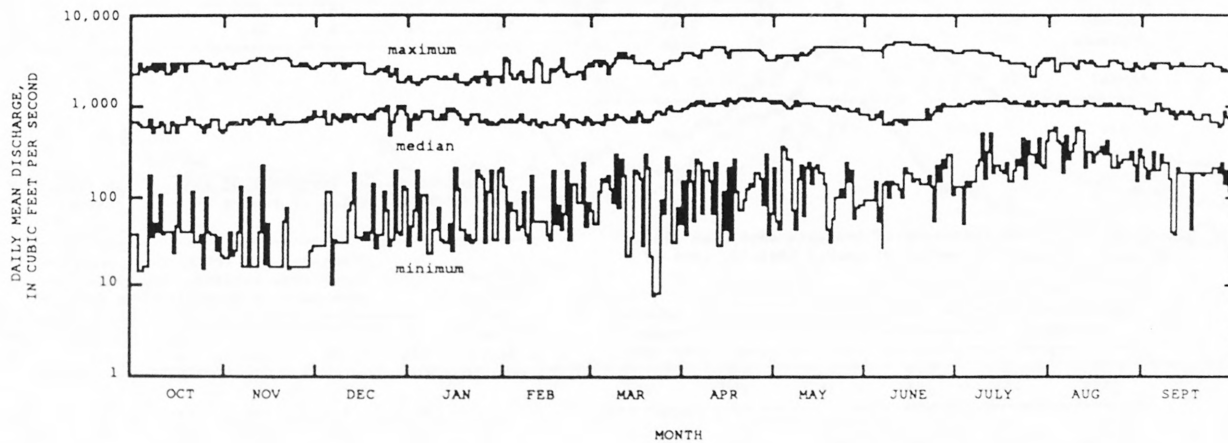
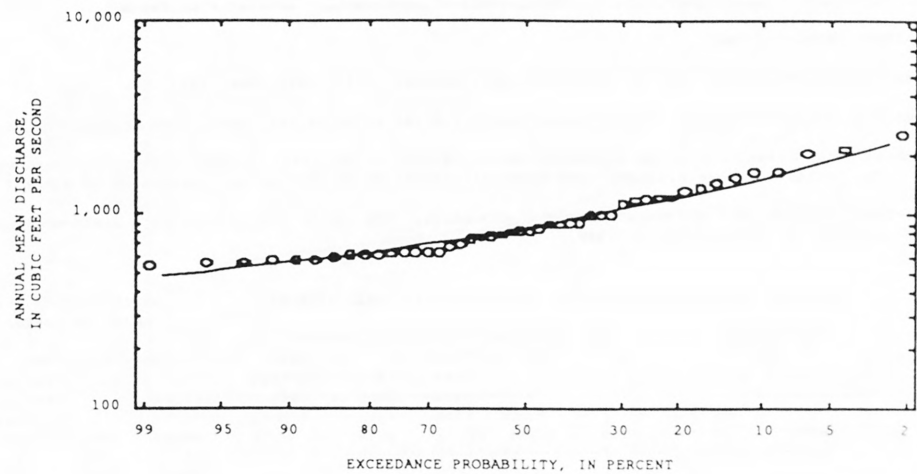
Duration table of daily mean flow for period of record 1943-45, 1947-89

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
3,270	2,160	1,740	1,560	1,430	1,200	1,030	866	697	548	429	306	216	117	51	35
															18

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# BEAR RIVER BASIN

10087500 MINK CREEK BELOW DRY FORK, NEAR MINK CREEK, ID

LOCATION.—Lat 42°15'30", long 111°40'30", in NE 1/4, NW 1/4, sec. 33, T. 13 S., R. 41 E., Franklin County, Hydrologic Unit 16010202, on right bank 500 ft downstream from Dry Fork, and 3 mi northeast of town of Mink Creek.

DRAINAGE AREA.—19.3 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1947 to September 1952, October 1955 to September 1962.

GAGE.—Water-stage recorder. Elevation of gage is 5,300 ft above sea level, from topographic map.

REMARKS.—Mink Creek Canal began diverting above station in June 1950. Diversion is routed through Glendale Reservoir in Worm Creek basin for irrigation near Preston. Two other diversions above station for irrigation of about 1,000 acres above and below station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 600 ft<sup>3</sup>/s May 29, 1948; maximum gage height, 3.97 ft, June 7, 1957; minimum, 2.5 ft<sup>3</sup>/s Oct. 4, 1960.

Summary of monthly and annual discharges, 1948-52, 1956-62

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	50	24	38	7.6	0.20	4.3
November	43	29	36	4.3	0.12	4.0
December	41	27	34	4.1	0.12	3.9
January	39	24	31	4.3	0.14	3.6
February	50	24	33	7.2	0.22	3.8
March	50	29	37	6.4	0.17	4.2
April	141	43	87	29	0.33	10.0
May	305	107	241	69	0.29	27.6
June	414	63	216	101	0.47	24.7
July	155	21	65	38	0.58	7.5
August	56	14	31	13	0.43	3.6
September	44	12	24	10	0.44	2.7
Annual	104	36	73	19	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1948-52, 1957-62

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	20	9.9	6.1	3.8	2.1	1.3
3	20	11	7.3	4.9	2.9	2.0
7	20	12	8.6	6.2	4.2	3.1
14	21	14	11	8.5	6.5	5.4
30	22	15	13	11	8.6	7.4
60	24	18	14	12	9.7	8.3
90	28	20	17	14	11	9.6
120	30	24	21	18	16	14
183	32	26	23	21	19	17

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1948-52, 1956-62

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
426	529	583	640	676	708

Magnitude and frequency of annual high flow,  
based on period of record 1948-52, 1956-62

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	417	514	554	586	602	613
3	407	507	549	585	603	616
7	391	490	531	567	585	598
15	359	457	500	536	554	568
30	307	395	433	466	482	494
60	242	312	342	368	380	390
90	193	247	270	289	298	305

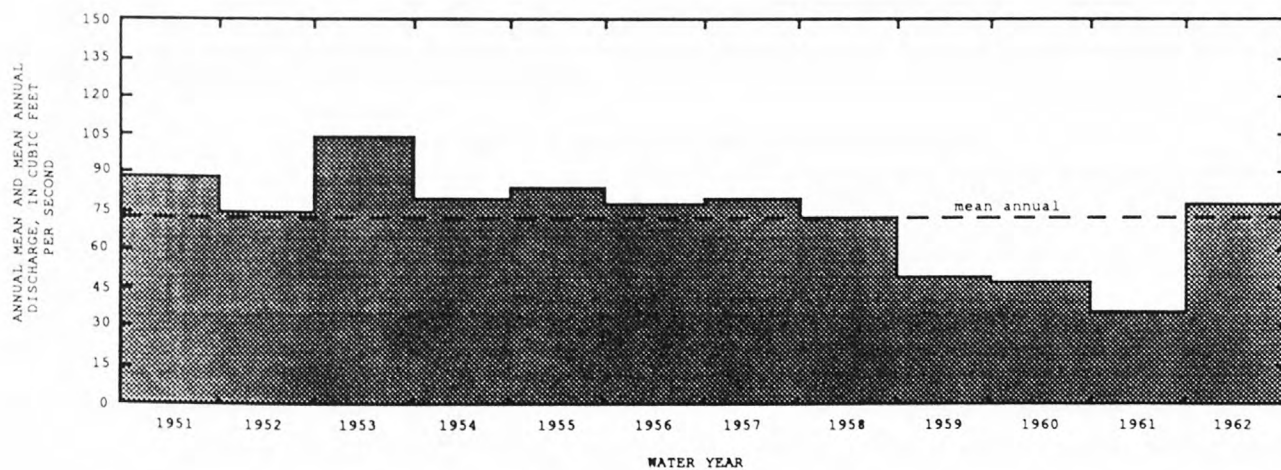
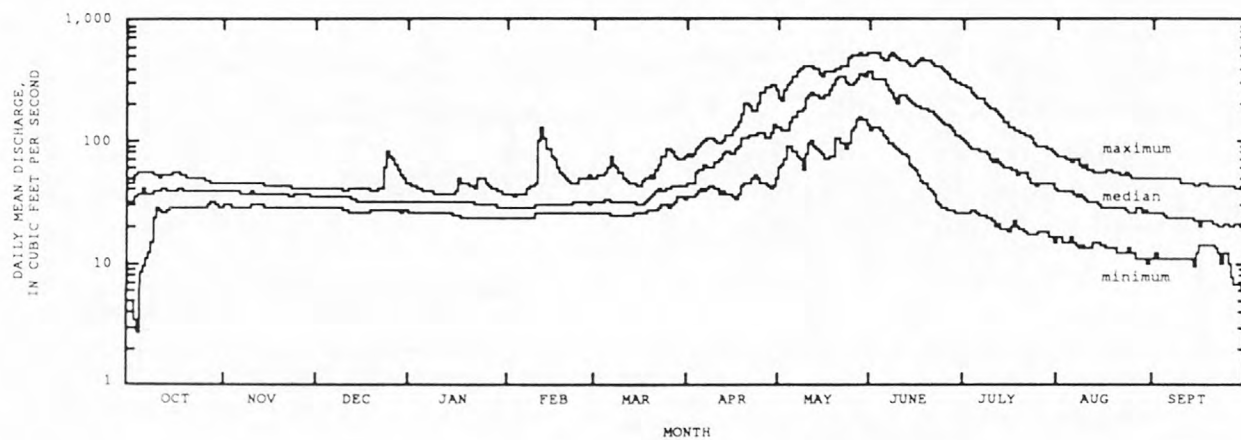
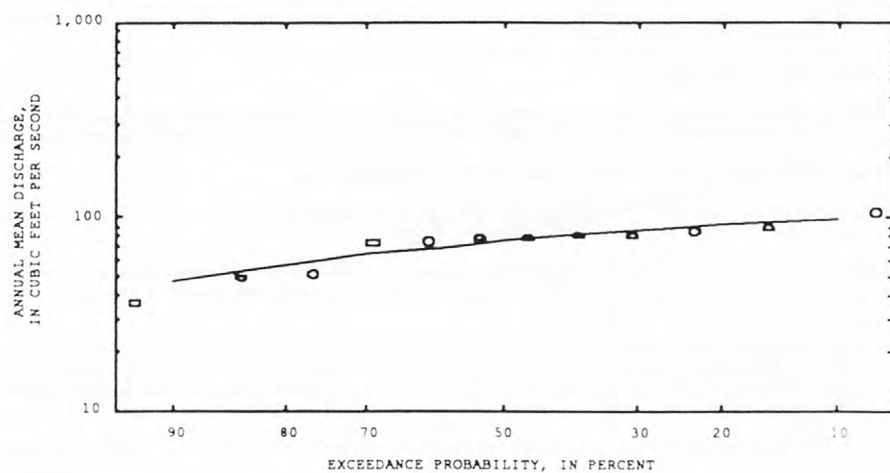
Duration table of daily mean flow for period of record 1948-52, 1956-62

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
443	289	188	128	89	51	42	38	35	32	28	24	19	15	13	11	6.3

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10090500 BEAR RIVER NEAR PRESTON, ID

LOCATION.—Lat 42°10'05", long 111°50'59", in NW 1/4, NE 1/4, NW 1/4, sec. 36, T. 14 S., R. 39 E., Franklin County, Hydrologic Unit 16010202, on left bank 600 ft downstream from headgates of West Cache Canal, 5 mi downstream from Mink Creek, 5 mi north of Preston, and 5.5 mi upstream from Battle Creek.

DRAINAGE AREA.—4,545 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1889 to December 1916, January to September 1917 (gage heights only), October 1943 to September 1986. Prior to 1903 published as "at Battlecreek." Monthly discharge only for some periods, published in WSP 1314.

REVISED RECORDS.—WSP 205: 1905-7. WDR UT-74-1: Drainage area.

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

REMARKS.—Station is below all irrigation diversions from Bear River in Idaho except Cub River pumps in SE 1/4, sec. 20, T. 16 S., R. 39 E. Natural flow of stream affected by storage reservoirs, power development, diversions for irrigation, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.—(since 1943): Maximum discharge, 4,900 ft<sup>3</sup>/s June 12, 1986, gage height, 5.61 ft; no flow Sept. 10-11, 1980. 1889-1917: Maximum flood occurred June 9, 10, 1907, about 8,500 ft<sup>3</sup>/s, estimated on basis of records for downstream station Bear River near Collinston (station 10118000), site and datum then in use; maximum gage height observed, 9.04 ft Jan. 17, 18, 1917 (backwater from ice), site and datum then in use.

Summary of monthly and annual discharges, 1945-84, 1986

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,690	203	795	558	0.70	6.8
November	2,840	286	842	557	0.66	7.2
December	2,330	281	886	478	0.54	7.5
January	1,850	346	897	456	0.51	7.7
February	2,060	378	897	482	0.54	7.6
March	2,810	388	962	548	0.57	8.2
April	3,240	389	1,290	631	0.49	11.0
May	3,690	305	1,250	782	0.62	10.7
June	4,180	281	1,110	1,030	0.92	9.5
July	3,020	447	989	512	0.52	8.4
August	2,170	449	951	424	0.45	8.1
September	2,360	263	858	560	0.65	7.3
Annual	2,530	503	978	487	0.50	100

Magnitude and frequency of annual low flow,  
based on period of record 1946-84

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>#</sup> 1%
1	56	16	8.2	4.6	2.4	1.5
3	158	62	36	23	14	9.3
7	249	121	83	60	41	32
14	330	180	131	101	75	61
30	385	255	215	191	170	160
60	474	317	265	233	204	189
90	536	363	304	266	232	213
120	579	391	325	283	245	224
183	626	427	359	314	275	253

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-84, 1986

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,490	4,620	5,480	6,690	7,710	8,810

Magnitude and frequency of annual high flow,  
based on period of record 1945-84, 1986

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>#</sup> 1%
1	2,300	3,140	3,730	4,520	5,140	5,780
3	2,030	2,890	3,510	4,380	5,080	5,830
7	1,790	2,580	3,190	4,080	4,840	5,670
15	1,630	2,360	2,970	3,880	4,680	5,600
30	1,480	2,170	2,740	3,610	4,370	5,250
60	1,340	1,960	2,470	3,240	3,910	4,670
90	1,230	1,810	2,270	2,980	3,600	4,300

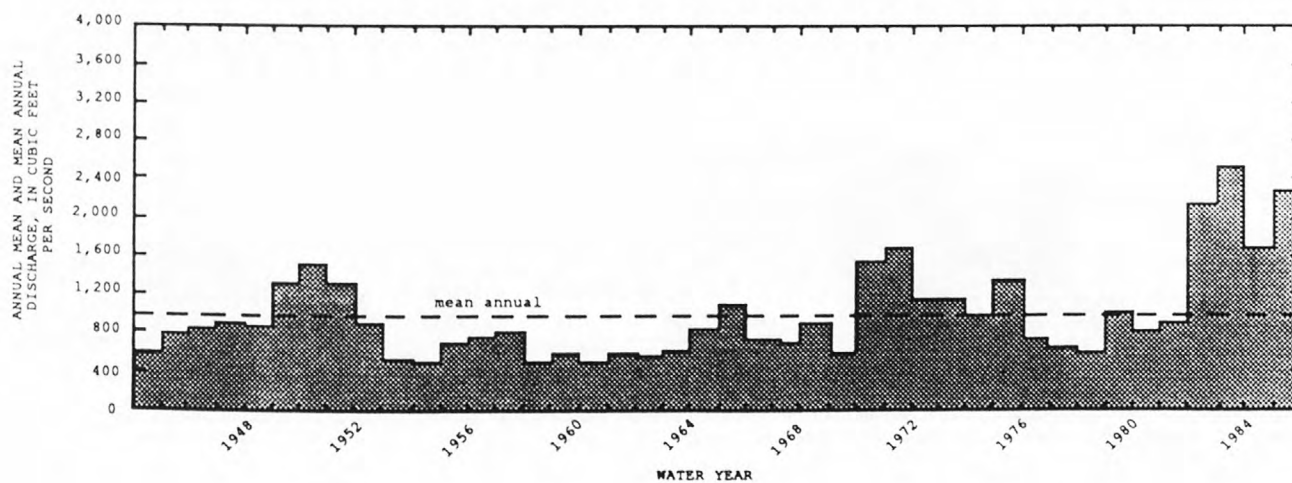
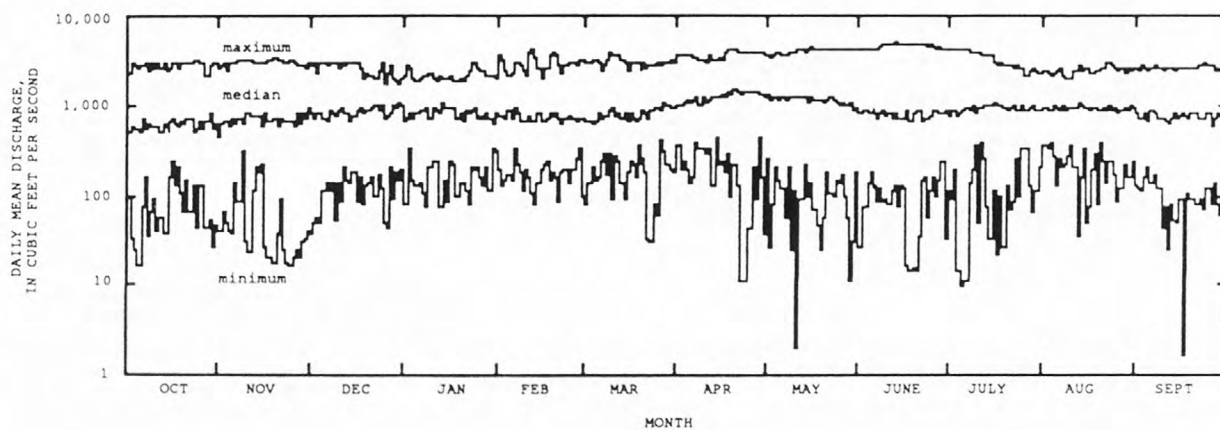
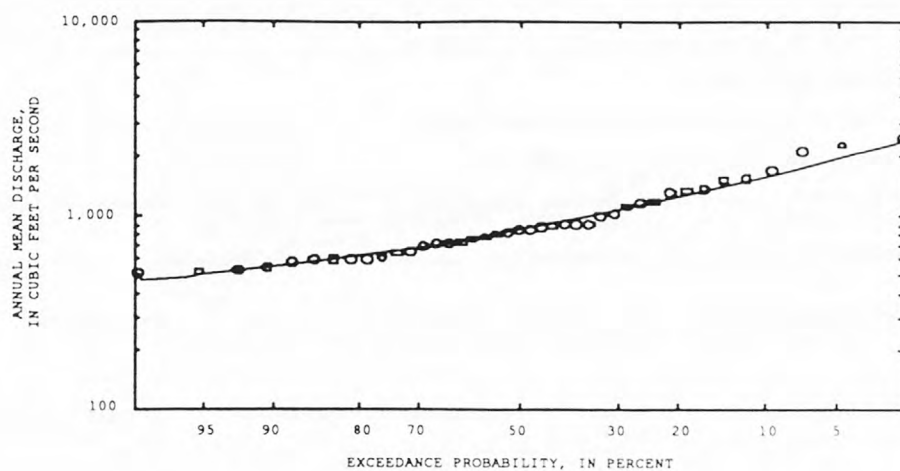
Duration table of daily mean flow for period of record 1945-84, 1986

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,640	2,240	1,800	1,630	1,460	1,210	1,010	837	680	542	429	297	210	134	88	52	18

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10092700 BEAR RIVER AT IDAHO-UTAH STATE LINE

LOCATION.—Lat 42°00'47", long 111°55'14", in NW 1/4, NE 1/4, sec. 29, T. 16 S., R. 39 E., Franklin County, Idaho, Hydrologic Unit 16010202, on left bank 1,050 ft downstream from inlet canal to Cub River pumps, 1.1 mi downstream from Weston Creek, 1.8 mi upstream from Idaho-Utah State line, and 3.5 mi southeast of Weston.

DRAINAGE AREA.—4,881 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1970 to September 1990.

REVISED RECORDS.—WRD UT-74-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 4,420 ft above sea level, from topographic map. Prior to Sept. 10, 1982, at datum 2.00 ft higher. Sept. 10, 1982, to Sept. 30, 1985, at datum 10.0 ft lower.

REMARKS.—Natural flow of stream affected by storage reservoirs, power developments, diversions for irrigation, and return flow from irrigated areas.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,870 ft<sup>3</sup>/s June 14, 1984, gage height, 9.20 ft; minimum daily discharge, 48 ft<sup>3</sup>/s May 1, 1988. Maximum gage height, 19.19 ft, Feb. 19, 1986, present datum.

Summary of monthly and annual discharges, 1971-89

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,850	258	1,220	763	0.62	7.6
November	2,980	328	1,240	844	0.68	7.6
December	2,550	310	1,260	688	0.55	7.7
January	1,900	457	1,240	490	0.39	7.7
February	2,560	482	1,250	619	0.50	7.7
March	3,260	545	1,420	770	0.54	8.7
April	3,590	480	1,730	969	0.56	10.6
May	3,970	357	1,780	1,030	0.58	11.0
June	4,260	333	1,620	1,430	0.88	10.0
July	3,440	473	1,230	795	0.64	7.6
August	2,420	494	1,080	590	0.55	6.7
September	2,550	411	1,160	675	0.58	7.1
Annual	2,730	566	1,350	662	0.49	100

Magnitude and frequency of annual low flow,  
based on period of record 1972-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	161	77	54	41	31	26
3	222	100	68	51	37	30
7	318	142	96	70	49	39
14	409	216	159	125	98	83
30	530	320	254	213	178	160
60	683	420	329	270	218	189
90	747	468	369	304	246	214
120	825	511	398	325	259	222
183	931	586	462	380	305	264

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1971-89

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,220	4,000	4,540	5,260	5,820	6,400

Magnitude and frequency of annual high flow,  
based on period of record 1971-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	2,960	4,010	4,640	5,590	5,900	6,390
3	2,710	3,860	4,610	5,520	6,180	6,820
7	2,490	3,690	4,510	5,450	6,330	7,110
15	2,350	3,530	4,340	5,360	6,120	6,880
30	2,160	3,270	4,020	4,980	5,690	6,410
60	1,970	2,970	3,640	4,490	5,120	5,750
90	1,830	2,740	3,350	4,120	4,690	5,250

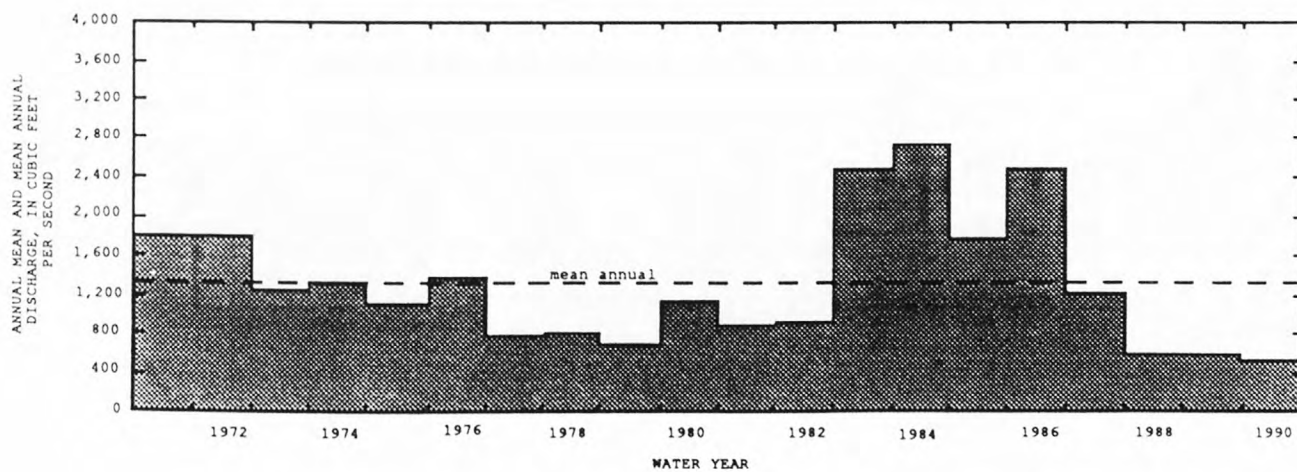
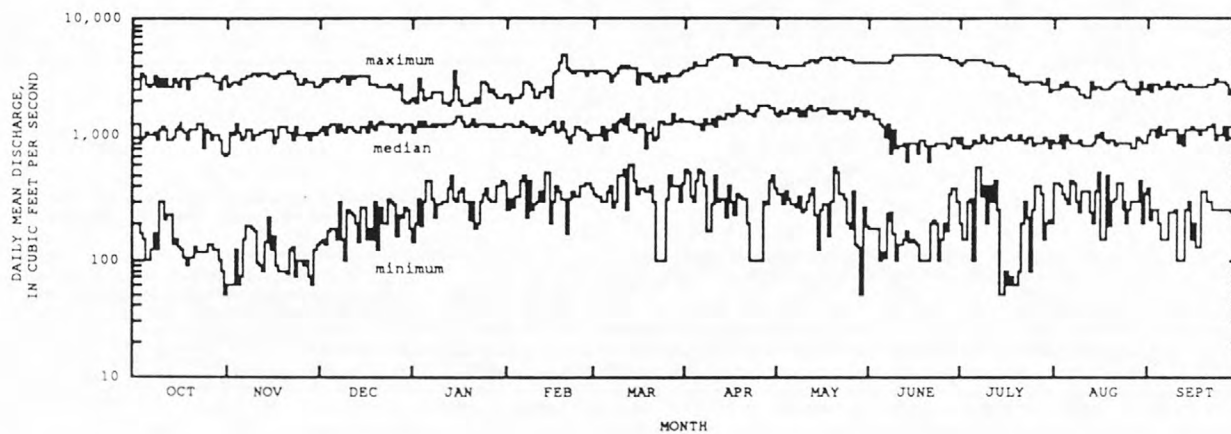
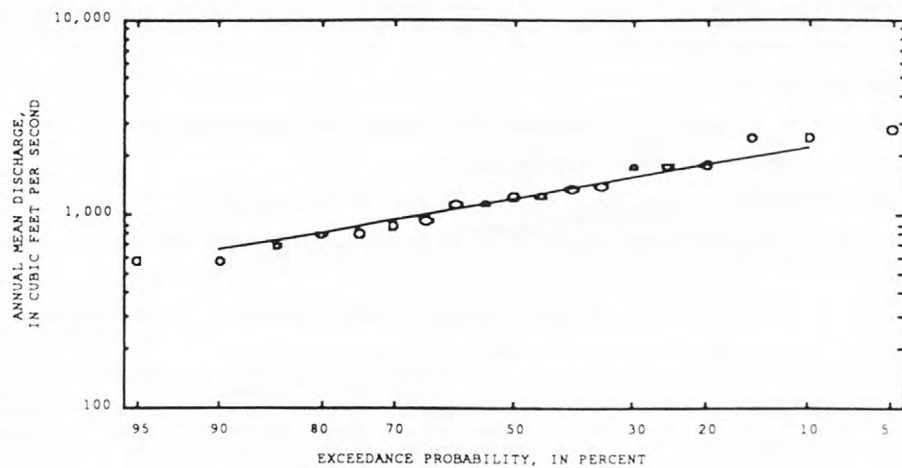
Duration table of daily mean flow for period of record 1971-89

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
4,280	3,160	2,550	2,240	2,010	1,690	1,440	1,210	964	748	561	385	281	171	122	101
															60

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# BEAR RIVER BASIN

10093000 CUB RIVER NEAR PRESTON, ID

LOCATION.—Lat 42°08'25", long 111°41'26", in NW 1/4, NW 1/4, NE 1/4, sec. 8, T. 15 S., R. 41 E., Franklin County, Hydrologic Unit 16010202, Cache National Forest, on right bank 0.2 mi upstream from headgates of Cub River-Worm Creek Canal, 0.7 mi upstream from forest boundary, and 10 mi east of Preston.

DRAINAGE AREA.—31.6 mi<sup>2</sup>.

PERIOD OF RECORD.—March 1940 to September 1952, October 1955 to September 1986.

REVISED RECORDS.—WDR UT-74-1: Drainage area.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,070 ft<sup>3</sup>/s June 4, 1986, gage height, 3.95 ft; no flow for part of Jan. 29, 1965, result of snowslide.

Summary of monthly and annual discharges, 1941-52, 1956-86

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	53	16	29	6.7	0.23	2.7
November	49	14	26	6.3	0.25	2.4
December	43	15	23	5.3	0.23	2.2
January	32	16	21	4.1	0.19	2.1
February	36	15	21	4.7	0.22	2.0
March	69	15	29	9.9	0.34	2.7
April	201	31	80	41	0.51	7.6
May	432	78	291	74	0.26	27.8
June	691	74	335	152	0.45	32.0
July	284	29	111	61	0.55	10.5
August	78	22	49	13	0.27	4.7
September	51	18	35	7.1	0.20	3.3
Annual	143	32	88	23	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1941-52, 1957-86

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	18	16	15	14	13	13
3	18	16	15	14	13	13
7	18	16	15	14	13	13
14	19	16	15	15	14	13
30	19	17	16	15	14	14
60	20	17	16	16	15	14
90	20	18	17	16	15	15
120	21	19	18	17	16	16
183	23	20	19	19	18	18

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1941-52, 1956-86

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
636	713	793	891	963	1,030

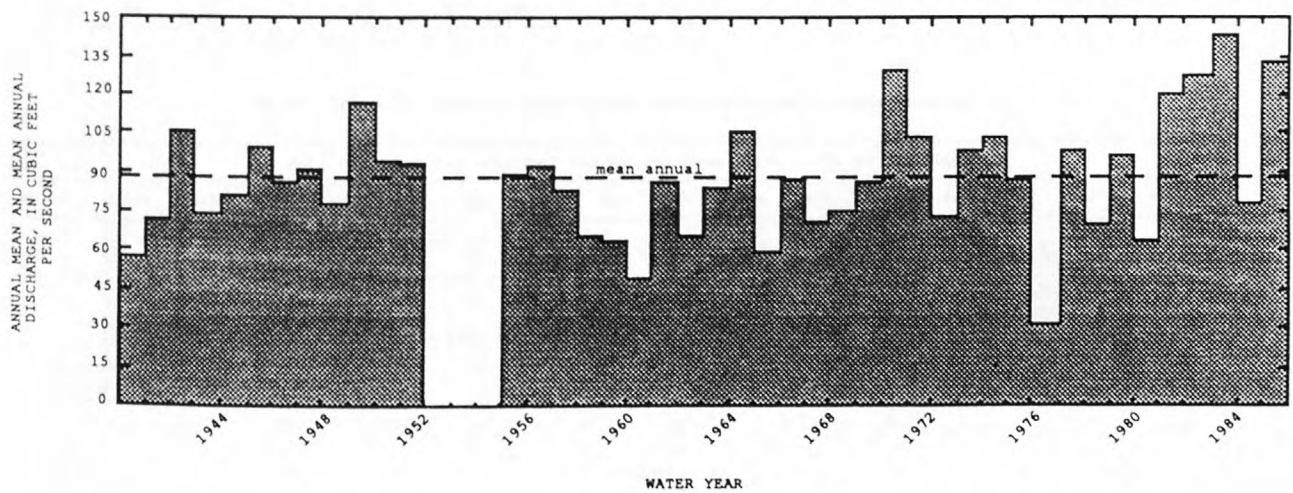
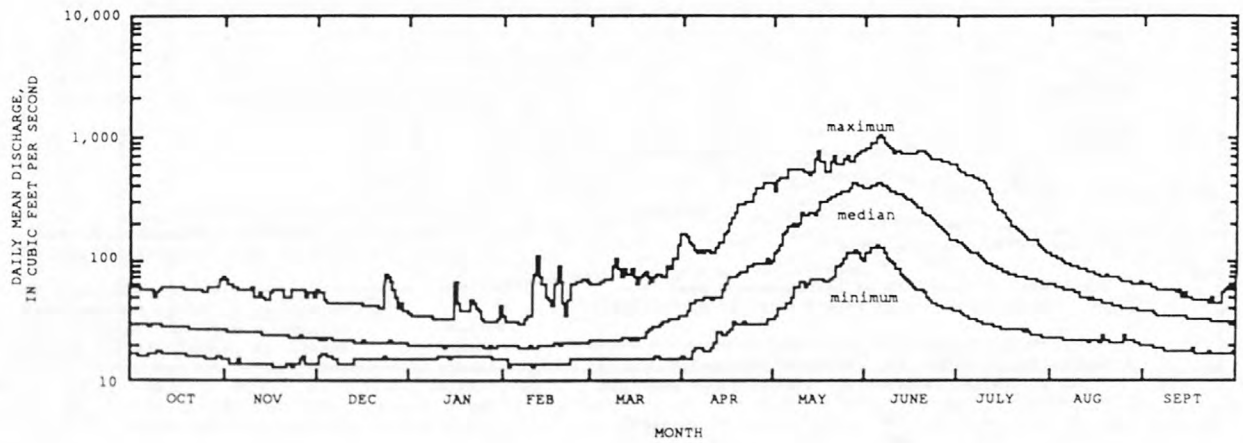
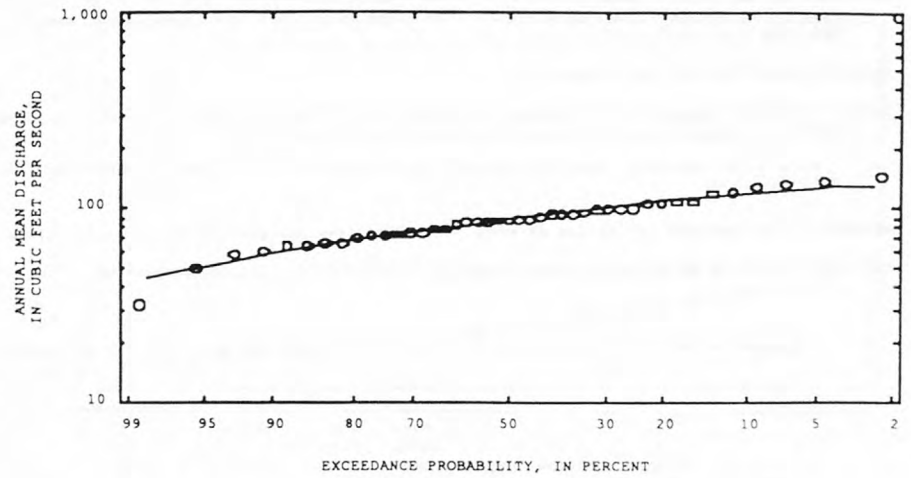
Magnitude and frequency of annual high flow,  
based on period of record 1941-52, 1956-86

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	619	700	717	724	726	727
3	599	681	700	709	711	712
7	562	645	666	677	680	681
15	506	595	622	639	645	648
30	441	522	546	562	567	570
60	336	415	447	474	487	496
90	261	324	350	372	383	391

Duration table of daily mean flow for period of record 1941-52, 1956-86

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
619	402	266	162	106	60	42	33	28	25	22	19	18	16	16	15	14

# Length of record used in calculation may yield unreliable values for this column.



BEAR RIVER BASIN

10119000 LITTLE MALAD RIVER ABOVE ELKHORN RESERVOIR, NEAR MALAD CITY, ID

LOCATION.—Lat 42°20'12", long 112°26'22", in NE 1/4, SE 1/4, sec. 35, T. 12 S., R. 34 E., Oneida County, Hydrologic Unit 16010204, on left bank 0.8 mi upstream from road crossing, 2 mi downstream from Wright Creek, 2.5 mi downstream from springs, 2.5 mi upstream from Elkhorn Dam, and 14 mi northwest of Malad City.

DRAINAGE AREA.—120 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—August 1911 to August 1913 (published as "near Malad"), October 1931 to September 1932, October 1940 to October 1969. Monthly discharge only for some periods, published in WSP 1314.

GAGE: Water-stage recorder. Elevation of gage is 5,050 ft above sea level, by barometer. Prior to Dec. 5, 1940, nonrecording gages at different datums.

REMARKS.—Diversion for irrigation of about 400 acres above station. Some regulation since August 1967 from Daniels Dam 1 mi upstream.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,450 ft<sup>3</sup>/s Feb. 10, 1962, gage height, 4.85 ft; minimum, 1.4 ft<sup>3</sup>/s Oct. 24, 25, 1967.

Summary of monthly and annual discharges, 1912, 1932, 1941-69

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	18	8.3	13	2.4	0.18	6.7
November	18	2.6	13	3.3	0.25	6.7
December	23	3.4	14	3.7	0.26	7.0
January	22	4.6	15	3.4	0.24	7.2
February	97	5.5	20	16	0.79	10.0
March	51	6.0	21	8.0	0.39	10.2
April	41	6.2	22	7.5	0.35	10.8
May	34	13	20	4.9	0.24	9.9
June	31	11	18	4.3	0.24	8.9
July	30	12	17	4.2	0.25	8.2
August	35	11	15	4.4	0.29	7.4
September	21	10	14	2.4	0.17	7.0
Annual	25	12	17	2.7	0.16	100

Magnitude and frequency of annual low flow,  
based on period of record 1913, 1942-69

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>#</sup> 1%
1	13	8.9	6.1	4.1	2.3	1.4
3	13	9.0	6.2	4.1	2.3	1.4
7	13	9.3	6.4	4.3	2.4	1.5
14	14	9.5	6.6	4.4	2.4	1.5
30	14	9.8	7.0	4.8	2.8	1.9
60	14	10	7.4	5.3	3.3	2.3
90	14	10	7.8	5.8	3.8	2.8
120	14	11	8.4	6.3	4.3	3.2
183	15	11	9.3	7.6	5.8	4.6

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1912, 1932, 1941-49

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
109	259	430	773	1,160	1,690

Magnitude and frequency of annual high flow,  
based on period of record 1912, 1932, 1941-69

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>#</sup> 1%
1	45	94	160	324	549	928
3	38	72	117	225	369	606
7	32	53	78	133	199	298
15	29	43	58	85	113	151
30	26	36	44	59	72	89
60	23	30	37	48	59	73
90	21	27	32	41	48	57

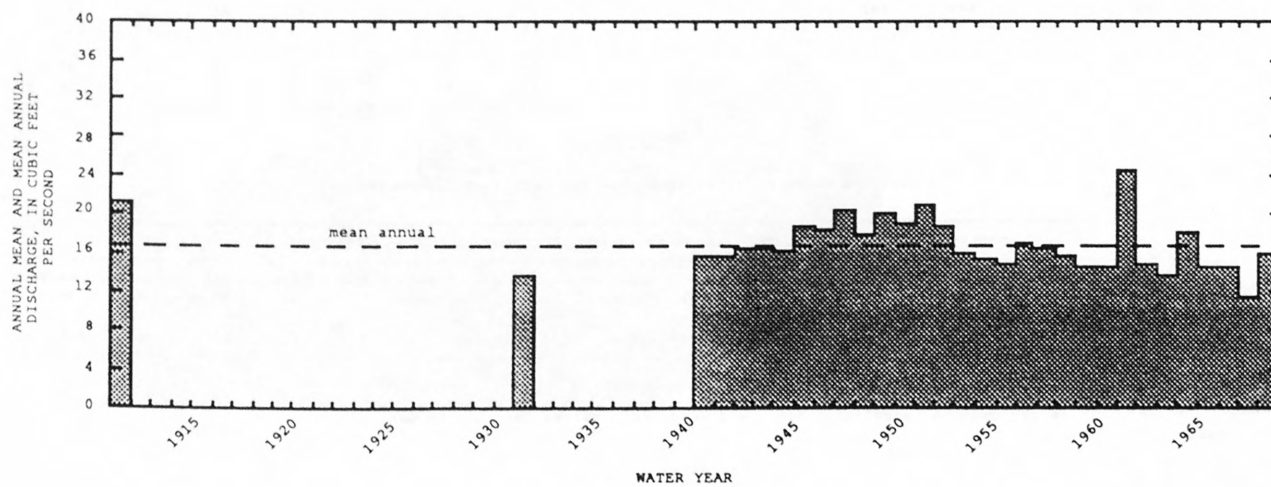
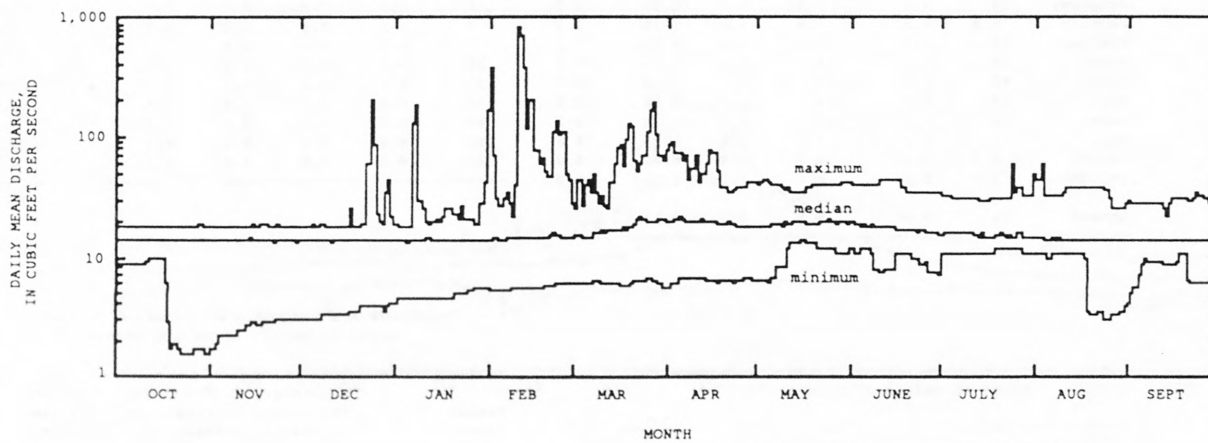
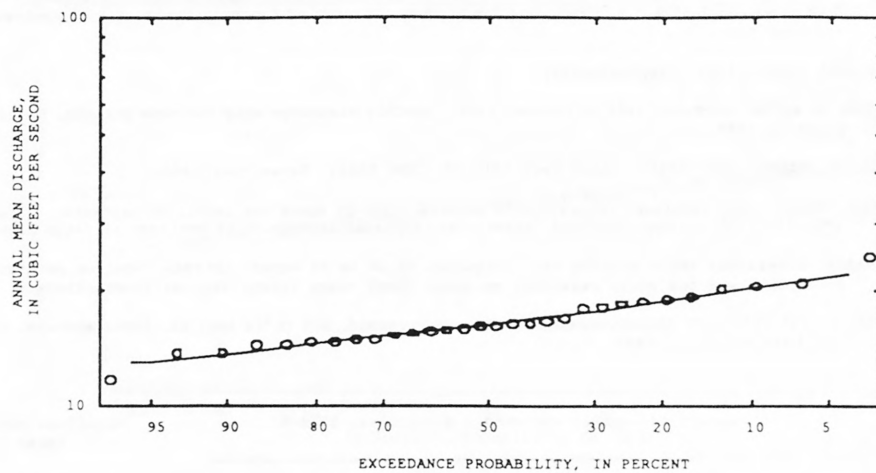
Duration table of daily mean flow for period of record 1912, 1932, 1941-69

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
46	29	24	21	20	18	17	16	15	14	13	12	10	5.4	3.8	3.0	1.8

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



**BEAR RIVER BASIN**

10122500 DEVIL CREEK ABOVE CAMPBELL CREEK, NEAR MALAD CITY, ID

**LOCATION.**—Lat 42°18', long 112°23', in sec. 12, T. 13 S., R. 36 E., Oneida County, Hydrologic Unit 16010204, on right bank 0.6 mi upstream from proposed dam, 1.3 mi upstream from highway crossing of Campbell Creek, 4.5 mi upstream from Evans dividers, and 7.5 mi northeast of Malad City.

**DRAINAGE AREA.**—13 mi<sup>2</sup>, approximately.

**PERIOD OF RECORD.**—October 1938 to October 1961. Monthly discharge only for some periods, published in WSP 1314. Published as "near Malad" prior to 1949.

**REVISED RECORDS.**—WSP 1344: Water year 1943(M). WSP 1514: Water year 1942.

**GAGE:** Water-stage recorder. Elevation of gage is 5,150 ft above sea level, by barometer. Prior to Dec. 16, 1943, nonrecording gage, and Dec. 16, 1943, to Aug. 22, 1954, water-stage recorder at site 50 ft upstream at datum 1.84 ft higher.

**REMARKS.**—Diversion above station for irrigation of 20 to 30 acres. Stream receives part of flow of Birch Creek above station. Malad powerplant and its small reservoir on Birch Creek cause slight diurnal fluctuations.

**EXTREMES FOR PERIOD OF RECORD.**—Maximum discharge recorded, 194 ft<sup>3</sup>/s Aug. 25, 1961; minimum, 0.60 ft<sup>3</sup>/s Sept. 26, 1961; minimum daily, 1.8 ft<sup>3</sup>/s Nov. 3-5, 1949.

Summary of monthly and annual discharges, 1939-61

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	10	4.5	7.1	1.6	0.23	6.4
November	10	5.0	7.4	1.5	0.20	6.7
December	10	5.2	7.6	1.5	0.19	6.9
January	9.8	5.2	7.6	1.4	0.18	6.8
February	12	4.9	7.9	1.8	0.22	7.1
March	26	6.1	11	5.1	0.44	10.3
April	46	4.9	18	11	0.62	15.7
May	24	5.2	14	5.0	0.36	12.5
June	22	4.6	10	3.9	0.38	9.3
July	11	4.5	7.4	1.8	0.24	6.6
August	9.3	4.4	6.6	1.5	0.23	5.9
September	9.0	3.9	6.4	1.3	0.21	5.8
Annual	14	5.0	9.3	2.5	0.27	100

Magnitude and frequency of annual low flow,  
based on period of record 1940-61

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	4.4	3.3	2.7	2.3	1.9	1.7
3	5.1	3.6	2.9	2.4	1.9	1.8
7	5.3	4.3	3.8	3.4	3.1	2.9
14	5.8	4.8	4.4	4.0	3.7	3.5
30	6.1	5.1	4.7	4.4	4.1	3.8
60	6.3	5.4	4.9	4.6	4.2	4.0
90	6.5	5.4	5.0	4.6	4.2	4.0
120	6.6	5.6	5.1	4.7	4.3	4.1
183	6.9	5.8	5.3	4.9	4.5	4.3

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1939-61

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
65	110	145	193	233	276	

Magnitude and frequency of annual high flow,  
based on period of record 1939-61

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	35	63	86	123	155	192
3	29	52	71	101	128	159
7	24	44	61	88	113	143
15	20	35	48	67	84	104
30	17	28	36	49	59	70
60	15	23	28	36	41	47
90	14	20	24	29	32	36

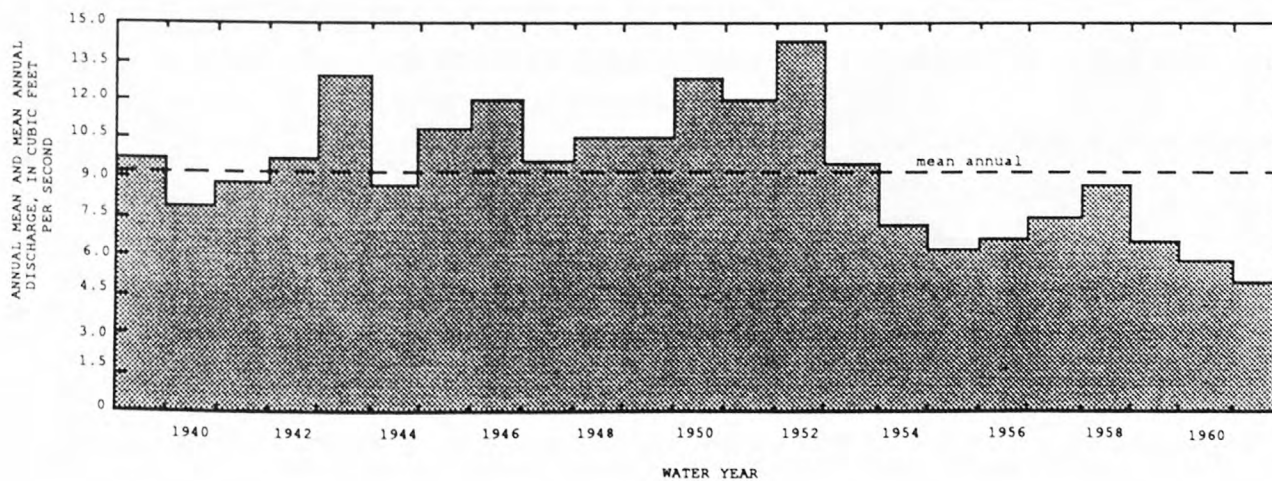
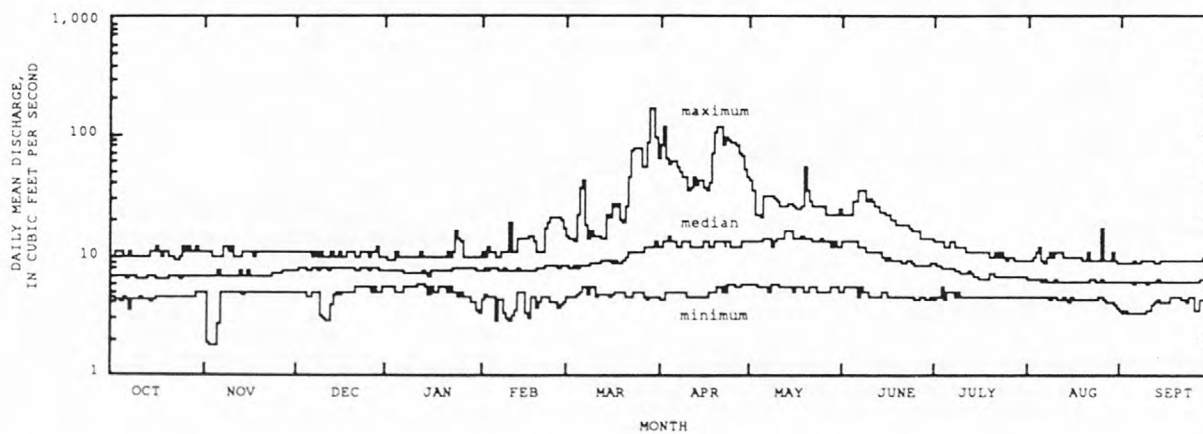
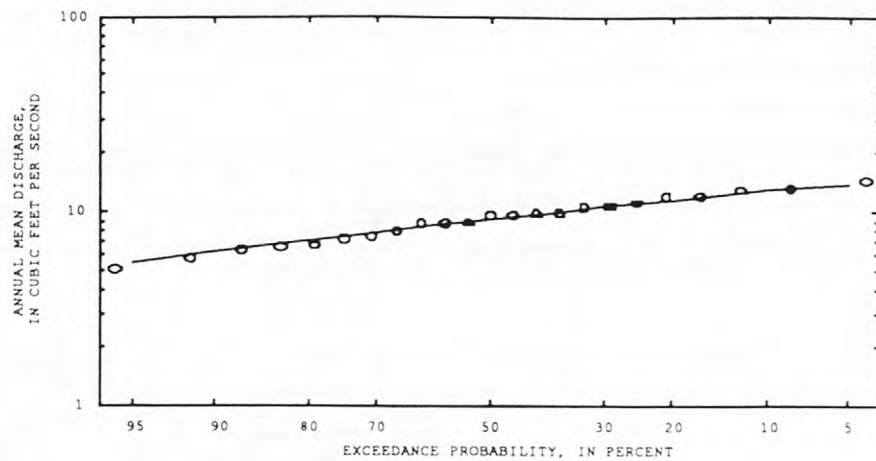
Duration table of daily mean flow for period of record 1939-61

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
34	20	15	12	11	9.3	8.6	7.9	7.2	6.6	6.0	5.3	4.9	4.4	4.1	3.9	2.9	

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# BEAR RIVER BASIN

10125000 DEEP CREEK BELOW FIRST CREEK, NEAR MALAD CITY, ID

LOCATION.—Lat 42°14', long 112°11', in sec. 7, T. 14 S., R. 37 E., Oneida County, Hydrologic Unit 16010204, just downstream from site of proposed reservoir, 1 mi north and 3.5 mi east of Malad City, and 12 mi upstream from mouth.

DRAINAGE AREA.—32 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1931 to December 1948.

GAGE.—Water-stage recorder and wooden control. Elevation of gage is 5,074 ft above sea level, from river profile survey. Prior to Dec. 16, 1940, nonrecording gages or nonrecording gage and wooden weir at sites within 40 ft downstream and at different datums.

REMARKS.—Small diversions above station. Flow regulated at times by reservoir 2.5 mi upstream.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 172 ft<sup>3</sup>/s July 8, 1927, from rating curve extended above 40 ft<sup>3</sup>/s by logarithmic plotting; minimum observed, 0.3 ft<sup>3</sup>/s Aug. 29, 1934.

Summary of monthly and annual discharges, 1932-48

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	5.5	0.97	3.1	1.3	0.44	2.8
November	4.7	1.4	3.0	1.0	0.33	2.7
December	4.9	1.3	3.0	1.0	0.33	2.8
January	4.0	1.9	3.0	0.68	0.23	2.7
February	7.7	2.3	3.8	1.4	0.36	3.5
March	16	3.5	7.1	3.5	0.50	6.5
April	59	4.6	22	16	0.72	20.3
May	51	3.0	27	13	0.48	24.7
June	30	2.1	18	6.1	0.34	16.2
July	15	0.84	11	3.8	0.35	9.9
August	12	0.44	5.6	3.0	0.54	5.1
September	8.2	0.52	3.0	1.7	0.55	2.8
Annual	14	2.4	9.1	3.1	0.34	100

Magnitude and frequency of annual low flow,  
based on period of record 1933-48

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	1.8	1.1	0.76	0.53	0.33	0.23
3	2.0	1.2	0.87	0.62	0.40	0.29
7	2.1	1.3	0.96	0.68	0.44	0.31
14	2.3	1.5	1.0	0.71	0.44	0.31
30	2.5	1.5	1.1	0.73	0.45	0.31
60	2.8	1.8	1.2	0.83	0.50	0.34
90	2.9	1.9	1.3	0.95	0.60	0.42
120	3.0	2.0	1.5	1.1	0.71	0.52
183	3.1	2.2	1.7	1.3	1.0	0.82

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1932-48

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
55	96	128	175	213	255

Magnitude and frequency of annual high flow,  
based on period of record 1932-48

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	42	67	81	94	102	109
3	40	65	79	94	101	108
7	38	62	75	89	98	105
15	35	57	70	83	91	98
30	31	49	59	69	75	80
60	27	40	45	51	54	56
90	23	33	37	40	41	42

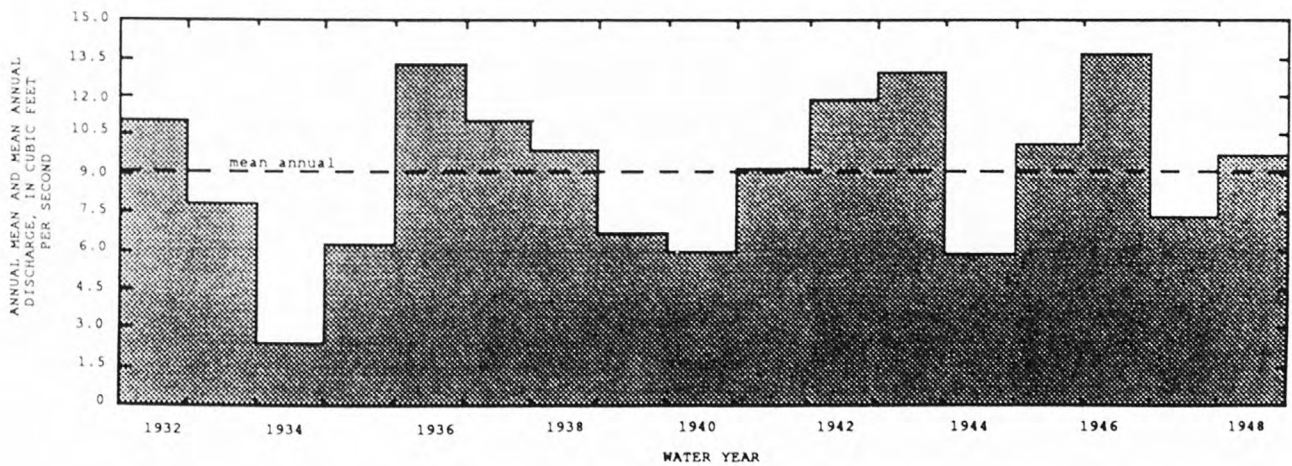
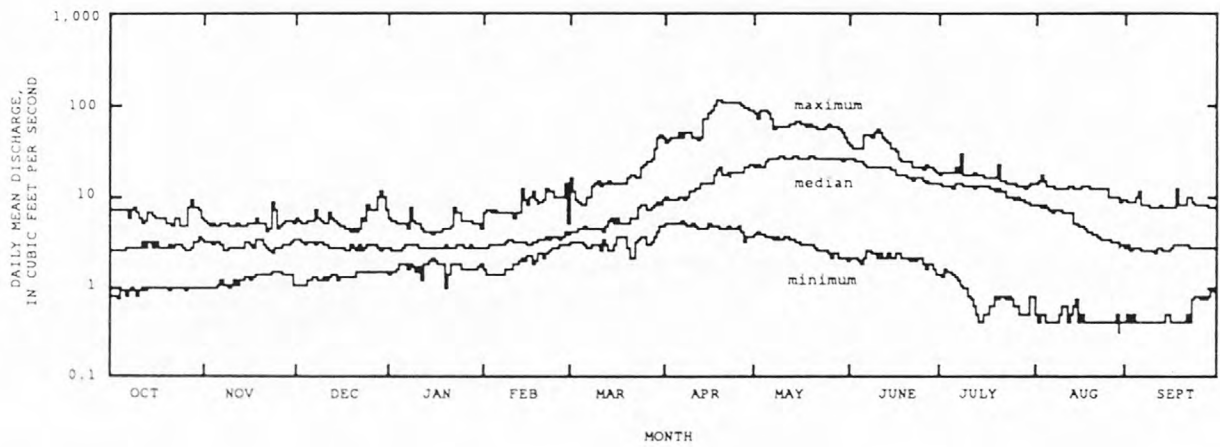
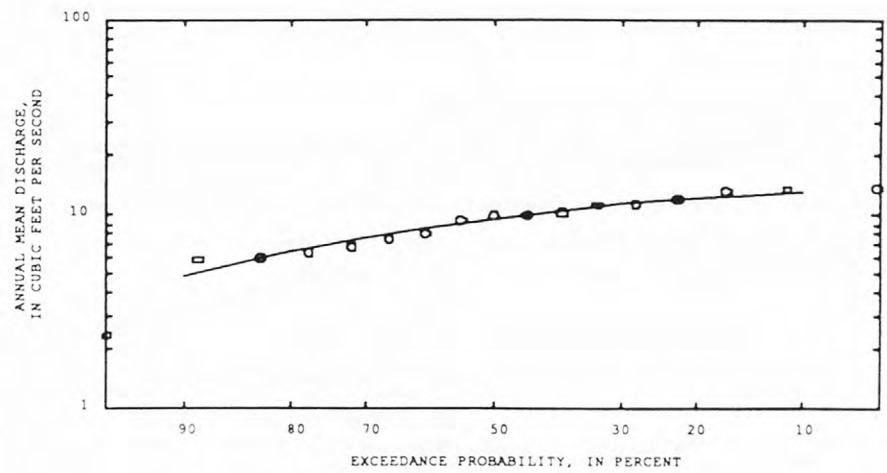
Duration table of daily mean flow for period of record 1932-48

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
56	32	22	17	14	9.7	5.9	4.3	3.6	3.0	2.6	2.0	1.6	1.0	0.58	0.42

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR RIVER BASIN

10125500 MALAD RIVER AT WOODRUFF, ID

LOCATION.—Lat 42°01'48", long 112°13'45", in NE 1/4, NE 1/4, sec. 22, T. 16 S., R. 36 E., Oneida County, Hydrologic Unit 16010204, at left abutment of highway bridge at Woodruff and 2.1 mi north of Idaho-Utah State line.

DRAINAGE AREA.—472 mi<sup>2</sup>.

PERIOD OF RECORD.—November 1938 to September 1982.

GAGE.—Water-stage recorder. Elevation of gage is 4,355 ft above sea level, 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.

REMARKS.—Flow regulated by several small reservoirs above station. Diversions above station for irrigation of 25,000 to 30,000 acres.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,530 ft<sup>3</sup>/s Feb. 12, 1962, gage height, 8.93 ft; minimum 1.8 ft<sup>3</sup>/s July 14, 1964, gage height, 1.30 ft.

Summary of monthly and annual discharges, 1940-82

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	91	17	37	18	0.49	4.8
November	106	24	60	23	0.39	7.7
December	120	32	68	24	0.35	8.8
January	231	28	77	37	0.48	9.9
February	450	47	111	66	0.60	14.3
March	249	49	134	50	0.37	17.3
April	280	36	111	53	0.48	14.3
May	209	19	68	41	0.61	8.8
June	147	15	39	24	0.61	5.0
July	52	12	24	8.1	0.34	3.0
August	48	14	23	8.2	0.36	3.0
September	63	13	24	10	0.42	3.1
Annual	112	28	64	19	0.30	100

Magnitude and frequency of annual low flow,  
based on period of record 1940-82

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	19	12	8.4	5.7	3.3	2.2
3	19	13	9.9	7.4	4.9	3.6
7	19	14	12	9.8	7.8	6.6
14	19	15	13	12	10	9.6
30	19	16	14	13	12	11
60	20	16	15	14	13	13
90	21	17	16	15	14	13
120	22	18	16	15	14	14
183	29	22	19	18	16	15

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1940-82

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
295	531	774	1,230	1,710	2,350

Magnitude and frequency of annual high flow,  
based on period of record 1940-82

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	290	498	695	1,030	1,360	1,780
3	272	451	609	863	1,100	1,380
7	239	378	488	647	781	929
15	197	295	365	460	534	612
30	165	229	270	321	357	392
60	136	184	214	250	275	300
90	122	160	181	206	222	237

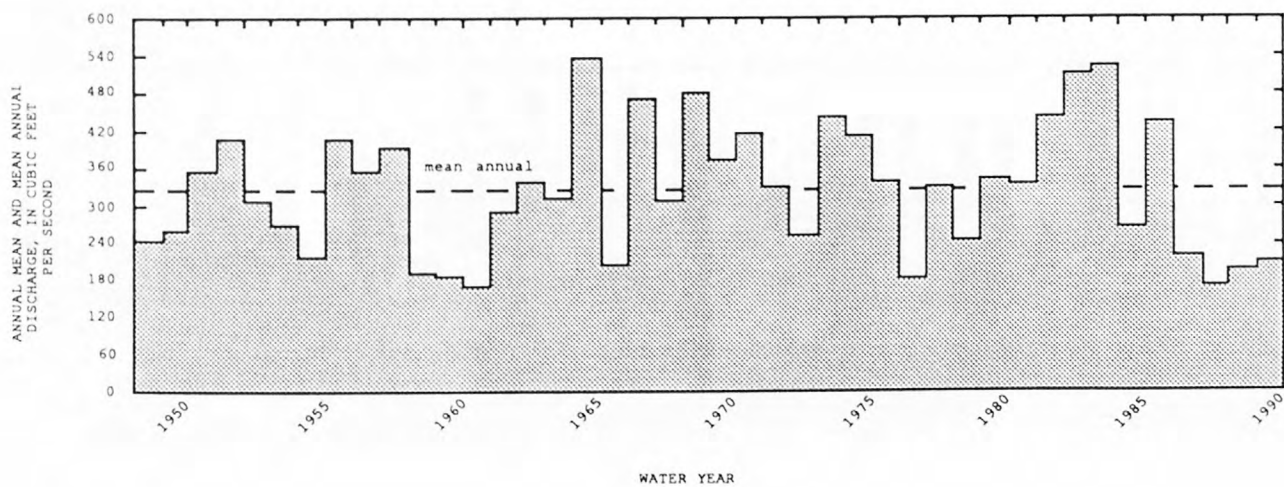
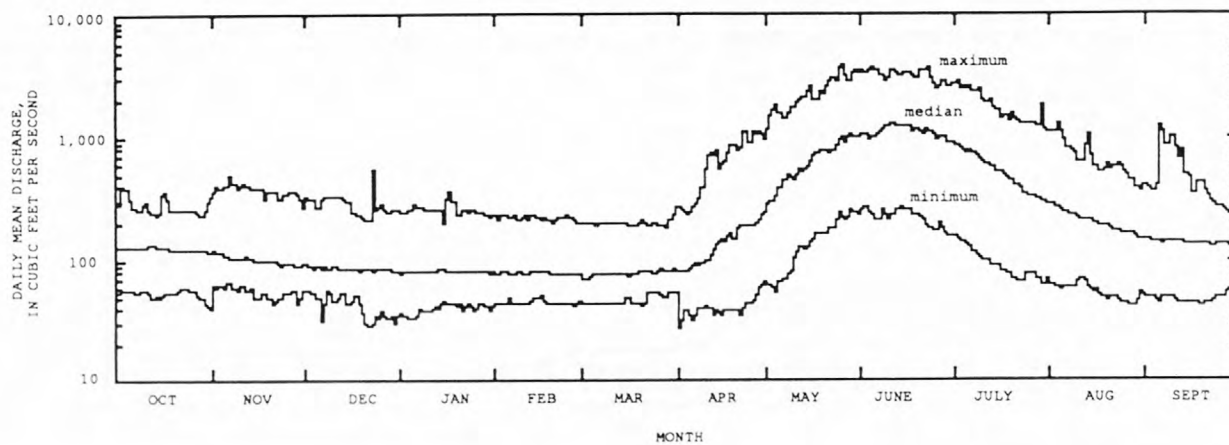
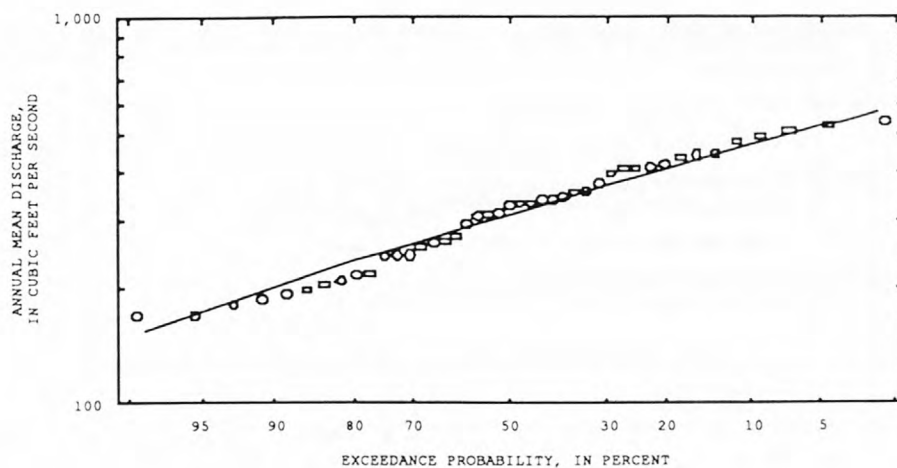
Duration table of daily mean flow for period of record 1940-82

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
302	168	129	106	93	74	60	48	37	28	23	19	17	15	14	13	8.5

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# KOOTENAI RIVER BASIN

12305000 KOOTENAI RIVER AT LEONIA, ID

LOCATION.—Lat 48°37'04", long 116°02'47", in NW 1/4, NW 1/4, NW 1/4, sec. 20, T. 33 N., R. 34 W., principal Meridian, Lincoln County, Montana, Hydrologic Unit 17010104, on right bank at Leonia, 450 ft east of Montana-Idaho State line, 0.5 mi upstream from Boulder Creek, and at mile 171.6.

DRAINAGE AREA.—11,740 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—March 1928 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 1,790.25 ft above sea level. Prior to Oct. 1, 1970, at datum 90 ft lower. Prior to Nov. 13, 1928, nonrecording gage on bridge 250 ft upstream at datum 90.41 ft lower.

REMARKS.—Divisions above station for irrigation of about 14,600 acres. Flow regulated by Lake Koocanusa since Mar. 21, 1972.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 123,000 ft<sup>3</sup>/s May 28, 1948, gage height, 33.40 ft; minimum, 996 ft<sup>3</sup>/s Dec. 9, 1936; minimum gage height, 7.56 ft, Dec. 10, 1929.

Summary of monthly and annual discharges, 1929-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	32,000	3,530	9,500	6,010	0.63	5.7
November	25,100	2,750	9,270	6,250	0.67	5.6
December	24,900	2,480	7,900	6,260	0.79	4.8
January	28,600	1,920	7,510	6,450	0.86	4.5
February	24,800	1,990	6,870	5,440	0.79	4.1
March	15,200	2,690	6,190	3,090	0.50	3.7
April	39,900	4,330	13,200	6,570	0.50	8.0
May	61,800	8,350	31,300	15,000	0.48	18.9
June	74,300	5,370	35,600	19,000	0.53	21.5
July	47,500	4,140	19,700	9,050	0.46	11.9
August	20,300	3,960	10,200	3,030	0.30	6.2
September	21,000	4,740	8,530	3,570	0.42	5.1
Annual	19,200	7,420	13,800	2,940	0.21	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	2,640	1,880	1,530	1,360	1,210	1,100
3	2,750	2,000	1,700	1,480	1,270	1,150
7	2,980	2,200	1,880	1,640	1,420	1,290
14	3,260	2,470	2,140	1,900	1,670	1,540
30	3,600	2,750	2,450	2,250	2,060	1,960
60	4,080	3,030	2,660	2,420	2,210	2,090
90	4,530	3,230	2,780	2,490	2,240	2,090
120	4,930	3,490	2,990	2,660	2,370	2,210
183	5,940	4,130	3,480	3,050	2,660	2,430

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
58,600	81,200	94,000	108,000	118,000	126,000

Magnitude and frequency of annual high flow,  
based on period of record 1929-90

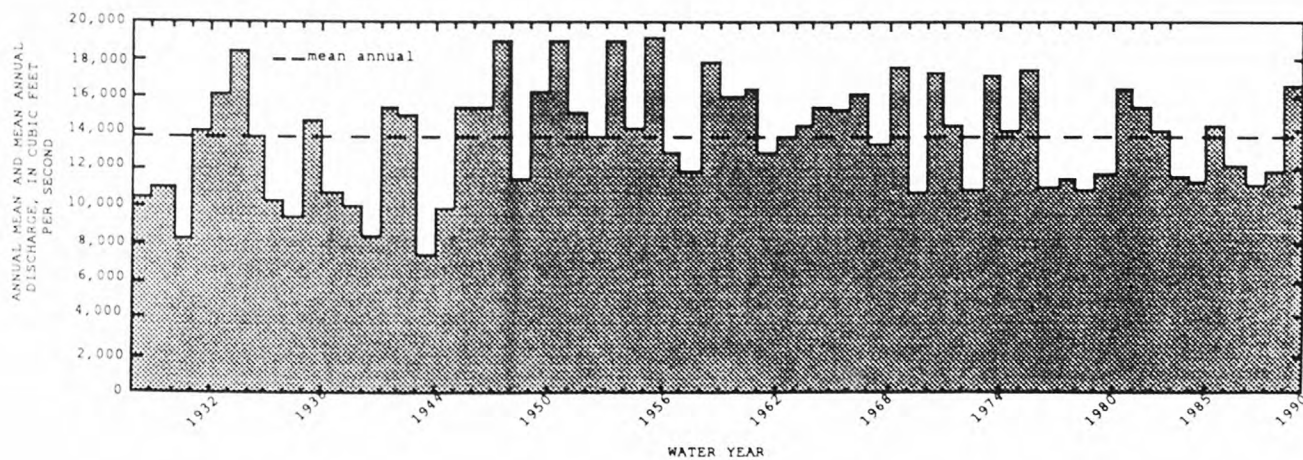
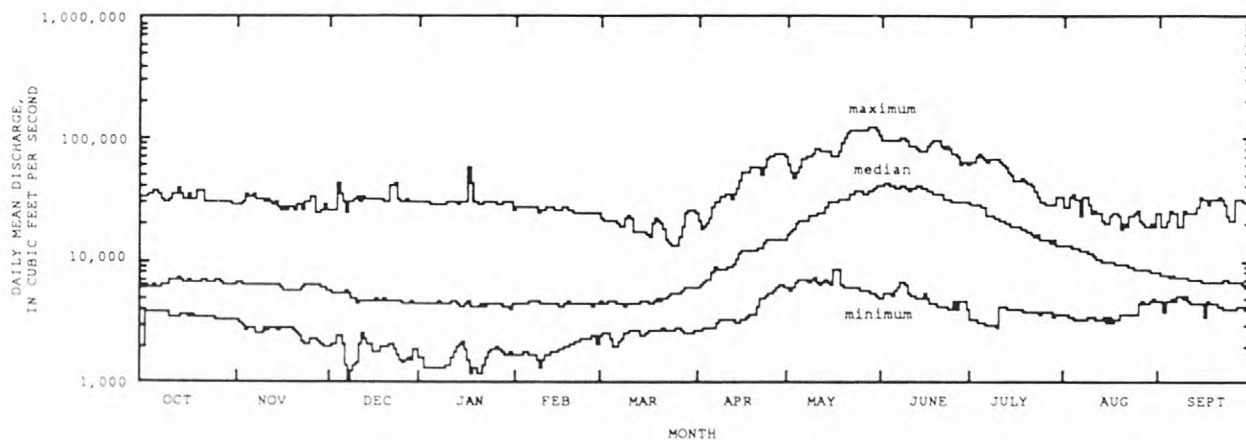
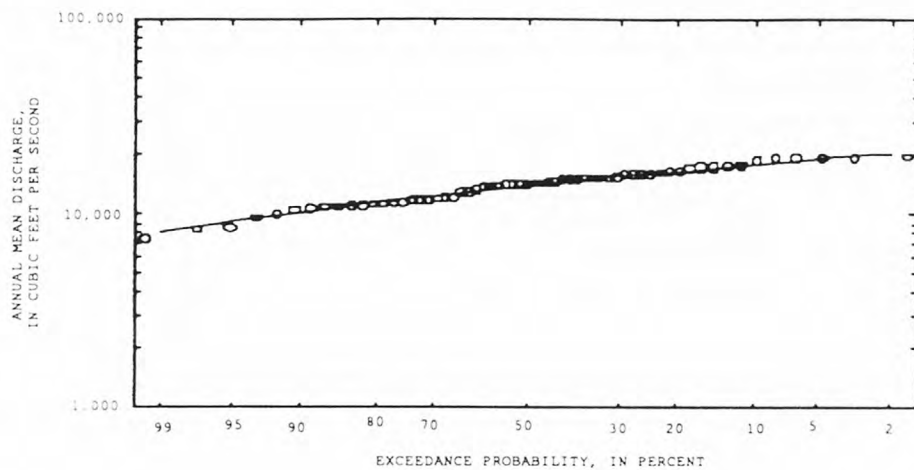
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	56,100	80,100	92,800	106,000	116,000	124,000
3	53,800	77,900	90,900	103,000	113,000	122,000
7	49,600	72,100	86,600	100,000	110,000	120,000
15	45,300	65,600	78,700	95,000	107,000	118,000
30	41,200	58,400	69,300	82,500	91,900	101,000
60	35,600	49,000	57,100	66,700	73,400	79,700
90	30,300	40,900	47,300	54,900	60,300	65,300

Duration table of daily mean flow for period of record 1929-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time														
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%
70,300	44,900	31,600	24,500	20,800	15,000	10,900	8,250	6,490	5,380	4,520	3,560	3,000	2,560	2,280
														2,030
														1,470



LOCATION MAP





## KOOTENAI RIVER BASIN

12305500 BOULDER CREEK NEAR LEONIA, ID

LOCATION.—Lat 48°35'54", long 116°05'30", in NE 1/4, NE 1/4, sec. 32, T. 61 N., R. 3 E., Boundary County, Hydrologic Unit 17010104, Kaniksu National Forest, on left bank 0.8 mi downstream from McGinty Creek, 0.8 mi upstream from building of the Idamont-Zinc Mines Co., 2.5 mi southwest of Leonia, and at mile 2.8.

DRAINAGE AREA.—56 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1928 to September 1971, May 1973 to September 1977. Monthly discharge only for some periods, published in WSP 1316.

GAGE.—Water-stage recorder. Elevation of gage is 2,600 ft above sea level, from topographic map. Prior to November 20, 1928, nonrecording gage at site 1 mi 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 mi upstream at different datum.

REMARKS.—No regulation or diversion.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,140 ft<sup>3</sup>/s Jan. 16, 1974, gage height, 8.16 ft; minimum 2.0 ft<sup>3</sup>/s Aug. 25, Sept. 5, 1931.

Summary of monthly and annual discharges, 1929-71, 1974-77

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	223	8.5	36	41	1.1	2.5
November	222	7.3	58	48	0.83	4.0
December	293	9.2	62	65	1.1	4.3
January	330	7.9	47	53	1.1	3.3
February	182	7.8	49	40	0.81	3.3
March	167	16	59	35	0.59	4.1
April	626	67	239	113	0.47	16.7
May	846	172	531	154	0.29	37.1
June	765	55	271	165	0.61	19.0
July	153	12	50	33	0.67	3.5
August	37	3.8	16	7.2	0.46	1.1
September	50	5.6	15	9.2	0.59	1.1
Annual	232	44	120	37	0.31	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-71, 1975-77

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	8.7	5.7	4.4	3.5	2.6	2.2
3	8.8	6.0	4.8	3.9	3.1	2.6
7	9.2	6.3	5.1	4.2	3.3	2.8
14	9.9	6.8	5.4	4.5	3.5	3.0
30	11	7.6	6.1	5.0	3.9	3.3
60	13	8.9	7.3	6.1	5.0	4.3
90	15	10	8.3	7.1	5.9	5.2
120	18	12	9.6	8.2	7.0	6.3
183	28	16	12	10	7.9	6.8

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-71, 1974-77

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,240	1,720	2,050	2,480	2,810	3,150	

Magnitude and frequency of annual high flow,  
based on period of record 1929-71, 1974-77

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	996	1,270	1,420	1,570	1,670	1,760
3	889	1,110	1,220	1,320	1,370	1,420
7	788	995	1,100	1,200	1,250	1,300
15	691	863	943	1,020	1,060	1,090
30	611	754	814	866	892	911
60	471	583	631	673	694	709
90	364	451	488	520	536	548

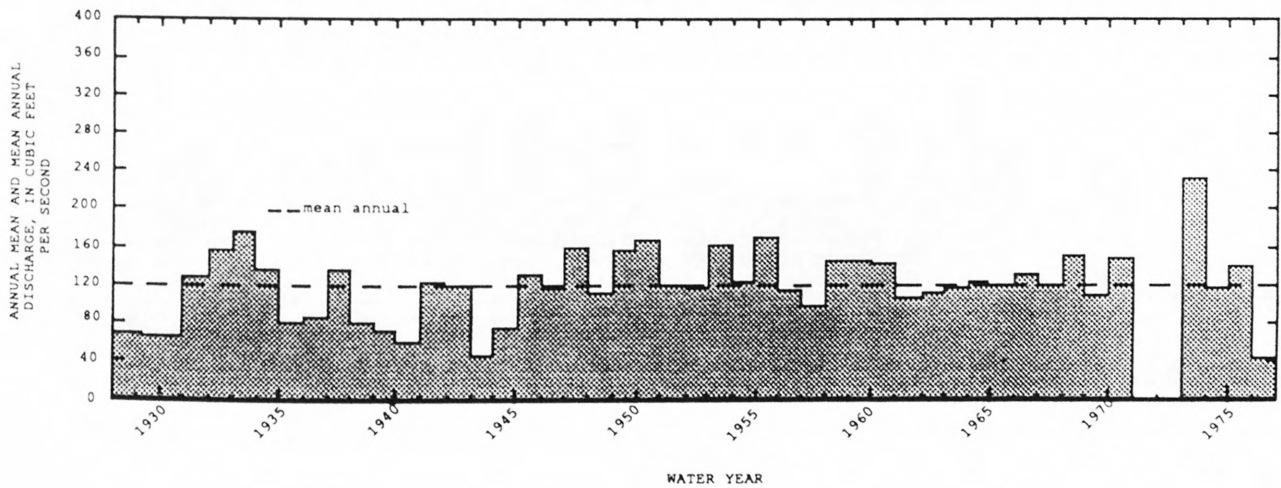
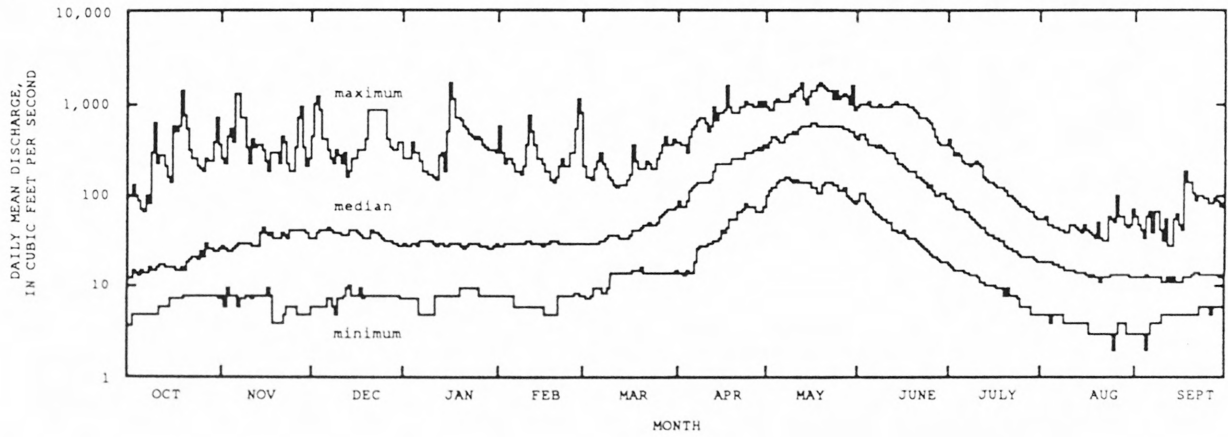
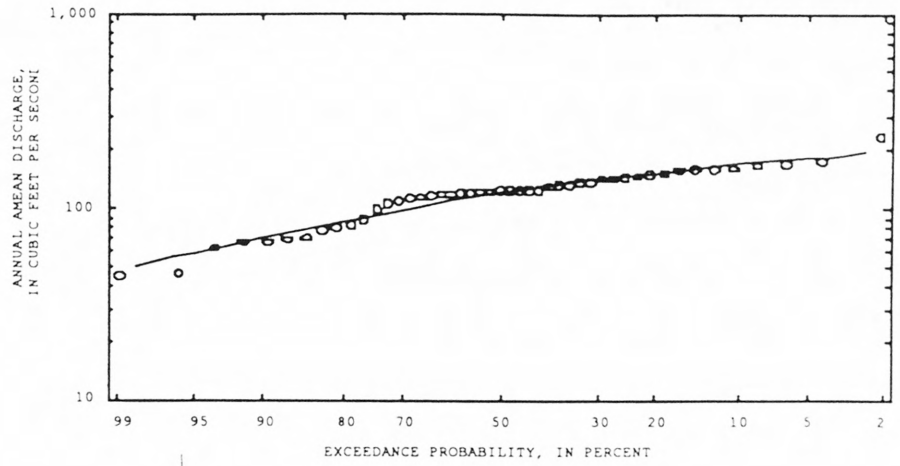
Duration table of daily mean flow for period of record 1929-71, 1974-77

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
885	580	376	246	165	89	55	37	27	20	15	11	8.4	6.9	5.4	4.6	3.6

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



KOOTENAI RIVER BASIN

12306500 MOYIE RIVER AT EASTPORT, ID  
(International gaging station)

LOCATION.—Lat 48°59'58", long 116°10'43", in NW 1/4, NE 1/4, SE 1/4, sec. 10, T. 65 N., R. 2 E., Boundary County, Hydrologic Unit 17010105, Kaniksu National Forest, on left bank at Eastport, 1,000 ft downstream from international boundary, and at mile 25.0.

DRAINAGE AREA.—570 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—January to December 1915, March to December 1916, August 1929 to September 1990 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 sea level. January 1915 to December 1916 nonrecording gage at site 0.2 mi upstream at different datum.

REMARKS.—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. Three discharge measurements per year are provided by Water Survey of Canada.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 10,600 ft<sup>3</sup>/s June 19, 1916; maximum gage height, 10.55 ft, May 20, 1954; minimum discharge, 23 ft<sup>3</sup>/s Nov. 7, 1936, gage height, 3.20 ft.

Summary of monthly and annual discharges, 1930-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	907	39	148	148	1.0	1.8
November	677	42	215	172	0.80	2.6
December	1,060	53	209	196	0.94	2.5
January	647	42	165	122	0.73	2.0
February	926	55	175	130	0.74	2.1
March	871	69	275	174	0.63	3.3
April	3,300	317	1,300	649	0.50	15.6
May	5,130	1,170	3,160	899	0.28	38.0
June	4,860	526	1,970	947	0.48	23.7
July	1,200	127	462	262	0.57	5.6
August	296	58	133	60	0.45	1.6
September	382	44	100	57	0.57	1.2
Annual	1,160	244	694	210	0.30	100

Magnitude and frequency of annual low flow,  
based on period of record 1931-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	59	44	38	34	30	27
3	60	45	39	35	30	28
7	63	47	40	36	31	28
14	66	50	43	38	33	30
30	72	54	47	42	37	34
60	80	60	52	46	41	38
90	92	67	57	50	44	40
120	105	73	62	54	47	44
183	128	84	69	60	52	47

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1930-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
5,320	6,880	7,740	8,700	9,330	9,890	

Magnitude and frequency of annual high flow,  
based on period of record 1930-90

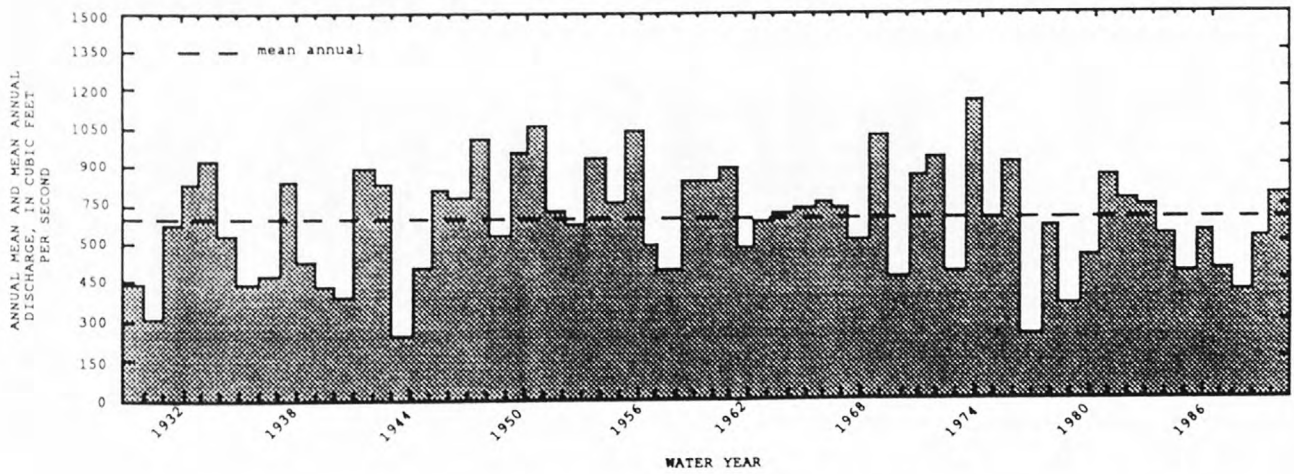
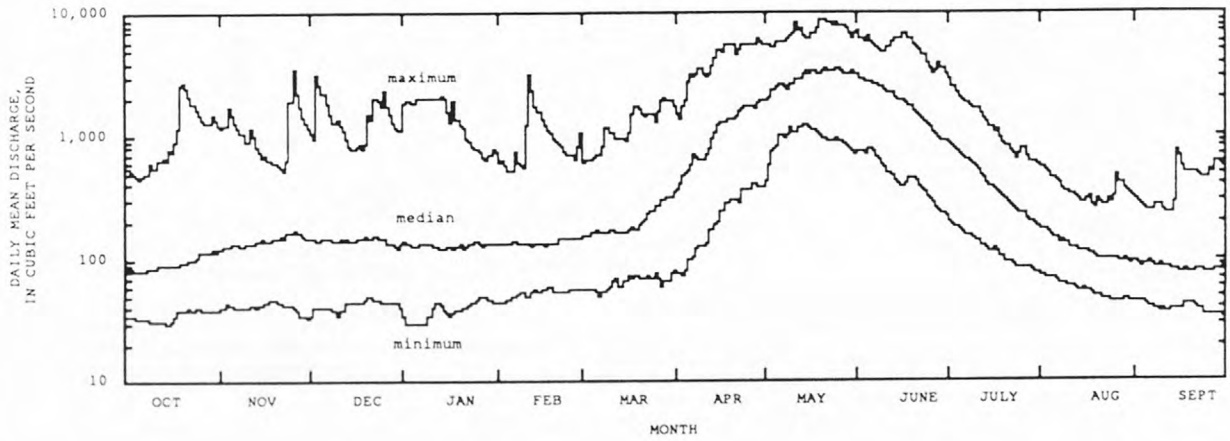
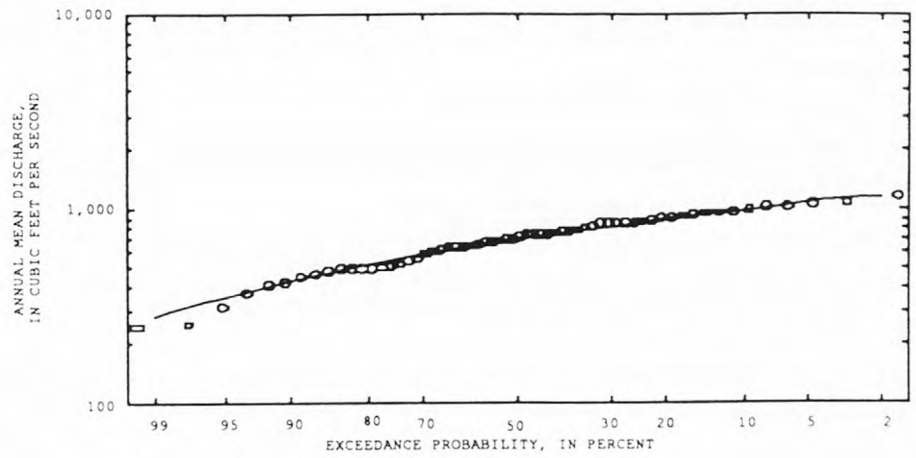
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	5,140	6,590	7,280	7,930	8,300	8,590
3	4,940	6,320	6,970	7,590	7,940	8,210
7	4,600	5,890	6,510	7,080	7,400	7,660
15	4,110	5,190	5,690	6,150	6,390	6,590
30	3,560	4,480	4,900	5,290	5,500	5,670
60	2,830	3,540	3,860	4,140	4,300	4,420
90	2,230	2,800	3,060	3,290	3,420	3,520

Duration table of daily mean flow for period of record 1930-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%		
5,190	3,360	2,320	1,570	995	449	264	183	144	116	90	68	58	49	43	39	33		



LOCATION MAP



KOOTENAI RIVER BASIN

12307500 MOYIE RIVER AT EILEEN, ID

LOCATION.—Lat 48°46'27", long 116°09'26", in NE 1/4, NE 1/4, sec. 35, T. 63 N., R. 2 E., Boundary County, Hydrologic Unit 17010105, on right bank 800 ft downstream from Skin Creek, 0.3 mi southeast of Eileen, and at mile 5.0.

DRAINAGE AREA.—755 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1925 to September 1978.

GAGE.—Water-stage recorder. Datum of gage is 2,124.5 ft above sea level, from 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.

REMARKS.—No regulation or diversion above station.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 19, 1916, was about 12,000 ft<sup>3</sup>/s.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 11,000 ft<sup>3</sup>/s May 20, 1954, gage height, 6.99 ft; minimum, 40 ft<sup>3</sup>/s Nov. 27, 1936, and Dec. 17, 1964, both the result of freezeup; minimum gage height, 0.50 ft, Feb. 22, 1944, present datum.

Summary of monthly and annual discharges, 1926-78

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,150	83	241	243	1.0	2.3
November	904	69	298	224	0.75	2.8
December	1,440	88	321	291	0.90	3.1
January	942	70	246	174	0.71	2.4
February	1,190	86	264	181	0.69	2.5
March	1,280	109	386	218	0.56	3.6
April	4,280	521	1,670	835	0.50	15.8
May	6,250	1,340	3,850	1,140	0.29	36.3
June	5,660	347	2,370	1,140	0.48	22.4
July	1,450	167	592	311	0.53	5.6
August	362	88	185	70	0.38	1.7
September	902	77	163	126	0.77	1.5
Annual	1,400	323	885	274	0.31	100

Magnitude and frequency of annual low flow,  
based on period of record 1927-78

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	92	73	66	60	56	53
3	94	75	67	62	57	54
7	99	77	69	63	58	55
14	103	82	74	68	63	60
30	110	88	80	75	70	67
60	118	94	85	80	75	73
90	133	102	92	85	78	75
120	152	110	97	88	81	77
183	184	125	106	94	84	78

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1926-78

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
6,370	8,280	9,380	10,600	11,500	12,200

Magnitude and frequency of annual high flow,  
based on period of record 1926-78

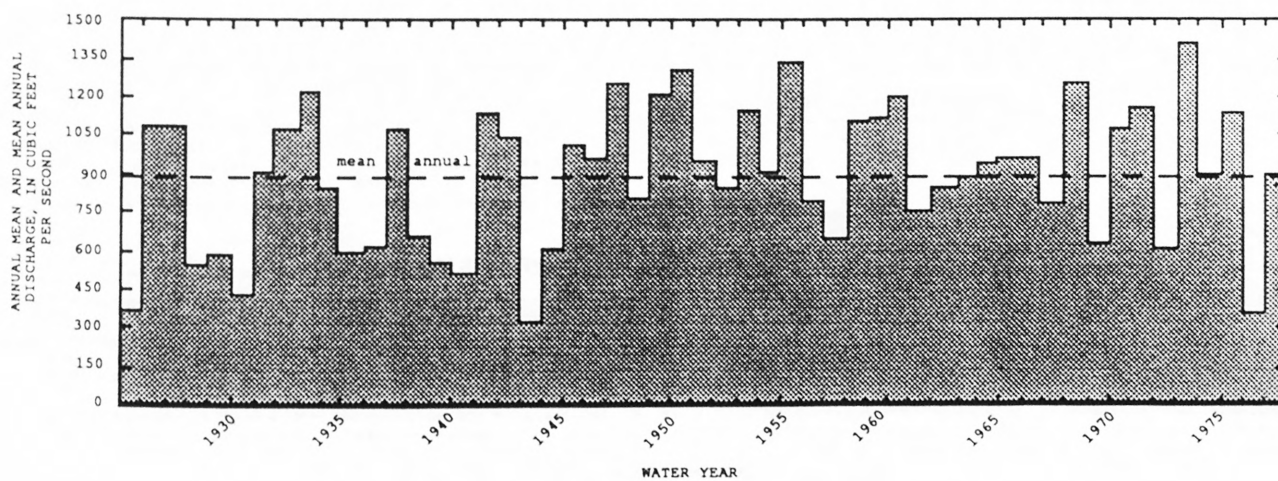
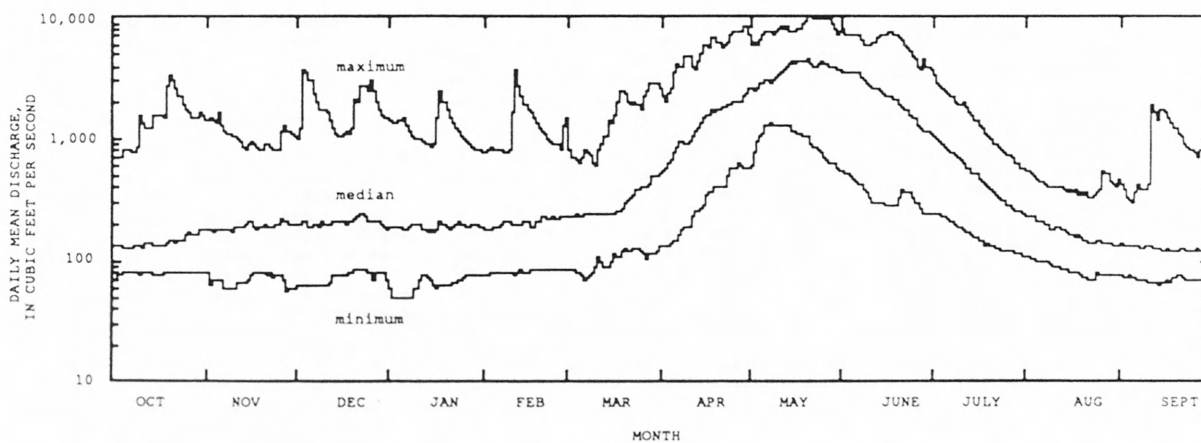
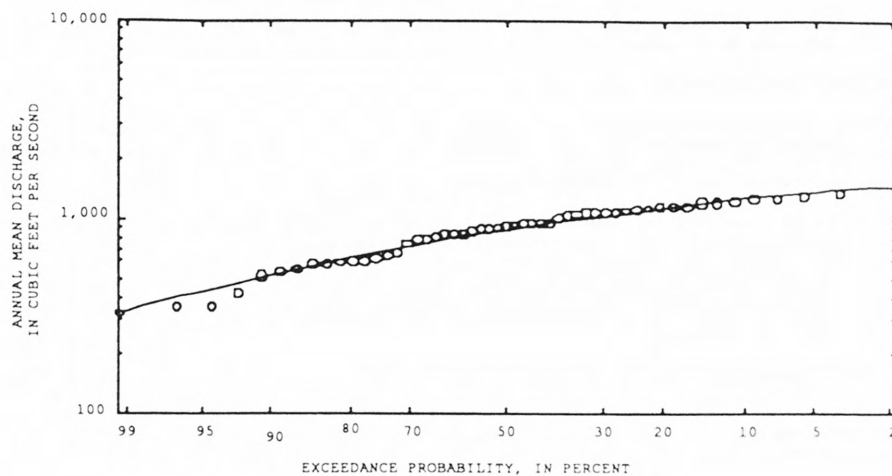
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	6,310	8,020	8,780	9,460	9,820	10,100
3	6,070	7,700	8,430	9,070	9,410	9,660
7	5,630	7,210	7,930	8,570	8,920	9,180
15	4,990	6,350	6,960	7,520	7,820	8,050
30	4,370	5,530	6,040	6,510	6,750	6,940
60	3,470	4,350	4,740	5,070	5,240	5,370
90	2,750	3,470	3,790	4,060	4,200	4,310

Duration table of daily mean flow for period of record 1926-78

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
6,240	4,140	2,820	1,920	1,280	629	388	270	209	169	136	108	93	82	75	70
															61



LOCATION MAP





# KOOTENAI RIVER BASIN

12309500 KOOTENAI RIVER AT BONNERS FERRY, ID

LOCATION.—Lat 48°42'00", long 116°18'45", in NW 1/4, SE 1/4, NE 1/4, sec. 27, T. 62 N., R. 1 E., Boundary County, Hydrologic Unit 17010104, on left bank 90 ft downstream from new highway bridge at Bonners Ferry, and at mile 152.8.

DRAINAGE AREA.—12,690 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—May to October 1904, October 1927 to September 1990 (elevations only prior to March 1928 and October 1960 to 1990. Gage heights collected in this vicinity since 1904 are contained in reports of U.S. Weather Bureau.

REVISED RECORDS.—WSP 1716: Maximum elevation. WDR ID-78-2: 1975(M), 1976(M).

GAGE.—Water-stage recorder. Datum of gage is 1,700.00 ft above sea level with respect to U.S. Geological Survey benchmark V-3-1929 at elevation 1,777.08 ft. Gage heights have been reduced to that datum. National Geodetic Vertical Datum of 1929 is 0.02 ft higher. May 1 to Oct. 15, 1904, nonrecording gage on railroad bridge 0.8 mi 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. May 8, 1942, to present, recording gage on left bank downstream from highway bridge at present datum. Datum of gages Oct. 1, 1927, to Jan. 2, 1931, was about 0.23 ft lower.

REMARKS.—Elevations affected by backwater from Kootenay Lake. Flow regulated by Libby Dam since Mar. 21, 1972 (see sta 12305000). Add 1,700 ft to gage heights to obtain elevations.

EXTREMES FOR 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.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 1894 reached a stage of 1,777.2 ft, present datum.

Summary of monthly and annual discharges, 1929-60

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	16,900	3,640	6,870	3,160	0.46	3.9
November	12,200	2,830	6,160	2,580	0.42	3.4
December	14,900	2,640	5,330	2,890	0.54	3.0
January	12,500	2,030	4,360	1,980	0.45	2.5
February	12,600	2,090	4,420	2,060	0.47	2.5
March	11,700	2,810	5,340	1,860	0.35	3.0
April	45,000	4,970	17,100	8,720	0.51	9.6
May	68,700	20,000	42,800	12,900	0.30	24.1
June	70,500	21,600	45,200	14,700	0.33	25.4
July	49,700	10,000	23,200	9,610	0.41	13.0
August	17,300	6,300	9,970	2,730	0.27	5.6
September	17,200	4,860	7,170	2,440	0.34	4.0
Annual	21,000	7,710	14,900	3,820	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1929-60

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	2,290	1,760	1,570	1,450	1,330	1,270
3	2,380	1,830	1,640	1,500	1,380	1,320
7	2,590	2,010	1,790	1,650	1,520	1,450
14	2,880	2,280	2,070	1,920	1,790	1,710
30	3,210	2,620	2,420	2,280	2,160	2,090
60	3,490	2,860	2,660	2,530	2,420	2,360
90	3,760	3,040	2,800	2,660	2,530	2,470
120	4,140	3,270	2,960	2,750	2,570	2,480
183	4,840	3,790	3,410	3,150	2,910	2,780

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-60

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
75,000	94,100	105,000	117,000	125,000	132,000	

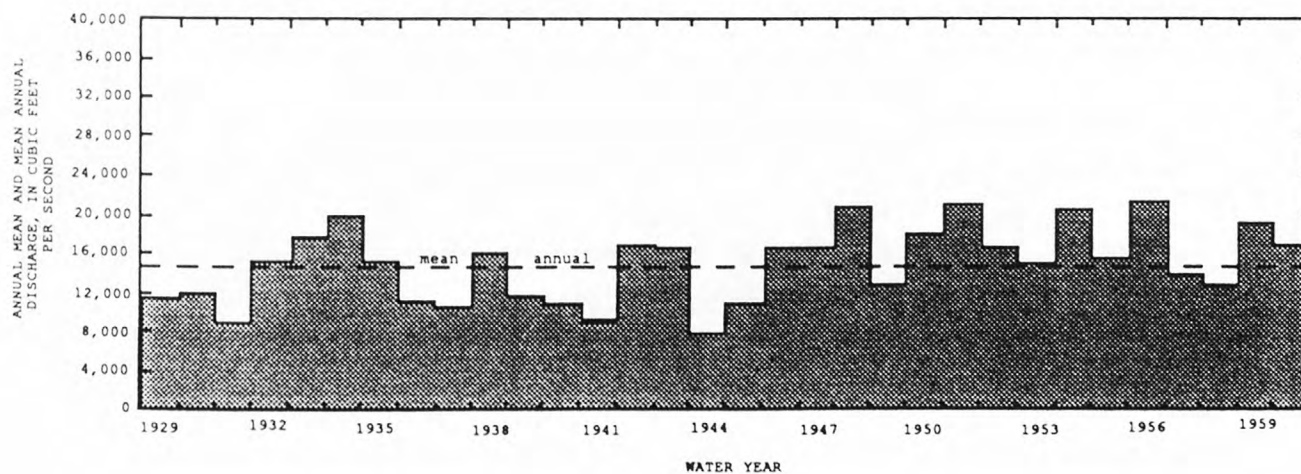
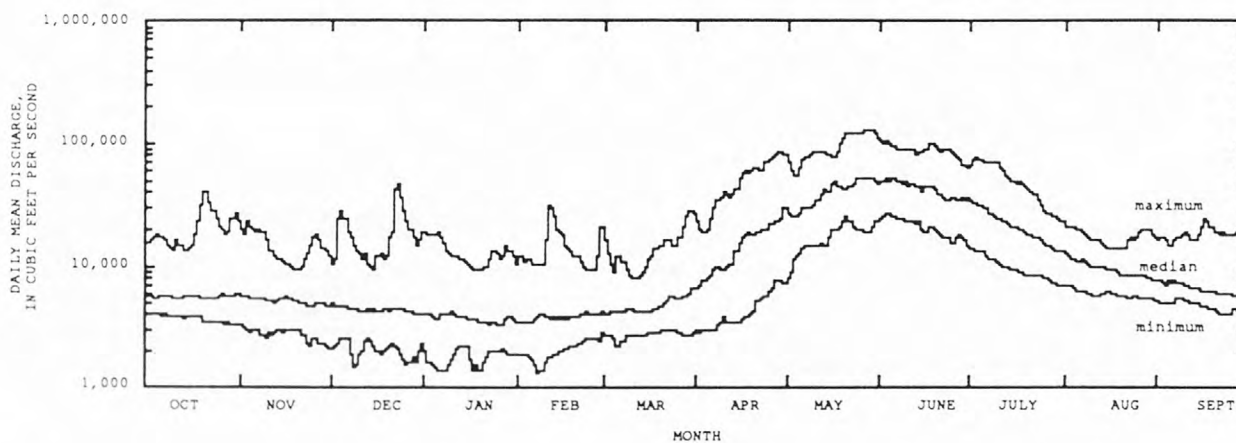
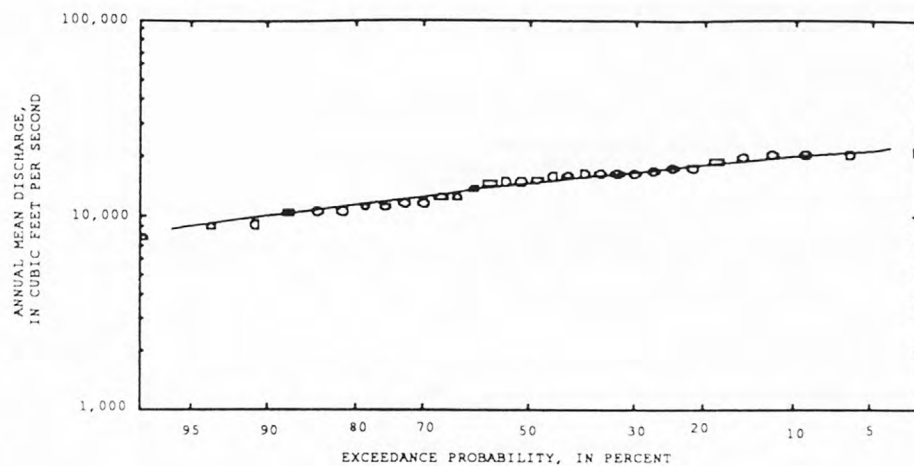
Magnitude and frequency of annual high flow,  
based on period of record 1929-60

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	74,800	95,000	106,000	117,000	124,000	130,000
3	72,400	92,400	103,000	115,000	122,000	129,000
7	66,700	86,500	97,500	110,000	118,000	125,000
15	60,200	78,000	87,900	98,700	106,000	112,000
30	53,600	68,300	76,400	85,200	90,900	96,100
60	45,900	57,100	62,900	68,800	72,400	75,500
90	38,900	48,300	53,100	57,800	60,700	63,200

Duration table of daily mean flow for period of record 1929-60

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
78,700	53,500	40,200	30,900	23,700	13,800	9,320	7,110	5,840	4,970	4,180	3,310	2,860	2,470	2,200	2,000	1,520	

† Length of record used in calculation may yield unreliable values for this column.



# KOOTENAI RIVER BASIN

12311000 DEEP CREEK AT MORAVIA, ID

LOCATION.—Lat 48°37'49", long 116°23'10", in NE 1/4, NE 1/4, NW 1/4, sec. 19, T. 61 N., R. 1 E., Boundary County, Hydrologic Unit 17010104, on left bank 50 ft downstream from highway bridge, 1 mi downstream from Ruby Creek, 1 mi southwest of Moravia, and at mile 6.1.

DRAINAGE AREA.—133 mi<sup>2</sup>.

PERIOD OF RECORD.—May 1928 to September 1971. Monthly discharge only for some periods, published in WSP 1316.

GAGE.—Water-stage recorder. Elevation of gage is 1,800 ft above sea level, 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.

REMARKS.—Small diversions above station for irrigation. Occasional regulation above station at migratory waterfowl refuge near Elmir.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,670 ft<sup>3</sup>/s May 18, 1954, gage height, 7.40 ft, from graph based on gage readings; maximum gage height, 7.54 ft, May 4, 1971; minimum discharge observed, 5.0 ft<sup>3</sup>/s Aug. 14, 22, 1940.

Summary of monthly and annual discharges, 1929-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	165	15	39	29	0.75	2.2
November	146	17	63	38	0.61	3.6
December	341	22	95	82	0.86	5.4
January	367	18	86	68	0.79	5.0
February	337	24	103	70	0.67	5.9
March	309	40	150	64	0.43	8.5
April	772	113	418	158	0.38	23.8
May	923	163	503	179	0.36	28.6
June	459	58	210	102	0.48	12.0
July	110	13	50	26	0.51	2.8
August	44	7.8	19	7.9	0.42	1.1
September	46	11	20	7.6	0.38	1.1
Annual	229	57	146	44	0.30	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	12	9.1	7.8	6.9	5.9	5.3
3	12	9.5	8.2	7.3	6.3	5.7
7	13	10	8.6	7.7	6.7	6.1
14	14	10	9.0	7.9	6.8	6.1
30	15	11	9.9	8.7	7.5	6.8
60	17	13	12	10	8.9	8.1
90	20	15	13	12	10	9.1
120	24	18	15	14	12	11
183	38	26	22	19	16	15

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
977	1,350	1,640	2,030	2,330	2,650

Magnitude and frequency of annual high flow,  
based on period of record 1929-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	948	1,210	1,320	1,410	1,450	1,480
3	853	1,120	1,240	1,340	1,390	1,430
7	754	993	1,100	1,200	1,260	1,300
15	658	873	978	1,080	1,130	1,180
30	586	762	842	915	954	984
60	487	626	692	753	787	814
90	398	508	559	607	634	655

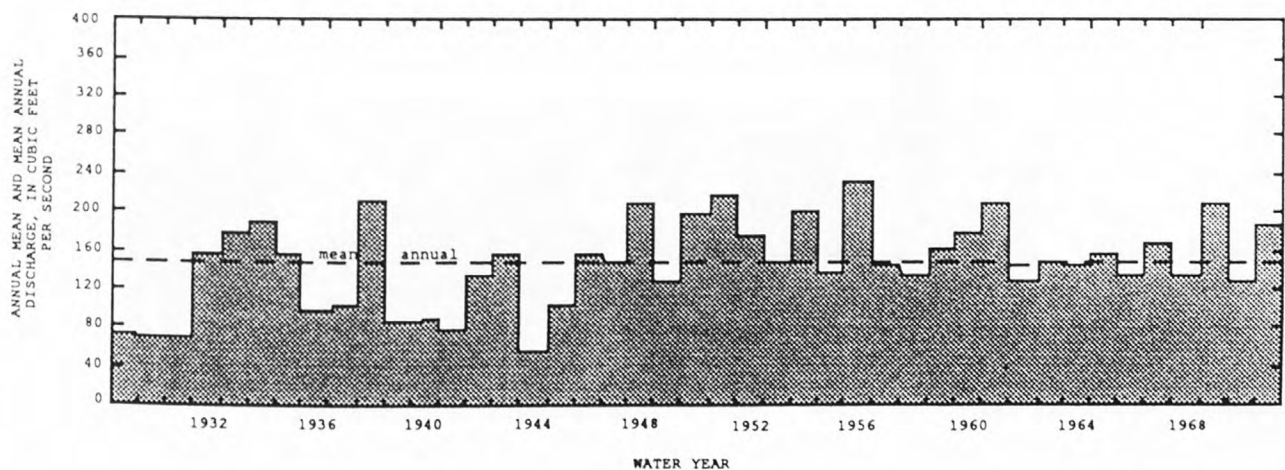
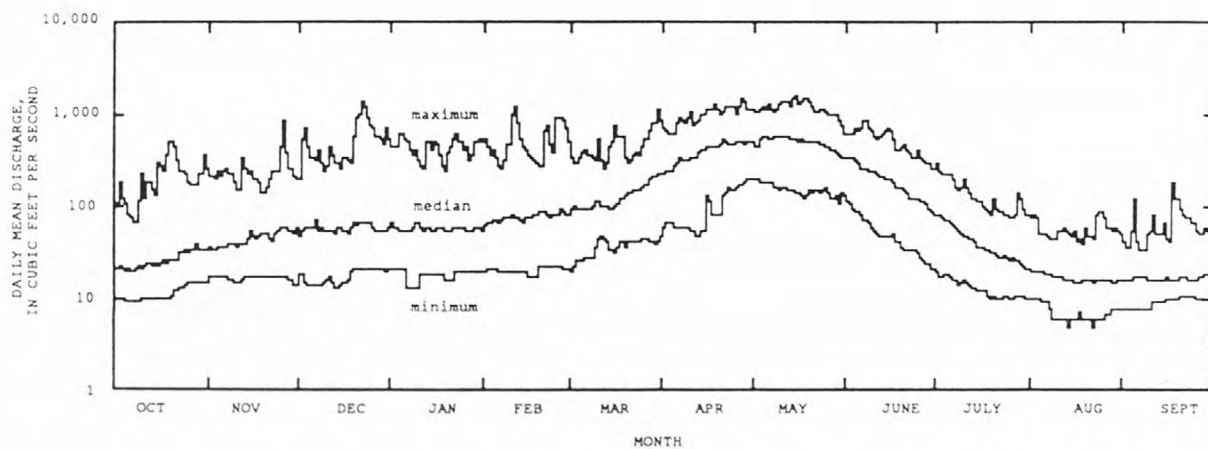
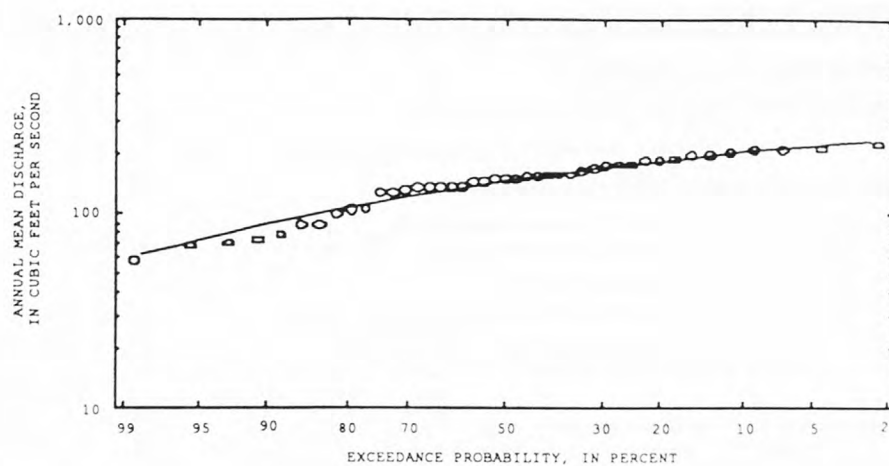
Duration table of daily mean flow for period of record 1929-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
897	579	434	309	234	142	91	63	44	33	24	17	14	11	10	8.4	6.9

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



KOOTENAI RIVER BASIN

12316800 MISSION CREEK NEAR COPELAND, ID

LOCATION.—Lat 48°55'54", long 116°20'00", in SW 1/4, NE 1/4, sec. 4, T. 64 N., R. 1 E., Boundary County, Hydrologic Unit 17010104, on left bank 0.1 mi upstream from bridge crossing, 4 mi northeast of Copeland, at mile 6.0, and 17 mi north of Bonners Ferry.

DRAINAGE AREA.—23 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—September 1958 to September 1981.

GAGE.—Water-stage recorder. Elevation of gage is 2,814 ft above sea level.

REMARKS.—No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 528 ft<sup>3</sup>/s May 26, 1961, gage height, 5.52 ft, from rating curve extended above 250 ft<sup>3</sup>/s on basis of indirect measurement of peak flow; minimum daily, 1.3 ft<sup>3</sup>/s Dec. 7-11, 1972.

Summary of monthly and annual discharges, 1959-81

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	22	3.7	6.6	4.3	0.65	1.5
November	28	2.4	8.7	6.0	0.69	2.0
December	28	3.1	9.0	6.5	0.72	2.1
January	34	2.5	8.8	7.0	0.80	2.0
February	23	3.5	9.5	5.9	0.62	2.2
March	51	3.9	16	12	0.77	3.6
April	113	20	65	28	0.44	14.9
May	288	42	178	48	0.27	40.7
June	239	19	99	50	0.50	22.8
July	47	7.0	22	12	0.53	5.1
August	15	3.6	7.5	2.5	0.33	1.7
September	11	3.3	6.1	2.0	0.32	1.4
Annual	60	12	36	11	0.30	100

Magnitude and frequency of annual low flow,  
based on period of record 1960-81

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 <sup>†</sup> 2%	100 <sup>†</sup> 1%
1	3.2	2.2	1.8	1.5	1.2	1.0
3	3.4	2.3	1.9	1.5	1.2	1.0
7	3.6	2.4	1.9	1.6	1.2	1.0
14	3.8	2.7	2.2	1.8	1.5	1.3
30	4.1	3.1	2.7	2.4	2.1	1.9
60	4.6	3.6	3.2	2.9	2.6	2.4
90	5.0	3.9	3.5	3.3	3.0	2.8
120	5.4	4.2	3.8	3.5	3.3	3.1
183	6.1	4.6	4.1	3.8	3.6	3.4

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1959-81

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
338	426	478	536	576	613	

Magnitude and frequency of annual high flow,  
based on period of record 1959-81

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 <sup>†</sup> 2%	100 <sup>†</sup> 1%
1	321	385	402	412	415	416
3	303	363	380	389	392	394
7	277	331	346	355	357	359
15	242	288	301	308	311	312
30	211	248	257	262	263	264
60	160	188	196	200	201	201
90	124	148	155	159	160	161

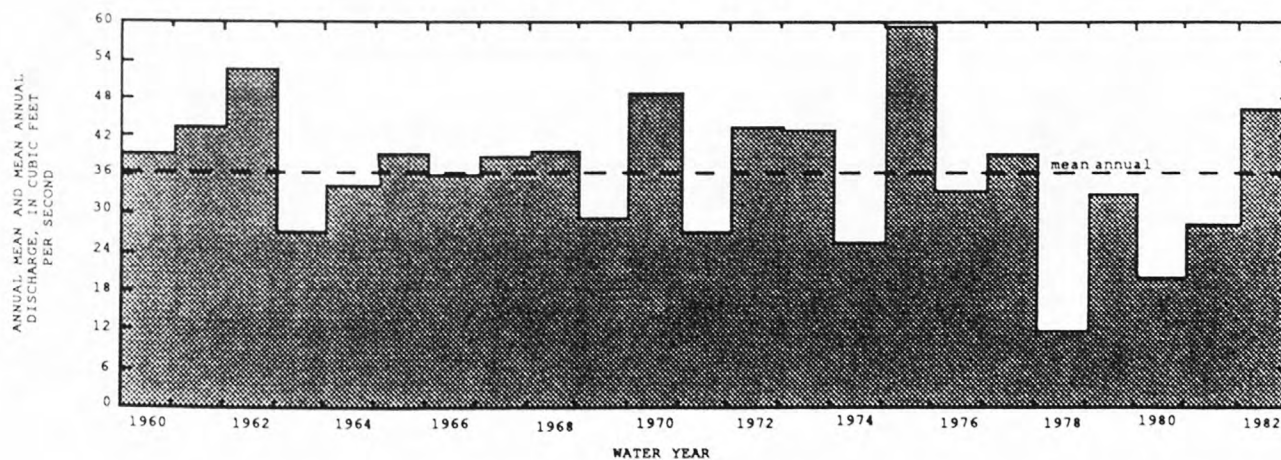
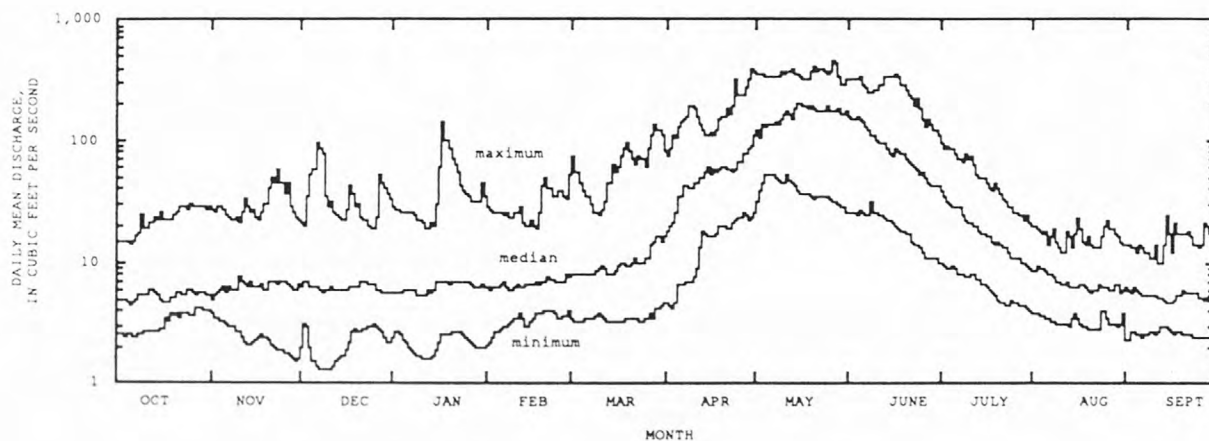
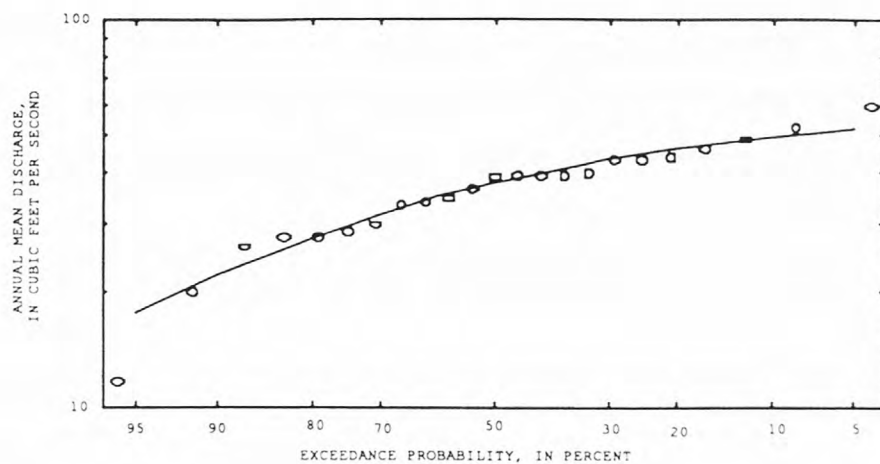
Duration table of daily mean flow for period of record 1959-81

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
299	184	120	74	49	23	14	9.1	7.2	6.0	5.0	4.1	3.5	2.9	2.5	2.2	1.5	

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## KOOTENAI RIVER BASIN

12320500 LONG CANYON CREEK NEAR PORTHILL, ID

LOCATION.—Lat 48°56'50", long 116°32'15", in NW 1/4, sec. 36, T. 65 N., R. 2 W., Boundary County, Hydrologic Unit 17010104, on left bank about 200 ft downstream from U.S. Forest Service bridge at mouth of canyon, and 4 mi southwest of Porthill.

DRAINAGE AREA.—29 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—May 1928 to September 1959 (no winter record prior to 1931). Monthly discharge only for some periods, published in WSP 1316.

GAGE.—Water-stage recorder. Elevation of gage is 1,830 ft above sea level, from barometer, May 18, 1929, to Aug. 26, 1929, nonrecording gage and Mar. 20, 1930 to Apr. 30, 1956, water-stage recorders at several nearby sites at various datums.

REMARKS.—No diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,300 ft<sup>3</sup>/s May 27, 1948 (gage height, 6.75 ft, site and datum then in use), by slope-area measurement of peak flow; maximum gage height, 8.55 ft June 14, 15, 1933 (datum then in use), backwater from drift; minimum, 3.0 ft<sup>3</sup>/s Nov. 1-3, 28, Dec. 4-10, 1936, Jan. 6-8, 1937, Dec. 13, 1940.

Summary of monthly and annual discharges, 1931-59

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	125	4.3	22	26	1.2	2.9
November	75	3.1	25	22	0.89	3.3
December	99	3.4	21	21	0.96	2.8
January	47	4.3	15	10	0.71	1.9
February	50	4.0	14	11	0.75	1.9
March	40	5.3	16	8.1	0.52	2.0
April	247	17	69	46	0.66	9.0
May	416	116	257	73	0.28	33.6
June	459	66	236	119	0.51	30.9
July	196	15	63	44	0.69	8.3
August	29	5.6	14	5.9	0.42	1.8
September	51	5.5	12	10	0.82	1.6
Annual	93	26	64	18	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1932-59

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	6.2	3.9	2.8	2.1	1.4	1.1
3	6.2	4.0	3.1	2.4	1.7	1.4
7	6.2	4.3	3.4	2.8	2.2	1.9
14	6.4	4.5	3.7	3.1	2.6	2.3
30	6.9	4.9	4.1	3.6	3.1	2.8
60	7.8	5.5	4.6	4.0	3.4	3.1
90	8.9	6.1	5.1	4.4	3.8	3.4
120	10	6.7	5.5	4.8	4.1	3.7
183	13	7.9	6.1	5.1	4.2	3.7

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1931-59

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
602	798	931	1,100	1,230	1,370

Magnitude and frequency of annual high flow,  
based on period of record 1931-59

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	524	708	820	951	1,040	1,130
3	483	648	747	863	944	1,020
7	432	571	653	748	813	874
15	384	493	553	615	655	690
30	334	422	468	515	544	569
60	265	325	351	374	386	396
90	205	252	272	290	299	306

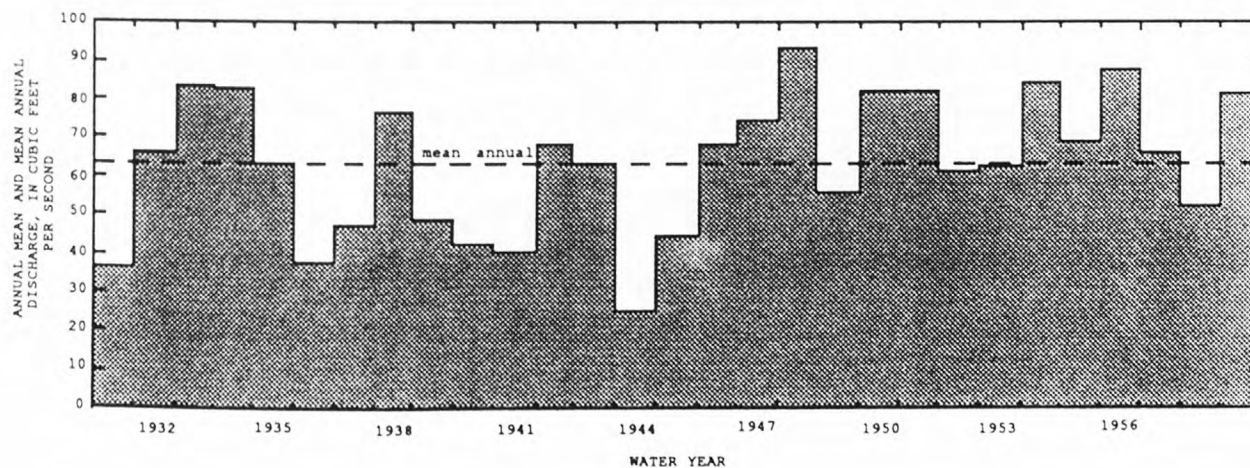
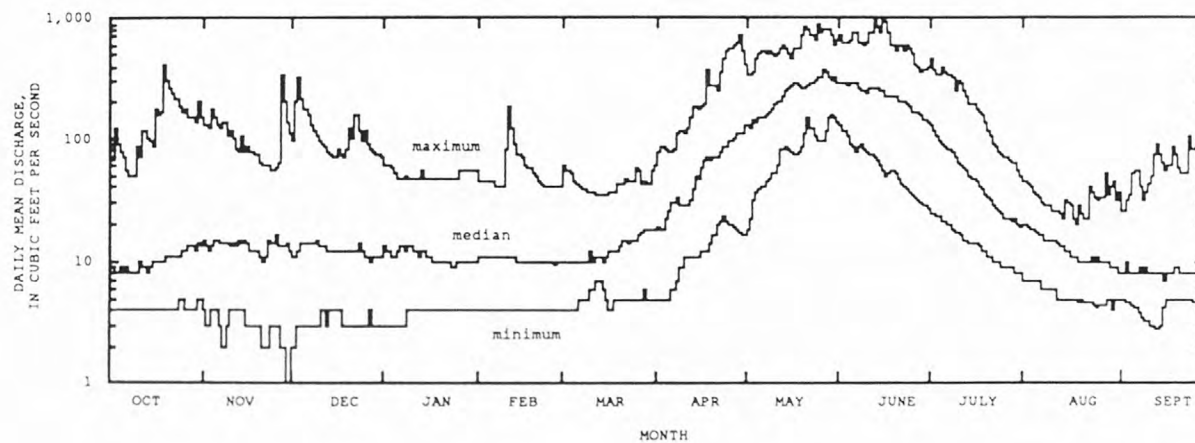
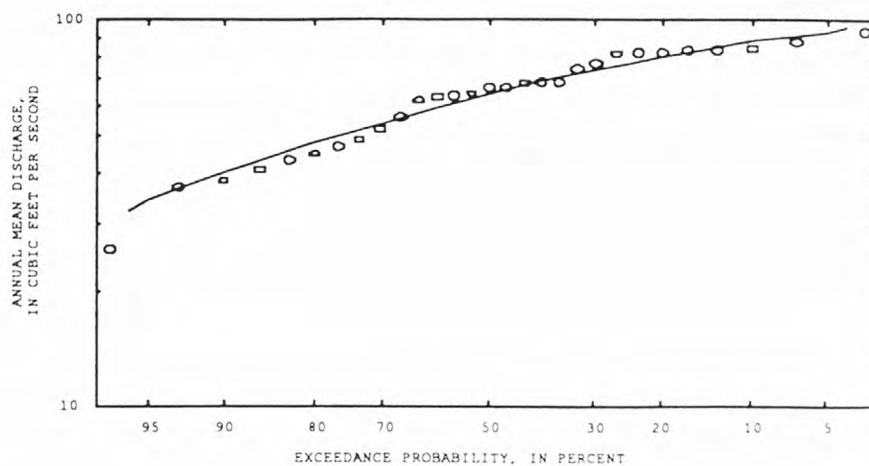
Duration table of daily mean flow for period of record 1931-59

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
501	313	211	140	85	42	26	18	14	10	8.5	6.4	5.1	4.1	3.7	3.4	2.8

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



KOOTENAI RIVER BASIN

12321000 SMITH CREEK NEAR PORTHILL, ID

LOCATION.—Lat 48°57'40", long 116°33'20", in NE 1/4, sec. 26, T. 65 N., R. 2 W., Boundary County, Hydrologic Unit 17010104, on right bank at U.S. Forest Service bridge, 1 mi south of Smith Creek Ranger Station, and 4 mi southwest of Porthill.

DRAINAGE AREA.—70 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—May 1928 to November 1960, no winter records 1928-30. Monthly discharge only for some periods, published in WSP 1316.

GAGE.—Water-stage recorder. Elevation of gage is 1,770 ft above sea level, from topographic map. Prior to Apr. 20, 1929, staff gage at site 40 ft downstream at datum 0.98 ft lower. Apr. 20, 1929, to Sept. 30, 1956, water-stage recorder at present site at datum 1.69 ft higher.

REMARKS.—No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,810 ft<sup>3</sup>/s June 23, 1955, gage height, 9.34 ft (present datum), from rating curve extended above 1,600 ft<sup>3</sup>/s by logarithmic plotting; minimum daily, 3.0 ft<sup>3</sup>/s Nov. 29, 30, 1952.

Summary of monthly and annual discharges, 1931-60

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	358	7.7	80	92	1.1	3.5
November	226	7.3	90	71	0.78	3.9
December	331	8.2	77	69	0.90	3.3
January	134	8.6	47	30	0.63	2.1
February	185	8.0	47	37	0.77	2.1
March	134	14	56	28	0.50	2.5
April	746	62	245	138	0.56	10.7
May	1,180	475	801	184	0.23	35.0
June	1,220	184	638	310	0.49	27.9
July	527	25	148	116	0.79	6.4
August	66	8.5	28	15	0.54	1.2
September	174	9.9	32	37	1.2	1.4
Annual	267	89	191	46	0.24	100

Magnitude and frequency of annual low flow,  
based on period of record 1931-60

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	10	6.6	5.1	4.1	3.2	2.7
3	11	6.8	5.3	4.3	3.3	2.8
7	11	7.2	5.6	4.6	3.7	3.1
14	12	7.8	6.3	5.3	4.3	3.7
30	14	9.5	7.7	6.5	5.4	4.8
60	18	12	9.3	7.6	6.1	5.3
90	23	14	11	9.0	7.1	6.0
120	30	17	13	10	8.0	6.7
183	44	23	16	12	8.6	6.9

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1931-60

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,930	2,520	2,890	3,330	3,650	3,960	

Magnitude and frequency of annual high flow,  
based on period of record 1931-60

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	1,620	1,950	2,100	2,260	2,350	2,430
3	1,480	1,740	1,860	1,960	2,020	2,060
7	1,310	1,560	1,680	1,810	1,880	1,930
15	1,140	1,370	1,490	1,600	1,670	1,730
30	988	1,180	1,270	1,370	1,430	1,470
60	780	921	985	1,040	1,070	1,100
90	602	714	764	811	836	857

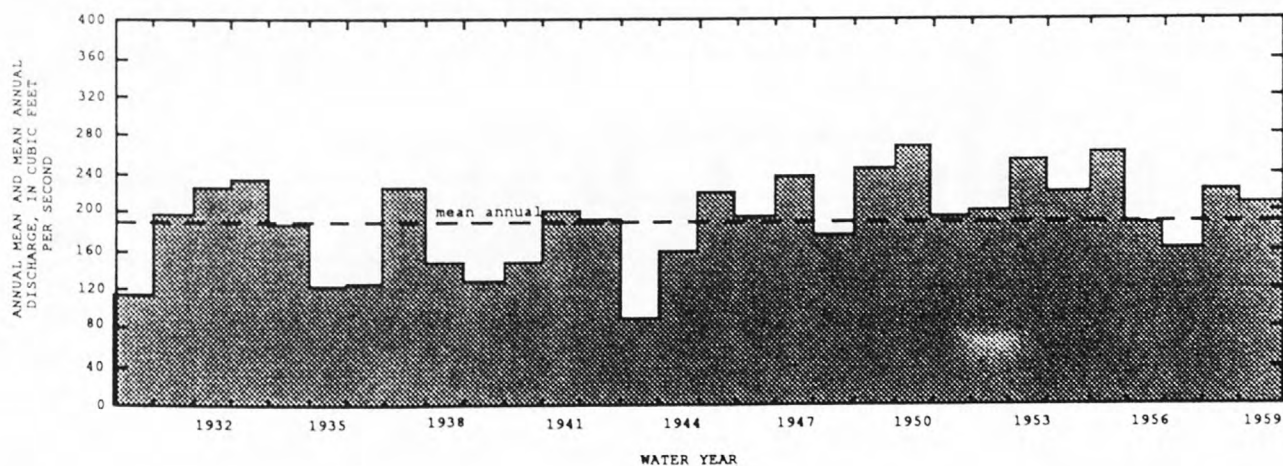
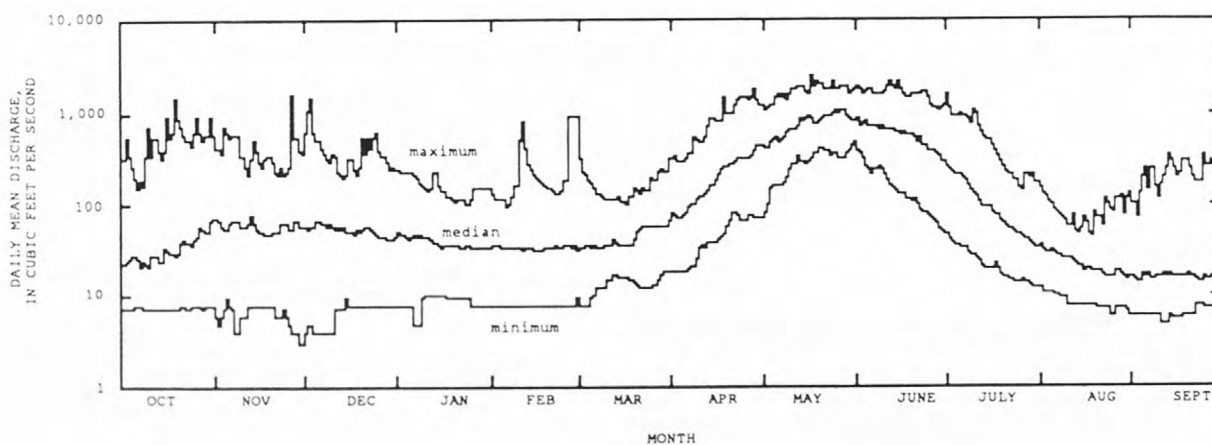
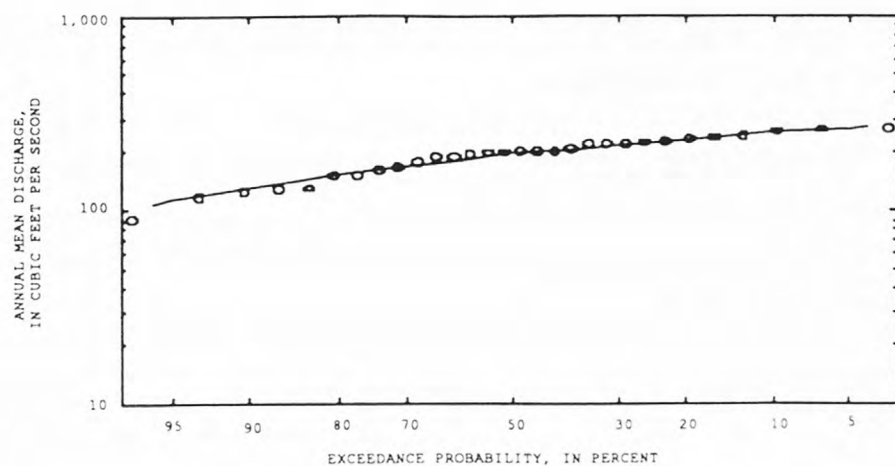
Duration table of daily mean flow for period of record 1931-60

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
1,440	940	633	420	269	133	81	56	40	31	23	15	10	7.5	7.0	6.7	4.3	

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# KOOTENAI RIVER BASIN

12321500 BOUNDARY CREEK NEAR PORTHILL, ID  
(International gaging station)

LOCATION.—Lat 48°59'50", long 116°34'05", in SW 1/4, NW 1/4, SW 1/4, sec. 11, T. 6S N., R. 2 W., Boundary County, Hydrologic Unit 17010104, on left bank near mouth of canyon, 0.2 mi south of international boundary, 3 mi west of Porthill, and at mile 3.5.

DRAINAGE AREA.—97 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—May 1928 to September 1990 (no winter records 1929, 1930).

GAGE.—Water-stage recorder. Elevation of gage is 1,770 ft above sea level, from topographic map. Prior to Apr. 24, 1929, nonrecording gage at site 140 ft upstream at different datum.

REMARKS.—Diversion upstream from station may have been used during the year.

COOPERATION.—This station is maintained by the United States under agreement with Canada. Three discharge measurements per year provided by Water Survey of Canada.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,540 ft<sup>3</sup>/s June 2, 1968, gage height, 6.00 ft, from rating curve extended above 2,000 ft<sup>3</sup>/s; minimum, 5.0 ft<sup>3</sup>/s some time between Nov. 10 and Dec. 3, 1936; minimum gage height, 0.24 ft, Nov. 22, 1952.

Summary of monthly and annual discharges, 1931-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	337	14	60	55	0.91	2.5
November	238	14	79	55	0.70	3.3
December	275	16	66	52	0.79	2.8
January	253	15	51	37	0.72	2.2
February	206	13	51	35	0.69	2.1
March	242	15	68	46	0.67	2.9
April	793	50	268	147	0.55	11.3
May	1,260	414	856	200	0.23	36.2
June	1,660	189	646	325	0.50	27.2
July	427	34	145	90	0.62	6.1
August	157	16	43	23	0.54	1.8
September	146	16	38	23	0.59	1.6
Annual	357	83	198	50	0.25	100

Magnitude and frequency of annual low flow,  
based on period of record 1931-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	19	14	12	10	8.7	7.7
3	19	15	13	11	9.5	8.5
7	20	15	13	12	10	9.6
14	21	16	14	13	11	10
30	24	19	16	15	13	12
60	28	21	19	17	15	14
90	31	23	20	18	16	15
120	36	26	22	20	17	16
183	45	30	25	21	18	16

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1931-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,960	2,490	2,830	3,230	3,520	3,800

Magnitude and frequency of annual high flow,  
based on period of record 1931-90

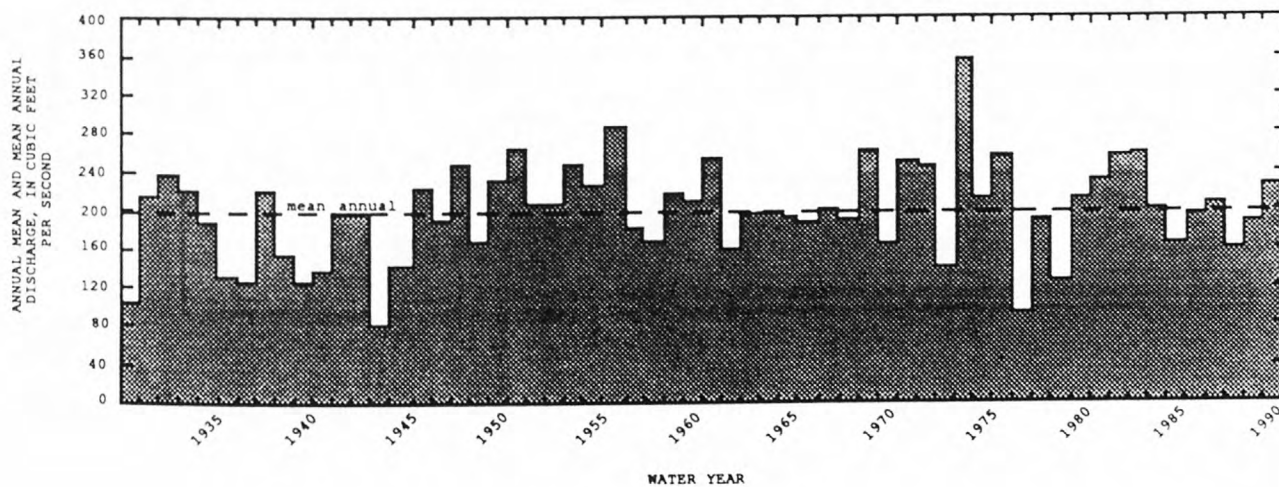
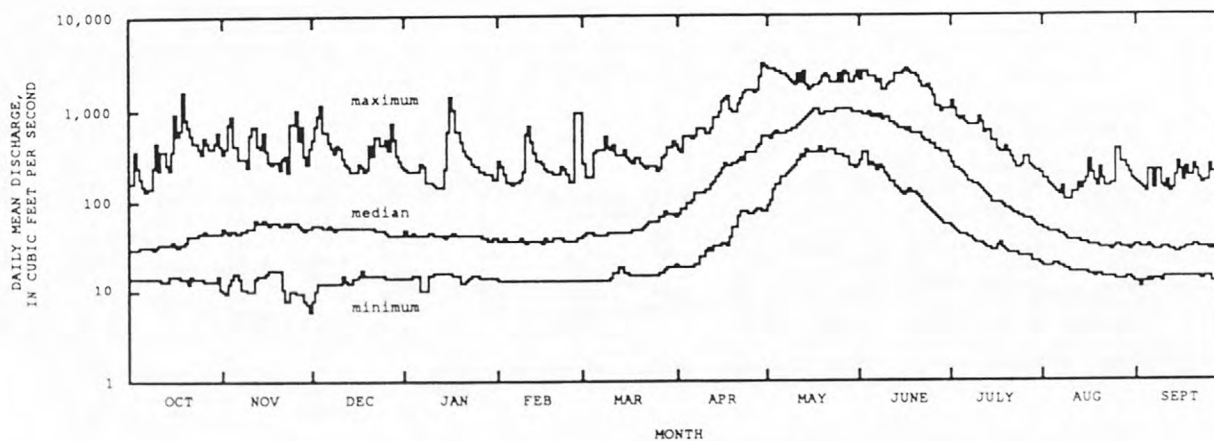
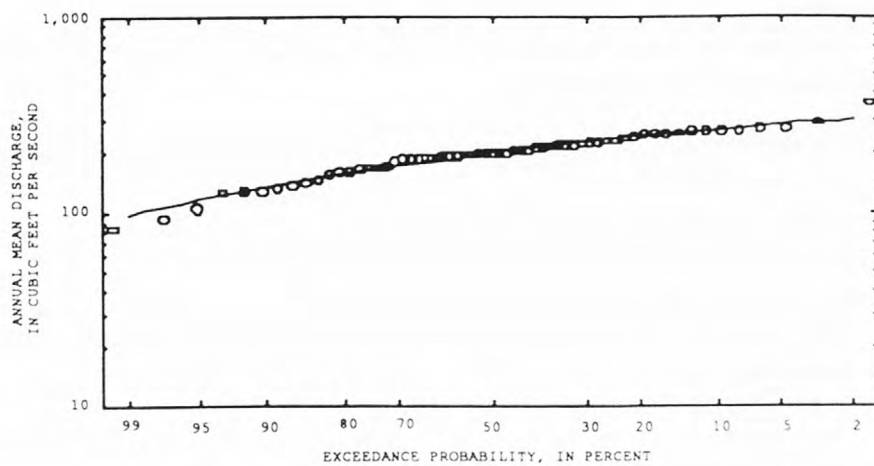
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,650	2,050	2,270	2,520	2,680	2,830
3	1,520	1,870	2,060	2,270	2,400	2,520
7	1,350	1,690	1,880	2,090	2,230	2,350
15	1,180	1,480	1,650	1,830	1,950	2,060
30	1,040	1,280	1,400	1,530	1,610	1,680
60	810	972	1,050	1,110	1,150	1,180
90	625	751	808	860	890	913

Duration table of daily mean flow for period of record 1931-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
1,540	960	637	421	259	127	81	59	45	37	30	24	20	17	15	11



LOCATION MAP





# KOOTENAI RIVER BASIN

12322000 KOOTENAI RIVER AT PORTHILL, ID  
(International gaging station)

LOCATION.—Lat 49°00'00", long 116°30'10", in NE 1/4 NW 1/4 sec. 8, T. 65 N., R. 1 W., Boundary County, Hydrologic Unit 17010104, on right bank 300 ft south of international boundary at Porthill, and at mile 105.63.

DRAINAGE AREA.—13,700 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—May to July 1904 and October 1927 to March 1928 (elevations only), and April 1928 to September 1990 in reports of Geological Survey. October 1924 to September 1927 (gauge heights only) in reports of Water Survey of Canada, Department of Environment.

REVISED RECORDS.—SMD ID 1971-75(m).

GAGE.—Water-stage recorder. Datum of gage is 1,700.00 ft above Topographic Division Datum of 1928. Gage readings have been reduced to that datum. Sea level datum and datum of Geodetic Survey of Canada are 0.03 ft higher. Prior to May 17, 1928, nonrecording 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.

REMARKS.—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. Elevations affected by backwater from Kootenay Lake. Flow regulated by Libby Dam started on Mar. 21, 1972.

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

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 125,000 ft<sup>3</sup>/s June 1, 1948; maximum elevation, 1,767.61 ft, June 7, 1961; minimum daily discharge, 1,380 ft<sup>3</sup>/s Feb. 8, 1936; minimum elevation, 1,738.21 ft, Apr. 3, 1944.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum elevation known, 1,772.7 ft in June 1894, present datum.

Summary of monthly and annual discharges, 1929-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	32,400	3,750	9,880	6,000	0.61	5.2
November	25,400	2,920	9,960	6,290	0.63	5.3
December	26,300	2,880	8,680	6,410	0.74	4.6
January	29,000	2,100	8,200	6,660	0.81	4.3
February	24,700	2,190	7,690	5,740	0.75	4.1
March	16,700	3,000	7,230	3,520	0.49	3.8
April	48,000	5,520	16,400	7,930	0.48	8.7
May	67,800	11,500	38,400	15,800	0.41	20.3
June	86,600	6,720	41,700	21,400	0.51	22.0
July	53,400	4,700	21,700	10,300	0.48	11.5
August	20,100	4,220	10,700	3,190	0.30	5.6
September	20,700	4,950	8,720	3,580	0.41	4.6
Annual	22,400	8,210	15,800	3,510	0.22	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	3,080	2,270	1,940	1,710	1,480	1,340
3	3,230	2,380	2,030	1,780	1,540	1,390
7	3,470	2,580	2,210	1,940	1,680	1,530
14	3,770	2,870	2,490	2,220	1,950	1,800
30	4,170	3,170	2,800	2,540	2,290	2,150
60	4,670	3,460	3,020	2,720	2,450	2,290
90	5,210	3,700	3,160	2,810	2,490	2,310
120	5,680	3,990	3,380	2,980	2,610	2,400
183	6,790	4,650	3,870	3,350	2,860	2,590

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
63,400	88,100	102,000	118,000	128,000	137,000

Magnitude and frequency of annual high flow,  
based on period of record 1929-90

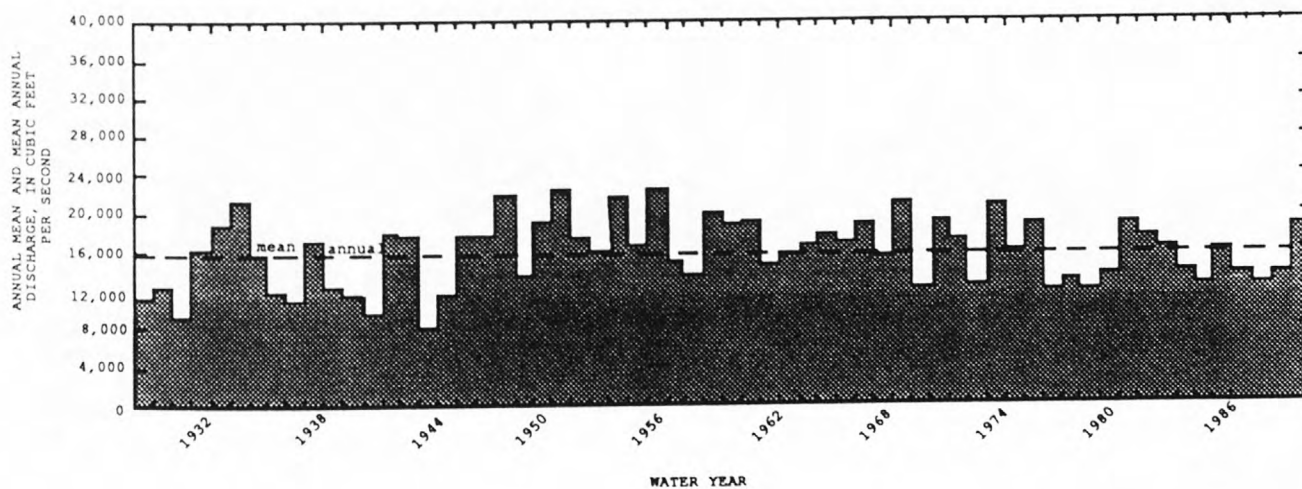
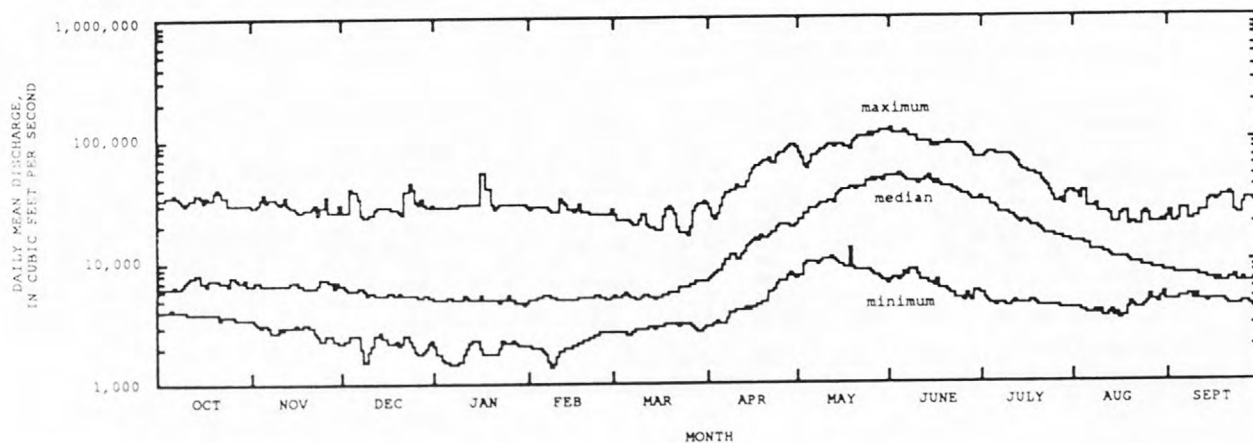
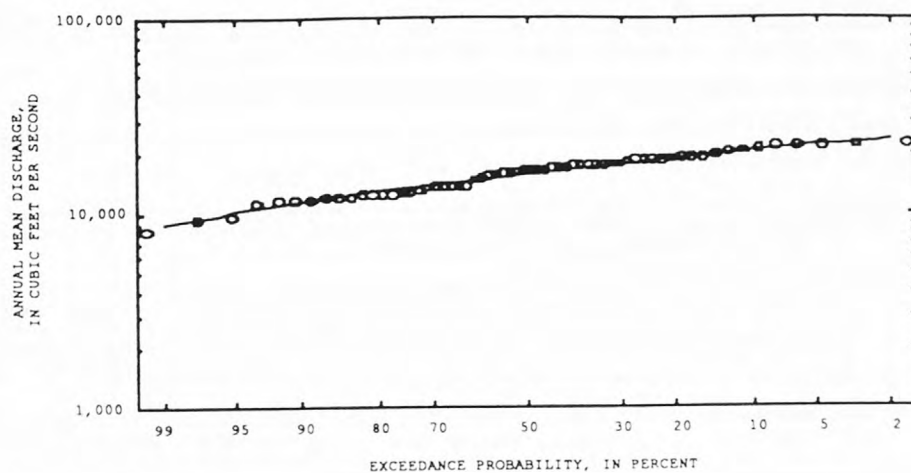
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	62,200	87,700	103,000	120,000	127,000	136,000
3	60,600	86,100	101,000	119,000	125,000	134,000
7	56,900	81,400	96,300	114,000	120,000	132,000
15	52,300	75,300	89,700	107,000	117,000	128,000
30	47,400	67,700	80,300	95,100	106,000	115,000
60	40,900	57,100	66,800	78,100	85,900	93,100
90	34,800	47,700	55,500	64,700	71,100	77,100

Duration table of daily mean flow for period of record 1929-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
79,600	52,700	36,900	27,700	22,800	17,200	12,500	9,170	7,200	5,960	5,060	4,050	3,360	2,840	2,570	2,300	1,800



LOCATION MAP



PEND OREILLE RIVER BASIN

12392000 CLARK FORK AT WHITEHORSE RAPIDS, NEAR CABINET, ID

LOCATION.—Lat 48°05'18", long 116°04'16", in SW 1/4 NW 1/4, sec. 27, T. 55 N., R. 3 E., Bonner County, Hydrologic Unit 17010213, on right bank 0.8 mi downstream from Cabinet Gorge Dam at cableway, 2.1 mi downstream from Blue Creek, 6.1 mi southeast of Clark Fork, and at mile 149.1. Discharge computed at Whitehorse Rapids, 2.3 mi downstream.

DRAINAGE AREA.—22,073 mi<sup>2</sup>, revised. (Based on area of 22,067 mi<sup>2</sup> for site 0.4 mi upstream prior to Oct. 1, 1964.)

PERIOD OF RECORD.—September 1928 to September 1990. Prior to October 1952, published as "near Heron, Mont."

REVISED RECORDS.—WSP 1182: 1936. WSP 1736: 1931, 1936(m), 1937.

GAGE.—Water-stage recorder. Datum of gage is 2,060.00 ft above sea level (levels by Washington Water Power Co). See WSP 1933 for history of changes made prior to Sept. 30, 1952. Water-stage recorder at site 0.4 mi upstream at datum 60.00 ft lower Oct. 1, 1952, to Sept. 30, 1964, and at present datum Oct. 1, 1964, to May 21, 1973.

REMARKS.—Flow regulated by Hungry Horse Reservoir, Flathead Lake, and Noxon Rapids Reservoir. 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 ft<sup>3</sup>/s ground-water inflow between Cabinet Gorge Dam and Whitehorse Rapids. Records given herein represent flow at Whitehorse Rapids, computed by adding 600 ft<sup>3</sup>/s 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 ft<sup>3</sup>/s should be deducted from discharges published herein.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 153,000 ft<sup>3</sup>/s May 29 to June 1, 1948; maximum gage height, 50.97 ft, May 31, 1948, site and datum then in use; minimum observed, 270 ft<sup>3</sup>/s Aug. 12, 1952 (discharge measurement), at sites in use since October 1952, during filling of Cabinet Gorge Reservoir; minimum daily since reservoir filled, 762 ft<sup>3</sup>/s Sept. 2, 1962.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in June 1894 reached a discharge of 195,000 ft<sup>3</sup>/s from floodmark, elevation of 2,137.1 ft, at site about 4 mi upstream and 0.1 mi below "near Heron" site.

Summary of monthly and annual discharges, 1929-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	25,700	5,470	11,900	3,830	0.32	4.5
November	21,800	5,010	12,700	4,060	0.32	4.8
December	30,400	4,730	14,000	5,250	0.37	5.3
January	28,000	3,530	14,100	5,310	0.38	5.3
February	26,900	4,220	14,700	5,720	0.39	5.5
March	36,400	5,120	15,600	6,290	0.40	5.9
April	59,100	6,170	24,900	10,500	0.42	9.4
May	87,700	16,500	50,600	17,300	0.34	19.0
June	116,000	15,500	58,600	22,100	0.38	22.0
July	57,700	9,210	26,700	10,700	0.40	10.0
August	17,900	6,770	11,500	2,900	0.25	4.3
September	18,300	5,580	10,500	3,170	0.30	4.0
Annual	31,200	10,200	22,200	5,360	0.24	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	3,960	2,250	1,550	1,100	713	520
3	5,760	3,670	2,640	1,910	1,250	910
7	6,840	5,170	4,410	3,830	3,250	2,900
14	7,630	5,830	5,000	4,370	3,730	3,330
30	8,420	6,440	5,510	4,800	4,060	3,620
60	9,500	7,210	6,120	5,300	4,450	3,940
90	10,400	7,760	6,520	5,590	4,640	4,070
120	11,000	8,180	6,850	5,840	4,810	4,190
183	12,100	8,960	7,430	6,270	5,090	4,380

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-90

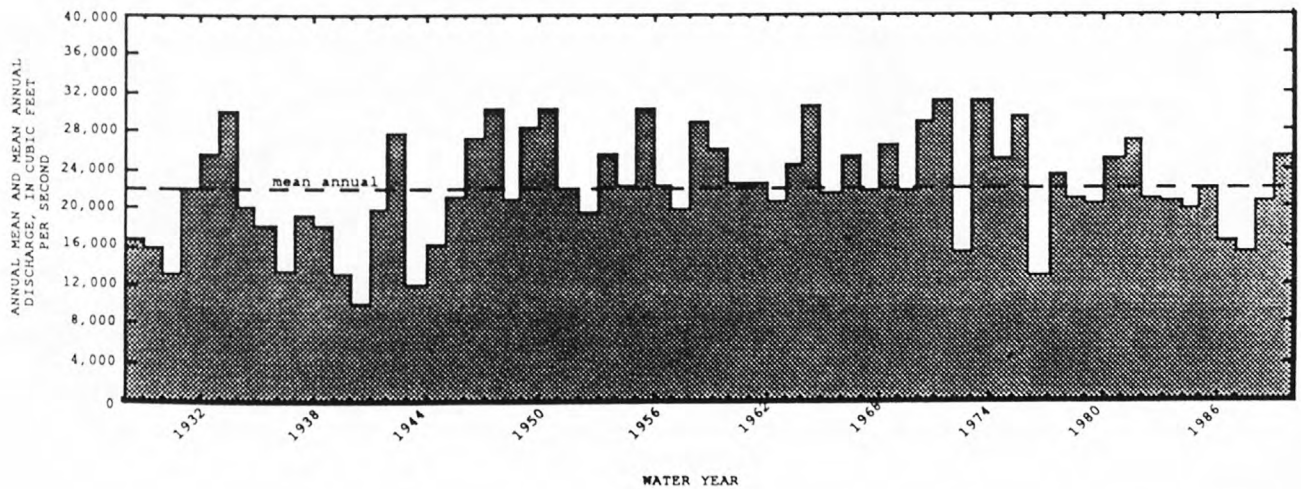
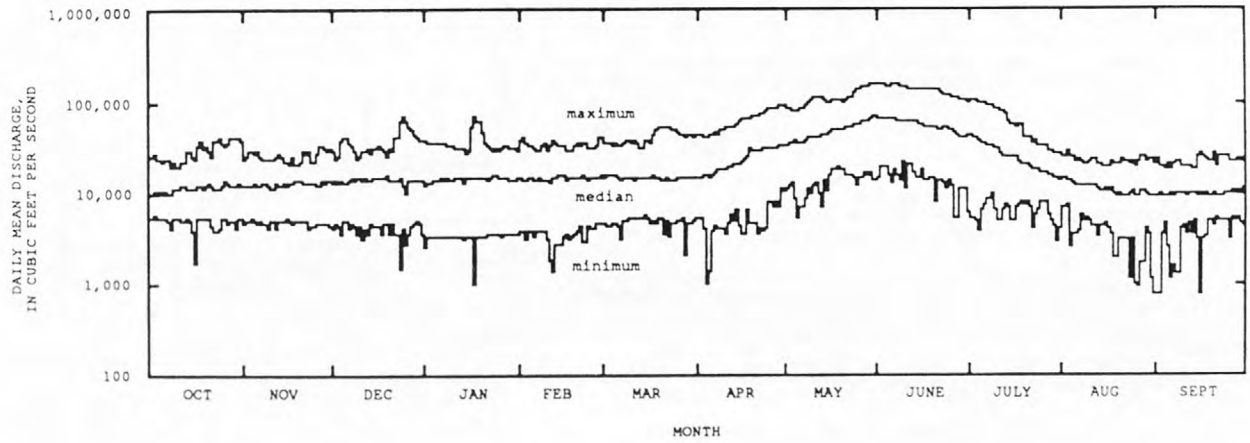
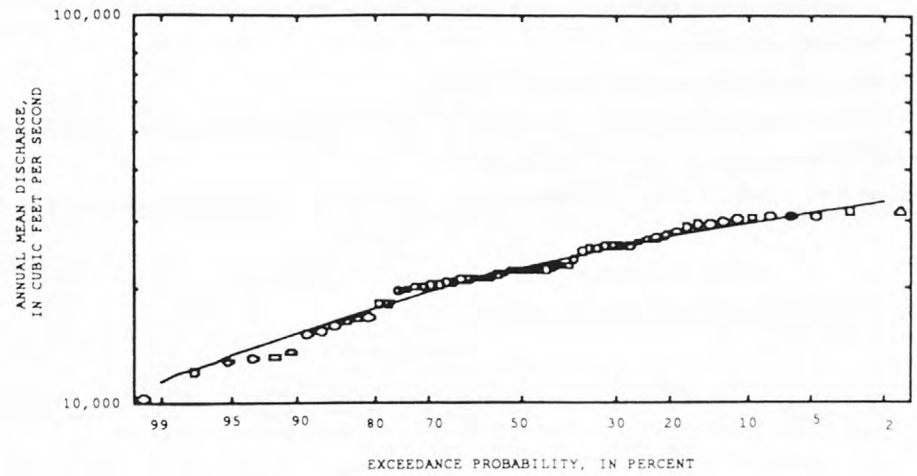
Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
87,700	117,000	135,000	155,000	168,000	181,000

Magnitude and frequency of annual high flow,  
based on period of record 1929-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	84,600	109,000	121,000	133,000	140,000	146,000
3	83,400	108,000	120,000	132,000	138,000	143,000
7	79,500	104,000	116,000	128,000	135,000	141,000
15	74,000	97,400	109,000	121,000	128,000	133,000
30	67,200	87,700	97,800	108,000	113,000	118,000
60	57,200	72,900	80,200	86,900	90,600	93,500
90	48,600	61,200	66,900	72,100	74,900	77,100

Duration table of daily mean flow for period of record 1929-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
96,900	67,400	49,300	38,200	30,300	21,600	18,100	15,600	13,400	11,100	9,070	7,130	5,900	4,980	4,250	3,670	1,850



PEND OREILLE RIVER BASIN

12392300 PACK RIVER NEAR COLBURN, ID

LOCATION.—Lat 48°25'11", long 116°30'02", in SE 1/4, NW 1/4, SW 1/4, sec. 32, T. 59 N., R. 1 W., Bonner County, Hydrologic Unit 17010214, on right bank 150 ft downstream from bridge on U.S. Highway 95, 2.2 mi northeast of Colburn, 10 mi north of Sandpoint, and at mile 28.07.

DRAINAGE AREA.—124 mi<sup>2</sup>.

PERIOD OF RECORD.—September 1958 to September 1982.

GAGE.—Water-stage recorder. Elevation of gage is 2,130 ft above sea level, from topographic map.

REMARKS.—No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,880 ft<sup>3</sup>/s Jan. 16, 1974, gage height, 16.38 ft; minimum, 15 ft<sup>3</sup>/s Sept. 2, 3, 1967; minimum gage height, 0.69 ft, Sept. 14, 15, 1973.

Summary of monthly and annual discharges, 1959-82

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	264	28	86	55	0.64	2.2
November	348	35	145	81	0.56	3.7
December	416	44	167	107	0.64	4.3
January	815	31	162	157	0.97	4.2
February	606	51	178	128	0.72	4.6
March	717	72	236	146	0.62	6.1
April	909	306	575	184	0.32	14.8
May	1,610	415	1,200	270	0.23	31.0
June	1,860	218	831	390	0.47	21.4
July	382	48	181	81	0.45	4.7
August	144	24	54	24	0.45	1.4
September	145	20	61	33	0.55	1.6
Annual	574	125	323	86	0.27	100

Magnitude and frequency of annual low flow,  
based on period of record 1960-82

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	27	21	19	17	15	14
3	27	22	19	17	15	14
7	28	22	19	18	16	14
14	30	24	21	19	16	15
30	35	26	23	20	18	16
60	43	32	27	24	21	19
90	52	38	33	29	25	23
120	63	47	41	37	33	31
183	87	64	56	50	45	42

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1959-82

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
2,580	3,500	4,160	5,050	5,750	6,500	

Magnitude and frequency of annual high flow,  
based on period of record 1959-82

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	2,260	3,050	3,610	4,360	4,960	5,580
3	2,050	2,560	2,840	3,150	3,360	3,540
7	1,850	2,180	2,310	2,420	2,480	2,520
15	1,580	1,870	1,990	2,100	2,160	2,200
30	1,400	1,670	1,780	1,870	1,910	1,940
60	1,120	1,340	1,430	1,510	1,550	1,580
90	916	1,090	1,150	1,210	1,230	1,250

Duration table of daily mean flow for period of record 1959-82

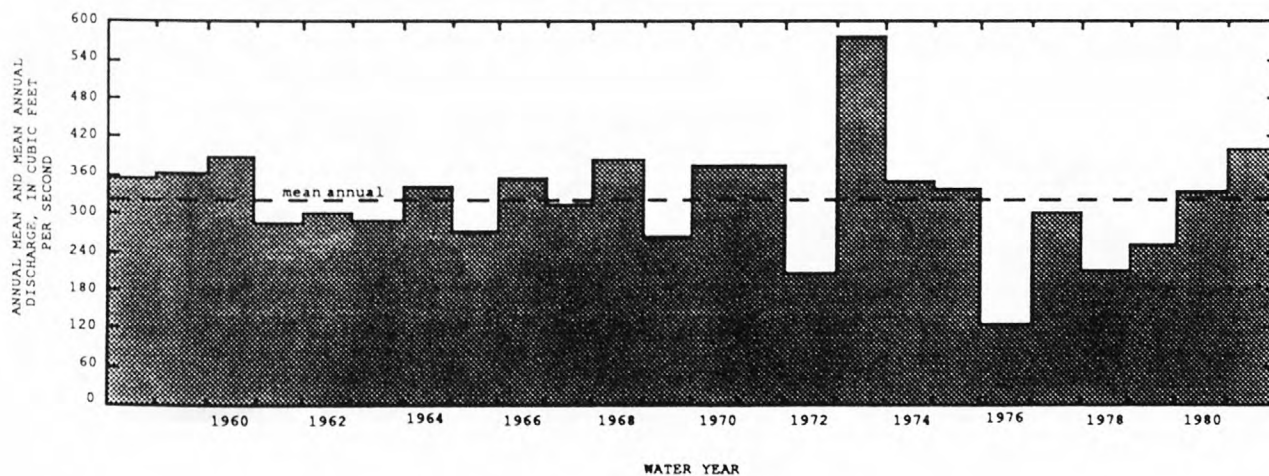
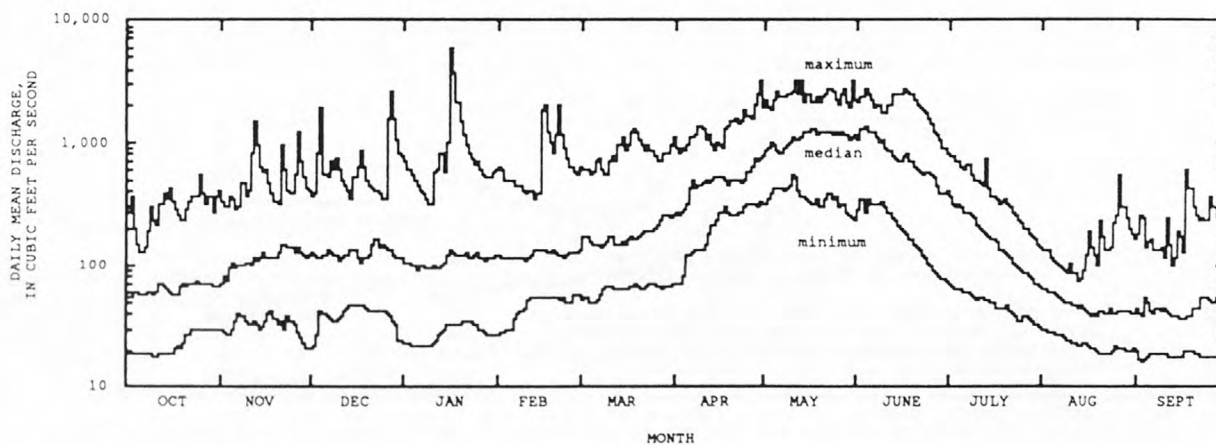
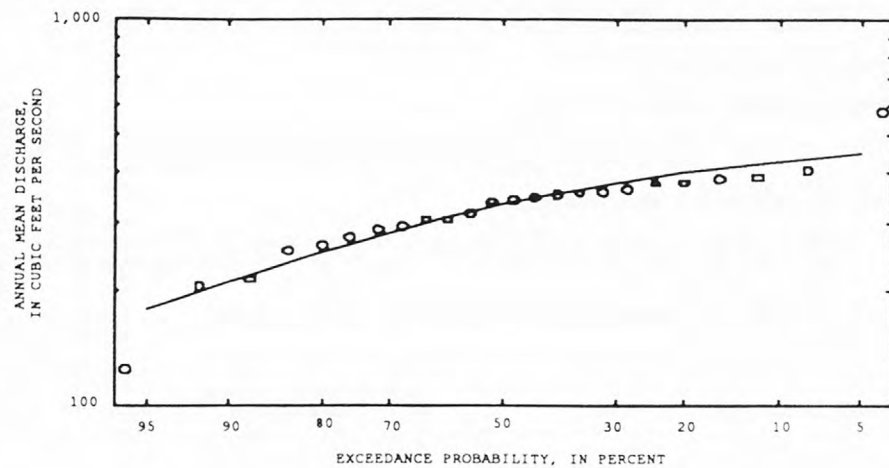
Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
2,060	1,310	927	667	496	291	192	136	103	78	58	41	31	25	22	20	17	

# Length of record used in calculation may yield unreliable values for this column.





LOCATION MAP





PEND OREILLE RIVER BASIN

12393500 PRIEST RIVER AT OUTLET OF PRIEST LAKE, NEAR COOLIN, ID

LOCATION.—Lat 48°29', long 116°54', in SW 1/4, sec. 5, T. 59 N., R. 4 W., Bonner County, Hydrologic Unit 17010215, on right bank 600 ft downstream from outlet of Priest Lake and 2 mi northwest of Coolin.

DRAINAGE AREA.—572 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1939 to September 1951.

GAGE.—Water-stage recorder. Datum of gage is 2,435.06 ft (Coast and Geodetic Survey datum) or 2,437.99 ft (Geological Survey datum) above sea level. Prior to Nov. 25, 1914, several staff gages on Priest Lake at Coolin at different datums.

REMARKS.—No diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,560 ft<sup>3</sup>/s May 29, 1948; maximum gage height, 6.83 ft, May 30, 1917; minimum, 118 ft<sup>3</sup>/s Nov. 25, 1936; minimum gage height, -0.42 ft, Oct. 19, 1946, computed on basis of Priest Lake gage heights.

Summary of monthly and annual discharges, 1914-18, 1920-48

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,370	152	348	265	0.76	2.7
November	1,320	133	445	312	0.70	3.4
December	1,690	152	518	353	0.68	4.0
January	1,620	189	520	304	0.58	3.9
February	1,130	208	474	211	0.44	3.5
March	1,120	224	532	234	0.44	4.1
April	3,450	409	1,420	738	0.52	10.9
May	5,920	2,180	3,570	976	0.27	27.3
June	5,910	807	3,140	1,310	0.42	24.0
July	3,200	391	1,300	567	0.44	9.9
August	999	242	501	169	0.34	3.8
September	821	174	328	132	0.40	2.5
Annual	1,580	533	1,090	305	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1915-18, 1921-48

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	209	162	142	127	112	103
3	212	164	143	128	112	103
7	215	166	145	129	114	104
14	222	170	148	132	116	106
30	231	176	154	138	123	114
60	246	186	163	148	133	125
90	269	201	176	159	143	134
120	300	220	191	171	152	142
183	358	252	214	189	165	152

Magnitude and frequency of annual high flow,  
based on period of record 1914-18, 1920-48

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1914-18, 1920-48

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,840	6,120	6,840	7,650	8,180	8,680

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	4,700	5,980	6,720	7,570	8,140	8,640
3	4,660	5,930	6,670	7,510	8,070	8,600
7	4,560	5,780	6,490	7,300	7,850	8,360
15	4,350	5,520	6,220	7,020	7,570	8,090
30	4,010	5,110	5,780	6,550	7,090	7,610
60	3,420	4,340	4,880	5,480	5,890	6,270
90	2,850	3,630	4,060	4,540	4,860	5,150

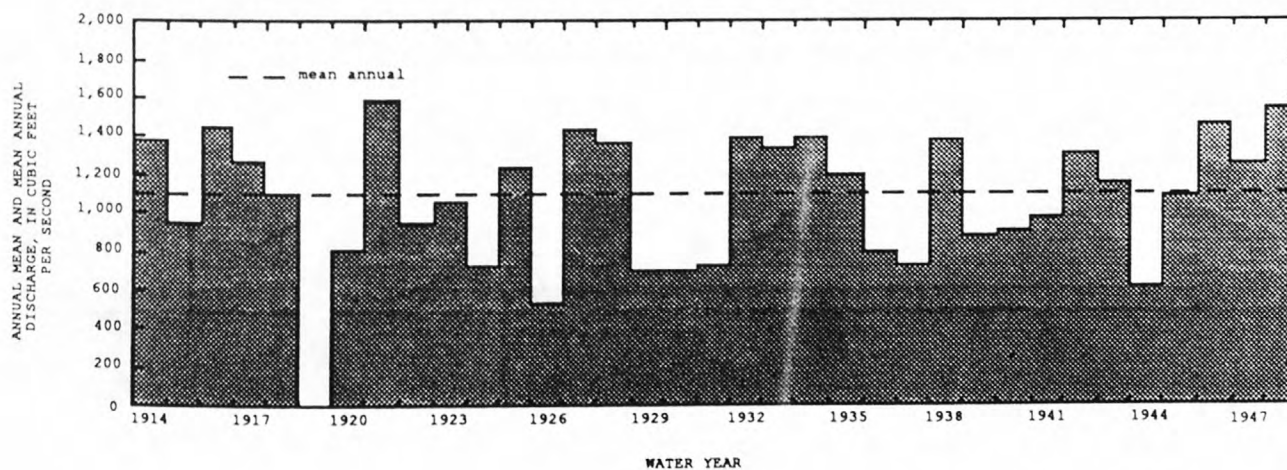
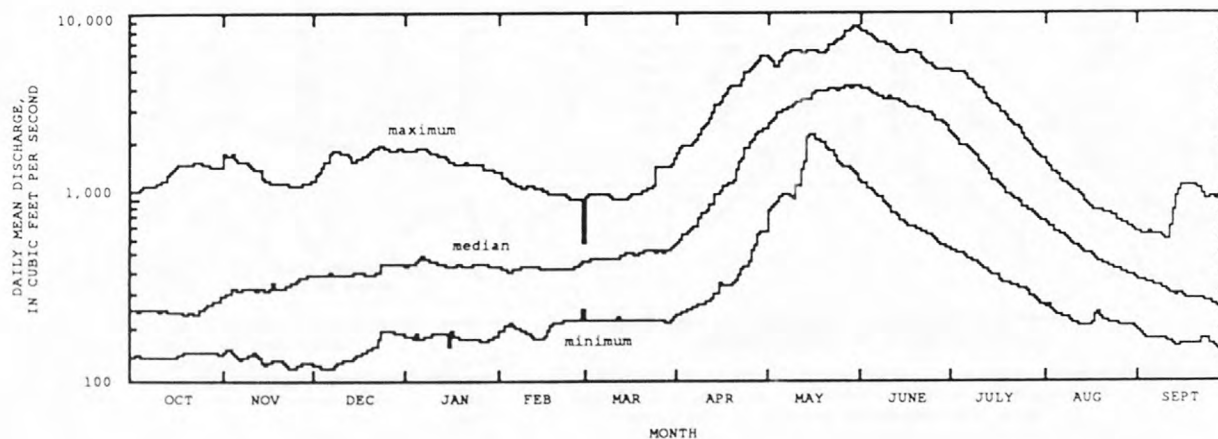
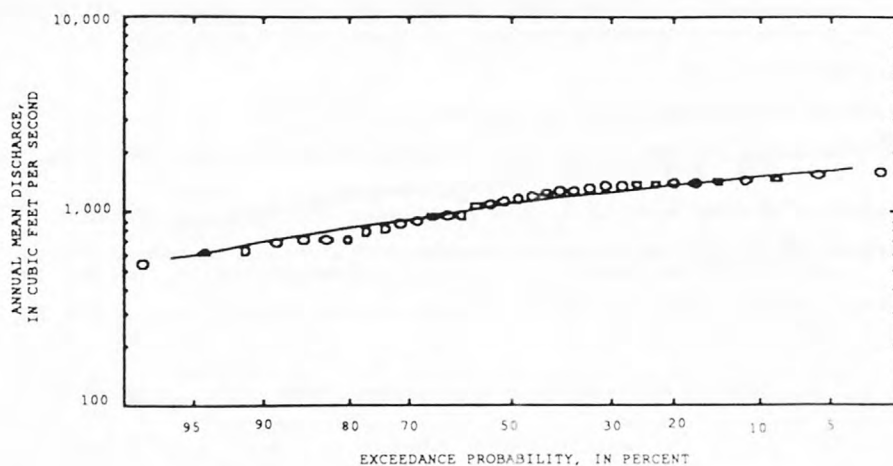
Duration table of daily mean flow for period of record 1914-18, 1920-48

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
5,760	4,100	3,150	2,290	1,670	972	698	539	426	345	280	225	193	166	150	138	124	

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



PEND OREILLE RIVER BASIN

12394000 PRIEST RIVER NEAR COOLIN, ID

LOCATION.—Lat 48°27'07", long 116°53'38", in SE 1/4 SW 1/4 NE 1/4, sec. 19, T. 59 N., R. 4 W., Bonner County, Hydrologic Unit 17010215, in Dickensheet Campground, on left bank 190 ft downstream from Dickensheet Bridge, 2.5 mi downstream from Binarch Creek, 3 mi southwest of Coolin, 5.2 mi downstream from outlet of Priest Lake, and at mile 38.8.

DRAINAGE AREA.—611 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1948 to September 1990.

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

REMARKS.—No diversion above station. Flow partly regulated by Priest Lake (sta 12393000) 5.2 mi upstream.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,900 ft<sup>3</sup>/s June 18, 1974, gage height, 8.44 ft; minimum observed, 26 ft<sup>3</sup>/s Sept. 25, 1958, gage height, 1.16 ft, but may have been less Sept. 11, 1953, Sept. 24, 1958, when stage was below intake.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of May 29, 1948, reached a stage of 8.40 ft, present site and datum, discharge, 8,670 ft<sup>3</sup>/s.

Summary of monthly and annual discharges, 1949-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,520	258	943	352	0.37	6.1
November	2,390	294	1,000	410	0.40	6.6
December	1,480	246	723	299	0.41	4.7
January	1,870	246	631	328	0.52	4.2
February	1,940	250	617	333	0.54	4.0
March	1,890	285	748	412	0.56	4.8
April	2,570	515	1,558	539	0.35	10.1
May	5,630	1,240	3,910	934	0.24	25.3
June	7,210	1,020	3,680	1,470	0.40	23.8
July	2,740	239	1,020	637	0.62	6.6
August	727	103	312	148	0.47	2.0
September	1,220	72	272	201	0.74	1.8
Annual	2,170	534	1,290	292	0.23	100

Magnitude and frequency of annual low flow,  
based on period of record 1950-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	106	71	56	47	37	32
3	109	74	60	50	41	36
7	117	79	64	53	42	36
14	131	87	70	57	45	38
30	162	105	82	66	51	42
60	222	150	120	98	78	66
90	300	209	173	148	124	110
120	459	348	300	266	231	210
183	607	513	474	446	419	402

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1949-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,730	6,780	7,280	8,010	8,510	9,000

Magnitude and frequency of annual high flow,  
based on period of record 1949-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	5,720	6,710	7,150	7,550	7,770	7,930
3	5,690	6,670	7,100	7,490	7,710	7,870
7	5,630	6,570	6,950	7,270	7,420	7,530
15	5,450	6,310	6,610	6,830	6,930	6,990
30	5,110	5,810	6,010	6,120	6,150	6,170
60	4,150	4,810	5,030	5,170	5,230	5,260
90	3,340	3,870	4,030	4,140	4,180	4,200

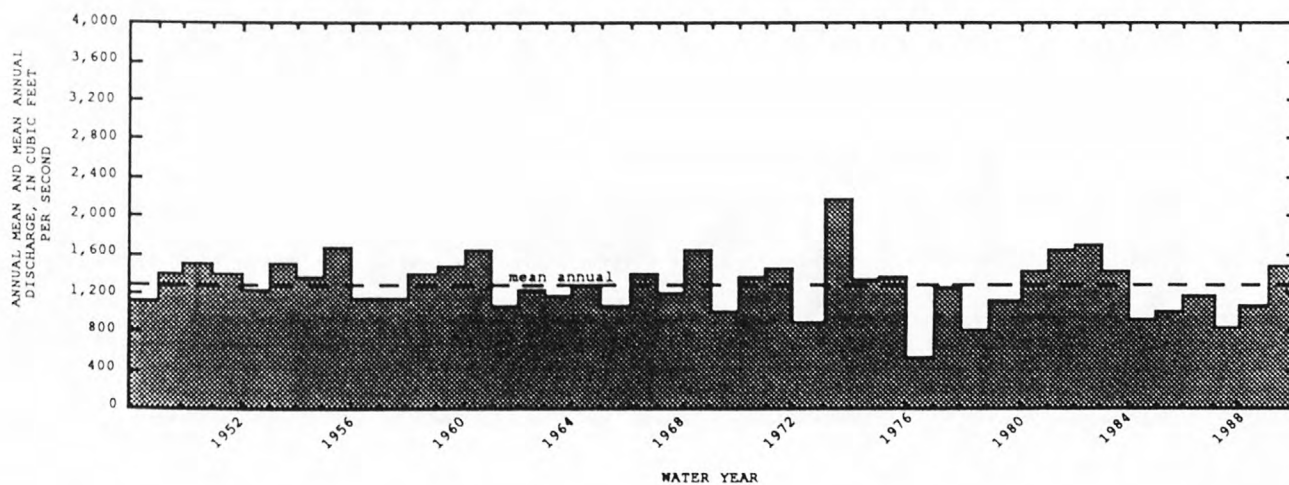
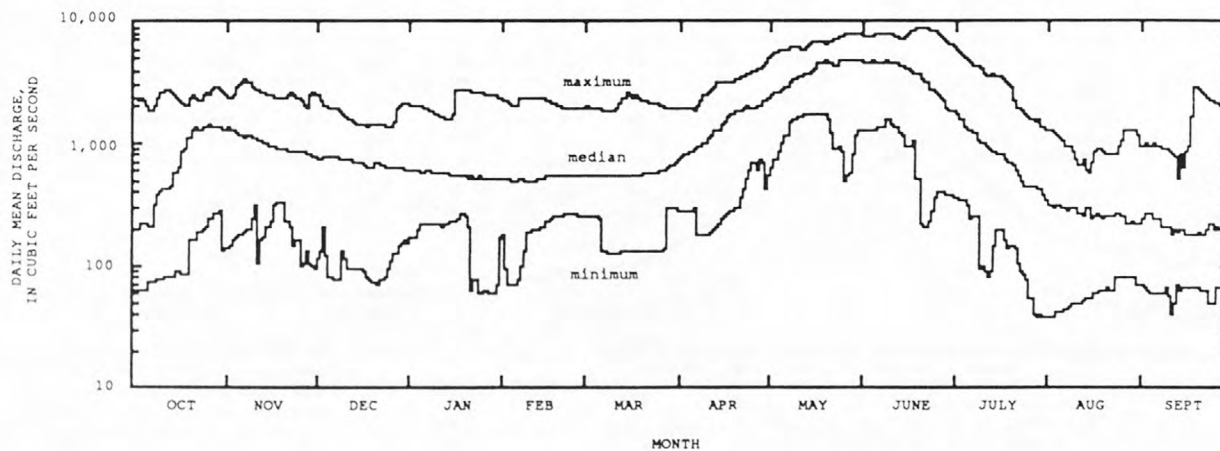
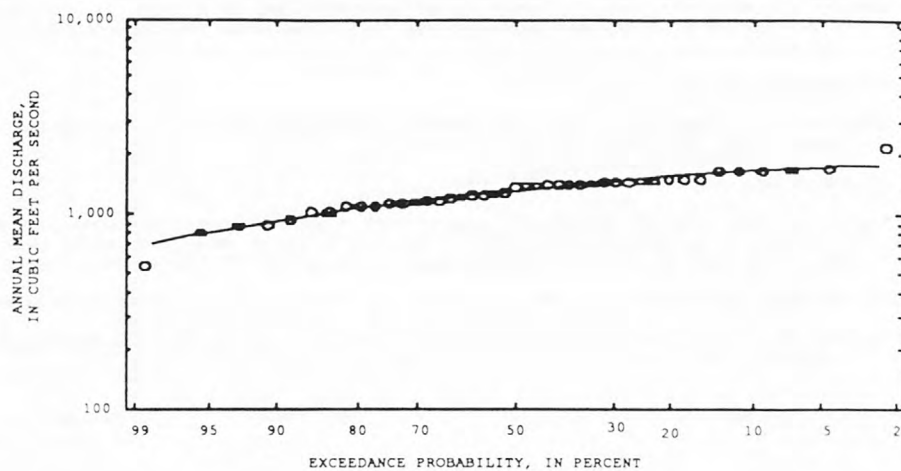
Duration table of daily mean flow for period of record 1949-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
6,140	4,800	3,580	2,460	1,910	1,300	939	716	565	458	337	203	126	85	74	65	47

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



PEND OREILLE RIVER BASIN

12395000 PRIEST RIVER NEAR PRIEST RIVER, ID

LOCATION.—Lat 48°12'31", long 116°54'49", in NW 1/4, SW 1/4, NW 1/4, sec. 12, T. 56 N., R. 5 W., Bonner County, Hydrologic Unit 17010215, on right bank 500 ft downstream from Saddler Creek, 0.4 mi downstream from Lower West Branch Priest River, 2.7 mi north of Priest River, and at mile 3.8.

DRAINAGE AREA.—902 mi<sup>2</sup>.

PERIOD OF RECORD.—June 1903 to April 1905, November 1910 to April 1911, May to December 1923, February 1929 to September 1990. Prior to October 1930, published as "at Priest River."

REVISED RECORDS.—WSP 572: 1903-5.

GAGE.—Water-stage recorder. Elevation of gage is 2,090 ft above sea level, from river-profile map. Prior to May 15, 1929, and Sept. 11, 1929, to Apr. 28, 1930, nonrecording gages at site 3 mi downstream at elevation of about 40 ft lower. June 4 to Sept. 17, 1929, and Apr. 29 to Sept. 11, 1930, nonrecording gages at or near present site at present datum.

REMARKS.—Some regulation on tributaries and, since Aug. 9, 1950, flow partly regulated by Priest Lake (see sta 12393000).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,500 ft<sup>3</sup>/s May 29, 30, 1948; maximum gage height, 8.97 ft, May 29, 1948; minimum discharge, 150 ft<sup>3</sup>/s Nov. 29, 1979, gage height, 0.38 ft.

Summary of monthly and annual discharges, 1904, 1930-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,620	253	892	442	0.50	4.5
November	2,950	227	1,090	537	0.49	5.5
December	2,570	293	972	508	0.52	4.9
January	2,960	284	897	522	0.58	4.6
February	2,790	350	916	493	0.54	4.6
March	3,630	459	1,230	635	0.51	6.2
April	4,450	810	2,590	849	0.33	13.0
May	7,420	1,560	4,860	1,250	0.26	24.5
June	8,530	1,250	4,110	1,650	0.40	20.7
July	3,140	399	1,360	662	0.49	6.8
August	1,120	229	525	203	0.39	2.6
September	1,350	184	422	187	0.44	2.1
Annual	2,950	711	1,660	422	0.25	100

Magnitude and frequency of annual low flow,  
based on period of record 1905, 1930-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	266	211	187	170	153	143
3	270	215	191	174	157	147
7	278	221	197	180	162	150
14	290	229	202	182	162	151
30	320	249	217	193	168	154
60	371	288	252	224	197	180
90	438	336	294	265	235	218
120	584	434	369	321	273	245
183	736	534	443	375	308	268

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1904, 1930-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
6,620	8,000	8,690	9,570	10,200	10,700	

Magnitude and frequency of annual high flow,  
based on period of record 1904, 1930-90

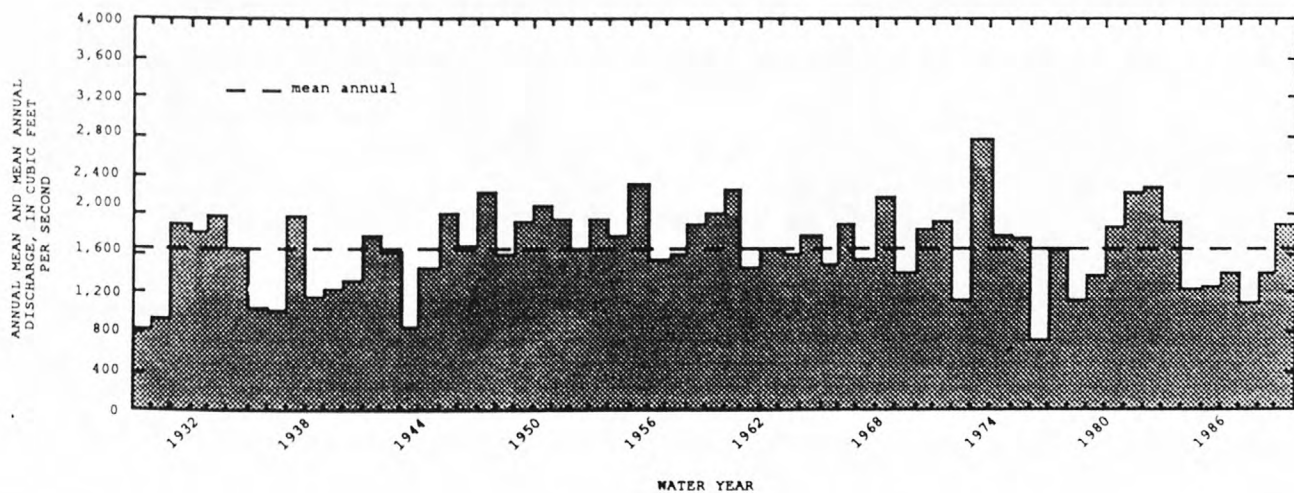
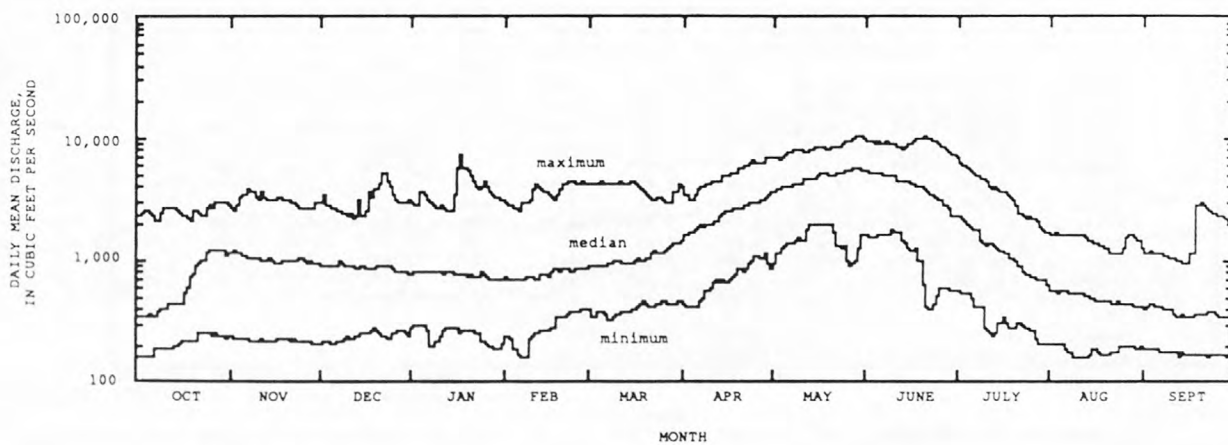
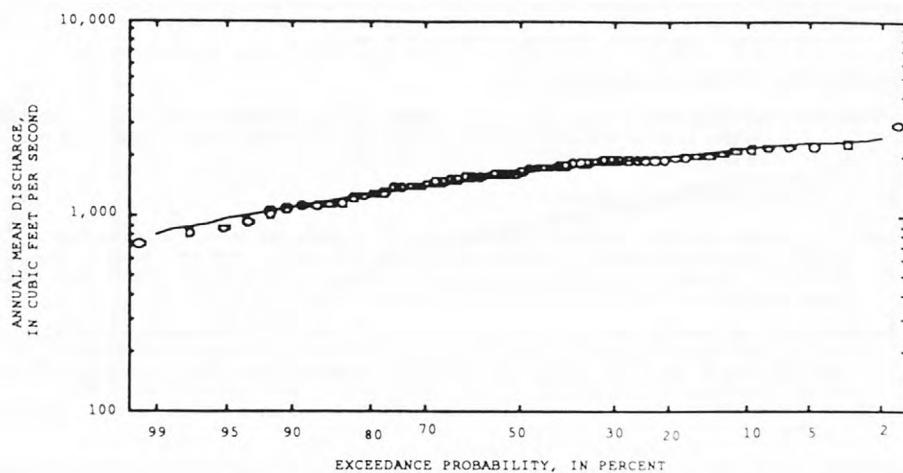
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	6,570	7,920	8,540	9,130	9,460	9,720
3	6,510	7,840	8,470	9,050	9,380	9,640
7	6,360	7,670	8,260	8,800	9,100	9,330
15	6,110	7,360	7,910	8,390	8,650	8,840
30	5,700	6,850	7,310	7,700	7,890	8,020
60	4,800	5,840	6,290	6,700	6,920	7,090
90	4,050	4,900	5,260	5,570	5,730	5,840

Duration table of daily mean flow for period of record 1904, 1930-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
7,340	5,630	4,340	3,270	2,600	1,740	1,260	987	783	607	470	338	273	224	202	186



LOCATION MAP





# PEND OREILLE RIVER BASIN

12395500 PEND OREILLE RIVER AT NEWPORT, WA

LOCATION.—Lat 48°10'56", long 117°02'00", in SE 1/4, SE 1/4, SW 1/4, sec. 24, T. 56 N., R. 6 W. (Boise Meridian), Bonner County, Hydrologic Unit 17010216, on left bank at Newport, 0.2 mi upstream from bridge on U.S. Highway 2, 0.2 mi east of Idaho-Washington State line, 1.6 mi downstream from Albeni Falls Dam, and at mile 88.5.

DRAINAGE AREA.—24,200 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—June 1903 to September 1941, October 1952 to September 1990. 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."

REVISED RECORDS.—WSP 532: 1903-11.

GAGE.—Water-stage recorder. Datum of gage is 1,999.7 ft above sea level. Prior to Sept. 22, 1928, nonrecording 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 40.44 ft higher, and Oct. 1, 1935, to Sept. 30, 1941, water-stage recorder at datum 0.30 ft higher. Since December 1952, auxiliary water-stage recorder 2.74 mi downstream from base gage.

REMARKS.—Flow regulated at Albeni Falls Dam and affected by storage in Pend Oreille Lake, Flathead Lake, Hungry Horse Reservoir, and several smaller reservoirs. Diversions above station for irrigation of about 354,000 acres. Stage-discharge relation affected by backwater from Box Canyon dam 54 mi downstream. Discharge computed from slope and conveyance of reach between base and auxiliary gage.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 136,000 ft<sup>3</sup>/s June 15, 1913, June 21, 1933, June 12, 1972; minimum, 1,280 ft<sup>3</sup>/s Sept. 1, 1961.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 1894 reached a stage of about 64.0 ft present site and datum, discharge, about 200,000 ft<sup>3</sup>/s.

Summary of monthly and annual discharges,  
1904-12, 1929-41, 1953-85, 1987-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	31,300	6,210	16,700	6,980	0.42	5.5
November	32,300	6,050	17,800	6,410	0.36	5.9
December	32,100	5,990	15,900	5,660	0.36	5.2
January	40,000	4,270	15,100	6,300	0.42	5.0
February	31,600	4,380	16,100	7,080	0.44	5.3
March	38,400	6,620	18,500	7,480	0.40	6.1
April	56,900	5,510	27,200	11,800	0.43	9.0
May	87,500	15,300	51,100	17,000	0.33	16.9
June	115,000	15,200	64,100	23,200	0.36	21.1
July	73,700	7,300	32,900	14,600	0.44	10.9
August	45,200	5,880	14,300	6,230	0.44	4.7
September	22,000	6,350	13,300	4,060	0.31	4.4
Annual	37,700	12,900	25,300	6,060	0.24	100

Magnitude and frequency of annual low flow,  
based on period of record  
1905-12, 1930-41, 1954-86, 1988-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	5,390	3,880	3,210	2,700	2,200	1,780
3	6,040	4,430	3,740	3,240	2,740	2,450
7	7,100	5,280	4,490	3,910	3,340	2,990
14	8,060	6,040	5,140	4,470	3,790	3,390
30	9,070	6,810	5,800	5,060	4,310	3,850
60	10,600	8,060	6,890	6,010	5,130	4,590
90	12,100	8,980	7,550	6,480	5,400	4,750
120	13,400	9,750	8,050	6,780	5,500	4,740
183	14,600	10,600	8,630	7,200	5,760	4,910

Magnitude and frequency of annual high flow,  
based on period of record 1904-12, 1929-41, 1953-85, 1987-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	81,600	106,000	118,000	129,000	136,000	141,000
3	81,000	105,000	117,000	128,000	135,000	140,000
7	79,200	103,000	115,000	126,000	133,000	139,000
15	76,000	99,500	111,000	123,000	129,000	135,000
30	70,700	91,500	102,000	111,000	117,000	121,000
60	61,100	77,900	85,800	93,200	97,400	101,000
90	52,300	66,200	73,000	79,500	83,200	86,200

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1904-12, 1929-41, 1953-85, 1988-90

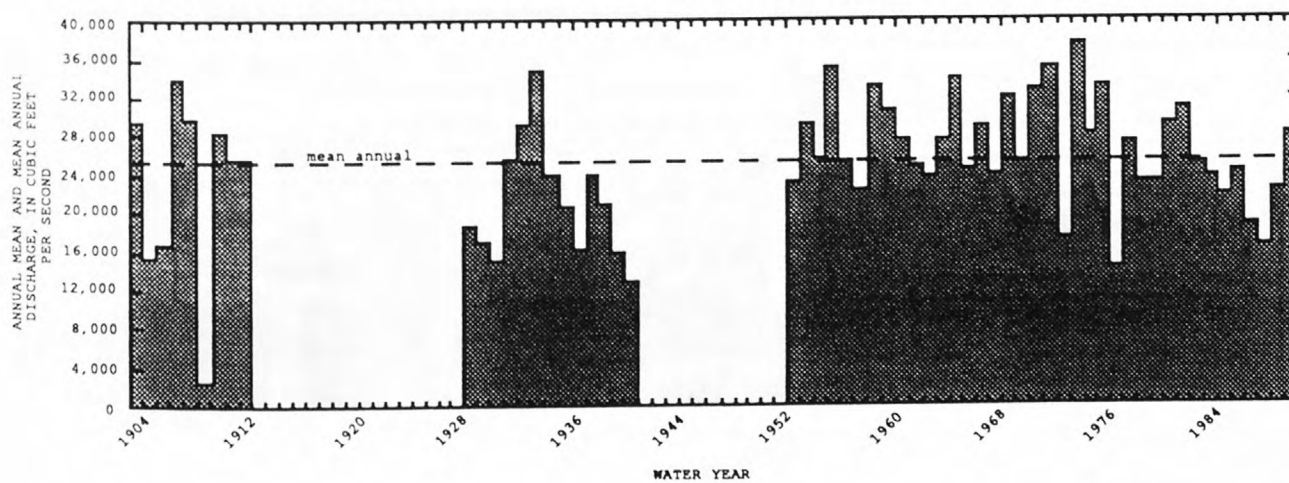
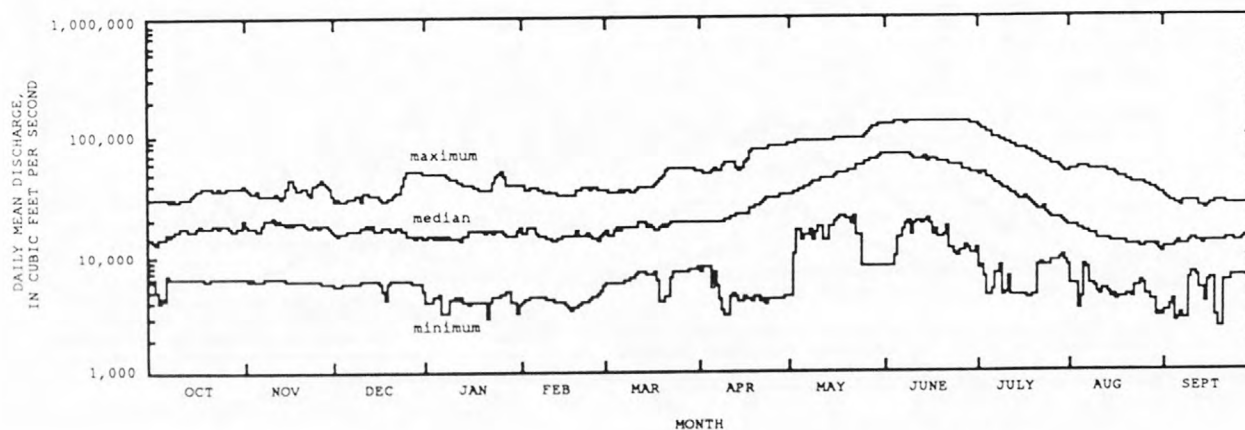
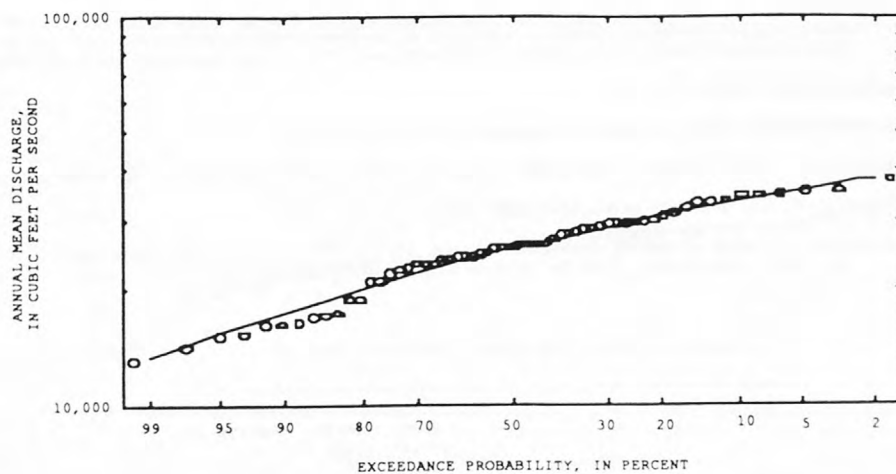
Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
83,900	113,000	130,000	150,000	164,000	176,000

Duration table of daily mean flow for period of record 1904-12, 1929-41, 1953-85, 1987-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
100,000	72,500	54,600	43,500	34,700	26,200	21,800	18,700	15,900	13,400	10,900	8,470	7,040	5,940	4,960	4,270



LOCATION MAP



SPOKANE RIVER BASIN

12411000 NORTH FORK COEUR D'ALENE RIVER ABOVE SHOSHONE CREEK, NEAR PRICHARD, ID

LOCATION.—Lat 47°42'26", long 115°58'36", in NE 1/4, SE 1/4, SW 1/4, sec. 5, T. 50 N., R. 4 E., Shoshone County, Hydrologic Unit 17010301, in Coeur d'Alene National Forest, on left bank at Shoshone Creek Ranger Station, 0.1 mi downstream from Uranus Creek, 0.5 mi upstream from Shoshone Creek, 3.5 mi north of Prichard, and 200.0 mi upstream from mouth of Spokane River.

DRAINAGE AREA.—335 mi<sup>2</sup>.

PERIOD OF RECORD.—December 1950 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 2,485 ft above sea level, from river-profile map.

REMARKS.—No regulation or diversions above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 22,000 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 11.60 ft; minimum discharge, 34 ft<sup>3</sup>/s Dec. 26, 1952, gage height, 0.69 ft; minimum gage height, 0.48 ft Sept. 25, 26, 1987.

Summary of monthly and annual discharges, 1951-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	449	69	144	90	0.62	1.7
November	911	71	325	235	0.72	3.8
December	1,670	75	528	482	0.91	6.2
January	2,600	72	497	452	0.91	5.8
February	2,120	109	661	520	0.79	7.8
March	2,730	188	870	533	0.61	10.2
April	3,710	896	2,110	705	0.33	24.7
May	3,600	491	2,210	913	0.41	25.9
June	2,240	200	719	417	0.58	8.4
July	399	104	227	77	0.34	2.7
August	176	69	126	28	0.23	1.5
September	170	71	107	23	0.22	1.3
Annual	1,270	223	709	187	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1952-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	77	61	53	47	40	36
3	78	63	55	49	42	38
7	80	65	58	52	46	42
14	84	70	64	59	53	50
30	90	76	70	65	60	58
60	98	84	77	72	67	64
90	107	90	82	76	70	66
120	119	96	87	80	73	70
183	177	131	114	102	91	84

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1951-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
7,030	10,100	12,300	15,300	17,600	20,100	

Magnitude and frequency of annual high flow,  
based on period of record 1951-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	5,560	7,710	9,100	10,800	12,100	13,300
3	4,970	6,500	7,330	8,230	8,800	9,300
7	4,300	5,360	5,820	6,220	6,420	6,570
15	3,630	4,410	4,680	4,870	4,950	5,000
30	2,960	3,610	3,870	4,080	4,170	4,240
60	2,370	2,860	3,040	3,170	3,230	3,270
90	1,940	2,310	2,440	2,530	2,570	2,590

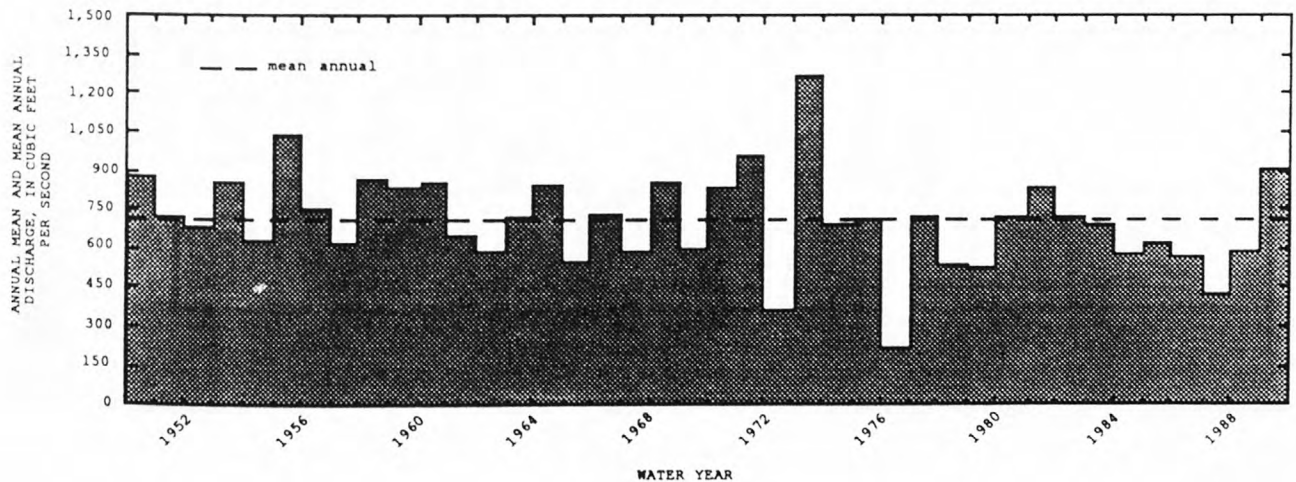
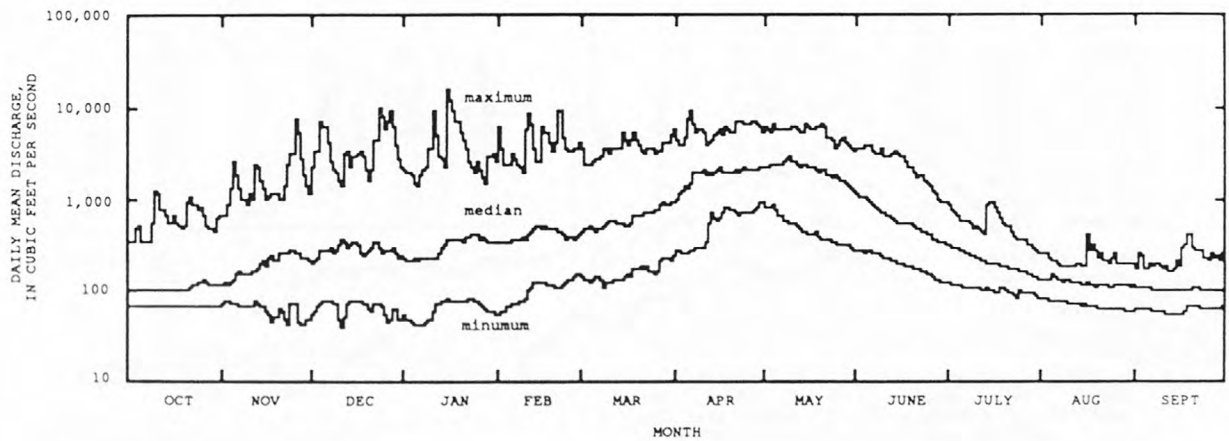
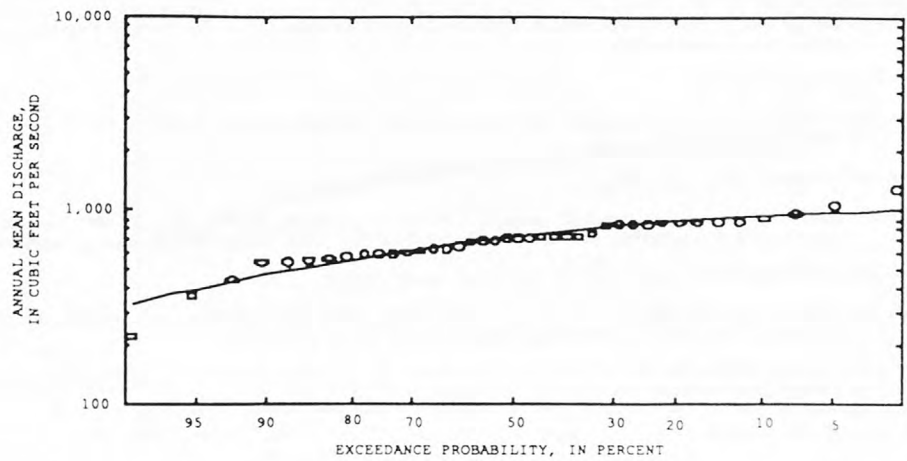
Duration table of daily mean flow for period of record 1951-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
4,780	2,880	2,020	1,460	1,090	651	424	284	195	148	117	93	81	71	67	61	48	

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



**SPOKANE RIVER BASIN**

12413000 NORTH FORK COEUR D'ALENE RIVER AT ENAVILLE, ID

LOCATION.—Lat 47°34'21", long 116°15'11", in NW 1/4, NW 1/4, NE 1/4, sec. 30, T. 49 N., R. 2 E., Shoshone County, Hydrologic Unit 17010301, on right bank 800 ft upstream from highway bridge, 1.1 mi upstream from South Fork, 3.5 mi downstream from North Fork, and 168.9 mi upstream from mouth of Spokane River.

DRAINAGE AREA.—895 mi<sup>2</sup>.

PERIOD OF RECORD.—March 1911 to April 1913 (fragmentary), October 1939 to September 1990. Published as "North Fork of Coeur d'Alene River at Enaville," 1911-13.

REVISED RECORDS.—WSP 1396: 1945.

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

REMARKS.—No appreciable regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 61,000 ft<sup>3</sup>/s Jan. 16, 1974, gage height, 81.32 ft; minimum, 95 ft<sup>3</sup>/s Nov. 30, 1979, gage height, 60.95 ft; minimum gage height, 60.10 ft Dec. 26, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in December 1933 reached a stage of 79.47 ft, and a flood in April 1938 reached a stage of 78.16 ft, from local information concerning high-water marks.

Summary of monthly and annual discharges, 1940-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,210	188	389	249	0.64	1.7
November	2,830	197	905	657	0.73	4.0
December	5,120	211	1,550	1,380	0.89	6.8
January	6,930	209	1,430	1,170	0.81	6.3
February	7,020	340	1,930	1,530	0.80	8.3
March	8,030	573	2,560	1,420	0.56	11.2
April	9,880	1,920	5,450	1,970	0.36	23.8
May	9,650	1,380	5,330	2,320	0.44	23.3
June	5,370	636	2,030	1,080	0.53	8.9
July	1,230	295	665	241	0.36	2.9
August	608	191	350	91	0.26	1.5
September	526	184	296	66	0.22	1.3
Annual	3,280	599	1,900	529	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1941-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2	5	10	20	50	100
	50%	20%	10%	5%	2%	1%
1	210	166	145	128	110	99
3	215	174	154	138	121	110
7	224	184	164	149	132	121
14	233	194	175	161	146	136
30	248	211	194	181	168	160
60	270	230	212	199	185	176
90	296	246	224	208	192	182
120	333	267	241	222	204	194
183	517	371	315	275	238	216

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1940-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
14,800	22,500	28,400	36,500	43,200	50,300

Magnitude and frequency of annual high flow,  
based on period of record 1940-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2	5	10	25	50	100
	50%	20%	10%	4%	2%	1%
1	14,000	20,500	24,900	30,800	35,200	39,700
3	12,700	17,500	20,300	23,500	25,600	27,500
7	11,000	14,100	15,600	16,900	17,500	18,000
15	9,120	11,300	12,200	12,800	13,000	13,200
30	7,350	9,240	10,000	10,700	11,100	11,300
60	5,870	7,350	7,980	8,510	8,780	8,980
90	4,930	6,080	6,550	6,940	7,120	7,260

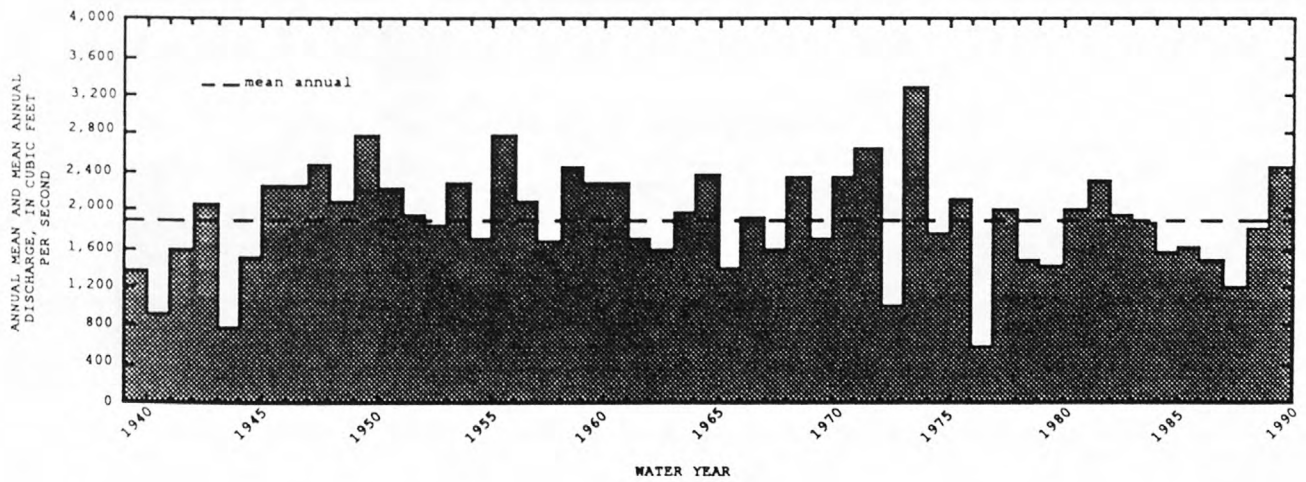
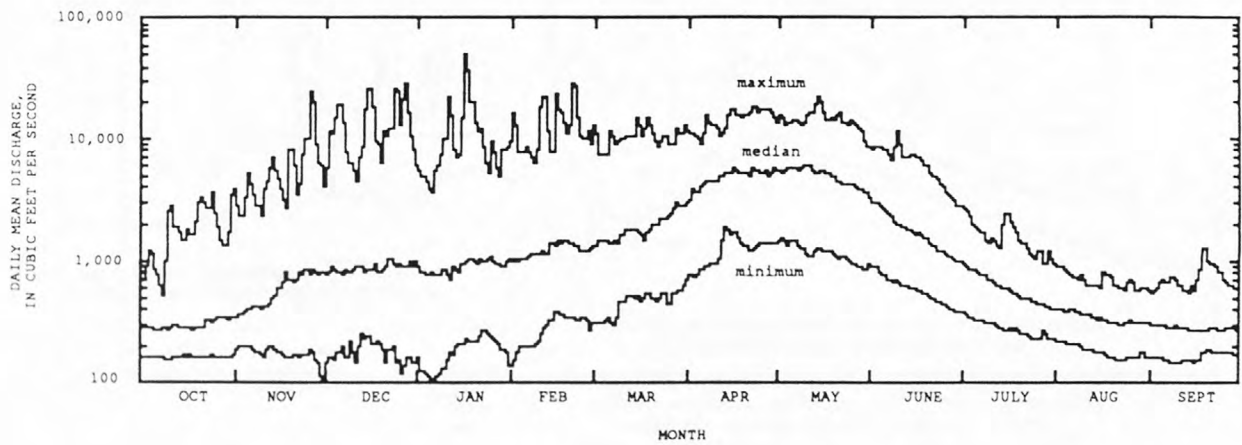
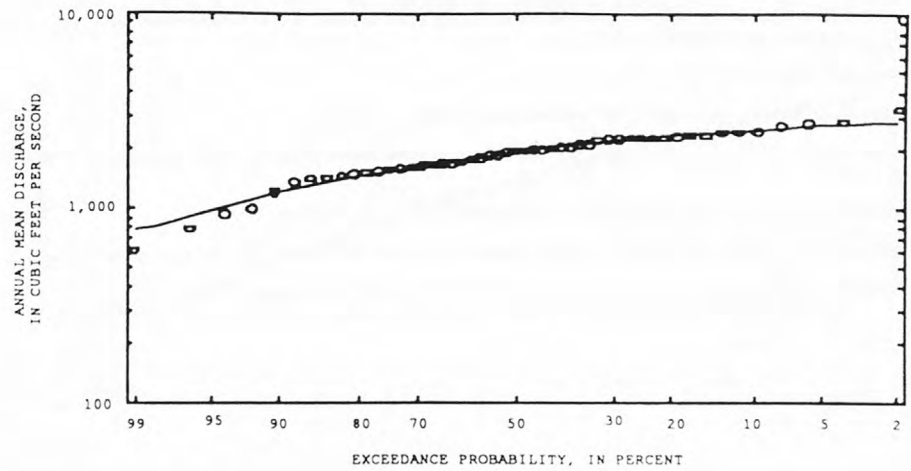
Duration table of daily mean flow for period of record 1940-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
12,300	7,240	5,160	3,850	2,990	1,910	1,260	841	572	416	320	254	223	191	180	163	140





LOCATION MAP





## SPOKANE RIVER BASIN

12413140 PLACER CREEK AT WALLACE, ID

LOCATION.—Lat 47°27'47", long 115°56'10", in SW 1/4, NE 1/4, SW 1/4, sec. 34, T. 48 N., R. 4 E., Shoshone County, Hydrologic Unit 17010302, on right bank about 400 ft upstream from county road bridge, 0.3 mi downstream from West Fork Placer Creek, 0.4 mi south of Wallace city limits, and at mile 1.0.

DRAINAGE AREA.—14.9 mi<sup>2</sup>.

PERIOD OF RECORD.—November 1967 to September 1990.

GAGE.—Water-stage recorder. Rock-filled gabion control since July 29, 1981. Elevation of gage is 2,840 ft above sea level, from topographic map.

REMARKS.—Water for town of Wallace is diverted above the station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,200 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 4.71 ft; minimum, 0.27 ft/s Jan. 28, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Dec. 23, 1964, estimated at 1,300 ft<sup>3</sup>/s by Idaho Department of Highways on basis of observed depths in concrete flume downstream. Flood in December 1933 reported slightly higher than 1964.

Summary of monthly and annual discharges, 1969-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	14	1.4	5.1	2.7	0.53	1.2
November	29	1.5	11	7.6	0.71	2.5
December	72	2.1	19	21	1.1	4.5
January	117	0.72	25	26	1.1	5.8
February	117	3.1	29	27	0.94	6.6
March	110	5.9	43	27	0.63	10.0
April	152	34	82	32	0.38	19.1
May	243	34	126	59	0.47	29.2
June	243	15	63	50	0.80	14.5
July	27	6.1	17	6.4	0.39	3.8
August	12	3.0	7.4	2.5	0.34	1.7
September	7.3	1.7	4.7	1.5	0.31	1.1
Annual	75	10	36	14	0.38	100

Magnitude and frequency of annual low flow,  
based on period of record 1969-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	2.4	1.2	0.72	0.46	0.27	0.18
3	2.5	1.2	0.77	0.50	0.29	0.19
7	2.7	1.4	0.87	0.56	0.32	0.22
14	3.1	1.6	1.0	0.68	0.40	0.27
30	3.5	2.0	1.4	1.0	0.65	0.47
60	4.1	2.5	1.9	1.4	0.99	0.76
90	4.6	3.0	2.3	1.8	1.4	1.1
120	5.4	3.6	2.8	2.3	1.8	1.5
183	7.7	4.9	3.8	3.0	2.3	1.9

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1969-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
365	668	933	1,360	1,740	2,190

Magnitude and frequency of annual high flow,  
based on period of record 1969-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	313	465	555	655	720	779
3	270	366	411	451	473	489
7	226	292	317	337	346	351
15	182	238	262	283	294	302
30	145	203	235	269	291	310
60	114	157	181	206	221	235
90	96	129	146	164	174	183

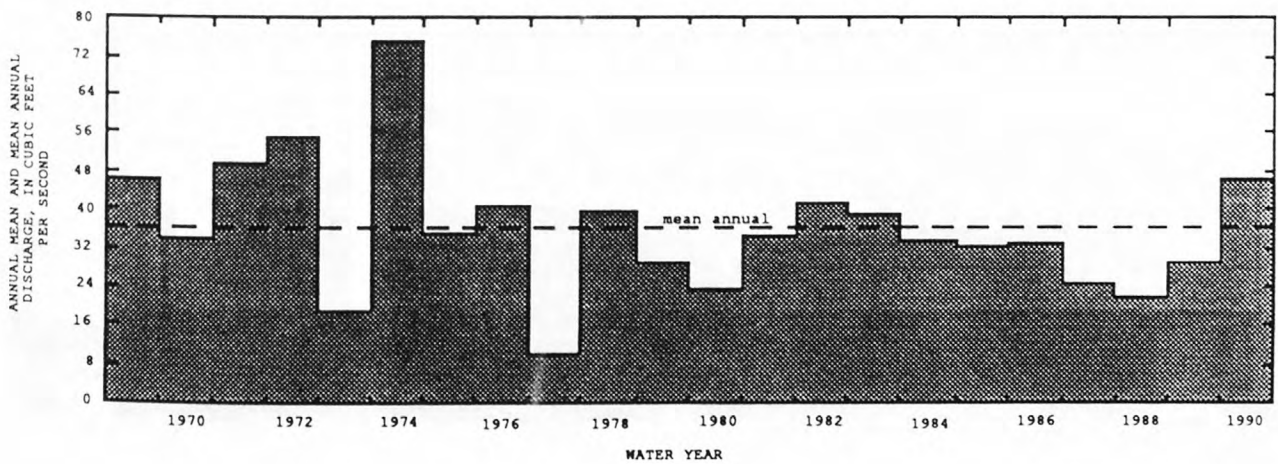
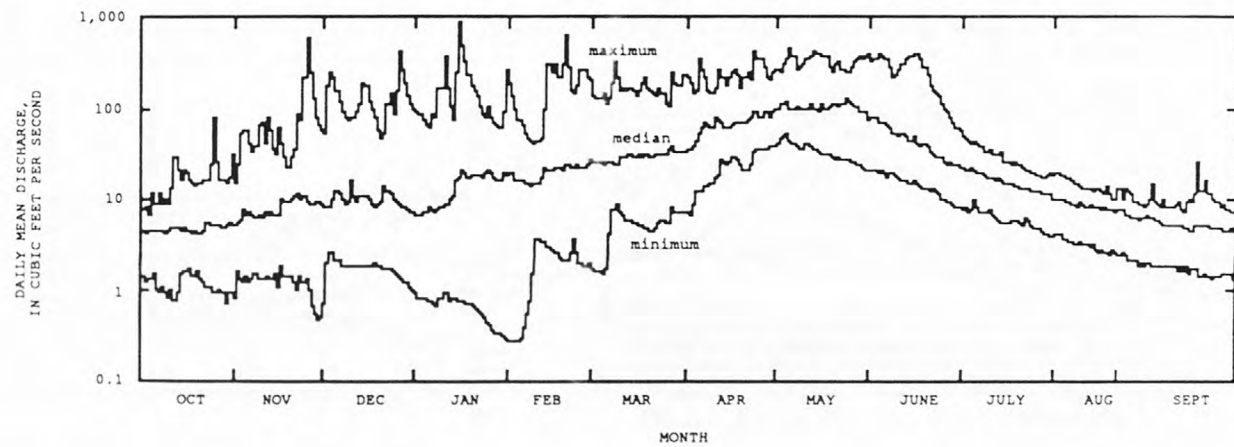
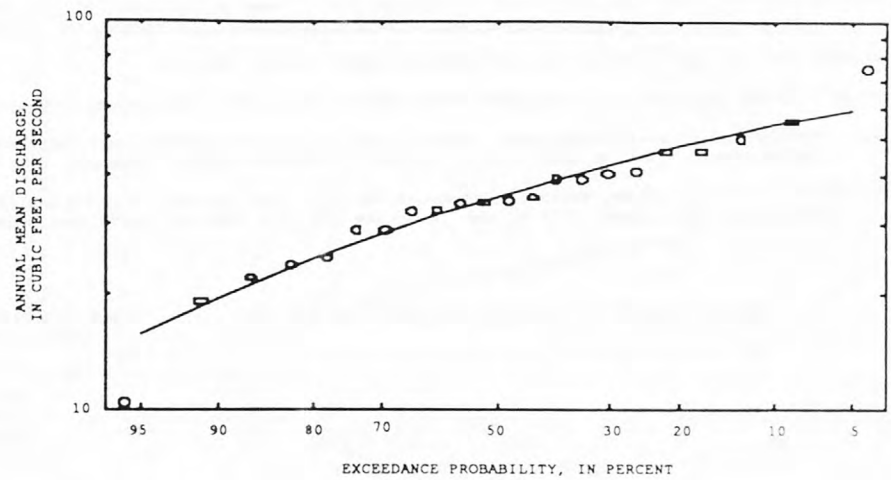
Duration table of daily mean flow for period of record 1969-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
273	149	99	72	55	32	22	15	9.4	6.5	4.9	3.3	2.3	1.5	1.1	0.84
															0.35

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



**SPOKANE RIVER BASIN**

12413150 SOUTH FORK COEUR D'ALENE RIVER AT SILVERTON, ID

LOCATION.—Lat 47°29'29", long 115°57'12", in SW 1/4, NW 1/4, SE 1/4, sec. 21, T. 48 N., R. 4 E., Shoshone County, Hydrologic Unit 17010302, on upstream side of bridge at the off ramp of U.S. Highway I-90 at Silverton, 700 ft downstream from Lake Creek, and at mile 17.4.

DRAINAGE AREA.—108 mi<sup>2</sup>. Area at site used prior to Sept. 1, 1976, 103 mi<sup>2</sup>.

PERIOD OF RECORD.—November 1967 to September 1986, October 1986 to March 1987 (discharge measurements only), April 1987 to September 1988.

GAGE.—Nonrecording and crest-stage gages. Datum of gage is 2,617.10 ft above sea level (levels by Idaho Department of Transportation). Prior to Sept. 1, 1976, at site 1,100 ft upstream at different datum. September 1976 to June 7, 1978, at datum 1 ft higher.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,300 ft<sup>3</sup>/s Jan. 16, 1974, gage height, 10.80 ft; minimum daily, 19 ft<sup>3</sup>/s Jan. 5, 1988; minimum gage height, 2.85 ft, Oct. 7, 8, Dec. 31, 1974 (site and datum then in use).

Summary of monthly and annual discharges, 1969-85, 1988

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	126	37	58	18	0.32	2.0
November	187	38	79	38	0.48	2.7
December	355	44	123	102	0.82	4.2
January	590	37	142	128	0.91	4.8
February	444	44	148	112	0.75	5.0
March	590	60	204	129	0.63	6.9
April	680	199	419	144	0.34	14.2
May	1,350	362	835	259	0.31	28.2
June	1,460	175	614	309	0.50	20.8
July	292	75	184	72	0.39	6.2
August	118	52	84	20	0.24	2.8
September	78	46	64	9.0	0.14	2.2
Annual	404	106	246	74	0.30	100

Magnitude and frequency of annual low flow, based on period of record 1969-85, 1988

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	38	30	26	23	19	17
3	39	31	27	24	21	19
7	41	34	31	29	26	24
14	44	37	33	31	28	26
30	48	41	37	34	31	29
60	52	44	41	38	36	34
90	55	46	42	40	37	36
120	59	49	45	42	39	37
183	74	58	51	47	42	39

Magnitude and frequency of instantaneous peak flow, based on period of record 1969-85, 1988

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,650	2,370	2,870	3,560	4,100	4,670

Magnitude and frequency of annual high flow, based on period of record 1969-85, 1988

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	1,620	2,260	2,700	3,270	3,720	4,170
3	1,500	1,960	2,240	2,540	2,750	2,950
7	1,290	1,650	1,840	2,040	2,160	2,270
15	1,110	1,430	1,590	1,760	1,860	1,950
30	956	1,250	1,400	1,560	1,660	1,750
60	789	992	1,080	1,170	1,210	1,240
90	652	816	887	949	981	1,000

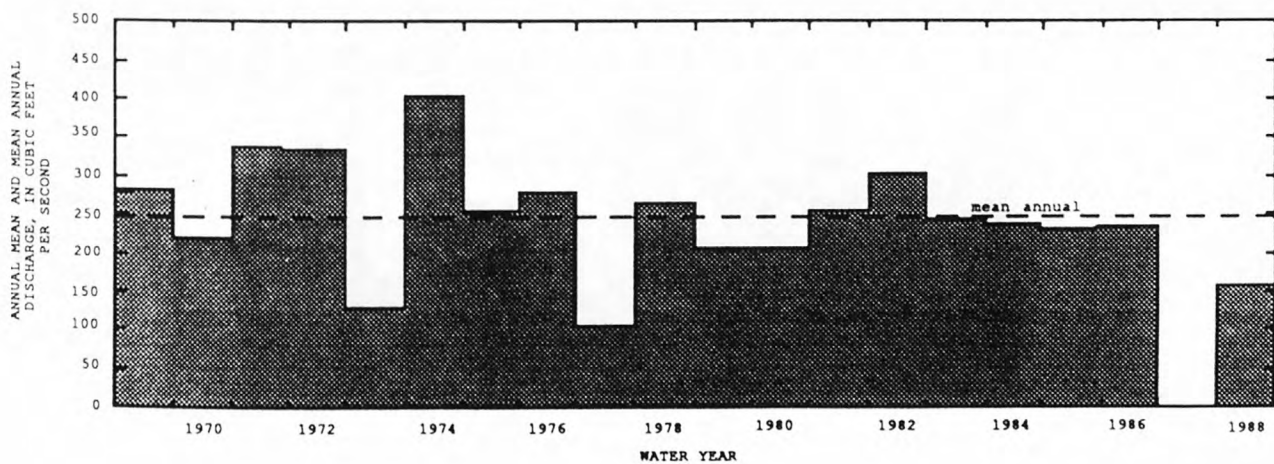
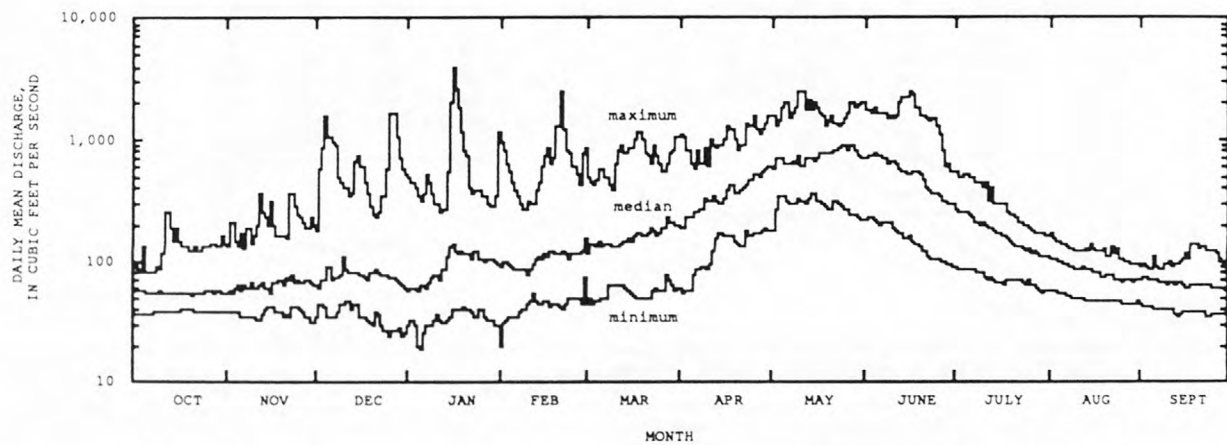
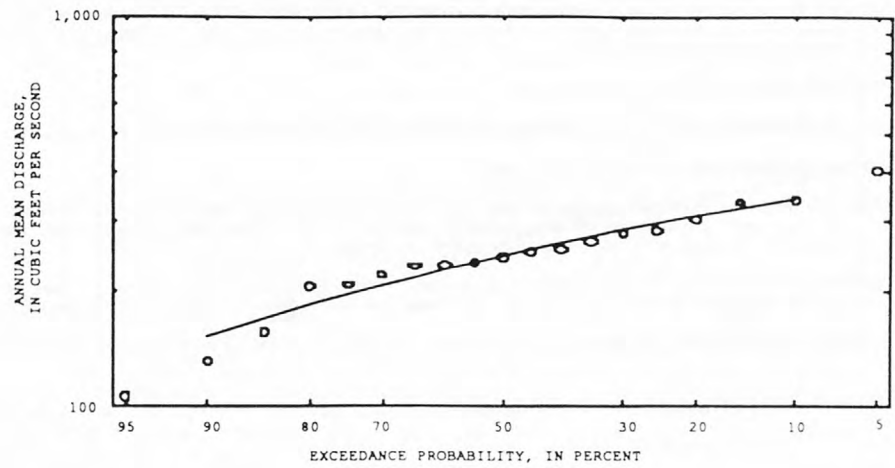
Duration table of daily mean flow for period of record 1969-85, 1988

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,570	934	662	495	378	223	148	109	85	68	57	49	43	37	35	32	25

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SPOKANE RIVER BASIN

12413500 COEUR D'ALENE RIVER AT CATALDO, ID

LOCATION.—Lat 47°33'17", long 116°19'23", in NW 1/4, SE 1/4, NW 1/4, sec. 34, T. 49 N., R. 1 E., Shoshone County, Hydrologic Unit 17010303, on left bank at Cataldo, 50 ft upstream from railroad bridge, 0.9 mi upstream from Interstate Highway 90, 1.5 mi downstream from old gage site, 3.4 mi upstream from Latour Creek, about 2 mi upstream from Coeur d'Alene Lake backwater, 4.9 mi downstream from South Fork and at mile 162.9.

DRAINAGE AREA.—1,223 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—April 1911 to December 1912, July 1920 to September 1972, October 1986 to September 1990.

REVISED RECORDS.—WSP 1396: WSP 1736: 1934 M

GAGE.—Water-stage recorder. Datum of gage is 2,100.00 ft above sea level. Apr. 25, 1911 to Dec. 31, 1912, nonrecording gage at site 1.4 mi upstream at different datum. July 29, 1920, to Oct. 10, 1925, nonrecording gage, and Oct. 11, 1925, to Sept. 30, 1972, recording gage at site 1.5 mi upstream at datum 2.84 ft lower.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 67,000 ft<sup>3</sup>/s Dec. 22 or 23, 1933, gage height, 56.9 ft, from floodmark (from rating curve extended above 24,000 ft<sup>3</sup>/s); minimum, 122 ft<sup>3</sup>/s Dec. 4, 1929; minimum gage height, 33.03 ft, Jan. 4, 5, 1988.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Jan. 16, 1974, reached a discharge of 79,000 ft<sup>3</sup>/s, by indirect computation.

Summary of monthly and annual discharges, 1912, 1921-72, 1987-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,980	276	579	376	0.65	1.9
November	6,530	238	1,280	1,110	0.86	4.2
December	13,200	276	2,010	2,150	1.1	6.6
January	8,320	241	1,800	1,450	0.80	5.9
February	8,840	276	2,380	1,840	0.77	7.8
March	10,300	810	3,220	1,680	0.52	10.6
April	12,600	2,490	7,480	2,420	0.32	24.5
May	12,800	2,180	7,180	2,790	0.39	23.6
June	6,770	768	2,740	1,460	0.53	9.0
July	1,910	404	898	331	0.37	2.9
August	898	273	476	126	0.26	1.6
September	839	279	416	114	0.27	1.4
Annual	3,860	1,040	2,530	699	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1922-72, 1988-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	306	244	213	189	164	148
3	310	250	221	199	175	161
7	317	261	234	214	193	180
14	330	271	245	225	204	191
30	348	290	266	247	229	217
60	373	313	288	271	254	244
90	404	332	304	284	266	256
120	454	360	326	303	282	271
183	692	466	385	332	283	256

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1912, 1921-72, 1987-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
18,600	28,000	35,100	45,100	53,400	62,400	

Magnitude and frequency of annual high flow,  
based on period of record 1912, 1921-72, 1987-90

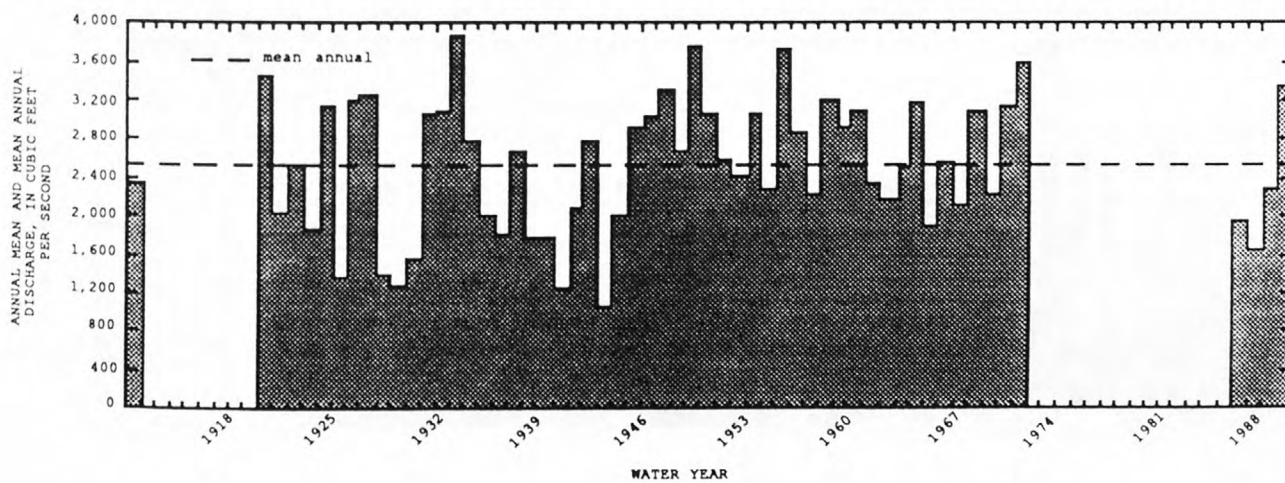
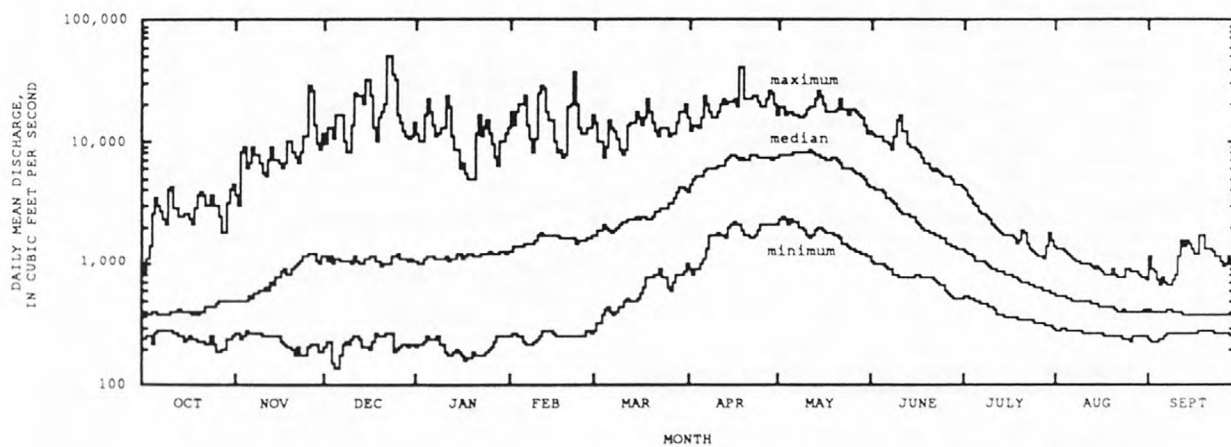
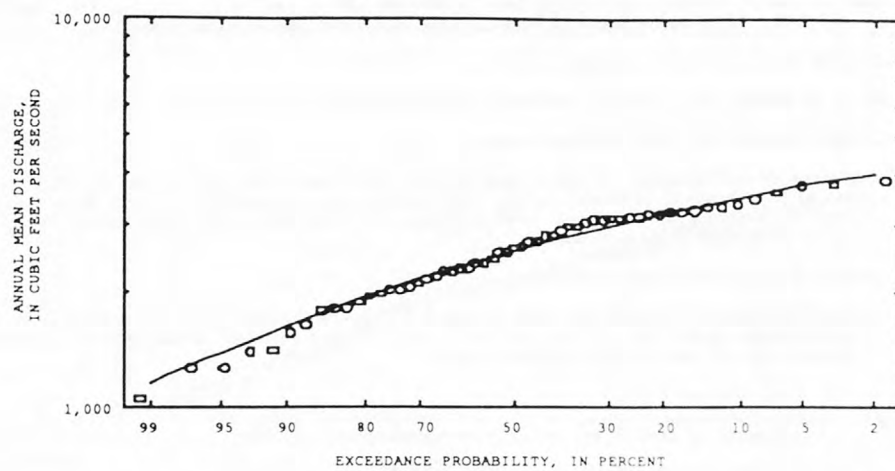
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	17,900	24,900	29,400	34,900	38,800	42,700
3	16,300	21,700	24,600	27,800	29,800	31,600
7	14,000	17,600	19,200	20,600	21,400	22,000
15	11,700	14,500	15,700	16,800	17,300	17,700
30	9,980	12,200	13,100	13,900	14,300	14,600
60	7,990	9,740	10,500	11,100	11,500	11,700
90	6,540	7,980	8,630	9,230	9,550	9,810

Duration table of daily mean flow for period of record 1912, 1921-72, 1987-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
15,800	9,660	6,990	5,320	4,050	2,550	1,670	1,100	762	554	434	346	304	273	251	238	191



LOCATION MAP





## SPOKANE RIVER BASIN

12414500 ST. JOE RIVER AT CALDER, ID

LOCATION.—Lat 47°16'29", long 116°11'17", in NW 1/4 NW 1/4 SE 1/4, sec. 3, T. 45 N., R. 2 E., Shoshone County, Hydrologic Unit 17010304, on right bank 75 ft downstream from road bridge at Calder, and at mile 42.9.

DRAINAGE AREA.—1,030 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—April 1911 to September 1912 (published as "near Calder"), July 1920 to September 1990.

REVISED RECORDS.—WSP 1182: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 2,171.76 ft above sea level. Apr. 14, 1911, to Sept. 30, 1912, nonrecording gage at site 2.5 mi downstream at different datum. Nonrecording gage at present site July 13 to Dec. 21, 1920, water-stage recorder at present site thereafter. Datum July 13, 1920, to Sept. 30, 1966, 75 ft lower than present datum, and datum Oct. 1, 1966, to Aug. 14, 1972, 15 ft lower than present datum.

REMARKS.—No diversions above gage.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 53,000 ft<sup>3</sup>/s Dec. 23, 1933, computed on basis of slope between gages downstream; maximum gage height, 18.1 ft Apr. 18, 1938, from floodmark, present datum; minimum discharge, 87 ft<sup>3</sup>/s Nov. 29, 1979; minimum gage height, 3.43 ft Dec. 5, 1928, present datum.

Summary of monthly and annual discharges, 1912, 1921-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,620	273	562	300	0.54	2.0
November	6,030	258	964	851	0.88	3.4
December	8,890	288	1,360	1,420	1.0	4.9
January	5,440	204	1,180	966	0.82	4.2
February	4,370	239	1,450	1,030	0.71	5.1
March	6,410	539	2,010	1,190	0.59	7.2
April	10,500	2,070	5,360	1,930	0.36	19.0
May	13,900	3,290	8,180	2,660	0.33	29.0
June	13,000	1,150	4,660	2,440	0.52	16.6
July	3,250	554	1,360	567	0.42	4.8
August	953	356	603	141	0.23	2.1
September	839	316	472	105	0.22	1.7
Annual	3,960	1,060	2,350	652	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1922-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	305	226	188	160	131	114
3	319	242	205	177	148	130
7	335	264	230	204	177	160
14	354	283	250	225	199	183
30	385	313	280	255	229	213
60	417	340	305	278	251	235
90	450	360	322	295	269	253
120	503	387	341	310	279	262
183	645	455	389	346	306	285

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1912, 1921-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
15,300	21,800	26,400	32,600	37,600	42,700	

Magnitude and frequency of annual high flow,  
based on period of record 1912, 1921-90

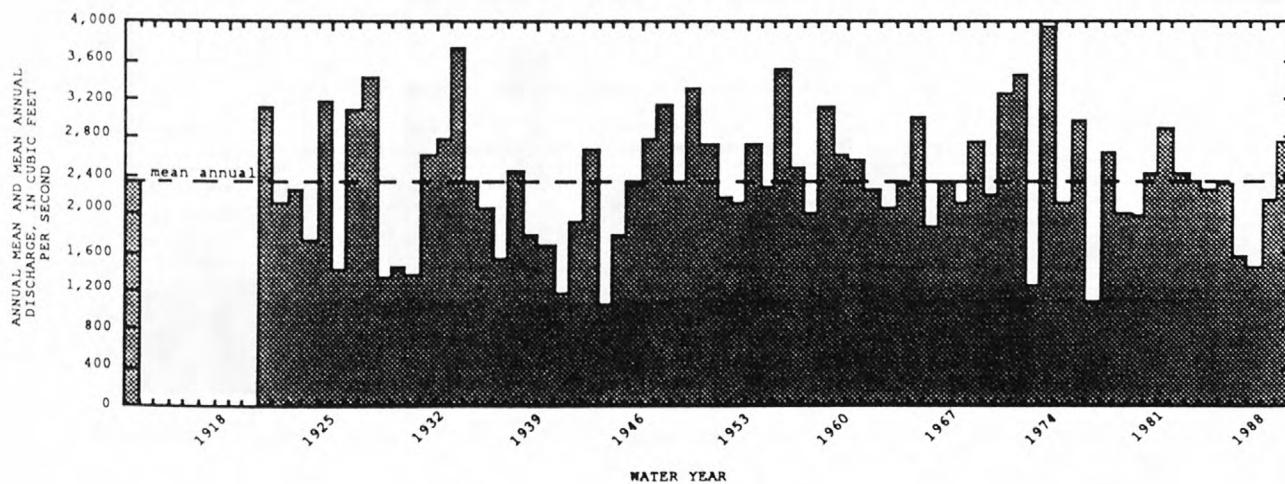
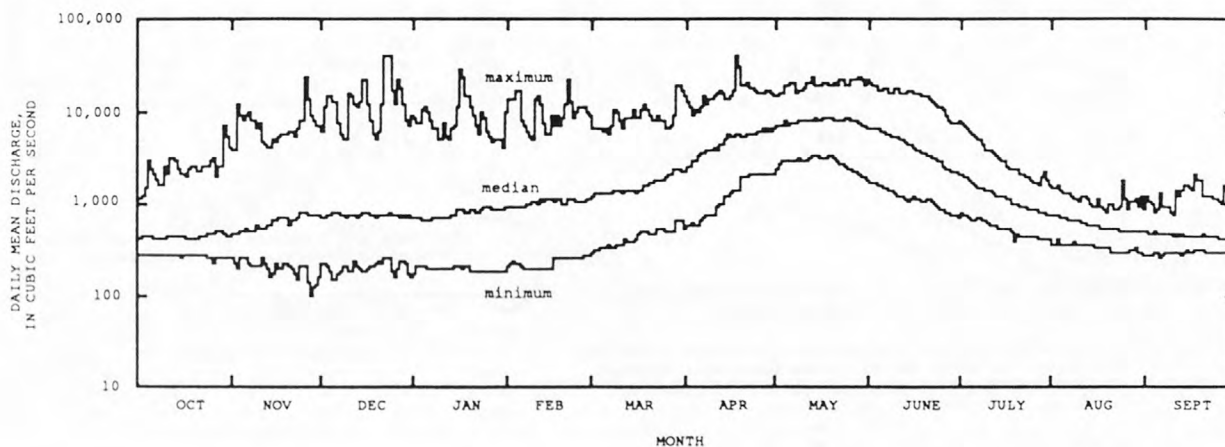
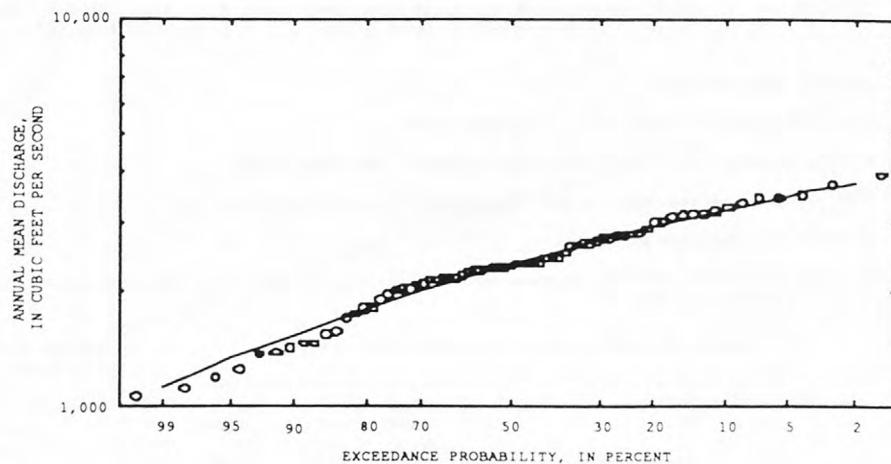
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	14,600	20,000	23,300	27,200	30,000	32,700
3	13,600	17,900	20,300	23,000	24,700	26,300
7	12,200	15,600	17,300	18,900	19,900	20,800
15	10,600	13,500	15,000	16,600	17,500	18,400
30	9,230	11,800	13,100	14,400	15,300	16,000
60	7,650	9,590	10,600	11,500	12,000	12,500
90	6,290	7,790	8,520	9,220	9,620	9,960

Duration table of daily mean flow for period of record 1912, 1921-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
14,600	9,120	6,560	4,930	3,690	2,190	1,450	1,010	724	572	462	374	323	275	247	221	178



LOCATION MAP



## SPOKANE RIVER BASIN

12414900 ST. MARIES RIVER NEAR SANTA, ID

LOCATION.—Lat 47°10'35", long 116°29'30", in NW 1/4, SE 1/4, NW 1/4, sec. 8, T. 44 N., R. 1 W., Benewah County, Hydrologic Unit 17010304, on right bank 450 ft upstream from bridge on State Highway 3, 0.3 mi upstream from Santa Creek, 2.7 mi northwest of Santa, and at mile 24.6.

DRAINAGE AREA.—275 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1965 to September 1990.

REVISED RECORDS.—WDR 1974: 1968-70(M), 1972(M). WDR 1982: 1981.

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

REMARKS.—No diversions above gage.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,700 ft<sup>3</sup>/s Jan. 15, 1974, gage height, 12.60 ft; minimum, 15 ft<sup>3</sup>/s Nov. 11, 1978, gage height, 3.32 ft.

Summary of monthly and annual discharges, 1966-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	132	36	71	19	0.27	1.7
November	280	46	121	62	0.51	2.9
December	701	55	203	179	0.88	4.8
January	1,640	48	338	320	0.95	8.1
February	1,390	125	469	329	0.70	11.2
March	2,170	153	687	411	0.60	16.3
April	1,670	289	889	434	0.49	21.2
May	1,610	265	783	417	0.53	18.7
June	1,010	131	383	248	0.65	9.1
July	188	57	124	40	0.33	2.9
August	103	38	68	18	0.27	1.6
September	91	36	65	16	0.24	1.5
Annual	711	134	349	138	0.40	100

Magnitude and frequency of annual low flow,  
based on period of record 1967-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	42	33	29	26	22	20
3	43	34	30	27	23	22
7	45	37	33	30	27	26
14	48	40	36	32	29	27
30	53	43	38	35	31	28
60	58	47	42	38	34	31
90	63	51	46	41	37	34
120	69	55	49	44	40	37
183	90	72	64	59	53	50

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1966-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,710	4,430	5,780	7,760	9,430	11,300

Magnitude and frequency of annual high flow,  
based on period of record 1966-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	2,630	4,330	5,620	7,410	8,870	10,400
3	2,240	3,550	4,490	5,730	6,700	7,690
7	1,850	2,890	3,580	4,440	5,070	5,690
15	1,540	2,200	2,550	2,910	3,130	3,310
30	1,210	1,690	1,940	2,200	2,350	2,480
60	965	1,340	1,540	1,750	1,870	1,980
90	825	1,160	1,360	1,570	1,720	1,840

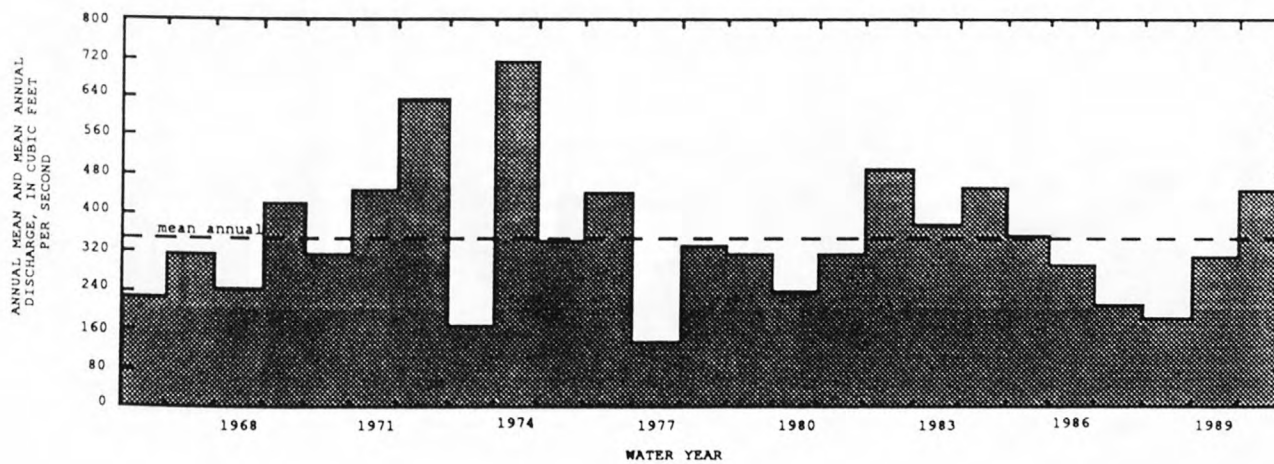
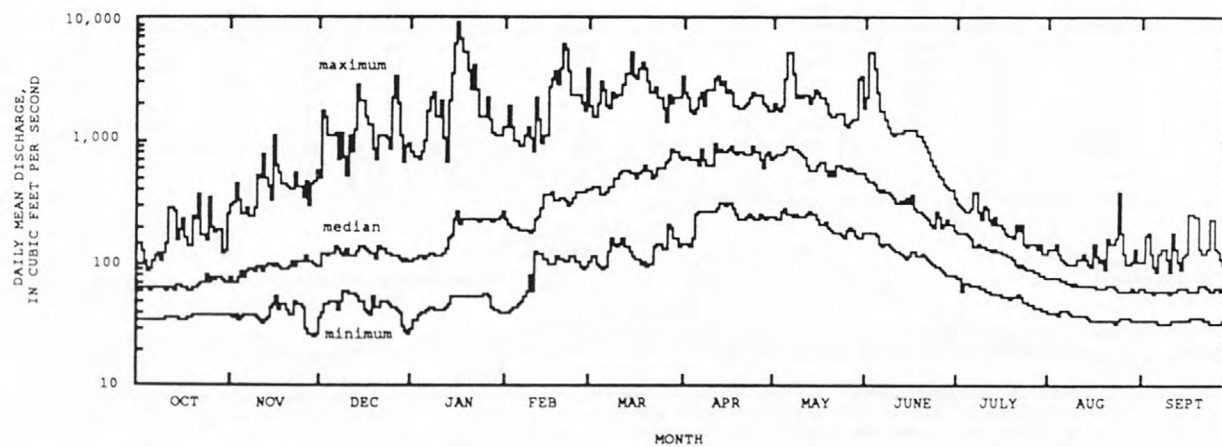
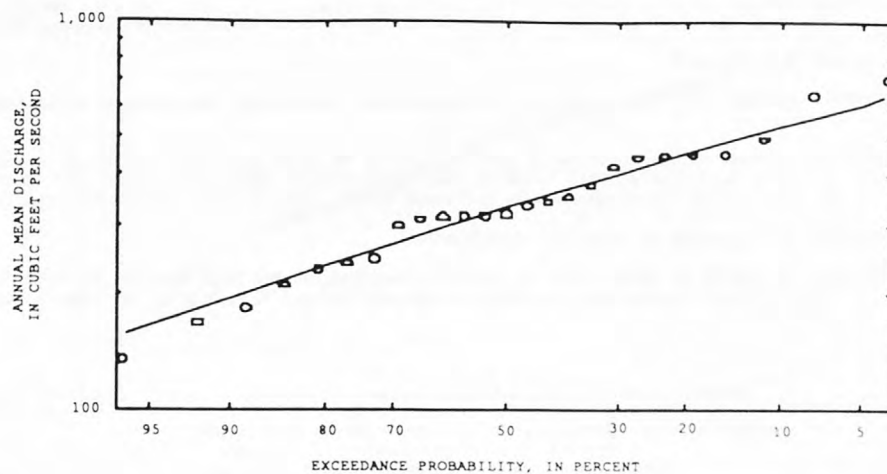
Duration table of daily mean flow for period of record 1966-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
2,250	1,310	937	690	530	343	224	149	108	82	66	53	45	38	36	35	30	

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SPOKANE RIVER BASIN

12415000 ST. MARIES RIVER AT LOTUS, ID

LOCATION.—Lat 47°14'40", long 116°37'25", in NW 1/4, SW 1/4, sec. 17, T. 45 N., R. 2 W., Benewah County, Hydrologic Unit 17010304, on left bank 1 mi northwest of Lotus, 1 mi downstream from Carlton Creek, 5.5 mi southwest of St. Maries, and at mile 10.0.

DRAINAGE AREA.—437 mi<sup>2</sup>.

PERIOD OF RECORD.—July, August, October to December 1911, January 1912 (gage heights only), February to October 1912, July 1920 to September 1966.

GAGE.—Water-stage recorder. Datum of gage is 2,140.19 ft above sea level, referenced to bench mark "U.S.G.S. 2155 1911 35" (Geological Survey Bulletin 567, p. 45). Datum of 1929, supplementary adjustment of 1947, is 3.17 ft higher. Prior to Oct. 1, 1945, staff gages at sites 0.8 to 1.3 mi upstream at different datums. Oct. 1, 1945, to Feb. 21, 1949, staff gage at present site and datum.

REMARKS.—No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 23,800 ft<sup>3</sup>/s Dec. 22, 23, 1933, from discharge rating curve extended above 4,000 ft<sup>3</sup>/s by logarithmic plotting; maximum gage height, 15.0 ft, Dec. 23, 1964; minimum, 11 ft<sup>3</sup>/s Nov. 23, 1952, gage height, 0.98 ft.

Summary of monthly and annual discharges, 1921-66

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	360	46	107	67	0.63	1.7
November	1,800	42	249	278	1.1	4.0
December	3,320	38	438	562	1.3	7.0
January	2,290	28	435	448	1.0	7.0
February	2,320	34	646	507	0.79	10.3
March	2,010	71	945	454	0.48	15.1
April	3,090	321	1,690	690	0.41	27.1
May	2,910	285	1,060	559	0.53	17.1
June	1,080	120	406	232	0.57	6.5
July	297	50	126	55	0.44	2.0
August	209	26	68	30	0.44	1.1
September	161	34	69	28	0.41	1.1
Annual	958	190	519	183	0.35	100

Magnitude and frequency of annual low flow,  
based on period of record 1922-66

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	41	29	24	20	16	14
3	43	32	27	23	19	17
7	45	34	29	25	21	19
14	48	36	31	27	23	20
30	51	39	34	30	26	23
60	57	45	40	36	33	31
90	64	51	45	41	38	35
120	74	56	49	45	40	38
183	113	76	62	53	45	41

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1921-66

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,790	8,160	11,100	15,800	20,000	25,100

Magnitude and frequency of annual high flow,  
based on period of record 1921-66

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	4,280	6,650	8,390	10,800	12,700	14,600
3	3,560	5,170	6,210	7,470	8,370	9,240
7	2,880	3,970	4,590	5,270	5,700	6,090
15	2,360	3,210	3,660	4,140	4,440	4,690
30	1,940	2,630	3,000	3,380	3,610	3,810
60	1,560	2,110	2,410	2,720	2,920	3,090
90	1,340	1,780	2,010	2,250	2,390	2,520

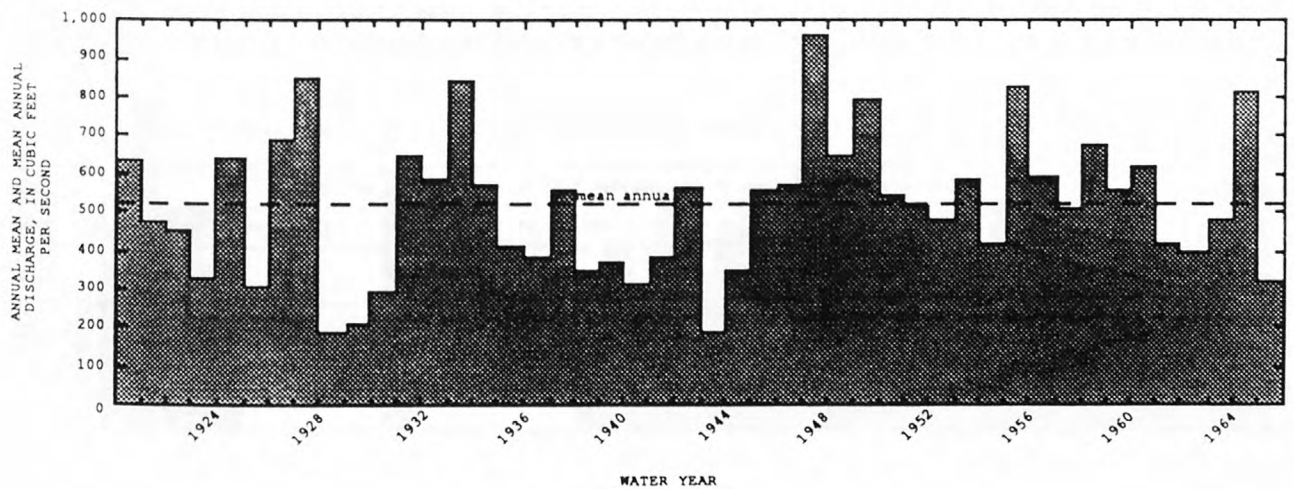
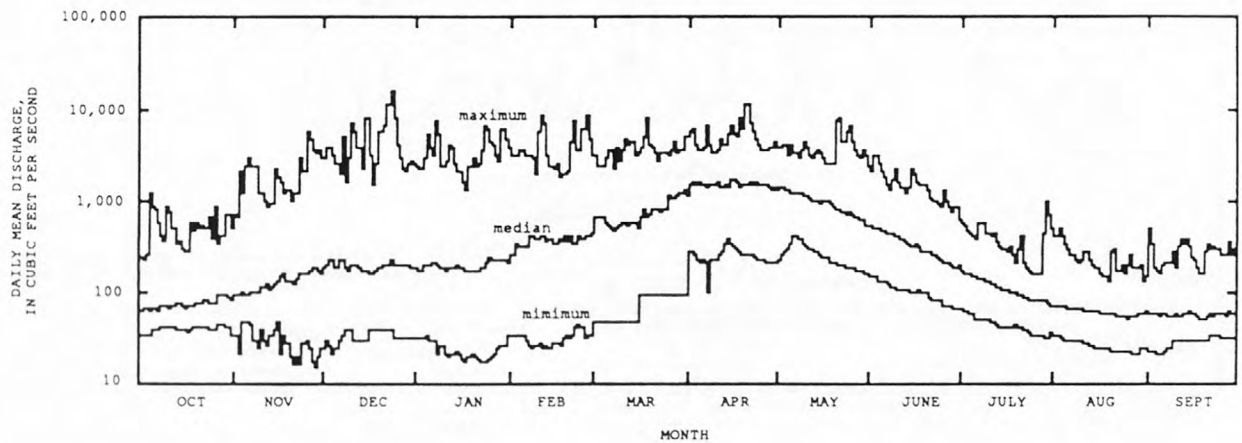
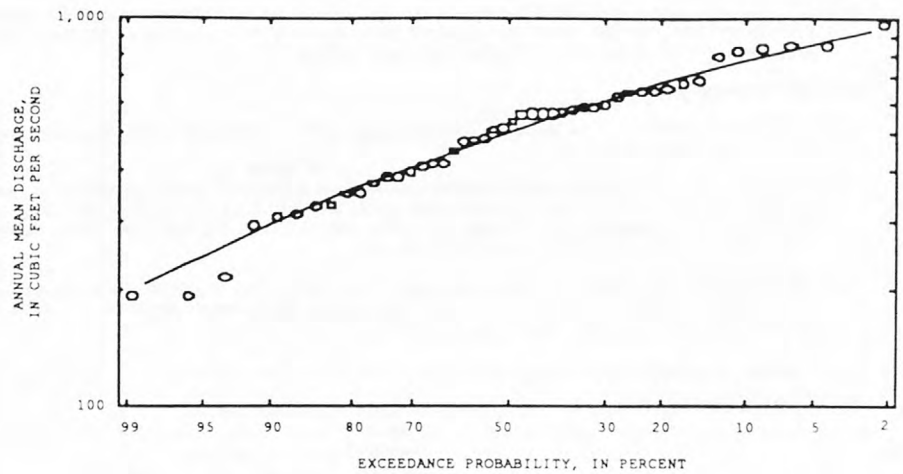
Duration table of daily mean flow for period of record 1921-66

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,630	2,060	1,460	1,110	854	496	300	191	128	90	68	52	43	35	31	27	20

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





**SPOKANE RIVER BASIN**

12416000 HAYDEN CREEK BELOW NORTH FORK, NEAR HAYDEN LAKE, ID  
(Hydrologic bench-mark station)

**LOCATION.**—Lat 47°49'22", long 116°39'10", in NW 1/4, NW 1/4, SW 1/4, sec. 25, T. 52 N., R. 3 W., Kootenai County, Hydrologic Unit 17010305, Coeur d'Alene National Forest, on right bank 0.3 mi downstream from confluence of East Fork and North Fork, 2.2 mi upstream from Hayden Lake, and 7.5 mi northeast of Hayden Lake Post Office.

**DRAINAGE AREA.**—22.0 mi<sup>2</sup>.

**PERIOD OF RECORD.**—April 1948 to December 1953, October 1958 to September 1959, September 1961 to September 1965 (annual maximum), October 1965 to September 1990.

**GAGE.**—Water-stage recorder and a self-cleaning broad-crested concrete weir. Elevation of gage is 2,370 ft above sea level, from topographic map. Apr. 22 to Nov. 1, 1948, nonrecording gage, and Nov. 2, 1948, to June 26, 1951, water-stage recorder at site 200 ft downstream 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.

**EXTREMES FOR PERIOD OF RECORD.**—Maximum discharge, 1,280 ft<sup>3</sup>/s Feb. 21, 1982, gage height, 5.69 ft, present site and datum, from rating curve extended above 365 ft<sup>3</sup>/s on basis of slope-area measurement; minimum, 1.7 ft<sup>3</sup>/s Aug. 19–20, 1977; minimum gage height, 2.25 ft, Aug. 19–20, 1977, Oct. 23, Dec. 26, 1988.

Summary of monthly and annual discharges, 1949–53, 1959, 1966–90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	21	2.7	5.8	3.4	0.59	1.7
November	35	3.1	10	7.9	0.76	3.1
December	80	3.7	20	21	1.0	5.9
January	110	3.3	27	27	1.0	7.8
February	120	4.4	39	30	0.78	11.4
March	174	6.5	60	38	0.63	17.6
April	168	12	81	43	0.54	23.5
May	137	8.7	53	28	0.52	15.6
June	59	6.5	24	15	0.60	7.1
July	23	3.7	10	4.7	0.45	3.0
August	11	2.3	6.0	2.0	0.33	1.8
September	8.1	2.8	5.1	1.3	0.25	1.5
Annual	52	5.4	28	11	0.37	100

Magnitude and frequency of annual low flow,  
based on period of record 1949–53, 1967–91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>#</sup> 1%
1	3.4	2.7	2.4	2.1	1.9	1.7
3	3.4	2.8	2.4	2.2	1.9	1.8
7	3.6	2.9	2.5	2.3	2.0	1.8
14	3.8	3.1	2.7	2.4	2.1	1.9
30	4.2	3.4	3.0	2.7	2.4	2.2
60	4.6	3.7	3.3	2.9	2.6	2.3
90	4.9	3.9	3.4	3.1	2.7	2.5
120	5.3	4.2	3.7	3.4	3.0	2.8
183	6.7	5.1	4.5	4.1	3.7	3.5

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1949–53, 1959, 1966–90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
316	561	762	1,060	1,320	1,600

Magnitude and frequency of annual high flow,  
based on period of record 1949–53, 1959, 1966–90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>#</sup> 1%
1	308	472	543	600	627	644
3	255	363	402	430	440	447
7	197	264	284	295	299	301
15	150	194	207	213	215	216
30	115	150	160	166	168	169
60	89	116	124	128	130	131
90	74	97	105	110	112	113

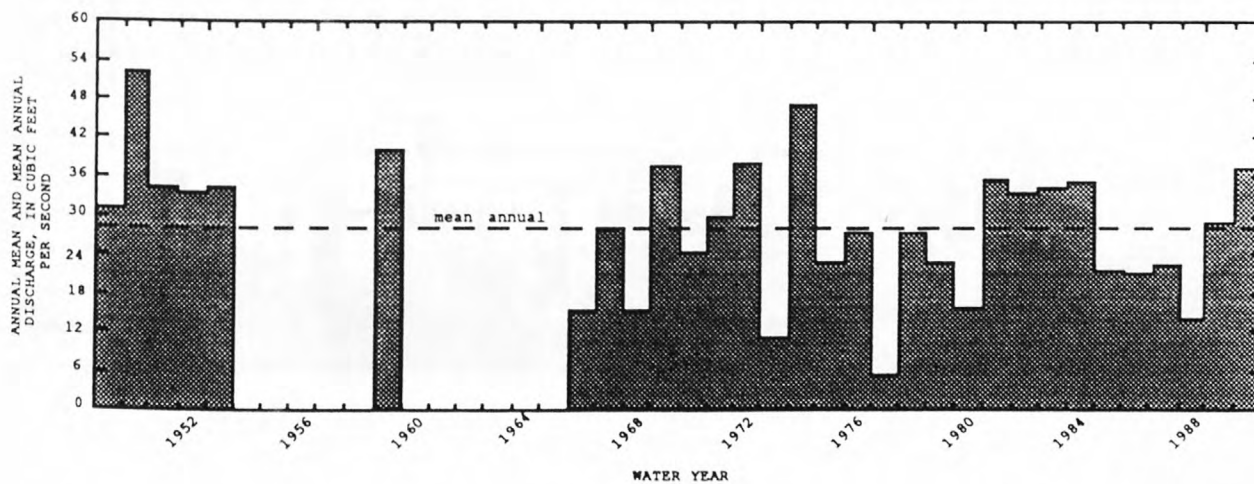
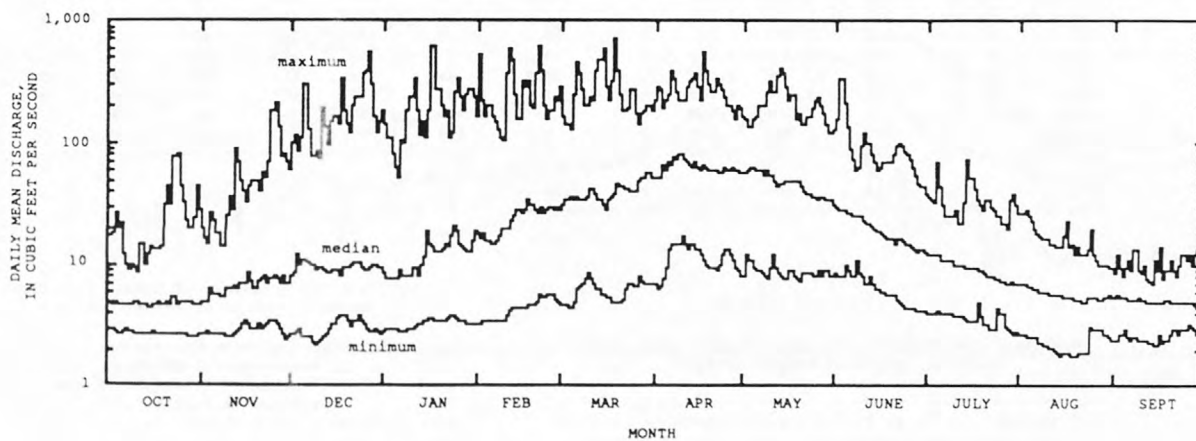
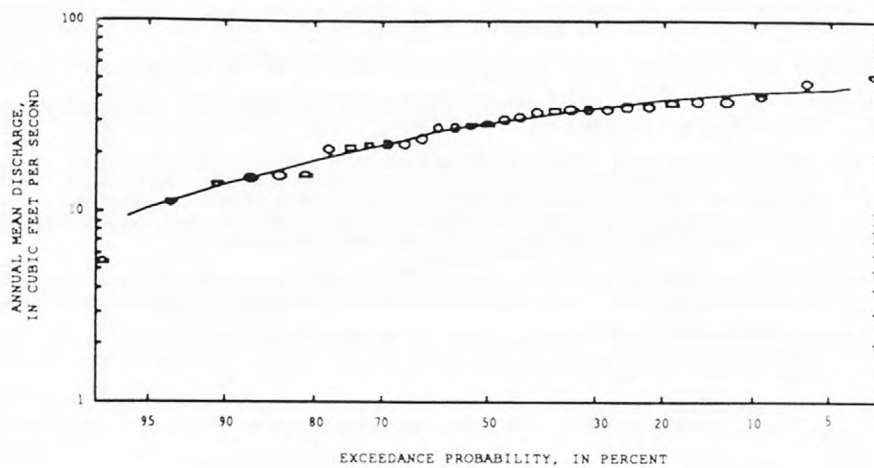
Duration table of daily mean flow for period of record 1949–53, 1959, 1966–90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
216	110	71	52	42	28	18	12	7.9	6.1	5.0	4.1	3.6	3.0	2.8	2.6	2.2

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SPOKANE RIVER BASIN

12419000 SPOKANE RIVER NEAR POST FALLS, ID

LOCATION.—Lat 47°42'11", long 116°58'37", in SW 1/4, SW 1/4, SW 1/4, sec. 4, T. 50 N., R. 6 W., Kootenai County, Hydrologic Unit 17010305, on right bank 1 mi downstream from powerplant of Washington Water Power Co., 1.5 mi southwest of Post Falls, and at mile 100.7.

DRAINAGE AREA.—3,840 mi<sup>2</sup>, approximately, of which about 122 mi<sup>2</sup> in the vicinity of Hayden Lake is noncontributing to this station.

PERIOD OF RECORD.—October 1912 to September 1990 (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 sea level, referred to originally accepted elevation of 2,157.40 ft for the U.S. Geological Survey bench mark in southeast corner of Idaho First National Bank Building (see WSP 882). National Geodetic Vertical Datum of 1929 is at 2,047.00 ft gage datum. Jan. 1, 1913, to Nov. 21, 1920, nonrecording gage, and Nov. 22, 1920, to Sept. 15, 1934, recording gage 0.6 mi upstream. From Sept. 16, 1934, to Nov. 15, 1949, recording gage 0.8 mi upstream. From Nov. 16, 1949, at present site. Datum of all gages prior to Sept. 30, 1964, 50 ft lower.

REMARKS.—Rathdrum Prairie Canal (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 (sta 12415500).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 50,100 ft<sup>3</sup>/s, when recorder was not operating, Dec. 25, 1933 (determined from unpublished records collected by Washington Water Power Co. for station at Liberty Bridge); maximum, 65 ft<sup>3</sup>/s July 25, 30, 1973; minimum gage height, 4.68 ft, July 20, 21, 1977.

Summary of monthly and annual discharges, 1914-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	5,460	782	1,690	751	0.44	2.3
November	13,100	627	2,810	1,910	0.68	3.8
December	23,700	784	4,730	4,040	0.85	6.4
January	24,900	996	5,190	4,540	0.87	7.0
February	16,300	1,030	6,010	3,890	0.65	8.0
March	25,400	1,750	7,990	4,250	0.53	10.7
April	26,100	3,560	14,500	4,870	0.34	19.4
May	31,800	5,680	17,700	6,500	0.37	23.8
June	26,700	1,580	9,710	6,140	0.63	13.0
July	10,700	889	2,030	1,460	0.72	2.7
August	2,130	185	946	411	0.43	1.3
September	1,850	188	1,160	384	0.33	1.6
Annual	11,600	2,140	6,200	1,930	0.31	100

Magnitude and frequency of annual low flow,  
based on period of record 1914-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	402	190	125	87	56	42
3	448	220	146	102	67	50
7	534	275	185	130	84	62
14	612	326	222	156	101	74
30	743	430	306	223	151	115
60	940	635	495	393	296	240
90	1,090	820	688	587	483	420
120	1,240	972	855	767	679	625
183	1,740	1,310	1,150	1,050	961	910

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1914-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
25,700	33,100	38,100	44,100	48,500	52,800	

Magnitude and frequency of annual high flow,  
based on period of record 1914-90

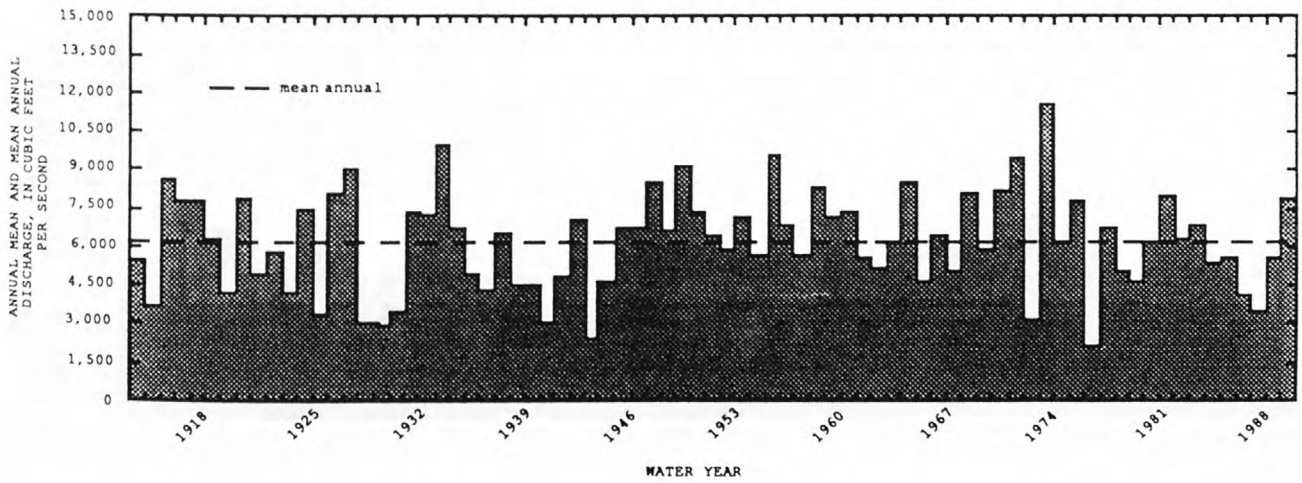
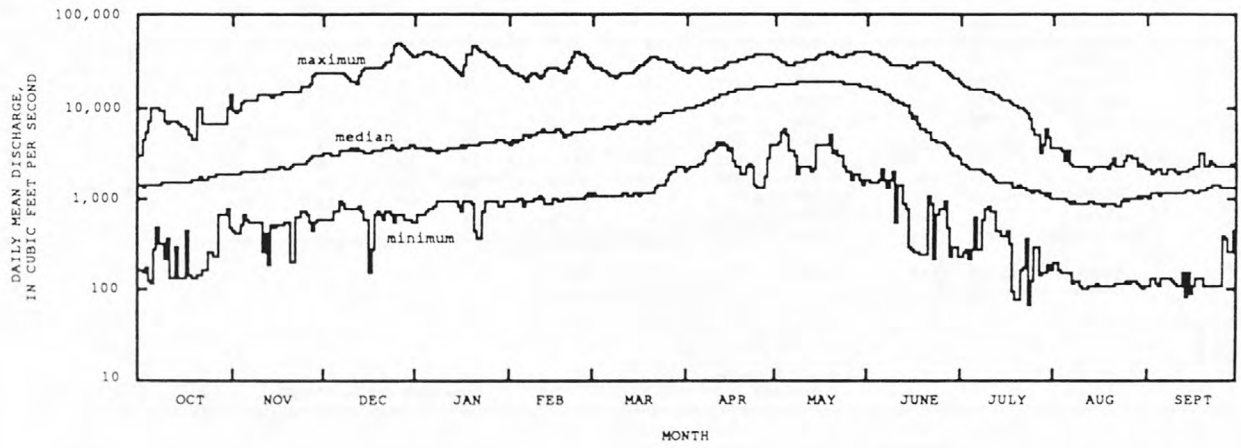
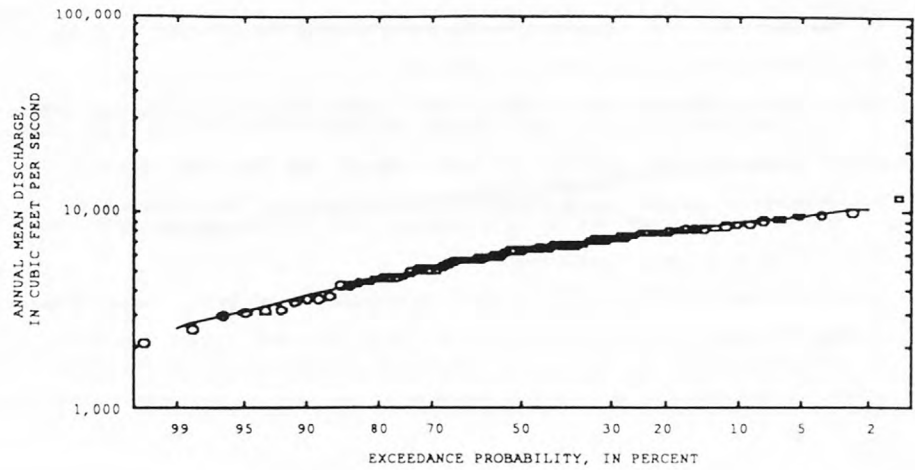
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	25,600	33,000	36,500	39,800	41,600	43,100
3	25,400	32,700	36,000	39,100	40,800	42,100
7	24,700	31,600	34,700	37,400	38,800	39,900
15	23,200	29,400	32,000	34,200	35,300	36,100
30	21,000	26,500	28,800	30,800	31,900	32,600
60	18,000	22,800	24,800	26,500	27,300	27,900
90	15,400	19,500	21,300	22,900	23,700	24,300

Duration table of daily mean flow for period of record 1914-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
30,000	21,600	17,400	14,100	11,300	6,820	4,410	2,910	2,010	1,580	1,240	913	659	282	160	136	110



LOCATION MAP



# SNAKE RIVER MAIN STEM

13011000 SNAKE RIVER NEAR MORAN, WY

LOCATION.—Lat 43°51'31", long 110°35'09", in SW 1/4, sec. 18, T. 45 N., R. 114 W., Teton County, Hydrologic Unit 17040101, Grand Teton National Park, on left bank 1,000 ft downstream from Jackson Lake Dam, 4.1 mi west of Moran, and at mile 988.7.

DRAINAGE AREA.—807 mi<sup>2</sup>. Mean elevation, 8,040 ft.

PERIOD OF RECORD.—September 1903 to September 1990. 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.

REVISED RECORDS.—WSP 1217: 1944(m). WSP 1347: 1906-10. WDR Idaho 1974: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 6,727.84 ft above sea level (levels by U.S. Bureau of Reclamation). Prior to June 13, 1917, nonrecording gage, and June 14, 1917, to May 20, 1940, water-stage recorder, at site 1.5 mi downstream at different datums.

REMARKS.—Flow regulated by Jackson Lake.

COOPERATION.—Gage readings for current reporting purposes provided by U.S. Bureau of Reclamation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,100 ft<sup>3</sup>/s June 12, 1918, gage height, 10.41 ft, site and datum then in use; maximum gage height, 10.74 ft June 25, 1981; minimum, 0.30 ft<sup>3</sup>/s Oct. 26, 27, 28, 1969, gage height, 0.89 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood during early June 1894 was considerably higher than that of June 12, 1918.

Summary of monthly and annual discharges, 1904-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,610	5.1	325	353	1.1	1.9
November	3,010	3.0	286	410	1.4	1.7
December	4,280	2.0	324	520	1.6	1.9
January	1,360	2.0	291	288	0.99	1.7
February	2,490	2.0	355	470	1.3	2.0
March	3,050	2.0	448	596	1.3	2.6
April	3,830	2.5	712	952	1.3	4.2
May	5,660	6.5	1,410	1,440	1.0	8.2
June	8,600	52	3,410	1,890	0.55	19.9
July	8,180	983	4,090	1,510	0.37	23.8
August	7,370	987	3,570	1,480	0.41	20.8
September	5,270	146	1,930	1,030	0.53	11.3
Annual	2,150	687	1,440	324	0.23	100

Magnitude and frequency of annual low flow,  
based on period of record 1905-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	32	7.8	3.6	1.8	0.66	0.00
3	33	8.4	4.0	2.2	0.84	0.00
7	34	8.8	4.3	2.3	0.92	0.00
14	41	10	5.2	2.9	1.5	0.99
30	47	12	6.1	3.4	1.8	1.2
60	60	16	7.6	4.2	2.1	1.3
90	88	21	9.5	4.7	2.1	1.2
120	110	24	10	4.7	1.9	1.0
183	174	44	19	9.5	4.0	2.2

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1904-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
7,550	9,740	11,100	12,800	14,000	15,200

Magnitude and frequency of annual high flow,  
based on period of record 1904-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	7,110	9,270	10,600	12,300	13,600	14,800
3	6,910	9,030	10,400	12,000	13,200	14,400
7	6,550	8,520	9,730	11,200	12,200	13,200
15	6,090	7,810	8,850	10,100	10,900	11,700
30	5,400	6,860	7,740	8,750	9,460	10,100
60	4,560	5,650	6,260	6,950	7,410	7,830
90	4,030	4,920	5,420	5,970	6,330	6,660

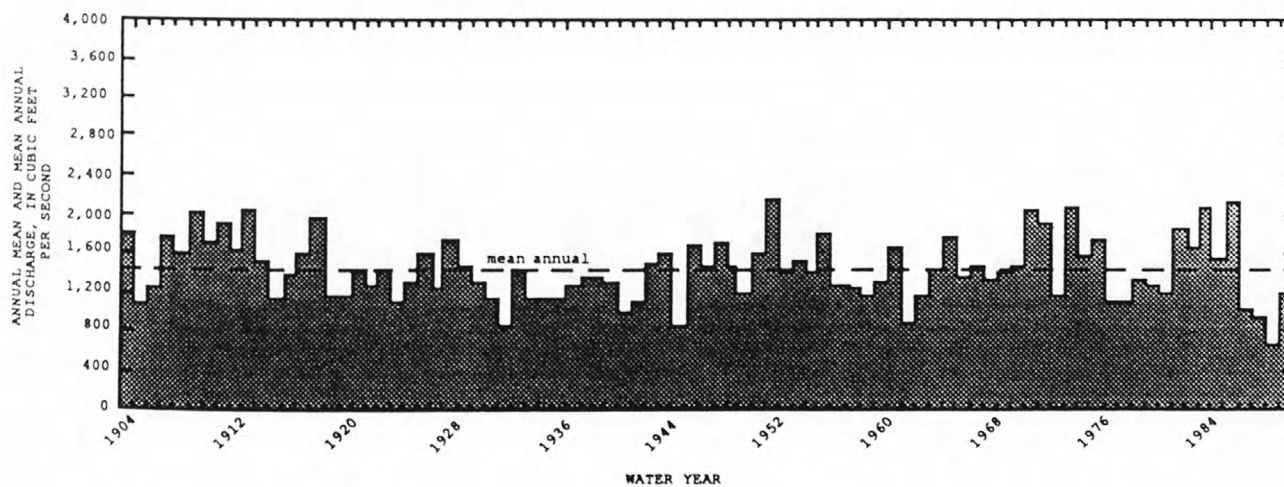
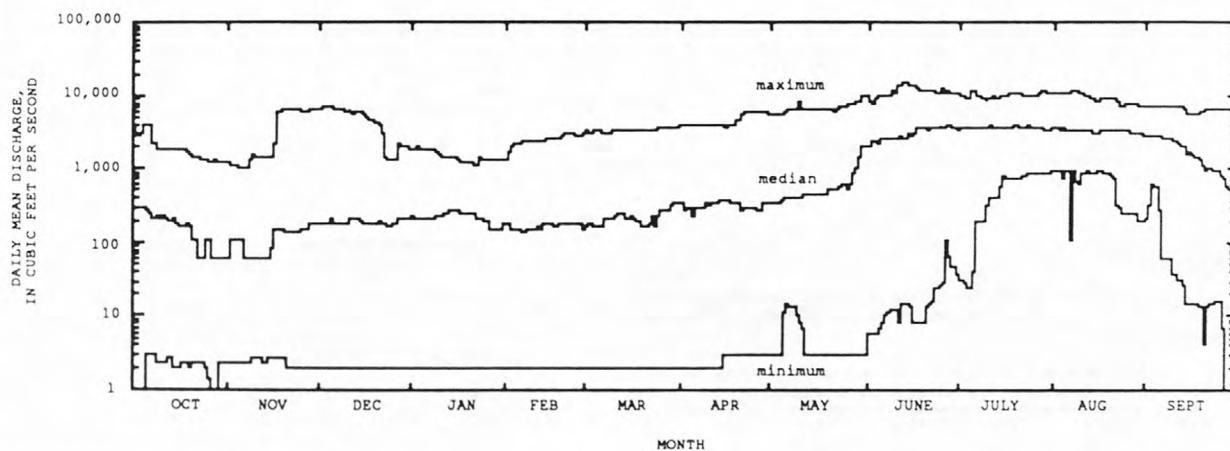
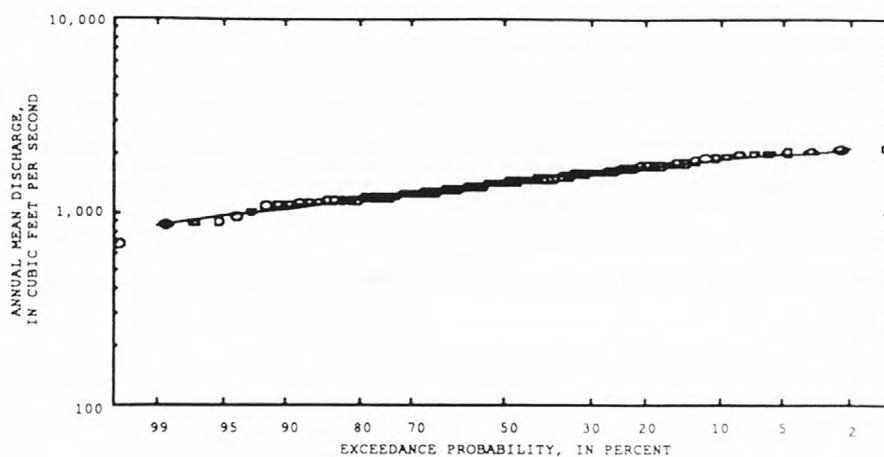
Duration table of daily mean flow for period of record 1904-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
8,450	5,840	4,480	3,550	2,870	1,710	754	495	320	76	30	17	8.5	3.9	3.3	2.1	1.6	1.6





LOCATION MAP





PACIFIC CREEK BASIN

13011500 PACIFIC CREEK AT MORAN, WY

LOCATION.—Lat 43°51'04", long 110°30'59", in SW 1/4 NW 1/4, sec. 23, T. 45 N., R. 114 W., Teton County, Hydrologic Unit 17040101, Grand Teton National Park, on left bank 40 ft upstream from bridge on U.S. Highway 287, at Moran, and at mile 0.5.

DRAINAGE AREA.—169 mi<sup>2</sup>. Mean elevation, 8,160 ft.

PERIOD OF RECORD.—July to November 1906 (gage heights only), July 1917 to September 1918 (no winter records), September 1944 to September 1975, July 1978 to September 1990. Published as "near Moran" prior to October 1968.

GAGE.—Water-stage recorder. Elevation of gage is 6,720 ft above sea level, from topographic map. July 31 to Nov. 11, 1906, nonrecording gage at site 0.4 mi downstream at different datum. July 20, 1917, to Sept. 30, 1918, nonrecording gage at site 0.1 mi downstream at different datum. Sept. 23, 1944, to Nov. 13, 1959, at site 100 ft upstream at same datum. Nov. 14, 1959, to Sept. 24, 1975, at site 35 ft downstream at same datum.

REMARKS.—No diversion or regulation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,350 ft<sup>3</sup>/s May 29, 1983, gage height, 6.33 ft; minimum daily, 19 ft<sup>3</sup>/s Dec. 31, 1979.

Summary of monthly and annual discharges, 1945-75, 1979-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	142	35	66	20	0.31	2.1
November	105	33	56	16	0.30	1.8
December	94	30	49	14	0.28	1.6
January	71	25	45	11	0.24	1.4
February	66	27	45	9.0	0.20	1.3
March	95	35	51	11	0.22	1.6
April	418	53	147	91	0.62	4.6
May	1,610	345	922	279	0.30	29.2
June	2,380	301	1,260	482	0.38	39.9
July	1,530	91	351	252	0.72	11.1
August	191	43	98	33	0.34	3.1
September	127	41	71	18	0.25	2.3
Annual	403	148	264	64	0.24	100

Magnitude and frequency of annual low flow,  
based on period of record 1946-75, 1980-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	33	27	24	22	20	19
3	35	28	26	23	21	20
7	37	30	27	25	23	21
14	38	31	28	26	24	22
30	40	33	30	28	25	24
60	42	35	32	29	27	25
90	44	37	34	31	28	27
120	46	38	35	32	30	28
183	50	42	39	37	34	33

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-75, 1979-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,460	3,270	3,750	4,290	4,660	5,000

Magnitude and frequency of annual high flow,  
based on period of record 1945-75, 1979-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	2,140	2,720	3,050	3,430	3,690	3,930
3	2,010	2,560	2,880	3,250	3,500	3,740
7	1,860	2,370	2,680	3,050	3,320	3,560
15	1,670	2,150	2,450	2,810	3,060	3,310
30	1,460	1,840	2,070	2,340	2,530	2,720
60	1,120	1,410	1,570	1,750	1,880	1,990
90	849	1,070	1,200	1,350	1,450	1,550

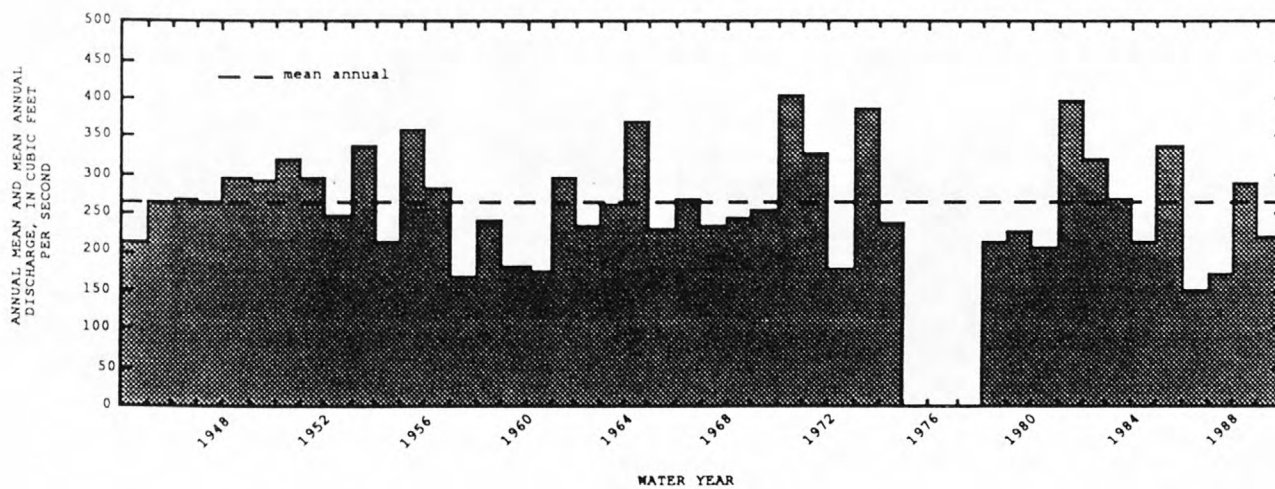
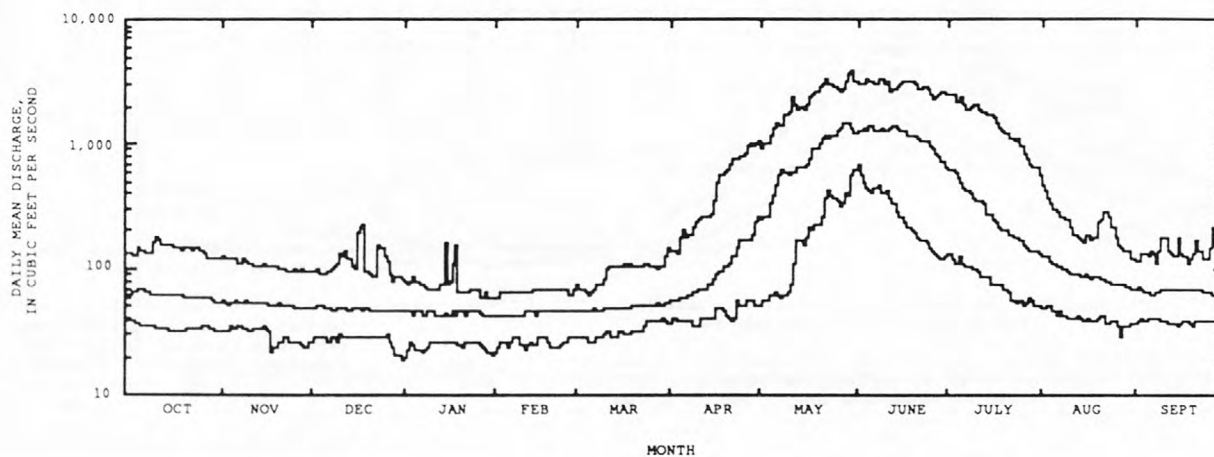
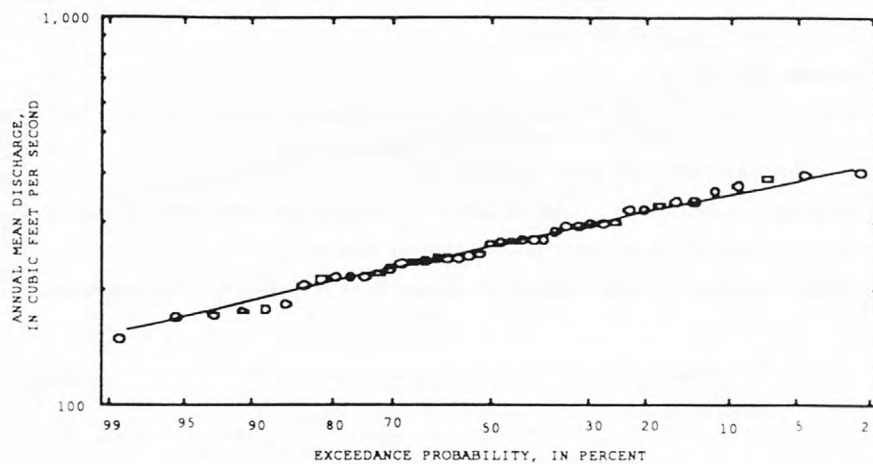
Duration table of daily mean flow for period of record 1945-75, 1979-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,210	1,360	933	551	278	114	80	66	58	52	46	39	34	30	28	27	23

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BUFFALO FORK BASIN

13011900 BUFFALO FORK ABOVE LAVA CREEK, NEAR MORAN, WY

LOCATION.—Lat 43°50'14", long 110°26'21", in SE 1/4, NE 1/4, sec. 29, T. 45 N., R. 113 W., Teton County, Hydrologic Unit 17040101, Grand Teton National Park, on right bank underneath bridge on U.S. Highway 26/287, about 2 mi upstream from Lava Creek, 3.5 mi east of Moran, and 4.0 mi upstream from mouth.

DRAINAGE AREA.—323 mi<sup>2</sup>.

PERIOD OF RECORD.—September 1965 to September 1990. July to November 1906, July 1917 to September 1918, and September 1944 to September 1960 at sites about 3 mi downstream.

REVISED RECORDS.—WDR Idaho 1974: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 6,772.78 ft above sea level (Federal Highway Administration bench mark).

REMARKS.—No regulation and small diversions above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,540 ft<sup>3</sup>/s June 9, 1981, gage height, 8.61 ft; minimum daily, 77 ft<sup>3</sup>/s Feb. 5, 1982.

Summary of monthly and annual discharges, 1966-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	304	128	218	52	0.24	3.3
November	229	122	171	28	0.16	2.6
December	180	100	140	20	0.14	2.2
January	143	87	121	17	0.14	1.9
February	191	93	117	20	0.17	1.7
March	175	101	127	18	0.15	1.9
April	367	124	220	66	0.30	3.4
May	1,770	397	981	310	0.32	15.1
June	4,110	1,130	2,320	711	0.31	35.8
July	3,060	230	1,390	771	0.56	21.4
August	946	163	426	185	0.43	6.6
September	428	141	263	80	0.31	4.1
Annual	751	286	542	121	0.22	100

Magnitude and frequency of annual low flow,  
based on period of record 1967-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	95	85	80	75	71	68
3	99	89	84	80	76	73
7	102	93	87	83	79	76
14	106	95	90	86	81	78
30	109	98	93	88	83	80
60	113	102	96	92	87	84
90	117	106	101	97	93	90
120	123	112	107	103	99	97
183	148	131	123	116	108	104

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1966-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,130	5,000	5,540	6,190	6,650	7,110

Magnitude and frequency of annual high flow,  
based on period of record 1966-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	3,750	4,660	5,210	5,870	6,350	6,800
3	3,540	4,450	5,010	5,670	6,140	6,590
7	3,240	4,140	4,720	5,450	5,980	6,520
15	2,860	3,710	4,260	4,950	5,460	5,960
30	2,520	3,200	3,590	4,040	4,340	4,610
60	2,050	2,550	2,810	3,070	3,230	3,370
90	1,600	1,990	2,190	2,390	2,510	2,610

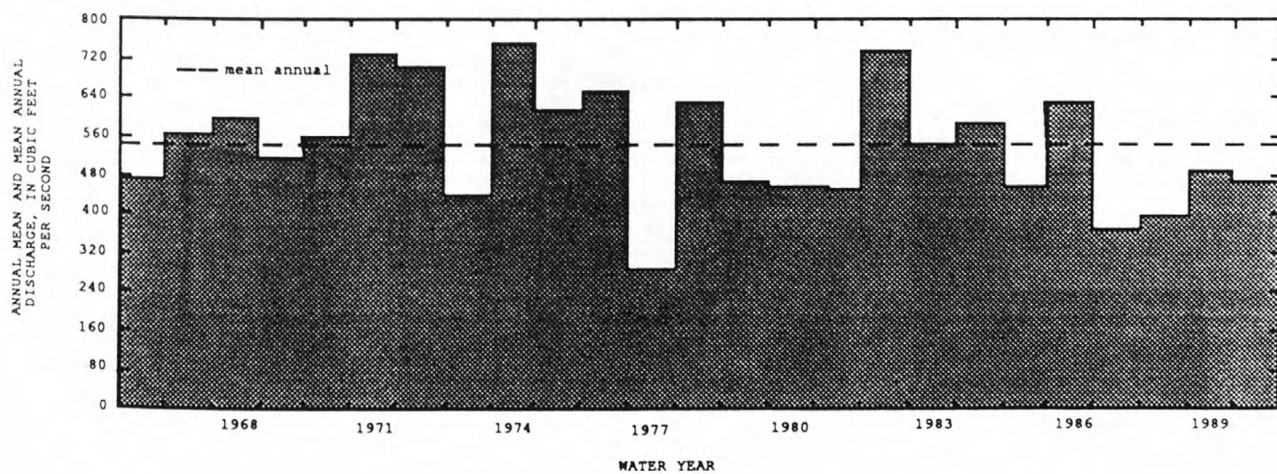
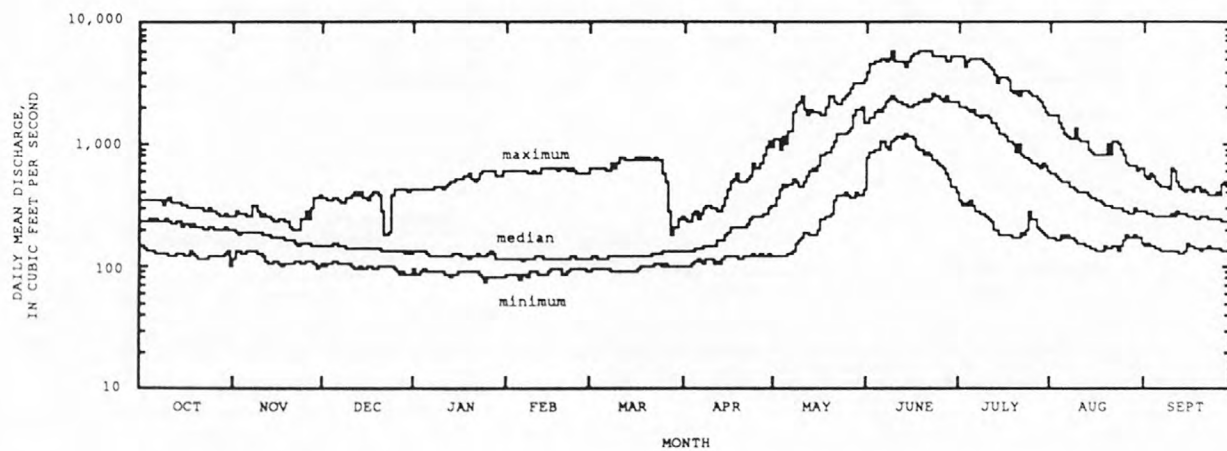
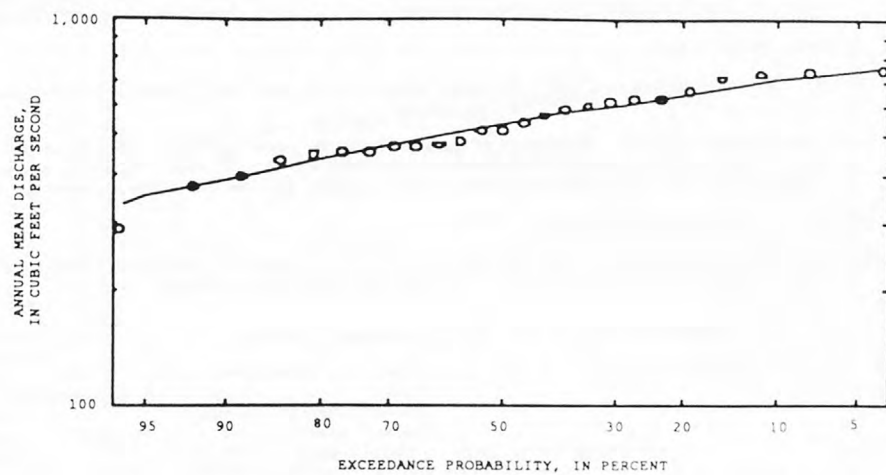
Duration table of daily mean flow for period of record 1966-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
3,840	2,430	1,670	1,100	688	351	255	199	163	141	127	114	103	95	89	85

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BUFFALO FORK BASIN

13012000 BUFFALO FORK NEAR MORAN, WY

LOCATION.—Lat 43°50'10", long 110°30'30", in sec.26, T.45 N., R.114 W., Teton County, Hydrologic Unit 17040101, on right bank 0.2 mi above bridge crossing, 0.5 mi upstream from mouth, 2.75 mi downstream from Lava Creek, and 4 mi southeast of Moran.

DRAINAGE AREA.—378 mi<sup>2</sup>.

PERIOD OF RECORD.—July to November 1906 (gage heights only), July 1917 to September 1918 (no winter records), September 1944 to September 1960.

GAGE.—Water-stage recorder. Elevation of gage is 6,720 ft above sea level, from topographic map. July 31 to Nov. 20, 1906, staff gage 300 ft upstream from mouth at different datum. July 9, 1917, to Sept. 30, 1918, nonrecording gages at sites within 500 ft upstream from present site at different datums. June 1, 1958, to June 21, 1959, water-stage recorder 0.2 mi upstream at different datum.

REMARKS.—No diversion or regulation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,960 ft<sup>3</sup>/s June 27, 1954, gage height, 6.71 ft; minimum, 78 ft<sup>3</sup>/s Nov. 20, 1953, gage height, 0.88 ft, but may have been less during periods of ice effect.

Summary of monthly and annual discharges, 1945-60

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	329	169	225	47	0.21	3.1
November	236	144	182	27	0.15	2.5
December	194	120	153	21	0.14	2.1
January	164	114	136	15	0.11	2.0
February	160	107	133	15	0.11	1.9
March	154	116	136	11	0.08	2.0
April	608	160	274	112	0.41	3.8
May	1,960	607	1,280	456	0.36	18.0
June	3,590	1,590	2,430	521	0.21	34.0
July	2,490	462	1,460	568	0.39	20.4
August	892	235	460	177	0.38	6.4
September	400	184	274	68	0.25	3.8
Annual	771	466	597	91	0.15	100

Magnitude and frequency of annual low flow,  
based on period of record 1946-60

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	110	97	92	87	83	80
3	117	105	99	94	89	86
7	123	110	103	98	92	88
14	125	112	105	100	94	90
30	127	115	109	104	98	95
60	129	118	112	108	103	101
90	133	122	116	112	107	104
120	138	127	121	117	112	110
183	159	145	138	134	129	126

Magnitude and frequency of annual high flow,  
based on period of record 1945-60

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	3,780	4,410	4,790	5,230	5,550	5,850
3	3,660	4,210	4,510	4,840	5,060	5,250
7	3,450	4,000	4,290	4,600	4,790	4,970
15	3,140	3,630	3,910	4,210	4,410	4,600
30	2,680	3,110	3,380	3,710	3,960	4,200
60	2,130	2,470	2,690	2,950	3,140	3,330
90	1,730	2,010	2,180	2,380	2,520	2,660

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-60

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
4,090	4,730	5,100	5,540	5,850	6,150	

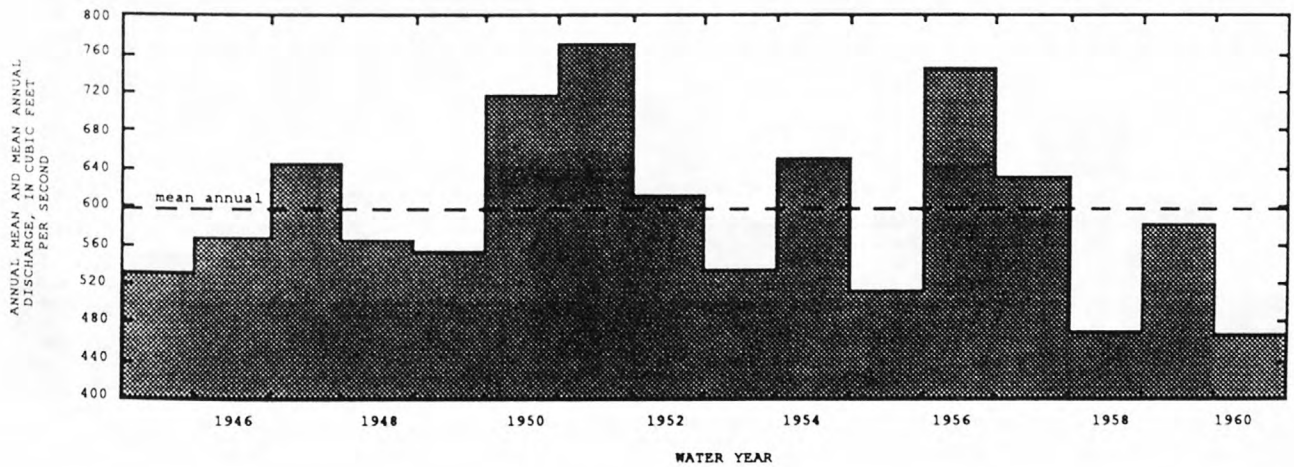
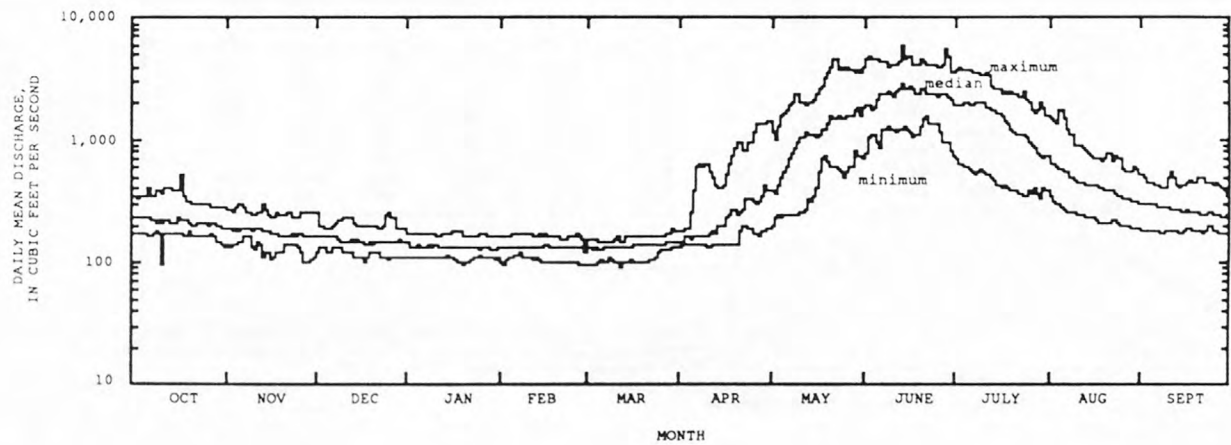
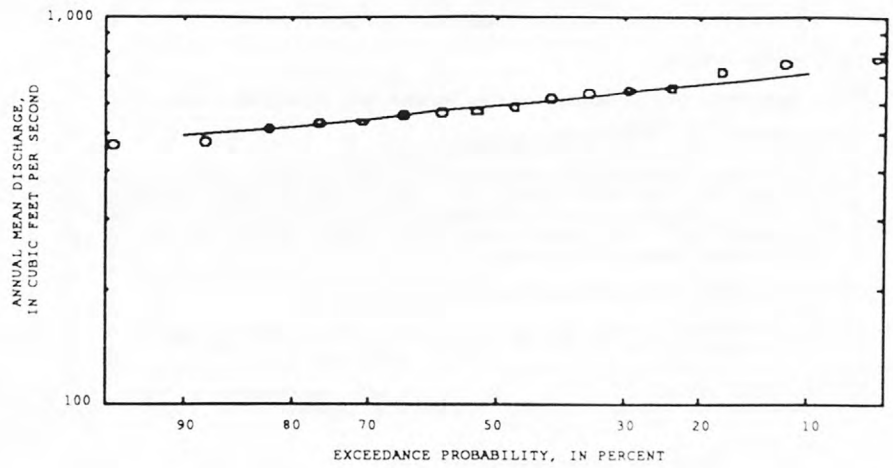
Duration table of daily mean flow for period of record 1945-60

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%		
3,780	2,580	1,810	1,340	877	404	273	210	180	160	144	131	122	111	104	101	94		

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## GROS VENTRE RIVER BASIN

13014500 GROS VENTRE RIVER AT KELLY, WY

LOCATION.—Lat 43°37'20", long 110°37'30", in NW¼, sec.11, T.42 N., R.115 W., on pier at former bridge site on private road, 0.3 mi south of Kelly Post Office, and 3 mi downstream from Turpin Creek.

DRAINAGE AREA.—622 mi<sup>2</sup>.

PERIOD OF RECORD.—June to September 1918, October 1944 to September 1958.

REVISED RECORDS.—WSP 1043: Drainage area.

GAGE.—Staff gage. Elevation of gage is 6,750 ft above sea level, from topographic map. June 16 to Sept. 30, 1918, staff gage at site 1 mi upstream at different datum. Oct. 1 1944, to Aug. 8, 1949, wire-weight gage on bridge 25 ft downstream at present datum. Aug. 9, 1949, to to June 25, 1953, staff gage 10 ft upstream at present datum. May 15 to July 23, 1954, May 22 to June 28, 1955, supplementary staff gage 300 ft downstream at datum 1.09 ft higher, and May 20, 1956, to July 10, 1958, supplementary staff gage at site 300 ft downstream at datum 0.61 ft lower.

REMARKS.—Diversion above and below station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 6,220 ft<sup>3</sup>/s June 16, 1918, gage height, 9.95 ft (site and datum then is use); minimum observed, 101 ft<sup>3</sup>/s Mar. 12, 1956, gage height, 0.27 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of May 18, 1927, was considerably higher than flood of June 16, 1918. Landslide about 2 mi upstream washed out and released about 60,000 acre-ft of impounded water, (discharge not determined).

Summary of monthly and annual discharges, 1945-58

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	309	151	209	43	0.20	3.7
November	228	146	181	25	0.14	3.2
December	209	124	162	22	0.14	2.8
January	185	132	151	15	0.10	2.7
February	178	132	147	15	0.10	2.6
March	172	132	147	12	0.08	2.6
April	686	163	289	136	0.47	5.1
May	1,930	527	1,300	451	0.35	22.8
June	2,820	887	1,770	536	0.30	31.1
July	1,520	260	819	365	0.45	14.4
August	608	165	297	122	0.41	5.2
September	309	157	217	49	0.22	3.8
Annual	670	351	475	99	0.21	100

Magnitude and frequency of annual low flow,  
based on period of record 1946-58

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	122	111	106	102	97	95
3	127	116	111	108	104	102
7	132	122	117	114	110	107
14	137	127	122	119	116	114
30	141	133	129	127	125	124
60	144	135	131	129	127	125
90	146	138	134	132	131	130
120	150	141	138	135	133	132
183	164	151	146	143	140	138

Magnitude and frequency of annual high flow,  
based on period of record 1945-58Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-58

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,190	3,850	4,260	4,740	5,090	5,430

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	3,170	3,820	4,230	4,700	5,050	5,380
3	2,980	3,620	4,030	4,550	4,940	5,330
7	2,760	3,330	3,700	4,150	4,480	4,810
15	2,380	2,950	3,340	3,860	4,260	4,680
30	1,940	2,440	2,810	3,340	3,770	4,240
60	1,580	1,950	2,210	2,560	2,830	3,110
90	1,280	1,580	1,780	2,020	2,200	2,380

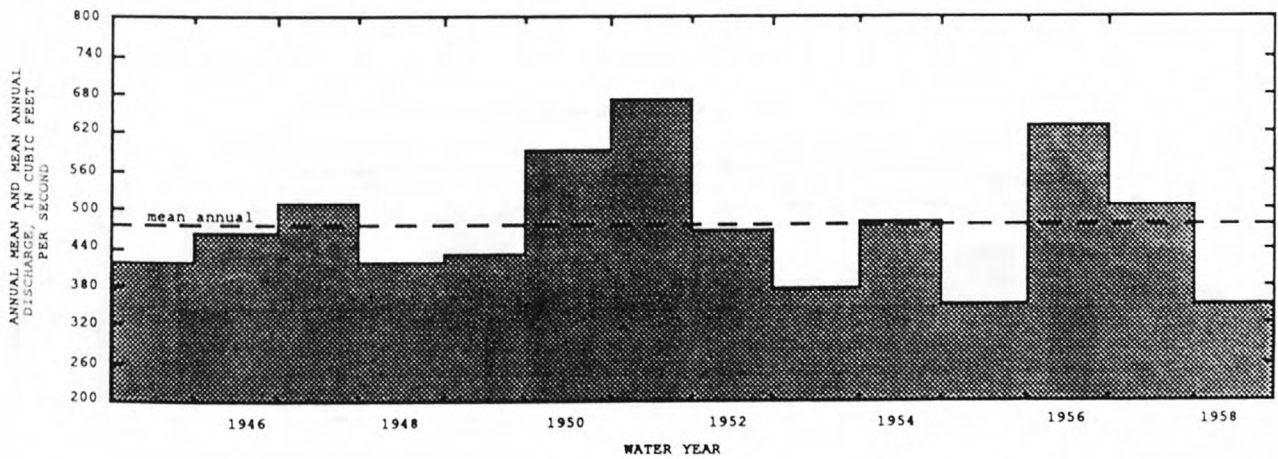
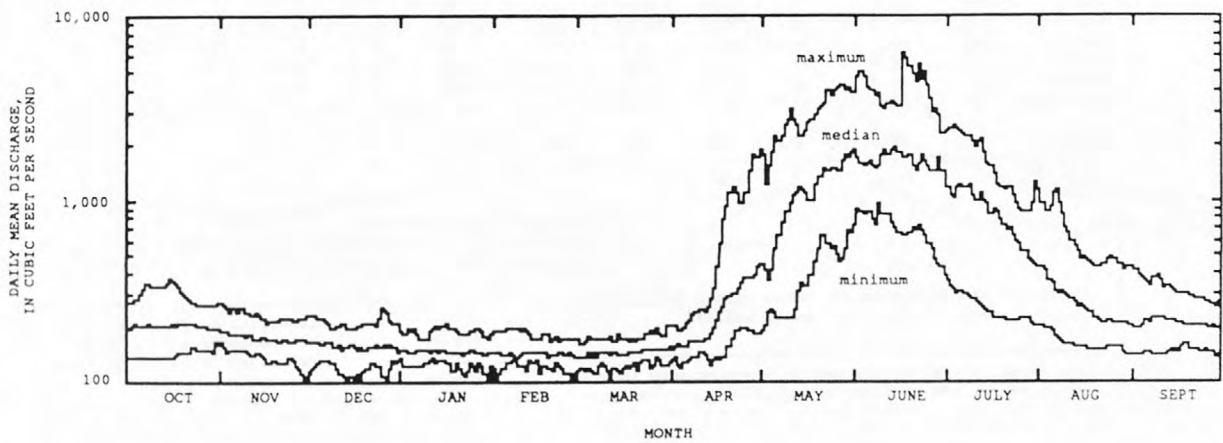
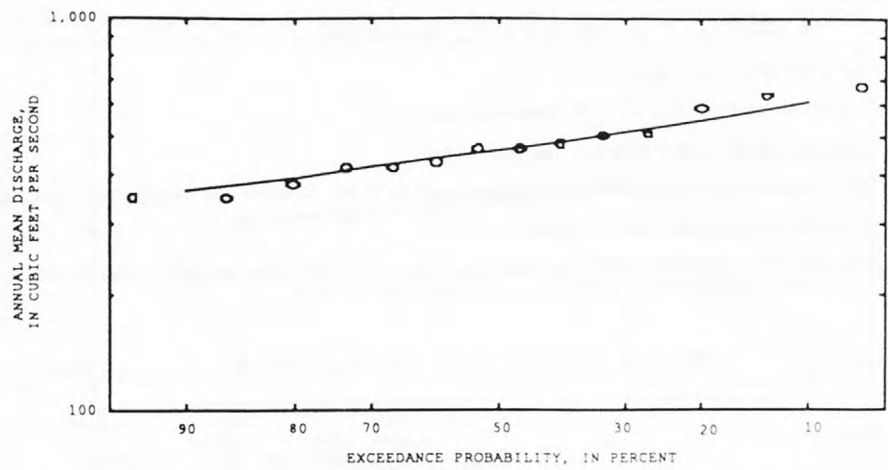
Duration table of daily mean flow for period of record 1945-58

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
3,130	1,930	1,310	955	645	301	226	196	177	161	148	137	132	121	115	111
															104

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



FLAT CREEK BASIN

13018300 CACHE CREEK NEAR JACKSON, WY  
(Hydrologic bench-mark station)

LOCATION.—Lat 43°27'08", long 110°42'12", in SW 1/4, SE 1/4, sec. 1, T. 40 N., R. 116 W., Teton County, Hydrologic Unit 17040103, Teton National Forest, on right bank 0.7 mi upstream from Salt Lick Draw, 2.4 mi southeast of Jackson, and 4.8 mi upstream from mouth.

DRAINAGE AREA.—10.6 mi<sup>2</sup>.

PERIOD OF RECORD.—June 1962 to September 1990.

REVISED RECORDS.—WDR WY-76-2: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 6,750 ft above sea level, from topographic map.

REMARKS.—No diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 225 ft<sup>3</sup>/s, June 24, 1971, gage height, 3.90 ft; maximum gage height, 3.97 ft, June 7, 1972; minimum daily discharge, 2.1 ft<sup>3</sup>/s, Jan. 1, 1978.

Summary of monthly and annual discharges, 1963-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	9.4	4.1	6.9	1.3	0.19	4.4
November	7.3	3.1	5.7	0.98	0.17	3.6
December	6.6	1.5	5.0	1.1	0.23	3.1
January	5.9	2.4	4.4	0.86	0.20	2.8
February	6.1	2.3	4.1	0.83	0.21	2.6
March	7.3	1.1	4.0	1.0	0.26	2.5
April	14	3.6	6.5	2.6	0.40	4.1
May	47	5.9	26	9.0	0.35	16.2
June	103	12	51	23	0.46	32.0
July	42	6.5	25	11	0.43	15.7
August	19	5.3	12	3.6	0.29	7.7
September	12	4.8	8.4	1.9	0.23	5.3
Annual	20	5.7	13	3.5	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1964-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	3.4	2.6	2.0	1.6	1.1	0.80
3	3.5	2.7	2.1	1.6	1.1	0.81
7	3.6	2.8	2.2	1.7	1.2	0.90
14	3.8	2.9	2.3	1.9	1.4	1.0
30	3.9	3.0	2.4	2.0	1.5	1.2
60	4.0	3.2	2.7	2.4	2.0	1.7
90	4.2	3.4	2.9	2.6	2.2	1.9
120	4.5	3.6	3.1	2.6	2.1	1.8
183	5.1	4.2	3.8	3.4	2.8	2.6

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1963-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
78	116	141	171	193	214

Magnitude and frequency of annual high flow,  
based on period of record 1963-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	73	105	125	147	162	176
3	69	98	116	135	149	161
7	65	92	109	127	139	150
15	59	84	98	114	124	133
30	54	74	84	94	100	104
60	43	57	63	68	70	72
90	35	45	50	54	56	57

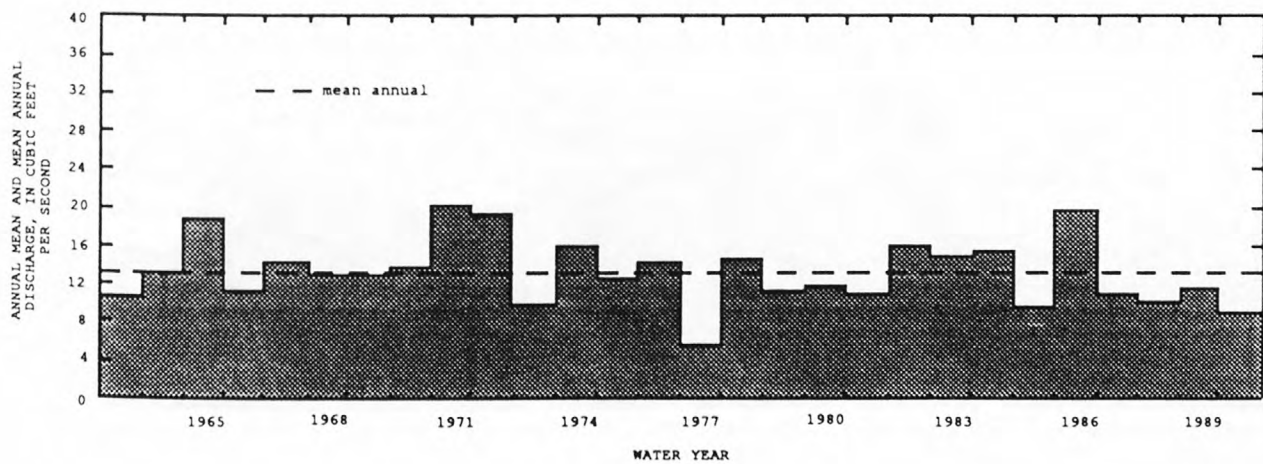
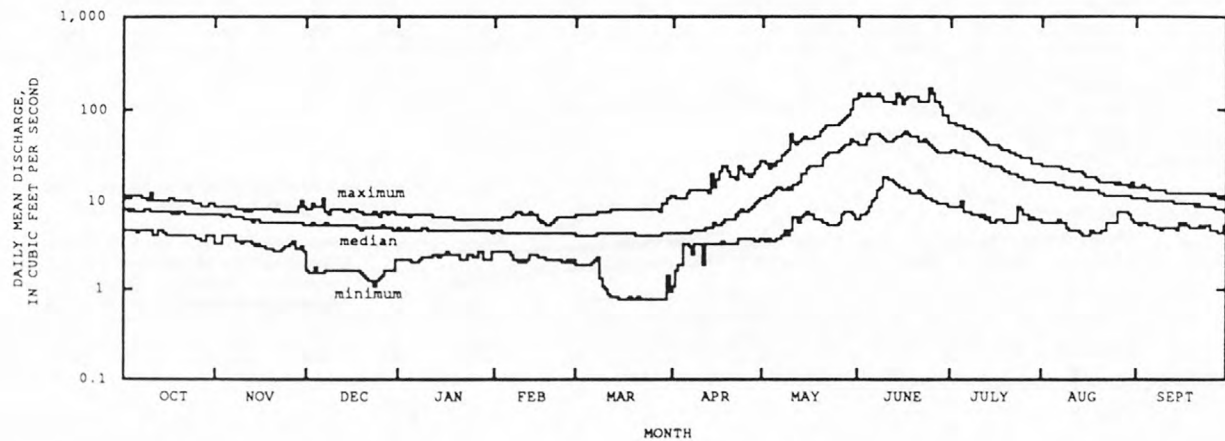
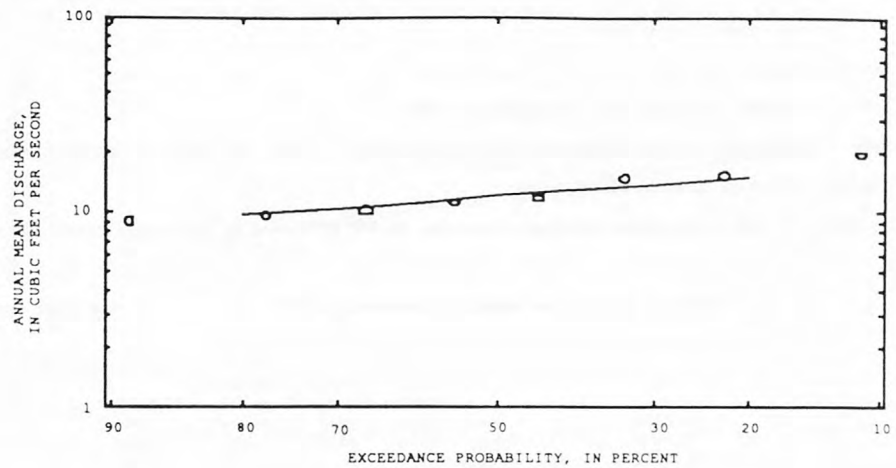
Duration table of daily mean flow for period of record 1963-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.95%
84	50	34	24	18	11	8.0	6.6	5.7	4.9	4.4	3.8	3.2	2.7	2.3	1.7	0.8	0.8

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



Snake River Main Stem

13018750 SNAKE RIVER BELOW FLAT CREEK, NEAR JACKSON, WY

LOCATION.—Lat 43°22'20", long 110°44'17", in NE 1/4, SE 1/4, sec. 3, T. 39 N., R. 116 W., Teton County, Hydrologic Unit 17040103, on left bank 20 ft upstream from county road bridge, about 1 mi downstream from Flat Creek, 4.8 mi upstream from Hoback River, 7.0 mi south of Jackson, and at mile 938.9.

DRAINAGE AREA.—2,627 mi<sup>2</sup>.

PERIOD OF RECORD.—November 1975 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 5,950 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Jackson Lake.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 25,600 ft<sup>3</sup>/s June 6, 1986, gage height, 10.22 ft; minimum daily, 690 ft<sup>3</sup>/s Jan. 19, 1988.

Summary of monthly and annual discharges, 1977-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	3,090	977	1,780	607	0.34	4.2
November	2,750	967	1,570	496	0.32	3.7
December	2,000	846	1,410	341	0.24	3.3
January	1,900	879	1,280	281	0.22	3.0
February	1,610	825	1,300	265	0.20	3.0
March	2,690	910	1,540	566	0.37	3.6
April	5,440	1,290	2,620	1,200	0.46	6.2
May	8,760	2,570	6,510	1,830	0.28	15.4
June	19,600	5,430	10,800	3,610	0.33	25.4
July	14,100	3,250	6,730	3,280	0.49	15.8
August	5,390	2,310	3,800	1,010	0.27	8.9
September	6,460	1,800	3,200	1,290	0.40	7.5
Annual	5,020	2,470	3,550	865	0.24	100

Magnitude and frequency of annual low flow, based on period of record 1977-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	985	822	754	704	655	625
3	1,010	851	785	738	692	664
7	1,050	889	819	768	718	687
14	1,100	922	845	789	731	696
30	1,140	958	874	811	745	704
60	1,200	1,010	917	846	771	724
90	1,240	1,050	953	881	805	757
120	1,280	1,080	982	907	829	780
183	1,450	1,180	1,050	956	856	795

Magnitude and frequency of instantaneous peak flow, based on period of record 1977-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
16,900	21,000	23,300	25,700	27,300	28,700	

Magnitude and frequency of annual high flow, based on period of record 1977-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	15,100	19,100	21,500	24,400	26,500	28,500
3	14,300	18,300	20,800	23,900	26,200	28,500
7	13,100	16,900	19,500	22,900	25,500	28,200
15	12,000	15,700	18,200	21,700	24,300	27,100
30	11,100	14,300	16,500	19,300	21,400	23,600
60	9,400	12,100	13,900	16,100	17,700	19,200
90	7,890	10,100	11,500	13,200	14,500	15,700

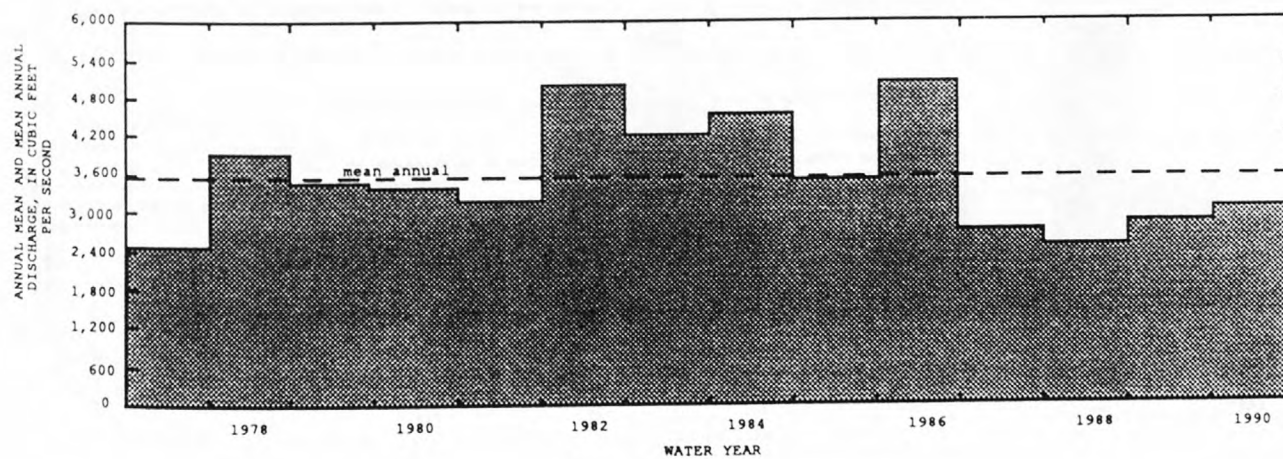
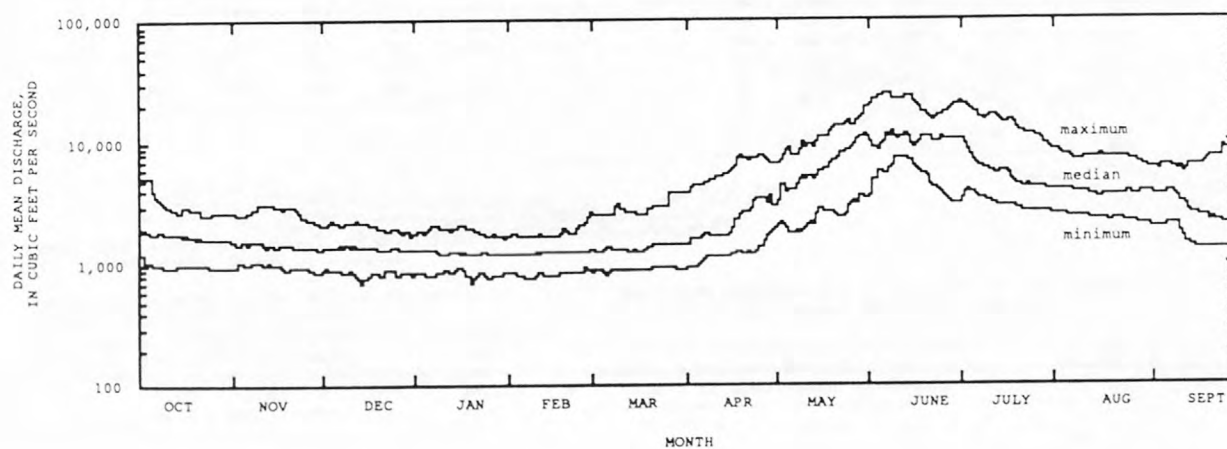
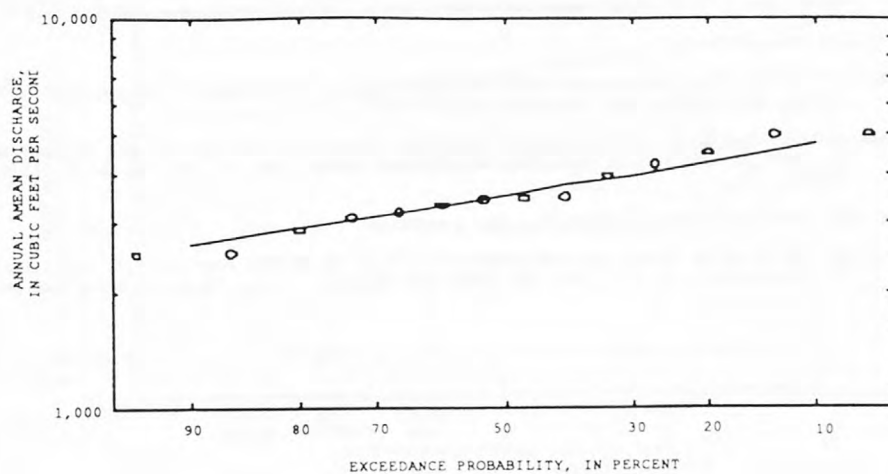
Duration table of daily mean flow for period of record 1977-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time														
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%
16,300	11,600	8,600	6,400	5,120	3,720	2,740	2,090	1,690	1,460	1,260	1,100	948	874	829
													795	747

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## HOBACK RIVER BASIN

13019500 HOBACK RIVER NEAR JACKSON, WY

LOCATION.—Lat 43°17'55", long 110°40'10", in sec.32, T.39 N., R.115 W., Teton County, Hydrologic Unit 17040103, on right bank at Camp Creek Camp, 0.25 mi downstream from Willow Creek, 4 mi upstream from mouth, and 13.5 mi southeast of Jackson.

DRAINAGE AREA.—564 mi<sup>2</sup>.

PERIOD OF RECORD.—July 1917 to September 1918 (published as "near Cheney"), October 1944 to September 1958. Monthly discharge only for October and November 1944, published in WSP 1317.

GAGE.—Nonrecording gage read once daily. Elevation of gage is 6,040 ft above sea level, from topographic map. July 9, 1917, to Sept. 30, 1918, at site 3.25 mi downstream at different datum. Nov. 6, 1944, to May 29, 1956, at site 300 ft upstream at datum 0.92 ft higher.

REMARKS.—Small diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 6,160 ft<sup>3</sup>/s June 16, 1918, gage height, 13.46 ft, (site and datum then in use); minimum observed, 90 ft<sup>3</sup>/s Dec. 18, 1946, gage height, 1.70 ft, (site and datum then in use).

Summary of monthly and annual discharges, 1945-58

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	368	211	273	43	0.16	3.2
November	307	192	230	30	0.13	2.7
December	259	158	209	26	0.12	2.5
January	232	170	197	20	0.10	2.3
February	229	164	190	18	0.09	2.2
March	223	156	189	21	0.11	2.2
April	1,490	254	686	397	0.58	8.1
May	3,400	1,060	2,140	678	0.32	25.4
June	3,360	1,720	2,330	562	0.24	27.5
July	2,110	468	1,200	464	0.39	14.3
August	845	281	497	146	0.29	5.9
September	432	210	314	65	0.21	3.7
Annual	985	496	706	154	0.22	100

Magnitude and frequency of annual low flow,  
based on period of record 1946-58

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 <sup>†</sup> 2%	100 <sup>†</sup> 1%
1	151	130	116	103	89	79
3	154	144	140	137	133	131
7	164	154	149	145	141	138
14	172	160	154	150	145	141
30	179	167	160	155	150	146
60	185	173	167	163	158	154
90	191	179	173	169	164	162
120	196	183	177	173	168	165
183	215	200	194	190	186	183

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-58

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,750	4,780	5,450	6,270	6,870	7,470

Magnitude and frequency of annual high flow,  
based on period of record 1945-58

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 <sup>†</sup> 2%	100 <sup>†</sup> 1%
1	3,710	4,720	5,350	6,040	6,510	6,870
3	3,530	4,390	4,900	5,500	5,930	6,340
7	3,370	4,120	4,580	5,110	5,480	5,830
15	3,040	3,740	4,180	4,710	5,100	5,470
30	2,630	3,220	3,600	4,070	4,430	4,780
60	2,270	2,770	3,080	3,460	3,740	4,010
90	1,910	2,340	2,620	2,960	3,220	3,470

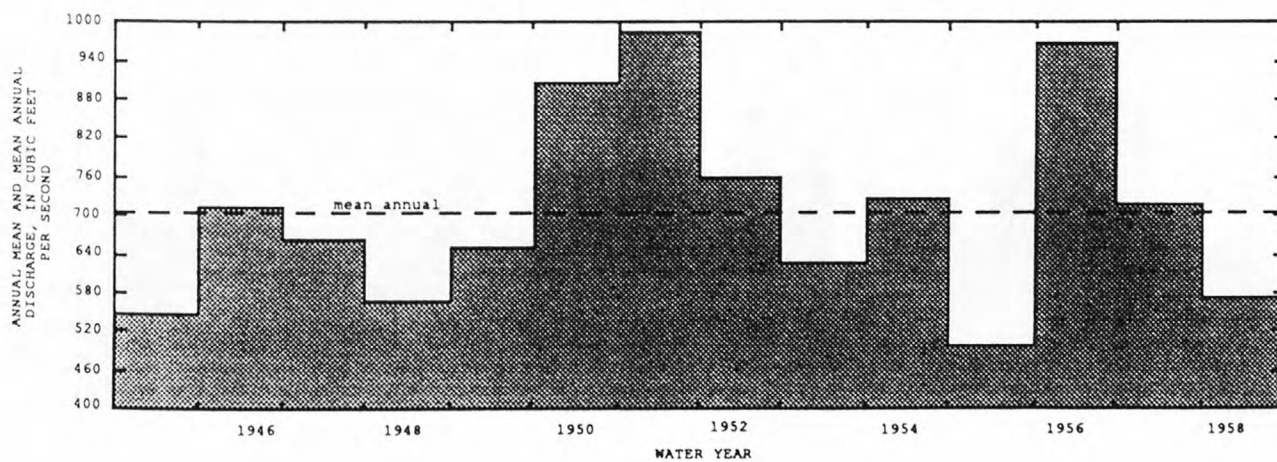
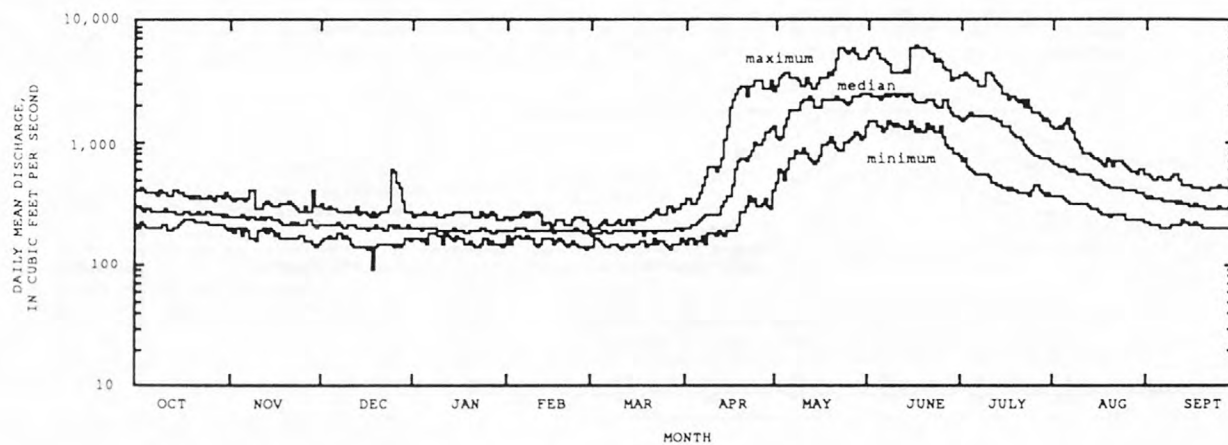
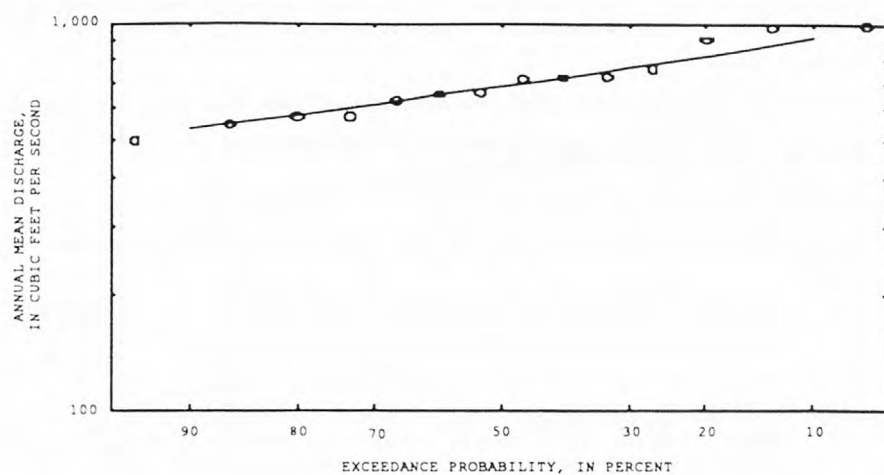
Duration table of daily mean flow for period of record 1945-58

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
3,890	2,710	2,090	1,620	1,210	542	346	273	239	214	195	177	166	154	149	139

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# Snake River Main Stem

13022500 SNAKE RIVER ABOVE RESERVOIR, NEAR ALPINE, WY

LOCATION.—Lat 43°11'47", long 110°53'18", Lincoln County, Hydrologic Unit 17040103, on right bank 0.3 mi downstream from Wolf Creek, 6.4 mi upstream from Greys River, 7.4 mi east of Alpine, 16.1 mi upstream from Palisades Dam, and at mile 917.5.

DRAINAGE AREA.—3,465 mi<sup>2</sup>.

PERIOD OF RECORD.—March 1937 to March 1939 (published as "above Greys River, near Alpine"), July 1953 to September 1990.

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

REMARKS.—Flow regulated by Jackson Lake.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 31,300 ft<sup>3</sup>/s June 6, 1986; minimum, 740 ft<sup>3</sup>/s Nov. 16, 1955, gage height, 2.19 ft.

Summary of monthly and annual discharges, 1938, 1954-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	3,610	1,330	2,150	558	0.26	3.9
November	4,240	1,230	1,870	588	0.31	3.4
December	5,800	1,100	1,720	753	0.44	3.2
January	2,230	1,070	1,500	287	0.19	2.7
February	3,380	1,070	1,600	464	0.29	2.9
March	3,480	1,100	1,810	672	0.37	3.3
April	6,820	1,510	3,430	1,570	0.46	6.3
May	15,400	3,000	8,950	3,040	0.34	16.5
June	24,100	6,850	13,500	4,070	0.30	24.7
July	15,800	3,800	8,740	3,050	0.35	16.0
August	7,540	2,490	5,330	1,370	0.26	9.8
September	7,600	2,240	4,010	1,160	0.29	7.3
Annual	6,590	2,730	4,560	971	0.21	100

Magnitude and frequency of annual low flow,  
based on period of record 1938, 1955-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	1,220	1,040	964	904	841	802
3	1,240	1,080	1,000	943	884	847
7	1,280	1,110	1,030	975	913	875
14	1,320	1,140	1,060	1,000	937	896
30	1,370	1,190	1,110	1,040	975	933
60	1,430	1,240	1,150	1,090	1,010	970
90	1,480	1,290	1,200	1,130	1,060	1,010
120	1,530	1,320	1,230	1,160	1,090	1,040
183	1,740	1,470	1,350	1,250	1,160	1,110

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1938, 1954-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
18,800	23,500	26,300	29,500	31,700	33,800

Magnitude and frequency of annual high flow,  
based on period of record 1938, 1954-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	18,400	22,800	25,400	28,400	30,500	32,500
3	17,700	21,900	24,500	27,600	29,800	31,900
7	16,500	20,700	23,200	26,400	28,600	30,800
15	15,300	19,300	21,700	24,700	26,800	28,900
30	13,900	17,500	19,700	22,300	24,200	26,100
60	12,000	15,000	16,800	18,800	20,300	21,600
90	10,400	12,900	14,500	16,300	17,500	18,700

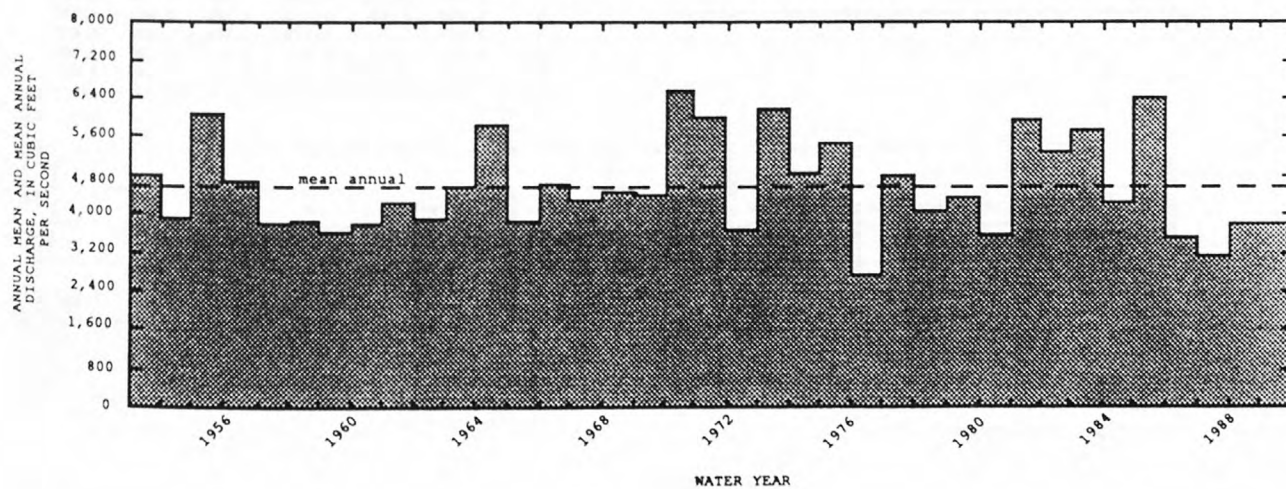
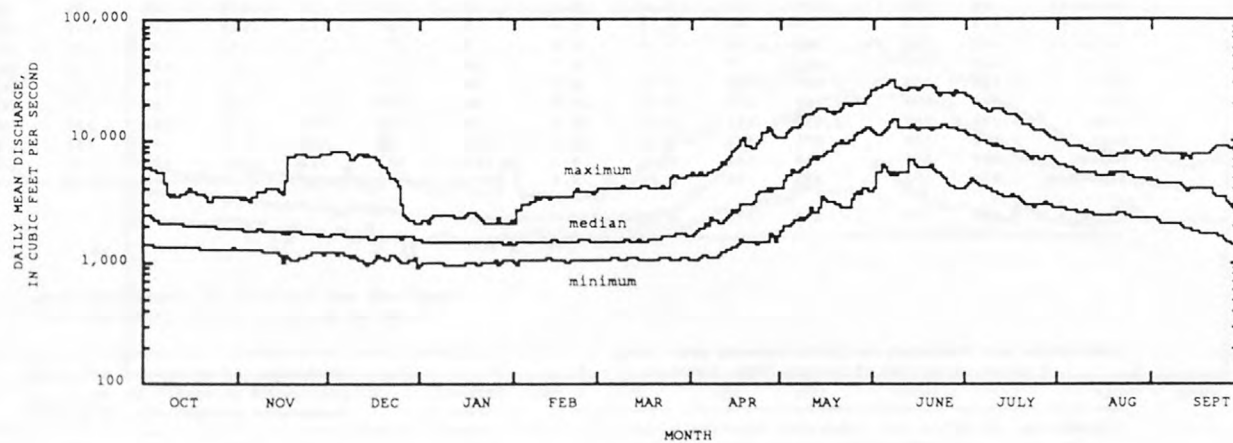
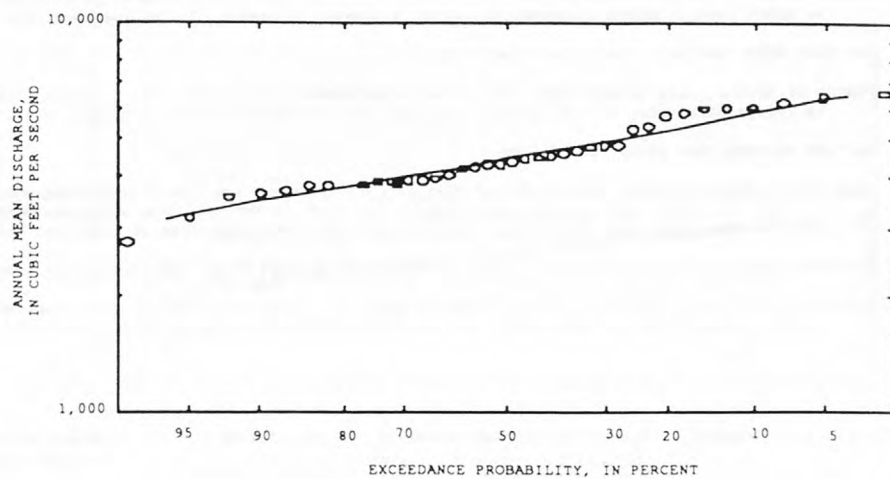
Duration table of daily mean flow for period of record 1938, 1954-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
20,000	14,400	11,100	8,730	7,220	5,110	3,670	2,440	1,960	1,710	1,530	1,320	1,190	1,110	1,060	959

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## GREYS RIVER BASIN

13023000 GREYS RIVER ABOVE RESERVOIR, NEAR ALPINE, WY

LOCATION.—Lat 43°08'35", long 110°58'34", in SW 1/4, SE 1/4, sec. 34, T. 37 N., R. 118 W. (unsurveyed), Lincoln County, Hydrologic Unit 17040103, on right bank at Bridge Campground, 3.6 mi southeast of Alpine, 3.0 mi upstream from maximum flowline of Palisades Reservoir.

DRAINAGE AREA.—448 mi<sup>2</sup>. Mean elevation, 8,080 ft.

PERIOD OF RECORD.—July to September 1917, June to September 1918, March 1937 to March 1939, October 1953 to September 1990. Published as "Greys River near Alpine, Idaho," 1917-18, and as "Greys River near Alpine, Wyo.," 1937-39.

REVISED RECORDS.—WDR Idaho 1967: 1966.

GAGE.—Water-stage recorder. Elevation of gage is 5,720 ft above sea level, 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 mi downstream, and October 1953 to Sept. 22, 1965, water-stage recorder at site 1 mi downstream at different datums.

REMARKS.—Less than 500 acres irrigated by diversions from Greys River and tributaries above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 7,230 ft<sup>3</sup>/s June 19, 1971, gage height, 6.33 ft; maximum gage height observed, 19.1 ft former site and datum about Dec. 18, 1965 (ice jam); minimum, 84 ft<sup>3</sup>/s Feb. 17, 1986, result of current-meter measurement.

Summary of monthly and annual discharges, 1938, 1954-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	472	194	320	69	0.22	4.1
November	455	175	272	57	0.21	3.4
December	366	164	239	46	0.19	3.1
January	315	159	216	40	0.18	2.8
February	293	152	209	34	0.16	2.6
March	406	173	227	50	0.22	2.9
April	1,320	238	637	288	0.45	8.2
May	2,840	333	1,790	543	0.30	23.0
June	4,000	387	2,070	862	0.42	26.4
July	1,900	228	971	437	0.45	12.4
August	809	205	489	149	0.31	6.3
September	559	198	372	90	0.24	4.8
Annual	1,020	259	653	172	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1938-39, 1955-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	160	133	119	108	96	88
3	165	141	129	119	108	100
7	173	152	141	132	123	117
14	180	158	147	139	130	124
30	187	165	155	148	141	136
60	196	174	164	156	148	143
90	204	181	171	164	156	151
120	212	189	178	171	163	158
183	241	212	198	188	178	172

Magnitude and frequency of annual high flow,  
based on period of record 1938, 1954-90Magnitude and frequency of instantaneous peak flow,  
based on period of record 1938, 1954-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,360	4,430	5,080	5,830	6,340	6,830

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3,170	4,170	4,630	5,020	5,230	5,390
3	3,040	4,000	4,420	4,790	4,980	5,110
7	2,830	3,740	4,160	4,530	4,730	4,880
15	2,650	3,470	3,810	4,100	4,250	4,350
30	2,460	3,130	3,370	3,550	3,620	3,670
60	2,080	2,620	2,820	2,960	3,020	3,060
90	1,730	2,190	2,370	2,500	2,560	2,600

Duration table of daily mean flow for period of record 1938, 1954-90

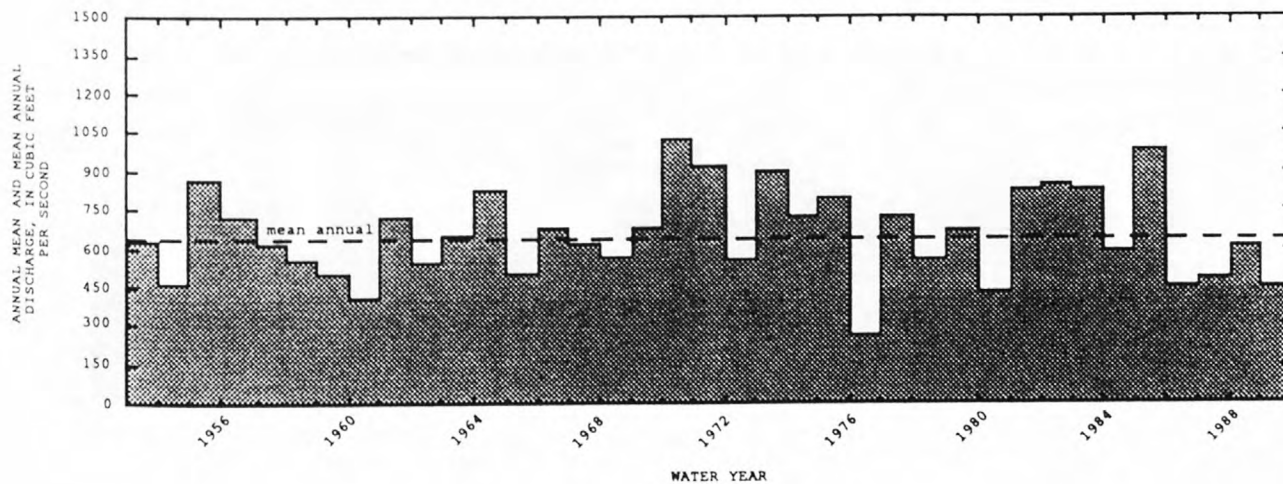
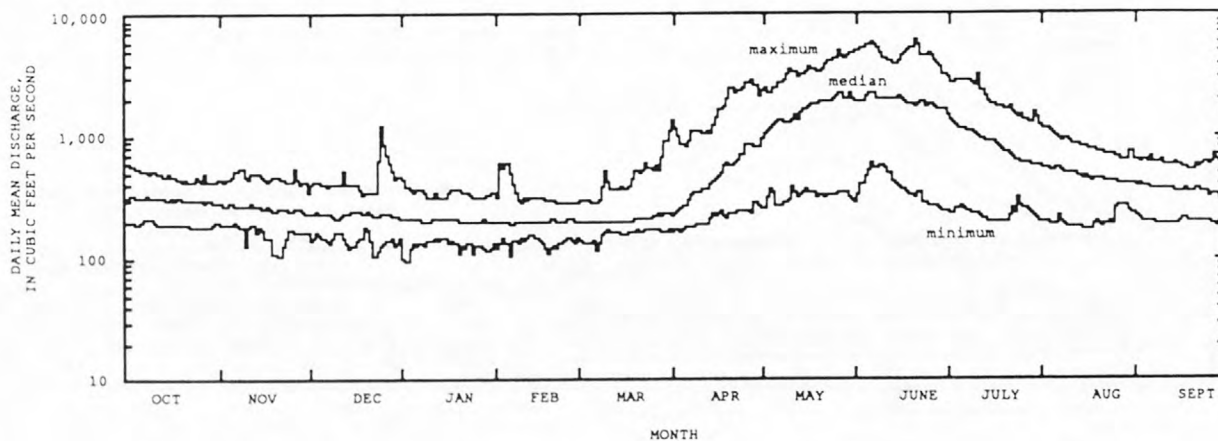
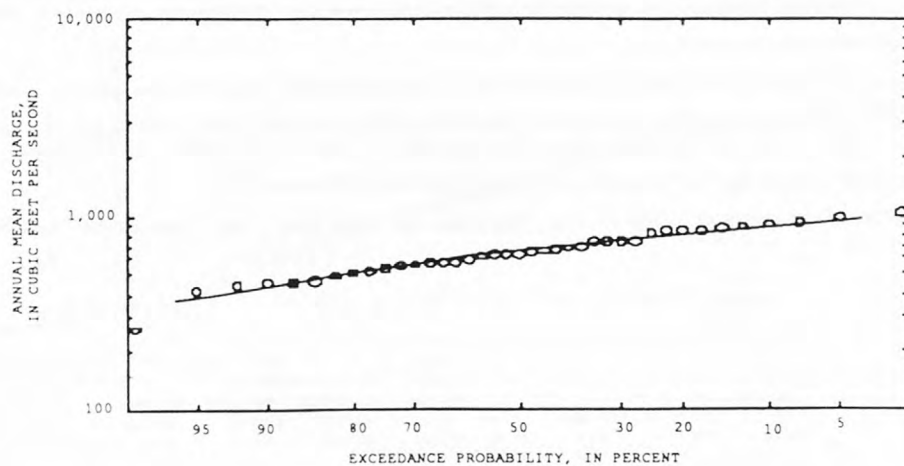
Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
3,490	2,370	1,770	1,290	942	534	402	322	276	243	216	194	178	163	153	142	123	

† Length of record used in calculation may yield unreliable values for this column.





LOCATION MAP





## SALT RIVER BASIN

13024000 SALT RIVER NEAR SMOOT, WY

LOCATION.—Lat 42°36'20", long 110°55'10", in sec.7, T.30 N., R.118 W., Lincoln County, Hydrologic Unit 17040105, on left bank 1.2 mi south of Smoot, 1.5 mi upstream from Willow Creek, and 4 mi upstream from Cottonwood Creek.

DRAINAGE AREA.—47.8 mi<sup>2</sup>.

PERIOD OF RECORD.—June 1932 to September 1957. Monthly discharge only for some periods, published in WSP 1317.

GAGE.—Water-stage recorder. Elevation of gage is 6,600 ft above sea level, from topographic map. Prior to Apr. 11, 1934, chain gage and Apr. 11 to Sept. 30, 1934, water-stage recorder, at same site at datum 1.00 ft higher.

REMARKS.—Diversion for irrigation of about 4,000 acres above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 460 ft<sup>3</sup>/s June 7, 1957 (gage height, 3.83 ft); no flow Jan. 25-28, 1949.

Summary of monthly and annual discharges, 1933-57

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	19	3.8	10	3.2	0.32	2.3
November	13	3.4	8.7	2.5	0.28	2.0
December	13	3.0	7.4	2.4	0.33	1.7
January	14	1.5	6.8	3.1	0.46	1.6
February	13	2.5	6.8	2.9	0.43	1.6
March	15	4.0	8.2	2.8	0.34	1.9
April	99	8.3	41	25	0.62	9.5
May	279	38	141	57	0.41	32.5
June	248	18	131	57	0.43	30.1
July	106	9.7	45	24	0.54	10.4
August	28	4.7	17	5.9	0.35	3.9
September	19	2.8	11	3.6	0.32	2.6
Annual	56	11	36	12	0.33	100

Magnitude and frequency of annual low flow,  
based on period of record 1934-57

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	4.3	2.8	2.1	1.4	0.00	0.00
3	4.6	3.1	2.4	1.5	0.00	0.00
7	5.0	3.2	2.4	1.6	0.50	0.20
14	5.6	3.2	2.5	1.7	0.75	0.48
30	5.6	3.5	2.6	1.9	1.3	1.0
60	5.8	3.9	3.0	2.4	1.9	1.5
90	6.1	4.3	3.6	3.0	2.5	2.2
120	6.4	4.8	4.1	3.6	3.2	2.9
183	7.7	5.8	4.9	4.2	3.6	3.2

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1933-57

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
250	334	386	446	489	527

Magnitude and frequency of annual high flow,  
based on period of record 1933-57

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	242	323	356	383	396	405
3	235	312	343	368	379	387
7	222	295	326	351	363	371
15	202	266	292	313	324	331
30	176	229	251	268	277	282
60	143	189	208	224	232	238
90	115	152	168	182	189	194

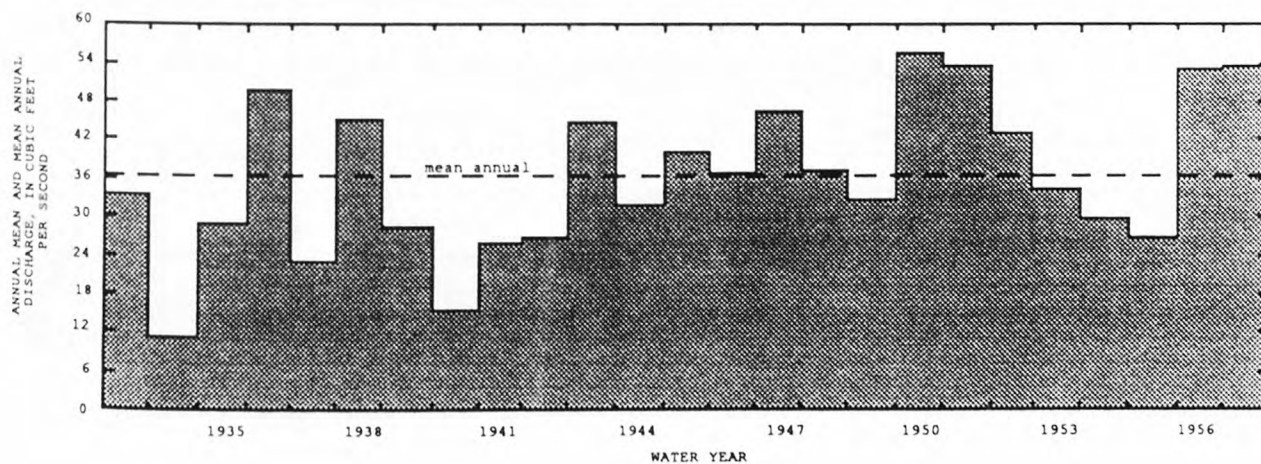
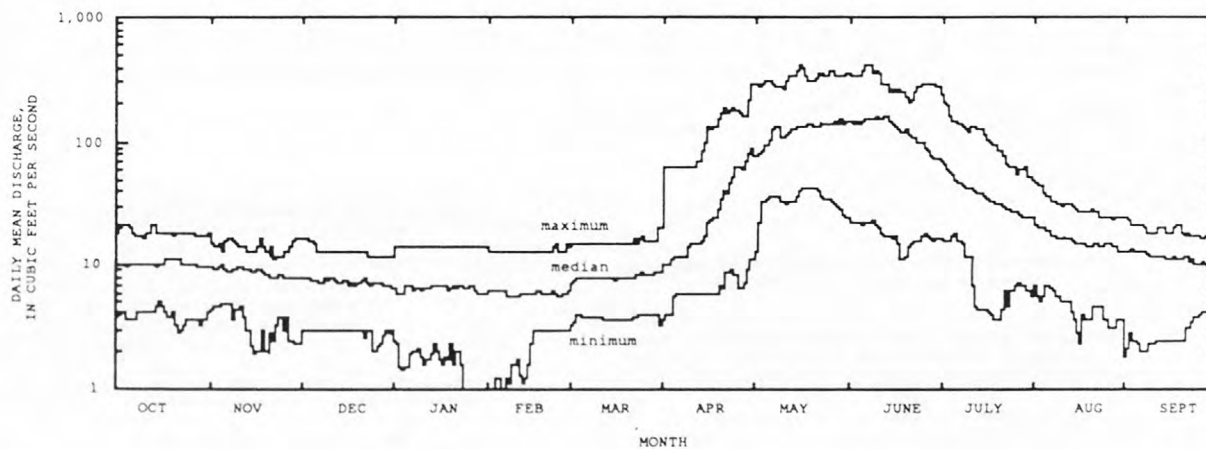
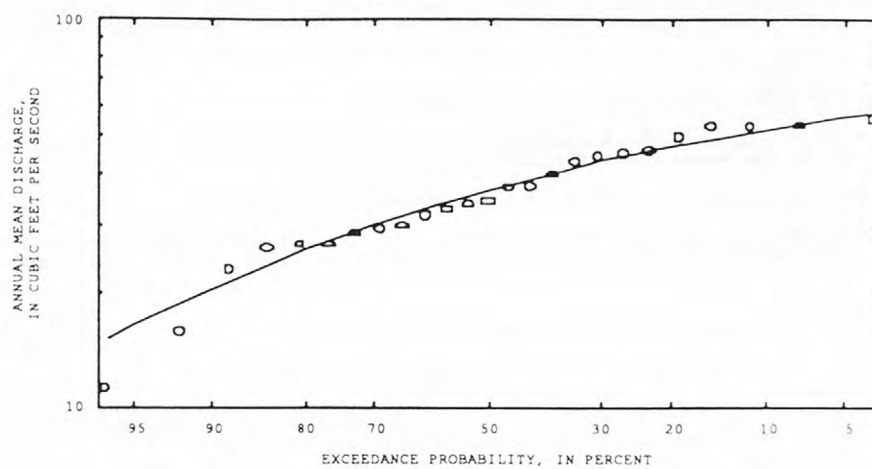
Duration table of daily mean flow for period of record 1933-57

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
276	171	121	82	51	21	14	12	9.3	8.0	6.7	5.0	3.9	3.0	2.4	0.58

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALT RIVER BASIN

13024500 COTTONWOOD CREEK NEAR SMOOT, WY

LOCATION.—Lat 42°36'40", long 111°53'30", in sec. 4, T.30 N., R.118 W., Lincoln County, Hydrologic Unit 17040105, on right bank 0.3 mi upstream from headgate of highest diversion, 1.2 mi downstream from Porcupine Creek, 1.5 mi southeast of Smoot, and at mile 4.5.

DRAINAGE AREA.—26.3 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1932 to September 1957.

GAGE.—Water-stage recorder. Elevation of gage is 6,750 ft above sea level, from topographic map. Prior to Apr. 8, 1934, staff gage at site 0.3 mi downstream at different datum.

REMARKS.—No diversions above station. Flow regulated by Cottonwood Lake.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 438 ft<sup>3</sup>/s June 2, 1956 (gage height, 3.31 ft); maximum gage height 4.12 ft June 10, 1957 (backwater from debris); minimum discharge, 6.4 ft<sup>3</sup>/s Mar. 11, 1948; minimum gage height, 0.95 ft Jan. 19, 1950.

Summary of monthly and annual discharges, 1933-57

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	35	14	23	4.4	0.19	4.4
November	26	12	19	3.2	0.17	3.6
December	24	12	17	2.6	0.15	3.2
January	23	10	15	2.6	0.17	2.8
February	20	9.9	14	2.4	0.18	2.6
March	17	8.7	13	2.1	0.16	2.4
April	53	11	24	9.6	0.40	4.6
May	145	34	84	33	0.39	15.8
June	225	44	160	48	0.30	30.1
July	160	34	88	34	0.39	16.6
August	67	21	45	11	0.24	8.5
September	44	16	29	6.5	0.22	5.4
Annual	62	24	44	9.5	0.21	100

Magnitude and frequency of annual low flow,  
based on period of record 1934-57

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	11	9.5	8.7	8.0	7.3	6.8
3	11	9.7	8.8	8.2	7.4	7.0
7	11	9.8	9.0	8.3	7.6	7.1
14	12	10	9.3	8.7	8.0	7.5
30	12	11	9.9	9.2	8.5	8.1
60	13	11	11	10	9.3	8.8
90	14	12	11	11	9.9	9.5
120	14	13	12	11	11	10
183	17	15	14	13	12	11

Magnitude and frequency of annual high flow,  
based on period of record 1933-57Magnitude and frequency of instantaneous peak flow,  
based on period of record 1933-57

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
242	312	354	402	434	465

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	238	303	331	355	367	376
3	229	291	318	342	355	364
7	217	276	303	327	340	349
15	199	250	273	293	303	311
30	176	217	233	247	254	258
60	143	174	186	196	201	204
90	116	141	152	162	167	171

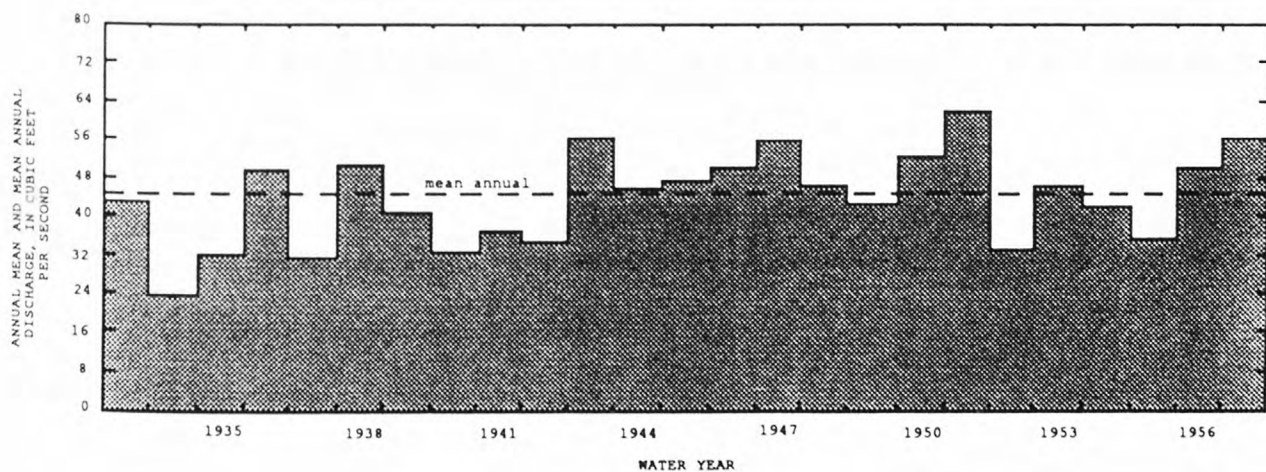
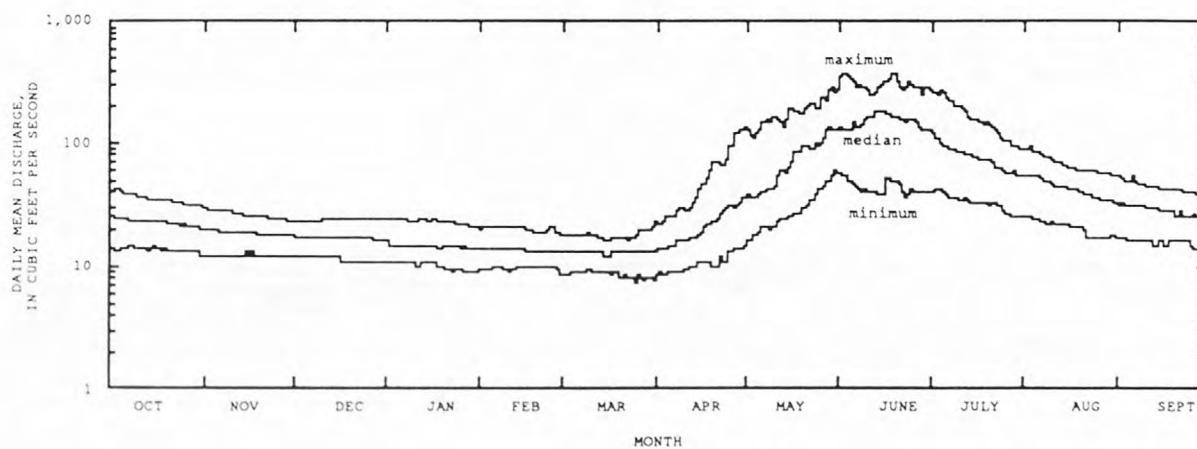
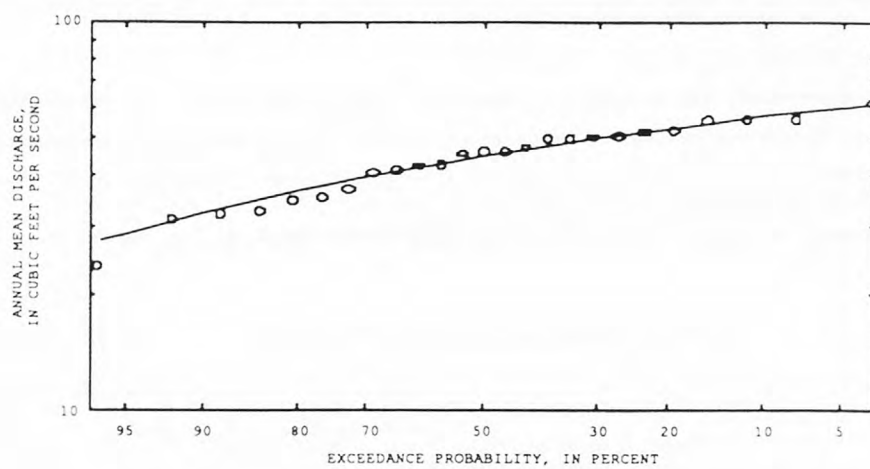
Duration table of daily mean flow for period of record 1933-57

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
245	166	115	82	62	40	29	23	19	17	15	13	12	10	9.5	8.3

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALT RIVER BASIN

13025000 SWIFT CREEK NEAR AFTON, WY

LOCATION.—Lat 42°43'30", long 110°54'00", in SE sec.29, T.32 N., R.118 W., Lincoln County, Hydrologic Unit 17040105, on right bank 1 mi upstream from mouth of canyon, 1.5 mi east of Afton, and at mile 4.5.

DRAINAGE AREA.—27.4 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1942 to September 1971. Monthly discharge only for some periods, published in WSP 1317.

GAGE.—Water-stage recorder. Elevation of gage is 6,420 ft above sea level, from topographic map.

REMARKS.—Pipeline diverts water above station for town of Afton. Diurnal fluctuation caused by small powerplant and reservoir 0.2 mi upstream. No diversion for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 775 ft<sup>3</sup>/s June 30, 1957 (gage height, 3.52 ft); minimum daily, 20 ft<sup>3</sup>/s.

Summary of monthly and annual discharges, 1943-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	64	39	50	6.0	0.12	4.8
November	55	33	44	5.4	0.12	4.2
December	51	30	40	4.9	0.12	3.8
January	54	28	38	5.4	0.14	3.6
February	43	28	35	3.8	0.11	3.4
March	46	29	35	3.6	0.10	3.4
April	77	29	44	10	0.24	4.2
May	240	62	131	47	0.36	12.6
June	461	189	294	60	0.20	28.2
July	359	73	188	67	0.36	18.1
August	140	45	84	20	0.24	8.0
September	88	38	59	9.9	0.17	5.7
Annual	122	63	87	13	0.15	100

Magnitude and frequency of annual low flow,  
based on period of record 1944-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	30	27	25	23	21	20
3	30	28	26	25	24	23
7	31	29	27	26	25	24
14	32	29	28	27	26	26
30	33	30	29	28	27	26
60	34	32	30	29	28	27
90	36	32	31	30	28	28
120	37	34	32	31	30	29
183	40	37	35	34	33	32

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1943-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
515	634	703	781	833	882	

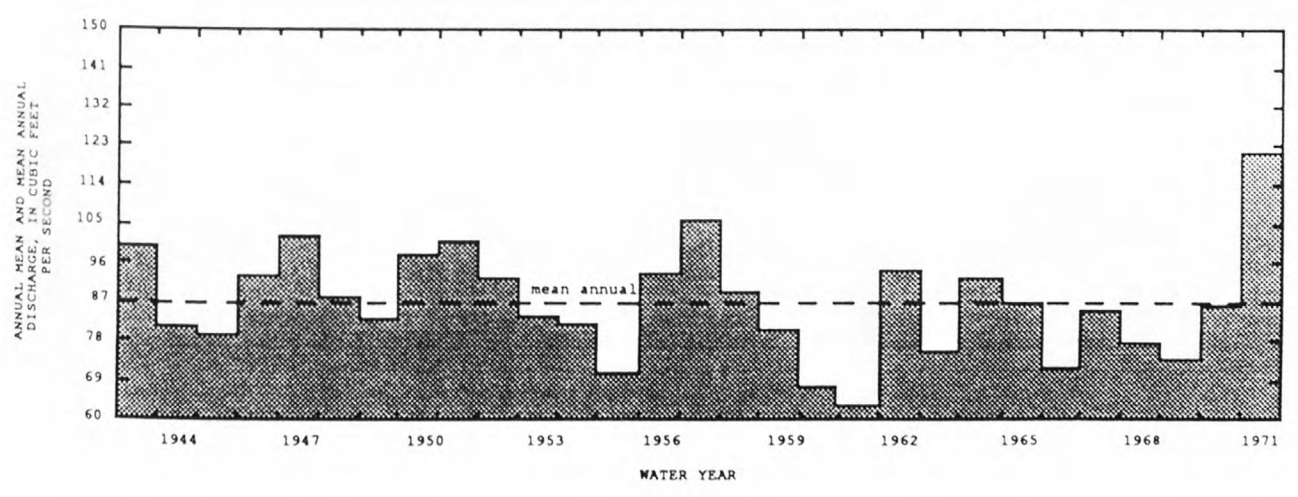
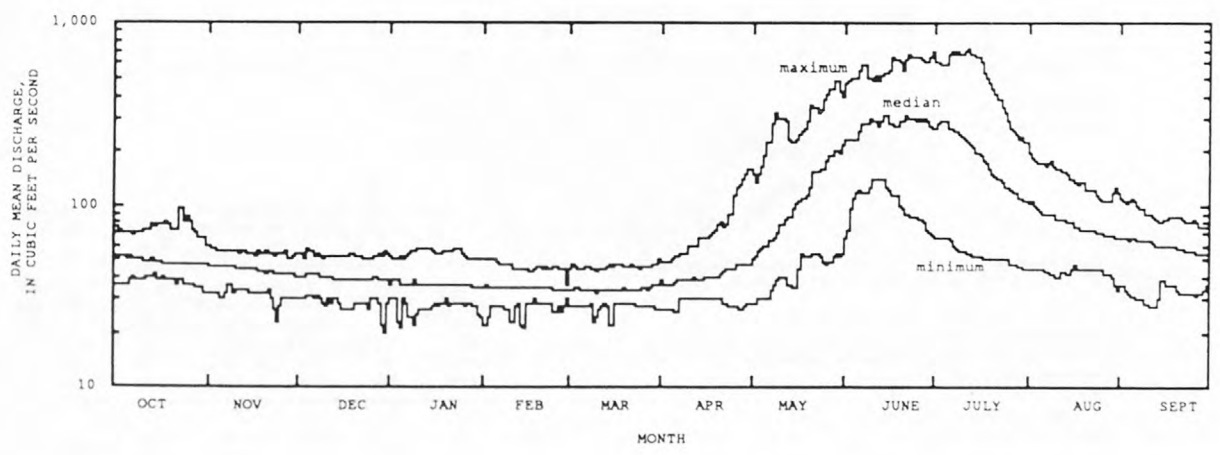
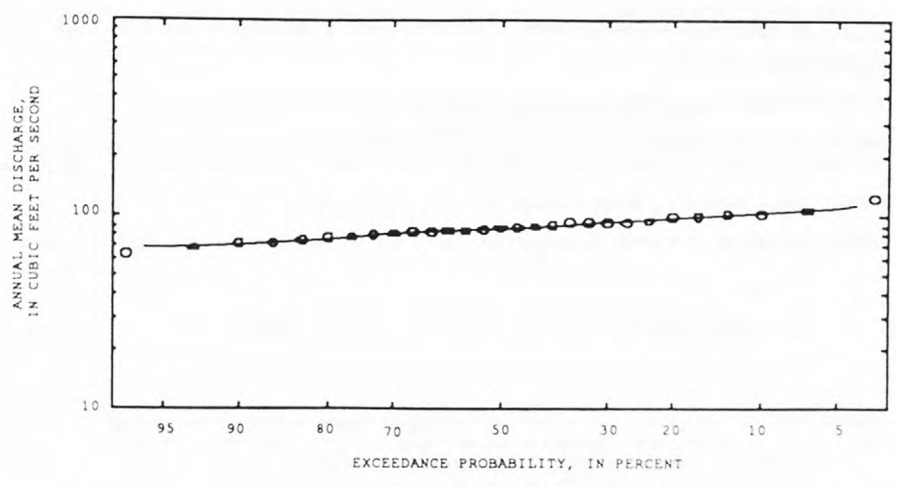
Magnitude and frequency of annual high flow,  
based on period of record 1943-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	443	540	600	673	726	777
3	423	515	572	641	690	739
7	396	481	535	601	648	695
15	358	431	474	525	561	594
30	315	372	406	446	474	501
60	254	302	331	365	389	412
90	207	246	269	295	313	331

Duration table of daily mean flow for period of record 1943-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
440	298	222	157	111	71	56	48	43	40	37	34	32	29	28	28	23	

# Length of record used in calculation may yield unreliable values for this column.





## SALT RIVER BASIN

13025500 CROW CREEK NEAR FAIRVIEW, WY

LOCATION.—Lat 42°40'30", long 111°00'25", in NW 1/4, sec. 16, T. 31 N., R. 119 W., Lincoln County, Hydrologic Unit 17040105, on left bank 0.5 mi upstream from Spring Creek, 1.8 mi southwest of Fairview, and 2.5 mi downstream from Idaho-Wyoming State line.

DRAINAGE AREA.—113 mi<sup>2</sup>.

PERIOD OF RECORD.—March 1946 to September 1949, October 1961 to September 1967.

GAGE.—Water-stage recorder. Elevation of gage is 6,230 ft above sea level, from topographic map. Mar. 22 to Aug. 11, 1946, nonrecording gage, and Aug. 12, 1946 to Sept. 30, 1949, water-stage recorder, at site 0.3 mi upstream at different datum.

REMARKS.—Small diversions above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 346 ft<sup>3</sup>/s Feb. 1, 1963, gage height, 5.97 ft; minimum daily, 14 ft<sup>3</sup>/s Nov. 17–22, 1961.

Summary of monthly and annual discharges, 1947–49, 1962–67

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	59	31	45	7.7	0.17	6.2
November	55	18	43	10	0.24	5.9
December	62	27	41	9.5	0.23	5.7
January	53	28	37	8.0	0.22	5.2
February	71	28	40	13	0.33	5.6
March	55	28	41	8.9	0.22	5.6
April	114	53	78	21	0.27	10.7
May	200	80	133	39	0.30	18.3
June	172	65	110	41	0.37	15.2
July	91	43	63	18	0.29	8.6
August	69	36	49	11	0.22	6.7
September	65	36	45	9.0	0.20	6.3
Annual	85	47	60	11	0.18	100

Magnitude and frequency of annual low flow,  
based on period of record 1947–49, 1962–67

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20† 5%	50† 2%	100† 1%
1	30	24	22	19	17	15
3	31	25	22	20	18	16
7	32	26	24	22	20	19
14	33	28	26	24	22	21
30	34	30	27	25	24	22
60	35	31	28	26	25	23
90	37	32	30	28	26	25
120	38	34	32	30	28	27
183	41	37	35	34	33	32

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1947–49, 1962–67

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
227	294	334	379	411	440	

Magnitude and frequency of annual high flow,  
based on period of record 1947–49, 1962–67

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	205	252	275	298	311	322
3	189	227	245	261	270	277
7	171	208	228	248	260	271
15	154	194	217	243	260	276
30	140	182	209	239	261	282
60	122	158	182	212	234	256
90	105	134	154	178	196	214

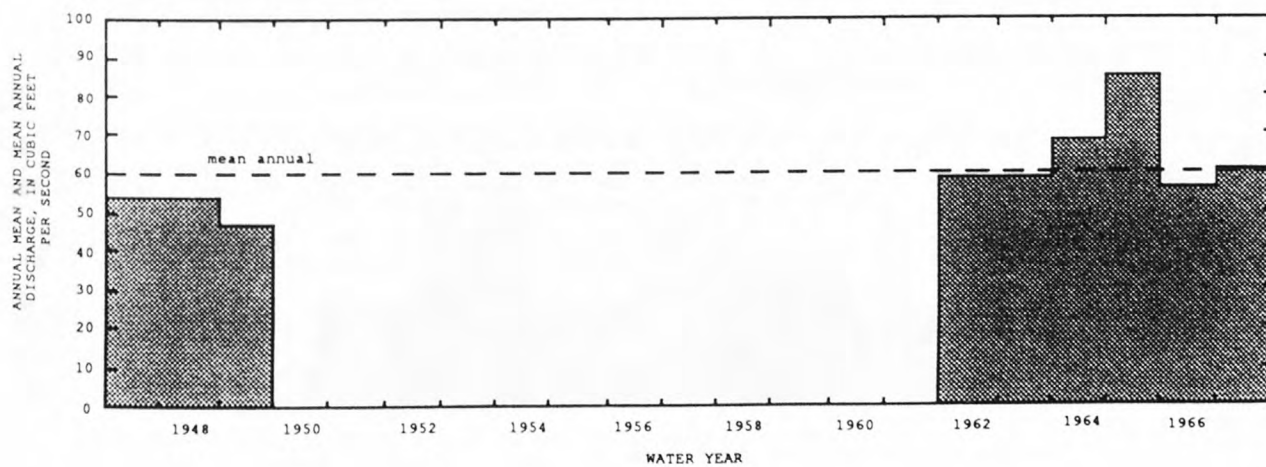
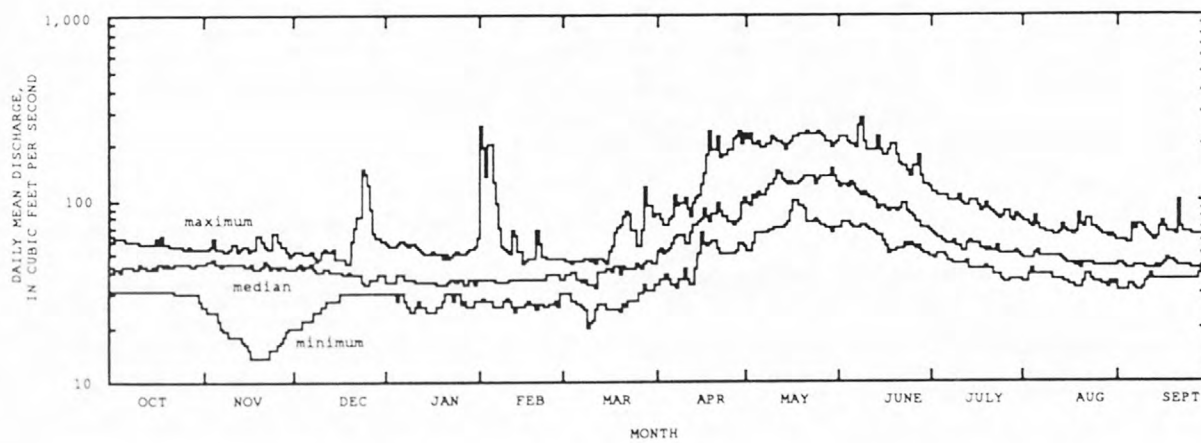
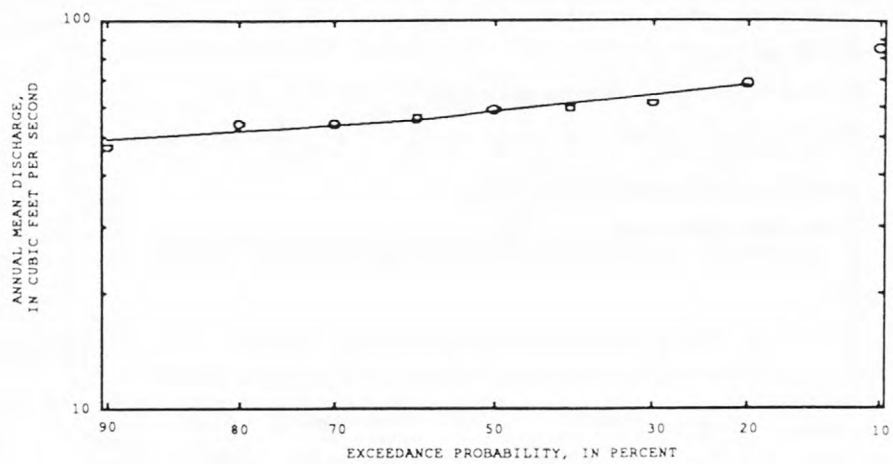
Duration table of daily mean flow for period of record 1947–49, 1962–67

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
210	156	111	88	75	60	51	47	43	41	37	33	29	26	24	19	15

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALT RIVER BASIN

13027000 STRAWBERRY CREEK NEAR BEDFORD, WY

LOCATION.—Lat 42°54'10", long 111°54'00", in sec.27, T.34 N., R.118 W., Lincoln County, Hydrologic Unit 17040105, on right bank at mouth of canyon, 300 ft upstream from Strawberry Canal headgate, 1.5 mi east of Bedford, and at mile 5.5.

DRAINAGE AREA.—21.3 mi<sup>2</sup>.

PERIOD OF RECORD.—June 1932 to September 1943.

GAGE.—Water-stage recorder. Elevation of gage is 6,420 ft above sea level, from topographic map. Prior to Apr. 9, 1934, staff gage 200 ft downstream at different datum.

REMARKS.—One small diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge recorded, 396 ft<sup>3</sup>/s June 27, 1943 (gage height, 4.51 ft), from rating curve extended above 250 ft<sup>3</sup>/s, but may have been higher during period of no gage-height record June 19-26, 1943; minimum not determined.

Summary of monthly and annual discharges, 1933-43

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	53	35	46	5.0	0.11	6.1
November	48	34	41	3.9	0.09	5.5
December	43	31	37	3.9	0.11	4.9
January	37	28	33	2.7	0.08	4.5
February	35	28	32	2.3	0.07	4.2
March	35	25	30	2.8	0.09	4.0
April	62	29	43	11	0.25	5.8
May	150	52	105	29	0.28	14.1
June	236	74	159	52	0.33	21.3
July	187	56	96	36	0.37	12.9
August	110	44	69	17	0.25	9.3
September	81	37	55	11	0.20	7.4
Annual	86	47	62	11	0.17	100

Magnitude and frequency of annual low flow,  
based on period of record 1934-43

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	27	25	24	24	23	22
3	27	26	25	24	23	23
7	28	26	25	24	23	23
14	28	26	25	24	23	23
30	30	27	26	25	24	23
60	31	29	28	27	26	25
90	32	30	29	28	26	25
120	34	32	30	29	28	27
183	37	35	33	32	31	30

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1933-43

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
262	320	354	393	420	445

Magnitude and frequency of annual high flow,  
based on period of record 1933-43

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	240	307	339	371	390	405
3	231	294	325	357	375	391
7	211	274	309	348	373	396
15	187	241	272	307	331	353
30	168	216	243	275	297	317
60	139	175	198	226	246	265
90	118	148	167	192	210	229

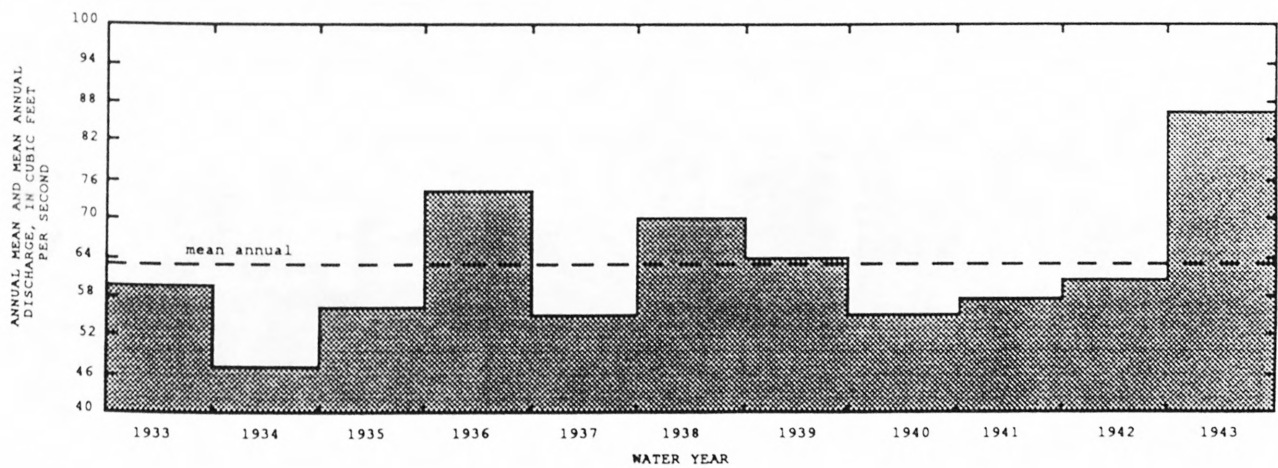
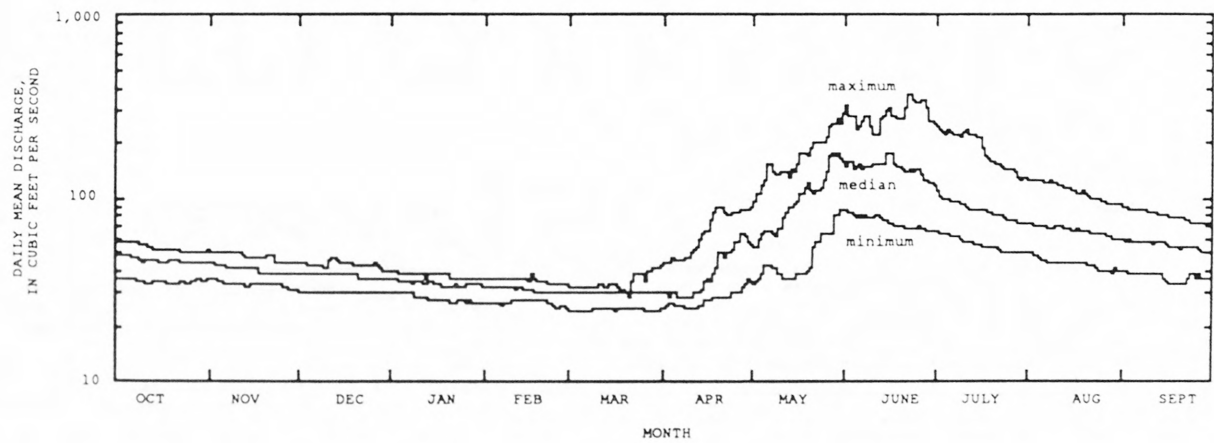
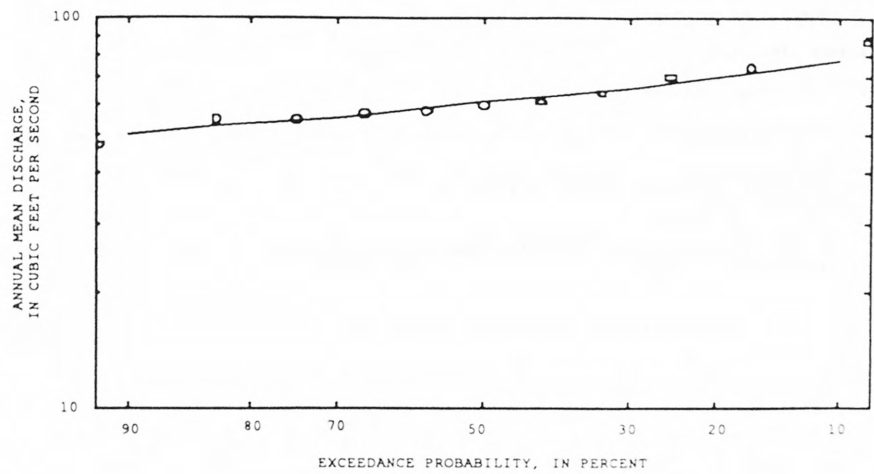
Duration table of daily mean flow for period of record 1933-43

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
249	162	123	96	82	65	52	45	40	36	33	30	29	27	26	25	24	24

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALT RIVER BASIN

13027500 SALT RIVER ABOVE RESERVOIR, NEAR ETNA, WY

LOCATION.—Lat 43°04'47", long 111°02'12", in SW 1/4, NE 1/4, sec. 28, T. 36 N., R. 119 W., Lincoln County, Hydrologic Unit 17040105, on right bank 3.4 mi northwest of Etna and 8.0 mi upstream from maximum flow line of Palisades Reservoir.

DRAINAGE AREA.—829 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1953 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 5,675.78 ft above sea level (levels by U.S. Bureau of Reclamation).

REMARKS.—Diversions above station for power developments, industry, municipal supply, and irrigation of about 60,500 acres of which about 1,000 acre are below station (1966 determination). For details on adjudication of diversions, see Remarks for this station in WSP 1347.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,090 ft<sup>3</sup>/s June 2, 1986, gage height, 5.71 ft; minimum, 160 ft<sup>3</sup>/s Jan. 7, 8, 1971, gage height, 1.53 ft.

Summary of monthly and annual discharges, 1954-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	912	336	633	135	0.21	6.7
November	838	347	599	104	0.17	6.3
December	712	381	525	85	0.16	5.6
January	583	324	454	66	0.15	4.8
February	702	337	445	73	0.16	4.7
March	1,120	362	476	135	0.28	5.0
April	2,200	503	973	379	0.39	10.3
May	3,250	306	1,740	817	0.47	18.4
June	3,360	275	1,440	877	0.61	15.3
July	1,810	271	865	430	0.50	9.2
August	997	266	640	193	0.30	6.8
September	961	342	655	166	0.25	6.9
Annual	1,270	432	788	234	0.30	100

Magnitude and frequency of annual low flow,  
based on period of record 1955-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>#</sup> 1%
1	367	306	271	241	207	186
3	374	316	282	254	222	201
7	382	332	304	281	255	238
14	396	347	320	298	272	255
30	414	364	335	311	283	265
60	428	375	346	321	294	275
90	444	387	356	330	301	282
120	467	405	371	344	313	293
183	517	441	402	369	333	310

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1954-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
2,310	3,370	4,050	4,880	5,490	6,070	

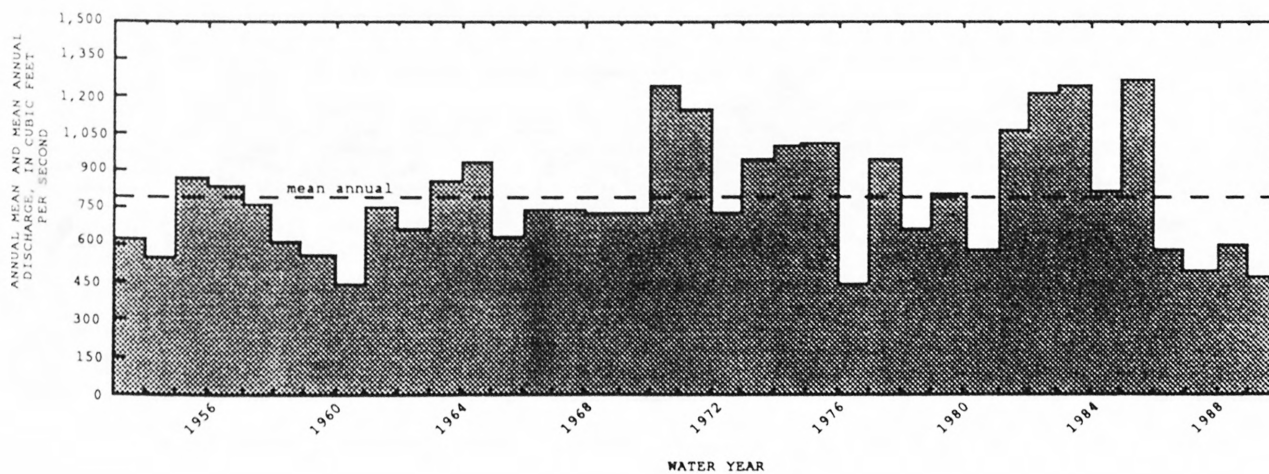
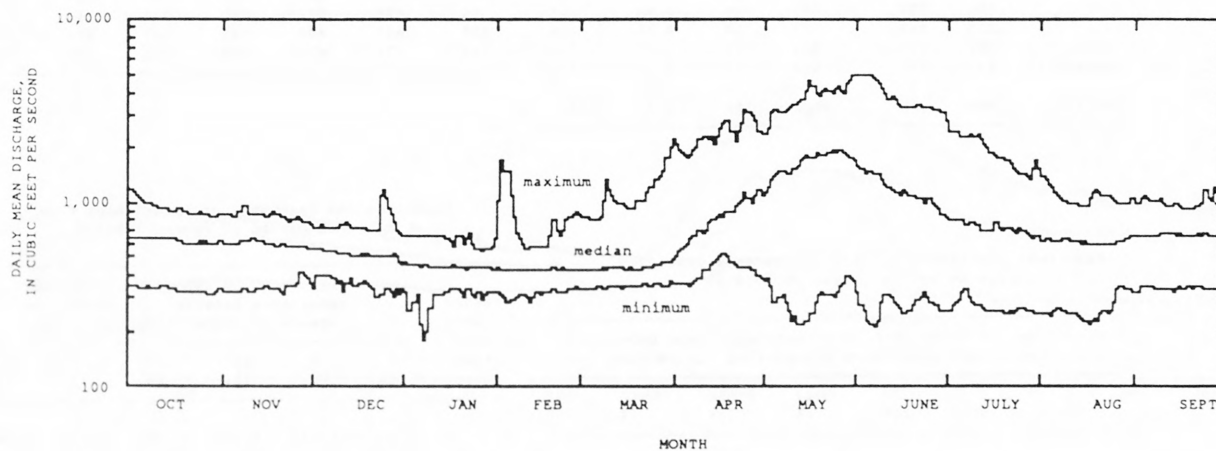
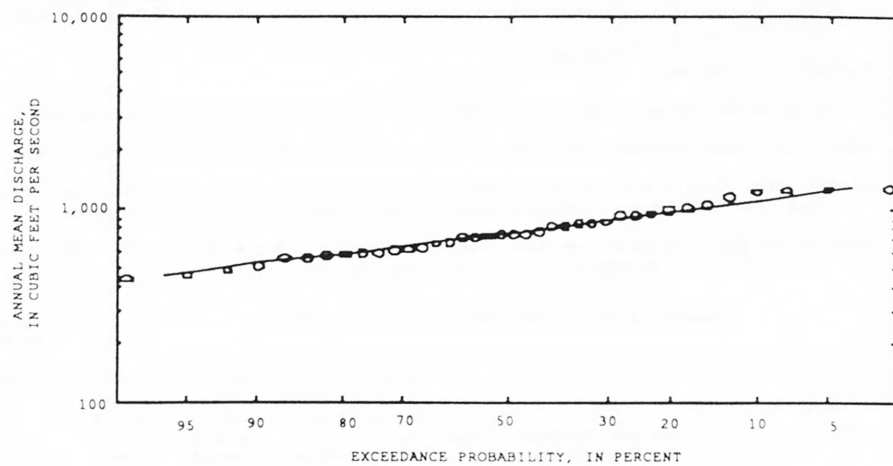
Magnitude and frequency of annual high flow,  
based on period of record 1954-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>#</sup> 1%
1	2,170	3,210	3,930	4,750	5,440	5,940
3	2,100	3,140	3,850	4,700	5,350	5,840
7	2,010	3,040	3,730	4,630	5,300	5,770
15	1,900	2,870	3,540	4,400	5,040	5,680
30	1,770	2,660	3,260	4,020	4,580	5,140
60	1,540	2,300	2,820	3,490	3,990	4,500
90	1,330	1,970	2,420	3,000	3,450	3,900

Duration table of daily mean flow for period of record 1954-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,290	2,130	1,540	1,110	920	746	659	589	531	485	442	394	364	335	310	268	231

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.





## SALT RIVER BASIN

## 13028500 SALT RIVER AT WYOMING-IDAHO STATE LINE

LOCATION.—Lat 43°09'50", long 110°03'50", in sec.16, T.3 S., R.46 E., Bonneville County, Hydrologic Unit 17040105, on left bank 350 ft upstream from highway bridge, 400 ft downstream from Trout Creek, 0.5 mi upstream from mouth, and 0.75 mi west of Wyoming-Idaho State line.

DRAINAGE AREA.—890 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1933 to September 1955. Monthly discharge only for some periods, published in MSP 1317.

GAGE.—Water-stage recorder. Elevation of gage is 5,580 ft above sea level, from topographic map.

REMARKS.—Some diurnal fluctuation at low flow caused by many small powerplants on tributaries. Diversions above station for power developments, industry, municipal supply, and irrigation of about 66,000 acres.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,520 ft<sup>3</sup>/s May 6, 1936, gage height, 4.64 ft; minimum, 216 ft<sup>3</sup>/s May 17, 1934, gage height, 1.30 ft; minimum daily, 220 ft<sup>3</sup>/s May 17, 1934.

Summary of monthly and annual discharges, 1934-55

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	789	335	597	105	0.18	7.1
November	759	339	574	91	0.16	6.7
December	635	326	505	72	0.14	6.0
January	528	310	445	61	0.14	5.3
February	512	297	409	50	0.12	4.9
March	495	318	415	50	0.12	4.9
April	1,930	451	1,030	413	0.40	12.2
May	2,640	273	1,410	607	0.43	16.7
June	2,060	290	1,060	419	0.40	12.6
July	1,210	269	737	228	0.31	8.8
August	969	267	639	176	0.27	7.6
September	850	273	603	137	0.23	7.2
Annual	990	358	702	164	0.23	100

Magnitude and frequency of annual low flow,  
based on period of record 1935-55

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	379	331	299	270	235	212
3	384	337	304	274	239	215
7	389	342	309	279	243	218
14	397	350	315	283	245	219
30	403	356	324	295	261	238
60	416	367	336	309	276	254
90	434	382	348	318	283	259
120	459	400	361	327	286	259
183	510	439	393	352	305	274

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1934-55

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,820	2,540	3,010	3,600	4,030	4,460	

Magnitude and frequency of annual high flow,  
based on period of record 1934-55

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1,810	2,520	2,970	3,420	3,710	3,960
3	1,770	2,480	2,890	3,330	3,620	3,870
7	1,710	2,400	2,800	3,230	3,510	3,770
15	1,620	2,290	2,690	3,150	3,460	3,740
30	1,500	2,110	2,490	2,930	3,240	3,530
60	1,330	1,830	2,120	2,450	2,670	2,880
90	1,170	1,580	1,820	2,090	2,270	2,430

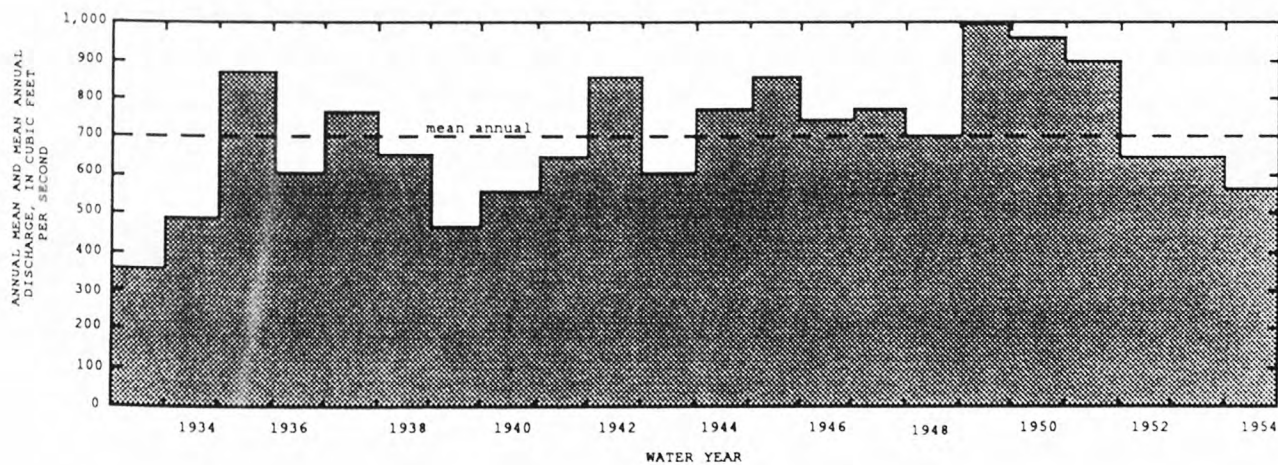
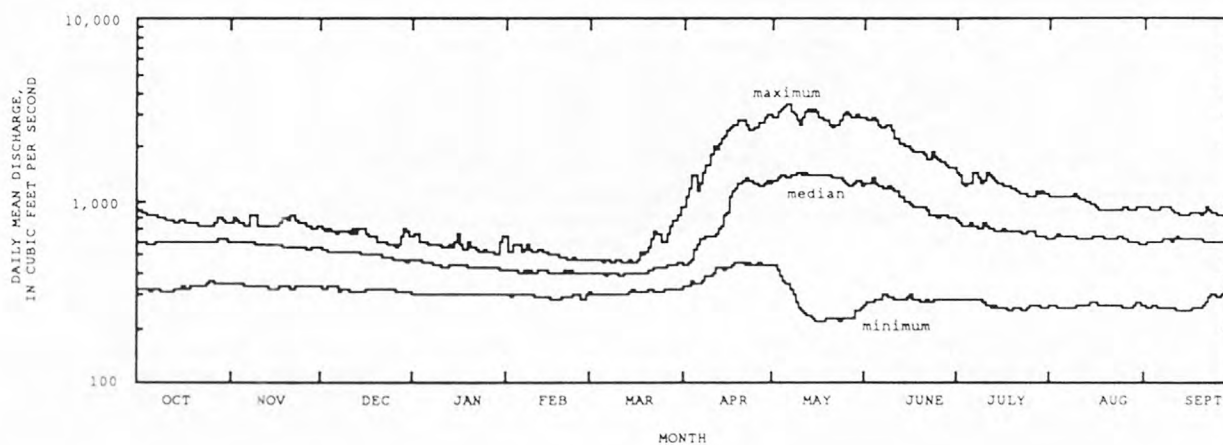
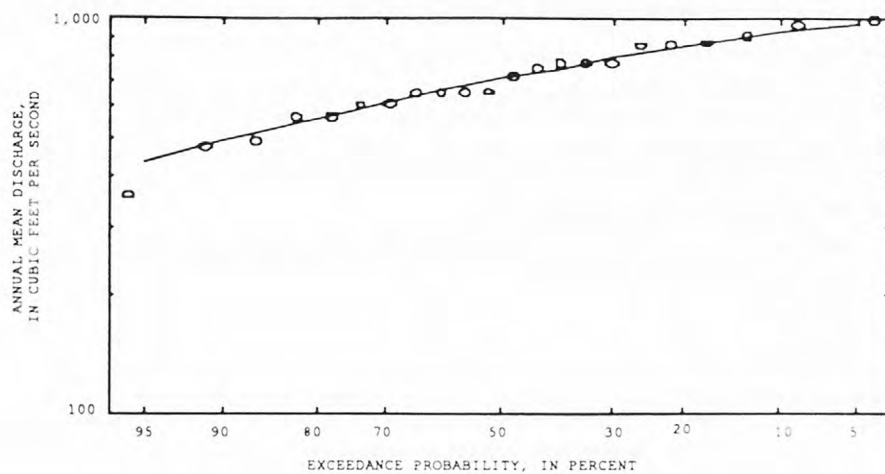
Duration table of daily mean flow for period of record 1934-55

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,530	1,620	1,240	1,000	856	704	626	571	519	471	427	382	342	301	273	257	230

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BEAR CREEK BASIN

13032000 BEAR CREEK ABOVE RESERVOIR, NEAR IRWIN, ID

LOCATION.—Lat 43°17'00", long 111°13'17", in SE 1/4, SE 1/4, sec. 31, T.1 S., R.45 E., Caribou National Forest, Bonneville County, Hydrologic Unit 17040104, on left bank 0.5 mi upstream from maximum flow line of Palisades Reservoir, and 6.4 mi south of Irwin.

DRAINAGE AREA.—77.1 mi<sup>2</sup>. 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 September 1936 (discontinued). Published as "Bear Creek near Irwin," 1917-18, 1934-36.

GAGE.—Water-stage recorder. Elevation of gage is 5,626.0 ft above sea level, unadjusted (planetable survey). Prior to Nov. 1, 1936, nonrecording gage at site 4 mi downstream at different datum.

REMARKS.—No diversion above station

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 784 ft<sup>3</sup>/s May 5, 1936; minimum, about 1.0 ft<sup>3</sup>/s Jan. 20, 1954, gage height, 1.08 ft, result of freezeup.

Summary of monthly and annual discharges, 1954-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	36	20	28	4.0	0.14	3.0
November	32	19	25	3.7	0.15	2.7
December	39	16	24	5.9	0.25	2.5
January	36	15	22	6.0	0.27	2.4
February	36	15	22	5.6	0.26	2.4
March	44	18	26	6.4	0.24	2.8
April	290	32	123	74	0.60	13.2
May	507	166	314	104	0.33	33.6
June	338	81	193	76	0.40	20.6
July	124	44	79	25	0.32	8.5
August	65	27	45	11	0.24	4.8
September	46	24	34	6.6	0.20	3.5
Annual	117	50	78	20	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1955-71

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	17	14	12	11	9.6	8.8
3	17	15	13	12	11	10
7	18	15	14	13	12	11
14	19	16	15	13	12	12
30	19	16	15	14	13	12
60	20	17	16	15	14	13
90	21	18	16	15	14	13
120	22	19	17	16	15	14
183	24	21	19	18	17	16

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1954-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
515	673	767	875	950	1,020

Magnitude and frequency of annual high flow,  
based on period of record 1954-71

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	473	611	684	761	808	849
3	449	584	657	734	783	825
7	416	551	625	704	754	798
15	379	501	569	642	688	730
30	335	441	500	563	603	640
60	267	349	396	451	488	522
90	213	275	312	354	384	411

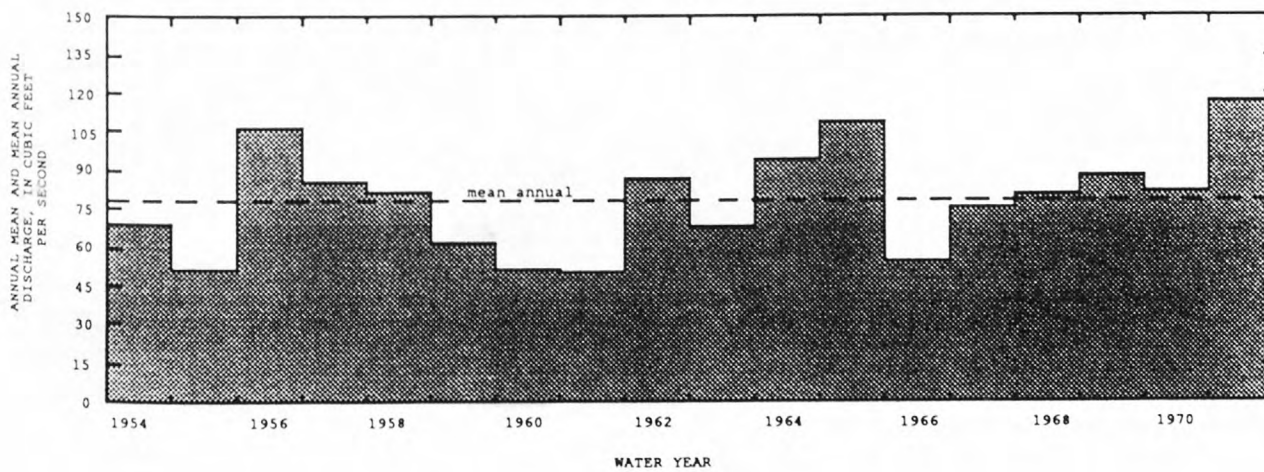
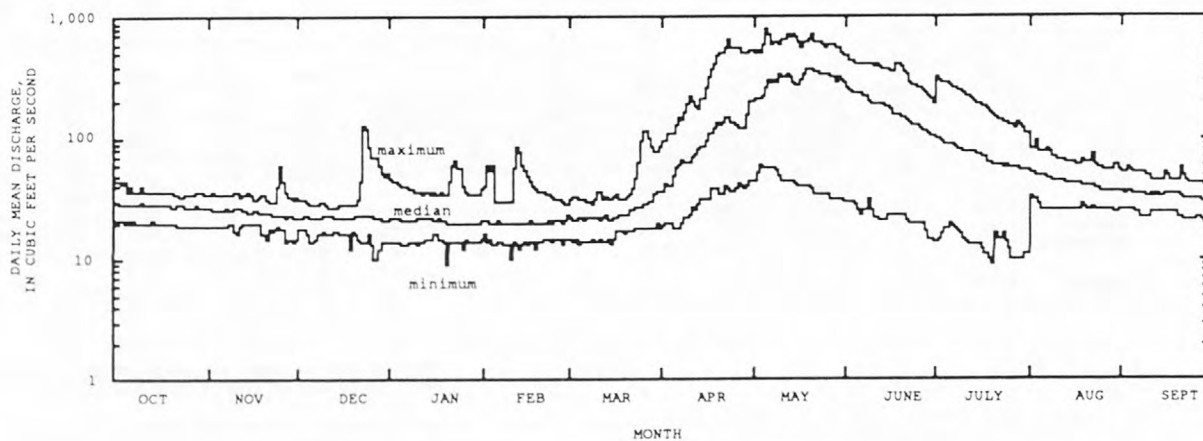
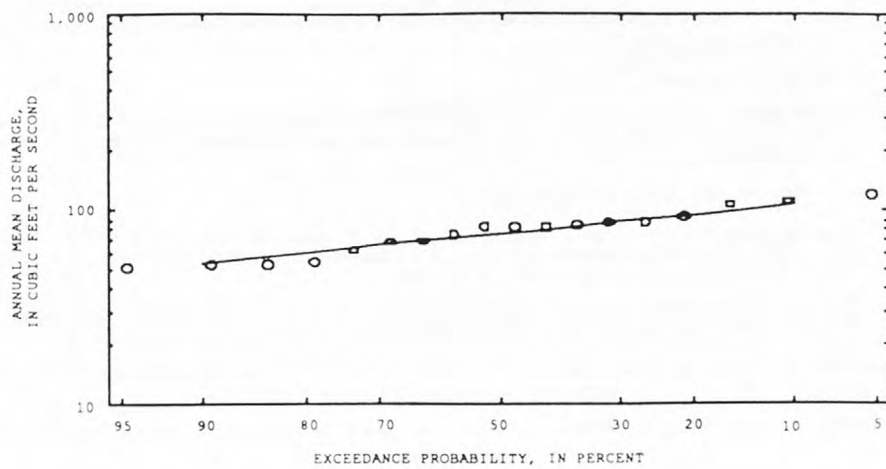
Duration table of daily mean flow for period of record 1954-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
523	333	210	151	107	60	40	33	28	25	22	20	17	15	14	13	

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# Snake River Main Stem

13032500 SNAKE RIVER NEAR IRWIN, ID

LOCATION.—Lat 43°21'03", long 111°13'06", in NE 1/4, sec. 7, T. 1 S., R. 45 E., Bonneville County, Hydrologic Unit 17040104, on right bank at U.S. Bureau of Reclamation headquarters, 1.5 mi downstream from Palisades Dam, 2 mi upstream from Palisades Creek, 5 mi southeast of Irwin, and at mile 900.2.

DRAINAGE AREA.—5,225 mi<sup>2</sup>.

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.

REVISED RECORDS.—WSP 1217: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 5,353.00 ft above sea level (levels by U.S. Bureau of Reclamation). Mar. 30, 1935, to Oct. 31, 1936, water-stage recorder at site 3.5 mi downstream at different datum. May 1, 1949, to Mar. 22, 1950, nonrecording gage at site 1,100 ft downstream at datum 1.9 ft higher.

REMARKS.—Station equipment includes satellite telemetry. Flow regulated by Jackson Lake and Palisades Reservoir. Diversion from tributaries above station for irrigation in Wyoming and Idaho of about 95,300 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 31,800 ft<sup>3</sup>/s June 4-6, 1956; maximum gage height, 13.31 ft, June 4, 1956; minimum, 19 ft<sup>3</sup>/s Nov. 8, 1956, gage height, 2.43 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in early June 1894 probably was higher than that of June 4-6, 1956.

Summary of monthly and annual discharges, 1940-41, 1950-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard deviation (ft <sup>3</sup> /s)	Coefficient of variation	Percentage of annual runoff
October	7,720	1,180	3,250	1,140	0.35	4.2
November	4,960	796	2,280	988	0.43	2.9
December	5,490	713	2,280	1,200	0.52	2.9
January	5,620	702	2,310	1,190	0.51	3.0
February	7,030	715	2,240	1,290	0.57	2.9
March	11,100	607	3,340	2,710	0.81	4.3
April	15,800	1,010	6,360	4,330	0.68	8.1
May	20,500	7,480	12,500	3,260	0.26	16.1
June	25,400	9,710	14,800	3,840	0.26	19.0
July	17,800	8,760	13,100	2,060	0.16	16.8
August	12,400	6,720	8,990	1,220	0.14	11.5
September	9,650	3,440	6,500	1,460	0.23	8.3
Annual	9,270	4,390	6,520	1,320	0.20	100

Magnitude and frequency of annual low flow,  
based on period of record 1941, 1951-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>#</sup> 1%
1	1,510	690	342	161	57	25
3	1,600	847	457	232	90	42
7	1,610	862	501	282	128	70
14	1,410	923	737	610	491	425
30	1,510	1,020	826	695	571	500
60	1,630	1,090	888	748	617	542
90	1,770	1,180	957	803	659	577
120	1,890	1,250	999	830	671	581
183	2,320	1,640	1,370	1,180	1,000	896

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1940-41, 1950-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
19,500	24,000	26,700	30,000	32,400	34,600

Magnitude and frequency of annual high flow,  
based on period of record 1940-41, 1950-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>#</sup> 1%
1	18,900	23,500	26,400	29,900	32,300	34,500
3	18,600	23,000	25,800	29,100	31,500	33,800
7	18,000	22,200	24,700	27,800	30,000	32,100
15	16,900	20,800	23,100	26,000	28,000	30,000
30	15,700	19,100	21,300	23,900	25,900	27,900
60	14,500	17,300	19,100	21,200	22,800	24,300
90	13,600	15,900	17,300	18,900	20,100	21,200

Duration table of daily mean flow for period of record 1940-41, 1950-90

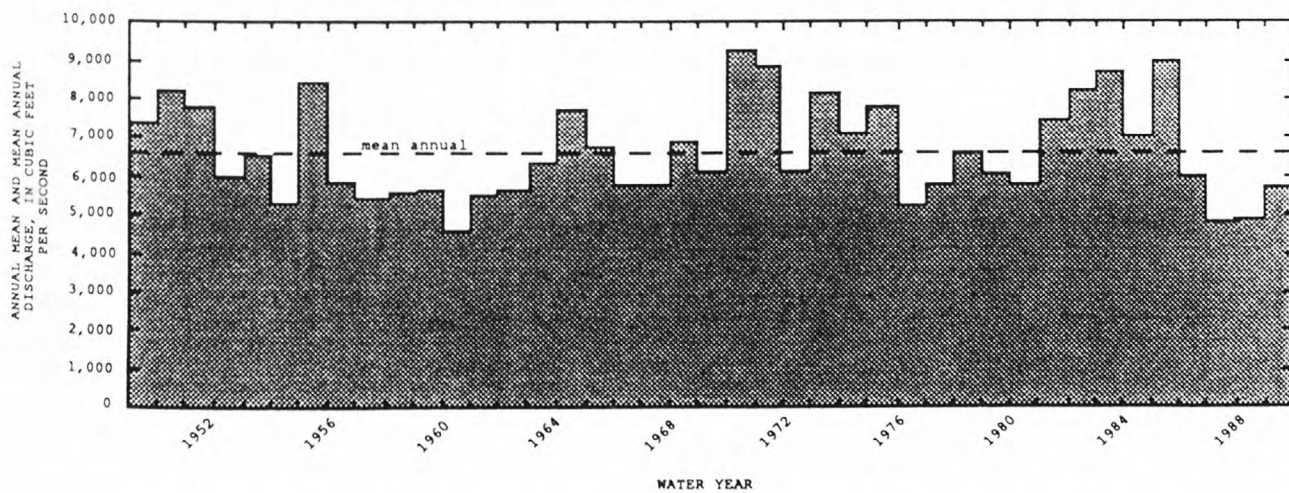
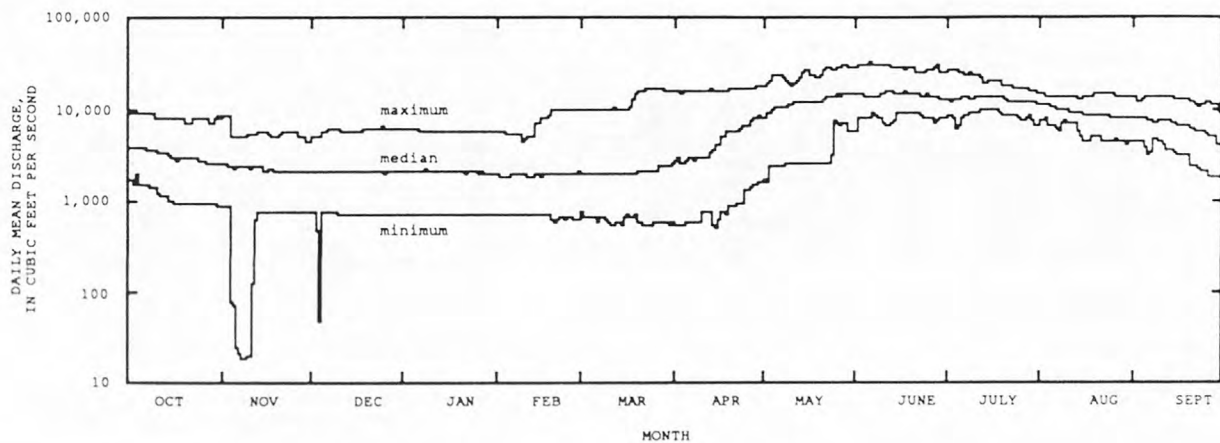
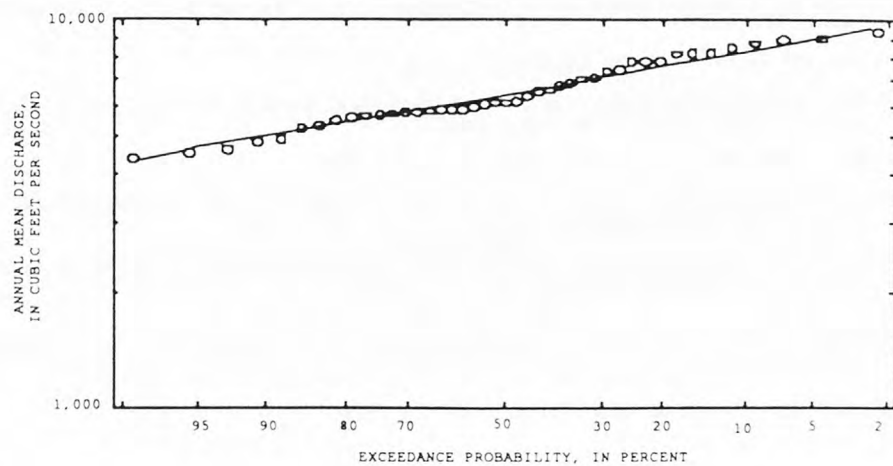
Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
22,800	17,100	14,500	12,700	11,500	9,170	6,960	4,370	3,170	2,470	1,850	1,220	981	809	734	697	558

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.





LOCATION MAP





Snake River Main Stem

13037500 Snake River near Heise, ID

LOCATION.—Lat 43°36'45", long 111°39'33", in SE 1/4, SW 1/4, sec. 5, T. 3 N., R. 41 E., Bonneville County, Hydrologic Unit 17040104, on left bank 850 ft upstream from Anderson Canal headgate, 2.4 mi upstream from Heise, 6 mi east of Ririe, 24 mi upstream from Henrys Fork, and at mile 853.6.

DRAINAGE AREA.—5,752 mi<sup>2</sup>. Mean elevation, 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."

REVISED RECORDS.—WSP 1217: Drainage area. WSP 1347: 1912.

GAGE.—Water-stage recorder. Datum of gage is 5,015.3 ft above 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.

REMARKS.—Station equipment includes satellite telemetry. Some diurnal fluctuations during winter powerplant operations at Palisades. Riley Ditch, 1.5 mi upstream, diverted 7,760 acre-ft during the year. Diversions from tributaries above station for irrigation in Wyoming and Idaho of about 104,000 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, about 60,000 ft<sup>3</sup>/s May 19, 1927, result of washing out of landslide on Gros Ventre River, gage height, about 16.0 ft, present datum; maximum discharge since filling of Palisades Reservoir, 27,000 ft<sup>3</sup>/s, gage height, 8.49 ft, June 18, 1986; minimum, 460 ft<sup>3</sup>/s Nov. 10, 12, 1956, gage height, -0.18 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood in early June 1894 was estimated as 65,000 ft<sup>3</sup>/s by U.S. Army Corps of Engineers.

Summary of monthly and annual discharges, 1911-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	8,180	1,670	3,620	998	0.28	4.3
November	5,760	1,180	2,910	895	0.31	3.5
December	6,270	1,060	2,740	998	0.36	3.3
January	6,230	1,080	2,640	978	0.37	3.1
February	7,530	1,040	2,570	1,000	0.39	3.1
March	12,000	983	3,250	2,130	0.66	3.9
April	16,800	1,400	6,420	3,690	0.57	7.7
May	27,000	7,280	13,600	3,760	0.28	16.3
June	36,500	6,420	17,100	5,250	0.31	20.4
July	22,900	6,850	13,300	2,680	0.20	15.9
August	13,400	3,760	9,210	1,720	0.19	11.0
September	10,200	2,790	6,310	1,590	0.25	7.5
Annual	10,100	4,120	6,990	1,360	0.19	100

Magnitude and frequency of annual low flow,  
based on period of record 1912-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	1,960	1,380	1,100	883	672	550
3	2,000	1,440	1,160	952	744	622
7	2,050	1,490	1,210	998	784	657
14	2,080	1,570	1,330	1,150	960	847
30	2,150	1,630	1,390	1,210	1,030	919
60	2,240	1,700	1,460	1,280	1,100	988
90	2,340	1,780	1,530	1,350	1,160	1,050
120	2,450	1,840	1,580	1,380	1,190	1,070
183	2,760	2,170	1,920	1,740	1,550	1,440

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1911-90

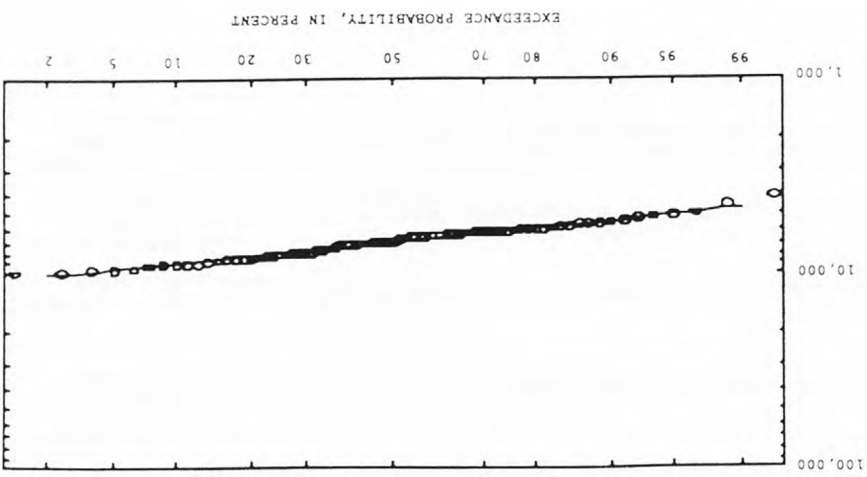
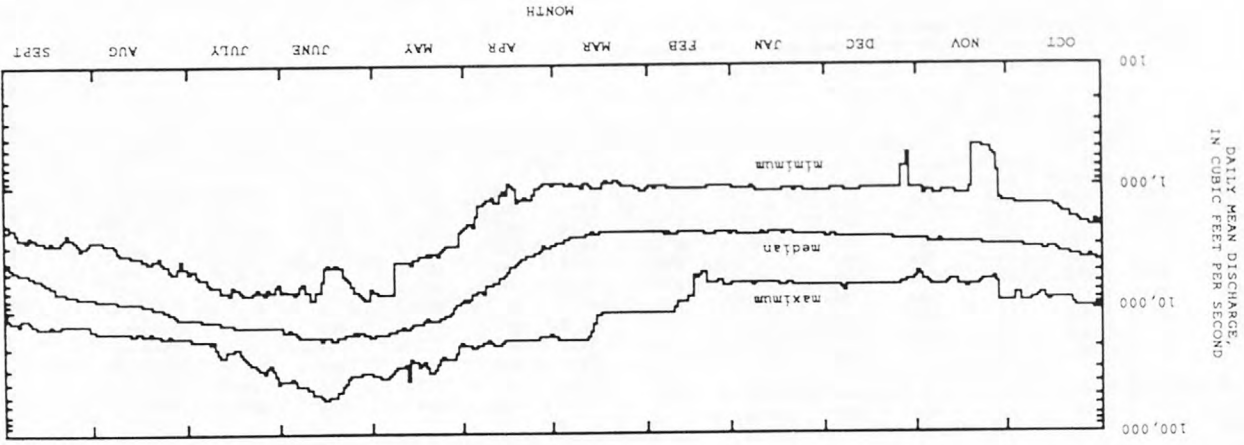
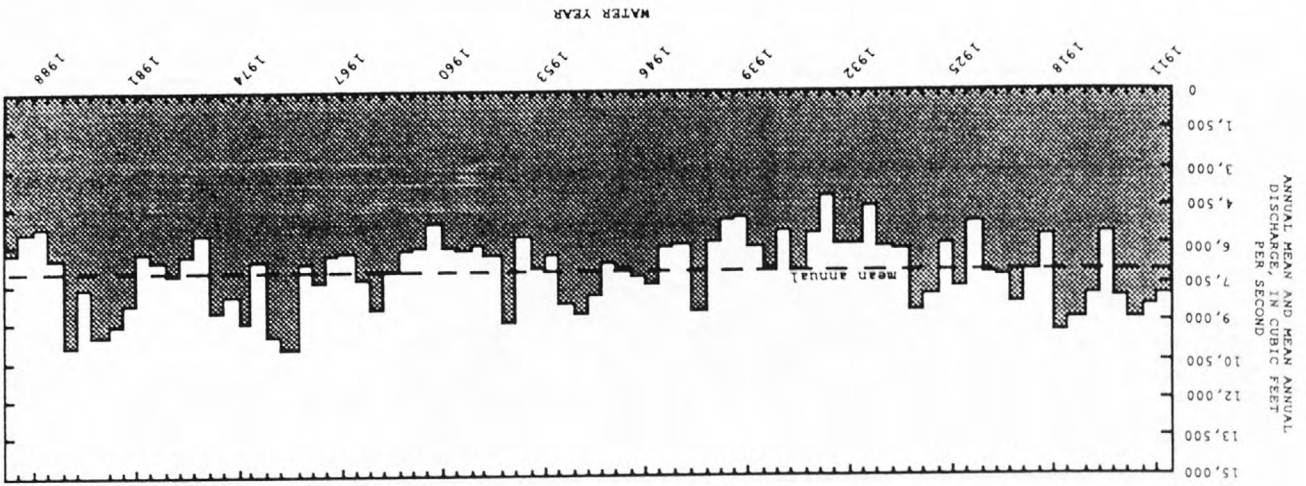
Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
22,000	29,000	34,100	41,000	46,500	52,200

Magnitude and frequency of annual high flow,  
based on period of record 1911-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	21,700	28,200	32,600	38,100	42,400	46,600
3	21,200	27,600	31,900	37,300	41,500	45,600
7	20,200	26,400	30,600	35,900	40,100	44,200
15	18,900	24,500	28,400	33,400	37,200	41,100
30	17,600	22,400	25,700	29,700	32,800	35,900
60	16,100	19,700	21,800	24,300	26,000	27,600
90	14,900	17,800	19,400	21,200	22,400	23,500

Duration table of daily mean flow for period of record 1911-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
26,000	18,600	15,300	13,300	11,900	9,110	6,510	4,310	3,440	2,880	2,430	1,980	1,550	1,290	1,160	1,050	948	



Snake River Main Stem

13038500 SNAKE RIVER AT LORENZO, ID

LOCATION.—Lat 43°44'06", long 111°52'33", in NE 1/4, SW 1/4, sec. 28, T. 5 N., R. 39 E., Jefferson County, Hydrologic Unit 17040201, on left bank 0.5 mi downstream from bridge on U.S. Highway 191, 0.5 mi north of Lorenzo, 5.5 mi upstream from Henrys Fork, and at mile 837.9.

DRAINAGE AREA.—5,810 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1978 to current year. Prior to January 1978 monthly mean discharges for the period April to September for the years 1924 to 1927 published in WSP 1317.

REVISED RECORDS.—WDR ID-81-1: 1980.

GAGE.—Water-stage recorder. Elevation of gage is 4,850 ft above sea level, from topographic map. Prior to January 1978 at site 0.5 mi upstream at different datum.

REMARKS.—Station equipment includes satellite telemetry. Flow partly regulated by Jackson Lake and Palisades Reservoir. Some diurnal fluctuations during winter from powerplant operations at Palisades. Diversion above station for irrigation in Wyoming and Idaho of about 111,600 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 43,000 ft<sup>3</sup>/s May 19, 1927, result of washing out of landslide on Gros Ventre River, gage height, 9.85 ft site and datum then in use; maximum discharge excluding 1927, 20,900 ft<sup>3</sup>/s June 26, 1986, gage height, 11.75 ft; minimum, 48 ft<sup>3</sup>/s Nov. 15, 1979.

Summary of monthly and annual discharges, 1979-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	3,030	405	1,480	949	0.64	2.8
November	4,280	243	1,430	1,310	0.92	2.7
December	5,710	497	2,300	1,950	0.84	4.3
January	5,980	431	2,520	2,060	0.82	4.7
February	3,960	433	1,820	1,300	0.71	3.4
March	10,100	426	3,220	3,150	0.98	6.0
April	13,900	1,260	6,150	4,330	0.70	11.5
May	16,800	3,810	9,420	4,200	0.45	17.6
June	17,200	4,020	9,810	4,550	0.46	18.4
July	12,200	4,300	7,880	2,560	0.33	14.8
August	6,750	2,660	4,150	1,130	0.27	7.8
September	6,210	1,670	3,240	1,340	0.42	6.0
Annual	7,180	2,430	4,460	1,610	0.36	100

Magnitude and frequency of annual low flow,  
based on period of record 1979-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	381	173	116	84	59	47
3	410	199	140	105	77	63
7	475	239	168	127	93	76
14	563	285	199	147	105	83
30	633	353	269	219	176	154
60	784	450	350	289	238	212
90	956	520	391	315	250	217
120	1,090	575	422	331	254	215
183	1,370	748	551	431	329	276

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1979-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
13,800	20,300	25,700	34,200	41,900	50,800

Magnitude and frequency of annual high flow,  
based on period of record 1979-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	13,500	17,300	19,700	22,400	24,200	26,000
3	13,300	17,200	19,500	22,200	24,100	25,900
7	12,800	16,600	18,900	21,600	23,400	25,200
15	12,000	16,000	18,300	21,000	22,800	24,600
30	11,100	14,800	17,000	19,600	21,400	23,000
60	9,810	13,400	15,700	18,600	20,800	22,900
90	8,940	12,300	14,700	17,800	20,200	22,700

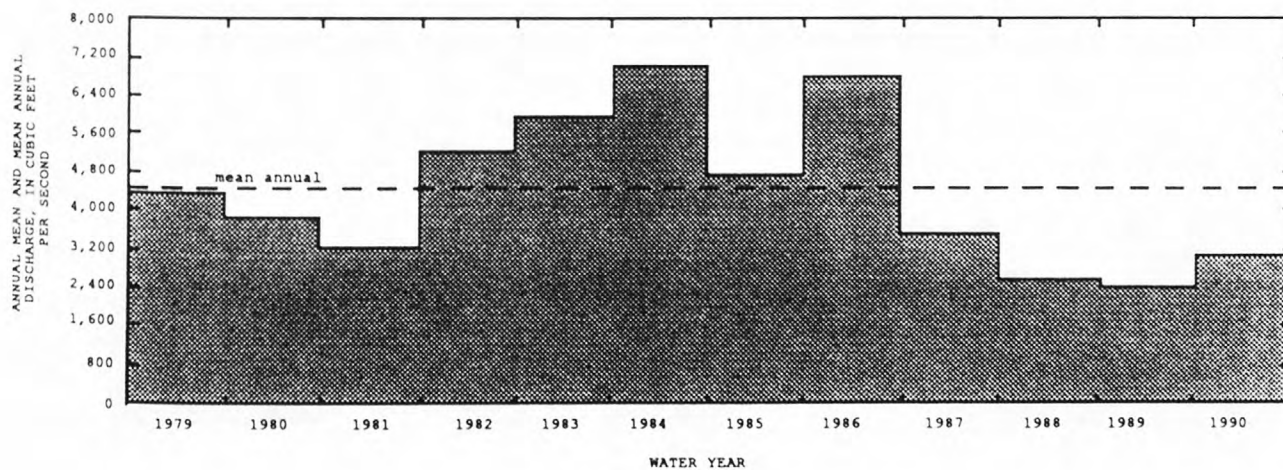
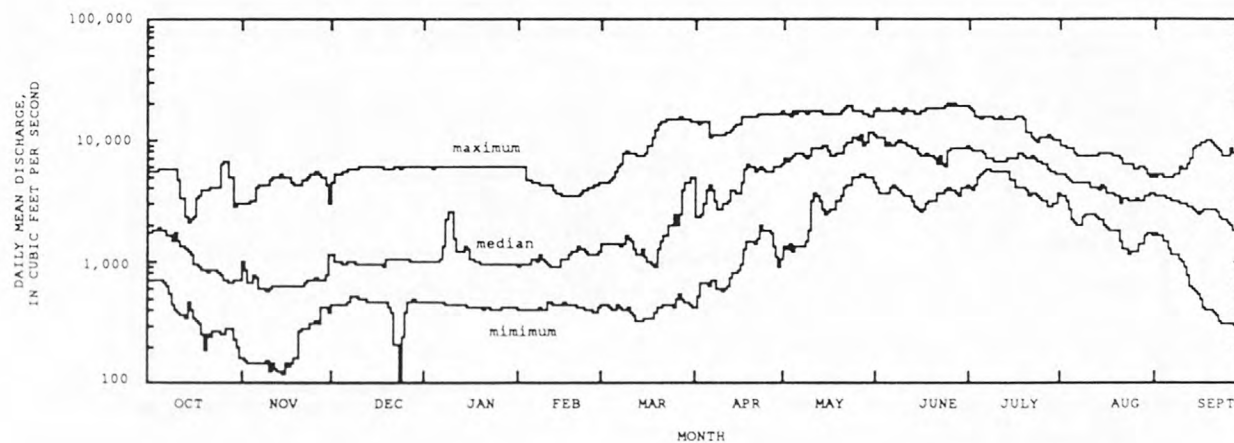
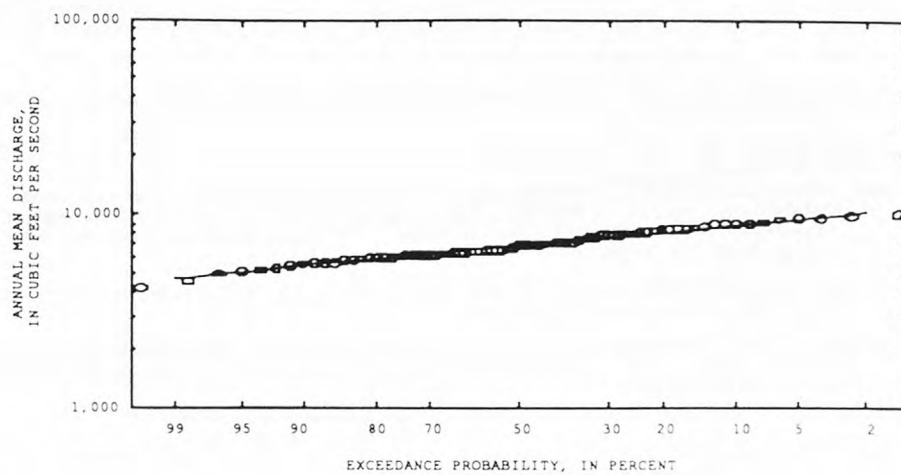
Duration table of daily mean flow for period of record 1979-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time														
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%
17,000	14,600	11,300	8,130	6,820	5,530	4,330	3,370	2,510	1,490	841	525	444	348	246
														167
														131

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## HENRYS FORK BASIN

13039500 HENRYS FORK NEAR LAKE, ID

LOCATION.—Lat 44°35'42", long 111°20'57", in NE 1/4, SW 1/4, sec. 26, T. 15 N., R. 43 E., Fremont County, Hydrologic Unit 17040202, on left bank 0.2 mi downstream from Henrys Lake Dam, 5.4 mi south of former Lake Post Office, and at mile 117.1.

DRAINAGE AREA.—99.3 mi<sup>2</sup>, including 6.2 mi<sup>2</sup> 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.

REVISED RECORDS.—WSP 1217: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 6,437.06 ft above sea level, U.S. Army Corps of Engineers bench mark (levels by Bureau of Reclamation). May 1920 to September 1922, nonrecording gage at site 3 mi downstream and below mouth of Dry Creek at different datum. September 1922 to July 30, 1978, recording gage at site 125 ft upstream at different datum. July 31, 1978, to July 27, 1989, at present site at datum 4.0 ft higher.

REMARKS.—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 1980).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 907 ft<sup>3</sup>/s 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, Sept. 18 to Oct. 6, 1977. Outflow from Henrys Lake was reported to have ceased entirely in late summer of 1889.

Summary of monthly and annual discharges, 1930-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	97	0.19	20	22	1.1	3.1
November	89	0.32	17	21	1.3	2.7
December	102	0.36	17	21	1.2	2.7
January	84	0.38	18	19	1.1	2.9
February	81	0.36	21	21	1.0	3.3
March	96	0.72	25	24	0.99	3.9
April	170	1.0	34	34	0.98	5.4
May	166	0.90	48	43	0.90	7.5
June	267	2.6	93	71	0.76	14.7
July	313	19	147	67	0.45	23.2
August	352	14	142	79	0.56	22.3
September	154	3.1	52	37	0.71	8.3
Annual	113	4.1	53	22	0.42	100

Magnitude and frequency of annual low flow,  
based on period of record 1931-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	0.00	0.00	0.17	0.53	1.3	5.1
3	0.00	0.00	0.20	0.59	1.4	5.2
7	0.00	0.00	0.23	0.65	1.5	5.3
14	0.00	0.00	0.25	0.69	1.6	5.5
30	5.9	1.6	0.75	0.37	0.16	0.09
60	6.3	2.1	1.1	0.67	0.37	0.24
90	7.3	2.5	1.4	0.86	0.49	0.33
120	8.2	2.8	1.5	0.94	0.52	0.35
183	11	3.9	2.1	1.3	0.69	0.45

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1930-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
309	437	517	614	683	749

Magnitude and frequency of annual high flow,  
based on period of record 1930-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	296	355	367	371	372	372
3	289	351	364	370	371	371
7	278	340	353	359	361	361
15	258	320	336	343	345	346
30	227	285	300	308	311	312
60	179	217	226	230	231	232
90	148	178	185	188	188	189

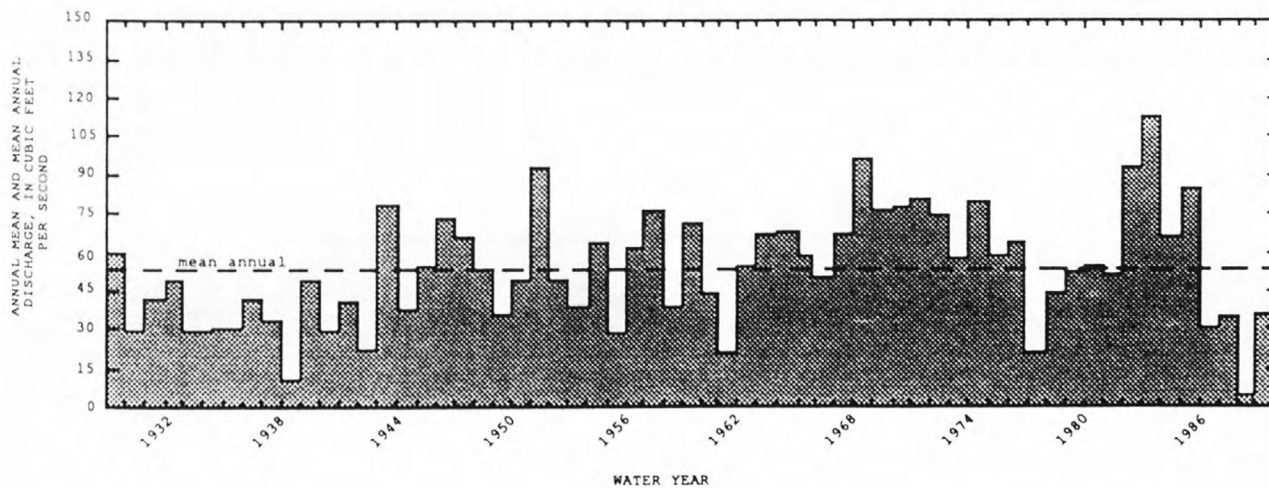
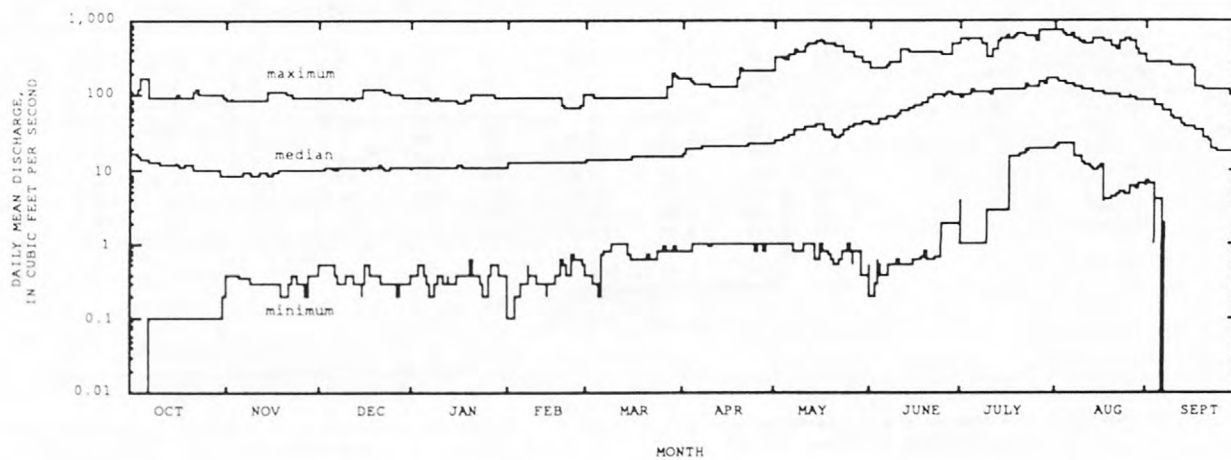
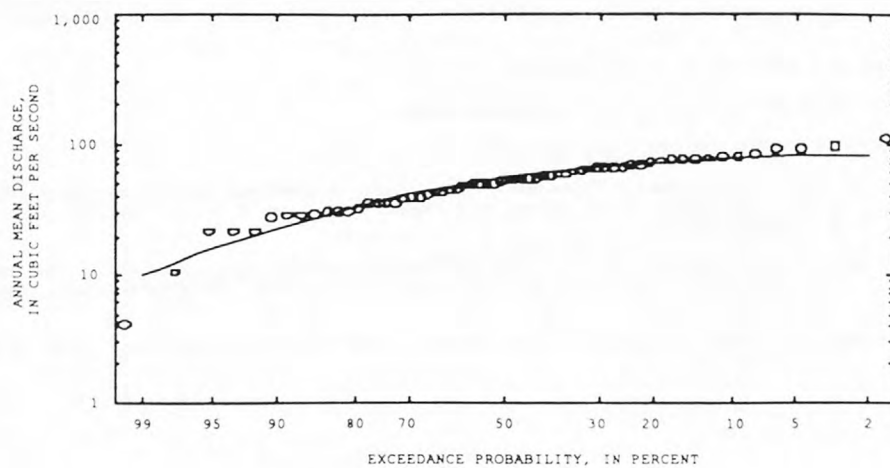
Duration table of daily mean flow for period of record 1930-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time													
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	99%
332	219	150	109	88	59	37	22	15	10	5.0	2.5	1.7	0.91
													0.47
													0.31
													0.05





LOCATION MAP





## HENRYS FORK BASIN

13042500 HENRYS FORK NEAR ISLAND PARK, ID

LOCATION.—Lat 44°24'59", long 111°23'41", in SW¼, SW¼, sec.28, T.13 N., R.43 E., Fremont County, Hydrologic Unit 17040202, Targhee National Forest, on left bank 0.2 mi downstream from Island Park Dam, 0.2 mi upstream from Buffalo River, 1 mi southwest of Island Park Post Office, and at mile 91.5.

DRAINAGE AREA.—481 mi<sup>2</sup>. Mean elevation, 7,080 ft.

PERIOD OF RECORD.—January 1933 to September 1990.

REVISED RECORDS.—WSP 1217: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 6,225 ft above sea level, from river-profile map. Prior to May 15, 1935, nonrecording gage at site about 0.8 mi upstream at different datum. May 15 to Nov. 30, 1935, water-stage recorder at site 1,000 ft downstream at different datum.

REMARKS.—Station equipment includes satellite telemetry. Flow regulated by Henrys Lake (see sta 13039000) and Island Park Reservoir. Diversions above station for irrigation of about 15,500 acres (1966 determination), a considerable part of which consists of partly subirrigated meadows.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,030 ft<sup>3</sup>/s May 23, 1984, gage height, 6.06 ft; minimum daily, 1.0 ft<sup>3</sup>/s Nov. 16 to Dec. 7, 1938.

Summary of monthly and annual discharges, 1934-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	895	8.1	438	179	0.41	6.0
November	799	2.0	307	195	0.64	4.2
December	635	1.9	263	195	0.74	3.6
January	688	5.7	239	212	0.89	3.3
February	661	7.8	279	189	0.68	3.7
March	695	9.3	318	172	0.54	4.3
April	924	37	499	199	0.40	6.8
May	1,720	380	991	291	0.29	13.5
June	2,130	439	961	327	0.34	13.1
July	2,070	485	1,150	341	0.30	15.7
August	2,180	349	1,140	320	0.28	15.6
September	1,370	312	747	216	0.29	10.2
Annual	1,050	398	614	136	0.22	100

Magnitude and frequency of annual low flow,  
based on period of record 1934-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	15	4.1	2.3	1.5	0.88	0.55
3	18	4.7	2.5	1.5	0.89	0.59
7	21	4.9	2.5	1.5	0.90	0.59
14	25	5.8	2.8	1.6	0.92	0.65
30	36	8.0	3.7	1.9	0.94	0.71
60	87	20	8.5	3.9	1.6	0.83
90	142	42	20	9.8	4.2	2.3
120	204	75	39	20	9.0	5.0
183	282	181	140	113	88	73

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1934-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,920	2,260	2,450	2,660	2,800	2,920	

Magnitude and frequency of annual high flow,  
based on period of record 1934-90

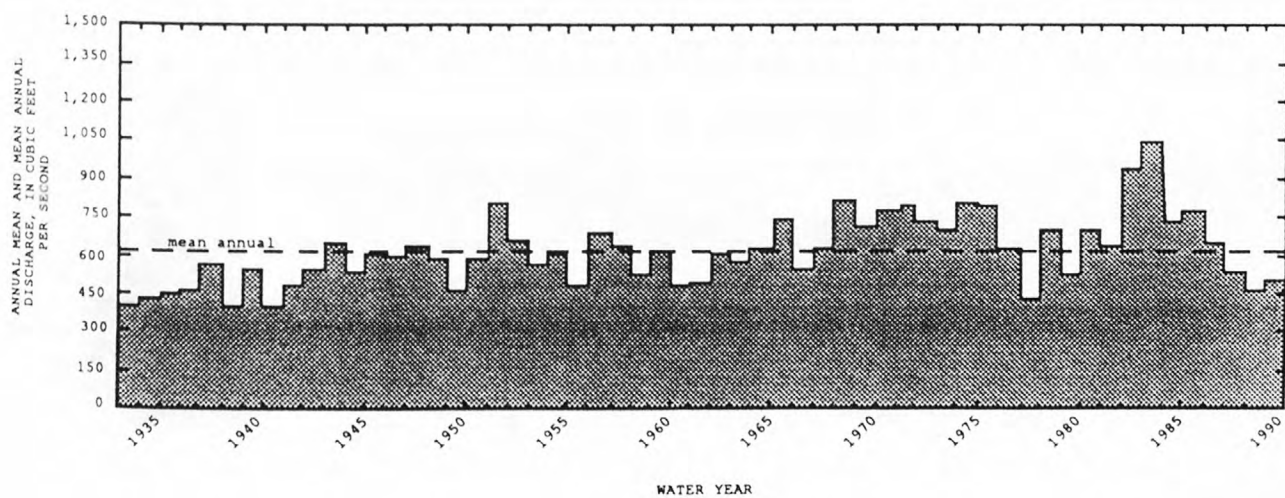
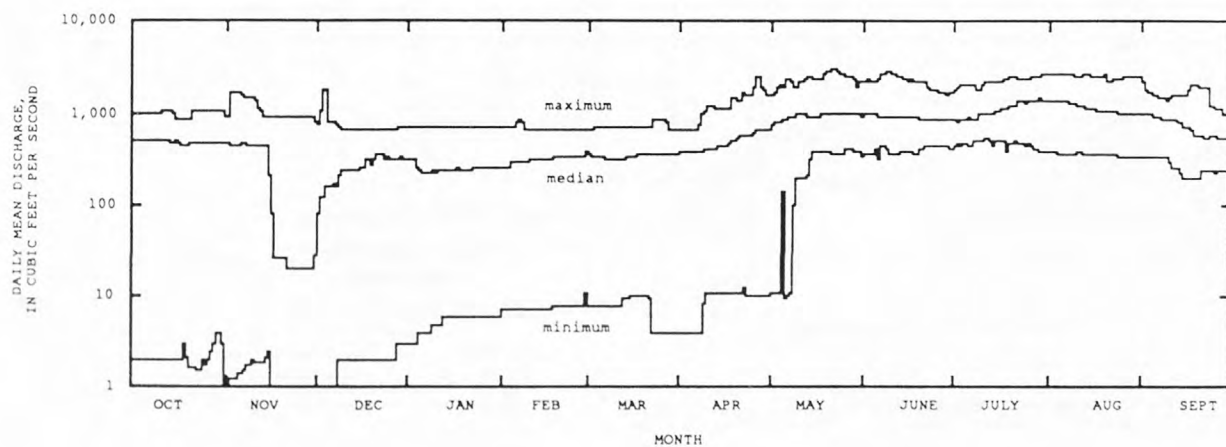
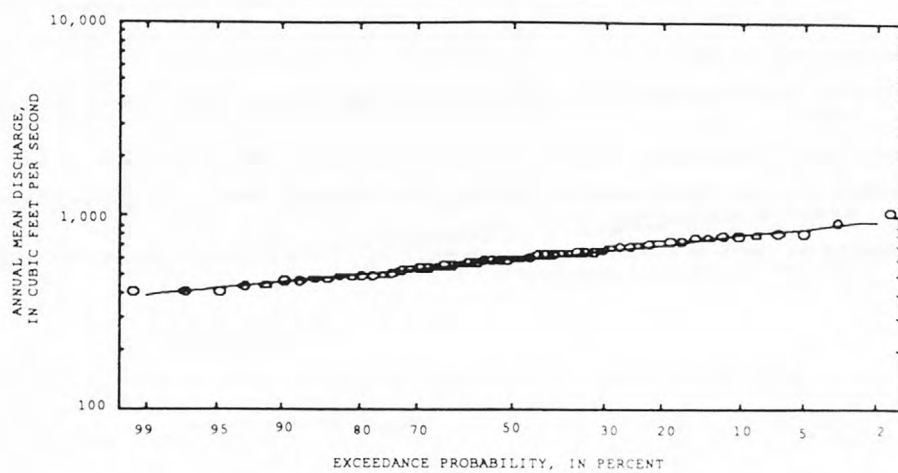
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,870	2,180	2,330	2,470	2,550	2,620
3	1,840	2,140	2,270	2,400	2,460	2,510
7	1,760	2,030	2,140	2,220	2,260	2,280
15	1,640	1,880	1,970	2,030	2,060	2,080
30	1,510	1,750	1,840	1,920	1,950	1,970
60	1,320	1,520	1,590	1,650	1,670	1,690
90	1,180	1,390	1,480	1,550	1,600	1,630

Duration table of daily mean flow for period of record 1934-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%		
2,080	1,570	1,300	1,120	995	776	626	522	445	359	226	13	8.3	6.2	4.1	2.3	1.2		



LOCATION MAP



## HENRYS FORK BASIN

13044000 HENRYS FORK AT WARM RIVER, ID

LOCATION.—Lat 44°07', long 111°20', in sec.12, T.9 N., R.43 E., Fremont County, Hydrologic Unit 17040202, on left bank 1,000 ft upstream from Warm River, and 0.5 mi northwest of Warm River railroad siding.

DRAINAGE AREA.—656 mi<sup>2</sup>.

PERIOD OF RECORD.—September 1910 to March 1915, April 1918 to October 1952. Prior to 1911, published as "North Fork Snake River at Warm River."

GAGE.—Water-stage recorder. Elevation of gage is 5,257 ft above sea level, from river-profile map.

REMARKS.—Flow regulated by Henrys Lake and Island Park Reservoir. Some water diverted above station for irrigation of about 18,000 acres of meadows on headwaters.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,540 ft<sup>3</sup>/s May 18, 1927; maximum gage height, 7.80 ft, Apr. 27, 1946; minimum, 217 ft<sup>3</sup>/s Dec. 11, 12, 1949, gage height, 3.12 ft.

Summary of monthly and annual discharges, 1911-14, 1919-52

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,250	661	890	133	0.15	7.4
November	1,200	570	792	166	0.21	6.6
December	1,030	360	687	203	0.30	5.7
January	1,050	354	683	200	0.29	5.7
February	1,020	357	719	170	0.24	6.0
March	1,040	361	741	162	0.22	6.2
April	1,800	493	1,060	283	0.27	8.9
May	2,560	690	1,650	461	0.28	13.8
June	2,190	782	1,320	360	0.27	11.1
July	1,840	785	1,190	258	0.22	10.0
August	1,970	662	1,200	325	0.27	10.1
September	1,810	655	1,020	236	0.23	8.5
Annual	1,310	727	998	154	0.15	100

Magnitude and frequency of annual low flow, based on period of record 1912-14, 1920-52

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	489	355	298	257	216	192
3	525	389	330	287	244	218
7	556	417	355	310	264	237
14	578	434	370	324	276	248
30	604	454	387	337	286	256
60	625	471	401	349	296	264
90	653	498	425	370	313	279
120	681	531	457	400	341	305
183	732	613	557	513	467	438

Magnitude and frequency of instantaneous peak flow, based on period of record 1911-14, 1919-52

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,430	2,970	3,270	3,590	3,810	4,000

Magnitude and frequency of annual high flow, based on period of record 1911-14, 1919-52

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2,390	2,930	3,200	3,460	3,620	3,750
3	2,330	2,830	3,060	3,290	3,410	3,510
7	2,210	2,660	2,850	3,030	3,120	3,190
15	2,040	2,440	2,620	2,780	2,860	2,930
30	1,850	2,230	2,410	2,580	2,680	2,760
60	1,630	1,960	2,130	2,290	2,390	2,470
90	1,470	1,740	1,870	2,010	2,100	2,170

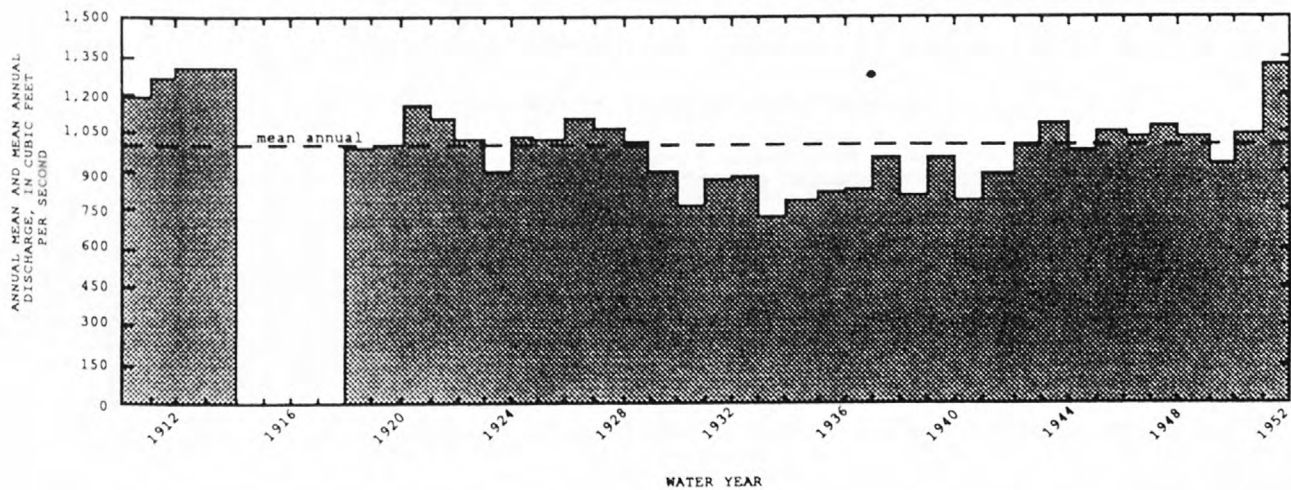
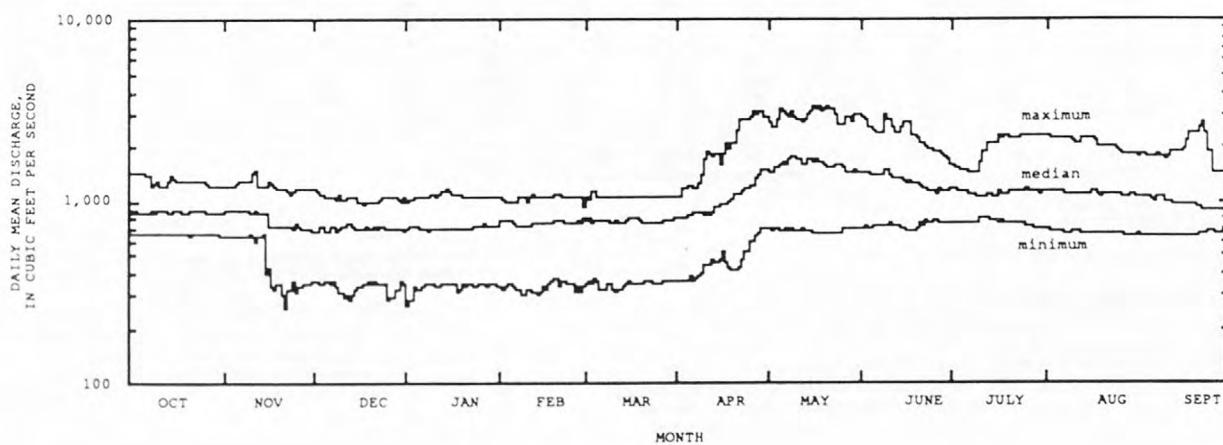
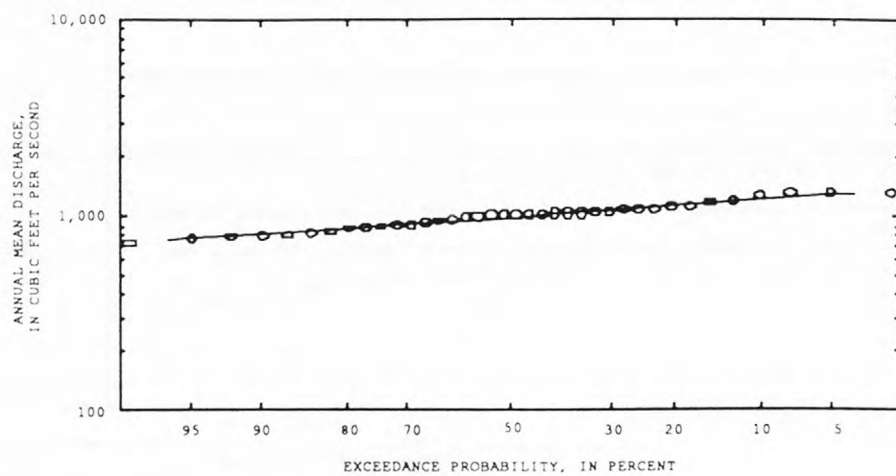
Duration table of daily mean flow for period of record 1911-14, 1919-52

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,490	1,890	1,580	1,390	1,250	1,070	977	904	843	780	712	587	407	367	353	338	305

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## HENRYS FORK BASIN

13044500 WARM RIVER AT WARM RIVER, ID

LOCATION.—Lat 44°07', long 111°19', in SE 1/4, sec. 12, T. 9 N., R. 43 E., Fremont County, Hydrologic Unit 17040202, at highway bridge 0.25 mi above Robinson Creek, 0.5 mi above mouth, and 0.5 mi northeast of Warm River Railroad Station.

DRAINAGE AREA.—178 mi<sup>2</sup>.

PERIOD OF RECORD.—March 1946 to September 1949, October 1961 to September 1967.

REVISED RECORDS.—WSP 1317: Drainage area.

GAGE.—Staff gage. Elevation of gage is 5,270 ft above sea level, from river-profile map. Prior to Sept. 25, 1922, several staff gages at approximately same location and datum.

REMARKS.—No regulation. Flow of stream is spring fed, except during snowmelt period.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 900 ft<sup>3</sup>/s June 2, 1912, gage height, 1.94 ft; minimum observed, 123 ft<sup>3</sup>/s Dec. 19, 1924.

Summary of monthly and annual discharges, 1913-14, 1919-32

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	272	167	212	24	0.11	7.7
November	279	163	207	27	0.13	7.6
December	255	161	200	22	0.11	7.3
January	242	167	199	18	0.09	7.2
February	233	171	197	18	0.09	7.2
March	230	166	199	18	0.09	7.2
April	405	180	253	63	0.25	9.2
May	601	186	352	112	0.32	12.8
June	381	173	273	65	0.24	9.9
July	295	169	226	33	0.15	8.2
August	309	170	218	31	0.14	7.9
September	269	168	214	25	0.12	7.8
Annual	291	177	229	32	0.14	100

Magnitude and frequency of annual low flow, based on period of record 1914, 1920-32

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	176	157	145	134	122	114
3	181	164	154	146	137	130
7	183	170	164	159	154	150
14	186	173	166	161	156	152
30	189	175	168	163	156	152
60	192	178	171	165	159	155
90	193	179	172	167	161	157
120	195	180	173	167	161	157
183	198	183	175	170	164	160

Magnitude and frequency of instantaneous peak flow, based on period of record 1913-14, 1919-32

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
461	628	736	869	967	1,060	

Magnitude and frequency of annual high flow, based on period of record 1913-14, 1919-32

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	455	601	687	785	851	913
3	440	575	653	740	798	852
7	419	543	613	691	743	790
15	390	504	570	646	697	745
30	356	461	525	603	658	711
60	318	405	458	523	570	615
90	290	359	400	450	485	519

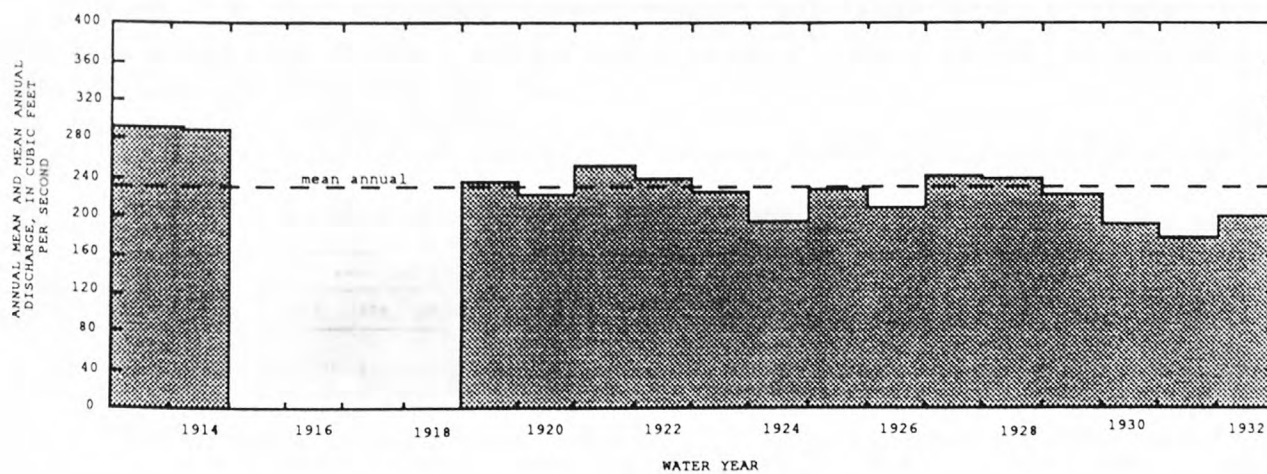
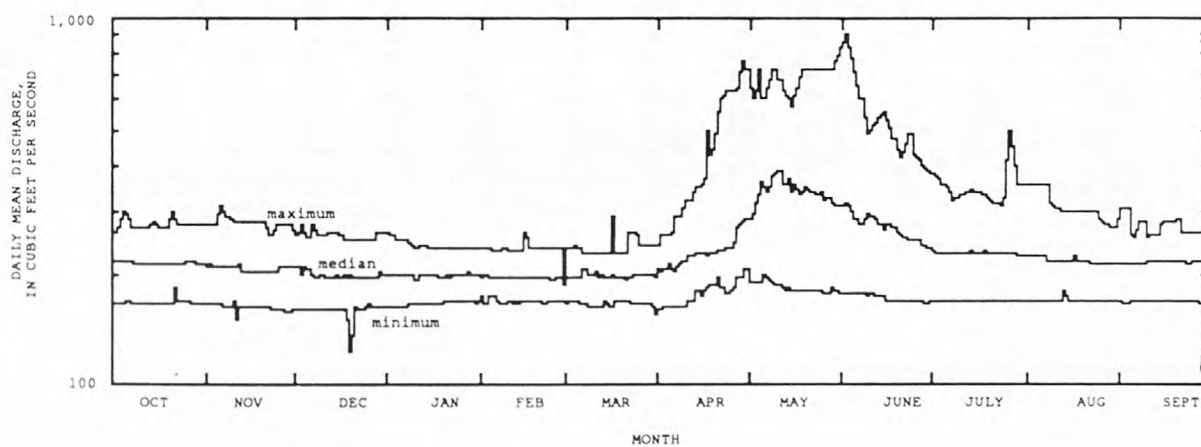
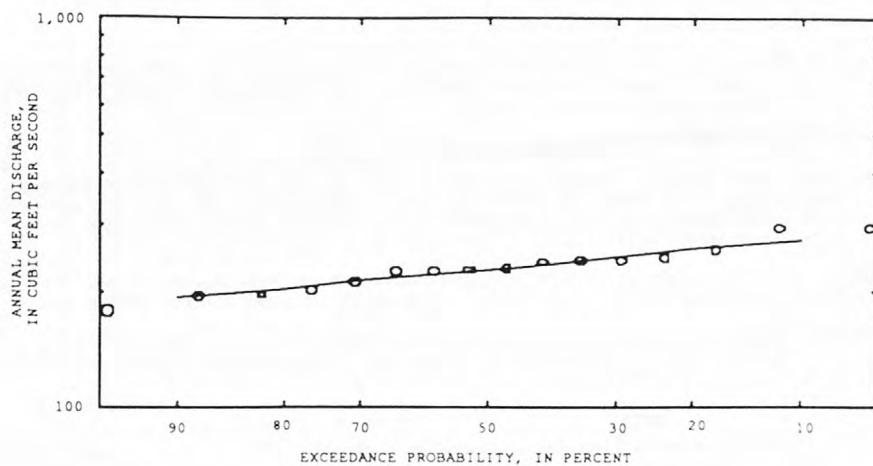
Duration table of daily mean flow for period of record 1913-14, 1919-32

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
543	375	302	265	243	229	219	213	206	197	190	178	170	164	162	161	158

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## HENRYS FORK BASIN

13046023 HENRYS FORK NEAR ASHTON, ID

LOCATION.—Lat 44°04'12", long 111°30'34", in NW¼, NE¼, NW¼, sec.33, T.9 N., R.42 E., Fremont County, Hydrologic Unit 17040203, on left bank 0.8 mi downstream from powerplant, 3.1 mi west of Ashton, and at mile 44.2.

DRAINAGE AREA.—1,040 mi<sup>2</sup>. Mean elevation, 6,710 ft.

PERIOD OF RECORD.—April 1890 to June 1891, August 1902 to June 1909, April 1920 to September 1990 (seasonal records only 1920-26). Monthly discharge only for some periods, published in WSP 1317. Published as "Henry's Fork in canyon, above Fall River," 1890-91, and as "North Fork of Snake River near Ora," 1902-09.

REVISED RECORDS.—WSP 1217: Drainage area. WSP 1347: 1890-91.

GAGE.—Water-stage recorder. Elevation of gage is 5,090 ft above sea level, from topographic map. April 1890 to June 1891, nonrecording gage at site 5.5 mi 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 1.0 mi downstream at different datum. May 3, 1930, to Sept. 30, 1980, water-stage recorder at site 0.5 mi upstream at different datum.

REMARKS.—Diurnal fluctuation caused by powerplant above station. Flow regulated by Henry's Lake (see sta 13039000) and Island Park Reservoir. Diversions above station for irrigation of about 24,500 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,140 ft<sup>3</sup>/s May 15, 1984, gage height, 6.50 ft; minimum, 53 ft<sup>3</sup>/s Sept. 20, 1960, gage height, 5.45 ft (site and datum then in use); minimum daily, 171 ft<sup>3</sup>/s Oct. 18, 1961.

Summary of monthly and annual discharges, 1903-08, 1927-80

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,780	753	1,210	226	0.19	6.8
November	2,070	633	1,100	273	0.25	6.2
December	1,600	630	1,030	256	0.25	5.8
January	1,620	624	993	270	0.27	5.6
February	1,510	624	1,030	228	0.22	5.7
March	1,560	648	1,080	208	0.19	6.0
April	2,670	901	1,590	359	0.23	8.9
May	4,920	966	2,620	783	0.30	14.7
June	4,510	1,030	2,070	628	0.30	11.6
July	3,220	1,020	1,850	429	0.23	10.3
August	3,210	898	1,810	470	0.26	10.1
September	2,250	842	1,480	308	0.21	8.3
Annual	2,360	996	1,500	270	0.18	100

Magnitude and frequency of annual low flow,  
based on period of record 1891, 1904-09, 1927-81

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	680	491	404	338	273	234
3	752	581	500	438	374	335
7	791	646	581	534	486	457
14	819	673	610	564	519	491
30	856	706	641	593	545	515
60	906	744	673	621	568	535
90	937	772	699	645	591	557
120	967	800	726	670	613	575
183	1,040	891	825	776	727	696

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1903-08, 1927-80

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
4,890	6,220	7,050	8,060	8,790	9,500	

Magnitude and frequency of annual high flow,  
based on period of record 1903-08, 1927-80

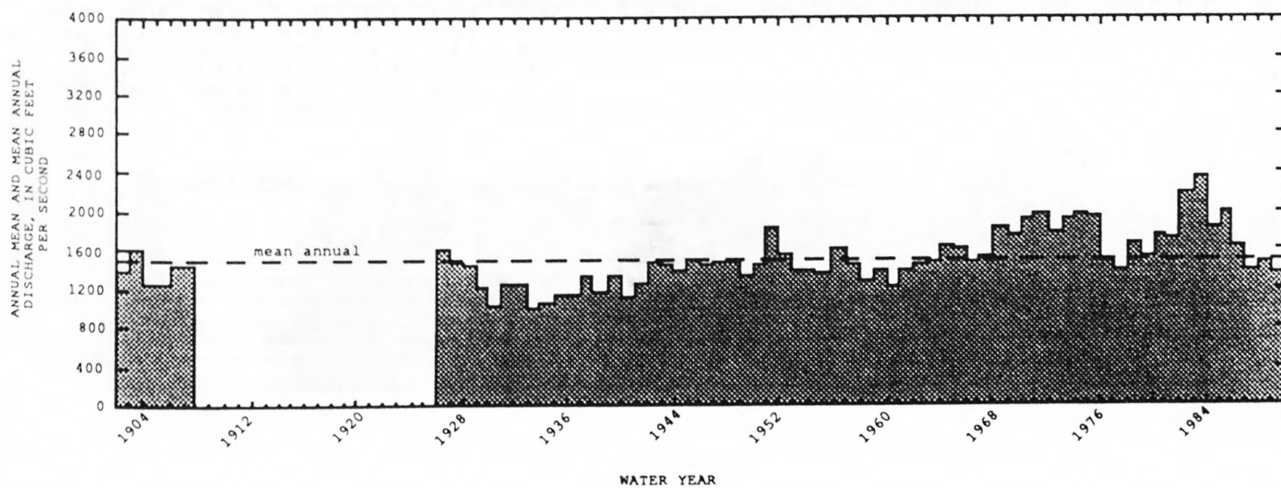
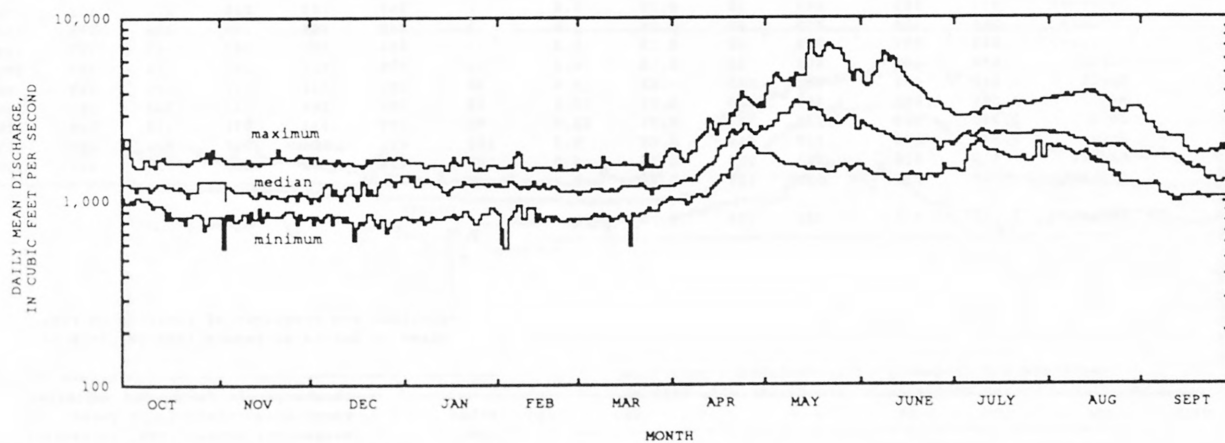
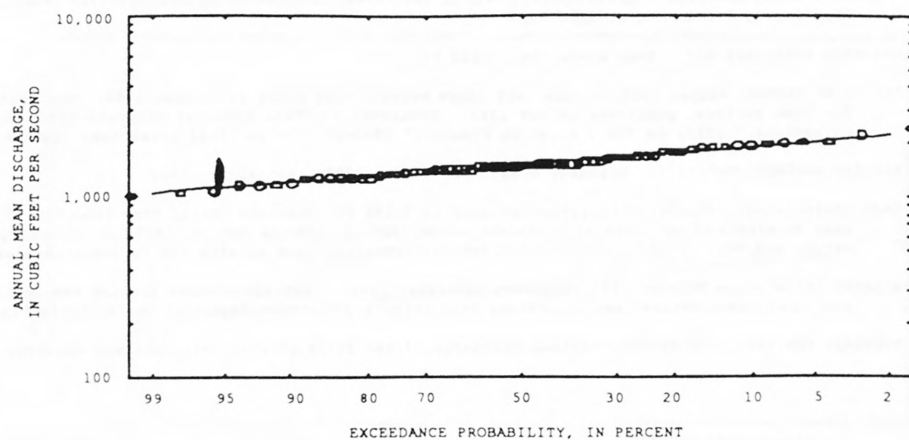
Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3,530	4,480	5,060	5,750	6,240	6,710
3	3,430	4,330	4,860	5,470	5,890	6,280
7	3,270	4,120	4,610	5,180	5,570	5,930
15	3,030	3,810	4,280	4,830	5,210	5,570
30	2,760	3,450	3,870	4,360	4,710	5,050
60	2,440	2,990	3,310	3,680	3,930	4,170
90	2,230	2,700	2,970	3,270	3,480	3,670

Duration table of daily mean flow for period of record 1903-08, 1927-80

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%		
5,440	2,850	2,410	2,180	1,990	1,690	1,470	1,330	1,210	1,080	975	790	695	642	604	588	480		



LOCATION MAP



## HENRYS FORK BASIN

## 13047500 FALLS RIVER NEAR SQUIRREL, ID

LOCATION.—Lat 44°04'07", long 111°14'25", in NW 1/4, NE 1/4, sec.34, T.9 N., R.44 E., Fremont County, Hydrologic Unit 17040203, on right bank 0.2 mi upstream from road bridge, 0.5 mi downstream from headgates of Marysville Canal, 4 mi northeast of Squirrel, 10.8 mi upstream from Conant Creek, and at mile 19.8.

DRAINAGE AREA.—326 mi<sup>2</sup>. Mean elevation, 7,520 ft.

PERIOD OF RECORD.—August 1902 to June 1909 (gage heights only prior to October 1904), May 1918 to September 1990. 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," 1904-09, and as "Fall River near Squirrel," 1918-59.

REVISED RECORDS.—WSP 1217: Drainage area. WSP 1317: 1908. WSP 1347: 1905.

GAGE.—Water-stage recorder. Elevation of gage is 5,590 ft above sea level, from topographic map. Prior to Jan. 1, 1904, nonrecording gage at site 3 mi 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.

REMARKS.—Flow since October 1939 regulated by Grassy Lake. Diversions above station for irrigation of about 17,000 acres below station and in adjacent basins, and diversions from tributary upstream from station for irrigation of about 500 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,060 ft<sup>3</sup>/s June 9, 1981; minimum observed, 72 ft<sup>3</sup>/s Feb. 9, 1930.

## Summary of monthly and annual discharges, 1905-08, 1919-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	933	259	506	110	0.22	5.4
November	912	276	492	105	0.21	5.2
December	647	283	447	72	0.16	4.8
January	564	219	409	66	0.16	4.4
February	565	287	398	50	0.13	4.2
March	590	285	403	52	0.13	4.3
April	1,420	404	696	223	0.32	7.4
May	3,040	1,090	1,890	429	0.23	20.2
June	3,790	589	2,130	710	0.33	22.7
July	2,370	298	905	444	0.49	9.7
August	918	316	567	150	0.26	6.0
September	791	290	530	119	0.22	5.7
Annual	1,140	475	782	139	0.18	100

Magnitude and frequency of annual low flow,  
based on period of record 1906-08, 1920-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	348	269	216	171	125	98
3	348	284	246	214	179	157
7	356	300	267	240	209	189
14	370	317	285	258	227	206
30	381	332	304	280	253	236
60	390	346	322	302	281	266
90	399	354	331	312	292	278
120	411	364	340	320	299	285
183	438	382	356	335	312	298

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1905-08, 1919-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,530	4,420	4,990	5,690	6,200	6,700

Magnitude and frequency of annual high flow,  
based on period of record 1905-08, 1919-90

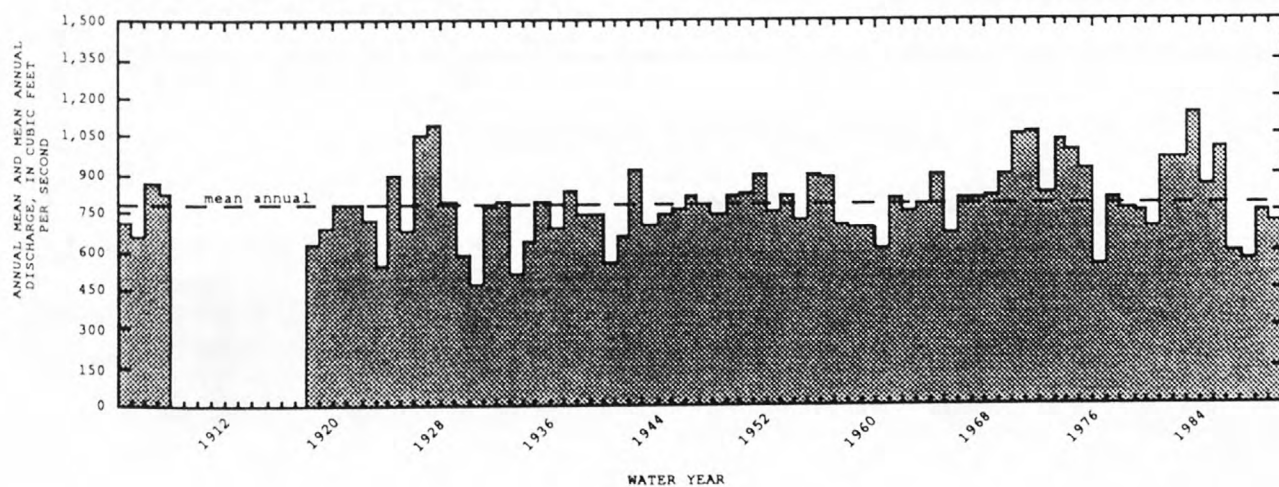
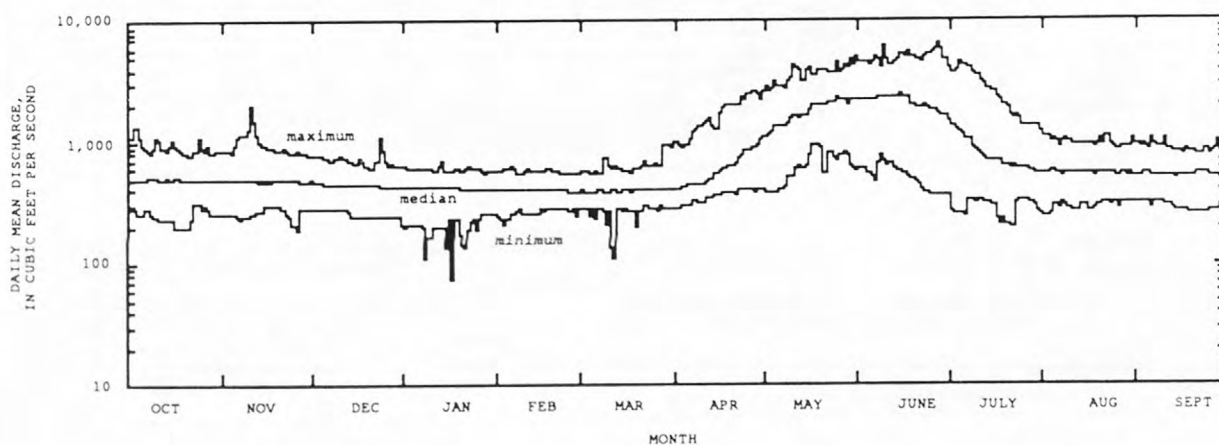
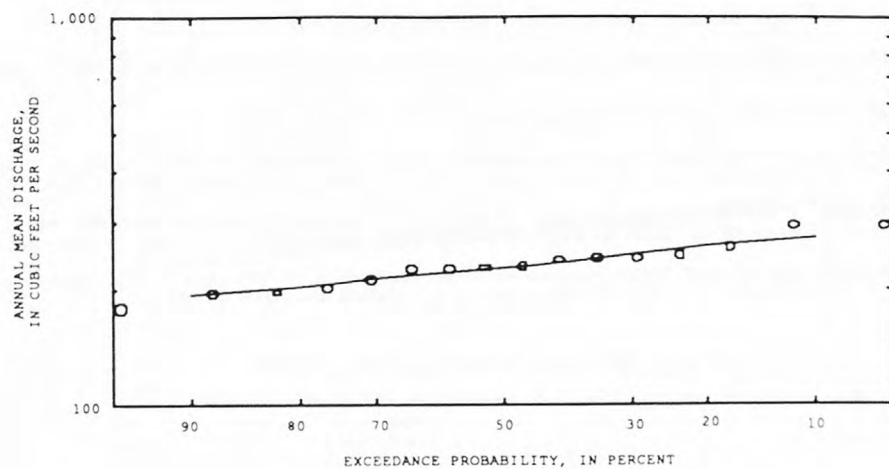
Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3,350	4,150	4,660	5,270	5,720	6,150
3	3,170	3,870	4,290	4,780	5,130	5,460
7	2,940	3,580	3,950	4,390	4,690	4,980
15	2,710	3,290	3,620	3,970	4,210	4,420
30	2,450	2,970	3,250	3,560	3,760	3,940
60	2,110	2,520	2,740	2,960	3,100	3,230
90	1,710	2,050	2,230	2,420	2,540	2,650

## Duration table of daily mean flow for period of record 1905-08, 1919-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
3,420	2,480	1,870	1,350	913	640	543	497	458	429	398	364	333	299	282	206



LOCATION MAP



## HENRYS FORK BASIN

13049500 FALLS RIVER NEAR CHESTER, ID

LOCATION.—Lat 44°01'06", long 111°33'57", in NW 1/4, SE 1/4, sec. 13, T. 8 N., R. 41 E., Fremont County, Hydrologic Unit 17040203, on right bank, 0.2 mi upstream from highway bridge, at mile 0.8, and 1.5 mi north of Chester.

DRAINAGE AREA.—520 mi<sup>2</sup>, approximately. Mean elevation, 6,970 ft.

PERIOD OF RECORD.—April 1920 to September 1990 (irrigation seasons only prior to 1962). Prior to October 1959, published as "Fall River near Chester."

REVISED RECORDS.—WSP 1217: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 5,051.9 ft above 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.

REMARKS.—Flow since October 1939 partly regulated by Grassy Lake. Diversions above station for irrigation of about 4,600 acres above station and about 36,000 acres in adjacent basins (1966 determination). Station is below all diversions from Falls River.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge recorded, 7,730 ft<sup>3</sup>/s June 9, 1981, gage height, 7.83 ft; maximum gage height recorded, 7.93 ft Jan. 18, 1966 (backwater from ice); minimum discharge recorded, 7.0 ft<sup>3</sup>/s June 27, 1961, gage height, 0.74 ft.

Summary of monthly and annual discharges, 1962-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	953	230	460	164	0.36	5.0
November	992	350	533	135	0.25	5.8
December	754	356	520	93	0.18	5.7
January	638	352	478	78	0.16	5.2
February	611	357	465	61	0.13	5.1
March	730	365	480	76	0.16	5.2
April	1,540	431	828	275	0.33	9.0
May	3,160	1,070	2,070	527	0.25	22.6
June	3,420	391	2,120	880	0.42	23.0
July	1,970	40	594	498	0.84	6.5
August	626	57	278	167	0.60	3.0
September	595	121	363	156	0.43	3.9
Annual	1,150	474	766	175	0.23	100

Magnitude and frequency of annual low flow,  
based on period of record 1962-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	100	38	23	14	8.6	6.0
3	105	42	25	17	10	7.3
7	117	50	32	22	14	11
14	136	64	43	30	21	16
30	162	79	54	39	27	21
60	219	118	84	63	44	35
90	268	166	128	103	80	67
120	315	210	168	139	111	96
183	386	289	248	218	188	171

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1962-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,500	4,500	5,150	5,960	6,560	7,150

Magnitude and frequency of annual high flow,  
based on period of record 1962-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3,460	4,450	5,110	5,840	6,260	6,640
3	3,430	4,250	4,690	5,160	5,460	5,720
7	3,170	3,910	4,300	4,700	4,960	5,180
15	2,940	3,600	3,920	4,230	4,400	4,540
30	2,620	3,230	3,530	3,810	3,970	4,110
60	2,240	2,740	2,980	3,220	3,350	3,460
90	1,790	2,180	2,370	2,550	2,660	2,740

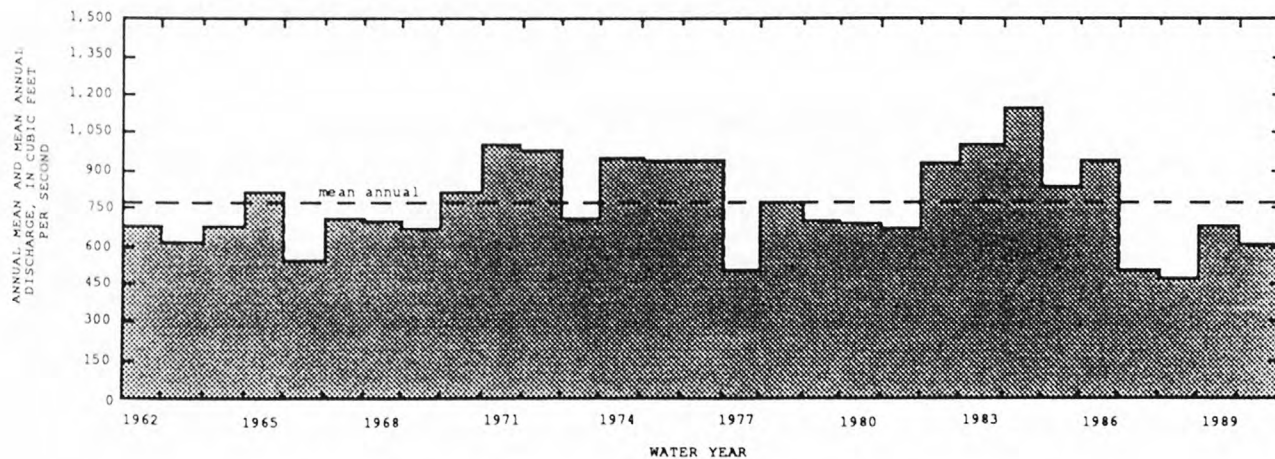
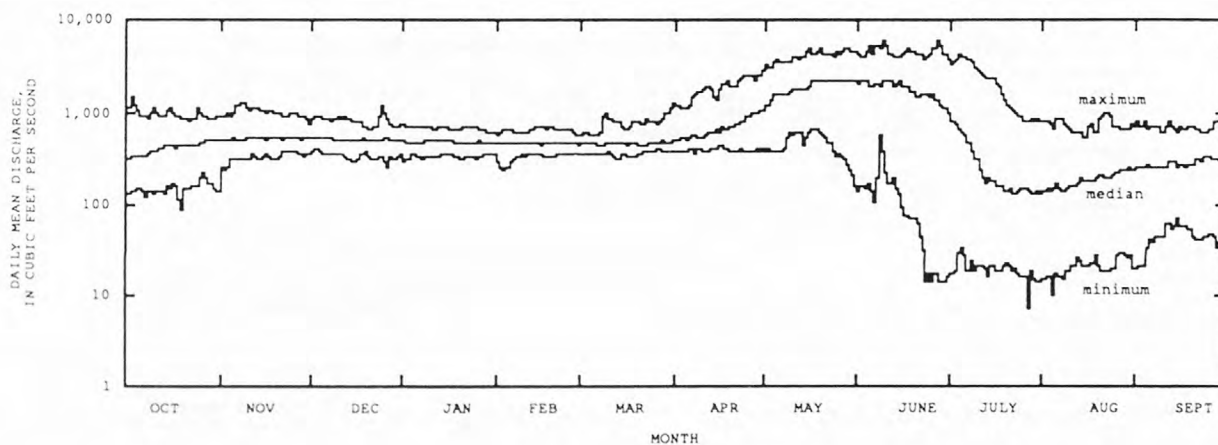
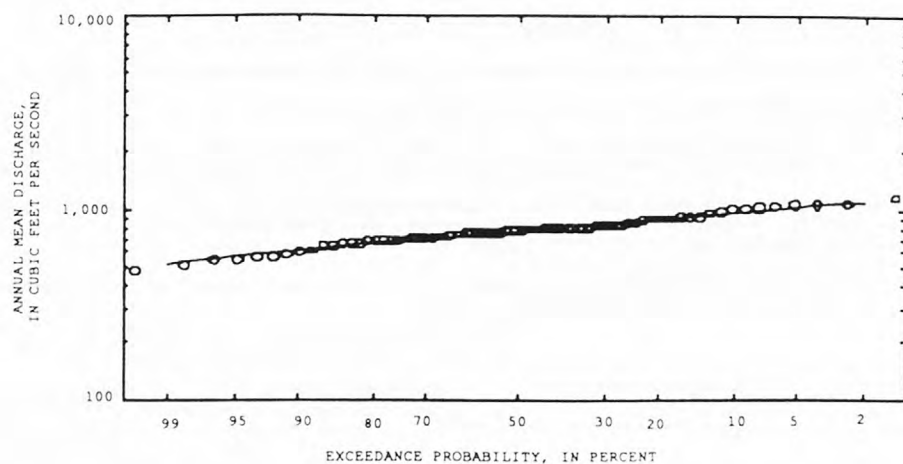
Duration table of daily mean flow for period of record 1962-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
3,730	2,670	1,930	1,350	883	615	554	498	460	423	357	221	126	66	45	33

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## HENRYS FORK BASIN

13050500 HENRYS FORK AT ST. ANTHONY, ID

LOCATION.—Lat 43°58'00", long 111°40'20", in NW<sup>1</sup>/<sub>4</sub>, sec. 6, T. 7 N., R. 41 E., Fremont County, Hydrologic Unit 17040203, on right bank 0.5 mi upstream from bridge on main street of St. Anthony, 6.4 mi downstream from Falls River, and at mile 32.4.

DRAINAGE AREA.—1,770 mi<sup>2</sup>, approximately. Mean elevation, 6,670 ft.

PERIOD OF RECORD.—March 1919 to September 1990 (irrigation seasons only prior to 1962).

REVISED RECORDS.—WSP 1217: Drainage area. WSP 1317: 1923(M).

GAGE.—Water-stage recorder. Datum of gage is 4,950.7 ft above sea level. March 1919 to May 7, 1922, nonrecording gages, and May 8, 1922, to Aug. 14, 1931, water-stage recorder, at site 150 ft downstream at datum 0.08 ft lower.

REMARKS.—Diversions above station for irrigation of about 21,000 acres below and about 58,000 acres above station of which about 1,100 acres are irrigated by withdrawals from ground water (1966 determination). Flow regulated by powerplant 17 mi above station and by Henrys Lake (see sta 13039000), Island Park Reservoir, and Grassy Lake.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge recorded, 13,200 ft<sup>3</sup>/s May 16, 1984, gage height, 8.62 ft; minimum discharge recorded, 21 ft<sup>3</sup>/s July 9, 1973, gage height, 1.91 ft.

Summary of monthly and annual discharges, 1962-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,240	668	1,460	437	0.30	6.2
November	2,530	863	1,610	402	0.25	6.8
December	2,120	976	1,560	342	0.22	6.6
January	2,070	936	1,560	345	0.22	6.6
February	2,210	978	1,580	299	0.19	6.7
March	2,180	971	1,530	333	0.22	6.5
April	3,980	979	2,160	619	0.29	9.2
May	6,950	1,690	4,120	1,370	0.33	17.5
June	6,520	1,070	3,460	1,520	0.44	14.7
July	3,630	909	1,660	696	0.42	7.1
August	3,270	820	1,450	530	0.36	6.2
September	2,230	688	1,380	411	0.30	5.9
Annual	3,150	1,310	1,960	464	0.24	100

Magnitude and frequency of annual low flow,  
based on period of record 1962-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	830	596	496	424	353	311
3	895	654	550	473	397	352
7	964	717	605	522	439	389
14	1,020	770	655	570	484	432
30	1,110	865	754	671	586	535
60	1,210	967	858	777	695	644
90	1,260	1,010	902	821	738	688
120	1,320	1,060	946	862	777	725
183	1,390	1,140	1,030	946	864	814

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1962-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,930	7,990	9,210	10,600	11,600	12,500

Magnitude and frequency of annual high flow,  
based on period of record 1962-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	5,770	7,850	9,060	10,400	11,400	12,200
3	5,530	7,440	8,960	9,980	10,500	11,000
7	5,360	7,170	8,420	9,240	9,720	10,100
15	5,150	6,710	7,670	8,390	8,810	9,150
30	4,690	6,070	6,750	7,420	7,800	8,120
60	3,980	5,110	5,700	6,300	6,670	6,980
90	3,310	4,250	4,780	5,370	5,760	6,120

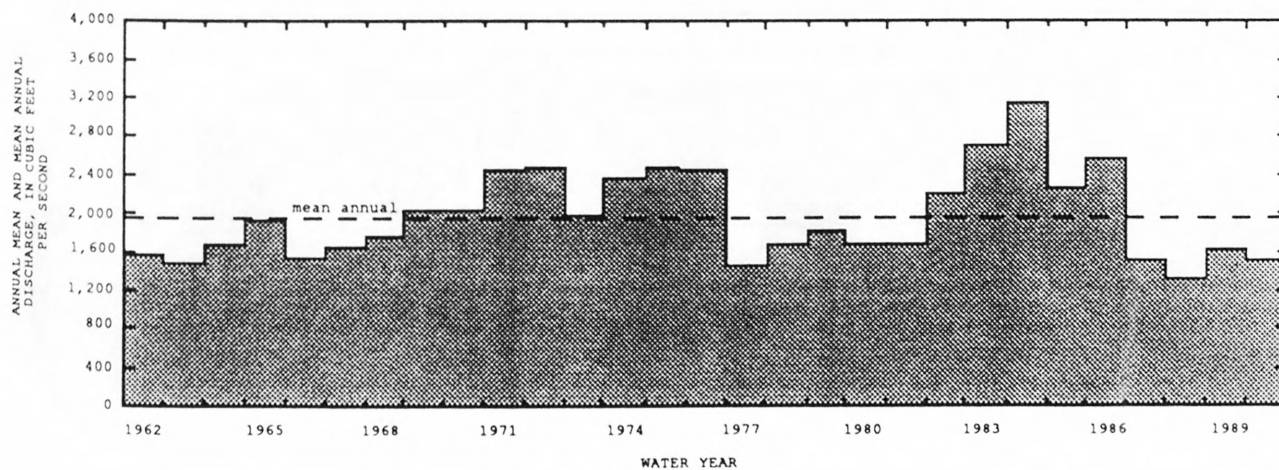
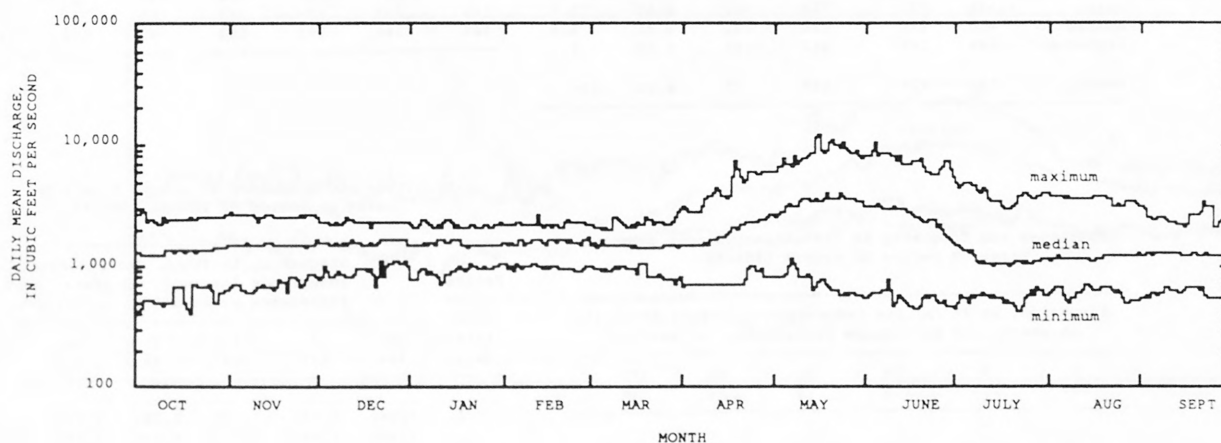
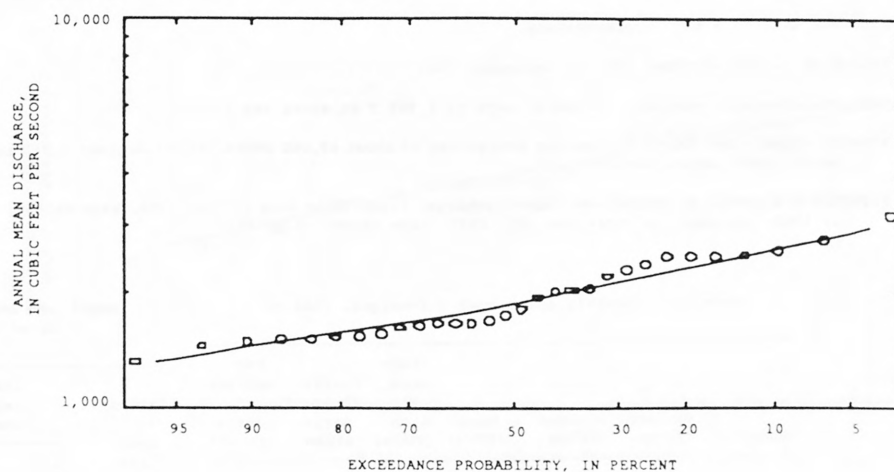
Duration table of daily mean flow for period of record 1962-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
6,850	4,760	3,630	2,690	2,280	1,970	1,780	1,610	1,460	1,330	1,190	1,010	899	790	705	630
															495

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## HENRYS FORK BASIN

13052200 TETON RIVER ABOVE SOUTH LEIGH CREEK, NEAR DRIGGS, ID

LOCATION.—Lat 43°46'54", long 111°12'30", in NW 1/4, NE 1/4, sec.12, T.5 N., R.44 E., Teton County, Hydrologic Unit 17040204, on right bank 75 ft upstream from county road bridge, 3.5 mi southwest of Teton, 6.5 mi northwest of Driggs, and at mile 56.3.

DRAINAGE AREA.—335 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1961 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 5,952.9 ft above sea level.

REMARKS.—Diversions above station for irrigation of about 42,000 acres, of which about 1,000 acres are irrigated by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,460 ft<sup>3</sup>/s July 10, 11, 1983, gage height, 5.17 ft; maximum gage height, 6.37 ft Feb. 1, 1963; minimum, 54 ft<sup>3</sup>/s Nov. 23, 1977, gage height, 0.60 ft.

Summary of monthly and annual discharges, 1962-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	481	156	323	87	0.27	6.7
November	458	162	293	69	0.24	6.1
December	342	145	230	50	0.22	4.8
January	326	122	205	47	0.23	4.2
February	328	124	218	49	0.23	4.5
March	522	175	260	73	0.28	5.5
April	528	193	373	95	0.26	7.7
May	899	236	505	163	0.32	10.5
June	1,530	291	883	323	0.37	18.3
July	1,510	231	759	353	0.47	15.7
August	610	175	426	131	0.31	8.8
September	496	158	347	102	0.29	7.2
Annual	580	236	402	93	0.23	100

Magnitude and frequency of annual low flow,  
based on period of record 1963-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>#</sup> 1%
1	142	114	100	89	78	71
3	154	123	107	95	82	74
7	165	133	118	105	92	84
14	170	140	126	115	103	96
30	177	148	135	125	114	108
60	191	160	146	135	122	115
90	201	168	152	140	127	118
120	213	179	163	150	137	129
183	246	203	183	167	150	140

Magnitude and frequency of annual high flow,  
based on period of record 1962-90Magnitude and frequency of instantaneous peak flow,  
based on period of record 1962-90

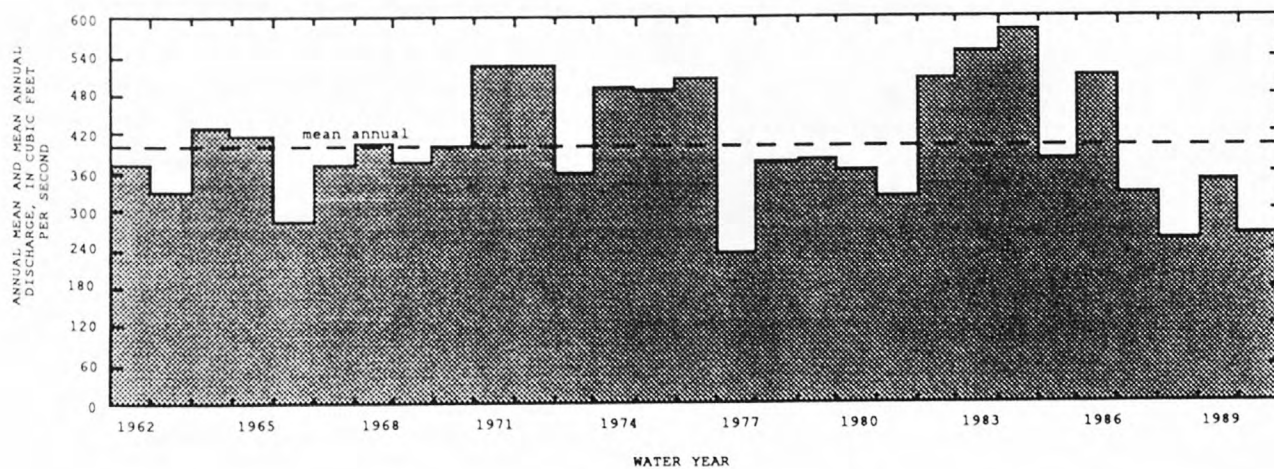
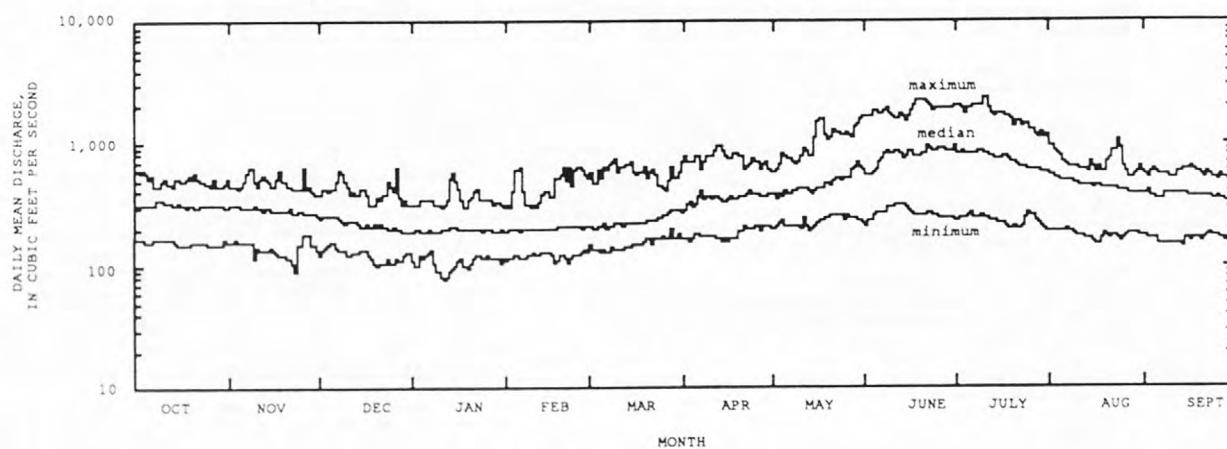
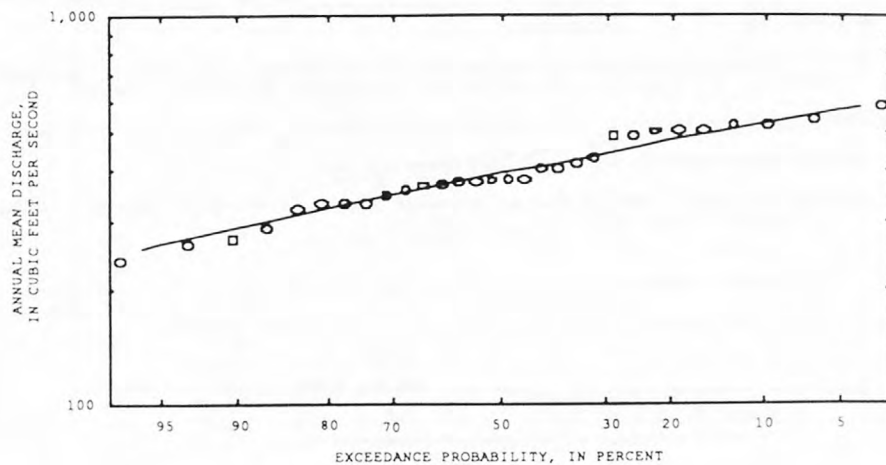
Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,460	1,880	2,130	2,410	2,610	2,790

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>#</sup> 1%
1	1,360	1,820	2,090	2,380	2,580	2,750
3	1,300	1,740	2,010	2,320	2,530	2,700
7	1,190	1,630	1,890	2,180	2,380	2,560
15	1,070	1,480	1,720	2,010	2,200	2,380
30	971	1,320	1,540	1,780	1,950	2,110
60	829	1,110	1,280	1,470	1,600	1,720
90	724	952	1,080	1,220	1,320	1,400

Duration table of daily mean flow for period of record 1962-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
1,600	1,010	730	598	521	429	369	315	272	238	211	181	161	143	130	118	102	102

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.



## HENRYS FORK BASIN

13054000 TETON RIVER NEAR TETONIA, ID

LOCATION.—Lat 43°51'00", long 111°15'00", in sec.15, T.6 N., R.44 E., Fremont County, Hydrologic Unit 17040204, 1.8 miles downstream from highway bridge, 4 mi downstream from Packsaddle Creek, and 6 mi northwest of Tetonía.

DRAINAGE AREA.—471 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1929 to December 1932, May to September 1934, July to September 1935-37, May to September 1940, June 1941 to October 1957. Monthly discharge only for some periods, published in MSP 1317.

GAGE.—Water-stage recorder. Elevation of gage is 5,910.3 ft above sea level, from topographic map.

REMARKS.—Many diversions from tributaries above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 1,900 ft<sup>3</sup>/s, June 28, 1945 (gage height, 2.97 ft); minimum observed, 62 ft<sup>3</sup>/s Jan. 16, 17, 1943.

Summary of monthly and annual discharges, 1930-32, 1942-57

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	425	189	328	61	0.19	7.0
November	373	181	299	48	0.16	6.3
December	325	154	241	41	0.17	5.1
January	261	160	205	27	0.13	4.4
February	278	140	212	35	0.17	4.5
March	354	130	245	64	0.26	5.2
April	746	194	406	126	0.31	8.6
May	902	179	523	209	0.40	11.1
June	1,210	227	820	262	0.32	17.4
July	1,100	233	631	217	0.34	13.4
August	749	219	450	114	0.25	9.5
September	495	182	355	73	0.21	7.5
Annual	495	206	393	73	0.19	100

Magnitude and frequency of annual low flow,  
based on period of record 1931-32, 1943-57

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	157	119	98	81	64	53
3	163	128	108	91	73	63
7	172	144	128	115	100	90
14	180	154	139	126	112	102
30	190	168	154	143	130	121
60	200	177	162	149	134	123
90	210	184	169	156	141	131
120	223	194	177	163	146	135
183	259	225	205	187	167	153

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1930-32, 1942-57

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,250	1,710	2,010	2,400	2,690	2,980

Magnitude and frequency of annual high flow,  
based on period of record 1930-32, 1942-57

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1,230	1,700	1,860	1,990	2,050	2,100
3	1,200	1,640	1,790	1,920	1,980	2,030
7	1,170	1,510	1,670	1,800	1,870	1,930
15	1,060	1,350	1,480	1,590	1,650	1,690
30	927	1,170	1,280	1,380	1,430	1,460
60	788	995	1,090	1,170	1,220	1,250
90	708	869	935	989	1,020	1,030

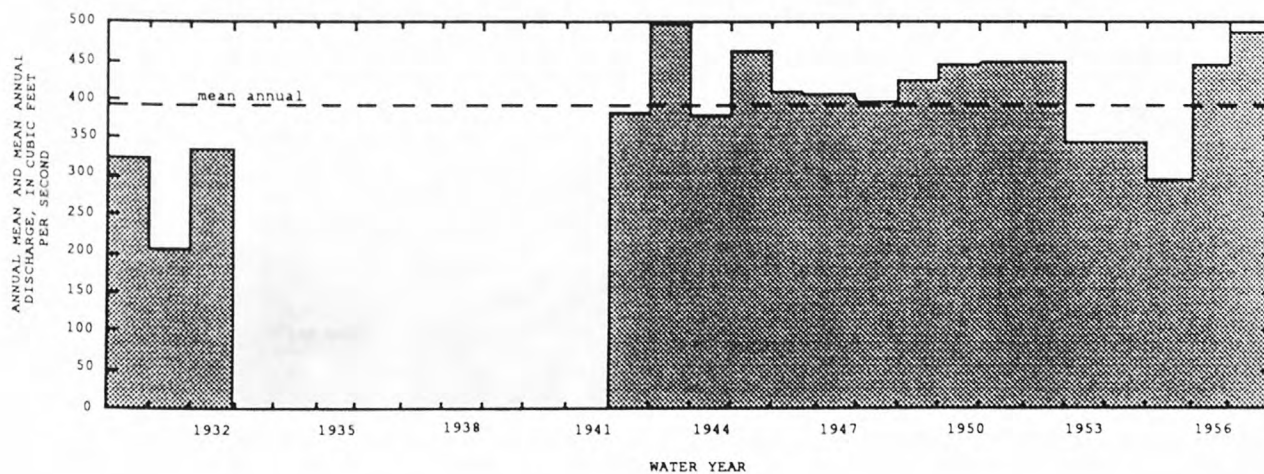
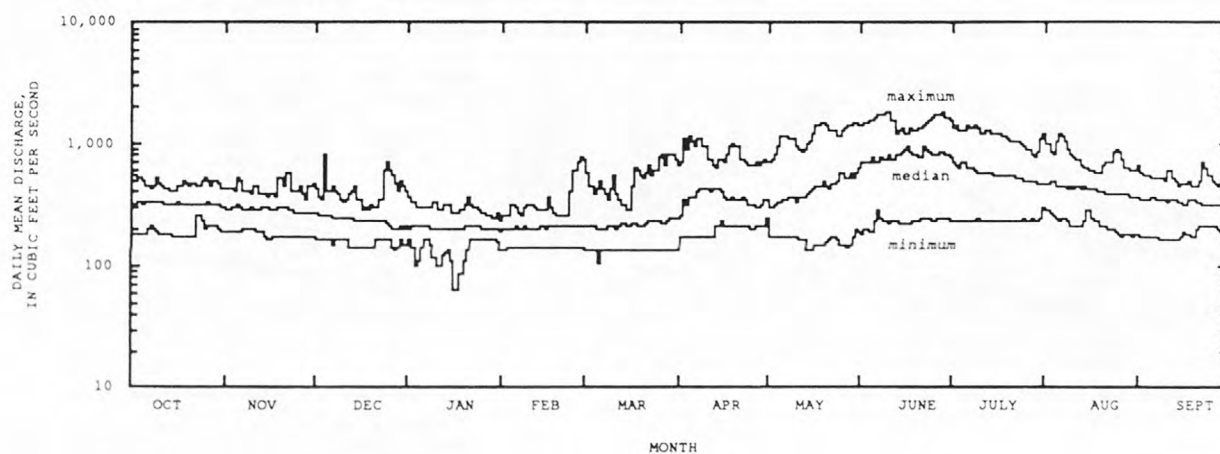
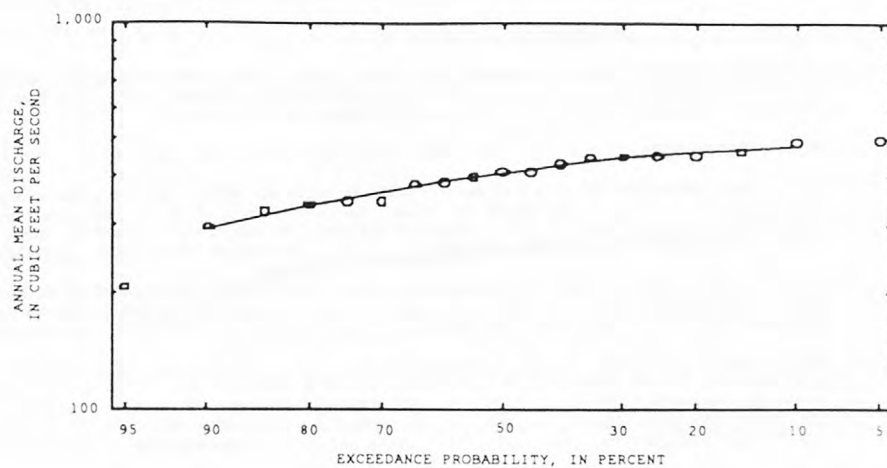
Duration table of daily mean flow for period of record 1930-32, 1942-57

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time														
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%
1,340	944	698	585	513	424	363	319	281	247	217	193	173	152	142
														136
														110

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## HENRYS FORK BASIN

13055000 TETON RIVER NEAR ST. ANTHONY, ID

LOCATION.—Lat 43°55'38", long 111°36'55", in SW 1/4, SW 1/4, sec.15, T.7 N., R.41 E., Fremont County, Hydrologic Unit 17040204, on right bank 0.5 mi upstream from railroad bridge, 4 mi southeast of St. Anthony, and at mile 22.

DRAINAGE AREA.—890 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—January 1890 to September 1893, April 1903 to June 1909, (irrigation seasons only 1920-21, 1923-33), April 1920 to May 1976 (destroyed by flood of June 5, 1976), October 1977 to September 1990. Monthly discharge only for some periods, published in WSP 1317. Published as "near Wilford" or "at Chases Ranch," 1890-93.

REVISED RECORDS.—WSP 1217: Drainage area. WSP 1347: 1903-6, 1908-9. WDR ID-80-1: 79.

GAGE.—Water-stage recorder. Elevation of gage is 4,970 ft above sea level, from topographic map. Apr. 5, 1890, to Sept. 30, 1893, nonrecording gage at site 1 mi downstream at different datum. Apr. 23, 1903, to June 30, 1909, nonrecording gage at site 0.8 mi upstream at different datum. Apr. 19, 1920, to May 1, 1921, nonrecording gage, and May 2, 1921, to Nov. 5, 1933, water-stage recorder at site 400 ft downstream at different datum. Nov. 6, 1933, to June 5, 1976, water-stage recorder at approximately same site at different datum.

REMARKS.—Diversions above station for irrigation of about 58,000 acres, of which about 4,400 acres are irrigated by withdrawals from ground water (1966 determination). Water is diverted at times (since 1939) during irrigation season from Henrys Fork through Crosscut Canal to Teton River 0.8 mi upstream from station, 47,100 acre-ft diverted into river during 1989 irrigation season.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, about 1,700,000 ft<sup>3</sup>/s, estimated from the average of slope-area measurements of peak flow at Teton, 5.3 mi downstream and near Newdale, 3.4 mi upstream, June 5, 1976 (Teton Dam failure); maximum stage, 42.2 ft; maximum discharge excluding 1976, 11,000 ft<sup>3</sup>/s Feb. 12, 1962, gage height, 9.36 ft, on basis of contracted-opening measurement of peak flow, site and datum then in use; minimum, 103 ft<sup>3</sup>/s Oct. 4, 1975, gage height, 2.38 ft, site and datum then in use, due to filling of Teton Reservoir; minimum, excluding the filling period of Teton Reservoir, 203 ft<sup>3</sup>/s Jan. 13, 1983, gage height, 2.27 ft.

Summary of monthly and annual discharges, 1891-93, 1904-08, 1922, 1934-49, 1951-76, 1977-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	910	363	550	102	0.19	5.5
November	868	326	496	87	0.18	5.0
December	623	300	424	64	0.15	4.3
January	518	280	386	53	0.14	3.9
February	895	280	402	88	0.22	4.1
March	758	295	472	94	0.20	4.7
April	1,410	416	773	235	0.30	7.8
May	2,680	630	1,610	441	0.27	16.2
June	3,900	488	2,120	805	0.38	21.4
July	2,880	359	1,280	536	0.42	13.0
August	1,140	293	773	160	0.21	7.8
September	872	284	626	112	0.18	6.3
Annual	1,280	411	827	164	0.20	100

Magnitude and frequency of annual low flow, based on period of record 1891-93, 1904-09, 1934-49, 1951-76, 1977-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	307	267	248	233	217	207
3	321	284	267	254	240	232
7	335	298	281	267	252	243
14	345	309	291	277	263	253
30	357	320	303	289	274	265
60	372	334	316	301	285	275
90	384	346	326	311	293	282
120	403	361	338	320	301	287
183	448	398	373	353	332	318

Magnitude and frequency of instantaneous peak flow, based on period of record 1891-93, 1904-08, 1922, 1934-49, 1951-75, 1977-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
3,340	4,530	5,320	6,340	7,110	7,890	

Magnitude and frequency of annual high flow, based on period of record 1891-93, 1904-08, 1922, 1934-49, 1951-75, 1977-90

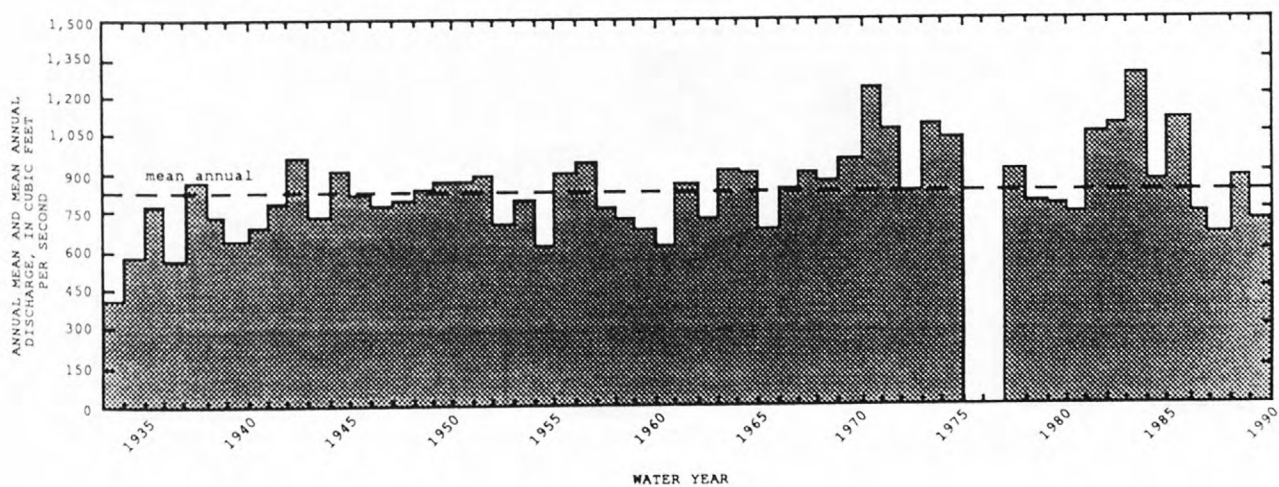
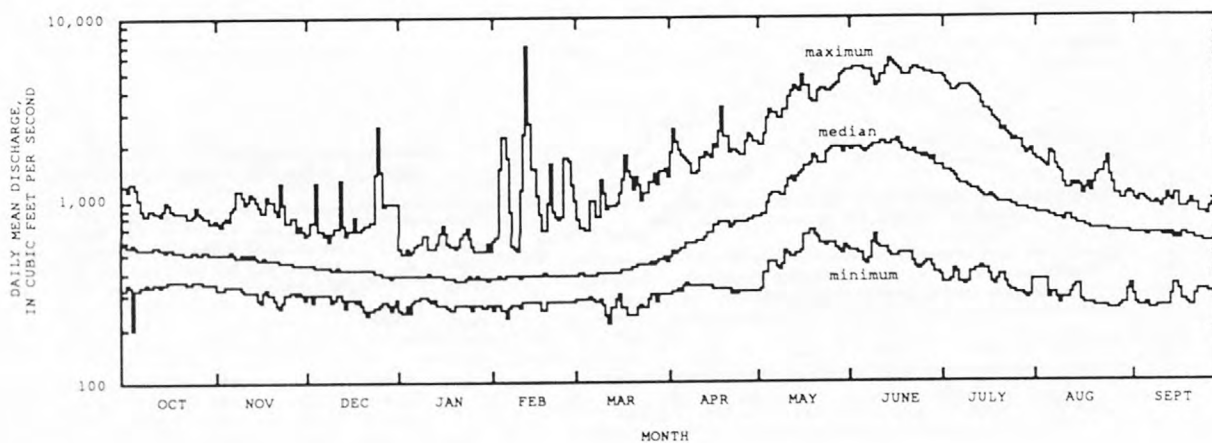
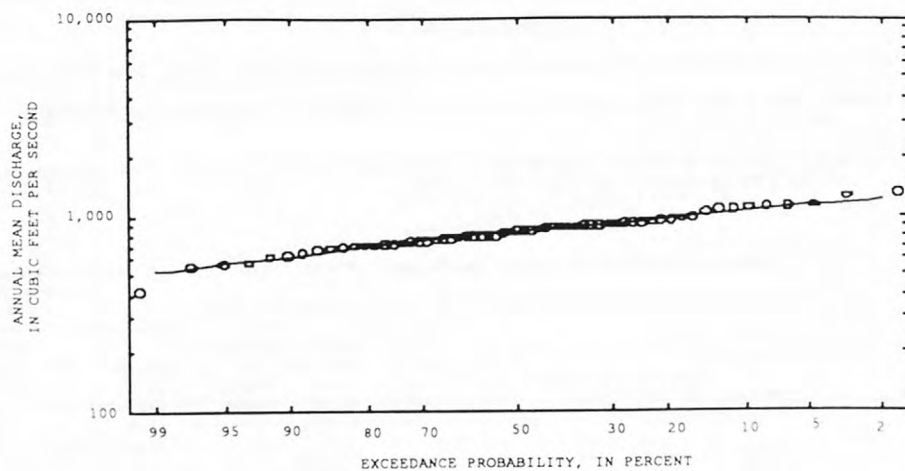
Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3,280	4,260	4,770	5,310	5,650	5,940
3	3,120	4,010	4,460	4,920	5,190	5,420
7	2,840	3,720	4,200	4,710	5,040	5,330
15	2,560	3,400	3,880	4,410	4,760	5,080
30	2,290	3,010	3,410	3,870	4,170	4,450
60	1,950	2,530	2,860	3,230	3,480	3,710
90	1,670	2,130	2,390	2,670	2,860	3,030

Duration table of daily mean flow for period of record 1891-93, 1904-08, 1922, 1934-49, 1951-75, 1977-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,670	2,310	1,680	1,330	1,090	813	666	570	495	447	403	358	333	305	289	277	251



LOCATION MAP



## HENRYS FORK BASIN

13055198 NORTH FORK TETON RIVER AT TETON, ID

LOCATION.—Lat 43°53'53", long 111°40'37", in NW 1/4, NW 1/4, NW 1/4, sec.31, T.7 N., R.41 E., Fremont County, Hydrologic Unit 17040204, on left bank 60 ft upstream from county road bridge, 0.4 mi downstream from point of diversion, 0.5 mi north of Teton, and at mile 16.2.

PERIOD OF RECORD.—October 1977 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 4,390 ft above sea level, from topographic map.

REMARKS.—Flow partially regulated by headworks 0.4 mi upstream. Diversions from tributaries above station for irrigation in Wyoming and Idaho.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 2,400 ft<sup>3</sup>/s June 4, 1986; maximum gage height, 13.63 ft Feb. 10, 1981 (result of ice jam); minimum, 0.90 ft<sup>3</sup>/s Jan. 5, 1981.

Summary of monthly and annual discharges, 1978-88, 1990

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	440	105	214	83	0.39	5.6
November	424	103	178	84	0.47	4.7
December	156	55	97	32	0.33	2.6
January	170	30	86	47	0.55	2.3
February	150	26	98	34	0.34	2.6
March	244	69	127	53	0.42	3.3
April	440	119	263	112	0.43	6.9
May	1,170	538	732	190	0.26	19.2
June	1,560	564	893	320	0.36	23.4
July	884	331	537	220	0.41	14.1
August	470	194	326	87	0.27	8.6
September	360	170	257	61	0.24	6.7
Annual	478	221	318	78	0.25	100

Magnitude and frequency of annual low flow,  
based on period of record 1978-89, 1991

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	39	19	12	8.4	5.4	3.9
3	43	21	14	10	6.8	5.1
7	47	24	17	12	8.3	6.4
14	51	28	20	15	11	8.8
30	56	31	23	17	12	9.4
60	65	36	25	18	12	9.4
90	77	44	30	21	13	9.7
120	92	55	38	27	17	12
183	120	93	82	74	67	62

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1978-88, 1990

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,490	1,840	2,050	2,320	2,500	2,690

Magnitude and frequency of annual high flow,  
based on period of record 1978-88, 1990

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	1,400	1,740	1,970	2,280	2,420	2,620
3	1,310	1,650	1,890	2,230	2,400	2,580
7	1,170	1,510	1,770	2,150	2,370	2,510
15	1,070	1,400	1,650	2,020	2,330	2,460
30	967	1,250	1,460	1,760	2,010	2,270
60	823	1,060	1,240	1,470	1,660	1,850
90	698	892	1,030	1,210	1,350	1,500

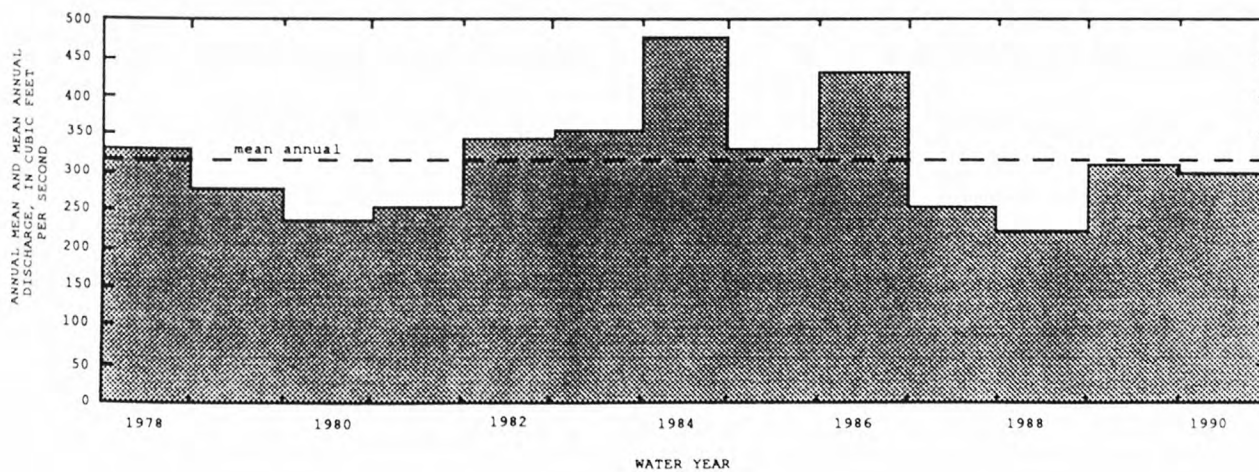
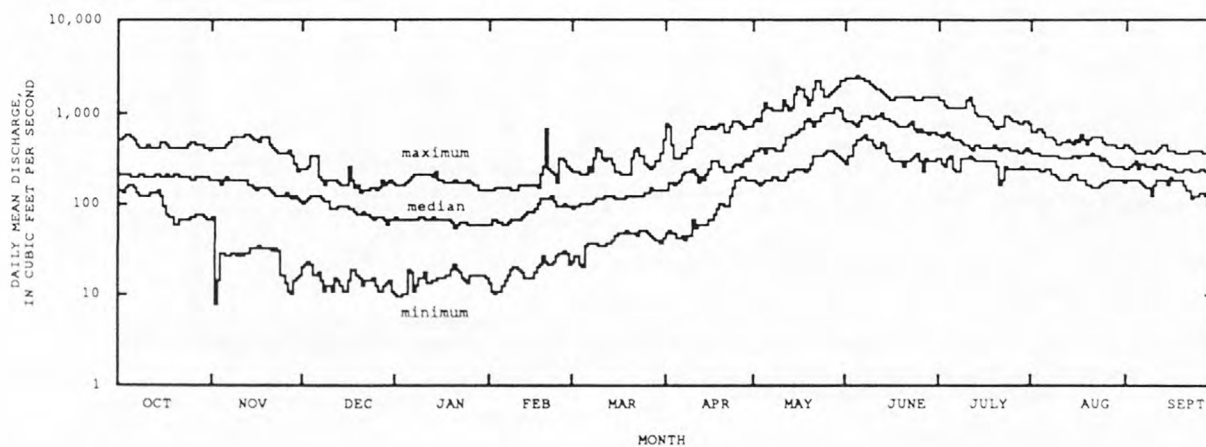
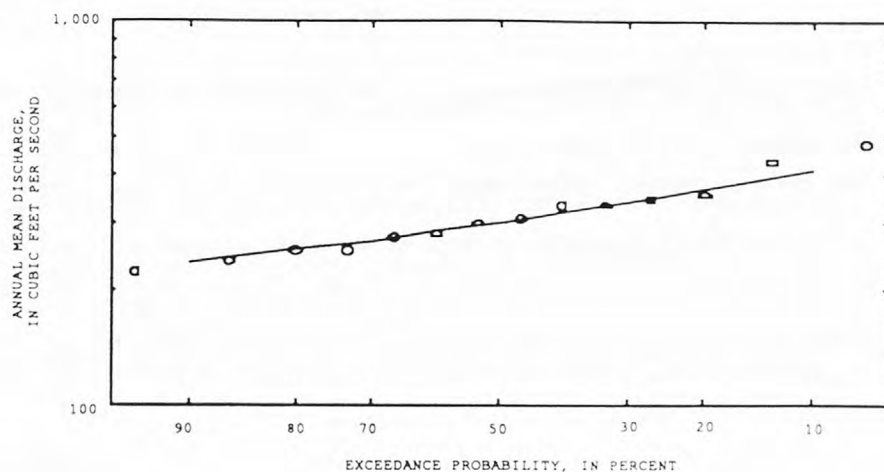
Duration table of daily mean flow for period of record 1978-88, 1990

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,540	1,030	753	581	461	344	267	209	168	132	100	63	47	33	28	24	11

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## HENRYS FORK BASIN

13056500 HENRYS FORK NEAR REXBURG, ID

LOCATION.—Lat 43°49'34", long 111°54'15", in NW 1/4, NE 1/4, sec. 30, T. 6 N., R. 39 E., Madison County, Hydrologic Unit 17040203, on right bank 200 ft downstream from highway bridge, 6 mi west of Rexburg, and at mile 9.2.

DRAINAGE AREA.—2,920 mi<sup>2</sup>; approximately.

PERIOD OF RECORD.—April 1909 to September 1990. Monthly discharge only for some periods, published in WSP 1317. Prior to 1911, published as "North Fork of Snake River near Rexburg."

REVISED RECORDS.—WSP 1217: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 4,806.35 ft above 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.

REMARKS.—Flow regulated by operation of powerplant near Ashton, and by Henrys Lake (see sta 13039000), Island Park Reservoir, and Grassy Lake. Diversions above station for irrigation of about 5,000 acres below and about 204,000 acres above station, of which about 21,000 acres are irrigated by withdrawals from ground water (1966 determination). Considerable water leaks above station into the Snake Plain aquifer. Station is downstream from all tributaries except inflow from ground water and irrigation waste.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 79,000 ft<sup>3</sup>/s June 5, 1976; maximum gage height, 22.36 ft June 5, 1976, result of Teton Dam failure; maximum discharge excluding 1976, 16,400 ft<sup>3</sup>/s May 17, 1984, gage height, 12.05 ft from high-water mark in gage well; minimum, 183 ft<sup>3</sup>/s Mar. 24–28, 1934, gage height, 1.45 ft.

Summary of monthly and annual discharges, 1910–90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	3,070	377	1,730	552	0.32	7.0
November	3,280	440	1,870	464	0.25	7.5
December	2,660	1,070	1,740	370	0.21	7.0
January	2,490	1,100	1,660	368	0.22	6.7
February	2,580	1,060	1,720	353	0.20	6.9
March	2,770	340	1,730	368	0.21	7.0
April	4,850	388	2,250	847	0.38	9.0
May	8,760	390	3,940	1,750	0.45	15.8
June	9,520	463	3,790	2,090	0.55	15.2
July	4,560	358	1,650	1,060	0.65	6.6
August	3,990	446	1,300	569	0.44	5.2
September	2,900	561	1,510	539	0.36	6.1
Annual	4,130	829	2,070	587	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1910–91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	671	462	378	319	263	230
3	702	479	389	325	264	229
7	766	515	410	336	266	226
14	850	572	455	372	294	249
30	947	656	536	451	369	322
60	1,120	783	641	539	439	381
90	1,230	874	715	600	486	420
120	1,350	965	789	659	531	455
183	1,500	1,130	951	816	678	594

Magnitude and frequency of annual high flow,  
based on period of record 1910–90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	5,770	9,160	12,200	17,300	22,100	28,000
3	5,900	8,840	11,000	13,800	16,100	18,500
7	5,720	8,160	9,660	11,400	12,600	13,700
15	5,230	7,370	8,620	10,000	11,000	11,900
30	4,580	6,460	7,600	8,920	9,820	10,700
60	3,900	5,440	6,400	7,530	8,310	9,060
90	3,320	4,550	5,320	6,270	6,940	7,600

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1909–90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
6,380	8,740	10,300	12,300	13,800	15,200

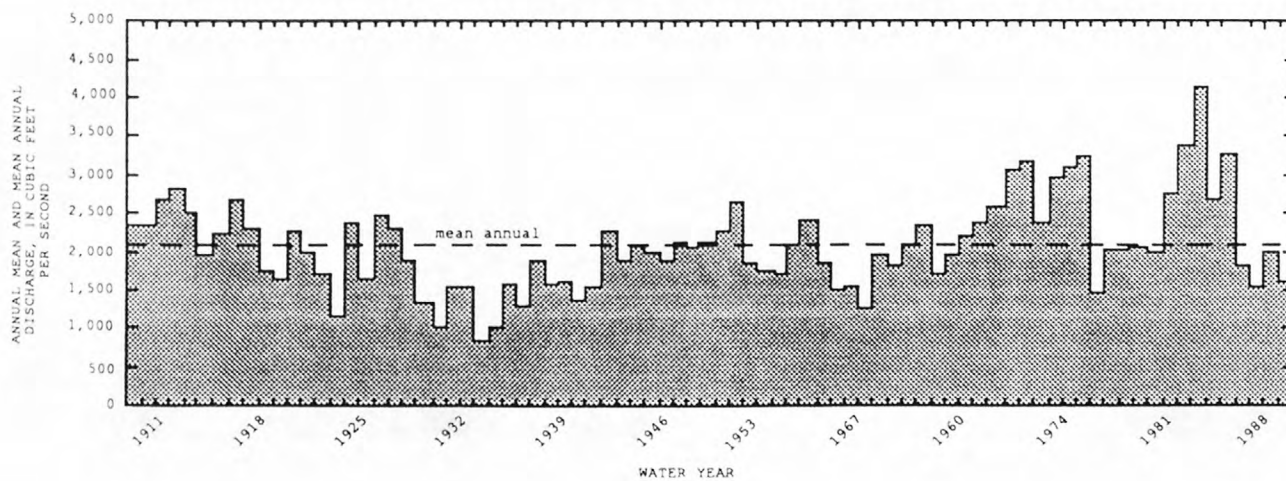
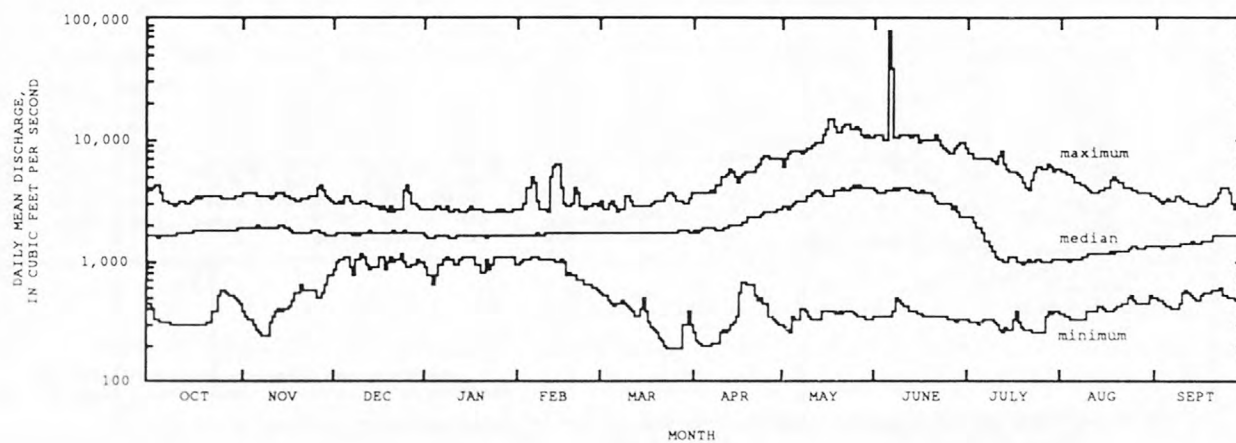
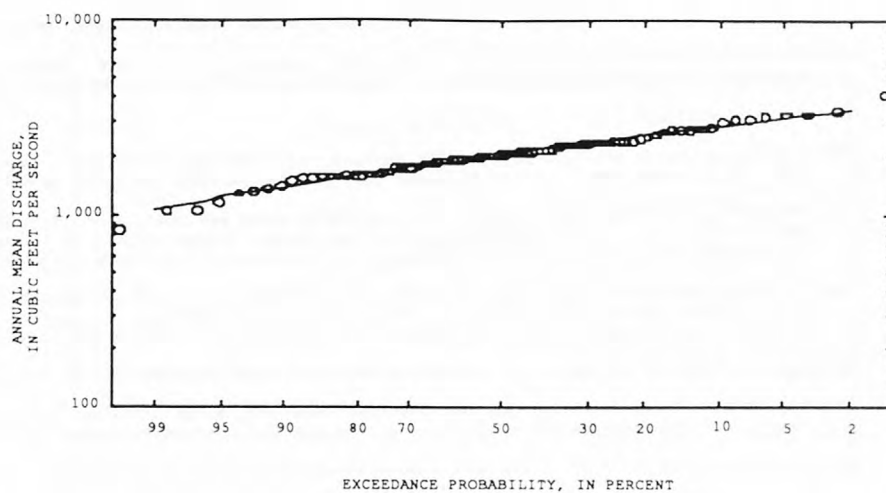
Duration table of daily mean flow for period of record 1910–90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
7,530	5,160	3,660	2,850	2,510	2,130	1,890	1,700	1,550	1,390	1,210	923	703	512	430	345
															254





LOCATION MAP





WILLOW CREEK BASIN

13058000 WILLOW CREEK NEAR RIRIE, ID

LOCATION.—Lat 43°35'02", long 111°44'44", in SE 1/4, SE 1/4, sec.16, T.3 N., R.40 E., Bonneville County, Hydrologic Unit 17040205, on right bank 0.25 mi downstream from Ririe Dam, 3.4 mi southeast of Ririe, and at mile 20.2.

DRAINAGE AREA.—627 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1903 to September 1904, October 1916 to September 1925, May to August 1928, October 1962 to September 1979, October 1985 to September 1990. Monthly discharge only for some periods, published in WSP 1317.

GAGE.—Water-stage recorder. Elevation of gage is 4,950 ft above sea level, from topographic map. Prior to September 1904, nonrecording gage at site about 3.25 mi downstream at different datum. October 1916 to June 1921, nonrecording gage, June 1921 to August 1928, water-stage recorder at present site. October 1962 to September 1979, at site 1.75 mi downstream at different datum. Records comparable.

REMARKS.—Diversion above station for irrigation of about 7,300 acres, of which about 100 acres are irrigated by withdrawals from ground water (1966 determination). Since May 1924, water has been diverted from Grays Lake, about 40 mi upstream, into Meadow Creek basin and thence into Blackfoot Reservoir. Flow regulated by Ririe Reservoir (sta 13057950) beginning December 1975.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 4,200 ft<sup>3</sup>/s May 15, 1917, gage height, 16.3 ft; no flow for many days.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge since 1899, 5,080 ft<sup>3</sup>/s 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.

Summary of monthly and annual discharge  
1904, 1918-20, 1963-79, 1986-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	350	18	81	76	0.94	4.4
November	145	0.19	53	31	0.58	2.9
December	92	0.00	35	25	0.71	1.9
January	160	0.00	41	37	0.90	2.2
February	155	0.00	49	37	0.75	2.7
March	360	0.00	87	85	0.98	4.7
April	750	0.00	310	268	0.87	16.9
May	1,560	30	601	451	0.75	32.8
June	824	31	271	192	0.71	14.8
July	340	29	102	73	0.72	5.5
August	293	13	71	61	0.86	3.9
September	521	18	134	156	1.2	7.3
Annual	280	39	153	71	0.46	100

Magnitude and frequency of annual low flow,  
based on period of record 1904, 1918-20, 1964-79, 1987-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	9.4	0.00	0.00	0.00	0.00	0.00
3	11	0.00	0.00	0.00	0.00	0.00
7	13	0.00	0.00	0.00	0.00	0.00
14	15	0.00	0.00	0.00	0.00	0.00
30	18	0.00	0.00	0.00	0.00	0.00
60	22	0.00	0.00	0.00	0.00	0.00
90	32	0.00	0.00	0.00	0.00	0.00
120	32	5.0	0.00	0.00	0.00	0.00
183	42	22	15	10	6.5	4.6

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1904, 1918-20, 1986-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,750	2,670	3,340	4,270	5,010	5,790

Magnitude and frequency of annual high flow,  
based on period of record 1904, 1918-20, 1963-79, 1986-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	1,260	2,050	2,510	3,020	3,340	3,620
3	1,160	1,900	2,340	2,830	3,150	3,430
7	1,020	1,680	2,080	2,520	2,800	3,050
15	854	1,420	1,770	2,160	2,420	2,650
30	671	1,140	1,430	1,780	2,020	2,250
60	493	832	1,050	1,310	1,490	1,660
90	386	650	819	1,020	1,150	1,280

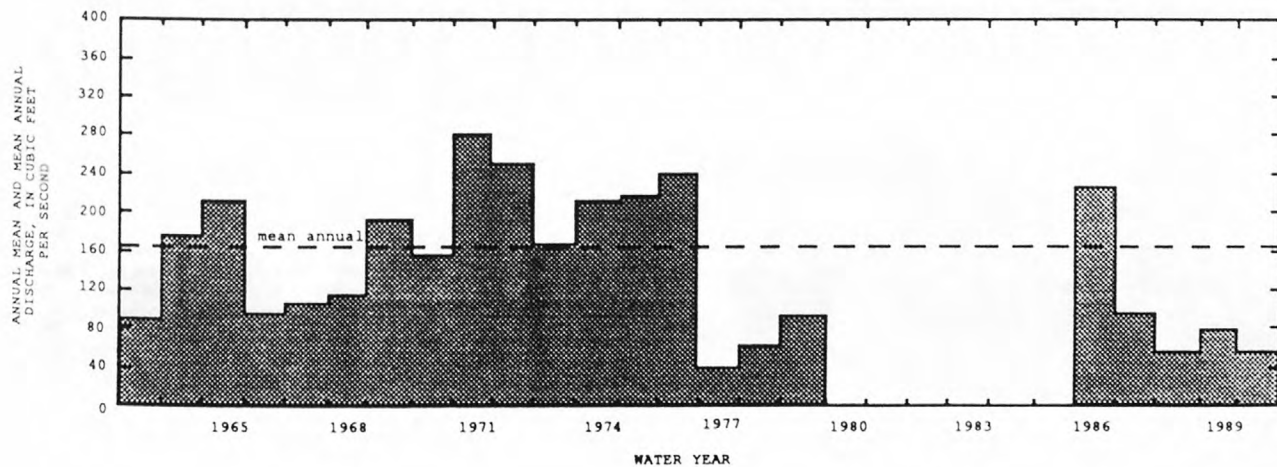
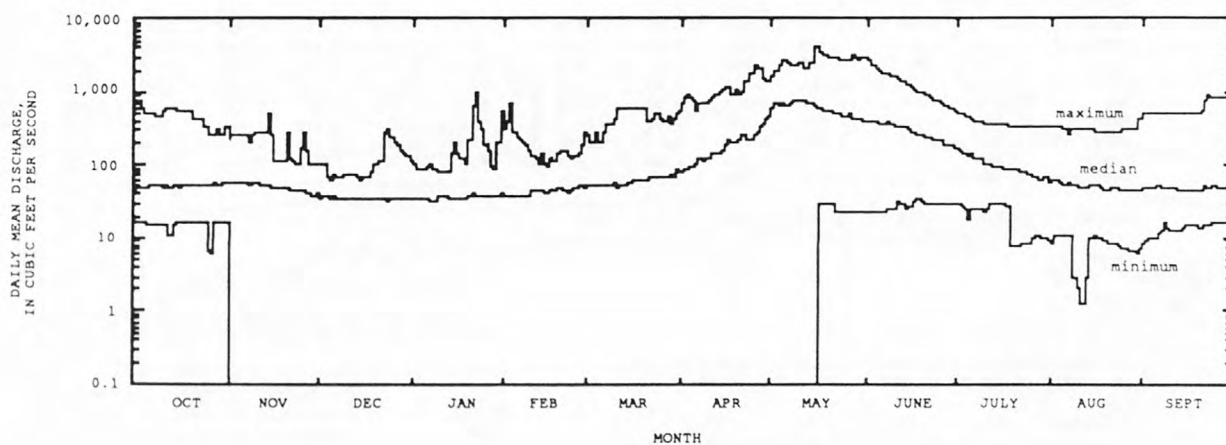
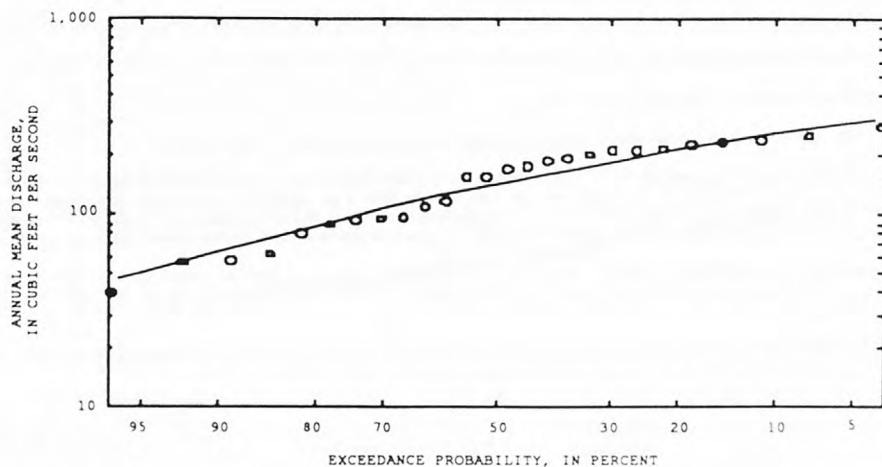
Duration table of daily mean flow for period of record 1904, 1918-20, 1963-79, 1986-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,420	689	414	280	200	100	74	59	47	39	29	3.0	0.03	0.01	0.01	0.00	0.00

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# Snake River Main Stem

13060000 SNAKE RIVER NEAR SHELLEY, ID

LOCATION.—Lat 43°24'47", long 112°08'02", in SE 1/4, SW 1/4, sec.17, T.1 N., R.37 E., Bingham County, Hydrologic Unit 17040201, on right bank 0.3 mi southeast of Woodville, 2.5 mi north of Shelley, and at mile 787.8.

DRAINAGE AREA.—9,790 mi<sup>2</sup>, approximately, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.—March 1915 to September 1990 (prior to October 1931, irrigation seasons only).

REVISED RECORDS.—WSP 1317: 1916.

GAGE.—Water-stage recorder. Datum of gage is 4,599.0 ft above sea level.

REMARKS.—Some regulation by Jackson Lake, Palisades Reservoir, Island Park Reservoir, Henrys Lake (see sta 13039000), and Grassy Lake. Initial filling of forebay pool at Gem powerplant 3 mi upstream, occurred during March and April of 1988. Diversions above station for irrigation of about 39,000 acres below and about 637,000 acres above station, of which about 100,000 acres are irrigated by withdrawals from ground water (1966 determination). Considerable water leaks above station into Snake River Plain aquifer.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 67,300 ft<sup>3</sup>/s June 6, 1976, gage height, 19.12 ft, result of Teton Dam failure; maximum discharge excluding 1976, 47,200 ft<sup>3</sup>/s June 17, 1918, gage height, 16.97 ft; minimum, 288 ft<sup>3</sup>/s Nov. 5, 1934, gage height, 2.22 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 6, 1894, reached an estimated discharge of 75,000 ft<sup>3</sup>/s at former station at Eagle Rock (now Idaho Falls), 7 mi upstream from present site.

Summary of monthly and annual discharges, 1932-35, 1938-39, 1941-90

Magnitude and frequency of annual low flow, based on period of record 1933-35, 1938-39, 1941-91

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	9,470	646	3,200	1,570	0.49	4.5
November	7,840	827	3,550	1,300	0.37	5.0
December	8,330	1,580	3,680	1,430	0.39	5.2
January	8,210	1,520	3,510	1,520	0.43	4.9
February	8,030	1,600	3,620	1,420	0.39	5.1
March	13,200	1,400	4,490	2,650	0.59	6.3
April	19,600	1,560	7,970	4,920	0.62	11.2
May	23,200	3,380	12,600	5,210	0.41	17.8
June	23,400	2,430	12,800	5,490	0.43	18.1
July	15,400	2,210	7,150	3,120	0.44	10.1
August	7,920	1,560	4,600	1,240	0.27	6.5
September	7,680	1,120	3,740	1,350	0.36	5.3
Annual	10,900	2,000	5,910	1,940	0.33	100

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	1,800	1,210	949	766	591	492
3	1,910	1,290	1,020	818	629	522
7	2,090	1,420	1,120	901	691	571
14	2,220	1,560	1,280	1,070	874	758
30	2,440	1,760	1,470	1,260	1,060	936
60	2,700	2,020	1,730	1,520	1,320	1,190
90	2,910	2,190	1,880	1,650	1,430	1,300
120	3,060	2,300	1,980	1,740	1,510	1,370
183	3,210	2,430	2,110	1,880	1,660	1,520

Magnitude and frequency of instantaneous peak flow, based on period of record 1932-35, 1938-39, 1941-90

Magnitude and frequency of annual high flow, based on period of record 1932-35, 1938-39, 1941-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
20,900	30,700	37,200	45,400	51,400	57,300

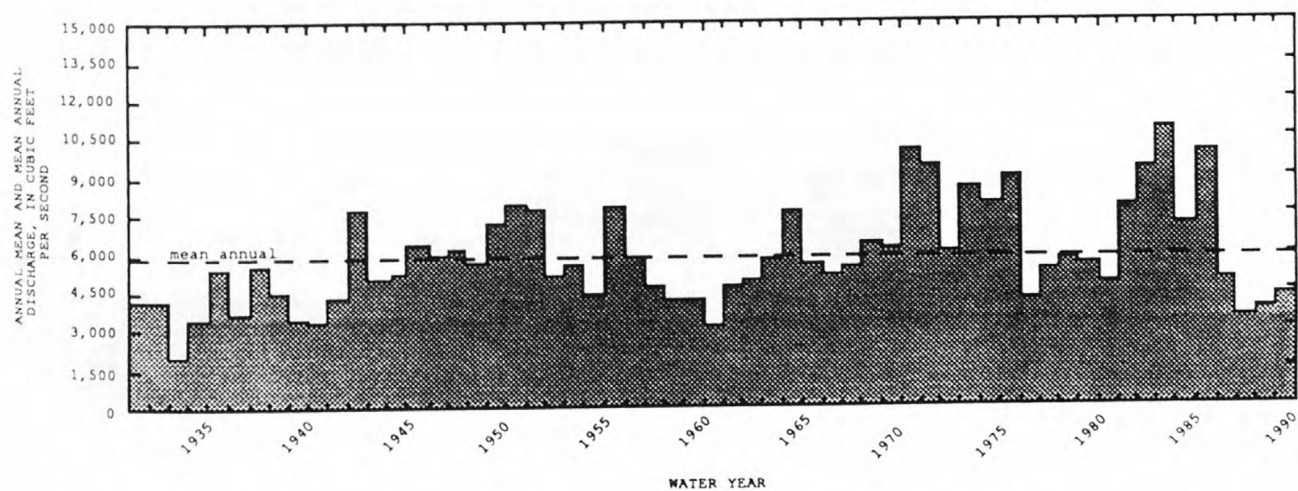
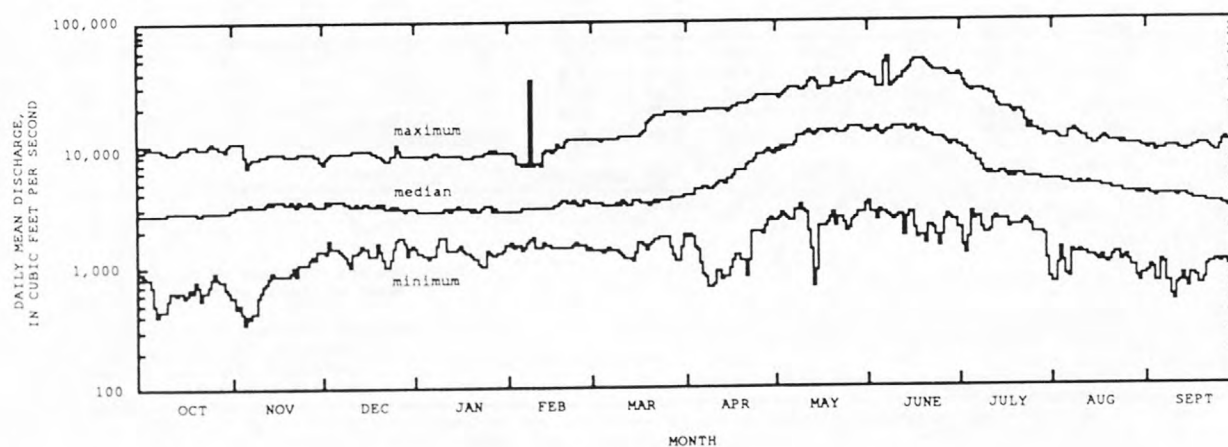
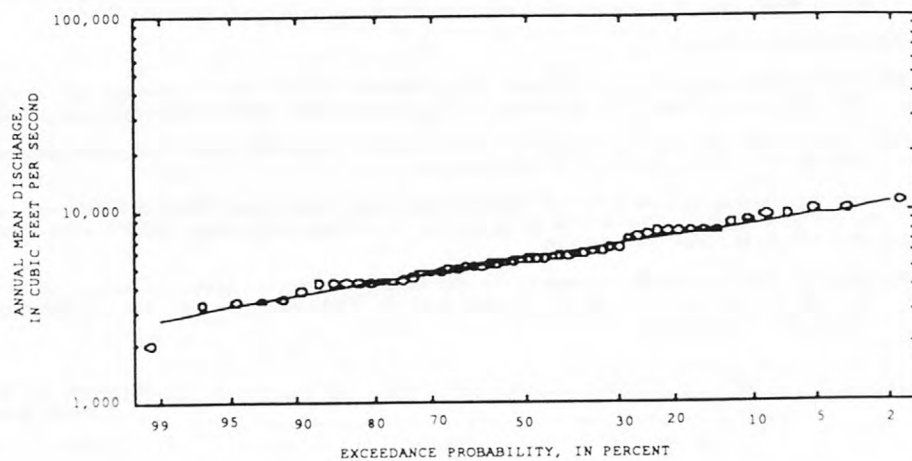
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	20,000	27,000	30,700	34,600	37,000	39,000
3	19,600	25,800	28,900	31,900	33,600	35,000
7	18,500	24,200	26,800	29,200	30,400	31,400
15	17,000	22,700	25,400	28,000	29,400	30,500
30	15,100	20,500	23,100	25,600	27,000	28,200
60	13,000	17,900	20,500	23,100	24,700	26,100
90	11,400	15,800	18,300	21,000	22,800	24,400

Duration table of daily mean flow for period of record 1932-35, 1938-39, 1941-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
23,800	17,900	13,200	9,910	7,930	5,820	4,880	4,190	3,610	3,120	2,670	2,200	1,900	1,500	1,150	912	580	



LOCATION MAP



Snake River Main Stem

13062500 Snake River at Blackfoot, ID

LOCATION.—Lat 43°11'50", long 112°22'05", in SE 1/4, SW 1/4, sec.33, T.2 S., R.35 E., Bingham County, Hydrologic Unit 17040206, on left bank immediately upstream from old Riverside Highway bridge, 0.25 mi downstream from new U.S. Highway 26 bridges, 1.2 mi west of Blackfoot, and at mile 764.3.

DRAINAGE AREA.—9,950 mi<sup>2</sup>.

PERIOD OF RECORD.—August 1978 to September 1990. Records for May 1924 to September 1932 at site downstream, published as "Snake River below Blackfoot Bridge, near Blackfoot," are not equivalent because diversions were not included.

GAGE.—Water-stage recorder. Elevation of gage is 4,490 ft above sea level, from topographic map. May 1924 to Sept. 1932, water-stage recorder at site downstream at different datum.

REMARKS.—Flow regulated by Jackson Lake, Palisades Reservoir, Henrys Lake, Island Park Reservoir, and Grassy Lake, having a combined capacity of 2,570,000 acre-ft. Diversions above station for irrigation of about 750,000 acres. Considerable water leaks above the station into the Snake River Plain aquifer.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 28,600 ft<sup>3</sup>/s May 18, 1984, gage height, 10.18 ft; maximum gage height, 14.71 ft Feb. 7, 1985, due to backwater from ice; minimum observed, 92 ft<sup>3</sup>/s Oct. 2, 1981, but may have been lower during period of no gage-height record Oct. 3-21, 1981.

Summary of monthly and annual discharges, 1979-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	6,090	871	2,760	1,980	0.72	4.4
November	7,930	1,810	3,660	1,960	0.54	5.7
December	8,270	1,540	3,960	2,240	0.57	6.2
January	8,000	1,400	4,100	2,300	0.56	6.4
February	5,700	1,550	3,580	1,510	0.42	5.6
March	13,100	1,490	4,870	3,460	0.71	7.6
April	19,500	2,150	7,970	5,410	0.68	12.5
May	22,100	1,540	11,600	7,340	0.63	18.1
June	22,800	2,050	10,400	7,590	0.73	16.2
July	13,200	1,730	5,560	4,780	0.86	8.7
August	6,540	1,160	2,860	1,620	0.57	4.5
September	6,100	726	2,640	1,750	0.66	4.1
Annual	10,300	2,020	5,330	2,760	0.52	100

Magnitude and frequency of annual low flow, based on period of record 1980-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	578	230	140	92	56	41
3	679	268	159	101	59	42
7	879	372	227	147	88	62
14	1,070	555	391	292	210	168
30	1,380	839	663	553	457	405
60	1,730	1,050	816	671	542	473
90	2,000	1,270	1,030	871	733	658
120	2,190	1,440	1,190	1,030	887	811
183	2,490	1,640	1,370	1,190	1,030	950

Magnitude and frequency of instantaneous peak flow, based on period of record 1979-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
17,300	26,600	29,900	34,900	37,900	40,300

Magnitude and frequency of annual high flow, based on period of record 1979-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	17,200	25,300	29,500	34,300	37,100	39,400
3	16,800	24,800	29,100	33,500	36,200	38,500
7	15,700	23,500	27,900	32,600	35,600	38,200
15	14,500	22,300	26,900	31,900	35,200	38,000
30	12,800	20,400	25,000	30,400	34,000	37,200
60	10,900	17,800	22,400	28,000	32,000	35,800
90	9,400	15,900	20,400	26,300	30,600	34,900

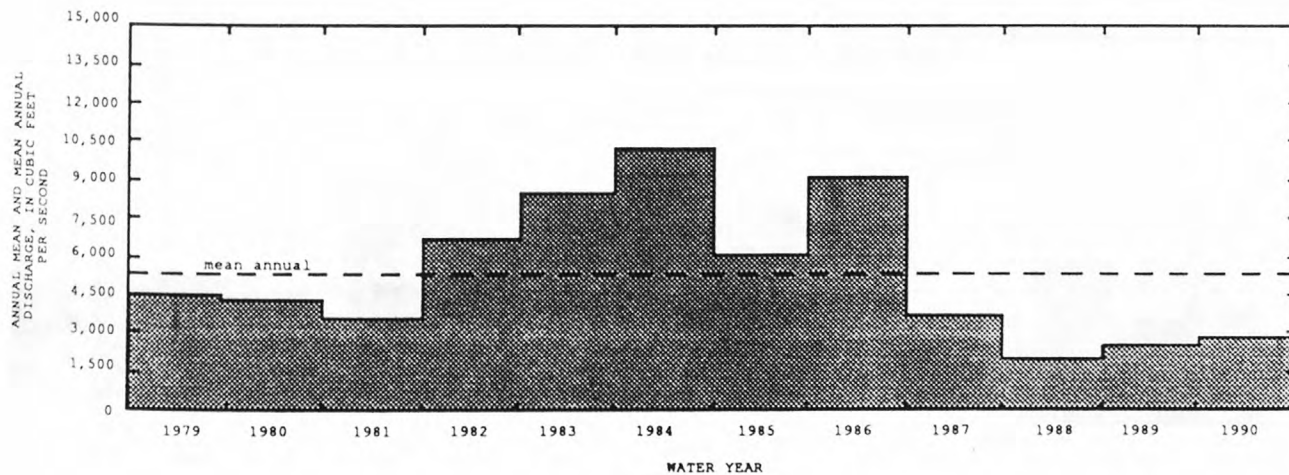
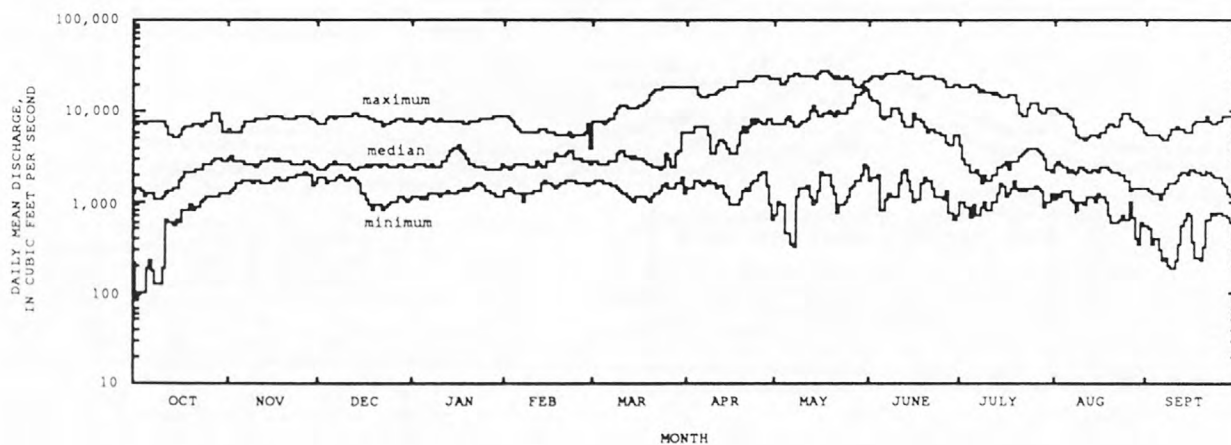
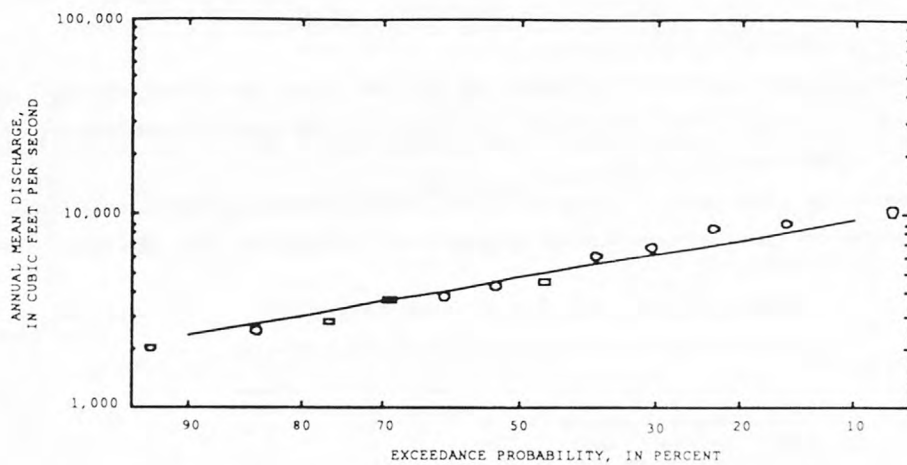
Duration table of daily mean flow for period of record 1979-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
23,900	18,500	12,800	9,110	7,560	5,810	4,650	3,340	2,520	2,160	1,820	1,300	979	655	474	259

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# BLACKFOOT RIVER BASIN

13063000 BLACKFOOT RIVER ABOVE RESERVOIR, NEAR HENRY, ID

LOCATION.—Lat 42°49'00", long 111°30'35", in SE 1/4, NE 1/4, sec. 14, T. 7 S., R. 42 E., Caribou County, Hydrologic Unit 17040207, on right bank 70 ft upstream from railroad bridge, immediately upstream from the Monsanto Chemical Company "haul road," 5 mi upstream from Blackfoot Reservoir flow line, 6 mi south of Henry, and 11 mi north of Soda Springs.

DRAINAGE AREA.—350 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—April 1914 to September 1925 (no winter records except water year 1915), August 1967 to September 1982.

GAGE.—Water-stage recorder. Datum of gage is 6,259.36 ft sea level (levels by Topographic Division). Mar. 25 to Sept. 30, 1914, nonrecording gage at site 3.3 mi downstream at different datum. Oct. 1, 1915, to Sept. 30, 1925, nonrecording gage at site 4 mi downstream at different datum.

REMARKS.—Diversions above station for irrigation of about 4,500 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,150 ft<sup>3</sup>/s Apr. 26, 1974, gage height, 8.60 ft; minimum, 22 ft<sup>3</sup>/s Aug. 17, 1977, gage height, 1.36 ft.

Summary of monthly and annual discharges, 1915, 1968-82

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	140	37	90	30	0.33	4.5
November	129	43	85	25	0.29	4.2
December	100	36	68	19	0.27	3.4
January	80	43	59	12	0.20	2.9
February	96	42	63	14	0.23	3.1
March	207	52	83	37	0.45	4.1
April	593	98	294	147	0.50	14.6
May	1,060	110	603	278	0.46	30.0
June	651	49	336	179	0.53	16.8
July	264	35	142	64	0.45	7.1
August	150	29	98	38	0.38	4.9
September	134	33	88	31	0.36	4.4
Annual	273	72	168	55	0.33	100

Magnitude and frequency of annual low flow,  
based on period of record 1915, 1969-82

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	39	29	25	22	19	17
3	42	31	27	23	20	18
7	45	34	29	25	21	19
14	48	37	31	28	24	21
30	52	40	35	30	26	24
60	57	44	38	34	29	26
90	60	47	41	36	31	28
120	64	49	43	37	32	29
183	71	55	47	41	35	32

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1915, 1968-82

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,230	1,740	2,050	2,430	2,690	2,950

Magnitude and frequency of annual high flow,  
based on period of record 1915, 1968-82

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	1,180	1,640	1,900	2,170	2,340	2,490
3	1,090	1,510	1,740	1,980	2,130	2,260
7	957	1,320	1,500	1,690	1,800	1,900
15	806	1,130	1,290	1,440	1,530	1,600
30	674	942	1,070	1,180	1,230	1,280
60	524	734	839	938	994	1,040
90	419	587	671	752	799	837

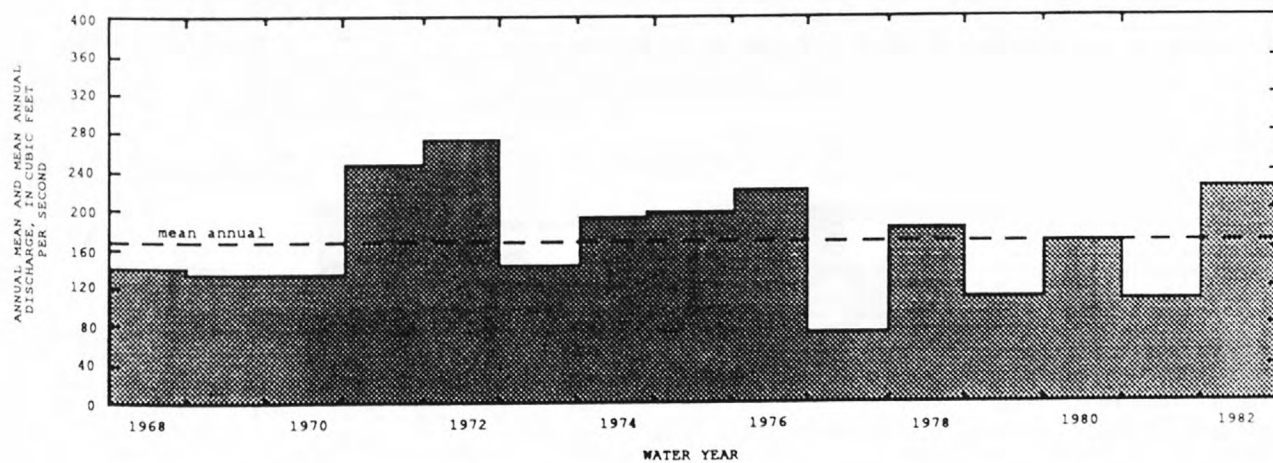
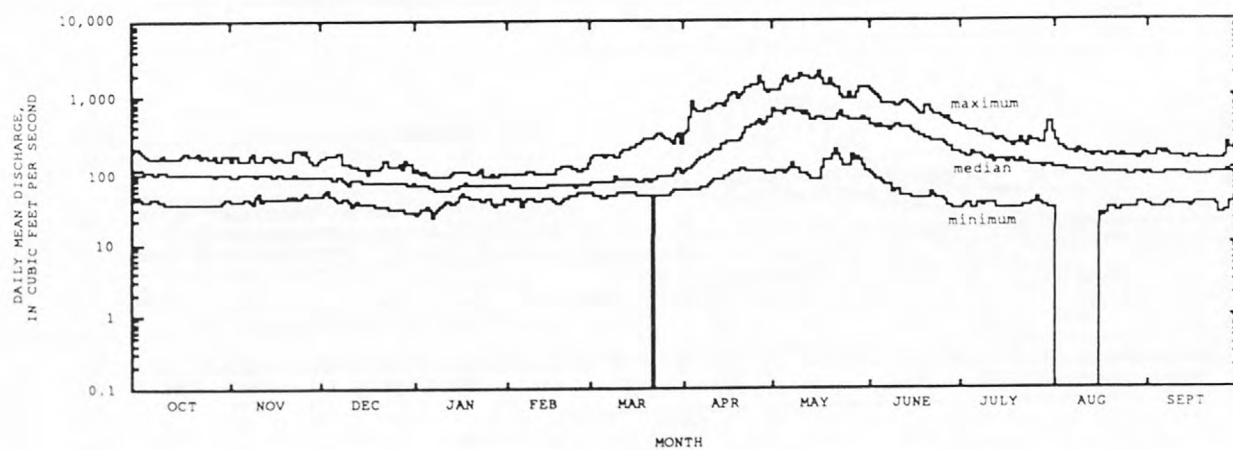
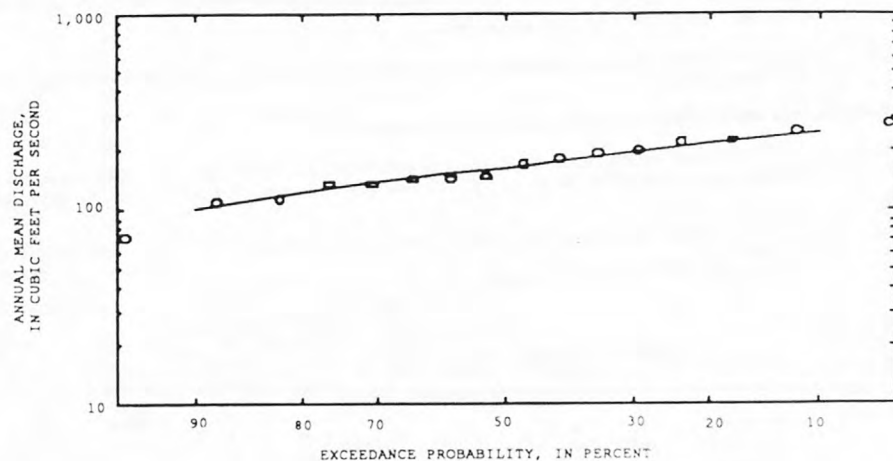
Duration table of daily mean flow for period of record 1915, 1968-82

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,110	643	423	273	192	130	106	90	77	68	59	50	42	35	31	28	25

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



BLACKFOOT RIVER BASIN

13063500 LITTLE BLACKFOOT RIVER AT HENRY, ID

LOCATION.—Lat 42°54'30", long 111°31'45", in sec.10, T.6 S., R.42 E., Caribou County, Hydrologic Unit 17040207, on left bank at Henry, a short distance upstream from the flow line of Blackfoot Reservoir, and 20 mi north of Soda Springs.

PERIOD OF RECORD.—March 1914 to September 1925.

GAGE.—Nonrecording gage. Elevation of gage is 6,120 ft above sea level, from topographic map. Prior to Aug. 19, 1919, at site 40 ft downstream at different datum.

REMARKS.—One small diversion above station. No regulation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 292 ft<sup>3</sup>/s Apr. 19, 1914, gage height, 3.5 ft (site and datum then in use), from rating curve extended above 170 ft<sup>3</sup>/s; minimum observed, 6.9 ft<sup>3</sup>/s Jan. 8, 1919, gage height, 1.03 ft.

Summary of monthly and annual discharges, 1915-25

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	18	9.8	15	2.7	0.18	6.6
November	20	12	15	2.7	0.18	6.7
December	20	11	14	2.8	0.19	6.4
January	21	8.3	13	3.5	0.28	5.8
February	20	8.6	13	3.3	0.26	5.7
March	31	8.8	15	5.9	0.40	6.7
April	54	15	34	12	0.36	15.4
May	80	16	37	22	0.61	16.6
June	35	12	21	6.8	0.33	9.4
July	29	12	17	5.0	0.29	7.7
August	24	5.7	15	4.4	0.30	6.5
September	19	9.8	14	2.6	0.18	6.5
Annual	24	13	19	3.7	0.20	100

Magnitude and frequency of annual low flow,  
based on period of record 1915-25

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	9.4	6.9	5.7	4.8	3.9	3.3
3	9.5	7.2	6.0	5.1	4.2	3.6
7	10	7.7	6.5	5.6	4.5	3.9
14	11	8.1	6.7	5.6	4.6	3.9
30	11	8.3	7.1	6.1	5.1	4.5
60	11	9.4	8.5	7.9	7.3	6.9
90	12	10	9.4	8.8	8.1	7.7
120	13	11	10	9.4	8.8	8.3
183	13	11	10	9.8	9.1	8.7

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1915-25

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
143	210	254	307	346	384

Magnitude and frequency of annual high flow,  
based on period of record 1915-25

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	115	159	185	214	233	251
3	100	138	163	192	212	232
7	78	113	139	175	203	233
15	61	85	102	125	144	163
30	48	64	75	90	101	113
60	36	46	53	61	67	72
90	31	39	44	50	54	58

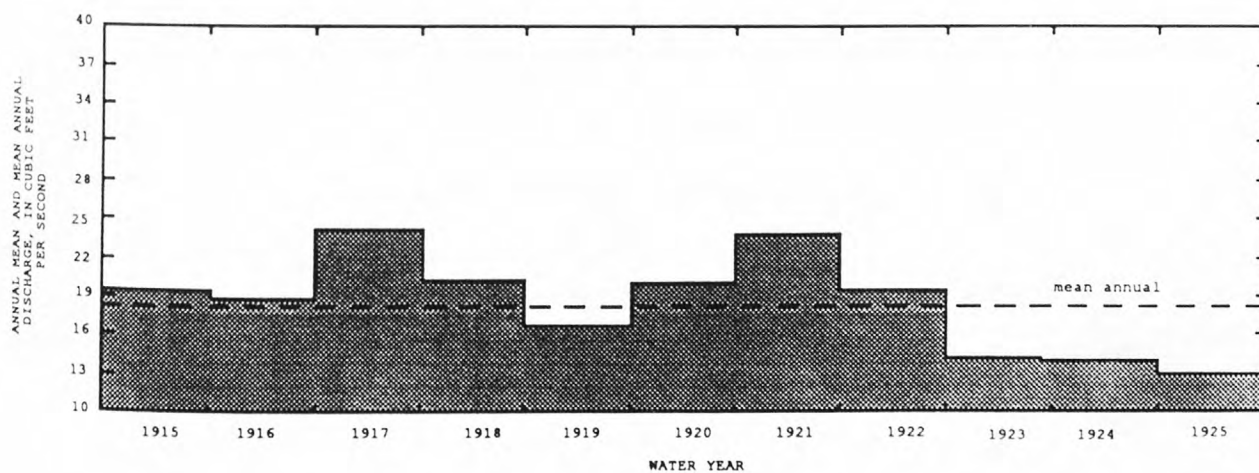
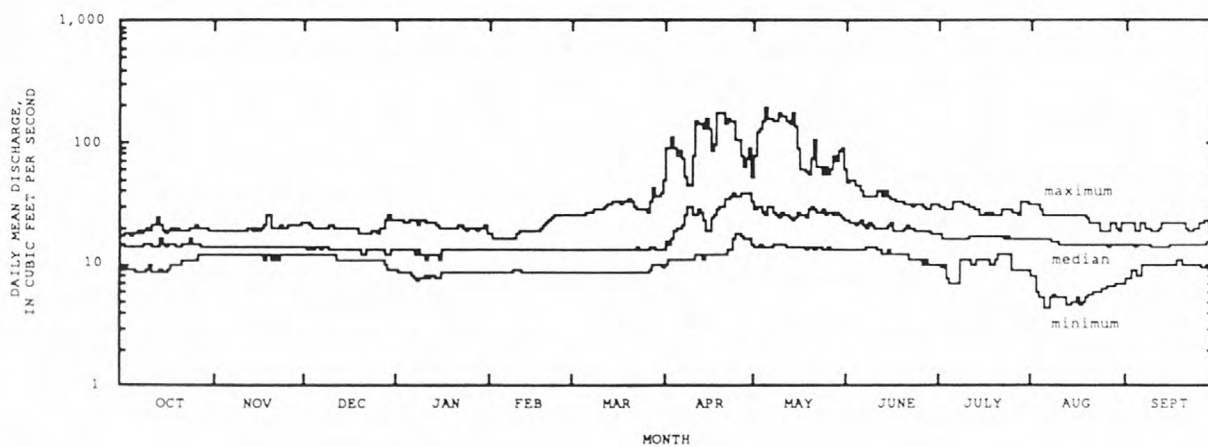
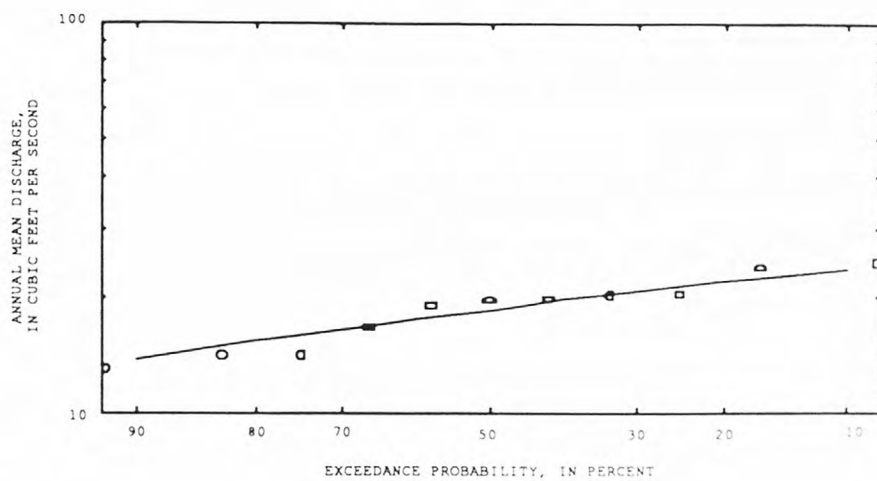
Duration table of daily mean flow for period of record 1915-25

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
93	39	28	24	21	18	16	15	14	13	12	11	9.4	8.7	7.7	6.1	4.7

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



BLACKFOOT RIVER BASIN

13066000 BLACKFOOT RIVER NEAR SHELLEY, ID

LOCATION.—Lat 43°15'46", long 112°02'48", in NW 1/4, SW 1/4, NE 1/4, sec. 7, T. 2 S., R. 38 E., Bingham County, Hydrologic Unit 17040207, on right bank 1.2 mi downstream from Wolverine Creek, 8.5 mi southeast of Shelley, and at mile 30.5.

DRAINAGE AREA.—909 mi<sup>2</sup>.

PERIOD OF RECORD.—July 1909 to November 1926, May 1927 to September 1950 (irrigation seasons only), August 1975 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 4,650 ft above sea level, from topographic map. Prior to Aug. 19, 1975, at nearby site at different datum.

REMARKS.—Flow regulated by Blackfoot Reservoir (sta 13065000) 38.5 mi upstream. Water diverted from reservoir and several other diversions upstream for irrigation. Water diverted at times from Grays Lake near Wayan (Willow Creek basin).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,220 ft<sup>3</sup>/s May 16, 1987, gage height, 9.10 ft (flash flood); maximum gage height, 19.97 ft, Nov. 29, 1975 (backwater from ice); minimum observed discharge, 15 ft<sup>3</sup>/s Jan. 23, 1919, gage height, 2.83 ft, site and datum then in use.

Summary of monthly and annual discharges, 1911-25, 1976-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	626	73	237	149	0.63	5.1
November	563	59	176	145	0.82	3.8
December	760	47	152	157	1.0	3.3
January	783	52	142	150	1.1	3.1
February	471	53	131	99	0.76	2.8
March	966	69	191	187	0.98	4.1
April	1,040	95	350	270	0.77	7.6
May	1,830	155	604	456	0.76	13.2
June	1,850	138	788	400	0.51	17.1
July	1,350	266	798	223	0.28	17.3
August	959	209	617	186	0.30	13.4
September	827	116	425	161	0.38	9.2
Annual	807	143	385	157	0.41	100

Magnitude and frequency of annual low flow,  
based on period of record 1911-25, 1977-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	60	42	35	30	25	23
3	64	45	37	32	28	25
7	67	49	42	38	34	32
14	71	52	46	42	38	36
30	75	55	49	46	43	42
60	79	58	52	49	46	45
90	86	61	55	51	48	47
120	93	64	56	51	48	46
183	129	83	69	60	52	48

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1911-25, 1976-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,150	1,550	1,840	2,210	2,500	2,800

Magnitude and frequency of annual high flow,  
based on period of record 1911-25, 1976-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,130	1,470	1,700	1,990	2,210	2,440
3	1,100	1,450	1,670	1,960	2,180	2,400
7	1,070	1,410	1,620	1,900	2,100	2,300
15	1,000	1,340	1,560	1,840	2,040	2,240
30	935	1,270	1,480	1,720	1,890	2,050
60	855	1,170	1,350	1,560	1,700	1,830
90	797	1,070	1,220	1,360	1,450	1,530

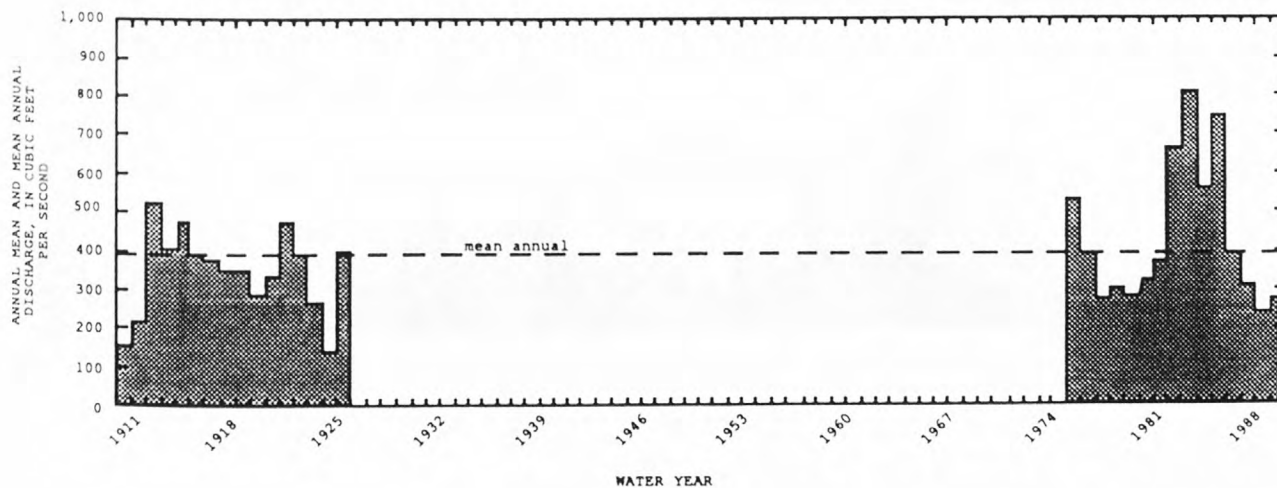
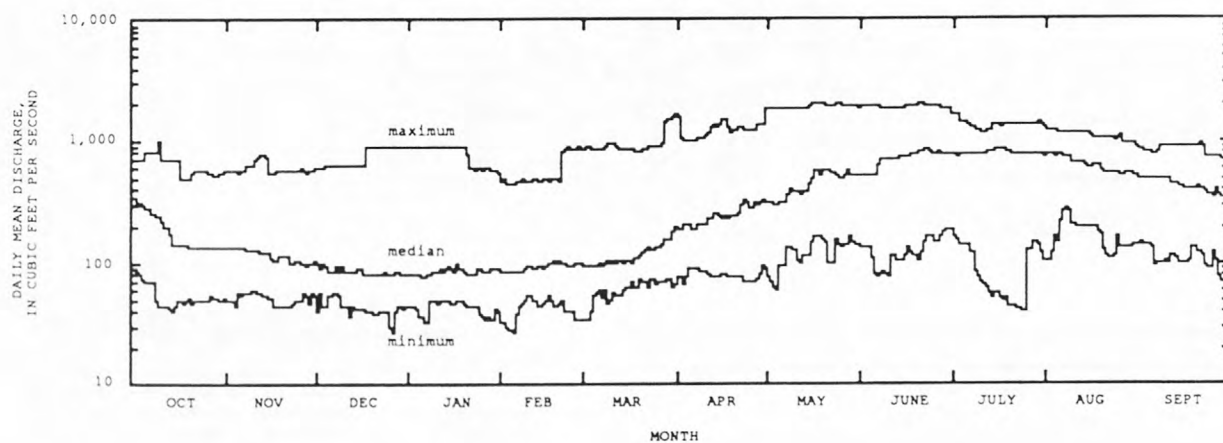
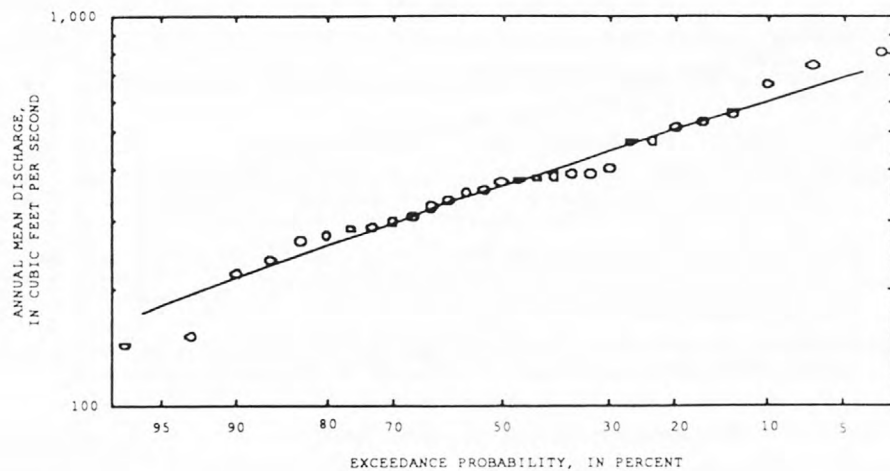
Duration table of daily mean flow for period of record 1911-25, 1976-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,790	1,040	866	767	681	511	374	250	172	118	88	72	62	54	48	43	35

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# BLACKFOOT RIVER BASIN

13068501 COMBINATION BLACKFOOT RIVER AND BYPASS CHANNEL NEAR BLACKFOOT, ID

LOCATION.—Lat 43°07'50", long 112°28'35", near E<sup>1</sup>/<sub>4</sub> corner, sec.28, T.3 S., R.34 E., Bingham County, Hydrologic Unit 17040207, Fort Hall Indian Reservation, on left bank 11 ft upstream from highway bridge, 8 mi southwest of Blackfoot, and at mile 3.4.

DRAINAGE AREA.—1,295 mi<sup>2</sup>, including that of Sand Creek, flow of which is diverted to Blackfoot River through the Idaho Canal.

PERIOD OF RECORD.—July 1913 to September 1990 (prior to October 1931, summer months only). Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 1217: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 4,420 ft above sea level, 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 mi upstream at different datum. June 26, 1937, to Aug. 16, 1963, water-stage recorder at site 175 ft downstream at same datum.

REMARKS.—Flow regulated by Blackfoot Reservoir (see sta 13065000). Diversions above station for irrigation of about 28,000 acres below and about 32,000 acres above station, of which about 900 acres are irrigated by withdrawals from ground water (1966 determination). Part of flow is supplied by waste from Snake River canals. Diversions to bypass channel, which diverts 5.5 mi upstream from station, started in April 1964.

EXTREMES FOR PERIOD OF RECORD.—River only, maximum discharge, 1,710 ft<sup>3</sup>/s Feb. 11, 1962, gage height, 7.68 ft; no flow on many days. Combined flow, maximum discharge, 2,130 ft<sup>3</sup>/s May 5, 1974; no flow on many days.

Summary of monthly and annual discharges, 1932-37, 1941-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	674	0.00	267	166	0.62	10.3
November	789	27	293	159	0.54	11.3
December	825	52	178	127	0.71	6.9
January	792	18	146	130	0.89	6.6
February	608	22	156	120	0.77	6.0
March	956	31	207	189	0.92	8.0
April	1,080	57	339	258	0.76	13.1
May	1,580	0.77	393	417	1.06	15.1
June	1,410	0.00	241	259	1.07	9.3
July	635	0.00	109	130	1.20	4.2
August	834	0.00	136	165	1.21	5.2
September	443	0.00	129	118	0.92	5.0
Annual	751	41	220	147	0.67	100

Magnitude and frequency of annual low flow,  
based on period of record 1933-37, 1941-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	3.8	0.00	0.00	0.00	0.00	0.00
3	6.9	0.00	0.00	0.00	0.00	0.00
7	12	0.18	0.00	0.00	0.00	0.00
14	21	4.7	1.3	0.00	0.00	0.00
30	33	10	3.5	0.00	0.00	0.00
60	56	13	3.3	0.40	0.00	0.00
90	72	20	6.2	1.6	0.02	0.00
120	74	31	16	8.3	1.2	0.00
183	197	66	52	38	19	0.00

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1932-37, 1941-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
772	1,150	1,400	1,720	1,950	2,190

Magnitude and frequency of annual high flow,  
based on period of record 1932-37, 1941-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	513	723	871	1,070	1,220	1,380
3	497	700	839	1,020	1,160	1,300
7	470	654	769	908	1,010	1,100
15	415	572	667	777	852	924
30	354	493	583	694	775	855
60	295	408	479	564	624	682
90	250	347	407	479	530	579

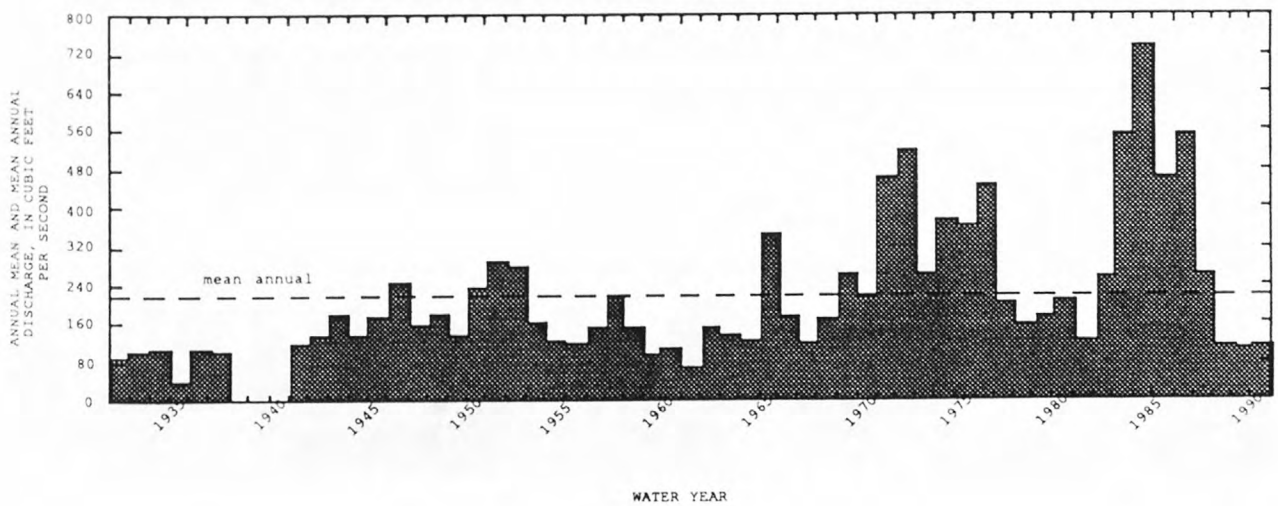
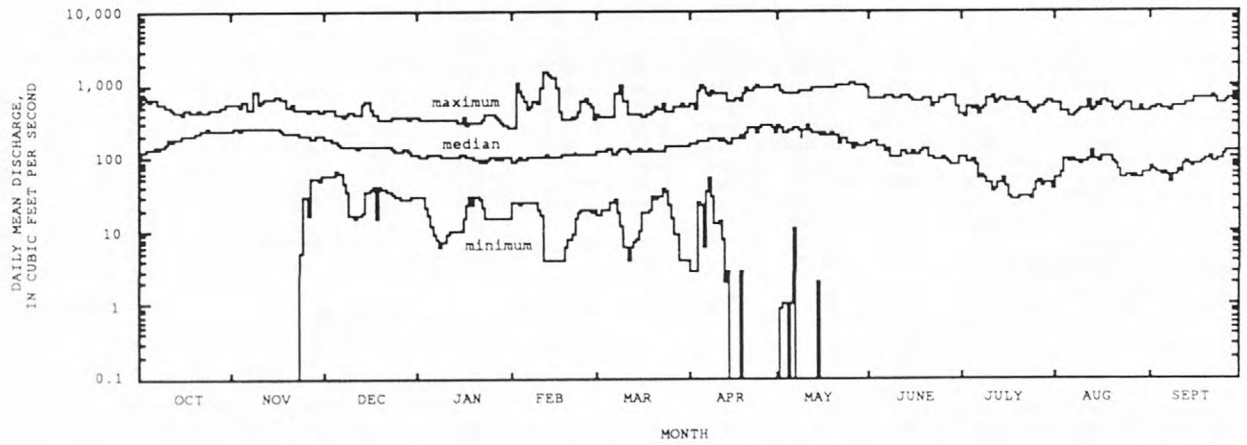
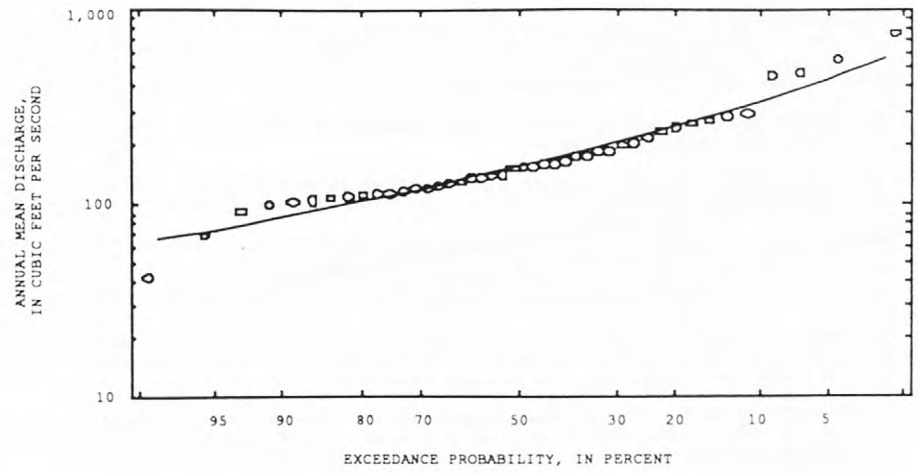
Duration table of daily mean flow for period of record 1932-37, 1941-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
1,320	697	529	422	342	252	188	140	105	76	47	18	4.5	0.01	0.00	0.00

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



Snake River Main Stem

13069500 Snake River near Blackfoot, ID

LOCATION.—Lat 43°07'31", long 112°31'06", in SE 1/4, SE 1/4, sec.30, T.3 S., R.34 E., Bingham County, Hydrologic Unit 17040206, on right bank 0.3 mi downstream from highway bridge, 0.7 mi downstream from Blackfoot River, 10 mi southwest of Blackfoot, and at mile 750.1.

DRAINAGE AREA.—11,310 mi<sup>2</sup>, approximately, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.—June 1910 to September 1990. 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 sea level. Prior to July 6, 1913, nonrecording gages: July 6, 1913, to Aug. 19, 1962, water-stage recorder at site 0.1 mi upstream at datum 1.00 ft higher.

REMARKS.—Flow regulated by Jackson Lake, Palisades Reservoir, Henrys Lake (see sta 13039000), Grassy Lake, Island Park Reservoir, and Blackfoot Reservoir (see sta 13065000), having a combined capacity of 2,883,000 acre-ft. Diversions above station for irrigation of about 121,000 acres below and about 832,000 acres above station, of which about 155,000 acres are irrigated by withdrawals from ground water (1966 determination). Considerable water leaks above the station into the Snake River Plain aquifer.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 53,500 ft<sup>3</sup>/s June 7, 1976, gage height, 15.44 ft result of Teton Dam failure, maximum discharge, excluding 1976, 46,200 ft<sup>3</sup>/s June 18, 1918, gage height, 14.80 ft, site and datum then in use; minimum, 111 ft<sup>3</sup>/s Nov. 10, 1934, gage height, 0.80 ft, site and datum then in use.

EXTREMES OUTSIDE PERIOD OF RECORD.—Late in summer of 1905 there was no flow in Snake River for a distance of 10 mi in vicinity of Blackfoot. Aug. 9, 1905, discharge of Snake River just below mouth of Blackfoot River was 39 ft<sup>3</sup>/s, supplied by ground-water inflow a short distance upstream.

Summary of monthly and annual discharges, 1911-15, 1917-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	9,680	165	2,810	1,780	0.64	4.8
November	7,850	175	3,600	1,380	0.38	6.2
December	8,230	1,130	3,440	1,330	0.39	5.9
January	8,030	975	3,130	1,410	0.45	5.4
February	8,160	1,030	3,270	1,330	0.41	5.5
March	12,900	1,190	4,000	2,330	0.58	6.9
April	19,200	330	6,890	4,450	0.65	11.9
May	25,400	395	10,800	5,960	0.55	18.6
June	31,000	325	11,000	7,100	0.64	19.0
July	18,500	214	4,580	3,870	0.85	7.9
August	7,970	193	2,460	1,770	0.72	4.2
September	9,170	147	2,150	1,760	0.82	3.7
Annual	10,400	983	4,850	2,090	0.43	100

Magnitude and frequency of annual low flow,  
based on period of record 1912-15, 1917-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	371	181	129	99	81	68
3	438	219	158	122	94	79
7	606	296	205	151	108	86
14	838	404	270	190	127	96
30	1,120	551	365	254	165	123
60	1,460	732	483	332	211	153
90	1,760	939	642	456	301	224
120	2,140	1,190	816	575	371	270
183	2,660	1,600	1,140	827	550	408

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1911-15, 1917-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
19,200	27,600	31,900	36,100	38,600	40,600

Magnitude and frequency of annual high flow,  
based on period of record 1911-15, 1917-90

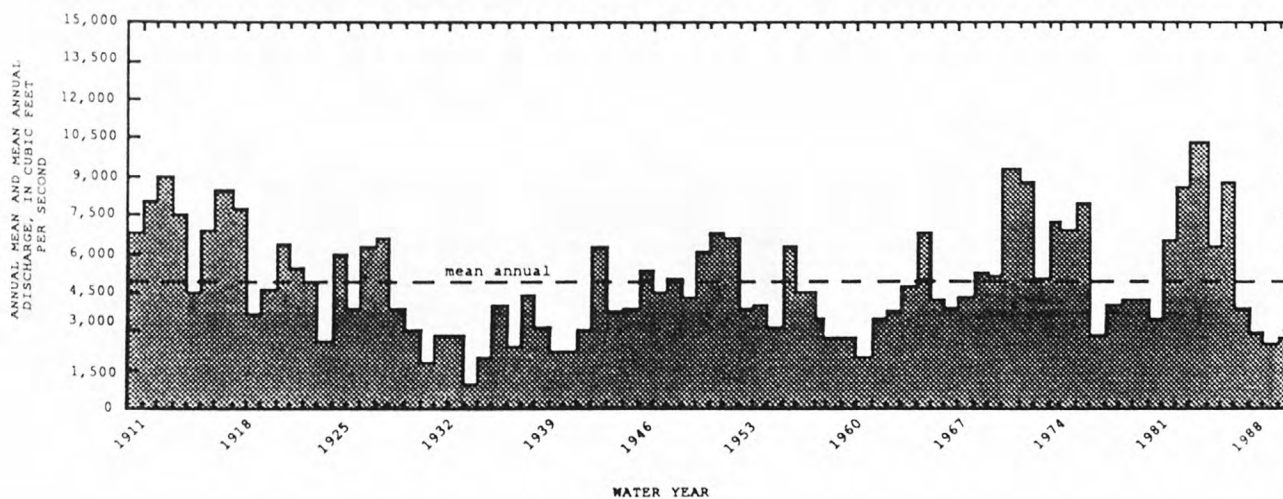
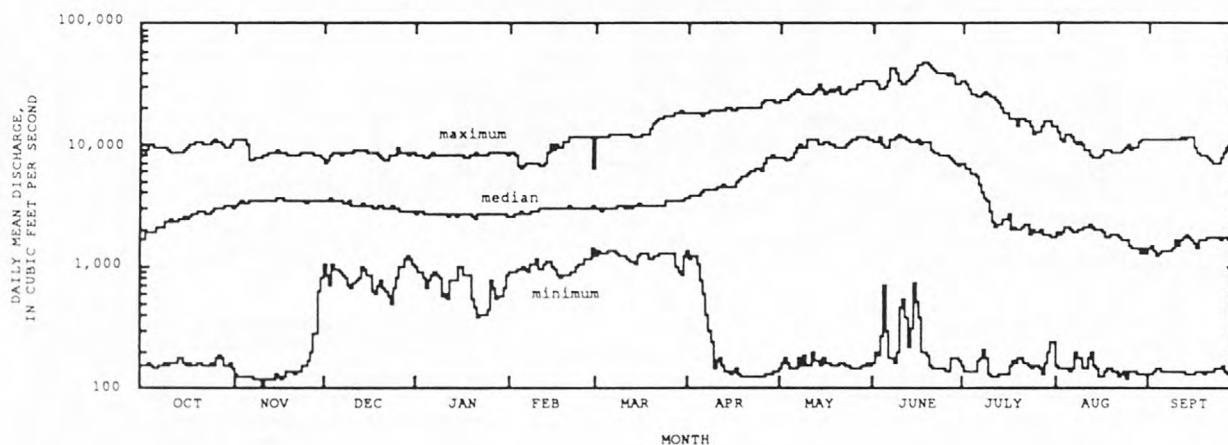
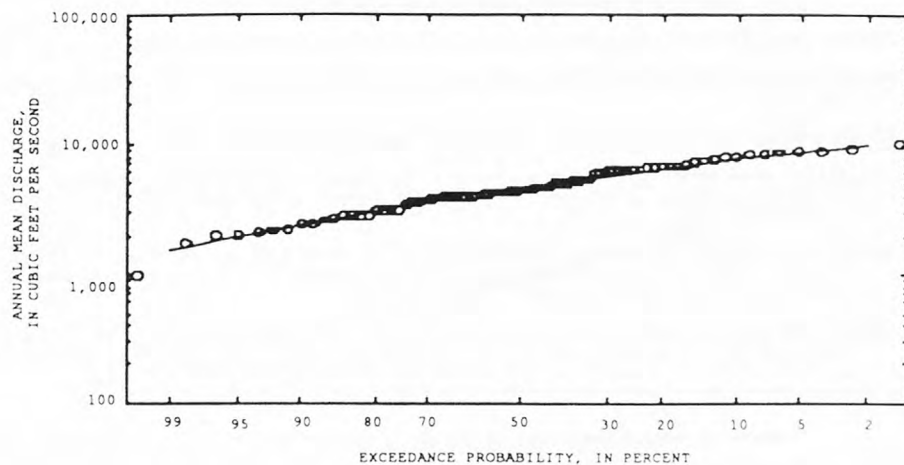
Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	18,700	27,300	31,600	35,400	38,300	40,300
3	18,300	27,000	31,200	35,100	37,700	40,000
7	17,000	25,300	29,800	34,400	37,100	39,400
15	15,100	23,200	27,800	32,700	35,800	38,500
30	13,000	20,300	24,700	29,700	32,900	35,900
60	10,900	17,200	21,000	25,500	28,500	31,400
90	9,370	14,600	18,000	22,000	24,900	27,500

Duration table of daily mean flow for period of record 1911-15, 1917-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
24,200	16,600	11,400	8,050	6,460	4,850	3,900	3,260	2,740	2,280	1,770	1,000	549	245	171	147	127	127



LOCATION MAP



PORTNEUF RIVER BASIN

13073000 PORTNEUF RIVER AT TOPAZ, ID

LOCATION.—Lat 42°37'30", long 112°05'20", in SE 1/4, sec. 23, T. 9 S., R. 37 E., Bannock County, Hydrologic Unit 17040208, on right bank 200 ft upstream from East Bob Smith Creek, 800 ft downstream from Topaz siding, 1.5 mi upstream from diversion dam of Portneuf-Marsh Valley Canal Co., 4 mi west of Lava Hot Springs, and at mile 55.5.

DRAINAGE AREA.—570 mi<sup>2</sup>, approximately (includes that of Bob Smith Creek). Mean elevation, 6,080 ft.

PERIOD OF RECORD.—January 1913 to September 1915, July 1919 to September 1990. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 1347: 1920-22, 1924-25(M). WSP 1567: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 4,918.00 ft above sea level. Prior to July 20, 1919, nonrecording gage at site 0.3 mi downstream at datum 3.0 ft lower. July 20, 1919, to June 22, 1954, nonrecording gage at site 0.3 mi downstream at datum 2.00 ft lower than present datum.

REMARKS.—Flow regulated by Portneuf Reservoir, capacity 24,000 acre-ft, and Chesterfield reservoir on Twentyfourmile Creek, capacity 685 acre-ft. Diversions above station for irrigation of about 29,000 acres, of which about 7,400 acres are irrigated by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,120 ft<sup>3</sup>/s Feb. 1, 1963, gage height, 8.22 ft, result of highway fill failure 2 mi upstream; maximum excluding 1963, 1,740 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 6.00 ft; minimum, 64 ft<sup>3</sup>/s Sept. 23, 1966, gage height, 2.27 ft.

Summary of monthly and annual discharges, 1914-15, 1920-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	284	78	146	44	0.30	6.0
November	283	109	158	35	0.22	6.5
December	279	115	157	32	0.20	6.5
January	271	109	157	33	0.21	6.5
February	484	102	174	57	0.33	7.2
March	475	116	208	65	0.31	8.6
April	589	106	272	112	0.41	11.2
May	875	127	345	165	0.48	14.2
June	735	97	271	100	0.37	11.1
July	347	89	207	48	0.23	8.5
August	331	81	180	50	0.28	7.4
September	361	80	154	52	0.34	6.3
Annual	362	115	202	52	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1914-15, 1921-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	114	91	81	73	65	61
3	116	93	82	75	67	62
7	118	94	84	76	69	64
14	120	96	86	78	71	66
30	125	100	90	82	74	69
60	131	106	95	86	78	73
90	137	111	99	91	82	77
120	140	115	103	95	86	81
183	147	122	111	103	95	90

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1914-15, 1920-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
486	800	1,100	1,610	2,100	2,730	

Magnitude and frequency of annual high flow,  
based on period of record 1914-15, 1920-90

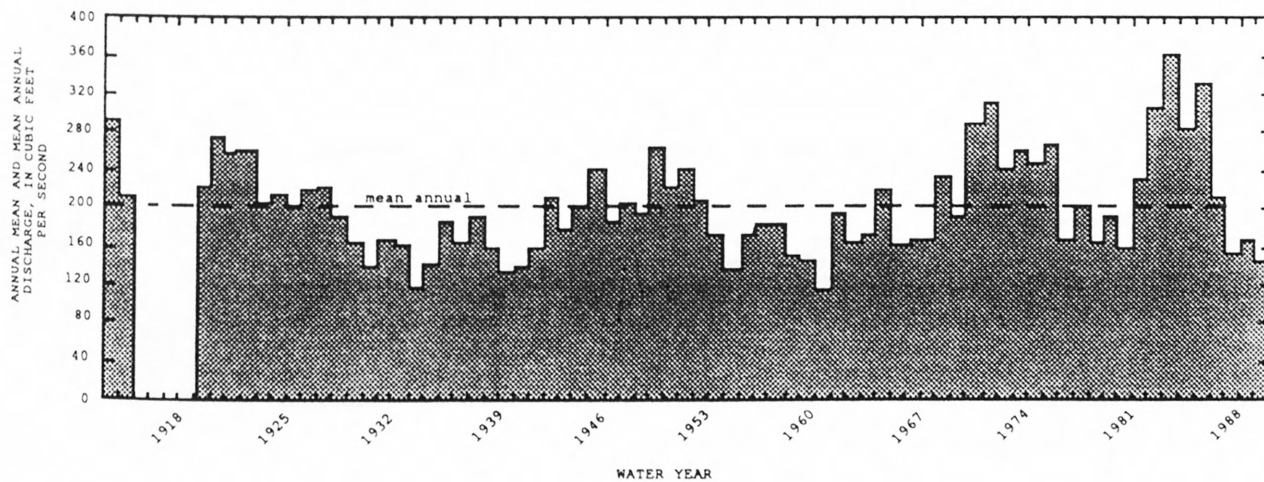
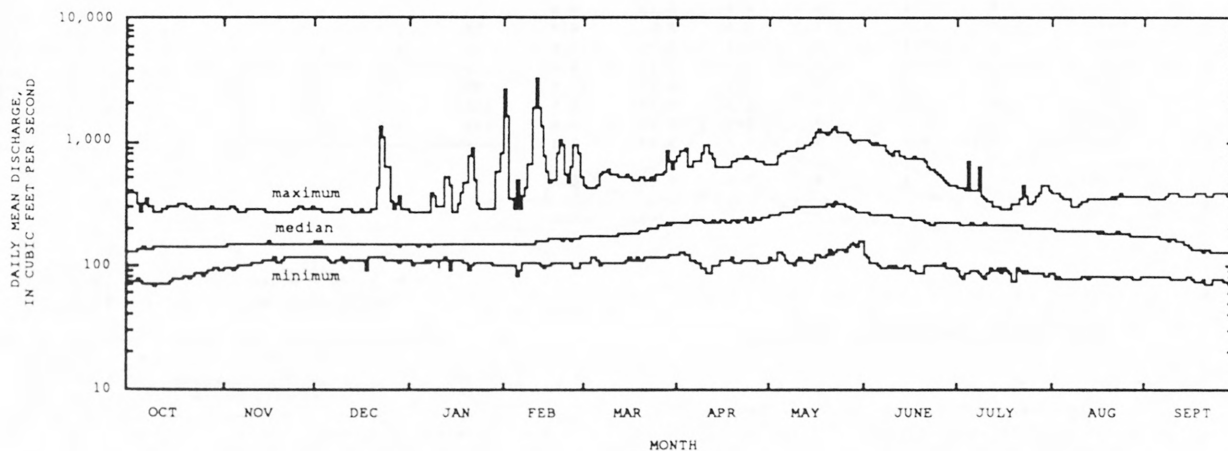
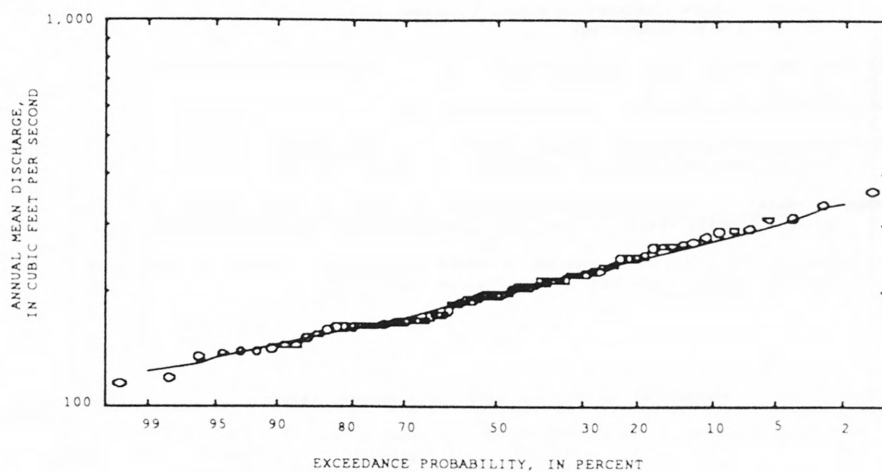
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	457	751	1,030	1,490	1,950	2,520
3	440	693	910	1,250	1,560	1,920
7	413	619	779	1,010	1,200	1,420
15	377	552	685	872	1,030	1,190
30	340	494	611	777	914	1,060
60	304	429	522	650	753	864
90	281	384	459	560	640	725

Duration table of daily mean flow for period of record 1914-15, 1920-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
655	406	306	264	242	214	196	179	163	148	134	116	103	92	85	81		74



LOCATION MAP





PORTNEUF RIVER BASIN

13074000 BIRCH CREEK NEAR DOWNEY, ID

LOCATION.—Lat 42°21', long 112°15', in SE 1/4 sec. 28, T. 12 S., R. 36 E., Bannock County, Hydrologic Unit 17040208, on left bank just downstream from point where flow that is diverted through Malad powerplant reenters stream, 8.6 mi southwest of Downey, and 10 mi upstream from confluence with Marsh Creek.

DRAINAGE AREA.—6.56 mi<sup>2</sup>. Mean altitude 7,240 (revised).

PERIOD OF RECORD.—September 1937 to September 1949.

GAGE.—Nonrecording gage with wooden control. Altitude of gage is 5,810 ft above sea level (by barometer, revised). Prior to July 26, 1939, nonrecording gages at same site at different datums.

REMARKS.—Water is diverted from Birch Creek 0.5 mi downstream from station and carried by transmountain canal to Devil Creek in Bear River basin. A small reservoir above the Malad powerplant may cause slight diurnal fluctuations.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed 95 ft<sup>3</sup>/s July 15, 1938, velocity-area method, on basis of floodmarks at measuring section; minimum observed, 3.4 ft<sup>3</sup>/s Dec. 24-27, 1913.

Summary of monthly and annual discharges, 1938-49

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	8.5	6.6	7.6	0.69	0.09	7.0
November	8.5	6.2	7.4	0.75	0.10	6.8
December	9.0	5.4	7.2	0.96	0.13	6.6
January	8.6	5.4	7.1	0.85	0.12	6.5
February	8.4	5.4	6.9	0.85	0.12	6.3
March	8.6	5.7	7.3	0.81	0.11	6.8
April	24	7.8	12	4.2	0.35	11.0
May	20	9.9	16	3.3	0.21	14.4
June	18	7.5	12	2.8	0.23	11.2
July	12	7.0	9.3	1.4	0.15	8.5
August	10	6.5	8.3	0.92	0.11	7.6
September	9.2	6.6	8.0	0.75	0.09	7.3
Annual	11	7.4	9.1	1.0	0.11	100

Magnitude and frequency of annual low flow,  
based on period of record 1913, 1939-49

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	6.3	5.8	5.6	5.4	5.1	4.8
3	6.5	5.9	5.6	5.4	5.1	4.8
7	6.7	6.0	5.6	5.4	5.1	4.8
14	6.7	6.1	5.7	5.4	5.1	4.9
30	6.9	6.1	5.8	5.4	5.1	4.9
60	7.0	6.3	5.9	5.6	5.2	5.0
90	7.2	6.4	6.0	5.6	5.2	5.0
120	7.3	6.5	6.0	5.7	5.3	5.0
183	7.4	6.7	6.3	6.0	5.6	5.4

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1938-49

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
22	36	49	73	98	131	

Magnitude and frequency of annual high flow,  
based on period of record 1938-49

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	22	28	31	34	36	37
3	21	27	29	32	34	36
7	20	25	28	30	32	34
15	19	23	26	28	30	32
30	17	21	23	26	27	29
60	15	18	20	22	23	25
90	13	16	17	19	20	21

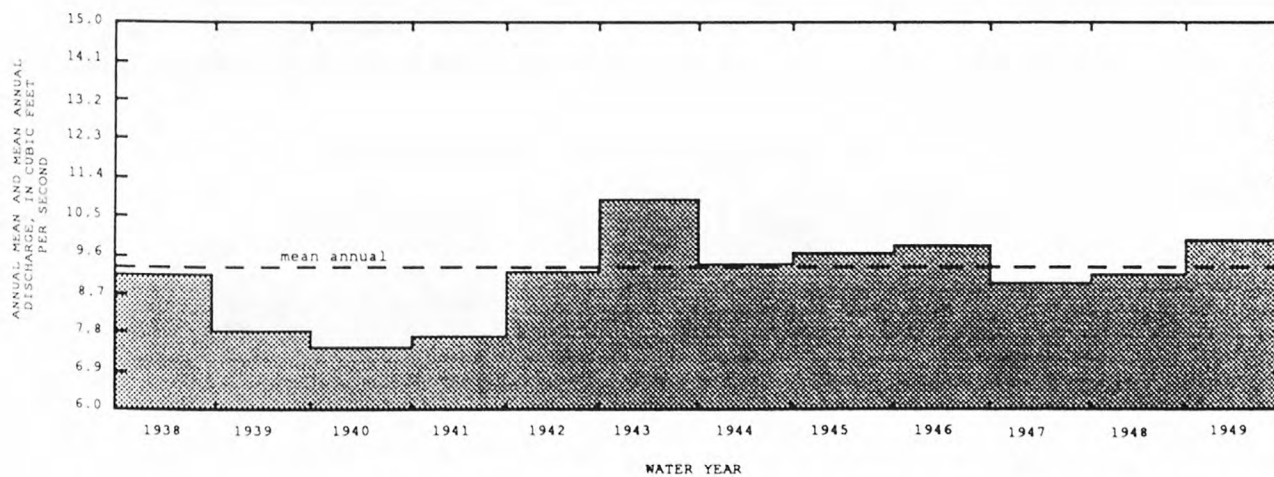
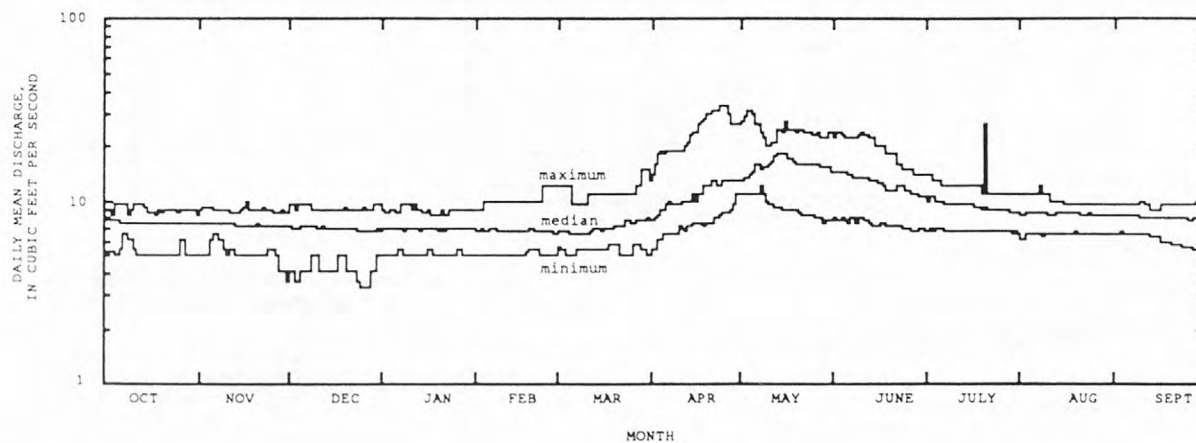
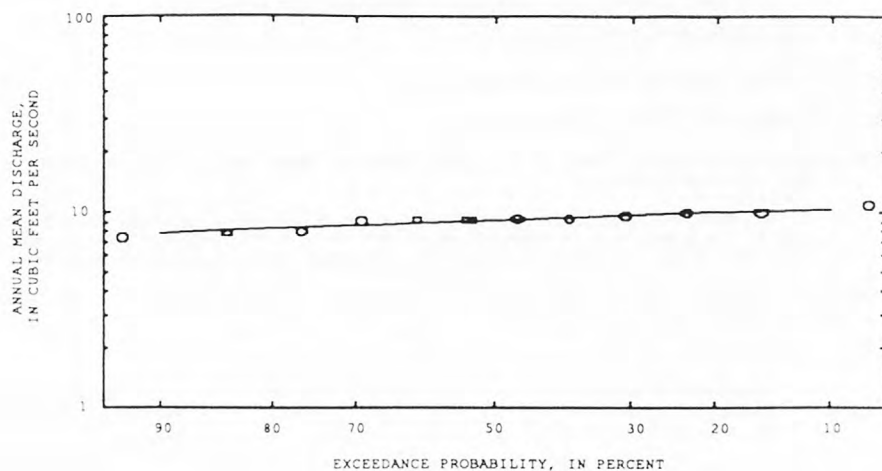
Duration table of daily mean flow for period of record 1938-49

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
24	17	14	12	11	9.0	8.5	8.0	7.7	7.3	6.9	6.5	6.3	5.6	5.3	5.2	5.1

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



PORTNEUF RIVER BASIN

13075000 MARSH CREEK NEAR MCCAMMON, ID

LOCATION.—Lat 42°37'48", long 112°13'29", in NE 1/4, sec.22, T.9 S., R.36 E., Bannock County, Hydrologic Unit 17040208, 70 ft upstream from county road crossing, 2 mi southwest of McCammon, and at mile 16.8.

DRAINAGE AREA.—353 mi<sup>2</sup>. Mean elevation, 5,630 ft.

PERIOD OF RECORD.—September 1954 to September 1990.

REVISED RECORDS.—WDR ID-1980-1: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 4,610 ft above sea level, by barometer. Prior to July 14, 1965, nonrecording gage 10 ft upstream at same datum.

REMARKS.—Diversions above station for irrigation of about 19,000 acres, of which about 5,500 acres are by withdrawals from ground water and about 5,000 acres are by diversions into Marsh Creek basin from Portneuf River through the Marsh Valley Canal (1966 determination). Part of Birch Creek (tributary to Marsh Creek) diverted into Devil Creek in Bear River basin.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 1,120 ft<sup>3</sup>/s Feb. 12, 1962, gage height, 13.25 ft; minimum, 16 ft<sup>3</sup>/s Dec. 6, 1978, gage height, 2.59 ft.

Summary of monthly and annual discharges, 1955-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	152	54	85	24	0.29	7.8
November	158	57	89	23	0.26	8.1
December	143	55	85	22	0.25	7.8
January	224	50	87	32	0.36	8.0
February	329	58	113	58	0.51	10.4
March	196	73	127	39	0.31	11.6
April	256	52	119	53	0.44	11.0
May	309	40	110	66	0.60	10.2
June	238	30	83	47	0.57	7.6
July	117	29	57	22	0.38	5.2
August	124	34	60	21	0.36	5.5
September	129	45	74	22	0.30	6.8
Annual	166	53	91	26	0.29	100

Magnitude and frequency of annual low flow,  
based on period of record 1956-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	37	27	24	21	18	17
3	39	30	26	23	21	19
7	41	31	27	24	22	20
14	43	32	28	26	23	22
30	46	36	32	29	26	25
60	50	39	34	31	28	26
90	55	43	38	34	31	29
120	59	46	41	37	34	32
183	66	52	47	43	39	37

Magnitude and frequency of annual high flow,  
based on period of record 1955-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	288	451	581	774	940	1,130
3	262	411	531	711	867	1,040
7	224	343	437	577	696	829
15	192	280	344	430	499	571
30	163	226	269	322	363	403
60	137	188	224	271	308	346
90	124	167	197	236	267	299

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1955-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
314	478	610	805	973	1,160

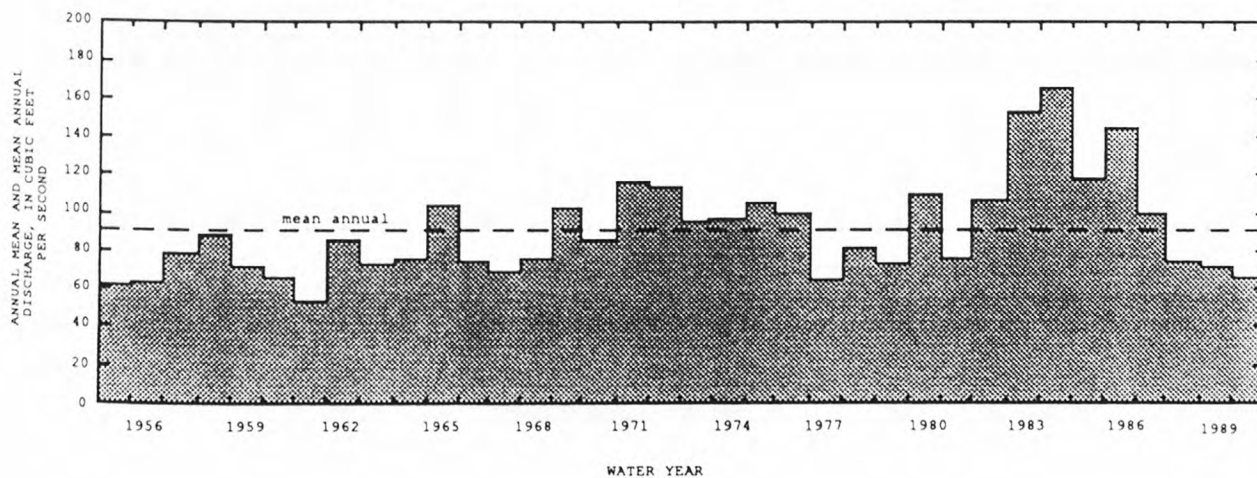
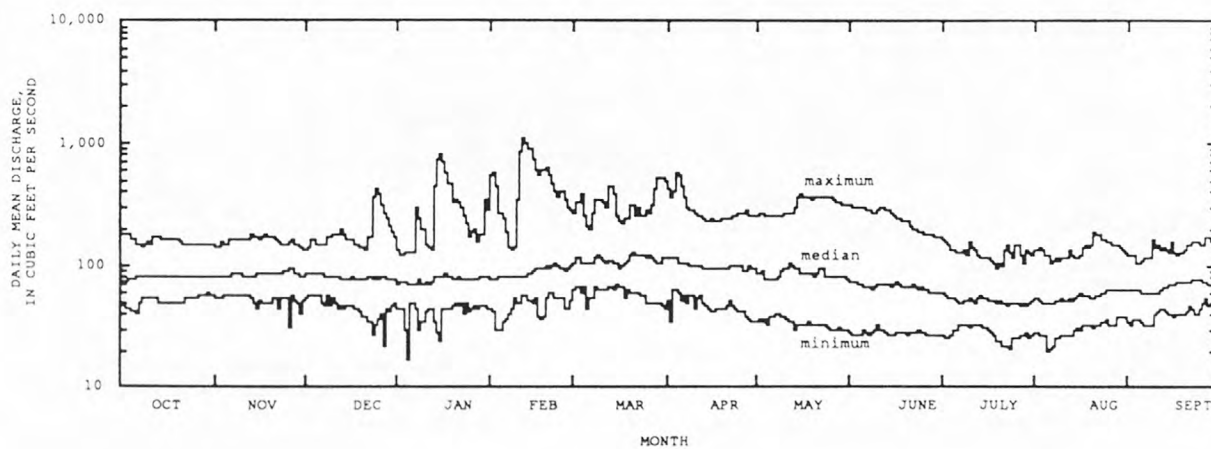
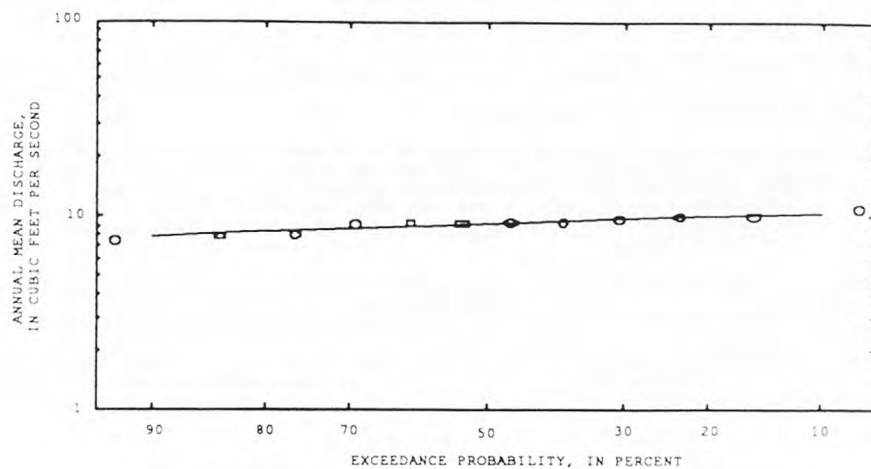
Duration table of daily mean flow for period of record 1955-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
285	187	149	128	113	97	86	78	71	64	57	46	39	33	30	28	25	

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



PORTNEUF RIVER BASIN

13075500 PORTNEUF RIVER AT POCATELLO, ID

LOCATION.—Lat 42°52'20", long 112°28'05", in SE 1/4, NW 1/4, sec. 27, T.6 S., R.34 E., Bannock County, Hydrologic Unit 17040208, on left bank 1,400 ft downstream from Carson Street Bridge at Pocatello, 1.2 mi upstream from Pocatello Creek, and at mile 16.8.

DRAINAGE AREA.—1,250 mi<sup>2</sup>, approximately. Mean elevation, 5,850 ft.

PERIOD OF RECORD.—May to September 1897, March 1898 to October 1899, August 1911 to September 1990.

REVISED RECORDS.—WSP 1567: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 4,418.41 ft above sea level (U.S. Army Corps of Engineers datum). May 18, 1897, to Oct. 14, 1899, nonrecording gage at site 1.6 mi upstream at different datum. Aug. 31, 1911, to May 13, 1927, and Oct. 13, 1927, to June 13, 1928, nonrecording gage 0.3 mi 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 mi 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 mi upstream at datum 18.57 ft higher.

REMARKS.—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 55,000 acres, of which about 13,000 acres are irrigated by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,990 ft<sup>3</sup>/s Feb. 14, 1962, gage height, 11.35 ft, site and datum then in use; maximum gage height, 14.56 ft, Jan. 21, 1987 (backwater from ice); minimum daily, 0.23 ft<sup>3</sup>/s July 19, 1979.

Summary of monthly and annual discharges, 1899, 1913-16, 1918-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	477	75	201	93	0.46	5.9
November	479	91	263	73	0.28	7.7
December	493	179	274	61	0.22	8.1
January	513	190	278	66	0.24	8.2
February	754	202	324	101	0.31	9.5
March	1,060	179	413	134	0.32	12.1
April	1,250	63	536	219	0.41	15.8
May	1,990	41	521	377	0.72	15.3
June	1,420	27	262	251	0.96	7.7
July	416	16	101	74	0.74	3.0
August	324	23	95	56	0.59	2.8
September	480	39	131	79	0.61	3.9
Annual	705	118	283	104	0.37	100

Magnitude and frequency of annual low flow,  
based on period of record 1899, 1914-17, 1919-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	48	16	6.9	3.1	1.1	0.50
3	53	19	8.6	3.9	1.4	0.66
7	54	23	13	8.0	4.2	2.6
14	57	29	20	14	9.0	6.6
30	64	36	27	20	15	12
60	74	46	36	29	23	20
90	84	54	43	36	29	26
120	98	63	50	42	35	31
183	140	93	75	62	50	44

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1899, 1913-16, 1918-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
782	1,190	1,520	2,010	2,440	2,930

Magnitude and frequency of annual high flow,  
based on period of record 1899, 1913-16, 1918-90

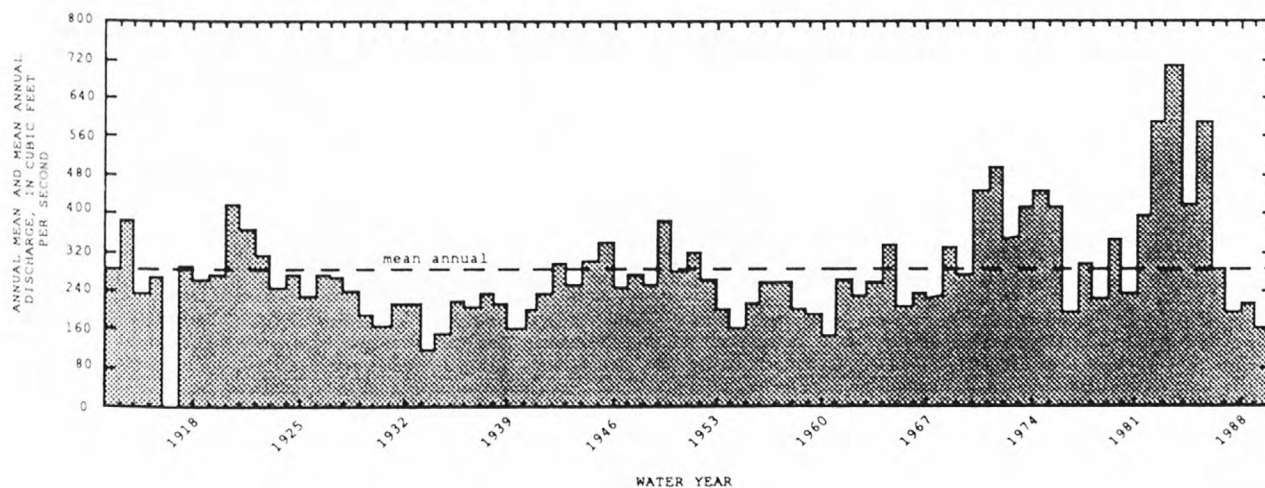
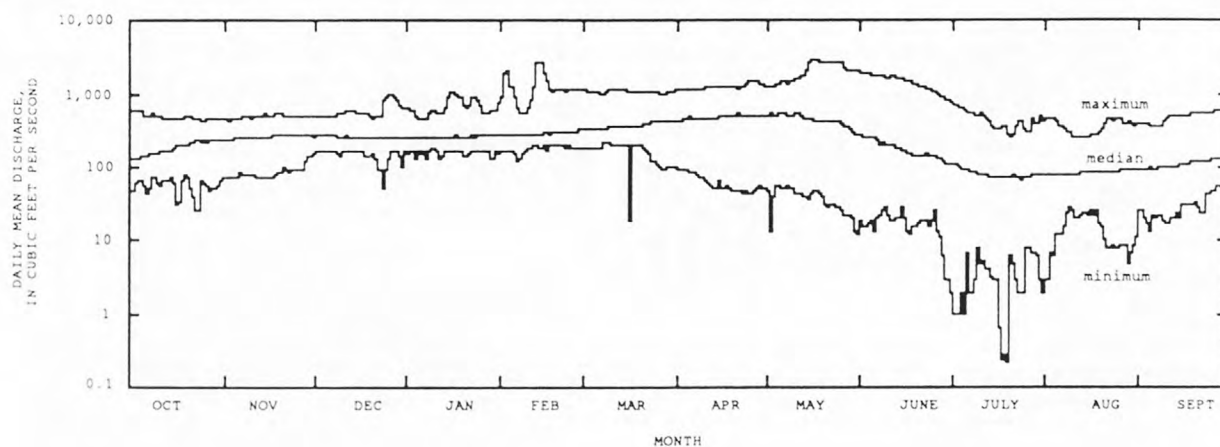
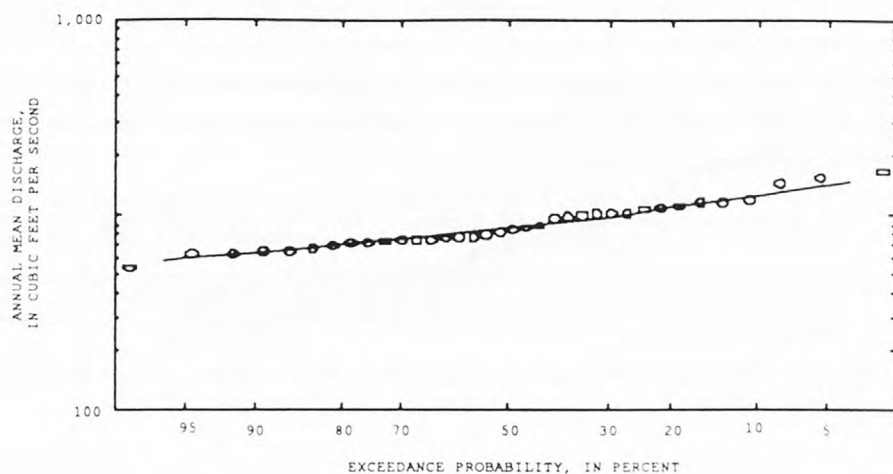
Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	754	1,130	1,430	1,880	2,260	2,690
3	742	1,110	1,390	1,810	2,150	2,530
7	710	1,050	1,310	1,670	1,960	2,280
15	658	975	1,210	1,550	1,820	2,120
30	599	881	1,100	1,400	1,660	1,940
60	532	763	939	1,190	1,400	1,630
90	473	665	813	1,050	1,210	1,400

Duration table of daily mean flow for period of record 1899, 1913-16, 1918-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,190	735	537	453	384	330	282	248	210	153	101	67	48	33	24	18	4.9



LOCATION MAP





# Snake River Main Stem

13077000 SNAKE RIVER AT NEELEY, ID

LOCATION.—Lat 42°46'06", long 112°52'42", in NE 1/4, SW 1/4, sec.31, T.7 S., R.31 E., Power County, Hydrologic Unit 17040209, on right bank 400 ft upstream from fish hatchery buildings, 0.9 mi downstream from American Falls Dam, at mile 714.1. Records computed to show flow at former site in sec. 11, T.8 S., R.30 E., 0.5 mi north of Neeley and 2.5 mi downstream from present site, by adding inflow between sites. Water-quality sampling site 300 ft downstream.

DRAINAGE AREA.—13,600 mi<sup>2</sup>, approximately, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.—March 1906 to September 1990. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 1317: 1910.

GAGE.—Water-stage recorder. Datum of gage is 4,241.6 ft above sea level (levels by U.S. Bureau of Reclamation). Prior to Aug. 8, 1910, nonrecording gage, and Aug. 8, 1910, to June 6, 1930, water-stage recorder at site 2.5 mi downstream at different datum. June 7, 1930, to Mar. 19, 1945, water-stage recorder at site 0.4 mi upstream at datum 0.4 ft higher.

REMARKS.—Flow regulated by American Falls Reservoir and other reservoirs, having a combined usable capacity of 4,600,000 acre-ft. Diversions above station for irrigation of about 1,080,000 acres, of which about 228,000 acres are irrigated by withdrawals from ground water (1966 determination). Considerable water leaks into the Snake River Plain aquifer above the station, some of which returns above American Falls Reservoir.

EXTREMES FOR PERIOD OF RECORD.—Maximum daily discharge, 48,400 ft<sup>3</sup>/s June 20, 1918, gage height, 13.5 ft, site and datum then in use; minimum, 50 ft<sup>3</sup>/s Oct. 22, 23, Nov. 14-16, 1941, Oct. 29, 1961, Nov. 6, 1970.

Summary of monthly and annual discharges, 1908-09, 1912-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	12,600	276	4,350	2,650	0.61	4.7
November	12,400	56	3,880	3,020	0.78	4.2
December	10,600	55	3,910	2,820	0.72	4.2
January	12,600	123	4,210	2,760	0.66	4.6
February	10,900	93	4,200	2,810	0.67	4.5
March	14,300	308	4,850	3,110	0.64	5.3
April	22,500	1,690	8,620	4,060	0.47	9.3
May	25,200	5,880	14,000	4,920	0.35	15.1
June	35,500	6,030	15,000	6,100	0.41	16.3
July	21,600	5,160	12,200	2,660	0.22	13.2
August	12,900	2,780	10,100	2,250	0.22	10.9
September	12,400	2,570	7,070	1,900	0.27	7.7
Annual	12,700	3,830	7,710	2,170	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1908-09, 1912-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	440	120	62	36	20	13
3	887	252	121	63	29	17
7	1,180	378	192	104	50	30
14	1,550	525	267	144	67	39
30	1,870	634	317	167	75	42
60	2,190	873	500	303	164	106
90	2,580	1,060	612	373	203	132
120	2,890	1,210	698	424	229	147
183	3,450	1,820	1,250	905	614	468

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1908-09, 1912-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
21,700	29,700	34,500	40,300	44,300	48,100

Magnitude and frequency of annual high flow,  
based on period of record 1908-09, 1912-90

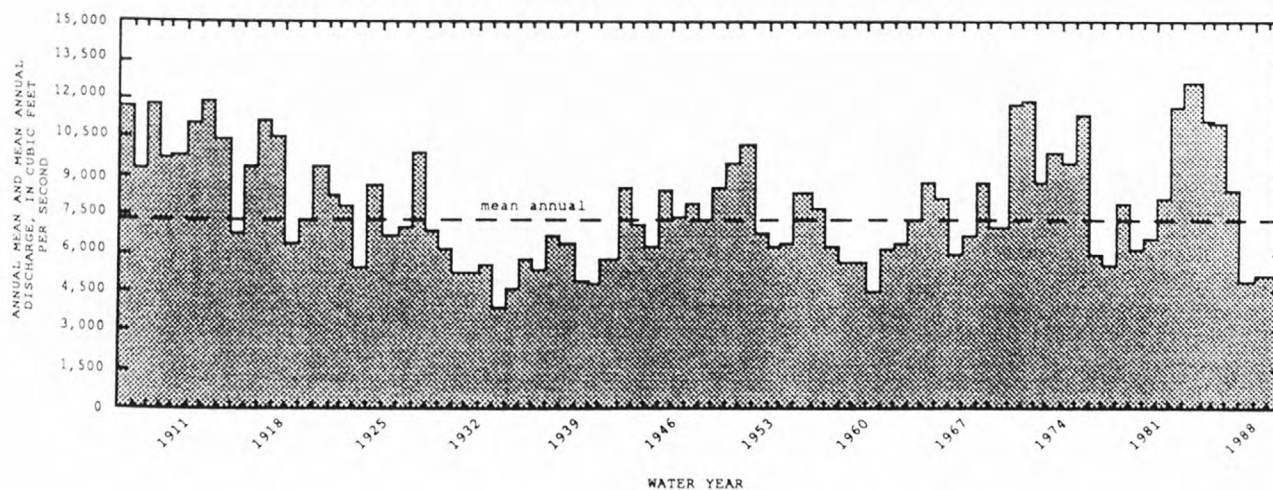
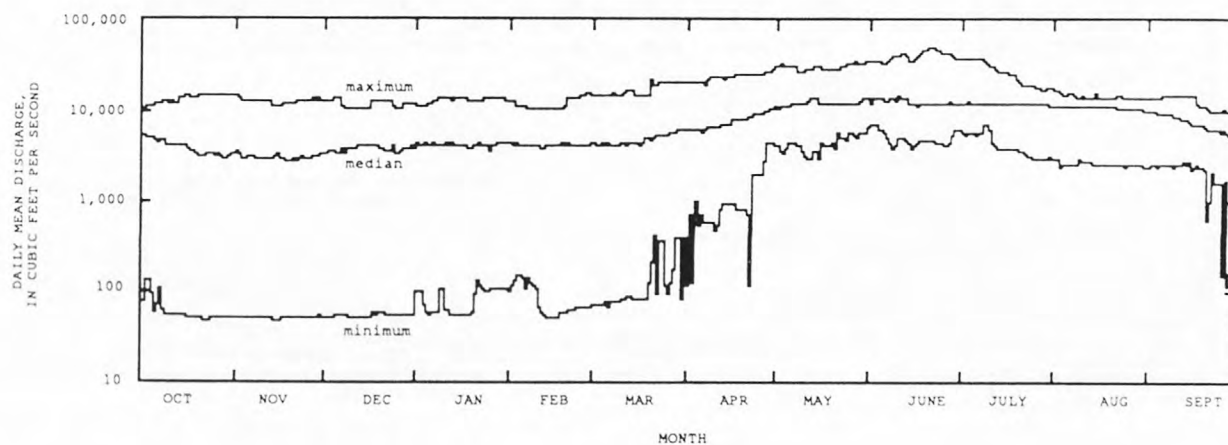
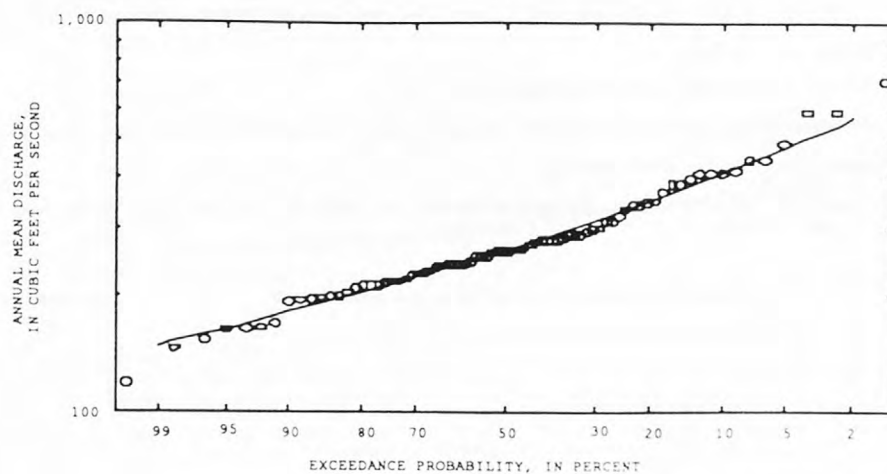
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	20,600	28,300	33,300	39,500	44,000	47,800
3	20,100	27,800	32,800	38,900	43,400	46,900
7	19,100	26,400	31,100	37,100	41,500	45,900
15	17,800	24,400	28,900	34,600	39,000	43,400
30	16,200	21,900	25,800	30,700	34,500	38,400
60	14,700	19,300	22,300	26,000	28,800	31,600
90	13,800	17,500	19,700	22,500	24,400	26,300

Duration table of daily mean flow for period of record 1908-09, 1912-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
27,300	18,700	13,800	12,900	11,900	10,200	8,520	6,990	5,700	4,280	2,660	1,220	538	194	98	60
															52



LOCATION MAP



RAFT RIVER BASIN

13077700 GEORGE CREEK NEAR YOST, UT

LOCATION.—Lat 41°55'07", long 113°28'51", in SE 1/4 SW 1/4 SW 1/4 sec.20, T.14 N., R.14 W., Box Elder County, Hydrologic Unit 17040201, on right bank 1,000 ft upstream from section corner and boundary of Sawtooth National Forest, 4.5 mi southeast of Yost, 5 mi south of Utah-Idaho State line, and 16 mi southwest of Strevell, Idaho.

DRAINAGE AREA.—7.84 mi<sup>2</sup>.

PERIOD OF RECORD.—July 1959 to September 1989.

GAGE.—Water-stage recorder. Elevation of gage is 7,000 ft above sea level, from topographic map.

REMARKS.—No diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 295 ft<sup>3</sup>/s May 30, 1983, gage height, 1.78 ft; minimum, 1.0 ft<sup>3</sup>/s July 14-19, 1976, Feb. 5, 1982.

Summary of monthly and annual discharges, 1960-89

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	4.8	1.5	2.9	0.89	0.31	3.1
November	4.0	1.5	2.5	0.60	0.24	2.6
December	2.8	1.4	2.1	0.43	0.20	2.2
January	2.8	1.3	2.0	0.41	0.21	2.1
February	2.7	1.4	2.0	0.35	0.17	2.0
March	3.8	1.4	2.3	0.66	0.28	2.5
April	13	2.1	6.2	3.1	0.50	6.6
May	54	5.3	25	11	0.45	26.6
June	92	8.2	34	21	0.62	35.6
July	26	2.0	9.1	6.6	0.72	9.7
August	7.8	1.4	3.7	1.5	0.40	3.9
September	5.1	1.5	2.9	1.0	0.35	3.1
Annual	17	2.8	7.9	3.1	0.40	100

Magnitude and frequency of annual low flow,  
based on period of record 1961-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	1.5	1.3	1.2	1.1	0.98	0.92
3	1.6	1.3	1.2	1.1	1.0	0.96
7	1.7	1.4	1.3	1.2	1.0	0.97
14	1.7	1.5	1.3	1.2	1.1	1.0
30	1.8	1.5	1.4	1.3	1.2	1.1
60	1.9	1.6	1.5	1.4	1.2	1.2
90	2.0	1.7	1.5	1.4	1.3	1.2
120	2.0	1.7	1.6	1.5	1.4	1.3
183	2.3	1.9	1.7	1.6	1.4	1.3

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1960-89

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
71	111	142	187	224	265

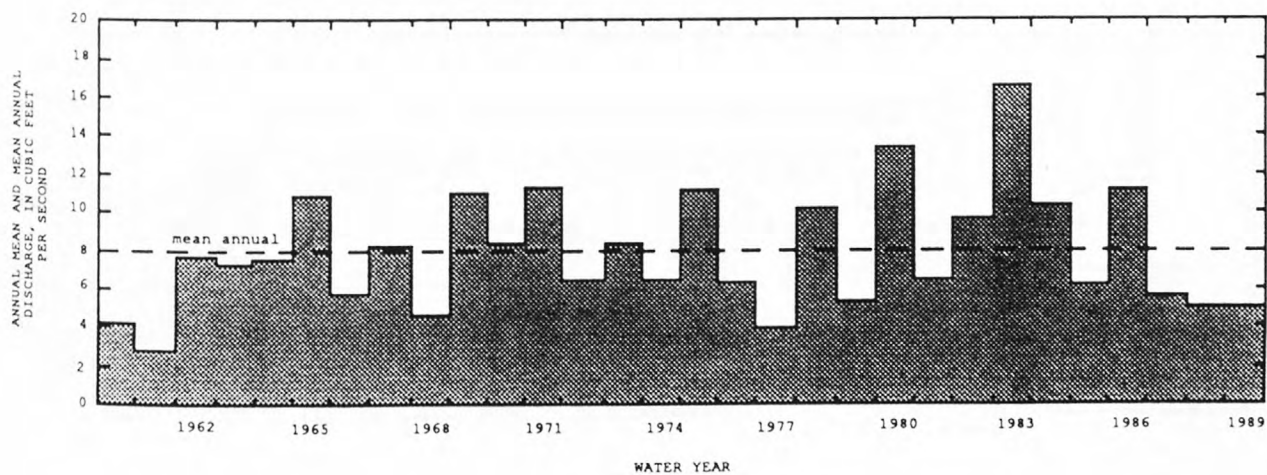
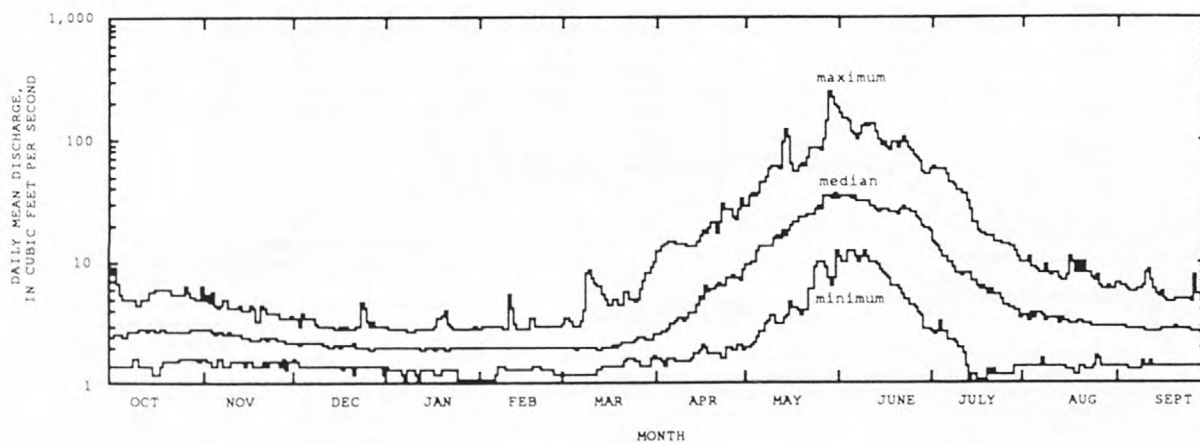
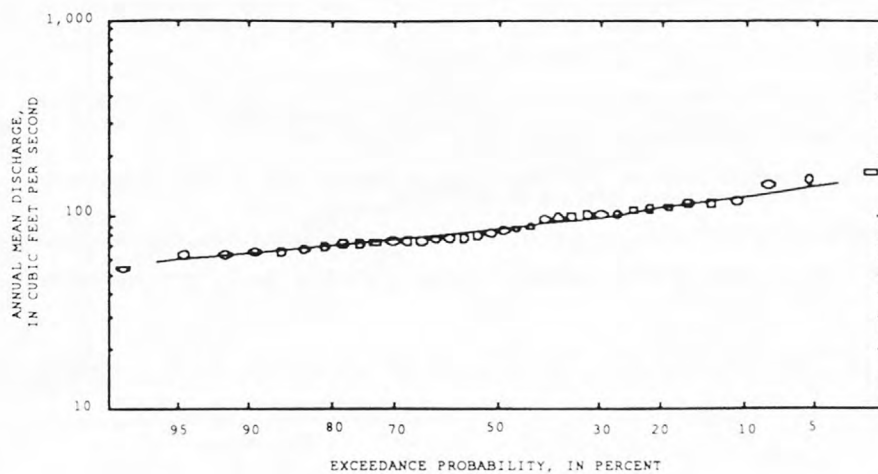
Magnitude and frequency of annual high flow,  
based on period of record 1960-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	57	90	117	157	191	229
3	54	84	108	143	173	207
7	49	75	96	125	150	177
15	43	67	84	109	130	152
30	36	56	70	89	104	119
60	28	42	52	65	74	84
90	22	32	40	49	55	62

Duration table of daily mean flow for period of record 1960-89

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
69	36	22	13	8.3	4.5	3.3	2.8	2.5	2.2	2.0	1.7	1.6	1.4	1.4	1.3	1.1

# Length of record used in calculation may yield unreliable values for this column.



RAFT RIVER BASIN

13078000 RAFT RIVER ABOVE ONEMILE CREEK, NEAR MALTA, ID

LOCATION.—Lat 42°04'06", long 113°26'56", in SW 1/4, NW 1/4, NW 1/4, sec. 5, T.16 S., R.26 E., Cassia County, Hydrologic Unit 17040210, U.S. Bureau of Land Management lands, on right bank 0.9 mi upstream from county road crossing, 0.2 mi upstream from Onemile Creek, and 17 mi southwest of Malta.

DRAINAGE AREA.—412 mi<sup>2</sup>. Mean elevation, 6,300 ft.

PERIOD OF RECORD.—September 1946 to December 1953, May 1955 to June 1971, published as "at Peterson Ranch, near Bridge"; October 1975 to May 1984, equivalent records, published as "below Onemile Creek" (sta 13078205), except for unusually heavy rainstorm runoff from Onemile Creek drainage; December 1984 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 4,940 ft above sea level, from topographic map. From October 1975 to May 1984, at site 0.9 mi downstream at different datum.

REMARKS.—Diversion above station for irrigation of about 16,000 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,250 ft<sup>3</sup>/s Jan. 14, 1980, gage height, 8.20 ft, site and datum then in use; no flow, Sept. 5, 6, 1988.

Summary of monthly and annual discharges, 1947-53, 1956-70, 1986-90

Magnitude and frequency of annual low flow, based on period of record 1948-53, 1957-71, 1986-91

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	20	4.8	8.6	3.3	0.38	4.1
November	25	6.4	11	4.4	0.40	5.2
December	22	6.1	12	4.2	0.35	5.7
January	29	6.2	14	5.7	0.41	6.6
February	83	8.9	24	19	0.79	11.2
March	90	5.0	24	16	0.68	11.4
April	122	8.6	35	29	0.83	16.5
May	130	6.9	37	36	0.99	17.4
June	67	5.4	25	19	0.79	11.8
July	15	2.8	7.8	3.3	0.42	3.7
August	16	2.8	6.7	3.0	0.44	3.2
September	13	2.2	6.7	2.3	0.34	3.2
Annual	48	6.5	17	9.5	0.55	100

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>#</sup> 1%
1	4.9	2.7	1.8	1.1	0.62	0.39
3	5.1	3.0	2.0	1.3	0.79	0.53
7	5.3	3.2	2.2	1.5	0.97	0.69
14	5.3	3.5	2.7	2.1	1.6	1.3
30	5.6	3.9	3.1	2.5	2.0	1.7
60	5.9	4.2	3.4	2.9	2.4	2.1
90	6.3	4.6	3.9	3.3	2.8	2.5
120	6.6	5.0	4.3	3.8	3.3	3.0
183	7.8	6.1	5.4	4.9	4.4	4.2

Magnitude and frequency of instantaneous peak flow, based on period of record 1947-53, 1956-70, 1986-90

Magnitude and frequency of annual high flow, based on period of record 1947-53, 1956-70, 1986-90

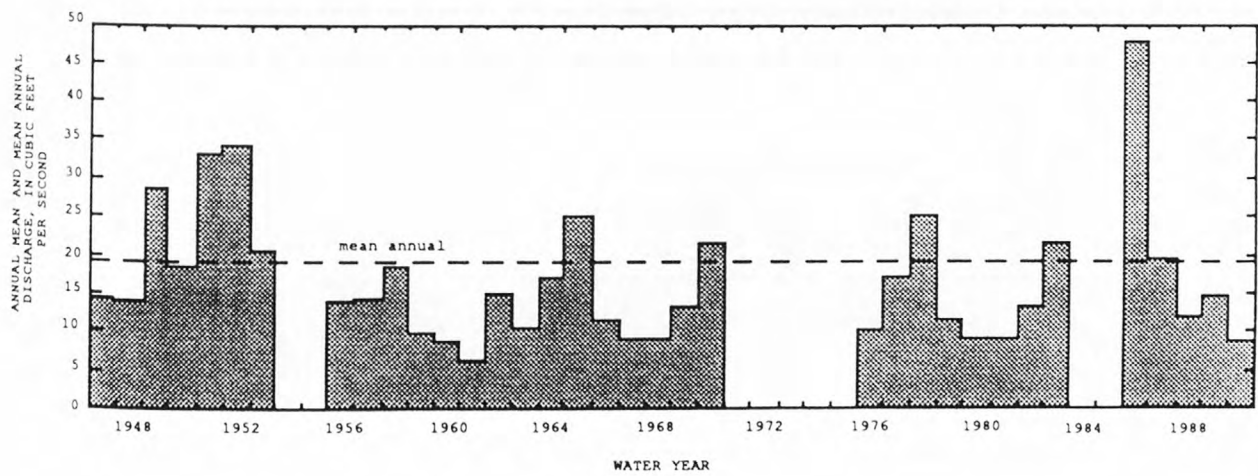
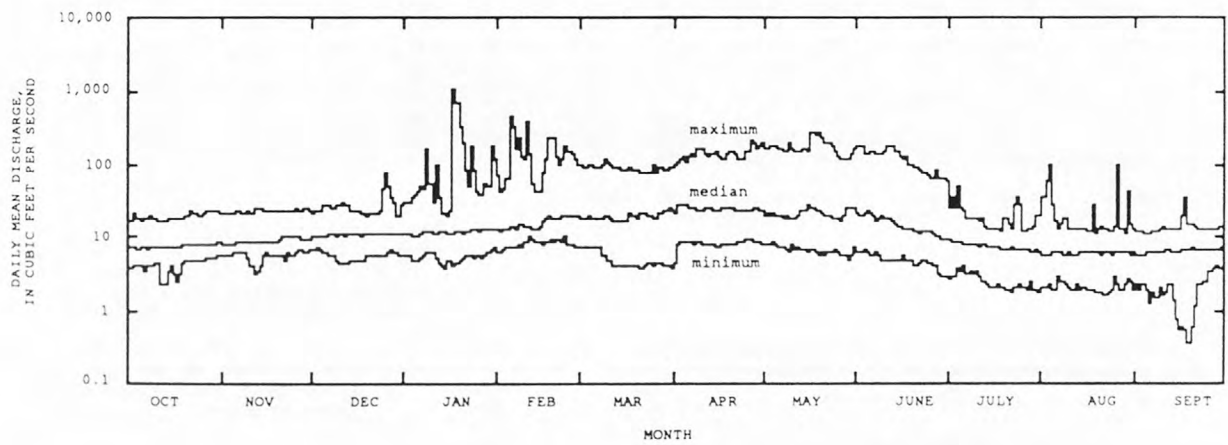
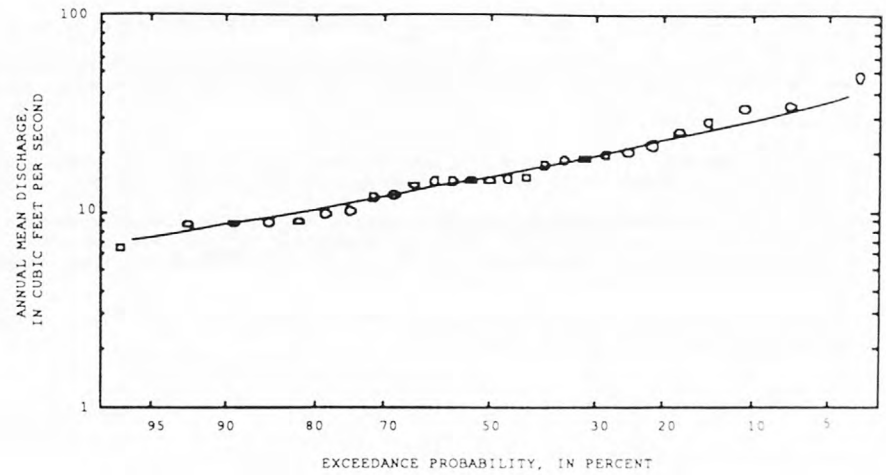
Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
150	334	523	859	1,200	1,630	

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>#</sup> 1%
1	84	170	252	395	535	709
3	65	126	185	289	394	526
7	53	100	145	221	295	386
15	45	83	116	167	213	267
30	39	70	95	134	167	206
60	33	59	82	116	147	182
90	29	51	69	97	121	150

Duration table of daily mean flow for period of record 1947-53, 1956-70, 1986-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
123	55	34	27	22	16	13	11	9.0	7.9	6.7	5.3	4.4	3.5	2.8	2.2	1.5

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.





Snake River Main Stem

13081500 SNAKE RIVER NEAR MINIDOKA, ID

LOCATION.—Lat 42°40'23", long 113°29'58", in SW 1/4, NE 1/4, sec.2, T.9 S., R.25 E., Minidoka County, Hydrologic Unit 17040209, on right bank 1 mi downstream from Minidoka Dam, 6 mi south of Minidoka, and at mile 673.5.

DRAINAGE AREA.—15,700 mi<sup>2</sup>, approximately, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.—August 1895 to September 1990. 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 mi downstream "at Montgomery Ferry."

REVISED RECORDS.—WSP 1347: 1911.

GAGE.—Water-stage recorder. Datum of gage is 4,132.2 ft above sea level from river-profile survey. Prior to Apr. 21, 1910, nonrecording gage at site 6 mi downstream at different datum. Apr. 21, 1910, to Aug. 28, 1911, nonrecording gage at present site and datum.

REMARKS.—Flow regulated by American Falls Reservoir, Lake Walcott, and other reservoirs, having a combined usable capacity of about 4,700,000 acre-ft. Diversions above station for irrigation of about 128,000 acres below and about 1,200,000 acres above station, of which about 304,000 acres are irrigated by withdrawals from ground water (1966 determination). Considerable water leaks into the Snake River Plain aquifer above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 47,500 ft<sup>3</sup>/s May 29, 30, 1897, gage height, 12.6 ft, former site and datum: minimum, 37 ft<sup>3</sup>/s Jan. 28, Feb. 4, 11, 18, 1962.

Summary of monthly and annual discharges, 1911-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	11,900	714	3,910	2,670	0.68	4.9
November	12,600	306	3,950	3,020	0.76	4.9
December	11,400	294	4,070	2,800	0.69	5.1
January	13,300	398	4,330	2,810	0.65	5.4
February	10,700	287	4,360	2,860	0.66	5.4
March	14,100	251	4,690	3,200	0.68	5.8
April	22,100	1,020	7,800	4,360	0.56	9.7
May	23,400	4,320	11,900	5,140	0.43	14.8
June	30,400	3,370	12,500	5,930	0.47	15.5
July	18,500	2,990	9,280	2,410	0.26	11.5
August	10,100	2,070	7,760	1,850	0.24	9.7
September	11,800	2,150	5,830	1,620	0.28	7.3
Annual	12,500	3,330	6,700	2,210	0.33	100

Magnitude and frequency of annual low flow, based on period of record 1912-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	1,170	425	220	119	55	31
3	1,290	511	286	168	87	54
7	1,420	652	412	274	169	120
14	1,620	746	473	317	196	140
30	1,870	898	589	407	263	193
60	2,240	1,060	685	466	294	213
90	2,550	1,210	788	537	340	246
120	2,820	1,350	871	591	371	267
183	3,290	1,740	1,210	881	606	467

Magnitude and frequency of instantaneous peak flow, based on period of record 1911-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
20,500	29,600	35,200	41,600	46,000	50,000

Magnitude and frequency of annual high flow, based on period of record 1911-90

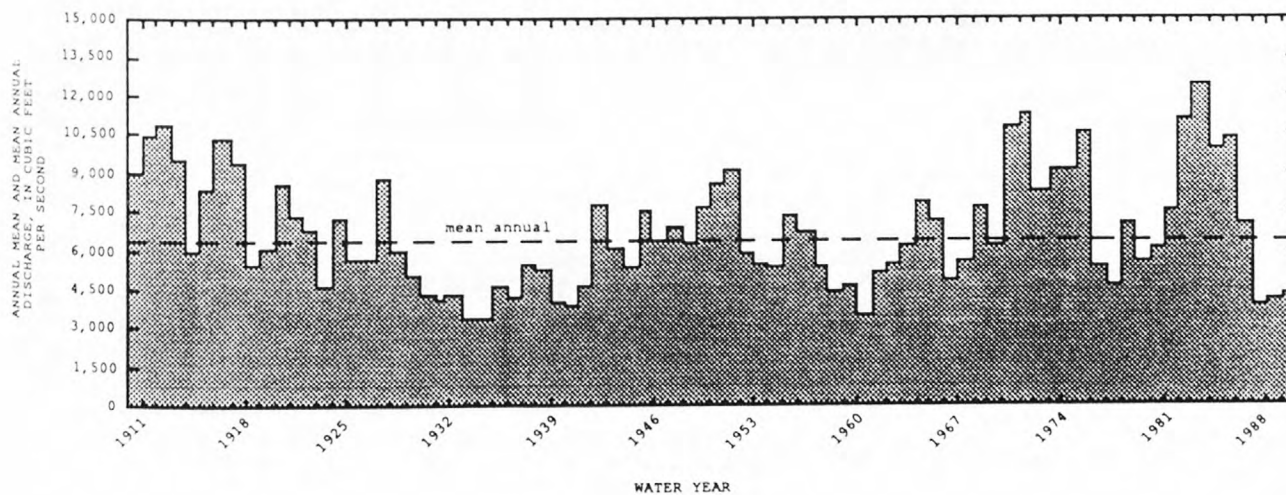
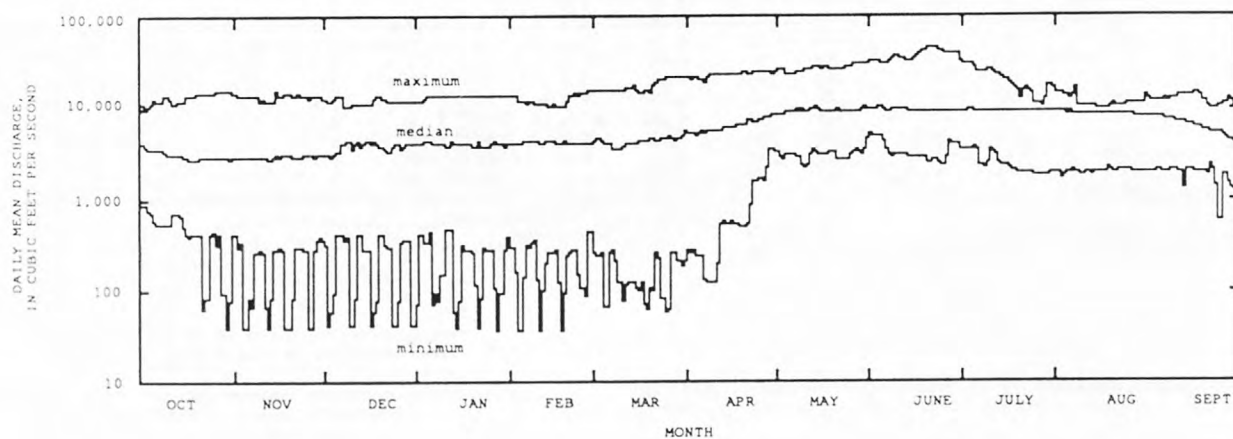
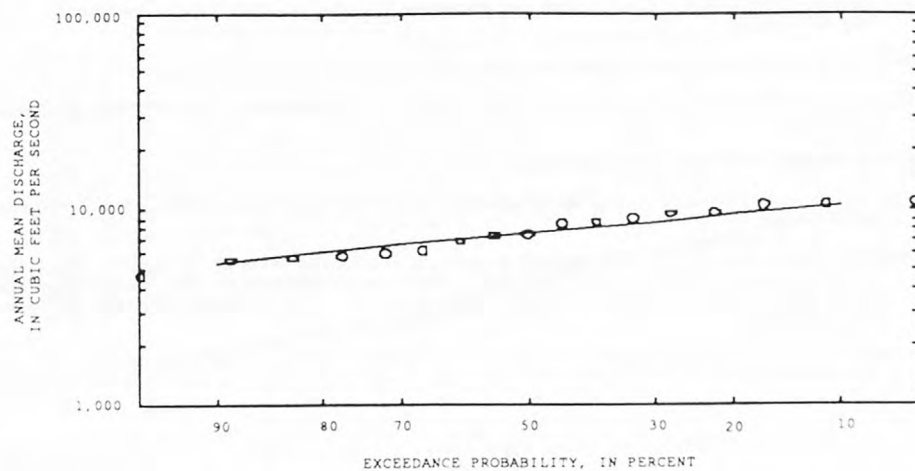
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	18,200	26,400	31,600	37,900	42,400	46,600
3	17,800	25,900	31,100	37,400	41,900	46,200
7	16,800	24,400	29,300	35,400	39,900	44,200
15	15,400	22,300	27,000	32,900	37,400	41,900
30	13,700	19,500	23,600	28,900	33,000	37,200
60	12,200	16,800	20,000	24,300	27,700	31,200
90	11,200	15,000	17,600	21,000	23,600	26,300

Duration table of daily mean flow for period of record 1911-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time														
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%
25,000	16,900	11,900	9,920	9,390	8,330	7,290	6,230	5,130	3,830	2,400	1,300	902	473	371
													260	66



LOCATION MAP



GOOSE CREEK BASIN

13082500 GOOSE CREEK ABOVE TRAPPER CREEK, NEAR OAKLEY, ID

LOCATION.—Lat 42°07'30", long 113°56'20", in sec.13, T.15 S., R.21 E., Cassia County, Hydrologic Unit 17040211, on right bank 0.2 mi upstream from maximum flow line of Oakley Reservoir, 5 mi upstream from Trapper Creek, 5 mi south of Oakley Dam, 9 mi southwest of Oakley, and at mile 35.1.

DRAINAGE AREA.—633 mi<sup>2</sup>. Mean elevation, 6,030 ft.

PERIOD OF RECORD.—April 1911 to September 1916, March 1919 to September 1990. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 1567: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 4,770 ft above sea level, by barometer. Prior to Aug. 29, 1912, at site 200 ft downstream at different datum.

REMARKS.—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 may occasionally discharge into the channel. Practically entire flow passing station is stored in Oakley Reservoir (see sta 13083500).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,240 ft<sup>3</sup>/s Feb. 11, 1962, gage height, 9.3 ft, determined from 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.

Summary of monthly and annual discharges, 1912-16, 1920-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	46	5.0	19	7.8	0.41	3.3
November	51	13	25	7.1	0.28	4.3
December	45	12	24	7.1	0.30	4.1
January	163	11	30	22	0.74	5.1
February	241	16	48	37	0.77	8.3
March	356	31	68	44	0.66	11.7
April	242	26	104	51	0.49	18.0
May	625	13	148	110	0.74	25.8
June	332	7.7	68	63	0.93	11.9
July	84	0.63	19	16	0.85	3.3
August	53	0.00	12	9.4	0.75	2.2
September	40	0.00	11	7.4	0.65	2.0
Annual	150	15	48	24	0.50	100

Magnitude and frequency of annual low flow,  
based on period of record 1913-16, 1920-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	5.2	1.4	0.48	0.08	0.00	0.00
3	5.4	1.5	0.57	0.11	0.00	0.00
7	5.9	1.8	0.67	0.13	0.00	0.00
14	6.7	2.2	0.86	0.18	0.00	0.00
30	8.2	2.8	1.2	0.44	0.00	0.00
60	11	4.2	1.9	0.76	0.11	0.00
90	12	5.3	3.0	1.8	0.89	0.53
120	13	7.0	4.9	3.5	2.3	1.8
183	16	11	9.0	7.4	5.9	5.0

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1912-16, 1920-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
251	540	825	1,320	1,810	2,430	

Magnitude and frequency of annual high flow,  
based on period of record 1912-16, 1920-90

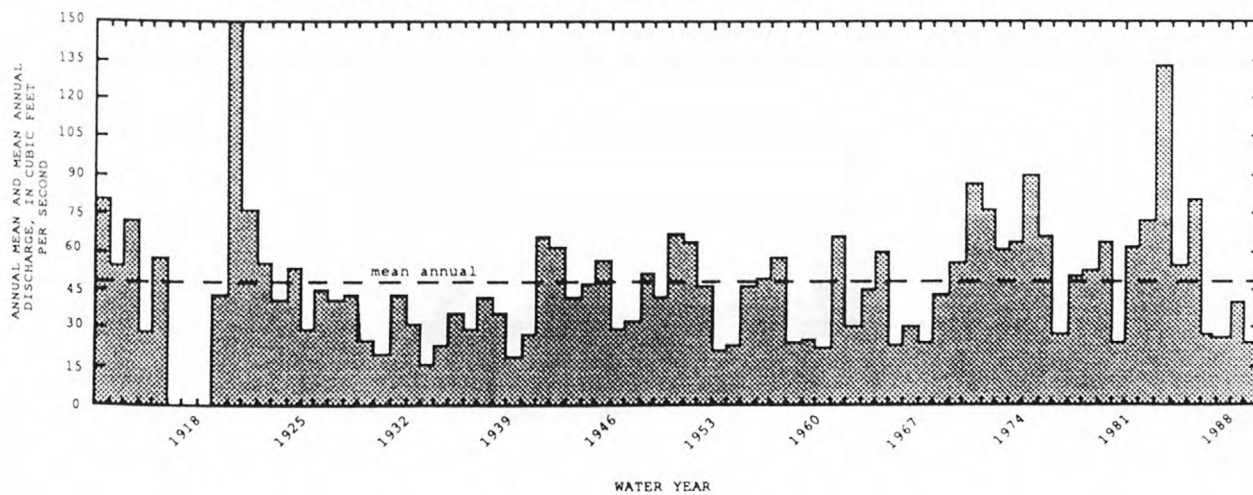
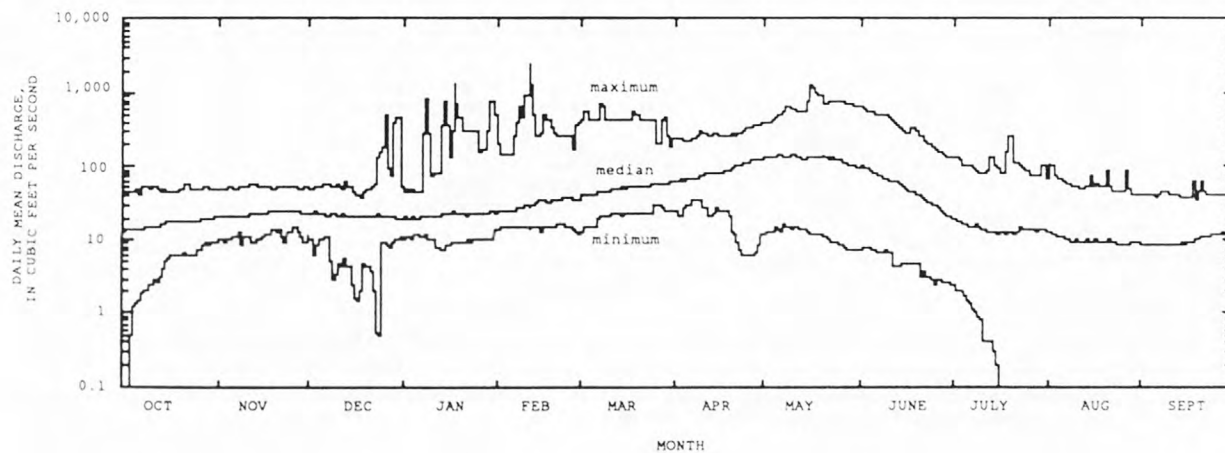
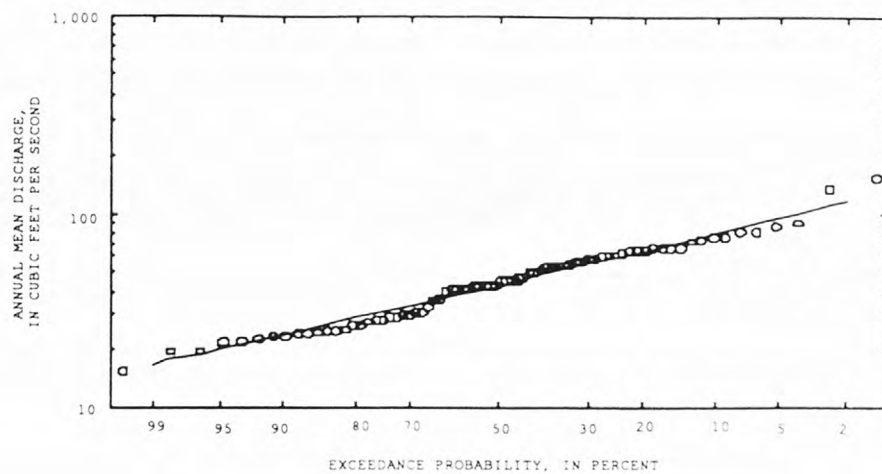
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	213	431	646	1,020	1,400	1,880
3	204	386	546	796	1,020	1,280
7	188	331	442	601	731	871
15	167	288	379	506	608	716
30	147	249	326	432	516	605
60	121	197	253	327	384	444
90	103	163	207	265	311	358

Duration table of daily mean flow for period of record 1912-16, 1920-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%	99.9%
329	179	120	84	64	42	32	26	22	18	14	8.2	5.0	2.0	0.73	0.09	0.02		



LOCATION MAP



GOOSE CREEK BASIN

13083000 TRAPPER CREEK NEAR OAKLEY, ID

LOCATION.—Lat 42°10'10", long 113°58'20", in NW 1/4, SE 1/4, NW 1/4, sec.34, T.14 S., R.21 E., Cassia County, Hydrologic Unit 17040211, on left bank 4 mi upstream from Oakley Dam, 7 mi southwest of Oakley, and at mile 3.0.

DRAINAGE AREA.—53.7 mi<sup>2</sup>. Mean elevation, 6,360 ft.

PERIOD OF RECORD.—May 1911 to September 1916, March 1919 to September 1990. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 1063: 1941, 1943. WSP 1567: Drainage area.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 4,820 ft above sea level, 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 mi upstream at different datum. Sept. 1, 1912, to Apr. 7, 1913, nonrecording gage at site 0.8 mi downstream at different datum.

REMARKS.—Small diversions above station for irrigation. Diversion and return flow for fish ponds just above station since 1979. Flow of artesian well, completed in 1936, enters above. Practically entire flow passing station is stored in Oakley Reservoir (see sta 13083500).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge recorded, 270 ft<sup>3</sup>/s Aug. 17, 1941, gage height, 6.99 ft during cloudburst, from rating curve extended above 100 ft<sup>3</sup>/s on basis of velocity-area studies and peak flow over weir (a higher flow may have occurred during cloudburst; Aug. 15, 1931); minimum, 1.3 ft<sup>3</sup>/s Jan. 1, 1970, gage height, 4.53 ft.

Summary of monthly and annual discharges, 1912-16, 1920-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	15	8.0	11	1.7	0.15	6.1
November	16	7.8	11	1.7	0.15	6.2
December	16	7.6	11	2.0	0.17	6.2
January	21	6.0	12	2.7	0.23	6.3
February	31	8.0	13	3.8	0.30	7.0
March	60	9.7	15	6.7	0.44	8.3
April	70	11	22	9.7	0.44	12.0
May	100	9.2	32	17	0.52	17.5
June	73	7.7	23	13	0.56	12.4
July	36	6.2	13	4.8	0.38	6.9
August	22	6.5	10	2.4	0.23	5.6
September	15	6.8	10	1.7	0.17	5.5
Annual	34	8.6	15	4.5	0.29	100

Magnitude and frequency of annual low flow,  
based on period of record 1913-16, 1920-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	7.5	5.9	5.1	4.5	3.8	3.3
3	8.0	6.6	5.9	5.3	4.7	4.3
7	8.4	7.3	6.8	6.4	5.9	5.7
14	8.7	7.6	7.0	6.6	6.2	5.9
30	9.0	7.8	7.3	6.8	6.4	6.1
60	9.4	8.2	7.7	7.2	6.8	6.5
90	9.7	8.5	7.9	7.6	7.1	6.9
120	9.9	8.8	8.2	7.9	7.5	7.3
183	10	9.2	8.6	8.2	7.8	7.5

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1912-16, 1920-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
52	86	113	153	186	223

Magnitude and frequency of annual high flow,  
based on period of record 1912-16, 1920-90

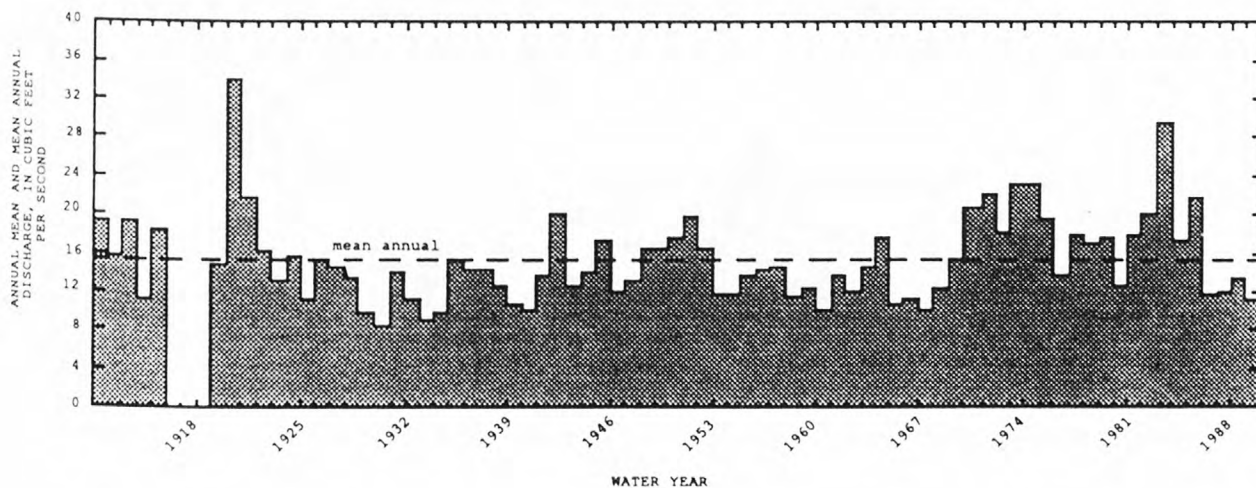
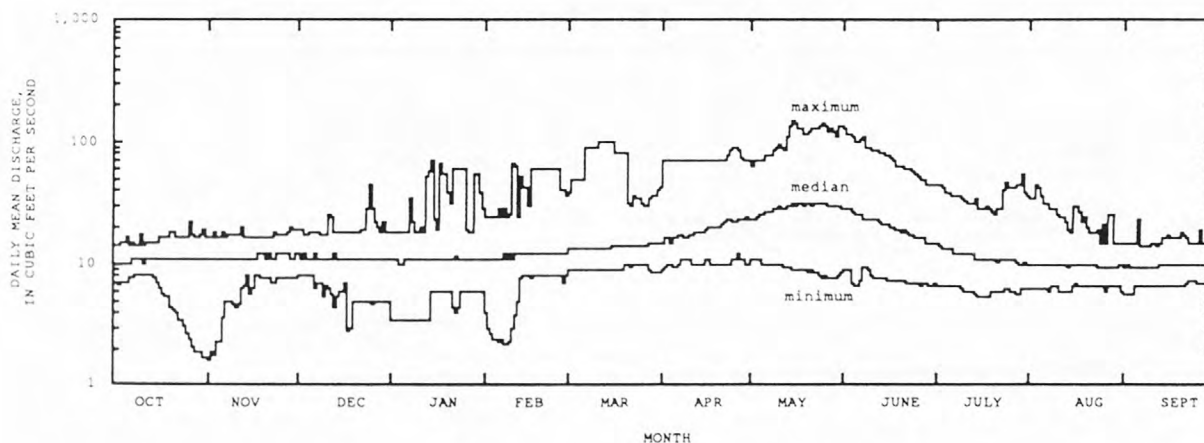
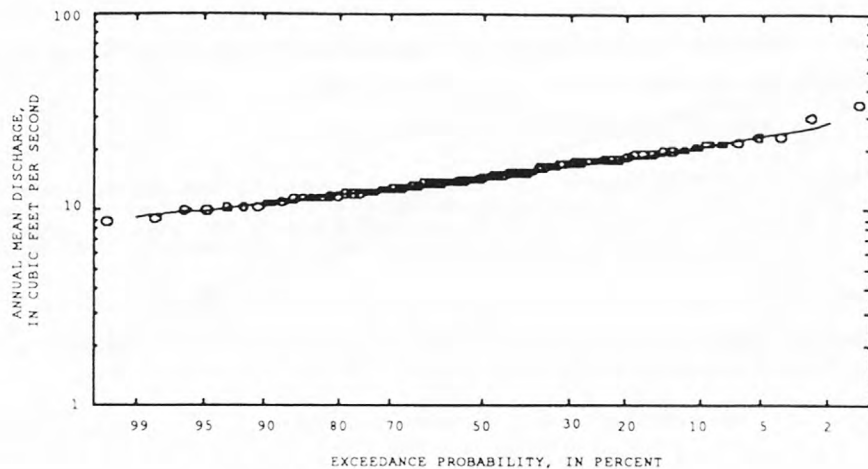
Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	39	60	76	98	116	134
3	36	58	74	95	113	131
7	34	55	70	91	107	125
15	32	51	65	84	99	115
30	30	47	59	76	89	103
60	27	40	50	62	72	83
90	24	34	42	53	61	69

Duration table of daily mean flow for period of record 1912-16, 1920-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
62	37	27	21	18	15	14	13	12	11	9.7	8.6	7.9	7.2	6.6	6.2	4.9



LOCATION MAP





SNAKE RIVER MAIN STEM

13088000 SNAKE RIVER AT MILNER, ID

LOCATION.—Lat 42°31'41", long 114°01'04", in SW¼, NE¼, sec.29, T.10 S., R.21 E., Twin Falls County, Hydrologic Unit 17040212, on left bank 200 ft downstream from highway bridge at Milner, 0.4 mi downstream from Milner Dam, and at mile 638.7.

DRAINAGE AREA.—17,180 mi², approximately, excluding indeterminate nontributary area on Snake River Plain.

PERIOD OF RECORD.—May 1909 to September 1990. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 1347: 1909-12, 1915-16, 1942-44, 1946-48.

GAGE.—Water-stage recorder. Datum of gage is 4,062.9 ft above sea level. Prior to May 28, 1919, nonrecording gages at slightly different sites and datums.

REMARKS.—Flow regulated by American Falls Reservoir, Lake Walcott, and other reservoirs having a combined usable capacity of about 4,700,000 acre-ft. Considerable water leaks into the Snake River Plain aquifer above station. Diversions above station for irrigation of about 1,990,000 acres, of which about 504,000 acres are irrigated by withdrawals from ground water and about 436,000 acres are irrigated below station. Return flow in large part enters Snake River between Milner and King Hill stations. At times, practically entire flow is diverted during irrigation season.

COOPERATION.—Observer readings provided by Twin Falls Canal Co. and North Side Canal Co.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 40,000 ft³/s June 21, 1918, gage height, 19.9 ft, site and datum then in use; minimum, 2.0 ft ³/s Mar. 17-28, 1936, Aug. 9 to Sept. 7, 1961.

Summary of monthly and annual discharges, 1910-90

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	9,890	8.3	2,400	2,620	1.1	6.1
November	12,700	142	3,270	3,020	0.92	8.3
December	11,500	281	3,560	2,840	0.80	9.2
January	14,000	360	3,830	2,900	0.76	9.8
February	10,700	213	3,920	2,910	0.74	10.0
March	13,900	87	4,100	3,360	0.82	10.4
April	19,400	3.9	5,230	4,830	0.92	13.3
May	17,900	2.8	5,290	5,720	1.1	13.5
June	24,400	2.3	5,320	6,300	1.2	13.6
July	12,700	5.3	1,300	2,380	1.8	3.3
August	3,720	2.6	361	581	1.6	0.9
September	8,460	6.0	638	1,130	1.8	1.6
Annual	9,430	156	3,260	2,350	0.72	100

Magnitude and frequency of annual low flow,  
based on period of record 1911-91

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	13	5.4	3.6	2.7	2.0	1.6
3	14	5.6	3.8	2.8	2.1	1.8
7	14	6.1	4.3	3.4	2.7	2.4
14	19	7.3	5.0	3.6	3.0	2.6
30	35	9.9	5.5	3.8	3.3	2.6
60	68	17	8.5	4.8	3.6	2.7
90	157	35	15	7.2	4.1	2.7
120	332	68	27	12	4.4	3.2
183	770	179	74	34	13	6.6

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1910-90

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
14,200	23,100	26,800	29,600	30,900	31,600	

Magnitude and frequency of annual high flow,  
based on period of record 1910-90

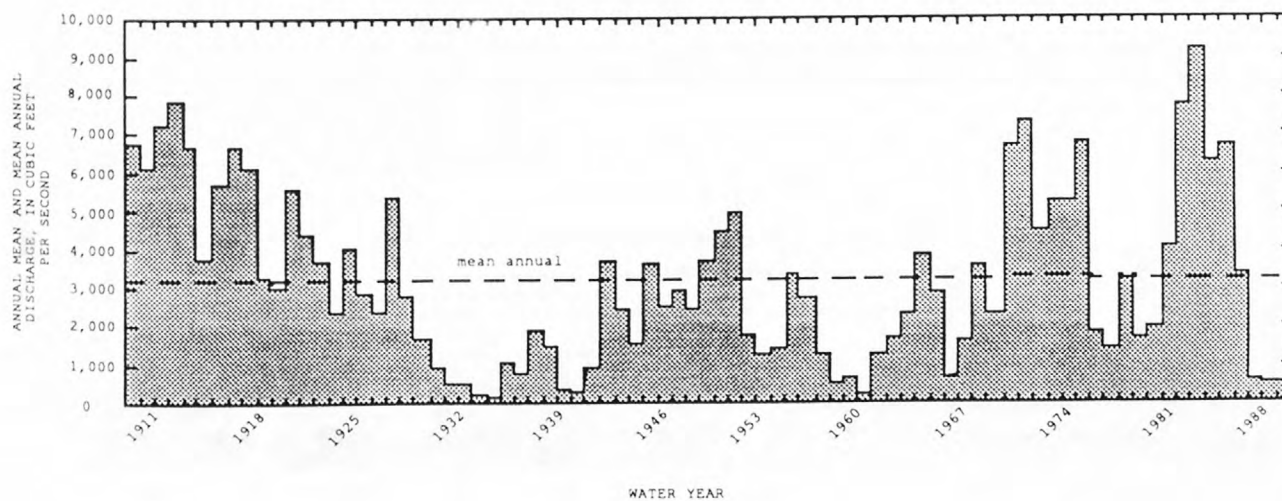
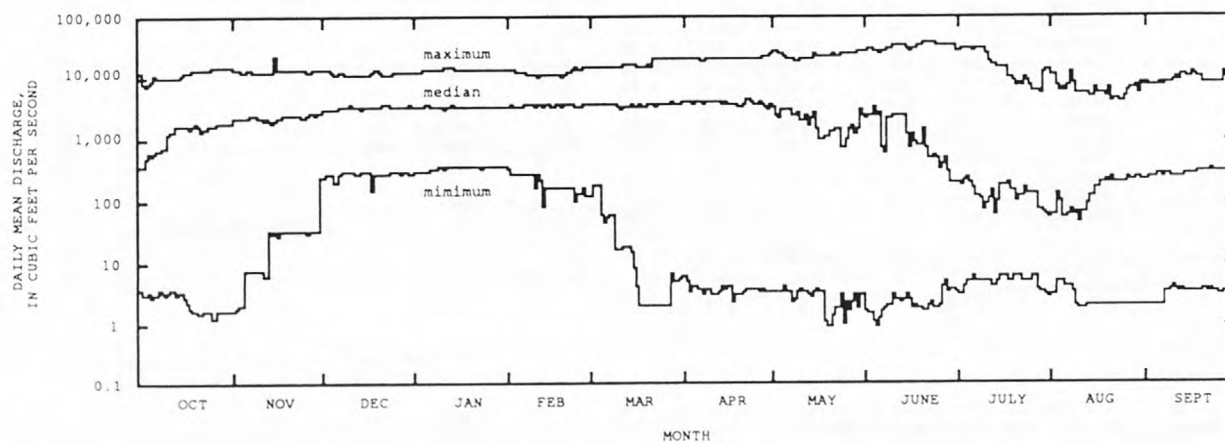
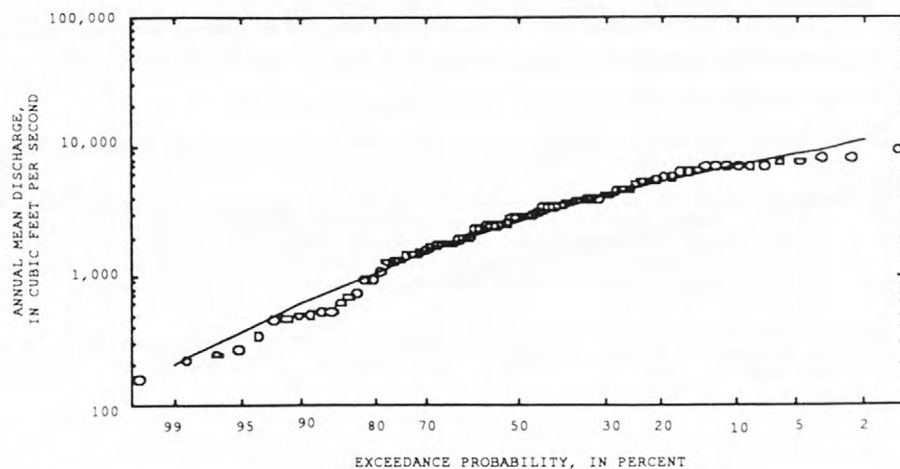
Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	14,200	23,100	26,800	29,600	30,800	31,500
3	13,600	22,400	26,200	29,100	30,400	31,200
7	12,200	20,800	25,000	28,500	30,200	31,000
15	10,500	18,700	22,900	26,800	28,900	30,400
30	8,640	16,000	20,200	24,200	26,500	28,300
60	6,930	13,200	16,900	20,800	23,100	25,000
90	5,990	11,400	14,800	18,400	20,600	22,400

Duration table of daily mean flow for period of record 1910-90

Discharge, in ft³/s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.95%	99.99%
19,500	12,800	9,190	7,310	6,000	4,220	2,620	1,210	535	306	130	15	9.7	6.7	4.9	3.2	1.8		



LOCATION MAP



SNAKE RIVER MAIN STEM

13090000 SNAKE RIVER NEAR KIMBERLY, ID

LOCATION.—Lat 42°35'28", long 114°21'34", in NE¼, NW¼, sec.4, T.10 S., R.18 E., Twin Falls County, Hydrologic Unit 17040212, on left bank 1,200 ft downstream from Twin Falls powerplant, 2.2 mi upstream from Shoshone Falls, 4 mi north of Kimberly, and at mile 617.2.

PERIOD OF RECORD.—July 1923 to September 1990.

REVISED RECORDS.—WSP 1347: 1924-26, 1928-30, 1942-44, 1946-48.

GAGE.—Water-stage recorder. Datum of gage is 3,362.67 ft above sea level (levels by Idaho Power Co.). Prior to Aug. 31, 1938, at site 2,000 ft downstream at different datum.

REMARKS.—Flow regulated by American Falls Reservoir 96.5 mi upstream 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. Diversion above station for irrigation of about 2,020,000 acres, of which about 537,000 acres are irrigated by withdrawals from ground water and about 364,000 acres are irrigated below the station. Considerable water leaks into the Snake River Plain aquifer upstream, a small part of which returns through springs a few miles above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 27,200 ft³/s July 4, 1927, gage height, 14.76 ft, site and datum then in use, from rating curve extended above 20,000 ft³/s; minimum recorded, 10 ft³/s May 17, 1944, gage height, 1.15 ft; minimum daily recorded, 95 ft³/s Apr. 20, 1977.

Summary of monthly and annual discharges, 1924-90

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	10,500	386	2,300	2,330	1.0	6.1
November	13,200	536	3,090	2,930	0.95	8.2
December	12,000	632	3,610	2,990	0.83	9.6
January	14,900	699	4,010	3,160	0.79	10.6
February	10,900	549	4,030	3,130	0.78	10.7
March	14,300	353	4,080	3,490	0.86	10.8
April	18,800	259	5,180	4,960	0.96	13.7
May	18,200	306	4,460	5,150	1.2	11.9
June	19,900	311	4,050	4,380	1.1	10.7
July	6,570	348	1,240	1,520	1.2	3.3
August	2,940	384	755	443	0.59	2.0
September	2,470	408	918	485	0.53	2.4
Annual	10,200	511	3,140	2,170	0.69	100

Magnitude and frequency of annual low flow,  
based on period of record 1925-91

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	329	234	190	157	125	106
3	367	294	262	239	216	201
7	371	312	293	282	273	268
14	389	327	310	300	294	291
30	434	347	322	308	297	292
60	492	376	341	321	304	297
90	570	415	369	341	318	307
120	721	464	387	342	324	312
183	1,050	576	438	356	339	324

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1924-90

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
13,000	20,200	23,500	26,400	27,800	28,800

Magnitude and frequency of annual high flow,  
based on period of record 1924-90

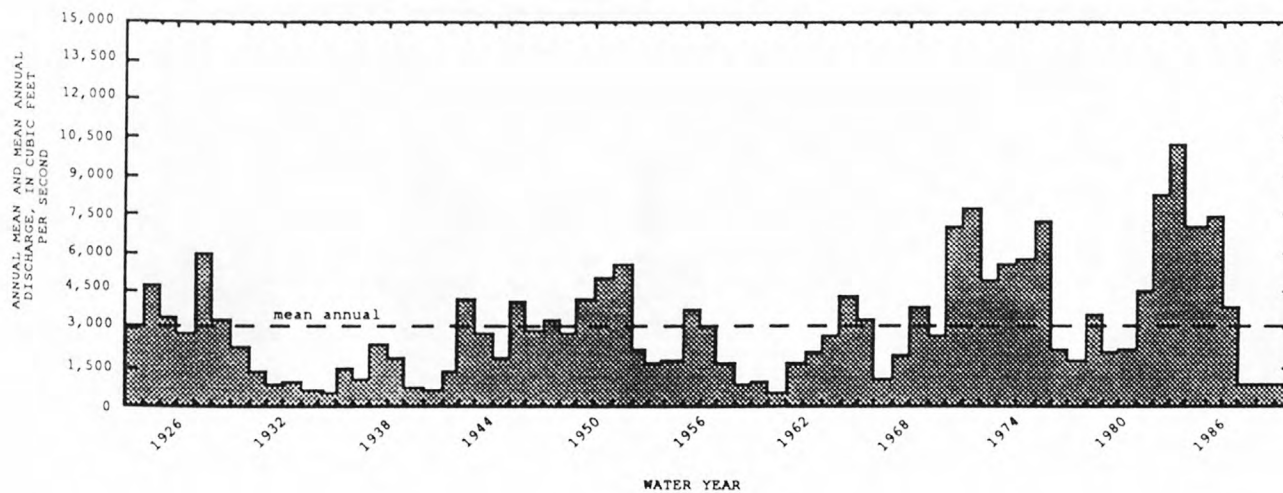
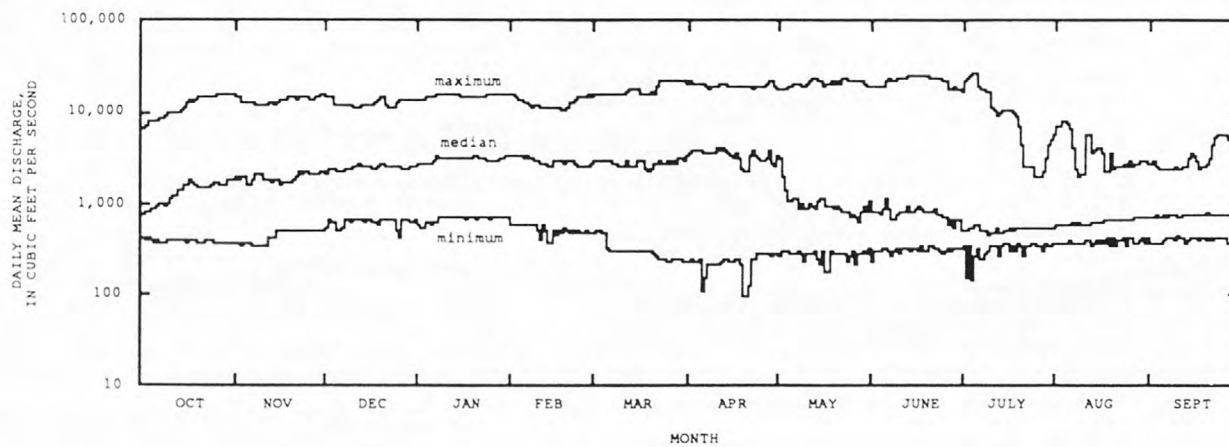
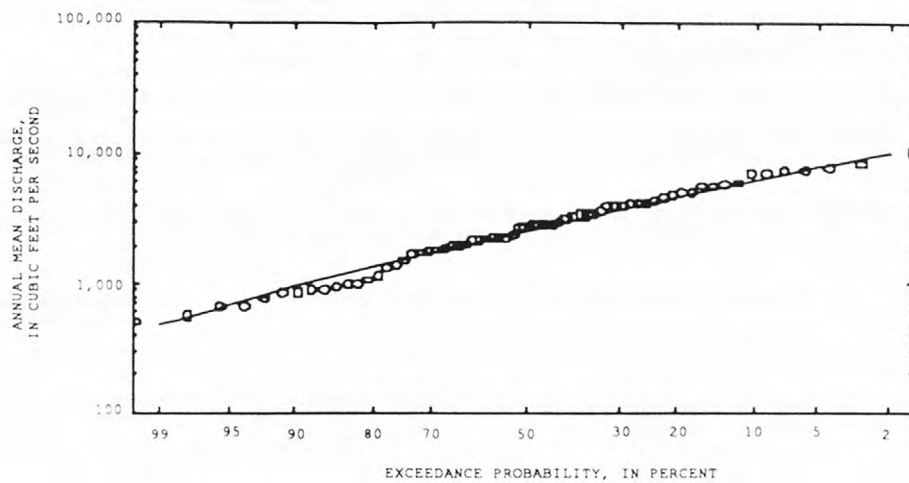
Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	12,400	20,000	23,400	26,200	27,600	28,500
3	11,900	19,500	23,200	26,000	27,400	28,200
7	10,600	17,900	21,600	25,100	27,000	27,600
15	9,210	15,900	19,600	23,300	25,400	27,100
30	7,600	13,600	17,100	21,000	23,400	25,400
60	6,140	11,200	14,500	18,400	21,000	23,400
90	5,390	9,970	13,100	16,900	19,600	22,100

Duration table of daily mean flow for period of record 1924-90

Discharge, in ft³/s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
17,700	11,800	9,030	6,990	5,340	3,460	2,030	1,170	840	689	538	411	373	326	306	273	225	



LOCATION MAP



## SNAKE RIVER MAIN STEM

13090500 SNAKE RIVER NEAR TWIN FALLS, ID

LOCATION.—Lat 42°36'25", long 114°29'10", in NW 1/4, NW 1/4, sec. 33, T. 9 S., R. 17 E., Jerome County, Hydrologic Unit 17040212, on downstream side of Perrine Bridge, 200 ft upstream from outlet of Blue Lakes, 4 mi north of city of Twin Falls, and 4 mi downstream from Shoshone Falls.

PERIOD OF RECORD.—September 1911 to June 1917, May 1919 to December 1947.

GAGE.—Water-stage recorder. Elevation of gage is 3,130 ft above sea level, from river-profile map.

REMARKS.—Flow regulated by Twin Falls and Shoshone Falls powerplants and several reservoirs above station. No diversions except by small ranch ditches between this station and station at Milner, where practically the entire flow is diverted during irrigation season.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 32,200 ft<sup>3</sup>/s June 10, 1914, gage height, 13.3 ft; minimum, 250 ft<sup>3</sup>/s Apr. 16, 1936, gage height, 1.51 ft, from rating extended below 2.0 ft.

Summary of monthly and annual discharges, 1912-16, 1920-47

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	10,400	595	3,100	2,750	0.89	7.2
November	8,790	704	4,090	2,790	0.68	9.5
December	10,000	836	3,820	2,450	0.64	8.9
January	8,480	893	3,790	2,200	0.58	8.8
February	8,150	704	3,810	2,310	0.61	8.8
March	7,610	560	3,700	2,540	0.68	8.6
April	10,600	462	4,580	3,520	0.77	10.7
May	17,300	459	5,390	5,710	1.1	12.5
June	23,000	493	6,410	6,650	1.0	14.9
July	9,610	477	2,030	2,600	1.3	4.7
August	4,050	486	844	630	0.75	2.0
September	9,000	526	1,460	1,650	1.1	3.4
Annual	8,750	673	3,580	2,280	0.64	100

Magnitude and frequency of annual low flow, based on period of record 1913-17, 1921-47

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	485	416	382	356	327	309
3	507	442	412	388	363	347
7	526	459	446	440	437	435
14	548	472	467	461	444	436
30	569	490	482	476	465	456
60	585	508	499	492	486	476
90	718	524	507	502	492	485
120	981	590	521	512	497	491
183	1,480	747	532	516	502	499

Magnitude and frequency of instantaneous peak flow, based on period of record 1912-16, 1920-47

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
14,800	25,600	31,200	36,200	38,800	40,700	

Magnitude and frequency of annual high flow, based on period of record 1912-16, 1920-47

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	14,800	25,600	31,100	36,100	38,700	40,600
3	13,900	24,500	30,100	35,400	38,300	40,500
7	12,400	22,100	27,500	32,900	36,000	38,400
15	10,500	19,000	24,000	29,200	32,300	34,900
30	8,600	15,900	20,500	25,700	29,000	31,900
60	6,770	12,400	16,100	20,300	23,200	25,800
90	5,880	10,600	13,800	17,400	19,900	22,200

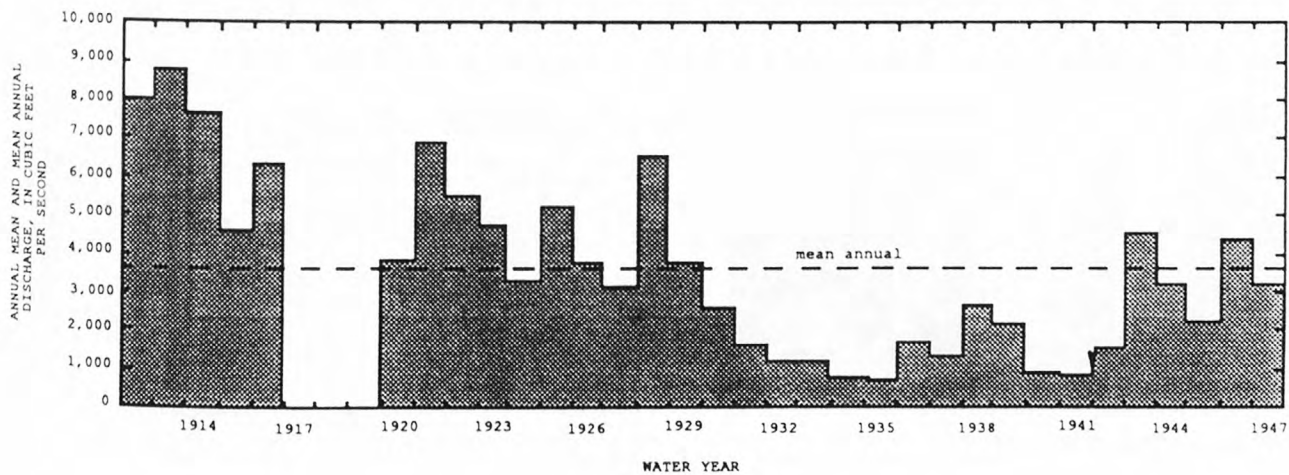
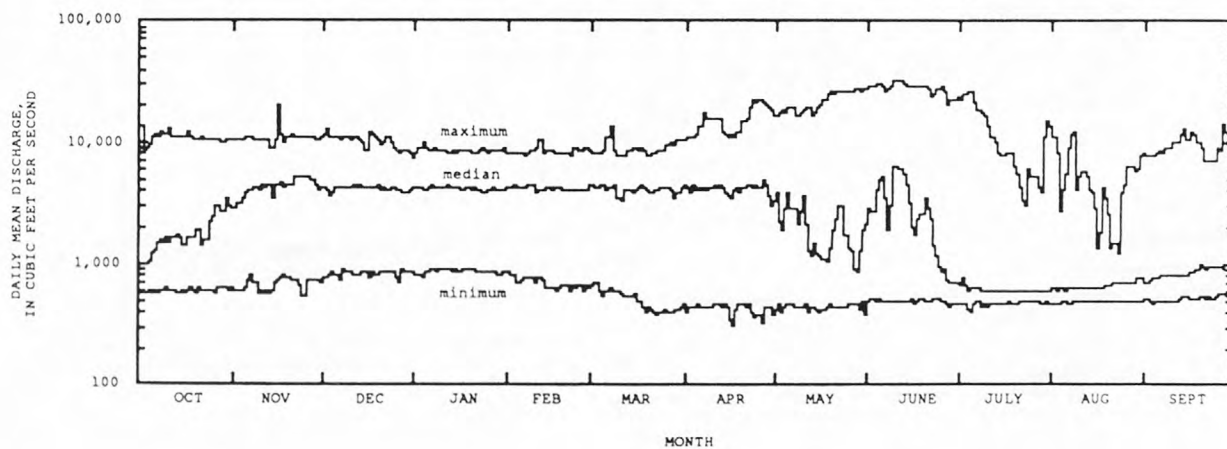
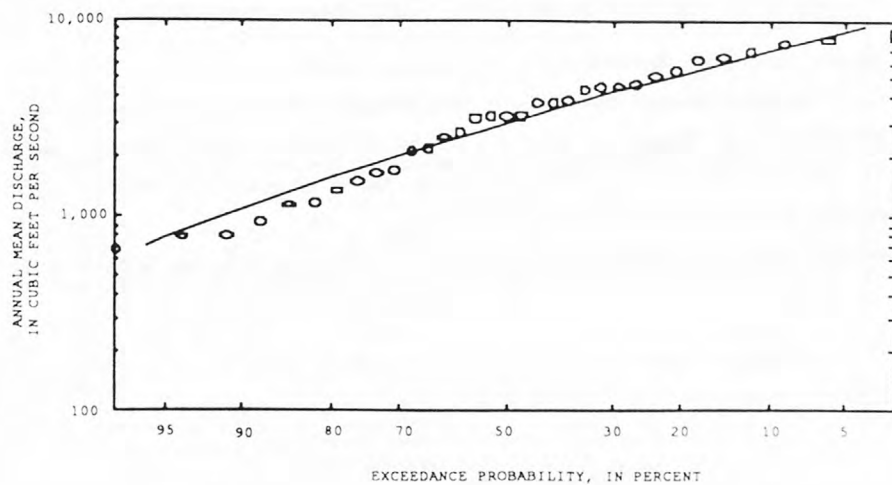
Duration table of daily mean flow for period of record 1912-16, 1920-47

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
20,800	11,400	8,180	6,980	6,200	4,850	3,140	1,440	977	807	655	562	510	472	439	422
															387

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# ROCK CREEK BASIN

13092000 ROCK CREEK NEAR ROCK CREEK, ID

LOCATION.—Lat 42°21'23", long 114°18'12", in NW¼, NW¼, sec.25, T.12 S., R.18 E., Twin Falls County, Hydrologic Unit 17040212, on right bank 0.1 mi downstream from road bridge, 0.8 mi downstream from Fifth Fork Rock Creek, 5 mi south of Rock Creek settlement, and 12 mi south of Hansen.

DRAINAGE AREA.—80 mi², approximately. Mean elevation, 6,330 ft.

PERIOD OF RECORD.—November 1909 to August 1913, November 1938 to July 1939, November 1943 to September 1974.

GAGE.—Water-stage recorder. Datum of gage is 4,347.0 ft above sea level (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 mi downstream at different datum, and Nov. 23, 1938, to July 21, 1939, at present site, at datum 2.25 ft higher.

REMARKS.—Small ranch diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 461 ft³/s May 19, 1970, gage height, 3.81 ft, but may have been more May 21, 1912; minimum, 2.7 ft³/s July 23, 1961, gage height, 0.76 ft; minimum gage height, 0.11 ft, Aug. 18, 1973.

Summary of monthly and annual discharges, 1911-12, 1945-74

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	16	6.0	9.8	1.9	0.20	2.4
November	16	7.3	11	2.1	0.18	2.7
December	49	8.2	13	7.1	0.53	3.2
January	45	8.4	17	9.5	0.56	4.1
February	53	9.7	20	11	0.55	4.8
March	95	12	28	17	0.62	6.8
April	162	21	81	43	0.53	19.7
May	305	35	139	75	0.54	33.6
June	218	15	59	40	0.67	14.3
July	40	5.2	17	7.6	0.44	4.2
August	14	4.9	8.8	2.3	0.27	2.1
September	13	5.7	8.3	1.9	0.23	2.0
Annual	65	14	34	14	0.41	100

Magnitude and frequency of annual low flow, based on period of record 1911-13, 1945-74

Period (con- secutive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	6.3	4.9	4.2	3.7	3.2	2.9
3	6.6	5.1	4.4	3.8	3.2	2.9
7	6.8	5.2	4.5	3.9	3.4	3.0
14	7.0	5.5	4.9	4.3	3.8	3.5
30	7.4	5.9	5.3	4.8	4.3	4.0
60	7.9	6.4	5.8	5.3	4.8	4.4
90	8.5	7.0	6.3	5.8	5.3	5.0
120	9.1	7.6	6.9	6.4	5.9	5.5
183	10	8.4	7.7	7.2	6.7	6.4

Magnitude and frequency of instantaneous peak flow, based on period of record 1911-12, 1945-74

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
198	329	419	533	618	701	

Magnitude and frequency of annual high flow, based on period of record 1911-12, 1945-74

Period (con- secutive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	196	324	406	488	540	585
3	192	319	391	469	519	562
7	185	300	369	446	496	541
15	165	271	338	417	471	521
30	141	226	280	343	386	426
60	113	171	206	246	271	295
90	89	134	162	194	215	236

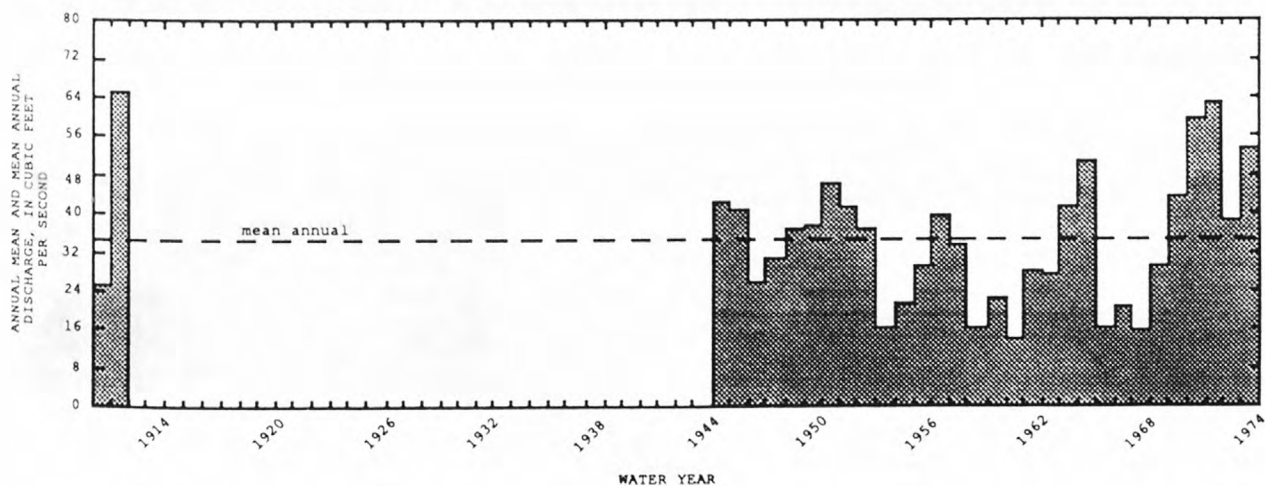
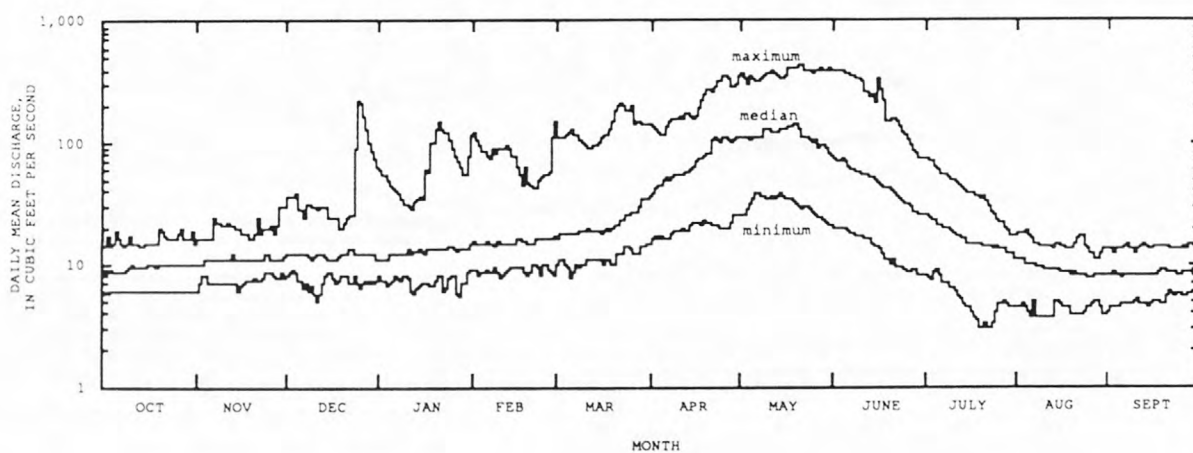
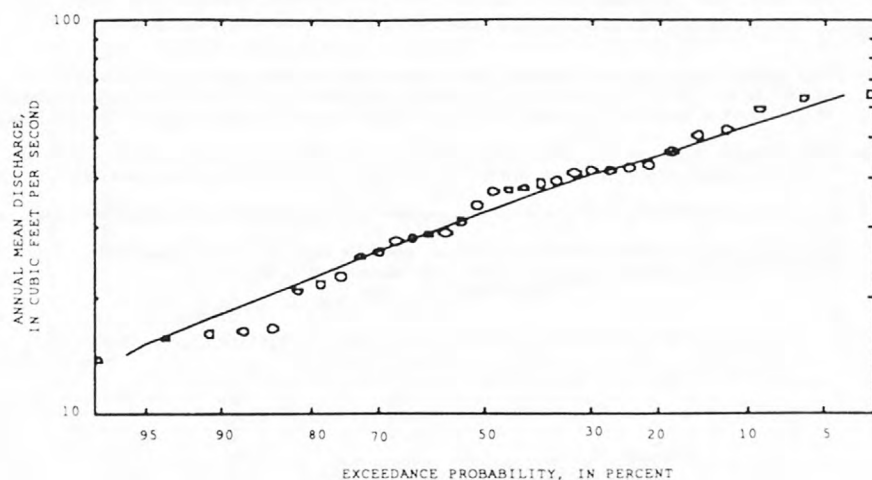
Duration table of daily mean flow for period of record 1911-12, 1945-74

Discharge, in ft³/s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
281	143	93	61	42	25	18	14	12	11	9.1	7.7	6.6	5.6	5.1	4.7	3.7

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# ROCK CREEK BASIN

13093000 ROCK CREEK BELOW POLELINE ROAD, NEAR TWIN FALLS, ID

LOCATION.—Lat 42°35'40", long 116°31'46", in SW¼, SE¼, SW¼, sec.36, T.9 S., R.16 E., Twin Falls County, Hydrologic Unit 17040212, on left bank, 420 ft downstream of Poleline Road bridge, 3 mi upstream from mouth, and 4 mi northwest of Twin Falls.

DRAINAGE AREA.—277 mi².

PERIOD OF RECORD.—July 1922 to September 1947, March 1983 to September 1990 (discontinued). Monthly and yearly discharge published 1922 to 1947 in WSP 1317. Published as "Rock Creek near mouth, near Twin Falls" (sta 13093095) at site 2 mi downstream July 1975 to December 1982. Records equivalent except during irrigation season when irrigation-return flow may be significant.

GAGE.—Water-stage recorder. Datum of gage is 3,482.46 ft above sea level. Prior to July 31, 1922, staff gage, and July 31, 1922, to Sept. 30, 1947, water-stage recorder 100 to 300 ft upstream at various sites and different datums.

REMARKS.—Flow regulated by many diversions upstream for irrigation and irrigation-return flows.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 984 ft³/s Sept. 21, 1927, gage height, 4.5 ft, from floodmarks, datum then in use; minimum, 63 ft³/s Jan. 30, 31, and Feb. 9, 1985, gage height, 8.75 ft.

Summary of monthly and annual discharges, 1923-46, 1984-90

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Standard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	416	188	247	47	0.19	9.7
November	301	153	194	31	0.16	7.5
December	298	121	182	43	0.24	7.1
January	354	98	205	79	0.39	8.1
February	415	94	201	91	0.45	7.9
March	234	96	155	42	0.27	6.1
April	276	109	182	44	0.24	7.2
May	507	136	218	74	0.34	8.6
June	429	137	240	59	0.24	9.5
July	265	106	210	32	0.15	8.3
August	307	110	233	42	0.18	9.2
September	415	136	274	57	0.21	10.8
Annual	257	163	212	25	0.12	100

Magnitude and frequency of annual low flow,  
based on period of record 1924-46, 1984-90

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	99	91	88	85	82	80
3	102	93	89	86	83	81
7	107	97	92	88	84	81
14	114	100	94	89	84	81
30	124	106	98	92	85	81
60	141	116	105	96	87	82
90	153	124	111	101	90	84
120	162	133	119	108	97	90
183	182	160	150	142	133	127

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1923-46, 1984-90

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
550	700	790	890	960	1,030

Magnitude and frequency of annual high flow,  
based on period of record 1923-46, 1984-90

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	461	589	673	780	860	941
3	434	548	622	713	782	850
7	391	481	538	607	658	708
15	349	423	471	530	575	619
30	314	378	421	478	521	565
60	279	328	361	405	438	473
90	262	302	328	361	386	411

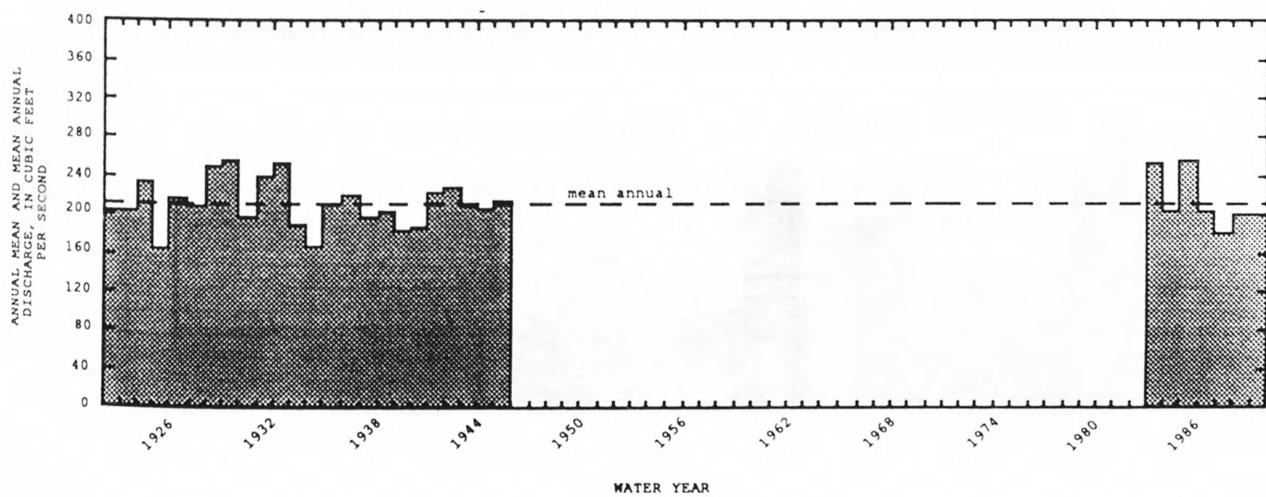
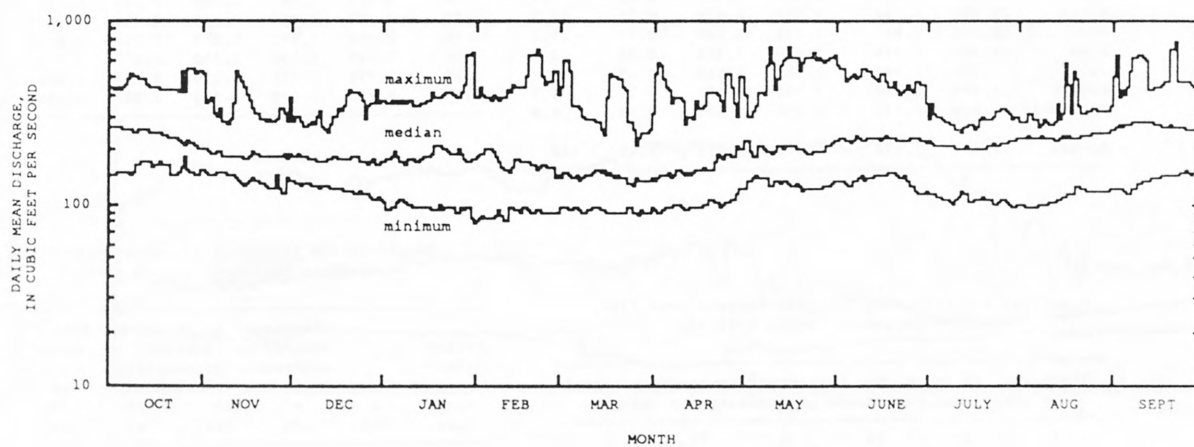
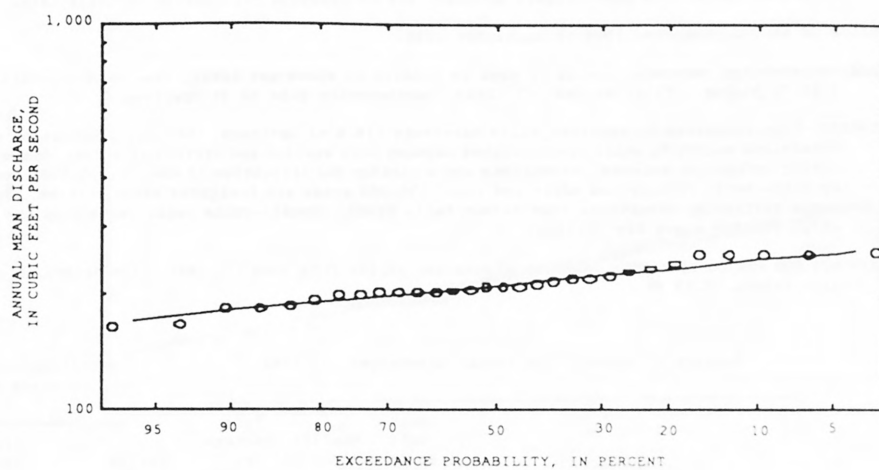
Duration table of daily mean flow for period of record 1923-46, 1984-90

Discharge, in ft³/s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
465	347	304	280	264	240	221	205	187	168	150	125	110	100	96	92	86	

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



Snake River Main Stem

13094000 SNAKE RIVER NEAR BUHL, ID

LOCATION.—Lat 42°39'58", long 114°42'41", in NW 1/4, NW 1/4, sec. 9, T. 9 S., R. 15 E., Twin Falls County, Hydrologic Unit 17040212, on left bank 2 mi downstream from Niagara Springs, 3.8 mi upstream from outlet of Clear Lakes, 6 mi northeast of Buhl, and at mile 596.4.

PERIOD OF RECORD.—December 1946 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 2,951.9 ft above sea level, from stadia levels. Dec. 12, 1946, to July 13, 1965, at datum 1.00 ft higher. Prior to Jan. 17, 1947, nonrecording gage 40 ft upstream.

REMARKS.—Flow regulated by American Falls Reservoir 116.8 mi upstream. Diurnal fluctuation caused by hydroelectric plants upstream. No diversions except by small ranch ditches between this station and station at Milner, where at times practically entire flow is diverted during irrigation seasons. Diversions above station for irrigation of about 2,030,000 acres, of which about 542,000 acres are irrigated by withdrawals from ground water and about 230,000 acres are irrigated below station. In addition, about 26,000 acres are irrigated above station by diversions from Salmon Falls Creek. Considerable water leaks into the Snake River Plain aquifer upstream, some of which returns above the station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 25,300 ft<sup>3</sup>/s June 14, 1984, gage height, 11.90 ft; minimum, 1,460 ft<sup>3</sup>/s Apr. 7, 1988, gage height, 0.89 ft.

Summary of monthly and annual discharges, 1948-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	12,300	2,130	4,590	2,640	0.58	7.2
November	14,800	2,130	5,080	3,240	0.64	7.9
December	13,400	2,200	5,670	3,260	0.58	8.9
January	16,000	2,150	6,160	3,490	0.57	9.7
February	12,200	2,060	6,160	3,430	0.56	9.6
March	15,300	1,600	6,250	3,790	0.61	9.8
April	20,600	1,550	7,690	5,470	0.71	12.1
May	19,600	1,860	7,130	5,500	0.77	11.2
June	20,900	1,910	6,220	4,530	0.73	9.8
July	7,920	1,980	2,990	1,350	0.45	4.7
August	4,640	2,080	2,750	477	0.17	4.3
September	4,590	2,190	3,090	545	0.18	4.8
Annual	11,600	2,170	5,310	2,370	0.45	100

Magnitude and frequency of annual low flow, based on period of record 1948-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	1,990	1,770	1,650	1,560	1,450	1,390
3	2,020	1,790	1,670	1,580	1,470	1,400
7	2,050	1,810	1,690	1,590	1,480	1,420
14	2,110	1,860	1,740	1,650	1,560	1,500
30	2,220	1,950	1,840	1,760	1,690	1,640
60	2,350	2,080	1,970	1,900	1,840	1,810
90	2,510	2,190	2,080	2,000	1,930	1,900
120	2,720	2,270	2,130	2,050	1,980	1,950
183	3,200	2,470	2,230	2,090	1,990	1,960

Magnitude and frequency of instantaneous peak flow, based on period of record 1948-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
16,200	21,100	23,200	25,200	26,200	26,900

Magnitude and frequency of annual high flow, based on period of record 1948-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	15,200	20,800	23,200	25,100	26,100	26,700
3	14,700	20,400	22,800	24,900	26,000	26,600
7	13,500	19,300	22,100	24,700	25,900	26,200
15	12,100	17,900	20,900	24,000	25,600	26,000
30	10,500	15,800	18,900	22,400	24,600	25,600
60	9,010	13,900	17,100	20,800	23,400	24,900
90	8,210	12,700	15,600	19,100	21,600	24,000

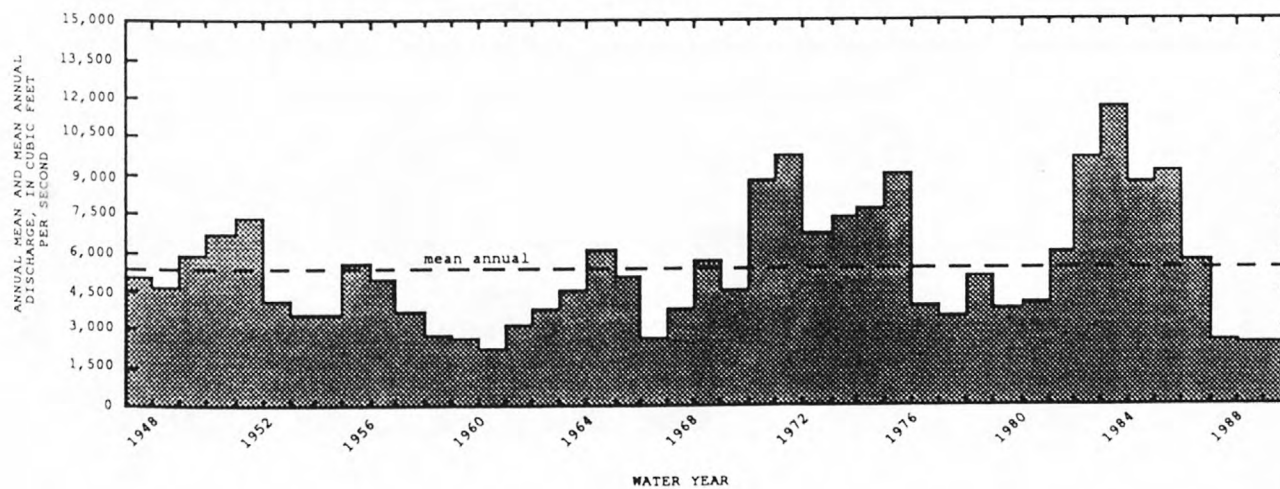
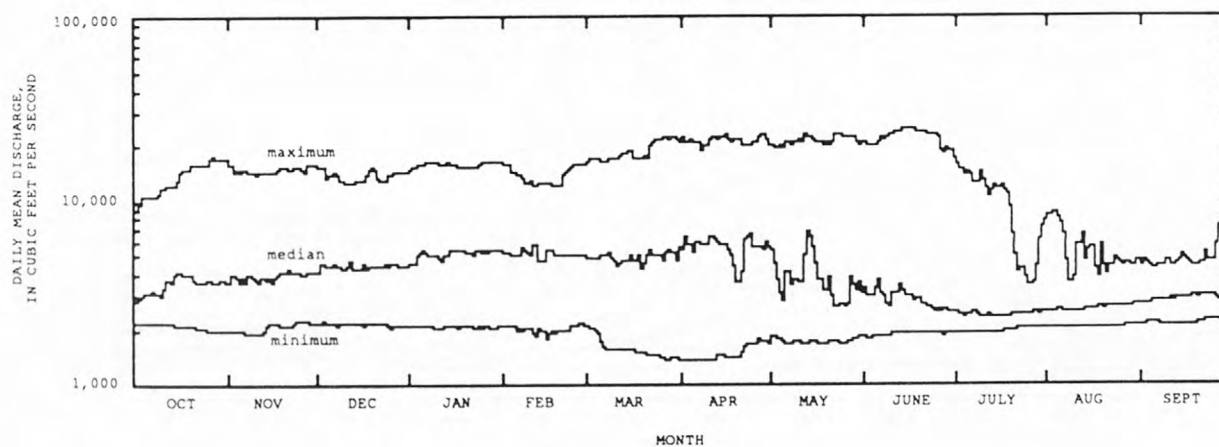
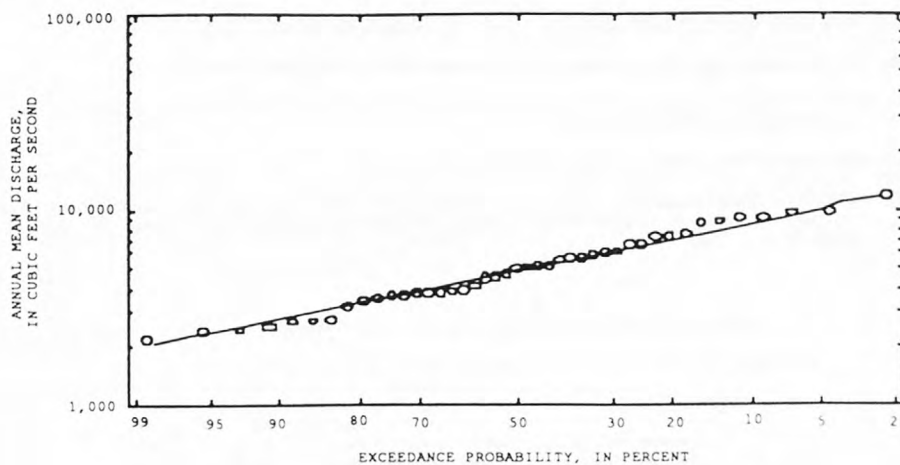
Duration table of daily mean flow for period of record 1948-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
19,600	14,500	11,800	10,200	8,280	5,690	4,250	3,300	2,880	2,610	2,390	2,150	1,990	1,870	1,730	1,420

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





SALMON FALLS CREEK BASIN

13096000 SALMON FALLS CREEK ABOVE UPPER VINEYARD DITCH, NEAR CONTACT, NV

LOCATION.—Lat 41°44', long 114°53', in NW 1/4, sec. 5, T. 44 N., R. 63 E., Elko County, Hydrologic Unit 17040213, on left bank 0.8 mi upstream from former diversion point for upper Vineyard ditch, 1.2 mi upstream from present diversion dam, and 6 mi southwest of Contact.

DRAINAGE AREA.—461 mi<sup>2</sup>, approximately. Mean elevation, 6,760 ft.

PERIOD OF RECORD.—May 1914 to July 1915, October 1948 to September 1962,

GAGE.—Water-stage recorder. Altitude of gage is 5,570 ft above sea level, by barometer. May 17, 1914, to July 25, 1915, at site 0.8 mi downstream at different datum.

REMARKS.—Diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,420 ft<sup>3</sup>/s Feb. 12, 1962 (gage height, 6.69 ft), from rating curve extended above 600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 6.8 ft<sup>3</sup>/s Dec. 26, 1954 (gage height, 0.93 ft) minimum gage height, 0.80 ft Aug. 1962.

Summary of monthly and annual discharges, 1949-62

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	29	20	25	2.3	0.09	2.3
November	33	24	29	2.5	0.09	2.7
December	40	22	30	4.7	0.15	2.8
January	47	22	31	7.3	0.24	2.9
February	245	24	54	57	1.1	4.9
March	147	29	68	32	0.47	6.3
April	435	45	213	129	0.60	19.8
May	705	86	340	190	0.56	31.5
June	369	53	201	100	0.50	18.7
July	80	19	45	20	0.44	4.2
August	30	17	22	3.8	0.17	2.0
September	24	17	20	1.9	0.10	1.9
Annual	152	38	90	37	0.41	100

Magnitude and frequency of annual low flow,  
based on period of record 1950-62

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	17	15	15	14	14	13
3	17	16	15	14	14	13
7	18	16	15	14	14	13
14	18	16	16	15	15	14
30	19	17	16	16	15	15
60	20	18	17	17	16	16
90	22	20	19	18	17	16
120	23	21	20	19	18	17
183	26	23	22	21	20	19

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1949-62

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
564	1,170	1,720	2,620	3,440	4,420

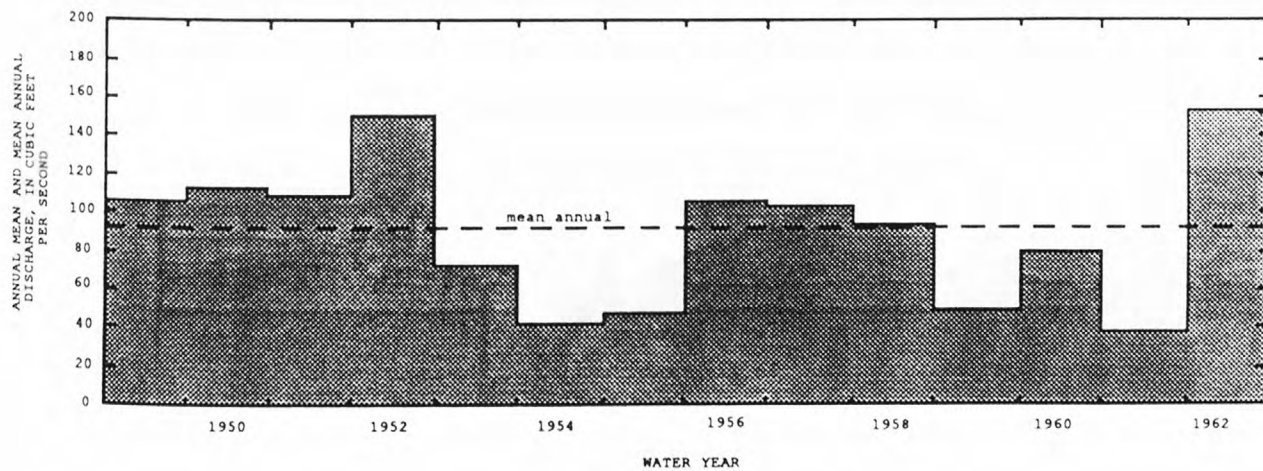
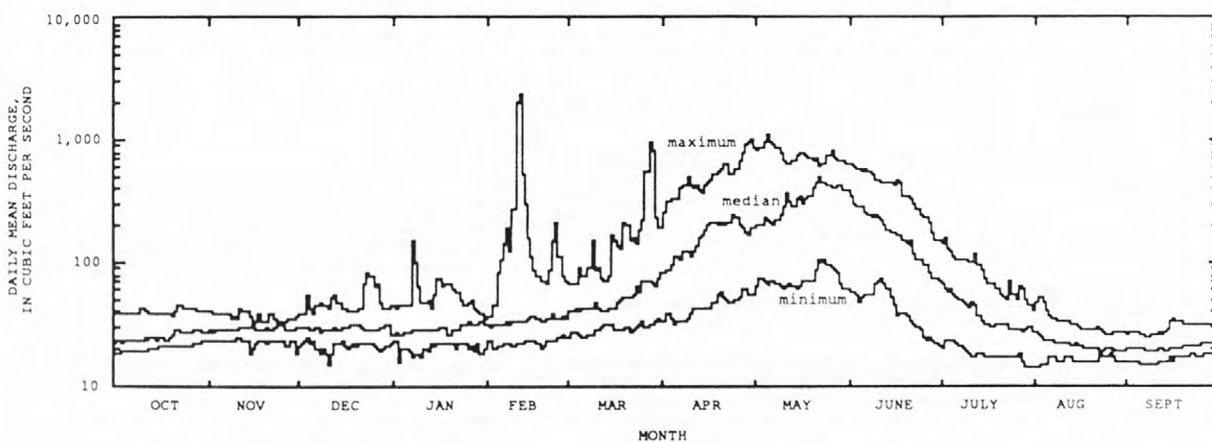
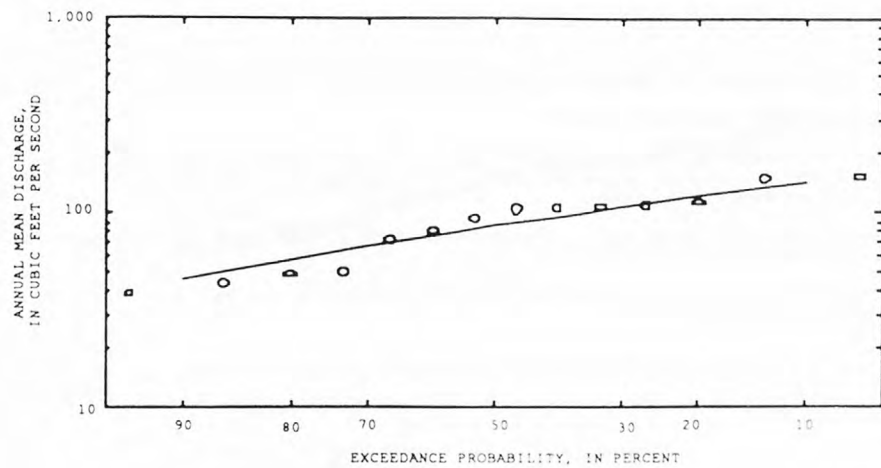
Magnitude and frequency of annual high flow,  
based on period of record 1949-62

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	521	988	1,380	1,950	2,450	2,990
3	502	893	1,180	1,540	1,820	2,100
7	457	742	914	1,110	1,230	1,340
15	395	634	781	948	1,060	1,160
30	350	559	685	827	920	1,000
60	290	463	569	689	768	839
90	238	374	457	553	617	676

Duration table of daily mean flow for period of record 1949-62

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
650	432	247	159	110	57	39	33	29	27	24	21	19	17	16	16	15

# Length of record used in calculation may yield unreliable values for this column.



SALMON FALLS CREEK BASIN

13105000 SALMON FALLS CREEK NEAR SAN JACINTO, NV

LOCATION.—Lat 41°56'40", long 114°41'15", in NE 1/4, SW 1/4, sec.23, T.47 N., R.64 E., Elko County, Hydrologic Unit 17040213, on right bank in canyon, 630 ft downstream from bridge on U.S. Highway 93, 550 ft downstream from Shoshone Creek, and 5 mi north of San Jacinto.

DRAINAGE AREA.—1,450 mi<sup>2</sup>, approximately. Mean elevation, 6,350 ft.

PERIOD OF RECORD.—September 1909 to June 1910 (gage heights only), June 1910 to September 1916, October 1918 to September 1990. Monthly discharge only for some periods published in WSP 1317. Prior to October 1910, published as "Salmon Falls River."

REVISED RECORDS.—WSP 1934: 1943(M).

GAGE.—Water-stage recorder. Elevation of gage is 5,120 ft above sea level, 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.

REMARKS.—Diversion above station for irrigation of about 18,200 acres (1966 determination). Salmon Dam of Salmon River Canal Co. is 15 mi downstream (see sta 13106500).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,860 ft<sup>3</sup>/s May 16, 1984, gage height, 14.27 ft; minimum, 2.6 ft<sup>3</sup>/s Sept. 4, 1961, gage height, 3.37 ft.

Summary of monthly and annual discharges, 1911-16, 1920, 1922-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	92	18	49	13	0.27	2.9
November	105	35	59	12	0.20	3.4
December	130	37	59	14	0.23	3.4
January	201	38	69	30	0.43	4.0
February	377	44	98	63	0.65	5.7
March	588	56	161	99	0.61	9.4
April	865	77	353	190	0.54	20.5
May	2,030	52	465	290	0.62	27.1
June	1,210	24	278	201	0.72	16.2
July	344	13	65	50	0.77	3.8
August	127	8.2	29	17	0.61	1.7
September	78	9.8	33	12	0.37	1.9
Annual	439	45	143	62	0.44	100

Magnitude and frequency of annual low flow,  
based on period of record 1912-16, 1923-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	16	10	7.9	6.3	4.8	4.0
3	17	11	8.5	7.0	5.5	4.7
7	17	12	9.7	8.3	7.0	6.3
14	18	13	11	9.1	7.7	6.9
30	21	15	12	11	8.9	8.0
60	26	18	15	13	11	9.6
90	31	22	19	16	14	13
120	36	27	23	20	18	16
183	43	35	32	29	26	24

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1911-16, 1920, 1922-90

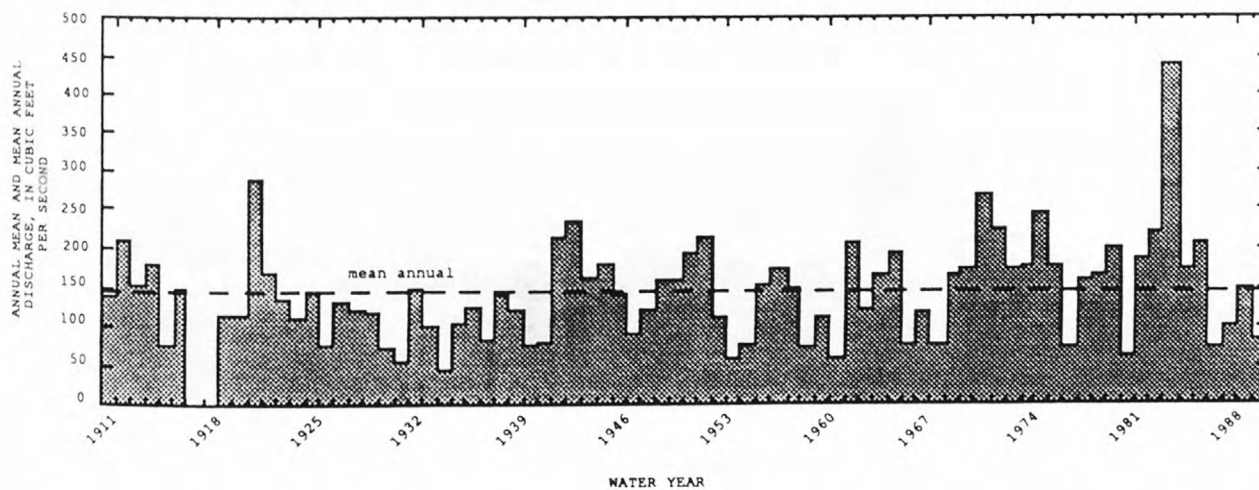
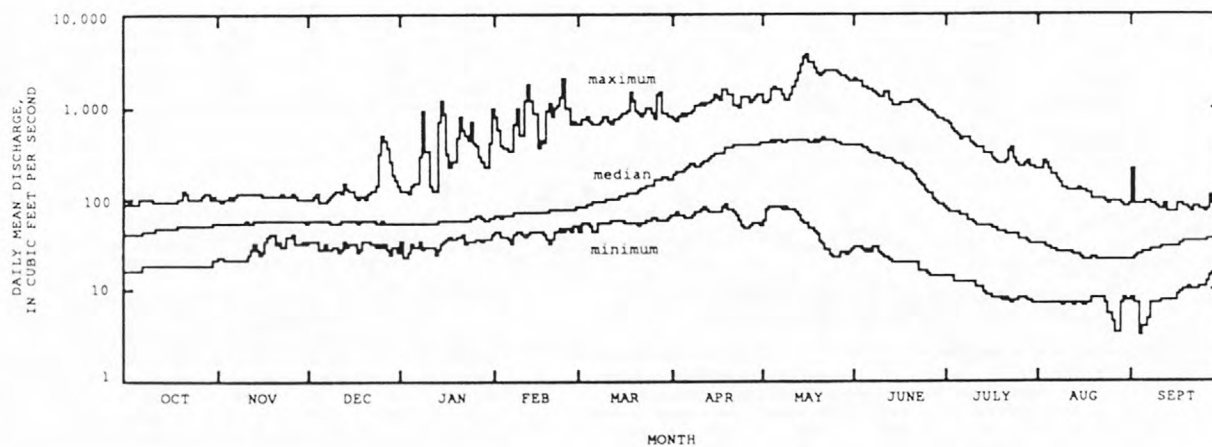
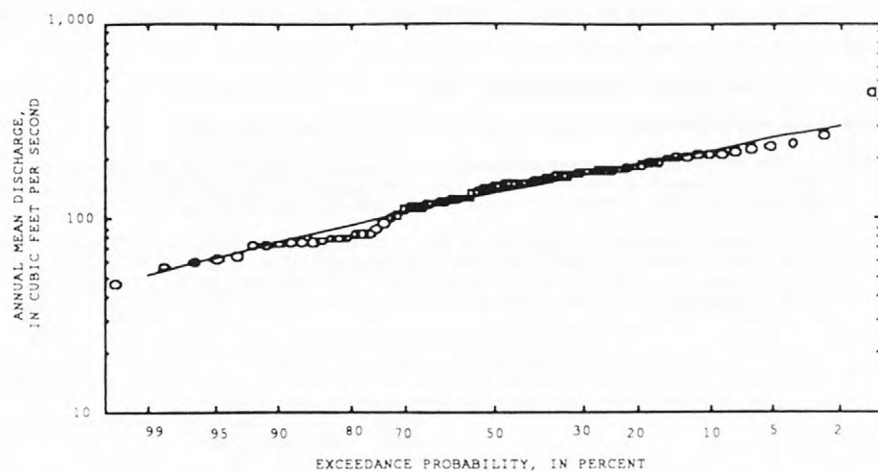
Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
713	1,200	1,580	2,110	2,550	3,020	

Magnitude and frequency of annual high flow,  
based on period of record 1911-16, 1920, 1922-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	677	1,130	1,460	1,870	2,190	2,500
3	648	1,060	1,350	1,710	1,970	2,230
7	597	967	1,210	1,520	1,740	1,950
15	541	871	1,090	1,360	1,550	1,730
30	482	774	965	1,190	1,360	1,510
60	418	656	804	977	1,090	1,200
90	352	542	660	800	896	986

Duration table of daily mean flow for period of record 1911-16, 1920, 1922-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%		
918	581	396	278	195	108	75	64	56	49	40	26	20	14	12	9.8	6.9		



SALMON FALLS CREEK BASIN

13108150 SALMON FALLS CREEK NEAR HAGERMAN, ID

LOCATION.—Lat 42°41'47", long 114°51'15", in SW¼, SE¼, sec.30, T.8 S., R.14 E., Twin Falls County, Hydrologic Unit 17040213, on left bank 25 ft upstream from U.S. Highway 30, at mile 1.9 and 8.5 mi south of Hagerman.

DRAINAGE AREA.—2,120 mi², approximately.

PERIOD OF RECORD.—April 1970 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 2,891.06 ft above sea level.

REMARKS.—Flow completely regulated by Salmon River Canal Co. reservoir 44 mi upstream (see sta 13106500). 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. Flow past the gage is partially regulated during irrigation season by small diversion dam 0.9 mi upstream.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,500 ft³/s May 16, 1984, gage height, 18.14 ft on basis of contracted opening measurement of peak flow, result of roadfill collapse approximately 13 mi upstream; minimum, 5.8 ft³/s July 9, 1977, gage height, 2.51 ft. From May 11 to June 28, 1984, Salmon River Canal Co. reservoir spilled into Salmon Falls Creek for the first time since construction in 1910. Maximum discharge excluding 1984 was 3,390 ft³/s Jan. 12, 1979, gage height, 4.10 ft.

Summary of monthly and annual discharges, 1971-90

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Standard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	314	206	241	26	0.11	12.2
November	244	167	201	22	0.11	10.1
December	202	140	172	17	0.10	8.6
January	233	130	172	29	0.17	8.6
February	203	126	161	19	0.12	8.1
March	243	119	156	27	0.17	7.9
April	334	90	177	53	0.30	8.9
May	1,270	75	193	257	1.3	9.7
June	834	65	149	166	1.1	7.5
July	104	28	64	22	0.34	3.2
August	150	52	102	30	0.30	5.1
September	271	147	201	35	0.17	10.1
Annual	314	138	166	38	0.23	100

Magnitude and frequency of annual low flow, based on period of record 1972-90

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	31	22	17	14	11	9.1
3	34	24	19	16	12	11
7	37	26	21	18	14	12
14	41	29	23	19	15	12
30	53	37	30	25	20	17
60	72	55	47	41	35	31
90	85	67	59	53	46	43
120	98	80	72	66	60	56
183	131	111	101	93	84	78

Magnitude and frequency of instantaneous peak flow, based on period of record 1971-90

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
556	1,190	1,800	2,830	3,820	5,030

Magnitude and frequency of annual high flow, based on period of record 1971-90

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	366	688	1,100	2,020	3,210	5,080
3	319	542	841	1,540	2,460	3,960
7	277	422	642	1,200	1,970	3,320
15	252	365	484	912	1,710	2,420
30	242	322	410	623	1,160	1,780
60	221	294	360	486	943	1,220
90	214	260	287	414	889	966

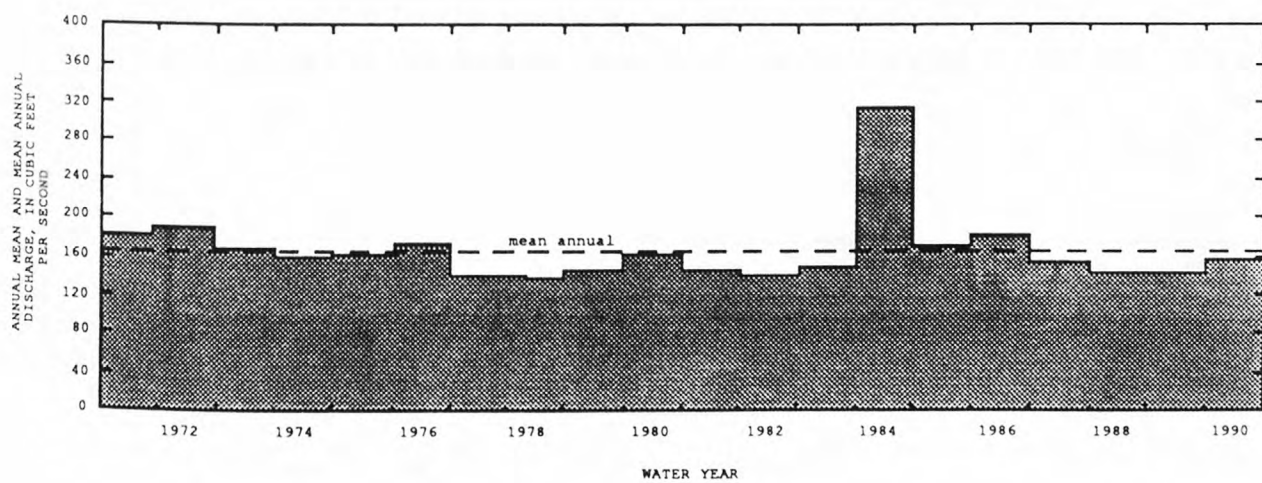
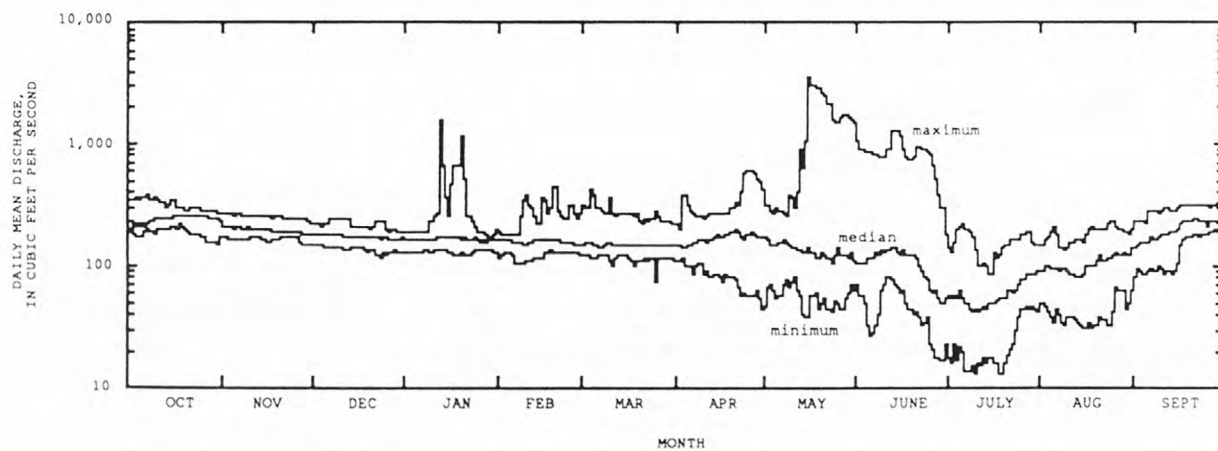
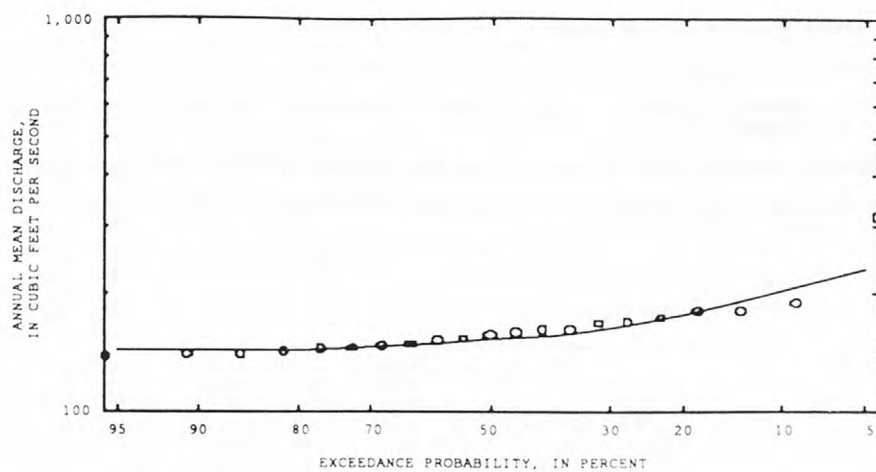
Duration table of daily mean flow for period of record 1971-90

Discharge, in ft³/s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
388	279	245	227	209	187	172	159	146	132	105	69	49	35	28	21	15

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## MUD LAKE-LOST RIVER BASINS

13108500 CAMAS CREEK AT EIGHTEENMILE SHEARING CORRAL, NEAR KILGORE, ID

LOCATION.—Lat 44°17'50", long 111°54'20", in NW 1/4, sec. 7, T. 11 N., R. 39 E., Clark County, Hydrologic Unit 17040203, on right bank at old bridge immediately downstream from Eighteenmile Shearing Corral, 7 mi south of Kilgore, and 18.5 mi northeast of Dubois.

DRAINAGE AREA.—210 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—May 1937 to October 1953 (no winter records prior to 1947), April 1969 to September 1973.

GAGE.—Water-stage recorder. Altitude of gage is 6,260 ft above sea level, from topographic map. Prior to Sept. 23, 1938, at datum 1.21 ft higher.

REMARKS.—Diversion above station for irrigation of about 7,500 acres, 1966 determination.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,590 ft<sup>3</sup>/s May 8, 1969 (gage height, 7.04 ft); no flow for short periods in February 1949.

Summary of monthly and annual discharges, 1947-53, 1970-73

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	62	20	34	14	0.42	3.3
November	55	18	33	12	0.36	3.2
December	42	15	25	8.0	0.32	2.4
January	34	9.0	19	7.3	0.38	1.8
February	35	2.0	19	9.6	0.52	1.8
March	64	6.1	23	16	0.72	2.2
April	338	50	172	85	0.50	16.6
May	758	142	382	211	0.55	36.8
June	551	71	226	139	0.61	21.8
July	132	17	50	33	0.65	4.8
August	50	13	27	10	0.37	2.6
September	60	14	28	15	0.55	2.7
Annual	153	57	87	29	0.33	100

Magnitude and frequency of annual low flow,  
based on period of record 1947-53, 1971-73

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	14	7.2	4.5	2.8	1.5	0.90
3	14	7.2	4.4	2.8	1.5	0.92
7	14	7.3	4.4	2.8	1.5	0.92
14	15	7.5	4.5	2.8	1.5	0.92
30	16	8.0	4.8	2.9	1.5	0.94
60	16	9.2	6.5	4.8	3.2	2.4
90	17	10	7.9	6.2	4.6	3.7
120	18	13	10	9.0	7.6	6.8
183	22	16	14	13	11	11

Magnitude and frequency of annual high flow,  
based on period of record 1947-53, 1970-73

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	736	1,030	1,270	1,630	1,940	2,290
3	690	965	1,190	1,520	1,810	2,130
7	619	869	1,060	1,340	1,580	1,840
15	499	703	872	1,130	1,350	1,610
30	407	572	703	895	1,060	1,240
60	317	431	524	664	786	925
90	241	326	394	497	586	687

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1947-53, 1970-73

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
825	1,320	1,660	2,090	2,420	2,740	

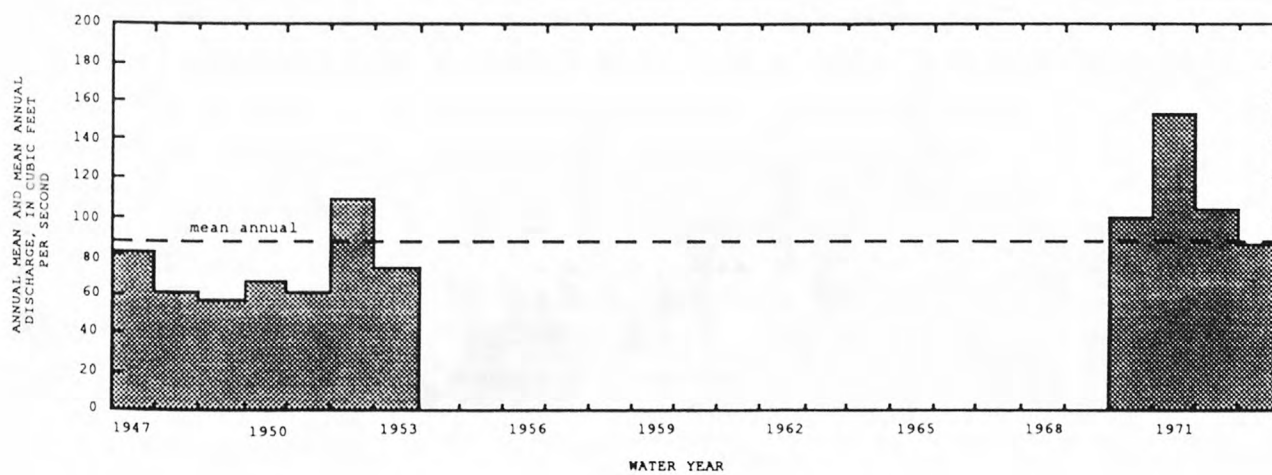
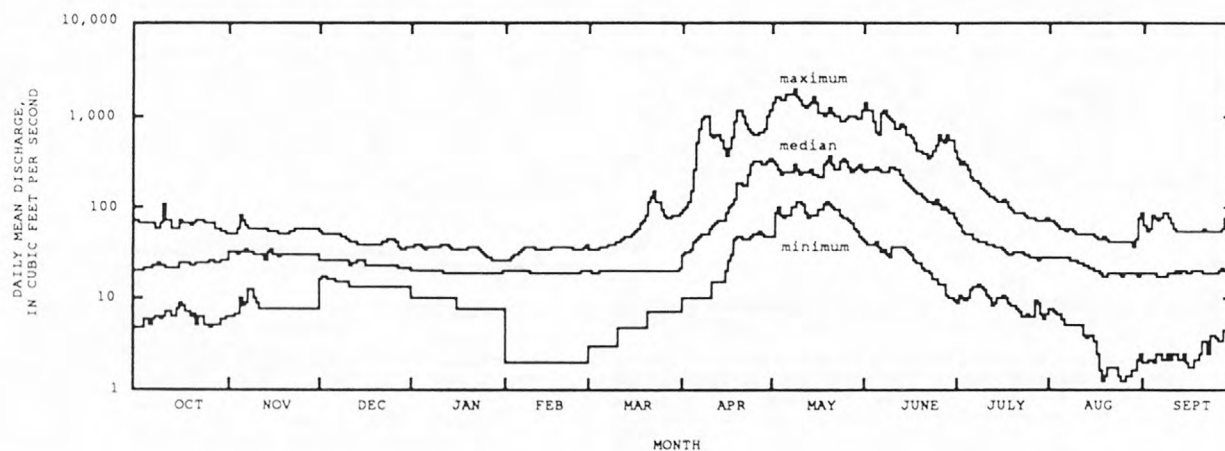
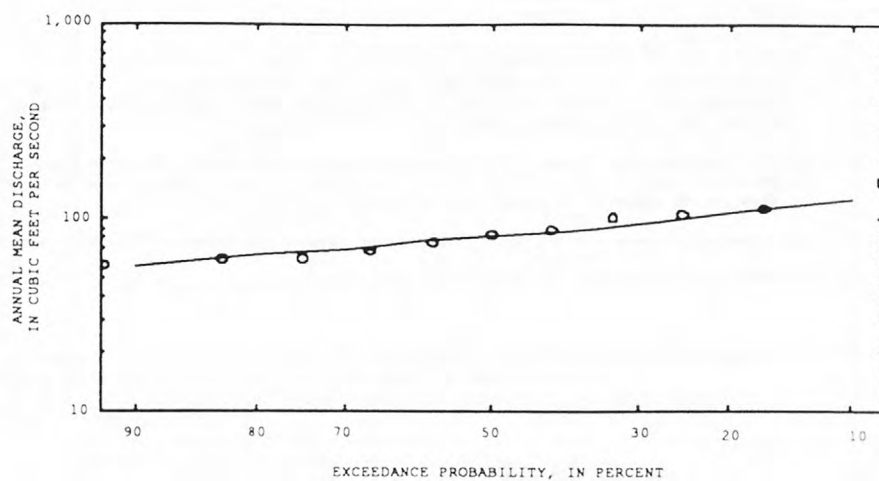
Duration table of daily mean flow for period of record 1947-53, 1970-73

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
773	416	258	158	89	49	37	30	25	21	18	14	11	7.6	4.7	2.2	2.0	

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MUD LAKE-LOST RIVER BASIN

13112000 CAMAS CREEK AT CAMAS, ID

LOCATION.—Lat 44°00'12", long 112°13'12", in SE $\frac{1}{4}$ , SE $\frac{1}{4}$ , sec. 21, T.8 N., R.36 E., Jefferson County, Hydrologic Unit 17040214, on left bank 150 ft upstream from county road bridge, 250 ft upstream from Union Pacific Railroad bridge at Camas, and about 1.1 mi upstream from Beaver Creek.

DRAINAGE AREA.—400 mi<sup>2</sup>, approximately. Mean elevation, 6,450 ft.

PERIOD OF RECORD.—April 1925 to October 1970, April 1971 to September 1982, May 1983 to September 1986, April to May 1987 (discharge measurements only November, December, March, and June 1987). April to June 1988 (discharge measurement only March 1988), April to June 1989, March to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 4,806.84 ft above sea level. Prior to Aug. 21, 1925, nonrecording gage at site 0.1 mi 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.

REMARKS.—Diversions above station for irrigation of about 8,100 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,320 ft<sup>3</sup>/s May 16, 1984, gage height, 7.61 ft; no flow at times in many years.

Summary of monthly and annual discharges, 1927-70, 1972-82, 1984-85, 1989-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	78	0.00	6.8	12	1.7	1.6
November	60	0.00	8.4	11	1.3	2.0
December	36	0.00	5.6	7.1	1.3	1.3
January	20	0.00	4.4	5.6	1.3	1.1
February	23	0.00	4.5	5.5	1.2	1.1
March	51	0.00	7.8	10	1.3	1.9
April	277	3.1	89	64	0.72	21.3
May	536	0.00	175	138	0.79	41.8
June	379	0.00	97	95	0.98	23.2
July	73	0.00	13	17	1.3	3.1
August	17	0.00	3.8	5.5	1.4	0.9
September	18	0.00	2.9	4.7	1.6	0.7
Annual	88	0.88	35	21	0.60	100

Magnitude and frequency of annual low flow, based on period of record 1927-70, 1973-82, 1985, 1990

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.18	0.00	0.00	0.00	0.00	0.00
120	0.92	0.00	0.00	0.00	0.00	0.00
183	2.2	0.02	0.00	0.00	0.00	0.00

Magnitude and frequency of annual high flow, based on period of record 1927-70, 1972-82, 1984-85, 1989-90

Magnitude and frequency of instantaneous peak flow, based on period of record 1927-70, 1972-82, 1989-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
438	751	970	1,250	1,460	1,670

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	401	666	816	973	1,070	1,150
3	363	607	750	901	995	1,070
7	313	527	651	784	865	934
15	254	429	527	628	688	737
30	204	352	432	509	553	587
60	157	266	318	364	386	402
90	117	197	235	268	284	295

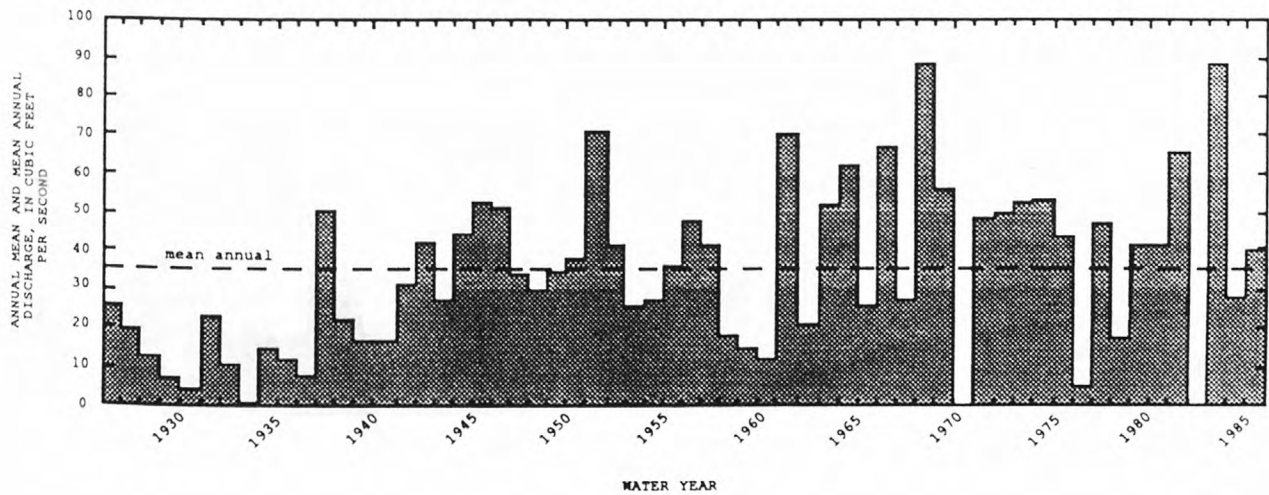
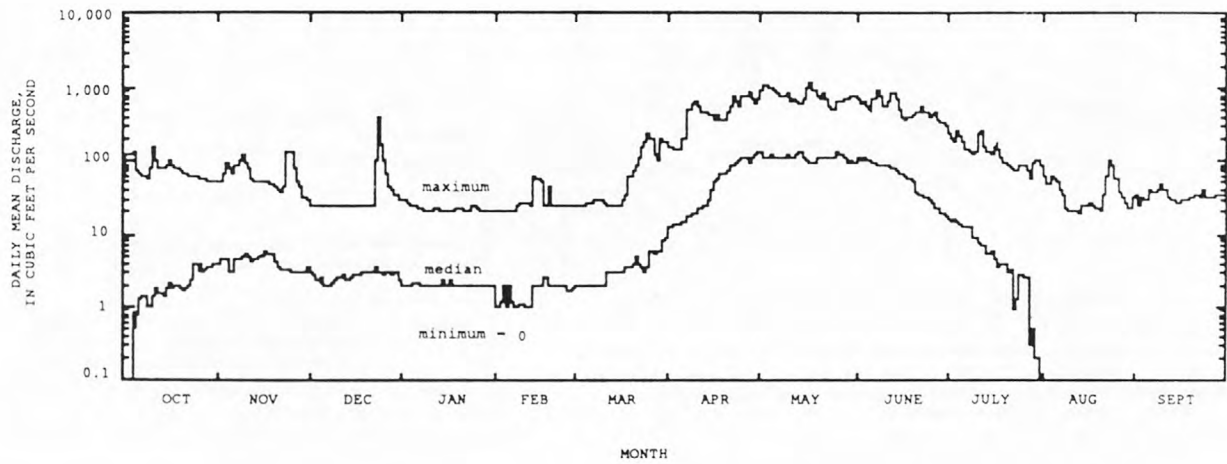
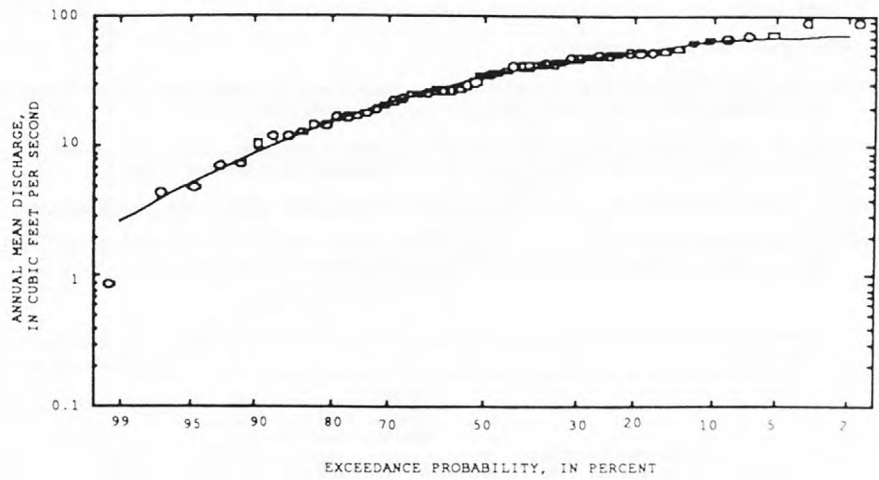
Duration table of daily mean flow for period of record 1927-70, 1972-82, 1984-85, 1989-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
450	207	104	56	28	15	9.2	5.0	1.9	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MUD LAKE-LOST RIVER BASIN

13113000 BEAVER CREEK AT SPENCER, ID

LOCATION.—Lat 44°21'20", long 112°10'45", in NW 1/4, SE 1/4, sec. 23, T.12 N., R.36 E., Clark County, Hydrologic Unit 17040214, on left bank 62 ft upstream from State Highway 22, 0.4 mi southeast of Spencer Post Office, and 2.5 mi upstream from Rattlesnake Creek.

DRAINAGE AREA.—120 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—December 1938 to September 1940 (published as "near Spencer"), October 1940 to November 1952 (no winter records 1942-52), October 1968 to May 1982, April 1985 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 5,850 ft above sea level, by barometer. December 1938 to November 1952, nonrecording gage. Prior to October 1940, at site 1.6 mi upstream at different datum.

REMARKS.—Diversion above station for irrigation of about 850 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,190 ft<sup>3</sup>/s May 18, 1975, gage height, 9.84 ft, from rating curve extended above 400 ft<sup>3</sup>/s on basis of computation of peak flow through culvert; no flow on many days.

Summary of monthly and annual discharges, 1941, 1969-81, 1987-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	48	1.4	20	12	0.57	4.4
November	39	5.8	19	9.4	0.49	4.2
December	35	5.0	16	8.1	0.51	3.5
January	26	5.0	14	6.5	0.46	3.1
February	26	5.0	15	6.7	0.46	3.2
March	67	8.3	24	13	0.55	5.1
April	211	18	84	47	0.56	18.3
May	387	24	122	105	0.86	26.5
June	245	7.7	81	72	0.89	17.6
July	88	0.00	31	27	0.87	6.7
August	53	0.00	17	14	0.81	3.8
September	41	0.00	17	12	0.72	3.6
Annual	85	13	38	22	0.57	100

Magnitude and frequency of annual low flow, based on period of record 1970-82, 1988-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 <sup>#</sup> 2%	100 <sup>#</sup> 1%
1	5.8	1.8	0.66	0.00	0.00	0.00
3	6.5	2.1	0.84	0.00	0.00	0.00
7	7.5	2.8	1.2	0.00	0.00	0.00
14	9.0	4.1	2.2	0.00	0.00	0.00
30	11	5.5	3.3	0.00	0.00	0.00
60	12	6.4	3.9	0.00	0.00	0.00
90	13	7.1	4.5	0.00	0.00	0.00
120	17	8.6	4.7	1.0	0.27	0.09
183	17	8.8	5.6	3.7	2.1	1.4

Magnitude and frequency of instantaneous peak flow, based on period of record 1941, 1969-81, 1987-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
331	524	659	836	970	1,110

Magnitude and frequency of annual high flow, based on period of record 1941, 1969-81, 1987-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 <sup>#</sup> 2%	100 <sup>#</sup> 1%
1	236	399	540	765	951	1,080
3	204	345	472	681	879	1,020
7	169	288	395	569	732	928
15	139	243	333	476	606	760
30	113	202	283	412	532	676
60	95	171	235	335	424	526
90	80	141	192	269	336	413

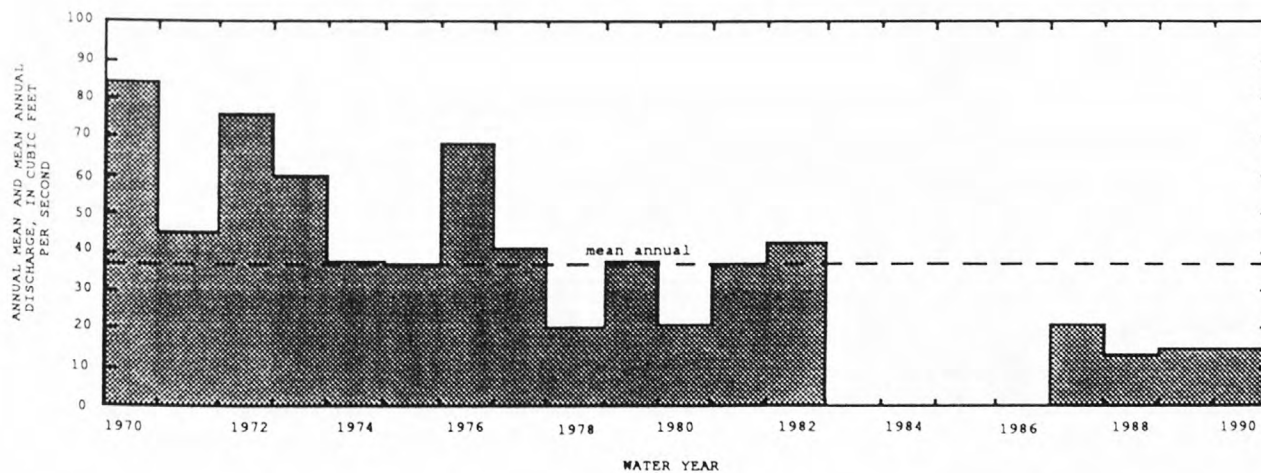
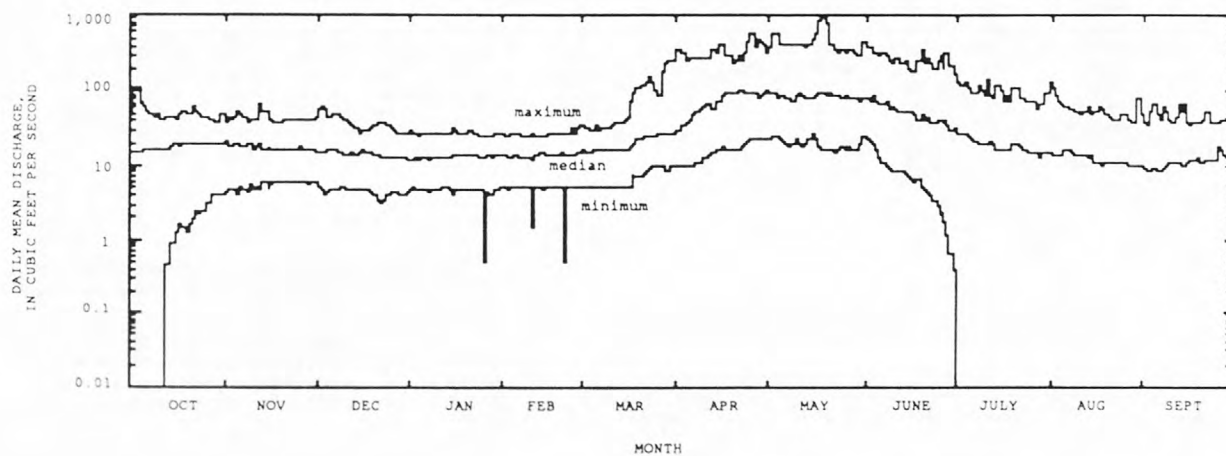
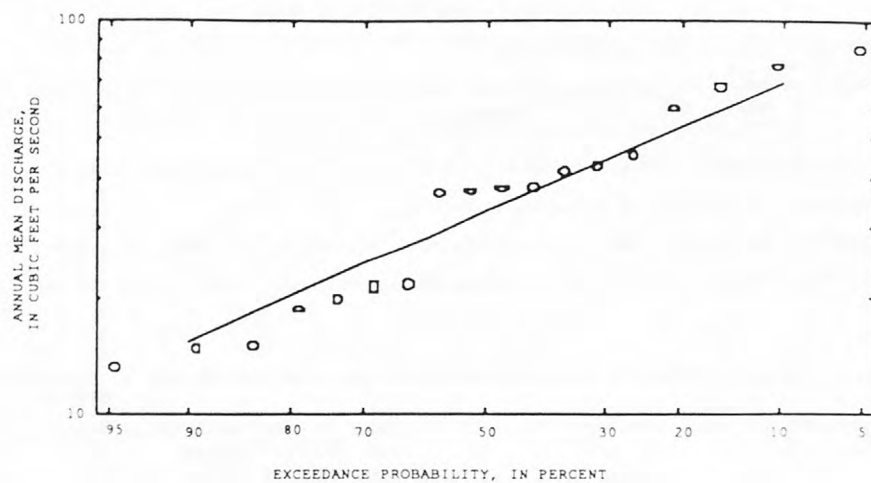
Duration table of daily mean flow for period of record 1941, 1969-81, 1987-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
329	145	94	62	46	32	25	20	17	13	9.7	6.1	4.4	0.69	0.01	0.00

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## MUD LAKE-LOST RIVER BASIN

13113500 BEAVER CREEK AT DUBOIS, ID

LOCATION.—Lat 44°11'10", long 112°14'08", in SW¼, SE¼, NW¼, sec. 21, T.10 N., R.36 E., Clark County, Hydrologic Unit 17040214, on left bank 50 ft north of highway bridge crossing in Dubois.

DRAINAGE AREA.—220 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—April 1921 to September 1973, April to September 1983, April 1985 to September 1987 (discontinued). Prior to July 12, 1985, nonrecording gage at same site and datum. April 1921 to September 1973, at site 0.50 mi upstream. Records may not be comparable during irrigation season.

GAGE.—Water-stage recorder. Elevation of gage is 5,150 ft above sea level, from topographic map.

REMARKS.—Flow affected by irrigation diversions.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 672 ft<sup>3</sup>/s Apr. 15, 1985, gage height, 4.50 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum observed discharge, 1,070 ft<sup>3</sup>/s May 16, 1984, gage height, 5.55 ft.

Summary of monthly and annual discharges, 1922-24, 1929, 1931-73, 1987

Magnitude and frequency of annual low flow, based on period of record 1923-24, 1929, 1931-73

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	39	0.00	6.5	9.5	1.5	2.5
November	39	0.00	7.3	10	1.4	2.8
December	24	0.00	5.4	7.7	1.4	2.1
January	21	0.00	4.5	6.5	1.5	1.7
February	23	0.00	5.6	7.1	1.3	2.2
March	54	0.00	12	14	1.2	4.5
April	213	0.00	59	46	0.78	22.9
May	473	0.00	80	93	1.2	30.9
June	251	0.00	56	63	1.1	21.5
July	77	0.00	13	18	1.4	5.1
August	31	0.00	5.4	8.9	1.7	2.1
September	34	0.00	4.5	7.7	1.7	1.7
Annual	94	0.00	22	19	0.90	100

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.36	0.00	0.00	0.00	0.00	0.00

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1922-24, 1929, 1987

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
267	456	593	773	912	1,050	

Magnitude and frequency of annual high flow,  
based on period of record 1922-24, 1929, 1931-73, 1987

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	217	352	417	474	503	524
3	187	305	361	411	437	456
7	159	260	306	344	362	374
15	129	218	257	288	302	310
30	100	179	215	242	255	263
60	74	145	178	206	218	227
90	58	117	145	168	178	185

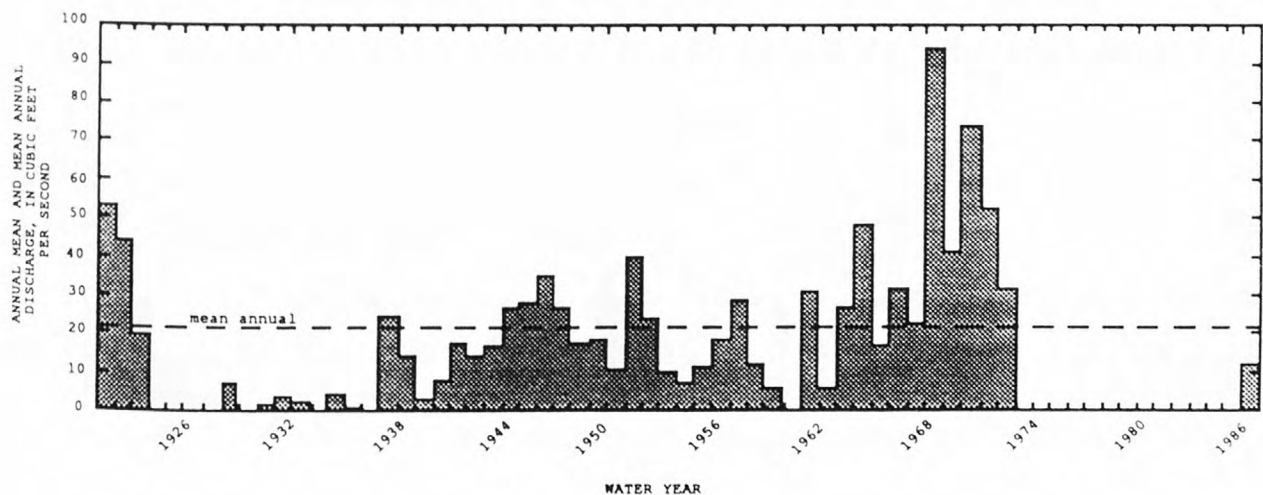
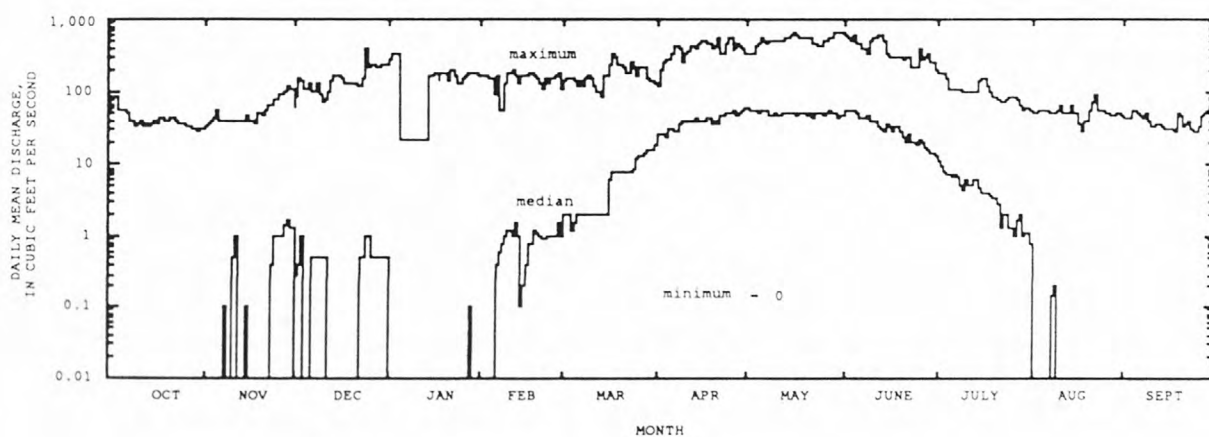
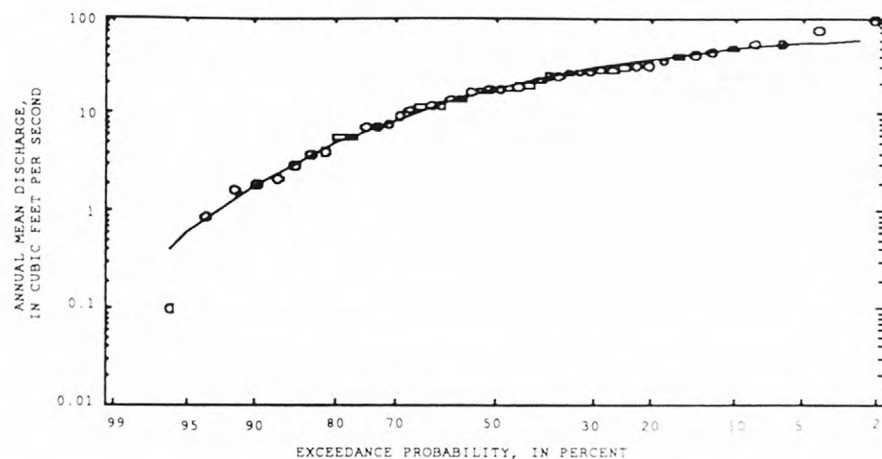
Duration table of daily mean flow for period of record 1922-24, 1929, 1931-73, 1987

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
252	116	60	37	26	17	9.2	3.1	0.02	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MUD LAKE-LOST RIVER BASIN

13114000 BEAVER CREEK AT CAMAS, ID

LOCATION.—Lat 44°00'27", long 112°13'25", in NW¼, SW¼, sec.21, T.8 N., R.36 E., Jefferson County, Hydrologic Unit 17040214, on right bank 0.1 mi west of railroad crossing at Camas, and about 1.4 mi upstream from mouth.

DRAINAGE AREA.—510 mi<sup>2</sup>, approximately. Mean elevation, 6,190 ft.

PERIOD OF RECORD.—April 1921 to September 1982 (flood season only 1971-82), April 1984 to September 1985 (no winter record), October 1985 to September 1986, October 1987 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 4,790 ft above sea level, by barometer. Prior to Dec. 22, 1949, nonrecording gages at nearby sites at present datum.

REMARKS.—Flow affected by irrigation diversions above Dubois, 14 mi above station, and by heavy channel losses below Dubois. Diversions above station for irrigation of about 5,800 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 492 ft<sup>3</sup>/s May 17, 1984, gage height, 4.56 ft; no flow for long periods in each year; no flow for entire water years 1929, 1931-37, 1940, 1963, 1989.

Summary of monthly and annual discharges, 1922-70, 1988-89

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	6.8	0.00	0.13	0.94	7.2	0.2
November	9.1	0.00	0.18	1.3	7.2	0.3
December	3.8	0.00	0.07	0.52	7.2	0.1
January	0.87	0.00	0.02	0.12	7.2	0.0
February	12	0.00	0.23	1.6	7.1	0.3
March	50	0.00	3.1	9.0	2.9	4.5
April	122	0.00	20	26	1.3	28.8
May	213	0.00	24	42	1.7	35.7
June	154	0.00	18	33	1.8	27.0
July	43	0.00	2.1	7.2	3.5	3.0
August	3.7	0.00	0.07	0.52	7.2	0.1
September	0.24	0.00	0.00	0.03	7.2	0.0
Annual	44	0.00	5.7	7.9	1.4	100

Magnitude and frequency of annual low flow,  
based on period of record 1923-70, 1989-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1922-70, 1988-89

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
109	195	263	363	446	538

Magnitude and frequency of annual high flow,  
based on period of record 1922-70, 1988-89

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	90	147	170	188	196	203
3	82	138	160	177	184	189
7	65	124	147	165	173	180
15	45	103	132	157	169	178
30	29	79	112	146	167	177
60	16	55	85	123	151	176
90	11	39	63	93	116	139

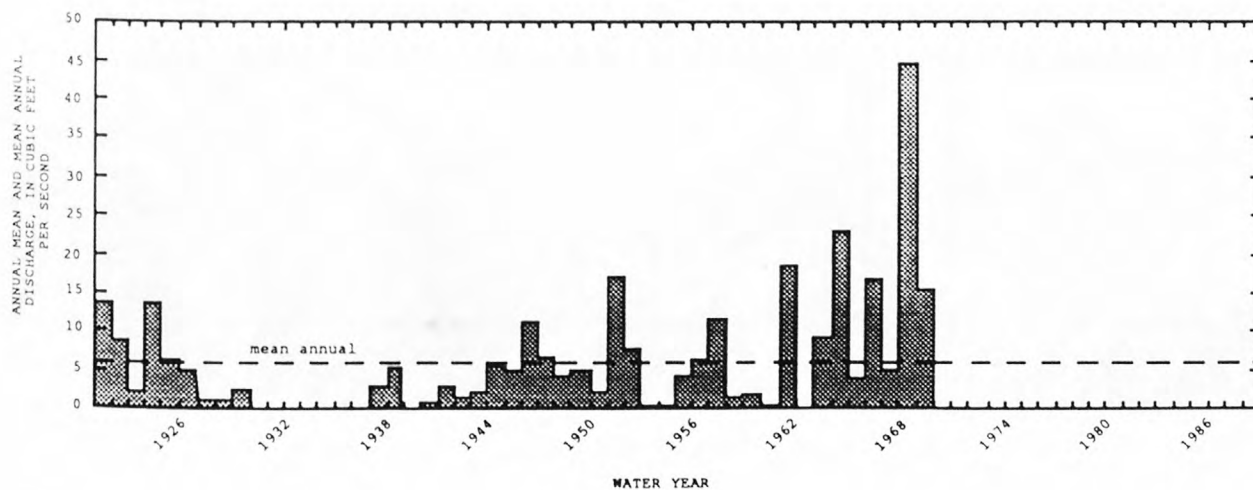
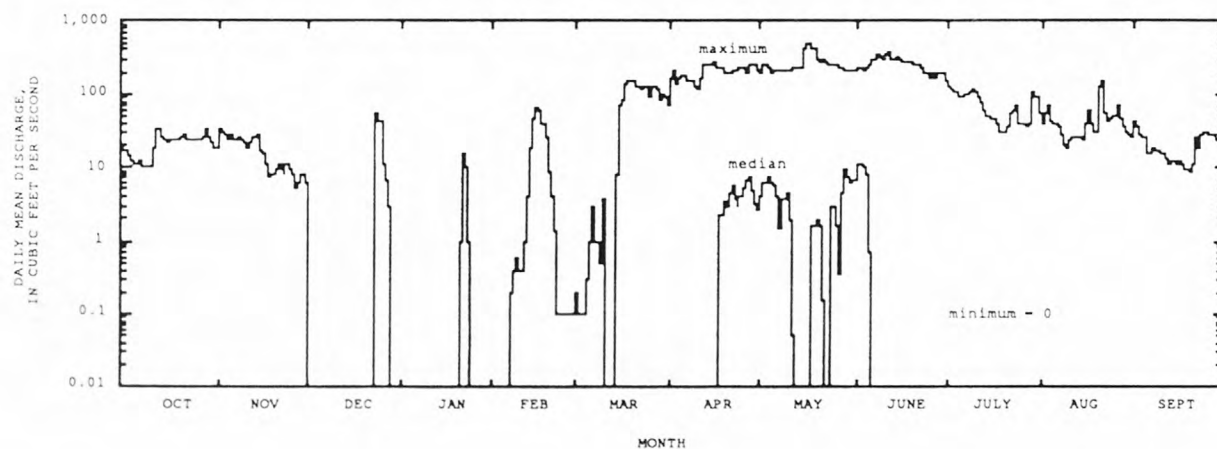
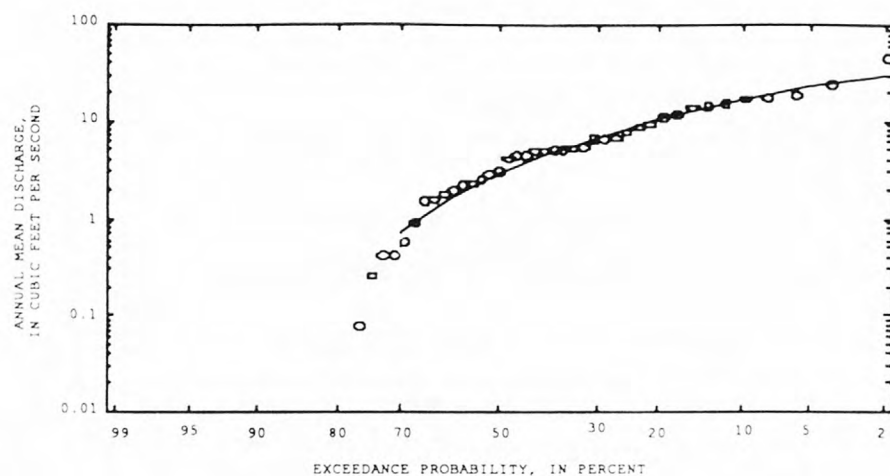
Duration table of daily mean flow for period of record 1922-70, 1988-89

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
126	44	4.9	0.02	0.02	0.02	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MUD LAKE-LOST RIVER BASIN

13116000 MEDICINE LODGE CREEK AT ELLIS RANCH, NEAR ARGORA, ID

LOCATION.—Lat 44°17'30", long 112°30'05", in SW 1/4, SE 1/4, sec. 7, T. 11 N., R. 34 E., Clark County, Hydrologic Unit 17040214, on left bank 4 mi upstream from Middle Creek, 6.5 mi southeast of Argora, and 16 mi northwest of Dubois.

DRAINAGE AREA.—165 mi<sup>2</sup>, approximately. Mean altitude 7,520 ft.

PERIOD OF RECORD.—October 1940 to September 1969.

GAGE.—Water-stage recorder. Altitude of gage is 5,710 ft above sea level, from topographic survey of dam sites. Prior to Nov. 16, 1940, non-recording gage at site 0.2 mi upstream at different datum. Nov. 16, 1940, to May 30, 1950, at site 50 ft downstream at present datum.

REMARKS.—Diversions above station for irrigation of about 2,900 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 361 ft<sup>3</sup>/s Apr. 15, 1962 (gage height, 4.52 ft), on basis of slope-area measurement of peak flow; minimum, 4.0 ft<sup>3</sup>/s Feb. 15, 1953, Nov. 28, 1954 (gage height, 1.24 ft).

Summary of monthly and annual discharges, 1942-69

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	59	23	38	9.4	0.25	7.4
November	54	13	34	9.9	0.29	6.8
December	44	19	30	7.2	0.24	6.0
January	46	22	31	6.2	0.20	6.2
February	45	24	35	6.5	0.19	6.9
March	58	21	37	8.4	0.22	7.5
April	96	12	38	20	0.54	7.6
May	69	28	47	9.2	0.20	9.3
June	110	35	63	18	0.29	12.6
July	111	25	57	18	0.32	11.4
August	78	21	49	15	0.31	9.8
September	68	23	43	12	0.28	8.5
Annual	54	25	42	7.4	0.18	100

Magnitude and frequency of annual low flow,  
based on period of record 1942-69

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	12	8.8	7.6	6.7	5.8	5.3
3	12	9.1	7.8	6.8	5.9	5.3
7	14	10	8.4	7.3	6.1	5.5
14	16	12	10	8.9	7.8	7.1
30	22	17	15	13	11	10
60	27	23	21	19	17	16
90	30	25	23	21	19	18
120	31	26	24	22	21	19
183	34	28	25	23	21	20

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1942-69

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
102	150	191	252	307	370	

Magnitude and frequency of annual high flow,  
based on period of record 1942-69

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	83	117	144	184	219	258
3	79	108	130	163	190	220
7	75	99	117	141	160	181
15	70	92	108	129	147	165
30	67	85	97	113	126	139
60	62	76	86	98	107	116
90	59	72	80	90	96	103

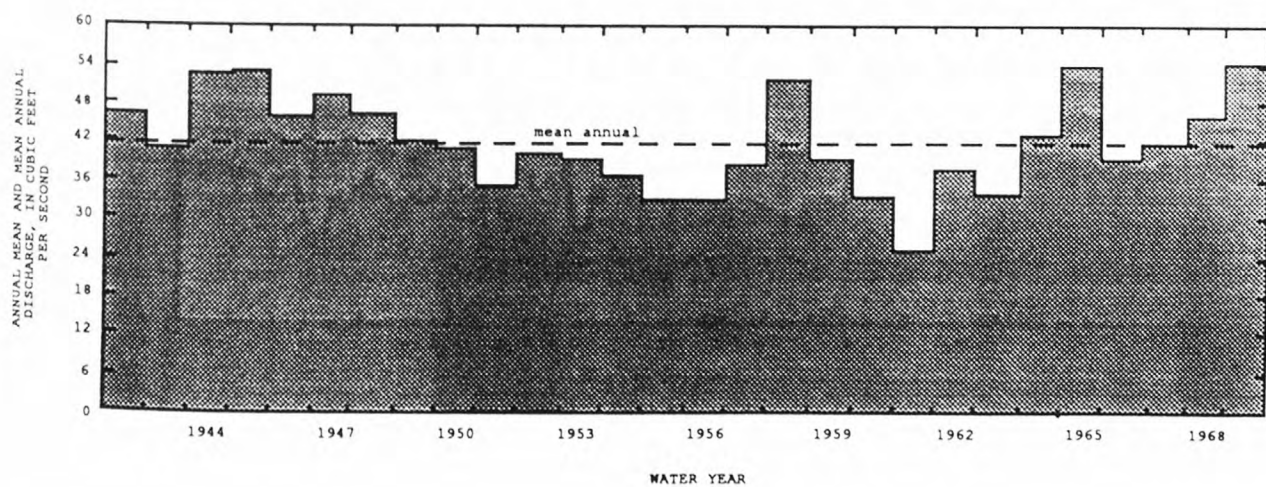
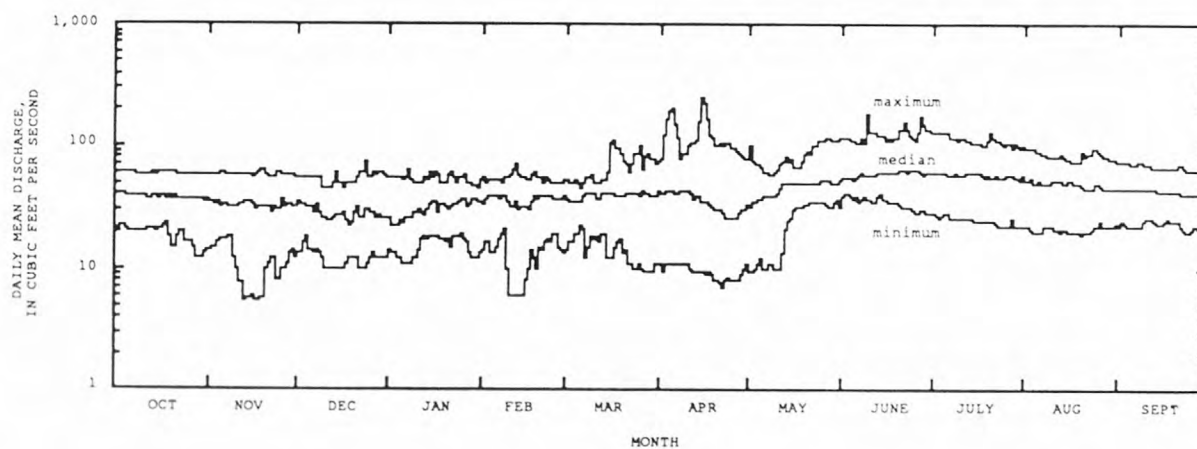
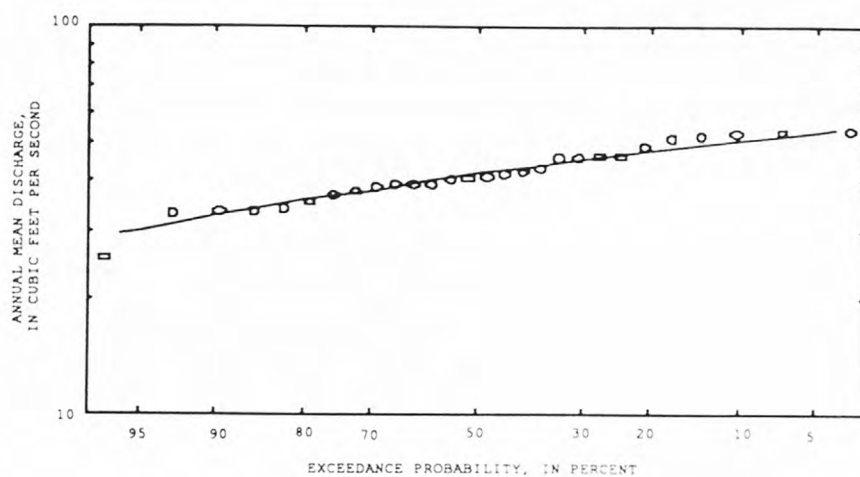
Duration table of daily mean flow for period of record 1942-69

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
106	71	64	59	55	49	44	41	37	32	28	22	17	13	11	9.8	6.5	

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## MUD LAKE-LOST RIVER BASIN

13116500 MEDICINE LODGE CREEK NEAR SMALL, ID

LOCATION.—Lat 44°15'22", long 112°24'12", in SW 1/4, NE 1/4, sec.25, T.11 N., R.34 E., Clark County, Hydrologic Unit 17040214, on right bank 400 ft west of H.W. Small's ranch house, 0.4 mi downstream from Indian Creek, 4 mi northwest of Small and 11 mi northwest of Dubois.

DRAINAGE AREA.—270 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—April 1921 to December 1923, October 1941 to January 1949, May 1985 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 5,440 ft above sea level, from topograph map. Nonrecording gage, Apr. 19, 1921, to Dec. 19, 1923, at a site 100 ft upstream at different datum, 1941-49, water-stage recorder at site 200 ft upstream.

REMARKS.—Many small diversions for irrigation above station. Water also diverted by ranches upstream of station during winter months.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 265 ft<sup>3</sup>/s June 9, 1944; maximum gage height, 8.44 ft Jan. 10, 1986; minimum discharge observed, 8.0 ft<sup>3</sup>/s Dec. 14, 1940 (discharge measurement).

Summary of monthly and annual discharges, 1922-23, 1942-48, 1986-90

Magnitude and frequency of annual low flow, based on period of record 1923, 1942-48, 1987-91

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	67	41	51	8.0	0.16	7.3
November	62	36	51	8.4	0.17	7.3
December	62	22	43	9.6	0.22	6.2
January	62	20	40	11	0.27	5.7
February	68	33	46	8.7	0.19	6.5
March	67	40	55	8.2	0.15	7.8
April	83	47	60	9.1	0.15	8.6
May	109	49	72	18	0.25	10.4
June	145	51	90	27	0.30	13.0
July	147	40	76	27	0.36	10.9
August	89	38	63	15	0.24	9.0
September	69	36	51	9.9	0.19	7.3
Annual	71	45	58	8.4	0.14	100

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	22	15	12	10	8.2	7.1
3	23	16	14	12	9.9	8.9
7	25	19	17	16	14	14
14	28	22	19	17	16	15
30	33	26	23	21	19	17
60	37	29	26	23	20	18
90	40	33	29	27	24	22
120	42	36	33	31	28	27
183	45	38	35	33	30	28

Magnitude and frequency of instantaneous peak flow, based on period of record 1922-23, 1942-48, 1986-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
132	175	203	238	265	291

Magnitude and frequency of annual high flow, based on period of record 1922-23, 1942-48, 1986-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	115	151	174	204	227	249
3	109	139	158	180	195	210
7	103	133	152	175	191	207
15	98	127	145	167	182	197
30	93	120	137	158	173	188
60	85	109	124	142	155	168
90	80	100	113	127	138	148

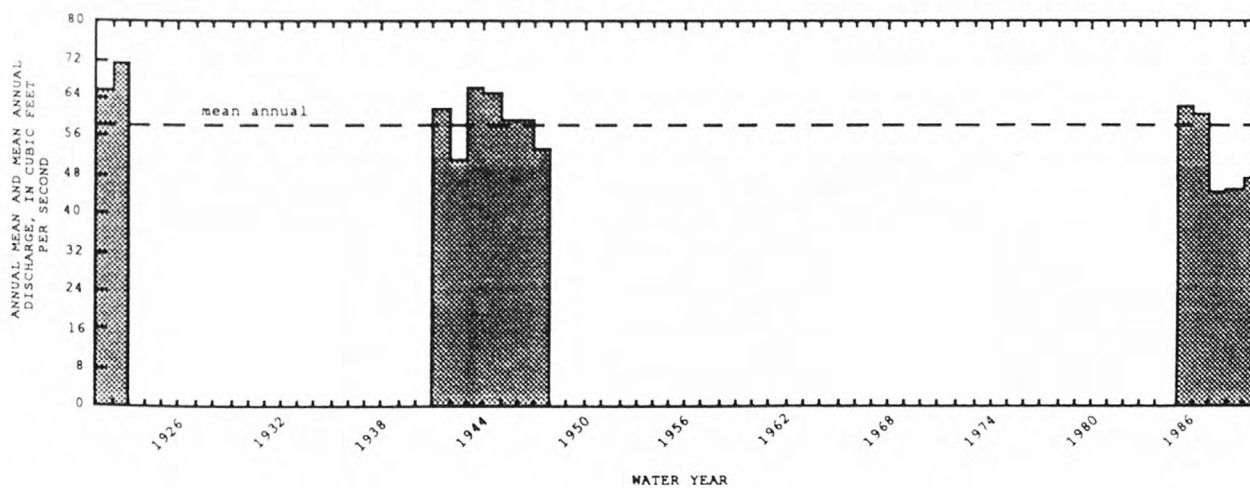
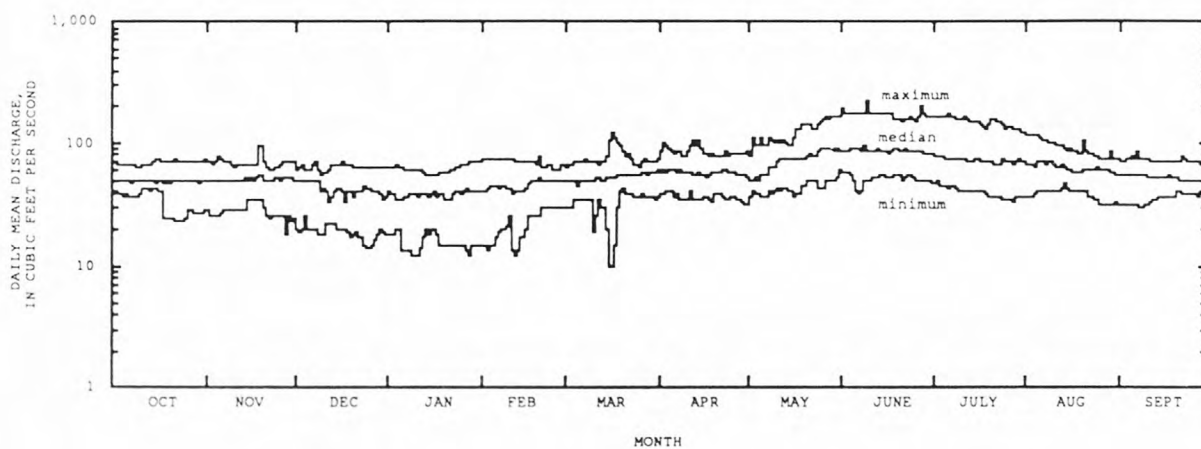
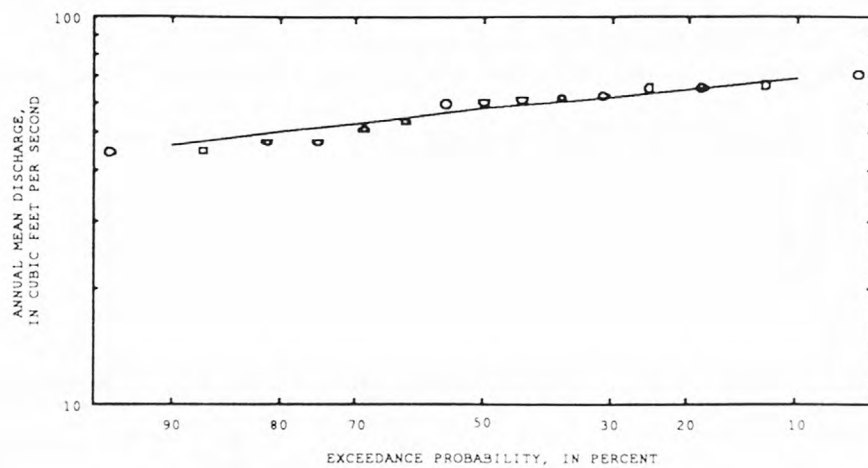
Duration table of daily mean flow for period of record 1922-23, 1942-48, 1986-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
144	103	86	77	71	64	58	54	51	48	44	38	30	21	20	19	13

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MUD LAKE-LOST RIVER BASINS

13117000 BIRCH CREEK NEAR RENO, ID

LOCATION.--Lat 44° 12', long 112° 57', in sec.13, T.10 N., R.29 E., on left bank 200 ft west of State Highway 28, 2 mi south of the Lemhi-Clark County line, 5 mi southeast of former Reno Post Office, and 35 mi west of Dubois.

DRAINAGE AREA.--320 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--September 1910 to June 1912 (published as "near Kaufman"), April 1921 to January 1923, October 1950 to September 1963.

GAGE.--Water-stage recorder. Elevation of gage is 6,240 ft above sea level, by barometer. Prior to Oct. 1, 1950, nonrecording gage at site 0.5 mi downstream at different datum.

REMARKS.--Small diversions for stock ranches and hay meadows above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 220 ft<sup>3</sup>/s Apr. 1, 1962 (gage height, 2.19 ft); maximum gage height observed, 3.11 ft Jan. 25, 1962 (backwater from ice); minimum daily mean discharge, 50 ft<sup>3</sup>/s, Jan. 12, 1963; minimum gage height, 1.33 ft, Jan. 23, 1963.

Summary of monthly and annual discharges, 1911, 1922, 1951-63

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	94	73	79	6.2	0.08	8.3
November	88	68	78	5.1	0.06	8.3
December	88	67	78	4.8	0.06	8.3
January	93	63	78	6.5	0.08	8.3
February	90	69	79	5.4	0.07	8.3
March	92	72	79	5.8	0.07	8.4
April	89	73	81	5.1	0.06	8.6
May	90	74	81	4.5	0.06	8.6
June	89	73	79	4.8	0.06	8.4
July	83	68	76	3.9	0.05	8.1
August	86	70	77	5.3	0.07	8.1
September	87	72	78	5.9	0.08	8.3
Annual	89	70	79	4.5	0.06	100

Magnitude and frequency of annual low flow,  
based on period of record 1912, 1922, 1952-63

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	72	64	59	55	50	46
3	72	65	61	57	52	48
7	72	67	63	60	56	53
14	73	68	65	62	58	56
30	73	69	67	65	64	62
60	74	71	69	67	65	64
90	75	72	70	68	66	65
120	76	72	70	68	66	65
183	77	73	71	70	68	67

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1911, 1922, 1951-63

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
95	113	134	171	209	257	

Magnitude and frequency of annual high flow,  
based on period of record 1911, 1922, 1951-63

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	88	98	107	120	131	142
3	87	96	103	114	123	132
7	86	94	99	105	110	115
15	85	91	95	100	103	106
30	84	89	91	94	96	97
60	82	87	89	92	93	95
90	81	86	88	91	93	95

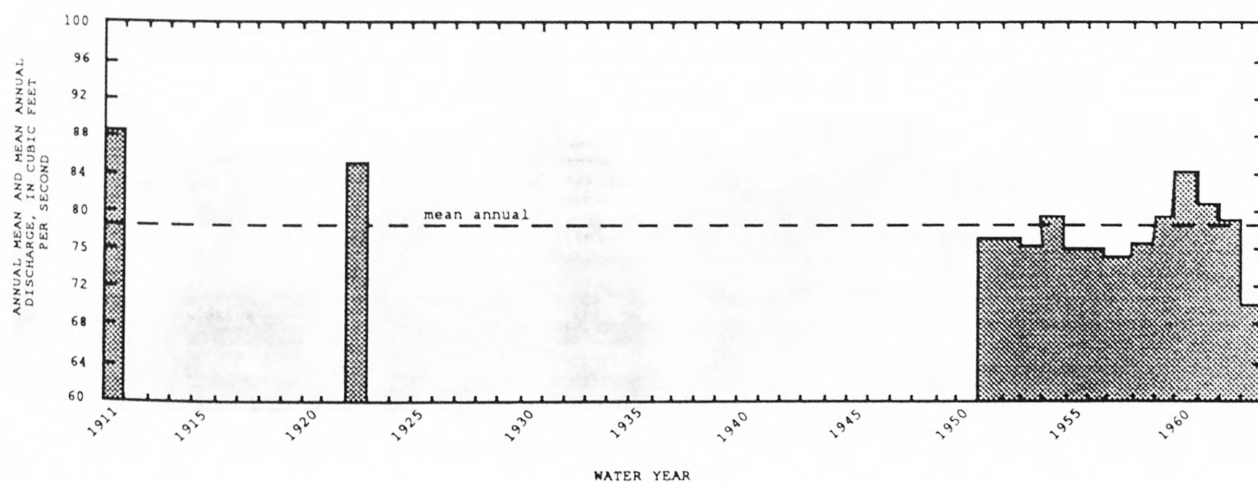
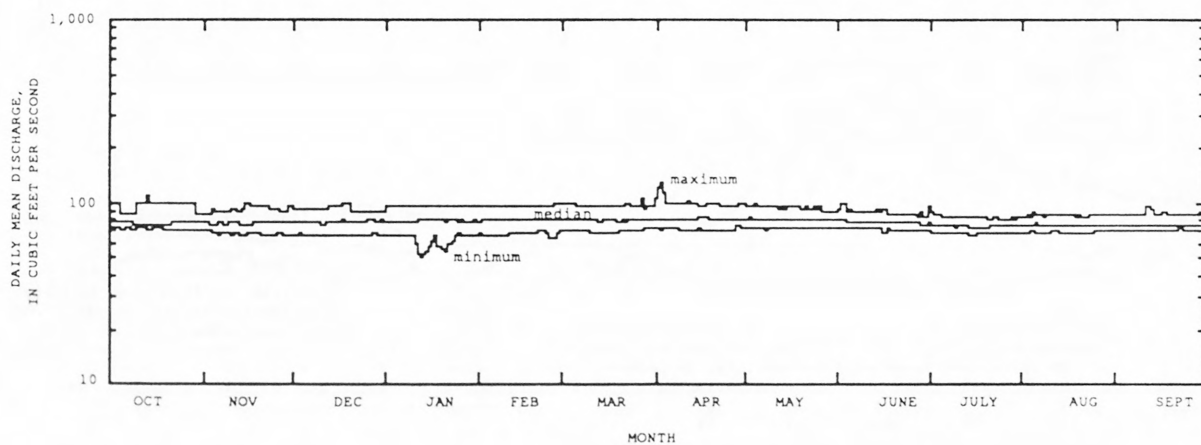
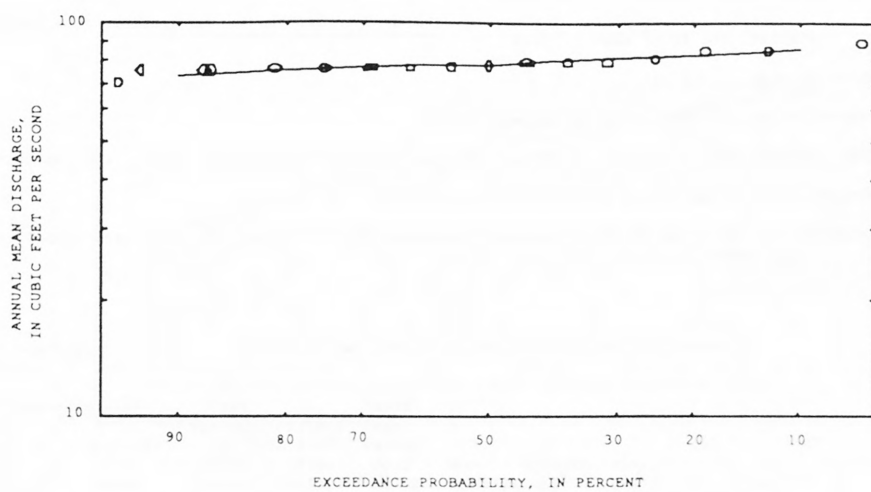
Duration table of daily mean flow for period of record 1961-73

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
94	89	87	85	84	82	80	79	77	76	75	73	71	68	67	66	57

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MUD LAKE-LOST RIVER BASINS

13117300 SAWMILL CREEK NEAR GOLDBURG, ID

LOCATION.--Lat 44° 18'40", long 113°20'20", in NE 1/4 SE 1/4, sec.3, T.11 N., R.26 E., Lemhi County, U.S. Bureau of Land Management lands on left bank 25 ft (7.6 mi) downstream from bridge, 0.4 mi upstream from Warm Creek, 2 mi southeast of Fairview guard station, and 16 mi east of Goldburg.

DRAINAGE AREA.--74.3 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1960 to September 1973.

GAGE.--Water-stage recorder. Elevation of gage is 6,600 ft above sea level, from topographic map.

REMARKS.--No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 651 ft<sup>3</sup>/s June 12, 1965 (gage height, 4.45 ft); minimum, 3.9 ft<sup>3</sup>/s Apr. 2, 1967 (gage height, 1.68 ft).

Summary of monthly and annual discharges, 1961-73

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	30	14	21	5.4	0.25	3.5
November	31	14	19	4.5	0.23	3.2
December	34	9.1	17	6.0	0.36	2.8
January	22	9.2	16	3.3	0.21	2.6
February	22	13	17	2.6	0.16	2.8
March	27	13	18	4.6	0.26	3.0
April	80	17	34	19	0.55	5.7
May	317	54	149	70	0.47	24.7
June	400	47	200	103	0.52	33.1
July	112	22	59	25	0.43	9.7
August	52	15	29	9.5	0.32	4.9
September	37	16	24	6.4	0.27	4.0
Annual	77	24	50	15	0.30	100

Magnitude and frequency of annual low flow,  
based on period of record 1962-73

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	13	11	9.1	8.0	6.7	5.9
3	13	11	9.4	8.3	7.0	6.2
7	14	11	9.9	8.7	7.4	6.6
14	14	12	11	9.4	8.1	7.2
30	15	13	11	9.8	8.4	7.6
60	16	13	12	10	8.9	7.9
90	16	13	12	11	9.6	8.8
120	17	14	13	12	11	10
183	18	15	13	12	11	11

Magnitude and frequency of annual high flow,  
based on period of record 1961-73Magnitude and frequency of instantaneous peak flow,  
based on period of record 1961-73

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
377	523	615	728	809	887	

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	341	479	554	633	683	725
3	321	452	524	600	647	688
7	301	427	495	568	612	651
15	274	390	453	516	555	588
30	238	338	391	445	477	504
60	176	252	292	335	360	382
90	137	191	221	251	269	285

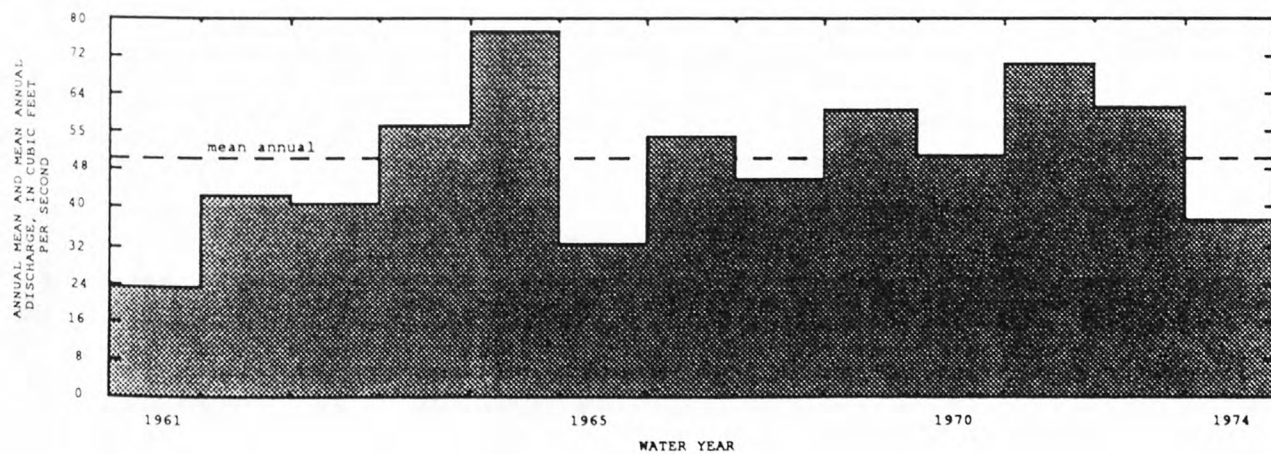
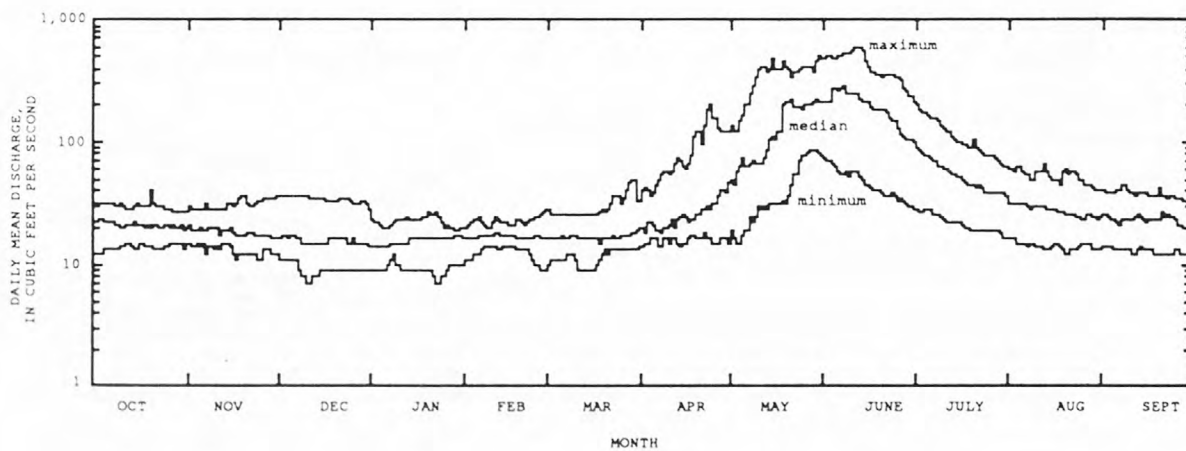
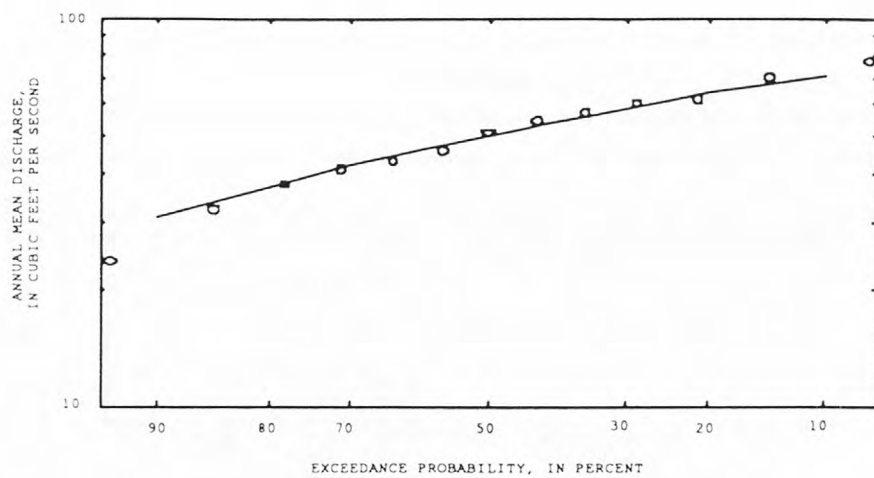
Duration table of daily mean flow for period of record 1961-73

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
395	225	127	76	54	33	27	23	19	18	16	14	13	12	9.0	8.5	8.0	

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## MUD LAKE-LOST RIVER BASINS

13118700 LITTLE LOST RIVER BELOW WET CREEK, NEAR HOWE, ID

LOCATION.--Lat 44° 08'19", long 113° 14'39", in NW 1/4, SE 1/4, sec. 4, T.9 N., R.27 E. Butte County, Hydrologic Unit 17050217, U.S. Bureau of Land Management lands, on right bank at Clyde School, 0.6 mi downstream from Wet Creek, and 27 mi northwest of Howe.

DRAINAGE AREA.--440 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--January 1958 to September 1990.

GAGE.--Water-stage recorder. Elevation of gage is 5,880 ft above sea level, from topographic map.

REMARKS.--Divisions above station for irrigation of about 3,800 acres, of which about 2,000 acres are irrigated by withdrawals from ground water.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 509 ft<sup>3</sup>/s June 16, 1975, gage height, 3.19 ft, but may have been more during period of doubtful gage-height record in 1958; maximum gage height recorded, 5.99 ft, Feb. 8, 1979 (ice jam); minimum discharge recorded, 2.8 ft<sup>3</sup>/s Dec. 13, 1962.

Summary of monthly and annual discharges, 1959-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	101	33	60	17	0.29	7.2
November	70	17	40	13	0.32	4.9
December	47	8.0	22	7.2	0.32	2.7
January	53	3.5	23	9.4	0.41	2.7
February	45	9.0	25	8.8	0.35	3.1
March	58	18	37	12	0.32	4.4
April	162	24	66	26	0.40	7.9
May	261	53	139	48	0.34	16.7
June	354	81	196	76	0.39	23.5
July	208	34	100	46	0.46	12.1
August	141	26	63	24	0.38	7.6
September	128	27	60	21	0.35	7.2
Annual	115	32	69	18	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1959-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	16	10	7.6	5.8	4.0	3.1
3	17	11	8.0	6.0	4.1	3.2
7	18	12	8.7	6.5	4.5	3.4
14	20	13	9.3	6.9	4.7	3.5
30	21	13	9.8	7.2	4.9	3.6
60	22	15	11	9.0	6.7	5.4
90	23	16	13	10	8.1	6.8
120	24	18	15	13	11	9.2
183	34	26	23	20	18	16

Magnitude and frequency of annual high flow,  
based on period of record 1959-90Magnitude and frequency of instantaneous peak flow,  
based on period of record 1959-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
309	409	464	524	562	596	

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	279	371	421	476	511	542
3	266	357	408	464	501	534
7	250	335	381	432	465	494
15	231	310	354	401	432	460
30	206	277	317	362	392	419
60	171	229	262	299	324	346
90	145	192	219	249	268	285

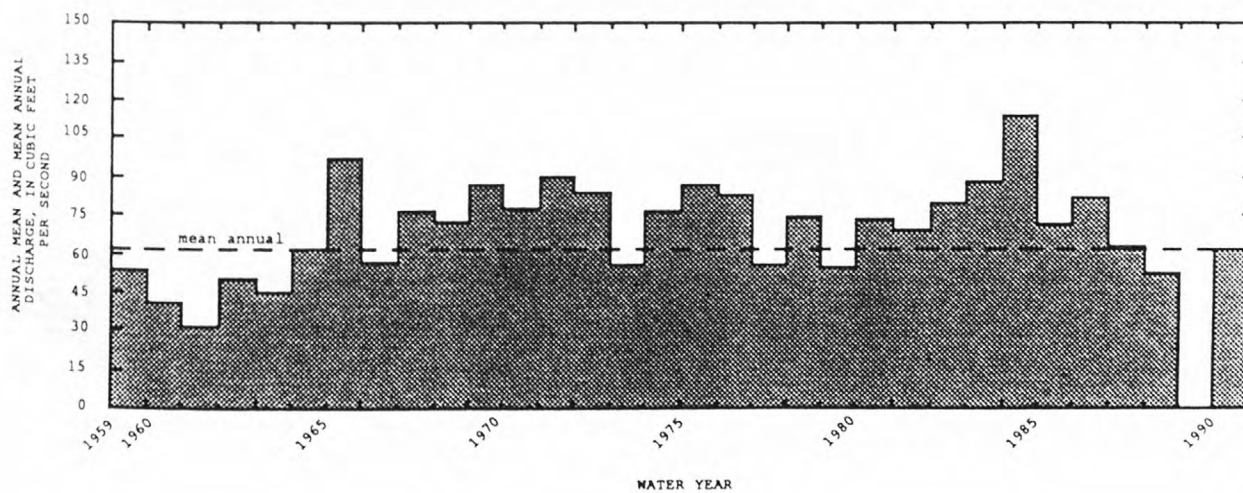
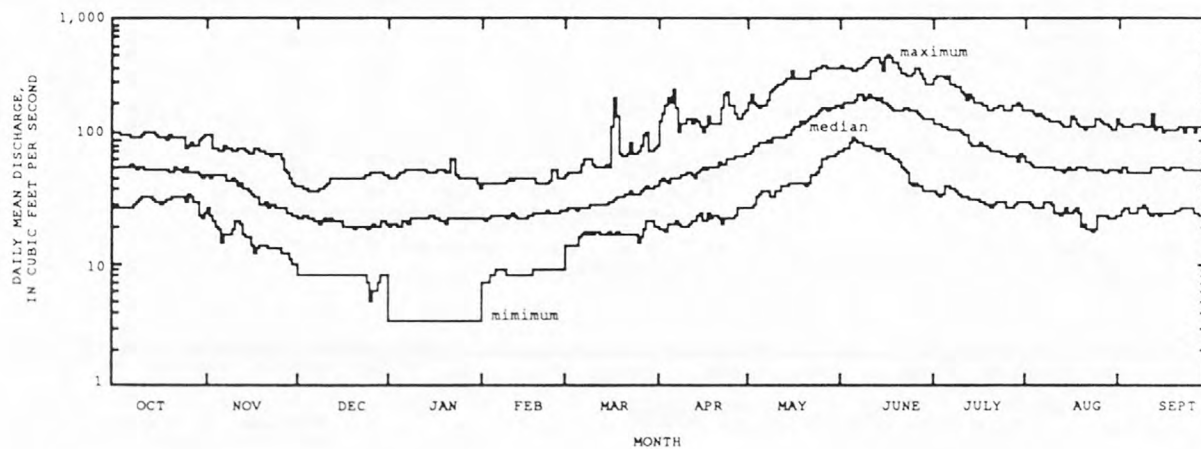
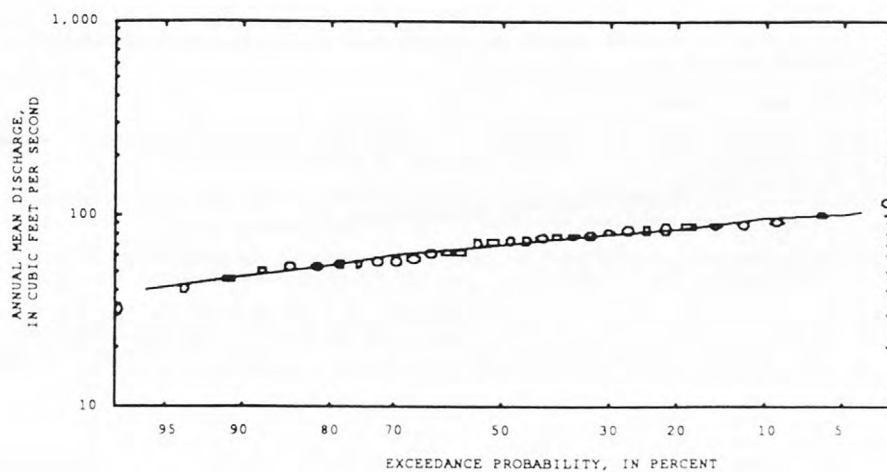
Duration table of daily mean flow for period of record 1959-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
322	212	151	117	96	74	60	50	41	32	26	20	16	12	8.6	6.4	3.7	

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MUD LAKE-LOST RIVER BASINS

13119000 LITTLE LOST RIVER NEAR HOWE, ID

LOCATION.--Lat 43° 53'10", long 113° 06'00", in NW 1/4, NE 1/4, NW 1/4, sec.11, T.6N., R.28 E., Butte County, Hydrologic Unit 17040217, U.S. Bureau of Land Management lands on left bank 0.2 mi upstream from diversion dam of Blaine County Investment Co., and 7 mi northwest of Howe.

DRAINAGE AREA.--703 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1921 to September 1981. May 1985 to September 1990 (no winter records prior to October 1940). Monthly discharges only for some periods, published in MSP 1317.

GAGE.--Water-stage recorder. Elevation of gage is 5,020 ft above sea level, by barometer. Prior to Sept. 2, 1938, nonrecording gage at site 120 ft downstream at datum 1.39 ft higher.

REMARKS.--Diversion above station for irrigation of about 11,500 acres, of which about 7,600 acres are irrigated by withdrawals from ground water (1966 determination). Diversions 1 mi upstream since Dec. 1984, for winter flood control.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, about 450 ft<sup>3</sup>/s Aug. 11, 1936, during cloudburst, gage height, 5.4 ft, present site and datum from rating curve extended above 220 ft<sup>3</sup>/s; maximum gage height observed, 6.63 ft, Jan. 23, 1957 (backwater from ice); minimum discharge observed before construction of bypass, 4.1 ft<sup>3</sup>/s Dec. 12, 1940.

Summary of monthly and annual discharges, 1941-81, 1986-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	116	46	75	18	0.23	8.2
November	107	30	58	17	0.29	6.3
December	57	0.00	31	12	0.39	3.4
January	49	0.00	27	13	0.48	2.9
February	80	0.00	35	15	0.43	3.7
March	112	17	55	22	0.40	6.0
April	174	40	84	25	0.30	9.2
May	218	73	135	33	0.25	14.7
June	239	94	164	39	0.24	17.9
July	195	50	107	33	0.31	11.6
August	114	44	75	18	0.24	8.2
September	111	48	72	16	0.23	7.9
Annual	106	49	77	15	0.20	100

Magnitude and frequency of annual low flow,  
based on period of record 1941-81

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	24	16	12	8.7	6.0	4.6
3	24	16	12	8.8	6.1	4.6
7	26	17	12	9.1	6.2	4.6
14	26	18	14	11	8.3	6.7
30	28	20	16	11	10	8.5
60	33	22	16	12	12	10
90	34	23	17	14	13	11
120	36	24	17	16	15	14
183	46	36	31	27	24	21

Magnitude and frequency of annual high flow,  
based on period of record 1941-81, 1986-90Magnitude and frequency of instantaneous peak flow,  
based on period of record 1941-81, 1986-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
190	229	262	302	332	361	

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	189	226	249	275	294	311
3	187	222	243	267	283	299
7	183	218	238	260	276	291
15	178	212	233	256	272	287
30	169	204	225	248	265	281
60	152	185	204	226	241	255
90	136	165	181	200	212	224

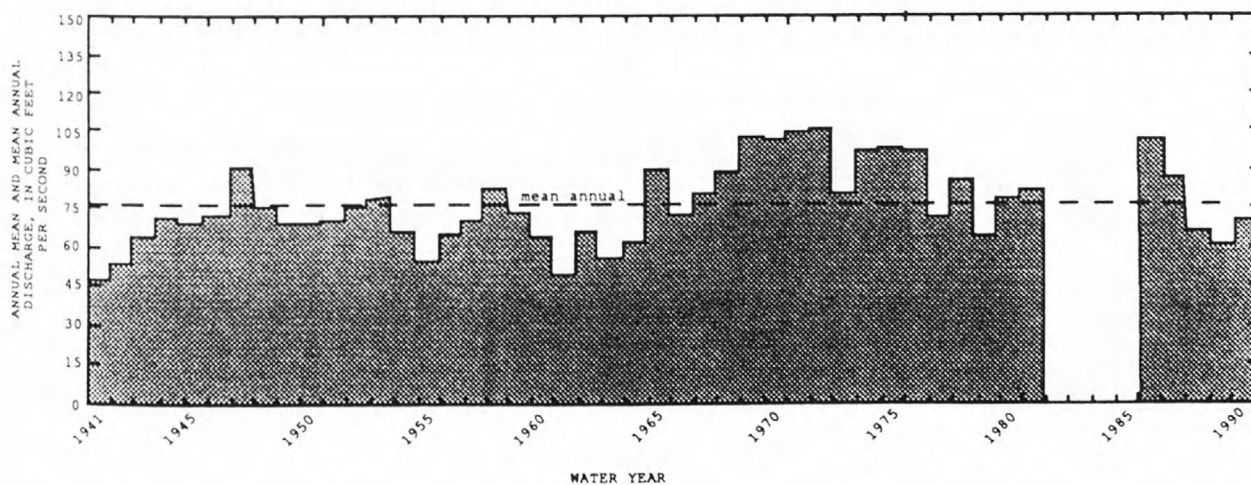
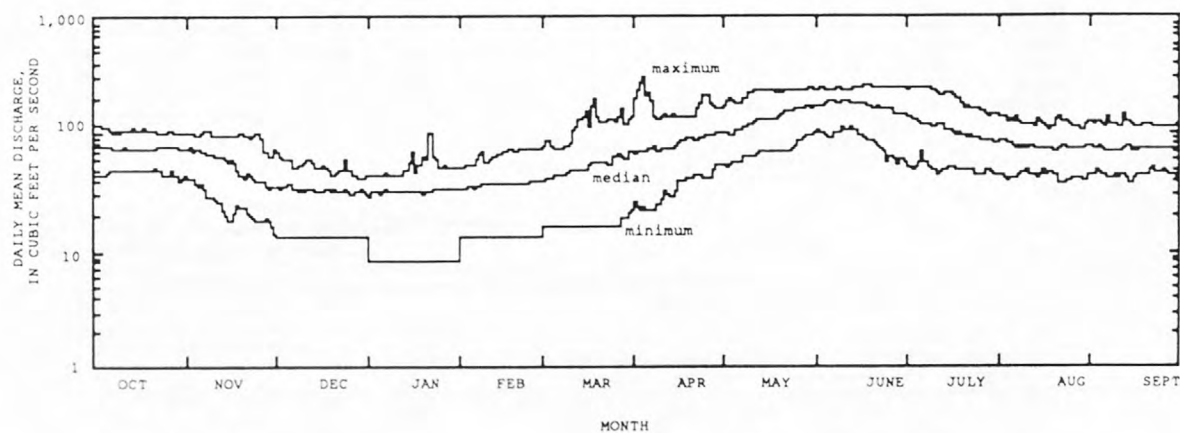
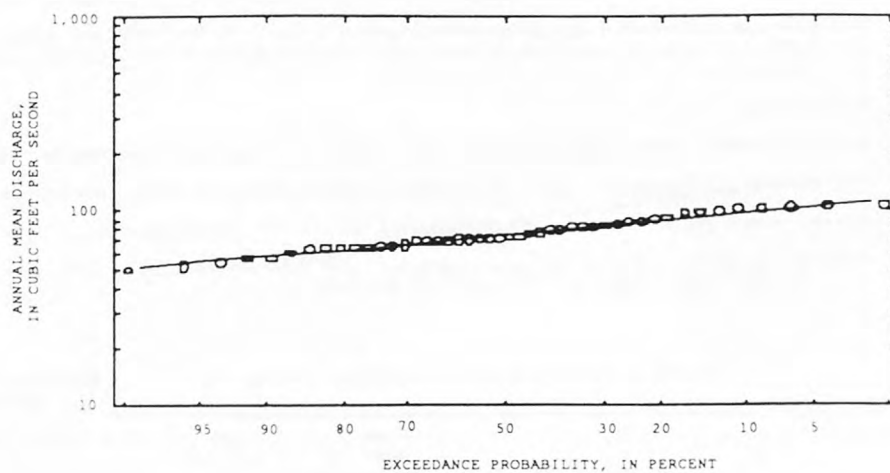
Duration table of daily mean flow for period of record 1941-81, 1986-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
229	180	146	124	110	92	79	68	57	47	37	28	20	0.90	0.45	0.22	0.04

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MUD LAKE-LOST RIVER BASINS

13120000 NORTH FORK BIG LOST RIVER AT WILD HORSE, NEAR CHILLY, ID

LOCATION.--Lat 43°55'59", long 114°06'47", in NE 1/4, SE 1/4, sec.17, T.7 N., R.20 E., Custer County, Hydrologic Unit 17040218, in Challis National Forest, on right bank 0.2 mi upstream from East Fork, 2 mi downstream from Wild Horse damsite, and 16 mi southwest of Chilly.

DRAINAGE AREA.--114 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1944 to September 1990. Prior to October 1967, published as "Big Lost River at Wild Horse, near Chilly."

GAGE.--Water-stage recorder. Elevation of gage is 6,820 ft above sea level, from topographic map.

REMARKS.--There are several small ranch diversions upstream for local irrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,440 ft<sup>3</sup>/s May 30, June 1, 1986, gage height, 5.85 ft; minimum, 4.9 ft/s Feb. 17, 1988, gage height, 0.92 ft, result of freezeup.

Summary of monthly and annual discharges, 1945-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	64	22	40	11	0.27	3.2
November	117	19	33	14	0.44	2.6
December	88	17	27	11	0.40	2.1
January	80	15	25	9.8	0.40	2.0
February	71	15	22	8.1	0.37	1.8
March	62	14	23	8.4	0.37	1.8
April	153	17	65	35	0.54	5.2
May	584	66	284	121	0.43	22.7
June	848	156	415	162	0.39	33.2
July	506	57	196	101	0.51	15.7
August	178	30	72	29	0.41	5.8
September	122	22	48	20	0.42	3.9
Annual	184	52	104	32	0.31	100

Magnitude and frequency of annual low flow,  
based on period of record 1945-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	16	14	13	12	11	9.9
3	17	15	13	12	11	11
7	17	15	14	13	12	12
14	18	16	15	14	13	13
30	19	16	15	15	14	14
60	19	18	17	17	17	17
90	20	18	18	18	18	18
120	21	19	18	18	18	18
183	25	22	21	20	20	20

Magnitude and frequency of annual high flow,  
based on period of record 1945-90Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
732	1,020	1,210	1,440	1,610	1,780	

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	670	937	1,120	1,340	1,510	1,690
3	628	881	1,050	1,270	1,440	1,610
7	574	809	968	1,170	1,320	1,480
15	511	719	857	1,030	1,160	1,290
30	441	608	715	847	942	1,040
60	358	490	573	673	744	812
90	291	396	459	534	586	636

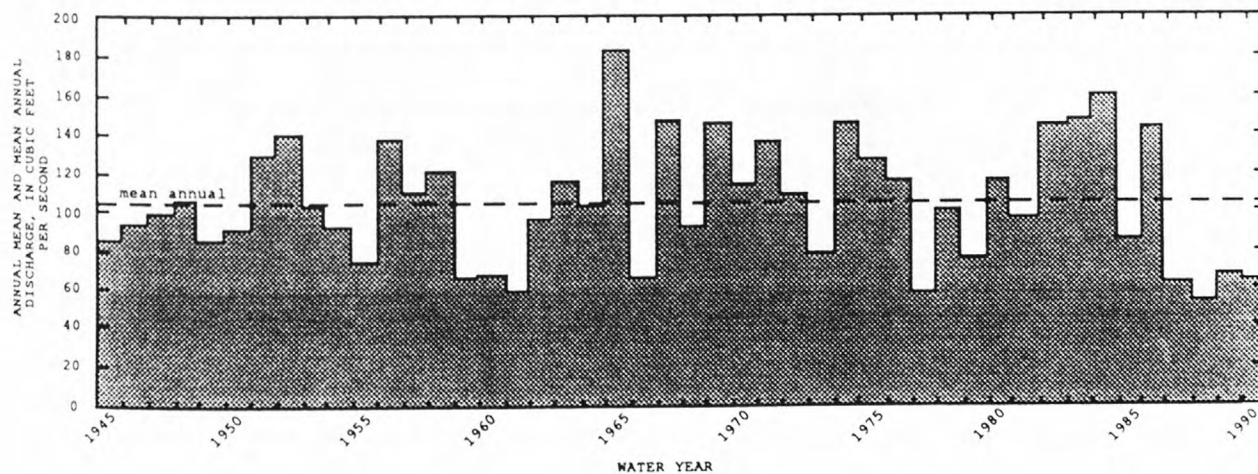
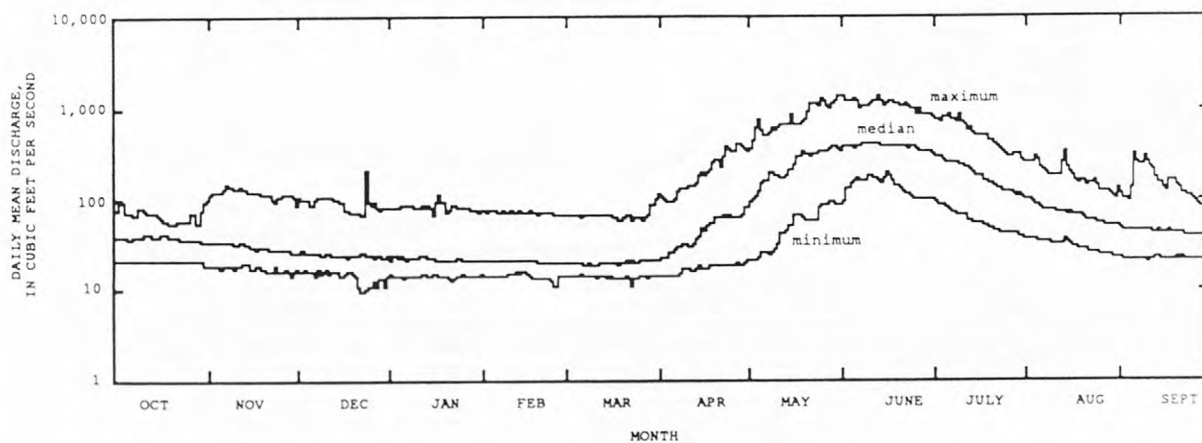
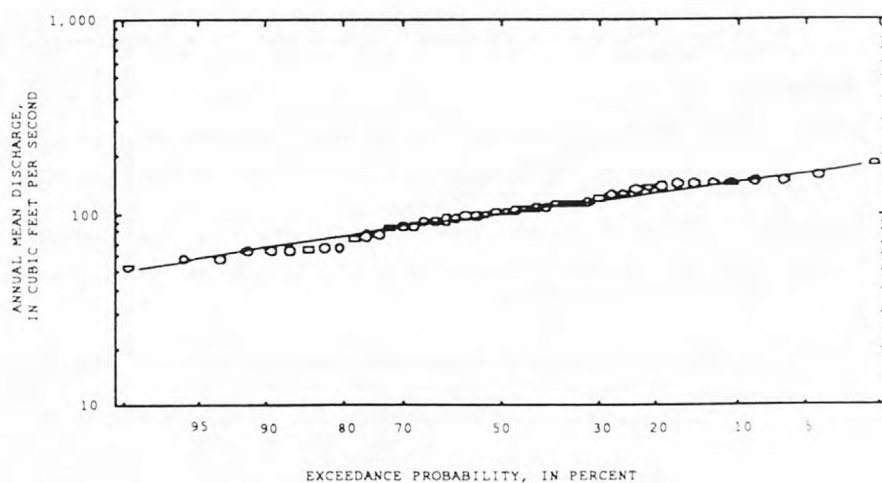
Duration table of daily mean flow for period of record 1945-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
760	435	305	212	148	75	50	38	31	26	23	20	18	17	15	14	13

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## MUD LAKE-LOST RIVER BASINS

13120500 BIG LOST RIVER AT HOWELL RANCH, NEAR CHILLY, ID

LOCATION.--Lat 43°59'54", long 114°01'12", in NE 1/4, NW 1/4, sec.30, T.8 N., R.21 E., Custer County, Hydrologic Unit 17040218, on left bank at Howell Ranch, 2.1 mi downstream from Burnt Creek, 7.7 mi downstream from East Fork, 9 mi southwest of Chilly, and 21 mi northwest of Mackay.

DRAINAGE AREA.--450 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1904 to November 1914, May 1920 to September 1990 (no winter records 1904, 1906-14, 1920-48).

GAGE.--Water-stage recorder. Datum of gage is 6,621.95 ft above sea level, from topographic map. See WSP 1737 for history of changes prior to June 11, 1920.

REMARKS.--No regulation. Diversions above station for irrigation of about 3,000 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 4,420 ft<sup>3</sup>/s May 25, 1967, gage height, 6.02 ft; minimum observed, 19 ft<sup>3</sup>/s Dec. 12, 1939 (discharge measurement).

Summary of monthly and annual discharges, 1905, 1949-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	223	66	129	38	0.30	3.3
November	373	61	111	48	0.43	2.9
December	278	57	92	35	0.38	2.4
January	245	51	86	31	0.36	2.3
February	218	49	80	26	0.33	2.1
March	194	47	82	25	0.30	2.1
April	448	64	191	92	0.48	4.9
May	1,880	200	814	373	0.46	21.0
June	2,350	487	1,290	515	0.40	33.2
July	1,470	153	616	351	0.57	15.9
August	586	84	230	110	0.48	5.9
September	378	67	156	67	0.43	4.0
Annual	538	168	323	105	0.33	100

Magnitude and frequency of annual low flow, based on period of record 1949-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	58	48	44	40	36	34
3	60	52	48	45	42	40
7	63	54	50	47	44	42
14	65	55	51	48	45	44
30	69	58	54	51	47	45
60	70	61	58	56	55	55
90	73	64	61	59	58	58
120	76	66	64	62	61	61
183	89	75	70	68	65	64

Magnitude and frequency of annual high flow, based on period of record 1905, 1949-90

Magnitude and frequency of instantaneous peak flow, based on period of record 1904-14, 1920-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,150	2,960	3,450	3,990	4,360	4,690

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2,130	2,860	3,330	3,900	4,310	4,650
3	1,980	2,680	3,130	3,690	4,110	4,520
7	1,780	2,450	2,890	3,440	3,840	4,250
15	1,580	2,200	2,600	3,100	3,470	3,840
30	1,360	1,880	2,210	2,630	2,930	3,230
60	1,070	1,500	1,790	2,130	2,390	2,640
90	867	1,210	1,440	1,710	1,900	2,100

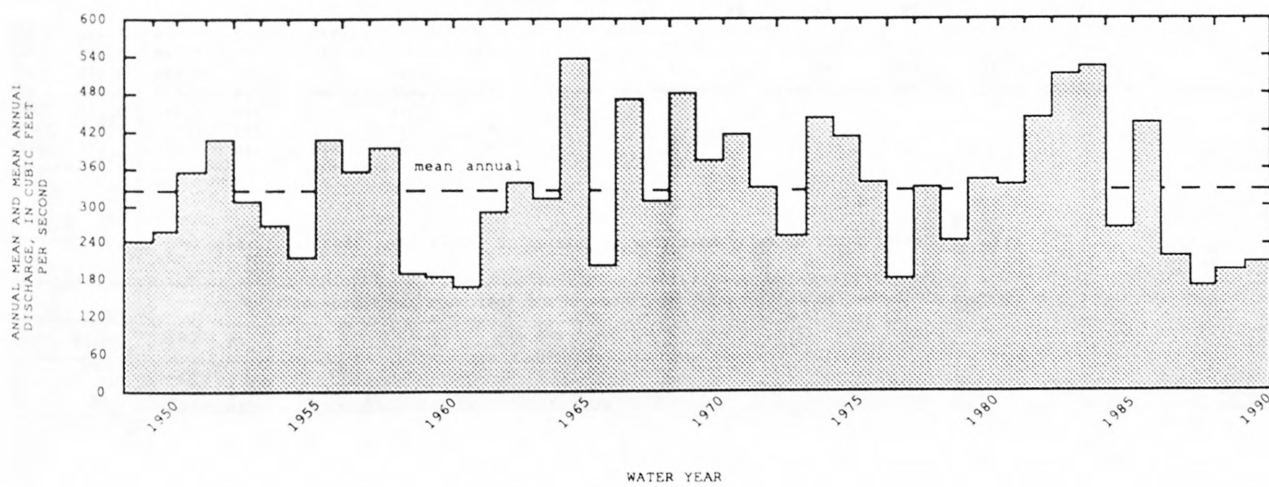
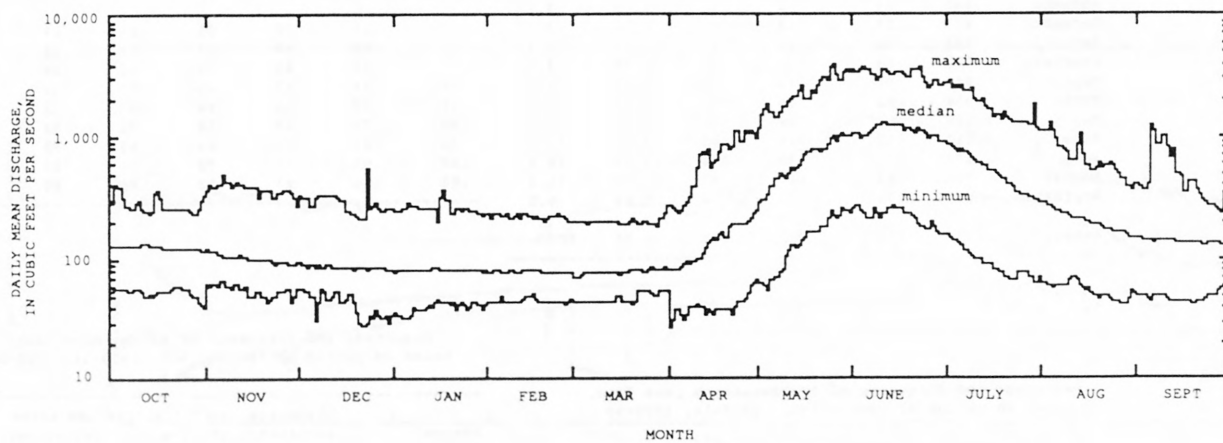
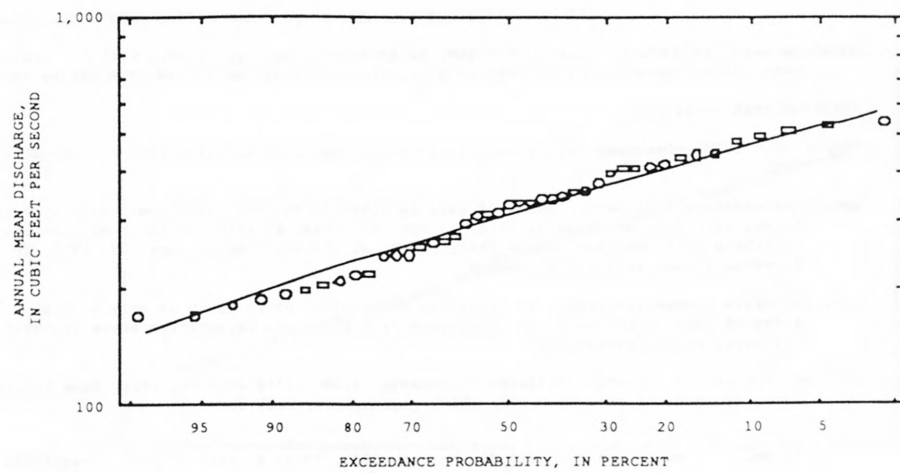
Duration table of daily mean flow for period of record 1905, 1949-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,350	1,370	911	617	435	228	158	125	105	89	79	68	60	54	50	48	43

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MUD LAKE-LOST RIVER BASINS

13127000 BIG LOST RIVER BELOW MACKAY RESERVOIR, NEAR MACKAY, ID

LOCATION.--Lat 43°56'20", long 113°38'50", in SW 1/4, NE 1/4, sec. 18, T.7 N., R.24 E., Custer County, Hydrologic Unit 17040218, on left bank 1.4 mi downstream from head of Sharp Ditch, 1.6 mi downstream from Mackay Reservoir, and 2.5 mi northwest of Mackay.

DRAINAGE AREA.--813 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1903 to August 1906, and May 1912 to March 1915 (published as "near Mackay"), January 1919 to September 1990.

GAGE.--Water-stage recorder. Datum of gage is 5,946.39 ft above sea level, from topographic map. Nonrecording gage prior to May 12, 1912, and June 5, 1912, to Apr. 28, 1913, at sites within 1 mi upstream at different datums, May 12 to June 4, 1912, at site 1.5 mi upstream (above Sharp Ditch) at different datum, Apr. 29, 1913, to Mar. 15, 1915, at site 1 mi downstream (below Streeter Ditch) at different datum.

REMARKS.--Flow completely regulated by Mackay Reservoir. Sharp Ditch is only diversion between station and reservoir; about 12,700 acres of land is irrigated by diversions from river and tributaries above reservoir by surface diversions, and 10,200 acres irrigated by subirrigation.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 2,990 ft<sup>3</sup>/s June 10, 1921, June 6, 1986; maximum gage height, 6.08 ft, June 6, 1986; minimum, 16 ft<sup>3</sup>/s Oct. 27, 1967, gage height, 1.11 ft.

Summary of monthly and annual discharges, 1905, 1913-14, 1920-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	487	60	166	75	0.45	4.5
November	660	45	104	83	0.79	2.8
December	476	59	112	63	0.56	3.0
January	292	75	123	42	0.34	3.3
February	304	82	130	39	0.30	3.5
March	544	94	148	70	0.47	4.0
April	516	93	164	87	0.53	4.4
May	1,190	116	494	252	0.51	13.3
June	2,010	203	955	405	0.42	25.7
July	1,470	127	678	274	0.40	18.2
August	895	113	417	183	0.44	11.2
September	635	100	225	96	0.43	6.1
Annual	658	128	311	102	0.33	100

Magnitude and frequency of annual low flow, based on period of record 1905-06, 1914, 1920-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	55	38	31	26	22	20
3	58	40	33	28	24	21
7	61	43	36	31	26	23
14	64	47	40	35	31	28
30	69	53	48	45	42	40
60	77	62	58	55	52	51
90	87	71	65	62	59	58
120	93	77	72	70	67	67
183	115	97	92	88	86	85

Magnitude and frequency of instantaneous peak flow, based on period of record 1905, 1913-14, 1920-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,440	2,030	2,400	2,840	3,160	3,460	

Magnitude and frequency of annual high flow, based on period of record 1905, 1913-14, 1920-90

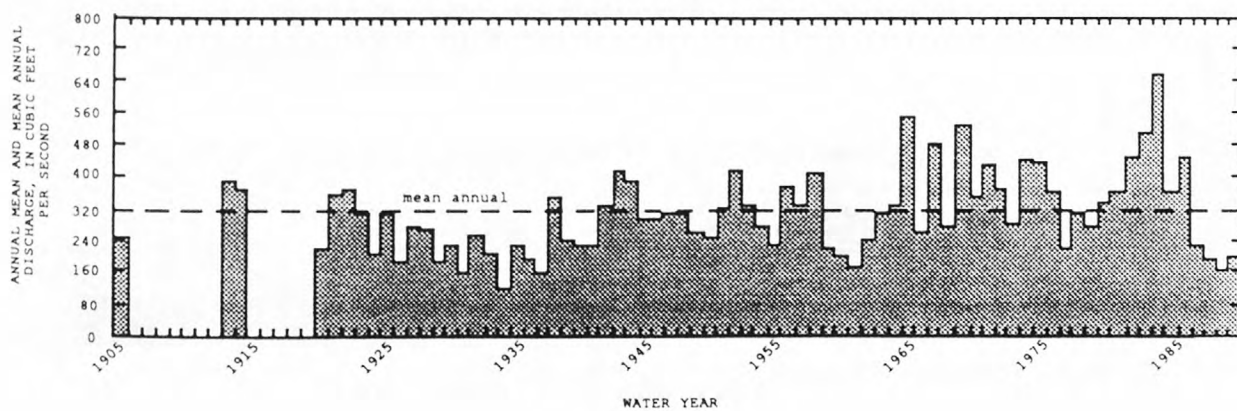
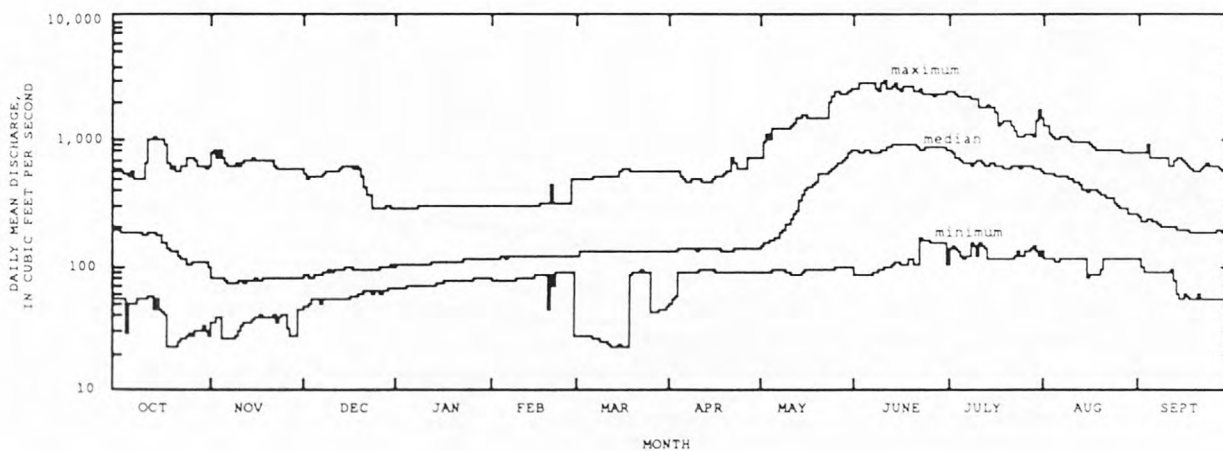
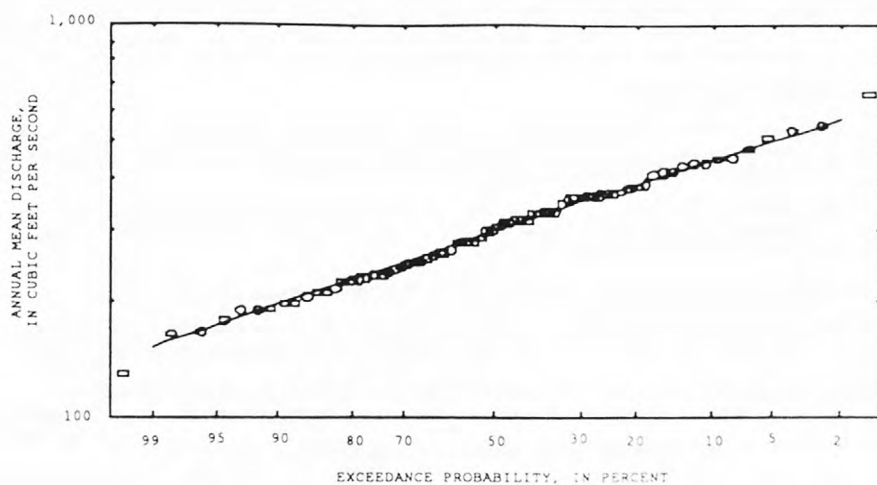
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,370	1,970	2,370	2,870	3,230	3,590
3	1,330	1,920	2,300	2,780	3,130	3,480
7	1,250	1,810	2,180	2,650	3,000	3,360
15	1,130	1,630	1,940	2,330	2,600	2,870
30	994	1,390	1,640	1,940	2,150	2,350
60	833	1,150	1,340	1,560	1,710	1,850
90	725	989	1,140	1,320	1,430	1,540

Duration table of daily mean flow for period of record 1905, 1913-14, 1920-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
1,780	990	763	628	513	294	195	160	130	115	101	82	67	55	48	42	29	



LOCATION MAP



## MUD LAKE-LOST RIVER BASINS

13128900 LOWER CEDAR CREEK ABOVE DIVERSION 3, NEAR MACKAY, ID

LOCATION.--Lat 43° 57'57", long 113°34'40", in NW 1/4, SW 1/4, sec.2, T.7 N., R.24 E., Custer County, Hydrologic Unit 17040218, Challis National Forest, on right bank at abandoned powerplant site, approximately 1,000 ft upstream from the heading of Nielson diversion, and 3.9 mi northeast of Mackay.

DRAINAGE AREA.--8.26 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1963, 1964-66, August 1966 to September 1973, October 1979 to September 1990. 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. Elevation of gage is 6,800 ft above sea level, 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.

REMARKS.--No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 310 ft<sup>3</sup>/s June 22, 1982, gage height, 3.10 ft. Minimum discharge observed, 0.4 ft<sup>3</sup>/s Nov. 21 to Dec. 1, 1921, gage height, 0.18 ft, site and datum then in use.

Summary of monthly and annual discharges, 1967-73, 1980-84

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	27	6.8	12	5.4	0.44	4.7
November	25	4.9	9.8	5.3	0.54	3.7
December	19	3.9	7.6	3.9	0.51	2.9
January	17	3.2	6.6	3.6	0.55	2.5
February	14	2.7	5.8	3.0	0.52	2.1
March	8.1	2.6	4.4	1.6	0.36	1.7
April	15	2.4	6.1	3.7	0.61	2.3
May	53	17	36	10	0.29	13.5
June	117	49	83	22	0.27	31.5
July	75	31	53	16	0.31	20.0
August	34	15	23	6.4	0.27	8.9
September	25	11	16	4.9	0.30	6.2
Annual	33	17	22	5.1	0.23	100

Magnitude and frequency of annual low flow,  
based on period of record 1968-73, 1981-84

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 1%	100 0.1%
1	2.7	2.0	1.6	1.4	1.1	0.99
3	2.7	2.0	1.6	1.4	1.1	0.99
7	2.8	2.0	1.7	1.4	1.2	0.99
14	3.0	2.2	1.9	1.6	1.3	1.2
30	3.7	3.0	2.6	2.3	2.0	1.9
60	4.7	3.8	3.4	3.2	3.1	3.0
90	5.0	4.0	3.7	3.6	3.5	3.4
120	5.4	4.4	4.1	3.9	3.8	3.8
183	7.0	5.7	5.4	5.3	5.1	5.1

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1967-73, 1980-84

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
182	228	256	290	314	338	

Magnitude and frequency of annual high flow,  
based on period of record 1967-73, 1980-84

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	149	187	211	240	262	283
3	139	175	198	227	247	268
7	122	156	178	205	225	245
15	105	139	161	190	211	233
30	88	112	128	148	162	177
60	71	90	101	115	126	136
90	58	71	80	92	101	110

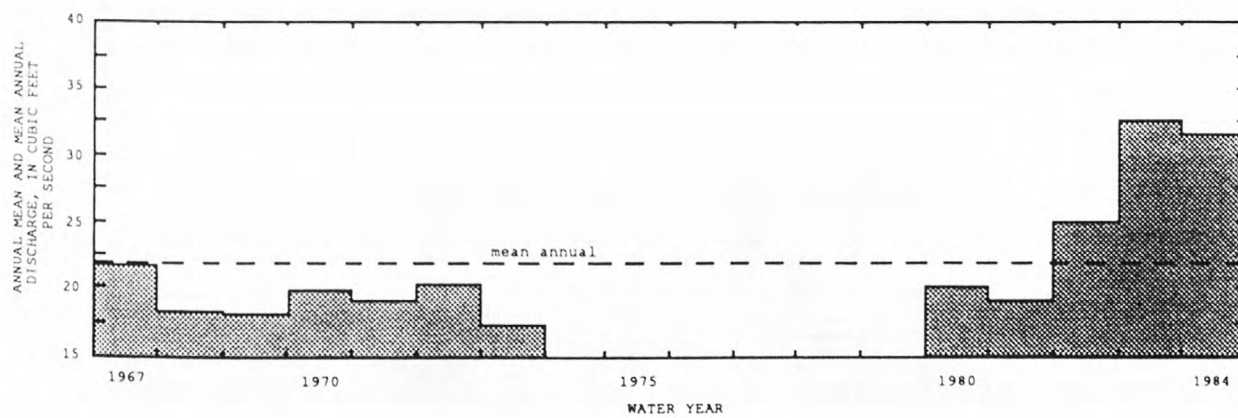
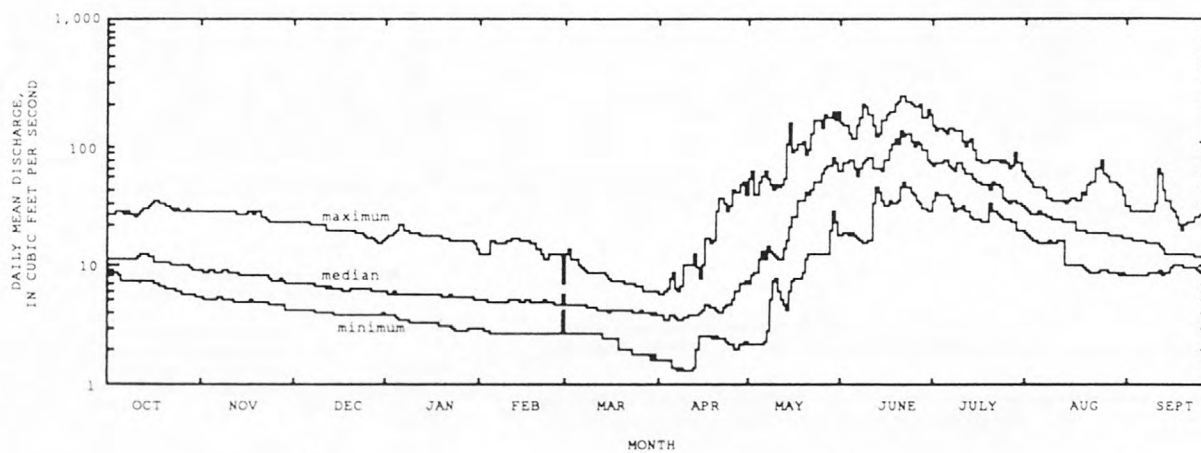
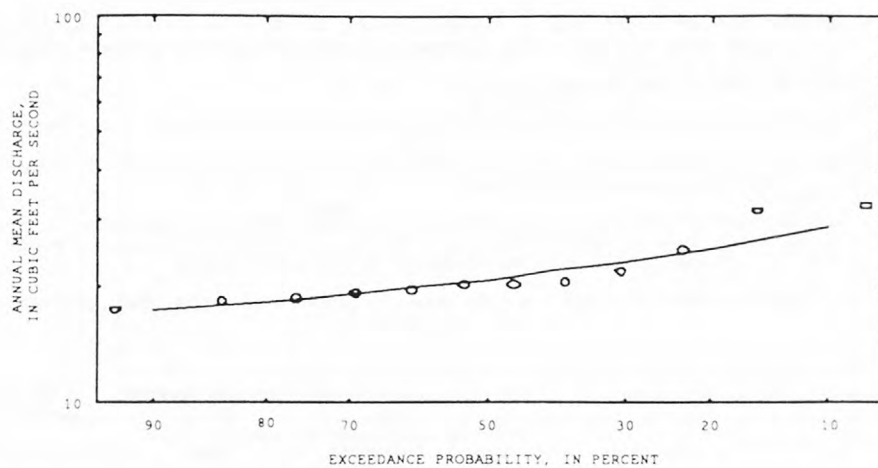
Duration table of daily mean flow for period of record 1967-73, 1980-84

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
149	86	58	43	32	20	15	11	7.8	6.2	4.9	3.9	3.0	2.6	2.4	1.9	1.4

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# MUD LAKE-LOST RIVER BASINS

13132500 BIG LOST RIVER NEAR ARCO, ID

LOCATION.--Lat 43°35'00", long 113°16'10", in SW 1/4, sec.17, T.3 N., R.27 E., Butte County, Hydrologic Unit 17040218, on right bank 0.4 mi downstream from slough entering from left bank, and 4 mi southeast of Arco.

DRAINAGE AREA.--1,410 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--August 1946 to September 1980, March to September 1981, May 1982 to September 1990.

GAGE.--Water-stage recorder. Elevation of gage is 5,240 ft above sea level, by barometer. Prior to Oct. 14, 1952, at site 800 ft upstream at datum 3.08 ft higher.

REMARKS.--Flow regulated by Mackay Reservoir. 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.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 1,890 ft<sup>3</sup>/s July 5, 1967, gage height, 7.68 ft; no flow on many days.

Summary of monthly and annual discharges, 1947-61, 1967-80, 1983-90

Magnitude and frequency of annual low flow, based on period of record 1948-61, 1968-80, 1984-91

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff	Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
								2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
October	371	0.00	97	100	1.0	7.4							
November	759	0.00	102	137	1.3	7.7							
December	614	0.00	88	111	1.3	6.7	1	6.6	0.00	0.00	0.00	0.00	0.00
January	347	0.00	70	73	1.0	5.3	3	7.1	0.1	0.00	0.00	0.00	0.00
February	314	0.00	72	69	0.96	5.5	7	8.2	0.2	0.00	0.00	0.00	0.00
March	390	0.00	94	98	1.0	7.2	14	9.9	1.1	0.00	0.00	0.00	0.00
April	653	0.00	112	155	1.4	8.5	30	14	2.3	0.00	0.00	0.00	0.00
May	841	0.00	140	211	1.5	10.6	60	17	4.4	0.00	0.00	0.00	0.00
June	1,120	0.00	246	332	1.3	18.8	90	26	5.9	0.00	0.00	0.00	0.00
July	918	0.00	145	243	1.7	11.0	120	29	7.0	0.00	0.00	0.00	0.00
August	502	0.00	60	95	1.6	4.6	183	58	8.4	0.00	0.00	0.00	0.00
September	395	0.00	88	105	1.2	6.7							
Annual	546	0.00	109	118	1.1	100							

Magnitude and frequency of annual high flow, based on period of record 1947-61, 1967-80, 1983-90

Magnitude and frequency of instantaneous peak flow, based on period of record 1947-61, 1967-80, 1983-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
420	1,100	1,530	2,350	3,010	3,700	

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	411	1,010	1,270	1,450	1,520	1,560
3	392	970	1,230	1,410	1,470	1,510
7	360	894	1,130	1,300	1,360	1,400
15	318	784	986	1,120	1,170	1,200
30	278	634	757	826	845	854
60	233	479	542	568	574	576
90	206	395	434	448	450	451

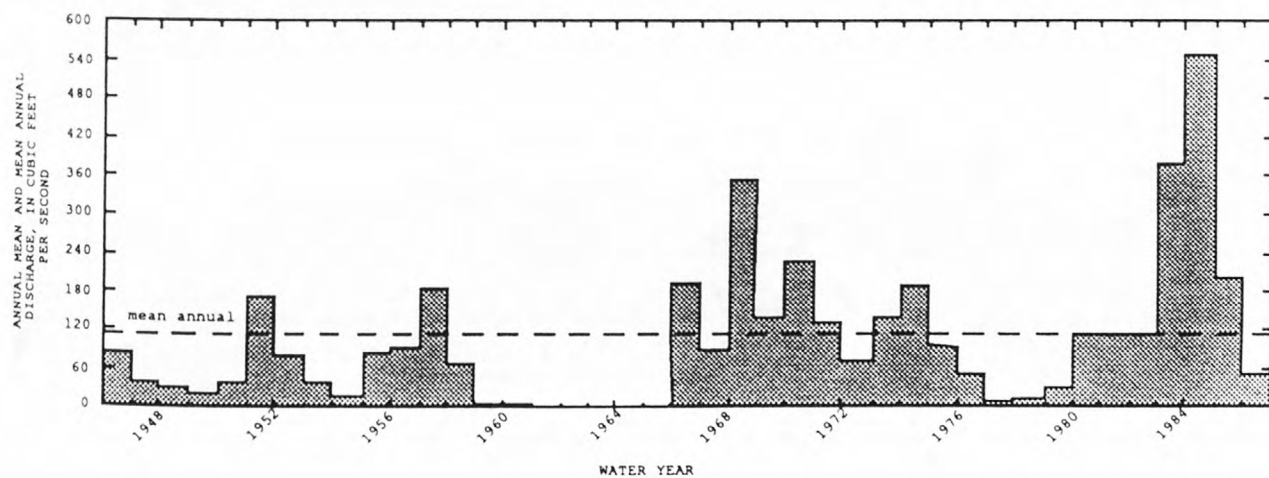
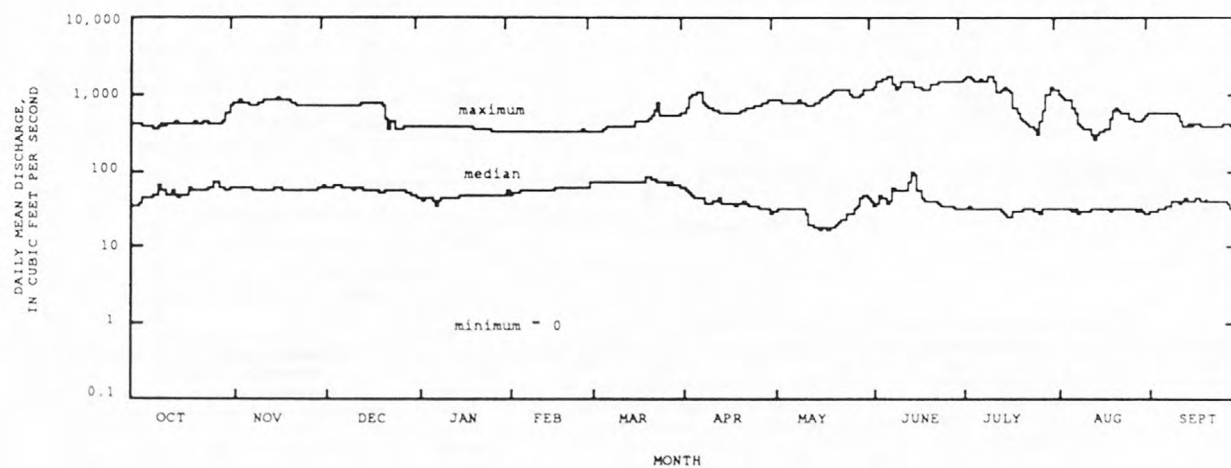
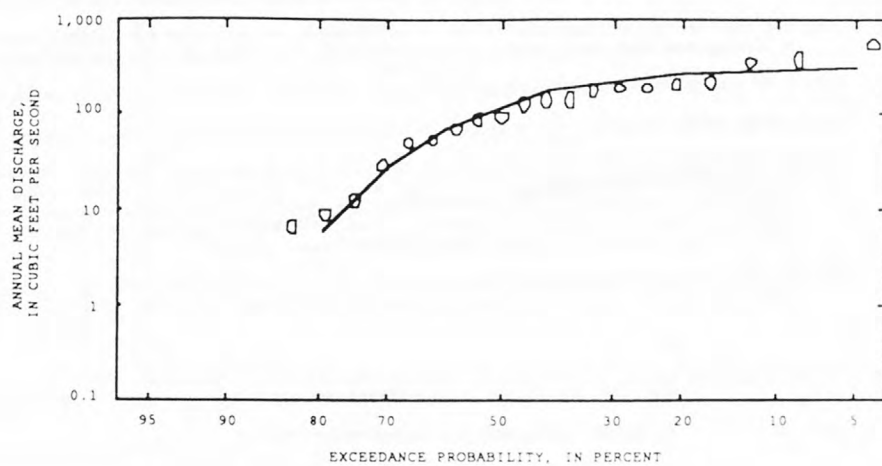
Duration table of daily mean flow for period of record 1947-61, 1967-80, 1983-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
993	456	285	192	144	108	72	43	28	17	8.3	0.10	0.00	0.00	0.00	0.00	0.00

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# SNAKE RIVER MAIN STEM

13135000 SNAKE RIVER BELOW LOWER SALMON FALLS, NEAR HAGERMAN, ID

LOCATION.—Lat 42°50'55", long 114°54'02", in NW¼, sec.2, T.7 S., R.13 E., Gooding County, Hydrologic Unit 17040212, on right bank 0.5 mi downstream from Lower Salmon Falls powerplant, 1 mi upstream from Big Wood River, 2.2 mi north of Hagerman, and at mile 572.5.

PERIOD OF RECORD.—October 1937 to September 1990. Monthly discharge only for October 1937, published in WSP 1317.

GAGE.—Water-stage recorder. Datum of gage is 2,727.7 ft above sea level (stadia levels). Prior to Jan. 3, 1950, at site 340 ft upstream.

REMARKS.—Flow regulated by American Falls Reservoir, 141.6 mi upstream. Diurnal fluctuation caused by hydroelectric plants upstream. At times, practically entire flow is diverted at Milner during the irrigation season; only minor diversions below Milner. Most of the percolation upstream into the Snake River Plain aquifer returns above station, including some water diverted from the Malad River. Diversions above station for irrigation of about 2,330,000 acres, of which about 665,000 acres are irrigated by withdrawals from ground water. There are about 83,000 acres irrigated below station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 31,200 ft³/s June 24, 1964, gage height, 15.73 ft; minimum, probably less than 100 ft³/s Jan. 10, 11, 1950, when river was below intake pipes; minimum daily, 3,970 ft³/s July 8, 1951.

Summary of monthly and annual discharges, 1938-90

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	16,600	6,090	8,990	2,490	0.28	8.1
November	18,900	6,050	9,350	3,070	0.33	8.4
December	17,500	5,800	9,610	3,110	0.32	8.7
January	19,800	5,680	9,910	3,380	0.34	9.0
February	16,300	5,800	9,860	3,350	0.34	8.8
March	19,300	5,180	9,860	3,720	0.38	8.9
April	25,300	5,250	11,400	5,290	0.46	10.3
May	24,100	5,300	10,400	5,330	0.51	9.4
June	25,100	5,470	10,300	4,610	0.45	9.3
July	11,600	5,330	6,810	1,530	0.22	6.2
August	8,280	5,600	6,700	490	0.07	6.1
September	9,030	5,930	7,500	559	0.07	6.8
Annual	15,700	6,060	9,210	2,290	0.25	100

Magnitude and frequency of annual low flow, based on period of record 1939-90

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	5,350	4,920	4,700	4,510	4,310	4,170
3	5,520	5,180	5,010	4,880	4,730	4,640
7	5,650	5,280	5,090	4,940	4,770	4,660
14	5,790	5,380	5,170	5,000	4,810	4,680
30	5,980	5,530	5,310	5,130	4,930	4,810
60	6,230	5,740	5,500	5,320	5,120	4,990
90	6,490	5,930	5,660	5,460	5,240	5,100
120	6,760	6,060	5,780	5,580	5,400	5,290
183	7,310	6,390	6,060	5,840	5,650	5,550

Magnitude and frequency of instantaneous peak flow, based on period of record 1938-90

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
22,300	26,700	29,100	31,800	33,600	35,300	

Magnitude and frequency of annual high flow, based on period of record 1938-90

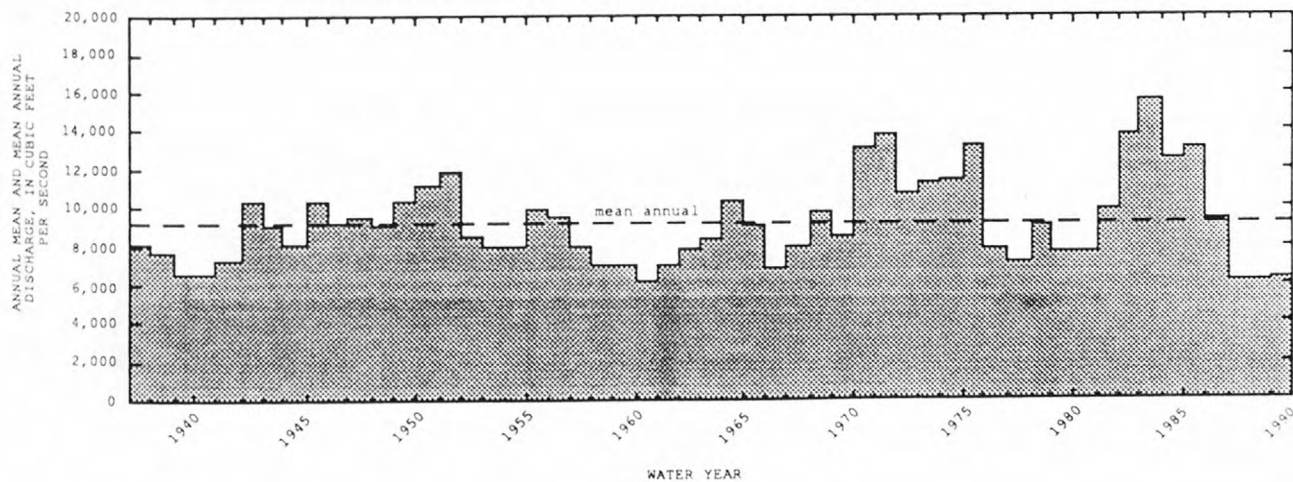
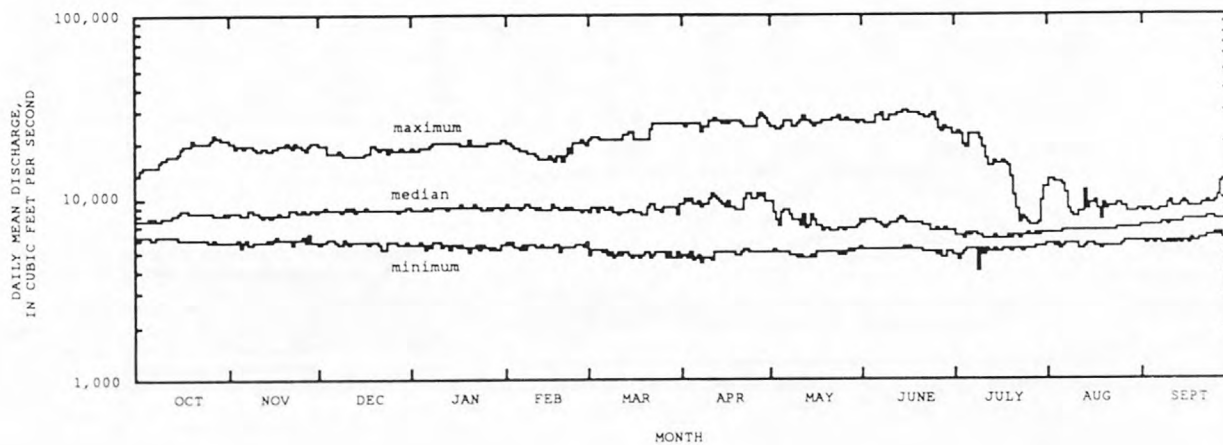
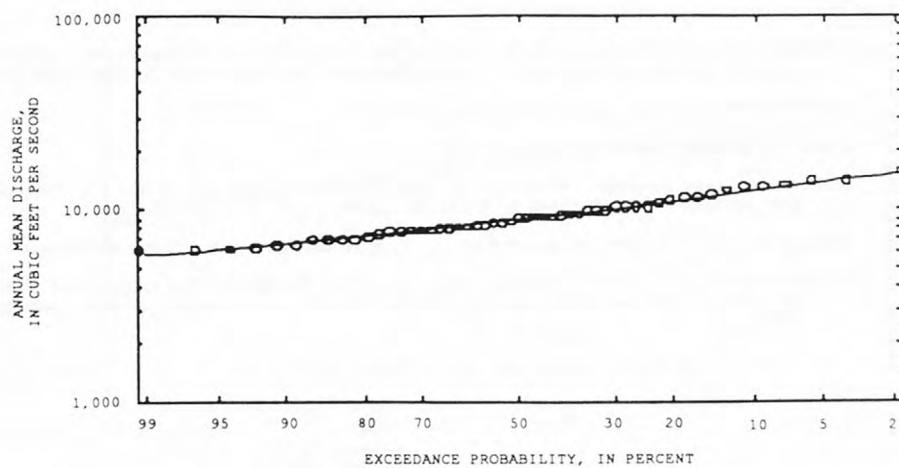
Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	19,800	25,500	28,200	30,800	32,200	33,400
3	19,000	24,800	27,600	30,400	32,000	33,300
7	17,700	23,200	26,100	29,000	30,700	32,200
15	16,100	21,400	24,300	27,400	29,500	31,300
30	14,300	19,100	22,000	25,300	27,600	29,800
60	12,700	17,000	19,800	23,400	26,000	28,700
90	12,000	15,900	18,500	21,700	24,100	26,500

Duration table of daily mean flow for period of record 1938-90

Discharge, in ft³/s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
23,600	18,100	15,500	13,500	11,700	9,670	8,400	7,580	7,100	6,690	6,290	5,840	5,550	5,270	5,150	5,030	4,830



LOCATION MAP



# BIG WOOD RIVER BASIN

13135500 BIG WOOD RIVER NEAR KETCHUM, ID

LOCATION.—Lat 43°47'11", long 114°25'27", in sec.4, T.5 S., R.17 E. (unsurveyed), Blaine County, Hydrologic Unit 17040219, 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 mi<sup>2</sup>. Mean elevation 8,120 ft.

PERIOD OF RECORD.—May 1948 to September 1971.

GAGE.—Water-stage recorder. Elevation of gage is 6,240 ft above sea level, from topographic map. Prior to Nov. 7, 1950, nonrecording gage at site 560 ft upstream at different datum.

REMARKS.—Minor diversions for nonconsumptive uses on Boulder Creek. About 97 acre-ft of storage in ponds on Prairie Creek.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,690 ft<sup>3</sup>/s May 24, 1967 (gage height, 5.92 ft); maximum gage height, 7.53 ft Jan. 20, 1964 (avalanche); minimum discharge, 8.5 ft<sup>3</sup>/s Mar. 28 1966 (gage height, 2.08 ft), but may have been less at time of avalanche Jan. 20, 1964.

Summary of monthly and annual discharges, 1949-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	98	48	71	12	0.17	3.5
November	75	45	63	8.5	0.13	3.1
December	66	41	53	7.6	0.14	2.7
January	69	39	50	7.1	0.14	2.5
February	59	38	48	5.9	0.12	2.3
March	61	38	49	5.6	0.12	2.4
April	314	46	151	77	0.51	7.6
May	923	219	502	226	0.45	25.1
June	1,080	220	582	227	0.39	29.1
July	574	81	246	115	0.47	12.3
August	211	57	108	35	0.32	5.4
September	133	51	80	18	0.22	4.0
Annual	270	86	167	49	0.29	100

Magnitude and frequency of annual low flow,  
based on period of record 1950-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	30	25	22	21	19	17
3	34	29	27	25	23	22
7	39	36	34	33	32	31
14	43	39	37	35	33	32
30	45	41	39	37	35	34
60	47	42	40	38	37	35
90	48	43	41	39	37	36
120	49	44	42	40	38	36
183	56	50	47	44	41	39

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1949-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
912	1,250	1,470	1,720	1,890	2,060

Magnitude and frequency of annual high flow,  
based on period of record 1949-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	868	1,220	1,450	1,710	1,870	2,040
3	837	1,180	1,400	1,670	1,840	2,010
7	793	1,110	1,310	1,560	1,740	1,920
15	722	1,020	1,210	1,440	1,620	1,790
30	635	889	1,060	1,260	1,410	1,560
60	534	743	872	1,020	1,130	1,230
90	441	607	706	823	903	978

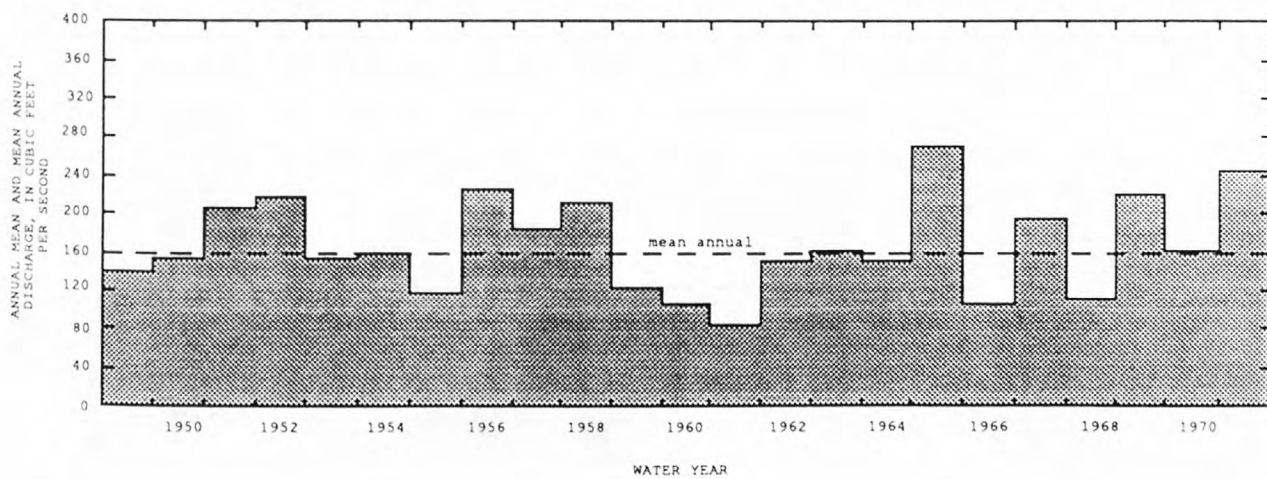
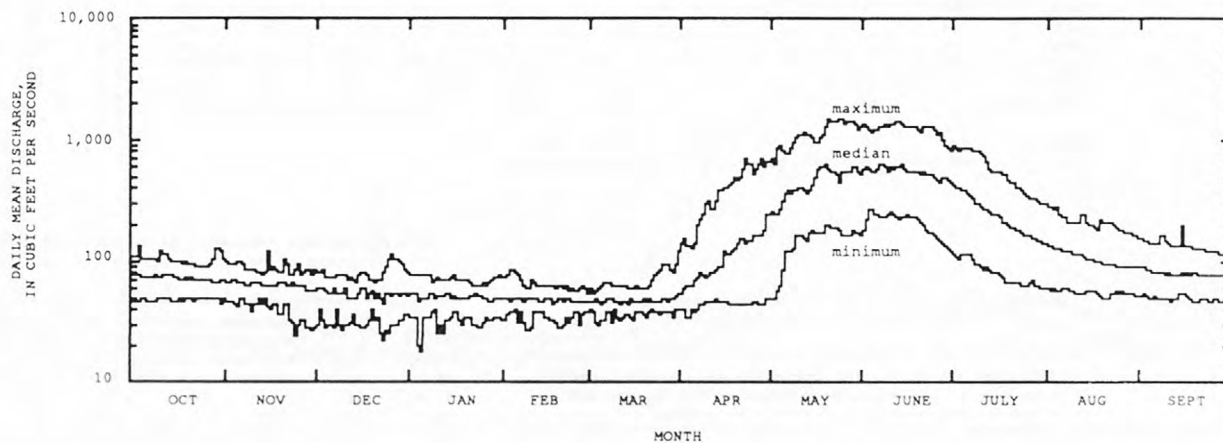
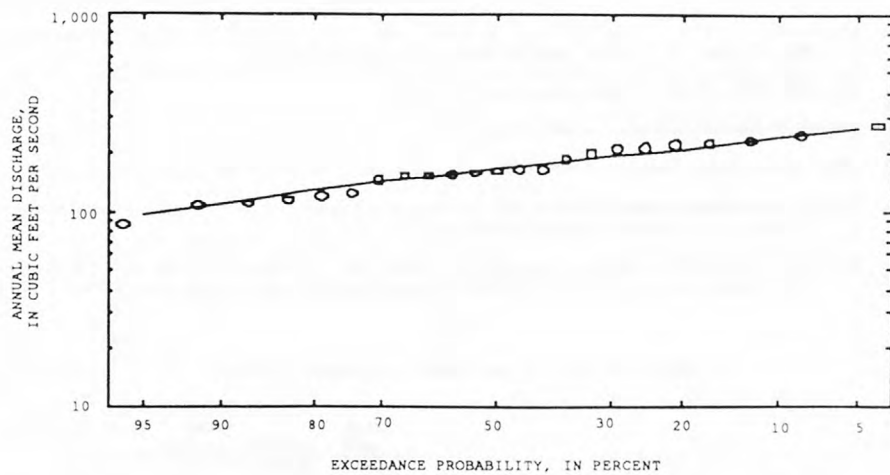
Duration table of daily mean flow for period of record 1949-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,100	669	464	334	229	119	85	73	63	56	50	44	41	36	33	30	26

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# BIG WOOD RIVER BASIN

13136500 WARM SPRINGS CREEK AT GUYER HOT SPRINGS, NEAR KETCHUM, ID

LOCATION.—Lat 43°41', long 114°25', in NE 1/4, sec.15, T.4 S., R.17 E., Blaine County, Hydrologic Unit 17040219, on left bank at Guyer Hot Springs, 2.2 miles west of Ketchum, and at mile 2.1.

DRAINAGE AREA.—96 mi<sup>2</sup>. Mean elevation 7,560 ft.

PERIOD OF RECORD.—November 1940 to April 1959.

GAGE.—Water-stage recorder. Datum of gage is 5,901.7 ft above sea level. Prior to Mar. 7, 1942, staff gage at same site and datum.

REMARKS.—Diversion above station for irrigation of about 200 acres (1950 determination). Small diversions from Guyer Hot Springs for recreational purposes bypass station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 961 ft<sup>3</sup>/s May 21, 1958 (gage height, 4.18 ft); minimum discharge, ft<sup>3</sup>/s Feb. 29, 1944 (gage height, 0.55 ft), result of ice jam upstream; minimum gage height, -0.13 ft Jan. 3, 1959.

Summary of monthly and annual discharges, 1942-58

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	48	31	38	4.6	0.12	3.6
November	44	30	36	3.4	0.10	3.4
December	48	28	35	4.5	0.13	3.3
January	37	27	32	2.7	0.08	3.1
February	35	26	31	2.7	0.09	2.9
March	51	27	35	6.3	0.18	3.3
April	284	38	130	66	0.51	12.4
May	524	144	299	117	0.39	28.6
June	428	133	239	82	0.34	22.9
July	204	53	89	34	0.38	8.5
August	72	35	47	9.6	0.21	4.4
September	51	29	38	5.4	0.14	3.6
Annual	139	55	87	22	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1942-58

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	23	20	19	18	16	16
3	26	23	21	20	18	17
7	27	25	24	23	22	22
14	29	27	26	25	24	23
30	30	28	27	26	25	24
60	31	28	27	26	25	24
90	32	30	29	28	26	26
120	32	30	29	28	26	26
183	34	32	30	29	28	28

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1942-58

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
501	657	751	860	935	1,010

Magnitude and frequency of annual high flow,  
based on period of record 1942-58

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	462	625	736	851	922	980
3	443	598	704	842	908	940
7	415	561	662	796	900	912
15	372	506	600	724	820	904
30	326	440	516	612	685	757
60	263	349	409	486	547	609
90	218	289	337	400	448	498

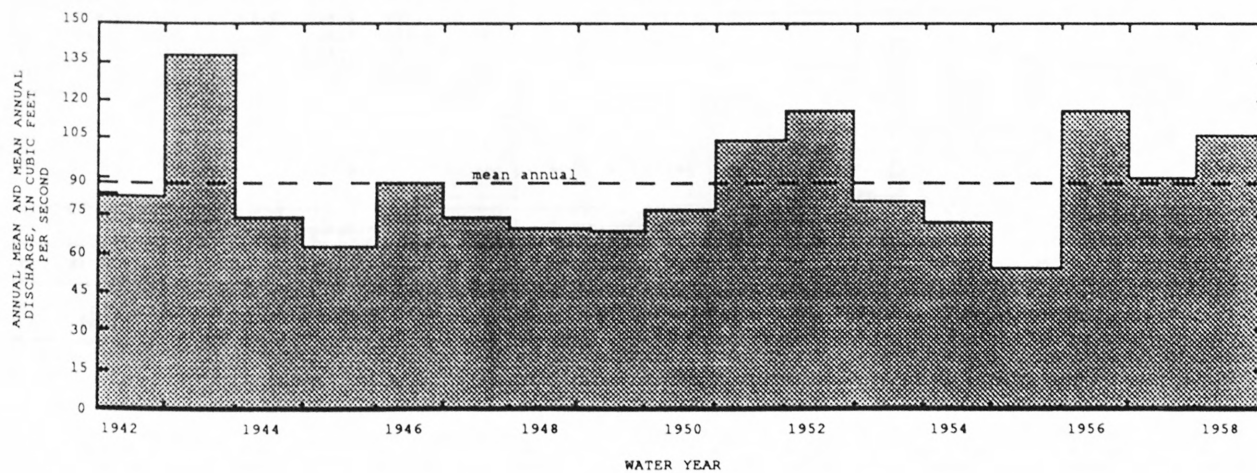
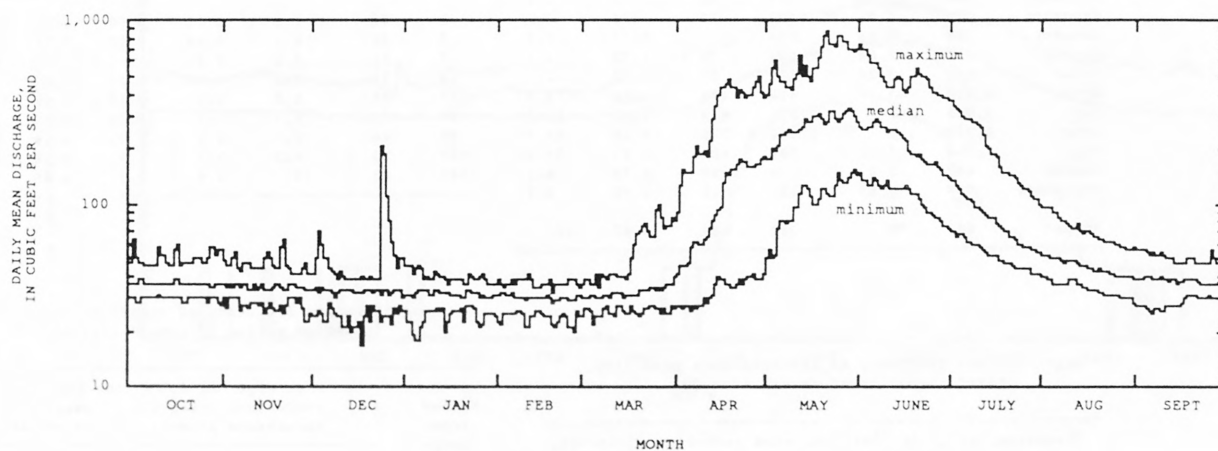
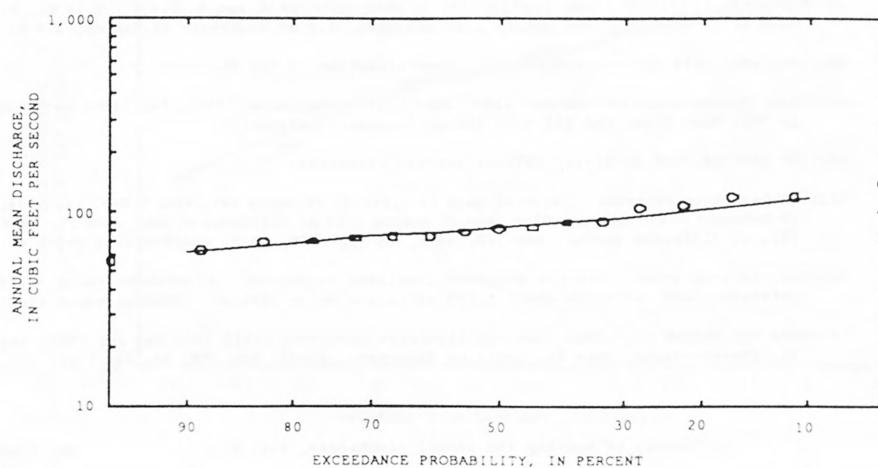
Duration table of daily mean flow for period of record 1942-58

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
543	335	232	168	121	61	45	39	37	34	32	30	28	26	25	24	20

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# MALAD RIVER BASIN

13139500 BIG WOOD RIVER AT HAILEY, ID

LOCATION.—Lat 43°31'02", long 114°19'14", in SW¼, NE¼, SW¼, sec.9, T.2 N., R.18 E., Blaine County, Hydrologic Unit 17040219, on left bank 15 ft upstream from county road crossing, 0.2 mi southwest of Hailey, 0.4 mi upstream from Croy Creek, and at mile 91.0.

DRAINAGE AREA.—640 mi<sup>2</sup>, approximately. Mean elevation, 7,620 ft.

PERIOD OF RECORD.—July to December 1889, June 1915 to September 1990. Published as "Wood River at Hailey" in 1889. Previously published as "Big Wood River and Big Wood Slough," combined discharge.

REVISED RECORDS.—WDR ID-81-1: 1974-80 average discharge.

GAGE.—Water-stage recorder. Datum of gage is 5,295.42 ft above sea level. Nov. 16, 1934, to Oct. 15, 1970, at datum 2.00 ft higher. July to December 1889, nonrecording gage at nearby site at different datum. June 11, 1915, to Nov. 15, 1934, nonrecording gages at present site at different datum. Nov. 10, 1971, to Sept. 30, 1972, nonrecording gages at different sites at present datum.

REMARKS.—Records good. Station equipment includes telemetry. Diversions above station for irrigation of about 10,000 acres (1966 determination), of which about 1,200 acres are below station. Storage above station is negligible.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 6,150 ft<sup>3</sup>/s May 30, 1983, gage height, 7.93 ft; maximum gage height, 10.66 ft, present datum, June 12, 1921; no flow Sept. 15-23, Nov. 20, 22, 23, 1911, Oct. 25, 1937.

Summary of monthly and annual discharges, 1916-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	427	0.19	143	105	0.73	3.0
November	430	0.40	127	92	0.73	2.6
December	324	1.0	105	78	0.74	2.2
January	289	0.00	104	77	0.73	2.2
February	275	0.04	101	74	0.73	2.1
March	475	0.26	127	92	0.72	2.7
April	1,310	63	470	276	0.59	9.9
May	3,030	201	1,230	629	0.51	25.8
June	3,270	115	1,410	773	0.55	29.6
July	1,760	5.8	589	405	0.69	12.4
August	683	1.2	206	150	0.73	4.3
September	438	0.83	151	113	0.75	3.2
Annual	842	70	397	187	0.47	100

Magnitude and frequency of annual low flow,  
based on period of record 1917-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	31	2.2	0.00	0.00	0.00	0.00
3	32	2.7	0.00	0.00	0.00	0.00
7	36	3.0	0.00	0.00	0.00	0.00
14	35	3.2	0.47	0.00	0.00	0.00
30	38	4.5	1.0	0.19	0.00	0.00
60	41	5.7	1.7	0.56	0.15	0.05
90	44	6.7	2.1	0.71	0.19	0.07
120	53	9.3	3.1	1.2	0.33	0.14
183	81	18	6.8	2.7	0.82	0.35

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1916-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
2,260	3,490	4,310	5,350	6,110	6,860	

Magnitude and frequency of annual high flow,  
based on period of record 1916-90

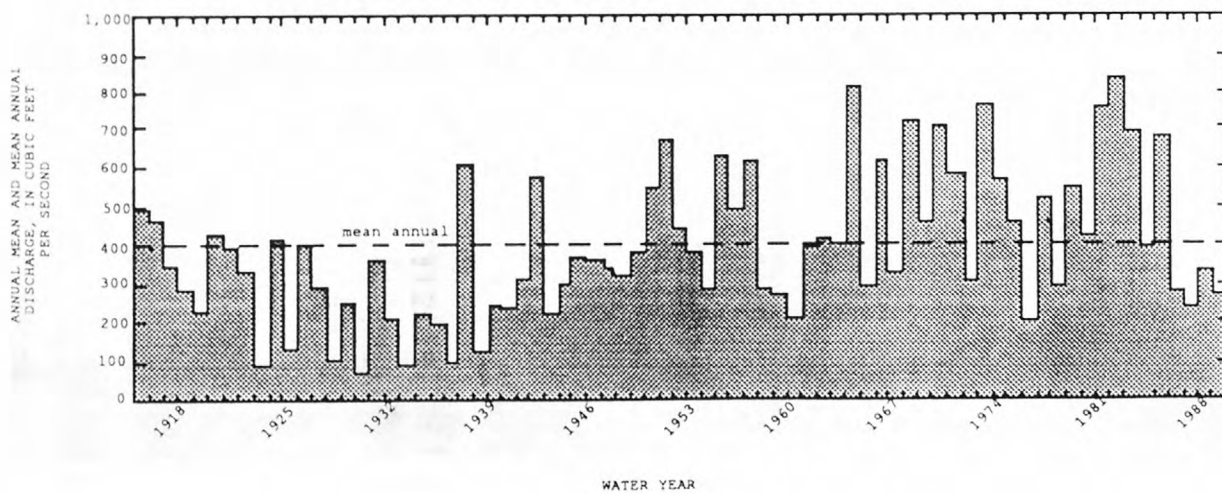
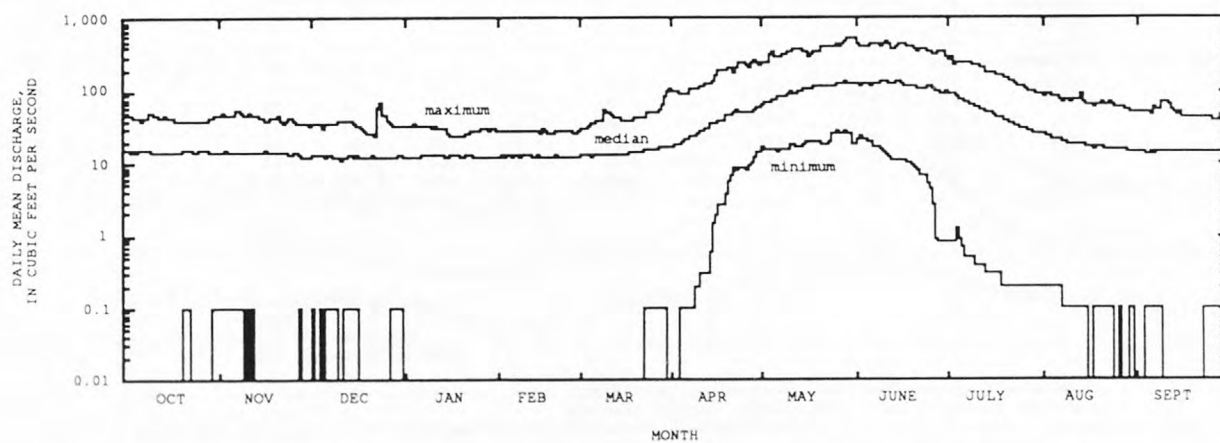
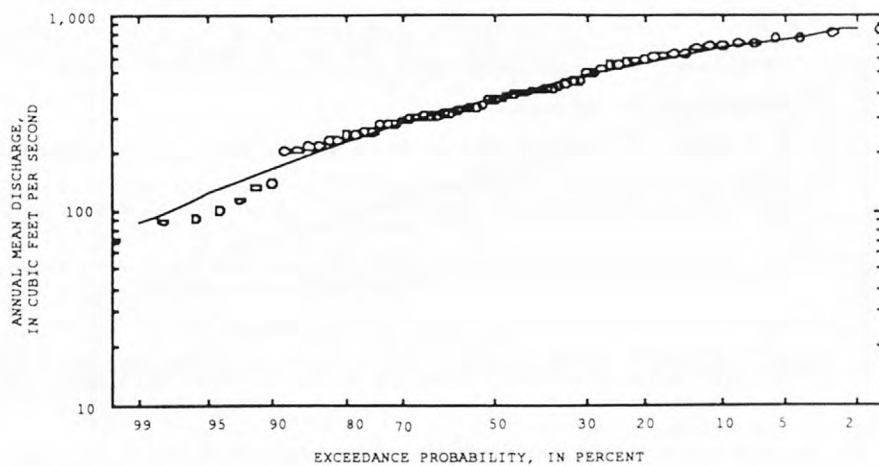
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2,180	3,280	3,980	4,820	5,410	5,970
3	2,070	3,150	3,840	4,660	5,250	5,810
7	1,910	2,920	3,580	4,380	4,950	5,500
15	1,700	2,640	3,260	4,030	4,600	5,160
30	1,500	2,300	2,820	3,460	3,920	4,360
60	1,260	1,920	2,340	2,850	3,200	3,540
90	1,060	1,610	1,950	2,340	2,610	2,860

Duration table of daily mean flow for period of record 1916-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,960	1,720	1,130	809	557	308	227	178	150	117	38	4.9	1.3	1.1	1.0	0.57	0.11



LOCATION MAP



# MALAD RIVER BASIN

13141000 BIG WOOD RIVER NEAR BELLEVUE, ID

LOCATION.—Lat 43°19'40", long 114°20'25", in NW¼, NE¼, sec.20, T.1 S., R.18 E., Blaine County, Hydrologic Unit 17040219, on right bank at downstream end of Mahoney Flat, 1.5 mi upstream from maximum flow line of Magic Reservoir, 2.8 mi upstream from Camas Creek, 10.1 mi southwest of Bellevue, and at mile 76.0.

DRAINAGE AREA.—824 mi², approximately.

PERIOD OF RECORD.—July 1911 to September 1990 (no winter records prior to October 1943 except water years 1916, 1921-22, 1940-41).

GAGE.—Water-stage recorder. Elevation of gage is 4,800 ft above sea level, from topographic map. Prior to July 8, 1921, at site 0.1 mi downstream at different datum. July 8, 1921, to Oct. 5, 1954, at site 0.2 mi upstream at different datum. Oct. 6, 1954, to Oct. 25, 1965, at site 1 mi upstream at different datum.

REMARKS.—Diversions above station for irrigation of about 21,800 acres, of which about 400 acres are irrigated by withdrawals from ground water (1966 determination). Storage above station is negligible.

COOPERATION.—Recorder inspected by employees of Water District 37.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,310 ft³/s May 30, 1983, gage height 7.61 ft, maximum gage height, 7.74 ft, June 9, 1983; minimum discharge recorded, 7.0 ft³/s Apr. 14, 1932, gage height, 1.10 ft, site and datum then in use.

Summary of monthly and annual discharges, 1916, 1922, 1940-41, 1943-90

Magnitude and frequency of annual low flow, based on period of record 1916, 1940-41, 1943-91

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Standard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	320	38	105	57	0.54	2.9
November	375	29	114	64	0.56	3.1
December	306	29	93	48	0.52	2.5
January	256	19	74	43	0.58	2.0
February	215	15	80	44	0.55	2.2
March	480	30	125	84	0.67	3.4
April	1,450	47	460	319	0.69	12.5
May	2,660	53	951	648	0.68	25.8
June	3,430	107	1,070	764	0.72	28.9
July	1,500	55	403	369	0.91	10.9
August	400	43	114	67	0.59	3.1
September	355	39	101	58	0.57	2.7
Annual	763	59	308	172	0.56	100

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	45	30	24	20	16	14
3	46	31	25	21	17	14
7	47	32	26	22	18	15
14	49	33	27	23	19	16
30	53	35	29	24	20	17
60	58	39	32	27	22	20
90	63	42	34	29	24	21
120	70	46	37	31	26	22
183	80	53	43	36	29	25

Magnitude and frequency of instantaneous peak flow, based on period of record 1916, 1922, 1940-41, 1943-90

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,680	2,770	3,500	4,390	5,030	5,650	

Magnitude and frequency of annual high flow, based on period of record 1916, 1922, 1940-41, 1943-90

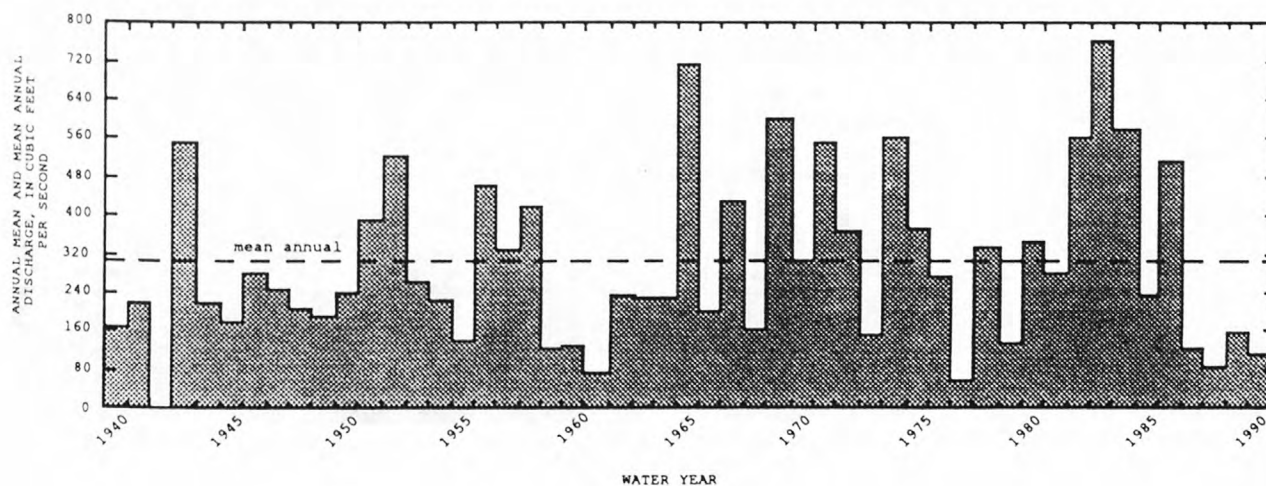
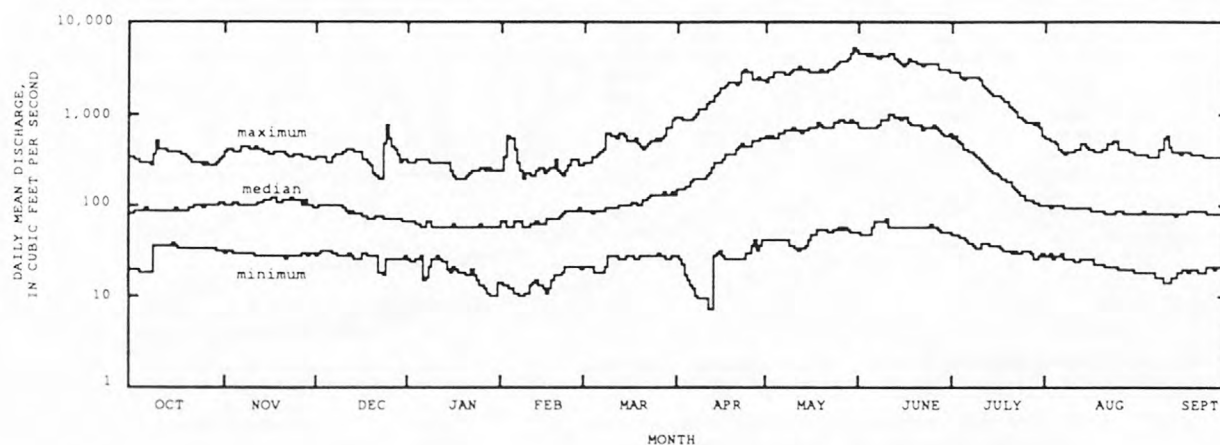
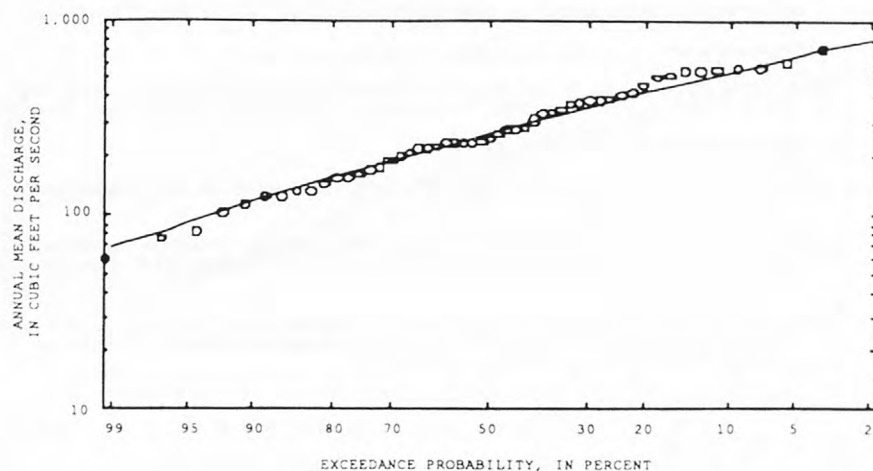
Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,640	2,720	3,470	4,310	4,920	5,240
3	1,590	2,640	3,400	4,260	4,830	5,160
7	1,450	2,470	3,190	4,120	4,720	5,010
15	1,280	2,210	2,860	3,690	4,310	4,810
30	1,100	1,920	2,480	3,180	3,690	4,170
60	911	1,620	2,100	2,690	3,110	3,500
90	764	1,350	1,750	2,240	2,590	2,910

Duration table of daily mean flow for period of record 1916, 1922, 1940-41, 1943-90

Discharge, in ft³/s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
2,630	1,430	848	559	370	196	139	110	92	76	61	45	38	32	29	25	14	



LOCATION MAP





## BIG WOOD RIVER BASIN

13141500 CAMAS CREEK NEAR BLAINE, ID

LOCATION.—Lat 43°19'59", long 114°32'27", in NW 1/4, SE 1/4, sec. 15, T. 1 S., R. 16 E., Camas County, Hydrologic Unit 17040220, 0.2 mi downstream from Willow Creek, 2.6 mi upstream from maximum flow line of Magic Reservoir, 4 mi southeast of Blaine, and at mile 7.0.

DRAINAGE AREA.—648 mi<sup>2</sup>. Mean elevation, 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 September 1990. Published as "Malad River near Blaine," 1912-14.

REVISED RECORDS.—WSP 1217: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 4,870 ft above sea level, by barometer. Prior to June 22, 1966, at site 600 ft downstream at datum 0.66 ft lower.

REMARKS.—Flow regulated by Mormon Reservoir on McKinney Creek, capacity, 31,240 acre-ft, and three minor reservoirs, combined capacity, 580 acre-ft. Diversions above station for irrigation of about 9,400 acres, of which about 1,500 acres are irrigated by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge recorded, 9,780 ft<sup>3</sup>/s 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 ft<sup>3</sup>/s Aug. 11, 12, 1959; minimum gage height, 1.04 ft (site and datum then in use), Aug. 23, 25, 1963.

Summary of monthly and annual discharges, 1945-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	40	3.0	11	8.7	0.76	0.5
November	83	4.6	20	16	0.77	0.9
December	451	6.4	34	65	1.9	1.5
January	246	7.3	30	37	1.2	1.4
February	1,120	8.6	85	172	2.0	3.8
March	1,810	23	275	362	1.3	12.5
April	3,310	19	1,080	817	0.75	49.1
May	1,550	14	455	385	0.85	20.7
June	621	5.7	168	138	0.82	7.6
July	165	1.8	32	36	1.2	1.4
August	40	1.8	7.0	7.3	1.0	0.3
September	32	1.7	6.7	5.3	0.80	0.3
Annual	449	13	183	117	0.64	100

Magnitude and frequency of annual low flow,  
based on period of record 1945-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	3.1	2.1	1.7	1.5	1.4	1.3
3	3.2	2.1	1.8	1.6	1.4	1.4
7	3.3	2.2	1.8	1.7	1.5	1.4
14	3.4	2.3	2.0	1.8	1.6	1.5
30	3.7	2.5	2.1	1.9	1.7	1.6
60	4.4	2.8	2.3	2.0	1.8	1.7
90	5.5	3.3	2.7	2.3	1.9	1.7
120	6.9	4.0	3.1	2.6	2.1	1.9
183	11	6.4	4.8	3.8	3.0	2.5

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
2,660	5,390	7,350	9,820	11,600	13,300	

Magnitude and frequency of annual high flow,  
based on period of record 1945-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2,630	4,880	6,000	6,990	7,470	7,810
3	2,430	4,470	5,470	6,340	6,770	7,060
7	2,070	3,800	4,680	5,450	5,840	6,120
15	1,580	2,910	3,610	4,270	4,610	4,870
30	1,120	2,040	2,560	3,060	3,350	3,570
60	758	1,350	1,690	2,030	2,230	2,380
90	570	1,010	1,270	1,530	1,690	1,820

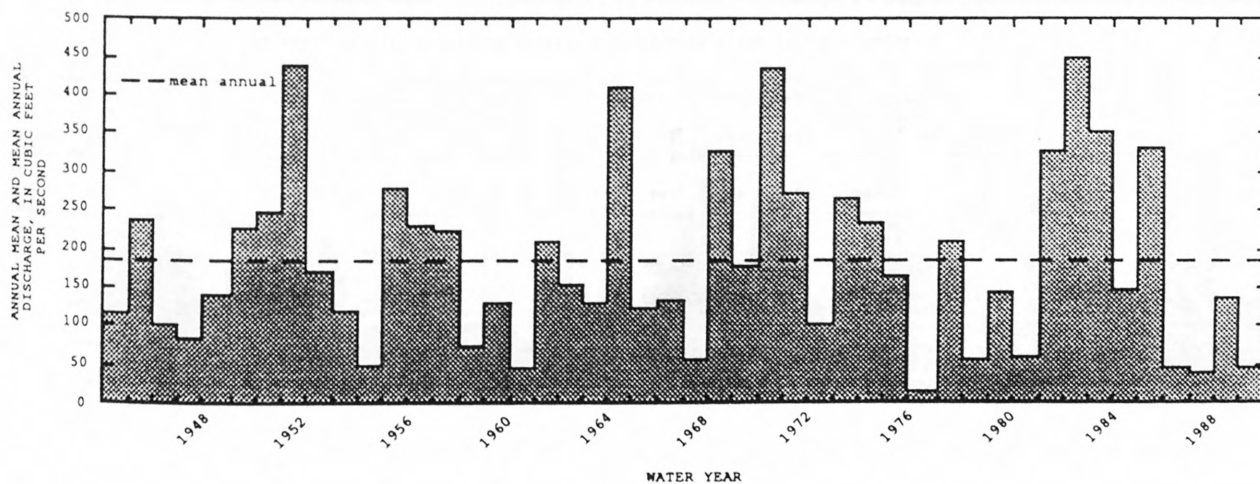
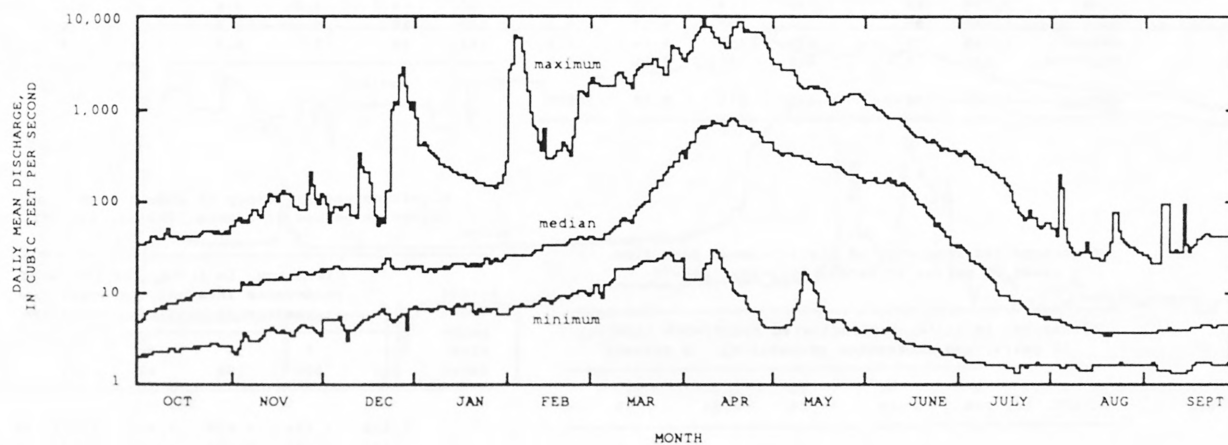
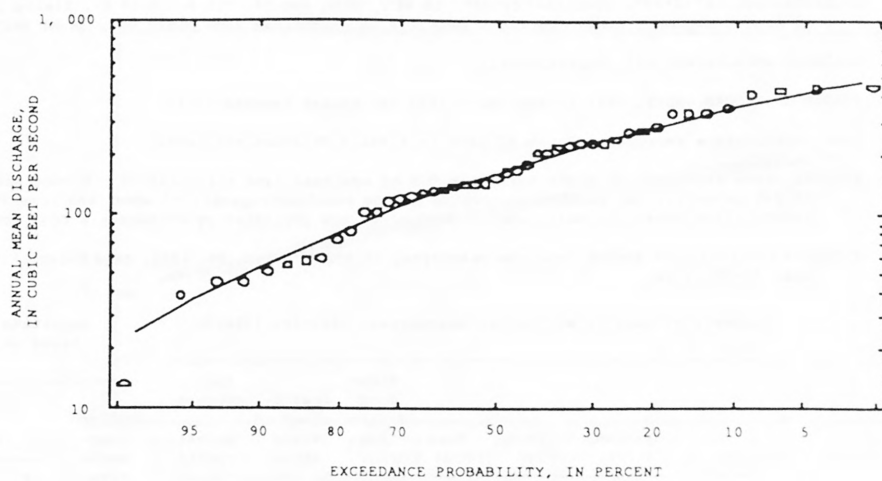
Duration table of daily mean flow for period of record 1945-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
2,750	911	468	282	181	63	36	24	16	11	7.1	4.0	3.0	2.3	2.0	1.8	1.4	

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MALAD RIVER BASIN

13142500 BIG WOOD RIVER BELOW MAGIC DAM, NEAR RICHFIELD, ID

LOCATION.—Lat 43°15'00", long 114°21'30", in NE 1/4, SE 1/4, sec. 18, T. 2 S., R. 18 E., Blaine County, Hydrologic Unit 17040219, U.S. Bureau of Land Management lands, on right bank 0.5 mi downstream from Magic Dam, 18 mi northwest of Richfield, and at mile 67.0.

DRAINAGE AREA.—1,600 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—April 1911 to September 1990 (no winter records 1912).

GAGE.—Water-stage recorder. Datum of gage is 4,661.6 ft above sea level.

REMARKS.—Flow regulated by Magic Reservoir 0.5 mi upstream (see sta 13142000), Mormon Reservoir on tributary of Camas Creek (capacity, 31,240 acre-ft), and smaller reservoirs having combined capacity of about 680 acre-ft. Diversions above station for irrigation of about 32,600 acres, of which about 1,900 acres are irrigated by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,000 ft<sup>3</sup>/s Apr. 26, 1952, gage height, 15.68 ft, from floodmark; no flow Feb. 3, 1915, Dec. 21-23, 1988.

Summary of monthly and annual discharges, 1913-54, 1956-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	372	1.3	55	71	1.3	1.0
November	165	1.4	65	30	0.45	1.2
December	591	1.4	36	89	2.5	0.6
January	767	1.6	38	108	2.8	0.7
February	943	1.7	55	148	2.7	0.9
March	1,970	2.9	212	462	2.2	3.7
April	3,920	4.2	624	826	1.3	11.0
May	3,810	325	1,290	835	0.65	22.6
June	3,530	386	1,280	709	0.55	22.5
July	1,680	95	915	357	0.39	16.1
August	1,310	20	675	314	0.46	11.9
September	826	2.4	442	223	0.51	7.8
Annual	1,220	94	476	253	0.53	100

Magnitude and frequency of annual low flow, based on period of record 1914-54, 1956-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	5.0	2.3	1.5	1.0	0.00	0.00
3	5.5	2.6	1.8	1.3	0.82	0.00
7	5.8	2.6	1.8	1.3	0.92	0.74
14	6.3	2.9	2.0	1.5	1.1	0.86
30	6.9	3.2	2.2	1.6	1.2	0.97
60	7.7	3.5	2.4	1.8	1.3	1.1
90	9.0	3.8	2.6	1.9	1.4	1.2
120	12	4.8	3.0	2.1	1.4	1.1
183	36	15	9.2	6.1	3.8	2.8

Magnitude and frequency of instantaneous peak flow, based on period of record 1913-54, 1956-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
2,070	3,610	4,880	6,810	8,490	10,400	

Magnitude and frequency of annual high flow, based on period of record 1913-54, 1956-90

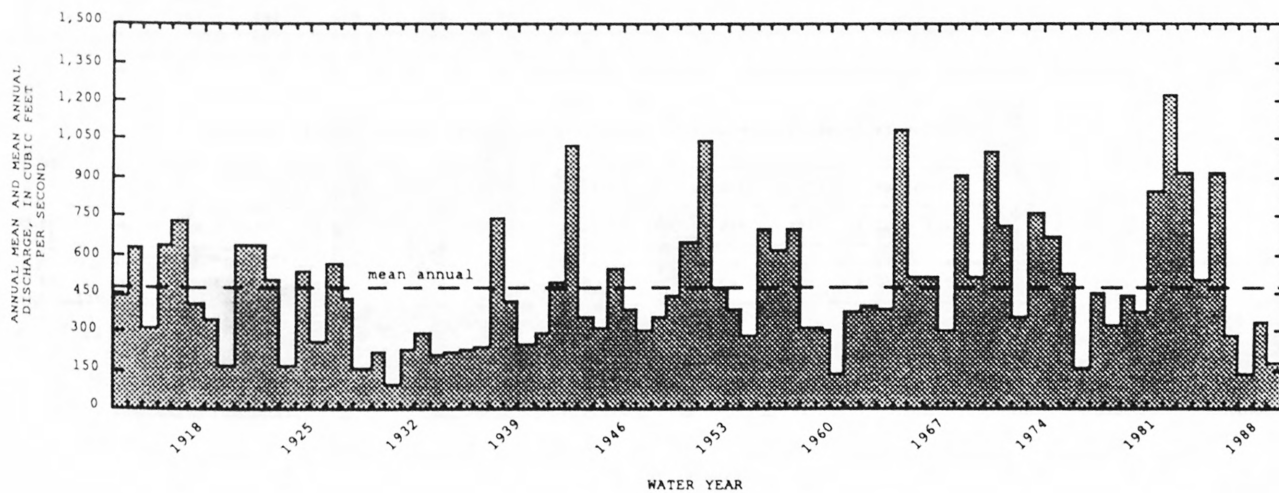
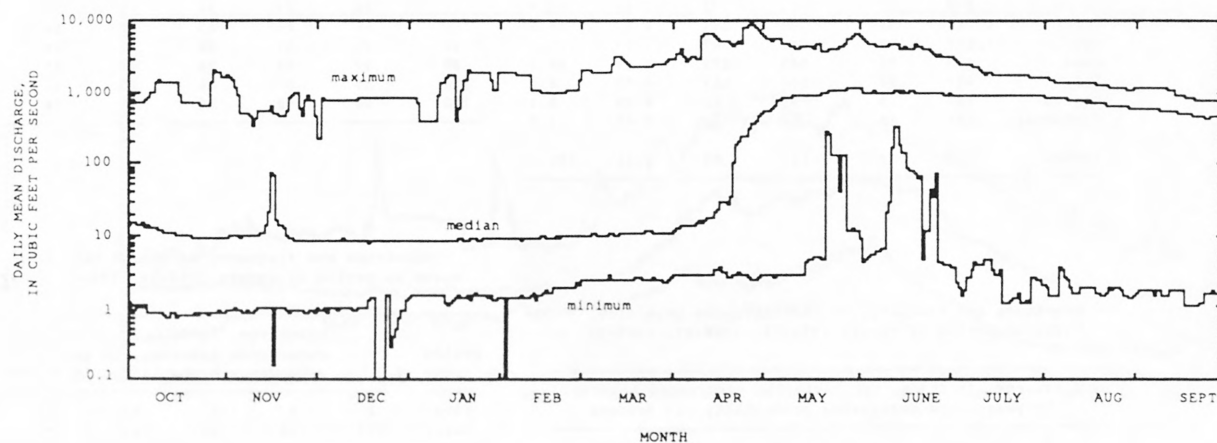
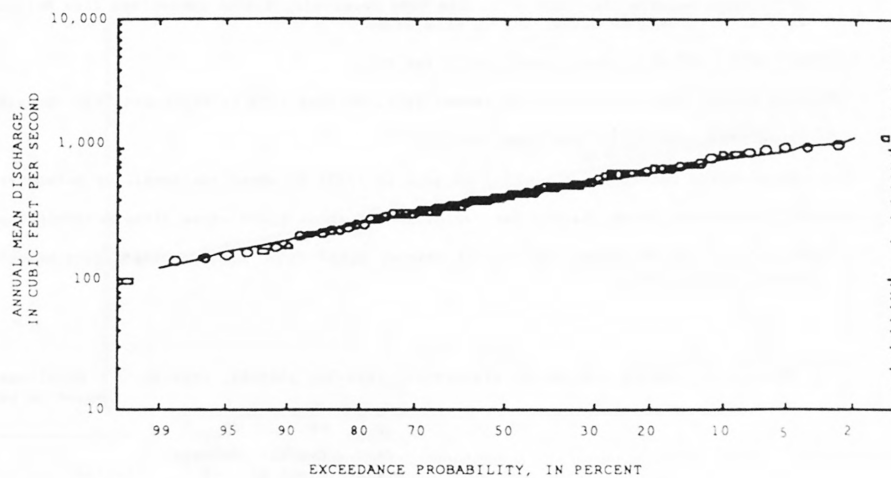
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,930	3,400	4,630	6,530	8,210	10,100
3	1,870	3,280	4,460	6,270	7,870	9,690
7	1,740	2,990	4,050	5,670	7,120	8,790
15	1,560	2,600	3,490	4,850	6,070	7,470
30	1,380	2,240	2,960	4,070	5,060	6,190
60	1,220	1,930	2,510	3,350	4,080	4,890
90	1,110	1,740	2,210	2,870	3,410	3,990

Duration table of daily mean flow for period of record 1913-54, 1956-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,410	1,930	1,280	1,030	909	677	431	68	15	10	7.5	4.4	2.6	1.9	1.7	1.4	1.1



LOCATION MAP



## MALAD RIVER BASIN

13147900 LITTLE WOOD RIVER ABOVE HIGH FIVE CREEK, NEAR CAREY, ID

LOCATION.—Lat 43°29'30", long 114°03'30", about center of sec.22, T.2 N., R.20 E., Blaine County, Hydrologic Unit 17040221, on left bank above maximum flow line of Little Wood Reservoir, 0.4 mi downstream from Muldoon Creek, 0.6 mi upstream from High Five Creek, 13.5 mi northwest of Carey, and at mile 83.0.

DRAINAGE AREA.—248 mi<sup>2</sup>. Mean elevation, 7,220 ft.

PERIOD OF RECORD.—October 1958 to September 1974, October 1979 to September 1990 (no winter record in water year 1982).

REVISED RECORDS.—WSP 1217: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 5,320 ft above sea level, by barometer.

REMARKS.—Diversions above station for irrigation of about 1,300 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,480 ft<sup>3</sup>/s Apr. 22, 1969, gage height, 7.01 ft; minimum, 16 ft<sup>3</sup>/s Aug. 20, 1961, gage height, 1.38 ft.

Summary of monthly and annual discharges, 1959-74, 1980-81, 1983-90

Magnitude and frequency of annual low flow, based on period of record 1960-74, 1981, 1984-91

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	110	24	63	22	0.35	3.3
November	166	38	67	25	0.38	3.5
December	146	37	61	27	0.44	3.2
January	126	36	58	21	0.35	3.1
February	150	41	64	25	0.40	3.3
March	374	47	111	72	0.65	5.9
April	1,110	92	364	243	0.67	19.3
May	1,150	108	444	307	0.69	23.5
June	889	91	387	229	0.59	20.5
July	407	30	154	113	0.73	8.1
August	177	19	65	41	0.63	3.4
September	101	18	54	23	0.42	2.9
Annual	325	59	158	80	0.51	100

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	33	24	20	18	15	14
3	34	25	21	18	15	14
7	36	25	21	18	15	14
14	38	27	22	19	16	14
30	41	29	23	20	16	14
60	44	31	26	22	18	15
90	47	34	28	24	21	18
120	50	37	31	27	24	21
183	55	42	36	32	28	25

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1959-74, 1980-81, 1983-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
980	1,510	1,860	2,300	2,620	2,940

Magnitude and frequency of annual high flow,  
based on period of record 1959-74, 1980-81, 1983-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	748	1,220	1,570	2,040	2,420	2,810
3	692	1,140	1,470	1,920	2,280	2,660
7	621	1,030	1,330	1,730	2,050	2,390
15	547	911	1,180	1,550	1,840	2,140
30	455	762	997	1,330	1,600	1,890
60	391	672	888	1,190	1,440	1,710
90	343	583	768	1,030	1,240	1,470

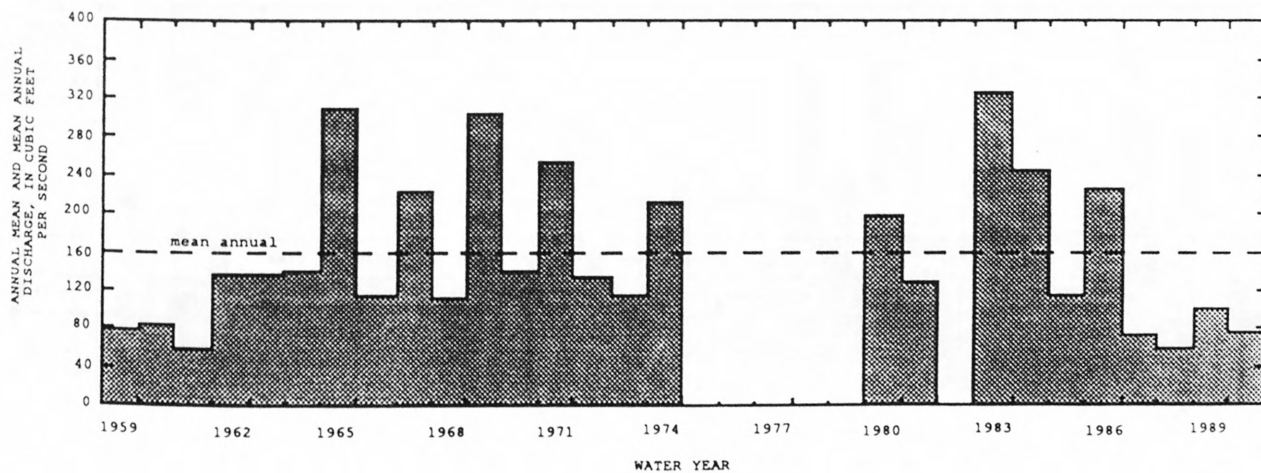
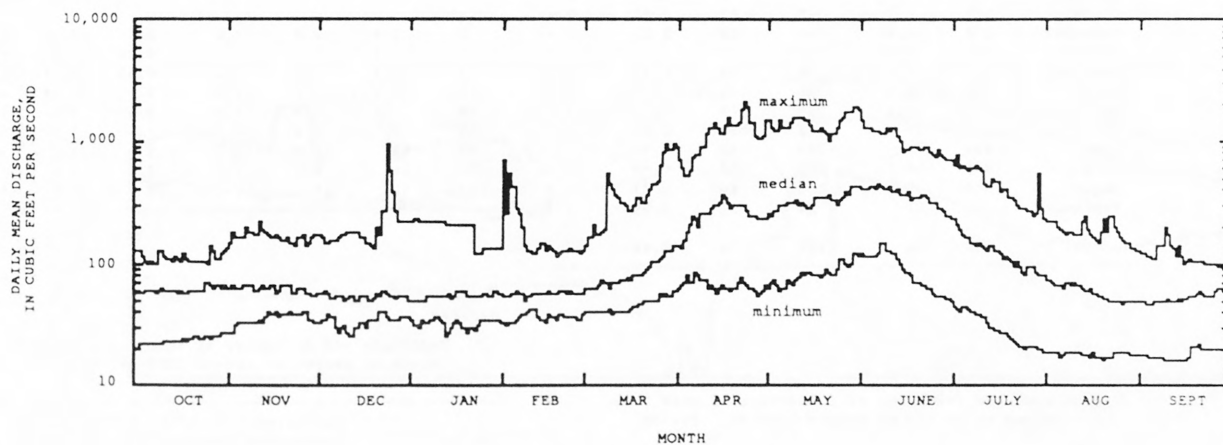
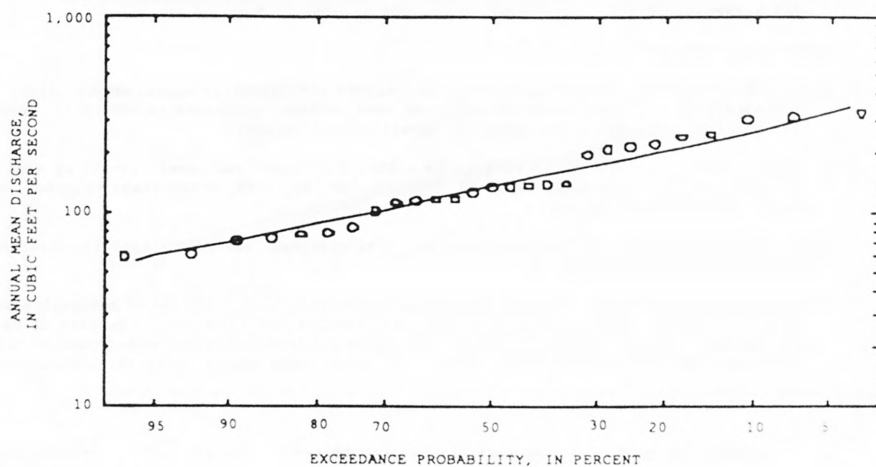
Duration table of daily mean flow for period of record 1959-74, 1980-81, 1983-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,140	611	408	285	204	124	87	73	63	54	46	39	32	25	21	19	17

• Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## MALAD RIVER BASIN

13148500 LITTLE WOOD RIVER NEAR CAREY, ID

LOCATION.—Lat 43°23'20", long 114°00'00", in E<sup>1</sup>/<sub>2</sub> sec. 30, T.1 N., R.21 E., Blaine County, Hydrologic Unit 17040221, on right bank 0.3 mi upstream from West Canal, 1.3 mi upstream from East Canal, 2 mi downstream from Little Fish Creek, 3 mi downstream from Little Wood Reservoir, 6 mi northwest of Carey, and at mile 75.5.

DRAINAGE AREA.—312 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1904 to May 1905 (gage heights and discharge measurements only), September 1926 to November 1942, April 1943 to September 1990. Monthly discharge only for some periods, published in WSP 1317. Records for February 1920 to September 1926 at site 6 mi upstream not equivalent owing to diversion and inflow.

GAGE.—Water-stage recorder. Datum of gage is 4,990.59 ft above sea level (levels by U.S. 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.

REMARKS.—Flow regulated by Little Wood Reservoir 3 mi upstream (see sta 13148200). Diversions above station for irrigation of about 1,500 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 20,000 ft<sup>3</sup>/s due to failure of reservoirs on Little Fish Creek Apr. 24, 1982, gage height, 16.74 ft; maximum discharge prior to Apr. 24, 1982, 6,000 ft<sup>3</sup>/s due to failure of reservoirs on Little Fish Creek Apr. 20, 1938, gage height, 12.81 ft, both floods at present datum and from rating curves extended on basis of slope area measurements; maximum discharge other than dam failures, 2,680 ft<sup>3</sup>/s Apr. 27, 1952, gage height, 8.95 ft; minimum, 1.0 ft<sup>3</sup>/s Jan. 26, 1945, Jan. 20, 1948.

Summary of monthly and annual discharges, 1926-42, 1944-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	205	3.6	50	30	0.61	2.7
November	290	1.7	39	39	0.99	2.1
December	170	1.5	35	32	0.91	1.9
January	132	1.8	32	32	1.0	1.7
February	151	2.0	35	32	0.90	1.8
March	470	2.9	91	104	1.1	5.0
April	1,110	7.4	324	235	0.72	17.7
May	1,150	79	432	261	0.60	23.5
June	837	40	363	182	0.50	19.8
July	451	14	233	113	0.49	12.7
August	315	7.2	135	86	0.63	7.4
September	180	11	67	39	0.59	3.7
Annual	351	46	154	74	0.48	100

Magnitude and frequency of annual low flow,  
based on period of record 1927-42, 1945-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	5.8	2.0	1.0	0.54	0.25	0.15
3	5.8	2.1	1.1	0.66	0.35	0.22
7	5.8	2.2	1.3	0.88	0.54	0.39
14	6.2	2.5	1.6	1.1	0.69	0.52
30	7.4	2.9	1.8	1.3	0.83	0.63
60	9.7	3.8	2.4	1.6	0.99	0.73
90	15	5.9	3.5	2.3	1.3	0.92
120	19	8.0	4.8	3.0	1.7	1.2
183	32	19	14	10	7.6	6.1

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1926-42, 1944-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
797	1,310	1,690	2,210	2,620	3,050	

Magnitude and frequency of annual high flow,  
based on period of record 1926-42, 1944-90

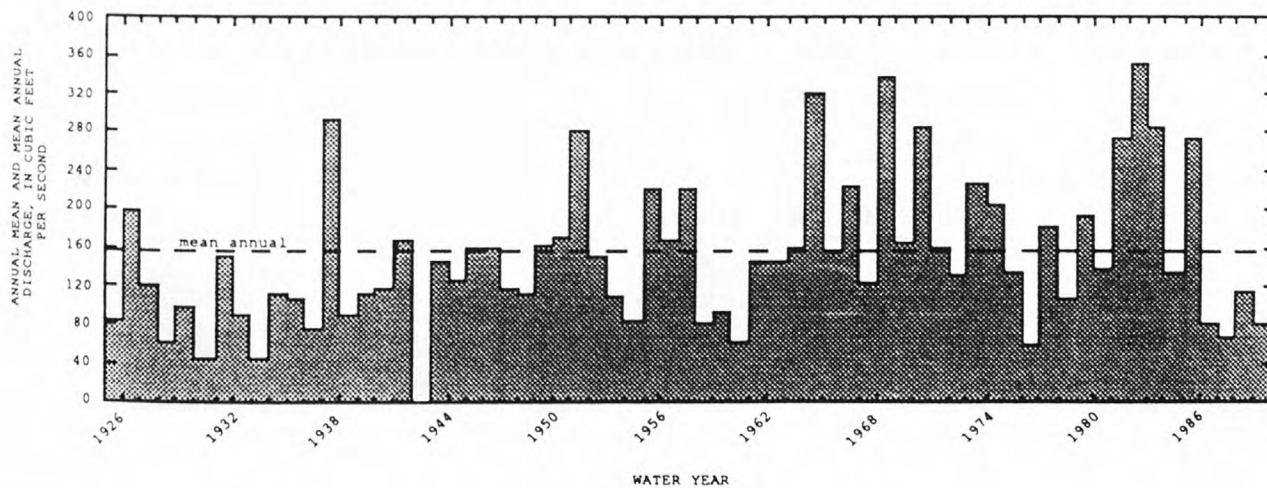
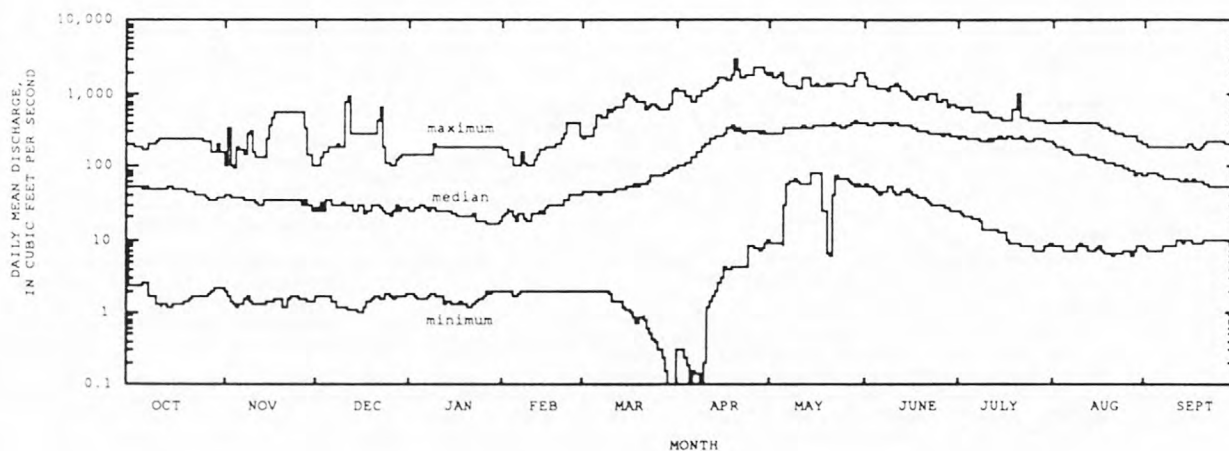
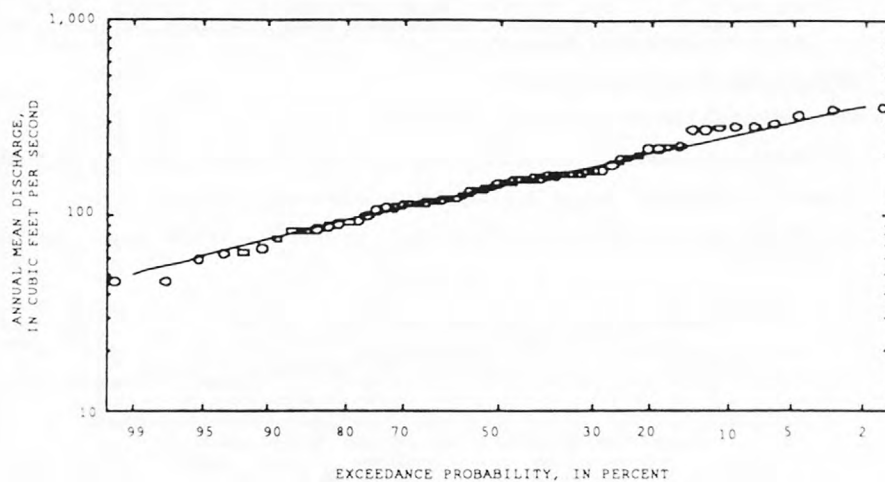
Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	687	1,130	1,450	1,880	2,220	2,570
3	648	1,050	1,340	1,710	2,000	2,300
7	596	959	1,210	1,550	1,800	2,060
15	530	847	1,070	1,370	1,590	1,820
30	463	728	912	1,150	1,330	1,510
60	402	626	783	988	1,150	1,300
90	362	552	678	838	956	1,070

Duration table of daily mean flow for period of record 1926-42, 1944-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,060	572	407	326	267	168	100	68	50	35	21	5.0	3.2	2.2	1.9	1.6	1.3



LOCATION MAP



## MALAD RIVER BASIN

13150430 SILVER CREEK AT SPORTSMAN ACCESS, NEAR PICABO, ID

LOCATION.—Lat 43°19'22", long 114°06'29", in SE¼, NW¼, sec.20, T.1 S., R.20 E., Blaine County, Hydrologic Unit 17040221, on right bank at sportsman access road crossing to campground, 0.6 mi downstream from State Highway 20/23 crossing, 2.3 mi northwest of Picabo, and 4.3 mi southeast of Gannett.

DRAINAGE AREA.—70 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1974 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 4,850 ft above sea level, from topographic map.

REMARKS.—No regulation. Several diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 566 ft<sup>3</sup>/s Apr. 10, 1985, gage height, 8.82 ft; minimum daily, 69 ft<sup>3</sup>/s June 30, July 17, 1977.

Summary of monthly and annual discharges, 1975-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	270	91	190	61	0.32	9.6
November	249	120	185	45	0.24	9.4
December	210	123	169	30	0.18	8.6
January	184	120	157	22	0.14	8.0
February	241	117	166	31	0.19	8.4
March	325	139	196	42	0.22	10.0
April	288	129	184	52	0.28	9.4
May	190	95	133	28	0.21	6.8
June	182	85	129	28	0.22	6.5
July	224	76	134	39	0.29	6.8
August	255	79	159	50	0.31	8.1
September	256	82	165	63	0.38	8.4
Annual	222	113	164	31	0.19	100

Magnitude and frequency of annual low flow,  
based on period of record 1976-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	97	77	66	57	48	42
3	99	81	71	63	54	48
7	103	83	73	64	54	48
14	106	86	75	67	58	52
30	112	90	79	70	61	55
60	120	97	86	78	69	64
90	124	100	89	80	71	65
120	130	105	93	84	75	69
183	143	113	99	88	78	71

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1975-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
373	457	508	570	613	655

Magnitude and frequency of annual high flow,  
based on period of record 1975-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	339	432	483	536	570	600
3	319	402	445	490	518	542
7	293	367	407	450	479	504
15	264	323	355	390	412	431
30	238	283	306	329	344	356
60	217	250	264	278	286	292
90	202	231	244	255	262	267

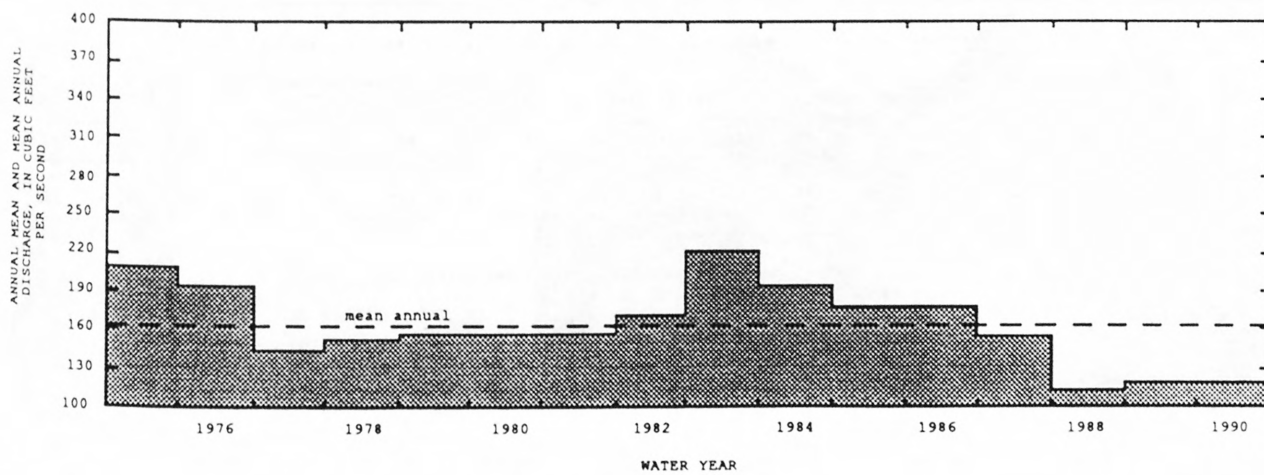
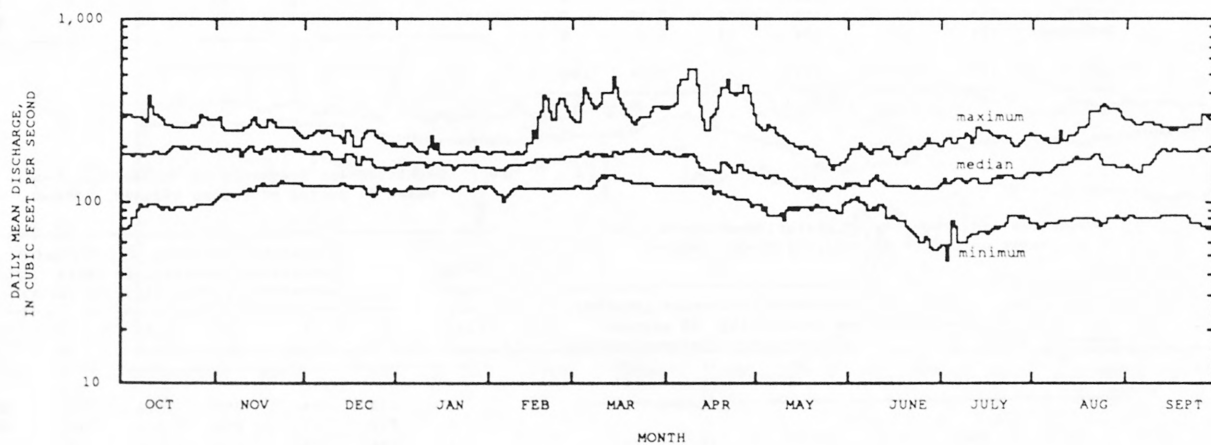
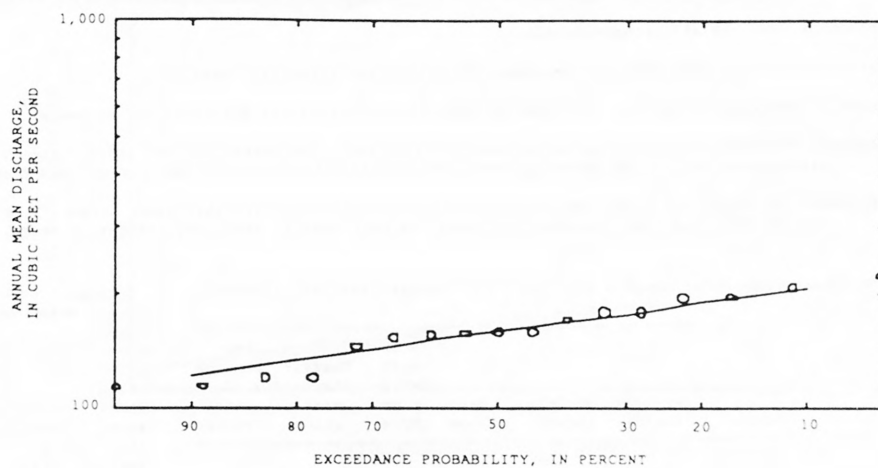
Duration table of daily mean flow for period of record 1975-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
324	256	233	216	204	186	173	159	143	132	120	105	94	82	76	71
															59

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MALAD RIVER BASIN

13150500 SILVER CREEK NEAR PICABO, ID

LOCATION.—Lat 43°17', long 114°01', in sec.1, T.2 S., R.20 E., Blaine County, Hydrologic Unit 17040221, on left bank 1.5 miles downstream from drain ditch of Blaine County Drainage District No. 1 and 3 mi southeast of Picabo.

DRAINAGE AREA.—88 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—May 1920 to September 1960 (1923-35, irrigation season only).

GAGE.—Water-stage recorder. Altitude of gage is 4,790 ft above sea level, by barometer.

REMARKS.—Diversion for irrigation of about 9,000 acres (1950 determination) above station. Two small canals bypass station. Records of discharge do not include water bypassed around station at times by slough on right bank from which there is some diversion for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 357 ft<sup>3</sup>/s Dec. 24, 1955 (gage height, 3.70 ft); maximum gage height recorded, 4.57 ft Jan 22, 1950 (ice jam); minimum discharge, 26 ft<sup>3</sup>/s June 2, 1920 (gage height, 0.48 ft).

Summary of monthly and annual discharges, 1921-22, 1936-62

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	219	109	168	31	0.18	9.2
November	209	119	171	27	0.16	9.4
December	187	115	156	24	0.16	8.6
January	184	107	142	22	0.15	7.8
February	192	109	146	22	0.15	8.0
March	210	121	167	21	0.12	9.2
April	234	124	170	27	0.16	9.4
May	187	82	119	24	0.20	6.5
June	192	86	126	28	0.22	7.0
July	219	83	148	30	0.20	8.1
August	213	80	147	34	0.23	8.1
September	214	91	158	35	0.22	8.7
Annual	192	110	152	21	0.14	100

Magnitude and frequency of annual low flow, based on period of record 1922, 1936-62

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	83	68	60	53	46	42
3	86	72	64	58	52	48
7	90	76	70	65	59	56
14	93	80	74	70	65	62
30	102	87	81	76	70	67
60	114	97	90	85	79	76
90	124	105	96	89	81	77
120	129	108	98	90	81	75
183	139	116	105	97	87	81

Magnitude and frequency of instantaneous peak flow, based on period of record 1921-22, 1936-62

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
261	294	311	330	341	352

Magnitude and frequency of annual high flow, based on period of record 1921-22, 1936-62

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	250	284	303	324	339	350
3	244	276	293	310	320	330
7	234	262	276	289	297	304
15	219	242	252	262	267	272
30	199	217	225	233	237	241
60	182	200	208	217	223	228
90	175	192	200	209	214	219

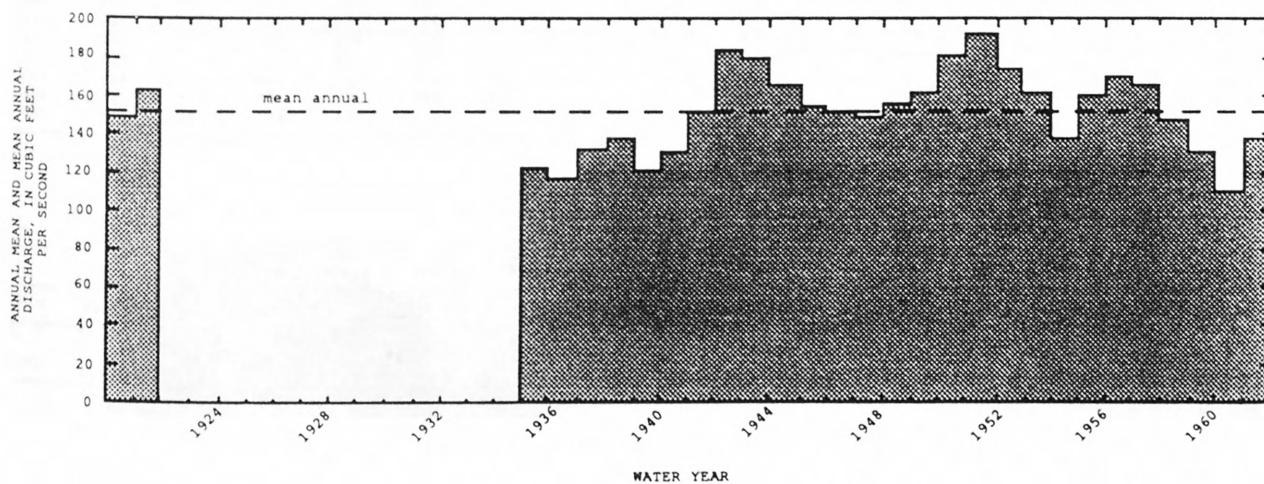
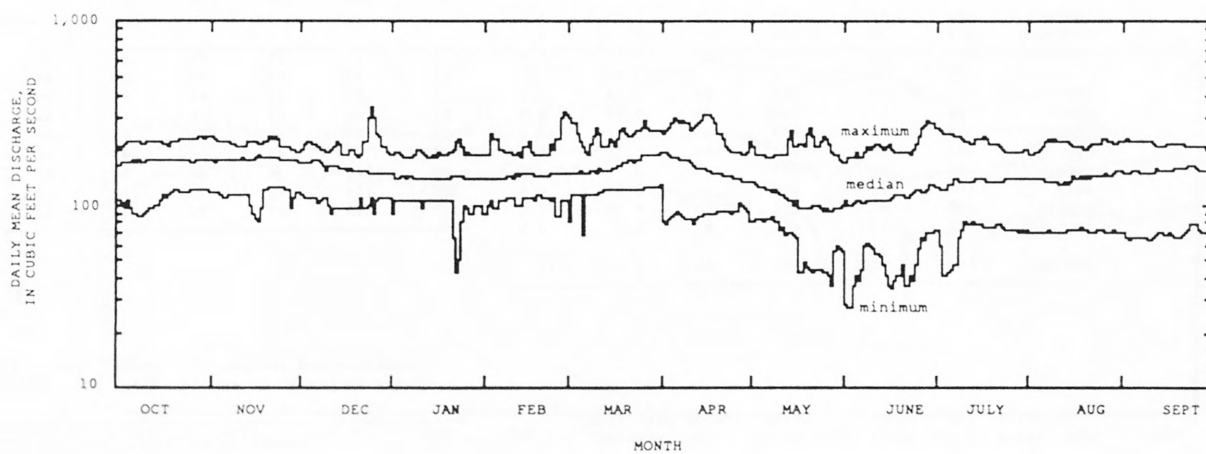
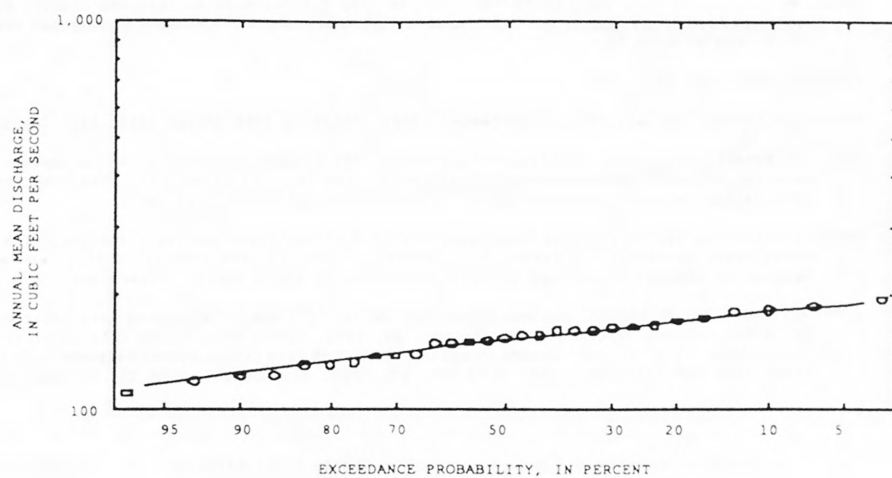
Duration table of daily mean flow for period of record 1921-22, 1936-62

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
247	210	199	189	181	172	162	153	143	132	120	105	95	86	80	73	63

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## MALAD RIVER BASIN

13151000 LITTLE WOOD RIVER NEAR RICHFIELD, ID

LOCATION.—Lat 43°03'00", long 114°07'30", in sec.30, T.4 S., R.20 E., Lincoln County, Hydrologic Unit 17040221, on right bank 0.5 mi upstream from Byrns Slough and heading of Dietrich Main Canal, 1 mi east of railroad station at Richfield, 14 mi downstream from Silver Creek, and at mile 40.1.

DRAINAGE AREA.—570 mi<sup>2</sup>.

PERIOD OF RECORD.—January 1911 to September 1972. Prior to 1955 except 1913, 1921 irrigation seasons only.

GAGE.—Water-stage recorder. Altitude of gage is 4,270 ft above sea level, by barometer. Prior to Sept. 5, 1918, nonrecording gage at site 500 ft downstream at datum 0.92 ft lower. Sept 6, 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.

REMARKS.—Flow regulated by Little Wood Reservoir 30.9 mi upstream (see sta 13148200), 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 above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 20,000 ft<sup>3</sup>/s due to failure of reservoirs on Little Fish Creek Apr. 24, 1982, gage height, 16.74 ft; maximum discharge prior to Apr. 24, 1982, 6,000 ft<sup>3</sup>/s due to failure of reservoirs on Little Fish Creek Apr. 20, 1938, gage height, 12.81 ft, both floods at present datum and from rating curves extended on basis of slope area measurements; maximum discharge other than dam failures, 2,680 ft<sup>3</sup>/s Apr. 27, 1952, gage height, 8.95 ft; minimum, 1.0 ft<sup>3</sup>/s Jan. 26, 1945, Jan. 20, 1948.

Summary of monthly and annual discharges, 1913, 1921, 1955-72

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	223	95	153	35	0.23	7.8
November	212	120	164	27	0.16	8.4
December	217	102	156	28	0.18	8.0
January	192	82	140	28	0.20	7.2
February	201	108	149	26	0.18	7.6
March	291	117	180	51	0.28	9.3
April	745	90	254	155	0.61	13.0
May	637	47	224	169	0.75	11.6
June	500	49	187	133	0.71	9.6
July	256	46	114	51	0.45	5.8
August	198	46	100	33	0.33	5.1
September	209	57	130	41	0.31	6.6
Annual	263	85	162	49	0.30	100

Magnitude and frequency of annual low flow,  
based on period of record 1955-72

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	61	45	40	36	33	31
3	63	48	42	38	34	32
7	70	53	46	41	36	33
14	75	56	48	42	36	34
30	84	62	53	46	39	35
60	93	69	57	49	41	36
90	100	72	60	50	41	36
120	104	75	61	52	42	36
183	119	87	72	61	50	43

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1913, 1921, 1955-72

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
331	505	630	797	928	1,060

Magnitude and frequency of annual high flow,  
based on period of record 1913, 1921, 1955-72

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	328	502	624	794	926	1,040
3	318	486	602	784	922	1,020
7	304	473	590	773	915	1,010
15	293	454	572	762	909	1,000
30	287	436	549	711	846	993
60	244	368	468	618	747	894
90	221	324	407	531	639	760

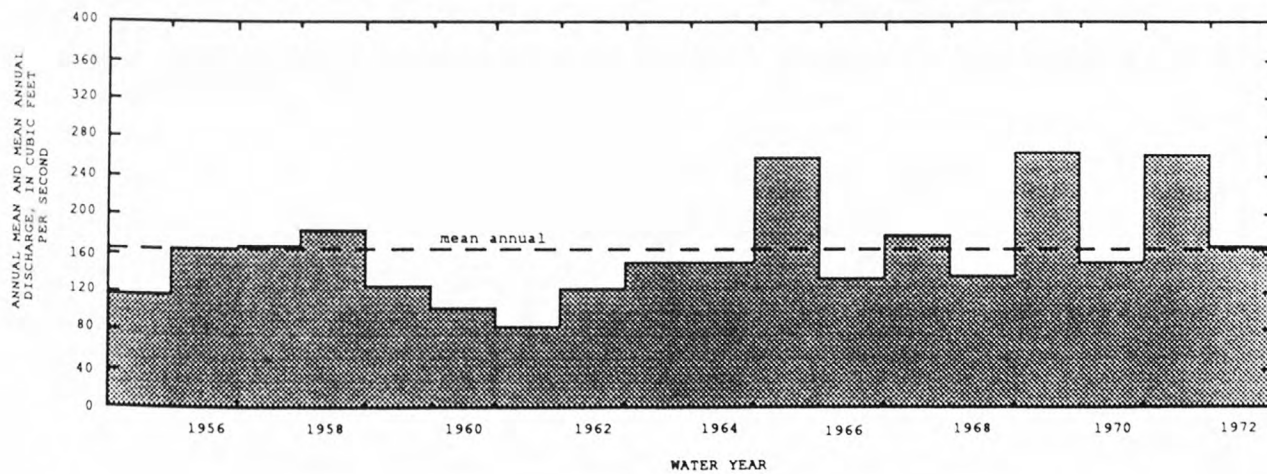
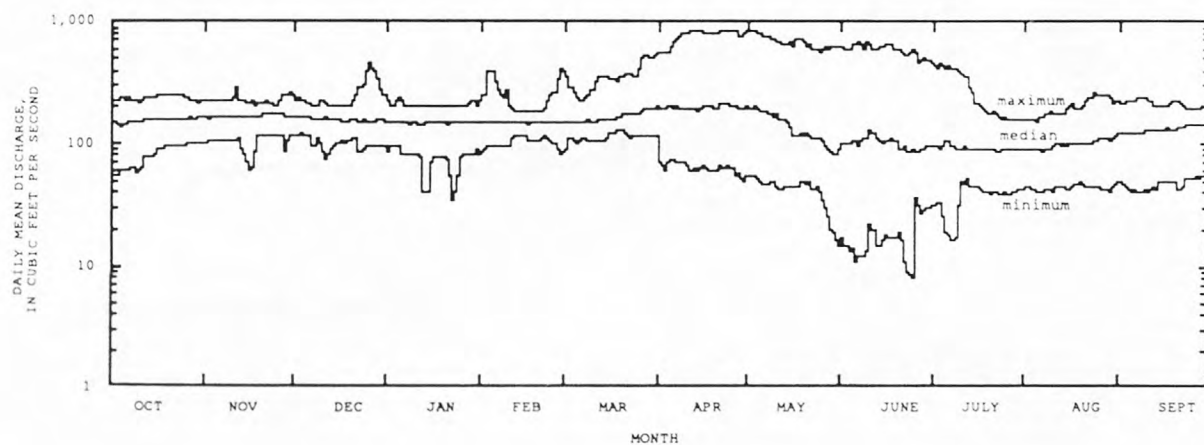
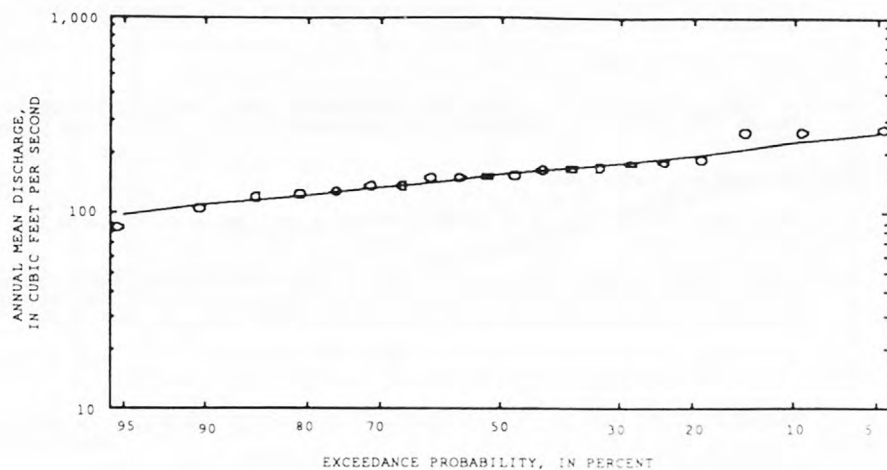
Duration table of daily mean flow for period of record 1913, 1921, 1955-72

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
601	373	246	208	188	171	158	146	134	121	103	74	61	51	46	44		39

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MALAD RIVER BASIN

13152500 MALAD RIVER NEAR GOODING, ID

LOCATION.—Lat 42°53'12", long 114°48'08", in NE 1/4, NE 1/4, SW 1/4, sec.21, T.6 S., R.14 E., Gooding County, Hydrologic Unit 17040219, on right bank at Hudson Ranch, 3.1 mi downstream from bridge on Bliss-Gooding highway, 4.2 mi downstream from Little Wood River, 6 mi southwest of Gooding, and at mile 7.2.

DRAINAGE AREA.—2,990 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—March 1916 to September 1990 (fragmentary from October 1923 to September 1926; no winter records for water years 1923, 1936-37, 1942; irrigation seasons only for water years 1927-35). October 1959 to September 1984, published as "Big Wood River near Gooding."

REVISED RECORDS.—WSP 1347: 1934.

GAGE.—Water-stage recorder. Datum of gage is 3,343.50 ft above sea level. Prior to Apr. 13, 1921, nonrecording gage at present site and datum.

REMARKS.—Flow regulated by Magic Reservoir (see sta 13142000) and by several smaller reservoirs on tributaries and affected by deliveries from canals diverting from Snake River at Milner. Diversions above station for irrigation of about 144,000 acres, of which about 4,000 acres are irrigated by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,860 ft<sup>3</sup>/s Dec. 22, 1964, gage height, 12.15 ft, from floodmarks; no flow at times in many years.

Summary of monthly and annual discharges, 1917-22, 1938-41, 1943-90

Magnitude and frequency of annual low flow, based on period of record 1917-22, 1938-41, 1943-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	520	5.8	141	133	0.94	4.0
November	523	9.9	141	116	0.82	4.0
December	727	3.4	119	130	1.1	3.3
January	798	1.9	126	136	1.1	3.5
February	910	4.8	213	217	1.0	5.9
March	1,920	45	385	435	1.1	10.7
April	2,950	13	766	742	0.97	21.3
May	3,060	7.4	700	754	1.1	19.5
June	2,710	11	571	593	1.0	15.9
July	796	0.42	139	174	1.3	3.9
August	342	0.00	102	80	0.78	2.8
September	547	0.06	188	146	0.78	5.2
Annual	1,080	20	299	234	0.78	100

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	3.6	0.00	0.00	0.00	0.00	0.00
3	6.6	0.00	0.00	0.00	0.00	0.00
7	9.8	1.2	0.00	0.00	0.00	0.00
14	21	3.0	0.48	0.00	0.00	0.00
30	31	9.8	4.1	1.2	0.00	0.00
60	60	16	5.0	1.4	0.24	0.06
90	67	24	11	4.9	1.7	0.78
120	75	30	16	8.4	3.8	2.1
183	97	45	28	18	10	7.0

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1917-22, 1938-41, 1943-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,030	3,860	5,180	6,850	8,070	9,240

Magnitude and frequency of annual high flow,  
based on period of record 1917-22, 1938-41, 1943-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,770	3,430	4,620	6,110	7,190	8,220
3	1,610	3,160	4,270	5,670	6,680	7,660
7	1,380	2,740	3,720	4,950	5,830	6,670
15	1,090	2,240	3,120	4,290	5,180	6,060
30	825	1,780	2,570	3,690	4,590	5,540
60	611	1,330	1,960	2,920	3,740	4,650
90	514	1,130	1,670	2,510	3,230	4,050

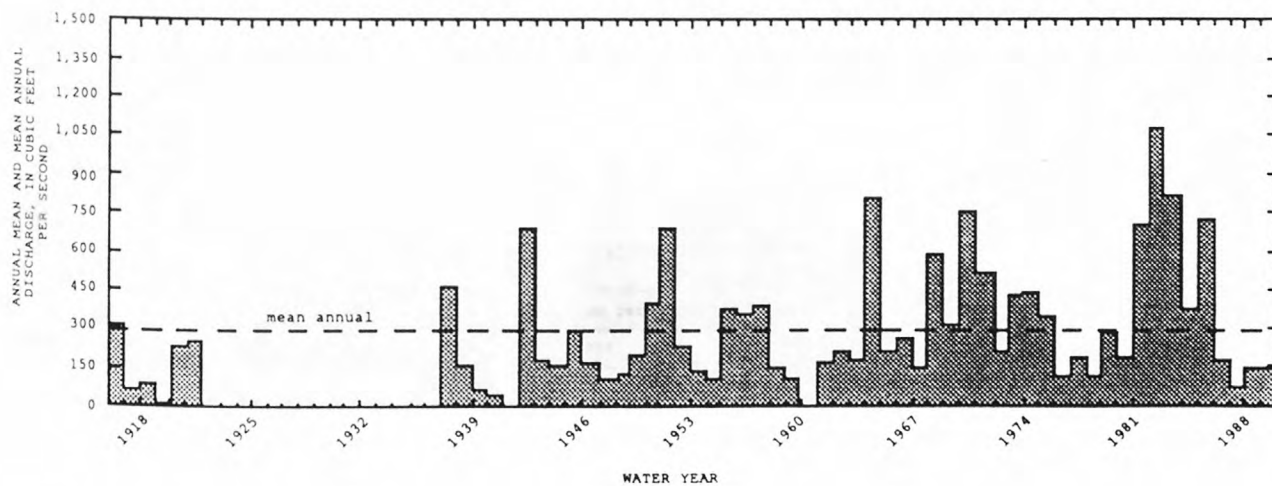
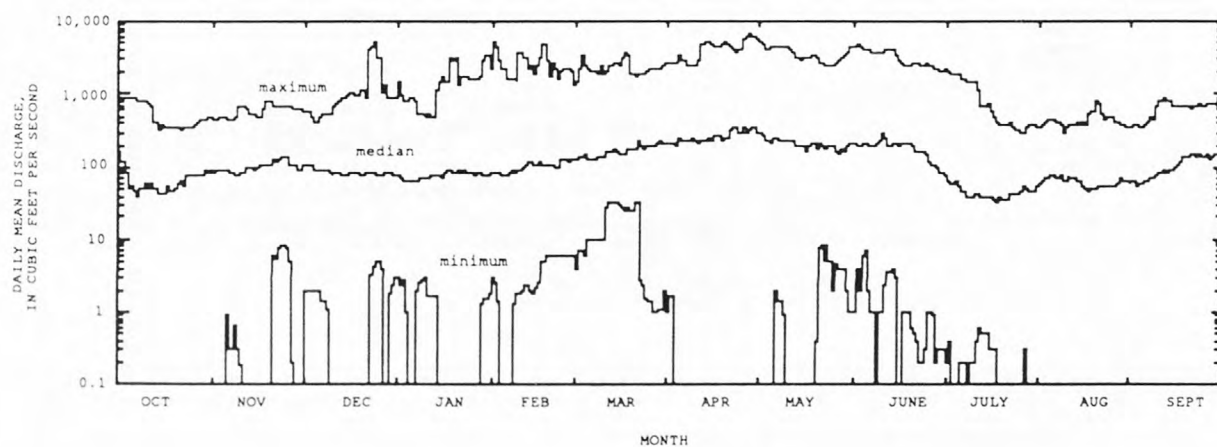
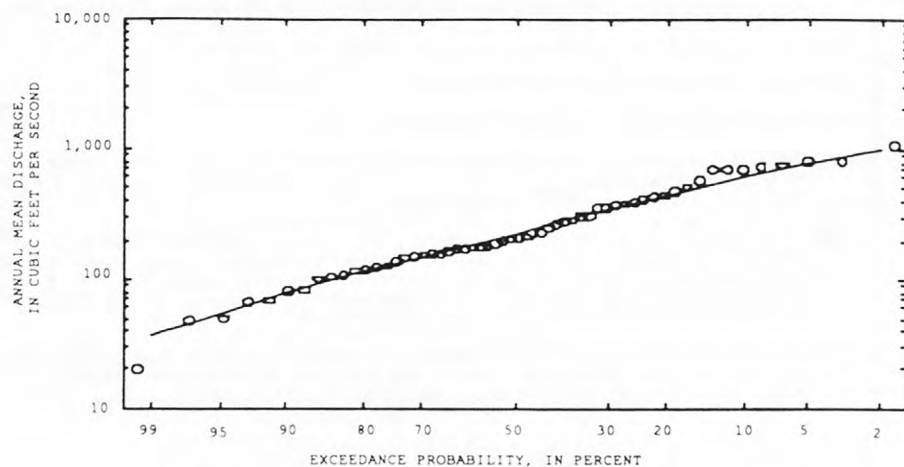
Duration table of daily mean flow for period of record 1917-22, 1938-41, 1943-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
2,740	1,520	782	486	340	216	153	114	88	64	42	20	8.2	1.3	0.01	0.00

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



**SNAKE RIVER MAIN STEM**

13154500 SNAKE RIVER AT KING HILL, ID

**LOCATION.**—Lat 43°00'08", long 115°12'06", in NW¼, NW¼, SW¼, sec. 7, T. 5 S., R. 11 E., Elmore County, Hydrologic Unit 17040212, on right bank 300 ft east of railroad tracks at King Hill, 20 mi downstream from Malad River, and at mile 546.6.

**DRAINAGE AREA.**—35,800 mi², approximately. Mean elevation, 6,040 ft.

**PERIOD OF RECORD.**—May 1909 to September 1990.

**REVISED RECORDS.**—WSP 1317: 1935(M). WDR ID-76-1: 1974.

**GAGE.**—Water-stage recorder. Datum of gage is 2,492.3 ft above sea level (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 mi upstream at different datum, and Aug. 17, 1910, to Oct. 7, 1928, at present site and datum.

**REMARKS.**—No estimated daily discharges. Records fair. Station equipment includes telemetry. Flow regulated by American Falls Reservoir, 168.4 mi upstream. 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. Diversions above station for irrigation of about 2,450,000 acres, of which about 675,000 acres are irrigated by withdrawals from ground water (1966 determination).

**EXTREMES FOR PERIOD OF RECORD.**—Maximum discharge observed, 47,200 ft³/s June 22, 1918, gage height, 16.3 ft, from rating curve extended above 30,000 ft³/s; minimum observed, 1,250 ft³/s Jan. 10, 1950, when flow was cut for gage repairs, gage height, 1.75 ft; minimum daily, 4,760 ft³/s June 7-9, Aug. 15, 16, 1910.

Summary of monthly and annual discharges, 1910-90

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Standard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	18,600	6,860	10,700	2,590	0.24	8.1
November	20,900	7,260	11,300	2,900	0.26	8.6
December	19,800	7,280	11,200	2,790	0.25	8.6
January	22,000	7,170	11,300	2,940	0.26	8.7
February	19,100	7,020	11,400	2,990	0.26	8.7
March	22,500	6,830	11,600	3,700	0.32	8.9
April	28,100	6,580	12,900	5,400	0.42	9.8
May	27,600	6,210	12,700	6,130	0.48	9.7
June	30,700	6,240	13,000	6,550	0.51	9.9
July	19,700	5,400	8,350	2,430	0.29	6.4
August	9,810	4,970	7,730	868	0.11	5.9
September	14,700	5,870	8,740	1,290	0.15	6.7
Annual	18,100	7,000	10,900	2,420	0.22	100

Magnitude and frequency of annual low flow,  
based on period of record 1911-90

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	6,530	6,050	5,780	5,550	5,290	5,120
3	6,700	6,220	5,950	5,710	5,440	5,250
7	6,820	6,320	6,030	5,790	5,510	5,320
14	6,940	6,400	6,100	5,840	5,560	5,360
30	7,110	6,500	6,200	5,950	5,670	5,490
60	7,370	6,680	6,350	6,080	5,800	5,610
90	7,690	6,910	6,540	6,260	5,960	5,770
120	8,100	7,150	6,730	6,430	6,120	5,930
183	8,820	7,610	7,110	6,750	6,390	6,180

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1910-90

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
22,700	29,100	32,300	35,400	37,200	38,700	

Magnitude and frequency of annual high flow,  
based on period of record 1910-90

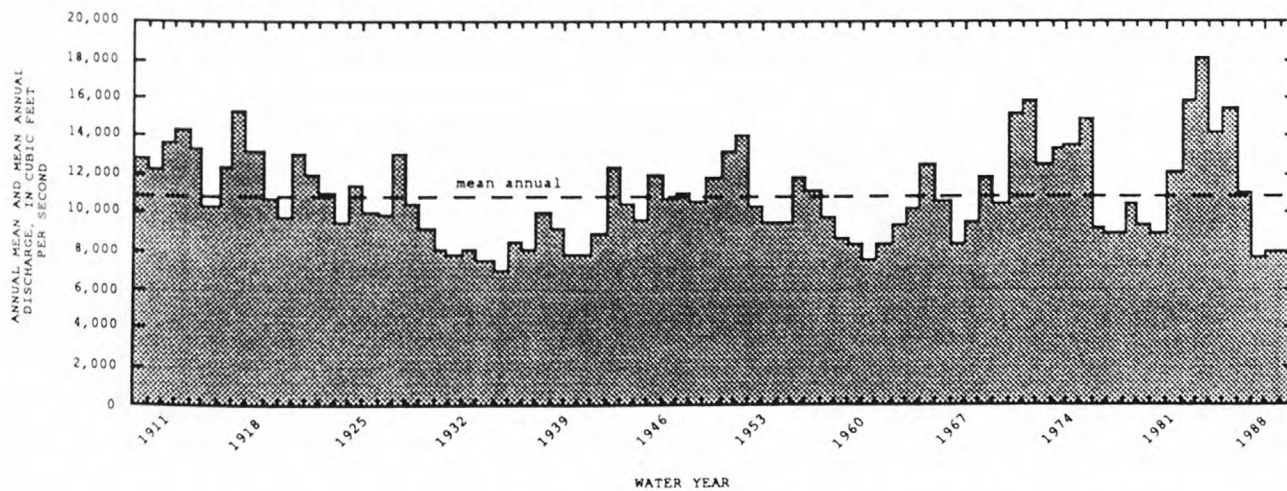
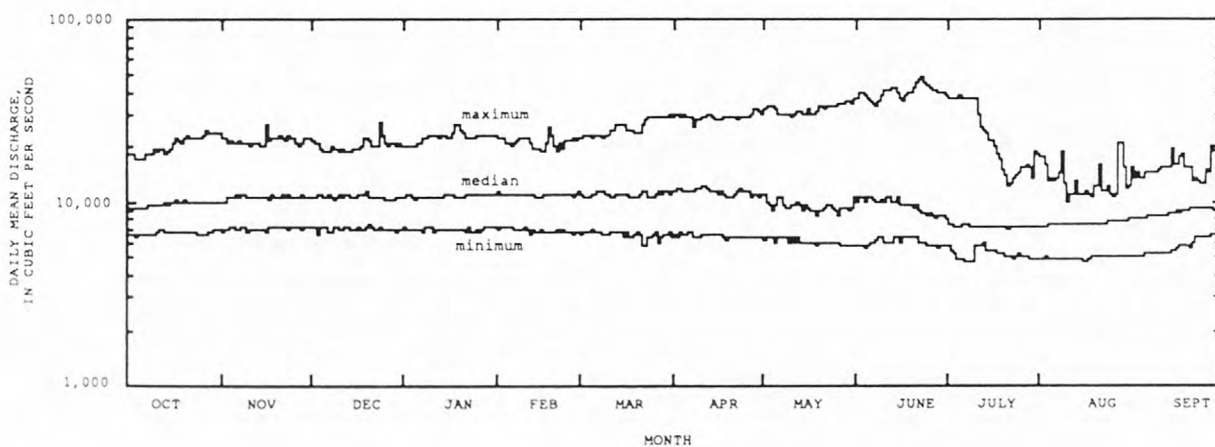
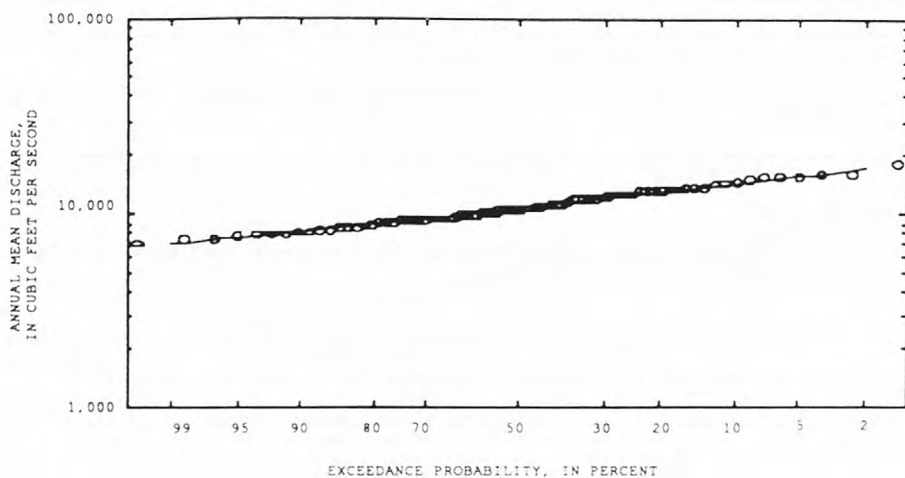
Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	22,200	29,000	32,100	35,200	37,000	38,500
3	21,300	28,400	31,600	34,800	36,300	37,500
7	20,100	27,700	30,300	33,600	35,500	36,900
15	18,600	25,500	29,800	32,400	34,700	36,200
30	16,800	22,800	26,700	31,500	33,000	35,500
60	15,000	20,100	23,400	27,700	30,900	34,000
90	14,100	18,500	21,300	24,800	27,400	30,000

Duration table of daily mean flow for period of record 1910-90

Discharge, in ft³/s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
28,000	20,500	17,000	14,900	13,500	11,800	10,500	9,360	8,620	8,060	7,550	6,980	6,630	6,300	6,030	5,870	5,000



LOCATION MAP





## BRUNEAU RIVER BASIN

13162500 EAST FORK JARBIDGE RIVER NEAR THREE CREEK, ID

LOCATION.—Lat 42°02'00", long 115°22'20", in SE 1/4, SE 1/4, sec. 14, T. 16 S., R. 9 E., Owyhee County, Hydrologic Unit 17050102, on left bank 0.2 mi downstream from Murphy Hot Springs, at mile 2.0, and 11 mi southwest of Three Creek.

DRAINAGE AREA.—84.6 mi<sup>2</sup>. Mean elevation, 4,600 ft.

PERIOD OF RECORD.—October 1928 to March 1933, September 1953 to September 1971. Monthly discharge only for October 1928, published in WSP 1317.

GAGE.—Water-stage recorder. Elevation of gage is 5,150 ft above sea level, by barometer. Prior to Sept. 23, 1953, at same site at datum about 1.6 ft higher.

REMARKS.—None.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 798 ft<sup>3</sup>/s June 22, 1971 (gage height, 6.33 ft); minimum, 0.7 ft<sup>3</sup>/s Dec. 23, 25, 1962 (gage height, 2.82 ft).

Summary of monthly and annual discharges, 1929-32, 1954-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	29	6.1	12	5.1	0.43	1.6
November	24	6.5	11	3.8	0.33	1.6
December	36	6.5	12	6.5	0.53	1.7
January	63	6.9	13	12	0.90	1.8
February	41	6.3	16	9.5	0.61	2.1
March	51	8.2	23	10	0.45	3.2
April	126	25	67	31	0.46	9.3
May	438	106	208	81	0.39	28.6
June	550	53	252	127	0.50	34.6
July	222	11	80	57	0.71	11.0
August	50	4.8	20	12	0.59	2.8
September	23	5.1	12	5.6	0.45	1.7
Annual	135	28	61	25	0.42	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-33, 1955-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	5.3	4.2	3.7	3.3	3.0	2.8
3	6.7	5.1	4.4	3.8	3.3	2.9
7	7.4	5.8	5.0	4.4	3.8	3.4
14	7.9	6.1	5.3	4.7	4.0	3.6
30	8.4	6.5	5.6	5.0	4.3	3.8
60	8.7	6.9	6.2	5.7	5.2	4.9
90	9.2	7.4	6.7	6.2	5.8	5.5
120	9.8	7.9	7.2	6.6	6.1	5.8
183	11	8.5	7.6	6.9	6.3	6.0

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-32, 1954-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
441	620	741	897	1,010	1,130

Magnitude and frequency of annual high flow,  
based on period of record 1929-32, 1954-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	419	573	664	768	839	905
3	398	542	628	728	797	862
7	369	503	585	684	753	819
15	328	451	526	616	679	739
30	278	382	447	523	578	629
60	223	318	378	451	502	552
90	177	253	303	365	410	455

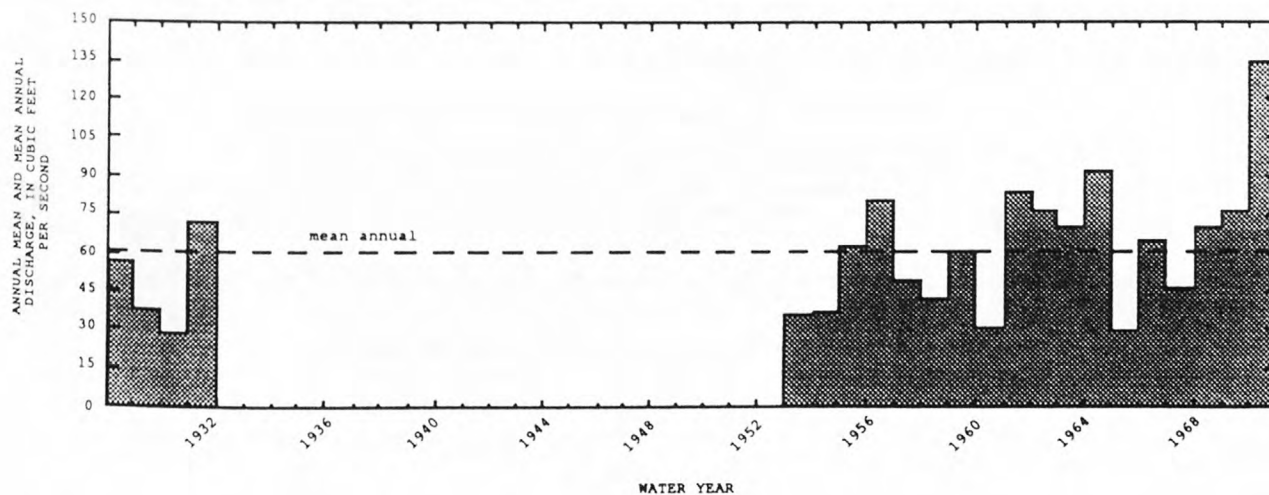
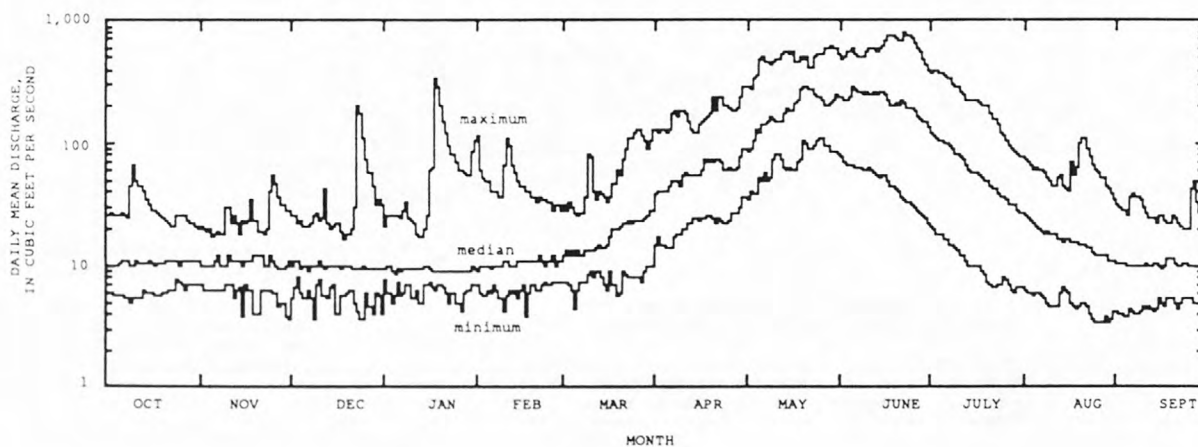
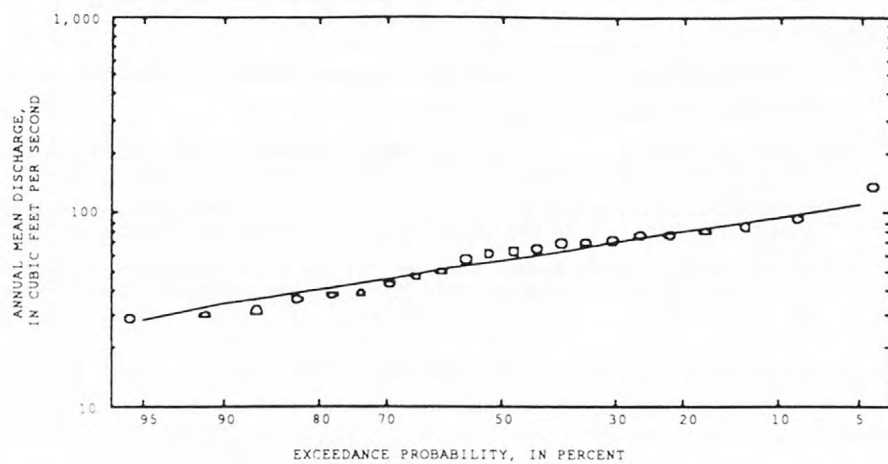
Duration table of daily mean flow for period of record 1929-32, 1954-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
485	295	191	126	84	40	23	17	13	11	9.2	7.8	6.8	5.8	5.1	4.5	3.7

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BRUNEAU RIVER BASIN

13167500 EAST FORK BRUNEAU RIVER NEAR HOT SPRING, ID

LOCATION.—Lat 42°33'25", long 115°30'35", in SW<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub>, sec.15, T.10 S., R.8 E., Owyhee County, Hydrologic Unit 17050102, on right bank at Winter Camp Ranch, at mile 10, and 20 mi southeast of Hot Spring.

DRAINAGE AREA.—620 mi<sup>2</sup>.

PERIOD OF RECORD.—August 1910 to November 1914, February to April 1915, December 1948 to September 1971.

REVISED RECORDS.—WSP 1397: 1949.

GAGE.—Water-stage recorder. Datum of gage is 3,864.8 ft above sea level. Prior to Dec. 10, 1948, nonrecording gage at approximately same 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.

REMARKS.—Diversion above station for irrigation of about 7,450 acres (1966 determination). Water diverted from Deadwood Creek (tributary to East Fork) to Cedar Creek Reservoir in Salmon Falls Creek basin for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 619 ft<sup>3</sup>/s 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, and shorter periods in 1959 and 1968.

Summary of monthly and annual discharges, 1911-14, 1950-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	19	0.37	8.6	4.8	0.56	2.2
November	23	2.7	12	5.0	0.43	2.9
December	24	4.8	12	4.6	0.38	3.0
January	89	5.1	18	17	0.94	4.6
February	63	6.2	21	13	0.63	5.3
March	136	9.7	31	29	0.94	7.9
April	168	13	61	41	0.67	15.4
May	433	7.9	114	93	0.82	28.9
June	245	8.0	87	67	0.77	22.1
July	48	0.00	18	14	0.80	4.5
August	19	0.00	6.6	5.7	0.87	1.7
September	17	0.00	6.0	5.1	0.85	1.5
Annual	99	7.7	33	20	0.59	100

Magnitude and frequency of annual low flow, based on period of record 1912-14, 1950-71

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	1.5	0.00	0.00	0.00	0.00	0.00
3	1.7	0.00	0.00	0.00	0.00	0.00
7	2.1	0.00	0.00	0.00	0.00	0.00
14	2.4	0.08	0.00	0.00	0.00	0.00
30	3.1	0.45	0.00	0.00	0.00	0.00
60	4.2	0.79	0.00	0.00	0.00	0.00
90	4.5	1.2	0.44	0.09	0.00	0.00
120	6.2	2.2	1.1	0.55	0.23	0.12
183	8.1	4.5	3.1	2.2	1.5	1.1

Magnitude and frequency of instantaneous peak flow, based on period of record 1911-14, 1950-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
193	353	486	688	864	1,060

Magnitude and frequency of annual high flow, based on period of record 1911-14, 1950-71

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	185	335	447	596	711	828
3	174	315	417	551	652	752
7	159	289	379	493	575	655
15	141	255	334	430	499	563
30	117	215	282	363	420	474
60	93	172	226	292	339	384
90	77	139	181	233	270	305

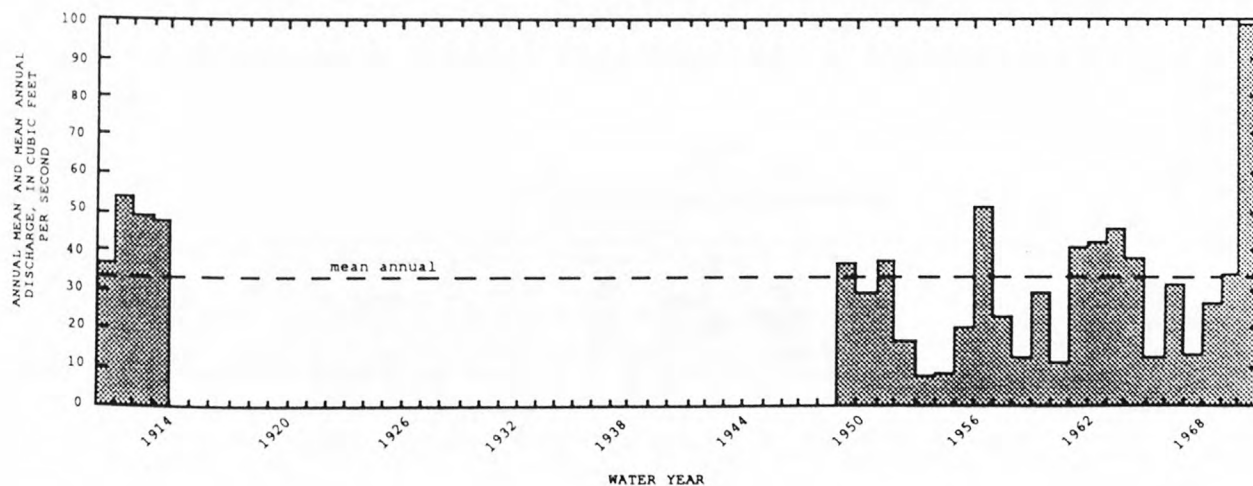
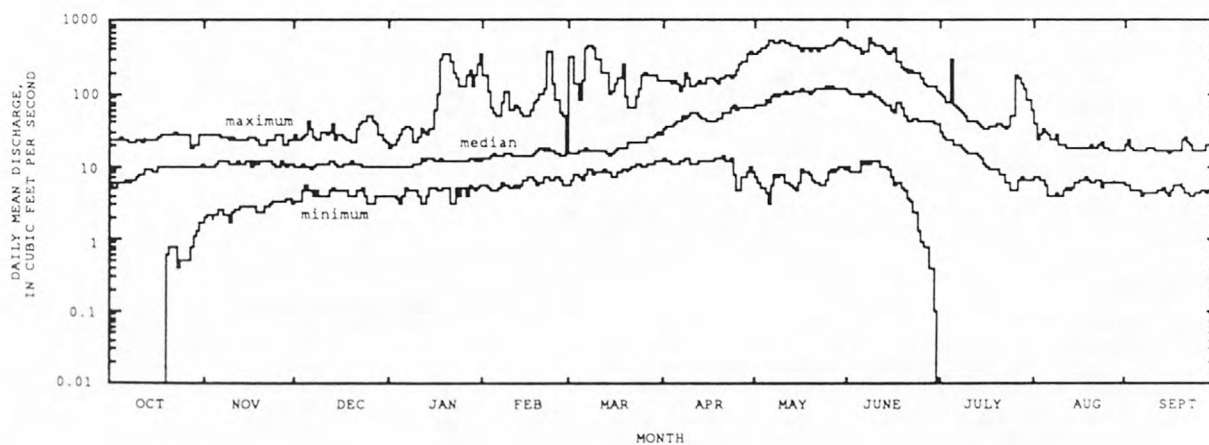
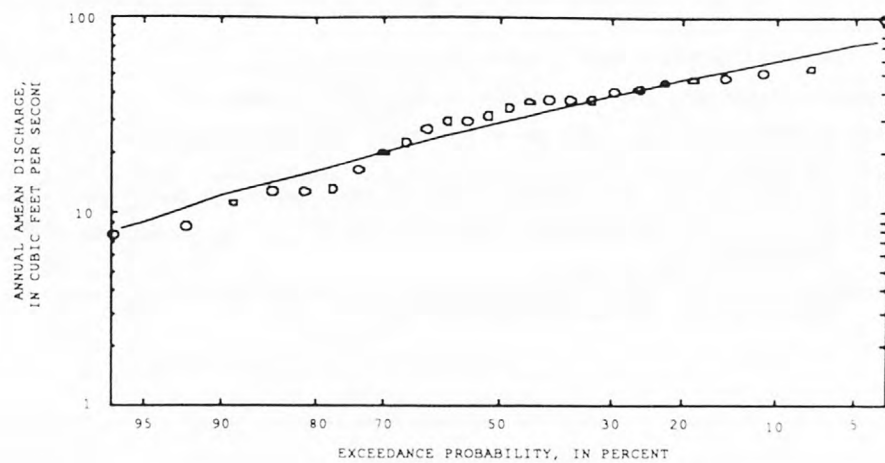
Duration table of daily mean flow for period of record 1911-14, 1950-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
298	139	92	62	41	22	17	14	11	8.9	6.6	3.0	0.94	0.02	0.01	0.00	0.00

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# BRUNEAU RIVER BASIN

13168500 BRUNEAU RIVER NEAR HOT SPRING, ID

LOCATION.—Lat 42°46'16", long 115°43'10", in NE¼, NE¼, SE¼, sec.34, T.7 S., R.6 E., Owyhee County, Hydrologic Unit 17050102, on right bank 1 mi downstream from Hot Creek, 1.5 mi south of Hot Spring, 9 mi southeast of Bruneau, 16 mi downstream from East Fork, and at mile 22.0.

DRAINAGE AREA.—2,630 mi<sup>2</sup>. Mean elevation, 5,600 ft.

PERIOD OF RECORD.—July 1909 to March 1915, October 1943 to September 1990.

REVISED RECORDS.—WSP 1063: 1913. WSP 1517: 1910 (M). WSP 1567: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 2,598.5 ft above sea level. Prior to Mar. 12, 1910, nonrecording gage at site 0.2 mi upstream at different datum, Mar. 12, 1910, to Mar. 15, 1915, nonrecording gage at present site and datum.

REMARKS.—Several small reservoirs on tributaries above station. Diversions above station for irrigation of about 12,900 acres (1990 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,860 ft<sup>3</sup>/s May 15, 1984, gage height, 13.03 ft; minimum, 20 ft<sup>3</sup>/s Nov. 29, 1973, gage height, 2.98 ft, result of freezeup.

Summary of monthly and annual discharges, 1910-14, 1944-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard deviation (ft <sup>3</sup> /s)	Coefficient of variation	Percentage of annual runoff
October	185	54	103	32	0.31	2.2
November	248	71	127	40	0.31	2.7
December	425	73	133	57	0.43	2.8
January	724	81	168	105	0.63	3.5
February	905	98	225	140	0.62	4.7
March	1,900	119	407	346	0.85	8.5
April	1,880	196	831	408	0.49	17.4
May	4,100	362	1,290	702	0.55	26.9
June	3,120	179	1,020	588	0.58	21.3
July	1,040	62	291	199	0.68	6.1
August	334	38	104	51	0.49	2.2
September	171	35	84	27	0.33	1.7
Annual	1,010	159	398	164	0.41	100

Magnitude and frequency of annual low flow, based on period of record 1911-14, 1945-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	48	37	32	29	25	23
3	56	45	40	36	32	30
7	65	52	45	41	36	33
14	70	54	47	42	37	34
30	74	57	49	44	38	35
60	80	61	53	47	40	37
90	88	67	58	51	44	40
120	95	73	63	56	48	44
183	106	83	73	66	59	54

Magnitude and frequency of instantaneous peak flow, based on period of record 1910-14, 1944-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,200	3,490	4,420	5,660	6,630	7,640

Magnitude and frequency of annual high flow, based on period of record 1910-14, 1944-90

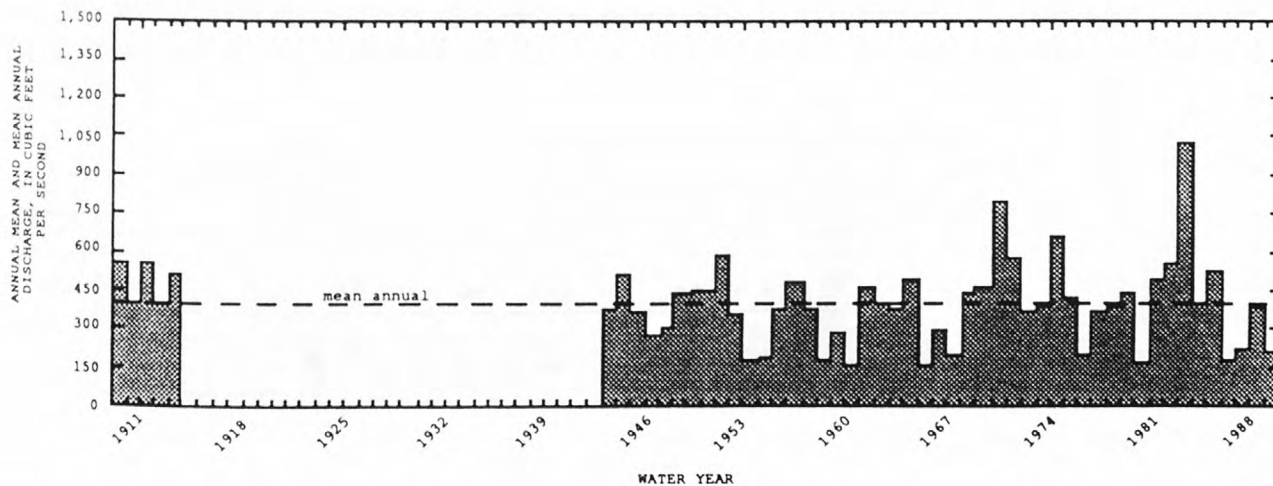
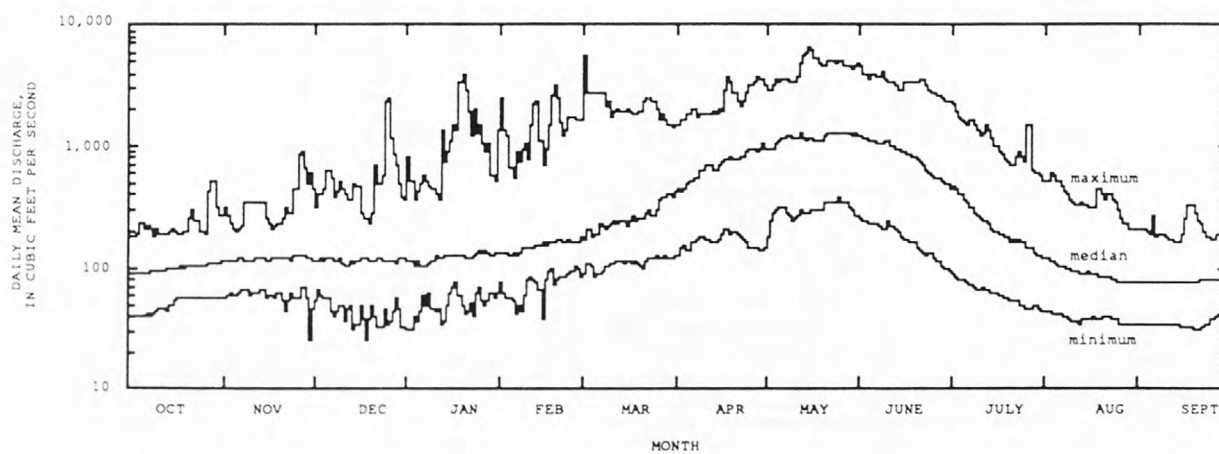
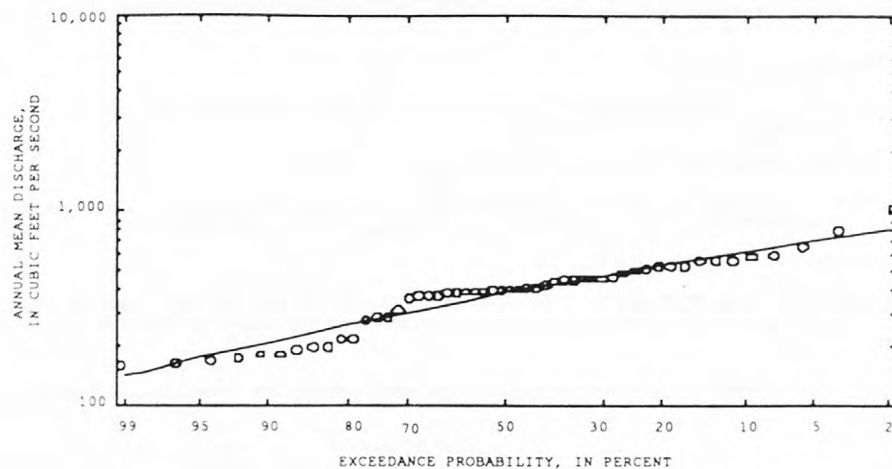
Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,950	3,050	3,820	4,840	5,620	6,410
3	1,830	2,810	3,480	4,340	4,980	5,630
7	1,680	2,570	3,190	3,980	4,570	5,170
15	1,540	2,330	2,860	3,530	4,010	4,500
30	1,360	2,060	2,520	3,090	3,500	3,900
60	1,170	1,760	2,130	2,570	2,890	3,190
90	1,020	1,500	1,800	2,140	2,380	2,610

Duration table of daily mean flow for period of record 1910-14, 1944-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
2,590	1,560	1,150	854	620	325	201	153	127	108	91	72	61	50	44	34



LOCATION MAP





## BRUNEAU RIVER BASIN

13169500 BIG JACKS CREEK NEAR BRUNEAU, ID  
(Hydrologic bench-mark station)

LOCATION.—Lat 42°47'06", long 115°59'00", in NW 1/4, SE 1/4, sec.28, T.7 S., R.4 E., Owyhee County, Hydrologic Unit 17050102, U.S. Bureau of Land Management lands, on left bank 0.2 mi upstream from confluence with Little Jacks Creek, 11.5 mi southwest of Bruneau, and at mile 12.7.

DRAINAGE AREA.—253 mi<sup>2</sup>.

PERIOD OF RECORD.—December 1938 to October 1949, July 1965 to September 1990. Prior to October 1968, published as "Mickahoney Creek near Bruneau."

REVISED RECORDS.—WDR Idaho 1967: Drainage area.

GAGE.—Water-stage recorder and a self-cleaning broad-crested concrete weir. Elevation of gage is 2,810 ft above sea level, by barometer; December 1938 to October 1949, at site 145 ft upstream at different datum.

REMARKS.—No diversion or regulation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,100 ft<sup>3</sup>/s Jan. 22, 1943, gage height, 12.4 ft, from high-water mark (site and datum then in use), on basis of slope-area measurement of peak flow; no flow for long periods most years.

Summary of monthly and annual discharges, 1940-49, 1966-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	14	0.00	1.3	2.9	2.2	2.0
November	13	0.00	1.3	2.7	2.2	2.0
December	8.1	0.00	0.63	1.6	2.5	1.0
January	34	0.00	5.0	9.3	1.9	7.6
February	70	0.00	8.6	16	1.9	13.2
March	110	0.00	19	25	1.3	28.9
April	115	0.00	15	23	1.6	22.4
May	89	0.00	7.0	16	2.3	10.7
June	55	0.00	3.8	9.5	2.5	5.9
July	18	0.00	1.6	3.4	2.2	2.5
August	15	0.00	1.2	3.0	2.4	1.9
September	14	0.00	1.3	2.9	2.3	1.9
Annual	33	0.00	5.4	6.8	1.3	100

Magnitude and frequency of annual low flow,  
based on period of record 1940-49, 1967-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10# 10%	20# 5%	50# 2%	100# 1%
1						
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1940-49, 1966-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
168	550	954	1,630	2,250	2,950

Magnitude and frequency of annual high flow,  
based on period of record 1940-49, 1966-90

Period (con- secu- tive days)	Discharge, ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10# 10%	25# 4%	50# 2%	100# 1%
1	98	256	335	397	423	439
3	72	207	284	349	380	399
7	49	152	215	272	299	317
15	33	105	149	188	207	219
30	21	71	105	137	154	165
60	13	47	71	95	107	116
90	9.6	36	54	72	81	87

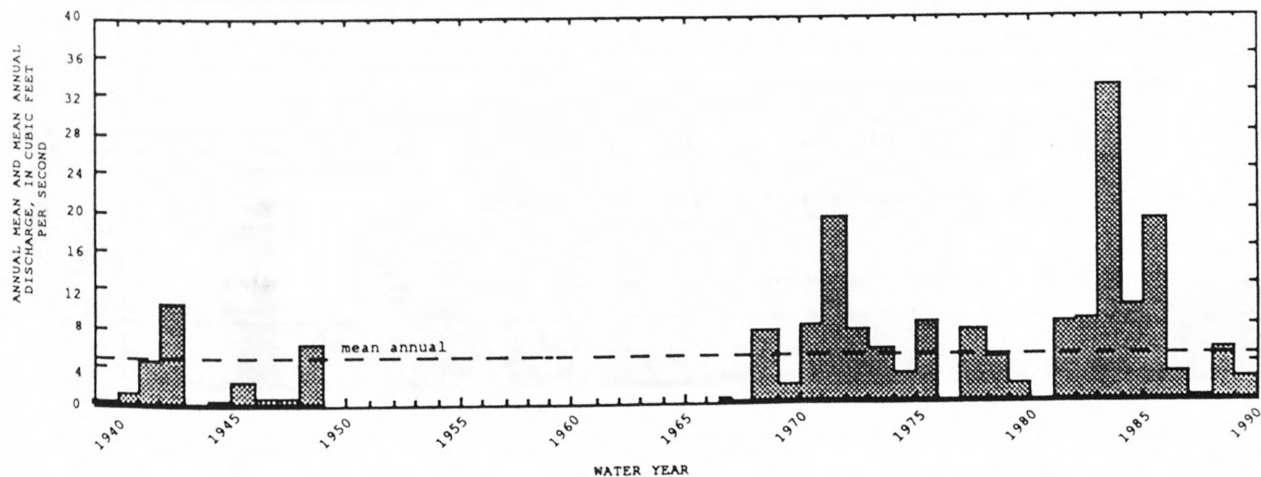
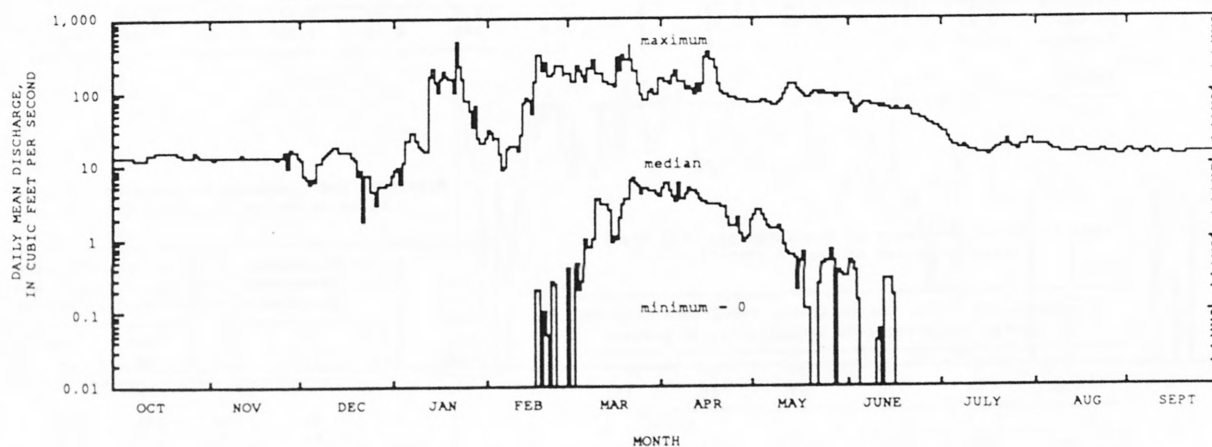
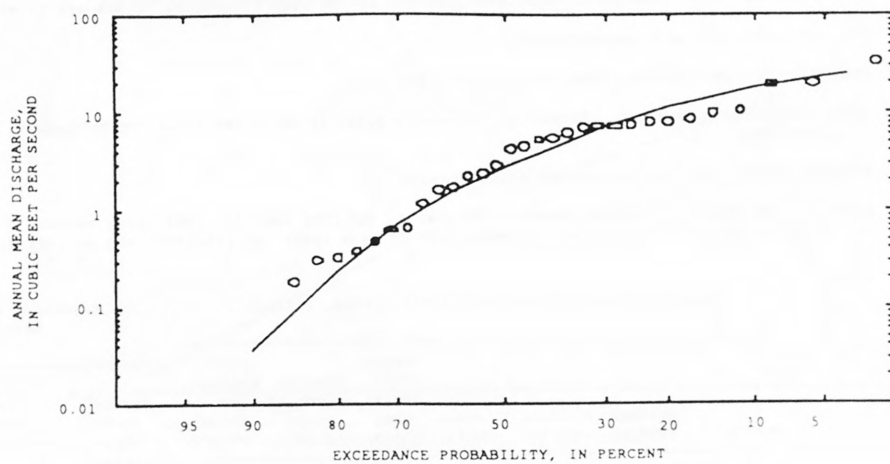
Duration table of daily mean flow for period of record 1940-49, 1966-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
100	24	13	7.2	4.6	1.6	0.12	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BRUNEAU RIVER BASIN

13170000 LITTLE JACKS CREEK NEAR BRUNEAU, ID

LOCATION.—Lat 42°47', long 115°59', in sec.27, T.7 S., R.4 E., Owyhee County, Hydrologic Unit 17050102, U.S. Bureau of Land Management lands, on left bank 650 ft upstream from confluence with Wickahoney Creek and 11 mi southwest of Bruneau.

DRAINAGE AREA.—290 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—December 1938 to October 1949.

GAGE.—Water-stage recorder. Elevation of gage is 2,820 ft above sea level, by barometer. Prior to May 3, 1939, staff gage at same site and datum.

REMARKS.—Diversion for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 908 ft<sup>3</sup>/s Jan. 21, 1943 (gage height, 7.2 ft), from rating curve extended above 10 ft<sup>3</sup>/s on basis of slope-area determination of peak flow; no flow for long periods each year.

Summary of monthly and annual discharges, 1940-49

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	0.04	0.00	0.00	0.01	3.2	0.0
November	0.00	0.00	0.00	0.00		0.0
December	0.00	0.00	0.00	0.00		0.0
January	13	0.00	1.3	4.2	3.2	14.6
February	14	0.00	2.4	4.3	1.8	26.4
March	7.4	0.00	2.0	2.8	1.4	21.2
April	14	0.00	2.3	4.3	1.9	25.0
May	6.4	0.00	0.73	2.0	2.7	8.0
June	1.7	0.00	0.40	0.62	1.6	4.3
July	0.27	0.00	0.04	0.09	2.4	0.4
August	0.02	0.00	0.00	0.01	3.2	0.0
September	0.12	0.00	0.01	0.04	3.2	0.1
Annual	3.0	0.01	0.75	0.95	1.3	100

Magnitude and frequency of annual low flow,  
based on period of record 1940-49

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 1%	100 0.1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.00	0.00	0.00	0.00	0.00	0.00

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1940-49

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
148	426	724	1,250	1,770	2,390	

Magnitude and frequency of annual high flow,  
based on period of record 1940-49

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	18	65	123	241	369	538
3	11	41	77	147	219	308
7	6.9	27	50	93	134	181
15	4.4	18	32	57	79	103
30	2.7	11	21	39	54	71
60	1.5	7.4	15	30	44	61
90	1.0	5.1	11	21	32	46

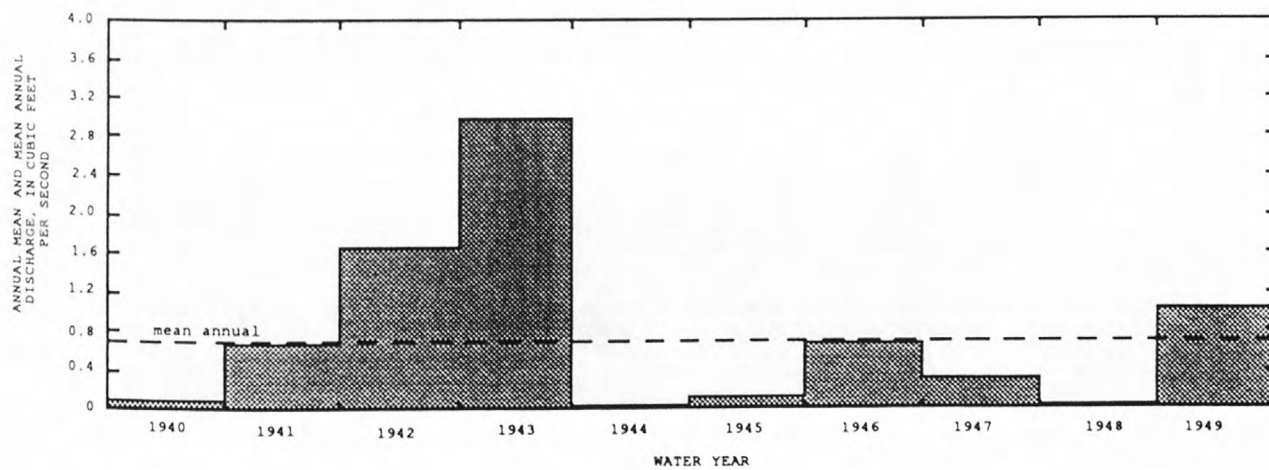
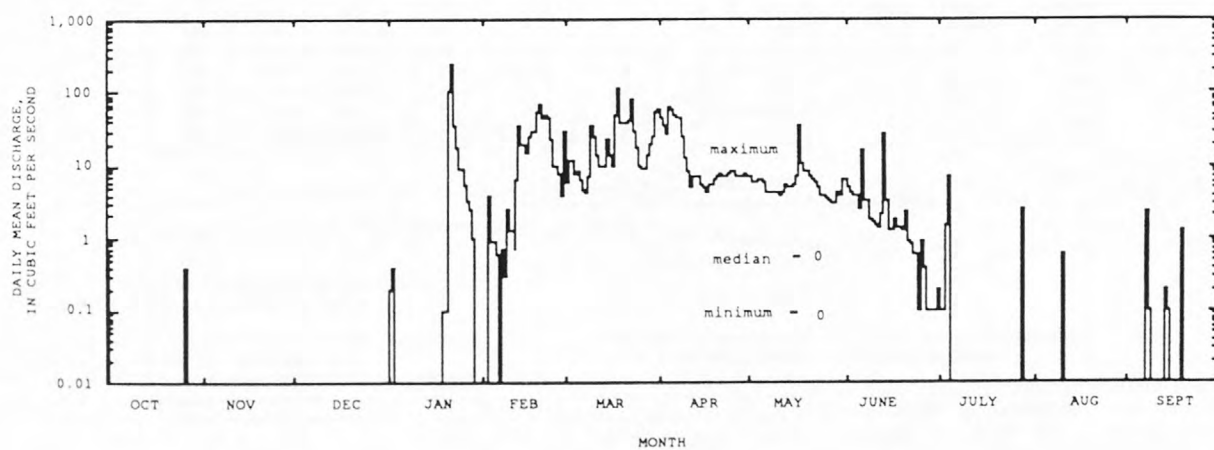
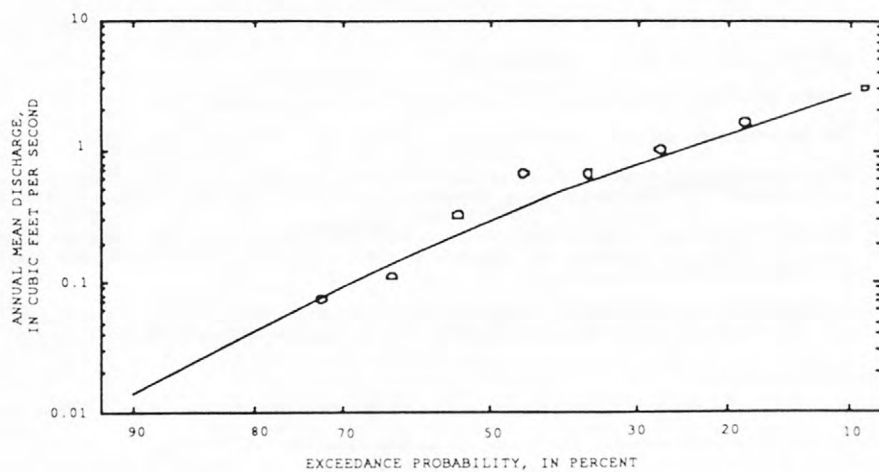
Duration table of daily mean flow for period of record 1940-49

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
16	3.1	0.42	0.10	0.09	0.08	0.07	0.06	0.05	0.03	0.02	0.01	0.01	0.00	0.00	0.00	0.00

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SNAKE RIVER MAIN STEM

13172500 SNAKE RIVER NEAR MURPHY, ID

LOCATION.—Lat 43°17'31", long 116°25'12", in NW 1/4, NE 1/4, SE 1/4, sec.35, T.1 S., R.1 W., Ada County, Hydrologic Unit 17050103, on right bank 4.2 mi downstream from Swan Falls powerplant, 7.5 mi northeast of Murphy, and at mile 453.5.

DRAINAGE AREA.—41,900 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—August to October 1912, August 1913 to September 1990.

REVISED RECORDS.—WSP 1737: 1933(M).

GAGE.—Water-stage recorder. Datum of gage is 2,271.17 ft above sea level. Prior to Sept. 7, 1914, nonrecording gage, and Sept. 7, 1914, to Sept. 30, 1935, water-stage recorder at site 3.5 mi upstream at datum 9.79 ft higher.

REMARKS.—Major regulation by American Falls Reservoir, 260.5 mi upstream. Diurnal fluctuation caused by hydroelectric plants upstream. Diversions above station for irrigation of about 2,590,000 acres, of which about 701,000 acres are irrigated by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 47,300 ft<sup>3</sup>/s June 22, 1918, gage height, 13.95 ft, site and datum then in use; minimum, 3,650 ft<sup>3</sup>/s July 7, 1981, gage height, 2.22 ft; minimum daily, 4,530 ft<sup>3</sup>/s June 28, 1981.

Summary of monthly and annual discharges, 1914-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	18,500	7,170	10,700	2,590	0.24	8.0
November	21,400	7,510	11,600	2,980	0.26	8.6
December	21,000	7,710	11,600	2,950	0.25	8.7
January	23,300	7,640	11,800	3,170	0.27	8.8
February	19,900	7,490	12,000	3,160	0.26	8.9
March	24,500	7,260	12,200	3,880	0.32	9.1
April	29,000	6,830	13,700	5,690	0.42	10.2
May	31,300	6,520	13,200	6,390	0.48	9.9
June	30,800	6,430	13,000	6,200	0.48	9.7
July	21,200	5,290	8,140	2,570	0.32	6.1
August	9,760	5,920	7,480	758	0.10	5.6
September	10,600	6,060	8,550	894	0.10	6.4
Annual	19,200	7,370	11,200	2,540	0.23	100

Magnitude and frequency of annual low flow,  
based on period of record 1915-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	6,490	5,860	5,510	5,210	4,870	4,650
3	6,670	6,010	5,630	5,310	4,940	4,700
7	6,770	6,110	5,730	5,410	5,040	4,790
14	6,850	6,200	5,840	5,530	5,190	4,950
30	7,020	6,370	6,020	5,730	5,410	5,190
60	7,260	6,610	6,280	6,010	5,710	5,520
90	7,620	6,890	6,540	6,260	5,960	5,770
120	8,070	7,160	6,770	6,470	6,180	5,990
183	8,880	7,660	7,160	6,800	6,440	6,230

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1914-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
24,400	31,900	36,200	41,100	44,400	47,400	

Magnitude and frequency of annual high flow,  
based on period of record 1914-90

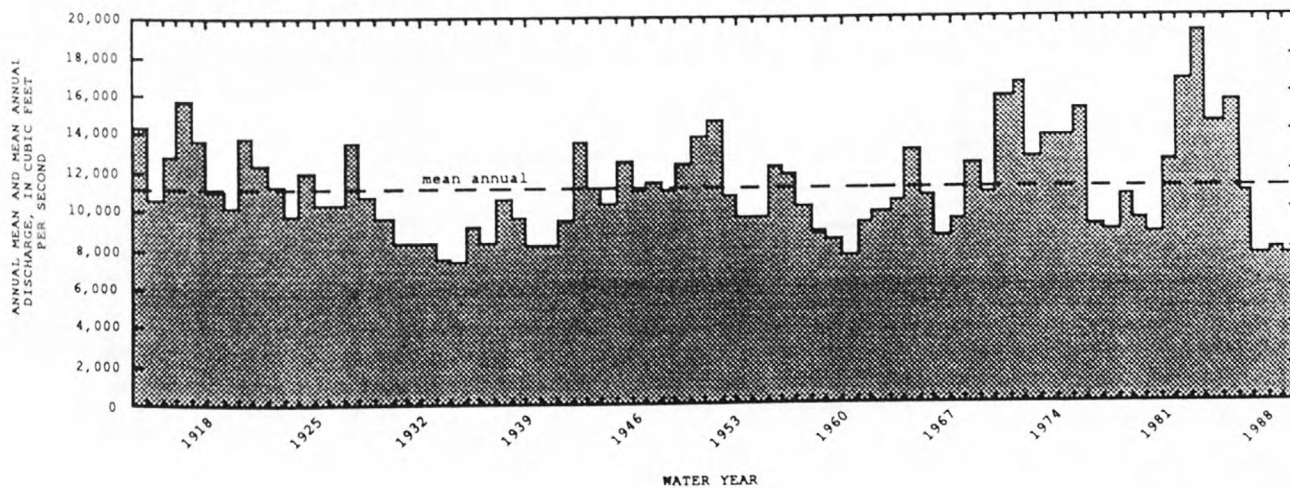
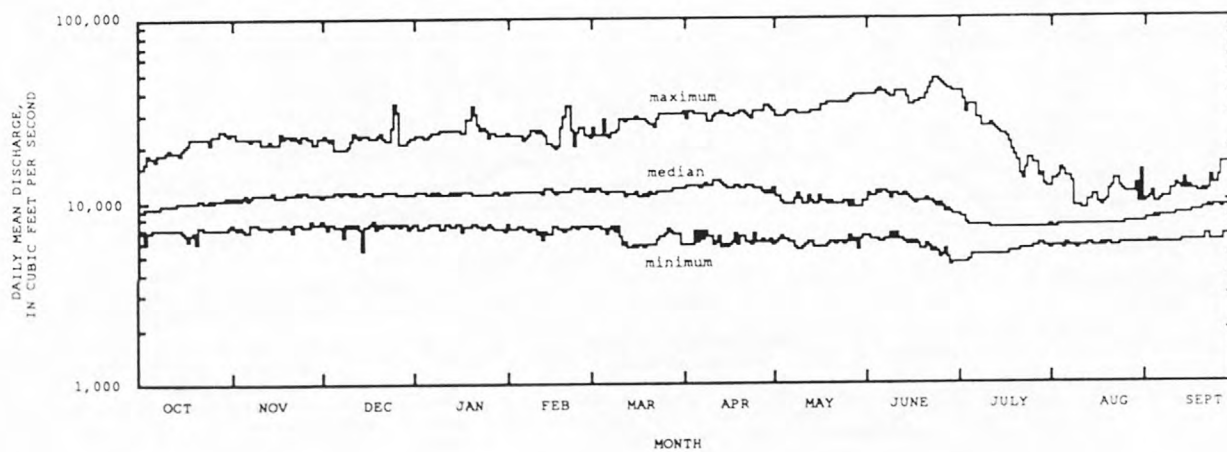
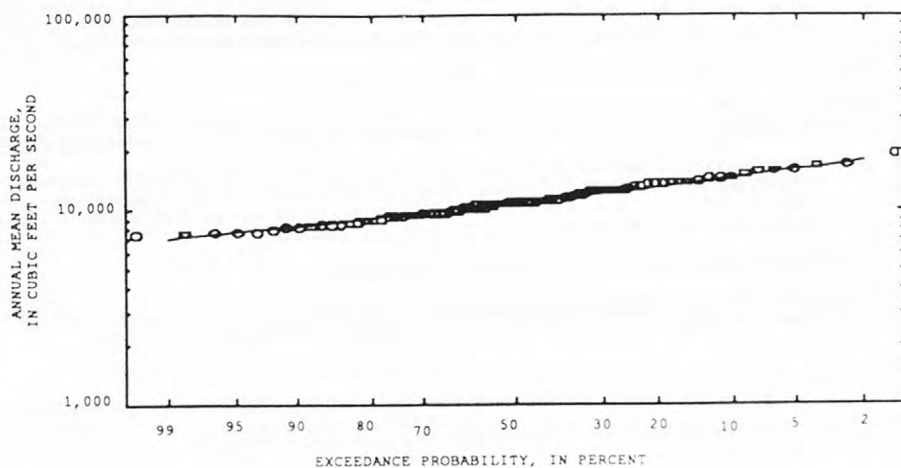
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	22,800	30,500	34,900	39,800	43,000	46,000
3	21,800	29,500	34,000	39,200	42,700	45,900
7	20,500	27,900	32,300	37,400	41,000	44,300
15	19,000	25,800	29,900	34,800	38,300	41,600
30	17,200	23,100	26,900	31,500	34,800	38,100
60	15,400	20,500	23,800	28,000	31,200	34,300
90	14,500	19,000	21,900	25,600	28,300	31,000

Duration table of daily mean flow for period of record 1914-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
28,600	21,100	17,600	15,500	13,900	12,200	10,700	9,550	8,800	8,200	7,610	7,000	6,550	6,080	5,780	5,590
															5,140



LOCATION MAP





OWYHEE RIVER BASIN

13178000 JORDAN CREEK ABOVE LONE TREE CREEK, NEAR JORDAN VALLEY, OR

LOCATION.—Lat 42°52'27", long 116°57'12", in SW 1/4, NE 1/4, sec.29, T.6 S., R.5 E., Owyhee County, Hydrologic Unit 17050108, on right bank 0.2 mi upstream from Morgan ranchhouse, 0.9 mi downstream from proposed damsite, 1.4 mi downstream from Williams Creek, 3.6 mi upstream from Lone Tree Creek, 4 mi east of the Idaho-Oregon State line, 9 mi southeast of Jordan Valley, and at mile 54.4.

DRAINAGE AREA.—440 mi<sup>2</sup>, approximately. Mean elevation, 5,780 ft.

PERIOD OF RECORD.—April 1955 to September 1971. October 1945 to January 1953 at site 1.6 mi 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 mi 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 mi downstream at different datum. Nonrecording gage at site 3.6 mi downstream at datum 4,404.78 ft above mean sea level, used as supplementary gage Feb. 3 to Aug. 31, 1965.

REMARKS.—Diversion upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,530 ft<sup>3</sup>/s Dec. 19, 1964 (gage height, 11.05 ft, site and datum then in use), from rating curve extended above 4,210 ft<sup>3</sup>/s: no flow part of each day Oct. 4, 5, 1948.

Summary of monthly and annual discharges, 1946-52, 1956-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	33	2.6	11	7.3	0.65	0.5
November	114	14	28	21	0.76	1.2
December	733	14	84	154	1.8	3.6
January	844	18	143	208	1.5	6.1
February	638	25	189	175	0.92	8.1
March	786	94	293	185	0.63	12.5
April	2,100	131	773	471	0.61	33.0
May	1,530	103	595	354	0.60	25.4
June	626	33	190	136	0.72	8.1
July	75	5.5	26	19	0.73	1.1
August	17	1.2	5.3	3.8	0.71	0.2
September	19	1.2	4.8	4.0	0.83	0.2
Annual	383	57	195	99	0.51	100

Magnitude and frequency of annual low flow, based on period of record 1947-52, 1956-71

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	1.8	0.82	0.48	0.28	0.14	0.09
3	1.8	1.1	0.88	0.72	0.57	0.49
7	2.0	1.2	0.94	0.77	0.62	0.53
14	2.1	1.3	1.0	0.86	0.71	0.63
30	2.4	1.5	1.2	1.0	0.85	0.76
60	3.0	1.9	1.5	1.3	1.1	1.0
90	4.4	2.8	2.3	1.9	1.5	1.4
120	7.4	4.7	3.6	2.9	2.3	1.9
183	15	9.8	8.2	7.3	6.5	6.1

Magnitude and frequency of instantaneous peak flow, based on period of record 1946-52, 1956-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,950	3,110	4,010	5,300	6,370	7,550

Magnitude and frequency of annual high flow, based on period of record 1946-52, 1956-71

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	1,570	2,470	3,130	4,020	4,720	5,450
3	1,380	2,120	2,660	3,380	3,940	4,530
7	1,200	1,780	2,160	2,630	2,980	3,320
15	998	1,500	1,820	2,220	2,510	2,790
30	852	1,310	1,600	1,950	2,190	2,430
60	675	1,040	1,270	1,560	1,760	1,950
90	544	826	1,000	1,220	1,360	1,500

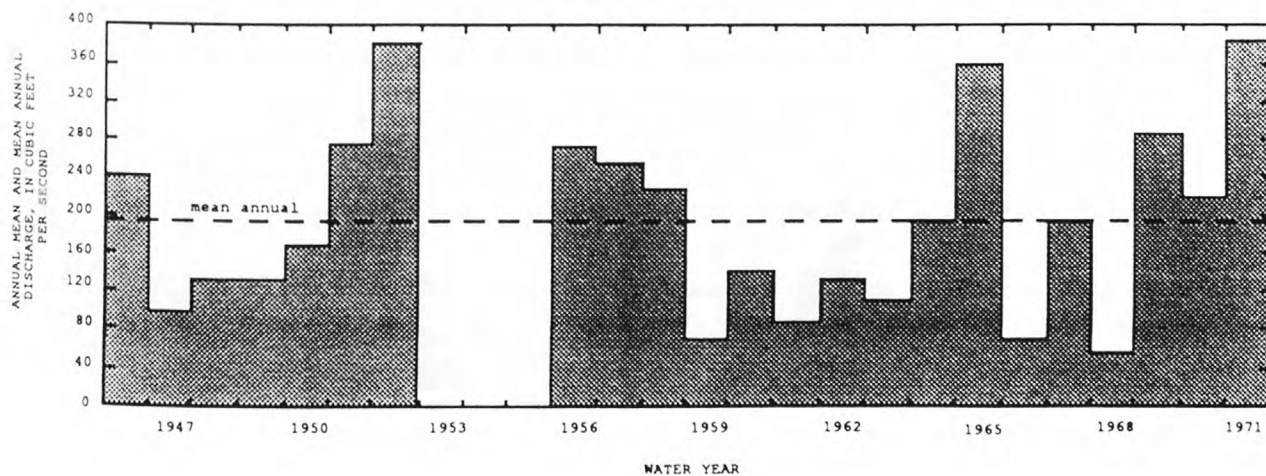
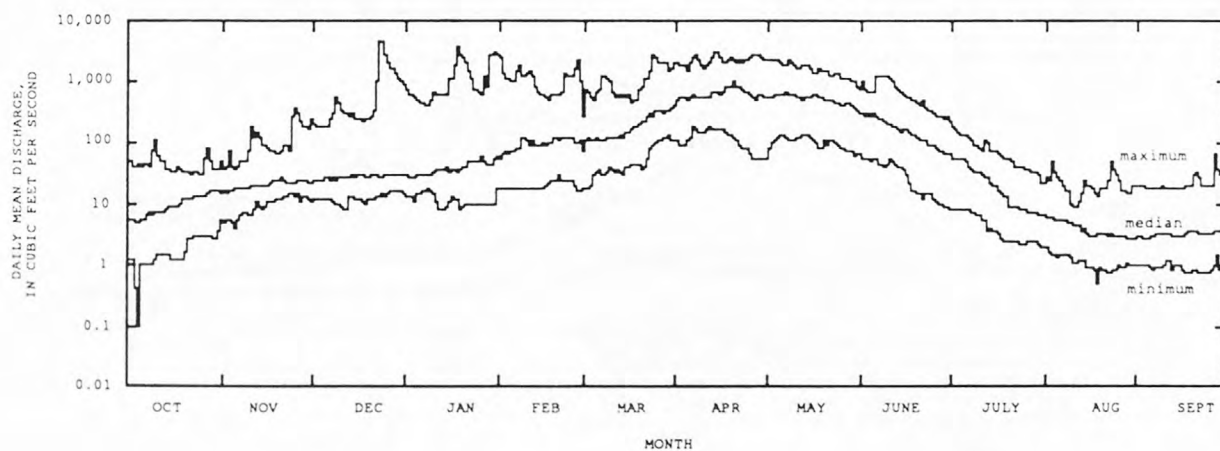
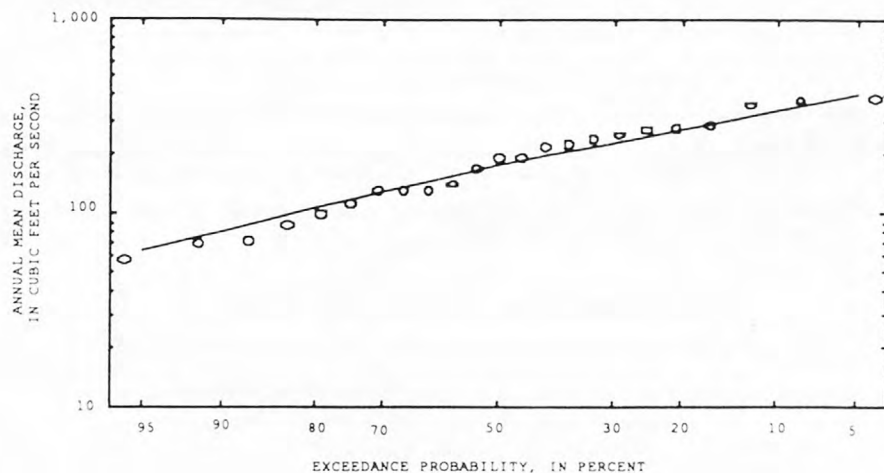
Duration table of daily mean flow for period of record 1946-52, 1956-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
1,840	966	606	416	292	151	72	35	23	16	7.4	3.3	2.1	1.4	1.1	0.97

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## MIDDLE OMYHEE RIVER BASIN

13181000 OMYHEE RIVER NEAR ROME, OR

LOCATION.—Lat 42°52'02", long 117°38'52", in SE 1/4, NE 1/4, sec. 14, T. 31 S., R. 41 E., Malheur County, Hydrologic Unit 17050107, Boise National Forest, on right bank 0.5 mi downstream from Jordan Creek, 2.6 mi north of Rome, and at mile 122.4.

DRAINAGE AREA.—8,000 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1949 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 3,344.20 ft above sea level. Prior to Feb. 10, 1960, at datum 0.24 ft lower.

REMARKS.—Flow regulated by Antelope Reservoir, capacity, 70,000 acre-ft, increased in 1970, and Wild Horse Reservoir, capacity, 32,690 acre-ft, and numerous small reservoirs. Diversions upstream from station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 41,400 ft<sup>3</sup>/s Feb. 19, 1986, gage height, 19.09 ft; minimum, 42 ft<sup>3</sup>/s Aug. 12, 1954, July 28, Aug. 5, 1961, July 31, 1968.

Summary of monthly and annual discharges, 1950-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	442	85	167	75	0.45	1.4
November	593	107	223	110	0.50	1.9
December	2,900	104	415	507	1.2	3.5
January	4,460	114	683	862	1.3	5.8
February	8,820	129	1,300	1,600	1.2	10.9
March	9,400	233	2,430	2,270	0.94	20.6
April	17,000	206	3,090	3,240	1.0	26.2
May	10,500	124	1,990	2,050	1.0	16.9
June	4,870	157	943	967	1.0	8.0
July	1,040	61	270	186	0.69	2.3
August	452	64	158	77	0.49	1.3
September	361	63	142	63	0.44	1.2
Annual	3,400	188	980	677	0.69	100

Magnitude and frequency of annual low flow,  
based on period of record 1951-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	97	69	58	50	42	37
3	99	71	59	52	44	40
7	102	73	61	53	46	41
14	106	75	63	54	46	42
30	115	81	68	59	51	46
60	125	89	75	66	57	51
90	135	98	83	73	64	59
120	145	106	91	81	71	66
183	172	125	108	97	86	80

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1950-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
11,800	20,900	27,500	36,100	42,600	49,100	

Magnitude and frequency of annual high flow,  
based on period of record 1950-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	9,360	17,400	22,800	29,100	33,500	37,400
3	7,770	14,600	19,300	25,200	29,500	33,500
7	6,000	11,600	15,900	21,600	25,900	30,300
15	4,490	8,880	12,300	17,000	20,700	24,600
30	3,440	6,860	9,560	13,400	16,400	19,500
60	2,600	5,190	7,210	10,000	12,200	14,500
90	2,150	4,280	5,960	8,280	10,100	12,000

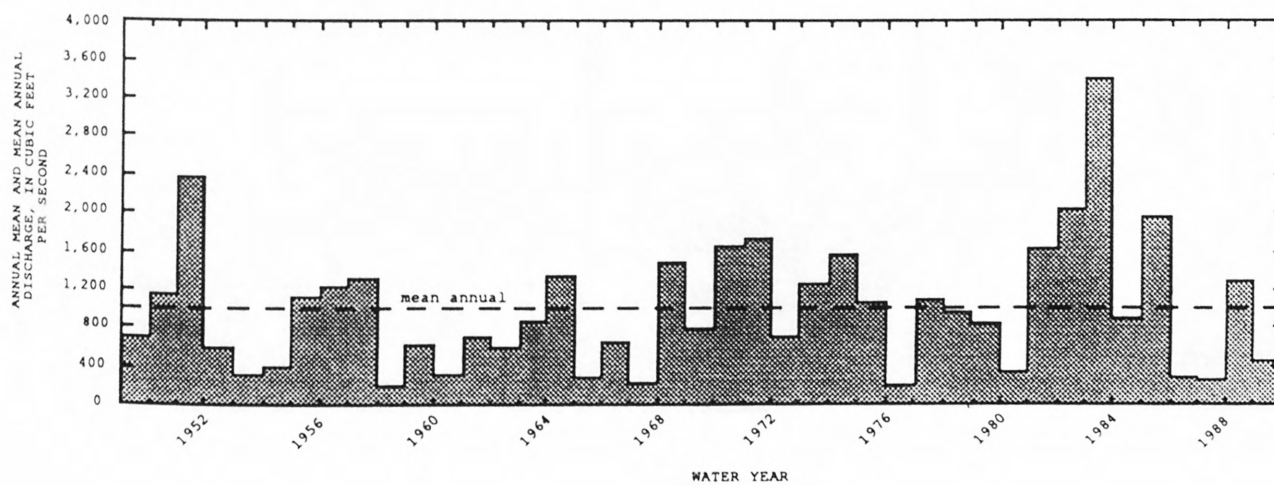
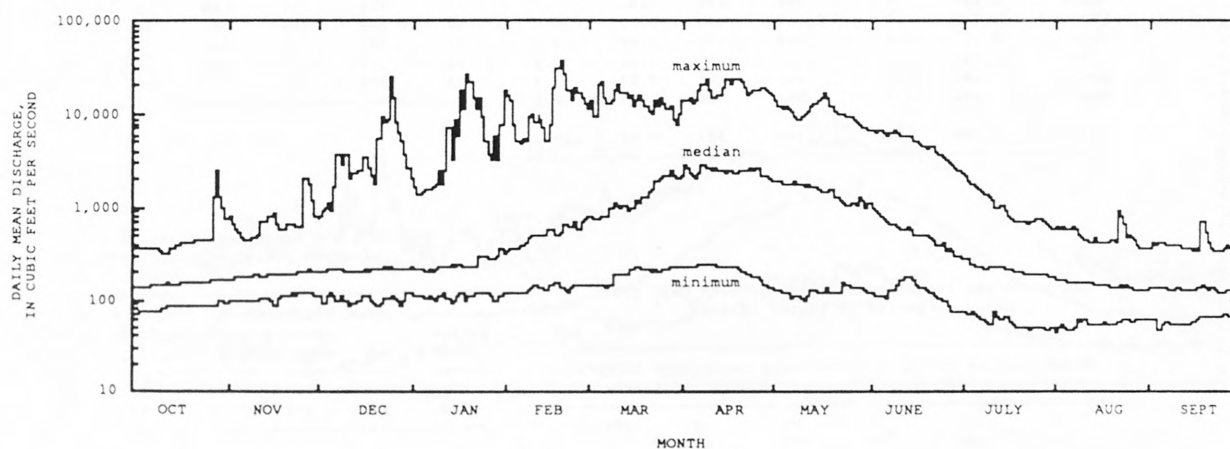
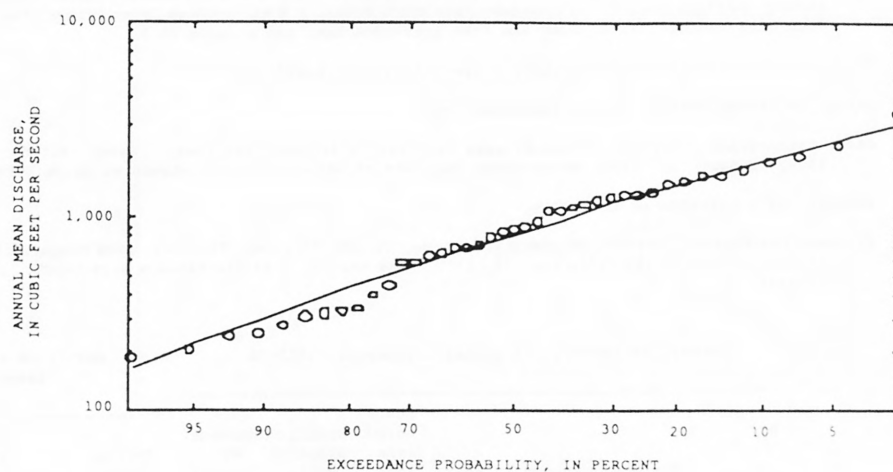
Duration table of daily mean flow for period of record 1950-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
10,700	4,240	2,600	1,760	1,160	570	348	245	202	172	142	110	89	73	64	58	49

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BOISE RIVER BASIN

13185000 BOISE RIVER NEAR TWIN SPRINGS, ID

LOCATION.—Lat 43°39'33", long 115°43'34", in NW 1/4, NE 1/4, sec. 27, T. 4 N., R. 6 E., Boise County, Hydrologic Unit 17050112, Boise National Forest, on right bank 0.7 mi upstream from Birch Creek, 1.8 mi upstream from maximum flow line of Arrowrock Reservoir, 3.2 mi downstream from Twin Springs, 13 mi upstream from Arrowrock Dam, and at mile 88.5.

DRAINAGE AREA.—830 mi<sup>2</sup>, approximately. Mean elevation, 6,350 ft.

PERIOD OF RECORD.—March 1911 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 3,255.70 ft above sea level. March 1911 to Apr. 3, 1915, nonrecording gage, and Apr. 4, 1915, to Sept. 30, 1965, water-stage recorder at site 0.3 mi downstream at datum 5.26 ft lower.

REMARKS.—No regulation or diversion.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 18,800 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 12.20 ft, from floodmark, site and datum then in use; minimum, 105 ft<sup>3</sup>/s Nov. 28, 1976, gage height, 2.64 ft; minimum gage height, 1.48 ft, Dec. 6, 7, 1960 (site and datum then in use).

Summary of monthly and annual discharges, 1912-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	699	246	394	93	0.24	2.7
November	1,100	263	442	139	0.31	3.1
December	1,750	265	476	243	0.51	3.3
January	994	265	448	165	0.37	3.1
February	1,470	283	509	208	0.41	3.5
March	2,630	326	822	387	0.47	5.7
April	5,660	717	2,140	890	0.42	14.9
May	6,740	782	3,760	1,270	0.34	26.2
June	6,800	723	3,340	1,450	0.43	23.3
July	2,980	321	1,200	671	0.56	8.4
August	892	224	465	155	0.33	3.2
September	584	223	370	86	0.23	2.6
Annual	1,990	442	1,200	363	0.30	100

Magnitude and frequency of annual low flow,  
based on period of record 1912-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	232	186	164	148	131	121
3	256	208	185	168	150	138
7	282	236	214	198	180	169
14	299	253	232	216	200	189
30	316	269	248	231	214	204
60	333	283	260	243	225	214
90	347	294	271	253	235	223
120	363	306	281	263	245	234
183	398	334	306	286	266	254

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1912-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
6,670	9,350	11,200	13,600	15,500	17,400

Magnitude and frequency of annual high flow,  
based on period of record 1912-90

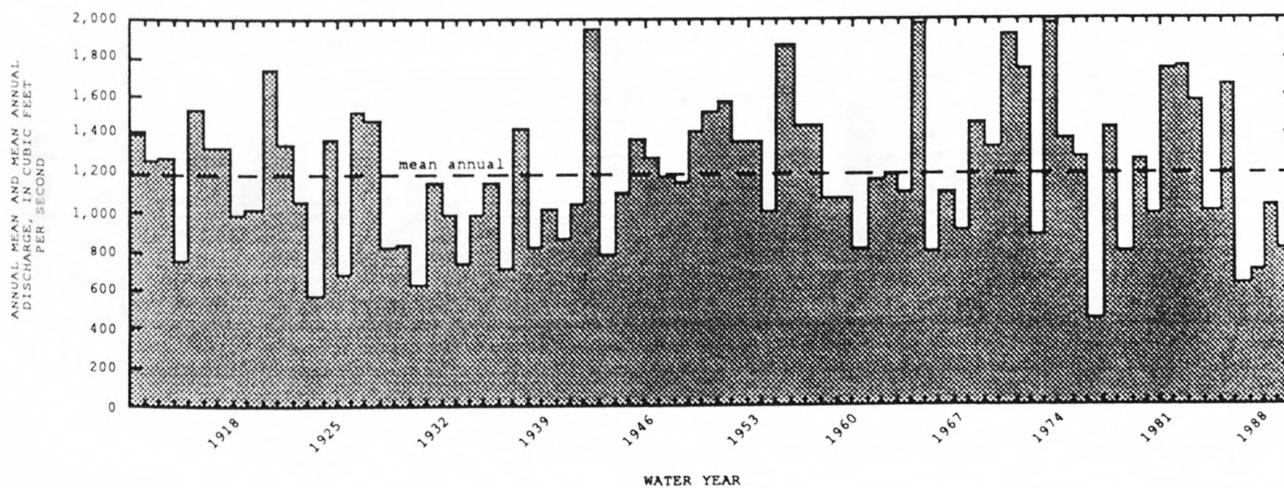
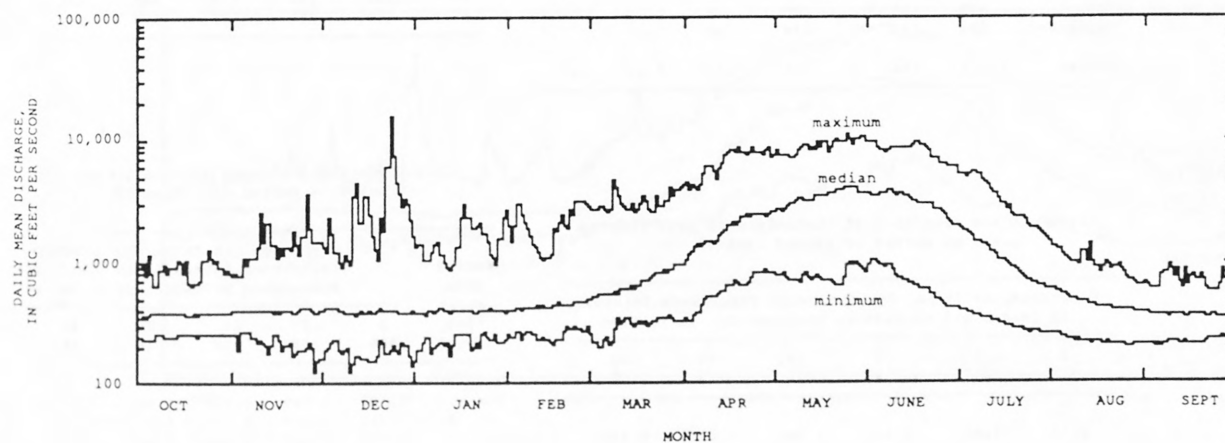
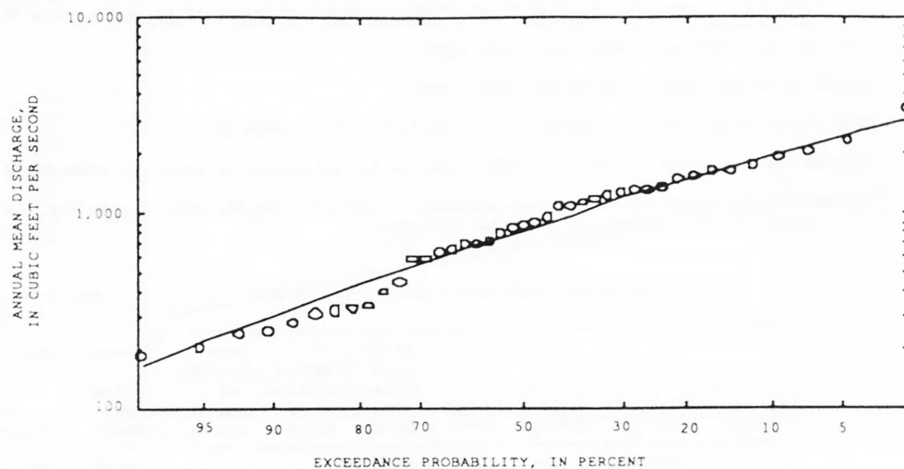
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	6,360	8,480	9,590	10,700	11,400	12,000
3	5,970	7,840	8,760	9,660	10,200	10,600
7	5,450	7,220	8,130	9,050	9,610	10,100
15	4,880	6,480	7,330	8,190	8,720	9,170
30	4,350	5,720	6,420	7,120	7,550	7,900
60	3,730	4,870	5,450	6,020	6,350	6,630
90	3,170	4,140	4,630	5,120	5,410	5,650

Duration table of daily mean flow for period of record 1912-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
6,860	4,560	3,310	2,500	1,870	1,000	648	512	440	390	347	302	271	242	223	212	180



LOCATION MAP





## BOISE RIVER BASIN

13186000 SOUTH FORK BOISE RIVER NEAR FEATHERVILLE, ID

LOCATION.—Lat 43°29'40", long 115°18'20", in lot 6, NE 1/4, sec.19, T.2 S., R.10 E., Elmore County, Hydrologic Unit 17050113, on right bank 2.5 mi upstream from Deer Creek, 8 mi southwest of Featherville, and at mile 59.0.

DRAINAGE AREA.—635 mi<sup>2</sup>. Mean elevation, 6,840 ft.

PERIOD OF RECORD.—April 1945 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 4,218.557 ft above sea level.

REMARKS.—No regulation. Diversions above station for irrigation of about 450 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,960 ft<sup>3</sup>/s May 30, 1983, gage height, 7.87 ft; minimum, 30 ft<sup>3</sup>/s Feb. 10, 1949, gage height, 0.60 ft, result of snowslide upstream.

Summary of monthly and annual discharges, 1946-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	366	148	246	52	0.21	2.6
November	433	167	256	55	0.21	2.7
December	682	173	251	84	0.34	2.7
January	445	170	245	57	0.23	2.6
February	443	176	261	65	0.25	2.7
March	1,240	192	391	174	0.45	4.2
April	2,590	345	1,290	597	0.46	13.8
May	4,880	420	2,680	1,080	0.40	28.5
June	4,800	457	2,430	1,120	0.46	25.9
July	1,950	215	803	473	0.59	8.6
August	643	138	299	108	0.36	3.2
September	396	136	236	63	0.27	2.5
Annual	1,370	254	784	265	0.34	100

Magnitude and frequency of annual low flow,  
based on period of record 1947-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	145	120	108	100	90	85
3	156	133	122	114	106	101
7	176	151	140	131	122	117
14	189	161	148	138	127	120
30	201	170	155	144	132	124
60	211	180	164	152	140	132
90	218	186	170	158	145	137
120	224	192	177	165	152	144
183	240	205	188	175	161	152

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1946-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,520	5,970	6,840	7,850	8,560	9,220

Magnitude and frequency of annual high flow,  
based on period of record 1946-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4,500	5,930	6,510	6,980	7,210	7,360
3	4,350	5,720	6,300	6,780	7,010	7,170
7	4,020	5,380	6,000	6,560	6,850	7,060
15	3,600	4,890	5,500	6,070	6,390	6,630
30	3,190	4,300	4,810	5,270	5,510	5,700
60	2,660	3,630	4,100	4,540	4,780	4,970
90	2,210	3,020	3,420	3,800	4,020	4,190

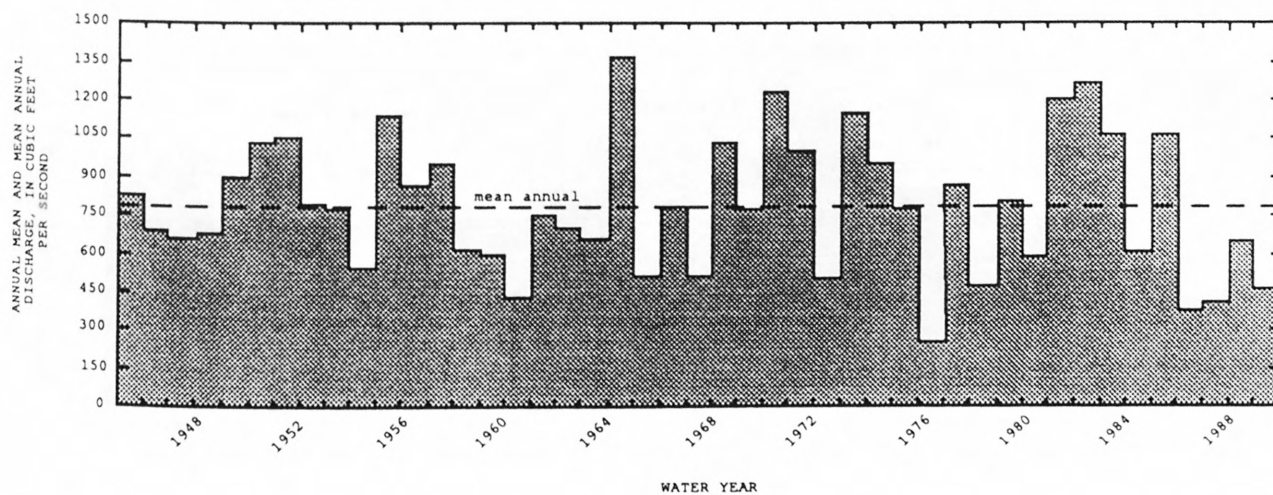
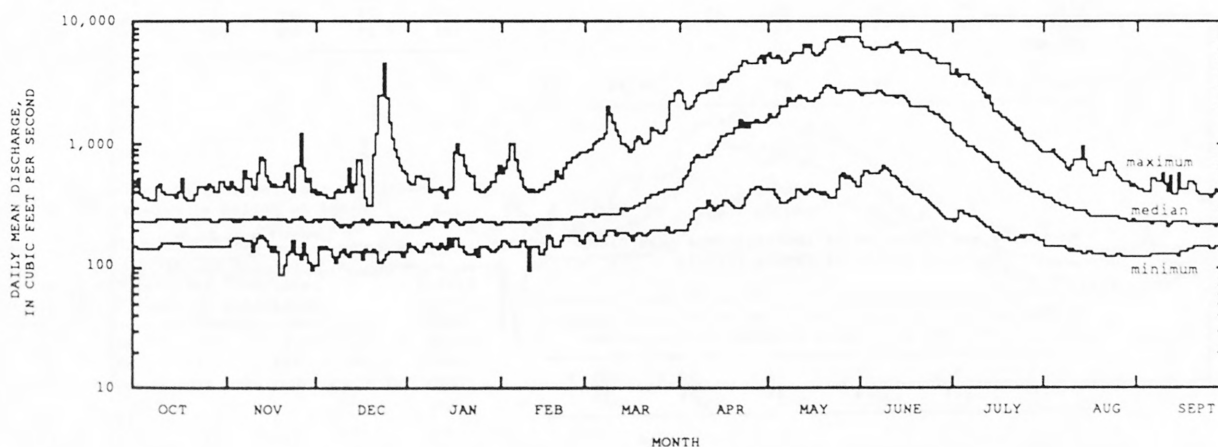
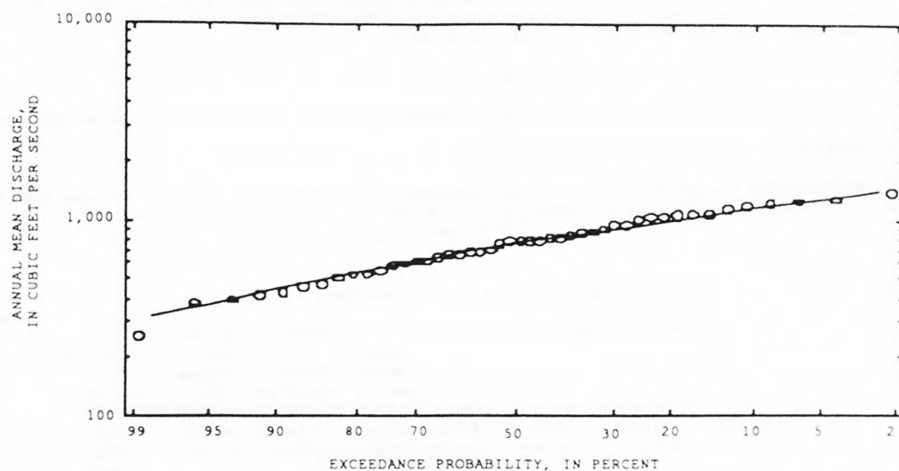
Duration table of daily mean flow for period of record 1946-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
5,070	3,300	2,310	1,630	1,120	531	361	299	261	237	214	190	170	151	139	132	114

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BOISE RIVER BASIN

13186500 LIME CREEK NEAR BENNETT, ID

LOCATION.—Lat 43°25'00", long 115°16'00", in SW 1/4, NE 1/4, sec.16, T.1 S., R.10 E., Elmore County, Hydrologic Unit 17050113, on right bank 0.4 mi upstream from flow line of Anderson Ranch Reservoir, 12 mi northeast of Bennett, and at mile 2.

DRAINAGE AREA.—131 mi<sup>2</sup>. Mean elevation, 6,140 ft.

PERIOD OF RECORD.—June 1945 to October 1956.

GAGE.—Water-stage recorder. Elevation of gage is 4,250 ft above sea level, from topographic map of U.S. Bureau of Reclamation.

REMARKS.—No regulation or diversion.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,180 ft<sup>3</sup>/s Apr. 27, 1952; maximum gage height, 8.02 ft Feb. 15, 1949 (backwater from snowslide); minimum discharge, 2.5 ft<sup>3</sup>/s Feb. 11, 1949 (gage height, 1.67 ft), result of snowslide upstream.

Summary of monthly and annual discharges, 1946-56

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	40	18	26	6.4	0.24	2.4
November	40	25	31	6.1	0.20	2.9
December	78	24	37	16	0.42	3.5
January	64	21	36	11	0.31	3.4
February	65	23	40	12	0.31	3.6
March	115	28	63	26	0.40	5.9
April	516	81	317	150	0.47	29.3
May	639	176	316	142	0.45	29.3
June	210	66	128	52	0.41	11.9
July	67	24	40	14	0.34	3.7
August	32	13	22	7.2	0.32	2.1
September	29	14	21	5.1	0.24	2.0
Annual	141	50	90	30	0.34	100

Magnitude and frequency of annual low flow,  
based on period of record 1947-56

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 <sup>†</sup> 2%	100 <sup>†</sup> 1%
1	16	9.4	6.4	4.3	2.6	1.7
3	15	11	8.3	6.7	5.1	4.2
7	17	12	10	8.8	7.3	6.5
14	18	14	12	11	9.5	8.8
30	19	14	12	11	9.0	8.0
60	20	16	14	12	11	10
90	22	17	16	14	13	12
120	24	19	17	16	14	13
183	27	22	21	19	18	17

Magnitude and frequency of annual high flow,  
based on period of record 1946-56

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 <sup>†</sup> 4%	50 <sup>†</sup> 2%	100 <sup>†</sup> 1%
1	535	779	943	1,150	1,300	1,460
3	501	741	907	1,120	1,290	1,460
7	473	689	837	1,030	1,170	1,320
15	426	633	774	956	1,090	1,230
30	370	547	670	829	951	1,070
60	307	441	531	647	734	821
90	243	342	408	489	550	610

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1946-56

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
649	961	1,180	1,470	1,690	1,920

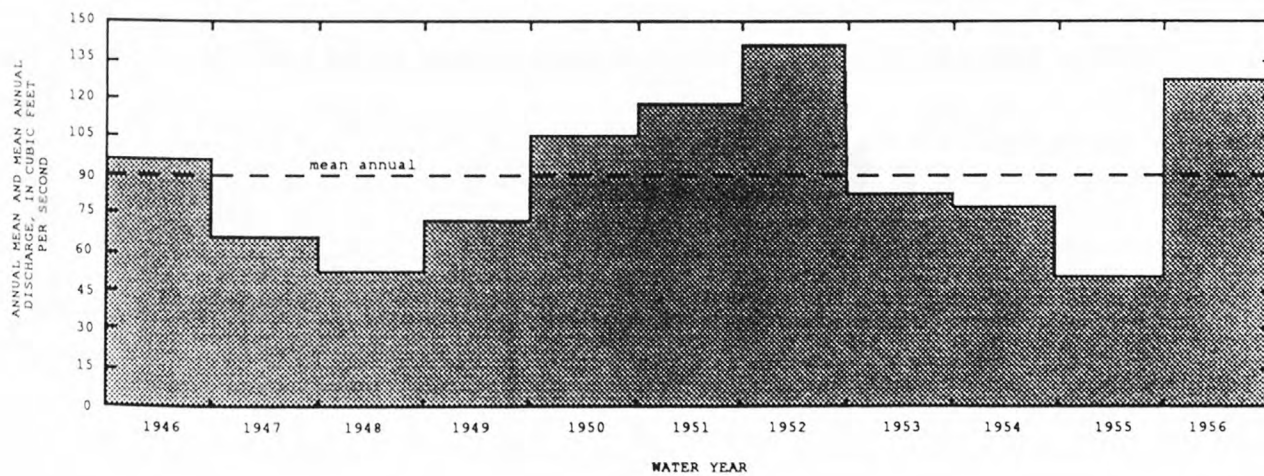
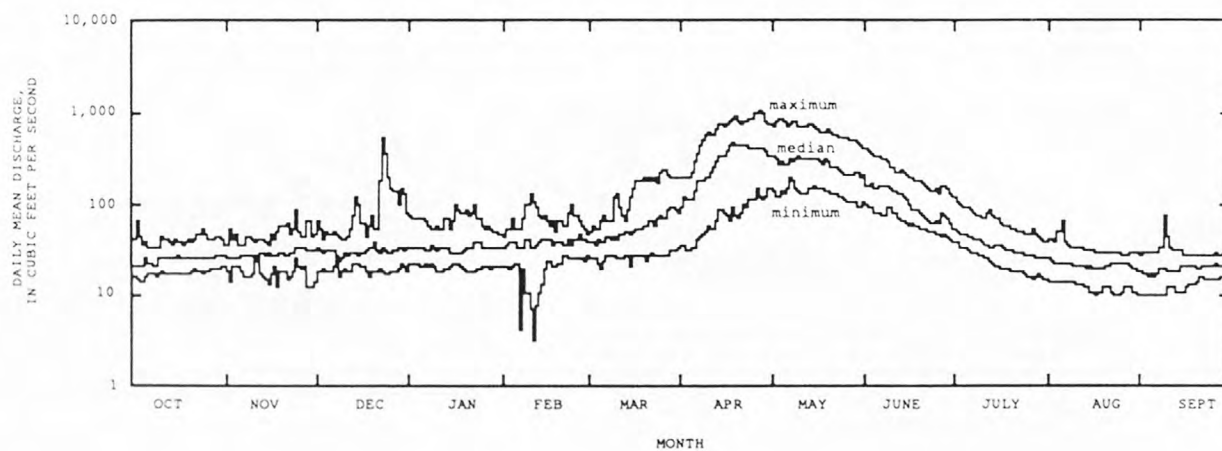
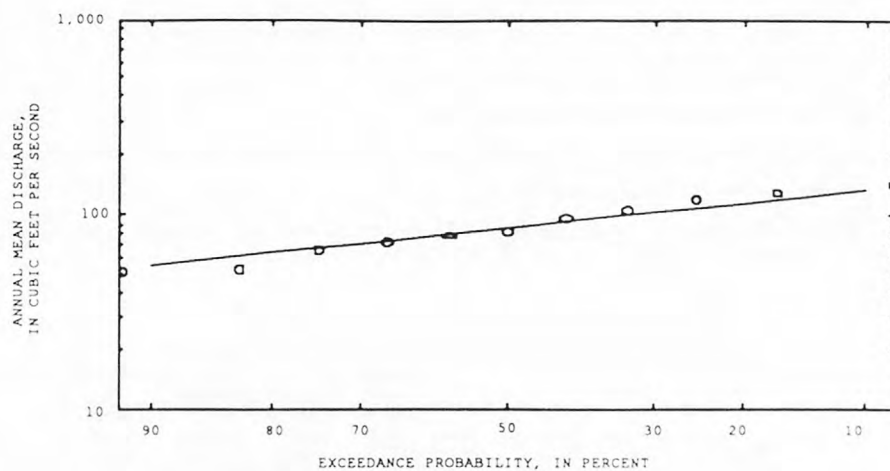
Duration table of daily mean flow for period of record 1946-56

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
684	395	241	171	116	59	43	36	31	27	24	20	17	14	13	11	9.1

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BOISE RIVER BASIN

13187000 FALL CREEK NEAR ANDERSON RANCH DAM, ID

LOCATION.—Lat 43°26'00", long 115°23'10", in SW 1/4, sec.9, T.1 S., R.9 E., Elmore County, Hydrologic Unit 17050113, on right bank 1.5 mi downstream from Mill Creek and 6 mi northeast of Anderson Ranch Dam.

DRAINAGE AREA.—55.3 mi<sup>2</sup>. Mean elevation, 6,070 ft.

PERIOD OF RECORD.—April 1945 to October 1956.

GAGE.—Water-stage recorder. Elevation of gage is 4,350 ft above sea level, from topographic map of U.S. Bureau of Reclamation.

REMARKS.—No regulation or diversion.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,150 ft<sup>3</sup>/s Apr. 27, 1952 (gage height, 6.25 ft); minimum, 1.6 ft<sup>3</sup>/s Feb. 9, 1949 (gage height, 1.94 ft), result of snowslide upstream.

Summary of monthly and annual discharges, 1946-56

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	21	13	17	3.0	0.18	1.9
November	33	15	20	5.1	0.25	2.3
December	62	13	25	14	0.57	2.9
January	50	14	24	9.7	0.41	2.8
February	42	15	25	8.2	0.33	2.8
March	79	16	40	19	0.46	4.6
April	377	53	232	98	0.42	26.6
May	486	190	281	101	0.36	32.3
June	207	75	136	49	0.36	15.5
July	56	26	40	11	0.28	4.5
August	24	14	18	3.6	0.19	2.1
September	19	12	15	2.3	0.16	1.7
Annual	112	42	73	21	0.29	100

Magnitude and frequency of annual low flow,  
based on period of record 1947-56

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	12	11	10	9.6	9.1	8.4
3	13	11	10	9.6	9.3	8.7
7	13	12	11	10	9.9	9.5
14	14	12	11	11	10	9.6
30	14	13	12	11	11	10
60	15	13	12	12	11	11
90	16	14	13	12	11	11
120	16	14	13	13	12	12
183	18	16	14	13	12	12

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1946-56

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
521	712	838	998	1,120	1,240

Magnitude and frequency of annual high flow,  
based on period of record 1946-56

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	442	608	732	904	1,040	1,190
3	421	578	694	854	983	1,120
7	395	530	624	749	847	948
15	352	480	569	689	782	879
30	311	423	499	600	678	759
60	261	353	414	494	555	617
90	209	278	322	378	418	459

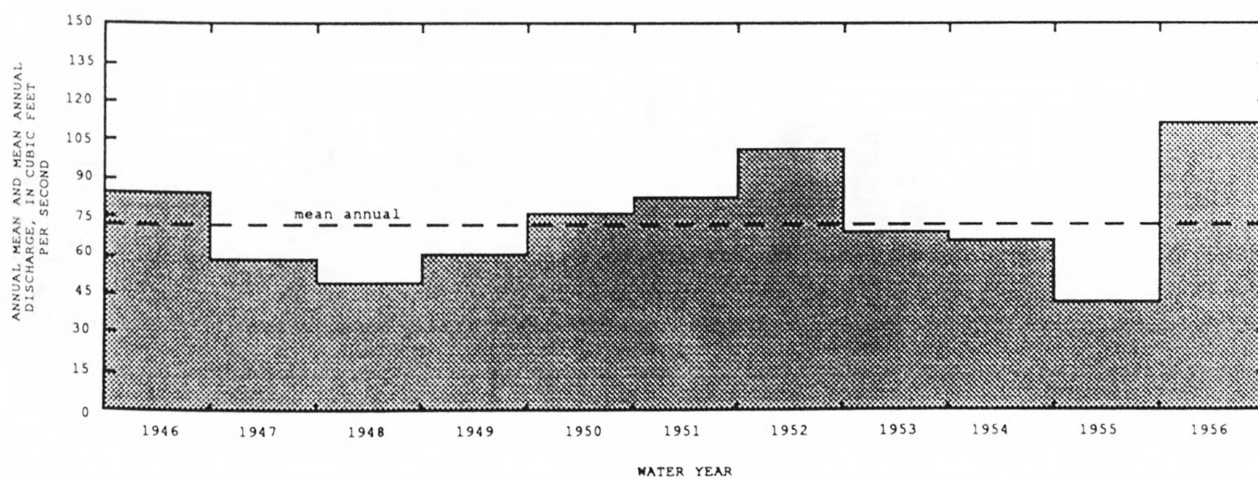
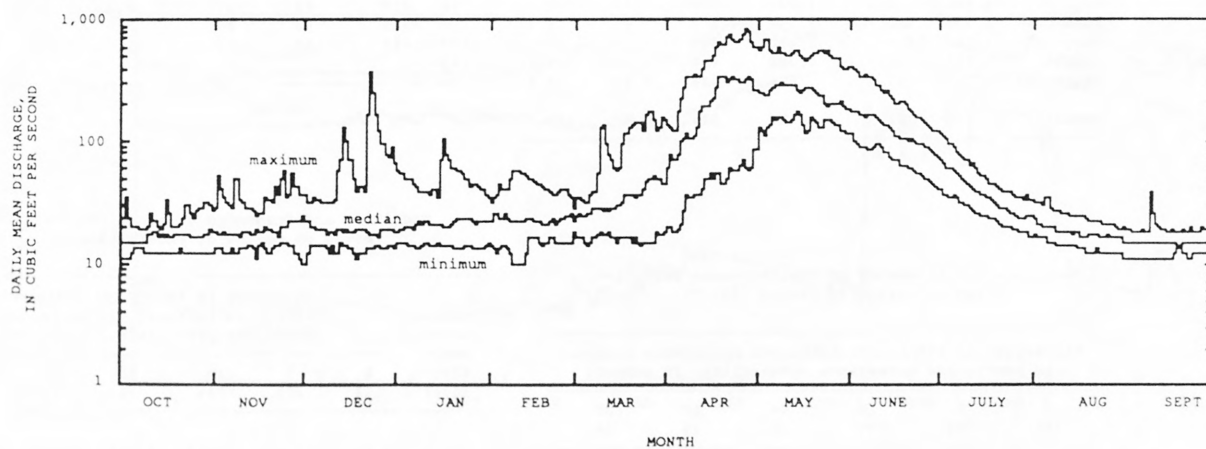
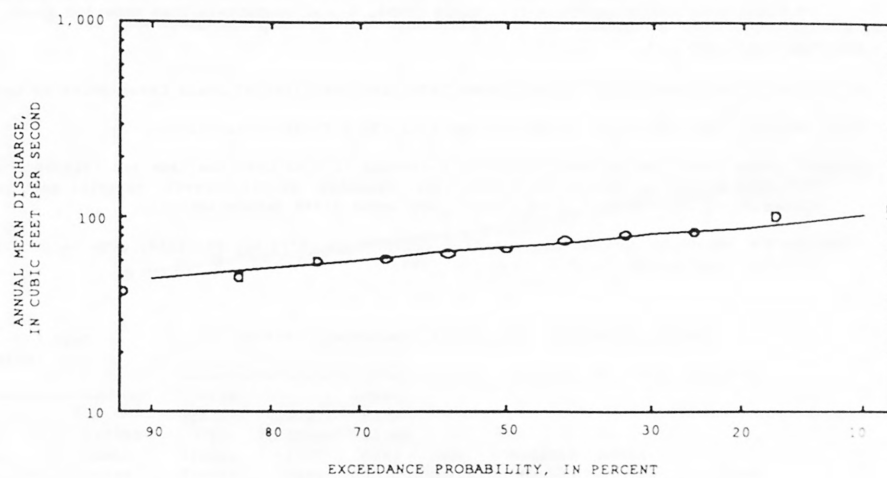
Duration table of daily mean flow for period of record 1946-56

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
526	326	222	155	107	46	31	24	21	18	17	15	14	12	12	11	11

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## BOISE RIVER BASIN

13190500 SOUTH FORK BOISE RIVER AT ANDERSON RANCH DAM, ID

LOCATION.—Lat 43°20'30", long 115°28'40", in NW 1/4, sec. 14, T. 1 S., R. 8 E., Elmore County, Hydrologic Unit 17050113, Boise National Forest, on right bank 600 ft upstream from Dixie Creek, 1.8 mi downstream from Anderson Ranch, 2.2 mi northwest of Bennett, and at mile 41.1.

DRAINAGE AREA.—982 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1943 to September 1990 (includes flow of Dixie Creek prior to October 1946).

GAGE.—Water-stage recorder. Datum of gage is 3,830.0 ft above sea level.

REMARKS.—Flow regulated by Anderson Ranch Reservoir, 1.8 mi 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 for irrigation of about 5,000 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,850 ft<sup>3</sup>/s May 25, 1956, gage height, 10.56 ft; minimum, 0.1 ft<sup>3</sup>/s Nov. 13, 1959; minimum gage height, 0.99 ft, Feb. 16, 1950.

Summary of monthly and annual discharges, 1944-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,180	1.5	395	263	0.66	3.3
November	1,500	1.3	429	318	0.74	3.6
December	1,560	1.3	568	384	0.68	4.7
January	1,530	1.3	579	403	0.70	4.8
February	1,890	1.6	578	452	0.78	4.8
March	2,170	3.2	594	529	0.89	4.9
April	3,800	5.8	1,070	915	0.86	8.9
May	4,580	3.4	2,220	1,200	0.54	18.4
June	5,170	572	2,390	1,010	0.42	19.9
July	2,550	628	1,490	380	0.25	12.4
August	1,860	63	1,080	418	0.39	9.0
September	1,740	42	644	428	0.67	5.3
Annual	1,690	512	1,000	325	0.32	100

Magnitude and frequency of annual low flow,  
based on period of record 1945-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	36	5.0	1.6	0.58	0.18	0.08
3	44	6.4	2.1	0.75	0.22	0.09
7	56	8.3	2.6	0.92	0.26	0.11
14	72	11	3.4	1.2	0.31	0.12
30	108	18	5.5	1.8	0.46	0.17
60	219	45	14	4.5	1.0	0.33
90	343	84	26	7.9	1.6	0.45
120	443	144	50	16	3.3	0.93
183						

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1944-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,440	6,390	7,570	8,930	9,860	10,700

Magnitude and frequency of annual high flow,  
based on period of record 1944-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3,970	5,700	6,720	7,870	8,650	9,360
3	3,760	5,420	6,430	7,620	8,430	9,190
7	3,520	5,060	6,020	7,170	7,970	8,730
15	3,200	4,600	5,500	6,610	7,430	8,220
30	2,830	3,990	4,760	5,730	6,460	7,180
60	2,390	3,260	3,840	4,580	5,140	5,690
90	2,090	2,810	3,280	3,880	4,320	4,770

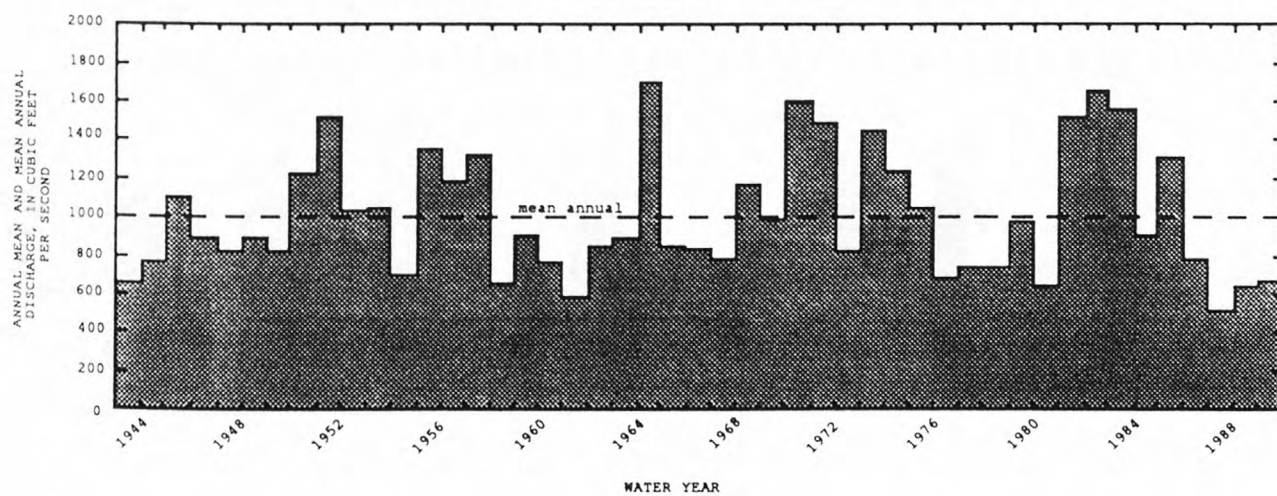
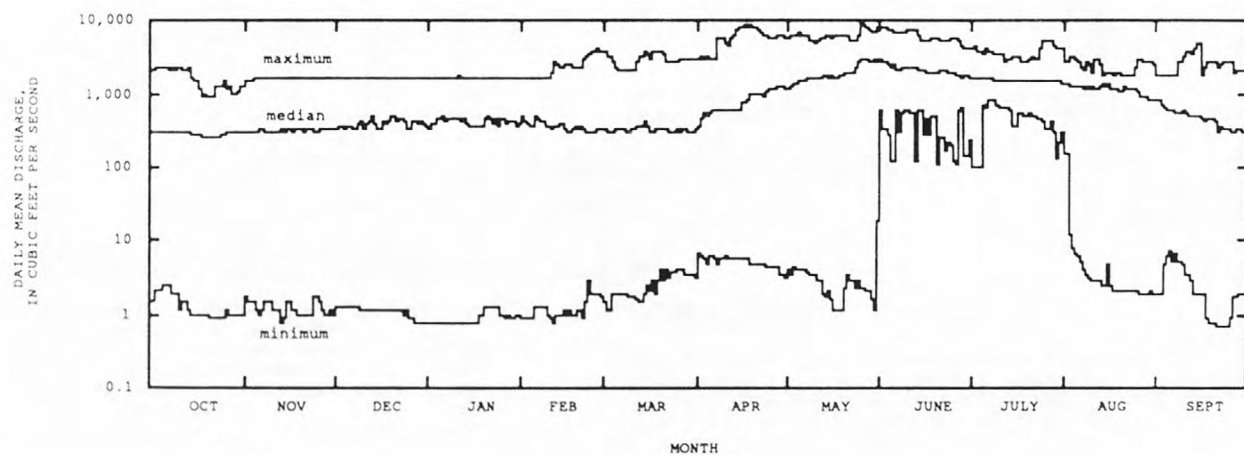
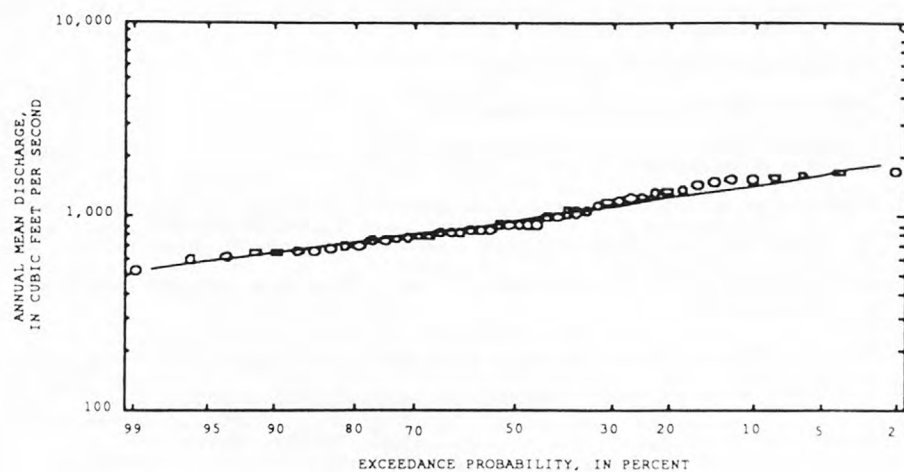
Duration table of daily mean flow for period of record 1944-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
4,890	3,300	2,250	1,790	1,540	1,300	950	659	451	332	254	127	5.0	1.9	1.4	1.2	0.78

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BOISE RIVER BASIN

13191000 SOUTH FORK BOISE RIVER NEAR LENOX, ID

LOCATION.—Lat 43°30', long 115°41', in sec.24, T.2 S., R.6 E., Elmore County, Hydrologic Unit 17050113, on right bank 1.5 mi upstream from Smith Creek, 4 mi upstream from flow line of Arrowrock Reservoir, 4 mi west of discontinued Lenox Post Office, 17 mi upstream from Arrowrock Dam, and at mile 13.

DRAINAGE AREA.—1,090 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—April 1911 to November 1948.

GAGE.—Water-stage recorder. Elevation of gage is 3,395 ft above sea level, from river-profile map. Mar. 23, 1911, to Apr. 10, 1918, staff gage at same site and datum.

REMARKS.—Flow regulated by Anderson Ranch Reservoir, 1.8 mi 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 for irrigation of about 5,000 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,550 ft<sup>3</sup>/s Apr. 17, 1943 (gage height, 10.05 ft); minimum, 26 ft<sup>3</sup>/s Feb. 6, 1946, Nov. 23, 1947.

Summary of monthly and annual discharges, 1912-19, 1921-47

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	465	201	328	75	0.23	2.8
November	740	214	359	91	0.25	3.1
December	691	198	354	105	0.30	3.0
January	606	41	326	109	0.33	2.8
February	529	45	354	100	0.28	3.0
March	1,130	94	649	250	0.38	5.6
April	6,360	931	2,140	1,100	0.52	18.3
May	5,670	1,210	3,210	1,270	0.40	27.7
June	5,150	515	2,420	1,310	0.54	20.7
July	2,270	210	866	529	0.61	7.4
August	1,540	129	371	238	0.64	3.2
September	441	151	281	75	0.27	2.4
Annual	1,850	467	972	325	0.33	100

Magnitude and frequency of annual low flow,  
based on period of record 1912-19, 1922-47

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	211	131	94	67	44	32
3	226	141	100	71	45	32
7	237	148	104	73	46	32
14	248	155	108	75	46	32
30	263	164	113	78	47	32
60	276	177	126	89	57	40
90	290	195	144	107	72	53
120	290	220	187	161	135	119
183	312	254	226	205	183	169

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1912-19, 1921-47

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,980	7,060	8,340	9,850	10,900	11,900

Magnitude and frequency of annual high flow,  
based on period of record 1912-19, 1921-47

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4,740	6,770	8,030	9,540	10,600	11,600
3	4,540	6,470	7,660	9,090	10,100	11,000
7	4,190	5,930	7,010	8,290	9,180	10,000
15	3,770	5,340	6,320	7,510	8,350	9,150
30	3,380	4,790	5,700	6,820	7,630	8,420
60	2,950	4,160	4,930	5,860	6,530	7,170
90	2,510	3,510	4,130	4,880	5,400	5,900

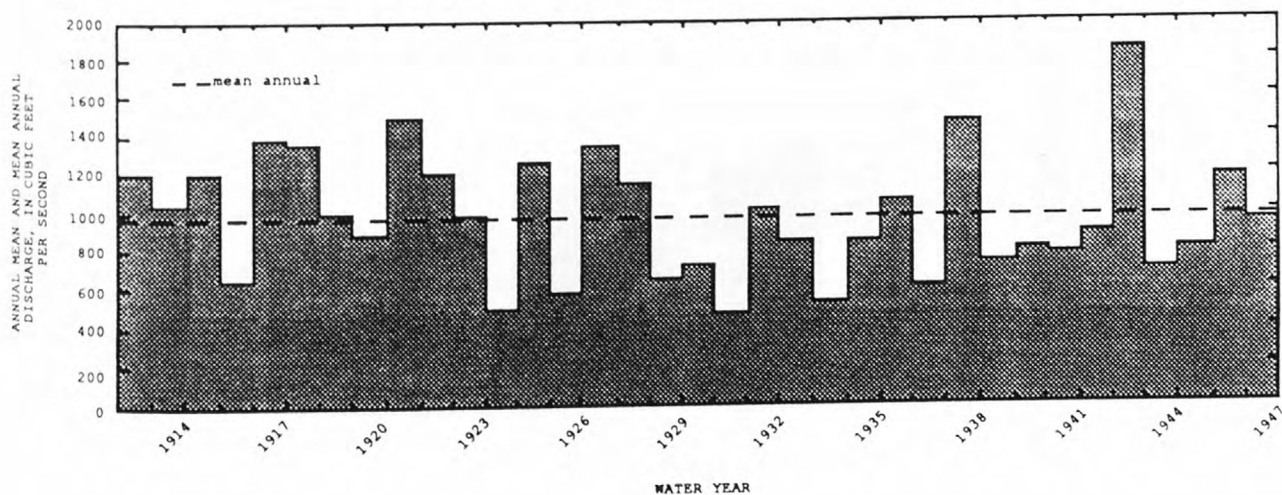
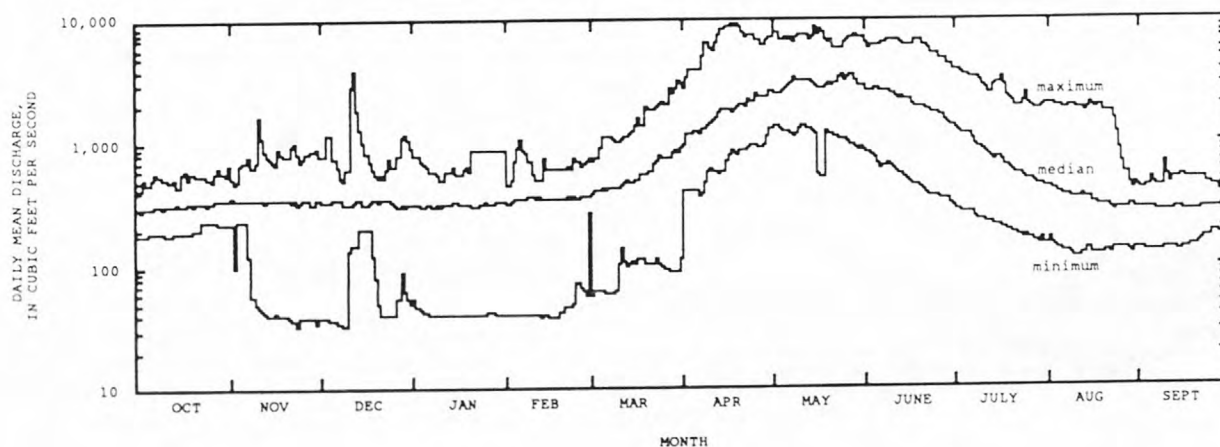
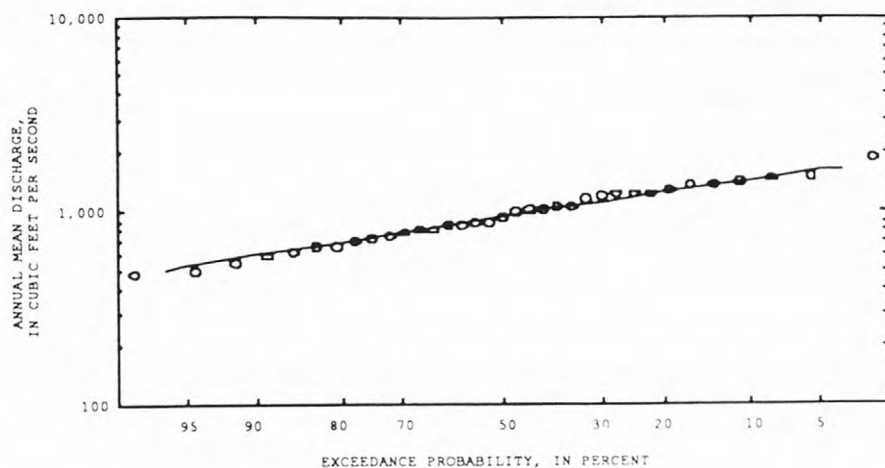
Duration table of daily mean flow for period of record 1912-19, 1921-47

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
6,030	3,870	2,660	2,010	1,510	744	480	405	359	320	282	238	194	142	74	43	39

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BOISE RIVER BASIN

13196500 BANNOCK CREEK NEAR IDAHO CITY, ID

LOCATION.—Lat 43°48'30", long 115°46'25", in NW 1/4, NW 1/4, sec. 5, T.5 S., R.6 E., Boise County, Hydrologic Unit 17050112, Boise National Forest, on right bank 0.8 mi upstream from West Fork, 3.2 mi southeast of Idaho City, and at mile 2.

DRAINAGE AREA.—5.75 mi<sup>2</sup>. Mean elevation, 5,240 ft.

PERIOD OF RECORD.—January 1939 to November 1941, October 1950 to September 1971 (discontinued). Monthly discharge only October and November 1950 published in WSP 1737.

REVISED RECORDS.—WSP 1447: 1952. WSP 1567: Drainage area.

GAGE.—Water-stage recorder and sharp-crested concrete control with V-notch. Elevation of gage is 4,090 ft above sea level, from topographic map. Prior to Sept. 10, 1966, at datum 0.06 ft lower.

REMARKS.—No regulation or diversion.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 46 ft<sup>3</sup>/s Apr. 22, 1965 (gage height, 2.07 ft); minimum, 0.07 ft<sup>3</sup>/s Aug. 23, 1940.

Summary of monthly and annual discharges, 1940-41, 1951-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1.2	0.36	0.62	0.21	0.34	2.4
November	1.4	0.38	0.78	0.23	0.30	2.9
December	4.2	0.55	1.1	0.87	0.81	4.0
January	3.6	0.50	1.1	0.79	0.69	4.3
February	3.3	0.59	1.4	0.75	0.54	5.2
March	4.4	0.62	2.1	1.0	0.49	7.7
April	18	2.1	7.4	5.0	0.68	27.7
May	17	2.0	7.4	4.6	0.62	28.0
June	7.3	0.83	2.8	1.5	0.52	10.5
July	1.7	0.34	0.96	0.46	0.48	3.6
August	1.0	0.16	0.49	0.22	0.45	1.9
September	0.76	0.26	0.48	0.15	0.30	1.8
Annual	4.5	0.90	2.2	1.1	0.48	100

Magnitude and frequency of annual low flow,  
based on period of record 1940-41, 1952-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	0.29	0.19	0.16	0.13	0.11	0.09
3	0.30	0.20	0.16	0.14	0.11	0.10
7	0.31	0.21	0.17	0.14	0.11	0.10
14	0.32	0.22	0.17	0.14	0.11	0.10
30	0.36	0.24	0.19	0.16	0.13	0.11
60	0.42	0.29	0.23	0.19	0.16	0.14
90	0.47	0.33	0.28	0.24	0.20	0.17
120	0.52	0.38	0.32	0.27	0.23	0.21
183	0.61	0.47	0.41	0.37	0.32	0.29

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1940-41, 1951-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
13	24	34	47	59	72

Magnitude and frequency of annual high flow,  
based on period of record 1940-41, 1951-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	12	22	30	41	50	61
3	11	20	27	38	47	57
7	10	18	25	34	42	50
15	9.3	16	22	30	36	43
30	8.1	14	19	25	30	35
60	6.5	11	14	19	22	26
90	5.3	8.4	11	14	17	19

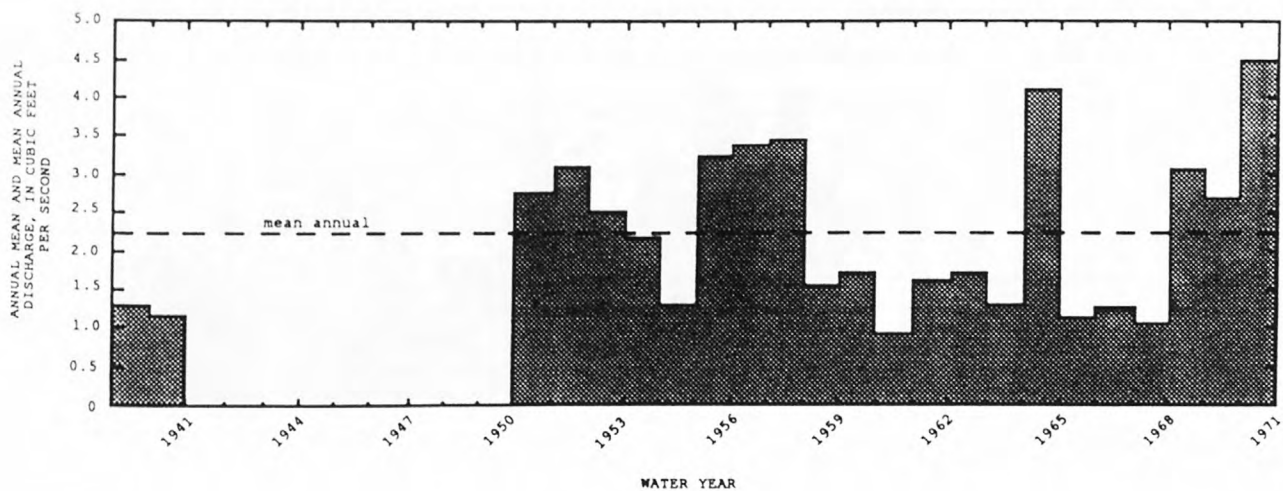
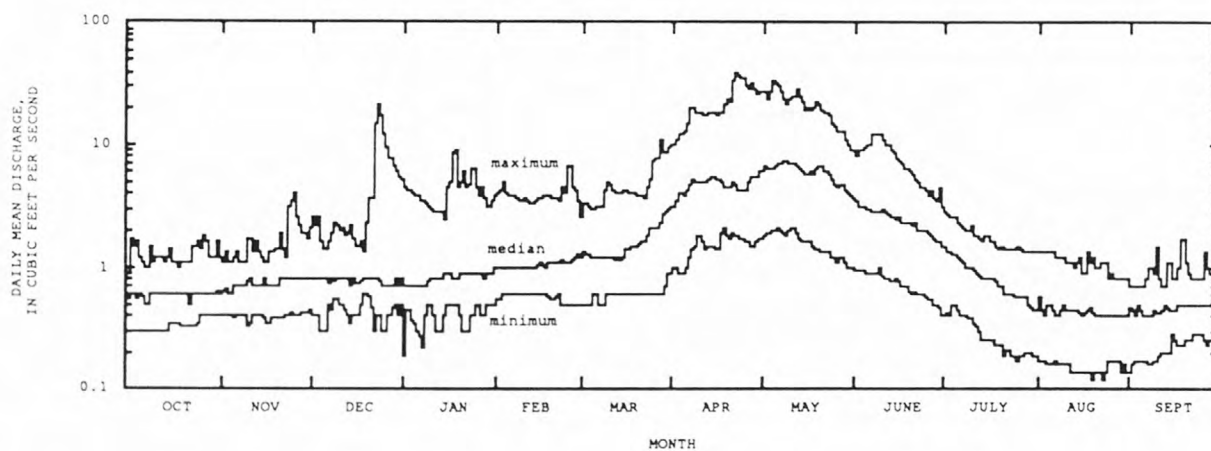
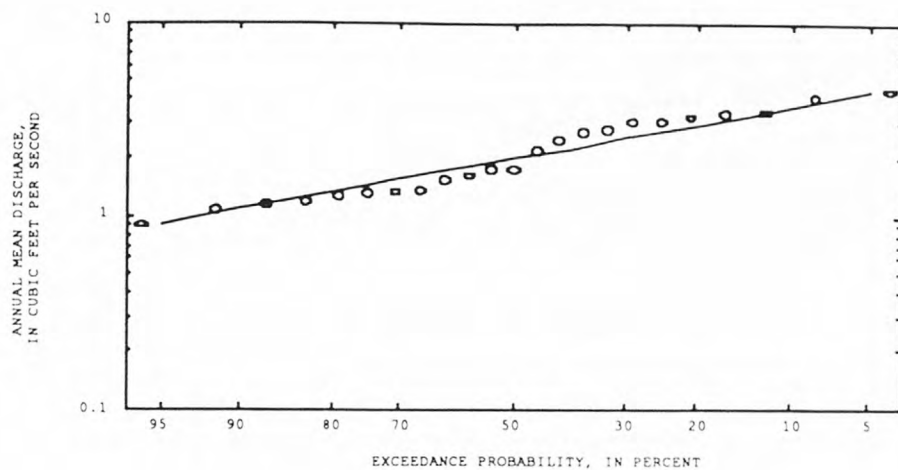
Duration table of daily mean flow for period of record 1940-41, 1951-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
19	9.1	5.2	3.8	3.0	1.8	1.2	0.93	0.79	0.65	0.55	0.43	0.32	0.24	0.21	0.19	0.15

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## BOISE RIVER BASIN

13200000 MORES CREEK ABOVE ROBIE CREEK, NEAR ARROWROCK DAM, ID

LOCATION.—Lat 43°38'53", long 115°59'20", in SE 1/4, SW 1/4, sec.28, T.4 N., R.4 E., Boise County, Hydrologic Unit 17050112, on left bank, 1.7 mi upstream from Robie Creek, 5.0 mi northwest of Arrowrock Dam, and at mile 5.8.

DRAINAGE AREA.—399 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1950 to September 1990. 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. Elevation of gage is 3,120 ft above sea level, from topographic map.

REMARKS.—Small diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,440 ft<sup>3</sup>/s Dec. 23, 1955, gage height, 9.55 ft; minimum, 7.4 ft<sup>3</sup>/s Aug. 18, 1977, gage height, 1.71 ft.

Summary of monthly and annual discharges, 1951-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	108	27	64	21	0.33	1.8
November	169	54	93	29	0.31	2.6
December	676	53	140	129	0.92	4.0
January	463	45	159	111	0.70	4.5
February	912	65	239	174	0.73	6.7
March	1,480	89	474	346	0.73	13.4
April	2,180	127	952	536	0.56	26.9
May	1,490	125	795	400	0.50	22.4
June	845	75	430	228	0.53	12.1
July	251	27	112	65	0.58	3.2
August	92	12	42	21	0.49	1.2
September	87	16	44	19	0.45	1.2
Annual	560	66	295	135	0.46	100

Magnitude and frequency of annual low flow,  
based on period of record 1952-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	25	15	12	9.4	7.1	5.9
3	25	16	12	9.7	7.4	6.2
7	27	17	13	10	7.8	6.5
14	28	18	14	11	8.4	7.0
30	31	20	16	13	9.8	8.3
60	37	25	19	16	12	10
90	44	30	24	20	16	14
120	51	37	30	26	21	19
183	68	51	44	39	34	31

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1951-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,720	2,820	3,650	4,810	5,750	6,750	

Magnitude and frequency of annual high flow,  
based on period of record 1951-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,610	2,610	3,250	4,010	4,530	5,020
3	1,520	2,420	2,970	3,580	3,990	4,350
7	1,380	2,140	2,570	3,010	3,280	3,510
15	1,220	1,880	2,240	2,620	2,840	3,020
30	1,040	1,610	1,920	2,250	2,460	2,630
60	873	1,340	1,610	1,900	2,080	2,230
90	747	1,130	1,360	1,600	1,750	1,880

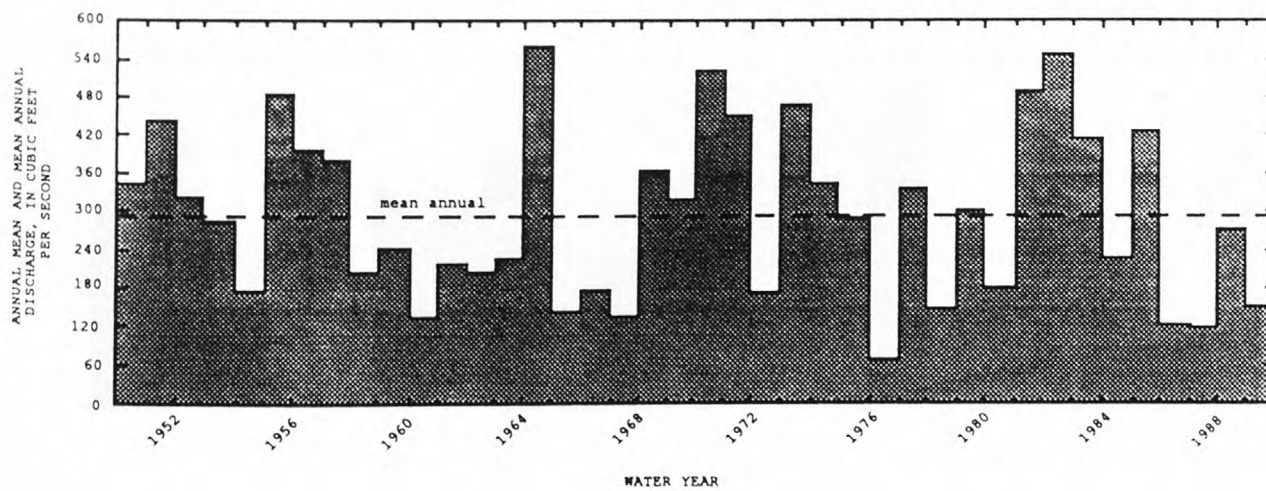
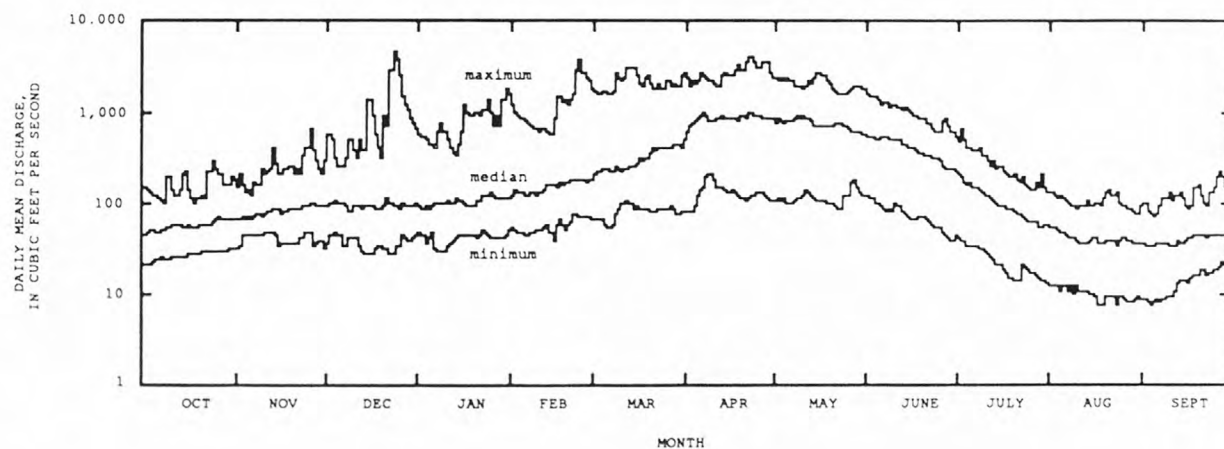
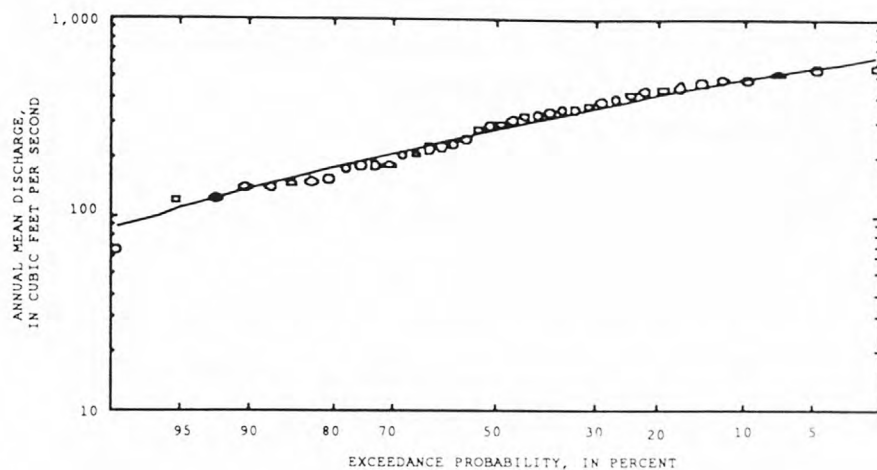
Duration table of daily mean flow for period of record 1951-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,970	1,210	843	610	457	269	161	113	88	69	54	37	26	18	15	13	8.8

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BOISE RIVER BASIN

13200500 ROBIE CREEK NEAR ARROWROCK DAM, ID

LOCATION.—Lat 43°37'49", long 115°59'55", in NE¼, sec.5, T.3 N., R.4 E., Boise County, Hydrologic Unit 17050112, on left bank 5 mi northwest of Arrowrock Dam, and at mile 0.5.

DRAINAGE AREA.—15.8 mi<sup>2</sup>. Mean elevation, 4,960 ft.

PERIOD OF RECORD.—October 1950 to September 1971. Published as "near Arrowrock" prior to October 1962.

GAGE.—Water-stage recorder and concrete control. Elevation of gage is 3,080 ft above sea level, from topographic map.

REMARKS.—No diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 274 ft<sup>3</sup>/s Jan. 29, 1965 (gage height, 3.07 ft); no flow on some days during summers of 1961, 1963, 1966-68.

Summary of monthly and annual discharges, 1951-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	3.5	1.2	2.2	0.72	0.34	2.2
November	5.6	2.0	3.4	0.88	0.26	3.3
December	23	2.0	5.4	4.7	0.88	5.4
January	28	2.2	8.0	7.3	0.91	8.1
February	32	2.4	11	7.4	0.65	11.4
March	35	4.3	15	8.4	0.56	15.1
April	86	5.1	30	22	0.73	29.8
May	42	2.9	16	11	0.71	16.2
June	14	0.69	5.1	3.2	0.63	5.2
July	3.6	0.15	1.4	1.0	0.72	1.5
August	2.0	0.08	0.67	0.48	0.71	0.7
September	2.6	0.26	1.0	0.58	0.56	1.1
Annual	17	3.0	8.2	4.5	0.55	100

Magnitude and frequency of annual low flow,  
based on period of record 1952-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	0.28	0.06	0.00	0.00	0.00	0.00
3	0.29	0.08	0.00	0.00	0.00	0.00
7	0.30	0.11	0.05	0.00	0.00	0.00
14	0.34	0.12	0.06	0.03	0.02	0.01
30	0.39	0.16	0.09	0.06	0.03	0.02
60	0.55	0.27	0.18	0.12	0.08	0.06
90	0.77	0.42	0.29	0.21	0.15	0.11
120	1.1	0.66	0.50	0.39	0.29	0.23
183	1.8	1.3	1.1	0.94	0.78	0.69

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1951-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
63	110	147	201	246	294

Magnitude and frequency of annual high flow,  
based on period of record 1951-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	49	87	117	162	200	243
3	43	75	100	135	165	198
7	37	65	86	116	142	169
15	32	55	73	100	122	147
30	27	47	64	88	110	133
60	21	37	50	69	86	105
90	18	30	40	55	67	81

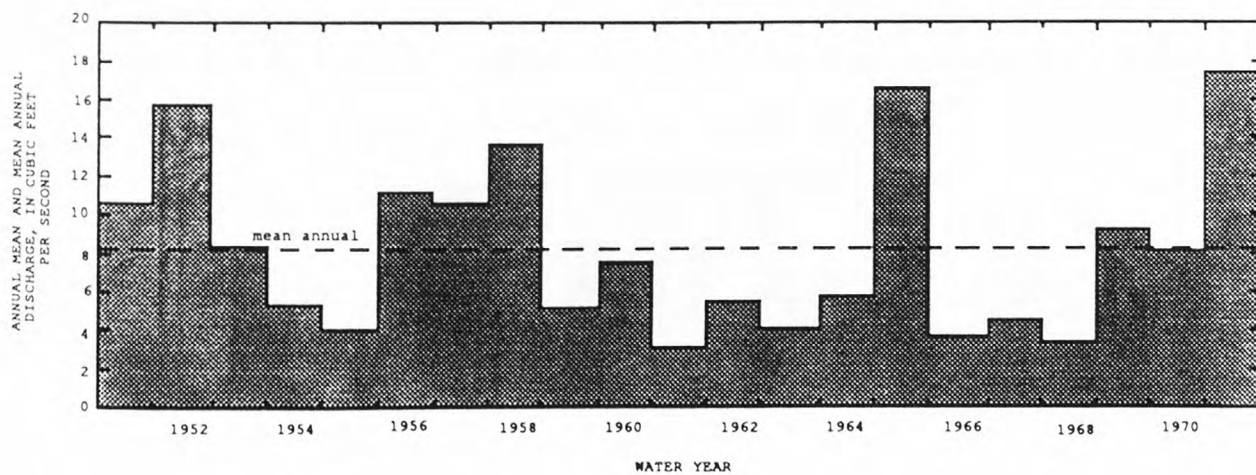
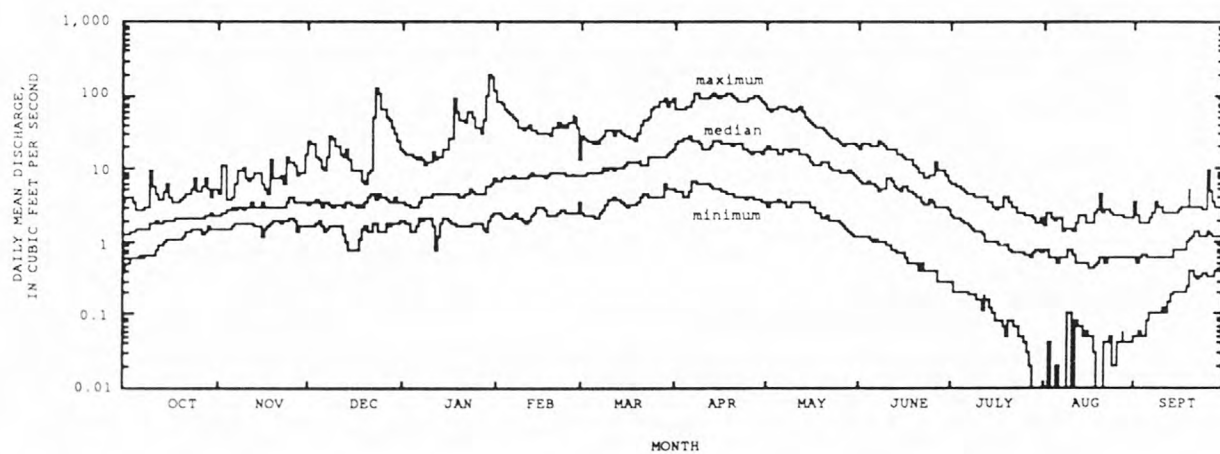
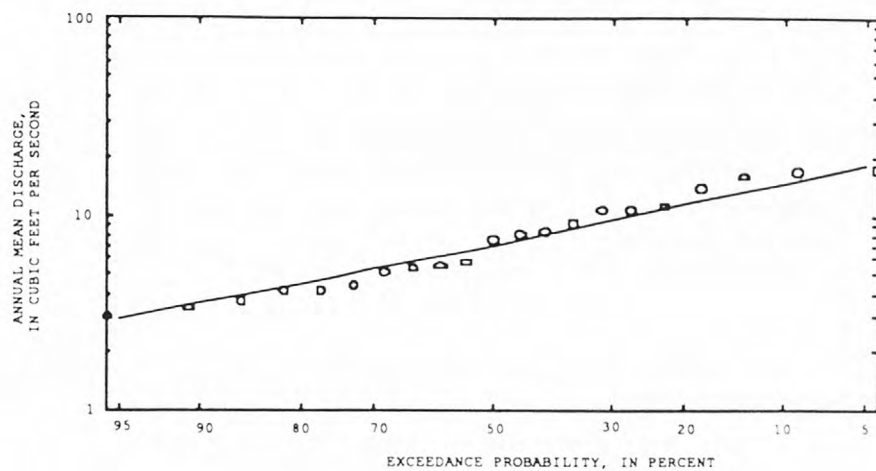
Duration table of daily mean flow for period of record 1951-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
68	35	21	15	12	7.2	4.8	3.5	2.7	2.0	1.3	0.59	0.31	0.11	0.09	0.06	0.01

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BOISE RIVER BASIN

13201000 MORES CREEK NEAR ARROWROCK, ID

LOCATION.—Lat 43°35', long 115°59', in sec. 21, T. 3 N., R. 4 E., Boise County, Hydrologic Unit 17050112, on right bank, 150 ft upstream from bridge on Boise-Arrowrock highway, 3 mi southwest of Arrowrock, and at mile 0.2.

DRAINAGE AREA.—426 mi<sup>2</sup>. Mean elevation, 4,950 ft.

PERIOD OF RECORD.—October 1914 to November 1915 (discharge measurements only), December 1915 to March 1955.

GAGE.—Staff gage. Datum of gage is 2,896.11 ft above sea level, unadjusted. Prior to July 15, 1921, staff gage at site 1,100 ft upstream at different datum. July 15 to Oct. 24, 1921, staff gage at site 400 ft upstream at datum 0.87 ft higher. Oct. 25, 1921, to Sept. 30, 1948, staff gage at site 200 ft upstream at datum 0.50 ft higher prior to Aug. 3, 1935, and at datum 0.23 ft higher thereafter.

REMARKS.—Diversions above station for irrigation of about 900 acres..

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,610 ft<sup>3</sup>/s Apr. 8, 1943 (gage height, 7.1 ft, site and datum then in use, from floodmark); minimum observed, 7.9 ft<sup>3</sup>/s Aug. 13-15, 17, 18, 1924.

Summary of monthly and annual discharges, 1917-54

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	112	28	61	20	0.32	1.7
November	385	38	106	61	0.58	2.9
December	395	36	131	85	0.65	3.6
January	538	52	138	102	0.74	3.8
February	469	73	198	112	0.57	5.4
March	1,120	139	469	267	0.57	12.9
April	3,180	261	1,120	587	0.52	30.9
May	1,650	177	825	376	0.46	22.7
June	959	52	408	238	0.58	11.2
July	245	17	101	57	0.57	2.8
August	75	8.3	38	18	0.47	1.1
September	73	13	37	13	0.36	1.0
Annual	660	98	302	121	0.40	100

Magnitude and frequency of annual low flow,  
based on period of record 1917-54

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	25	16	12	9.6	7.3	5.8
3	26	16	12	9.7	7.2	5.9
7	27	17	13	9.9	7.3	6.0
14	28	17	13	10	7.5	6.1
30	30	19	14	11	8.1	6.5
60	35	23	17	13	9.7	7.8
90	41	28	21	17	13	11
120	49	34	27	22	17	15
183	66	48	41	35	30	27

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1917-54

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,920	3,080	3,950	5,150	6,110	7,120	

Magnitude and frequency of annual high flow,  
based on period of record 1917-54

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	1,820	2,820	3,460	4,230	4,770	5,290
3	1,640	2,540	3,120	3,840	4,350	4,850
7	1,500	2,320	2,860	3,520	3,990	4,450
15	1,330	2,040	2,510	3,090	3,500	3,900
30	1,140	1,710	2,080	2,530	2,840	3,150
60	979	1,400	1,640	1,910	2,070	2,220
90	823	1,170	1,370	1,590	1,730	1,860

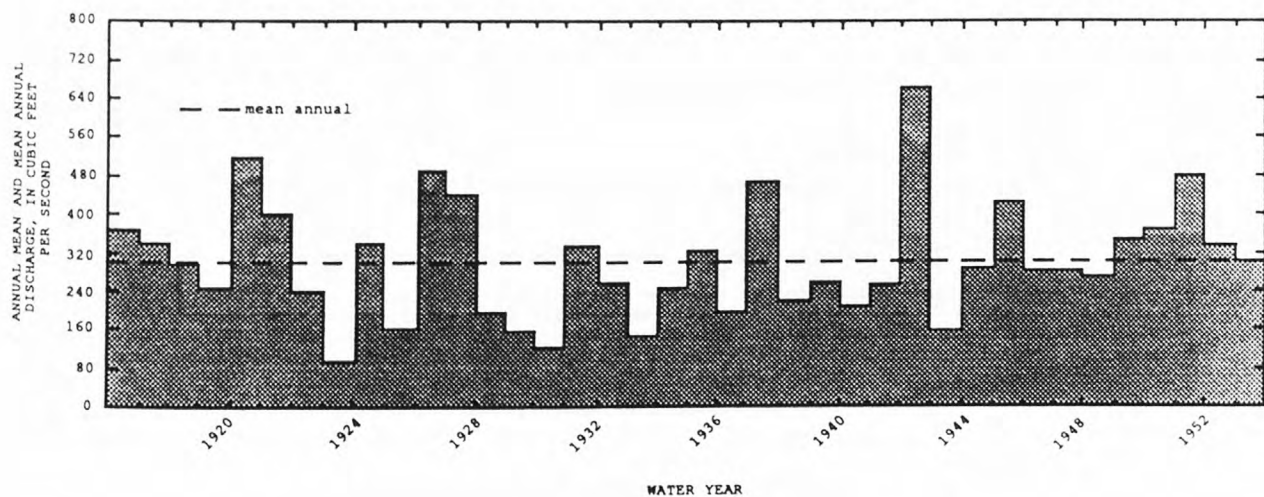
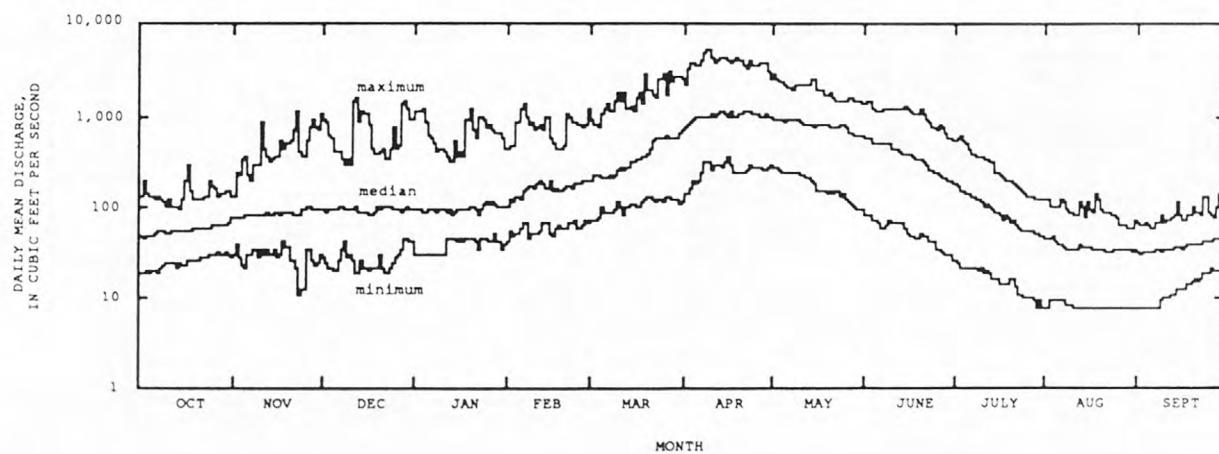
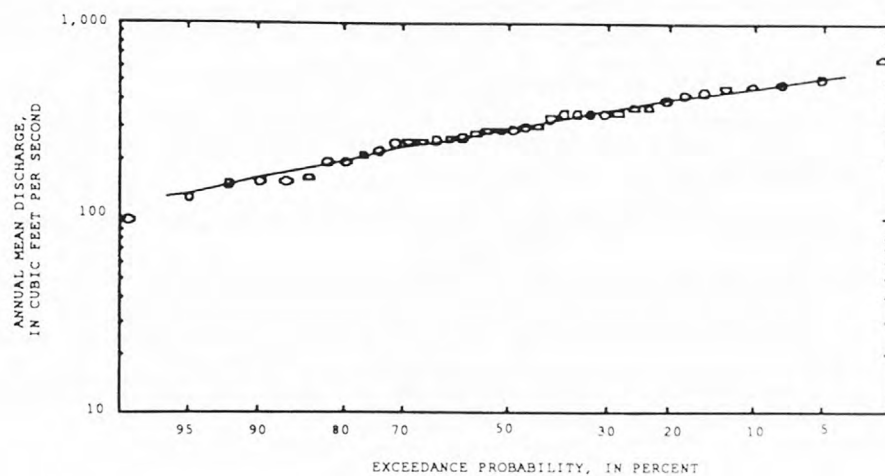
Duration table of daily mean flow for period of record 1917-54

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,060	1,220	890	660	478	270	160	107	81	64	48	33	25	17	13	9.4	8.2

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## BOISE RIVER BASIN

13202000 BOISE RIVER NEAR BOISE, ID

LOCATION.—Lat 43°31'40", long 116°03'31", in NE 1/4, sec.11, T.2 N., R.3 E., Ada County, Hydrologic Unit 17050112, on gate-control house at outlet works of Lucky Peak Lake, 1.8 mi upstream from diversion dam for New York Canal, 7.5 mi downstream from mouth of Mores Creek, 9 mi southeast of Boise, and at mile 63.6.

DRAINAGE AREA.—2,680 mi<sup>2</sup>, approximately. Mean elevation, 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 September 1990. Published as "near Highland" 1905-15 and as "below Moore Creek, near Arrowrock" 1916.

REVISED RECORDS.—WSP 1347: 1895-1901, 1904.

GAGE.—Water-stage recorder. Datum of gage is 2,600.00 ft above sea level. April 1938 to September 1940, 0.30 mi downstream at different datum.

REMARKS.—Discharges are a combination of flow in the New York Canal and Boise River below Diversion Dam near Boise, and compare favorably with unadjusted discharges furnished by the U.S. Army Corps of Engineers, except when pool above Diversion Dam is being regulated. Flow regulated by Lucky Peak Lake, Arrowrock Reservoir, and Anderson Ranch Reservoir. Diversions above station for irrigation of about 2,300 acres in the basin, and about 5,000 acres outside the basin near Mountain Home (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 35,500 ft<sup>3</sup>/s June 14, 1896; no flow on several days in 1954, 1955, 1957-59, 1961, 1969, 1974, 1978, 1980, 1982, 1984-86, 1989 when gates were closed; maximum discharge since construction of Lucky Peak Dam in 1955, 13,200 ft<sup>3</sup>/s June 13-15, 1983.

Summary of monthly and annual discharges, 1896, 1898-03, 1906, 1908-16, 1953-85,

Magnitude and frequency of annual low flow, based on period of record 1896-97, 1899-03, 1906, 1908-16, 1954-85

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,250	63	1,010	405	0.40	2.8
November	3,340	0.00	525	622	1.2	1.5
December	2,310	0.00	583	578	0.99	1.7
January	4,330	0.00	831	928	1.1	2.4
February	6,900	0.00	1,480	1,470	0.99	4.1
March	9,140	90	2,450	2,160	0.88	7.0
April	10,200	622	4,950	2,330	0.47	14.1
May	11,000	2,020	7,020	2,420	0.34	19.9
June	24,400	3,190	6,620	3,380	0.51	18.8
July	6,220	1,360	4,200	1,270	0.30	11.9
August	4,750	798	3,180	1,470	0.46	9.0
September	4,470	682	2,400	1,150	0.48	6.8
Annual	4,770	1,530	2,940	884	0.30	100

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	36	0.00	0.00	0.00	0.00	0.00
3	55	2.0	0.00	0.00	0.00	0.00
7	88	4.3	0.00	0.00	0.00	0.00
14	124	12	1.8	0.00	0.00	0.00
30	165	19	2.9	0.00	0.00	0.00
60	238	30	5.9	0.94	0.00	0.00
90	330	53	12	2.4	0.00	0.00
120	422	124	51	29	0.00	0.00
183	819	489	367	287	215	176

Magnitude and frequency of instantaneous peak flow, based on period of record 1895-14

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
13,400	19,700	24,400	31,000	36,300	42,100	

Magnitude and frequency of annual high flow, based on period of record 1896, 1898-03, 1906, 1908-16, 1953-85

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	8,820	13,200	16,400	20,800	24,200	27,700
3	8,710	12,900	15,900	19,800	22,900	26,000
7	8,390	12,300	15,000	18,600	21,300	24,200
15	7,970	11,400	13,800	16,900	19,300	21,800
30	7,420	10,500	12,700	15,500	17,700	20,000
60	6,860	9,310	10,900	12,800	14,200	15,500
90	6,350	8,340	9,550	11,000	12,000	13,000

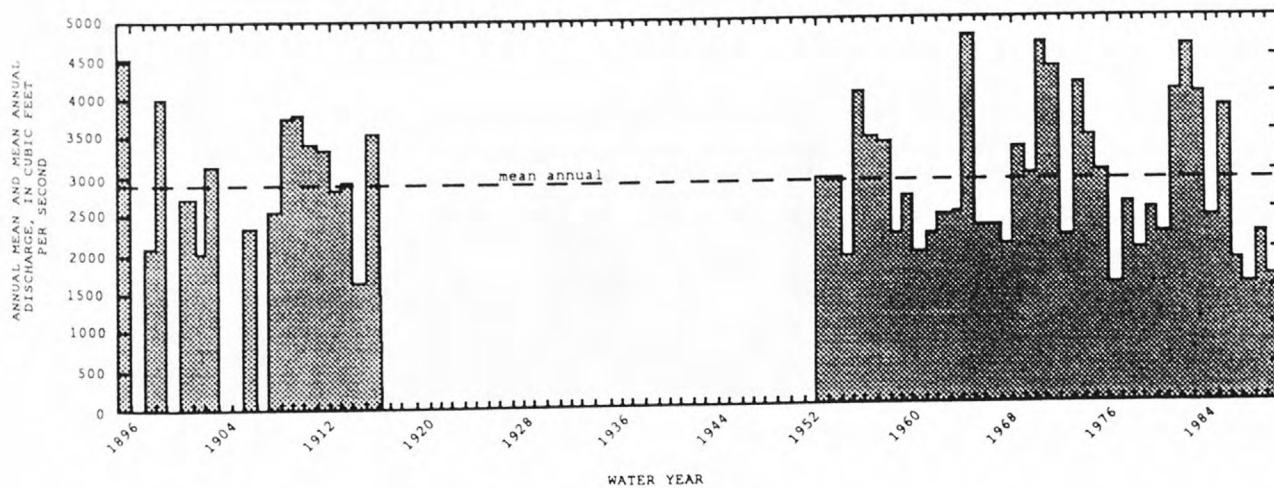
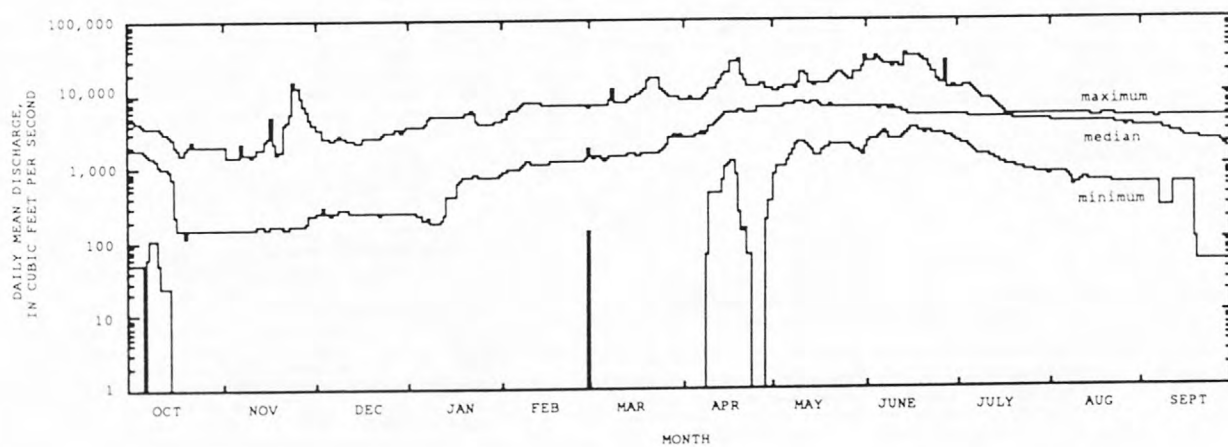
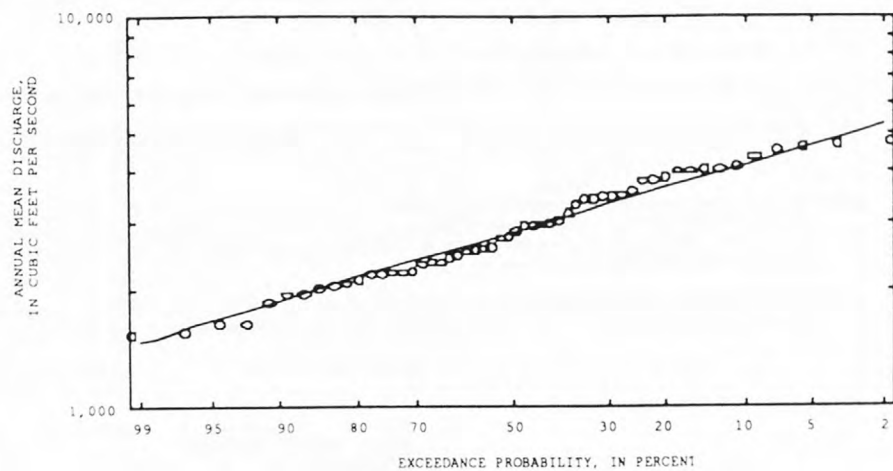
Duration table of daily mean flow for period of record 1896, 1898-03, 1906, 1908-16, 1953-85

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
11,900	8,790	7,050	5,840	4,850	4,070	3,170	2,000	1,250	919	222	101	40	1.1	0.78	0.39	0.08

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BOISE RIVER BASIN

13205500 BOISE RIVER AT BOISE, ID

LOCATION.—Lat 43°36'33", long 116°12'27", in NE 1/4, SW 1/4, sec.10, T.3 N., R.2 E., Ada County, Hydrologic Unit 17050114, on right bank at Capitol Boulevard Bridge at Boise and at mile 52.8.

DRAINAGE AREA.—2,760 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—March 1938 to September 1939 (gage heights only), February 1940 to October 1982.

GAGE.—Water-stage recorder. Datum of gage is 2,675.46 ft above sea level, datum of U.S. Army Corps of Engineers, Boise River Surveys. Prior to Apr. 30, 1943, at site 1 mi upstream at datum 13.69 ft higher. Apr. 30 to July 10, 1943, at site 400 ft downstream at present datum.

REMARKS.—Flow regulated by Anderson Ranch Reservoir, Arrowrock Reservoir, and Lucky Peak Lake. The New York, Ridenbaugh, and four small canals divert between station near Boise and this station. Diversions above station for irrigation of about 203,000 acres of which about 5,000 acres are outside the basin near Mountain Home, about 130,000 acres are inside the basin below station, and about 50,000 acres are outside the basin near Lake Lowell.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 21,000 ft<sup>3</sup>/s Apr. 20, 1943, gage height, 10.00 ft, site and datum then in use; minimum, 1.3 ft<sup>3</sup>/s Feb. 3, 1955, gage height, 2.21 ft; minimum daily, 3.5 ft<sup>3</sup>/s Jan. 19–23, 1961.

Summary of monthly and annual discharges, 1941–82

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	638	71	263	109	0.42	1.6
November	299	13	109	68	0.63	0.7
December	1,210	10	152	186	1.2	0.9
January	2,730	6.0	413	720	1.7	2.6
February	6,030	7.6	1,020	1,640	1.6	6.3
March	6,390	12	1,760	2,130	1.2	10.9
April	11,800	100	3,070	2,680	0.87	19.0
May	7,920	824	3,660	2,090	0.57	22.6
June	7,470	916	2,760	1,500	0.54	17.1
July	3,080	856	1,380	486	0.35	8.5
August	1,250	583	952	185	0.19	5.9
September	1,160	406	631	141	0.22	3.9
Annual	3,270	441	1,350	798	0.59	100

Magnitude and frequency of annual low flow, based on period of record 1941–82

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	24	9.6	6.0	4.1	2.7	2.1
3	25	10	6.2	4.2	2.8	2.1
7	28	11	6.9	4.6	3.0	2.3
14	36	14	8.6	5.7	3.5	2.5
30	56	22	12	7.5	4.0	2.6
60	82	35	20	12	6.0	3.7
90	100	43	24	14	7.4	4.5
120	122	52	30	18	9.3	5.8
183	209	109	75	55	38	29

Magnitude and frequency of annual high flow, based on period of record 1941–82

Magnitude and frequency of instantaneous peak flow, based on period of record 1941–82

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
5,240	8,530	10,600	12,900	14,500	15,900	

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	5,190	8,520	10,600	12,900	14,500	15,900
3	5,090	8,280	10,200	12,400	13,900	15,200
7	4,810	7,760	9,560	11,600	12,900	14,200
15	4,430	7,200	8,940	11,000	12,400	13,600
30	3,940	6,510	8,210	10,300	11,800	13,200
60	3,350	5,580	7,140	9,150	10,700	12,200
90	2,950	4,910	6,340	8,280	9,790	11,400

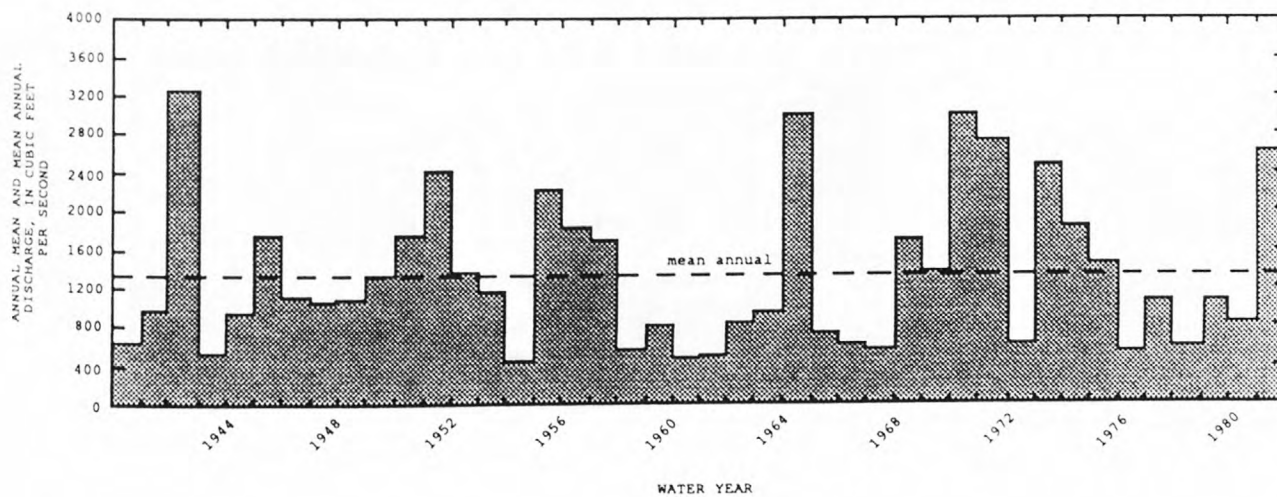
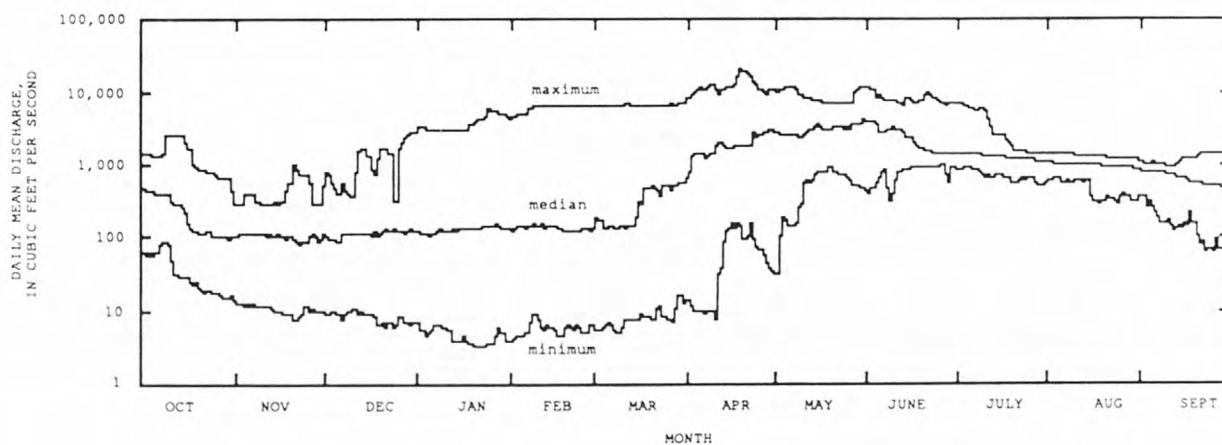
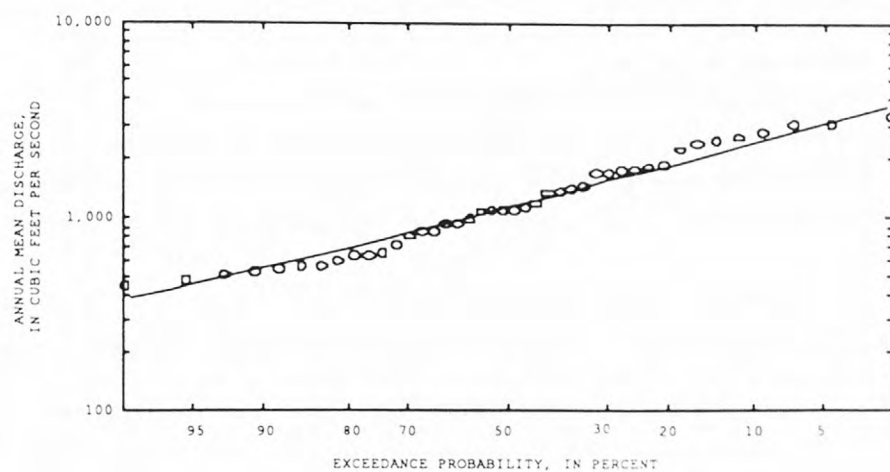
Duration table of daily mean flow for period of record 1941–82

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
8,050	5,920	4,460	2,970	1,780	1,250	962	649	302	158	107	46	18	10	7.7	6.3	4.2

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BOISE RIVER BASIN

13207000 SPRING VALLEY CREEK NEAR EAGLE, ID

LOCATION.—Lat 43°44'20", long 116°18'00", in SW 1/4, SE 1/4, sec. 26, T. 5 N., R. 1 E., Ada County, Hydrologic Unit 17050114, on right bank at mile 0.5 and 4 mi northeast of Eagle.

DRAINAGE AREA.—20.9 mi<sup>2</sup>.

PERIOD OF RECORD.—June 1954 to September 1959, October 1960 to September 1971.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 2,721.70 above sea level, unadjusted.

REMARKS.—Diversions above station for irrigation. Base flow is affected at times by discharge from artesian well entering upstream.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 244 ft<sup>3</sup>/s Feb. 26, 1957 (gage height, 2.31 ft); no flow for long periods.

Summary of monthly and annual discharges, 1955-59, 1961-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	0.16	0.00	0.02	0.04	2.6	0.1
November	0.42	0.00	0.05	0.11	2.2	0.2
December	6.6	0.00	1.0	1.7	1.7	3.3
January	25	0.00	5.9	8.6	1.5	19.2
February	20	0.89	6.8	6.4	0.94	21.8
March	26	0.06	6.9	7.3	1.0	22.4
April	15	0.29	6.0	5.4	0.91	19.3
May	20	0.00	3.3	5.0	1.5	10.7
June	4.1	0.00	0.91	1.2	1.3	2.9
July	0.10	0.00	0.02	0.03	1.9	0.1
August	0.02	0.00	0.00	0.00	4.0	0.0
September	0.12	0.00	0.01	0.03	3.4	0.0
Annual	6.7	0.13	2.6	2.2	0.87	100

Magnitude and frequency of annual low flow,  
based on period of record 1956-59, 1962-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.00	0.00	0.00	0.00	0.00	0.00
183	0.02	0.00	0.00	0.00	0.00	0.00

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1955-59, 1961-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
50	128	209	353	494	669

Magnitude and frequency of annual high flow,  
based on period of record 1955-59, 1961-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	26	65	102	162	215	275
3	20	51	82	134	183	242
7	16	39	62	100	136	178
15	11	29	46	74	100	131
30	8.8	22	35	54	71	90
60	6.6	16	25	38	49	61
90	5.5	14	22	33	43	53

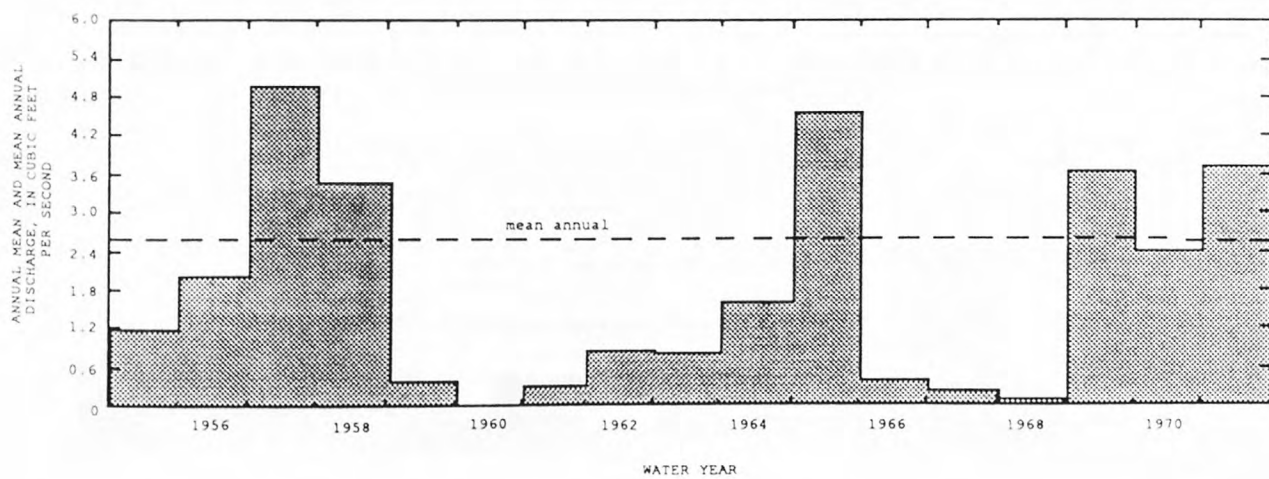
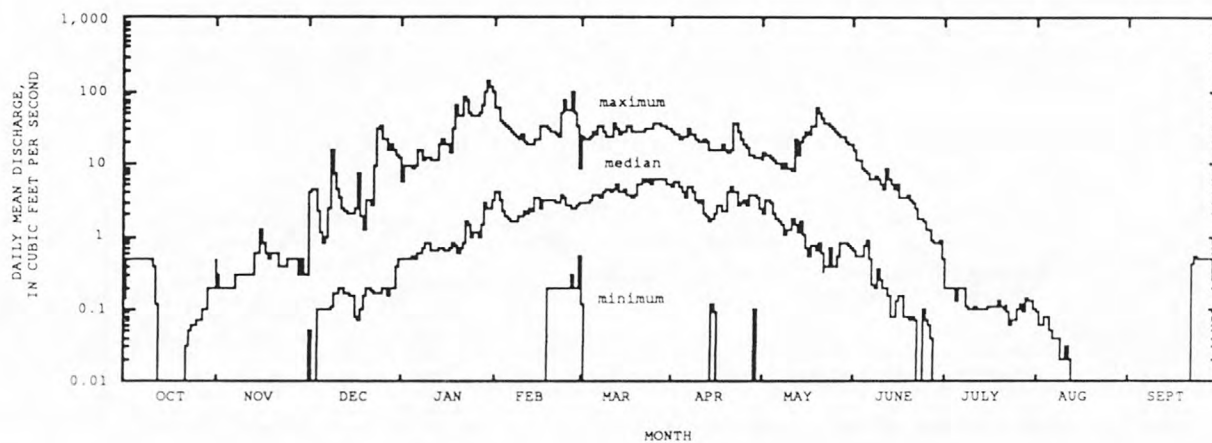
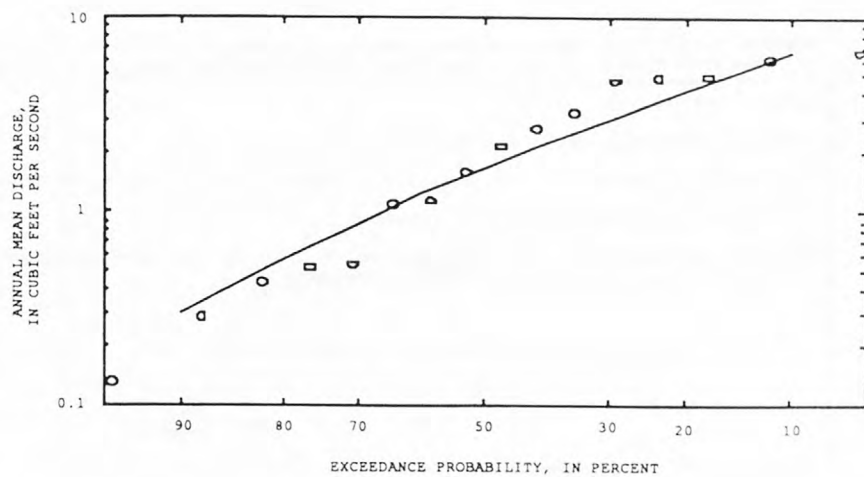
Duration table of daily mean flow for period of record 1955-59, 1961-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
33	14	8.3	5.0	2.8	0.83	0.31	0.08	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## BOISE RIVER BASIN

13207500 DRY CREEK NEAR EAGLE, ID

LOCATION.—Lat 43°43'55", long 116°18'15", in NW¼, sec.35, T.5 N., R.1 E., Ada County, Hydrologic Unit 17050114, on left bank 80 ft downstream from State Highway 55, 500 ft downstream from Spring Valley Creek, 3.6 mi northeast of Eagle, and at mile 4.2.

DRAINAGE AREA.—59.4 mi<sup>2</sup>.

PERIOD OF RECORD.—June 1954 to September 1968.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 2,692.80 above sea level, unadjusted.

REMARKS.—Diversion above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 373 ft<sup>3</sup>/s Jan. 29, 1965 (gage height, 4.48 ft); maximum gage height, 4.70 ft Feb. 26, 1957; no flow at times during summer of many years.

Summary of monthly and annual discharges, 1955-68

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2.0	0.33	0.83	0.43	0.51	0.9
November	2.4	0.48	1.5	0.60	0.41	1.6
December	29	0.60	4.9	7.6	1.5	5.5
January	68	0.82	9.3	18	1.9	10.4
February	62	3.8	18	19	1.0	20.1
March	77	1.4	19	21	1.1	21.8
April	59	0.51	20	21	1.0	22.1
May	72	0.07	12	19	1.6	13.2
June	17	0.08	2.9	4.8	1.7	3.2
July	0.85	0.03	0.28	0.21	0.76	0.3
August	1.3	0.00	0.33	0.36	1.1	0.4
September	1.2	0.17	0.40	0.30	0.75	0.5
Annual	22	0.84	7.4	7.2	0.98	100

Magnitude and frequency of annual low flow,  
based on period of record 1956-68

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20# 5%	50# 2%	100# 1%
1	0.05	0.00	0.00	0.00	0.00	0.00
3	0.08	0.00	0.00	0.00	0.00	0.00
7	0.10	0.05	0.00	0.00	0.00	0.00
14	0.12	0.06	0.00	0.00	0.00	0.00
30	0.13	0.08	0.00	0.00	0.00	0.00
60	0.18	0.08	0.05	0.03	0.02	0.01
90	0.24	0.12	0.08	0.06	0.04	0.03
120	0.32	0.18	0.13	0.10	0.07	0.05
183	0.63	0.35	0.25	0.19	0.13	0.11

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1955-68

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
93	237	386	649	908	1,230	

Magnitude and frequency of annual high flow,  
based on period of record 1955-68

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	59	145	231	375	511	674
3	46	110	178	298	418	570
7	37	87	140	237	336	462
15	28	66	106	176	247	335
30	21	50	80	131	181	242
60	16	39	62	101	139	186
90	14	34	54	89	122	162

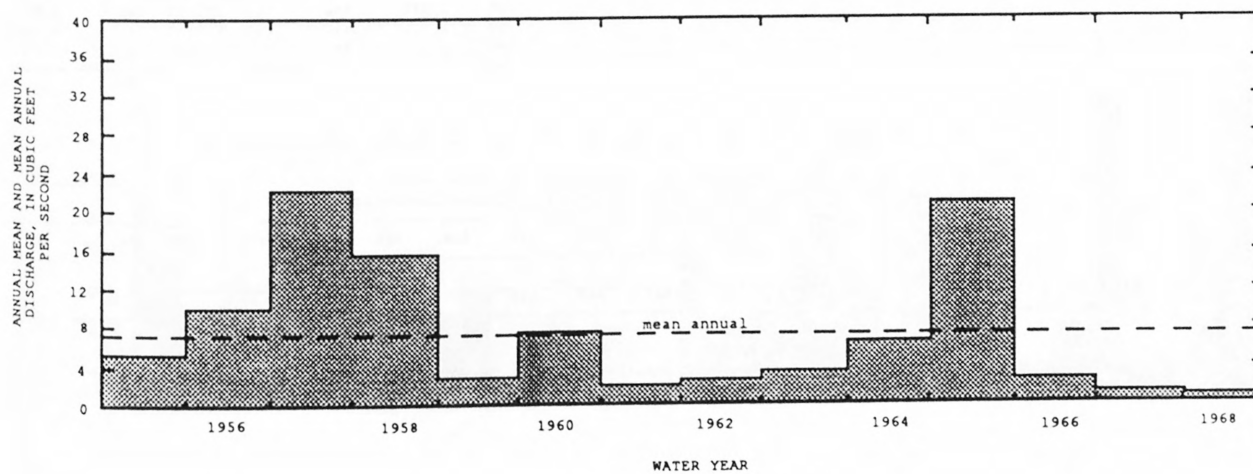
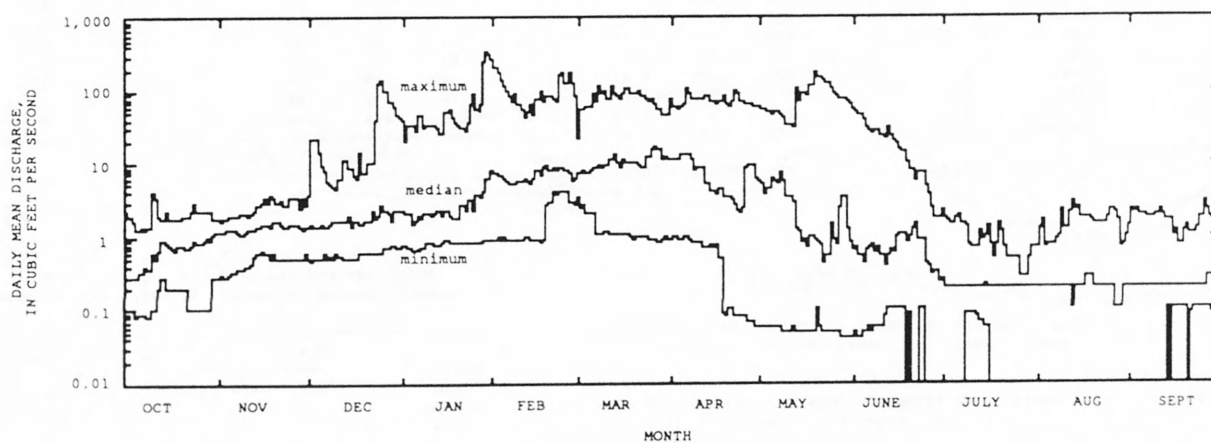
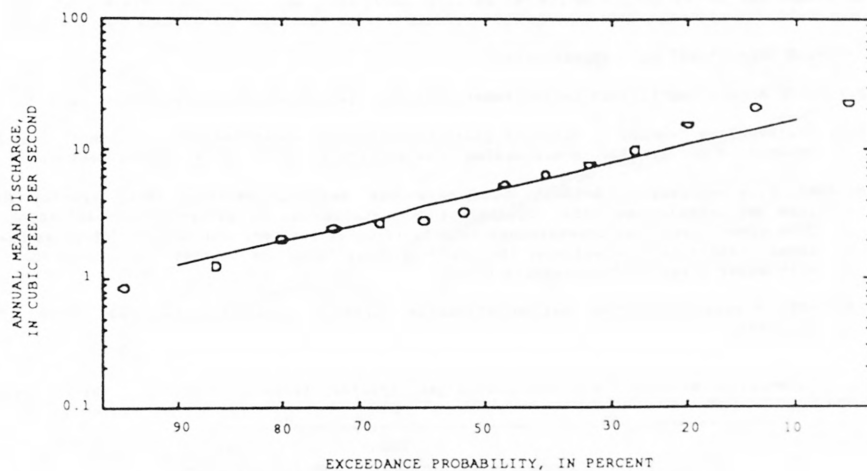
Duration table of daily mean flow for period of record 1955-68

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99	99.5%	99.9%
89	41	22	11	6.9	3.2	1.8	1.3	0.83	0.44	0.22	0.12	0.09	0.01	0.00	0.00	0.00

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BOISE RIVER BASIN

13212500 BOISE RIVER AT NOTUS, ID

LOCATION.—Lat 43°43'21", long 116°47'34", in SE 1/4, SE 1/4, sec.34, T.5 N., R.4 E., Ada County, Hydrologic Unit 17050114, on right bank 1,100 ft upstream from county road bridge, 0.4 mi southeast of Notus, 7 mi northwest of Caldwell, and at mile 14.0.

DRAINAGE AREA.—3,820 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—April 1920 to September 1973 (irrigation seasons only 1923-24 water years).

GAGE.—Water-stage recorder. Datum of gage is 2,288.55 ft above sea level, datum of U.S. Army Corps of Engineers, Boise River Surveys. Prior to Aug. 26, 1936, nonrecording gage at site 1,100 ft downstream at same datum.

REMARKS.—Flow regulated by Anderson Ranch Reservoir beginning December 1945, Arrowrock Reservoir beginning April 1920, and Lucky Peak Lake beginning October 1954. Diversions above station for irrigation of about 347,000 acres of which about 4,100 acres are by withdrawals from ground water: an undetermined acreage is below station, and about 5,000 acres near Mountain Home, about 50,000 acres near Lake Lowell, and sizable areas near the mouth of Boise River are outside the basin. About 19,000 acres are irrigated above the station with water diverted from Payette River.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 20,500 ft<sup>3</sup>/s Apr. 20, 1943, gage height, 10.43 ft; minimum observed, 10 ft<sup>3</sup>/s Aug. 18, 21, 1920.

Summary of monthly and annual discharges, 1921-22, 1925-37, 1946-73

Magnitude and frequency of annual low flow, based on period of record 1921-22, 1925-37, 1947-73

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,190	45	648	291	0.45	4.4
November	1,150	317	719	161	0.22	4.8
December	1,760	393	710	219	0.31	4.7
January	3,410	401	898	716	0.80	6.0
February	6,580	457	1,430	1,630	1.1	9.5
March	7,230	355	2,030	2,070	1.0	13.5
April	8,400	90	2,420	2,380	0.98	16.2
May	9,790	50	3,040	2,760	0.91	20.3
June	8,470	33	2,220	2,080	0.94	14.8
July	1,670	15	316	376	1.2	2.1
August	826	16	203	201	0.99	1.4
September	1,120	16	350	289	0.83	2.3
Annual	3,320	264	1,250	832	0.67	100

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	36	17	13	11	8.3	6.1
3	43	20	15	11	8.4	6.2
7	52	23	16	12	8.6	6.3
14	67	28	18	12	8.8	6.7
30	83	32	20	13	8.9	6.9
60	101	38	23	15	9.4	7.2
90	149	54	30	18	10	7.5
120	232	86	46	26	13	7.9
183	406	184	105	61	30	18

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1921-22, 1925-37, 1946-73

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
5,260	9,550	12,600	16,500	19,400	22,300	

Magnitude and frequency of annual high flow,  
based on period of record 1921-22, 1925-37, 1946-73

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	5,060	9,320	12,200	15,900	18,400	20,800
3	4,730	9,040	12,100	15,900	18,600	21,200
7	4,260	8,440	11,500	15,400	18,200	21,000
15	3,750	7,680	10,700	14,600	17,600	20,600
30	3,150	6,690	9,550	13,500	16,700	20,000
60	2,570	5,410	7,790	11,300	14,200	17,400
90	2,210	4,590	6,620	9,660	12,200	15,100

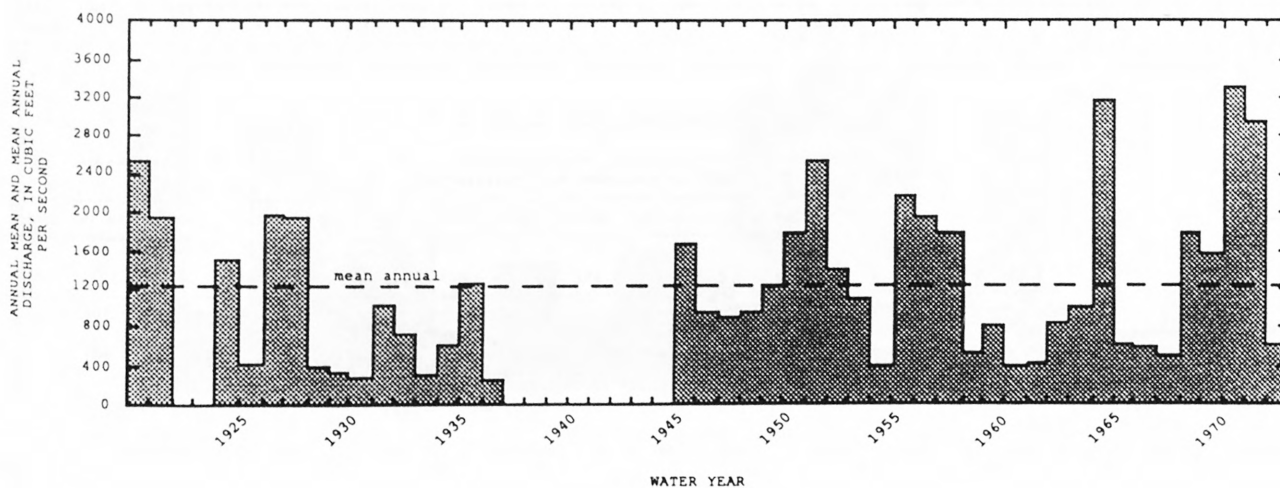
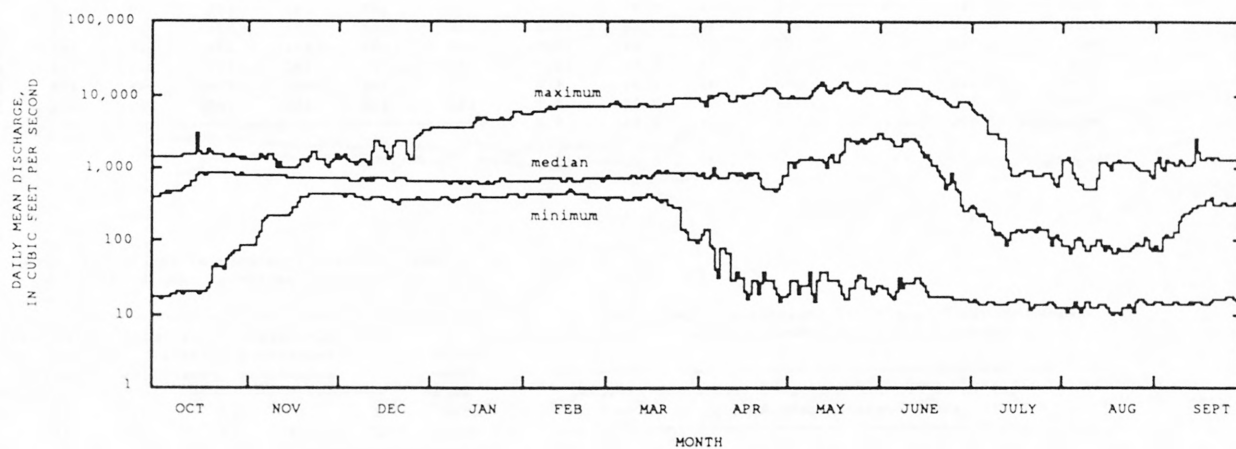
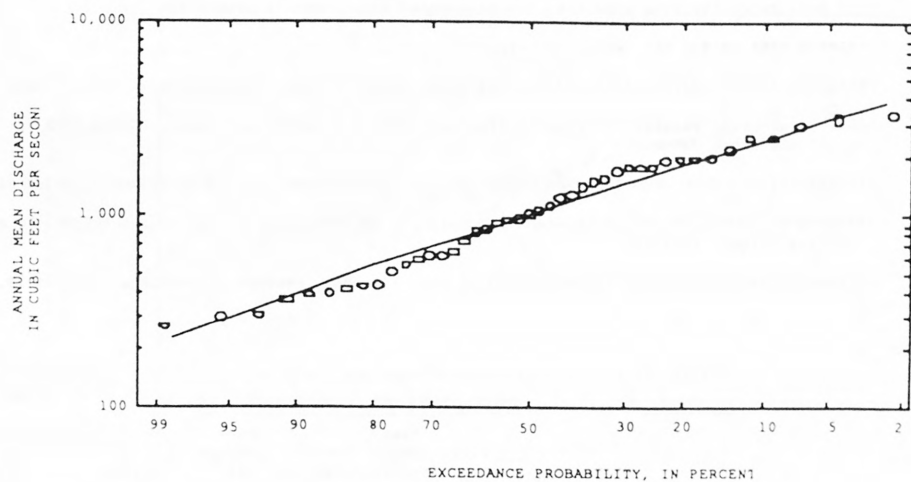
Duration table of daily mean flow for period of record 1921-22, 1925-37, 1946-73

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
8,640	5,920	3,980	2,230	1,240	849	722	620	525	403	205	49	32	22	18	15	13

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## BOISE RIVER BASIN

13213000 BOISE RIVER NEAR PARMA, ID

LOCATION.—Lat 43°46'54", long 116°58'17", in NE¼, SE¼, sec. 7, T.5 N., R.5 W., Canyon County, Hydrologic Unit 17050114, on left bank at county road crossing, 1.2 mi west of Parma, and at mile 3.8.

DRAINAGE AREA.—3,970 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—March 1938 to June 1939 (gage heights only), September 1971 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 2,196.49 ft above sea level. March 1938 to June 1939, nonrecording gage 1.4 mi upstream at different datum.

REMARKS.—Flow regulated by Anderson Ranch Dam, Arrowrock Reservoir, and Lucky Peak Lake and diverted for irrigation of about 400,000 acres.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 9,240 ft<sup>3</sup>/s June 14, 1983, gage height, 13.83 ft; minimum, 60 ft<sup>3</sup>/s Apr. 18, 19, 1987, gage height, 5.88 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Apr. 20, 1943, reached a discharge of about 20,000 ft<sup>3</sup>/s.

Summary of monthly and annual discharges, 1972-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,400	571	1,200	435	0.36	5.7
November	2,320	780	1,120	431	0.38	5.3
December	2,510	751	1,180	528	0.45	5.6
January	5,080	713	1,480	1,250	0.85	7.0
February	6,440	686	1,940	1,710	0.88	9.2
March	7,210	534	2,620	2,530	0.97	12.4
April	6,940	219	3,310	2,780	0.84	15.8
May	6,760	440	3,160	2,520	0.80	15.0
June	6,820	315	2,210	1,950	0.88	10.5
July	3,100	301	980	791	0.81	4.8
August	1,580	306	770	292	0.38	3.7
September	2,590	416	1,060	475	0.45	5.0
Annual	3,900	594	1,750	1,070	0.61	100

Magnitude and frequency of annual low flow,  
based on period of record 1973-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	391	197	130	90	58	42
3	417	212	140	97	61	44
7	459	237	157	108	68	49
14	508	275	186	130	83	60
30	582	379	292	231	174	142
60	676	471	378	310	244	205
90	711	492	399	333	269	232
120	778	530	424	348	276	234
183	869	591	480	403	330	288

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1972-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,480	8,260	9,630	10,900	11,600	12,100

Magnitude and frequency of annual high flow,  
based on period of record 1972-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	4,910	7,840	9,510	11,300	12,300	13,300
3	4,720	7,710	9,450	11,300	12,500	13,500
7	4,420	7,430	9,280	11,400	12,700	13,900
15	4,090	7,130	9,080	11,300	12,900	14,300
30	3,600	6,520	8,550	11,100	13,000	14,800
60	3,110	5,840	7,940	10,800	13,100	15,500
90	2,710	5,170	7,180	10,100	12,500	15,200

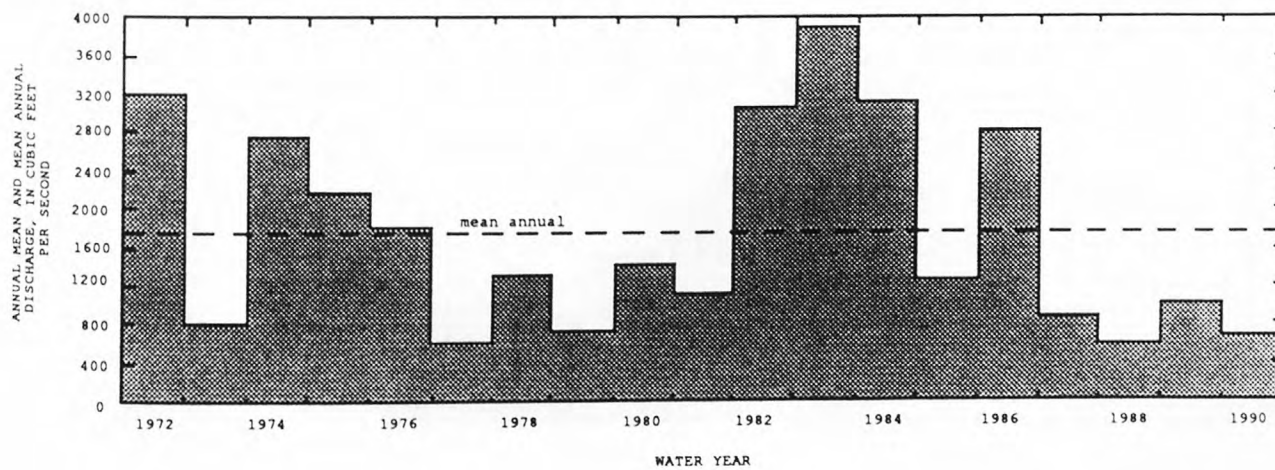
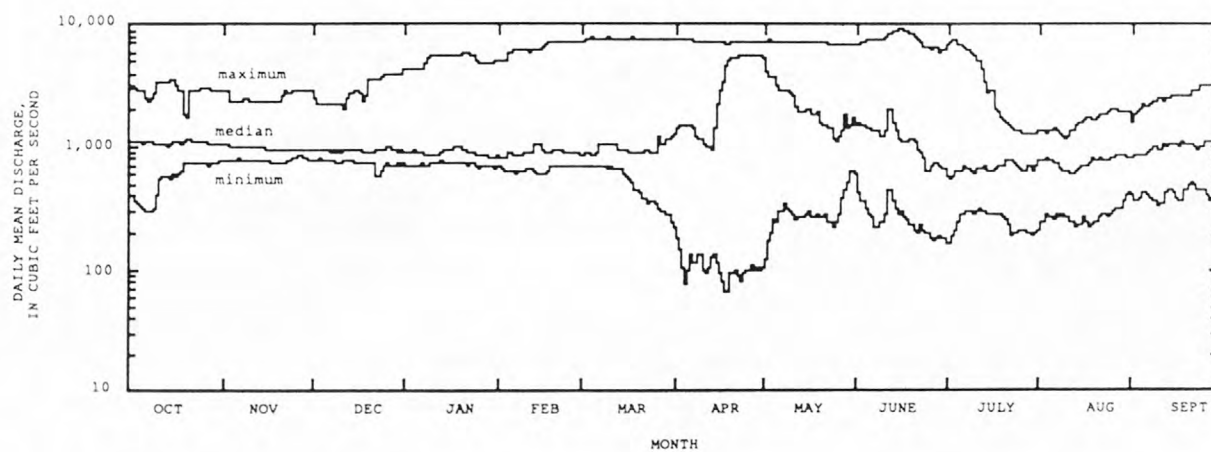
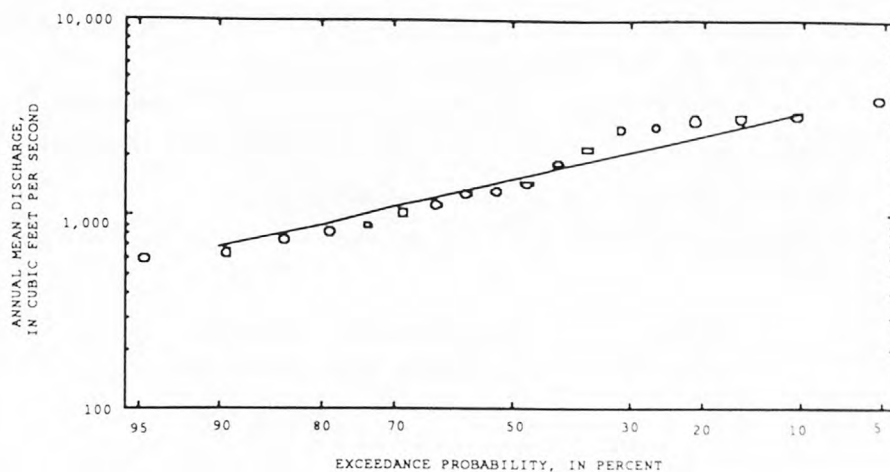
Duration table of daily mean flow for period of record 1972-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
7,590	6,610	5,270	3,640	2,340	1,280	1,070	956	867	782	689	510	350	257	199	127	90

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# SNAKE RIVER MAIN STEM

13213100 SNAKE RIVER AT NYSSA, OR

LOCATION.—Lat 43°52'34", long 116°58'53", in NW¼, SW¼, NE¼, sec. 7, T. 6 N., R. 5 W., Canyon County, Hydrologic Unit 17050115, on right bank 300 ft upstream from U.S. Highway 20-26 bridge at Nyssa, 2.3 mi downstream from Boise River, and at mile 385.2.

DRAINAGE AREA.—58,700 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—November 1974 to September 1986, February 1989 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 2,170 ft above sea level, from topographic map. Prior to 1989, station located on left bank in Oregon.

REMARKS.—Flow regulated by many reservoirs above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 57,900 ft<sup>3</sup>/s Apr. 19, 1984, gage height, 13.34 ft; minimum, 4,330 ft<sup>3</sup>/s July 1, 1977, gage height, 4.00 ft.

Summary of monthly and annual discharges, 1976-86, 1990

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	21,400	8,920	13,500	3,720	0.28	7.2
November	24,700	9,020	14,600	5,080	0.35	7.7
December	24,300	9,420	14,900	5,060	0.34	7.9
January	30,300	9,220	15,900	6,560	0.41	8.4
February	26,700	9,000	16,600	6,050	0.36	8.8
March	40,000	9,310	19,500	9,490	0.49	10.4
April	44,000	7,560	24,000	12,700	0.53	12.8
May	49,100	6,880	22,400	14,000	0.63	11.9
June	41,100	6,930	17,700	10,700	0.60	9.4
July	16,500	5,630	9,040	3,690	0.41	4.8
August	11,600	6,270	8,880	1,600	0.18	4.7
September	13,700	7,630	11,300	1,910	0.17	6.0
Annual	26,300	8,950	15,700	5,690	0.36	100

Magnitude and frequency of annual low flow,  
based on period of record 1976-86, 1990-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	6,340	5,380	4,890	4,490	4,070	3,790
3	6,440	5,450	4,970	4,590	4,190	3,940
7	6,560	5,580	5,130	4,790	4,430	4,210
14	6,730	5,840	5,460	5,190	4,920	4,760
30	7,110	6,150	5,770	5,500	5,250	5,110
60	7,740	6,590	6,120	5,780	5,450	5,250
90	8,450	7,150	6,620	6,250	5,890	5,680
120	9,350	7,710	7,050	6,590	6,140	5,880
183	10,600	8,440	7,580	6,970	6,380	6,030

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1976-86, 1990

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
35,800	47,300	54,000	61,600	66,700	71,500

Magnitude and frequency of annual high flow,  
based on period of record 1976-86, 1990

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	34,300	46,700	53,600	61,200	66,400	71,000
3	33,600	45,900	53,000	60,800	66,000	70,800
7	32,400	45,000	52,200	60,300	65,600	70,500
15	30,500	42,600	49,500	57,300	62,500	67,200
30	27,200	39,000	46,300	54,900	61,000	66,800
60	24,100	35,700	43,700	54,100	62,000	70,100
90	22,200	32,800	40,400	50,500	58,400	66,600

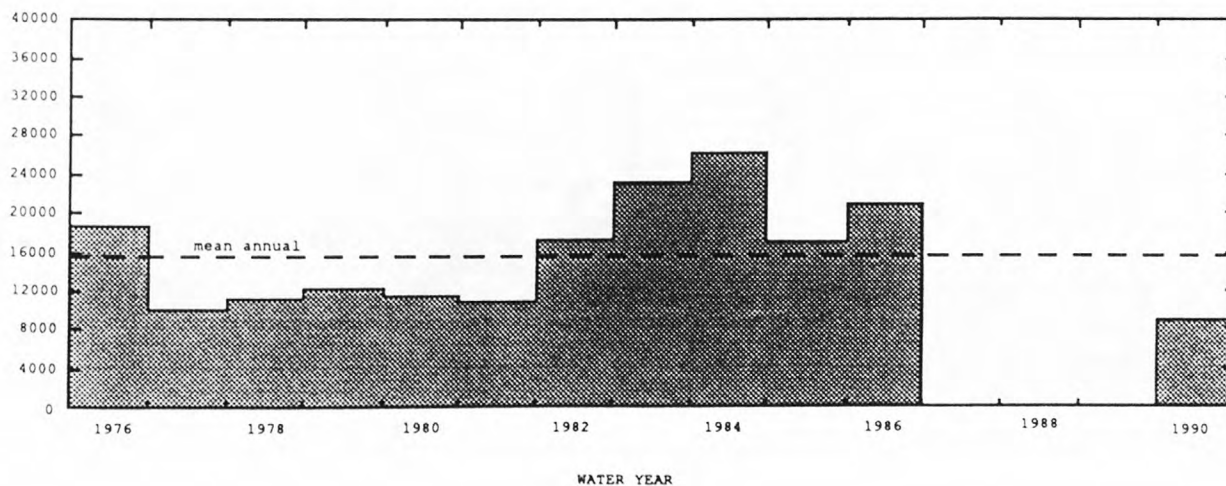
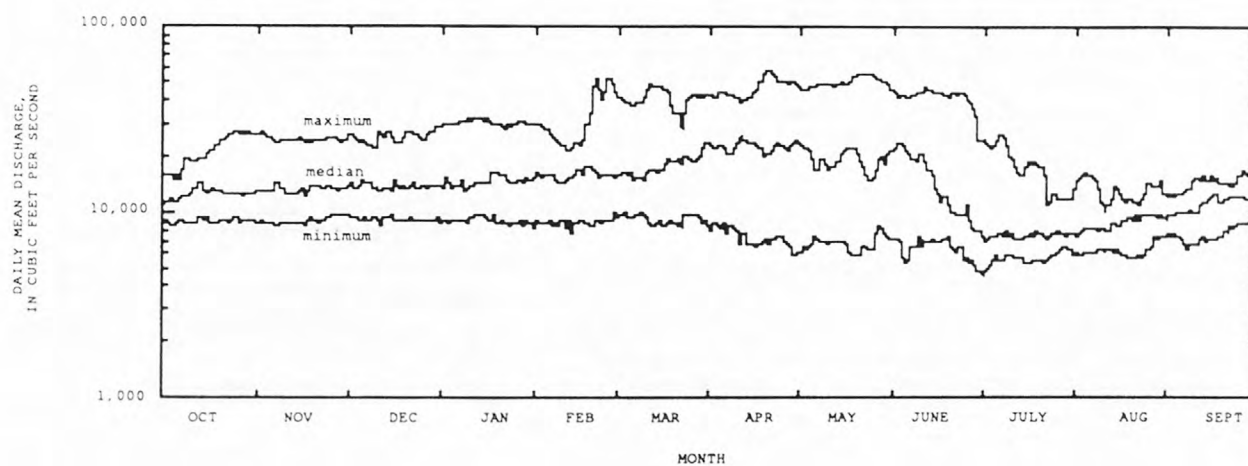
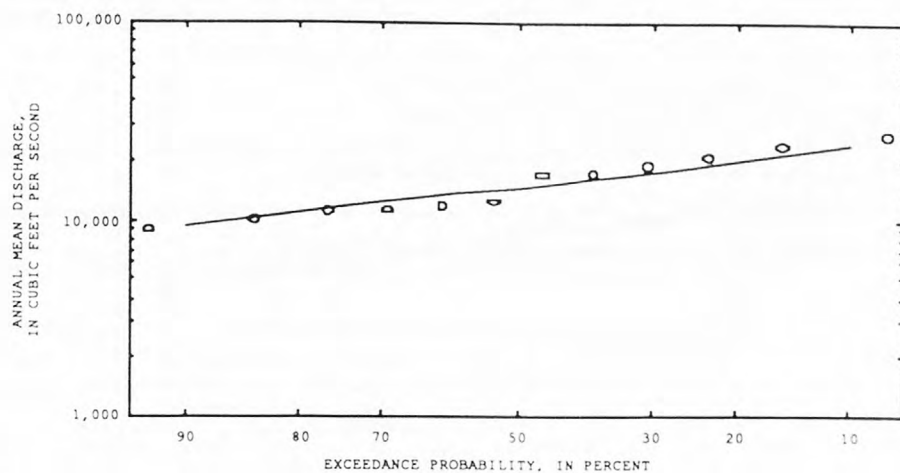
Duration table of daily mean flow for period of record 1976-86, 1990

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
47,600	35,600	29,400	24,600	22,100	17,500	14,000	12,400	11,000	9,850	8,880	7,430	6,680	5,960	5,640	5,350	4,710

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



PAYETTE RIVER BASIN

13235000 SOUTH FORK PAYETTE RIVER AT LOWMAN, ID

LOCATION.—Lat 44°05'07", long 115°37'16", in SE 1/4, NW 1/4, SW 1/4, sec. 27, T. 9 N., R. 7 E., Boise County, Hydrologic Unit 17040120, Boise National Forest, on right bank 1,200 ft upstream from Rock Creek, 0.5 mi northwest of Lowman, 4,100 ft downstream from Clear Creek, and at mile 106.

DRAINAGE AREA.—456 mi<sup>2</sup>. Mean elevation, 6,780 ft.

PERIOD OF RECORD.—May 1941 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 3,790 ft above sea level, from river-profile map. Prior to Dec. 18, 1941, nonrecording gage at site 900 ft upstream at different datum.

REMARKS.—No regulation. Return flow from several small irrigation diversions enters river above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,980 ft<sup>3</sup>/s June 16, 1974, gage height, 8.36 ft, from floodmark; minimum, 135 ft<sup>3</sup>/s Sept. 10, 1966, Jan. 1-2, 1978; minimum gage height, 2.22 ft, Sept. 10, 1966.

Summary of monthly and annual discharges, 1942-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	598	223	369	78	0.21	3.5
November	648	242	374	84	0.23	3.6
December	735	238	362	108	0.30	3.4
January	694	222	335	82	0.25	3.2
February	644	239	342	88	0.26	3.2
March	1,140	229	435	159	0.36	4.2
April	2,210	384	1,010	393	0.39	9.7
May	3,700	513	2,230	709	0.32	21.4
June	5,750	651	2,790	1,050	0.38	26.8
July	2,630	331	1,270	623	0.49	12.2
August	871	237	527	152	0.29	5.1
September	539	240	389	77	0.20	3.7
Annual	1,410	352	870	231	0.27	100

Magnitude and frequency of annual low flow,  
based on period of record 1943-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	212	183	168	156	143	135
3	231	201	186	174	160	152
7	257	226	209	196	181	171
14	271	239	223	211	197	188
30	282	251	236	224	211	203
60	295	261	245	233	220	212
90	306	272	256	244	231	223
120	319	280	262	249	235	226
183	345	301	280	263	245	234

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1942-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,320	5,640	6,420	7,320	7,940	8,530

Magnitude and frequency of annual high flow,  
based on period of record 1942-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	4,200	5,530	6,270	7,090	7,630	8,120
3	4,060	5,340	6,050	6,810	7,290	7,720
7	3,790	5,050	5,760	6,530	7,020	7,470
15	3,450	4,620	5,270	5,970	6,420	6,830
30	3,130	4,070	4,540	5,000	5,270	5,490
60	2,650	3,390	3,730	4,040	4,210	4,340
90	2,210	2,820	3,110	3,380	3,530	3,640

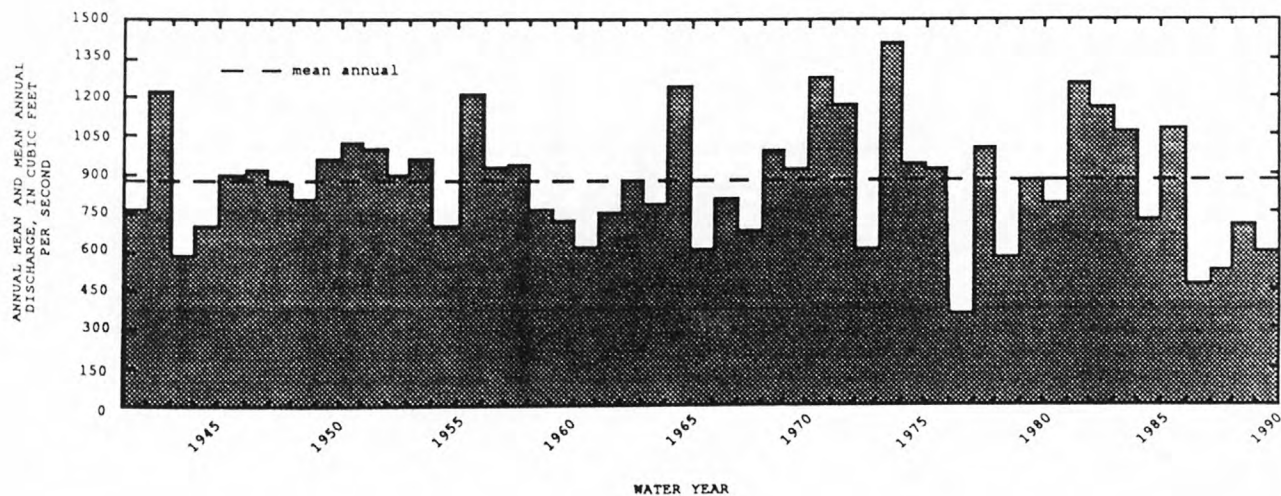
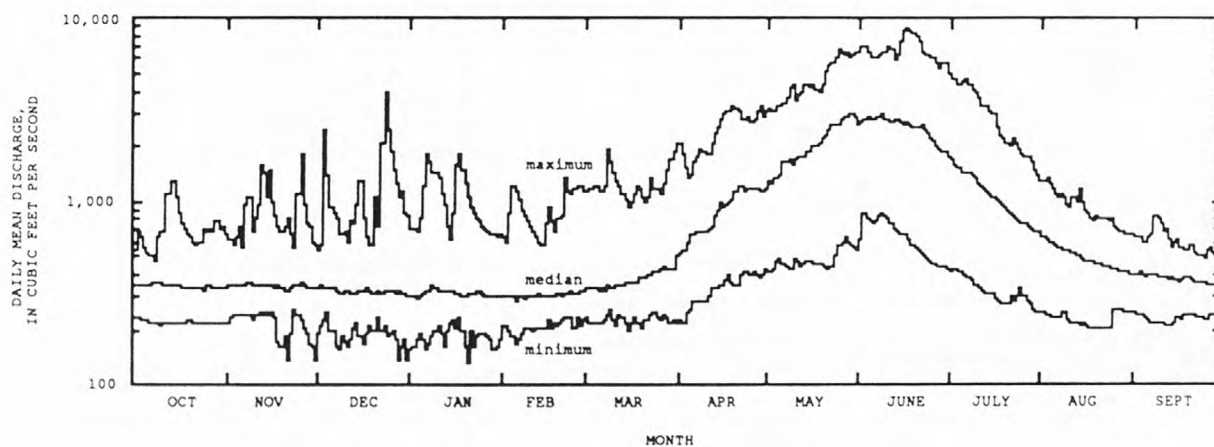
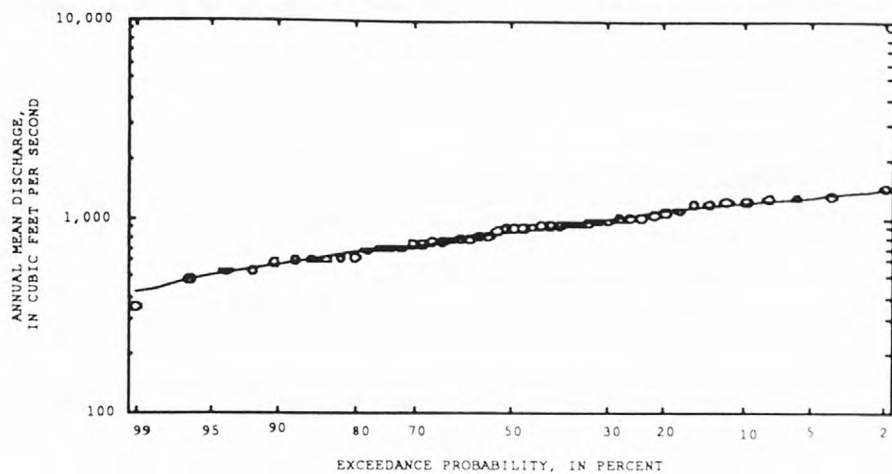
Duration table of daily mean flow for period of record 1942-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
4,600	3,090	2,300	1,680	1,270	720	511	430	381	343	311	278	253	228	215	198
															171

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



PAYETTE RIVER BASIN

13236500 DEADWOOD RIVER BELOW DEADWOOD RESERVOIR, NEAR LOWMAN, ID

LOCATION.—Lat 44°17'30", long 115°38'33", in SE 1/4, NE 1/4, sec. 17, T. 11 N., R. 7 E., Valley County, Hydrologic Unit 17050120, Boise National Forest, on right bank 300 ft upstream from Wilson Creek, 0.2 mi downstream from Deadwood Dam, 15 mi north of Lowman, and at mile 23.4.

DRAINAGE AREA.—112 mi<sup>2</sup>. Mean elevation, 6,630 ft.

PERIOD OF RECORD.—October 1926 to September 1990. Monthly discharge only prior to May 1927, published in WSP 1317. Published as "at Beaver Creek Ranger Station, near Lowman" prior to October 1934.

REVISED RECORDS.—WSP 1123: 1943. WSP 1517: 1956. WSP 1567: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 5,180.52 ft above sea level, from levels by U.S. Bureau of Reclamation. National Geodetic Vertical Datum of 1929 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.

REMARKS.—Flow regulated by Deadwood Reservoir.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,580 ft<sup>3</sup>/s July 14, 1953, maximum gage height, 9.09 ft, June 1, 1983; no flow or small amount of leakage from reservoir for long periods in 1934-37, when gates in dam were closed.

Summary of monthly and annual discharges, 1927-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	716	0.00	105	168	1.6	3.8
November	184	0.00	21	44	2.1	0.7
December	412	0.00	24	69	2.9	0.9
January	177	0.00	15	37	2.4	0.6
February	75	0.50	8.4	17	2.1	0.3
March	135	0.84	8.5	23	2.7	0.3
April	684	0.96	78	151	1.9	2.8
May	1,410	0.99	228	309	1.3	8.2
June	1,600	1.0	514	409	0.79	18.5
July	1,260	33	567	312	0.55	20.4
August	1,420	68	680	326	0.48	24.5
September	1,440	1.7	528	361	0.68	19.0
Annual	441	104	233	70	0.30	100

Magnitude and frequency of annual low flow,  
based on period of record 1928-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	1.2	0.56	0.40	0.26	0.00	0.00
3	1.3	0.60	0.43	0.29	0.00	0.00
7	1.4	0.70	0.54	0.41	0.00	0.00
14	1.5	0.85	0.71	0.63	0.00	0.00
30	1.6	0.99	0.86	0.80	0.00	0.00
60	1.8	1.1	0.93	0.84	0.00	0.00
90	2.0	1.2	0.96	0.88	0.44	0.00
120	3.0	1.0	0.59	0.39	0.25	0.19
183	11	3.0	1.5	0.89	0.47	0.31

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1927-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,380	1,820	2,100	2,440	2,690	2,940	

Magnitude and frequency of annual high flow,  
based on period of record 1927-90

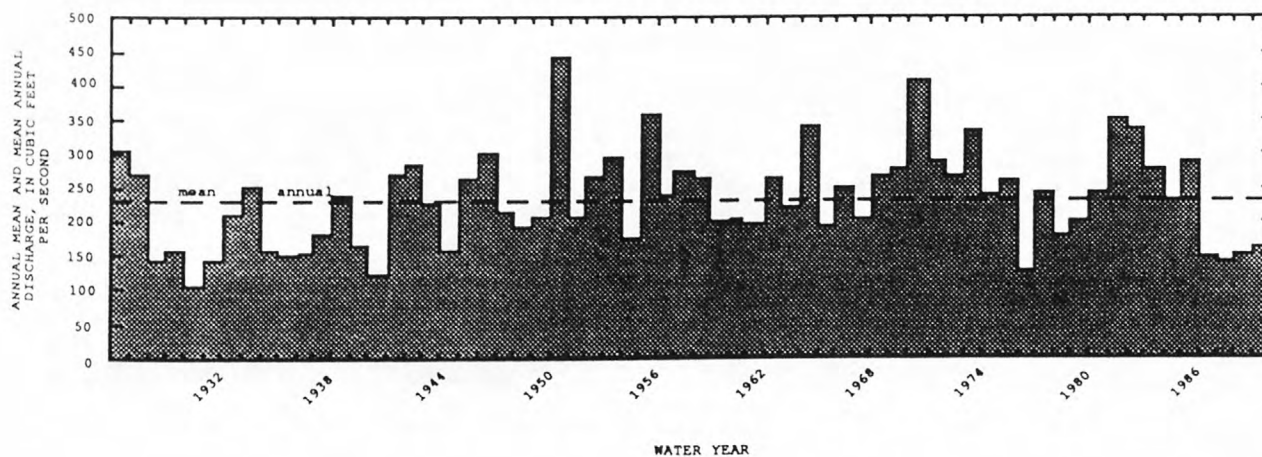
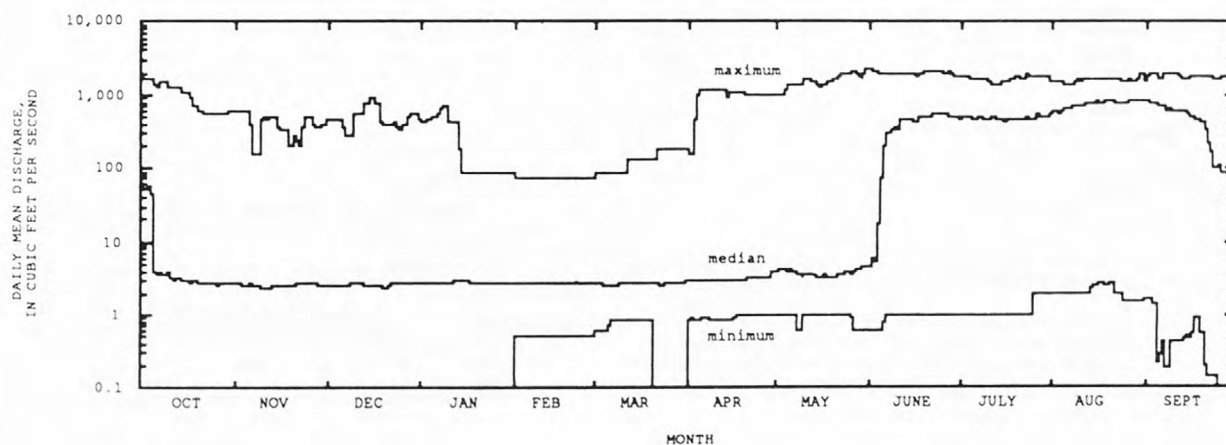
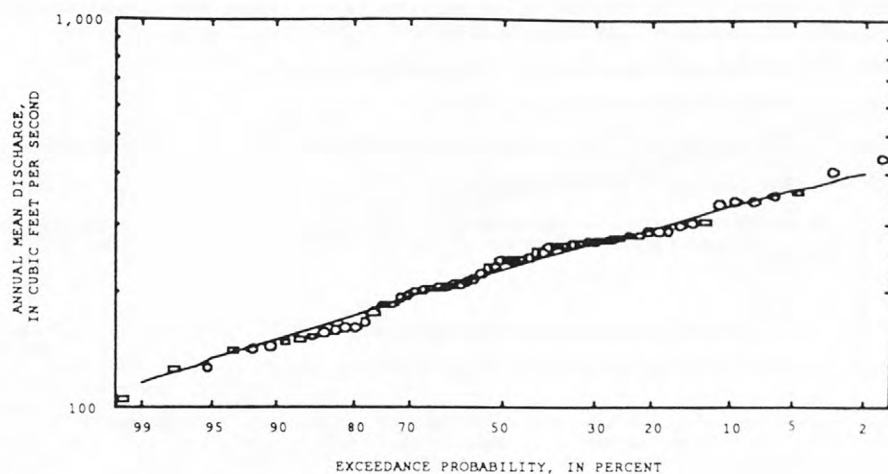
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,290	1,670	1,880	2,120	2,290	2,440
3	1,270	1,630	1,840	2,080	2,240	2,380
7	1,230	1,580	1,780	2,000	2,150	2,280
15	1,150	1,460	1,630	1,810	1,930	2,030
30	1,060	1,300	1,420	1,530	1,600	1,660
60	864	1,050	1,140	1,230	1,280	1,320
90	710	880	968	1,060	1,110	1,160

Duration table of daily mean flow for period of record 1927-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
1,560	1,120	899	709	514	185	14	3.5	3.0	2.6	2.2	1.1	0.89	0.54	0.13	0.07	0.01	



LOCATION MAP





PAYETTE RIVER BASIN

13237000 DEADWOOD RIVER NEAR LOWMAN, ID

LOCATION.—Lat 44°05', long 115°40', in sec.29, T.9 N., R.7 E., Valley County, Hydrologic Unit 17050120, Boise National Forest, on left bank 700 ft upstream from mouth and 2.5 mi west of Lowman.

DRAINAGE AREA.—230 mi<sup>2</sup>, approximately. Mean elevation, 6,250 ft.

PERIOD OF RECORD.—August 1921 to January 1953.

GAGE.—Water-stage recorder. Datum of gage is 3,680 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Deadwood Reservoir.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,230 ft<sup>3</sup>/s May 9, 1928 (gage height, 5.17 ft), from rating curve extended above 3,200 ft<sup>3</sup>/s; minimum recorded, 28 ft<sup>3</sup>/s Nov. 4, 1935; minimum gage height, 0.82 ft Dec. 8, 1951; minimum daily discharge, 34 ft<sup>3</sup>/s Nov. 4, 1935.

Summary of monthly and annual discharges, 1922-52

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	771	41	193	176	0.91	4.1
November	314	45	114	58	0.51	2.4
December	478	40	129	91	0.71	2.8
January	271	40	100	52	0.52	2.1
February	146	40	88	29	0.33	1.9
March	278	58	126	54	0.43	2.7
April	1,160	163	452	235	0.52	9.7
May	2,650	308	1,020	527	0.52	21.9
June	2,560	130	891	587	0.66	19.1
July	1,060	106	437	225	0.52	9.4
August	1,470	84	543	367	0.68	11.6
September	1,450	82	576	365	0.63	12.3
Annual	680	193	390	113	0.29	100

Magnitude and frequency of annual low flow,  
based on period of record 1923-52

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	50	38	35	32	30	29
3	55	42	38	35	32	31
7	59	47	42	39	36	34
14	62	49	44	41	38	36
30	68	53	47	43	39	37
60	73	57	50	45	41	38
90	84	63	54	48	41	39
120	90	67	57	51	45	41
183	113	85	73	65	57	52

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1922-52

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,670	2,220	2,630	3,170	3,610	4,080	

Magnitude and frequency of annual high flow,  
based on period of record 1922-52

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,670	2,220	2,540	3,100	3,570	4,020
3	1,610	2,180	2,500	3,030	3,450	3,850
7	1,520	2,120	2,450	3,950	3,320	3,730
15	1,390	1,920	2,310	2,820	3,230	3,660
30	1,260	1,740	2,070	2,520	2,860	3,220
60	1,040	1,410	1,660	1,970	2,210	2,460
90	869	1,170	1,370	1,600	1,770	1,940

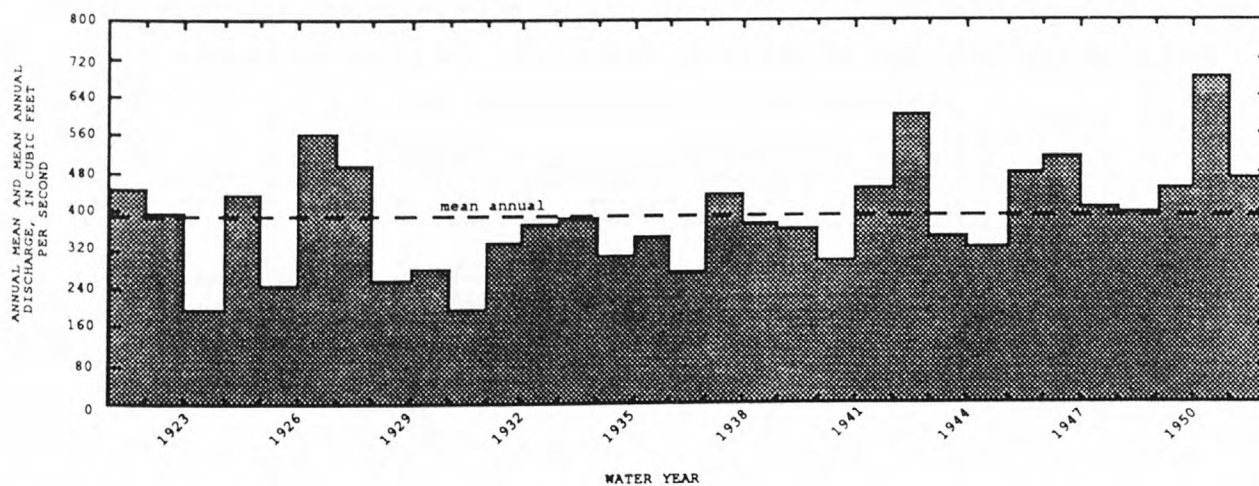
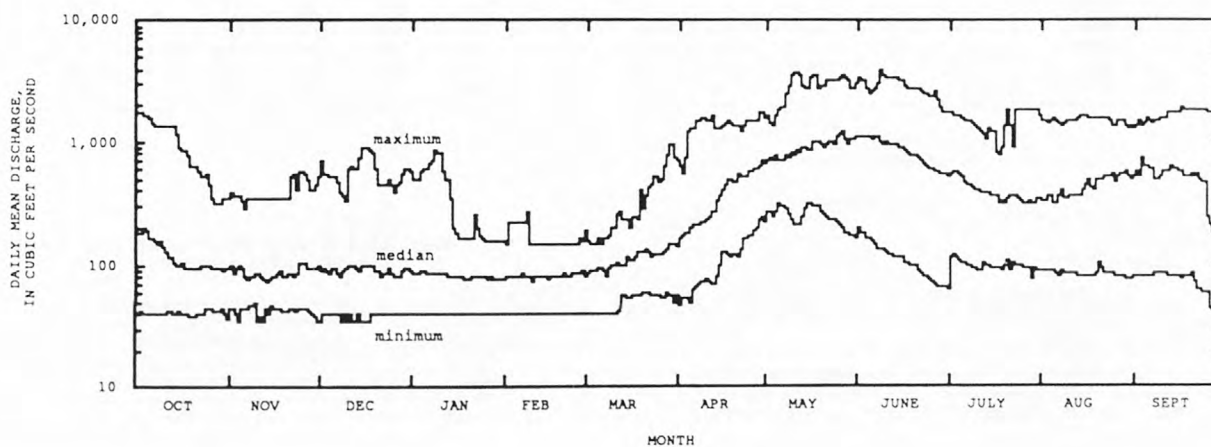
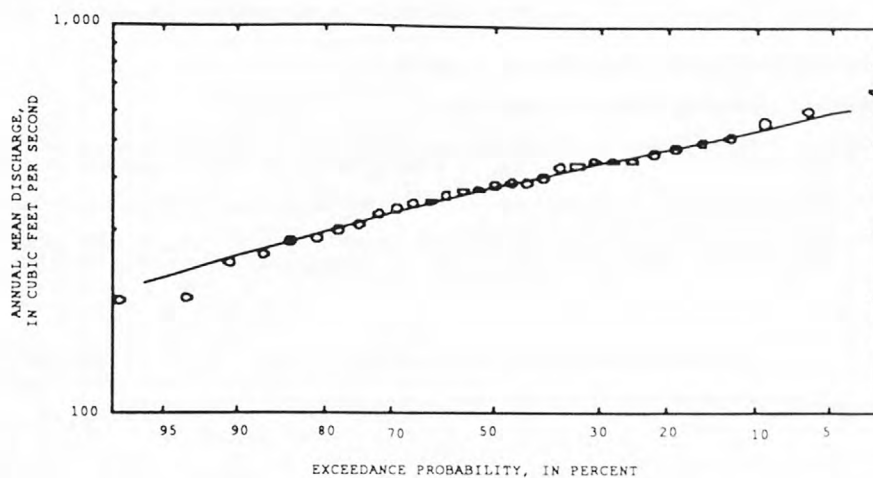
Duration table of daily mean flow for period of record 1922-52

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,130	1,350	1,060	840	667	443	265	160	126	101	80	64	54	45	42	40	37

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



PAYETTE RIVER BASIN

13237500 SOUTH FORK PAYETTE RIVER NEAR GARDEN VALLEY, ID

LOCATION.—Lat 44°03'40", long 115°55'10", in NE 1/4, sec.1, T.8 N., R.4 E., Boise County, Hydrologic Unit 17040120, on right bank at Garden Valley Ranger Station, 300 ft upstream from Station Creek, 2.7 mi southeast of Garden Valley, and 5.9 mi upstream from Middle Fork.

DRAINAGE AREA.—779 mi<sup>2</sup>. Mean elevation, 6,400 ft

PERIOD OF RECORD.—May 1921 to September 1960.

GAGE.—Water-stage recorder. Elevation of gage is 3,090 ft above sea level, from river-profile map. Prior to Aug. 3, 1926, nonrecording gage at datum 0.98 ft higher. Aug. 3, 1926, to Dec.5, 1933, nonrecording gage at present datum.

REMARKS.—Small diversions above station. Flow has been partly regulated by Deadwood Reservoir since Nov. 2, 1930.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 10,600 ft<sup>3</sup>/s May 26, 1928, gage height, 8.00 ft; minimum, 75 ft<sup>3</sup>/s Dec. 15, 1935, Jan. 26, 1936, gage height, 0.70 ft, from rating curve extended below 280 ft<sup>3</sup>/s; minimum daily, 196 ft<sup>3</sup>/s Dec. 10, 1944.

Summary of monthly and annual discharges, 1922-60

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,300	336	604	230	0.38	3.9
November	1,180	297	504	147	0.29	3.2
December	1,140	290	521	182	0.35	3.3
January	700	290	451	97	0.21	2.9
February	646	293	459	86	0.19	2.9
March	1,120	348	614	185	0.30	3.9
April	4,020	643	1,650	695	0.42	10.5
May	7,150	1,850	3,470	1,260	0.36	22.2
June	7,320	988	3,560	1,510	0.42	22.8
July	3,760	506	1,650	733	0.44	10.5
August	2,330	360	1,120	403	0.36	7.2
September	1,990	342	1,050	417	0.40	6.7
Annual	2,050	690	1,310	337	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1923-60

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	282	241	224	213	202	195
3	309	270	254	243	233	227
7	341	299	281	269	256	248
14	358	317	300	287	275	268
30	376	333	314	301	288	280
60	396	347	326	311	296	288
90	420	367	344	327	311	301
120	440	379	356	339	324	315
183	497	424	393	369	346	331

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1922-60

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
5,880	7,830	8,910	10,100	10,900	11,500	

Magnitude and frequency of annual high flow,  
based on period of record 1922-60

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	5,700	7,710	8,790	9,600	10,200	11,000
3	5,430	7,380	8,550	9,410	9,800	10,700
7	5,050	6,910	8,060	9,010	9,400	10,300
15	4,600	6,310	7,380	8,650	9,160	10,000
30	4,170	5,640	6,540	7,600	8,340	9,040
60	3,540	4,690	5,340	6,080	6,570	7,020
90	3,000	3,960	4,500	5,110	5,510	5,880

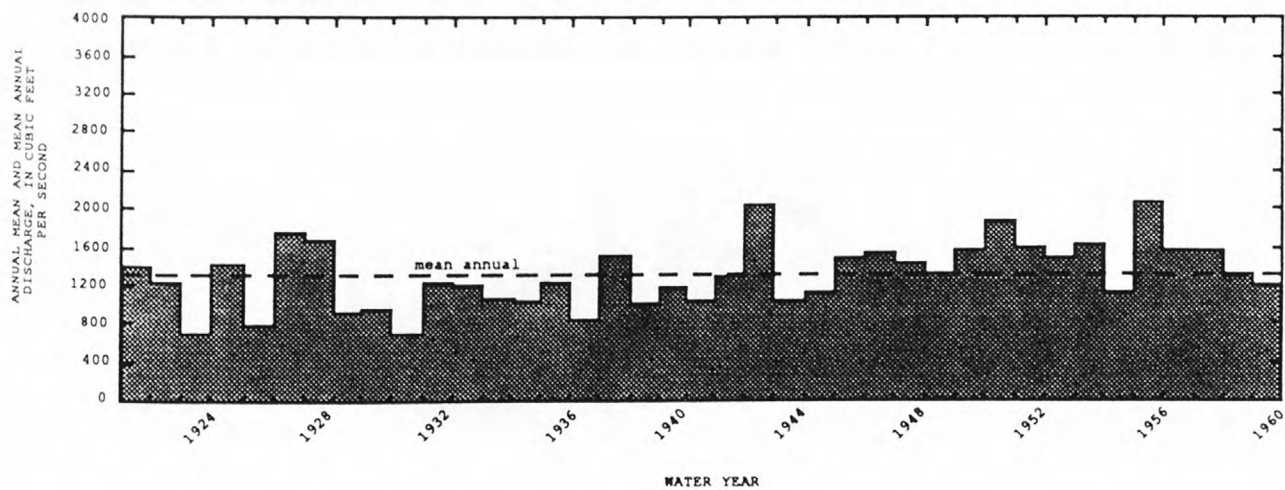
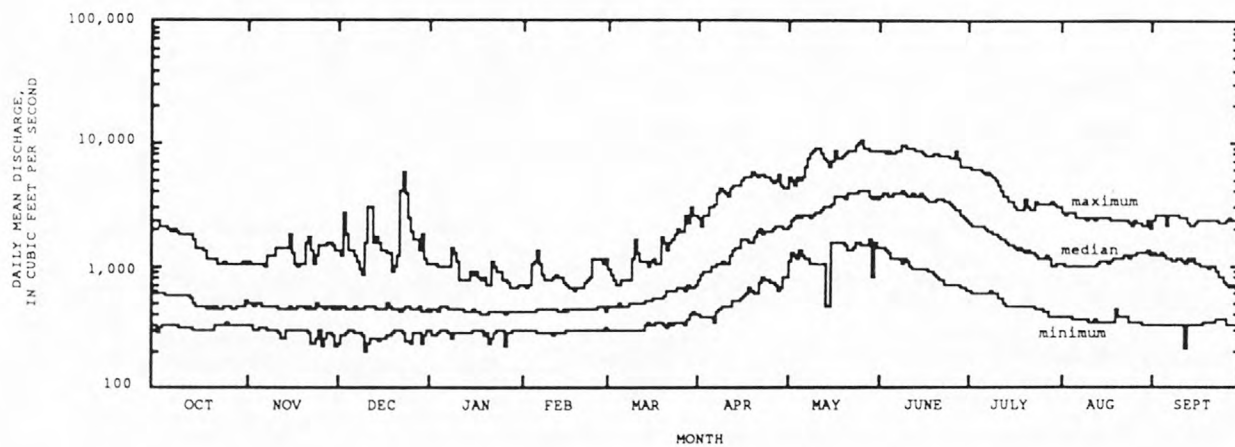
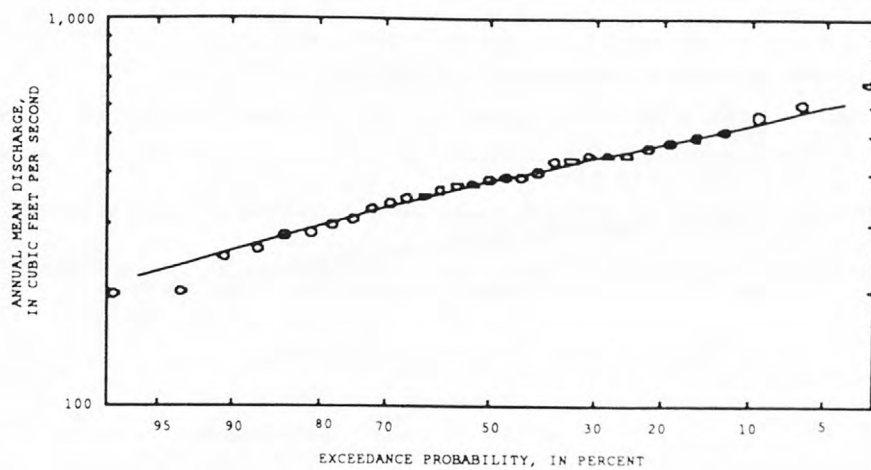
Duration table of daily mean flow for period of record 1922-60

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
6,650	4,350	3,160	2,400	1,940	1,350	1,000	712	558	481	426	376	340	306	289	281	247	

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# PAYETTE RIVER BASIN

13238000 PAYETTE RIVER NEAR BANKS, ID

LOCATION.—Lat 44°05'08", long 116°05'56", in NE 1/4, SE 1/4, sec. 28, T. 9 N., R. 3 E., Boise County, Hydrologic Unit 17050122, Boise National Forest on right bank 1 mi upstream from North Fork Payette River, 1.5 mi northeast of Banks, and at mile 73.8.

DRAINAGE AREA.—1,200 mi<sup>2</sup>, approximately. Mean elevation, 6,020 ft.

PERIOD OF RECORD.—August 1921 to September 1973. Prior to October 1960, published as "South Fork Payette River near Banks."

GAGE.—Water-stage recorder. Datum of gage is 2,805 ft above sea level, from river-profile map. Prior to Sept. 12, 1922, nonrecording gage at same site and datum.

REMARKS.—Flow partly regulated since November 1930 by Deadwood Reservoir 55.6 mi upstream. Diversions above station for irrigation of about 3,800 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 20,800 ft<sup>3</sup>/s Dec. 23, 1964; gage height, 15.46 ft, from floodmark; minimum daily, 220 ft<sup>3</sup>/s Dec. 15, 1967; minimum recorded gage height, 0.09 ft Dec. 17, 1967.

Summary of monthly and annual discharges, 1922-73

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,480	418	737	232	0.31	3.4
November	1,760	385	696	205	0.29	3.2
December	2,100	350	753	340	0.45	3.5
January	1,300	350	691	217	0.31	3.2
February	1,670	387	764	240	0.31	3.5
March	2,590	526	1,100	415	0.38	5.1
April	7,290	1,040	2,770	1,230	0.44	12.8
May	9,210	2,410	4,960	1,780	0.36	22.9
June	9,080	1,180	4,670	1,970	0.42	21.5
July	4,330	590	2,060	862	0.42	9.5
August	2,460	420	1,340	423	0.31	6.2
September	2,070	399	1,140	405	0.36	5.2
Annual	2,990	894	1,810	502	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1923-73

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	380	330	310	296	282	275
3	424	371	348	332	317	308
7	473	416	392	375	357	347
14	504	440	413	393	372	360
30	534	462	431	407	383	368
60	568	485	449	422	394	377
90	597	506	466	436	405	387
120	634	530	485	452	419	400
183	718	595	541	501	460	435

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1922-73

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
7,920	10,900	12,700	15,000	16,600	18,100	

Magnitude and frequency of annual high flow,  
based on period of record 1922-73

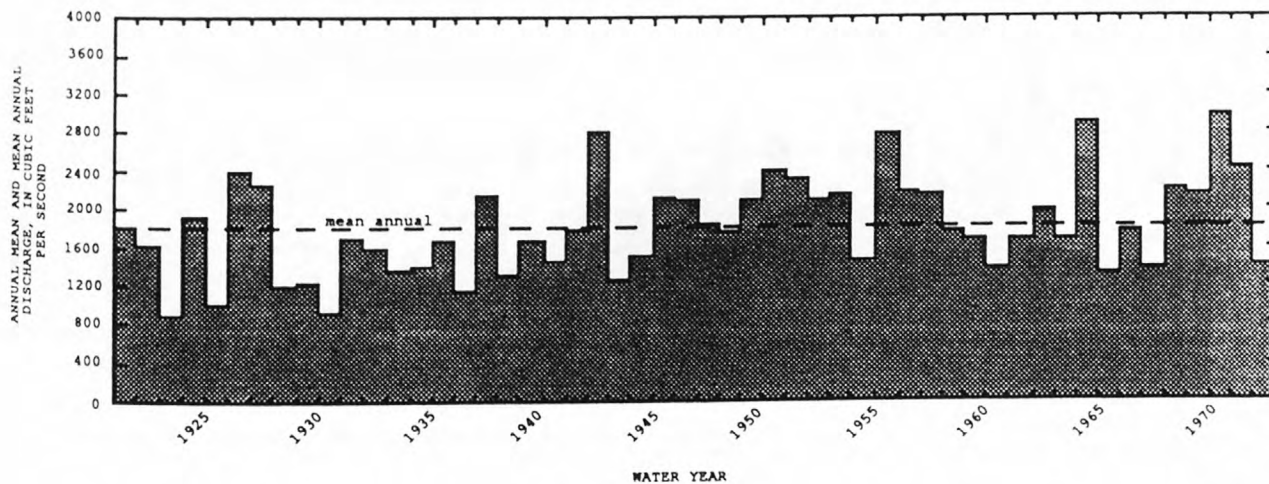
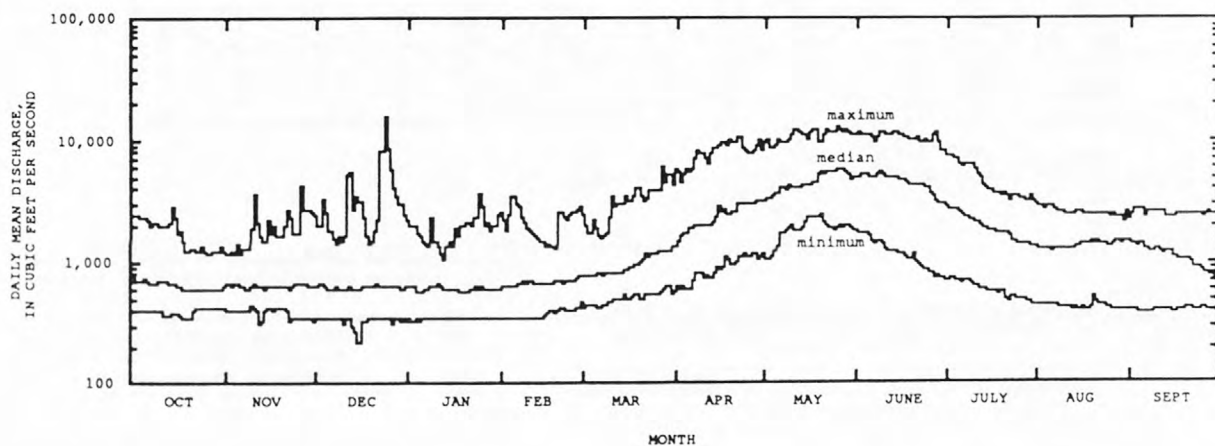
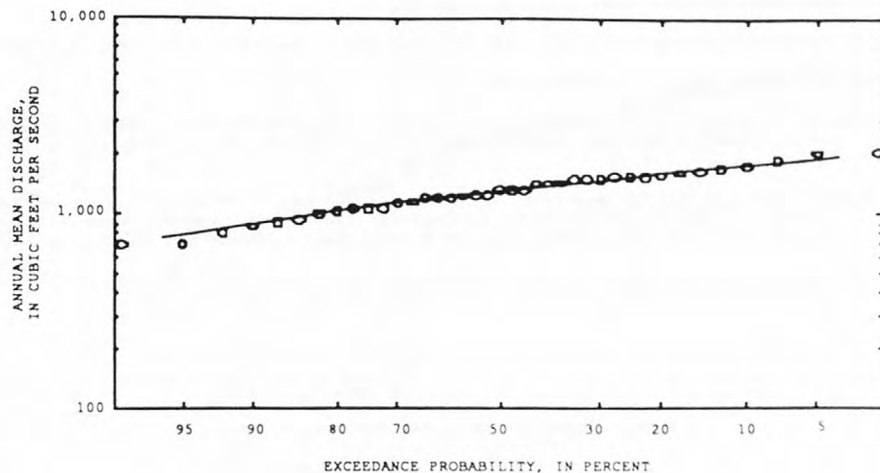
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	7,590	10,200	11,800	13,600	14,900	16,000
3	7,240	9,650	11,100	12,700	13,800	14,800
7	6,750	9,070	10,500	12,100	13,200	14,300
15	6,180	8,340	9,640	11,200	12,200	13,200
30	5,630	7,530	8,650	9,950	10,800	11,700
60	4,850	6,440	7,380	8,450	9,180	9,850
90	4,170	5,530	6,330	7,250	7,870	8,440

Duration table of daily mean flow for period of record 1922-73

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
9,000	6,150	4,430	3,340	2,620	1,780	1,360	1,040	815	684	597	521	469	416	376	349	324



LOCATION MAP





PAYETTE RIVER BASIN

13239000 NORTH FORK PAYETTE RIVER AT MCCALL, ID

LOCATION.—Lat 44°54'27", long 116°07'04", in NW 1/4, SE 1/4, SW 1/4, sec. 8, T.18 N., R.3 E., Valley County, Hydrologic Unit 17050123, on left bank at McCall, 0.2 mi downstream from outlet of Payette Lake, and at mile 75.2.

DRAINAGE AREA.—144 mi<sup>2</sup>. Mean elevation, 6,520 ft.

PERIOD OF RECORD.—September 1908 to June 1917, May 1919 to September 1990. Prior to October 1942, published as "at Lardo."

REVISED RECORDS.—WSP 963: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 4,967.75 ft above sea level (levels by Idaho Fish and Game). Nonrecording gage at site 1 mi 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.

REMARKS.—Flow regulated to some extent since several years prior to 1923 by gates at outlet of Payette Lake 0.2 mi 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. Diversions since 1980 not comparable.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,950 ft<sup>3</sup>/s June 19, 1974; maximum gage height, 8.16 ft, June 19, 1974; no flow Nov. 5-8, 1931, Nov. 17-24, 1933, Nov. 14-27, 1935, Oct. 22 to Nov. 11, 1938.

Summary of monthly and annual discharges, 1909-16, 1920-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	599	0.54	105	118	1.1	2.5
November	385	0.48	91	92	1.0	2.1
December	378	1.0	93	91	0.98	2.1
January	375	1.0	91	68	0.74	2.1
February	416	1.0	95	60	0.63	2.2
March	348	1.3	103	60	0.58	2.4
April	1,290	5.9	324	234	0.72	7.5
May	2,240	240	1,340	429	0.32	30.9
June	3,440	169	1,480	761	0.52	34.0
July	1,160	21	340	235	0.69	7.8
August	527	24	163	98	0.60	3.7
September	316	14	116	85	0.74	2.7
Annual	655	122	362	100	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1910-17, 1921-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	9.9	2.5	0.95	0.23	0.00	0.00
3	11	2.7	0.99	0.25	0.00	0.00
7	12	2.9	1.1	0.28	0.00	0.00
14	14	3.2	1.2	0.34	0.00	0.00
30	16	4.4	2.0	0.96	0.40	0.22
60	28	8.6	4.1	2.1	0.91	0.50
90	43	15	6.9	3.4	1.4	0.72
120	57	21	10	5.4	2.3	1.2
183	85	41	24	14	7.4	4.4

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1909-16, 1920-90

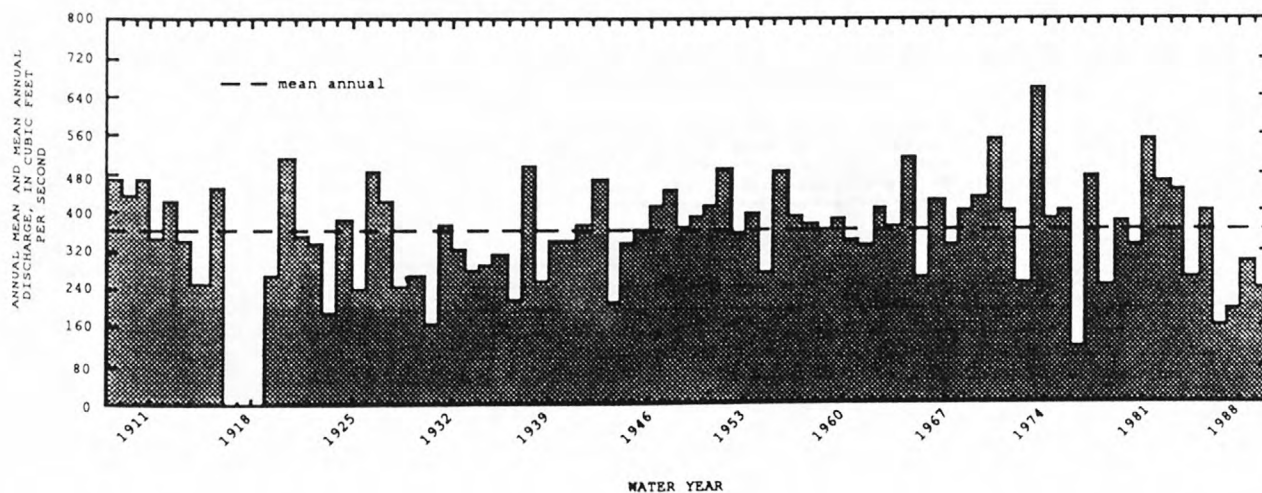
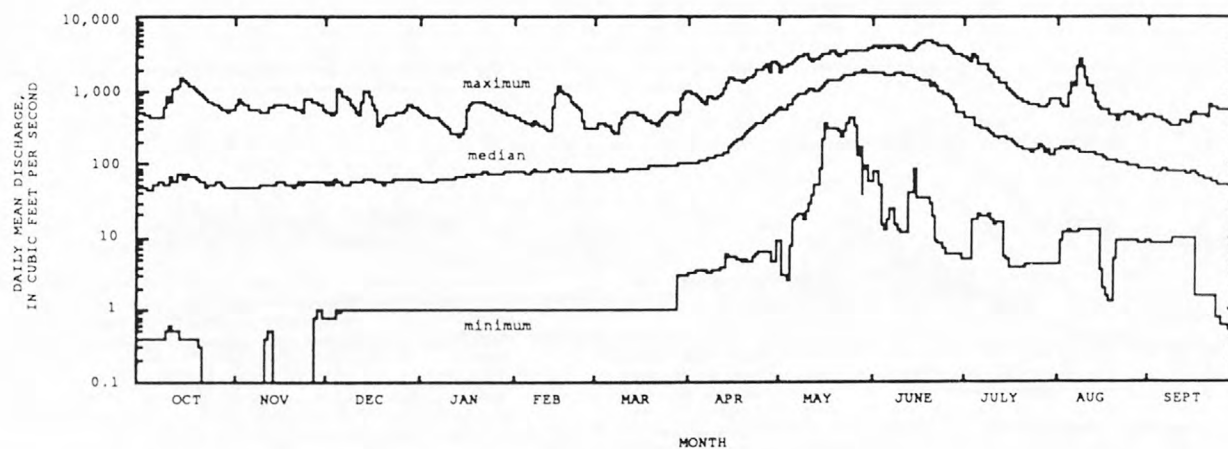
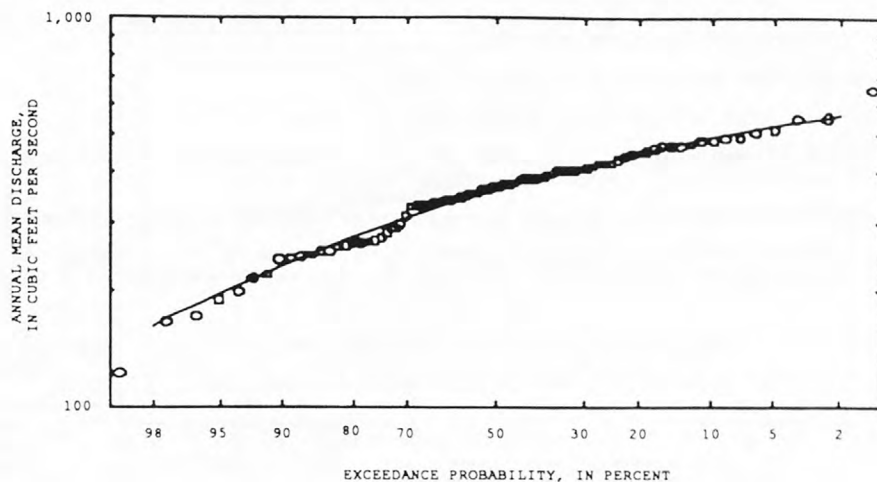
Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
2,950	3,600	3,950	4,330	4,590	4,820	

Magnitude and frequency of annual high flow,  
based on period of record 1909-16, 1920-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2,900	3,550	3,770	3,900	3,960	3,990
3	2,820	3,450	3,630	3,760	3,810	3,840
7	2,700	3,260	3,470	3,620	3,690	3,740
15	2,400	2,970	3,200	3,390	3,490	3,560
30	2,030	2,540	2,750	2,940	3,040	3,110
60	1,560	1,900	2,020	2,110	2,140	2,160
90	1,150	1,430	1,540	1,640	1,690	1,730

Duration table of daily mean flow for period of record 1909-16, 1920-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,090	1,890	1,190	680	412	236	159	117	88	64	43	19	6.3	1.4	1.0	0.67	0.13



# PAYETTE RIVER BASIN

13240000 LAKE FORK PAYETTE RIVER ABOVE JUMBO CREEK, NEAR MCCALL, ID

LOCATION.—Lat 44°54'49", long 115°59'47", in SW 1/4, SE 1/4, NW 1/4, sec. 8, T.18 N., R.4 E., Valley County, Hydrologic Unit 17040123, on left bank 100 ft upstream from abandoned powerplant, 0.2 mi upstream from Jumbo Creek, 3.5 mi upstream from Little Payette Lake dam, 5.5 mi east of McCall, and at mile 21.0.

DRAINAGE AREA.—48.9 mi<sup>2</sup>. Mean elevation, 6,950 ft.

PERIOD OF RECORD.—October 1945 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 5,140 ft above sea level, from topographic map. Prior to Nov. 10, 1945, nonrecording gage at site 200 ft downstream at different datum.

REMARKS.—No diversion above station. Flow regulated by Browns Pond, capacity 1,230 acre-ft.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,770 ft<sup>3</sup>/s June 26, 1971, gage height, 9.15 ft, from rating curve extended above 1,200 ft<sup>3</sup>/s; minimum, 1.2 ft<sup>3</sup>/s Dec. 3, 1967, Sept. 23, 1989; minimum gage height, 1.05 ft, part of each day Nov. 8-9, 1969.

Summary of monthly and annual discharges, 1946-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	180	8.2	35	33	0.97	2.0
November	182	9.8	46	35	0.76	2.7
December	115	10	41	27	0.66	2.4
January	141	12	36	22	0.62	2.1
February	87	12	34	17	0.50	2.0
March	78	13	38	16	0.43	2.2
April	311	21	145	73	0.51	8.4
May	830	152	523	153	0.29	30.4
June	1,260	115	601	227	0.38	34.9
July	406	30	166	100	0.60	9.6
August	70	14	33	15	0.44	1.9
September	68	8.6	24	13	0.53	1.4
Annual	242	49	144	35	0.25	100

Magnitude and frequency of annual low flow,  
based on period of record 1947-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	7.4	3.6	2.4	1.6	1.0	0.76
3	10	6.4	4.7	3.6	2.6	2.1
7	13	9.2	7.6	6.4	5.2	4.5
14	14	11	9.5	8.5	7.6	7.0
30	16	12	11	9.6	8.5	7.8
60	19	14	12	10	8.8	8.0
90	21	15	13	11	9.0	8.0
120	25	16	13	11	9.1	8.0
183	29	19	15	13	10	9.0

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1946-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,400	1,810	2,050	2,340	2,550	2,740	

Magnitude and frequency of annual high flow,  
based on period of record 1946-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,190	1,500	1,650	1,800	1,900	1,970
3	1,100	1,370	1,500	1,610	1,670	1,720
7	1,000	1,250	1,370	1,470	1,530	1,570
15	896	1,110	1,200	1,270	1,310	1,330
30	783	934	983	1,020	1,030	1,040
60	619	728	765	790	800	806
90	481	564	592	611	618	623

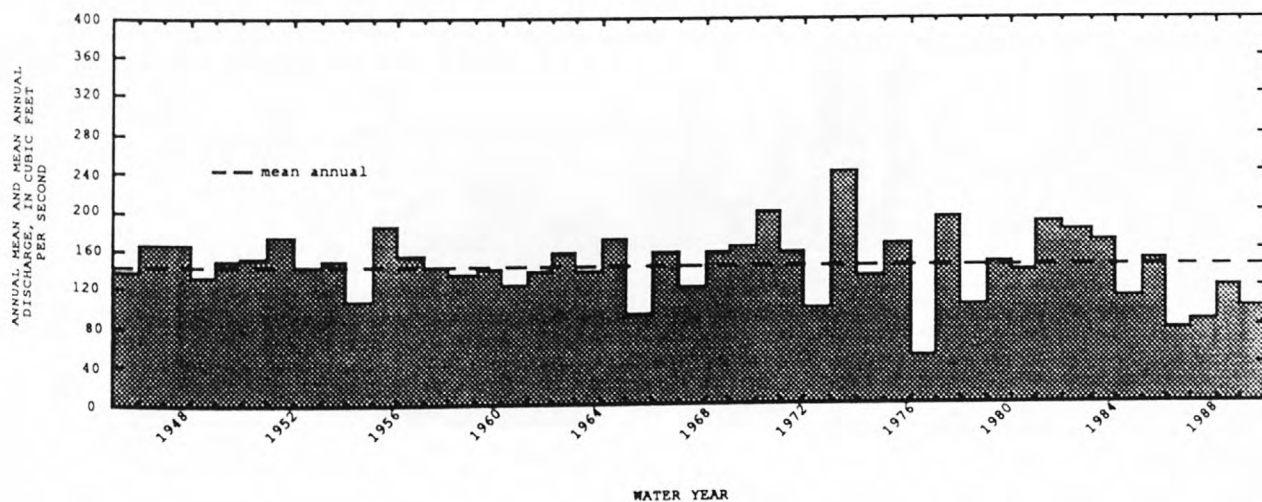
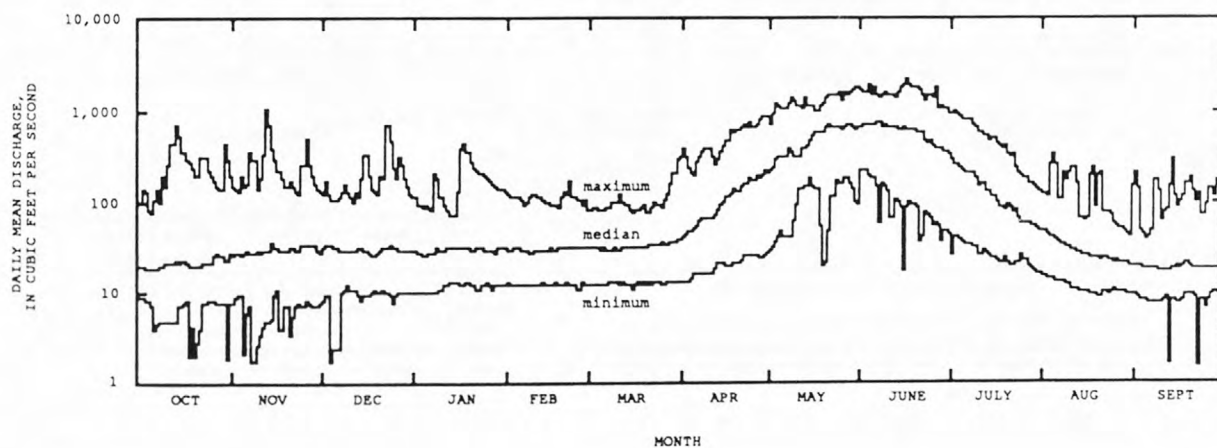
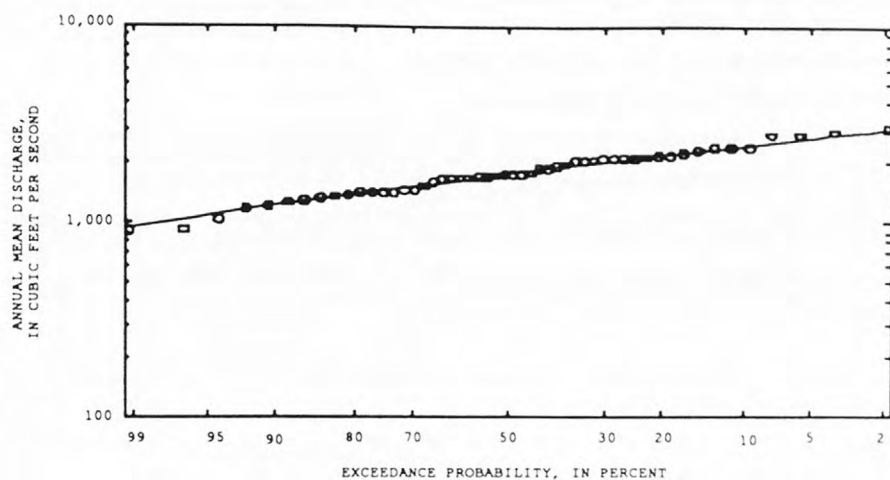
Duration table of daily mean flow for period of record 1946-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,150	721	488	312	191	82	54	40	32	25	20	16	13	11	9.0	7.8	3.8

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



PAYETTE RIVER BASIN

13245000 NORTH FORK PAYETTE RIVER AT CASCADE, ID

LOCATION.—Lat 44°31'30", long 116°02'45", in SE 1/4, NW 1/4, sec.25, T.14 N., R.3 E., Valley County, Hydrologic Unit 17050123, 0.2 mi downstream from Cascade Dam, and at mile 40.0.

DRAINAGE AREA.—620 mi<sup>2</sup>. Mean elevation, 5,960 ft.

PERIOD OF RECORD.—May 1941 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 4,720.00 ft above sea level. May 1941 to Jan. 28, 1947 (nonrecording gage), Jan. 28, 1947, to Nov. 5, 1958, Oct. 1, 1965 to Sept. 30, 1982, at site 1.4 mi downstream at datum 4,725.31 ft above sea level, Nov. 6, 1958, to Sept. 30, 1965, at site 0.1 mi upstream at datum 4,734.59 ft above sea level.

REMARKS.—Flow regulated by Payette Lake, Lake Fork Reservoir, and Cascade Reservoir 37.1 mi upstream, beginning November 1947. Diversions above station for irrigation of about 50,800 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,320 ft<sup>3</sup>/s May 10, 1947, gage height, 6.29 ft, site and datum then in use; no flow for part of Oct. 14, 1971, site and datum then in use.

Summary of monthly and annual discharges, 1942-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,350	134	719	382	0.53	5.9
November	1,090	12	426	267	0.63	3.4
December	1,450	3.0	532	361	0.68	4.4
January	1,510	144	567	357	0.63	4.6
February	3,100	136	622	618	0.99	5.0
March	2,840	126	766	768	1.0	6.3
April	3,640	102	1,070	876	0.82	8.8
May	4,670	75	1,240	1,050	0.85	10.2
June	4,280	117	1,840	1,120	0.61	15.1
July	2,620	513	1,350	490	0.36	11.0
August	2,510	389	1,630	558	0.34	13.4
September	2,480	136	1,450	641	0.44	11.9
Annual	1,490	510	1,020	245	0.24	100

Magnitude and frequency of annual low flow, based on period of record 1943-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	78	22	9.6	4.4	1.7	0.80
3	103	31	13	5.6	1.9	0.83
7	125	39	16	6.8	2.2	0.92
14	151	58	27	12	4.1	1.8
30	196	98	51	25	9.4	4.3
60	286	142	78	42	18	9.1
90	291	185	146	121	99	86
120	362	227	178	146	117	101
183	521	337	265	216	171	145

Magnitude and frequency of instantaneous peak flow, based on period of record 1942-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
3,670	5,070	6,030	7,260	8,200	9,160	

Magnitude and frequency of annual high flow, based on period of record 1942-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3,480	4,850	5,820	7,110	8,110	9,060
3	3,410	4,740	5,690	6,940	7,900	8,920
7	3,240	4,480	5,350	6,510	7,420	8,360
15	2,940	3,960	4,670	5,590	6,310	7,050
30	2,620	3,390	3,910	4,560	5,060	5,560
60	2,180	2,700	3,060	3,510	3,860	4,210
90	1,970	2,420	2,700	3,050	3,300	3,540

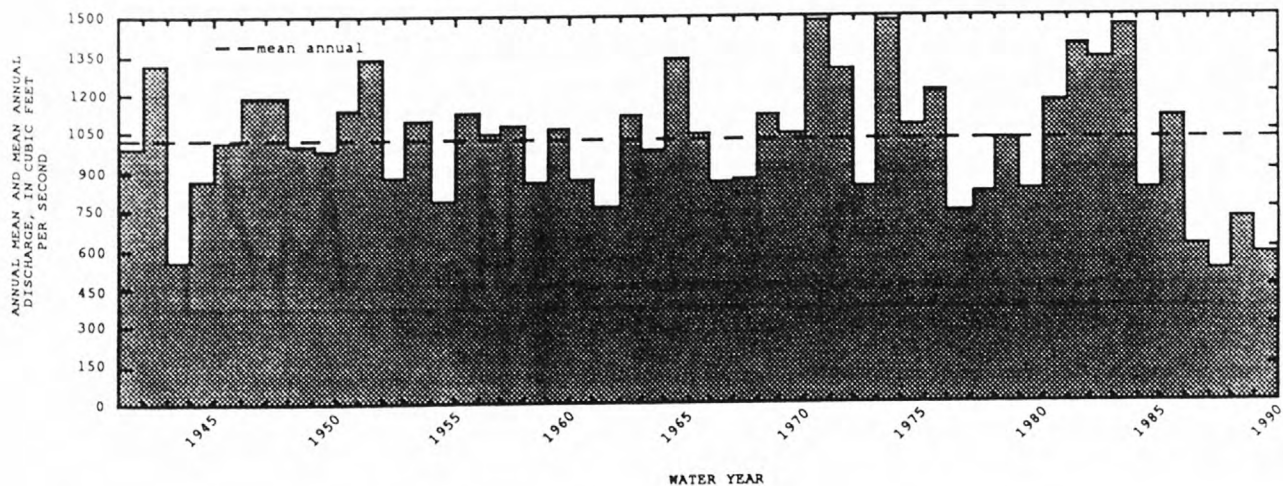
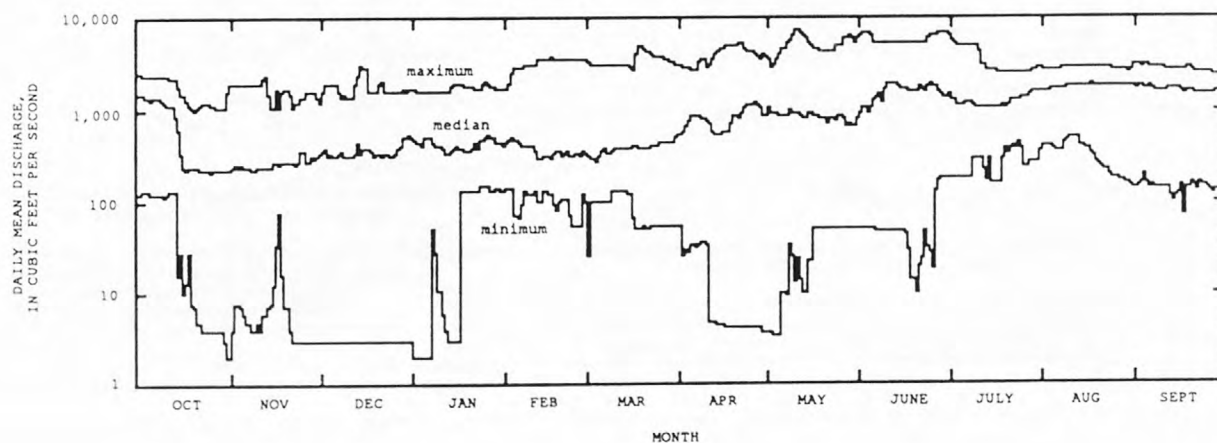
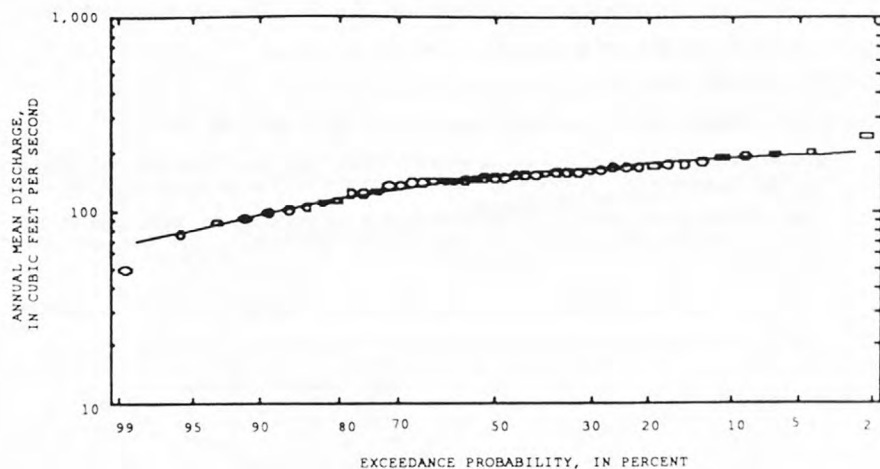
Duration table of daily mean flow for period of record 1942-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
4,520	2,810	2,310	2,020	1,810	1,390	996	711	466	277	211	170	141	94	18	4.5	2.8

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# PAYETTE RIVER BASIN

13246000 NORTH FORK PAYETTE RIVER NEAR BANKS, ID

LOCATION.—Lat 44°06'50", long 116°06'25", in NW¼, SE¼, sec.16, T.9 N., R.3 E., Boise County, Hydrologic Unit 17050123, Boise National Forest, on right bank 300 ft downstream from highway bridge, 2.5 mi north of Banks, and at mile 2.8.

DRAINAGE AREA.—933 mi<sup>2</sup>. Mean elevation, 5,800 ft.

PERIOD OF RECORD.—April 1947 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 3,081.13 ft above sea level.

REMARKS.—Flow regulated by Payette Lake (sta 13238500), Lake Fork Reservoir, and Cascade Reservoir 37.1 mi upstream, beginning November 1947 (sta 13244500). Diversions above station for irrigation of about 50,800 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 8,830 ft<sup>3</sup>/s May 11, 1947, gage height, about 13.5 ft, estimated on basis of records for station near Smiths Ferry; minimum recorded, 36 ft<sup>3</sup>/s Dec. 21, 1947, gage height, 3.01 ft.

Summary of monthly and annual discharges, 1948-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,440	194	890	360	0.40	5.6
November	1,260	109	543	284	0.52	3.4
December	1,710	90	683	369	0.54	4.3
January	1,860	237	743	393	0.53	4.6
February	3,370	250	843	675	0.80	5.2
March	3,550	223	1,110	943	0.85	6.9
April	3,760	566	1,760	1,010	0.57	11.0
May	4,300	564	1,980	1,010	0.51	12.4
June	5,290	407	2,360	1,260	0.54	14.7
July	2,950	702	1,570	508	0.32	9.8
August	2,560	616	1,840	382	0.21	11.5
September	2,520	328	1,690	488	0.29	10.6
Annual	2,040	645	1,340	348	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1949-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	212	145	112	88	65	52
3	233	162	127	101	75	61
7	256	189	154	127	100	83
14	272	201	167	141	115	99
30	325	234	191	160	129	110
60	422	281	219	175	133	120
90	493	327	260	213	169	143
120	556	366	289	235	185	157
183	728	511	419	353	288	250

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1948-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,130	5,770	6,850	8,200	9,200	10,200

Magnitude and frequency of annual high flow,  
based on period of record 1948-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3,930	5,390	6,340	7,520	8,380	9,230
3	3,820	5,240	6,170	7,340	8,220	9,080
7	3,620	4,980	5,890	7,070	7,950	8,850
15	3,360	4,550	5,340	6,350	7,110	7,870
30	3,030	4,010	4,610	5,330	5,830	6,320
60	2,600	3,320	3,750	4,250	4,590	4,910
90	2,340	3,010	3,410	3,870	4,190	4,500

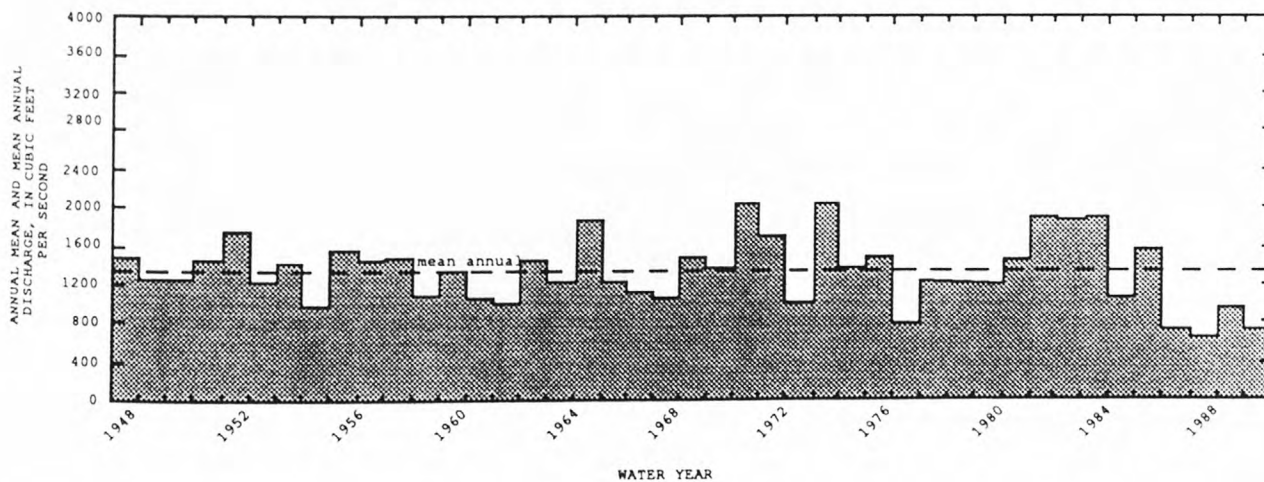
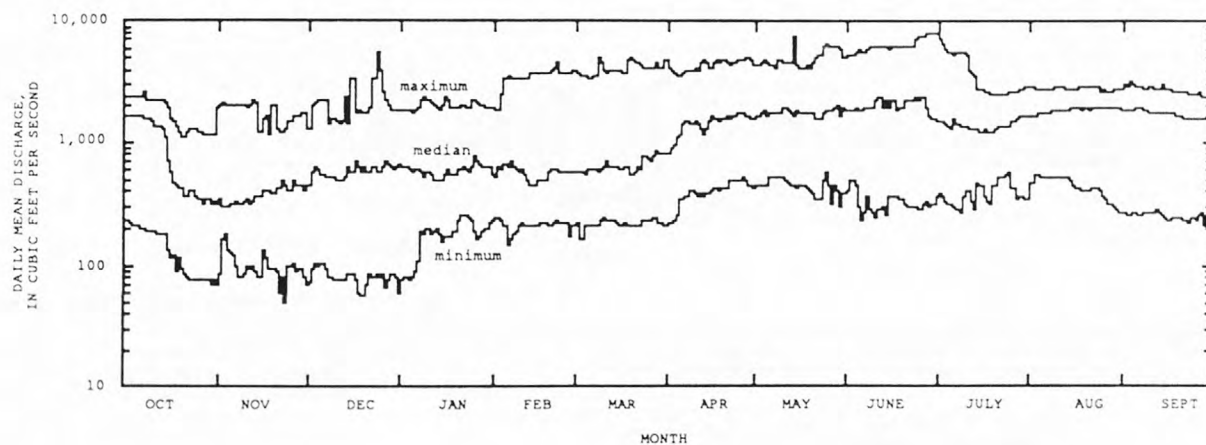
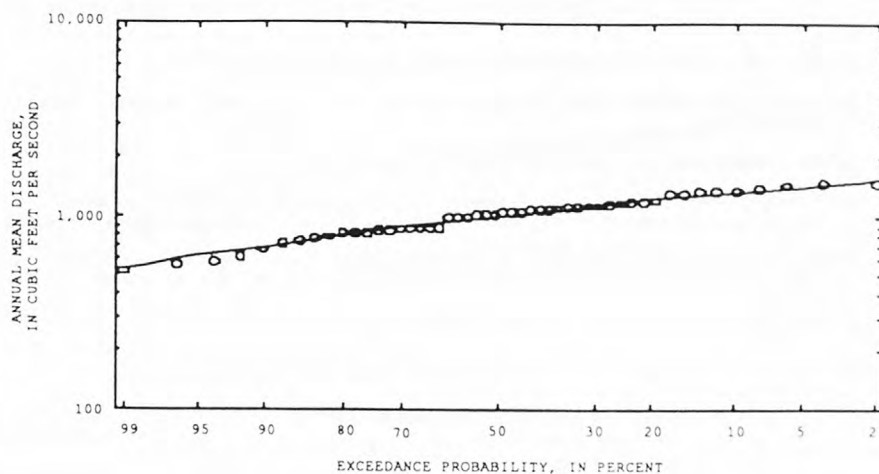
Duration table of daily mean flow for period of record 1948-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
4,920	3,440	2,690	2,320	2,050	1,720	1,370	1,060	838	614	427	300	250	204	163	97	73

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



PAYETTE RIVER BASIN

13247500 PAYETTE RIVER NEAR HORSESHOE BEND, ID

LOCATION.—Lat 43°56'33", long 116°11'45", in NE¼, SE¼, sec.15, T.7 N., R.2 E., Boise County, Hydrologic Unit 17050122, on left bank 0.5 mi downstream from Porter Creek, 0.6 mi upstream from concrete highway bridge on State Highway 55, 2 mi north of Horseshoe Bend, and at mile 60.8

DRAINAGE AREA.—2,230 mi<sup>2</sup>, approximately. Mean elevation, 5,850 ft.

PERIOD OF RECORD.—February 1906 to September 1916, July 1919 to September 1990. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 533: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 2,625.61 ft above sea level. Prior to Nov. 23, 1912, nonrecording gage at site 1.8 mi upstream at different datum. Nov. 23, 1912, to Apr. 16, 1953, water-stage recorder at site 1,000 ft downstream at datum 2.1 ft lower.

REMARKS.—Flow regulated by Deadwood Reservoir beginning November 1930 (see sta 13236000), and Cascade Reservoir, 51.9 mi upstream, beginning November 1947, and other reservoirs upstream. Diversions above station for irrigation of about 55,100 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 27,000 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 16.35 ft; minimum daily, 260 ft<sup>3</sup>/s Nov. 14, 1979.

Summary of monthly and annual discharges, 1907-16, 1920-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,250	541	1,350	480	0.36	3.5
November	3,620	583	1,260	513	0.41	3.3
December	3,130	597	1,360	585	0.43	3.5
January	3,060	602	1,360	533	0.39	3.5
February	4,930	647	1,550	775	0.50	3.9
March	6,920	794	2,360	1,380	0.58	6.1
April	13,600	1,650	5,220	2,300	0.44	13.4
May	16,100	2,050	8,140	2,980	0.37	21.0
June	16,100	1,770	8,040	3,660	0.46	20.7
July	8,240	907	3,620	1,570	0.44	9.3
August	3,750	643	2,500	1,020	0.41	6.4
September	3,370	611	2,090	937	0.45	5.4
Annual	5,300	1,460	3,240	937	0.29	100

Magnitude and frequency of annual low flow,  
based on period of record 1908-16, 1921-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	720	556	476	414	350	311
3	763	599	517	454	388	347
7	802	650	579	524	468	432
14	841	688	619	567	513	480
30	910	735	656	597	537	500
60	1,000	791	700	632	564	523
90	1,070	833	730	655	580	534
120	1,150	885	772	690	608	559
183	1,320	1,010	873	776	679	622

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1907-16, 1920-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
12,700	17,400	20,200	23,400	25,600	27,600

Magnitude and frequency of annual high flow,  
based on period of record 1907-16, 1920-90

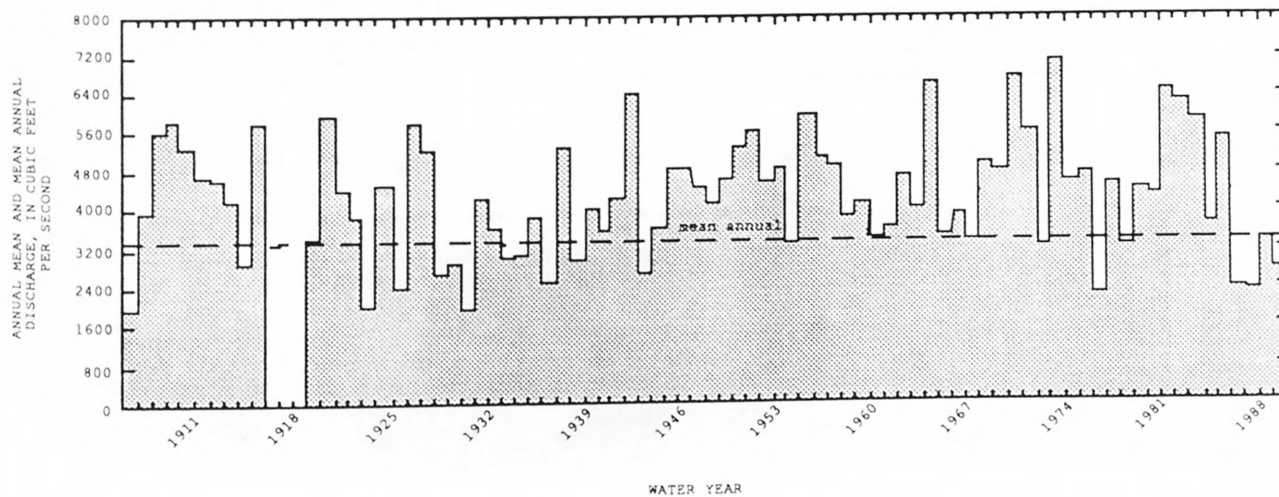
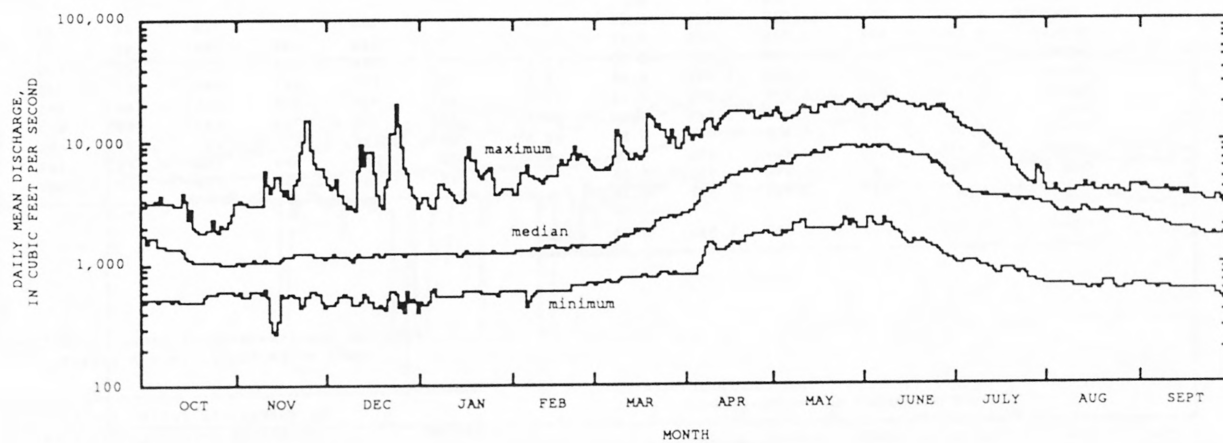
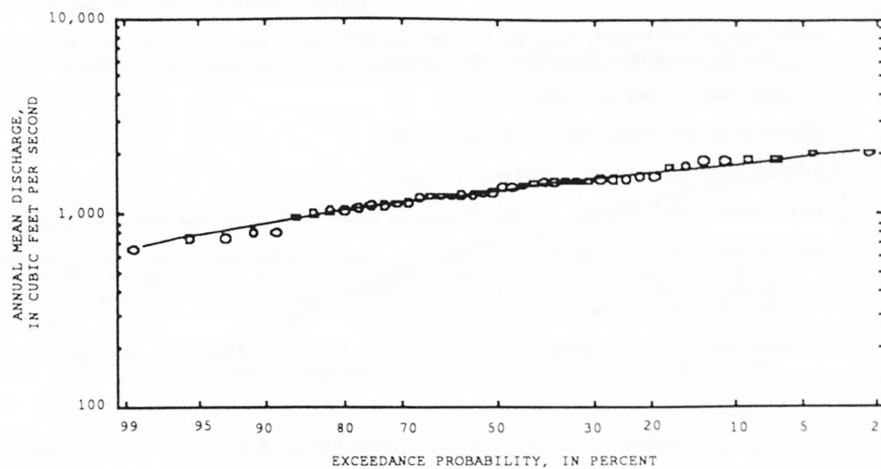
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	12,600	17,000	19,100	21,200	22,400	23,400
3	12,200	16,400	18,400	20,300	21,400	22,300
7	11,600	15,600	17,600	19,600	20,700	21,600
15	10,700	14,500	16,500	18,400	19,500	20,400
30	9,690	13,200	15,000	16,800	17,900	18,800
60	8,350	11,300	12,800	14,300	15,300	16,000
90	7,240	9,760	11,100	12,600	13,500	14,300

Duration table of daily mean flow for period of record 1907-16, 1920-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
15,300	10,600	7,920	6,030	4,630	3,450	2,660	1,950	1,570	1,290	1,040	848	736	644	597	557	467



LOCATION MAP



PAYETTE RIVER BASIN

13249500 PAYETTE RIVER NEAR EMMETT, ID

LOCATION.—Lat 43°55'50", long 116°26'30", in SW 1/4, NE 1/4, sec.22, T.7 N., R.1 W., Gem County, Hydrologic Unit 17050122, on right bank 0.3 mi downstream from Black Canyon Dam, 5 mi upstream northeast of Emmett, and at mile 38.4.

DRAINAGE AREA.—2,680 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—June 1925 to September 1990.

REVISED RECORDS.—WSP 1153: 1946(m), 1948(m).

GAGE.—Water-stage recorder. Datum of gage is 2,400.32 ft above sea level, from levels by U.S. Bureau of Reclamation.

REMARKS.—Flow regulated by Deadwood Reservoir beginning November 1930, and Cascade Reservoir beginning November 1947, other smaller reservoirs, and to some extent by Black Canyon Dam 0.3 mi upstream where flow is regulated by diversion and gate operation at dam. Diversions above station for irrigation of about 160,000 acres, of which about 43,700 acres are below station and about 53,000 acres are in adjacent basins (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 32,700 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 15.88 ft; minimum daily, 0.7 ft<sup>3</sup>/s Jan. 7, 1957, gage height, -1.49 ft when gates in dam were closed.

Summary of monthly and annual discharges, 1926-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,070	454	1,270	454	0.36	3.5
November	3,480	681	1,380	477	0.35	3.9
December	4,130	597	1,620	761	0.47	4.5
January	3,760	636	1,640	775	0.47	4.6
February	5,630	730	1,990	1,050	0.53	5.5
March	8,340	845	2,860	1,610	0.56	8.1
April	15,100	956	5,270	2,590	0.49	14.7
May	16,700	837	7,340	3,340	0.45	20.5
June	16,500	870	6,910	3,670	0.53	19.3
July	6,430	569	2,410	1,350	0.56	6.7
August	2,250	447	1,590	511	0.32	4.5
September	2,270	413	1,510	581	0.38	4.2
Annual	5,090	1,010	2,980	1,040	0.35	100

Magnitude and frequency of annual low flow,  
based on period of record 1927-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	380	244	152	66	18	3.0
3	546	330	256	140	24	3.0
7	786	468	320	220	134	93
14	817	587	486	413	341	298
30	918	660	548	466	385	338
60	1,050	764	639	548	457	403
90	1,130	827	693	595	498	440
120	1,200	889	750	648	545	484
183	1,380	1,030	875	757	637	565

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1926-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
13,300	18,700	22,000	26,100	29,000	31,700	

Magnitude and frequency of annual high flow,  
based on period of record 1926-90

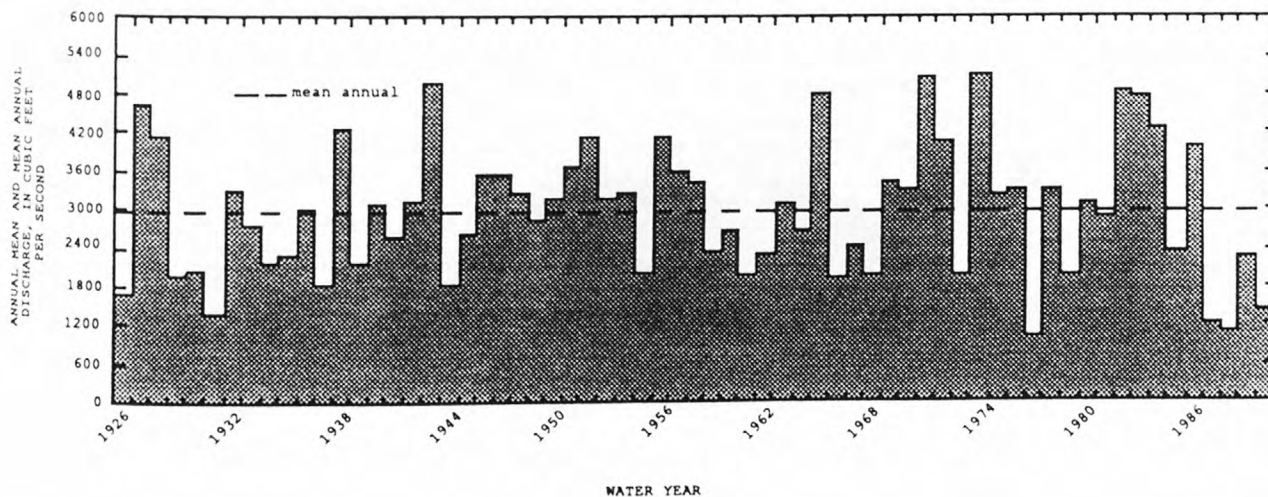
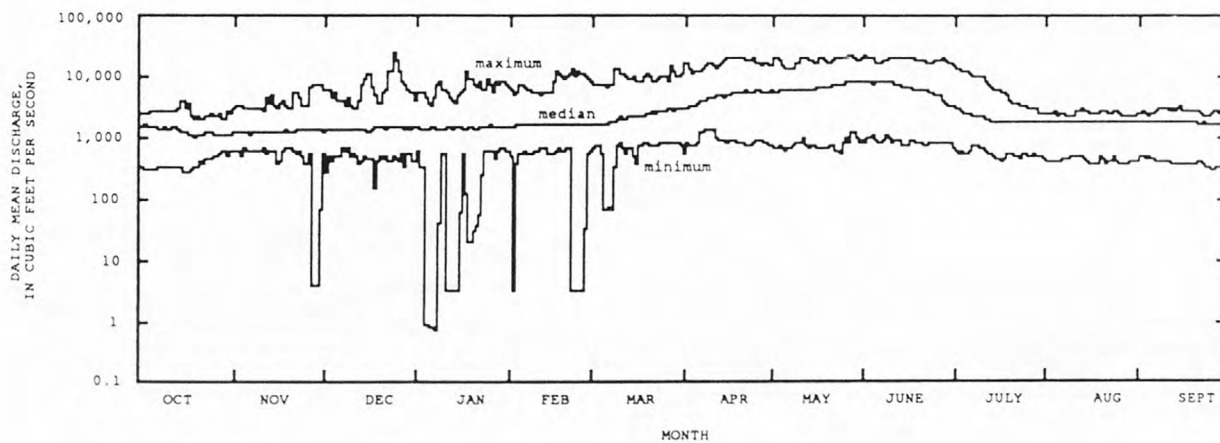
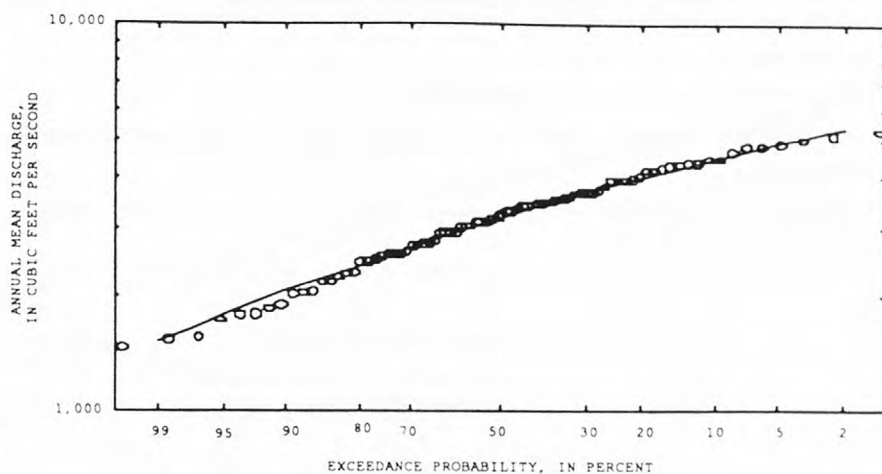
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	12,000	17,100	19,800	22,400	24,000	25,300
3	11,500	16,100	18,400	20,600	21,900	22,900
7	10,700	15,100	17,200	19,300	20,600	21,500
15	9,730	13,900	16,100	18,200	19,500	20,600
30	8,700	12,500	14,400	16,300	17,400	18,300
60	7,500	10,700	12,400	14,000	15,000	15,700
90	6,510	9,320	10,800	12,300	13,200	14,000

Duration table of daily mean flow for period of record 1926-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
15,300	10,100	7,470	5,660	4,340	2,640	2,170	1,880	1,610	1,330	1,080	822	686	524	437	382	41



LOCATION MAP





PAYETTE RIVER BASIN

13250600 BIG WILLOW CREEK NEAR EMMETT, ID

LOCATION.—Lat 44°04'25", long 116°29'10", in SE 1/4, NW sec. 32, T. 7 N., R. 1 W., Payette County, Hydrologic Unit 17050122, Bureau of Land Management lands, 62 ft downstream from bridge on Emmett-Council road, 500 ft upstream from mouth of Fourmile Creek, 13.5 mi north of Emmett, and at mile 24.5.

DRAINAGE AREA.—47.4 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1961 to September 1982.

GAGE.—Water-stage recorder. Datum of gage is 2,910 ft above sea level, from topographic map.

REMARKS.—None.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,570 ft<sup>3</sup>/s Feb. 16, 1982, gage height, 8.70 ft; minimum, 0.97 ft<sup>3</sup>/s July 8, 9, 1975, gage height, 1.96 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Feb. 24 or 25, 1957, reached a peak of 2,100 ft<sup>3</sup>/s, gage height not determined.

Summary of monthly and annual discharges, 1963-82

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	9.7	4.7	6.1	0.92	0.15	2.0
November	33	5.2	12	8.7	0.74	3.9
December	129	5.7	37	36	0.98	12.1
January	192	5.9	65	55	0.85	21.2
February	257	6.6	63	54	0.87	20.5
March	126	7.1	52	30	0.58	17.0
April	110	5.8	40	28	0.70	13.1
May	30	4.8	12	7.0	0.59	3.9
June	16	3.9	6.8	2.7	0.40	2.2
July	6.7	2.3	4.0	0.98	0.25	1.3
August	5.7	2.9	3.9	0.71	0.18	1.3
September	6.4	3.7	4.6	0.66	0.14	1.5
Annual	51	5.5	25	11	0.44	100

Magnitude and frequency of annual low flow,  
based on period of record 1963-82

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	2.5	2.0	1.8	1.6	1.3	1.2
3	2.7	2.2	2.0	1.8	1.7	1.5
7	2.9	2.4	2.2	2.0	1.8	1.7
14	3.0	2.5	2.3	2.1	1.9	1.8
30	3.3	2.8	2.6	2.3	2.1	2.0
60	3.6	3.2	3.0	2.8	2.6	2.5
90	3.9	3.5	3.3	3.1	2.9	2.8
120	4.3	3.9	3.7	3.5	3.3	3.2
183	5.1	4.6	4.4	4.2	4.1	3.9

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1963-82

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
902	1,390	1,740	2,210	2,580	2,970

Magnitude and frequency of annual high flow,  
based on period of record 1963-82

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	543	793	861	896	905	909
3	396	573	618	640	646	648
7	267	394	430	449	454	457
15	172	256	284	301	307	310
30	116	165	180	189	191	193
60	83	126	143	157	162	166
90	70	102	115	123	127	129

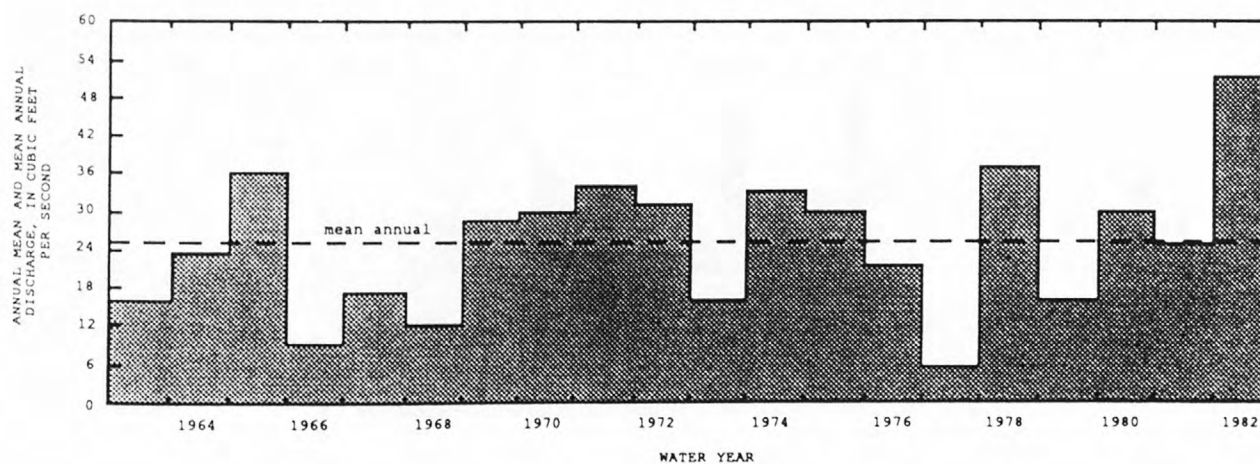
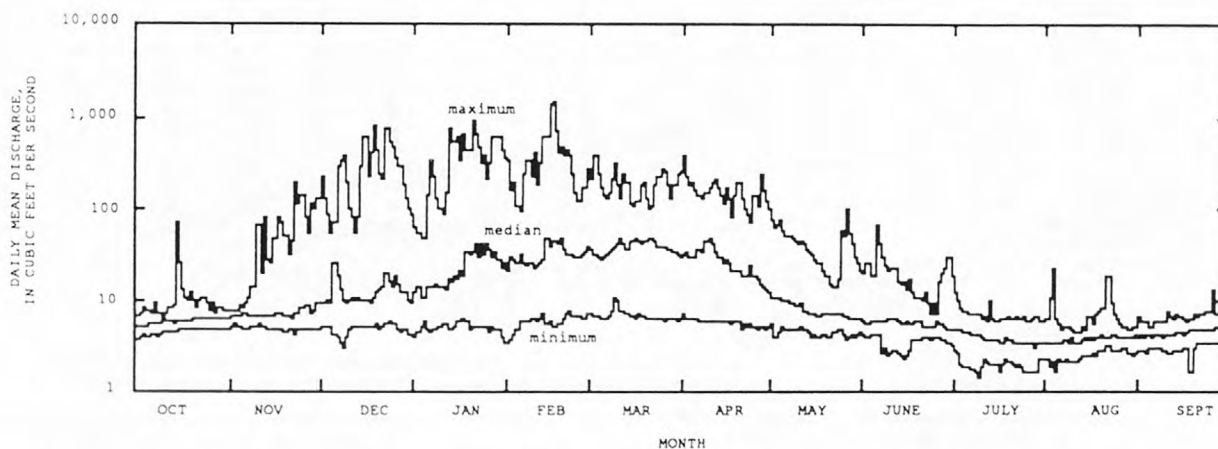
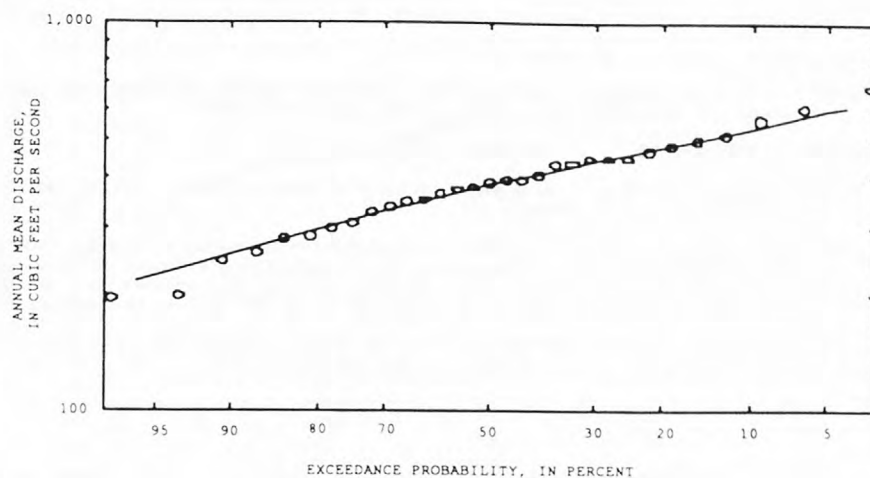
Duration table of daily mean flow for period of record 1963-82

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
288	98	59	42	30	16	8.9	6.9	6.1	5.3	4.6	3.8	3.2	2.7	2.3	2.1	1.8

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# PAYETTE RIVER BASIN

13251000 PAYETTE RIVER NEAR PAYETTE, ID

LOCATION.—Lat 44°02'33", long 116°55'27", in NE 1/4, SE 1/4, SW 1/4, sec. 10, T. 8 N., R. 5 W., Payette County, Hydrologic Unit 17050122, on right bank just upstream from bridge on U.S. Highway 95, 1.8 mi south of Payette, and at mile 4.1.

DRAINAGE AREA.—3,240 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—August 1935 to September 1990. 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.

REVISED RECORDS.—WSP 1397: 1949(m), 1952, 1953-54(m).

GAGE.—Water-stage recorder. Datum of gage is 2,138.44 ft above sea level. Aug. 1, 1935, to Aug. 7, 1939, nonrecording gage at site 50 ft downstream at present datum.

REMARKS.—Flow regulated by Deadwood Reservoir, Cascade Reservoir beginning November 1947, other smaller reservoirs, and to some extent by Black Canyon Dam 34.6 mi upstream, where flow is regulated by diversion and gate operation at dam. Diversions above station for irrigation of about 196,000 acres, of which about 100 acres are irrigated by withdrawals from ground water, about 5,100 acres are located below station, and about 53,000 acres are in adjacent basins (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 30,900 ft<sup>3</sup>/s Dec. 24, 1964, gage height, 13.80 ft; minimum, 71 ft<sup>3</sup>/s July 1, 1977, gage height, 3.27 ft; minimum daily, 150 ft<sup>3</sup>/s June 29, 30, 1977.

Summary of monthly and annual discharges, 1936-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,400	440	1,540	505	0.33	4.2
November	2,900	919	1,700	414	0.24	4.6
December	4,800	793	1,990	834	0.42	5.5
January	4,430	813	2,080	891	0.43	5.7
February	6,910	961	2,500	1,190	0.48	6.8
March	8,790	939	3,280	1,730	0.53	8.9
April	15,000	421	5,310	2,820	0.53	14.4
May	12,000	564	6,780	3,140	0.46	18.4
June	13,200	397	6,620	3,420	0.52	18.0
July	6,350	311	2,070	1,380	0.67	5.6
August	2,090	396	1,340	484	0.36	3.6
September	2,490	447	1,580	594	0.38	4.3
Annual	5,140	945	3,060	1,070	0.35	100

Magnitude and frequency of annual low flow,  
based on period of record 1937-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	715	444	334	259	190	153
3	774	476	353	270	194	154
7	874	551	415	320	232	185
14	975	628	476	368	268	213
30	1,070	697	531	414	303	242
60	1,200	796	611	477	350	280
90	1,300	861	661	517	380	304
120	1,380	944	735	581	433	349
183	1,590	1,160	942	769	595	492

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1936-90

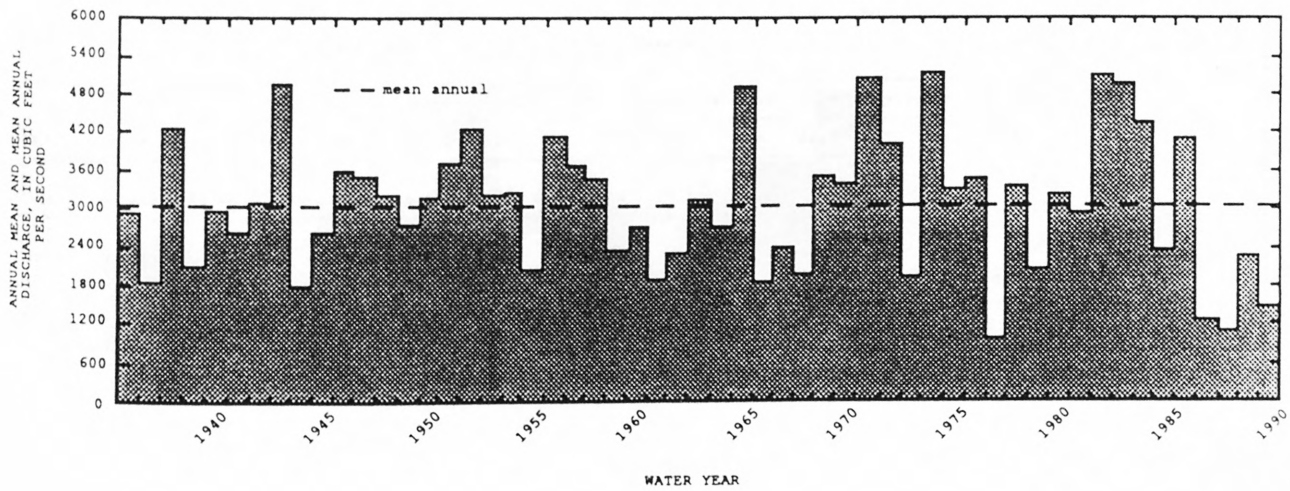
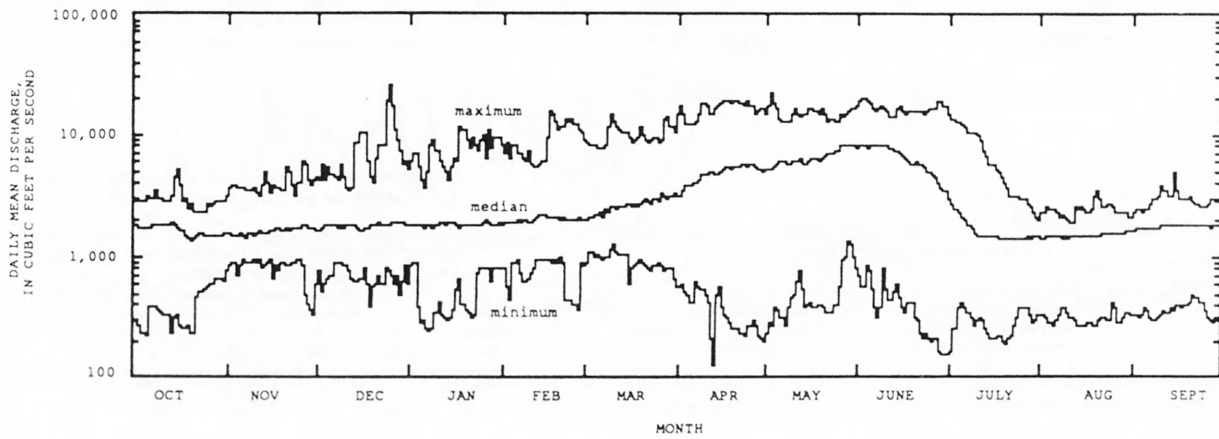
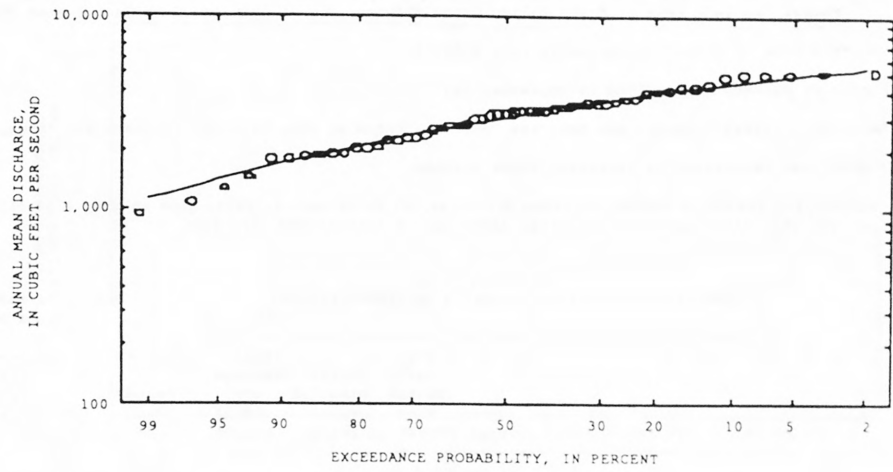
Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
12,300	17,600	20,700	24,100	26,400	28,500

Magnitude and frequency of annual high flow,  
based on period of record 1936-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	11,500	16,600	19,400	22,200	24,000	25,400
3	10,900	15,500	17,900	20,100	21,400	22,400
7	10,200	14,300	16,300	18,200	19,300	20,100
15	9,260	13,200	15,200	17,100	18,200	19,100
30	8,190	11,800	13,700	15,600	16,700	17,600
60	7,080	10,300	12,000	13,700	14,800	15,600
90	6,230	9,030	10,500	12,100	13,100	13,900

Duration table of daily mean flow for period of record 1936-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
13,700	9,850	7,370	5,710	4,400	2,830	2,190	1,930	1,730	1,530	1,300	925	661	478	381	317	222



## WEISER RIVER BASIN

13251300 WEST BRANCH WEISER RIVER NEAR TAMARACK, ID

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, Hydrologic Unit 17050124, Payette National Forest, on left bank at Price Valley Guard Station, 0.1 mi upstream from East Branch Weiser River, 5.2 mi northwest of Tamarack.

DRAINAGE AREA.—3.96 mi<sup>2</sup>. Mean elevation, 4,900 ft.

PERIOD OF RECORD.—August 1959 to September 1977.

GAGE.—Water-stage recorder and concrete control. Datum of gage is 4,200 ft above sea level, from topographic map.

REMARKS.—No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 87 ft<sup>3</sup>/s May. 4, 1971, gage height, 4.56 ft; maximum gage height, 6.73 ft about Jan. 17, 1974 (ice jam); minimum daily discharge, 0.4 ft<sup>3</sup>/s Nov. 22, 1964.

Summary of monthly and annual discharges, 1960-77

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	3.6	0.74	1.3	0.62	0.46	2.2
November	7.2	0.98	2.0	1.6	0.81	3.2
December	8.3	0.75	2.2	2.0	0.91	3.5
January	9.2	0.84	2.2	1.9	0.87	3.6
February	7.8	0.71	2.4	1.7	0.71	3.8
March	12	0.82	4.4	3.2	0.72	7.1
April	37	1.9	17	8.6	0.51	27.0
May	42	1.9	21	11	0.51	33.6
June	13	1.1	5.8	4.0	0.68	9.4
July	2.9	0.61	1.8	0.71	0.40	2.8
August	2.0	0.55	1.2	0.43	0.36	1.9
September	1.8	0.62	1.2	0.32	0.28	1.9
Annual	9.8	1.1	5.2	2.0	0.39	100

Magnitude and frequency of annual low flow,  
based on period of record 1961-77

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	0.73	0.55	0.48	0.42	0.36	0.33
3	0.76	0.60	0.53	0.49	0.44	0.42
7	0.80	0.64	0.57	0.52	0.47	0.44
14	0.85	0.70	0.63	0.58	0.53	0.50
30	0.92	0.75	0.67	0.62	0.55	0.52
60	0.99	0.81	0.73	0.66	0.60	0.56
90	1.1	0.88	0.79	0.72	0.64	0.60
120	1.1	0.92	0.83	0.76	0.70	0.65
183	1.3	1.0	0.91	0.82	0.73	0.67

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1960-77

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
39	59	73	91	106	121

Magnitude and frequency of annual high flow,  
based on period of record 1960-77

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	38	58	64	68	69	70
3	37	56	60	63	64	65
7	36	51	55	57	58	58
15	33	44	47	49	49	49
30	28	36	39	39	40	40
60	22	27	28	29	29	29
90	17	21	22	23	23	23

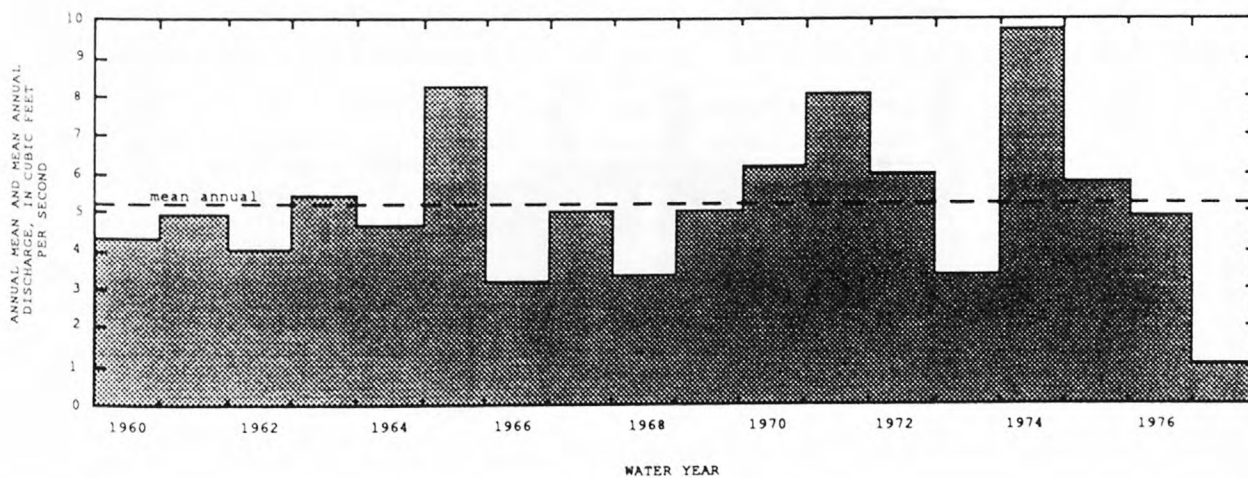
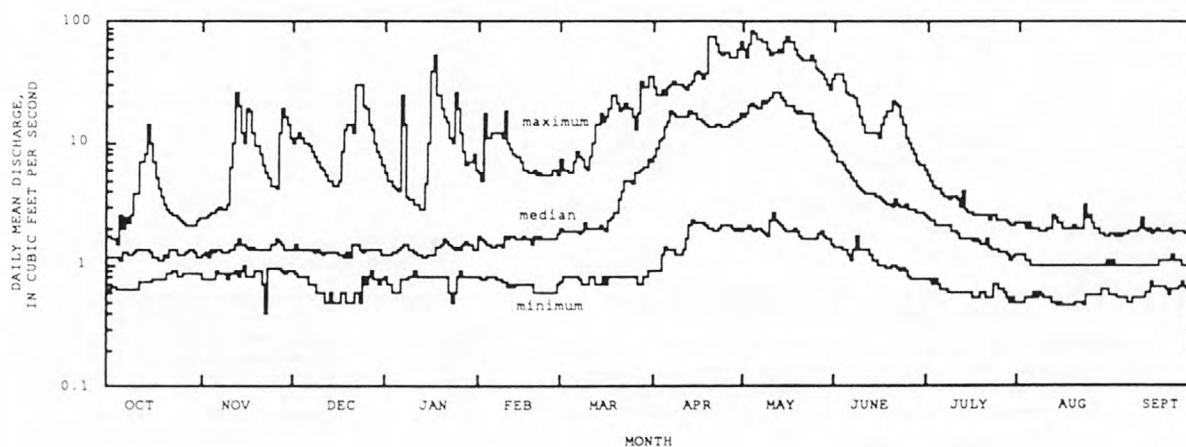
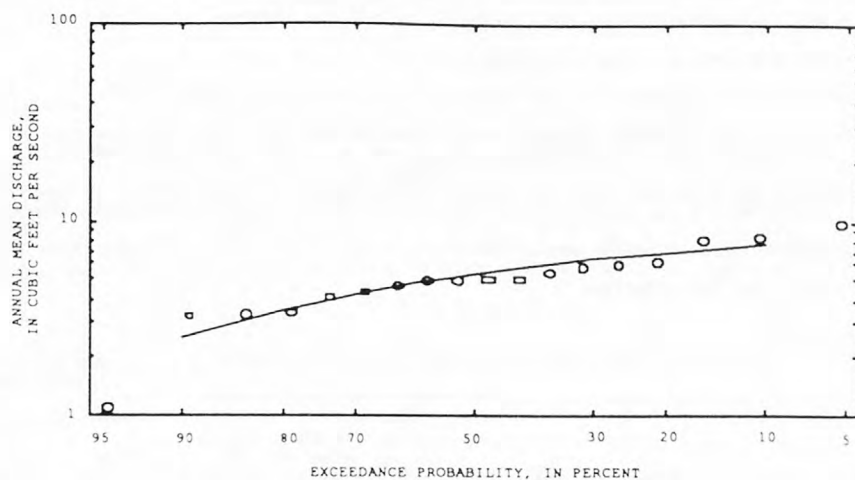
Duration table of daily mean flow for period of record 1960-77

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
41	25	16	11	6.6	3.2	2.1	1.7	1.4	1.2	1.1	0.91	0.79	0.63	0.57	0.52

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## WEISER RIVER BASIN

132S1500 WEISER RIVER AT TAMARACK, ID

LOCATION.—Lat 44°56'48", long 116°22'53", in NW 1/4, NE 1/4, sec.31, T.19 N., R.1 W., Adams County, Hydrologic Unit 17050124, on right bank 60 ft downstream from railroad bridge, 0.6 mi south of Tamarack, 1.5 mi upstream from Beaver Creek, and at mile 94.5.

DRAINAGE AREA.—36.5 mi<sup>2</sup>. Mean elevation, 4,600 ft.

PERIOD OF RECORD.—September 1936 to September 1971, March 1974 to September 1975.

GAGE.—Water-stage recorder. Datum of gage is 4,800 ft above sea level, 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 mi upstream at different datum.

REMARKS.—No diversion above station. Diurnal fluctuation caused by millpond 0.6 mi upstream at Tamarack. Small flow from Boulder Creek in Salmon River basin enters Weiser River above station through transmountain diversion during late irrigation season.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,320 ft<sup>3</sup>/s Dec. 22, 1955, gage height, 7.17 ft, from rating curve extended above 600 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum, 0.48 ft<sup>3</sup>/s July 5, 1969; minimum gage height, 0.89 ft Sept. 21, 1958, site and datum then in use.

Summary of monthly and annual discharges, 1937-71, 1975

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	33	3.9	8.1	4.9	0.61	1.5
November	46	4.4	11	8.8	0.77	2.2
December	128	4.0	24	32	1.3	4.4
January	68	3.0	17	14	0.82	3.1
February	67	3.0	21	15	0.69	3.9
March	205	6.5	55	40	0.72	10.4
April	368	62	216	83	0.39	40.5
May	287	35	129	69	0.53	24.2
June	95	9.0	29	18	0.63	5.4
July	20	6.3	9.9	2.8	0.28	1.9
August	11	4.2	6.9	1.5	0.22	1.3
September	9.7	3.2	6.5	1.4	0.22	1.2
Annual	68	17	44	12	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1938-71, 1975

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	3.6	2.1	1.5	1.0	0.69	0.50
3	4.5	3.1	2.3	1.7	1.2	0.91
7	4.7	3.7	3.1	2.7	2.2	2.0
14	5.0	4.1	3.7	3.3	2.9	2.6
30	5.4	4.5	4.1	3.7	3.2	2.9
60	5.9	5.0	4.5	4.1	3.6	3.3
90	6.3	5.4	4.9	4.4	3.9	3.6
120	6.7	5.8	5.3	4.9	4.4	4.2
183	7.8	6.4	5.9	5.6	5.4	5.2

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1937-71, 1975

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
477	670	801	968	1,090	1,220

Magnitude and frequency of annual high flow,  
based on period of record 1937-71, 1975

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	434	605	711	836	924	1,010
3	401	543	624	715	774	828
7	352	477	548	627	679	725
15	302	405	465	531	576	616
30	249	324	368	416	448	478
60	183	233	259	286	303	317
90	139	175	193	210	220	229

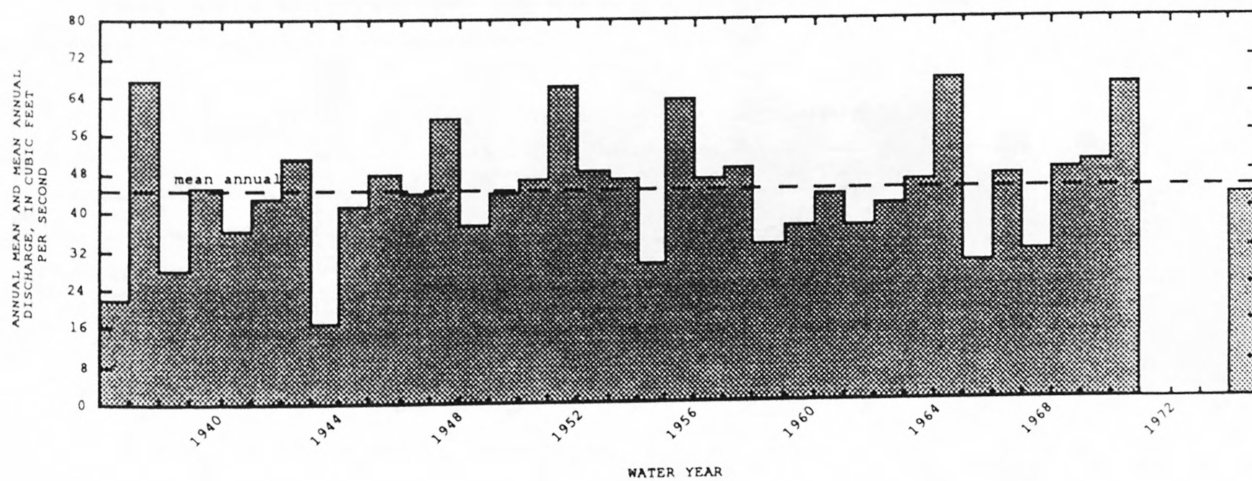
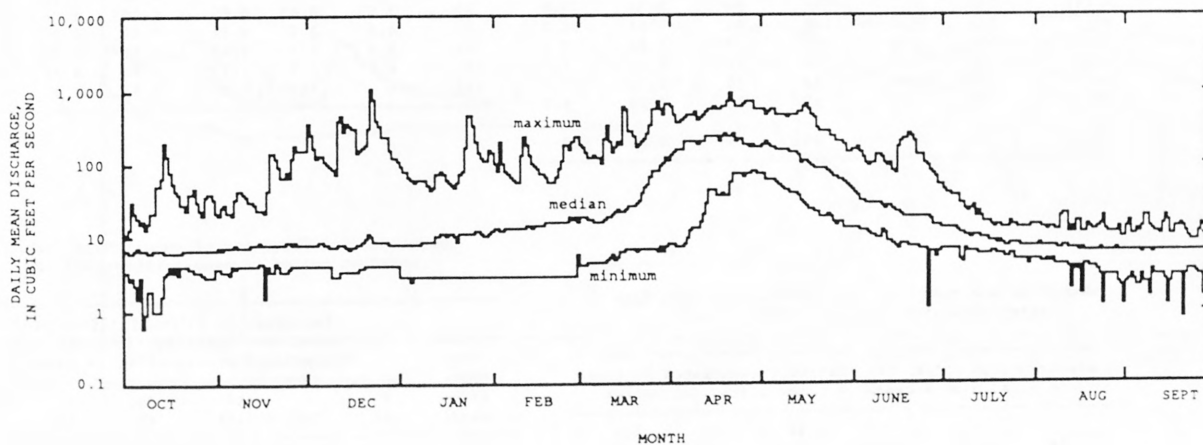
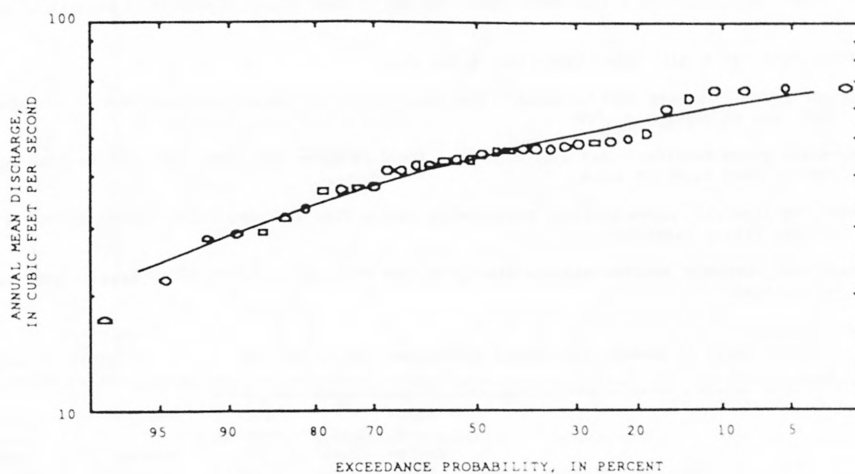
Duration table of daily mean flow for period of record 1937-71, 1975

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
418	223	138	87	55	25	16	11	8.5	7.4	6.4	5.6	4.7	3.8	3.2	2.9	1.6

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## WEISER RIVER BASIN

13254500 LOST CREEK NEAR TAMARACK, ID

LOCATION.—Lat 44°57'20", long 116°27'55", in SE 1/4, NW 1/4, sec. 28, T. 19 N., R. 1 W., Adams County, Hydrologic Unit 17050124 Payette National Forest, on right bank 0.1 mi downstream from dam of Lost Valley Reservoir, 4 mi west of Tamarack, 16 mi north of Council, and at mile 10.2.

DRAINAGE AREA.—36.5 mi<sup>2</sup>. Mean elevation, 4,600 ft.

PERIOD OF RECORD.—January 1910 to August 1914, May 1920 to September 1921, May 1924 to November 1929 (fragmentary), March 1930 to October 1969, May to September 1980.

GAGE.—Water-stage recorder. Datum of gage is 4,729.6 ft above sea level, by river-profile survey. Prior to Apr. 1, 1912, nonrecording gage at same site and datum.

REMARKS.—No diversion above station; practically entire flow diverted below station during irrigation season. Flow regulated since 1910 by Lost Valley Reservoir.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 688 ft<sup>3</sup>/s May. 17, 18, 1921, gage height, 4.29 ft; no flow at times when gates in dam were closed.

Summary of monthly and annual discharges, 1911, 1931-69

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	54	0.10	19	14	0.73	4.0
November	15	0.07	7.0	4.2	0.60	1.5
December	45	0.00	6.7	7.4	1.1	1.4
January	19	0.00	7.0	4.7	0.68	1.5
February	21	0.00	6.7	4.3	0.64	1.4
March	47	0.10	8.7	7.8	0.90	1.9
April	207	1.0	81	64	0.78	17.5
May	312	15	146	81	0.55	31.3
June	112	3.6	43	27	0.64	9.2
July	73	8.4	42	13	0.32	8.9
August	81	8.0	59	12	0.21	12.7
September	83	7.0	41	16	0.39	8.7
Annual	59	13	39	9.7	0.25	100

Magnitude and frequency of annual low flow,  
based on period of record 1911-12, 1931-69

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	1.9	0.28	0.00	0.00	0.00	0.00
3	2.3	0.42	0.01	0.00	0.00	0.00
7	2.5	0.50	0.01	0.00	0.00	0.00
14	3.2	0.64	0.01	0.00	0.00	0.00
30	3.6	0.69	0.01	0.00	0.00	0.00
60	4.9	1.2	0.31	0.00	0.00	0.00
90	5.4	1.7	0.63	0.19	0.00	0.00
120	6.0	2.3	1.1	0.55	0.22	0.11
183	12	8.2	5.4	2.5	1.2	0.40

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1911, 1931-69

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
243	404	525	691	823	961

Magnitude and frequency of annual high flow,  
based on period of record 1911, 1931-69

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	241	394	471	557	613	663
3	234	381	455	537	591	638
7	225	351	420	497	548	595
15	210	316	380	452	501	545
30	174	260	312	374	416	455
60	122	176	211	252	280	308
90	94	128	149	173	191	207

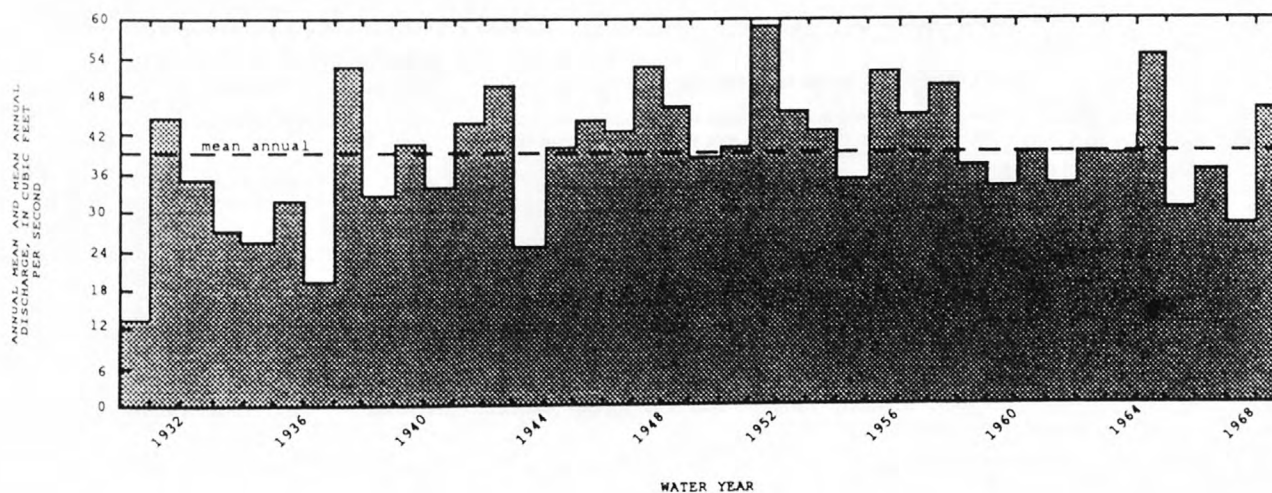
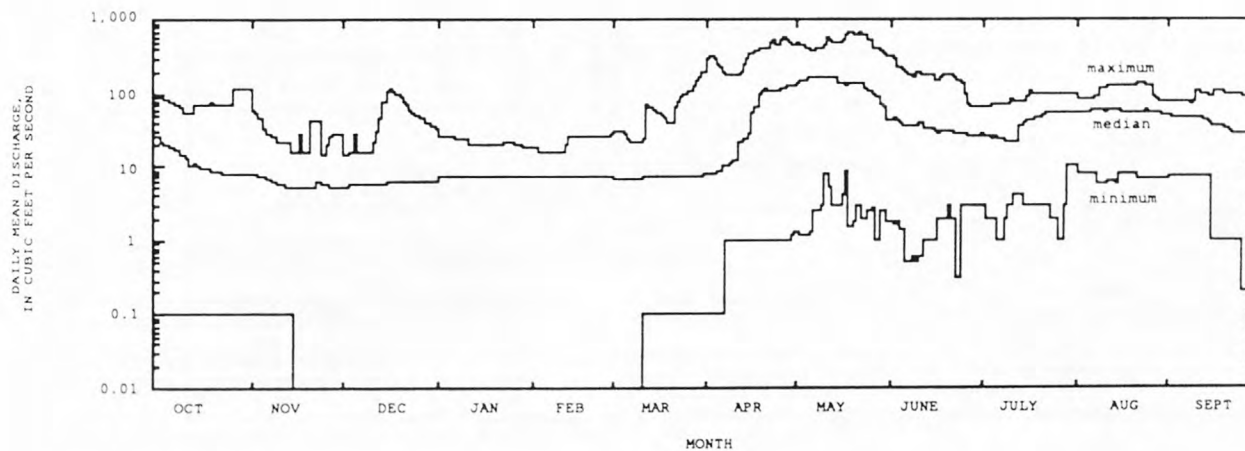
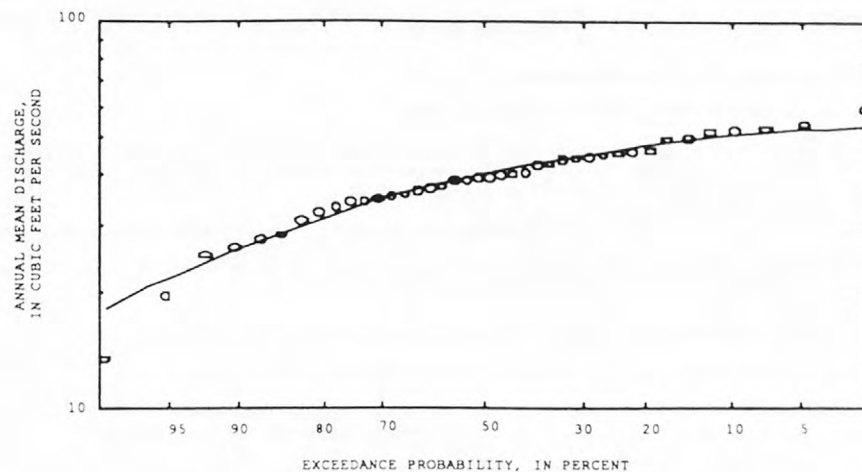
Duration table of daily mean flow for period of record 1911, 1931-69

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
331	161	91	71	61	45	26	13	8.8	6.8	5.1	2.8	0.84	0.10	0.06	0.03	0.01	0.01

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## WEISER RIVER BASIN

13255000 WEST FORK WEISER RIVER NEAR FRUITVALE, ID

LOCATION.—Lat 44°50', long 116°28', in NW 1/4, sec. 9, T. 17 N., R. 1 W., Adams County, Hydrologic Unit 17050124, on left bank at ranch, 1.2 mi northwest of Fruitvale, and at mile 1.5.

DRAINAGE AREA.—78 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1910 to September 1949.

GAGE.—Nonrecording gage. Datum of gage is 3,070 ft above sea level, by barometer. Prior to June 17, 1924, nonrecording gage at different datum, June 17, 1924, to Apr. 7, 1925, water-stage recorder, at different datum. Apr. 7, 1925, to Oct. 15, 1949, nonrecording gages at several sites within 320 ft at different datum.

REMARKS.—Several diversions for irrigation above station. Flow regulated by Lost Valley Reservoir.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 1,170 ft<sup>3</sup>/s Mar. 31, 1940, gage height, 3.79 ft, site and datum then in use; minimum observed, 0.5 ft<sup>3</sup>/s July 23-27, 1911.

Summary of monthly and annual discharges, 1912, 1920-22, 1925, 1938-49

Magnitude and frequency of annual low flow, based on period of record 1912, 1921-22, 1939-49

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	53	5.2	21	13	0.63	1.9
November	78	7.0	27	20	0.76	2.4
December	106	6.8	33	29	0.86	3.0
January	87	8.2	30	20	0.65	2.7
February	165	18	50	37	0.73	4.5
March	261	38	126	67	0.53	11.4
April	623	81	320	148	0.46	28.9
May	603	87	300	162	0.54	27.1
June	154	13	76	49	0.64	6.9
July	62	12	32	12	0.36	2.9
August	75	32	55	12	0.23	4.9
September	74	18	38	16	0.41	3.4
Annual	141	45	92	26	0.28	100

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	5.0	2.4	1.4	0.86	0.45	0.28
3	6.0	2.8	1.6	0.94	0.46	0.27
7	7.6	3.6	2.1	1.2	0.60	0.35
14	8.3	4.6	3.0	2.1	1.3	0.89
30	9.9	5.9	4.2	3.0	2.1	1.5
60	13	7.7	5.8	4.5	3.3	2.6
90	17	11	7.9	6.0	4.2	3.3
120	21	13	9.3	6.8	4.7	3.6
183	27	21	19	17	15	13

Magnitude and frequency of annual high flow, based on period of record 1912, 1920-22, 1925, 1938-49

Magnitude and frequency of instantaneous peak flow, based on period of record 1912, 1920-22, 1925, 1938-49

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
536	806	998	1,250	1,450	1,660

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	519	769	950	1,160	1,250	1,330
3	495	746	920	1,050	1,110	1,170
7	479	722	873	979	1,040	1,090
15	456	690	781	869	919	960
30	425	579	659	740	789	830
60	326	438	497	558	595	627
90	261	350	395	441	468	490

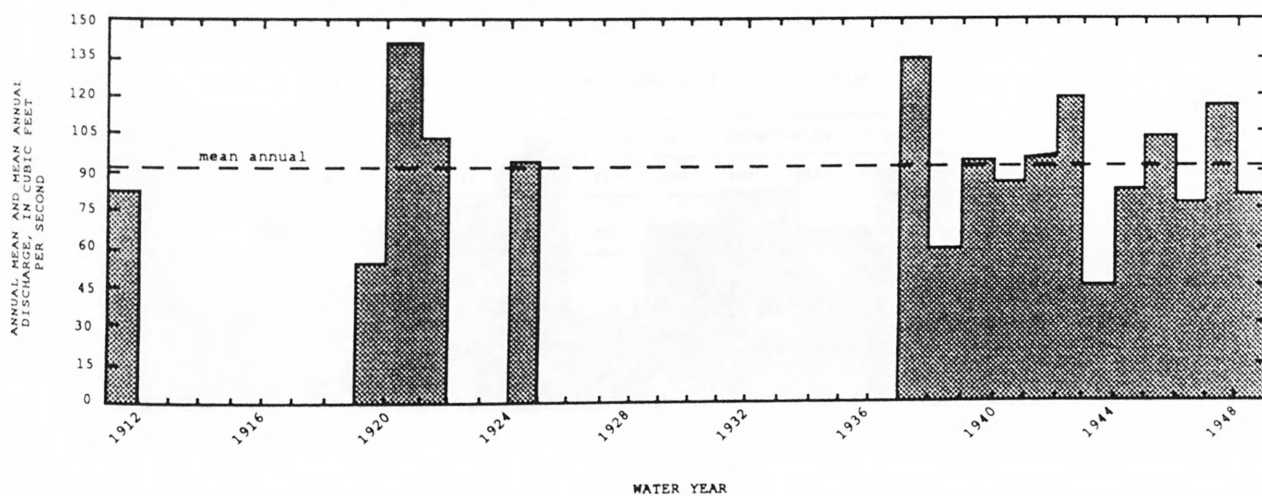
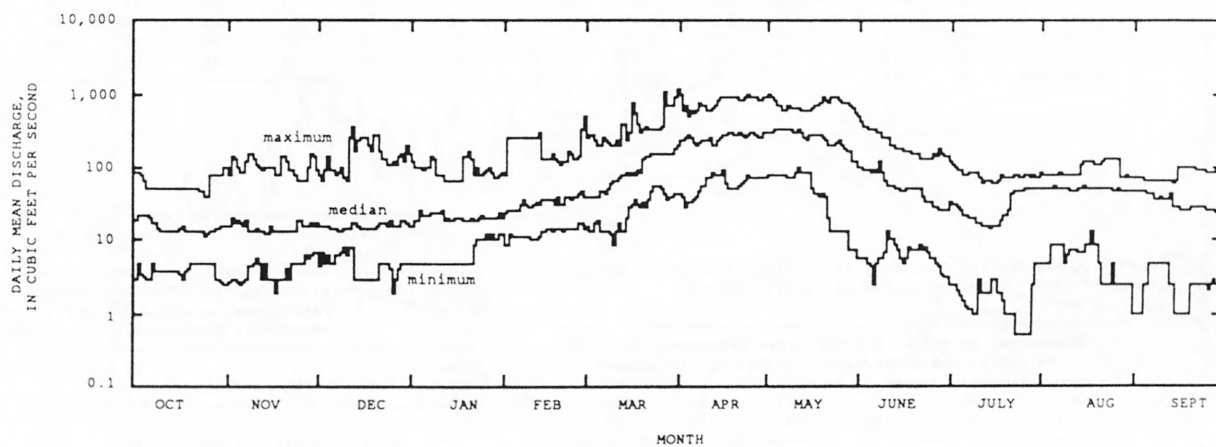
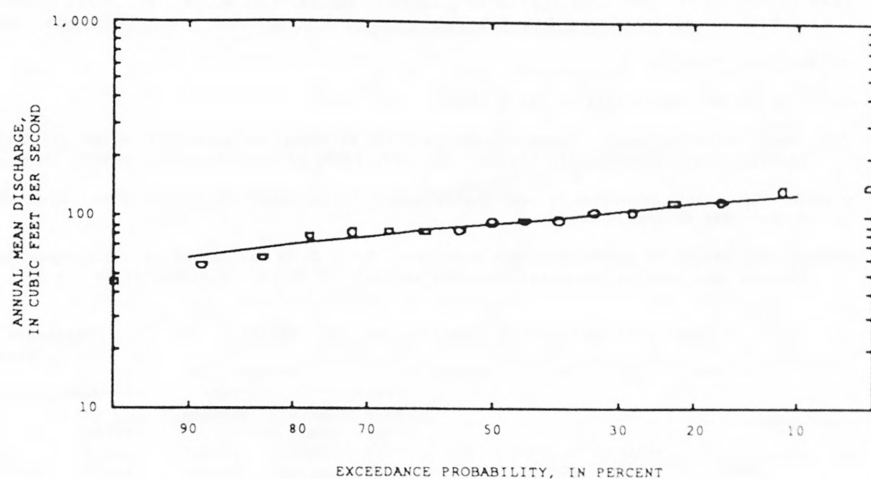
Duration table of daily mean flow for period of record 1912, 1920-22, 1925, 1938-49

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
704	410	258	177	123	70	52	43	31	22	15	11	7.1	4.3	3.1	2.7	2.0

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## WEISER RIVER BASIN

13256000 WEISER RIVER NEAR COUNCIL, ID

LOCATION.—Lat 44°41'30", long 116°28'10", in SW 1/4, sec.28, T.16 N., R.1 W., Adams County, Hydrologic Unit 17050124, on left bank 0.7 mi downstream from Cottonwood Creek, 2 mi upstream from Middle Fork, and 3.2 mi southwest of Council.

DRAINAGE AREA.—390 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1937 to March 1953.

GAGE.—Water-stage recorder. Datum of gage is 2,850 ft above sea level, by barometer. Prior to Oct. 28, 1938, nonrecording gage 370 ft downstream at datum 0.58 ft higher. Oct. 28, 1938, to Apr. 21, 1939, nonrecording gage at same site and datum.

REMARKS.—Flow partly regulated by Lost Valley Reservoir and other small reservoirs. Diversions above station for irrigation of about 7,000 acres (1948 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,700 ft<sup>3</sup>/s Mar. 16 or 17, 1938, gage height, 7.6 ft, from floodmark, site and datum then in use, from rating curve extended above 3,500 ft<sup>3</sup>/s; minimum, 22 ft<sup>3</sup>/s June 29, 1940.

Summary of monthly and annual discharges, 1938-52

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	143	44	81	28	0.35	1.6
November	404	42	144	90	0.62	2.8
December	645	65	260	210	0.81	5.1
January	463	56	201	108	0.54	4.0
February	668	75	336	167	0.50	6.5
March	1,670	247	799	383	0.48	15.7
April	3,060	740	1,530	664	0.44	30.0
May	2,150	455	1,080	509	0.47	21.2
June	744	93	434	210	0.48	8.5
July	162	51	97	32	0.34	1.9
August	82	53	70	10	0.14	1.4
September	97	44	65	14	0.21	1.3
Annual	667	195	423	128	0.30	100

Magnitude and frequency of annual low flow,  
based on period of record 1939-53

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	39	32	28	26	23	21
3	41	34	30	27	24	22
7	45	37	33	30	27	25
14	48	43	40	37	35	33
30	53	47	45	42	40	39
60	61	54	50	47	43	40
90	66	57	52	48	44	40
120	72	61	55	50	45	41
183	91	72	64	58	51	48

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1938-52

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,770	3,950	4,750	5,790	6,570	7,370

Magnitude and frequency of annual high flow,  
based on period of record 1938-52

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	2,520	3,580	4,300	5,230	5,940	6,660
3	2,370	3,360	4,010	4,830	5,440	6,040
7	2,160	3,000	3,520	4,120	4,540	4,930
15	1,920	2,670	3,140	3,690	4,070	4,440
30	1,610	2,250	2,670	3,210	3,610	4,010
60	1,370	1,860	2,160	2,510	2,750	2,990
90	1,160	1,530	1,740	1,980	2,130	2,270

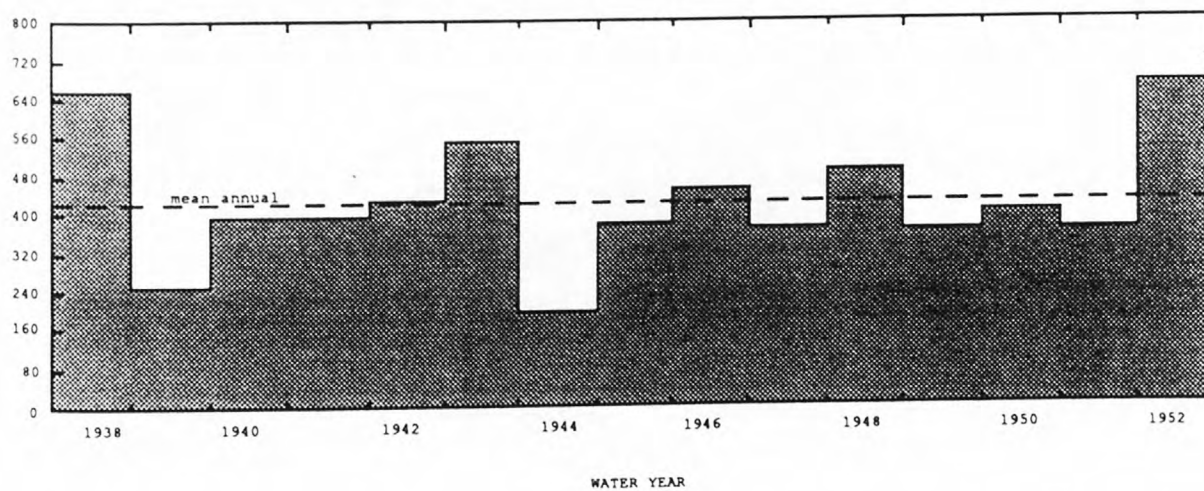
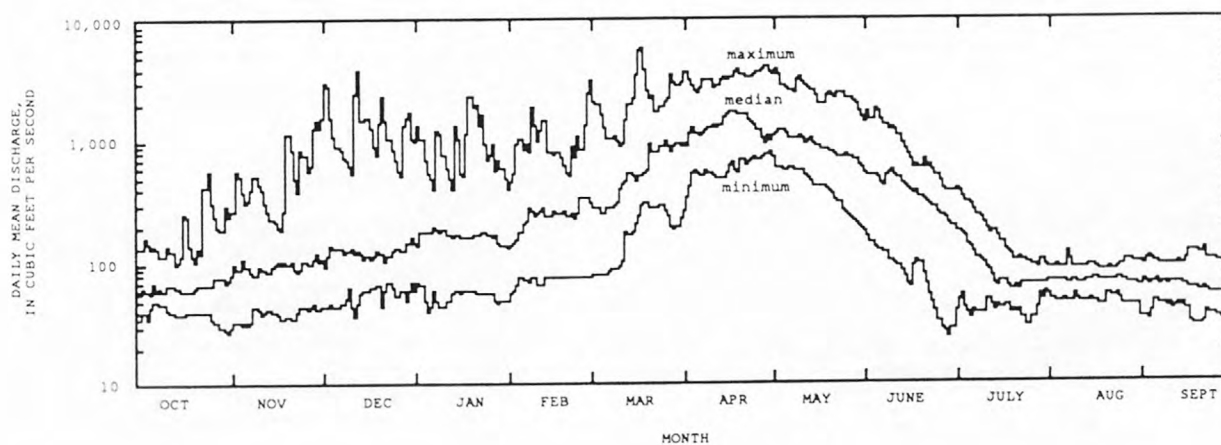
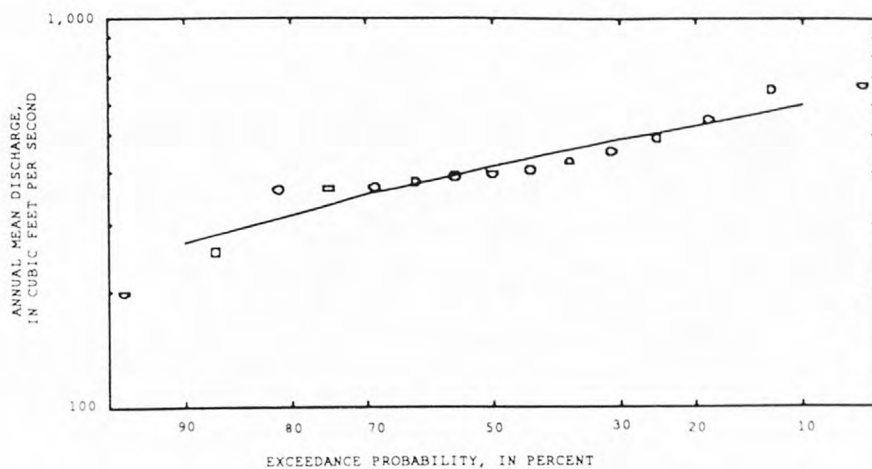
Duration table of daily mean flow for period of record 1938-52

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
3,040	1,650	1,190	892	708	399	231	147	100	81	68	57	49	41	37	33	29	29

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## WEISER RIVER BASIN

13257000 MIDDLE FORK WEISER RIVER NEAR MESA, ID

LOCATION.—Lat 44°39'35", long 116°27'14", in SE 1/4, SE 1/4, sec. 4, T.15 N., R.1 W., Adams County, Hydrologic Unit 17050124, on left bank 4.9 mi south of Council.

DRAINAGE AREA.—86.5 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1910 to August 1913 (published as "Middle Fork Weiser River at Middle Fork"), September 1919 to October 1921 (fragmentary), May 1937 to September 1949 (record not comparable during irrigation season), February 1981 to September 1982, March 1985 to November 1987.

GAGE.—Water-stage recorder. Datum of gage is 2,900 ft above sea level, from topographic map.

REMARKS.—Numerous diversions upstream for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,710 ft<sup>3</sup>/s Dec. 22, 1955, on basis of slope-area measurement. No flow at times in 1937, 1939-41, entire flow diverted for irrigation.

Summary of monthly and annual discharges, 1912, 1938-49, 1982, 1986-87

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	48	6.6	23	11	0.49	1.6
November	108	15	43	22	0.52	2.9
December	165	20	61	43	0.71	4.1
January	103	22	52	21	0.40	3.5
February	287	26	94	69	0.74	6.4
March	352	57	140	76	0.54	9.5
April	543	115	270	110	0.41	18.4
May	636	171	442	135	0.30	30.1
June	493	61	273	133	0.49	18.6
July	173	11	51	41	0.80	3.5
August	49	0.00	8.9	13	1.5	0.6
September	37	1.3	11	11	0.94	0.8
Annual	190	59	122	38	0.31	100

Magnitude and frequency of annual low flow, based on period of record 1912-13, 1939-49, 1982, 1986-87

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 1%	100 0.1%
1	0.76	0.03	0.00	0.00	0.00	0.00
3	0.89	0.04	0.00	0.00	0.00	0.00
7	1.0	0.06	0.00	0.00	0.00	0.00
14	1.6	0.25	0.00	0.00	0.00	0.00
30	2.3	0.40	0.00	0.00	0.00	0.00
60	6.2	1.2	0.39	0.13	0.03	0.01
90	11	5.3	3.5	2.4	1.6	1.2
120	16	10	8.1	6.6	5.2	4.4
183	26	19	16	14	12	11

Magnitude and frequency of instantaneous peak flow, based on period of record 1912, 1938-49, 1982, 1986-87

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
785	1,130	1,370	1,680	1,920	2,160	

Magnitude and frequency of annual high flow, based on period of record 1912, 1938-49, 1982, 1986-87

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	773	1,010	1,130	1,250	1,330	1,400
3	722	906	986	1,060	1,090	1,120
7	650	798	858	907	931	947
15	575	705	759	802	824	839
30	501	617	664	703	723	736
60	421	529	576	618	640	657
90	344	434	477	519	544	564

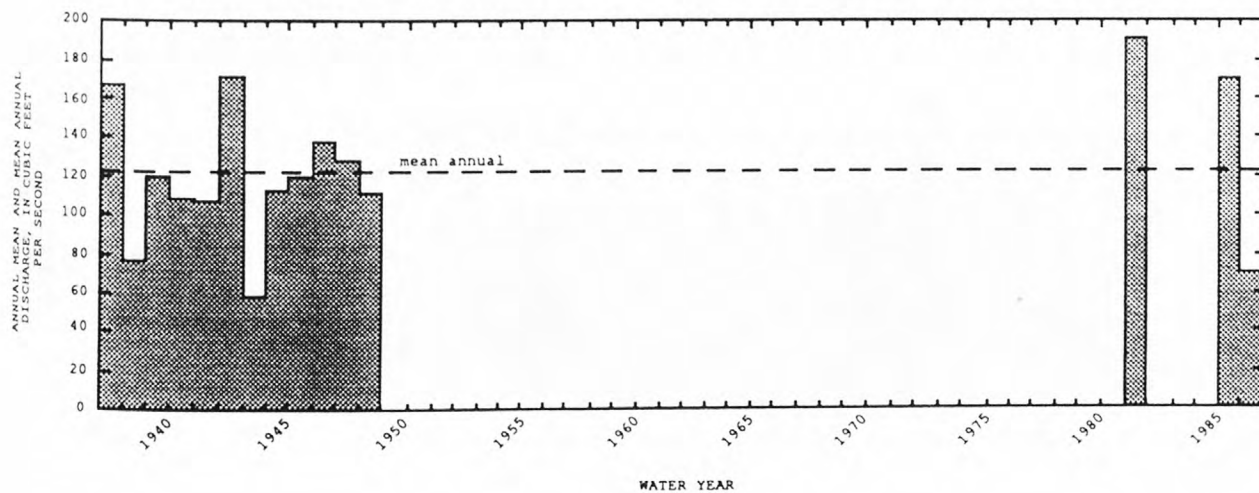
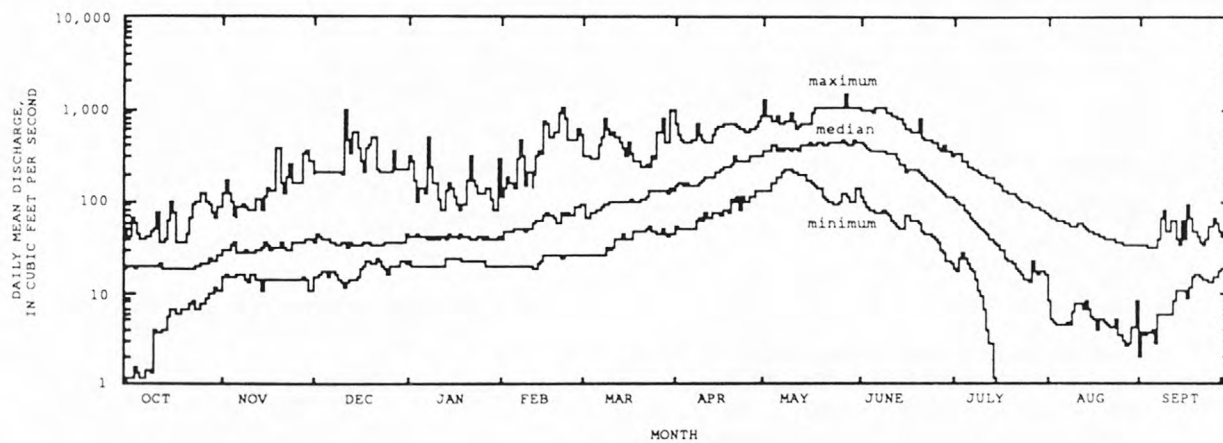
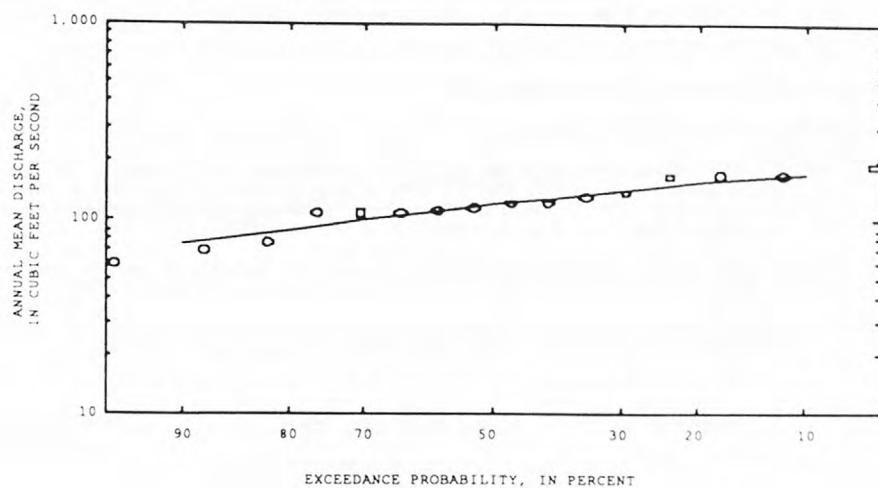
Duration table of daily mean flow for period of record 1912, 1938-49, 1982, 1986-87

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
726	511	381	281	202	118	71	48	34	26	18	3.8	0.72	0.13	0.05	0.03	0.00	

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## WEISER RIVER BASIN

13258500 WEISER RIVER NEAR CAMBRIDGE, ID

LOCATION.—Lat 44°34'47", long 116°38'20", in SE 1/4, NE 1/4, sec.1, T.14 N., R.3 W., Washington County, Hydrologic Unit 17050124, on left bank 100 ft upstream from road bridge, 2.2 mi northeast of Cambridge, 2.5 mi upstream from Rush Creek, and at mile 48.7.

DRAINAGE AREA.—605 mi<sup>2</sup>. Mean elevation, 4,650 ft.

PERIOD OF RECORD.—March 1939 to September 1990.

REVISED RECORDS.—WDR ID 1971: 1970(M).

GAGE.—Water-stage recorder. Datum of gage is 2,647.00 ft above sea level (levels by U.S. Bureau of Reclamation). Aug. 29, 1956, to Aug. 19, 1966, at datum 5.0 ft higher, Aug. 20, 1966, to July 8, 1976, at datum 3.00 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 mi downstream.

REMARKS.—Flow regulated to some extent by Lost Valley Reservoir about 57 mi upstream, capacity reported to be 11,000 acre-ft, and other smaller reservoirs. Diversions above station for irrigation of about 12,200 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,100 ft<sup>3</sup>/s Dec. 22, 1955, gage height, 13.9 ft, from floodmark, site and datum then in use; minimum, 7.1 ft<sup>3</sup>/s Aug. 21-24, 1977, gage height, 2.23 ft.

Summary of monthly and annual discharges, 1940-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	443	34	119	64	0.54	1.5
November	1,010	64	213	169	0.80	2.7
December	1,490	78	389	357	0.92	5.0
January	1,790	75	424	374	0.88	5.5
February	2,040	89	668	444	0.67	8.6
March	2,790	99	1,150	579	0.50	14.8
April	4,540	128	1,750	775	0.44	22.5
May	3,430	147	1,740	699	0.40	22.5
June	1,990	67	941	482	0.51	12.1
July	555	43	201	124	0.62	2.6
August	164	12	86	28	0.32	1.1
September	163	35	89	32	0.36	1.1
Annual	1,200	80	646	223	0.34	100

Magnitude and frequency of annual low flow,  
based on period of record 1940-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	57	39	29	22	15	11
3	61	42	31	23	15	11
7	65	45	33	24	16	12
14	70	48	36	26	17	12
30	74	53	41	32	23	18
60	80	58	47	38	30	25
90	87	64	53	45	37	32
120	97	72	61	52	43	38
183	136	95	80	69	58	52

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1940-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
4,770	6,830	8,170	9,830	11,000	12,200

Magnitude and frequency of annual high flow,  
based on period of record 1940-90

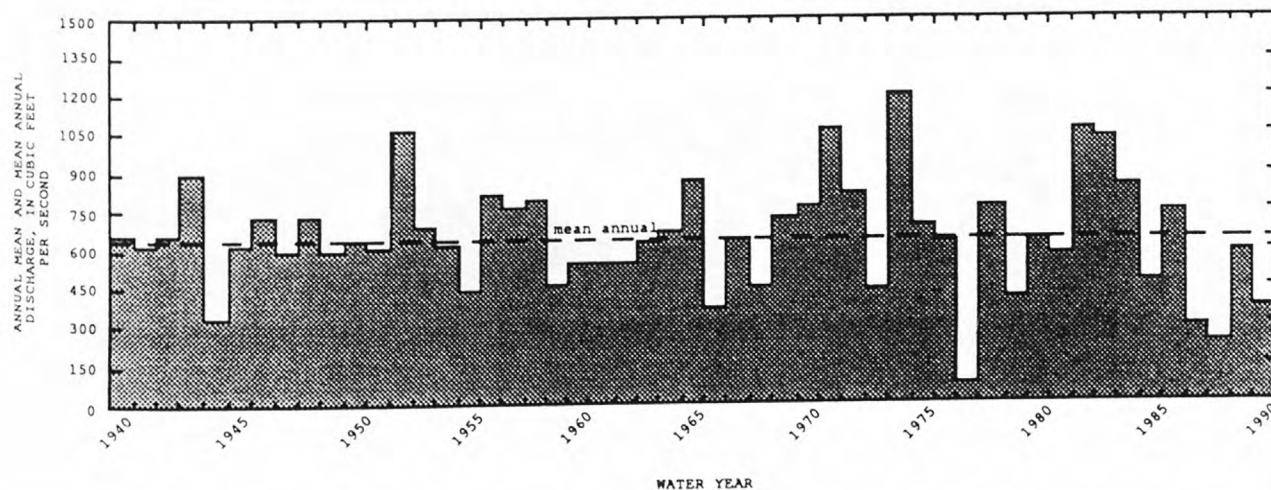
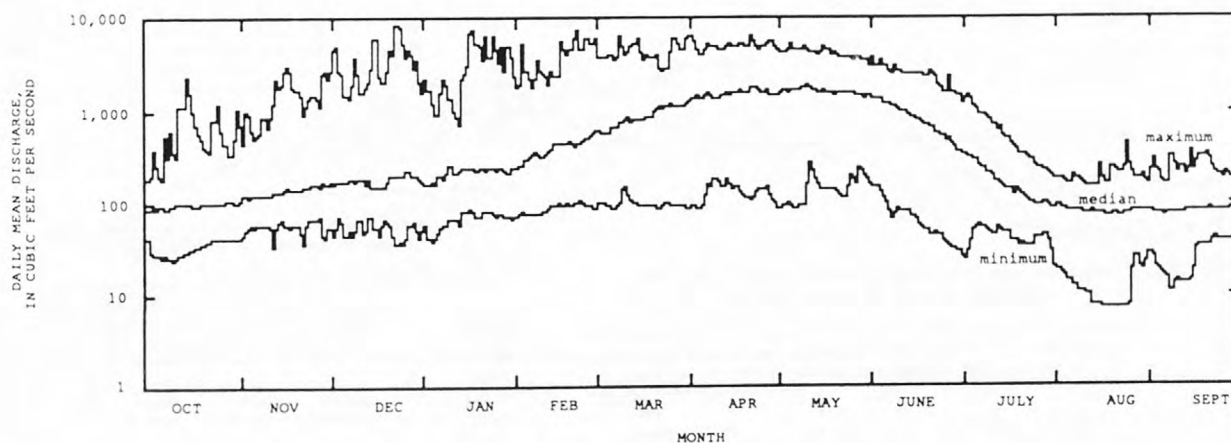
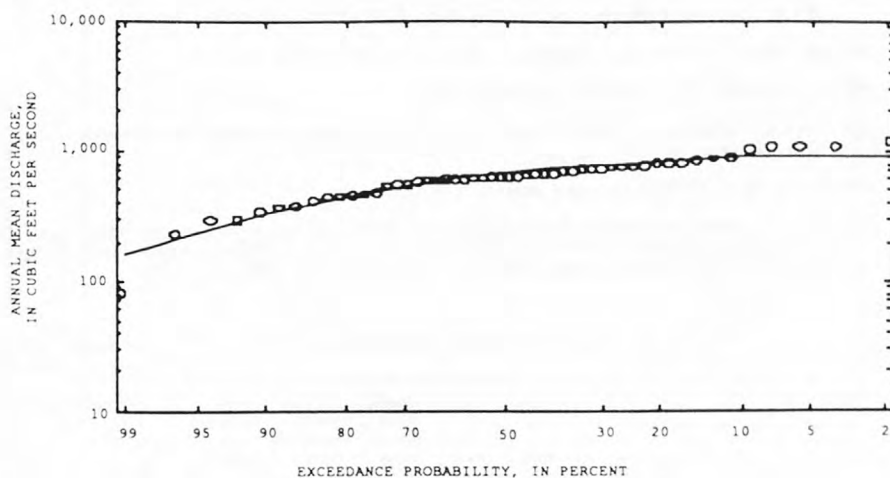
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4,550	5,730	6,010	6,150	6,180	6,200
3	3,900	4,720	4,880	4,940	4,950	4,960
7	3,350	4,030	4,160	4,200	4,210	4,220
15	2,900	3,390	3,470	3,490	3,490	3,500
30	2,460	2,900	2,980	3,010	3,010	3,010
60	2,110	2,460	2,510	2,530	2,530	2,530
90	1,860	2,130	2,160	2,170	2,170	2,170

Duration table of daily mean flow for period of record 1940-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
3,880	2,470	1,800	1,450	1,170	721	395	227	153	117	92	71	59	48	42	35	12



LOCATION MAP





## WEISER RIVER BASIN

13260000 PINE CREEK NEAR CAMBRIDGE, ID

LOCATION.—Lat 44°35'23", long 116°44'12", in SE 1/4, sec. 31, T. 15 N., R. 3 W., Washington County, Hydrologic Unit 17050124, on right bank 300 ft upstream from West Fork and 3.2 mi northwest of Cambridge.

DRAINAGE AREA.—54 mi<sup>2</sup>, approximately. Mean elevation, 4,720 ft.

PERIOD OF RECORD.—April 1938 to September 1962.

GAGE.—Nonrecording gage. Datum of gage is 2,800.00 ft above sea level, by barometer. Prior to Mar. 7, 1951, nonrecording gage at nearby sites at same datum.

REMARKS.—Several diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 850 ft<sup>3</sup>/s Feb. 25, 1958 (gage height, 4.5 ft, from floodmark), from rating curve extended above 200 ft<sup>3</sup>/s on basis of slope-area measurement of peak flow; minimum observed, 0.7 ft<sup>3</sup>/s Aug. 3, 1949, July 13, 14, 1954, minimum gage height observed, 0.29 ft Aug. 5, 1952.

Summary of monthly and annual discharges, 1939-62

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	16	4.1	9.1	2.9	0.32	2.0
November	26	6.1	13	3.9	0.29	2.9
December	59	8.2	18	12	0.67	3.9
January	70	6.4	19	14	0.71	4.2
February	99	11	34	19	0.57	7.4
March	132	16	68	30	0.43	14.7
April	289	48	94	52	0.55	20.2
May	271	46	113	48	0.42	24.3
June	146	9.6	73	35	0.48	15.7
July	37	2.2	13	8.9	0.70	2.7
August	7.9	2.0	4.2	1.9	0.46	0.9
September	13	2.1	5.2	2.8	0.53	1.1
Annual	66	20	39	12	0.31	100

Magnitude and frequency of annual low flow,  
based on period of record 1940-62

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	2.1	1.3	0.99	0.80	0.63	0.53
3	2.2	1.4	1.1	0.89	0.72	0.62
7	2.4	1.6	1.3	1.1	0.90	0.80
14	2.7	1.8	1.5	1.2	1.0	0.89
30	3.1	2.2	1.8	1.6	1.4	1.3
60	3.7	2.6	2.3	2.0	1.8	1.7
90	4.8	3.4	2.8	2.4	2.1	1.9
120	6.2	4.6	3.8	3.3	2.8	2.5
183	9.2	7.0	6.0	5.2	4.4	4.0

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1939-62

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
257	392	488	616	717	821

Magnitude and frequency of annual high flow,  
based on period of record 1939-62

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	228	329	401	496	569	646
3	202	290	355	445	519	598
7	174	250	308	393	464	543
15	151	217	268	342	404	473
30	125	176	217	276	326	381
60	105	144	171	208	238	269
90	97	131	153	181	203	224

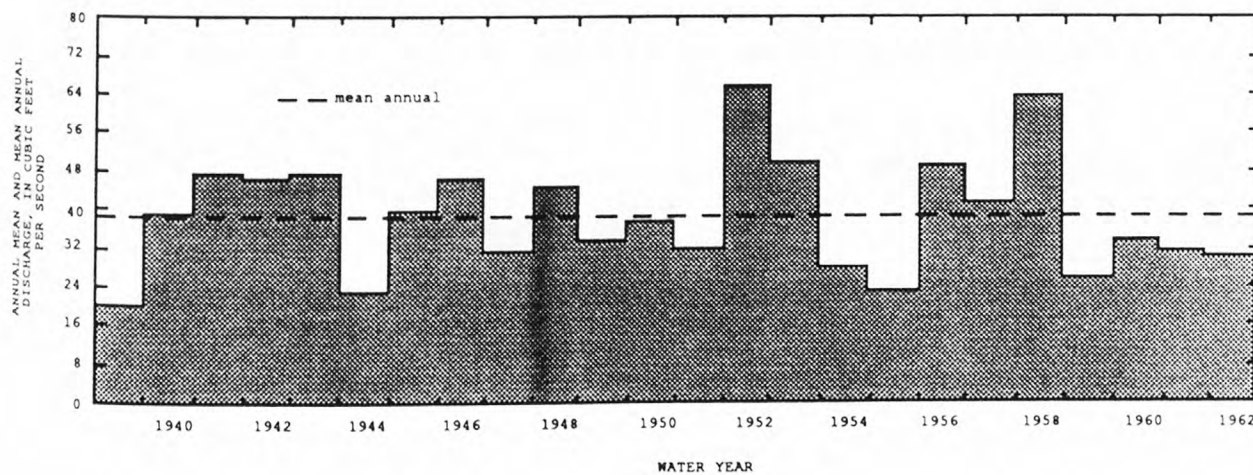
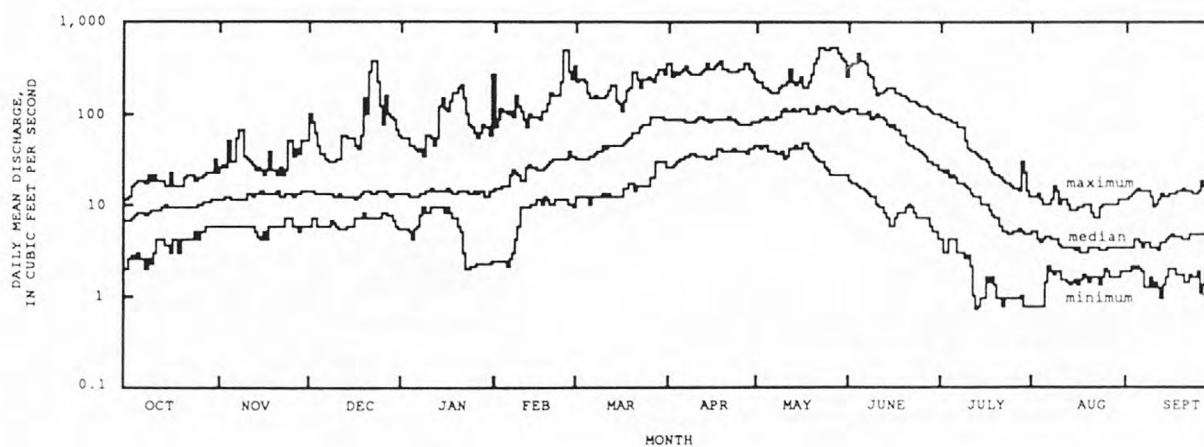
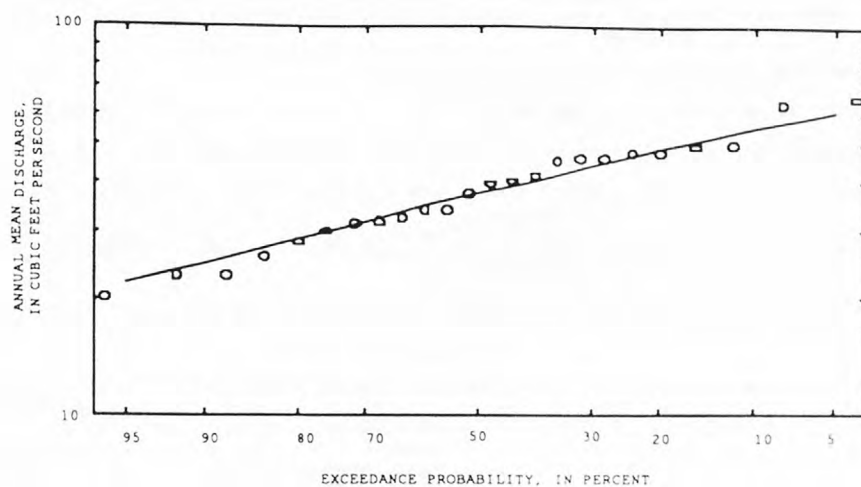
Duration table of daily mean flow for period of record 1939-62

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
243	142	105	84	68	42	23	15	12	9.8	6.6	3.5	2.6	2.1	1.8	1.6	0.85

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## WEISER RIVER BASIN

13261000 LITTLE WEISER RIVER NEAR INDIAN VALLEY, ID

LOCATION.—Lat 44°29'35", long 116°23'45", in NE 1/4, sec. 1, T. 13 N., R. 1 W., Adams County, Hydrologic Unit 17050124, on left bank 60 ft downstream from barn at Richardson Ranch, 1 mi upstream from diversion feeding into Ben Ross Reservoir, 4.8 mi southeast of Indian Valley, and at mile 21.0.

DRAINAGE AREA.—81.9 mi<sup>2</sup>. Mean elevation, 5,300 ft.

PERIOD OF RECORD.—June 1920 to February 1921, March to June 1923, February 1924 to October 1927, and April 1938 to September 1971.

REVISED RECORDS.—WSP 1374: 1923, WSP 1637: 1942(M). WRD Idaho, 1969: 1966.

GAGE.—Water-stage recorder. Datum of gage is 3,250 ft above sea level, by barometer. See WSP 1317 or 1737 for history of changes prior to Aug. 12, 1950.

REMARKS.—Diversion above station for irrigation of about 50 acres (1966 determination). Many diversions below station for irrigation including feeder canal to Ben Ross Reservoir.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, about 1,840 ft<sup>3</sup>/s Feb. 4, 1925; minimum, 2.6 ft<sup>3</sup>/s Nov. 27, 1967 (gage height, -0.18 ft).

Summary of monthly and annual discharges, 1925-27, 1939-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	60	6.6	17	11	0.66	1.3
November	87	9.2	30	21	0.69	2.3
December	186	12	47	46	0.97	3.8
January	191	13	52	43	0.81	4.2
February	256	13	81	50	0.63	6.4
March	218	25	95	39	0.41	7.5
April	491	87	234	97	0.42	18.5
May	609	182	365	115	0.32	28.9
June	552	48	263	125	0.47	20.8
July	118	14	54	29	0.53	4.2
August	25	4.6	15	5.0	0.32	1.2
September	25	5.4	12	3.5	0.30	0.9
Annual	157	56	105	30	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1925-27, 1940-71

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	7.6	5.8	4.9	4.3	3.7	3.3
3	8.1	6.2	5.3	4.6	3.9	3.5
7	8.5	6.6	5.6	4.8	4.1	3.6
14	8.9	6.9	5.9	5.1	4.2	3.7
30	9.9	7.8	6.7	5.8	4.9	4.3
60	11	9.2	7.8	6.7	5.5	4.8
90	13	10	8.6	7.4	6.1	5.3
120	15	11	9.5	8.3	7.1	6.4
183	20	15	13	11	10	9.5

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1925-27, 1939-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
723	1,050	1,270	1,570	1,790	2,020

Magnitude and frequency of annual high flow,  
based on period of record 1925-27, 1939-71

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	617	810	924	1,060	1,150	1,230
3	563	735	835	948	1,020	1,090
7	518	663	743	829	884	934
15	458	592	669	754	810	861
30	405	523	591	667	718	765
60	345	445	503	568	612	653
90	290	368	412	462	496	527

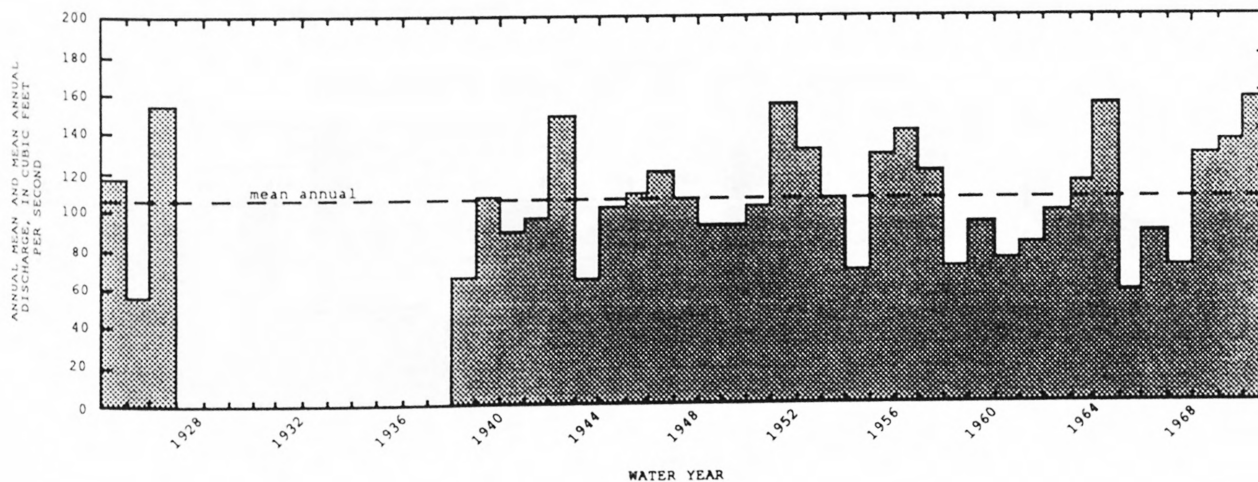
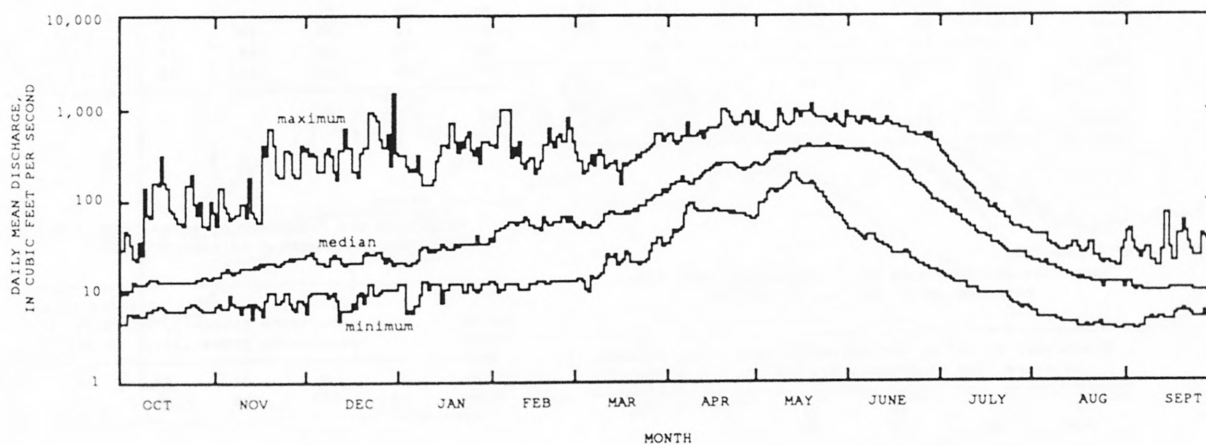
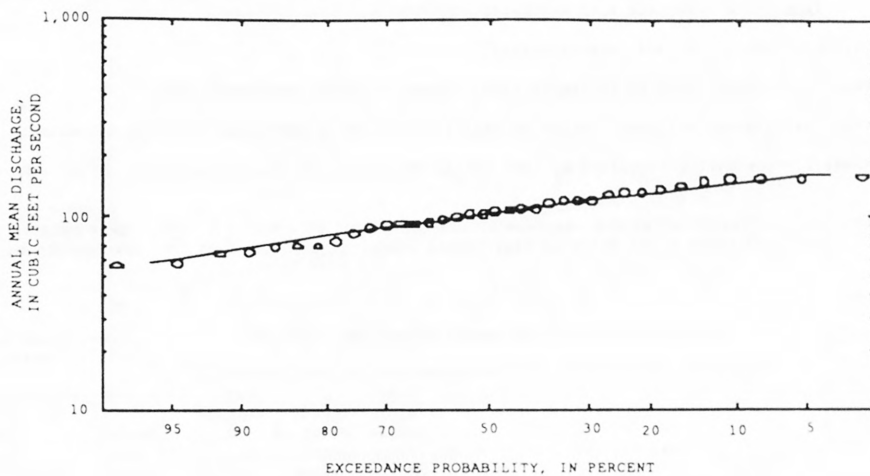
Duration table of daily mean flow for period of record 1925-27, 1939-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
634	433	319	240	182	103	61	38	25	18	14	11	9.0	7.3	6.4	5.6	4.2	4.2

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## WEISER RIVER BASIN

13263500 WEISER RIVER ABOVE CRANE CREEK, NEAR WEISER, ID

LOCATION.—Lat 44°18', long 116°48', in sec.10, T.11 N., R.4 W., Washington County, Hydrologic Unit 17050124, on left bank 1 mi upstream from Crane Creek and 9 mi northeast of Weiser.

DRAINAGE AREA.—1,160 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—July to September 1920, February 1921 to September 1952.

GAGE.—Water-stage recorder. Datum of gage is 2,647.00 ft above sea level, by barometer.

REMARKS.—Flow partly regulated by Lost Valley Reservoir and other reservoirs. Diversions above station for irrigation of about 22,000 acres.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 16,900 ft<sup>3</sup>/s Mar. 19, 1932, (gage height, 10.8 ft, from floodmark), from rating curve extended above 9,000 ft<sup>3</sup>/s by logarithmic plotting; minimum, 5 ft<sup>3</sup>/s (estimated) Aug. 11 to Sept. 10, 1931.

Summary of monthly and annual discharges, 1922-52

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	375	21	125	78	0.62	1.2
November	967	76	298	250	0.84	2.8
December	1,580	93	520	496	0.95	4.9
January	1,660	100	458	363	0.79	4.3
February	3,180	136	999	834	0.84	9.3
March	3,710	412	2,010	913	0.45	18.8
April	7,120	664	2,580	1,270	0.49	24.1
May	4,610	571	2,280	999	0.44	21.4
June	2,630	90	1,140	737	0.65	10.6
July	513	14	174	149	0.86	1.6
August	129	6.0	56	35	0.62	0.5
September	169	7.0	68	41	0.61	0.6
Annual	1,710	309	891	352	0.39	100

Magnitude and frequency of annual low flow,  
based on period of record 1922-52

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	29	14	9.7	6.8	4.5	3.2
3	30	15	9.8	6.9	4.5	3.3
7	31	15	10	7.0	4.5	3.4
14	35	16	11	7.2	4.5	3.5
30	39	18	11	7.7	4.7	3.6
60	48	24	16	11	6.8	4.9
90	60	30	19	13	8.1	5.7
120	78	40	26	18	11	8.0
183	136	81	61	48	37	31

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1922-52

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
7,200	10,300	12,500	15,300	17,400	19,600

Magnitude and frequency of annual high flow,  
based on period of record 1922-52

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	5,760	8,280	9,990	12,200	13,800	15,500
3	4,960	6,930	8,210	9,780	10,900	12,000
7	4,180	5,780	6,740	7,850	8,620	9,340
15	3,550	4,960	5,800	6,750	7,400	7,990
30	3,000	4,220	4,980	5,870	6,500	7,090
60	2,610	3,680	4,290	4,970	5,410	5,800
90	2,370	3,280	3,790	4,330	4,670	4,980

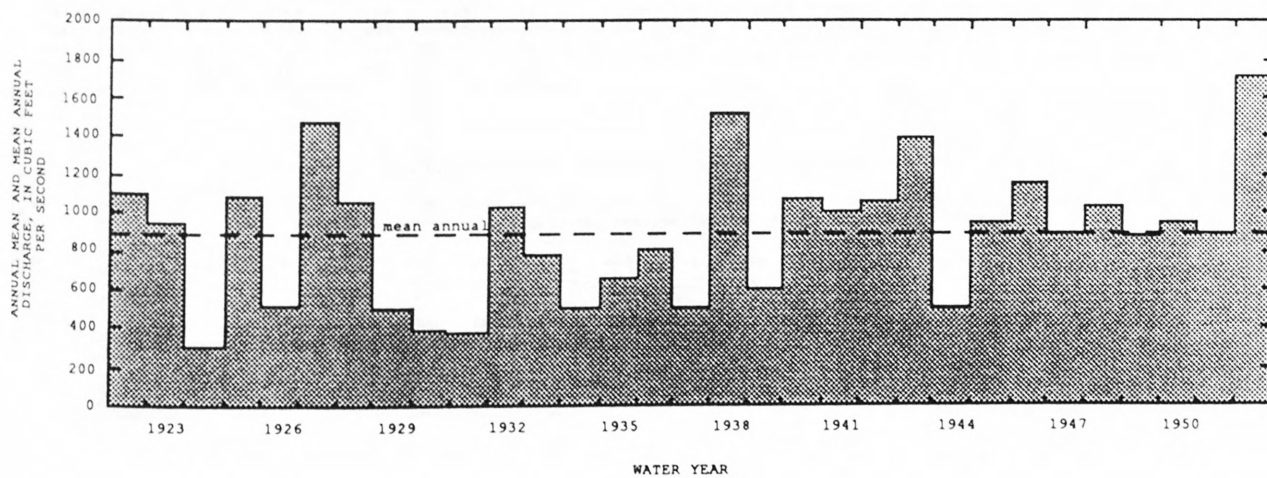
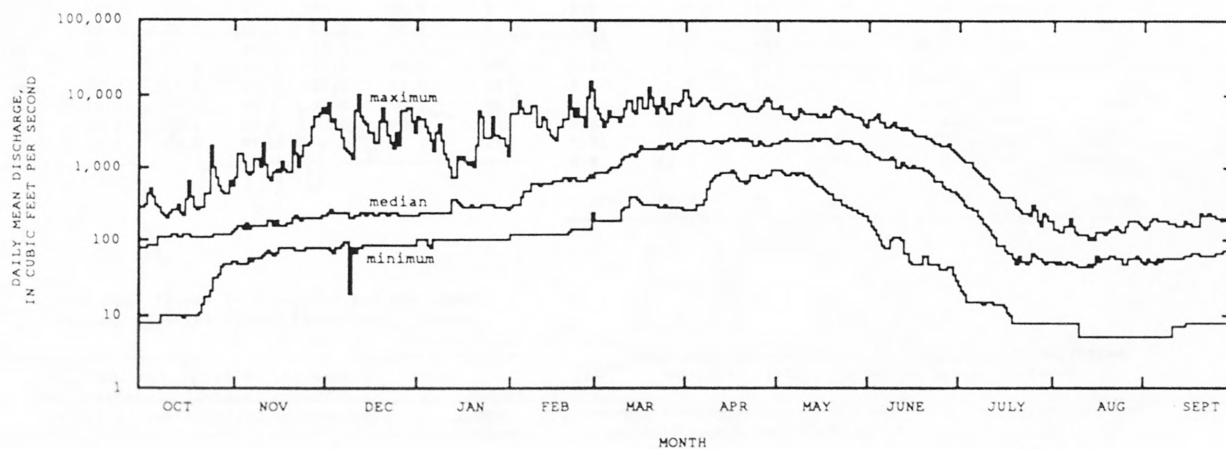
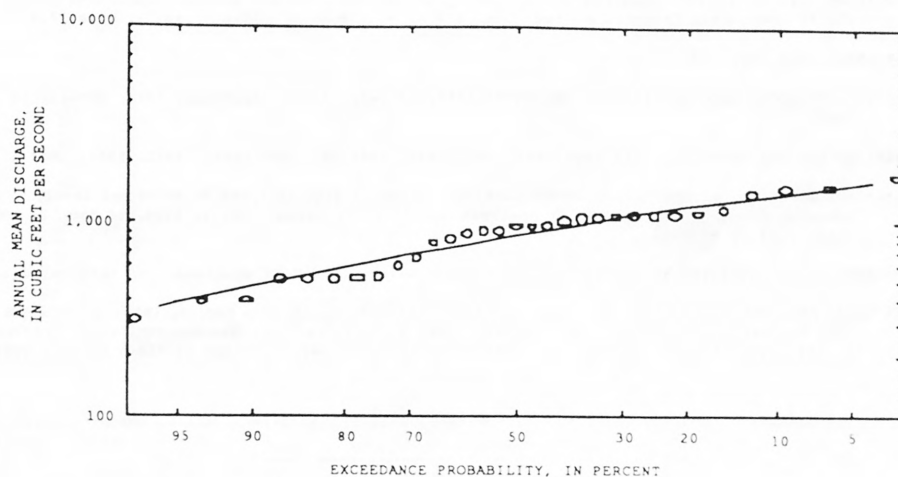
Duration table of daily mean flow for period of record 1922-52

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
5,870	3,570	2,680	2,090	1,640	952	523	265	172	124	84	43	22	13	8.0	6.9	5.5

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## WEISER RIVER BASIN

13264500 CRANE CREEK NEAR MIDVALE, ID

LOCATION.—Lat 44°21'20", long 116°37'05", SE 1/4, in sec. 19, T. 12 N., R. 2 W., Washington County, Hydrologic Unit 17050124, on left bank 400 ft downstream from Crane Creek Dam, 9.5 mi southeast of Midvale, and at mile 12.4.

DRAINAGE AREA.—242 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1910 to September 1911, January 1912 to September 1915, January to April 1916, May 1924 to September 1969.

REVISED RECORDS.—WSP 833: Drainage area. WSP 963: 1941(M). WSP 1347: 1925, 1927. WSP 1737: 1911(M).

GAGE.—Water-stage recorder and concrete control. Datum of gage is 3,140 ft above sea level, by barometer. Oct. 30, 1910, to May 4, 1916, nonrecording gage at site 100 ft upstream at different datum. May 1, 1924, to Dec. 7, 1952, water-stage recorder on right bank at datum 1.54 ft higher.

REMARKS.—Flow regulated since 1911 by Crane Creek Reservoir 0.1 mi upstream. No large diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 4,750 ft<sup>3</sup>/s Dec. 3, 1910 (gage height, 9.4 ft, from floodmark, site and datum then in use), from rating curve extended above 3,500 ft<sup>3</sup>/s; maximum observed since regulation began, 1.3 ft<sup>3</sup>/s Mar. 30, 31, Apr. 1, 1913 (gage height, 6.1 ft, site and datum then in use); no flow at times in many years when gates in dam were closed.

Summary of monthly and annual discharges, 1913-15, 1925-69

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	177	0.00	18	35	2.0	2.0
November	45	0.00	3.2	8.9	2.8	0.4
December	280	0.00	16	57	3.6	1.8
January	641	0.00	64	158	2.5	7.2
February	638	0.00	114	155	1.4	12.8
March	812	0.00	155	188	1.2	17.5
April	521	0.00	106	136	1.3	12.0
May	624	0.00	49	103	2.1	5.5
June	190	6.1	28	31	1.1	3.2
July	204	15	110	47	0.43	12.4
August	220	13	148	47	0.31	16.7
September	178	7.6	75	36	0.48	8.5
Annual	193	27	74	39	0.53	100

Magnitude and frequency of annual low flow,  
based on period of record 1913-15, 1926-69

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10† 10%	20† 5%	50† 2%	100† 1%
1	0.00	0.00	0.00	0.00	0.00	0.00
3	0.00	0.00	0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	0.00	0.00
14	0.00	0.00	0.00	0.00	0.00	0.00
30	0.00	0.00	0.00	0.00	0.00	0.00
60	0.00	0.00	0.00	0.00	0.00	0.00
90	0.00	0.00	0.00	0.00	0.00	0.00
120	0.09	0.00	0.00	0.00	0.00	0.00
183	11	2.4	0.79	0.12	0.00	0.00

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1913-15, 1925-69

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
557	979	1,320	1,800	2,210	2,650

Magnitude and frequency of annual high flow,  
based on period of record 1913-15, 1925-69

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10† 10%	25† 4%	50† 2%	100† 1%
1	547	877	1,090	1,340	1,510	1,670
3	534	865	1,080	1,340	1,520	1,690
7	500	824	1,040	1,310	1,510	1,700
15	415	695	897	1,170	1,370	1,580
30	301	489	635	845	1,020	1,210
60	221	331	418	546	655	777
90	171	259	332	444	544	660

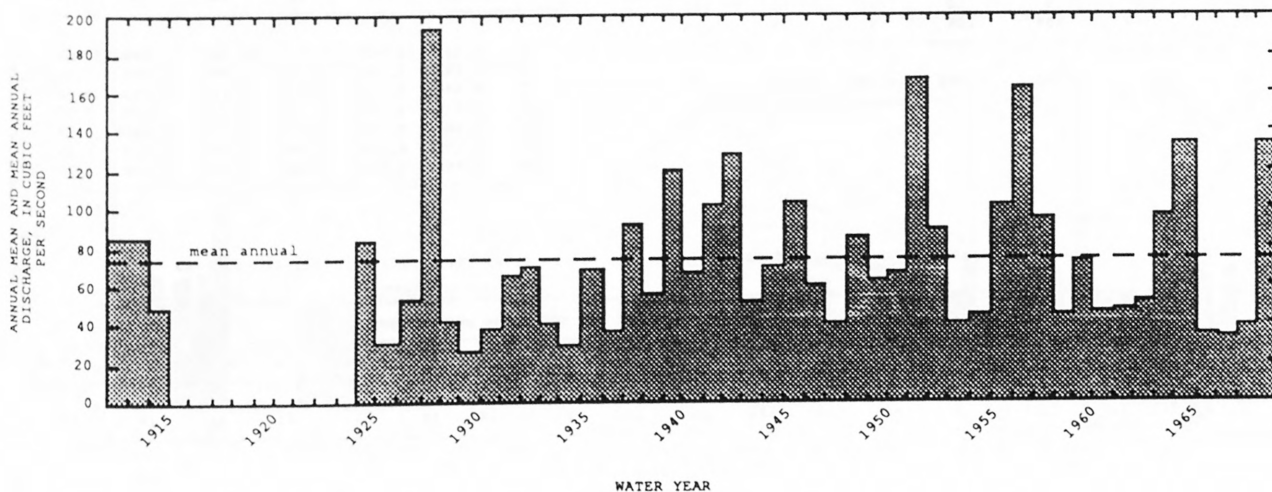
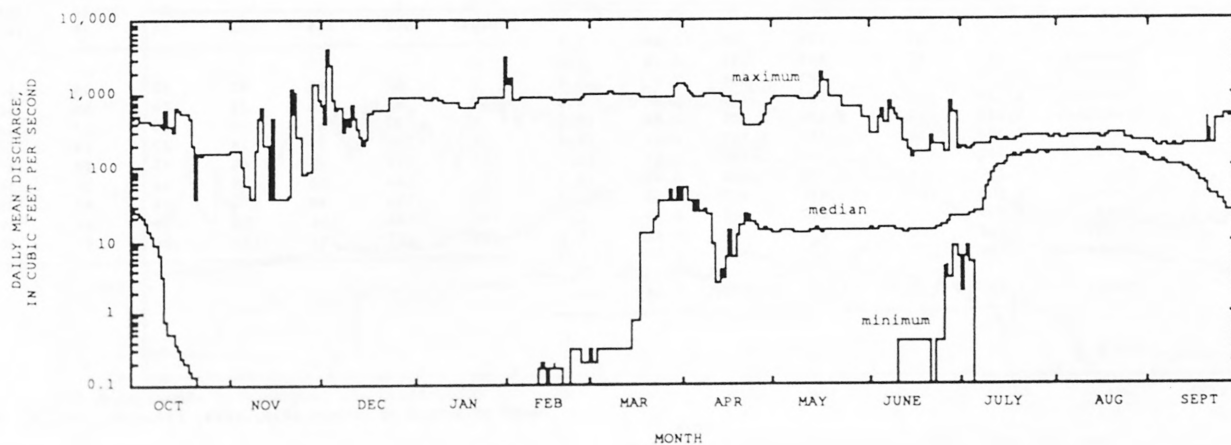
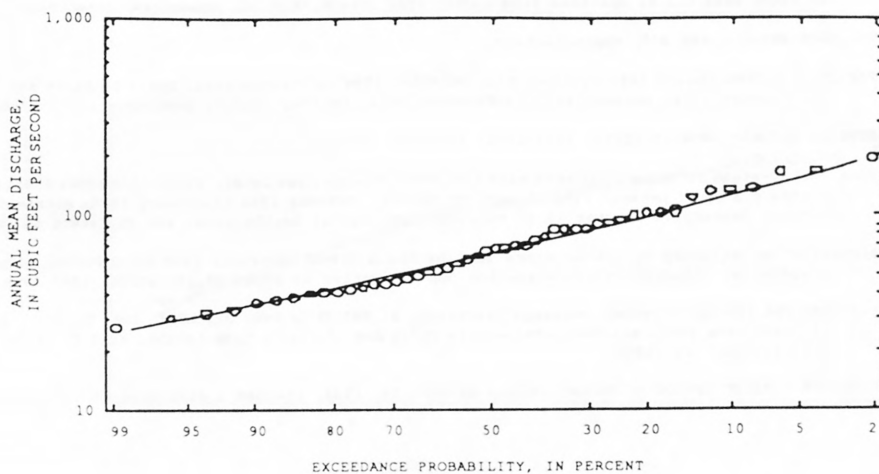
Duration table of daily mean flow for period of record 1913-15, 1925-69

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
895	329	192	154	122	56	22	12	1.7	0.10	0.02	0.01	0.00	0.00	0.00	0.00	0.00	0.00

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## WEISER RIVER BASIN

13266000 WEISER RIVER NEAR WEISER, ID

LOCATION.—Lat 44°16'03", long 116°46'16", in NE 1/4, SE 1/4, SE 1/4, sec. 23, T.11 N., R.4 W., Washington County, Hydrologic Unit 17050124, on right bank 0.2 mi upstream from county road bridge, 2.0 mi downstream from Crane Creek, 10 mi east of Weiser, and at mile 14.9.

DRAINAGE AREA.—1,460 mi<sup>2</sup>, 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 September 1990. Published as "at Weiser" prior to 1900.

REVISED RECORDS.—WDR ID 1347: 1895-1905, 1953(M).

GAGE.—Water-stage recorder. Datum of gage is 2,206.1 ft above sea level. Prior to October 1952, nonrecording gages at several sites downstream within 1.5 mi of present site at various datums. October 1952 to January 1974, water-stage recorder, 1,000 ft upstream at different datum. January to October 1974, nonrecording gage at nearby sites and different datums.

REMARKS.—Flow slightly regulated since 1911 by Crane Creek Reservoir 14.3 mi upstream, capacity about 51,700 acre-ft, and other small reservoirs. Diversions above station for irrigation of about 30,400 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 21,000 ft<sup>3</sup>/s Feb. 22, 1982, gage height, 12.04 ft; maximum gage height, 16.00 ft, Feb. 14, 1979 (ice jam); minimum observed, 14 ft<sup>3</sup>/s Aug. 7, 1911, gage height, 2.80 ft, site and datum then in use; minimum gage height, 1.45 ft, Nov. 29, 1970

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 19, 1932, reached a discharge of about 17,500 ft<sup>3</sup>/s.

Summary of monthly and annual discharges, 1896, 1899,  
1901-04, 1911-14, 1922-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	631	37	175	97	0.56	1.4
November	1,450	80	319	249	0.78	2.5
December	2,920	96	607	605	1.0	4.7
January	4,130	103	766	779	1.0	6.0
February	5,400	155	1,370	1,120	0.82	10.7
March	7,200	136	2,340	1,320	0.56	18.3
April	7,760	174	2,570	1,240	0.48	20.1
May	5,150	182	2,450	1,010	0.41	19.2
June	5,900	122	1,470	927	0.63	11.5
July	1,050	74	347	183	0.53	2.7
August	466	23	210	89	0.42	1.6
September	406	17	166	82	0.50	1.3
Annual	2,020	136	1,060	407	0.38	100

Magnitude and frequency of annual low flow,  
based on period of record 1896, 1899,  
1901-04, 1912-14, 1923-91

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	81	44	30	22	14	11
3	87	48	33	24	16	12
7	93	51	35	25	17	13
14	100	55	38	27	18	14
30	112	64	45	33	22	17
60	134	80	59	44	31	24
90	153	98	74	58	43	34
120	168	114	91	74	58	49
183	221	151	125	106	89	79

Magnitude and frequency of annual high flow,  
based on period of record 1896, 1899, 1901-04, 1911-14, 1922-90

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1896, 1899, 1901-04,  
1911-14, 1922-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
10,300	14,700	17,000	19,300	20,700	21,900	

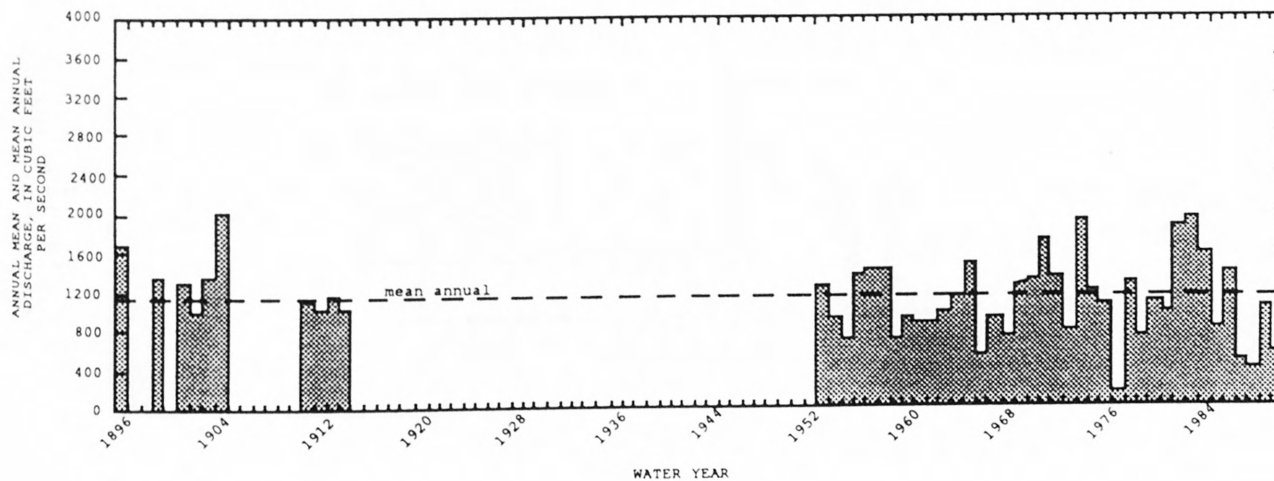
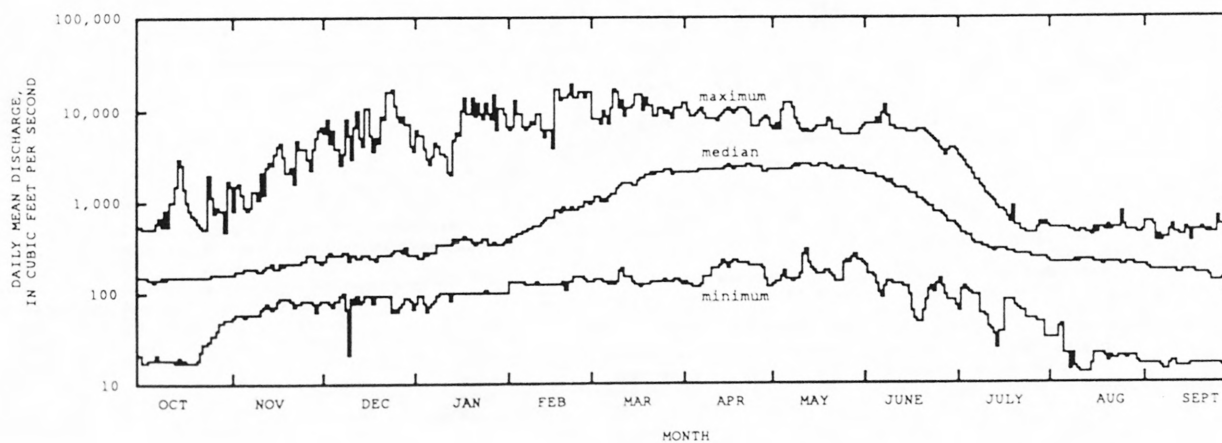
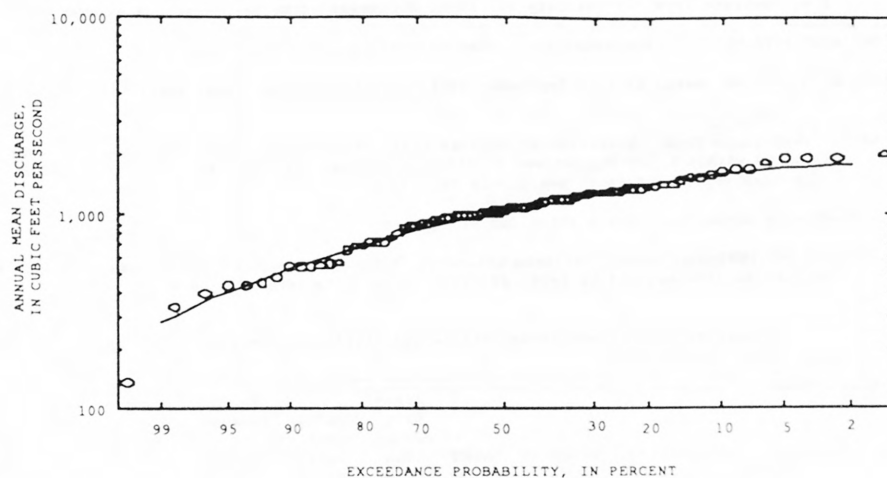
Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	8,530	11,600	12,600	13,200	13,400	13,500
3	7,250	9,650	10,400	10,800	11,000	11,000
7	5,840	7,800	8,440	8,840	8,990	9,060
15	4,710	6,230	6,720	7,010	7,120	7,170
30	3,860	5,030	5,390	5,610	5,690	5,730
60	3,170	4,100	4,390	4,560	4,620	4,650
90	2,840	3,620	3,860	3,990	4,040	4,060

Duration table of daily mean flow for period of record 1896, 1899, 1901-04, 1911-14, 1922-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
6,820	3,960	2,940	2,350	1,880	1,140	625	356	262	210	166	121	87	53	39	28	17	



LOCATION MAP



## WEISER RIVER BASIN

13267000 MANN CREEK NEAR WEISER, ID

LOCATION.—Lat 44°23'30", long 116°53'40", in NE 1/4, sec. 11, T. 12 N., R. 5 W., Washington County, Hydrologic Unit 17050124, on left bank 2 mi upstream from U.S. Highway 95, 10 mi northeast of Weiser, and 11.5 mi upstream from mouth.

DRAINAGE AREA.—56 mi<sup>2</sup>, approximately. Mean elevation, 4,860 ft.

PERIOD OF RECORD.—March 1911 to September 1913, July to November 1920, April 1937 to January 1962. Annual maximums, water years 1962-65.

GAGE.—Crest-stage gage. Elevation of gage is 2,830 ft above sea level, from topographic map. Prior to Feb. 9, 1951, nonrecording gages at sites within 1,000 ft upstream at different datum. Feb. 9, 1951, to Jan. 12, 1962, nonrecording gage at present site and datum, with crest-stage indicator since July 16, 1957.

REMARKS.—One diversion above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,540 ft<sup>3</sup>/s Mar. 27, 1940, gage height, 5.45 ft (from floodmark), site and datum then in use; no flow Aug. 18 to Sept. 22, 1937, July 31 to Sept. 13, 1939.

Summary of monthly and annual discharges, 1912-13, 1938-61

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	7.2	2.0	4.4	1.4	0.31	0.9
November	21	2.8	8.1	4.2	0.51	1.7
December	51	3.7	14	14	0.96	2.9
January	60	4.9	16	13	0.83	3.3
February	107	5.0	33	25	0.74	6.9
March	240	12	84	47	0.56	17.4
April	405	67	176	82	0.47	36.2
May	238	22	108	58	0.54	22.1
June	88	8.1	29	17	0.60	5.9
July	16	2.0	8.2	3.6	0.44	1.7
August	6.4	0.00	2.7	1.6	0.60	0.5
September	6.1	0.47	2.4	1.2	0.47	0.5
Annual	73	21	40	15	0.36	100

Magnitude and frequency of annual low flow,  
based on period of record 1912-13, 1939-61

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	0.91	0.35	0.19	0.07	0.00	0.00
3	1.0	0.39	0.20	0.07	0.00	0.00
7	1.2	0.50	0.26	0.09	0.00	0.00
14	1.5	0.62	0.31	0.10	0.00	0.00
30	1.8	0.87	0.53	0.24	0.00	0.00
60	2.4	1.3	0.78	0.48	0.25	0.16
90	3.0	1.9	1.4	1.1	0.72	0.54
120	3.8	2.7	2.1	1.6	1.2	0.96
183	5.4	3.9	3.2	2.6	2.1	1.8

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1912-13, 1938-61

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
418	653	834	1,090	1,300	1,530

Magnitude and frequency of annual high flow,  
based on period of record 1912-13, 1938-61

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	355	550	694	895	1,060	1,230
3	297	456	576	742	878	1,020
7	249	377	475	612	726	849
15	218	325	404	513	602	697
30	184	262	317	390	447	506
60	149	208	247	297	335	373
90	120	166	196	234	262	290

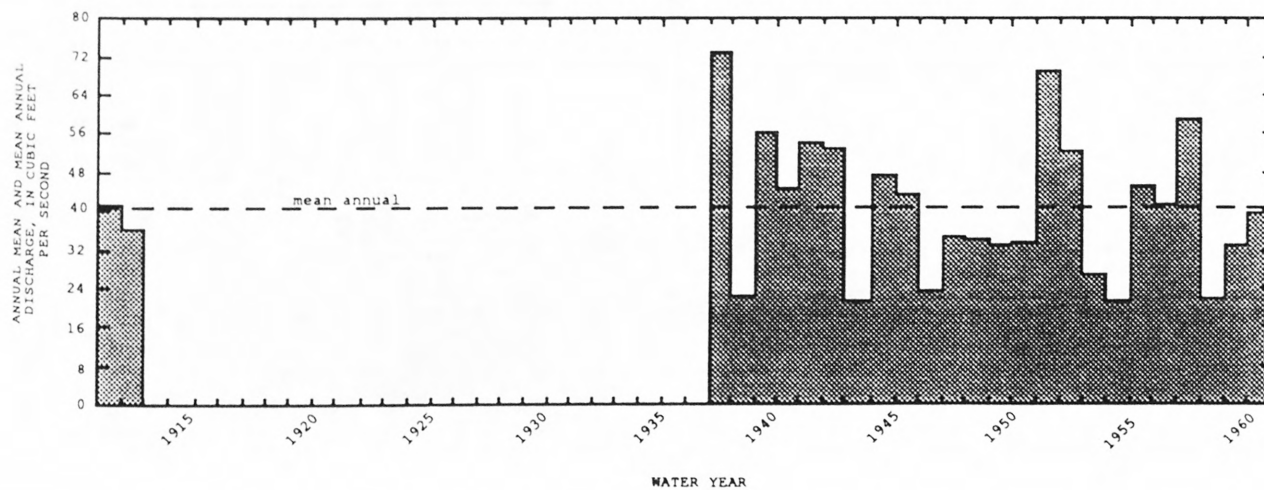
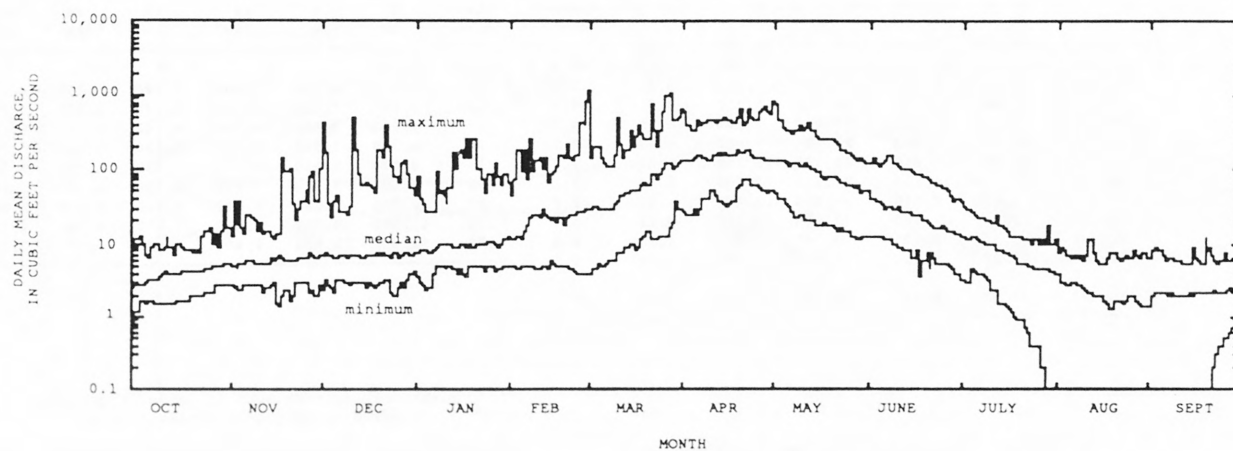
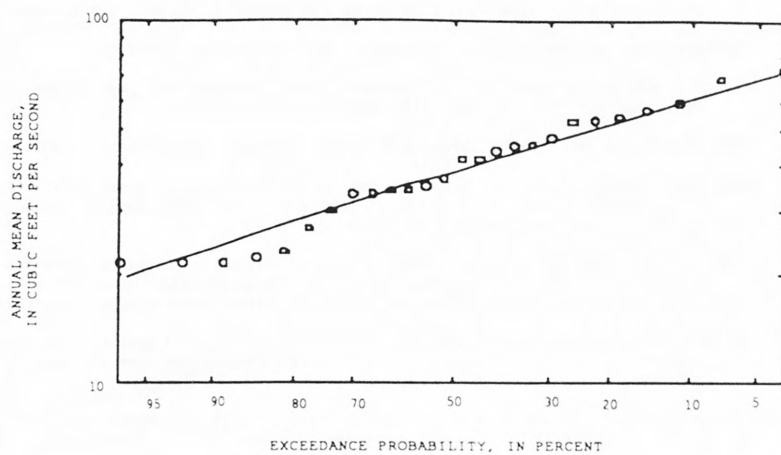
Duration table of daily mean flow for period of record 1912-13, 1938-61

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
348	184	127	89	62	29	15	9.2	6.8	5.1	3.7	2.3	1.4	0.72	0.40	0.11	0.02

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





SNAKE RIVER MAIN STEM

13269000 SNAKE RIVER AT WEISER, ID

LOCATION.—Lat 44°14'44", long 116°58'48", in NW 1/4, SE 1/4, sec.31, T.11 N., R.5 W., Washington County, Hydrologic Unit 17050124, on right bank at upstream side of U.S. Highway 30N bridge at Weiser, 0.7 mi downstream from Weiser River, and at mile 351.3.

DRAINAGE AREA.—69,200 mi<sup>2</sup>, approximately. Mean elevation, 5,400 ft.

PERIOD OF RECORD.—October 1910 to September 1990. Fragmentary gage-height record obtained by U.S. Weather Bureau since 1895. Monthly discharge only for October 1910, published in WSP 1317.

REVISED RECORDS.—WSP 1317: 1918. WSP 1567: 1910(M). WDR ID-76-1: 1975.

GAGE.—Water-stage recorder. Datum of gage is 2,086.64 ft above sea level. Prior to Oct. 1, 1914, nonrecording gage 0.2 mi downstream at different datum. Oct. 1, 1914, to Oct. 11, 1933, nonrecording gage, and Oct. 12, 1933, to Apr. 13, 1964, water-stage recorder, at site 0.3 mi upstream at same datum.

REMARKS.—Flow regulated by many reservoirs above station. Diurnal fluctuation caused by hydroelectric plants upstream. Diversions above station for irrigation of about 3,650,000 acres, of which about 742,000 acres are irrigated by withdrawals from ground water. In addition, approximately 7,300 acres are irrigated below station by diversions from Weiser River (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 84,500 ft<sup>3</sup>/s Apr. 29, 1952, gage height, 14.67 ft, site and datum then in use; maximum gage height recorded, 15.55 ft, Dec. 20, 1972 (backwater from ice jam); minimum observed, 4,570 ft<sup>3</sup>/s July 1, 1977, gage height, 1.32 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of Mar. 3, 1910, reached a stage of 17.1 ft at site and datum 0.3 mi upstream, from reading on old U.S. Weather Bureau gage, discharge, 120,000 ft<sup>3</sup>/s. Flood in June 1894 was considerably higher.

Summary of monthly and annual discharges, 1911-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	24,700	7,820	14,300	3,330	0.23	6.5
November	27,100	10,200	15,400	3,420	0.22	7.0
December	29,200	9,920	15,800	3,970	0.25	7.2
January	34,900	10,300	16,500	5,130	0.31	7.5
February	41,700	10,200	18,800	6,560	0.35	8.5
March	55,400	11,000	22,400	9,560	0.43	10.2
April	68,600	7,810	28,100	13,200	0.47	12.8
May	62,700	8,110	28,800	13,900	0.48	13.1
June	59,100	7,170	26,400	13,800	0.52	12.0
July	29,200	5,840	12,100	5,060	0.42	5.5
August	14,300	5,870	9,750	1,950	0.20	4.4
September	17,200	6,320	11,600	2,570	0.22	5.3
Annual	33,800	10,400	18,300	5,220	0.29	100

Magnitude and frequency of annual low flow,  
based on period of record 1912-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	8,300	6,940	6,250	5,690	5,100	4,710
3	8,430	7,090	6,410	5,880	5,300	4,930
7	8,550	7,220	6,560	6,040	5,480	5,130
14	8,700	7,360	6,710	6,200	5,640	5,290
30	8,990	7,570	6,870	6,330	5,740	5,380
60	9,490	7,940	7,190	6,600	5,980	5,580
90	10,300	8,580	7,720	7,040	6,320	5,860
120	11,300	9,270	8,310	7,570	6,780	6,290
183	12,400	10,400	9,400	8,660	7,900	7,420

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1911-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
45,600	63,100	73,700	86,000	94,500	102,000	

Magnitude and frequency of annual high flow,  
based on period of record 1911-90

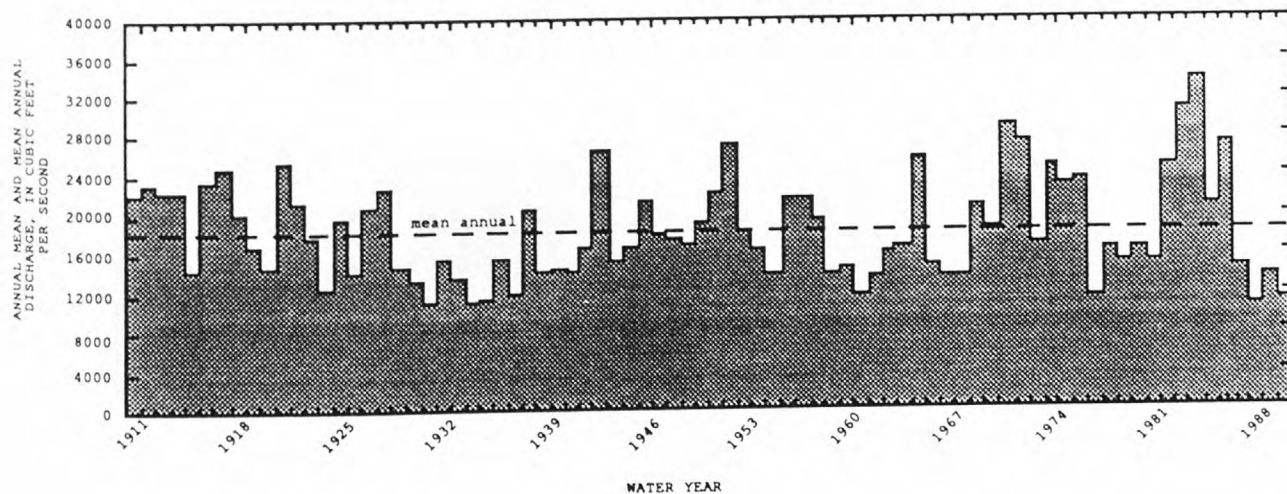
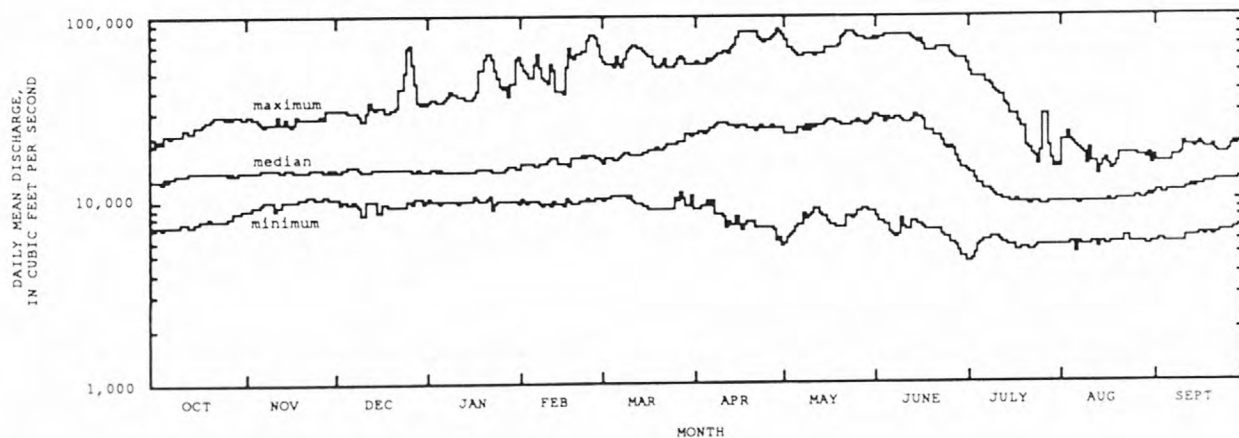
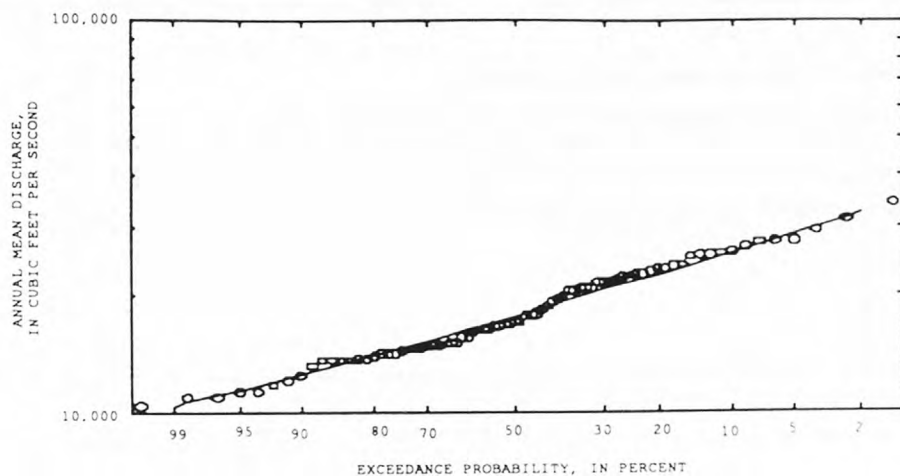
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	44,000	60,800	70,600	81,800	89,300	96,200
3	42,200	58,900	68,900	80,300	88,100	95,300
7	39,900	56,200	66,200	77,800	85,800	93,300
15	37,200	52,900	62,800	74,500	82,700	90,600
30	33,700	48,200	57,700	69,300	77,800	86,000
60	30,100	42,800	51,100	61,600	69,300	76,900
90	27,700	38,900	46,300	55,600	62,500	69,300

Duration table of daily mean flow for period of record 1911-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%		
58,800	42,900	34,000	27,800	23,700	19,000	16,500	14,800	13,300	12,100	10,800	9,140	7,960	7,000	6,360	6,080	5,500		



LOCATION MAP



WILDHORSE RIVER BASIN

13289960 WILDHORSE RIVER AT BROWNLEE DAM, ID

LOCATION.—Lat 44°51'08", long 116°53'41", in NE¼, SW¼, sec.36, T.18 N., R.5 W., Adams County, Hydrologic Unit 17050201, on left bank 5 ft downstream from bridge, about 300 ft upstream from mouth, and 1.1 mi north of Brownlee Dam.

DRAINAGE AREA.—177 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1978 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 1,820 ft above sea level, from topographic map. Prior to Aug. 21, 1986, at site 0.25 mi upstream, at different datum. Records comparable.

REMARKS.—Small diversions upstream for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,590 ft<sup>3</sup>/s Mar. 8, 1986, gage height, 9.07 ft; minimum, 7.1 ft<sup>3</sup>/s Aug. 30, 31, Sept. 1, 1988, gage height, 2.93 ft.

Summary of monthly and annual discharges, 1979-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	42	13	31	9.4	0.31	1.8
November	68	18	37	15	0.40	2.1
December	148	17	54	45	0.84	3.0
January	103	17	50	27	0.55	2.8
February	344	30	125	116	0.93	7.1
March	761	103	297	182	0.61	16.8
April	739	206	409	168	0.41	23.2
May	690	150	378	185	0.49	21.5
June	512	54	245	155	0.63	13.9
July	179	24	75	54	0.72	4.3
August	67	12	33	17	0.52	1.9
September	46	12	29	12	0.40	1.6
Annual	246	65	147	65	0.44	100

Magnitude and frequency of annual low flow,  
based on period of record 1980-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	19	13	11	8.8	6.8	5.6
3	20	14	11	9.0	6.9	5.7
7	21	14	11	9.1	7.0	5.8
14	22	15	12	9.4	7.3	6.1
30	23	16	12	9.9	7.7	6.5
60	26	18	14	11	8.6	7.1
90	28	19	15	12	9.4	7.7
120	30	21	17	14	11	9.1
183	35	23	19	15	12	10

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1979-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,100	1,860	2,440	3,270	3,950	4,680

Magnitude and frequency of annual high flow,  
based on period of record 1979-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	778	1,210	1,530	1,970	2,330	2,710
3	693	1,050	1,310	1,680	1,980	2,300
7	614	905	1,120	1,410	1,640	1,880
15	547	777	928	1,120	1,250	1,390
30	460	657	787	949	1,070	1,190
60	405	578	692	835	940	1,040
90	360	516	620	754	854	955

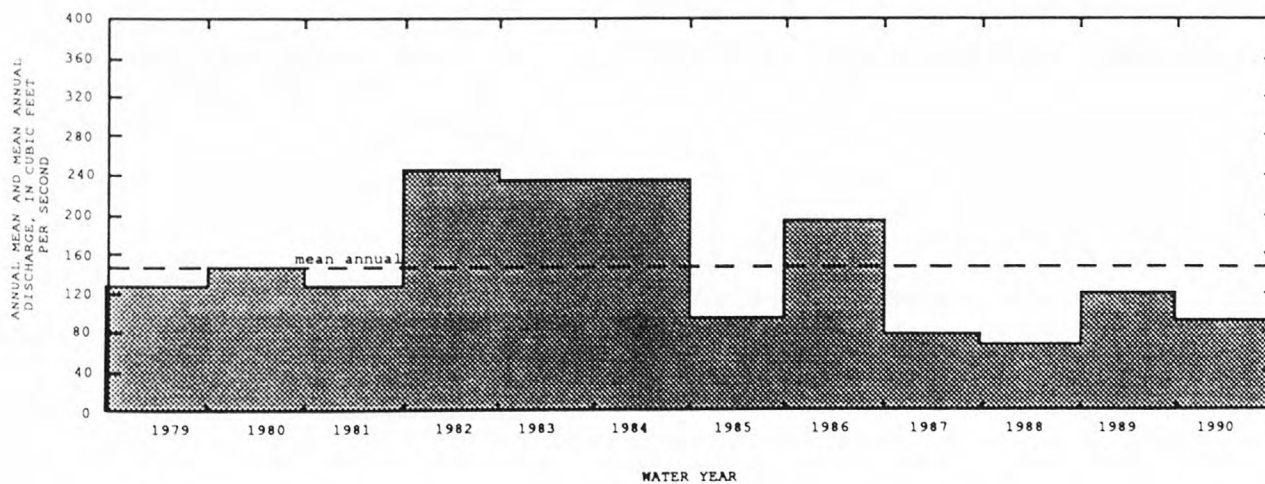
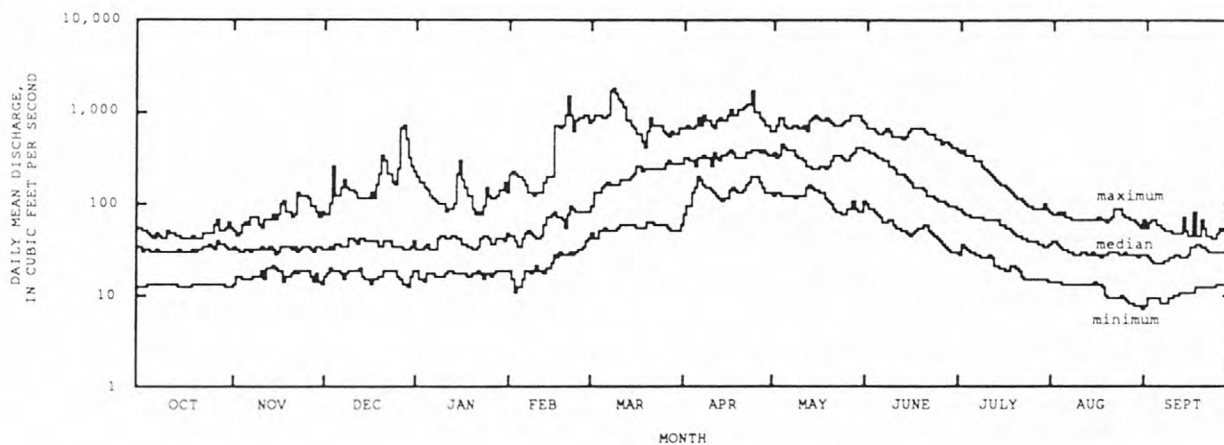
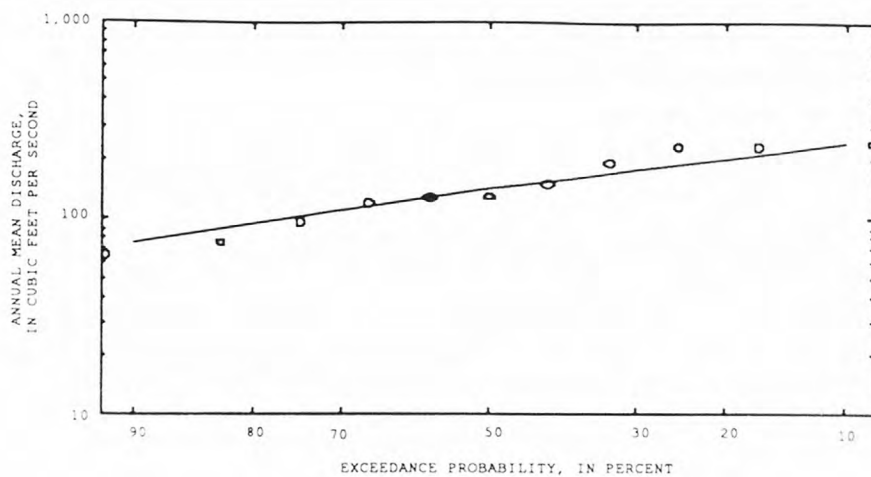
Duration table of daily mean flow for period of record 1979-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
825	583	443	321	251	147	78	52	41	33	28	20	16	13	12	10	8.1

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# SNAKE RIVER MAIN STEM

13290000 SNAKE RIVER AT OXBOW, OR

LOCATION.—Lat 44°58'00", long 116°50'44", in SW 1/4, SE 1/4, sec. 9, T. 7 S., R. 48 E., Baker County, Oregon, Hydrologic Unit 17050201, on left bank at Oxbow, just upstream from intakes to Oxbow powerplant, 0.8 mi southeast of Oxbow, and at mile 273.5.

DRAINAGE AREA.—72,800 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—May 1923 to March 1958, October 1967 to September 1971.

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. 10, 1923, nonrecording gage at site 0.6 mi upstream at different datum. Dec. 10, 1923 to Mar. 8, 1958, water-stage recorder at site 0.6 mi upstream at different datum.

REMARKS.—Flow regulated by many reservoirs above station, the most effective of which is Brownlee Reservoir 11.5 mi upstream (see sta 13289700). Oxbow Dam and powerplant started operation in 1958. Diversions above station for irrigation of about 3,800,000 acres, of which about 742,000 acres are by withdrawals from ground water (1966 determination).

COOPERATION.—Integrator charts, a log of gate and valve operation for spillway, and reservoir elevations furnished by Idaho Power Company.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 89,700 ft<sup>3</sup>/s 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, 3,250 ft<sup>3</sup>/s May 26, 1968.

Summary of monthly and annual discharges, 1926-57, 1968-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	18,700	8,770	13,500	2,510	0.19	6.2
November	21,600	10,400	14,700	2,630	0.18	6.7
December	25,100	10,000	15,700	3,540	0.23	7.2
January	31,500	10,200	16,400	4,710	0.29	7.5
February	40,600	10,500	18,700	6,480	0.35	8.6
March	37,600	11,600	22,200	7,760	0.35	10.2
April	71,900	14,000	29,700	13,900	0.47	13.6
May	55,600	6,930	28,500	12,300	0.43	13.1
June	50,800	8,010	25,400	11,100	0.44	11.6
July	26,000	6,580	12,200	4,770	0.39	5.6
August	13,300	6,370	9,780	1,690	0.17	4.5
September	15,300	7,300	11,400	2,010	0.18	5.2
Annual	29,400	11,200	18,200	4,650	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1927-57, 1969-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	8,770	7,110	6,050	5,140	4,150	3,520
3	8,830	7,390	6,590	5,930	5,200	4,730
7	8,890	7,570	6,890	6,340	5,740	5,350
14	9,040	7,670	6,970	6,400	5,780	5,380
30	9,230	7,880	7,210	6,670	6,100	5,730
60	9,610	8,270	7,600	7,060	6,480	6,100
90	10,300	8,720	7,950	7,330	6,660	6,230
120	11,000	9,300	8,420	7,720	6,950	6,460
183	12,200	10,400	9,410	8,660	7,840	7,320

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1926-57, 1968-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
45,400	61,300	71,000	82,400	90,400	97,900

Magnitude and frequency of annual high flow,  
based on period of record 1926-57, 1968-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	44,500	60,500	70,100	81,300	89,100	96,400
3	43,100	58,900	68,700	80,100	88,100	95,800
7	40,700	56,500	66,500	78,500	87,000	95,200
15	38,000	53,500	63,400	75,600	84,400	92,900
30	34,000	47,700	56,800	68,400	77,000	85,600
60	30,500	41,800	49,000	58,000	64,400	70,800
90	28,200	38,000	44,400	52,100	57,800	63,300

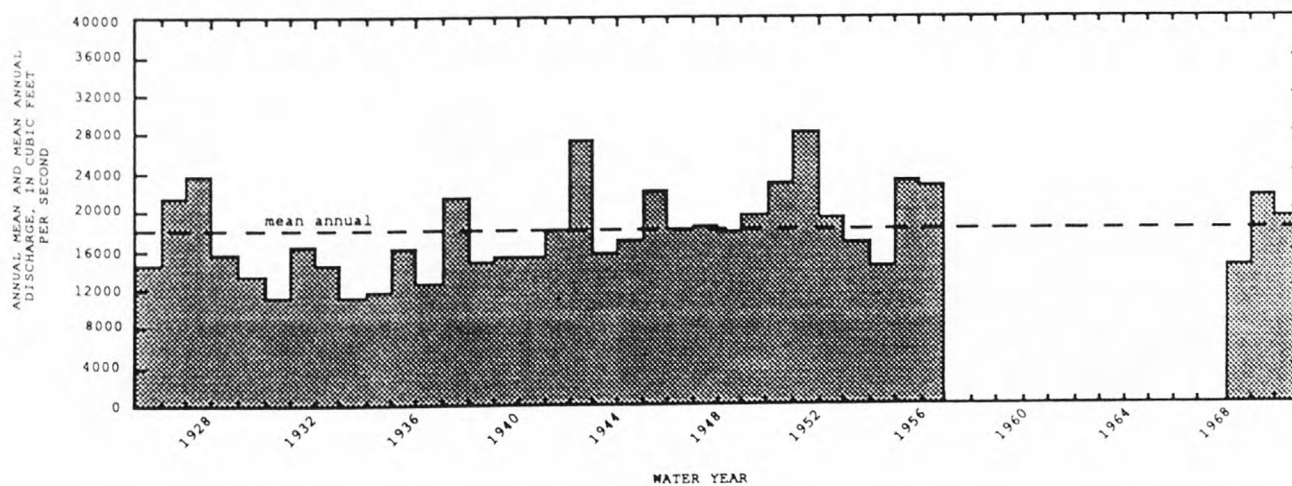
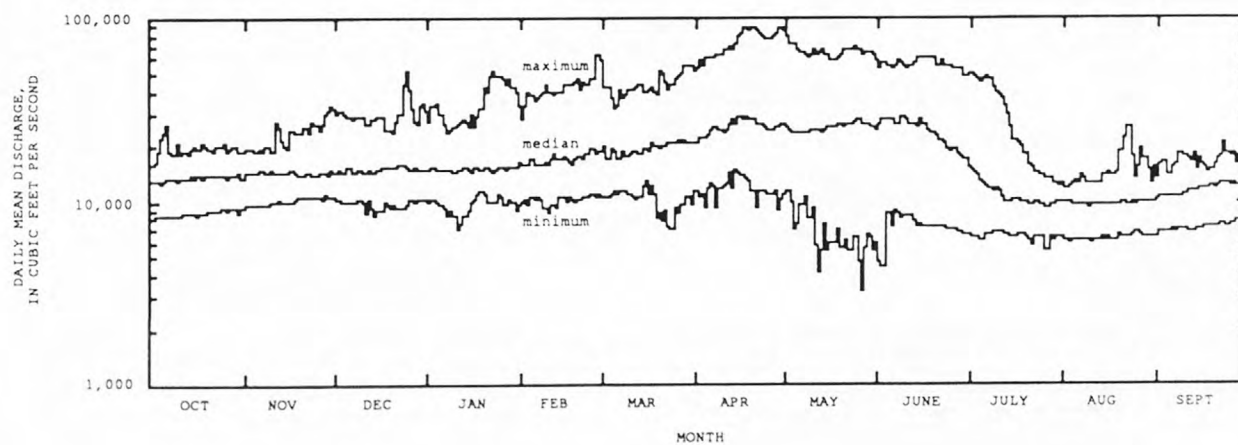
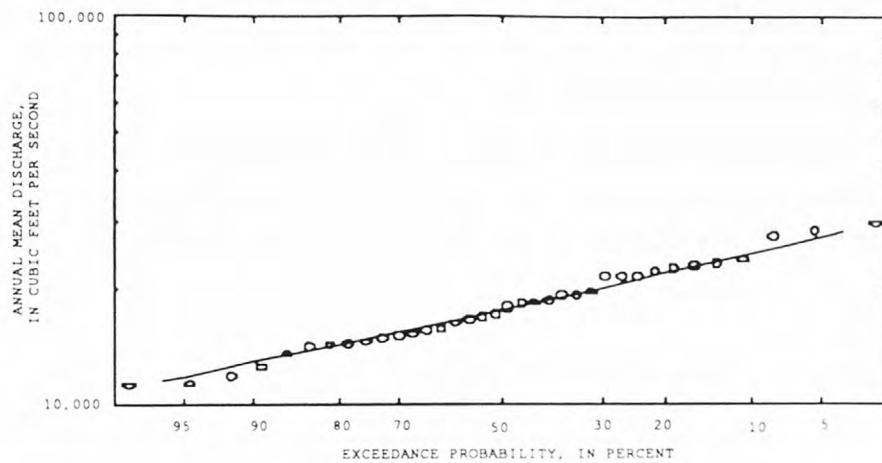
Duration table of daily mean flow for period of record 1926-57, 1968-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
5,200	40,600	33,100	27,200	23,600	19,100	16,600	14,700	13,400	12,100	10,900	9,240	8,170	7,390	6,910	6,430

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## PINE CREEK BASIN

13290190 PINE CREEK NEAR OXBOW, OR

LOCATION.—Lat 44°57'13", long 116°52'21", in NE¼, SW¼, sec.17, T.7 S., R.48 E., Baker County, Hydrologic Unit 17050201, 1.8 mi south of Oxbow, and at mile 1.9.

DRAINAGE AREA.—230 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—November 1966 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 1,850.48 ft above sea level (levels by Idaho Power Company). Prior to Aug. 24, 1967, nonrecording gage at site 1.7 mi downstream at different datum.

REMARKS.—Diversions above station for irrigation of about 19,000 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 7,110 ft<sup>3</sup>/s Feb. 21, 1968, gage height, 9.82 ft; minimum, 10 ft<sup>3</sup>/s Aug. 17-24, 1977, gage height, 2.12 ft.

Summary of monthly and annual discharges, 1968-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	135	24	72	24	0.34	1.6
November	491	45	136	91	0.67	3.1
December	619	58	217	158	0.73	5.0
January	962	52	268	241	0.90	6.1
February	1,040	66	386	267	0.69	8.8
March	1,140	69	641	296	0.46	14.7
April	1,030	65	677	268	0.40	15.5
May	1,600	94	877	321	0.37	20.1
June	1,930	67	786	436	0.56	18.0
July	541	21	201	176	0.88	4.6
August	95	14	51	24	0.48	1.2
September	119	20	57	25	0.44	1.3
Annual	674	55	363	138	0.38	100

Magnitude and frequency of annual low flow, based on period of record 1968-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	33	23	18	15	12	9.7
3	34	23	18	15	12	9.7
7	35	24	19	16	12	10
14	36	25	20	16	12	10
30	38	26	21	18	14	12
60	46	31	24	19	15	12
90	52	35	27	22	17	14
120	62	42	33	27	20	17
183	93	64	52	43	35	30

Magnitude and frequency of instantaneous peak flow, based on period of record 1968-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
2,810	4,510	5,780	7,530	8,930	10,400	

Magnitude and frequency of annual high flow, based on period of record 1968-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	2,260	3,430	3,980	4,460	4,710	4,880
3	1,970	2,750	3,040	3,240	3,320	3,360
7	1,710	2,220	2,360	2,440	2,460	2,470
15	1,470	1,800	1,870	1,900	1,910	1,910
30	1,250	1,500	1,540	1,550	1,560	1,560
60	1,070	1,240	1,260	1,270	1,270	1,270
90	951	1,110	1,130	1,130	1,130	1,130

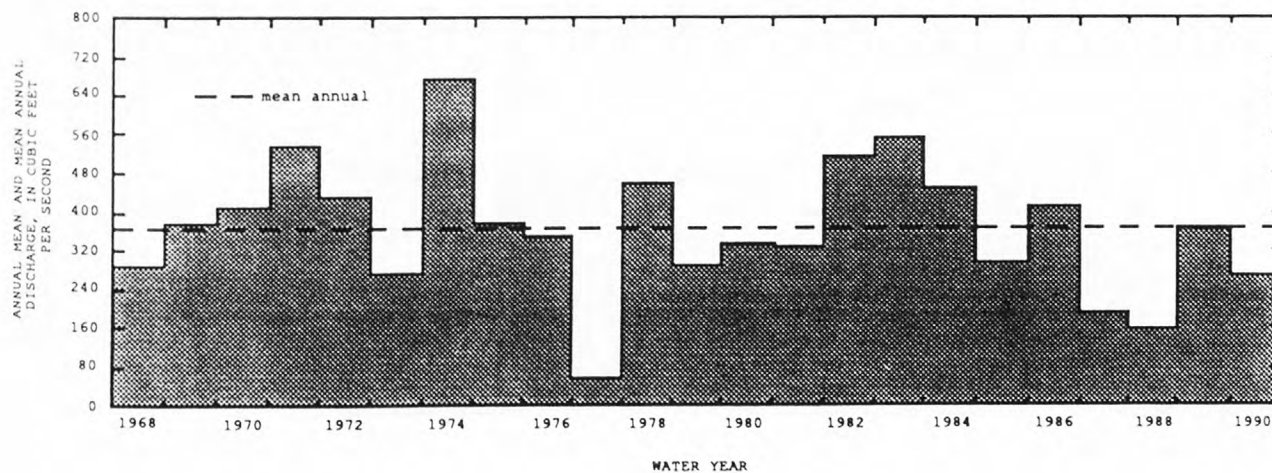
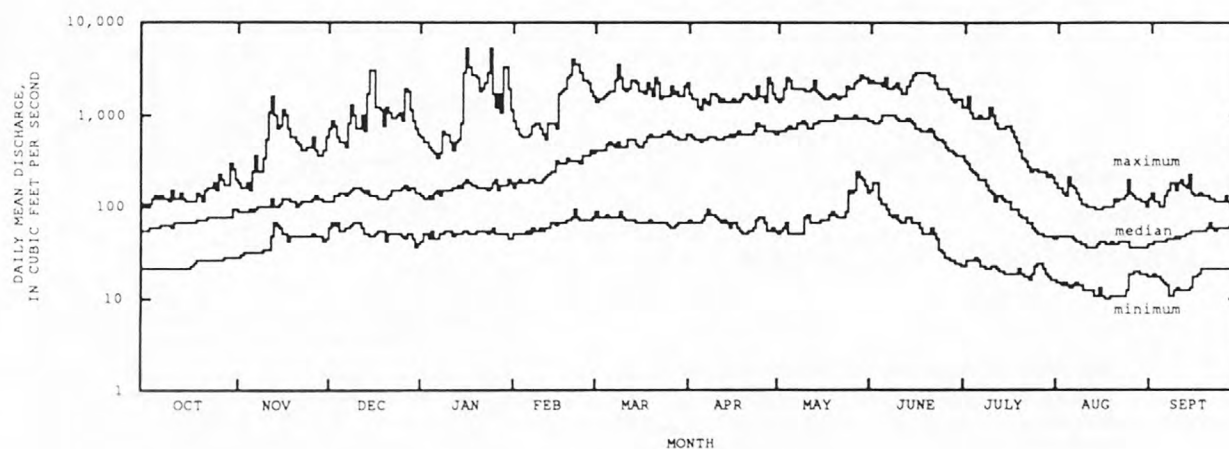
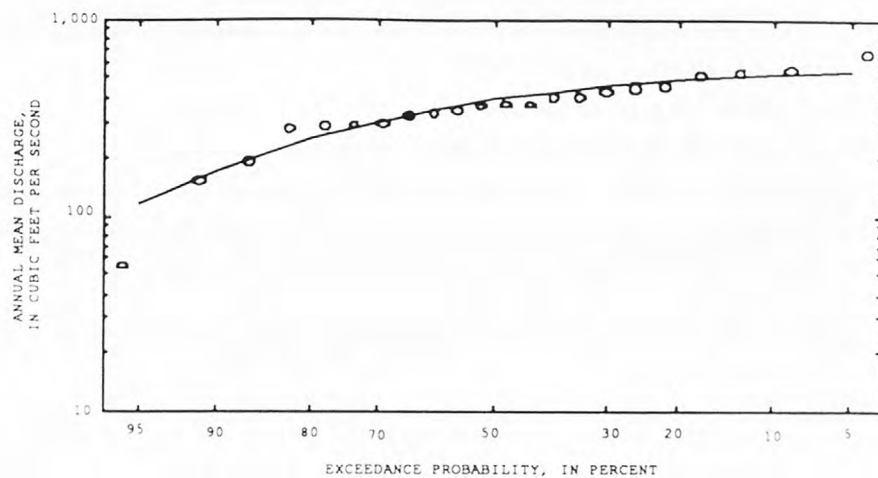
Duration table of daily mean flow for period of record 1968-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,940	1,290	973	793	657	431	252	159	108	80	61	40	30	23	20	17	12

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



Snake River Main Stem

13290450 Snake River at Hells Canyon Dam, Idaho-Oregon State Line

LOCATION.—Lat 45°15'05", long 116°41'50", in SE 1/4, SE 1/4, sec. 33, T. 3 S., R. 49 E., unsurveyed (Willamette Meridian), Wallowa County, Hydrologic Unit 17050201, Wallowa-Whitman National Forest, on left bank 0.2 mi upstream from Hells Canyon Creek, 0.4 mi downstream from Deep Creek, 0.6 mi downstream from Hells Canyon Dam, 15.5 mi northeast of Homestead, Oregon, and at mile 247.0.

DRAINAGE AREA.—73,300 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—July 1965 to September 1990.

REVISED RECORDS.—WDR ID-78-2: 1969-70, 1972-76, WDR ID-79-2: 1972-73(m).

GAGE.—Water-stage recorder. Datum of gage is 1,400.00 ft above sea level (levels by Idaho Power Company).

REMARKS.—Flow regulated by many reservoirs above station, with a total usable capacity of more than 10,000,000 acre-ft, the most effective of which is Brownlee Reservoir 38 mi upstream (see sta 13289700). Diurnal fluctuations caused by Hells Canyon powerplant. Diversions above station for irrigation of about 3,820,000 acres, of which 742,000 acres are irrigated by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 87,800 ft<sup>3</sup>/s Feb. 23, 1982, gage height, 84.05 ft; minimum, 1,580 ft<sup>3</sup>/s Mar. 19, 1967, gage height, 59.9 ft; minimum daily, 4,360 ft<sup>3</sup>/s May 8, 1977.

Summary of monthly and annual discharges, 1966-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	24,100	9,960	16,300	4,190	0.26	6.4
November	28,600	11,300	17,800	4,660	0.26	7.0
December	30,400	11,900	19,900	5,130	0.26	7.8
January	38,200	13,800	23,300	6,470	0.28	9.2
February	44,700	11,600	25,200	9,130	0.36	9.9
March	66,300	11,600	29,600	16,400	0.55	11.6
April	62,000	7,370	31,500	18,600	0.59	12.4
May	68,800	6,400	27,700	17,000	0.61	10.9
June	59,100	7,780	24,400	13,200	0.54	9.6
July	25,600	6,900	13,600	5,560	0.41	5.3
August	17,100	6,650	11,200	2,330	0.21	4.4
September	19,100	6,890	14,100	2,930	0.21	5.5
Annual	36,600	10,600	21,200	7,400	0.35	100

Magnitude and frequency of annual low flow, based on period of record 1967-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	7,560	6,060	5,310	4,710	4,070	3,670
3	8,230	6,610	5,770	5,100	4,380	3,930
7	8,770	7,250	6,480	5,860	5,190	4,760
14	9,130	7,550	6,790	6,200	5,580	5,190
30	9,760	8,080	7,290	6,690	6,060	5,670
60	10,900	8,940	8,040	7,350	6,620	6,160
90	12,000	9,770	8,680	7,840	6,940	6,370
120	12,800	10,200	8,930	7,980	6,990	6,380
183	14,300	11,000	9,560	8,460	7,340	6,650

Magnitude and frequency of instantaneous peak flow, based on period of record 1966-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
48,800	66,100	77,200	90,800	101,000	111,000

Magnitude and frequency of annual high flow, based on period of record 1966-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	45,300	62,000	72,700	85,800	95,300	105,000
3	43,700	60,600	71,500	84,900	94,600	104,000
7	42,100	59,200	70,200	83,800	93,700	103,000
15	40,100	57,500	68,500	81,700	91,000	100,000
30	36,400	53,200	64,300	78,200	88,400	98,500
60	33,100	48,300	58,600	71,700	81,500	91,300
90	30,300	44,400	54,200	67,000	76,800	86,900

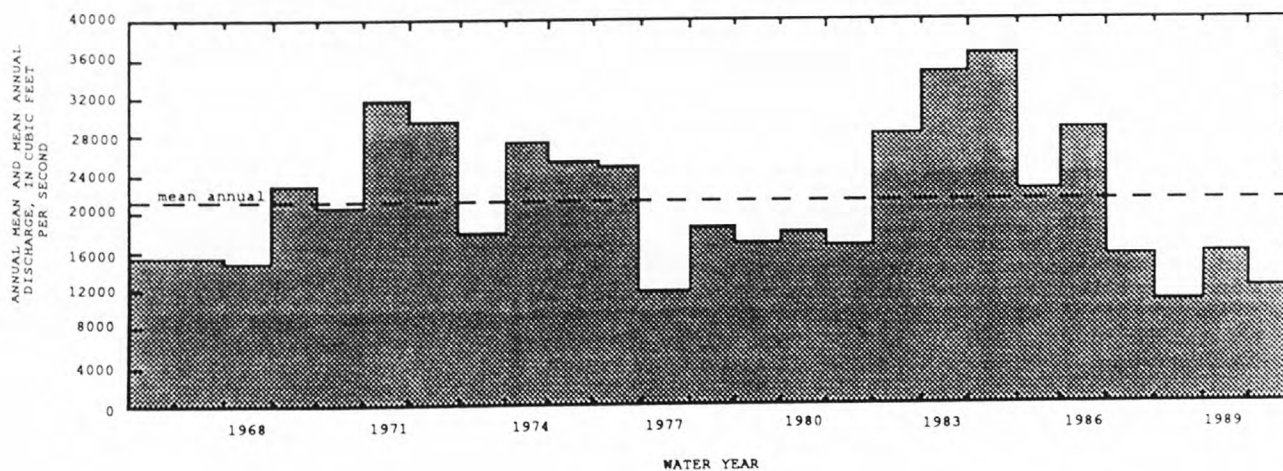
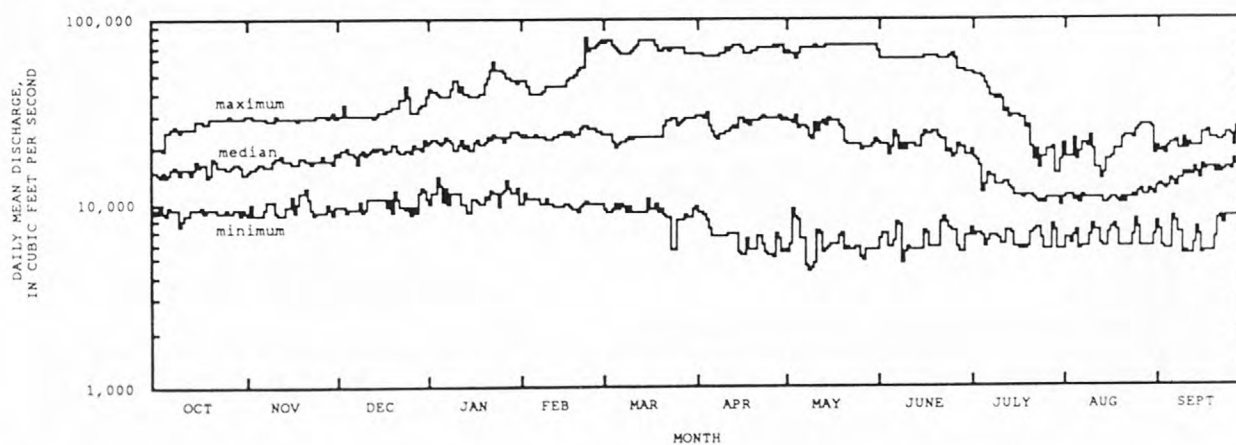
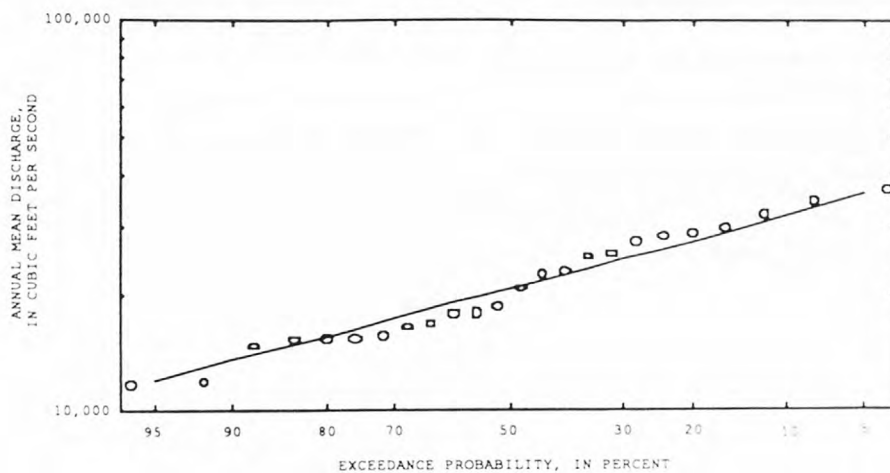
Duration table of daily mean flow for period of record 1966-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time													
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	99%
66,400	50,600	39,700	31,800	28,800	23,700	20,100	17,300	15,200	13,200	11,100	9,360	8,150	6,850
													6,100
													5,730
													5,220

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



**SNAKE RIVER MAIN STEM**

13290500 SNAKE RIVER NEAR JOSEPH, ID

LOCATION.—Lat 45°49'02", long 116°45'12", in NE¼, NE¼, sec.24, T.3 N., R.48 E. (Willamette Meridian, unsurveyed), Wallowa County, Oregon, Wallowa National Forest, Hydrologic Unit 17060101, on left bank at China Gulch, 0.5 mi upstream from Imnaha River, 0.9 mi downstream from Divide Creek, 13 mi west of Joseph, 22 mi west of White Bird, and at mile 192.3.

DRAINAGE AREA.—73,800 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—April 1955 to February 1971 (destroyed by flood of February 1971).

GAGE.—Water-stage recorder. Elevation of gage is 940.54 ft above sea level.

REMARKS.—Flow regulated by many reservoirs above station, the most effective of which is Brownlee Reservoir 92.7 mi upstream (see sta 13289700). Diurnal fluctuation caused by Hells Canyon powerplant 54.7 mi upstream. Diversions above station for irrigation of about 3,820,000 acres, of which about 742,000 acres are by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 80,000 ft<sup>3</sup>/s Dec. 26, 1964, gage height, 20.16 ft; minimum daily, 1,050 ft<sup>3</sup>/s Sept. 1, 1958.

Summary of monthly and annual discharges, 1956-70

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	21,200	12,400	15,200	2,300	0.15	6.8
November	18,000	12,500	15,100	1,460	0.10	6.7
December	28,000	12,900	17,600	3,760	0.21	7.8
January	30,000	14,800	20,100	4,700	0.23	8.9
February	59,500	17,100	24,000	10,900	0.45	10.7
March	44,300	14,500	22,800	9,620	0.42	10.1
April	44,700	12,400	24,700	11,800	0.48	11.0
May	55,100	8,030	24,700	13,900	0.56	11.0
June	43,300	12,200	24,000	9,770	0.41	10.7
July	17,100	6,950	11,500	2,890	0.25	5.1
August	15,400	8,660	11,400	1,700	0.15	5.1
September	16,000	11,400	13,800	1,330	0.10	6.1
Annual	28,600	13,100	18,700	4,540	0.24	100

Magnitude and frequency of annual low flow,  
based on period of record 1957-70

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	7,520	4,530	2,990	1,940	1,090	698
3	8,370	5,280	3,590	2,400	1,390	912
7	9,180	5,900	4,120	2,850	1,730	1,180
14	9,190	6,810	5,590	4,640	3,670	3,090
30	9,880	8,360	7,620	7,030	6,400	6,000
60	10,800	9,320	8,610	8,050	7,440	7,040
90	11,600	10,300	9,720	9,240	8,730	8,400
120	12,100	10,600	9,940	9,390	8,800	8,430
183	13,400	11,700	10,800	10,100	9,310	8,800

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1956-70

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
44,000	61,400	72,100	85,000	94,100	103,000

Magnitude and frequency of annual high flow,  
based on period of record 1956-70

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	41,300	58,400	69,500	83,300	93,400	102,000
3	40,100	56,800	67,600	81,100	90,900	101,000
7	38,500	54,200	64,600	77,500	87,000	96,400
15	35,900	50,800	60,800	73,600	83,200	92,900
30	31,400	44,300	53,500	65,900	75,600	85,900
60	28,100	38,900	46,600	56,900	65,000	73,500
90	26,000	35,900	43,100	53,000	60,900	69,400

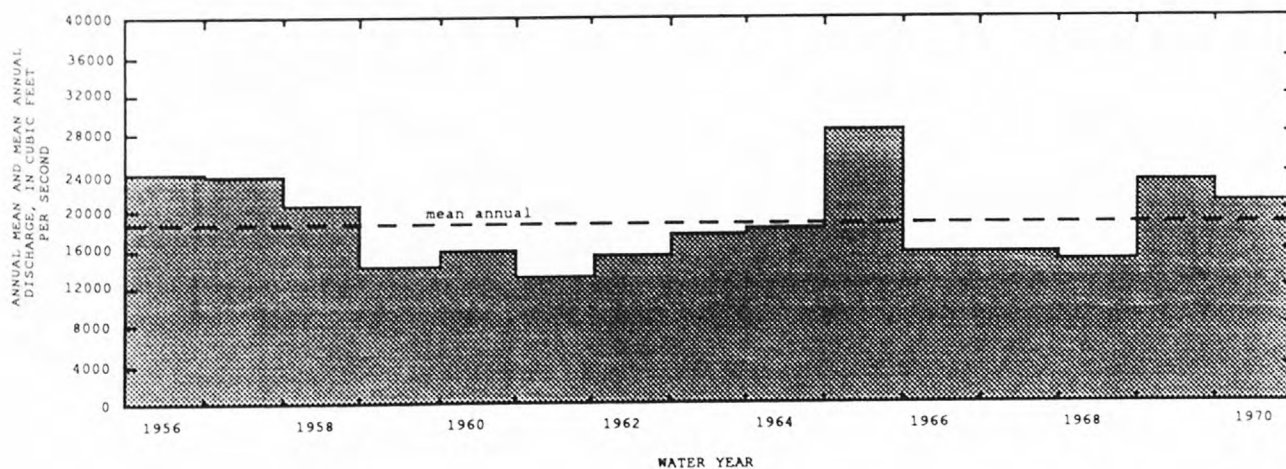
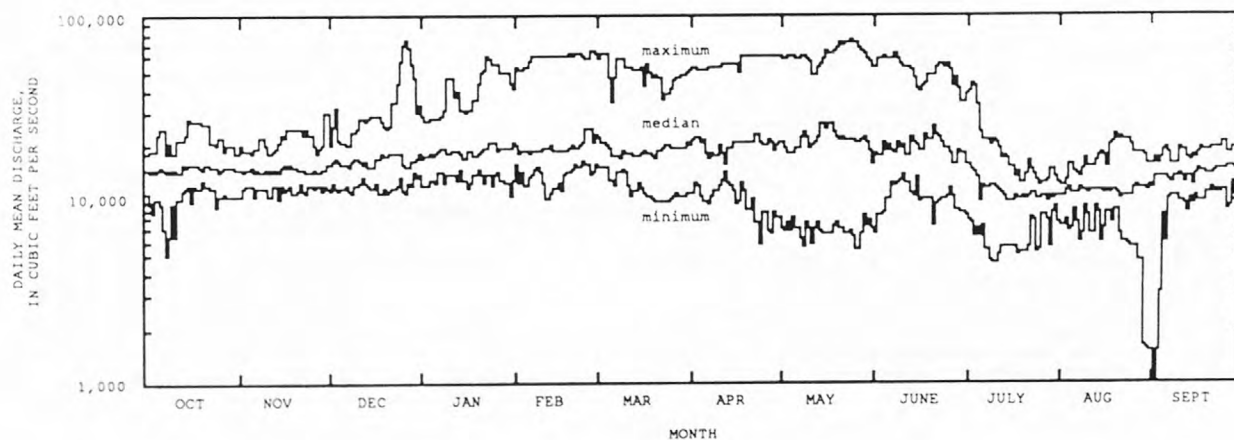
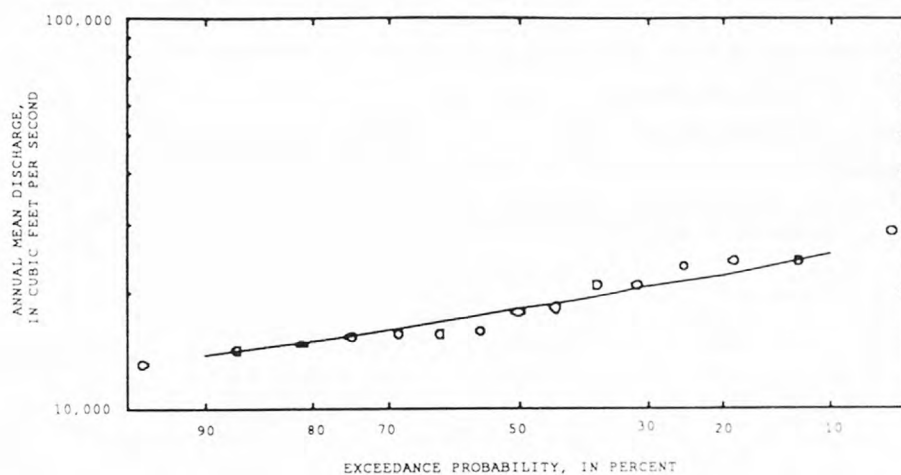
Duration table of daily mean flow for period of record 1956-70

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time													
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	99%
59,200	40,900	32,500	26,800	22,300	19,100	17,300	16,000	14,700	13,400	12,100	10,300	9,180	7,320
												6,250	5,650
													1,770

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





SALMON RIVER BASIN

13292500 SALMON RIVER NEAR OBSIDIAN, ID

LOCATION.—Lat 43°58', long 114°48', in sec.3, T.7 N., R.14 E., Custer County, Hydrologic Unit 17060201, on left bank 0.4 mi downstream from irrigation diversion dam, 1.0 mi upstream from Lost Creek, and 2.5 mi southeast of Obsidian.

DRAINAGE AREA.—94.7 mi<sup>2</sup>. Mean elevation, 8,140 ft.

PERIOD OF RECORD.—November 1940 to January 1953.

GAGE.—Water-stage recorder. Elevation of gage is 6,950 ft above sea level, by barometer.

REMARKS.—Diversion above station for irrigation of about 1,700 acres (1948 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 721 ft<sup>3</sup>/s May 29, 1952 (gage height, 4.01 ft); maximum gage height, 5.50 ft probably between Jan. 27 and Mar. 1, 1949 (ice jam); minimum discharge, 2 ft<sup>3</sup>/s Sept. 7-11, 1942, Apr. 1, 1945.

Summary of monthly and annual discharges, 1942-52

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	58	27	41	11	0.27	4.3
November	59	30	41	10	0.25	4.2
December	47	23	33	8.9	0.27	3.4
January	40	21	28	5.7	0.21	2.8
February	38	20	25	5.4	0.21	2.6
March	35	20	26	4.4	0.17	2.7
April	93	27	61	25	0.41	6.3
May	427	151	259	90	0.35	26.7
June	452	199	293	87	0.30	30.1
July	360	35	114	91	0.80	11.8
August	85	5.2	21	26	1.2	2.2
September	57	10	28	15	0.52	2.9
Annual	128	55	81	23	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1942-52

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	6.8	3.9	2.9	2.3	1.8	1.5
3	6.9	3.9	2.9	2.3	1.8	1.5
7	7.0	4.0	3.1	2.5	2.1	1.8
14	7.3	4.1	3.2	2.7	2.3	2.0
30	8.2	4.8	3.8	3.2	2.7	2.5
60	15	9.9	8.0	6.7	5.5	4.8
90	21	16	14	12	11	9.9
120	24	20	19	18	17	16
183	28	23	22	20	19	19

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1942-52

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
519	643	714	794	849	899

Magnitude and frequency of annual high flow,  
based on period of record 1942-52

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	480	599	667	744	796	844
3	451	561	626	700	751	799
7	409	519	585	664	720	773
15	366	482	557	648	715	781
30	341	441	501	573	622	670
60	284	362	412	472	516	559
90	219	283	328	387	434	483

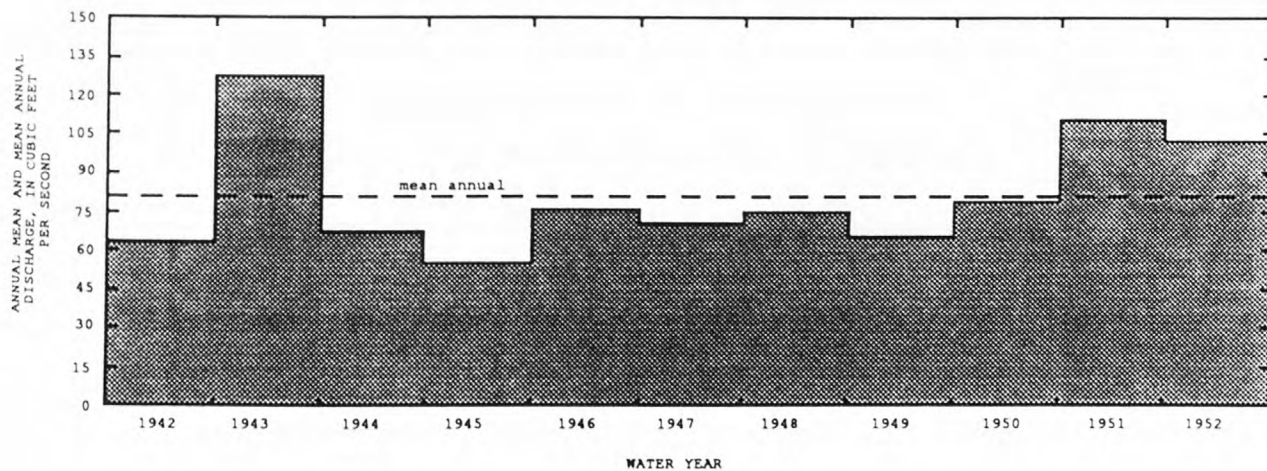
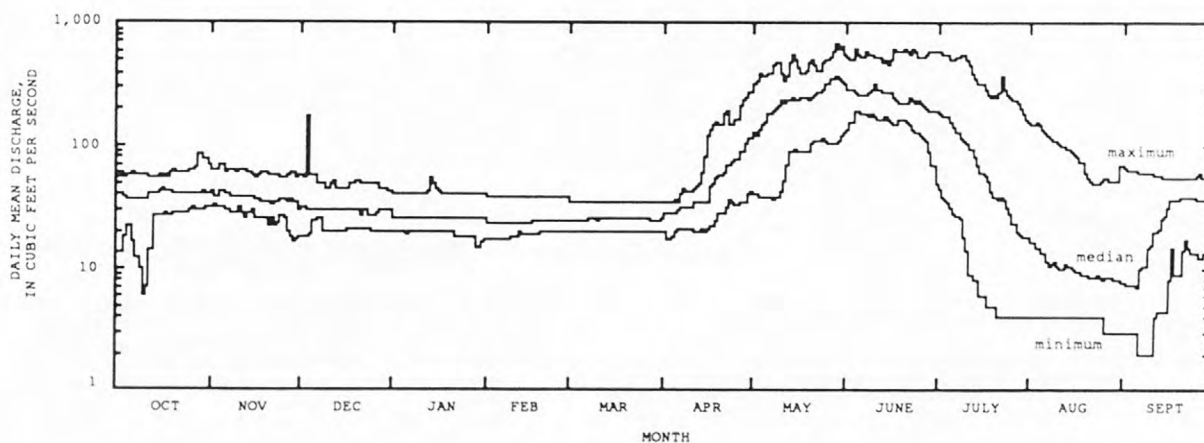
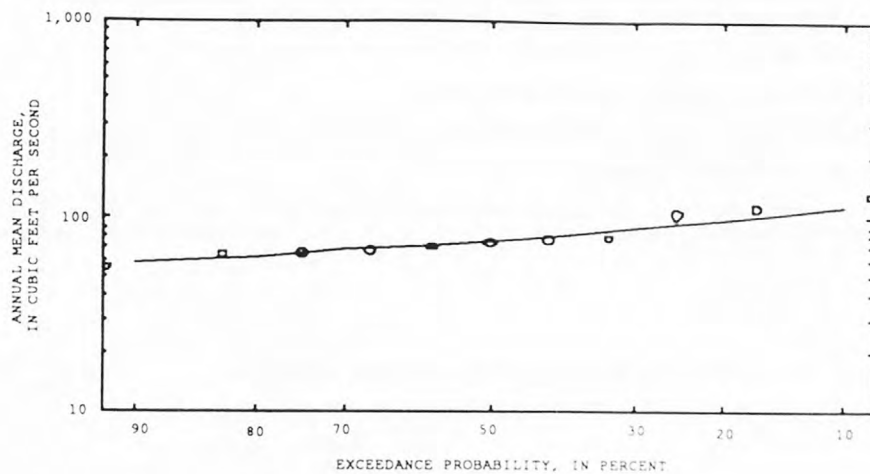
Duration table of daily mean flow for period of record 1942-52

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
540	345	246	179	110	53	41	35	30	26	23	16	7.8	5.5	4.6	4.1
															2.3

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13293000 ALTURAS LAKE CREEK NEAR OBSIDIAN, ID

LOCATION.—Lat 43°56', long 114°50', in SW<sup>1</sup>/<sub>4</sub>, sec. 9, T. 7 N., R. 14 E., Custer County, Hydrologic Unit 17060201, on right bank 1 mi downstream from outlet of Perkins Lake, 1.5 mi downstream from outlet of Alturas Lake, and 4 mi south of Obsidian.

DRAINAGE AREA.—35.7 mi<sup>2</sup>.

PERIOD OF RECORD.—November 1940 to January 1953.

GAGE.—Water-stage recorder. Elevation of gage is 7,000 ft above sea level, by barometer.

REMARKS.—No diversion or regulation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 633 ft<sup>3</sup>/s June 7, 1952, gage height, 5.34 ft; maximum gage height, 5.41 ft, June 9, 1948; minimum discharge recorded, 7.9 ft<sup>3</sup>/s Oct. 1, 1952, gage height, 1.87 ft, but may have been less during period of ice effect.

Summary of monthly and annual discharges, 1942-52

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	32	13	20	6.7	0.33	2.2
November	44	17	24	7.5	0.31	2.7
December	44	14	24	8.1	0.34	2.7
January	27	15	21	3.6	0.17	2.3
February	25	15	20	3.4	0.18	2.2
March	27	15	19	3.6	0.19	2.1
April	98	20	51	25	0.49	5.6
May	301	134	222	68	0.31	24.6
June	415	180	307	76	0.25	33.9
July	361	77	144	87	0.60	15.9
August	72	21	34	16	0.48	3.8
September	28	11	18	5.8	0.32	2.0
Annual	112	48	76	18	0.23	100

Magnitude and frequency of annual low flow,  
based on period of record 1942-52

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	14	12	11	11	9.7	9.2
3	14	12	11	11	9.8	9.3
7	15	12	11	11	9.8	9.4
14	15	13	12	11	9.8	9.7
30	16	13	12	11	11	9.9
60	17	14	13	12	12	11
90	18	16	14	14	13	12
120	19	16	15	14	13	13
183	20	17	16	15	14	13

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1942-52

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
481	580	636	699	740	779

Magnitude and frequency of annual high flow,  
based on period of record 1942-52

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	478	571	628	659	674	684
3	460	564	613	647	664	677
7	444	540	583	621	641	656
15	384	486	540	597	632	663
30	352	434	474	513	537	556
60	288	351	384	418	440	459
90	229	279	306	335	354	371

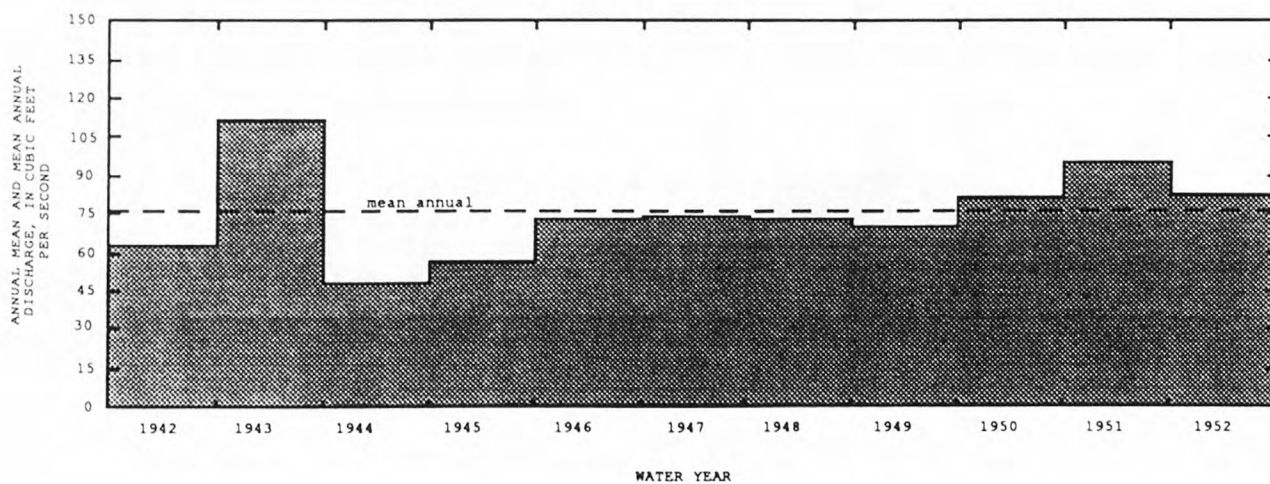
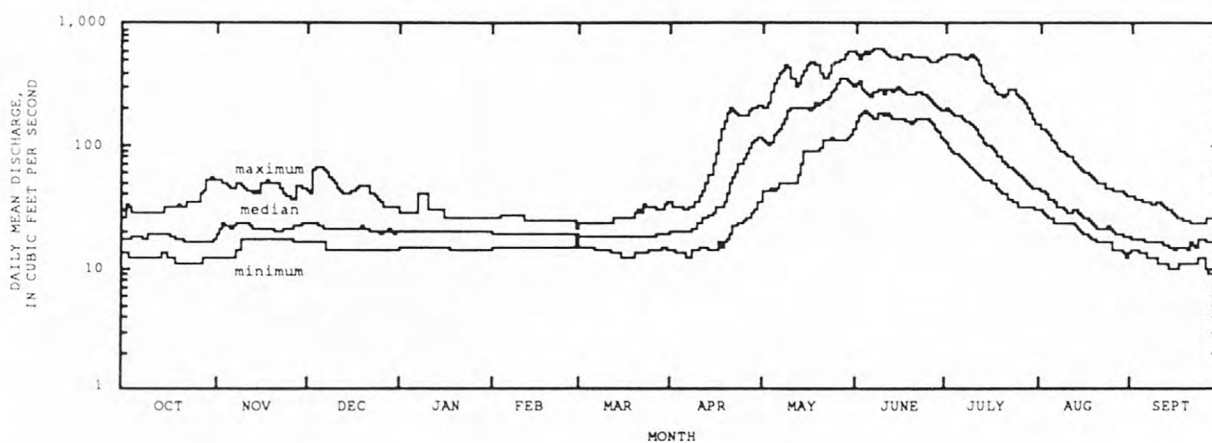
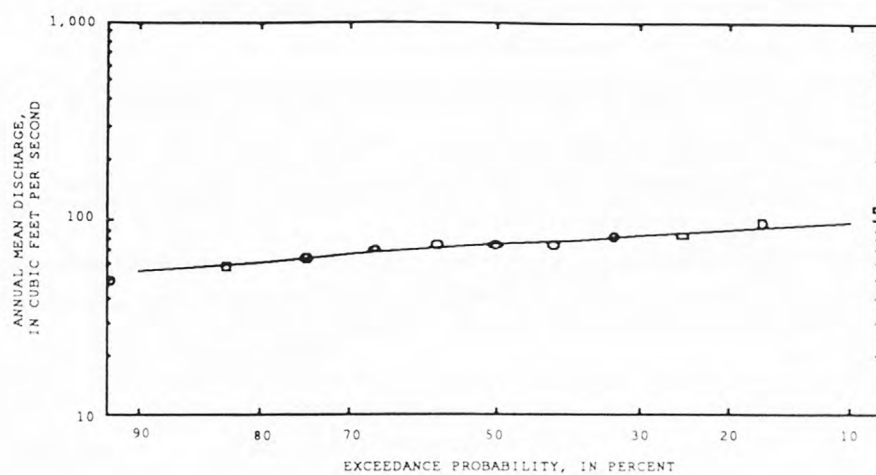
Duration table of daily mean flow for period of record 1942-52

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
526	331	235	177	117	44	29	25	22	19	18	16	14	13	12	12	9.4

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



SALMON RIVER BASIN

13295000 VALLEY CREEK AT STANLEY, ID

LOCATION.—Lat 44°13'21", long 114°55'49", in SE¼, NW¼, SW¼, sec.3, T.10 N., R.13 E., Custer County, Challis National Forest, Hydrologic Unit 17060201, on left bank at mile 0.2, 0.5 mi northeast of Stanley, and 0.8 mi southwest of Lower Stanley.

DRAINAGE AREA.—147 mi<sup>2</sup>. Mean elevation, 7,400 ft.

PERIOD OF RECORD.—December 1910 to April 1911 (gage heights only), May 1911 to October 1913, May 1921 to December 1971, April to September 1972 (discontinued). Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 362: Water years 1911-12. WSP 1567: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 6,221.81 ft above sea level. Prior to May 28, 1911, nonrecording gage at site 0.2 mi upstream and May 28, 1911, to Oct. 31, 1913, at site 0.8 mi upstream, at different datums. May 2, 1921, to Apr. 30, 1949, nonrecording gage at present site and datum.

REMARKS.—Diversions above station for irrigation of about 3,000 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,000 ft<sup>3</sup>/s May 24, 1956; maximum gage height, 4.4 ft, May 29, 1921; minimum, 40 ft/s (estimated) Nov. 17-30, 1929, Dec. 8-13, 1932.

Summary of monthly and annual discharges, 1912-13, 1922-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	181	64	100	26	0.26	4.2
November	178	61	100	23	0.23	4.1
December	202	55	90	28	0.31	3.8
January	138	50	82	18	0.22	3.4
February	163	58	82	18	0.22	3.4
March	158	65	85	14	0.16	3.5
April	417	88	212	84	0.40	8.8
May	1,030	311	555	183	0.33	23.1
June	1,060	167	617	228	0.37	25.7
July	717	82	273	140	0.51	11.4
August	244	52	113	44	0.39	4.7
September	151	49	93	23	0.25	3.9
Annual	317	115	200	50	0.25	100

Magnitude and frequency of annual low flow,  
based on period of record 1913, 1923-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	60	51	46	43	39	35
3	62	52	47	43	39	36
7	64	54	48	44	40	37
14	66	55	50	45	41	38
30	70	59	53	49	45	42
60	74	63	58	55	51	48
90	77	66	61	58	54	51
120	79	69	64	60	57	55
183	86	74	68	64	60	57

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1912-13, 1922-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
989	1,330	1,540	1,780	1,950	2,110

Magnitude and frequency of annual high flow,  
based on period of record 1912-13, 1922-71

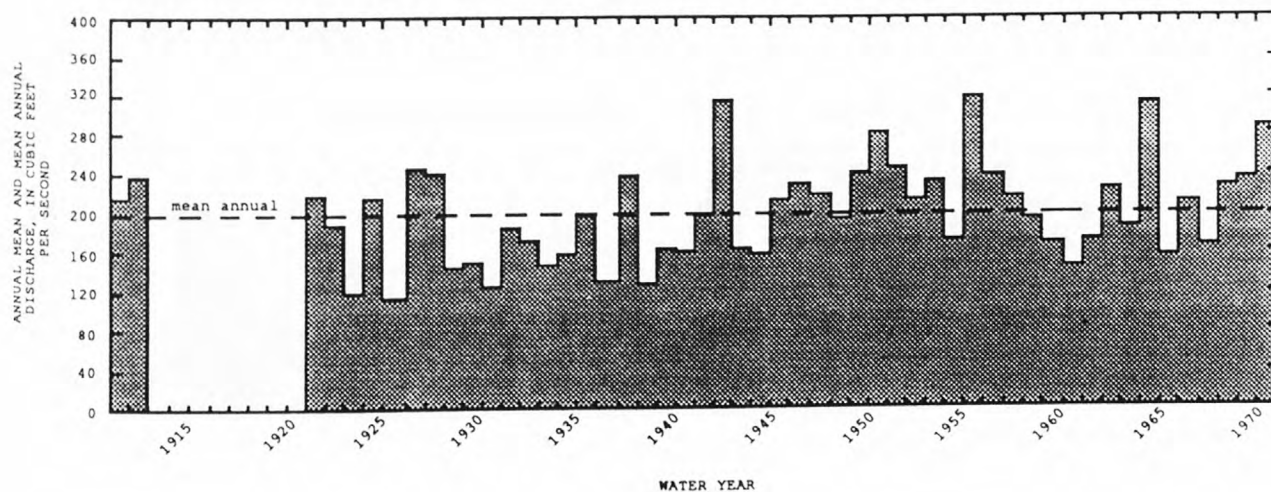
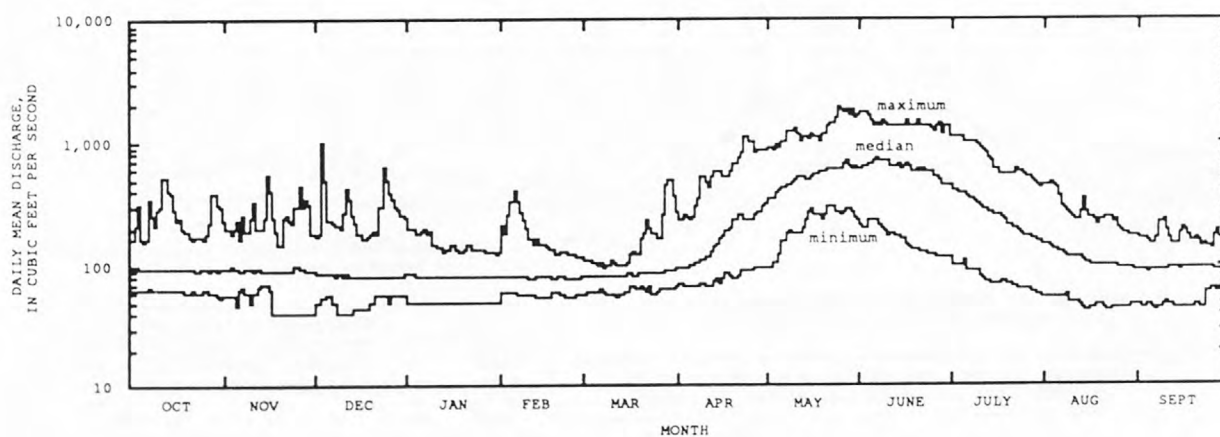
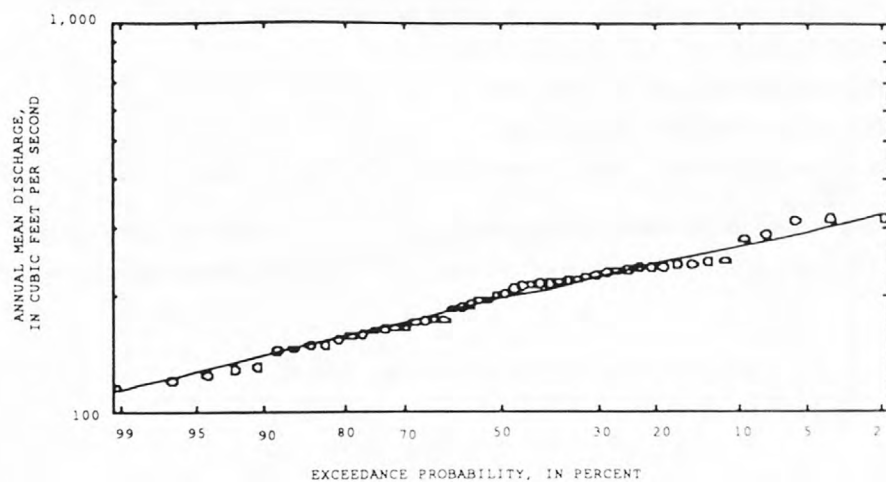
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	926	1,220	1,400	1,600	1,740	1,870
3	874	1,150	1,310	1,510	1,640	1,760
7	821	1,090	1,240	1,430	1,560	1,680
15	756	1,000	1,150	1,320	1,430	1,540
30	687	902	1,030	1,180	1,280	1,380
60	593	767	869	986	1,070	1,140
90	496	640	724	821	886	948

Duration table of daily mean flow for period of record 1912-13, 1922-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
1,070	731	530	393	290	153	116	100	91	84	77	68	63	55	51	48	42	42



LOCATION MAP





## SALMON RIVER BASIN

13295500 SALMON RIVER BELOW VALLEY CREEK, AT STANLEY, ID

LOCATION.—Lat 44°14', long 114°55', in SE 1/4, SE 1/4, sec. 34, T. 11 N., R. 13 E., Custer County, Hydrologic Unit 17060201, on left bank 0.75 mi downstream from Valley Creek, and 1.25 mi northeast of upper Stanley.

DRAINAGE AREA.—501 mi<sup>2</sup>. Mean elevation, 7,800 ft.

PERIOD OF RECORD.—July 1925 to October 1960.

REVISED RECORDS.—WSP 1567: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 6,190.32 ft above sea level. Prior to Oct. 13, 1925, nonrecording gage at same site and datum.

REMARKS.—Divisions above station for irrigation of about 6,000 acres (1948 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,070 ft<sup>3</sup>/s May 27, 1956, gage height, 4.62 ft; minimum, 100 ft<sup>3</sup>/s (estimated) Nov. 20-30, 1929.

Summary of monthly and annual discharges, 1926-60

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	613	226	380	102	0.27	4.8
November	585	192	380	92	0.24	4.8
December	624	193	339	90	0.27	4.3
January	483	140	315	70	0.22	4.0
February	437	155	306	60	0.20	3.7
March	427	171	312	52	0.17	3.9
April	1,150	318	631	218	0.35	7.9
May	2,840	800	1,610	558	0.35	20.3
June	3,410	730	1,970	685	0.35	24.7
July	2,530	281	967	488	0.50	12.1
August	896	220	413	154	0.37	5.2
September	531	208	340	87	0.26	4.3
Annual	1,020	410	664	162	0.24	100

Magnitude and frequency of annual low flow,  
based on period of record 1927-60

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>#</sup> 1%
1	248	194	165	141	116	100
3	259	203	171	145	118	101
7	272	213	179	151	121	103
14	275	221	191	167	141	125
30	281	229	201	179	155	139
60	293	239	210	188	163	147
90	302	247	218	194	169	153
120	312	255	226	202	177	161
183	334	275	245	222	197	182

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1926-60

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,040	4,030	4,630	5,320	5,810	6,260

Magnitude and frequency of annual high flow,  
based on period of record 1926-60

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>#</sup> 1%
1	2,950	3,890	4,440	5,070	5,490	5,890
3	2,840	3,750	4,280	4,890	5,310	5,690
7	2,650	3,520	4,040	4,630	5,030	5,410
15	2,410	3,220	3,710	4,270	4,660	5,030
30	2,160	2,830	3,240	3,710	4,030	4,340
60	1,830	2,350	2,650	3,010	3,250	3,480
90	1,530	1,960	2,210	2,500	2,700	2,880

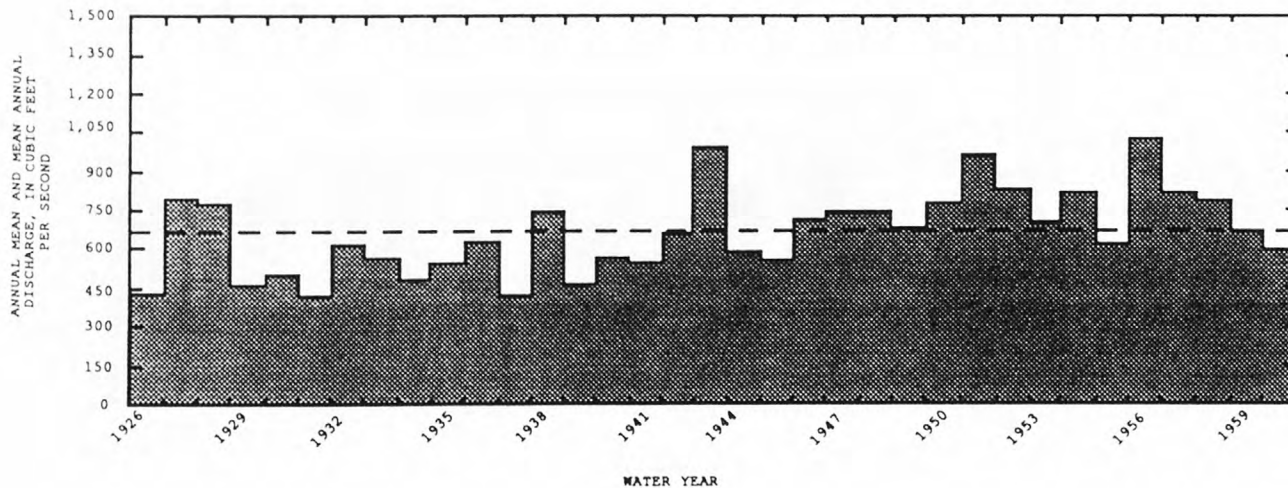
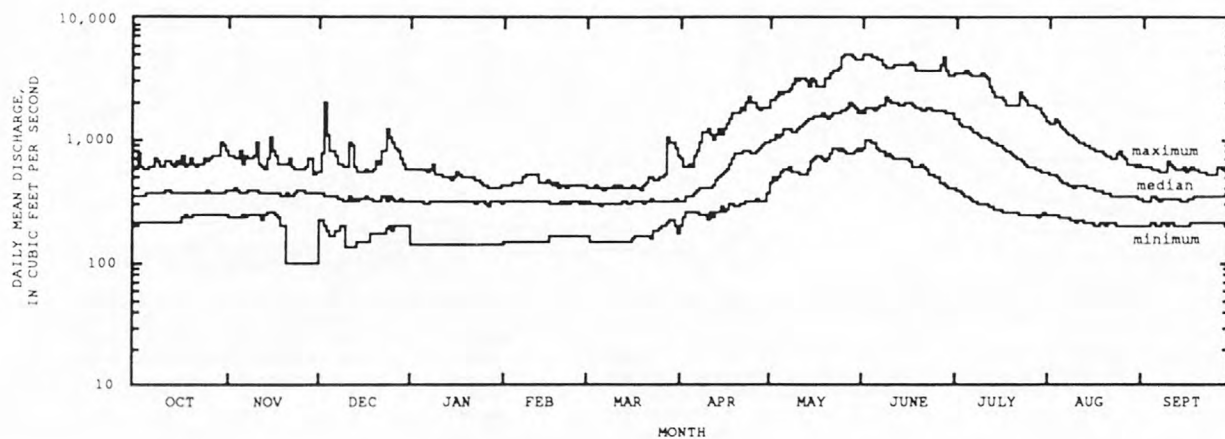
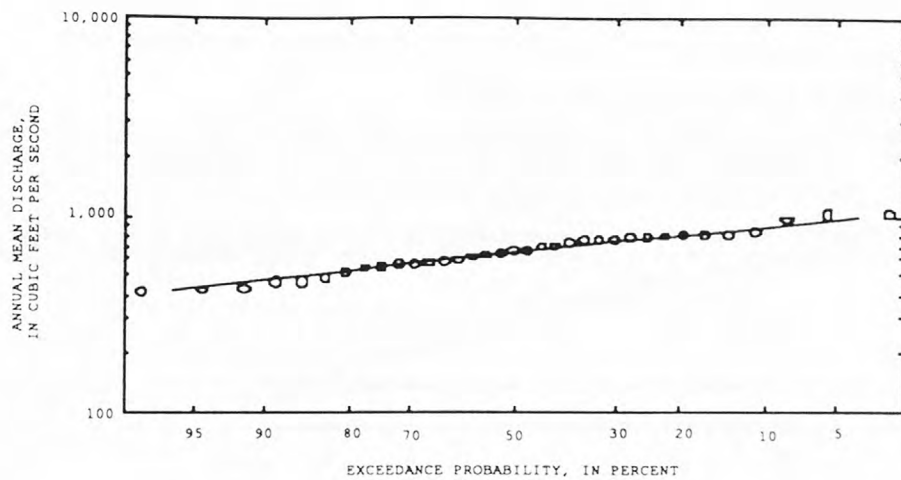
Duration table of daily mean flow for period of record 1926-60

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time													
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%
3,410	2,180	1,610	1,230	922	539	430	380	347	316	284	254	230	207
													191
													155
													133

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13296000 YANKEE FORK SALMON RIVER NEAR CLAYTON, ID

LOCATION.—Lat 44°17', long 114°44', in sec.17, T.11 N., R.15 E., Custer County, Hydrologic Unit 17060201, on right bank 0.5 mi upstream from mouth, and 17 mi west of Clayton.

DRAINAGE AREA.—195 mi<sup>2</sup>.

PERIOD OF RECORD.—May 1921 to February 1949.

GAGE.—Water-stage recorder. Elevation of gage is 5,950 ft above sea level, by barometer. Prior to Dec. 14, 1937, staff gage at site 2,000 ft downstream at different datums. Dec. 14, 1937 to Apr. 13, 1938, staff gage at described site and datum.

REMARKS.—No diversions or regulation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 3,360 ft<sup>3</sup>/s June 12, 1921, gage height, 6.79 ft, site and datum then in use, from rating curve extended above 2,300 ft<sup>3</sup>/s; minimum, 10 ft<sup>3</sup>/s (estimated) Dec. 5, 6, 1927.

Summary of monthly and annual discharges, 1922-48

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	94	30	65	15	0.23	2.8
November	94	40	60	13	0.22	2.5
December	102	34	53	16	0.29	2.3
January	61	28	46	8.6	0.19	2.0
February	55	30	44	6.1	0.14	1.8
March	125	33	55	18	0.33	2.3
April	498	59	207	123	0.59	8.8
May	1,560	369	731	294	0.40	31.0
June	1,530	168	726	404	0.56	30.7
July	777	74	213	139	0.65	9.0
August	190	45	91	30	0.33	3.9
September	106	31	69	15	0.22	2.9
Annual	378	102	197	63	0.32	100

Magnitude and frequency of annual low flow,  
based on period of record 1923-48

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	36	25	20	16	11	8.9
3	37	28	23	18	14	11
7	38	32	29	27	24	22
14	39	33	30	28	25	24
30	41	35	32	30	27	25
60	42	37	34	31	29	27
90	44	38	35	32	30	28
120	47	40	37	35	32	30
183	52	45	42	39	36	34

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1922-48

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,480	2,240	2,760	3,420	3,910	4,400

Magnitude and frequency of annual high flow,  
based on period of record 1922-48

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	1,360	2,010	2,460	3,030	3,460	3,900
3	1,280	1,900	2,310	2,830	3,210	3,600
7	1,170	1,730	2,100	2,570	2,920	3,270
15	1,060	1,550	1,880	2,290	2,600	2,900
30	930	1,320	1,580	1,890	2,120	2,340
60	726	996	1,160	1,350	1,490	1,610
90	567	777	905	1,060	1,160	1,260

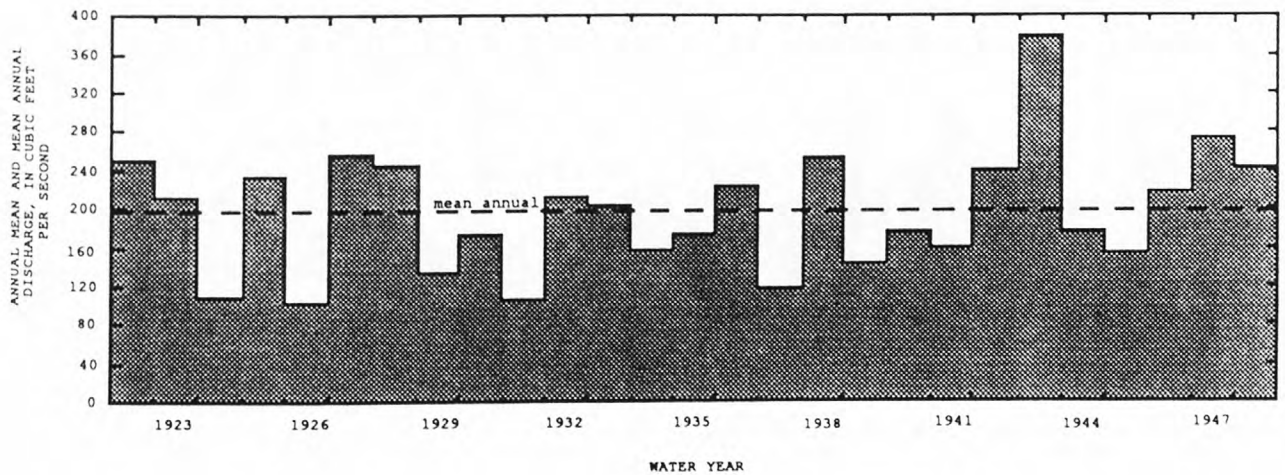
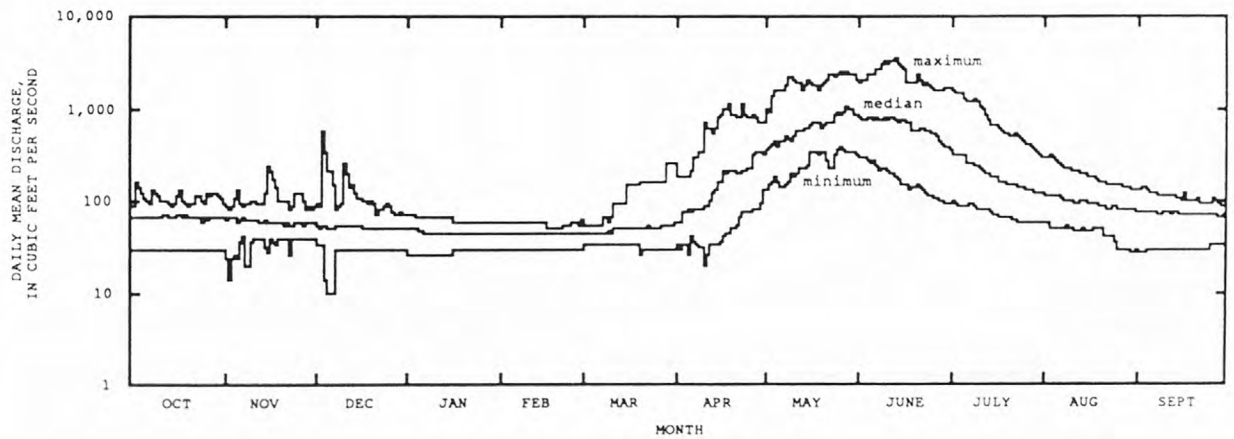
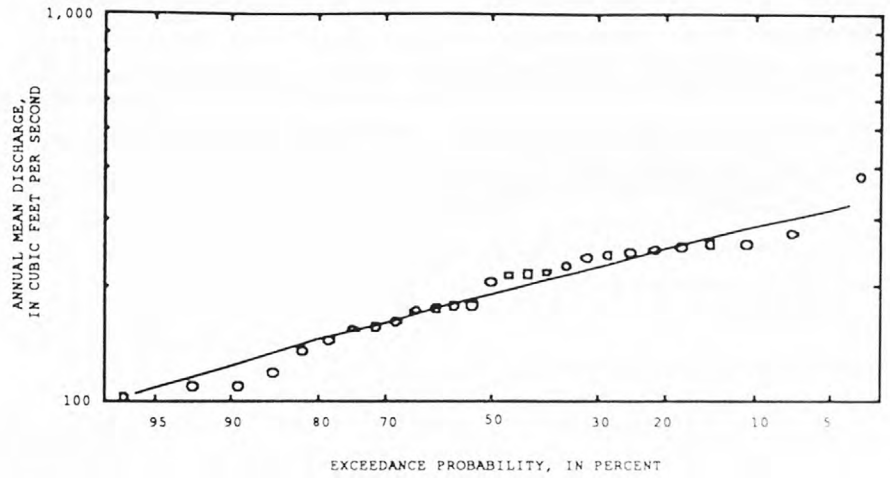
Duration table of daily mean flow for period of record 1922-48

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,750	873	569	379	237	115	81	68	59	53	46	39	36	33	30	29	24

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



SALMON RIVER BASIN

13296500 SALMON RIVER BELOW YANKEE FORK, NEAR CLAYTON, ID

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 mi upstream from Clayton, and at mile 366.9.

DRAINAGE AREA.—802 mi<sup>2</sup>. Mean elevation, 7,790 ft.

PERIOD OF RECORD.—October 1921 to September 1990. Monthly discharge only for some periods, published in WSP 1317. Operated as high-flow station only 1972-76 (discharge for period October 1976 to April 1977 was estimated).

REVISED RECORDS.—WSP 1347: 1931. WSP 1567: Drainage area. WDR ID-77-1: 1974-76(M).

GAGE.—Water-stage recorder. Elevation of gage is 5,900 ft above sea level, by barometer. Oct. 3, 1926, 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.

REMARKS.—Diversions above station for irrigation of about 4,400 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,400 ft<sup>3</sup>/s June 17, 1974, gage height, 11.86 ft; minimum, 160 ft<sup>3</sup>/s, estimated, Nov. 25-30, 1929.

Summary of monthly and annual discharges, 1922-71, 1974, 1977-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	796	300	506	123	0.24	4.2
November	813	277	496	111	0.22	4.2
December	755	272	445	92	0.21	3.7
January	659	230	412	78	0.19	3.5
February	665	250	405	67	0.16	3.4
March	699	284	423	71	0.17	3.5
April	1,920	421	936	349	0.37	7.9
May	4,990	601	2,600	911	0.35	21.9
June	6,940	838	3,210	1,380	0.43	26.9
July	3,750	402	1,400	773	0.55	11.7
August	1,280	269	599	228	0.38	5.0
September	903	263	489	131	0.27	4.1
Annual	1,640	466	995	274	0.28	100

Magnitude and frequency of annual low flow,  
based on period of record 1923-71, 1974, 1978-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	321	268	240	217	192	176
3	335	281	250	225	197	178
7	353	296	264	237	206	186
14	363	308	279	254	226	208
30	373	321	293	271	246	230
60	389	336	308	284	259	242
90	399	345	317	294	268	251
120	410	354	325	302	277	260
183	440	375	342	317	290	272

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1922-71, 1974, 1977-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,050	6,890	8,030	9,370	10,300	11,200

Magnitude and frequency of annual high flow,  
based on period of record 1922-71, 1974, 1977-90

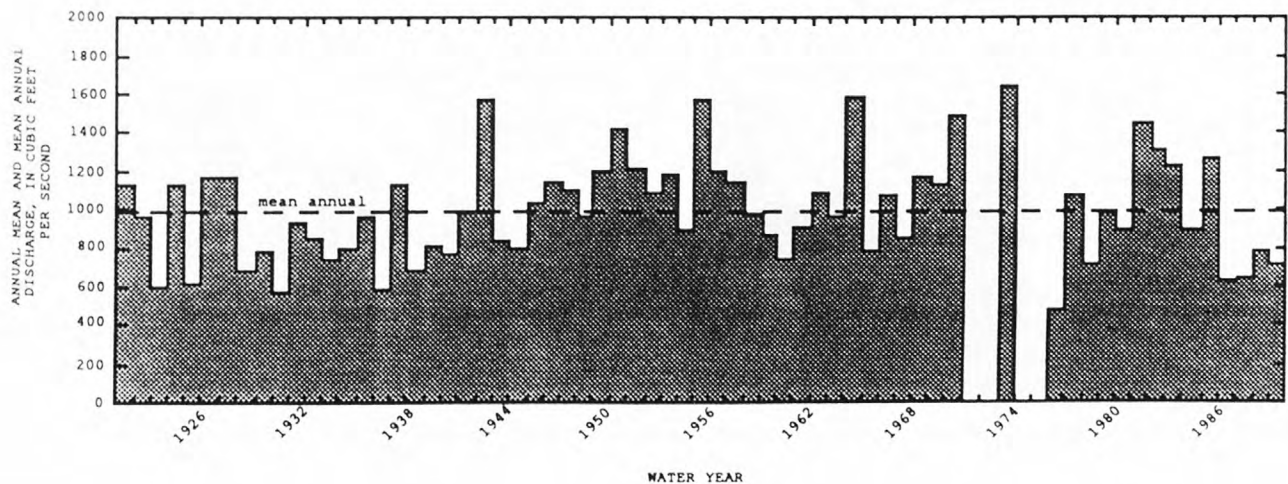
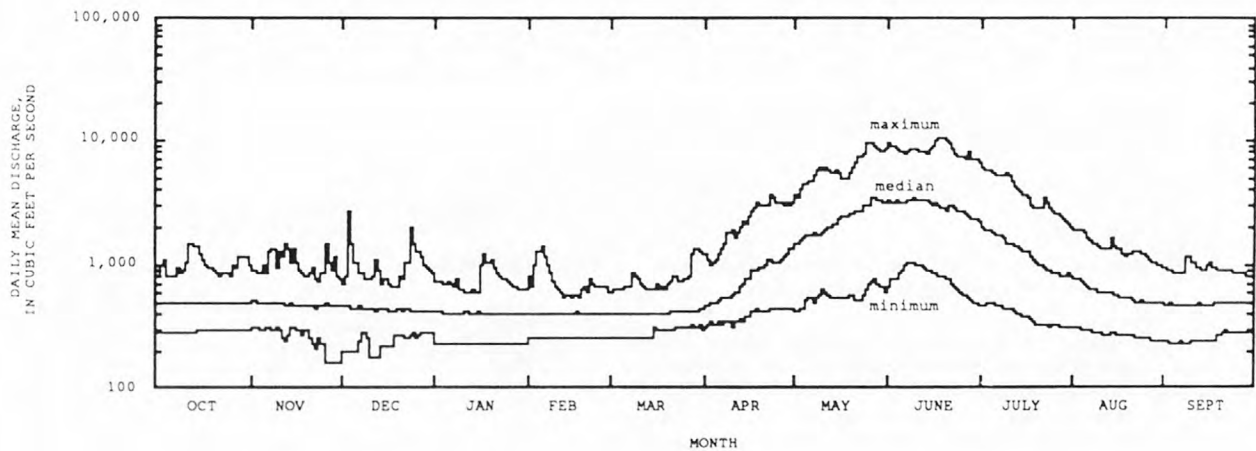
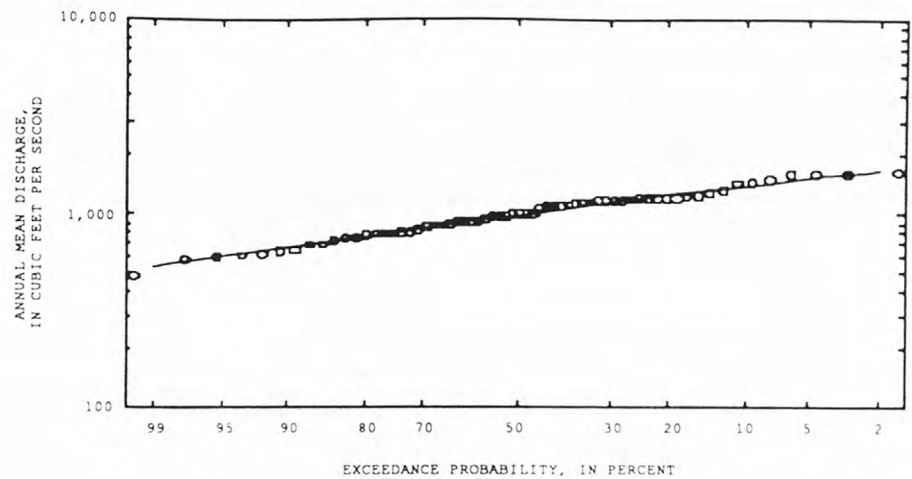
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4,910	6,750	7,810	8,990	9,760	10,500
3	4,730	6,520	7,560	8,740	9,520	10,200
7	4,430	6,150	7,180	8,360	9,160	9,900
15	4,000	5,580	6,520	7,610	8,350	9,040
30	3,600	4,900	5,630	6,420	6,940	7,400
60	2,990	3,990	4,520	5,070	5,410	5,710
90	2,450	3,250	3,680	4,150	4,450	4,710

Duration table of daily mean flow for period of record 1922-71, 1974, 1977-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
5,840	3,580	2,520	1,820	1,320	745	583	508	463	424	388	346	317	292	268	231



LOCATION MAP





SALMON RIVER BASIN

13297330 THOMPSON CREEK NEAR CLAYTON, ID

LOCATION.—Lat 44°16'01", long 114°30'48", in NE¼, NE¼, SE¼, sec.24, T.11 N., R.16 E., Custer County, Hydrologic Unit 17060201, on right bank 1.2 mi upstream from mouth, 2.2 mi below Pat Hughes Creek, and 5.7 mi west of Clayton.

DRAINAGE AREA.—29.1 mi<sup>2</sup>.

PERIOD OF RECORD.—November 1972 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 5,700 ft above sea level, from topographic map. Prior to June 13, 1982, recording gage at site 200 ft upstream at datum 2 ft higher.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 332 ft<sup>3</sup>/s June 16, 1974, gage height, 5.61 ft from floodmark; minimum, 1.0 ft<sup>3</sup>/s Mar. 16, 1980, gage height, 3.73 ft.

Summary of monthly and annual discharges, 1973-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	8.1	2.9	5.1	1.5	0.29	2.4
November	14	2.5	5.3	2.6	0.48	2.6
December	12	2.8	4.8	2.0	0.42	2.3
January	10	2.5	4.5	2.0	0.44	2.2
February	9.9	2.2	4.5	1.9	0.43	2.1
March	26	3.1	7.7	5.1	0.66	3.7
April	60	5.3	26	15	0.56	12.4
May	125	7.9	61	31	0.51	29.2
June	168	11	60	44	0.73	28.7
July	44	4.7	18	12	0.68	8.6
August	15	2.1	6.9	3.2	0.46	3.3
September	9.9	2.3	5.3	1.9	0.36	2.5
Annual	32	4.7	17	8.0	0.46	100

Magnitude and frequency of annual low flow,  
based on period of record 1974-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	2.5	1.8	1.6	1.4	1.2	1.1
3	2.8	2.1	1.8	1.6	1.4	1.3
7	3.1	2.4	2.1	1.8	1.6	1.5
14	3.3	2.6	2.2	2.0	1.7	1.5
30	3.5	2.7	2.4	2.1	1.9	1.7
60	3.7	2.9	2.6	2.3	2.0	1.9
90	3.8	3.0	2.7	2.5	2.3	2.1
120	4.0	3.1	2.8	2.6	2.3	2.2
183	4.3	3.4	3.0	2.8	2.5	2.4

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1973-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
135	233	303	397	469	542

Magnitude and frequency of annual high flow,  
based on period of record 1973-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	116	211	278	363	425	484
3	109	197	257	331	384	435
7	99	178	232	297	343	387
15	85	146	186	232	263	291
30	72	119	147	179	199	217
60	60	94	114	134	146	156
90	48	76	92	111	122	133

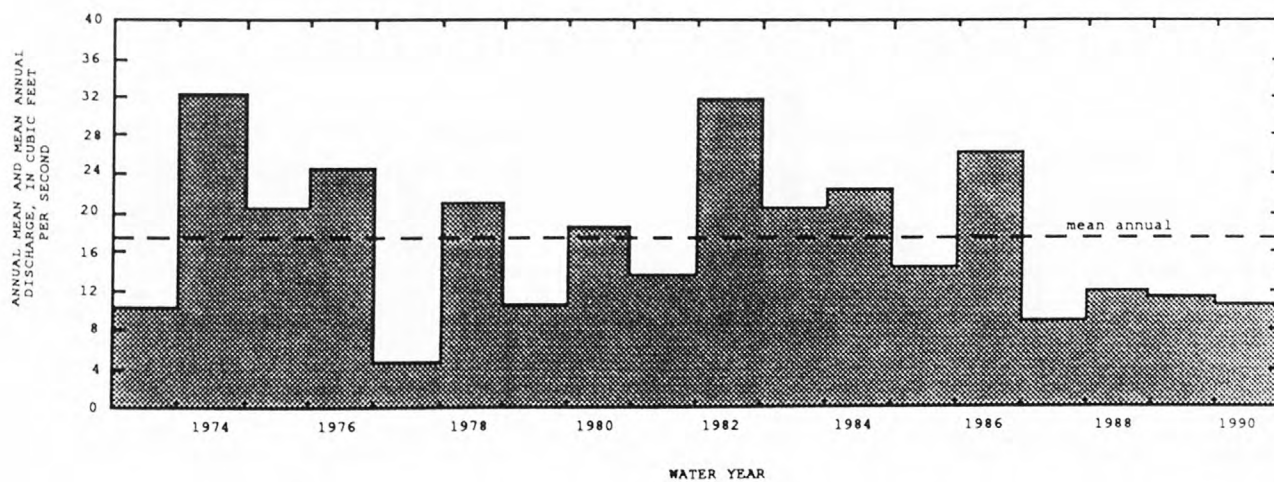
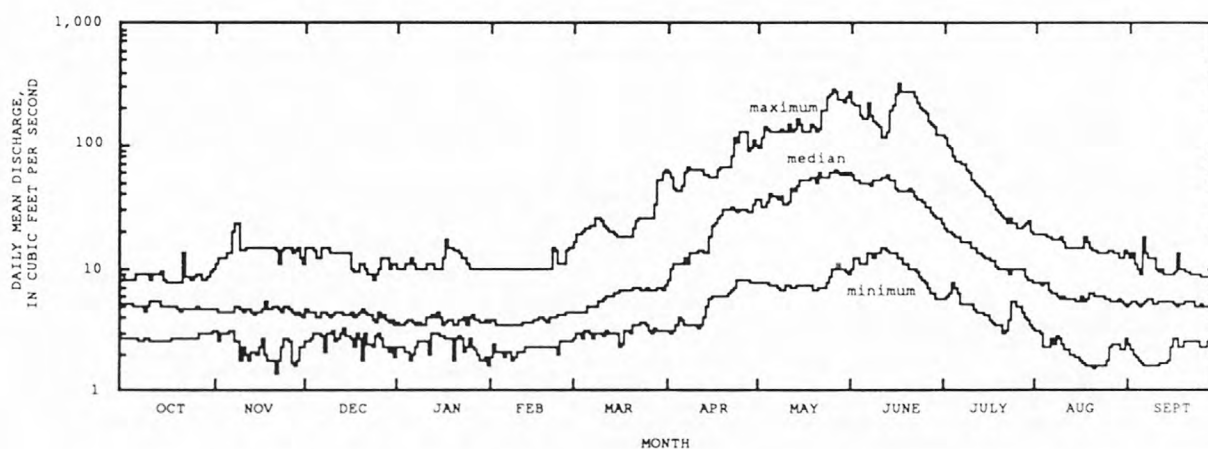
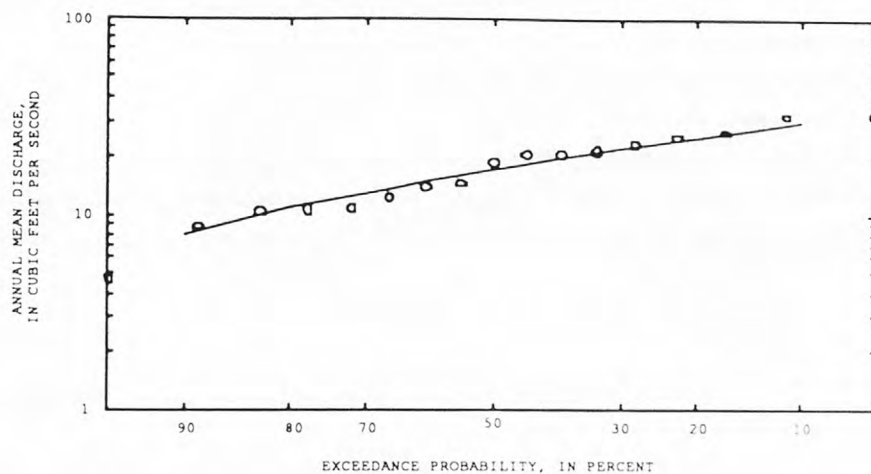
Duration table of daily mean flow for period of record 1973-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
147	76	49	33	23	11	7.5	6.1	5.2	4.5	3.8	3.2	2.8	2.4	2.2	1.9	1.6	

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13297350 BRUNO CREEK NEAR CLAYTON, ID

LOCATION.—Lat 44°17'56", long 114°26'50", in SW¼, NE¼, sec.8, T.11 N., R.17 E., Custer County, Hydrologic Unit 17060201, U.S. Bureau of Land Management lands, on left bank 0.2 mi upstream from mouth, and 4.8 mi northwest of Clayton.

DRAINAGE AREA.—6.29 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1971 to September 1990.

REVISED RECORDS.—WDR ID-76-1: 1974-75(P).

GAGE.—Water-stage recorder and cipolletti weir since 1978. Elevation of gage is 5,840 ft above sea level, from topographic map.

REMARKS.—Flow affected at times by diversions from stream or by return flow from ground-water pumpage at mine about 2 mi upstream.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 42 ft<sup>3</sup>/s May 31, 1972, gage height, 2.45 ft; no flow Dec. 14, 1980, to Feb. 20, 1981, Mar. 4 to Apr. 10, 1982.

Summary of monthly and annual discharges, 1972-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1.2	0.14	0.49	0.28	0.58	2.8
November	1.3	0.11	0.47	0.28	0.60	2.7
December	1.6	0.13	0.47	0.37	0.78	2.7
January	1.3	0.00	0.39	0.27	0.71	2.3
February	1.9	0.09	0.46	0.42	0.91	2.7
March	1.3	0.20	0.52	0.29	0.55	3.0
April	3.4	0.35	1.5	0.93	0.63	8.6
May	13	0.37	5.2	4.1	0.78	30.3
June	15	0.27	5.4	5.3	0.99	31.4
July	4.5	0.17	1.3	1.2	0.89	7.7
August	1.4	0.05	0.56	0.42	0.75	3.3
September	1.2	0.13	0.43	0.29	0.68	2.5
Annual	3.3	0.24	1.4	0.95	0.66	100

Magnitude and frequency of annual low flow,  
based on period of record 1973-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	0.13	0.00	0.00	0.00	0.00	0.00
3	0.14	0.00	0.00	0.00	0.00	0.00
7	0.15	0.00	0.00	0.00	0.00	0.00
14	0.19	0.05	0.00	0.00	0.00	0.00
30	0.21	0.11	0.07	0.00	0.00	0.00
60	0.25	0.13	0.09	0.00	0.00	0.00
90	0.26	0.16	0.11	0.09	0.06	0.05
120	0.31	0.21	0.16	0.13	0.11	0.09
183	0.35	0.23	0.18	0.15	0.11	0.10

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1972-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
9.9	23	35	53	69	87	

Magnitude and frequency of annual high flow,  
based on period of record 1972-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	8.2	19	27	38	46	53
3	8.0	18	26	35	42	48
7	7.4	17	23	31	36	41
15	6.5	15	21	28	33	38
30	5.6	12	17	23	27	30
60	4.2	9.2	13	18	22	25
90	3.2	7.0	9.9	14	17	19

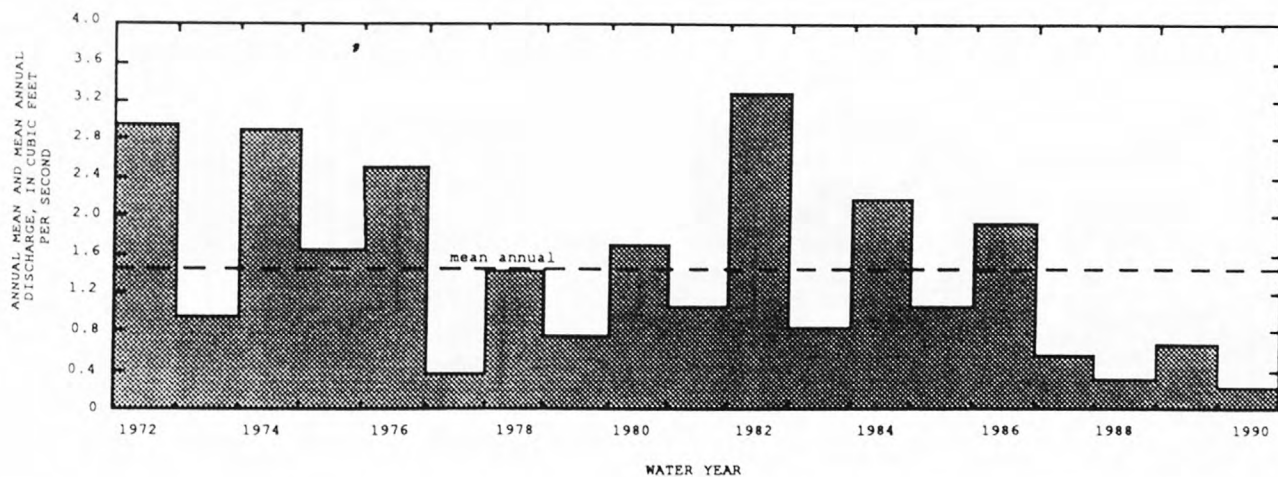
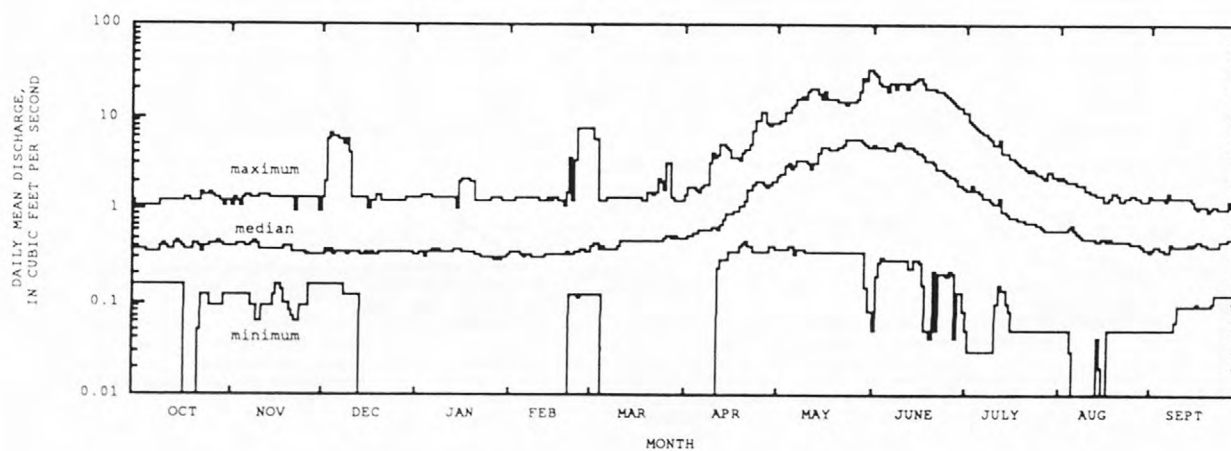
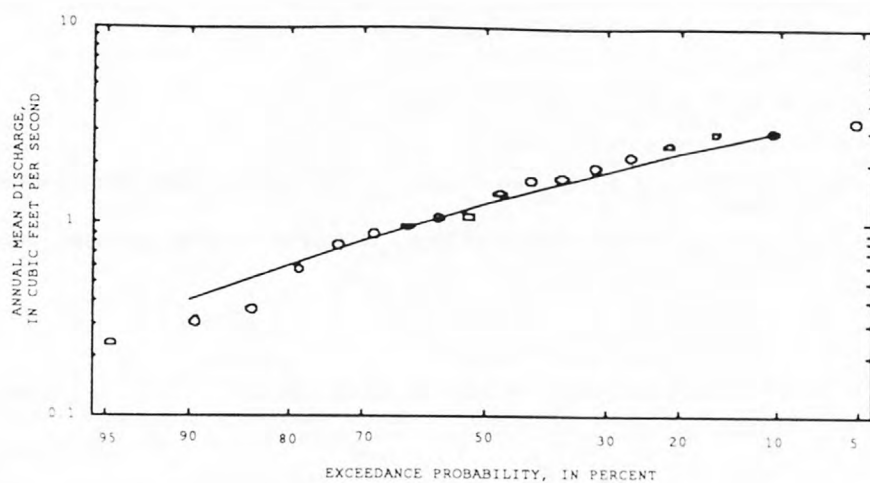
Duration table of daily mean flow for period of record 1972-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
17	6.9	3.6	2.0	1.4	0.82	0.60	0.48	0.40	0.32	0.25	0.17	0.12	0.04	0.01	0.00	0.00

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13297355 SQUAM CREEK BELOW BRUNO CREEK, NEAR CLAYTON, ID

LOCATION.—Lat 44°17'26", long 114°28'14", in SW<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>, sec. 9, T.11 N., R.17 E., Custer County, Hydrologic Unit 17060201, on left bank 3 mi upstream from mouth and 4.5 mi northwest of Clayton.

DRAINAGE AREA.—79.0 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1972 to September 1990.

REVISED RECORDS.—WDR ID-76-1: 1975(P).

GAGE.—Water-stage recorder. Elevation of gage is 5,710 ft above sea level, from topographic map. Prior to June 12, 1974, at datum 2.46 ft higher.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 755 ft<sup>3</sup>/s May 29, 1986, gage height, 6.31 ft; minimum, 3.3 ft<sup>3</sup>/s Mar. 11, 1979, gage height, 2.49 ft.

Summary of monthly and annual discharges, 1973-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	17	6.9	11	3.3	0.29	2.8
November	22	7.0	11	3.8	0.33	2.8
December	18	6.5	10	3.3	0.32	2.6
January	17	6.8	9.8	3.0	0.30	2.4
February	16	6.6	9.5	2.5	0.26	2.4
March	36	7.8	14	6.3	0.44	3.5
April	86	12	42	19	0.46	10.4
May	247	18	115	62	0.54	28.3
June	312	21	123	89	0.72	30.4
July	95	8.6	34	24	0.72	8.5
August	22	5.4	13	5.6	0.43	3.2
September	18	5.7	11	3.9	0.36	2.7
Annual	63	11	34	15	0.45	100

Magnitude and frequency of annual low flow,  
based on period of record 1974-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	5.6	4.4	4.0	3.7	3.4	3.2
3	6.1	4.9	4.3	4.0	3.7	3.4
7	6.6	5.3	4.7	4.3	4.0	3.7
14	7.0	5.7	5.1	4.7	4.4	4.1
30	7.6	6.2	5.5	5.1	4.6	4.4
60	8.3	6.8	6.1	5.7	5.2	4.9
90	8.6	7.1	6.5	6.1	5.6	5.4
120	9.0	7.4	6.8	6.3	5.8	5.6
183	9.7	7.8	7.0	6.4	5.9	5.7

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1973-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
292	472	597	758	879	999

Magnitude and frequency of annual high flow,  
based on period of record 1973-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	227	400	513	647	739	824
3	214	370	466	574	644	706
7	195	335	420	513	573	625
15	169	286	357	435	486	530
30	144	241	300	366	408	446
60	113	184	228	278	311	341
90	89	144	179	221	249	275

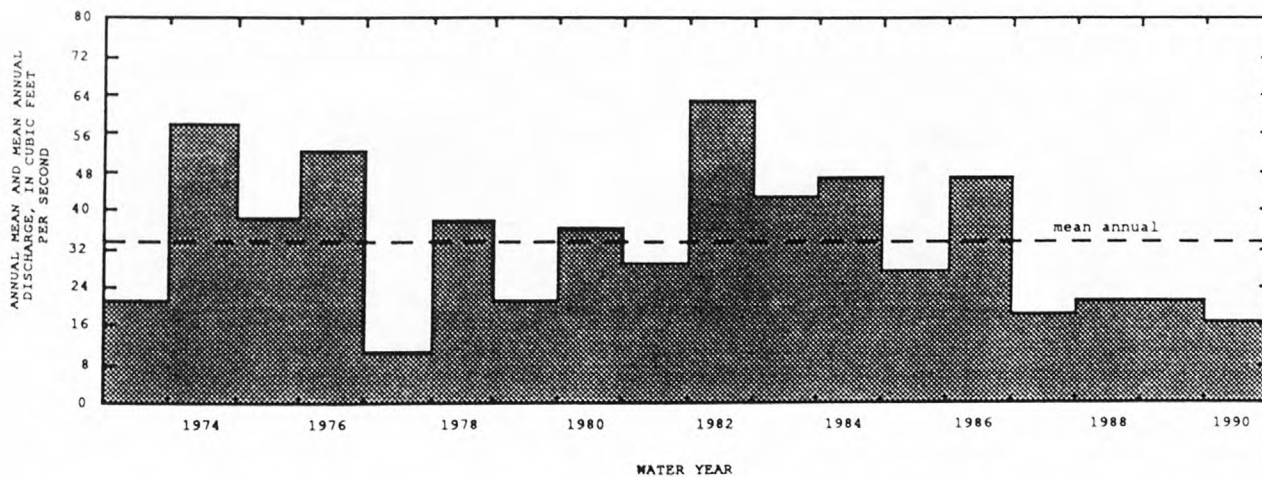
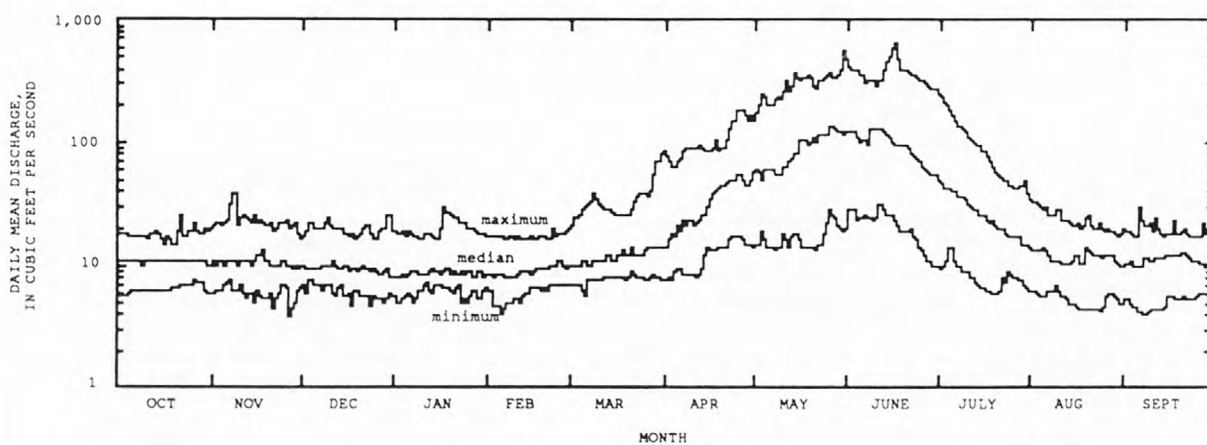
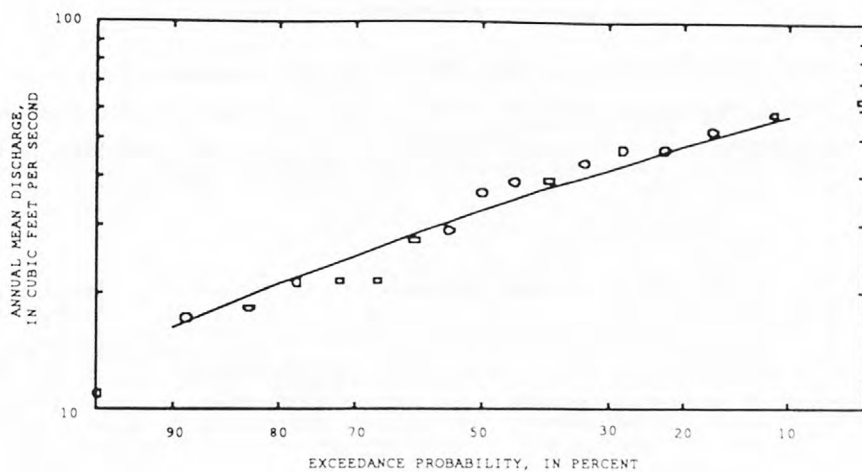
Duration table of daily mean flow for period of record 1973-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
304	149	87	57	39	20	16	13	12	9.9	8.2	7.2	6.5	5.8	5.3	4.8	4.1

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





SALMON RIVER BASIN

13297450 LITTLE BOULDER CREEK NEAR CLAYTON, ID

LOCATION.—Lat 44°05'57", long 114°26'56", in SW 1/4, NE 1/4, NW 1/4, sec. 22, T. 9 N., R. 17 E., Custer County, Hydrologic Unit 17060201, on right bank 950 ft upstream from mouth, and 11 mi south of Clayton.

DRAINAGE AREA.—18.4 mi<sup>2</sup>.

PERIOD OF RECORD.—June 1970 to September 1982, February 1983 to September 1986.

GAGE.—Water-stage recorder. Elevation of gage is 6,200 ft above sea level, from topographic map.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 570 ft<sup>3</sup>/s June 1, 1972, gage height, 5.84 ft; maximum gage height, 5.96 ft, Jan. 31, 1975 (ice jam); minimum, 2.2 ft<sup>3</sup>/s Nov. 8, 1977, gage height, 3.34 ft.

Summary of monthly and annual discharges, 1971-82, 1984-86

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	26	5.4	10	5.1	0.51	3.7
November	18	4.9	8.5	3.6	0.42	3.1
December	10	4.4	6.9	1.7	0.24	2.6
January	8.5	3.5	6.1	1.5	0.24	2.3
February	9.7	3.4	5.8	1.7	0.29	2.1
March	7.9	3.4	5.5	1.3	0.23	2.1
April	14	5.3	8.0	2.4	0.29	3.0
May	60	11	35	15	0.42	13.0
June	132	35	84	30	0.36	31.2
July	156	15	65	37	0.57	24.0
August	43	8.2	22	11	0.51	8.4
September	20	5.9	12	4.4	0.36	4.5
Annual	29	9.4	22	6.1	0.27	100

Magnitude and frequency of annual low flow,  
based on period of record 1972-82, 1984-86

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 <sup>#</sup> 2%	100 <sup>#</sup> 1%
1	4.0	3.2	2.8	2.5	2.3	2.1
3	4.2	3.4	3.1	2.8	2.6	2.4
7	4.4	3.7	3.4	3.2	3.0	2.9
14	4.6	3.8	3.6	3.3	3.2	3.0
30	4.8	4.0	3.7	3.5	3.2	3.1
60	5.2	4.3	3.8	3.5	3.2	3.1
90	5.5	4.5	4.1	3.7	3.3	3.1
120	5.9	4.9	4.4	4.0	3.6	3.3
183	6.8	5.6	5.1	4.8	4.5	4.3

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1971-82, 1984-86

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
207	324	403	502	576	649

Magnitude and frequency of annual high flow,  
based on period of record 1971-82, 1984-86

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 <sup>#</sup> 2%	100 <sup>#</sup> 1%
1	168	252	308	381	435	490
3	158	230	275	329	366	402
7	137	202	243	293	329	364
15	118	168	197	229	251	270
30	100	137	155	174	185	194
60	81	107	117	126	131	134
90	66	86	94	100	103	105

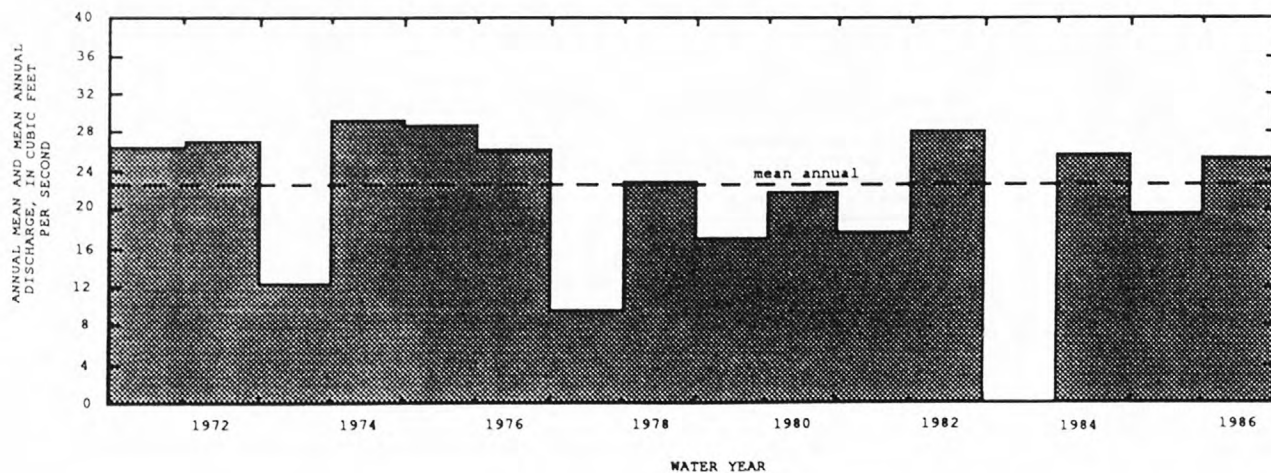
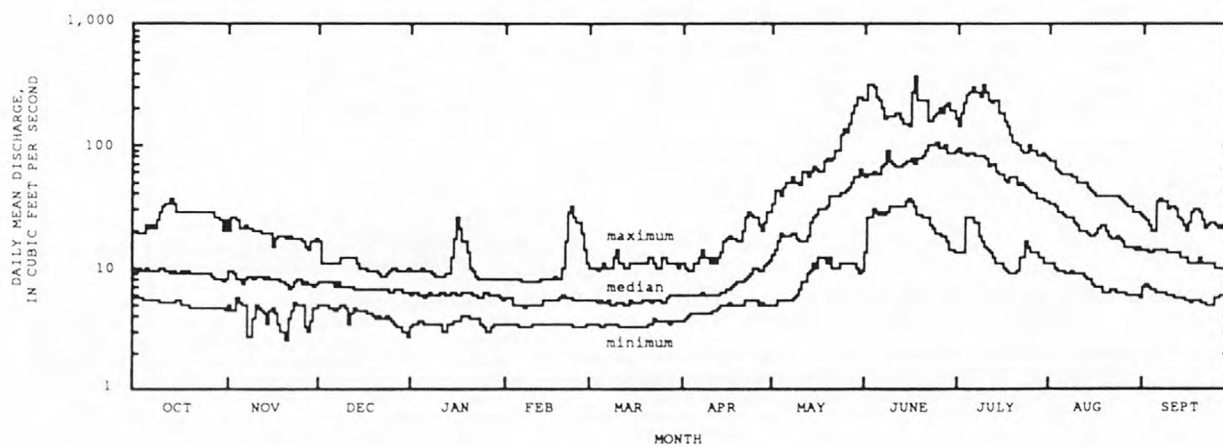
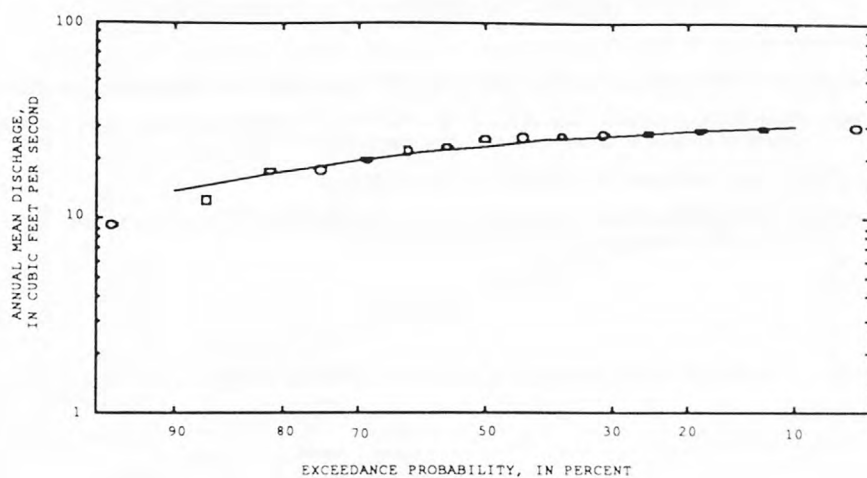
Duration table of daily mean flow for period of record 1971-82, 1984-86

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
154	92	64	45	31	17	12	8.7	7.4	6.5	5.6	4.8	4.3	3.8	3.5	3.3	2.9

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13298000 EAST FORK SALMON RIVER NEAR CLAYTON, ID

LOCATION.—Lat 44°13'29", long 114°17'06", in NW¼, NE¼, SW¼, sec.1, T.10 N., R.18 E., Custer County, Hydrologic Unit 17060201, on right bank at county road crossing, 6 mi southeast of Clayton, and at mile 3.9.

DRAINAGE AREA.—532 mi<sup>2</sup>.

PERIOD OF RECORD.—September 1928 to September 1939 (gage heights and discharge measurements only), May 1973 to September 1981.

GAGE.—Water-stage recorder. Elevation of gage is 5,510 ft above sea level, from topographic map. September 1928 to September 1939, nonrecording gage at present site, datum approximately 5 ft higher.

REMARKS.—Small diversions for irrigation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,020 ft<sup>3</sup>/s June 17, 1974, gage height, 10.60 ft, present datum, from rating curve extended above 1,400 ft<sup>3</sup>/s; minimum, 26 ft<sup>3</sup>/s Nov. 21, 1977.

Summary of monthly and annual discharges, 1929-39, 1974-81

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	190	75	118	38	0.32	4.3
November	144	76	103	23	0.23	3.6
December	124	50	84	20	0.24	3.1
January	111	45	79	18	0.23	2.9
February	107	51	79	16	0.20	2.8
March	111	65	86	14	0.17	3.1
April	291	82	146	59	0.40	5.3
May	833	135	434	182	0.42	15.7
June	1,910	250	883	452	0.51	31.8
July	1,320	99	459	321	0.70	16.6
August	334	60	174	83	0.48	6.3
September	263	58	124	61	0.49	4.5
Annual	390	122	231	83	0.36	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-39, 1975-81

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	46	36	32	29	27	25
3	52	42	37	34	31	29
7	61	49	44	40	36	33
14	66	54	48	44	39	36
30	70	57	51	46	41	37
60	75	61	54	49	43	39
90	77	63	56	51	46	42
120	79	67	61	56	52	49
183	88	73	66	61	56	53

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-39, 1974-81

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,640	2,480	3,040	3,730	4,240	4,730

Magnitude and frequency of annual high flow,  
based on period of record 1929-39, 1974-81

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	1,490	2,340	2,880	3,500	3,930	4,320
3	1,410	2,220	2,740	3,350	3,770	4,170
7	1,250	1,970	2,440	3,010	3,420	3,810
15	1,060	1,650	2,040	2,530	2,890	3,230
30	891	1,340	1,630	1,990	2,250	2,510
60	690	1,030	1,260	1,560	1,780	2,010
90	550	811	991	1,220	1,400	1,580

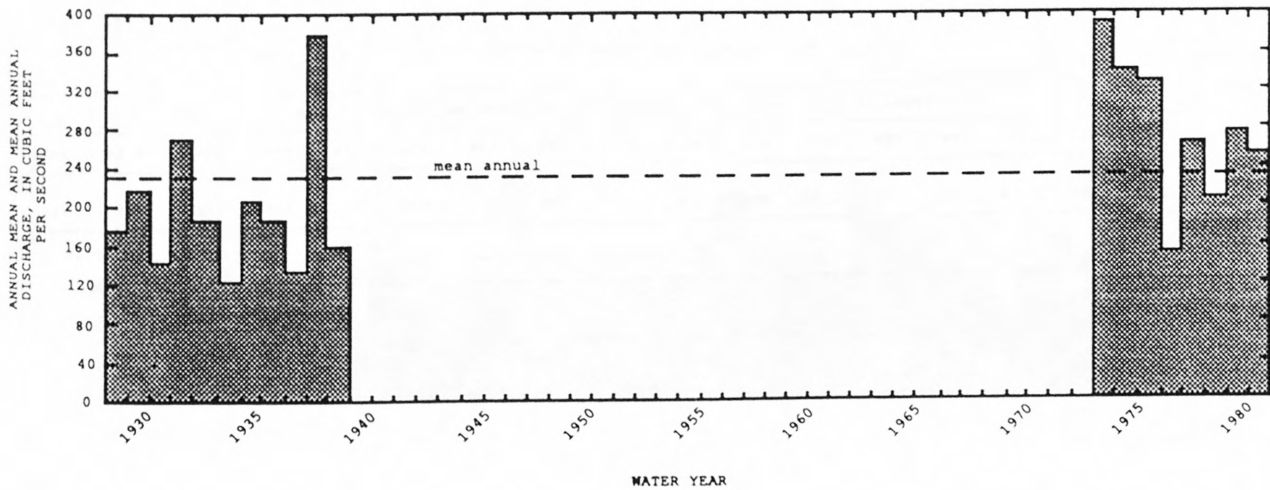
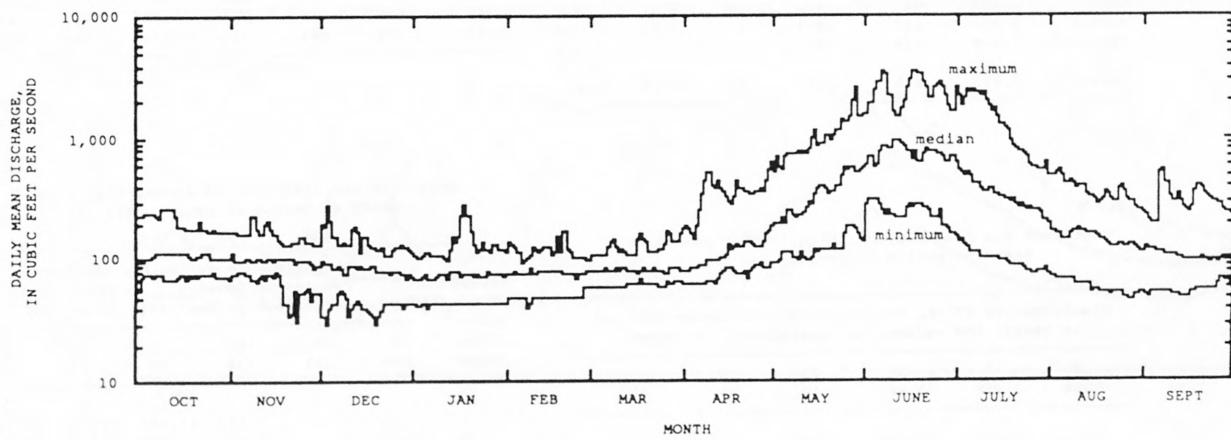
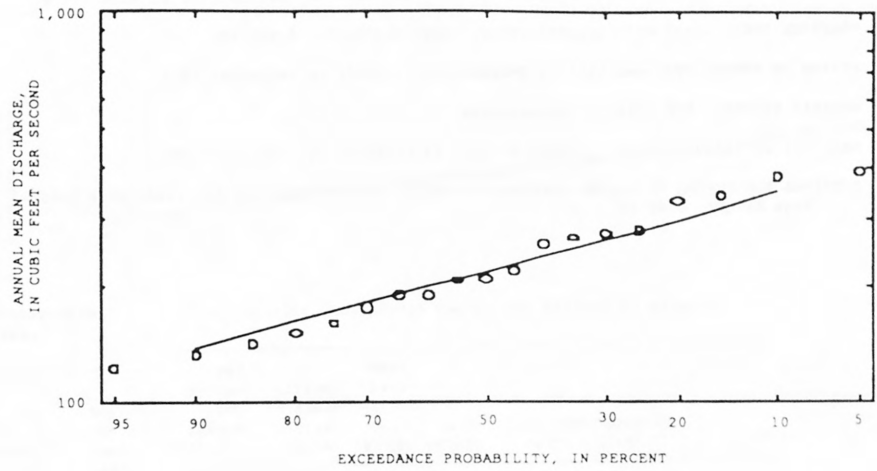
Duration table of daily mean flow for period of record 1929-39, 1974-81

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
1,590	900	551	383	289	172	132	109	94	85	77	67	61	50	47	45	36	36

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



SALMON RIVER BASIN

13290500 SALMON RIVER NEAR CHALLIS, ID

LOCATION.—Lat 44°22'43", long 114°15'18", in SE 1/4, SE 1/4, sec. 7, T. 12 N., R. 19 E., Custer County, Hydrologic Unit 17060201, on left bank 250 ft downstream from Bayhorse Creek, 9 mi south of Challis, and at mile 334.8.

DRAINAGE AREA.—1,800 mi<sup>2</sup>, approximately. Mean elevation, 7,820 ft.

PERIOD OF RECORD.—October 1928 to December 1971, April to September 1972.

REVISED RECORDS.—WSP 1043: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 6,163.92 ft above sea level.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 15,400 ft<sup>3</sup>/s May 25, 1956, gage height, 10.95 ft; minimum, 160 ft<sup>3</sup>/s Dec. 14, 1940, gage height, 0.95 ft.

Summary of monthly and annual discharges, 1929-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,090	501	787	175	0.22	4.4
November	1,040	477	733	135	0.18	4.0
December	1,030	423	659	137	0.21	3.7
January	839	441	616	93	0.15	3.5
February	947	395	619	91	0.15	3.4
March	848	497	626	80	0.13	3.5
April	2,720	608	1,280	515	0.40	7.2
May	7,100	1,860	3,670	1,330	0.36	20.6
June	9,430	1,580	4,870	1,800	0.37	27.3
July	5,640	620	2,240	1,140	0.51	12.6
August	2,300	457	974	371	0.38	5.5
September	1,420	439	766	193	0.25	4.3
Annual	2,470	855	1,490	388	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-71

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	416	355	324	299	271	253
3	457	396	362	335	303	283
7	508	445	410	380	347	325
14	541	476	440	411	377	355
30	567	502	466	436	402	379
60	592	526	489	458	423	400
90	610	539	500	467	430	406
120	622	549	511	479	444	421
183	672	584	538	501	460	433

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
7,660	10,500	12,200	14,200	15,600	17,000	

Magnitude and frequency of annual high flow,  
based on period of record 1929-71

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	7,250	9,700	11,200	12,900	14,100	15,200
3	6,950	9,310	10,700	12,400	13,600	14,700
7	6,520	8,770	10,100	11,800	12,900	14,000
15	5,890	7,950	9,230	10,800	11,900	13,000
30	5,280	7,000	8,060	9,320	10,200	11,100
60	4,320	5,700	6,550	7,580	8,310	9,020
90	3,540	4,660	5,350	6,180	6,770	7,340

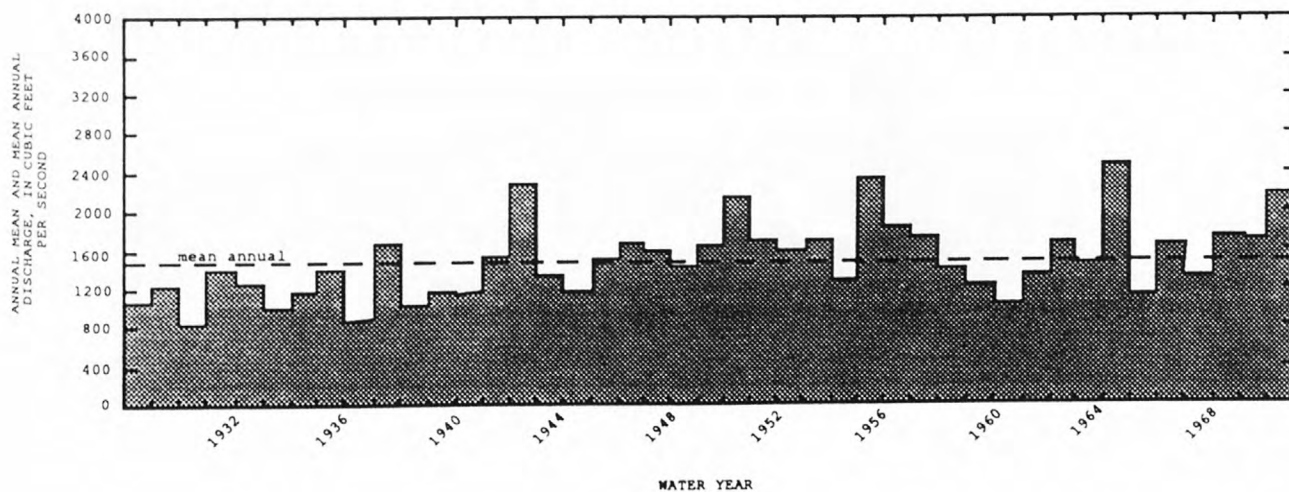
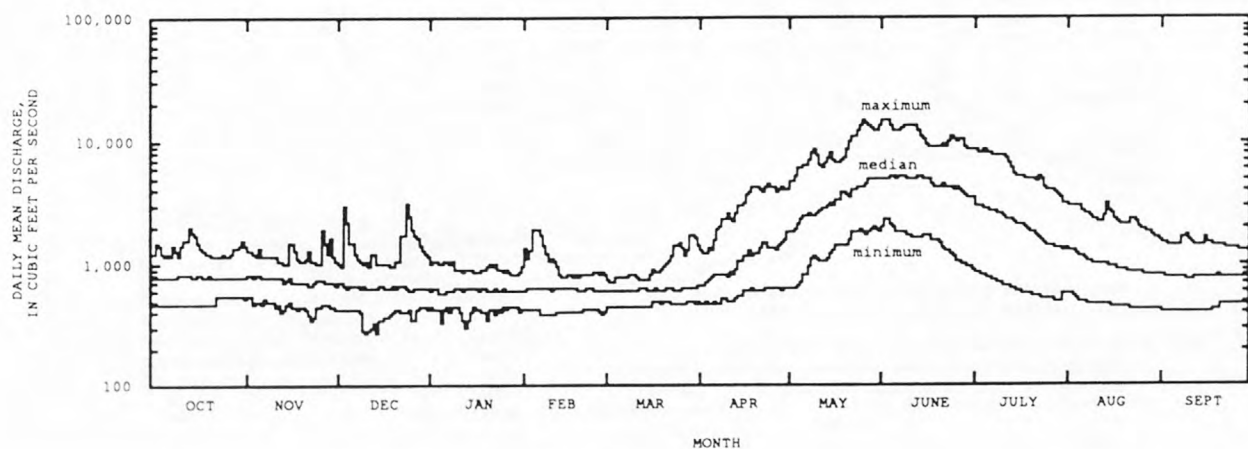
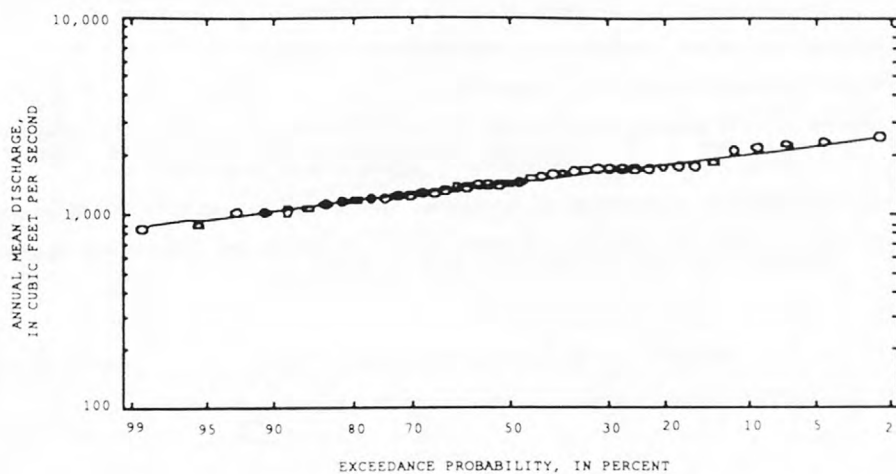
Duration table of daily mean flow for period of record 1929-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
8,340	5,280	3,750	2,720	2,010	1,130	885	778	700	643	588	528	485	439	422	394	350

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





SALMON RIVER BASIN

13299000 CHALLIS CREEK NEAR CHALLIS, ID

LOCATION.—Lat 44°34'20", long 114°18'20", in sec.2, T.14 N., R.18 E., Custer County, Hydrologic Unit 17060201, on left bank 0.1 mi downstream from Eddy Creek, 6 mi northwest of Challis, and at mile 6.5.

DRAINAGE AREA.—89 mi<sup>2</sup>, approximately. Mean elevation, 7,830 ft.

PERIOD OF RECORD.—October 1943 to August 1963.

GAGE.—Water-stage recorder. Datum of gage is 5,369.3 ft above sea level (levels by Topographic Division). Prior to Sept. 27, 1944, staff gage, and Sept. 27, 1944 to Nov. 10, 1948, water-stage recorder at site 350 ft downstream at datum 0.64 ft lower. Nov. 11, 1948, to Aug. 11, 1956, water-stage recorder at present site at datum 0.64 ft lower.

REMARKS.—Diversions above station for irrigation. Flow partly regulated since 1954 by Mosquito Flat Reservoir (capacity, 1,054 acre-ft).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 508 ft<sup>3</sup>/s June 1, 1956; maximum gage height, 6.30 ft, May 24, 1956 (datum then in use); minimum, 4.7 ft<sup>3</sup>/s Mar. 11, 1960, gage height, 2.34 ft.

Summary of monthly and annual discharges, 1944-62

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	28	15	22	3.9	0.17	4.2
November	22	14	19	2.5	0.13	3.6
December	20	7.8	15	3.1	0.20	2.9
January	17	8.1	13	2.8	0.21	2.4
February	17	7.7	12	2.7	0.22	2.3
March	26	7.3	14	4.2	0.30	2.6
April	74	11	29	15	0.50	5.6
May	226	48	112	61	0.54	21.3
June	285	87	157	59	0.38	29.9
July	117	35	68	20	0.30	12.8
August	56	21	39	9.6	0.25	7.4
September	35	17	26	5.1	0.20	5.0
Annual	70	27	44	11	0.26	100

Magnitude and frequency of annual low flow, based on period of record 1945-63

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	9.7	7.6	6.6	5.8	5.0	4.5
3	10	7.8	6.8	6.0	5.1	4.6
7	10	8.2	7.1	6.3	5.4	4.9
14	11	8.3	7.3	6.4	5.6	5.1
30	11	8.8	7.8	7.0	6.2	5.7
60	12	9.4	8.5	7.7	6.9	6.4
90	12	10	8.8	7.9	7.0	6.4
120	13	11	9.5	8.6	7.6	7.0
183	16	13	12	11	9.9	9.1

Magnitude and frequency of instantaneous peak flow, based on period of record 1944-62

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
250	348	409	482	533	582	

Magnitude and frequency of annual high flow, based on period of record 1944-62

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	231	324	389	464	516	545
3	226	313	374	441	500	523
7	215	308	357	424	453	488
15	195	277	337	412	425	456
30	170	236	281	341	387	435
60	134	181	213	253	283	313
90	109	144	167	196	218	241

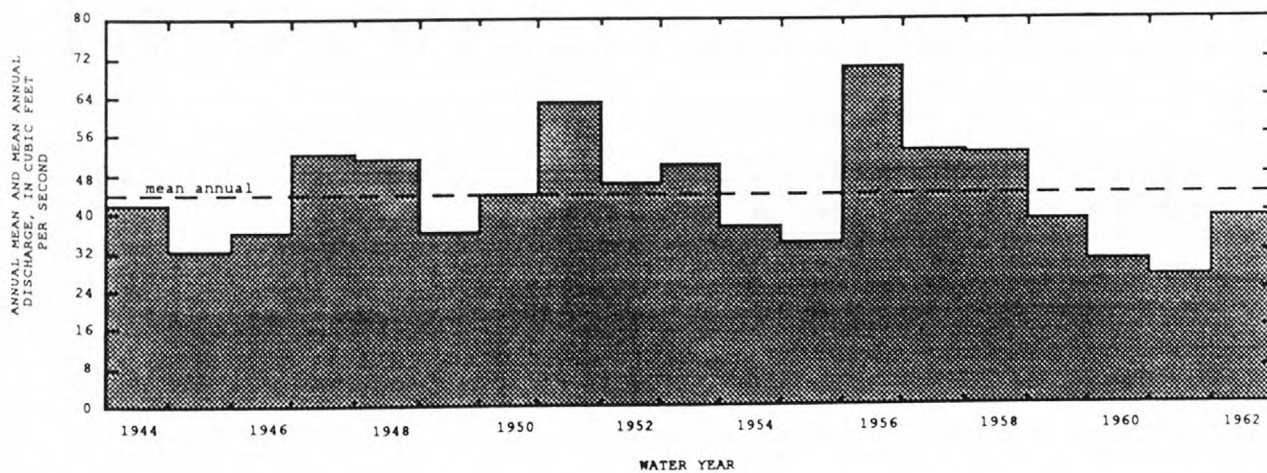
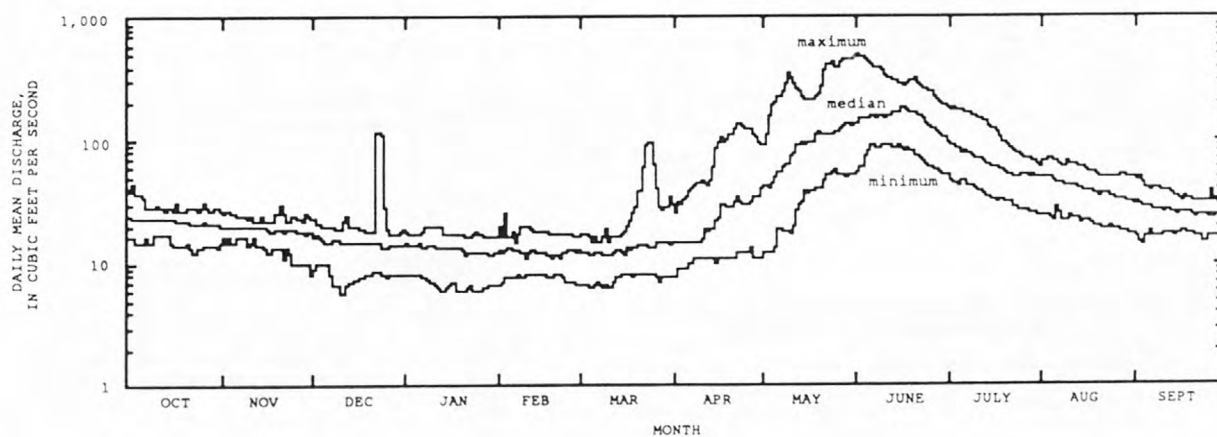
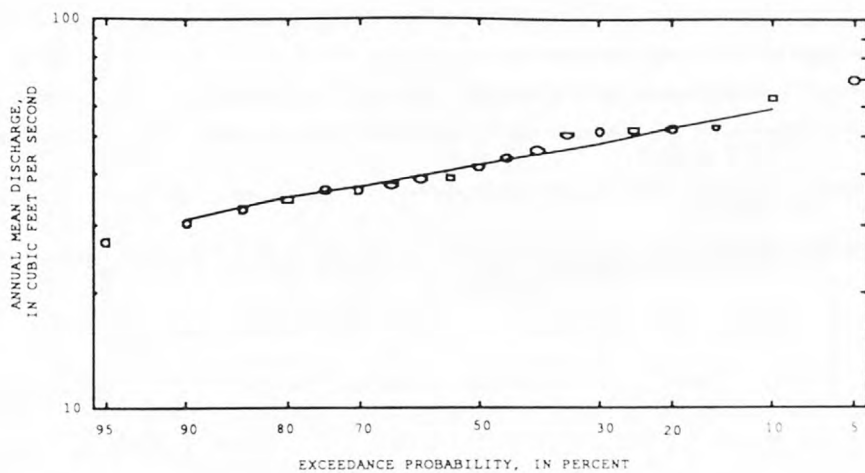
Duration table of daily mean flow for period of record 1944-62

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
291	161	111	78	58	39	27	22	19	16	14	12	9.7	8.1	7.4	6.9	6.3

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



SALMON RIVER BASIN

13302000 PAHSIMEROI RIVER NEAR MAY, ID

LOCATION.—Lat 44°41'23", long 114°02'40", in SE 1/4, NW 1/4, sec. 25, T. 16 N., R. 20 E., Lemhi County, Hydrologic Unit 17060202, on right bank on downstream side of old county road bridge approach, 0.2 mi southeast of Ellis, 10 mi northwest of May, and at mile 0.3.

DRAINAGE AREA.—845 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1929 to September 1959 (monthly discharge only, October 1929), July 1971 to June 1972.

GAGE.—Nonrecording gage. Datum of gage is 4,638.29 ft above sea level. Prior to September 30, 1959, at slightly different locations at datum 1.34 ft lower.

REMARKS.—Diversion above station for irrigation of 27,000 acres of which about 24,500 acres are irrigated with surface water (1971 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 796 ft<sup>3</sup>/s June 8, 1957; maximum gage height observed, 5.71 ft, May 25, 1956, present datum (backwater from Salmon River); minimum observed, 74 ft<sup>3</sup>/s May 19, 1955, gage height, 3.00 ft, present datum.

Summary of monthly and annual discharges, 1930-59

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	344	168	245	48	0.20	9.6
November	341	202	279	44	0.16	10.9
December	356	197	262	37	0.14	10.3
January	317	186	242	31	0.13	9.5
February	316	189	244	36	0.15	9.6
March	308	189	253	36	0.14	9.9
April	282	120	215	44	0.21	8.4
May	247	99	133	35	0.27	5.2
June	389	106	175	62	0.35	6.9
July	220	113	159	29	0.18	6.2
August	195	113	155	24	0.15	6.1
September	261	132	188	33	0.18	7.4
Annual	257	165	212	31	0.15	100

Magnitude and frequency of annual low flow,  
based on period of record 1931-59

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	96	85	80	76	73	71
3	98	87	82	78	75	73
7	102	89	84	80	76	74
14	107	93	87	83	79	77
30	118	103	96	92	87	85
60	138	119	110	103	96	92
90	145	124	115	107	100	95
120	149	127	117	109	102	97
183	166	141	129	120	111	105

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1930-59

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
311	400	470	572	658	754	

Magnitude and frequency of annual high flow,  
based on period of record 1930-59

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	311	400	470	571	656	750
3	302	384	449	543	623	712
7	293	365	421	503	572	647
15	290	348	387	438	476	515
30	288	332	356	383	401	418
60	277	314	335	356	370	383
90	267	301	320	340	353	365

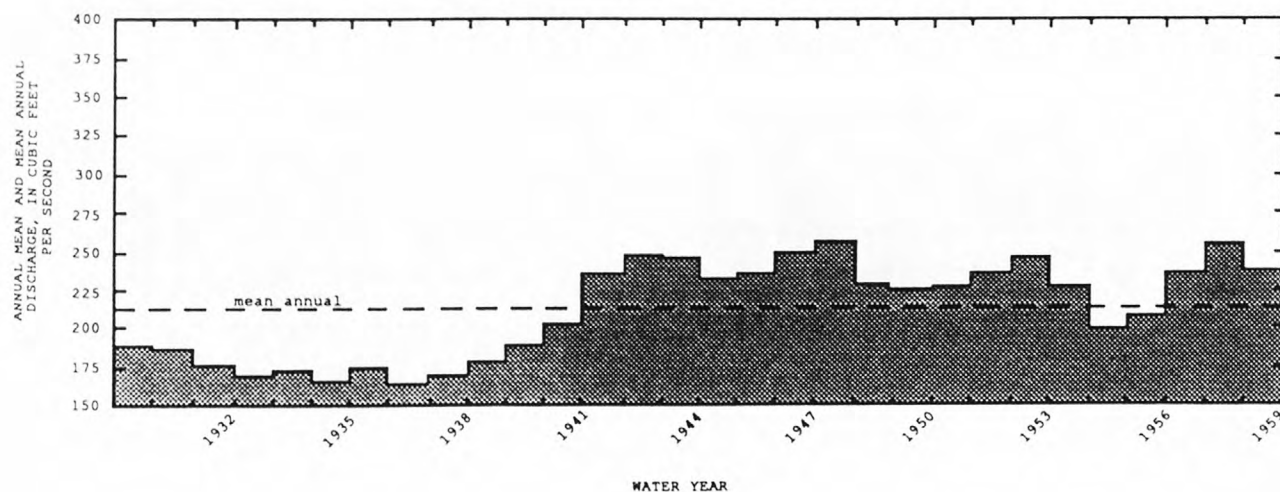
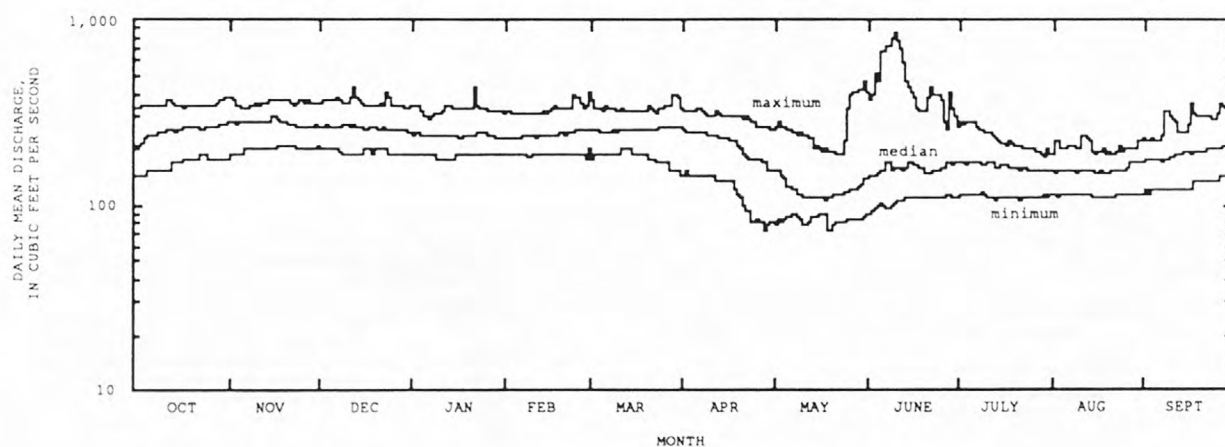
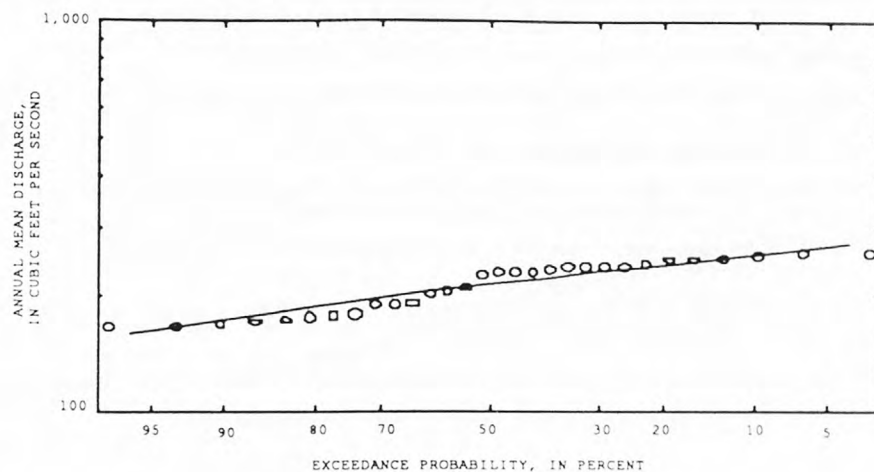
Duration table of daily mean flow for period of record 1930-59

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
754	323	300	283	269	250	232	213	194	172	150	127	114	102	94	88	81

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13302500 SALMON RIVER AT SALMON, ID

LOCATION.—Lat 45°11'00", long 113°53'40", in NE 1/4, NE 1/4, sec. 6, T. 21 N., R. 22 E., Lemhi County, Hydrologic Unit 17060203, on left bank 1,000 ft downstream from island, 0.4 mi upstream from Lemhi River, 0.5 mi downstream from highway bridge at Salmon, and at mile 258.9.

DRAINAGE AREA.—3,760 mi<sup>2</sup>, approximately. Mean elevation, 7,380 ft.

PERIOD OF RECORD.—April 1912 to September 1916, July 1919 to September 1990. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 1043: Drainage area. WSP 1317: 1916.

GAGE.—Water-stage recorder. Datum of gage is 3,911.14 ft above sea level (levels by U.S. Army Corps of Engineers). Prior to Oct. 21, 1929, nonrecording gage at site 700 ft upstream at different datum.

REMARKS.—Diversion above station for irrigation of about 83,800 acres, of which about 900 acres are irrigated by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 17,700 ft<sup>3</sup>/s June 17, 1974, gage height, 8.67 ft; maximum gage height, 10.33 ft, Feb. 7, 1985 (ice jam); minimum discharge, 242 ft<sup>3</sup>/s Jan. 8, 1937, gage height, 1.50 ft.

Summary of monthly and annual discharges, 1913-16, 1920-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,860	765	1,280	271	0.21	5.4
November	1,970	801	1,310	220	0.17	5.6
December	1,610	718	1,150	197	0.17	4.9
January	1,670	756	1,080	179	0.17	4.6
February	1,550	702	1,090	157	0.14	4.6
March	1,700	787	1,130	173	0.15	4.8
April	3,670	900	1,660	547	0.33	7.0
May	7,950	995	3,990	1,500	0.38	16.9
June	11,800	1,680	5,760	2,520	0.44	24.5
July	6,520	747	2,750	1,410	0.51	11.7
August	2,790	540	1,250	472	0.38	5.3
September	2,020	579	1,110	304	0.27	4.7
Annual	3,160	1,160	1,960	502	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1914-16, 1921-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	743	589	510	448	382	340
3	769	629	559	504	446	409
7	821	675	601	543	480	441
14	865	708	629	566	499	456
30	915	746	661	593	521	475
60	976	799	710	638	562	513
90	1,020	858	772	702	627	578
120	1,060	907	825	759	687	641
183	1,130	966	881	812	737	689

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1913-16, 1920-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
8,530	12,100	14,300	17,000	18,900	20,800

Magnitude and frequency of annual high flow,  
based on period of record 1913-16, 1920-90

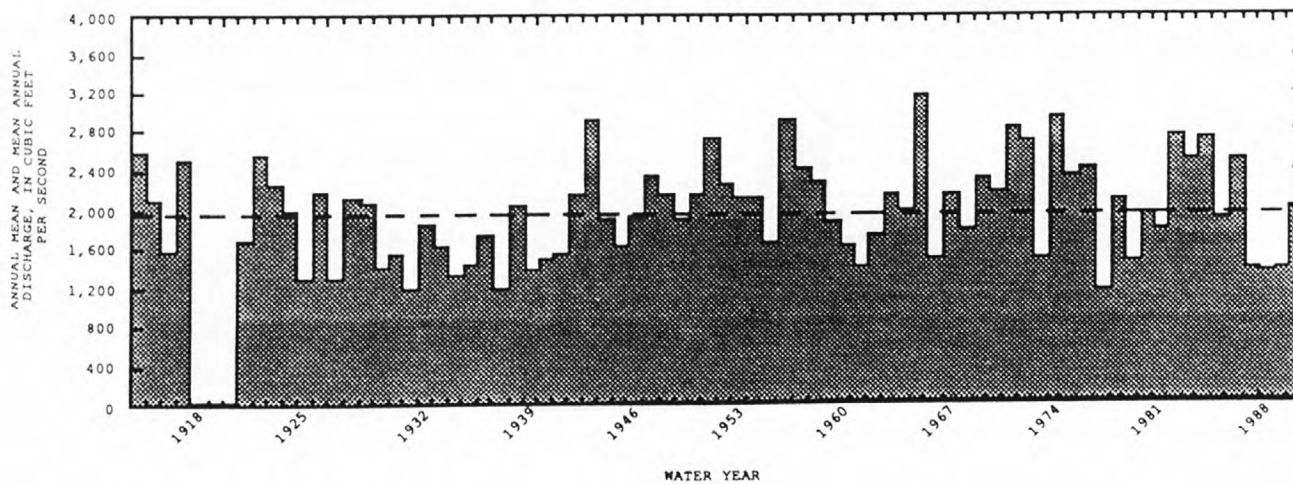
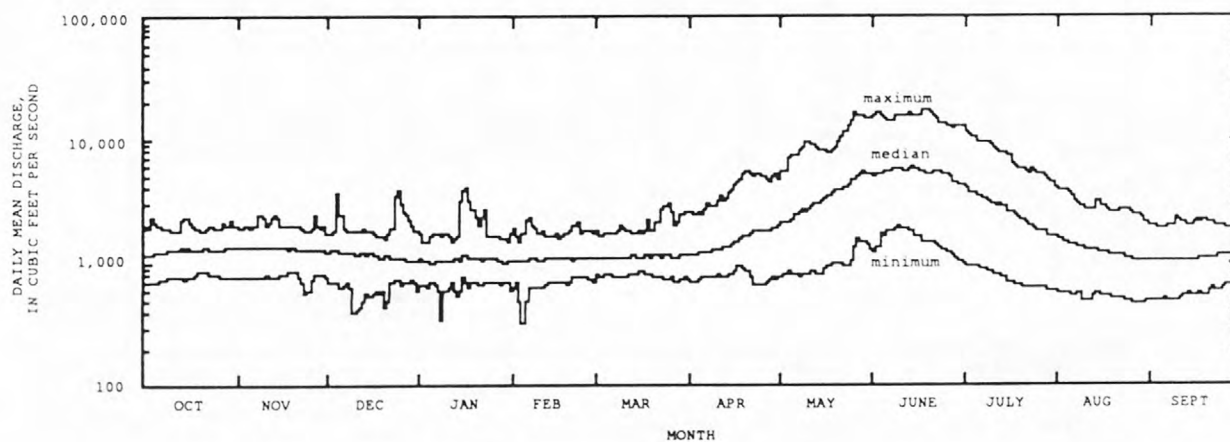
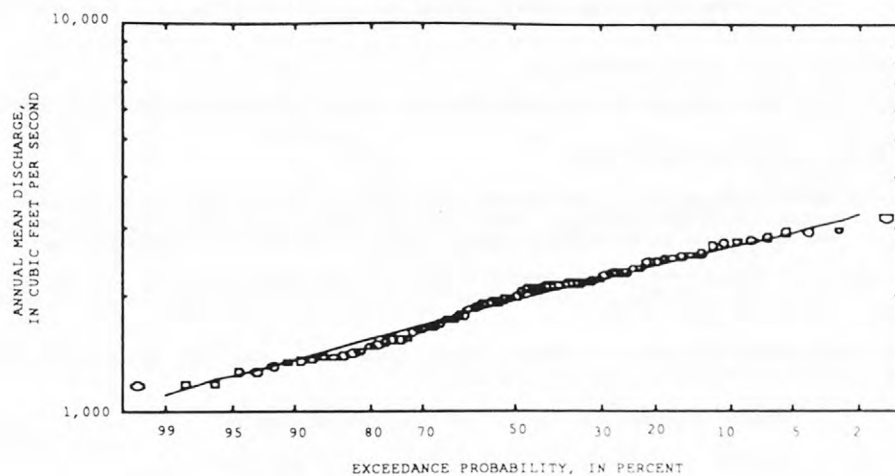
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	8,260	11,700	13,800	16,300	18,100	19,700
3	7,990	11,300	13,400	15,800	17,600	19,200
7	7,490	10,700	12,700	15,200	16,900	18,500
15	6,820	9,770	11,600	13,800	15,400	16,900
30	6,090	8,550	10,000	11,800	13,000	14,100
60	4,990	6,860	7,960	9,200	10,000	10,800
90	4,120	5,580	6,430	7,400	8,050	8,650

Duration table of daily mean flow for period of record 1913-16, 1920-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
10,200	6,160	4,210	3,040	2,310	1,620	1,410	1,280	1,180	1,090	986	865	769	674	616	568	495



LOCATION MAP





SALMON RIVER BASIN

13305000 LEMHI RIVER NEAR LEMHI, ID

LOCATION.—Lat 44°56'24", long 113°38'16", in NW 1/4, NE 1/4, sec. 32, T. 19 N., R. 24 E., Lemhi County, Hydrologic Unit 17060204, on right bank 35 ft upstream from bridge on State Highway 28, 1.4 mi south of Tendoy, 1.8 mi upstream from Agency Creek, 6.2 mi north of Lemhi, and at mile 28.8.

DRAINAGE AREA.—895 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—November 1938 to August 1939, April 1955 to September 1963, water years 1964-67 (annual maximum), August 1967 to September 1990.

REVISED RECORDS.—WSP 1397: 1939.

GAGE.—Water-stage recorder. Elevation of gage is 4,960 ft above sea level, from topographic map. Prior to Aug. 25, 1967, at site 1.5 mi 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. 24, 1967, crest-stage gage only.

REMARKS.—State Fish Hatchery on Hayden Creek several miles upstream since fall 1966 may affect maximums and minimums. Diversions above station for irrigation of about 25,500 acres, of which about 200 acres are irrigated by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,430 ft<sup>3</sup>/s June 21, 1984, gage height, 7.19 ft; minimum, 31 ft<sup>3</sup>/s Aug. 6, 1988, gage height, 2.39 ft.

Summary of monthly and annual discharges, 1956-63, 1968-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	405	133	262	59	0.23	7.9
November	379	197	279	47	0.17	8.4
December	339	181	239	37	0.15	7.2
January	319	175	233	41	0.18	7.1
February	322	175	240	37	0.15	7.3
March	330	194	260	34	0.13	7.9
April	473	146	271	68	0.25	8.2
May	816	100	328	179	0.55	9.9
June	1,300	192	563	280	0.50	17.1
July	909	63	294	188	0.64	8.9
August	349	58	154	65	0.42	4.7
September	274	77	177	57	0.33	5.4
Annual	479	155	275	67	0.24	100

Magnitude and frequency of annual low flow,  
based on period of record 1957-63, 1969-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	100	66	51	41	31	26
3	102	68	53	43	34	28
7	106	72	57	46	36	31
14	114	79	63	52	42	36
30	127	91	75	63	51	44
60	149	106	87	73	59	51
90	176	127	104	86	69	59
120	199	150	126	107	88	76
183	215	172	152	135	118	107

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1956-63, 1968-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
949	1,460	1,780	2,160	2,420	2,670

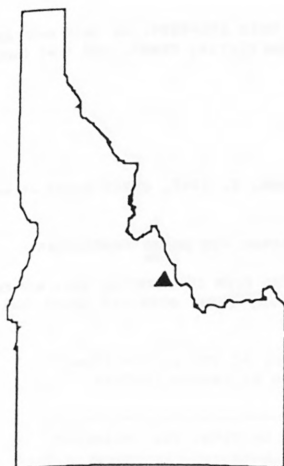
Magnitude and frequency of annual high flow,  
based on period of record 1956-63, 1968-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	840	1,280	1,600	2,020	2,300	2,580
3	794	1,210	1,510	1,900	2,210	2,420
7	732	1,110	1,380	1,730	2,000	2,270
15	660	988	1,220	1,520	1,760	2,000
30	571	838	1,020	1,270	1,450	1,640
60	455	655	801	998	1,150	1,320
90	394	547	656	801	916	1,040

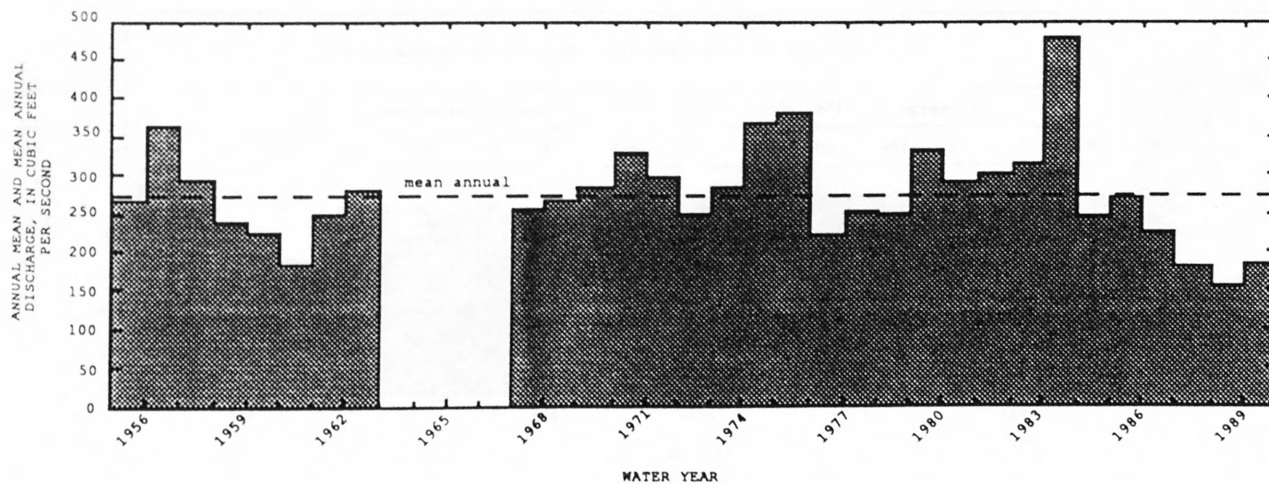
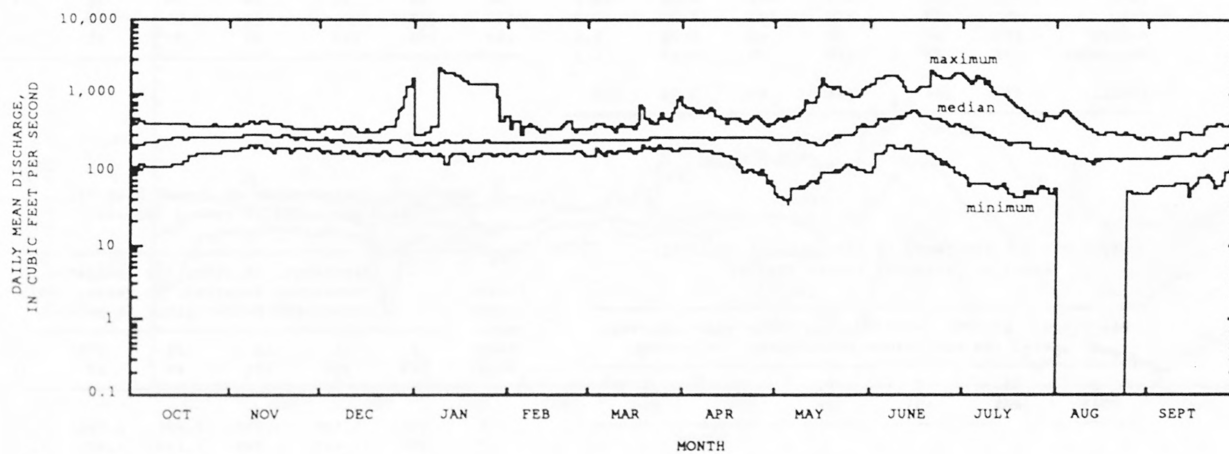
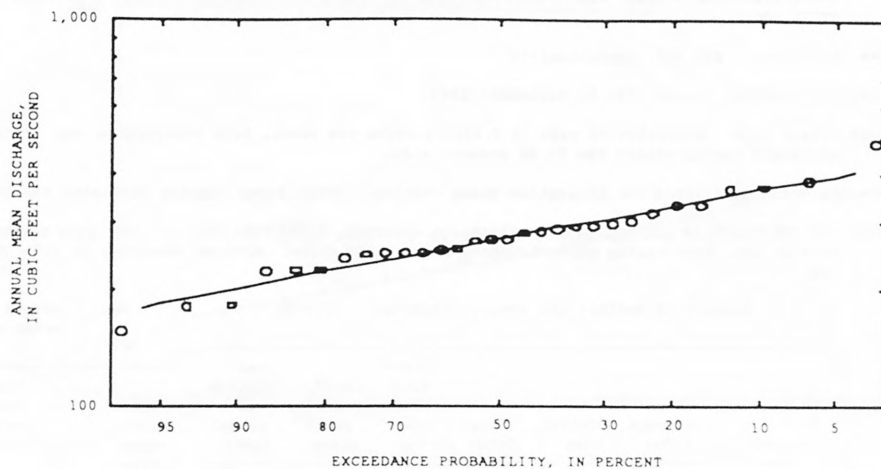
Duration table of daily mean flow for period of record 1956-63, 1968-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
1,050	580	401	351	319	287	264	244	225	205	179	136	100	77	62	53	43	

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13305500 LEMHI RIVER AT SALMON, ID

LOCATION.—Lat 45°10'20", long 113°52'30", in SE 1/4, sec. 5, T. 21 N., R. 22 E., Lemhi County, Hydrologic Unit 17060204, on left bank 200 ft downstream from bridge, 900 ft upstream from diversion gates of power canal, 1 mi downstream from Kirtley Creek, and 1 mi southeast of Salmon.

DRAINAGE AREA.—1,270 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—August 1928 to September 1943.

GAGE.—Staff gage. Elevation of gage is 3,950 ft above sea level, from topographic map. Prior to Sept. 3, 1942, staff gages at several sites and datums within 200 ft of present site.

REMARKS.—Many diversions for irrigation above station. Idaho Power Company diversion 900 ft downstream for power development.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 2,400 ft<sup>3</sup>/s June 3, 1936, gage height, 4.0 ft, from floodmarks, site and datum then in use, from rating curve extended above 1,200 ft<sup>3</sup>/s; minimum observed, 14 ft<sup>3</sup>/s July 22, 23, 1931, site and datum then in use.

Summary of monthly and annual discharges, 1929-43

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	343	132	232	59	0.25	7.8
November	344	190	268	46	0.17	9.0
December	326	163	219	45	0.21	7.4
January	313	153	205	42	0.21	6.9
February	302	166	218	38	0.18	7.4
March	374	185	253	61	0.24	8.5
April	680	145	293	144	0.49	9.9
May	820	58	302	196	0.65	10.2
June	1,350	131	577	341	0.59	19.5
July	603	27	208	188	0.90	7.0
August	207	24	70	49	0.70	2.4
September	236	27	119	60	0.50	4.0
Annual	447	136	246	86	0.35	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-43

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	30	19	15	12	9.4	7.9
3	31	20	16	12	9.6	8.0
7	33	21	16	13	9.9	8.2
14	37	23	18	14	11	8.9
30	45	27	21	17	13	11
60	59	35	27	21	17	14
90	84	51	38	30	22	18
120	123	82	64	51	40	33
183	160	114	93	77	61	51

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-43

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,010	1,630	2,030	2,500	2,820	3,120

Magnitude and frequency of annual high flow,  
based on period of record 1929-43

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	982	1,590	1,980	2,450	2,780	3,090
3	906	1,440	1,780	2,190	2,470	2,740
7	808	1,290	1,600	1,970	2,240	2,500
15	699	1,090	1,340	1,650	1,870	2,080
30	562	874	1,100	1,390	1,620	1,860
60	430	660	838	1,090	1,310	1,540
90	371	551	696	912	1,100	1,310

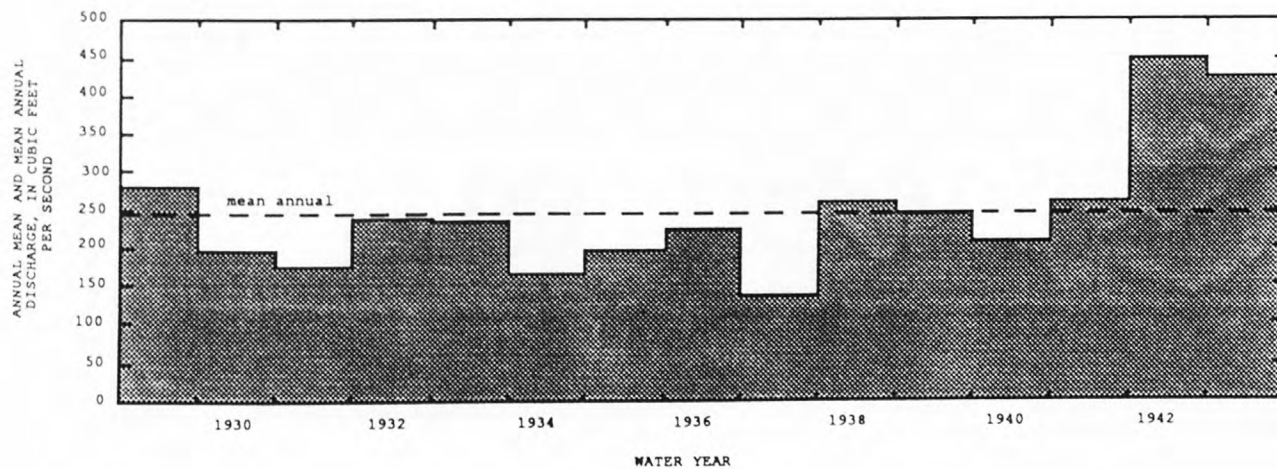
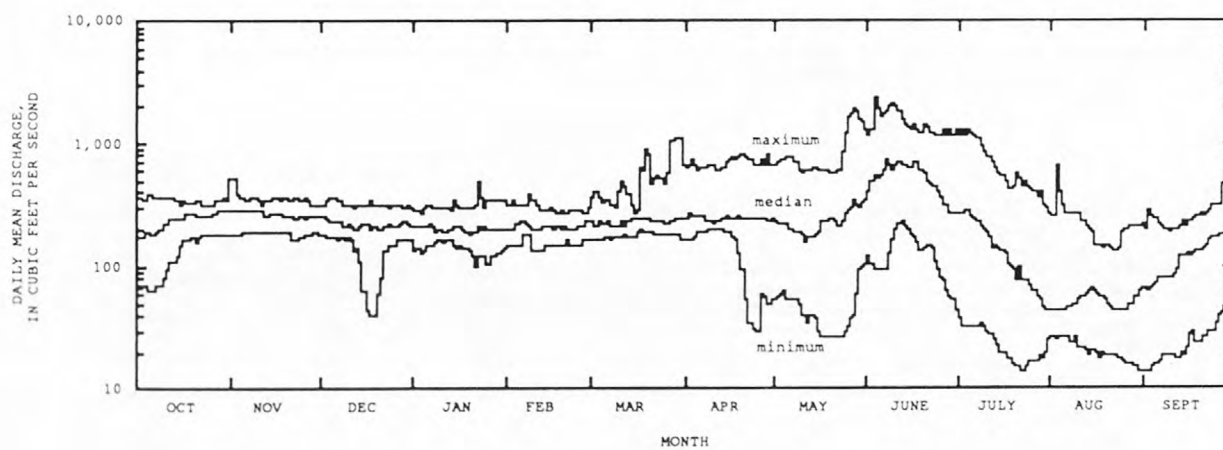
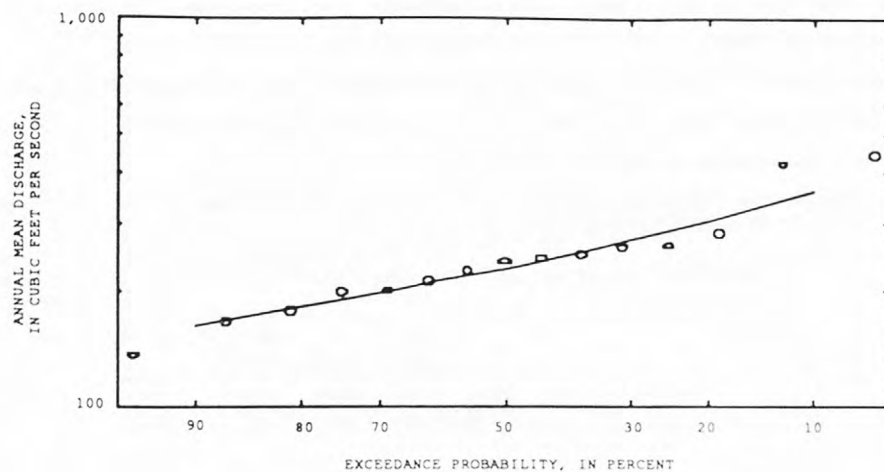
Duration table of daily mean flow for period of record 1929-43

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,190	651	392	331	303	263	236	214	195	169	122	57	35	26	21	18	15

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13306000 NORTH FORK SALMON RIVER AT NORTH FORK, ID

LOCATION.—Lat 45°25', long 113°59', in SW¼, sec.16, T.24 N., R.21 E., Lemhi County, Hydrologic Unit 17060203, on right bank 550 ft upstream from highway bridge, 1,100 ft upstream from mouth, and 0.2 mi northeast of North Fork.

DRAINAGE AREA.—214 mi².

PERIOD OF RECORD.—October 1929 to October 1939 (discontinued). April to September 1912, at site 6 mi upstream, above mouth of Spring Creek.

GAGE.—Staff gage. Elevation of gage is 3,620 ft above sea level, by barometer.

REMARKS.—No diversion or regulation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 901 ft³/s June 13, 1933, gage height, 4.40 ft; minimum observed, 11 ft³/s Dec. 8, 1932, gage height 0.06 ft.

Summary of monthly and annual discharges, 1930-39

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	46	29	38	6.4	0.17	3.5
November	49	31	41	6.2	0.15	3.8
December	48	30	37	6.9	0.18	3.5
January	48	28	35	6.0	0.17	3.2
February	47	31	35	5.1	0.15	3.2
March	89	34	46	17	0.36	4.2
April	303	46	130	83	0.64	12.0
May	453	219	308	87	0.28	28.5
June	604	97	263	147	0.56	24.3
July	121	37	78	30	0.38	7.2
August	50	22	37	9.8	0.26	3.5
September	45	25	34	6.8	0.20	3.1
Annual	113	58	91	19	0.21	100

Magnitude and frequency of annual low flow,  
based on period of record 1931-39

Period (con- secutive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20† 5%	50† 2%	100† 1%
1	24	18	14	12	9.3	7.8
3	24	19	16	13	11	9.6
7	25	20	18	17	15	14
14	27	22	20	18	17	15
30	29	24	21	20	18	16
60	30	26	24	23	22	21
90	31	28	26	25	24	24
120	33	30	28	27	26	26
183	36	32	29	28	26	24

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1930-39

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
560	745	857	988	1,080	1,160

Magnitude and frequency of annual high flow,  
based on period of record 1930-39

Period (con- secutive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	542	729	845	950	1,030	1,120
3	522	710	827	920	980	1,050
7	478	652	771	904	940	960
15	432	595	709	838	869	890
30	377	495	570	661	726	791
60	306	384	427	473	502	529
90	244	304	335	368	388	405

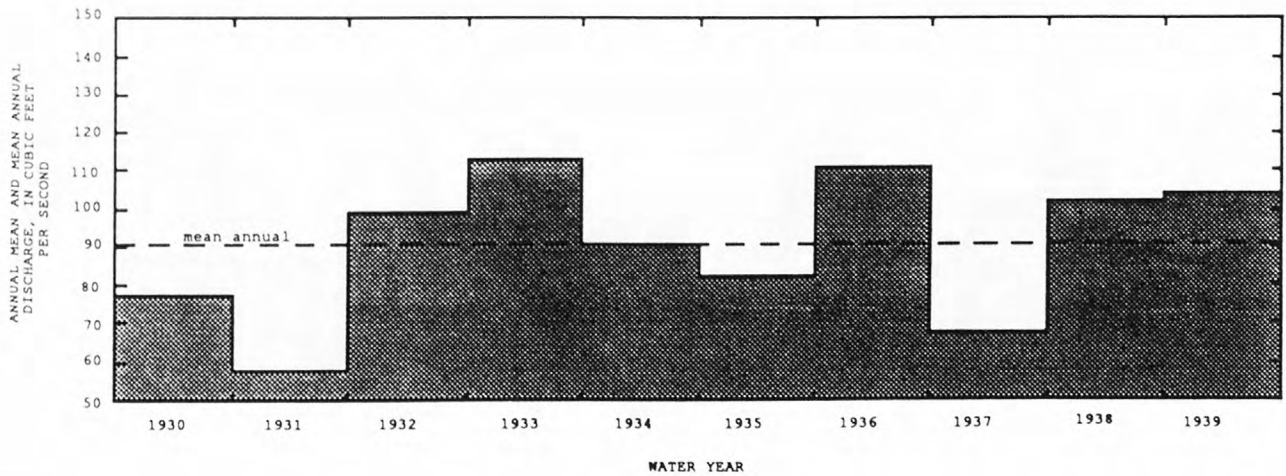
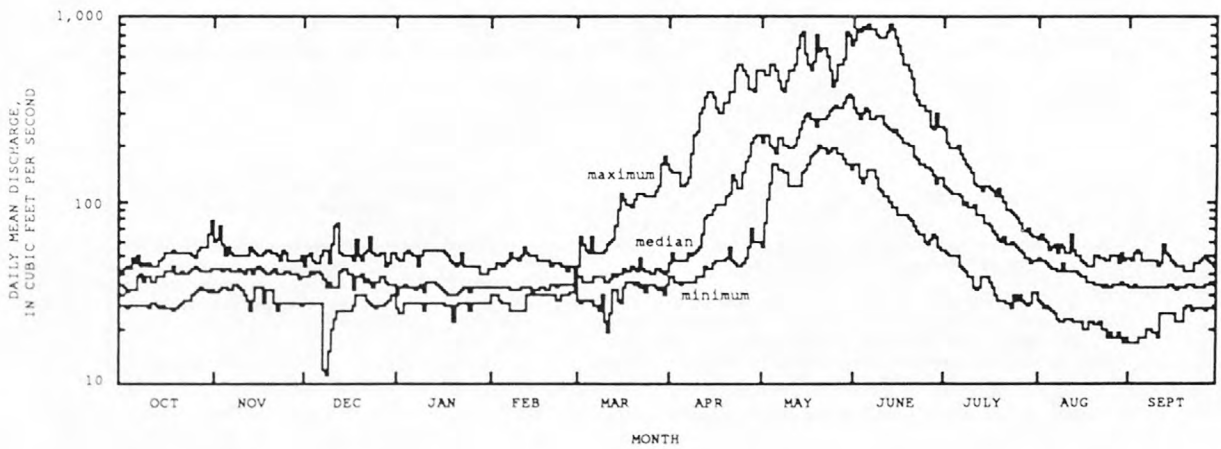
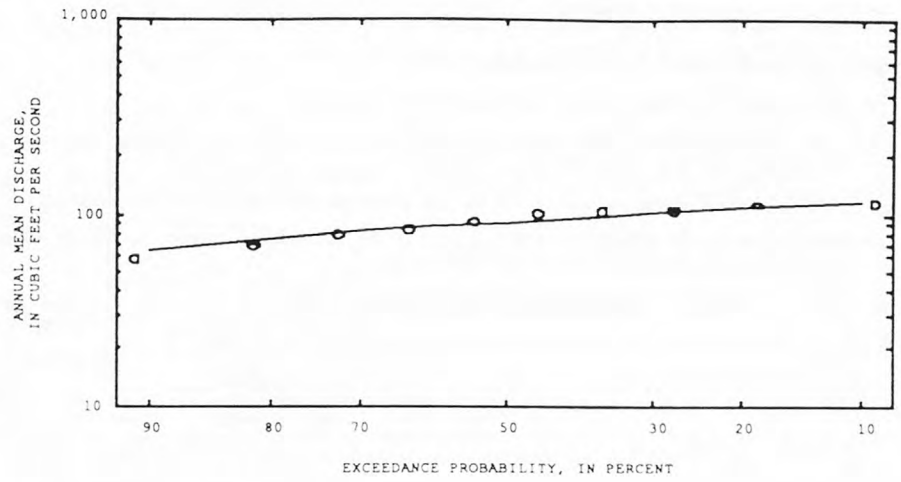
Duration table of daily mean flow for period of record 1930-39

Discharge, in ft³/s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
598	352	240	167	113	57	47	42	39	36	33	29	27	24	22	19	16

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## SALMON RIVER BASIN

13306500 PANTHER CREEK NEAR SHOUP, ID

LOCATION.—Lat 45°18'22", long 114°23'31", in sec.19, T.23 N., R.18 E., Lemhi County, Hydrologic Unit 17060203, Salmon National Forest, on right bank 100 ft downstream from bridge on private road, at mile 1.0, and 7 mi southwest of Shoup.

DRAINAGE AREA.—529 mi<sup>2</sup>. Mean elevation, 7,030 ft.

PERIOD OF RECORD.—October 1944 to September 1977.

REVISED RECORDS.—WSP 1063: 1945. WRD Idaho 1907: 1965(M).

GAGE.—Water-stage recorder. Datum of gage is 3,264.96 ft above sea level, unadjusted (planetable survey). Prior to Nov. 6, 1959, nonrecording gage 75 ft upstream at datum 0.94 ft higher.

REMARKS.—Diversions above station for irrigation of about 1,100 acres (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,050 ft<sup>3</sup>/s June 16, 1974, gage height, 5.95 ft; minimum observed, 22 ft<sup>3</sup>/s Nov. 17, 1958, gage height, 0.57 ft, present datum.

Summary of monthly and annual discharges, 1945-77

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	151	74	109	20	0.18	3.5
November	137	73	99	15	0.15	3.2
December	141	57	90	18	0.20	2.9
January	113	35	83	14	0.17	2.7
February	113	65	82	12	0.15	2.6
March	160	68	91	18	0.20	2.9
April	366	82	193	83	0.43	6.2
May	1,550	216	776	373	0.48	25.2
June	1,950	269	1,000	471	0.47	32.5
July	856	111	317	150	0.47	10.2
August	243	69	139	38	0.28	4.5
September	172	79	111	22	0.20	3.6
Annual	434	131	258	74	0.29	100

Magnitude and frequency of annual low flow,  
based on period of record 1946-77

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>#</sup> 1%
1	52	41	35	30	24	21
3	59	49	43	38	32	29
7	65	54	47	41	35	31
14	70	58	51	44	38	33
30	76	64	56	49	42	37
60	79	69	63	59	54	50
90	81	72	68	65	61	58
120	84	75	70	67	63	61
183	91	81	77	73	69	67

Magnitude and frequency of annual high flow,  
based on period of record 1945-77Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-77

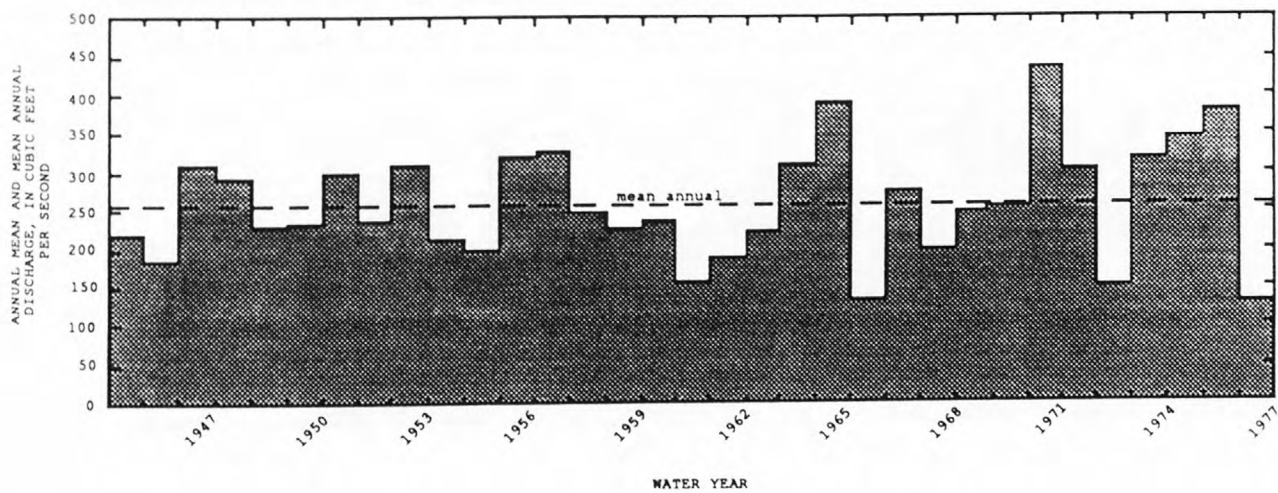
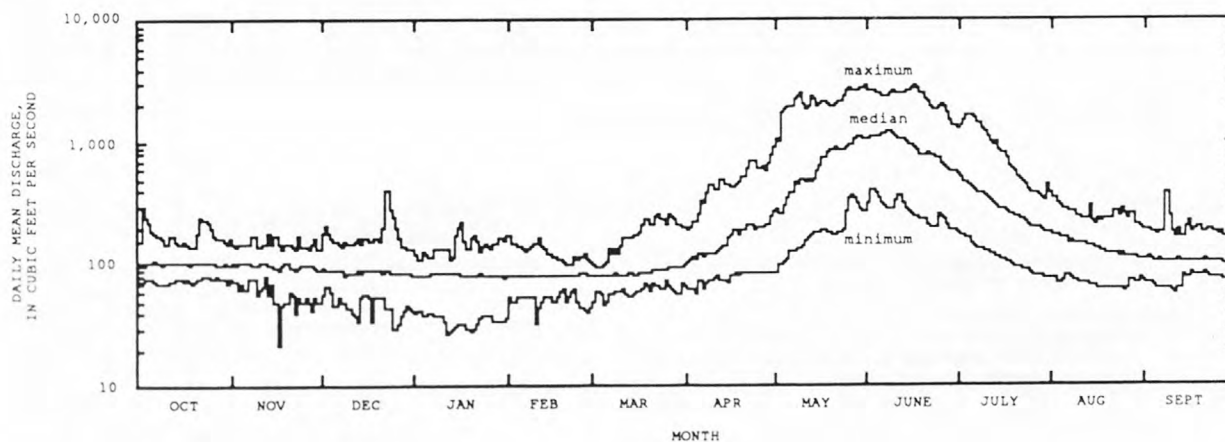
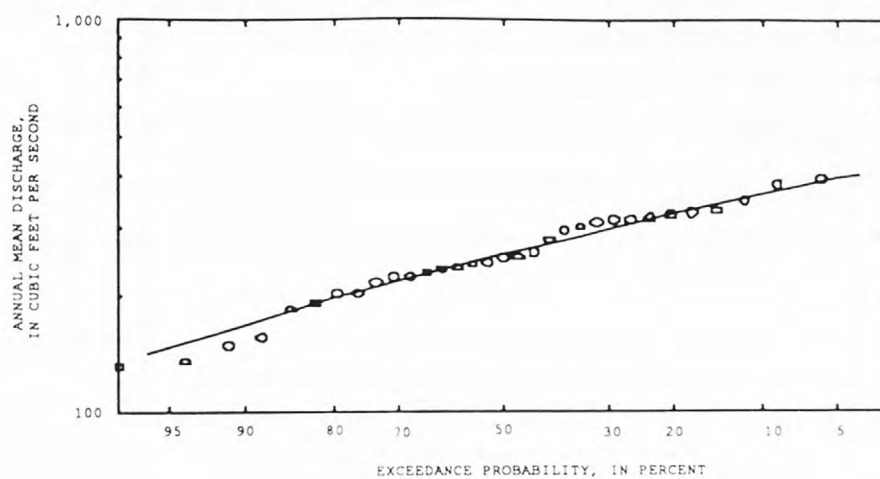
Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,730	2,500	2,990	3,580	4,010	4,420

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>#</sup> 1%
1	1,710	2,420	2,770	3,130	3,350	3,530
3	1,660	2,320	2,660	2,990	3,190	3,360
7	1,560	2,160	2,480	2,790	2,980	3,130
15	1,410	1,950	2,230	2,510	2,680	2,820
30	1,190	1,660	1,920	2,190	2,350	2,500
60	905	1,250	1,430	1,620	1,740	1,840
90	703	955	1,090	1,230	1,320	1,400

Duration table of daily mean flow for period of record 1945-77

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
2,020	1,110	661	430	289	164	128	110	99	90	83	73	66	57	51	45	32	32

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.



## SALMON RIVER BASIN

13307000 SALMON RIVER NEAR SHOUP, ID

LOCATION.—Lat 45°19'20", long 114°26'23", in NE1/4, SW1/4, sec.14, T.23 N., R.17 E., Lemhi County, Hydrologic Unit 17060203, Salmon National Forest, on right bank 0.6 mi upstream from Owl Creek, 2.3 mi downstream from Panther Creek, 9 mi southwest of Shoup, and at mile 207.8.

DRAINAGE AREA.—6,270 mi<sup>2</sup>, approximately. Mean elevation, 7,140 ft.

PERIOD OF RECORD.—October 1944 to September 1981.

GAGE.—Water-stage recorder. Datum of gage is 3,153.7 ft above sea level. Prior to Sept. 18, 1951, nonrecording gage at different sites approximately 1.3 mi upstream at different datums.

REMARKS.—Diversion above station for irrigation of about 149,000 acres, of which about 1,200 acres are by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 25,700 ft<sup>3</sup>/s June 18, 1974, gage height, 13.13 ft; minimum, 710 ft<sup>3</sup>/s Aug. 20, 21, 1966.

Summary of monthly and annual discharges, 1945-81

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,470	1,410	1,970	325	0.16	5.4
November	2,360	1,590	2,010	205	0.10	5.5
December	2,420	1,480	1,810	221	0.12	5.0
January	2,330	1,290	1,710	222	0.13	4.7
February	2,360	1,410	1,730	203	0.12	4.7
March	2,740	1,410	1,780	301	0.17	4.9
April	4,360	1,400	2,470	805	0.33	6.8
May	11,500	1,650	6,310	2,560	0.41	17.3
June	16,800	3,150	9,200	3,470	0.38	25.3
July	8,910	1,390	4,020	1,730	0.43	11.0
August	3,510	822	1,770	574	0.32	4.9
September	2,810	1,060	1,640	382	0.23	4.5
Annual	4,510	1,810	3,040	663	0.22	100

Magnitude and frequency of annual low flow,  
based on period of record 1946-81

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	1,110	940	854	786	713	666
3	1,150	970	878	805	727	677
7	1,250	1,050	937	849	752	690
14	1,330	1,100	985	888	781	713
30	1,420	1,180	1,050	944	823	745
60	1,530	1,300	1,170	1,070	951	873
90	1,620	1,410	1,300	1,200	1,080	1,010
120	1,680	1,490	1,390	1,310	1,210	1,150
183	1,770	1,580	1,490	1,410	1,320	1,260

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-81

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
13,400	18,200	21,100	24,500	26,900	29,100

Magnitude and frequency of annual high flow,  
based on period of record 1945-81

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	13,300	17,900	20,600	23,500	25,500	27,300
3	13,000	17,500	20,100	23,000	24,900	26,700
7	12,300	16,600	19,000	21,800	23,700	25,400
15	11,300	15,200	17,400	19,800	21,300	22,700
30	10,000	13,400	15,200	17,000	18,200	19,200
60	8,180	10,700	11,900	13,200	13,900	14,400
90	6,670	8,620	9,570	10,500	11,000	11,500

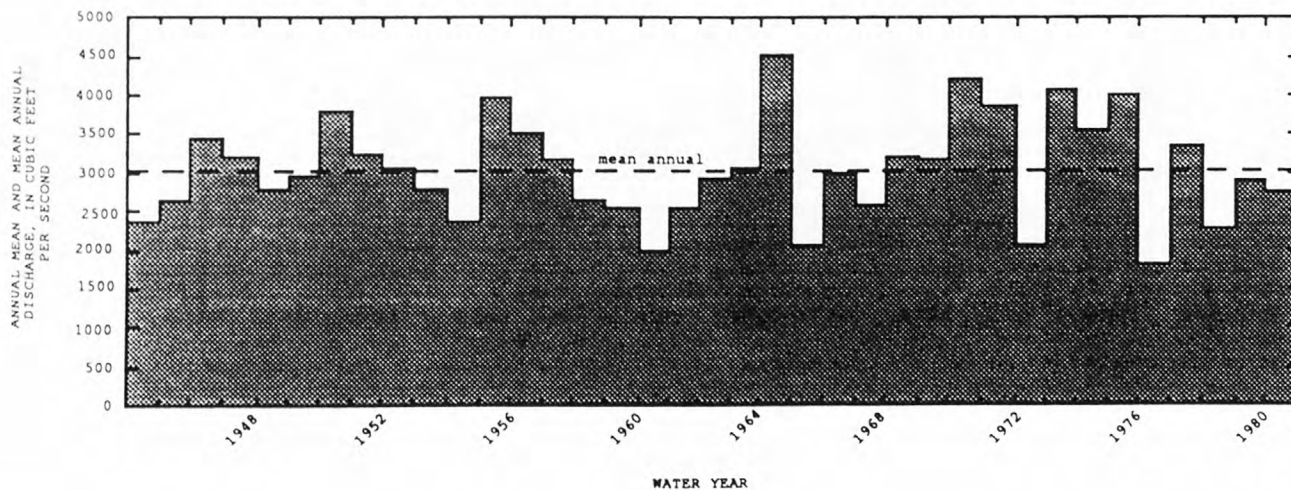
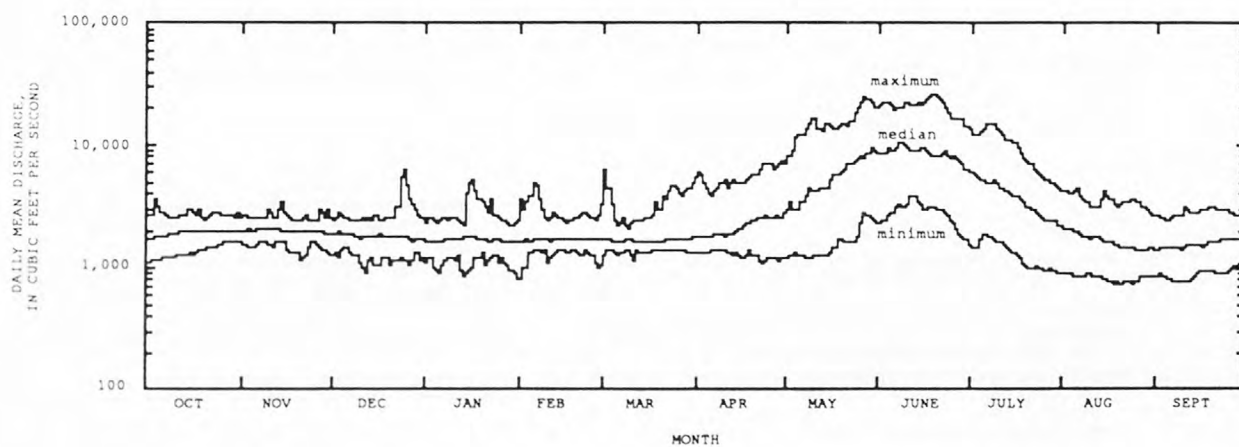
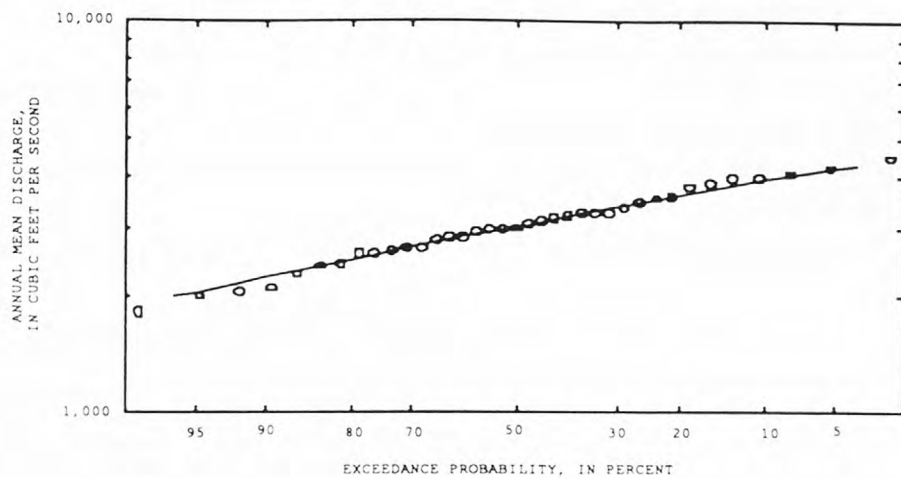
Duration table of daily mean flow for period of record 1945-81

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
15,200	9,720	6,830	4,760	3,540	2,400	2,110	1,930	1,800	1,680	1,560	1,420	1,260	1,100	957	870	773	773

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13308500 MIDDLE FORK SALMON RIVER NEAR CAPE HORN, ID

LOCATION.—Lat 44°24'30", long 115°10'20", in NW 1/4, sec.3, T.12 N., R.11 E., Custer County, Hydrologic Unit 17060205, Challis National Forest, on left bank 1,100 ft downstream from Little Beaver Creek, 0.5 mi downstream from confluence of Marsh and Beaver Creeks, 2 mi northwest of Cape Horn, and at mile 110.3.

DRAINAGE AREA.—138 mi<sup>2</sup>. Mean elevation, 7,370 ft.

PERIOD OF RECORD.—September 1928 to June 1972. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 738: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 6,435 ft above sea level, by barometer.

REMARKS.—No diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,980 ft<sup>3</sup>/s May 24, 1956, gage height, 6.96 ft; minimum recorded, 31 ft<sup>3</sup>/s Apr. 14, 1945, gage height, 2.12 ft.

Summary of monthly and annual discharges, 1929-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	180	69	100	23	0.23	3.5
November	134	52	91	19	0.21	3.1
December	297	50	87	41	0.47	3.0
January	120	52	75	15	0.20	2.6
February	104	50	70	11	0.16	2.4
March	122	55	71	11	0.16	2.5
April	577	59	174	97	0.56	6.0
May	1,400	350	796	261	0.33	27.5
June	1,720	249	904	375	0.41	31.3
July	809	96	291	155	0.53	10.1
August	221	71	129	35	0.27	4.5
September	151	70	102	19	0.18	3.5
Annual	374	135	241	60	0.25	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-72

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	58	50	46	43	40	38
3	60	52	48	44	41	38
7	61	54	49	46	43	40
14	62	55	51	48	45	42
30	64	57	54	52	49	47
60	67	60	57	55	52	50
90	69	62	59	56	53	52
120	71	64	61	59	57	56
183	80	71	67	64	62	60

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,630	2,140	2,440	2,790	3,030	3,260

Magnitude and frequency of annual high flow,  
based on period of record 1929-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	1,510	1,970	2,240	2,540	2,750	2,940
3	1,450	1,890	2,140	2,440	2,630	2,820
7	1,360	1,790	2,040	2,330	2,530	2,710
15	1,240	1,630	1,860	2,130	2,320	2,500
30	1,100	1,430	1,620	1,850	2,000	2,150
60	866	1,110	1,250	1,420	1,530	1,630
90	667	855	967	1,100	1,190	1,270

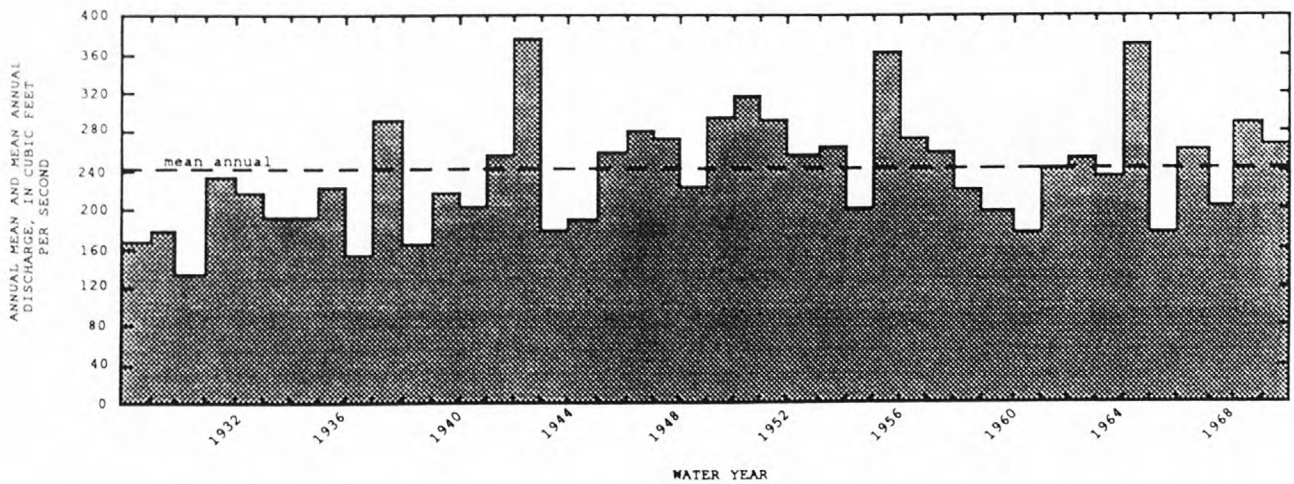
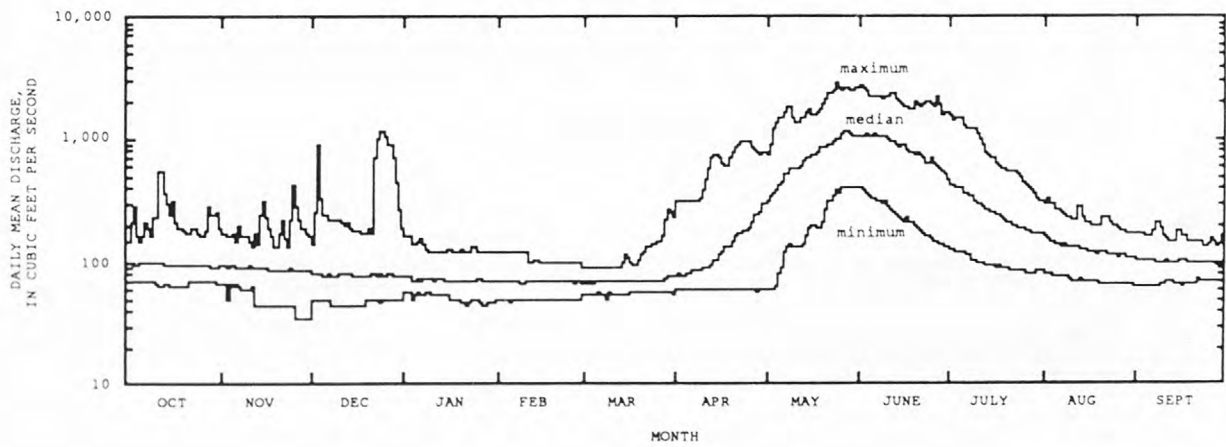
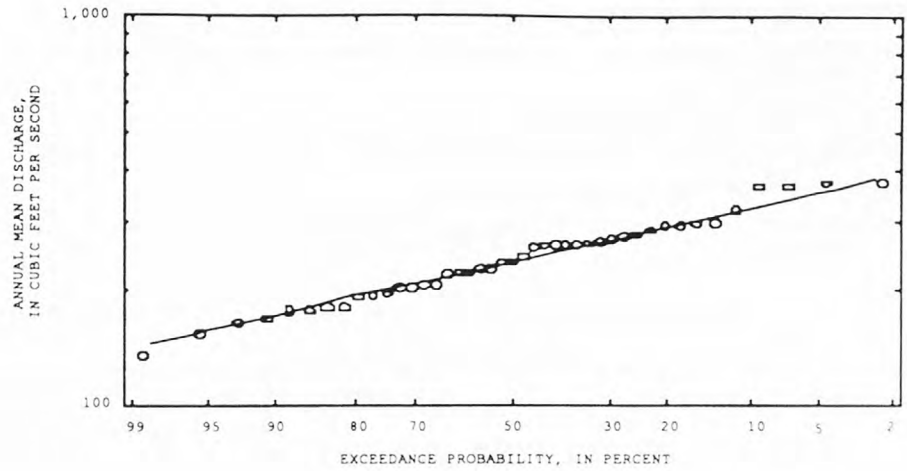
Duration table of daily mean flow for period of record 1929-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
1,690	1,080	696	451	282	149	115	98	87	79	72	65	60	55	51	48	42	42

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





SALMON RIVER BASIN

13309000 BEAR VALLEY CREEK NEAR CAPE HORN, ID

LOCATION.—Lat 44°26', long 115°17', in sec.29, T.13 N., R.10 E., Valley County, Hydrologic Unit 17060205, on right bank 250 ft downstream from Fir Creek, 3 mi upstream from mouth, and 7 mi northwest of Cape Horn.

DRAINAGE AREA.—180 mi<sup>2</sup>, approximately. Mean elevation, 7,040 ft.

PERIOD OF RECORD.—September 1921 to September 1928 (fragmentary), October 1938 to October 1960. Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 573: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 6,340 ft above sea level, by barometer.

REMARKS.—No diversion or regulation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,860 ft<sup>3</sup>/s May 27, 1956, gage height, 5.87 ft, from rating curve extended above 2,300 ft<sup>3</sup>/s by logarithmic plotting; minimum recorded, 28 ft<sup>3</sup>/s Nov. 11, 1931, gage height, 0.87 ft.

Summary of monthly and annual discharges, 1929-60

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	201	74	118	31	0.26	3.4
November	231	75	115	31	0.27	3.3
December	286	65	105	41	0.39	3.0
January	156	65	95	20	0.21	2.7
February	119	65	90	14	0.16	2.6
March	190	73	97	21	0.21	2.8
April	853	88	276	157	0.57	8.0
May	1,940	494	1,070	383	0.36	30.9
June	1,710	229	982	429	0.44	28.3
July	802	94	281	150	0.53	8.1
August	217	64	130	35	0.27	3.7
September	164	70	110	21	0.19	3.2
Annual	460	150	290	76	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-60

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>†</sup> 1%
1	77	65	59	55	49	46
3	79	69	63	58	53	49
7	82	70	64	59	53	49
14	83	72	65	60	55	51
30	84	73	67	63	58	55
60	87	76	70	66	61	58
90	89	78	72	68	64	61
120	91	79	75	72	69	67
183	99	86	80	76	72	70

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-60

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,110	2,810	3,240	3,740	4,090	4,420

Magnitude and frequency of annual high flow,  
based on period of record 1929-60

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>†</sup> 1%
1	1,900	2,520	2,890	3,310	3,600	3,870
3	1,800	2,390	2,730	3,120	3,390	3,640
7	1,670	2,240	2,590	3,010	3,310	3,590
15	1,490	2,030	2,380	2,800	3,100	3,400
30	1,330	1,770	2,030	2,350	2,560	2,770
60	1,050	1,350	1,530	1,730	1,860	1,980
90	806	1,040	1,180	1,340	1,440	1,540

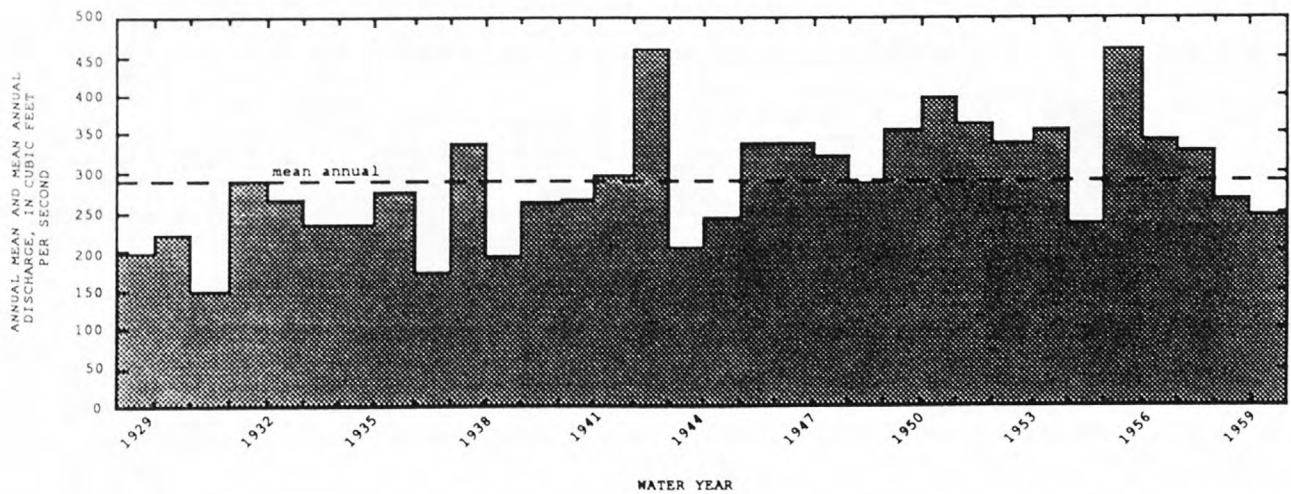
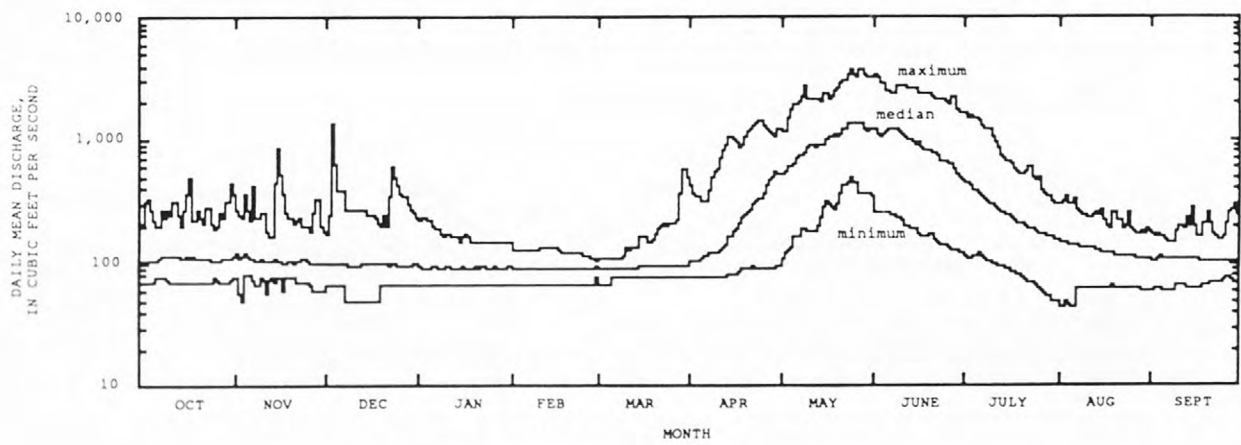
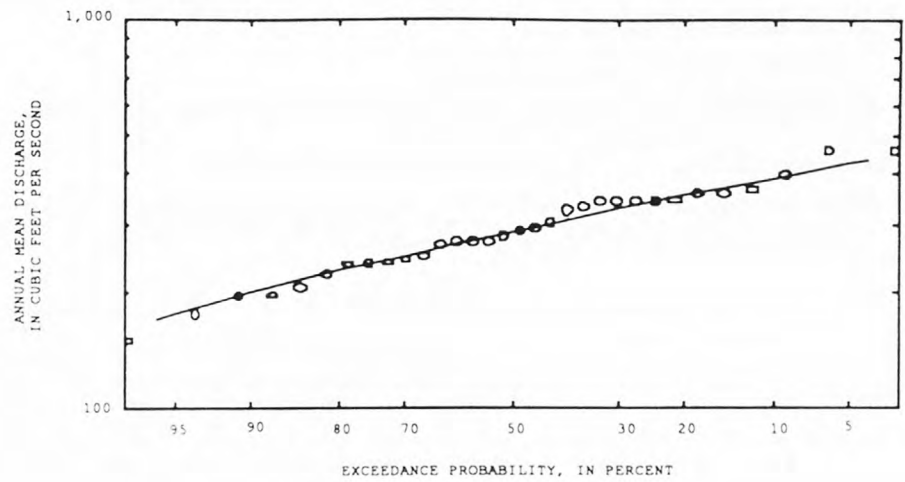
Duration table of daily mean flow for period of record 1929-60

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
2,070	1,310	837	545	321	173	134	117	106	97	88	79	75	68	65	61	56	56

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13310000 BIG CREEK NEAR BIG CREEK, ID

LOCATION.—Lat 45°07', long 114°55', in NE1/4, sec.36, T.21 N., R.12 E., Valley County, Hydrologic Unit 17060206, on left bank 0.75 mi downstream from Cabin Creek, 1.75 mi southeast of Wallace Ranch, and 19 mi east of Big Creek Post Office.

DRAINAGE AREA.—470 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—September 1944 to October 1958.

GAGE.—Water-stage recorder. Elevation of gage is 3,950 ft above sea level, from river-profile map. Prior to Oct. 22, 1948, staff gage at site 0.25 mi downstream at different datum.

REMARKS.—No regulation. Small diversions above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 5,800 ft<sup>3</sup>/s June 3, 1948, gage height, 7.12 ft, from floodmark (former site and datum), from rating curve extended above 3,000 ft<sup>3</sup>/s by logarithmic plotting; minimum, 48 ft<sup>3</sup>/s Dec. 14, 1955 (discharge measurement), but may have been less during period of ice effect.

Summary of monthly and annual discharges, 1945-58

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	311	134	192	52	0.27	3.2
November	269	124	167	37	0.22	2.7
December	235	101	149	36	0.24	2.5
January	167	101	136	20	0.15	2.2
February	193	91	130	23	0.18	2.1
March	236	104	148	36	0.24	2.4
April	886	164	471	224	0.48	7.7
May	2,530	894	1,720	548	0.32	28.3
June	2,840	1,200	1,850	501	0.27	30.4
July	1,090	357	677	224	0.33	11.1
August	320	200	259	36	0.14	4.3
September	226	155	191	21	0.11	3.1
Annual	665	353	509	81	0.16	100

Magnitude and frequency of annual low flow,  
based on period of record 1946-58

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	90	77	71	65	59	56
3	99	91	87	84	81	78
7	108	98	94	92	89	88
14	114	104	100	97	95	93
30	119	110	105	103	100	98
60	123	114	111	109	108	107
90	133	122	117	114	111	109
120	138	125	120	116	113	110
183	151	136	130	127	123	121

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-58

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
3,740	4,770	5,380	6,070	6,540	6,980	

Magnitude and frequency of annual high flow,  
based on period of record 1945-58

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	3,630	4,450	4,840	5,210	5,430	5,610
3	3,430	4,150	4,490	4,800	4,970	5,110
7	3,170	3,870	4,220	4,560	4,760	4,930
15	2,690	3,400	3,840	4,390	4,790	5,180
30	2,290	2,840	3,190	3,620	3,940	4,250
60	1,860	2,170	2,330	2,510	2,620	2,730
90	1,480	1,710	1,830	1,960	2,050	2,120

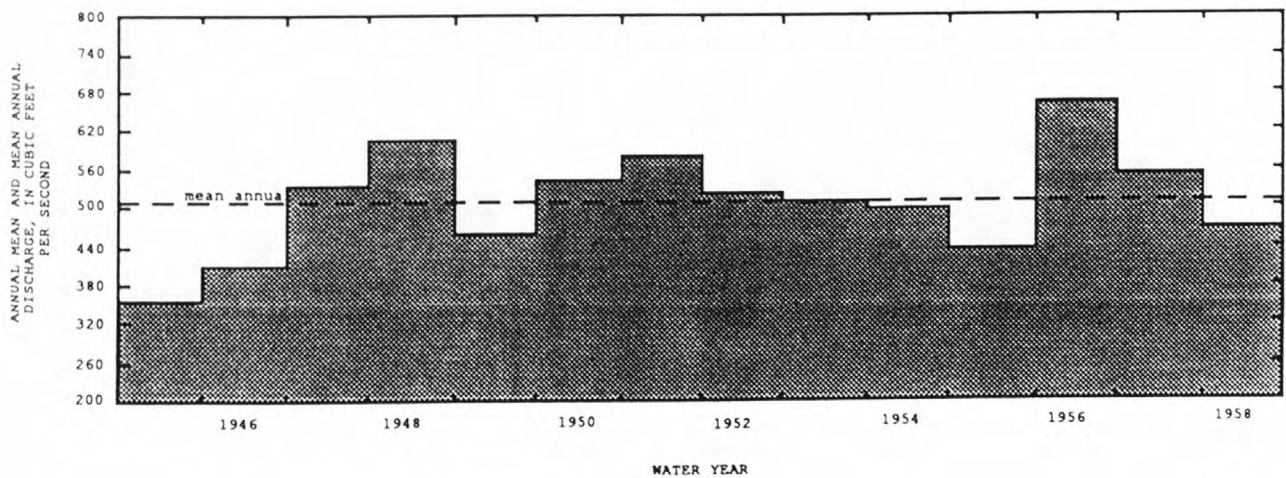
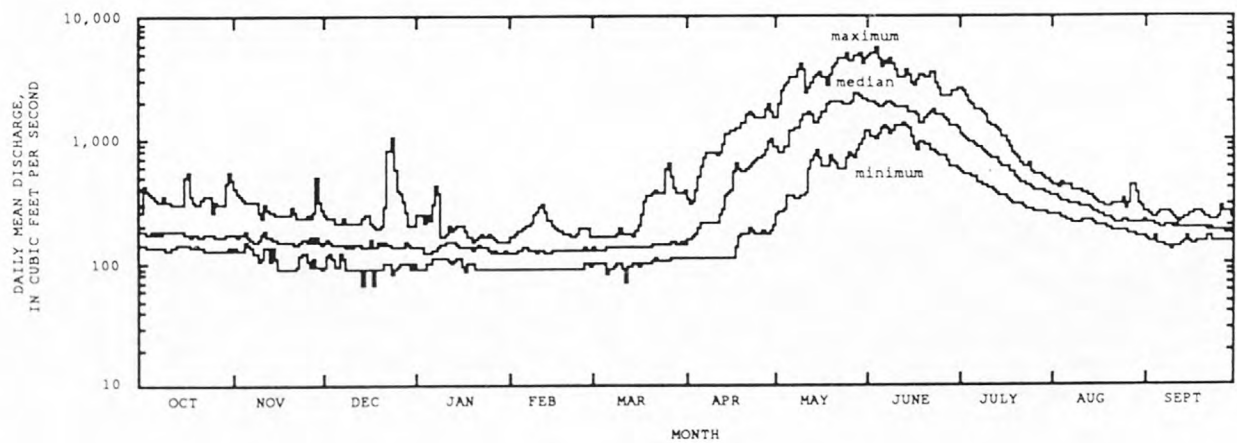
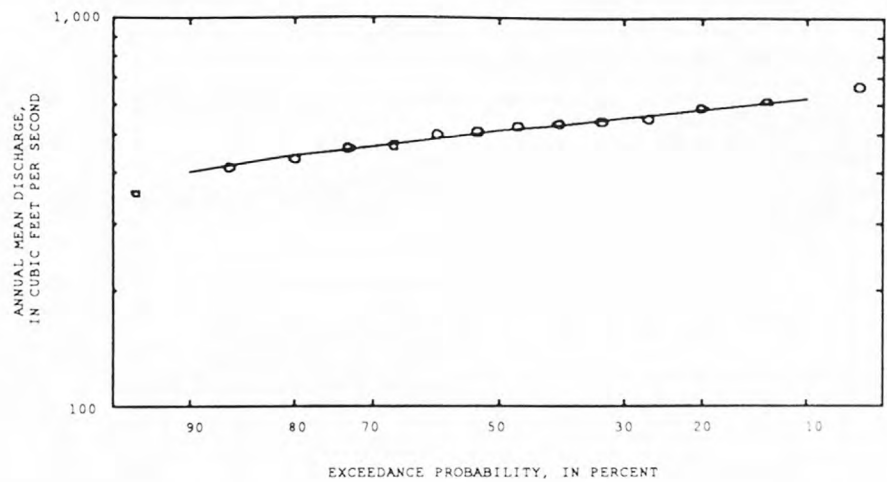
Duration table of daily mean flow for period of record 1945-58

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
3,480	2,070	1,500	1,100	738	333	231	191	168	151	137	120	111	97	91	88	85	

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



SALMON RIVER BASIN

13310500 SOUTH FORK SALMON RIVER NEAR KNOX, ID

LOCATION.—Lat 44°39'15", long 115°42'05", in NW¼, sec.11, T.15 N., R.6 E., Valley County, Hydrologic Unit 17060208, on left bank 800 ft downstream from Curtis Creek, 1 mi upstream from Warm Lake Creek, 1.5 mi southwest of Knox, and 21 mi northeast of Cascade.

DRAINAGE AREA.—92 mi², approximately. Mean elevation, 6,630 ft.

PERIOD OF RECORD.—September 1928 to October 1960.

GAGE.—Water-stage recorder. Datum of gage is 5,090.31 ft above sea level, unadjusted. Prior to Oct. 22, 1942, nonrecording gage at site 800 ft downstream at datum 2.09 ft lower.

REMARKS.—No diversion or regulation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,620 ft³/s May 27, 1956, gage height, 6.33 ft; minimum recorded, 14 ft³/s Nov. 3, 1952, gage height, 2.23 ft.

Summary of monthly and annual discharges, 1929-60

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	88	28	47	15	0.32	2.7
November	88	26	49	14	0.30	2.8
December	147	22	50	26	0.52	2.9
January	84	21	43	14	0.31	2.5
February	73	24	42	10	0.24	2.4
March	85	28	52	14	0.28	3.0
April	436	49	195	99	0.51	11.2
May	899	155	541	194	0.36	31.1
June	795	127	494	189	0.38	28.4
July	363	35	133	69	0.52	7.6
August	87	19	52	14	0.27	3.0
September	69	27	41	8.3	0.20	2.4
Annual	219	86	145	37	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-60

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	30	24	21	19	16	15
3	31	25	22	20	17	15
7	32	26	23	21	18	16
14	34	27	24	21	18	17
30	35	28	25	22	19	18
60	36	30	26	24	21	19
90	37	31	28	25	23	21
120	39	32	29	26	24	23
183	43	35	32	29	27	26

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-60

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,030	1,330	1,510	1,710	1,850	1,980

Magnitude and frequency of annual high flow,  
based on period of record 1929-60

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	953	1,240	1,410	1,620	1,760	1,900
3	905	1,170	1,320	1,500	1,620	1,730
7	840	1,090	1,240	1,410	1,520	1,640
15	761	980	1,110	1,270	1,370	1,470
30	666	848	957	1,090	1,180	1,260
60	530	669	749	839	900	956
90	421	534	599	672	721	766

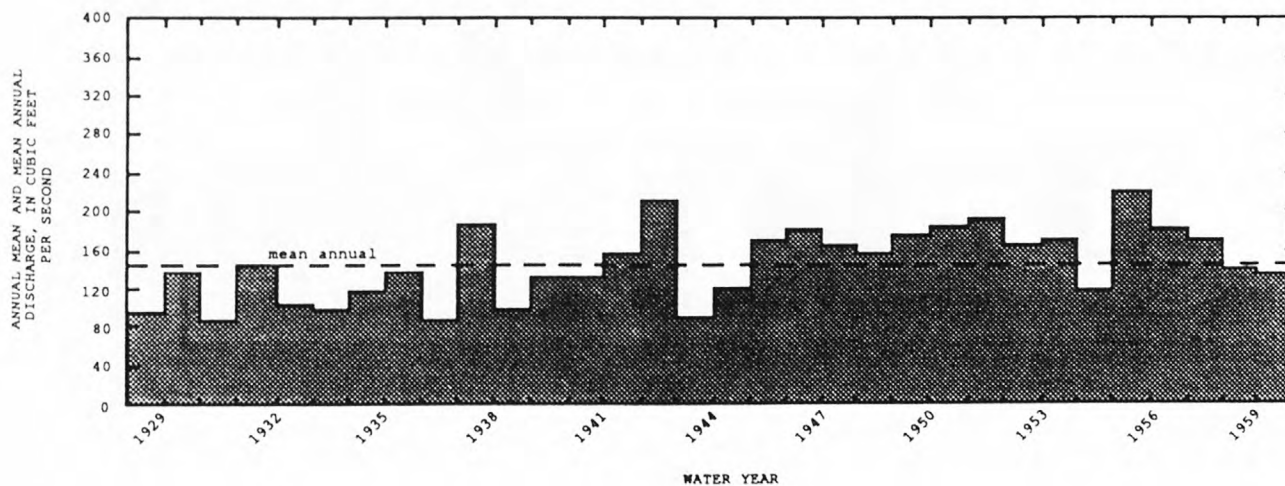
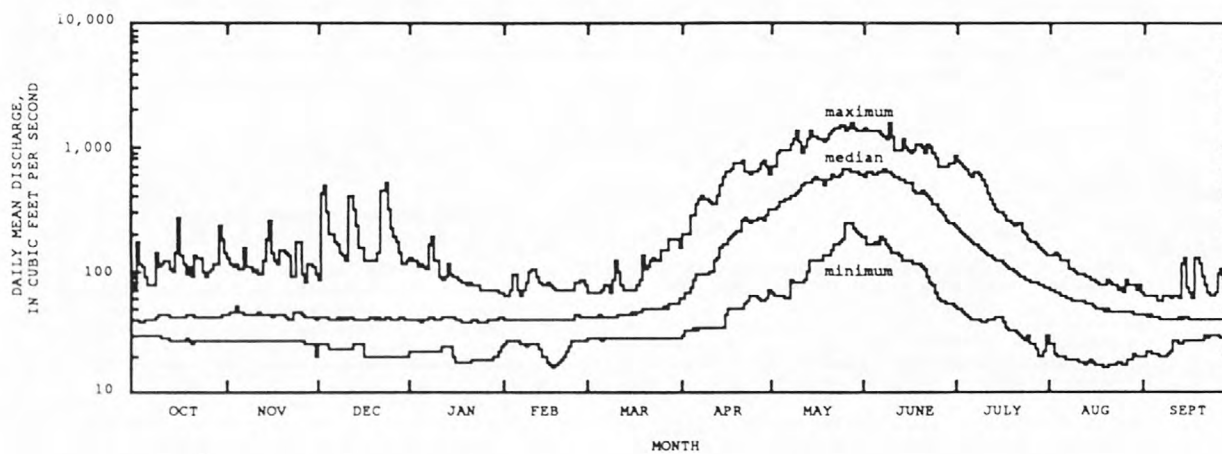
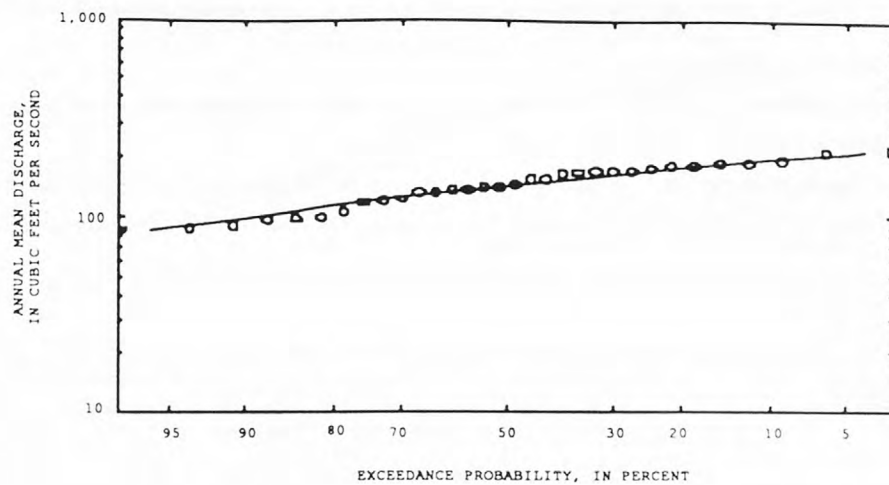
Duration table of daily mean flow for period of record 1929-60

Discharge, in ft³/s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
990	646	449	306	190	88	61	52	46	41	37	33	30	26	24	20	18	18

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





SALMON RIVER BASIN

13310700 SOUTH FORK SALMON RIVER NEAR KRASSEL RANGER STATION, ID

LOCATION.—Lat 44°59'30", long 115°43'30", in NE¼, sec.16, T.19 N., R.6 E., Valley County, Hydrologic Unit 17060208, Payette National Forest, on right bank 0.6 mi upstream from Fittum Creek, 1.4 mi downstream from Kraschel Ranger station, 2 mi upstream from mouth of East Fork South Fork Salmon River, 20 mi east of McCall, and at mile 39.2.

DRAINAGE AREA.—330 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1966 to September 1982, April 1985 to September 1986, February 1989 to September 1990.

REVISED RECORDS.—WSP 1397: 1939.

GAGE.—Water-stage recorder. Elevation of gage is 3,750 ft above sea level, from topographic map.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,740 ft<sup>3</sup>/s June 17, 1974, gage height, 10.00 ft; minimum, 38 ft<sup>3</sup>/s Nov. 27, 1976, gage height, 1.11 ft, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of May 28, 1948, reached a discharge of 5,200 ft<sup>3</sup>/s by slope-area measurement at site 2.3 mi upstream.

Summary of monthly and annual discharges, 1967-82, 1986, 1990

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	275	111	162	37	0.23	2.4
November	557	126	207	107	0.52	3.1
December	414	113	216	99	0.46	3.2
January	803	116	240	160	0.67	3.6
February	514	117	229	106	0.46	3.3
March	754	117	291	165	0.57	4.3
April	1,120	202	627	309	0.49	9.3
May	2,780	390	1,730	621	0.36	25.7
June	4,190	400	2,040	964	0.47	30.3
July	1,310	137	636	362	0.57	9.4
August	313	97	204	63	0.31	3.0
September	216	106	159	35	0.22	2.4
Annual	974	180	563	194	0.34	100

Magnitude and frequency of annual low flow,  
based on period of record 1968-82, 1986, 1990

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	93	76	68	62	56	53
3	104	88	81	75	69	66
7	112	97	90	84	78	74
14	118	102	94	88	81	76
30	125	108	101	95	89	85
60	136	118	111	106	101	98
90	141	125	118	114	109	107
120	151	131	122	117	111	108
183	173	142	129	120	111	109

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1967-82, 1986, 1990

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,540	4,620	5,260	6,010	6,520	7,000

Magnitude and frequency of annual high flow,  
based on period of record 1967-82, 1986, 1990

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	3,670	4,810	5,220	5,500	5,620	5,680
3	3,520	4,640	5,020	5,290	5,390	5,450
7	3,210	4,290	4,700	5,010	5,140	5,220
15	2,870	3,810	4,160	4,410	4,520	4,580
30	2,530	3,300	3,560	3,740	3,810	3,850
60	2,040	2,660	2,880	3,030	3,090	3,130
90	1,630	2,130	2,320	2,460	2,520	2,560

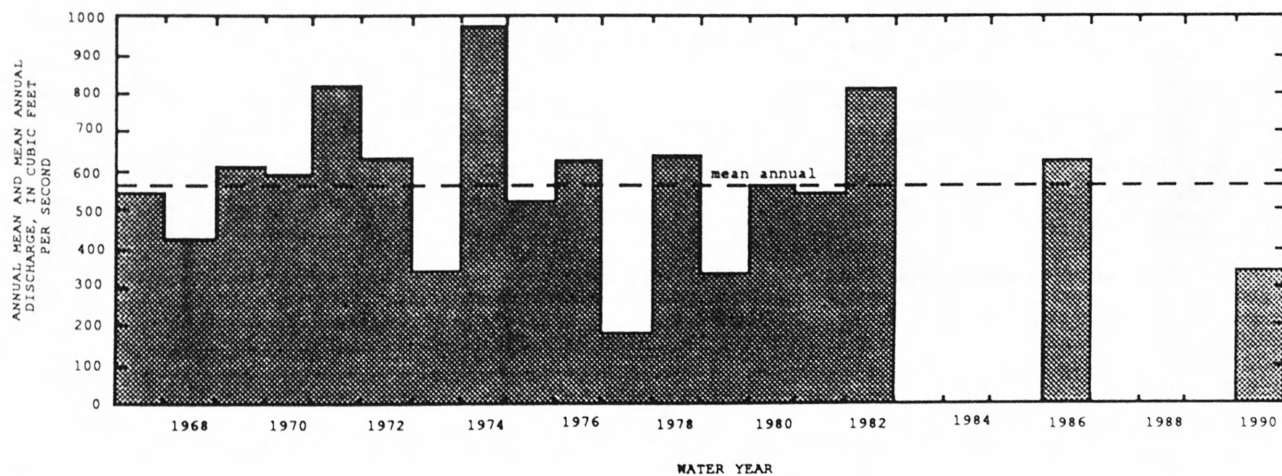
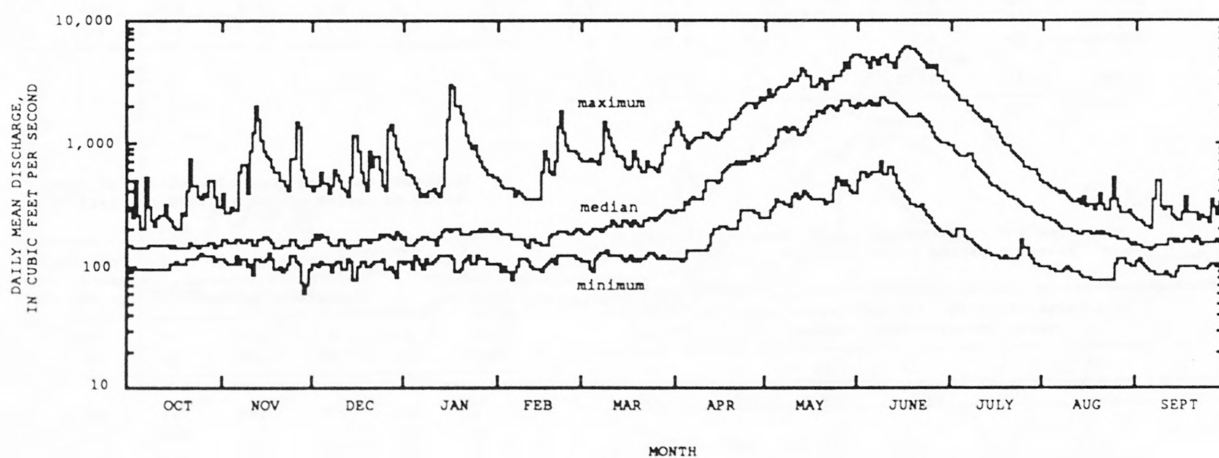
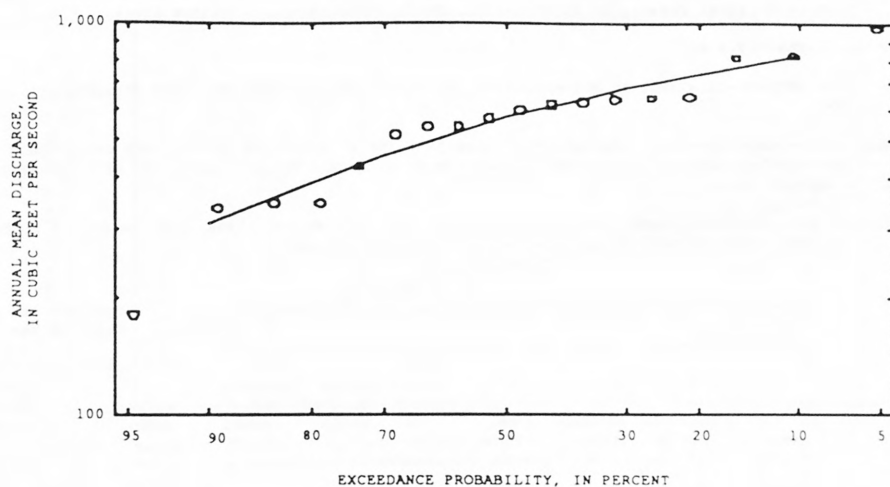
Duration table of daily mean flow for period of record 1967-82, 1986, 1990

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
3,740	2,370	1,650	1,120	773	402	287	222	187	159	143	125	112	102	94	88	83	73

• Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



SALMON RIVER BASIN

13311000 EAST FORK SOUTH FORK SALMON RIVER AT STIBNITE, ID

LOCATION.—Lat 44°54'21", long 115°19'42", in SE¼, SW¼, SW¼, sec.11, T.18 N., R.9 E., Valley County, Hydrologic Unit 17060208, Payette National Forest, on right bank 1,200 ft downstream from Meadow Creek.

DRAINAGE AREA.—19.6 mi<sup>2</sup>.

PERIOD OF RECORD.—July 1928 to November 1941, December 1941 to September 1943 (fragmentary records only), October 1982 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 6,460 ft above sea level, from topographic map. Prior to Sept. 18, 1929, nonrecording gage at site 1,090 ft upstream at different datum. Sept. 18, 1929, to Sept. 7, 1943, at site 1,100 ft upstream at different datum.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 394 ft<sup>3</sup>/s May 31, 1986, gage height, 7.11 ft; minimum recorded, 2.0 ft<sup>3</sup>/s Oct. 29, 1936, gage height, 1.71 ft, site and datum then in use.

Summary of monthly and annual discharges, 1929-41, 1983-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	18	5.5	10	3.3	0.32	3.6
November	20	5.9	9.4	3.0	0.32	3.3
December	12	4.0	8.0	1.9	0.24	2.8
January	9.0	4.9	7.2	1.2	0.16	2.5
February	8.3	4.8	6.9	0.91	0.13	2.3
March	20	5.9	8.2	3.1	0.37	2.9
April	65	7.3	22	12	0.56	7.7
May	113	41	72	20	0.28	25.3
June	206	25	91	53	0.59	31.6
July	72	9.7	28	17	0.62	9.7
August	31	6.6	13	5.4	0.41	4.6
September	19	6.1	11	3.2	0.30	3.7
Annual	37	15	24	6.7	0.28	100

Magnitude and frequency of annual low flow, based on period of record 1930-41, 1984-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	5.7	4.8	4.4	4.1	3.7	3.5
3	5.9	5.1	4.6	4.2	3.8	3.6
7	6.2	5.3	4.8	4.3	3.9	3.6
14	6.4	5.4	4.9	4.4	4.0	3.7
30	6.5	5.5	5.0	4.5	4.0	3.7
60	6.6	5.7	5.1	4.7	4.2	3.9
90	6.8	5.9	5.4	5.1	4.6	4.3
120	7.2	6.3	5.8	5.4	5.0	4.7
183	7.9	6.8	6.3	5.9	5.5	5.3

Magnitude and frequency of instantaneous peak flow, based on period of record 1929-41, 1983-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
179	254	301	357	397	436

Magnitude and frequency of annual high flow, based on period of record 1929-41, 1983-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	152	225	279	343	374	409
3	147	218	270	323	352	395
7	135	202	253	305	334	389
15	122	177	219	277	313	354
30	105	148	178	218	249	282
60	81	111	130	155	173	190
90	64	85	99	116	128	140

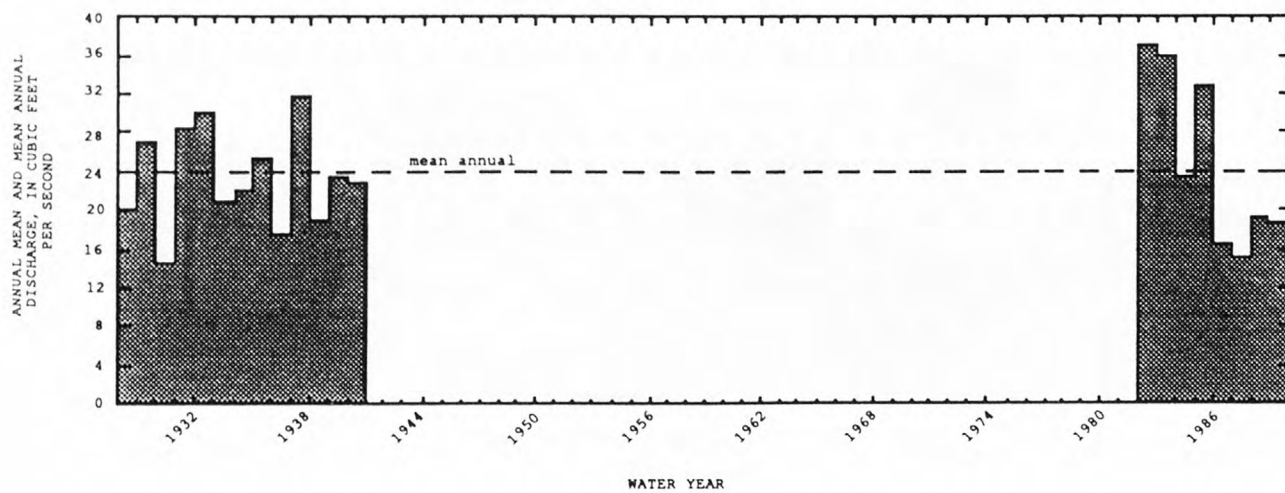
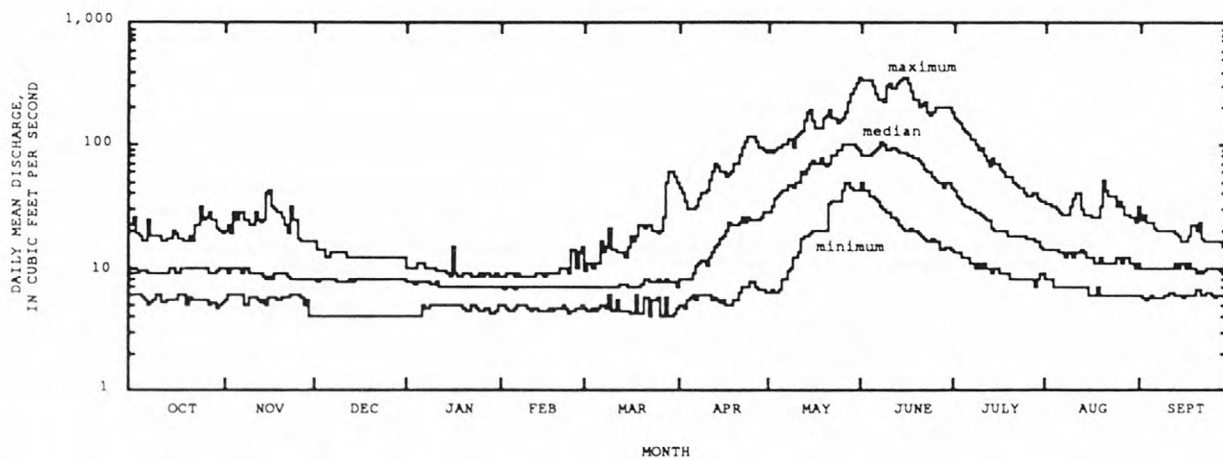
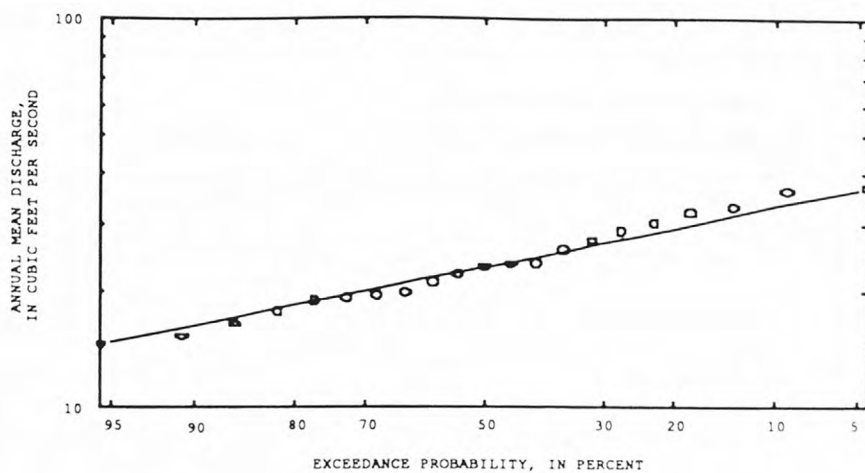
Duration table of daily mean flow for period of record 1929-41, 1983-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
186	98	63	42	28	17	13	10	8.9	8.1	7.4	6.6	6.2	5.2	4.8	4.5	4.1

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



SALMON RIVER BASIN

13311500 EAST FORK SOUTH FORK SALMON RIVER NEAR STIBNITE, ID

LOCATION.—Lat 44°56', long 115°20', in SE¼, sec.34, T.19 N., R.9 E., Valley County, Hydrologic Unit 17060208, on right bank 200 ft downstream from Sugar Creek, 3 mi north of Stibnite Post Office, and 8.5 mi upstream from Johnson Creek.

DRAINAGE AREA.—42.5 mi².

PERIOD OF RECORD.—June 1928 to September 1941.

GAGE.—Staff gage. Datum of gage is 5,912.47 ft above sea level (preliminary levels by Topographic Branch).

REMARKS.—Some regulation by Bradley Mining Company's powerplant above station and auxiliary storage reservoir on South Fork Meadow Creek (capacity about 700 acre-ft). About 0.3 ft³/s is diverted from Meadow Creek for transporting mine tailings.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 783 ft³/s June 15, 1933, gage height, 3.51 ft, from rating curve extended above 500 ft³/s; minimum observed, 10 ft³/s Apr. 7, 1929, and Apr. 7, 1936, gage height, 0.36 ft.

Summary of monthly and annual discharges, 1929-41

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	26	15	19	3.6	0.18	3.2
November	22	14	17	2.5	0.15	2.9
December	30	12	17	4.8	0.28	2.8
January	19	11	15	2.5	0.17	2.4
February	20	12	14	2.4	0.17	2.3
March	40	12	17	7.8	0.45	2.9
April	117	18	49	27	0.56	8.1
May	250	98	171	49	0.28	28.4
June	428	57	185	108	0.59	30.6
July	98	21	53	23	0.43	8.8
August	36	14	25	6.2	0.24	4.2
September	27	15	21	3.3	0.16	3.4
Annual	71	31	50	12	0.23	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-41

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	12	11	10	10	9.9	9.8
3	12	11	11	11	10	10
7	12	11	11	11	10	10
14	13	12	11	11	10	10
30	13	12	11	11	11	10
60	14	12	11	11	11	10
90	14	13	12	11	11	10
120	15	13	12	11	11	11
183	16	14	14	13	12	12

Magnitude and frequency of annual high flow,  
based on period of record 1929-41

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-41

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
356	500	590	698	775	849

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25† 4%	50† 2%	100† 1%
1	323	481	576	681	754	800
3	314	460	554	664	731	779
7	290	425	524	621	701	749
15	257	369	452	566	659	719
30	223	305	363	442	504	569
60	177	232	266	308	338	368
90	139	180	206	236	258	279

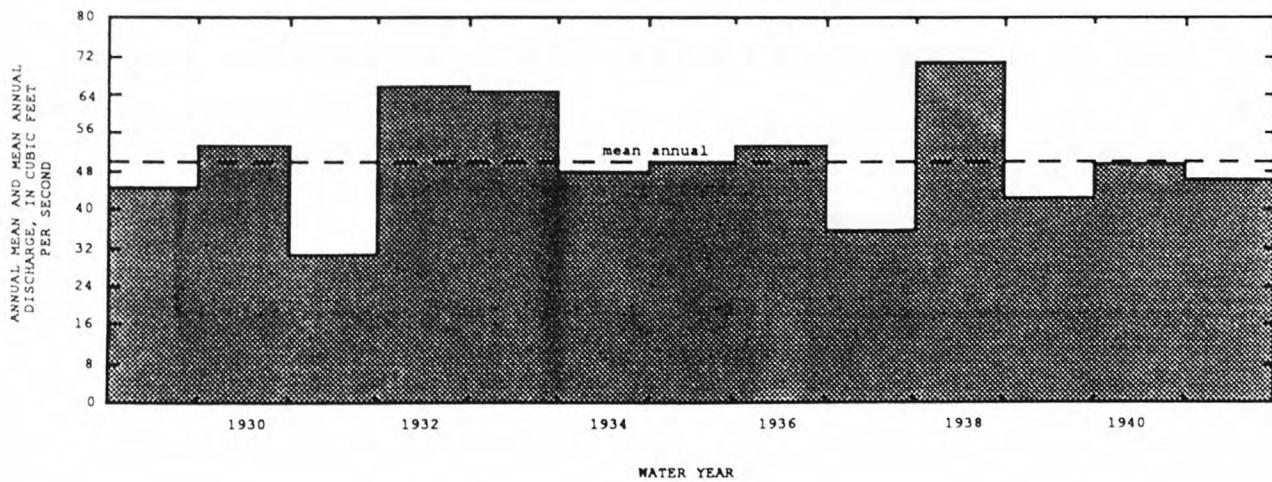
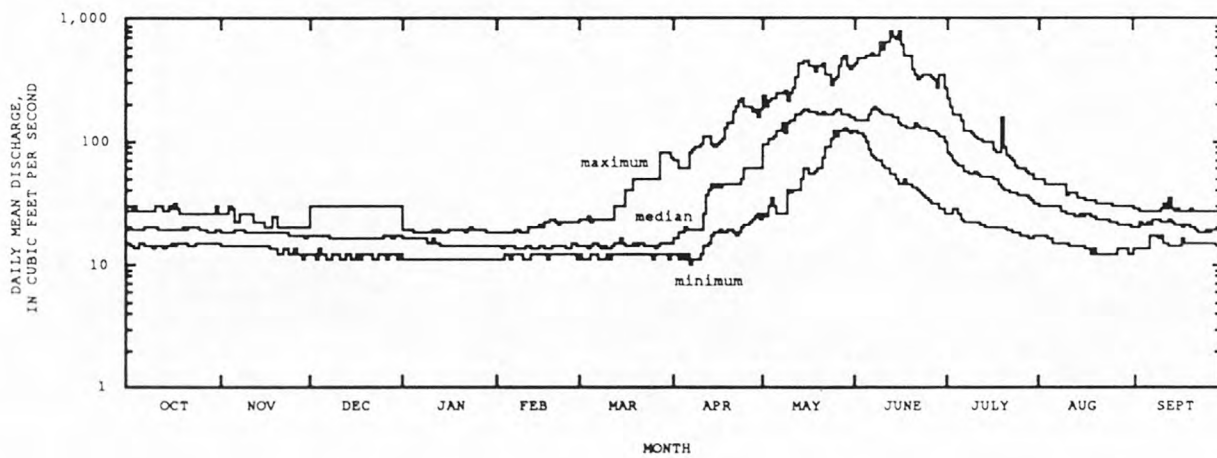
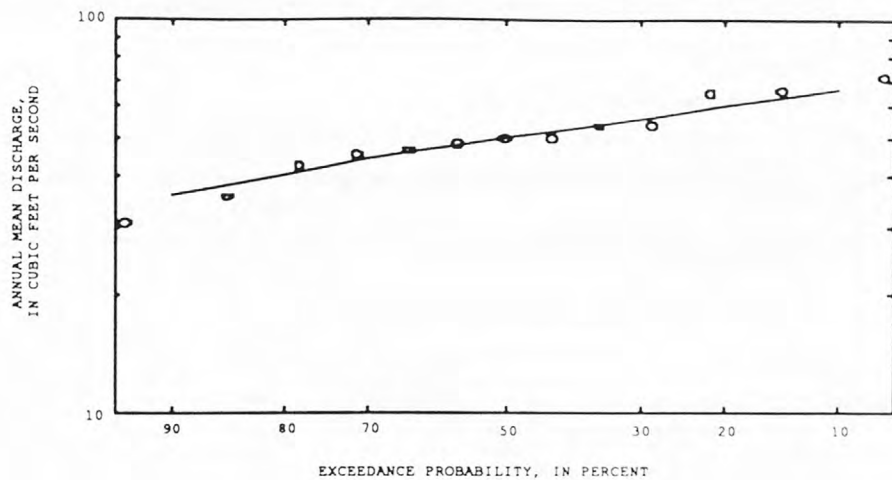
Duration table of daily mean flow for period of record 1929-41

Discharge, in ft³/s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%
397	198	144	98	58	32	24	21	18	17	15	13	12	11	11	11

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## SALMON RIVER BASIN

13312000 EAST FORK SOUTH FORK SALMON RIVER NEAR YELLOW PINE, ID

LOCATION.—Lat 44°57'50", long 115°27'30", in NE¼, sec.27, T.19 N., R.8 E., Valley County, Hydrologic Unit 17060208, on right bank 200 ft upstream from Forest Service highway bridge, 1.5 mi east of Yellow Pine, 1.5 mi upstream from Quartz Creek, 2 mi downstream from Profile Creek, and 2.8 mi upstream from Johnson Creek.

DRAINAGE AREA.—104 mi<sup>2</sup>.

PERIOD OF RECORD.—August 1928 to July 1943.

GAGE.—Water-stage recorder. Datum of gage is 5,049.11 ft above sea level (preliminary levels by Topographic Branch).

REMARKS.—Slight regulation by Bradley Mining Company's powerplant on this stream and reservoir on South Fork Meadow Creek (capacity, about 700 acre-ft).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,050 ft<sup>3</sup>/s June 14, 1933, gage height, 5.26 ft, from rating curve extended above 1,100 ft<sup>3</sup>/s; minimum recorded, 25 ft<sup>3</sup>/s Oct. 23, 1935.

Summary of monthly and annual discharges, 1929-42

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	74	33	54	11	0.21	3.3
November	83	35	49	14	0.29	3.0
December	130	30	51	26	0.51	3.1
January	80	28	43	13	0.31	2.6
February	60	30	40	9.5	0.24	2.5
March	109	30	48	21	0.42	2.9
April	390	50	154	88	0.57	9.4
May	636	278	442	114	0.26	27.0
June	1,020	172	473	241	0.51	28.9
July	254	63	152	57	0.38	9.3
August	105	37	74	18	0.25	4.5
September	73	37	57	10	0.18	3.5
Annual	185	89	137	28	0.20	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-42

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	33	29	28	27	26	25
3	35	30	28	27	26	25
7	35	30	28	27	26	25
14	36	31	29	28	26	26
30	37	32	29	28	26	26
60	39	33	30	28	26	26
90	40	33	30	29	27	26
120	41	34	31	29	27	27
183	45	37	34	32	30	29

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-42

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
963	1,270	1,460	1,680	1,840	2,000

Magnitude and frequency of annual high flow,  
based on period of record 1929-42

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	823	1,100	1,300	1,580	1,790	1,950
3	781	1,040	1,250	1,530	1,740	1,840
7	711	958	1,160	1,440	1,690	1,770
15	645	863	1,030	1,260	1,460	1,670
30	581	752	872	1,030	1,160	1,290
60	463	579	652	742	807	871
90	372	461	515	579	623	666

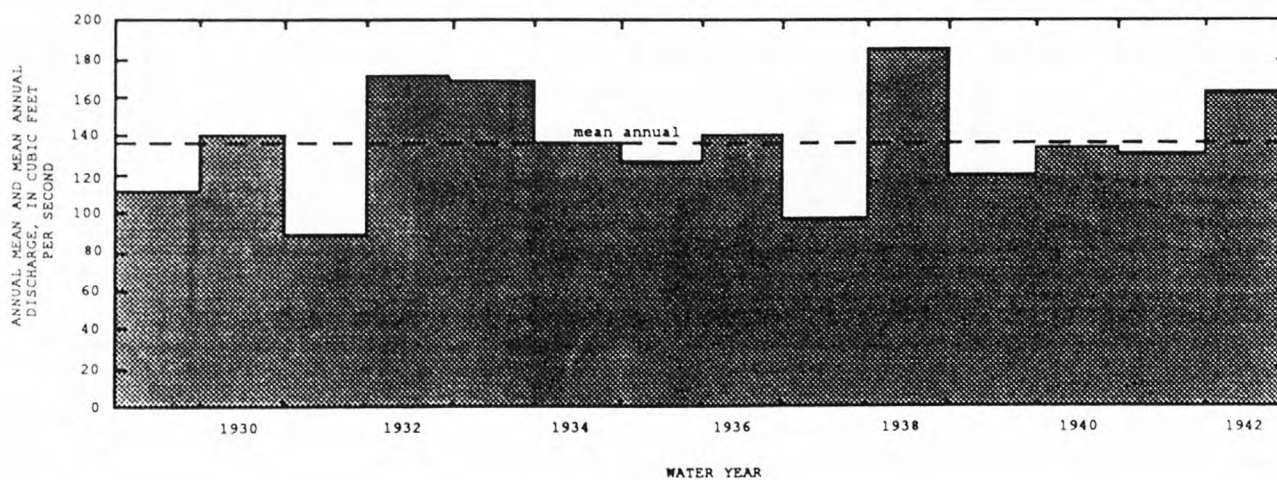
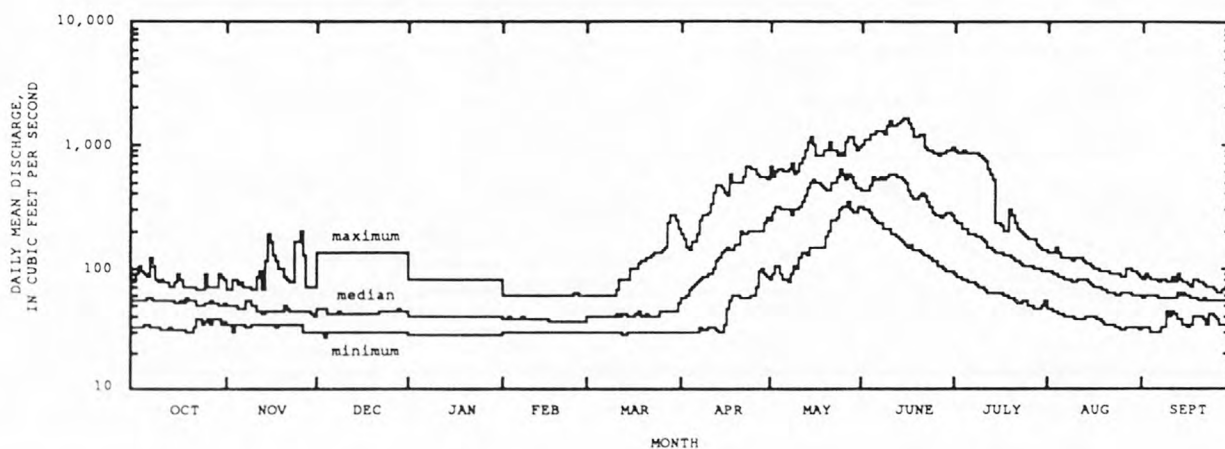
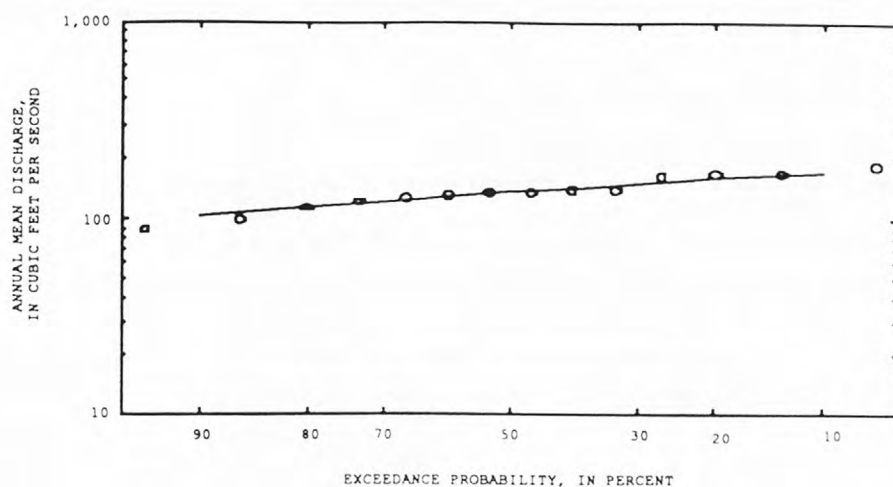
Duration table of daily mean flow for period of record 1929-42

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
877	550	378	268	185	99	71	58	53	47	40	36	30	28	28	27	27	27

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13313000 JOHNSON CREEK AT YELLOW PINE, ID

LOCATION.—Lat 44°57'44", long 115°29'58", in NE 1/4, sec. 29, T. 19 N., R. 8 E., Valley County, Hydrologic Unit 17060208, Boise National Forest, on right bank 700 ft upstream from mouth and 0.2 mi southwest of Yellow Pine.

DRAINAGE AREA.—213 mi<sup>2</sup>. Mean elevation, 7,170 ft.

PERIOD OF RECORD.—August 1928 to September 1990.

REVISED RECORDS.—WDR ID-83-1: 1982(M).

GAGE.—Water-stage recorder. Datum of gage is 4,655.75 ft above sea level. Prior to July 19, 1977, at site 385 ft upstream at datum 1.95 ft higher.

REMARKS.—Small diversion from Johnson Creek to Deadwood River until September 20, 1988.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 6,230 ft<sup>3</sup>/s June 17, 1974, gage height, 8.32 ft; minimum, 21 ft<sup>3</sup>/s Nov. 30, 1954, Nov. 20, 1979, Nov. 18, 1988.

Summary of monthly and annual discharges, 1929-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	350	43	99	45	0.45	2.4
November	269	49	102	45	0.44	2.5
December	288	47	94	42	0.44	2.3
January	235	50	87	32	0.37	2.1
February	231	52	84	31	0.36	1.9
March	245	57	93	35	0.37	2.2
April	1,100	69	309	185	0.60	7.5
May	2,340	295	1,270	434	0.34	30.7
June	3,530	247	1,410	666	0.47	34.1
July	1,030	77	380	239	0.63	9.2
August	230	45	121	43	0.36	2.9
September	140	45	90	24	0.27	2.2
Annual	622	123	346	101	0.29	100

Magnitude and frequency of annual low flow,  
based on period of record 1930-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	50	40	35	32	29	27
3	56	45	41	37	34	31
7	60	50	45	41	38	36
14	63	52	47	44	40	38
30	66	55	50	47	43	40
60	71	59	53	49	45	43
90	73	61	55	51	47	45
120	76	62	57	53	50	48
183	84	67	60	56	51	49

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1929-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,970	3,940	4,520	5,200	5,670	6,110

Magnitude and frequency of annual high flow,  
based on period of record 1929-90

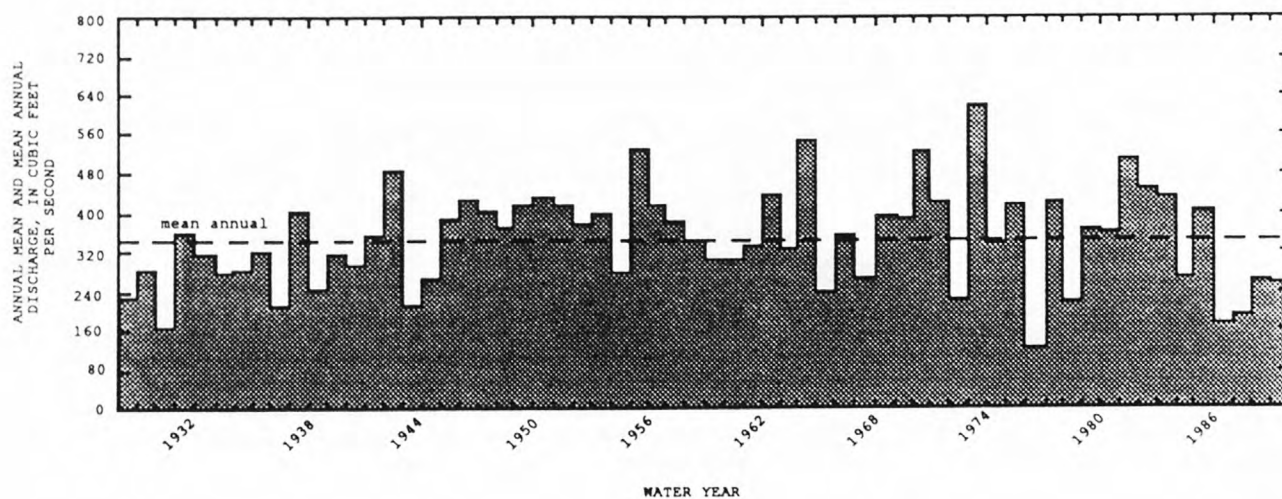
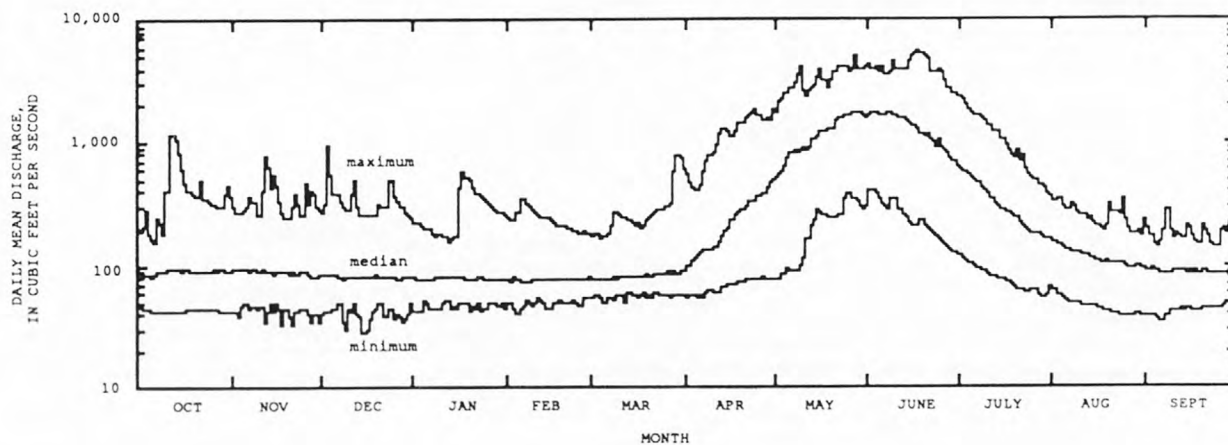
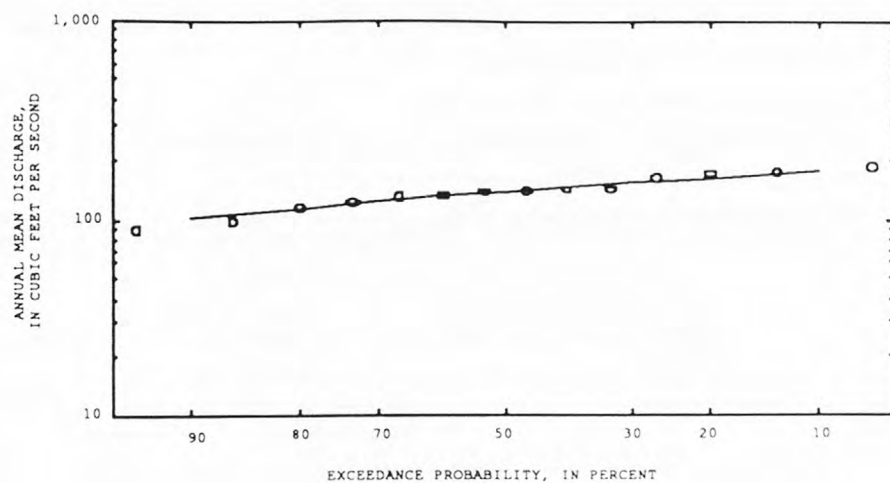
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	2,390	3,260	3,800	4,340	4,750	4,980
3	2,250	3,150	3,740	4,130	4,350	4,530
7	2,160	3,020	3,480	3,880	4,120	4,320
15	2,080	2,770	3,120	3,480	3,690	3,880
30	1,830	2,370	2,630	2,860	2,990	3,090
60	1,420	1,810	1,990	2,150	2,240	2,300
90	1,090	1,390	1,530	1,670	1,750	1,810

Duration table of daily mean flow for period of record 1929-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
2,740	1,700	1,100	690	393	182	130	106	92	81	72	62	55	49	45	42	40	36



LOCATION MAP



## SALMON RIVER BASIN

13314000 SOUTH FORK SALMON RIVER NEAR WARREN, ID

LOCATION.—Lat 45°09', long 115°35', in SE 1/4, sec. 15, T. 21 N., R. 7 E., Valley County, Hydrologic Unit 17060208, on right bank 500 ft downstream from Elk Creek, 900 ft north of Elk Creek powerplant, and 8 mi southeast of Warren.

DRAINAGE AREA.—1,160 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—July 1931 to September 1942.

GAGE.—Staff gage. Elevation of gage is 2,985 ft above sea level, from river profile survey.

REMARKS.—No appreciable diversions or regulation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 20,000 ft<sup>3</sup>/s June 9, 1933, gage height, 13.16 ft, from rating curve extended above 8,000 ft<sup>3</sup>/s; minimum observed, 180 ft<sup>3</sup>/s December 27, 1939, gage height, 2.26 ft.

Summary of monthly and annual discharges, 1932-42

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	713	332	487	127	0.26	2.5
November	1,060	326	525	208	0.40	2.7
December	1,690	292	603	401	0.67	3.1
January	836	325	479	150	0.31	2.5
February	685	348	472	114	0.24	2.5
March	1,560	396	705	336	0.48	3.7
April	4,780	845	2,330	1,100	0.47	12.2
May	7,790	3,410	5,840	1,450	0.25	30.5
June	9,900	1,910	5,240	2,560	0.49	27.4
July	2,400	672	1,440	615	0.43	7.5
August	765	375	572	145	0.25	3.0
September	588	335	462	86	0.19	2.4
Annual	2,140	1,120	1,600	293	0.18	100

Magnitude and frequency of annual low flow,  
based on period of record 1933-43

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	247	205	191	182	174	170
3	292	237	216	202	180	174
7	338	263	230	205	188	175
14	366	286	249	221	192	179
30	383	317	289	269	248	236
60	403	343	319	302	285	276
90	425	356	328	308	289	277
120	446	370	340	319	299	287
183	485	398	367	346	328	317

Magnitude and frequency of annual high flow,  
based on period of record 1932-42Magnitude and frequency of instantaneous peak flow,  
based on period of record 1932-42

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
11,500	15,100	17,300	20,000	21,800	23,600

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	10,300	13,600	15,900	19,000	20,400	22,000
3	9,720	12,300	14,100	16,400	18,100	19,900
7	8,800	11,100	12,700	14,800	16,500	18,200
15	8,080	10,100	11,600	13,500	15,000	16,600
30	7,220	8,760	9,750	11,000	11,900	12,700
60	5,710	6,870	7,600	8,510	9,160	9,810
90	4,580	5,510	6,070	6,750	7,230	7,700

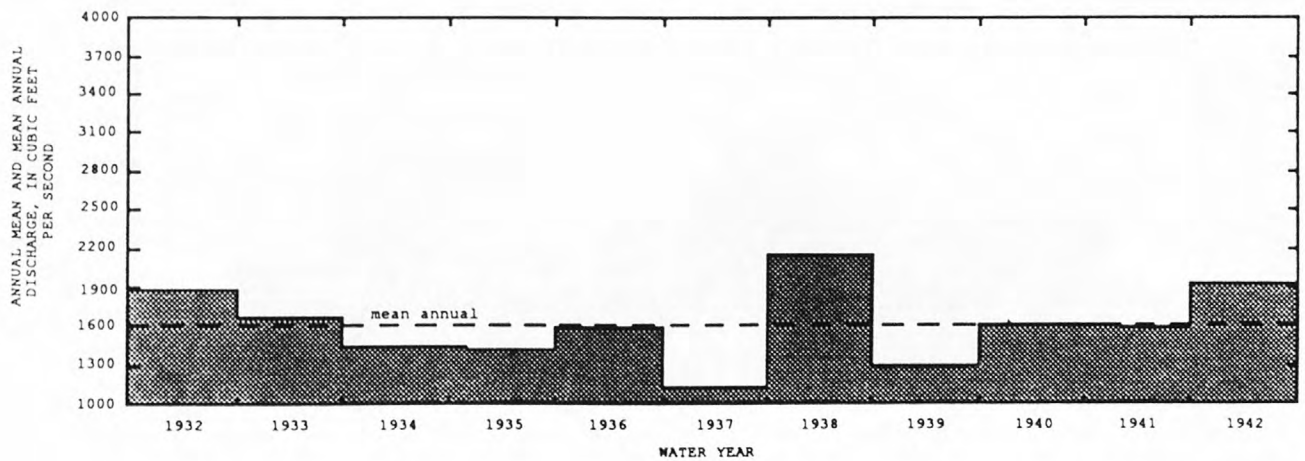
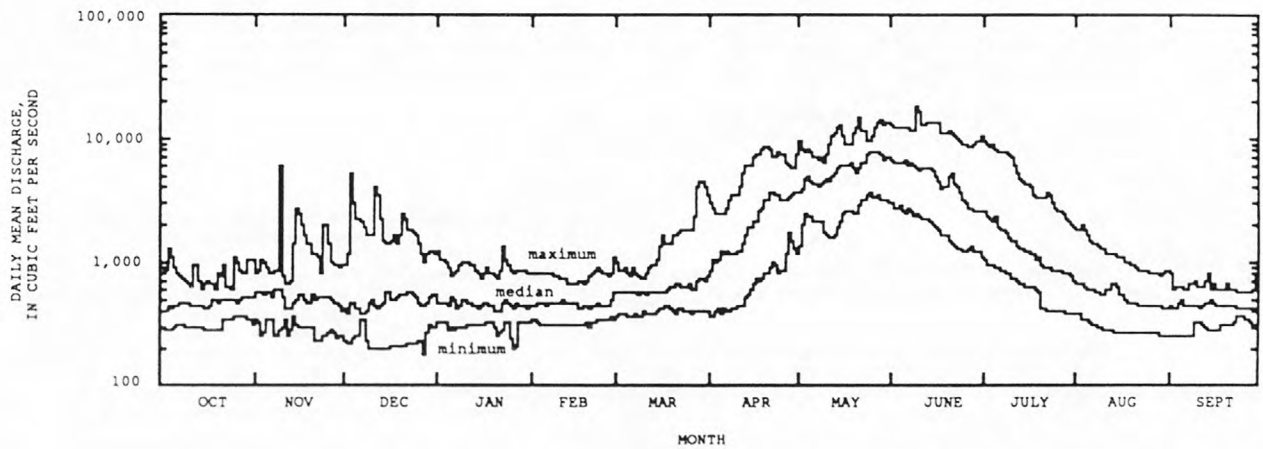
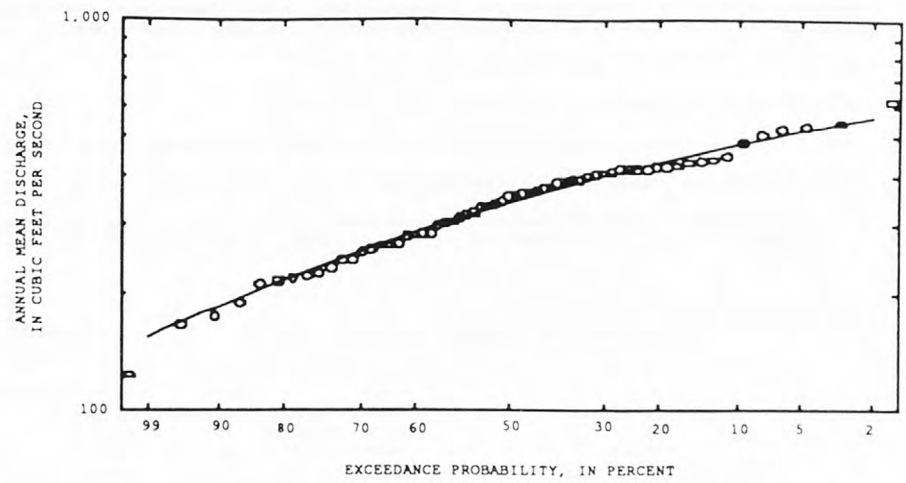
Duration table of daily mean flow for period of record 1932-42

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
10,600	6,850	4,770	3,350	2,280	1,060	702	591	516	453	401	351	323	288	254	227	194

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## SALMON RIVER BASIN

13315000 SALMON RIVER NEAR FRENCH CREEK, ID

LOCATION.—Lat 45°25'55", long 115°59'00", in sec. 8, T. 24 N., R. 4 E., Idaho County, Hydrologic Unit 17060207, on left bank 100 ft downstream from Fall Creek, 2.5 mi northeast of French Creek Post Office, and 16 mi east of Riggins.

DRAINAGE AREA.—12,270 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1944 to September 1956.

GAGE.—Staff gage. Datum of gage is 1,908.92 ft above sea level, unadjusted. Since Jan. 31, 1952, supplementary staff gage 3 mi upstream.

REMARKS.—Negligible amount of water diverted above station for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 88,600 ft<sup>3</sup>/s May 24, 1956 (approximately), gage height, 34.85 ft (from floodmark); minimum observed, 1,790 ft<sup>3</sup>/s Dec. 27, 1952, gage height, -1.30 ft (supplementary gage).

Summary of monthly and annual discharges, 1945-56

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	5,740	3,560	4,400	831	0.19	3.4
November	6,360	3,460	4,490	763	0.17	3.5
December	5,950	2,920	4,040	982	0.24	3.2
January	4,650	3,160	3,680	470	0.13	2.9
February	5,120	3,030	3,790	541	0.14	2.9
March	6,110	3,220	4,380	932	0.21	3.5
April	17,400	4,310	10,600	4,150	0.39	8.4
May	47,900	17,500	32,800	10,500	0.32	25.9
June	49,400	24,500	35,800	9,050	0.25	28.3
July	19,900	7,390	13,400	3,920	0.29	10.6
August	6,700	3,820	5,290	886	0.17	4.2
September	4,830	3,360	4,080	494	0.12	3.2
Annual	13,800	7,650	10,600	1,670	0.16	100

Magnitude and frequency of annual low flow,  
based on period of record 1946-56

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	2,410	2,160	2,040	1,940	1,830	1,750
3	2,530	2,280	2,150	2,050	1,950	1,880
7	2,890	2,620	2,470	2,360	2,220	2,130
14	3,150	2,890	2,760	2,650	2,530	2,450
30	3,340	3,120	3,020	2,940	2,850	2,800
60	3,490	3,220	3,100	3,010	2,930	2,880
90	3,650	3,340	3,200	3,090	2,980	2,910
120	3,790	3,440	3,290	3,170	3,050	2,970
183	3,990	3,600	3,440	3,320	3,200	3,130

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-56

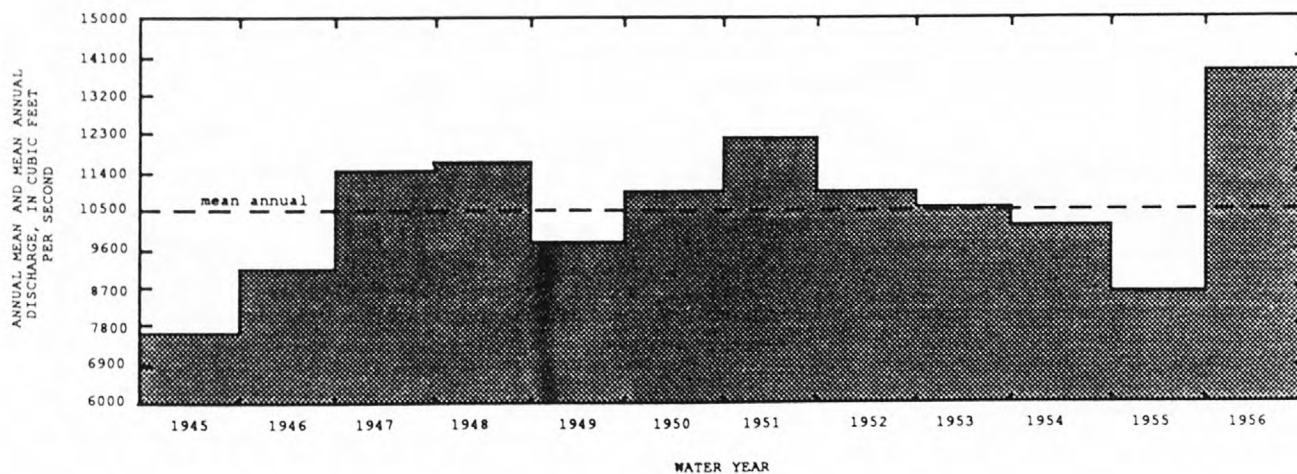
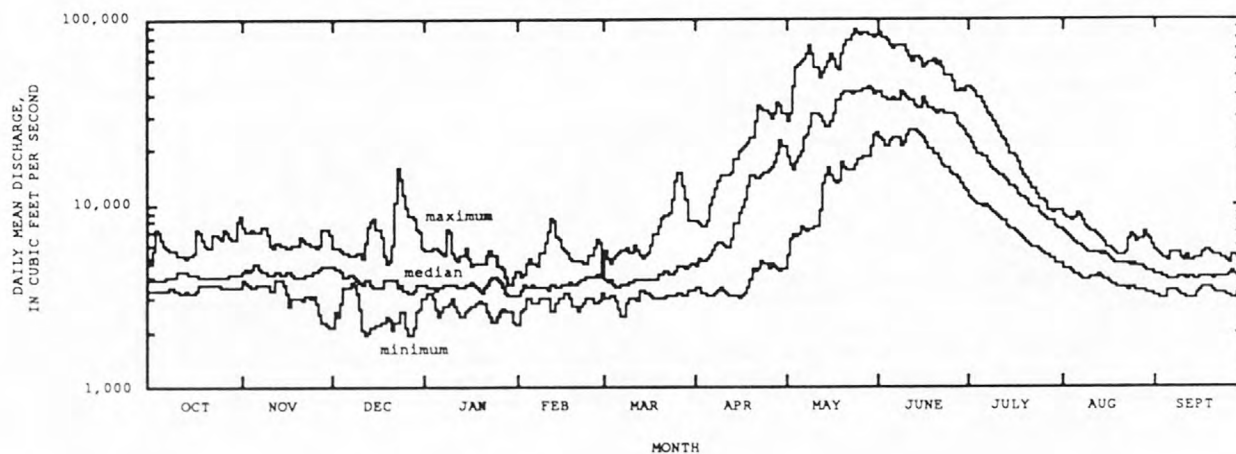
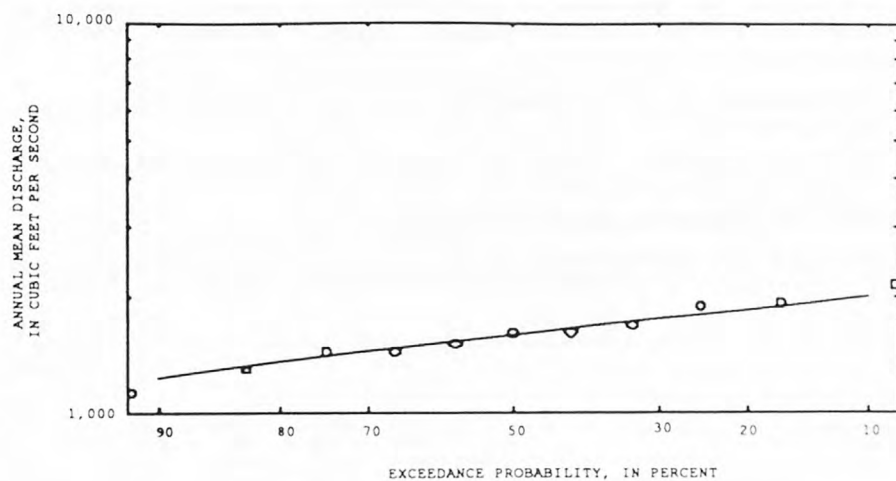
Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
61,300	75,000	82,800	91,600	97,500	103,000

Magnitude and frequency of annual high flow,  
based on period of record 1945-56

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	61,100	74,100	80,800	87,800	92,200	96,100
3	59,200	71,200	77,400	83,800	87,800	91,300
7	56,000	67,700	74,000	80,600	84,800	88,500
15	49,600	61,700	69,300	78,700	85,600	92,300
30	43,400	53,100	59,200	66,800	72,300	77,700
60	35,800	41,200	44,100	47,200	49,100	50,900
90	28,700	33,000	35,300	37,700	39,300	40,700

Duration table of daily mean flow for period of record 1945-56

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
60,600	40,800	29,600	21,500	14,900	7,340	5,370	4,700	4,230	3,920	3,630	3,310	3,070	2,780	2,550	2,370	2,080



SALMON RIVER BASIN

13315500 MUD CREEK NEAR TAMARACK, ID

LOCATION.—Lat 45°00', long 115°21', in sec.9, T.19 N., R.1 E., Adams County, Hydrologic Unit 17060210, on left bank 0.5 mi upstream from Little Mud Creek, 3.25 mi northeast of Tamarack, and 5 mi upstream from mouth.

DRAINAGE AREA.—15.8 mi<sup>2</sup>.

PERIOD OF RECORD.—April 1937 to September 1939 (fragmentary), October 1939 to September 1943 (discharge measurements only), September 1945 to September 1959.

GAGE.—Water-stage recorder. Elevation of gage is 3.990 ft above sea level, by barometer. Prior to Sept. 18, 1945, nonrecording gage at site 40 ft downstream at datum 1.21 ft higher.

REMARKS.—No regulation of diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 395 ft<sup>3</sup>/s Apr. 27, 1952, gage height, 5.00 ft; maximum gage height recorded, 6.29 ft, Feb. 27, 1957 (backwater from ice); minimum recorded, 0.2 ft<sup>3</sup>/s Nov. 19, 20, 1952.

Summary of monthly and annual discharges, 1946-59

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	4.4	1.2	2.5	0.91	0.37	1.1
November	13	1.4	3.8	2.8	0.75	1.7
December	35	2.1	8.2	11	1.3	3.6
January	10	1.9	4.7	2.7	0.58	2.0
February	8.7	1.5	5.3	2.2	0.41	2.2
March	39	2.2	15	9.9	0.67	6.4
April	156	17	95	33	0.35	41.3
May	124	21	76	32	0.42	33.0
June	27	6.2	12	6.4	0.51	5.4
July	5.3	2.4	3.6	0.84	0.23	1.6
August	2.9	1.5	2.0	0.39	0.20	0.9
September	3.0	1.3	1.8	0.46	0.26	0.8
Annual	28	12	19	4.6	0.24	100

Magnitude and frequency of annual low flow, based on period of record 1947-59

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	1.3	1.1	1.0	0.95	0.88	0.83
3	1.3	1.1	1.0	0.95	0.88	0.84
7	1.3	1.1	1.0	0.97	0.89	0.85
14	1.4	1.2	1.1	1.0	0.98	0.93
30	1.5	1.3	1.2	1.2	1.1	1.0
60	1.6	1.5	1.4	1.3	1.3	1.2
90	1.8	1.7	1.6	1.5	1.5	1.4
120	2.1	1.8	1.7	1.6	1.5	1.5
183	2.5	2.0	1.9	1.8	1.7	1.6

Magnitude and frequency of instantaneous peak flow, based on period of record 1946-59

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
199	280	335	405	458	511

Magnitude and frequency of annual high flow, based on period of record 1946-59

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	180	245	286	337	373	409
3	168	229	269	319	356	394
7	158	210	242	280	307	333
15	141	183	206	232	249	264
30	120	153	171	193	207	220
60	87	108	121	137	147	157
90	64	79	87	97	103	109

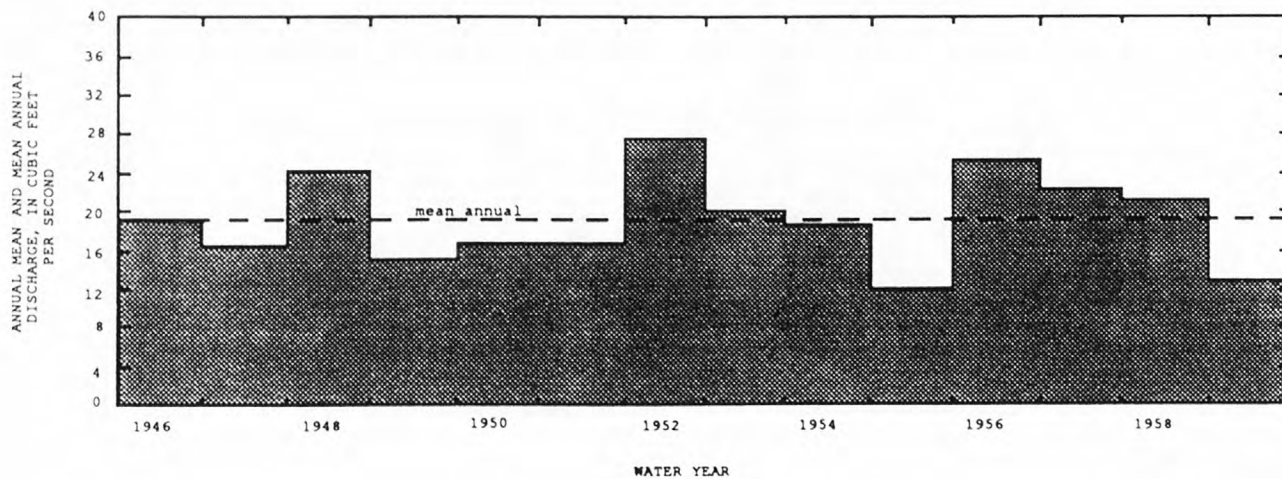
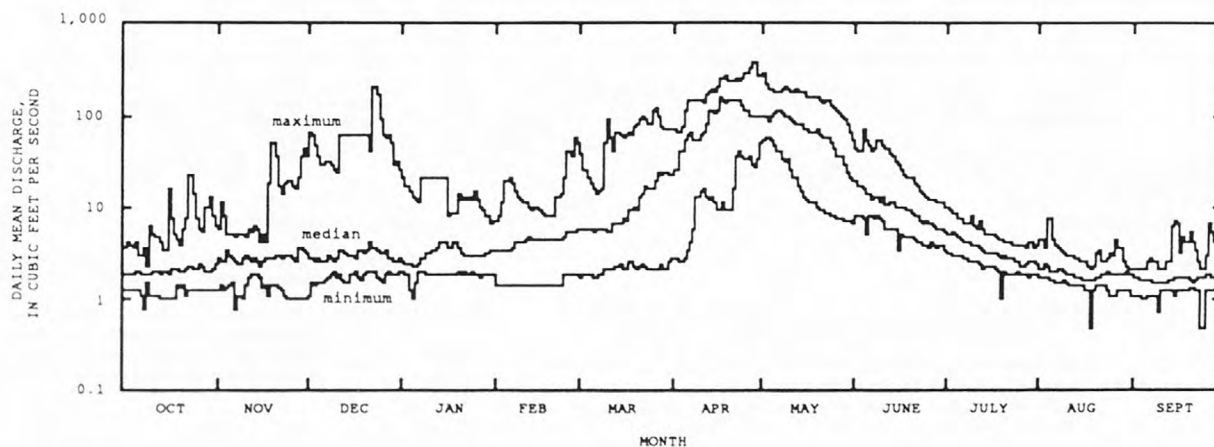
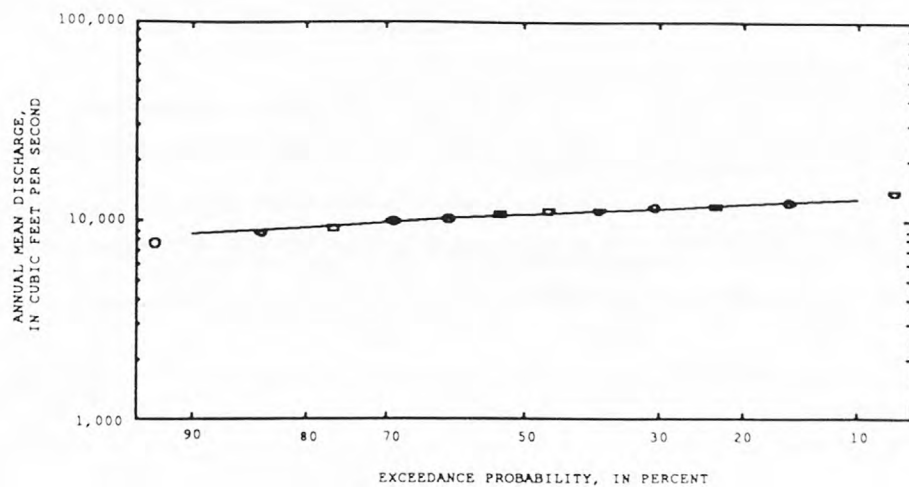
Duration table of daily mean flow for period of record 1946-59

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time															
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.9%
181	113	67	35	18	8.3	5.1	3.9	2.8	2.3	2.0	1.7	1.5	1.3	1.2	0.96

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## SALMON RIVER BASIN

13316500 LITTLE SALMON RIVER AT RIGGINS, ID

LOCATION.—Lat 45°24'47", long 116°19'29", SE 1/4, SW 1/4, sec. 15, T. 24 N., R. 1 E., Idaho County, Hydrologic Unit 17060210, on right bank 14 ft upstream from road bridge, at mile 0.5, and 0.8 mi southwest of Riggins.

DRAINAGE AREA.—576 mi<sup>2</sup>. Mean elevation, 5,430 ft.

PERIOD OF RECORD.—February 1951 to February 1955, September 1956 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 1,760 ft above sea level, from topographic map. Prior to Sept. 28, 1984, at site 250 ft upstream at different datum.

REMARKS.—Diversions above station for irrigation of about 15,300 acres, 1966 determination.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 12,600 ft<sup>3</sup>/s June 17, 1974, maximum gage height, 12.39 ft, June 13, 1953 (site and datum then in use); minimum discharge, 84 ft<sup>3</sup>/s Jan. 3, 1988, gage height, 3.17 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood about June 1, 1948, reached a discharge of 9,200 ft<sup>3</sup>/s, by slope-area measurement.

Summary of monthly and annual discharges, 1952-54, 1957-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	752	104	254	122	0.48	2.7
November	915	122	302	159	0.53	3.2
December	845	155	325	176	0.54	3.4
January	1,500	136	328	230	0.70	3.4
February	869	140	396	200	0.50	4.0
March	2,030	180	656	364	0.56	6.9
April	2,480	377	1,310	463	0.35	13.7
May	4,040	628	2,340	723	0.31	24.5
June	5,110	479	2,450	988	0.40	25.6
July	1,770	165	721	410	0.57	7.5
August	489	117	258	87	0.34	2.7
September	379	107	227	65	0.28	2.4
Annual	1,390	260	797	238	0.30	100

Magnitude and frequency of annual low flow, based on period of record 1952-54, 1958-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	141	119	109	102	95	91
3	148	123	113	105	97	93
7	156	129	117	108	99	94
14	165	134	120	110	99	94
30	176	141	126	114	102	95
60	193	153	135	122	107	99
90	204	162	144	130	115	106
120	216	171	152	139	125	117
183	252	196	173	156	139	129

Magnitude and frequency of instantaneous peak flow, based on period of record 1952-54, 1957-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,010	6,570	7,580	8,860	9,810	10,800

Magnitude and frequency of annual high flow, based on period of record 1952-54, 1957-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	4,330	5,600	6,240	6,890	7,270	7,590
3	4,080	5,270	5,870	6,480	6,840	7,150
7	3,770	4,850	5,380	5,890	6,190	6,430
15	3,490	4,430	4,830	5,180	5,360	5,490
30	3,100	3,870	4,170	4,410	4,520	4,600
60	2,550	3,200	3,470	3,700	3,810	3,890
90	2,160	2,690	2,890	3,050	3,130	3,180

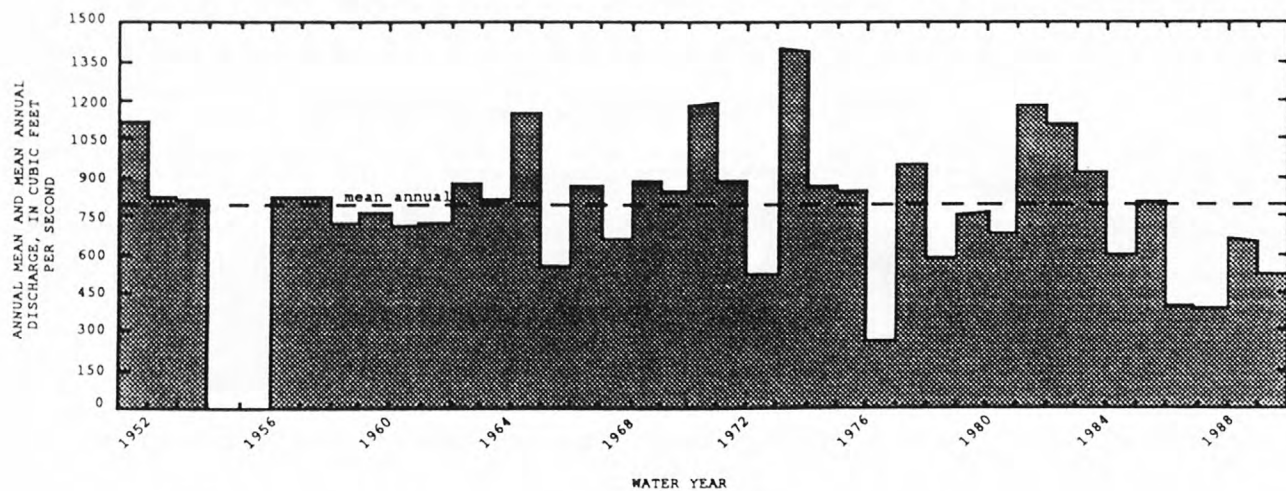
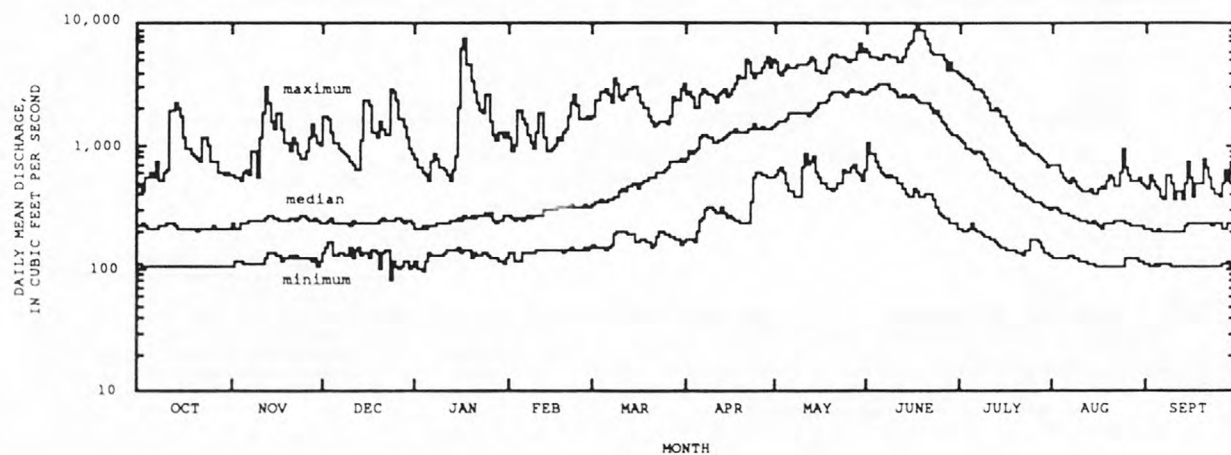
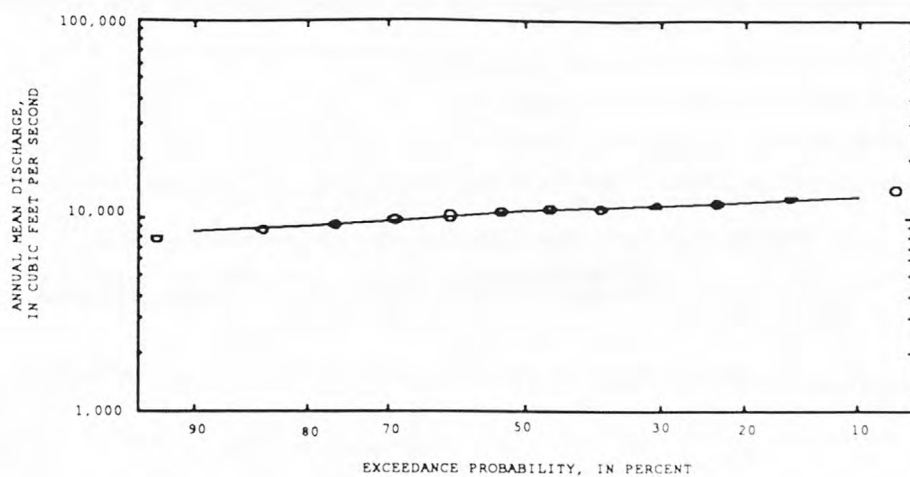
Duration table of daily mean flow for period of record 1952-54, 1957-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
4,470	3,040	2,210	1,670	1,280	730	470	341	278	237	204	170	147	124	113	103	93

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





## SALMON RIVER BASIN

13316800 NORTH FORK SKOOKUMCHUCK CREEK NEAR WHITE BIRD, ID

LOCATION.—Lat 45°43'34", long 116°12'16", in NE 1/4, NE 1/4, sec.33, T.28 N., R.2 E. Idaho County, Hydrologic Unit 17060209, Nez Perce National Forest, on right bank 22 ft upstream from 8-ft corrugated metal pipe culvert, 2.7 mi upstream from confluence with South Fork Skookumchuck Creek, and 5.2 mi southeast of White Bird.

DRAINAGE AREA.—15.3 mi<sup>2</sup>. Mean elevation, 5,000 ft.

PERIOD OF RECORD.—August 1959 to September 1971.

REVISED RECORDS.—WRD Idaho 1967: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 3,240 ft above sea level, from topographic map. Prior to Nov. 19, 1965 at site 118 ft downstream at different datum.

REMARKS.—Ditch bypassing station diverts from left bank 0.2 mi upstream from station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 471 ft<sup>3</sup>/s June 8, 1964, gage height, 4.46 ft, site and datum then in use, from rating curve extended above 160 ft<sup>3</sup>/s on basis of contracted-opening measurement of peak flow; minimum daily, 0.2 ft<sup>3</sup>/s several days in 1960, 1961 and 1964.

Summary of monthly and annual discharges, 1961-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	13	0.64	3.8	3.6	0.96	1.8
November	21	1.4	5.4	5.4	0.98	2.6
December	15	0.46	6.4	4.6	0.72	3.0
January	19	0.27	7.6	5.9	0.77	3.6
February	26	0.40	11	7.8	0.73	5.1
March	21	1.2	11	5.0	0.43	5.4
April	68	20	37	16	0.43	17.4
May	112	31	72	23	0.32	34.2
June	121	11	45	30	0.67	21.1
July	14	2.2	7.5	4.1	0.54	3.6
August	4.4	0.31	2.4	1.3	0.55	1.1
September	6.0	0.79	2.3	1.7	0.75	1.1
Annual	23	9.1	18	4.3	0.24	100

Magnitude and frequency of annual low flow,  
based on period of record 1962-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	0.73	0.32	0.21	0.14	0.09	0.07
3	0.80	0.36	0.23	0.16	0.10	0.07
7	0.89	0.40	0.26	0.17	0.11	0.08
14	1.0	0.45	0.28	0.18	0.11	0.08
30	1.3	0.57	0.35	0.22	0.13	0.09
60	1.6	0.78	0.50	0.34	0.21	0.15
90	2.0	1.0	0.66	0.44	0.27	0.19
120	2.7	1.4	0.91	0.60	0.36	0.24
183	3.8	1.9	1.2	0.79	0.47	0.32

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1961-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
140	220	278	357	420	486

Magnitude and frequency of annual high flow,  
based on period of record 1961-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	126	198	259	335	391	441
3	116	172	215	276	328	385
7	104	147	177	217	249	281
15	92	126	147	172	190	207
30	80	105	118	132	141	149
60	66	84	94	104	110	116
90	53	66	71	77	80	82

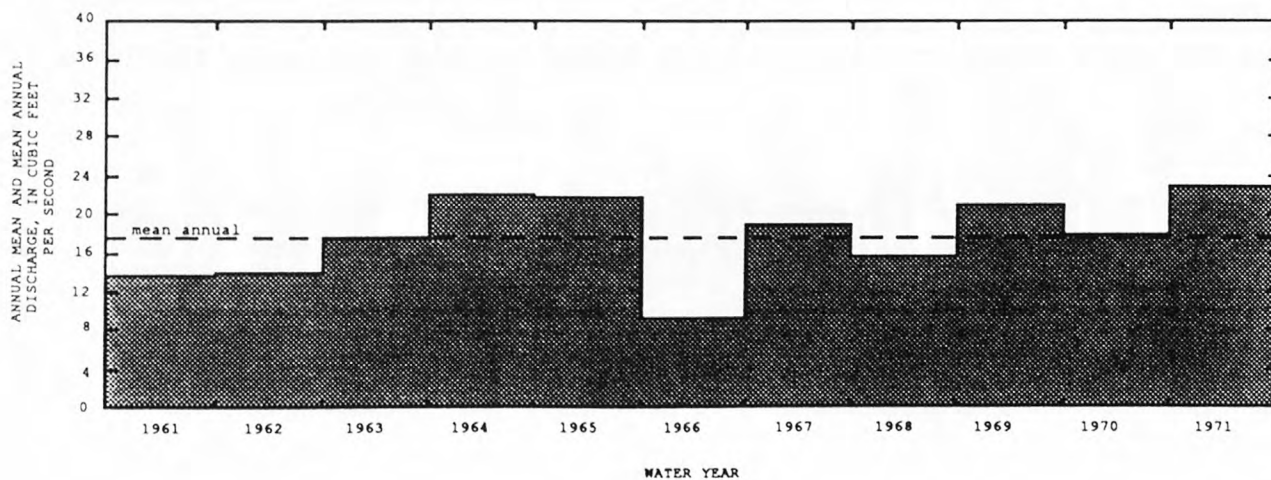
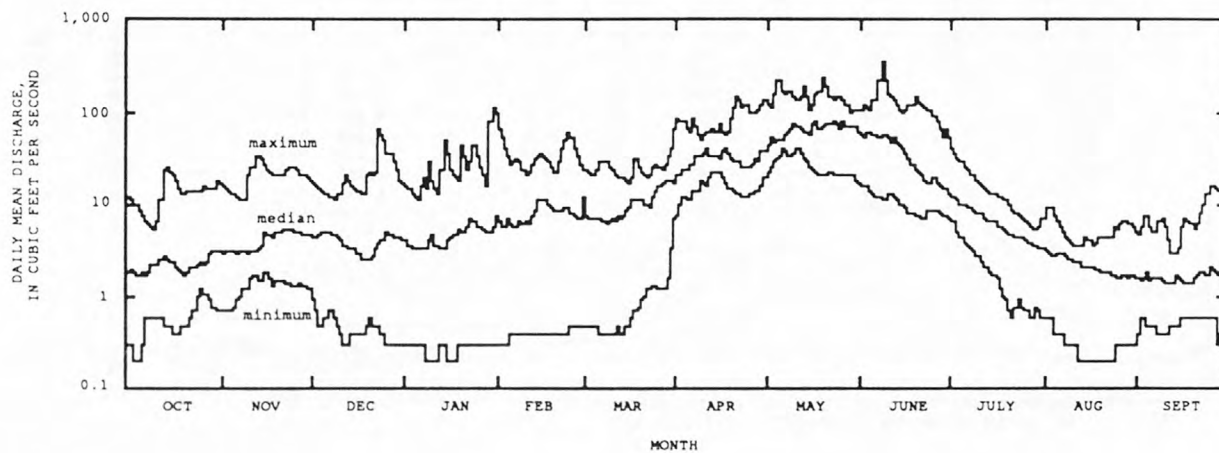
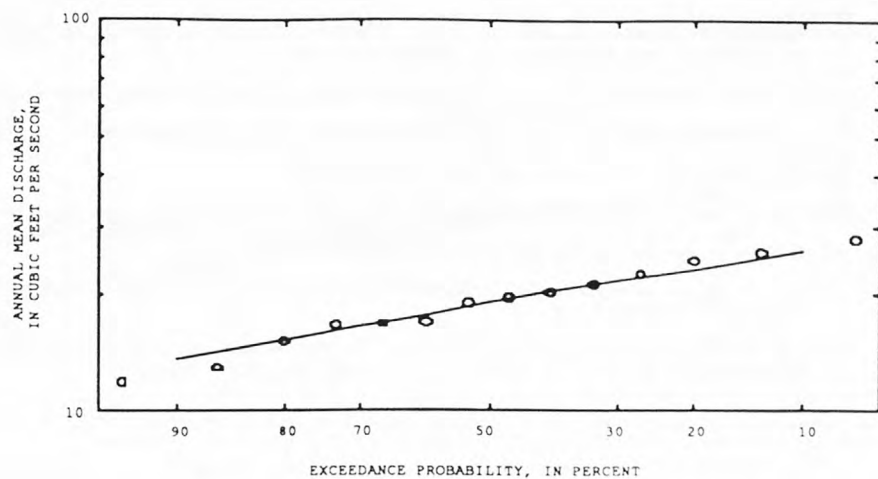
Duration table of daily mean flow for period of record 1961-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%	99.9%
130	77	54	39	27	15	9.0	6.1	4.2	3.1	2.1	1.3	0.62	0.39	0.27	0.24	0.21	0.21	0.21

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



SALMON RIVER BASIN

13317000 SALMON RIVER AT WHITE BIRD, ID

LOCATION.—Lat 45°45'01", long 116°19'23", in NE¼, NW¼, SW¼, sec.22, T.28 N., R.1 E., Idaho County, Hydrologic Unit 17060209, on left bank 0.1 mi upstream from White Bird Creek, 0.6 mi downstream from Canfield-Joseph highway bridge, 1 mi southwest of White Bird, and at mile 53.7. Records include flow of White Bird Creek.

DRAINAGE AREA.—13,550 mi<sup>2</sup>, approximately, includes that of White Bird Creek. Mean elevation, 6,720 ft.

PERIOD OF RECORD.—August 1910 to September 1917, October 1919 to September 1990.

REVISED RECORDS.—WSP 753: 1932. MSP 1043: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 1,412.65 ft above 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.

REMARKS.—Divisions above station for irrigation of about 165,000 acres, of which about 1,200 acres are irrigated by withdrawals from ground water (1966 determination).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 130,000 ft<sup>3</sup>/s June 17, 1974, gage height, 35.81 ft; minimum, 1,580 ft<sup>3</sup>/s Dec. 11, 1932, gage height, 10.23 ft, from rating curve extended below 2,200 ft<sup>3</sup>/s.

Summary of monthly and annual discharges, 1911-17, 1920-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	8,590	2,950	4,850	1,190	0.25	3.6
November	8,250	3,010	4,950	1,150	0.23	3.7
December	9,490	2,750	4,530	1,240	0.27	3.4
January	8,390	2,740	4,180	983	0.24	3.1
February	8,100	2,880	4,420	1,050	0.24	3.3
March	11,700	3,520	5,440	1,520	0.28	4.0
April	27,100	5,400	11,700	4,380	0.38	8.7
May	56,000	10,500	31,900	10,200	0.32	23.8
June	82,600	9,530	38,800	16,500	0.43	28.9
July	35,500	3,520	13,700	7,290	0.53	10.2
August	8,890	2,300	5,420	1,700	0.31	4.0
September	7,080	2,490	4,470	1,080	0.24	3.3
Annual	17,500	5,810	11,200	2,900	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1912-17, 1921-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	2,670	2,240	2,040	1,870	1,700	1,590
3	2,800	2,380	2,180	2,020	1,840	1,730
7	3,120	2,660	2,430	2,250	2,050	1,930
14	3,370	2,870	2,630	2,430	2,220	2,090
30	3,600	3,060	2,790	2,580	2,360	2,210
60	3,800	3,230	2,960	2,750	2,530	2,380
90	3,950	3,370	3,100	2,890	2,660	2,520
120	4,110	3,500	3,220	3,010	2,790	2,650
183	4,380	3,710	3,390	3,140	2,880	2,720

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1911-17, 1920-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
62,000	83,000	95,700	111,000	121,000	131,000

Magnitude and frequency of annual high flow,  
based on period of record 1911-17, 1920-90

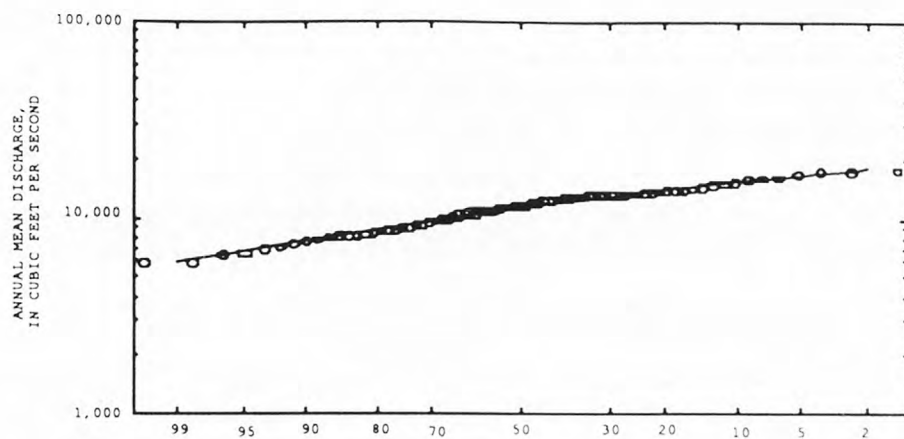
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	61,500	81,600	93,000	106,000	114,000	121,000
3	59,700	79,400	90,700	103,000	111,000	119,000
7	56,000	75,200	86,200	98,600	107,000	114,000
15	51,100	68,600	78,700	90,000	97,500	104,000
30	45,300	59,800	67,800	76,600	82,200	87,300
60	36,400	47,200	52,900	59,000	62,700	66,000
90	29,300	37,600	42,100	46,800	49,700	52,300

Duration table of daily mean flow for period of record 1911-17, 1920-90

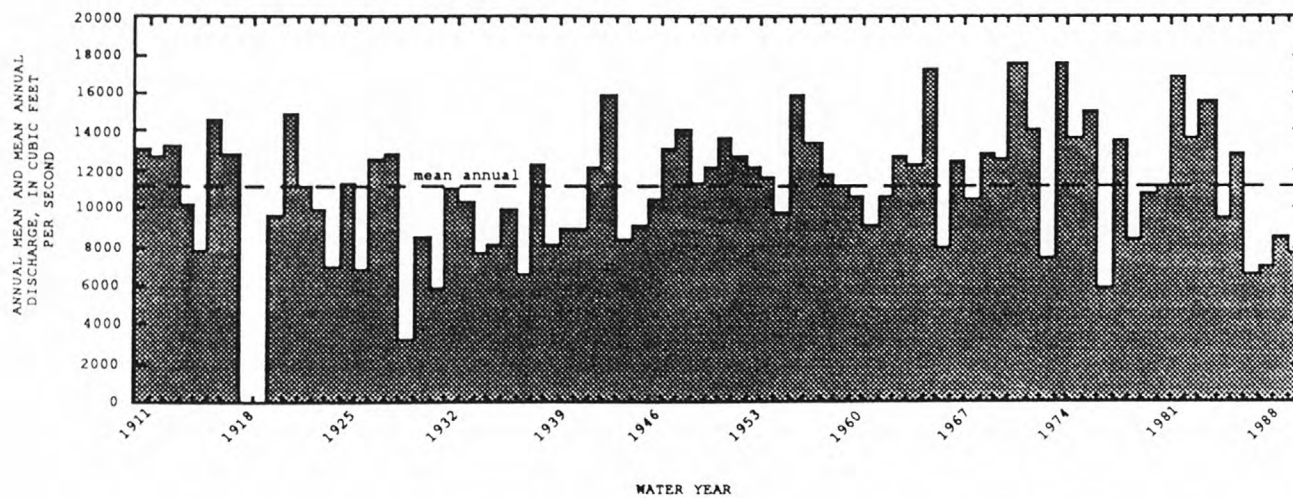
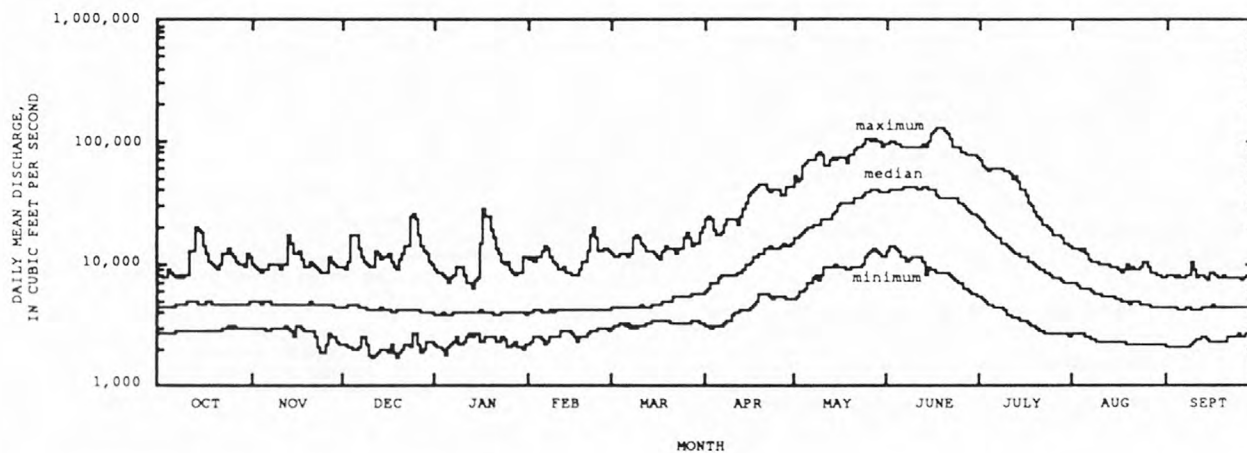
Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
69,600	44,200	29,500	20,500	14,400	8,110	6,170	5,320	4,740	4,310	3,890	3,400	3,040	2,690	2,520	2,330	2,010



LOCATION MAP



EXCEEDANCE PROBABILITY, IN PERCENT



SNAKE RIVER MAIN STEM

13334300 SNAKE RIVER NEAR ANATONE, WA

LOCATION.—Lat 46°05'50", long 116°58'36", in SE 1/4, SE 1/4, NE 1/4, sec. 12, T. 7 N., R. 46 E., Asotin County, Hydrologic Unit 17060103, on left bank 1.2 mi downstream from Grande Ronde River, 7.8 mi east of Anatone, 22 mi south of Clarkston, and at mile 167.2.

DRAINAGE AREA.—92,960 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—July 1958 to September 1990.

REVISED RECORDS.—WDR ID-76-1: 1974 and 1975.

GAGE.—Water-stage recorder. Datum of gage is 806.78 ft above sea level.

REMARKS.—Diversions above station for irrigation of about 4,090,000 acres, of which about 750,000 acres are irrigated by withdrawals from ground water. 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 117.8 mi upstream (see sta 13289700). Diurnal fluctuations caused by Hells Canyon powerplant.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 195,000 ft<sup>3</sup>/s June 18, 1974, gage height, 24.45 ft; minimum, 6,010 ft<sup>3</sup>/s Sept. 2, 1958, gage height, 1.29 ft.

Summary of monthly and annual discharges, 1959-85, 1987-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	31,500	13,800	22,300	5,130	0.23	5.2
November	37,000	17,300	24,200	5,470	0.23	5.6
December	41,600	17,000	26,800	6,560	0.24	6.2
January	48,200	18,800	30,200	8,700	0.29	7.0
February	72,500	17,100	33,300	12,600	0.38	7.7
March	90,400	18,700	38,100	17,900	0.47	8.8
April	88,700	18,900	48,400	21,600	0.45	11.2
May	119,000	20,600	66,000	25,400	0.38	15.4
June	134,000	21,200	73,000	31,200	0.43	16.9
July	63,900	12,800	30,900	14,700	0.47	7.2
August	26,500	10,300	18,100	4,300	0.24	4.3
September	27,000	11,300	19,500	3,890	0.20	4.5
Annual	58,200	18,900	35,900	11,100	0.31	100

Magnitude and frequency of annual low flow,  
based on period of record 1960-85, 1987-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 <sup>#</sup> 1%
1	13,800	11,600	10,400	9,540	8,550	7,920
3	14,600	12,200	11,000	10,100	9,000	8,330
7	15,500	12,900	11,600	10,600	9,460	8,740
14	16,000	13,400	12,100	11,000	9,900	9,200
30	16,900	14,000	12,600	11,500	10,300	9,520
60	18,100	14,900	13,300	12,000	10,700	9,800
90	19,100	15,700	14,000	12,700	11,300	10,400
120	19,900	16,400	14,800	13,500	12,200	11,400
183	21,800	18,100	16,400	15,000	13,700	12,800

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1959-85, 1987-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
102,000	137,000	158,000	182,000	198,000	213,000

Magnitude and frequency of annual high flow,  
based on period of record 1959-85, 1987-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 <sup>#</sup> 1%
1	97,300	132,000	153,000	177,000	193,000	209,000
3	95,100	129,000	149,000	172,000	188,000	203,000
7	91,000	123,000	142,000	164,000	178,000	191,000
15	85,900	116,000	133,000	152,000	164,000	175,000
30	78,500	106,000	121,000	137,000	148,000	157,000
60	68,600	94,600	110,000	127,000	139,000	149,000
90	60,700	84,300	98,900	116,000	128,000	140,000

Duration table of daily mean flow for period of record 1959-85, 1987-90

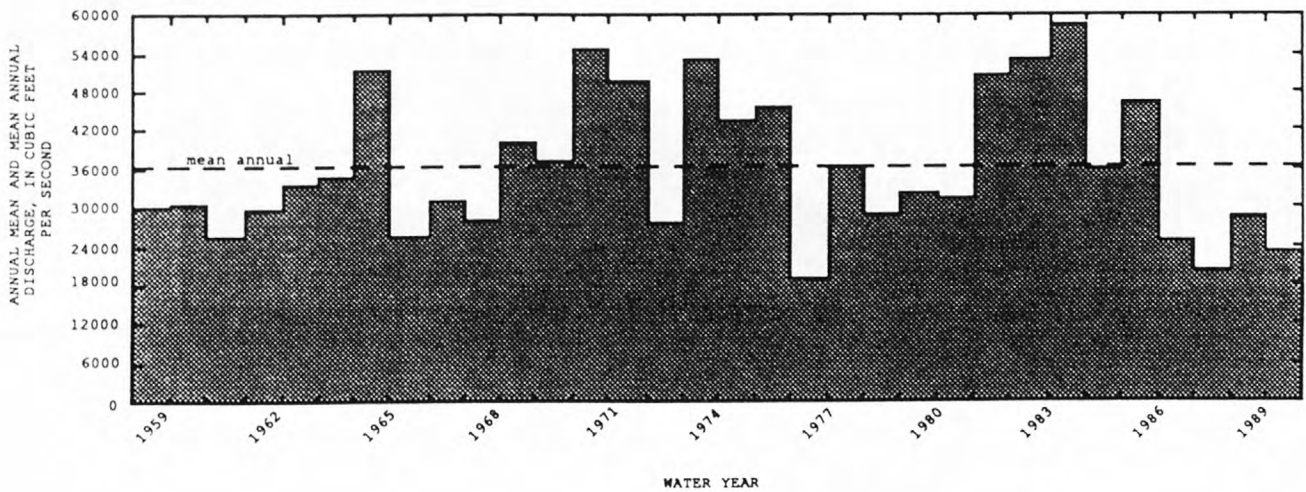
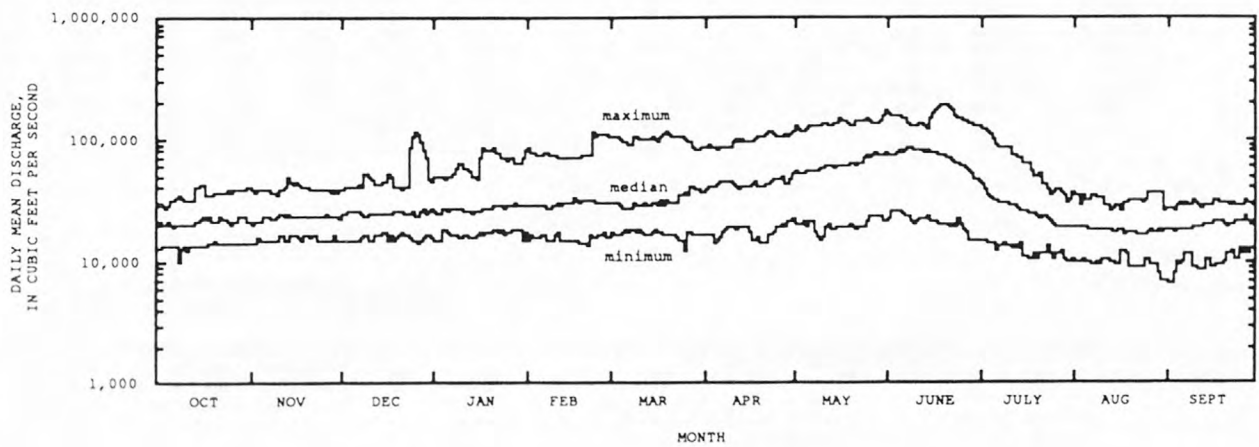
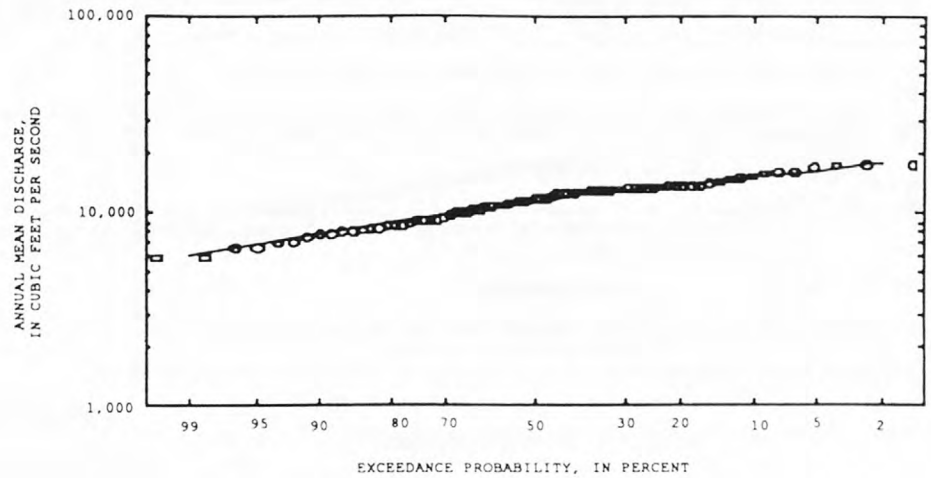
Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time														
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%
126,000	91,000	73,800	59,800	48,800	36,300	30,200	26,600	23,800	21,500	19,200	16,400	14,600	12,600	11,400
														10,400
														9,040

<sup>#</sup> Length of record used in calculation may yield unreliable values for this column.





LOCATION MAP





CLEARWATER RIVER BASIN

13336500 SELWAY RIVER NEAR LOWELL, ID

LOCATION.—Lat 46°05'12", long 115°30'46", in NW¼, SE ¼, NE¼, sec.25, T.32 N., R.7 E., Idaho County, Hydrologic Unit 17060302, Nez Perce National Forest, on right bank 0.2 mi upstream from O'Hara Creek, 7 mi upstream from Lowell, 7.6 mi upstream from confluence with Lochsa River, and 105.2 mi upstream from mouth of Clearwater River.

DRAINAGE AREA.—1,910 mi<sup>2</sup>, approximately. Mean elevation, 5,640 ft.

PERIOD OF RECORD.—April 1911 to September 1912 (gauge heights or fragmentary discharge records only), October 1929 to September 1990. Monthly discharge only for October 1929, published in WSP 1317.

REVISED RECORDS.—WSP 1043: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 1,540 ft above sea level, from river-profile map. Apr. 11 to Sept. 2, 1911, recording gage at site 2 mi downstream at different datum. Feb. 7 to Sept. 22, 1912, and Oct. 14 to Nov. 19, 1930, nonrecording gages at nearby sites at different datums.

REMARKS.—Small diversions from headwaters.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 48,900 ft<sup>3</sup>/s May 29, 1948, gage height, 16.04 ft; minimum, probably less than 100 ft<sup>3</sup>/s Jan. 8, 1937, during period of ice effect.

Summary of monthly and annual discharges, 1930-88, 1990

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	4,930	366	982	681	0.69	2.2
November	3,650	399	1,260	727	0.58	2.8
December	4,740	456	1,410	1,040	0.74	3.1
January	3,710	325	1,260	697	0.55	2.8
February	4,410	420	1,470	794	0.54	3.3
March	6,240	692	2,160	1,100	0.51	4.8
April	13,200	2,100	6,030	2,480	0.41	13.4
May	22,400	7,950	13,500	3,530	0.26	30.1
June	24,400	2,950	12,100	5,520	0.46	26.8
July	8,990	918	3,130	1,770	0.57	7.0
August	1,970	441	910	309	0.34	2.0
September	2,170	403	762	331	0.43	1.7
Annual	5,650	2,100	3,750	903	0.24	100

Magnitude and frequency of annual low flow,  
based on period of record 1931-88, 1991

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	442	326	273	233	193	169
3	475	358	302	259	215	188
7	509	392	336	293	249	222
14	537	429	380	344	306	284
30	579	467	420	386	352	332
60	646	511	457	418	381	359
90	720	552	487	441	396	371
120	805	597	516	460	406	375
183	947	678	579	512	450	415

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1930-88, 1990

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
26,300	33,600	38,000	43,100	46,700	50,100

Magnitude and frequency of annual high flow,  
based on period of record 1930-88, 1990

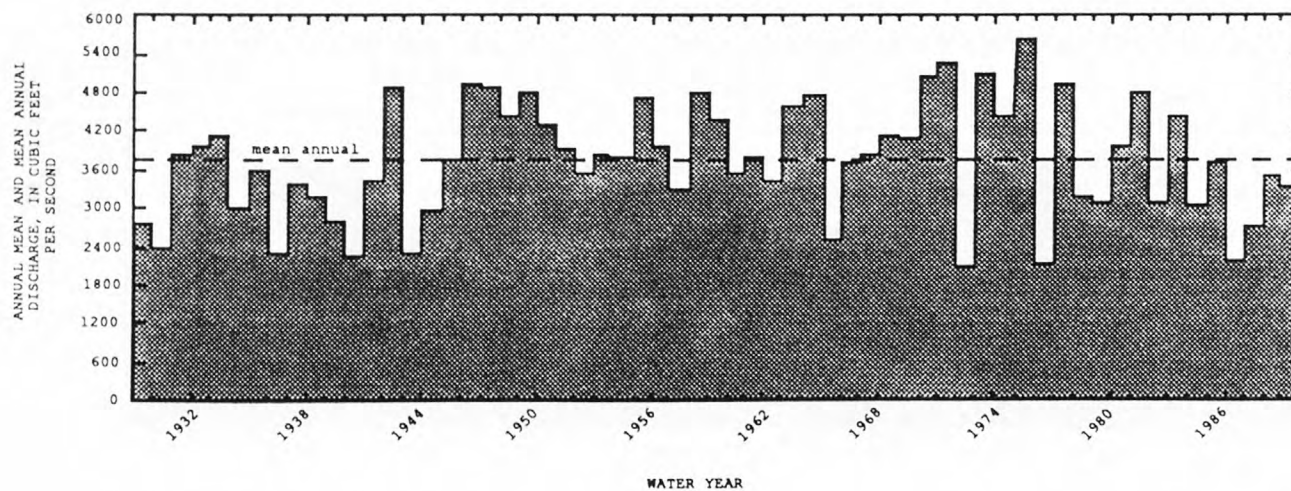
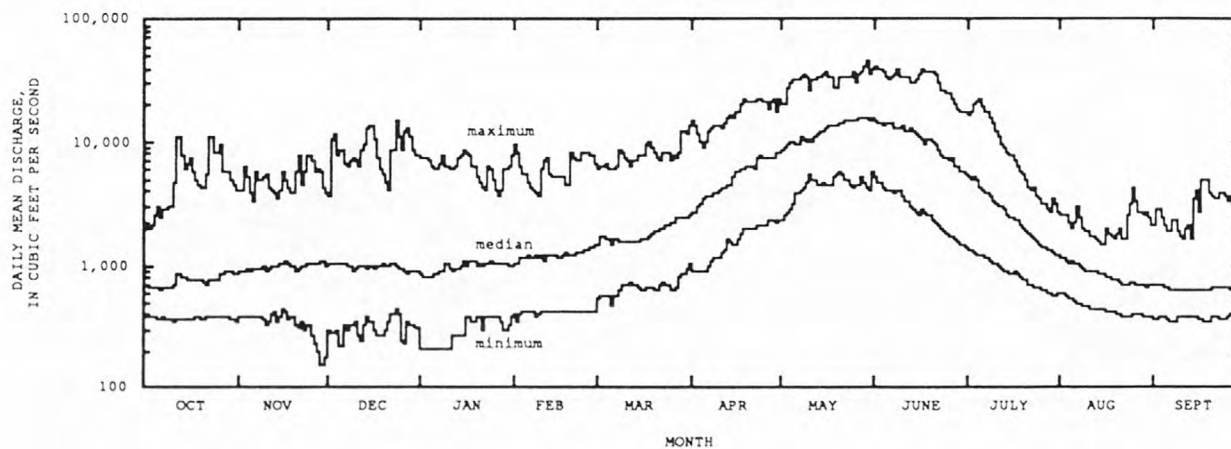
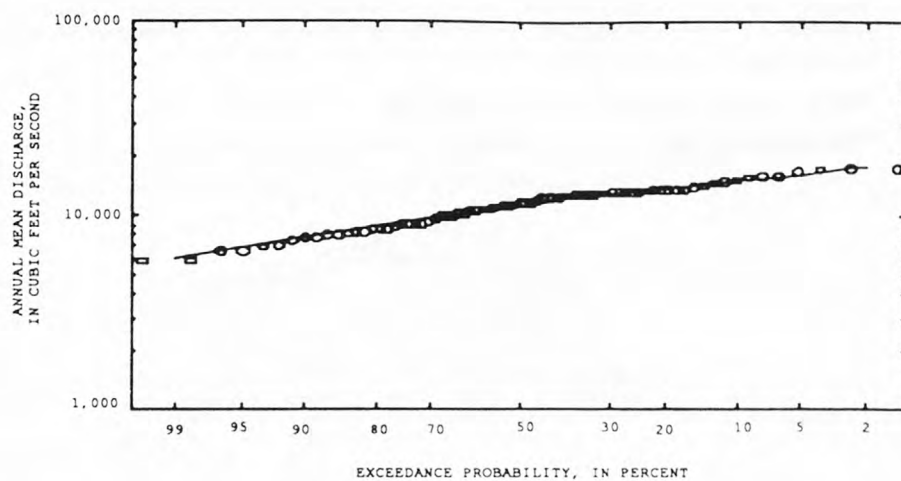
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	24,100	30,900	35,300	40,600	44,500	48,300
3	22,900	29,200	33,200	38,000	41,400	44,800
7	21,000	26,900	30,500	34,800	37,900	40,800
15	18,800	23,900	27,000	30,600	33,100	35,500
30	16,400	20,700	23,100	25,900	27,800	29,500
60	13,500	16,600	18,300	20,200	21,400	22,500
90	10,900	13,300	14,500	15,800	16,600	17,300

Duration table of daily mean flow for period of record 1930-88, 1990

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
24,700	16,100	11,300	8,080	5,730	2,940	1,900	1,400	1,080	865	712	565	481	413	373	354	250	



LOCATION MAP



CLEARWATER RIVER BASIN

13336900 FISH CREEK NEAR LOWELL, ID

LOCATION.—Lat 46°20', long 115°21', in sec.33, T.35 N., R.9 E. (unsurveyed), Idaho County, Hydrologic Unit 17060303, on left bank at mile 0.2, 1.3 mi southwest of Lochsa ranger station, and 18 mi northeast of Lowell.

DRAINAGE AREA.—89.2 mi<sup>2</sup>.

PERIOD OF RECORD.—September 1957 to September 1967.

GAGE.—Water-stage recorder. Datum of gage is 1,996.94 ft above sea level, datum of 1929.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 2,280 ft<sup>3</sup>/s May 20, 1964 gage height, 5.54 ft; minimum, 17 ft<sup>3</sup>/s Nov. 9, 1957, gage height, 0.98 ft.

Summary of monthly and annual discharges, 1958-67

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	245	31	74	63	0.85	2.4
November	282	41	119	86	0.72	3.9
December	390	38	151	130	0.86	5.0
January	265	39	113	73	0.65	3.7
February	252	37	149	79	0.53	4.8
March	248	59	179	61	0.34	5.9
April	880	333	608	197	0.32	20.0
May	1,200	627	969	174	0.18	31.8
June	1,150	269	496	260	0.52	16.3
July	205	66	100	39	0.40	3.3
August	79	28	44	16	0.36	1.4
September	79	26	45	19	0.42	1.5
Annual	319	190	254	43	0.17	100

Magnitude and frequency of annual low flow, based on period of record 1959-67

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	27	24	23	22	22	22
3	28	25	23	23	22	22
7	30	25	23	23	22	22
14	32	26	25	24	23	22
30	34	28	26	25	24	23
60	39	32	29	27	26	25
90	44	36	32	30	27	26
120	51	41	37	35	33	32
183	76	50	40	34	28	25

Magnitude and frequency of instantaneous peak flow, based on period of record 1958-67

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
1,730	2,040	2,210	2,390	2,520	2,630	

Magnitude and frequency of annual high flow, based on period of record 1958-67

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,560	1,800	1,870	1,920	1,940	1,950
3	1,470	1,710	1,790	1,850	1,880	1,890
7	1,350	1,580	1,660	1,730	1,760	1,780
15	1,190	1,410	1,510	1,600	1,650	1,680
30	1,050	1,270	1,390	1,520	1,610	1,680
60	887	1,040	1,100	1,170	1,200	1,230
90	727	824	862	893	908	919

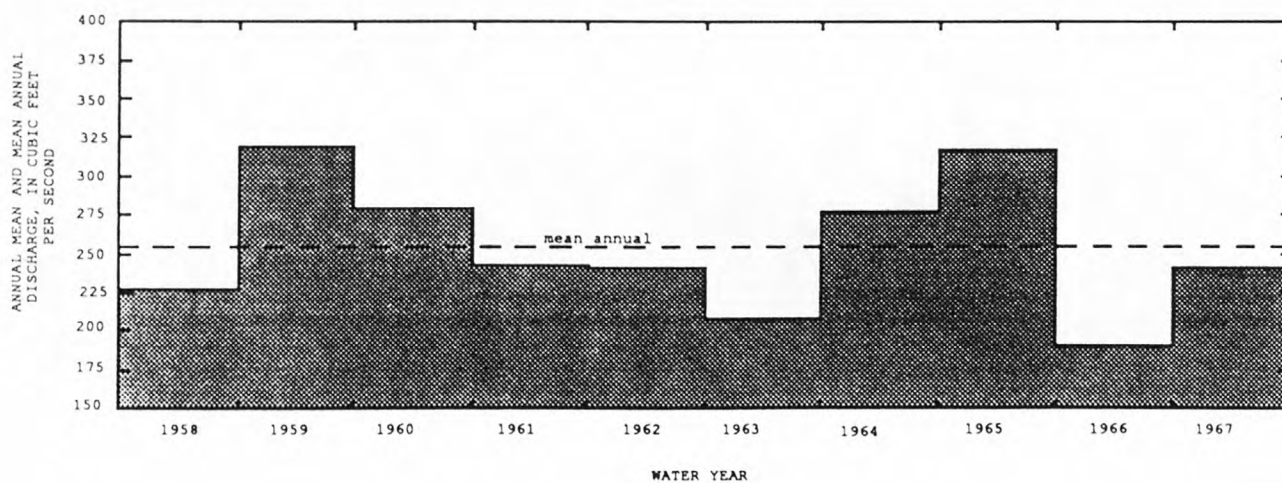
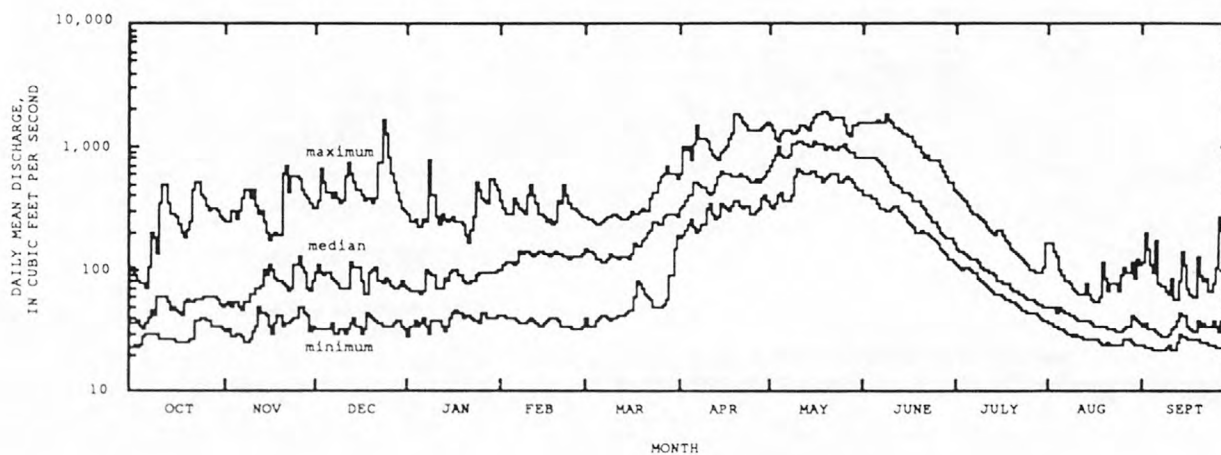
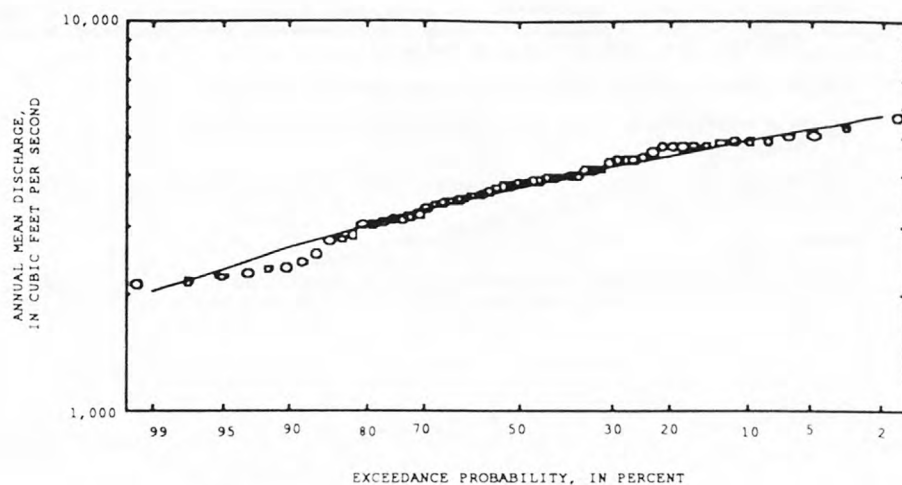
Duration table of daily mean flow for period of record 1958-67

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,490	1,040	750	545	394	244	163	104	73	56	44	35	30	26	25	23	22

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



**CLEARWATER RIVER BASIN**

13337000 LOCHSA RIVER NEAR LOWELL, ID

LOCATION.—Lat 46°09'02", long 115°35'11", in SW¼, SW¼, SE¼, sec.33, T.33 N., R.7 E., Idaho County, Hydrologic Unit 17060303, Clearwater National Forest, on right bank 0.7 mi upstream from Lowell, 0.9 mi upstream from confluence with Selway River, 1.2 mi downstream from Pete King Creek, and 19 mi east of Kooskia.

DRAINAGE AREA.—1,180 mi², approximately. Mean elevation, 5,250 ft.

PERIOD OF RECORD.—October 1910 to September 1912, October 1929 to September 1990. Monthly discharge only for some periods, published in WSP 1317.

GAGE.—Water-stage recorder. Datum of gage is 1,452.98 ft above sea level. Prior to Nov. 21, 1930, nonrecording gages at site 1 mi upstream at different datums.

REMARKS.—None.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 35,100 ft³/s June 8, 1964, gage height, 13.50 ft, from rating curve extended above 17,000 ft³/s; minimum, probably less than 100 ft³/s Jan. 8, 1937, during period of ice effect.

Summary of monthly and annual discharges, 1911-12, 1930-90

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	3,480	261	757	512	0.68	2.2
November	2,800	289	1,060	641	0.61	3.1
December	4,840	330	1,230	992	0.81	3.6
January	4,250	251	1,110	713	0.64	3.2
February	3,510	325	1,230	709	0.57	3.6
March	5,250	597	1,780	928	0.52	5.2
April	10,800	1,850	4,900	1,810	0.37	14.3
May	16,600	5,290	10,300	2,710	0.26	30.1
June	19,700	2,230	8,480	4,000	0.47	24.8
July	6,100	734	2,170	1,150	0.53	6.3
August	1,460	326	665	226	0.34	1.9
September	1,600	278	568	261	0.46	1.7
Annual	4,300	1,500	2,850	682	0.24	100

Magnitude and frequency of annual low flow,  
based on period of record 1912, 1931-91

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	338	239	191	155	119	99
3	345	259	219	189	158	140
7	363	281	244	216	188	171
14	386	307	273	248	224	209
30	423	336	300	275	250	235
60	477	374	332	303	274	257
90	536	410	361	327	294	275
120	612	451	389	346	306	282
183	745	527	448	394	345	317

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1911-12, 1930-90

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
19,200	24,800	28,100	32,100	34,800	37,400

Magnitude and frequency of annual high flow,  
based on period of record 1911-12, 1930-90

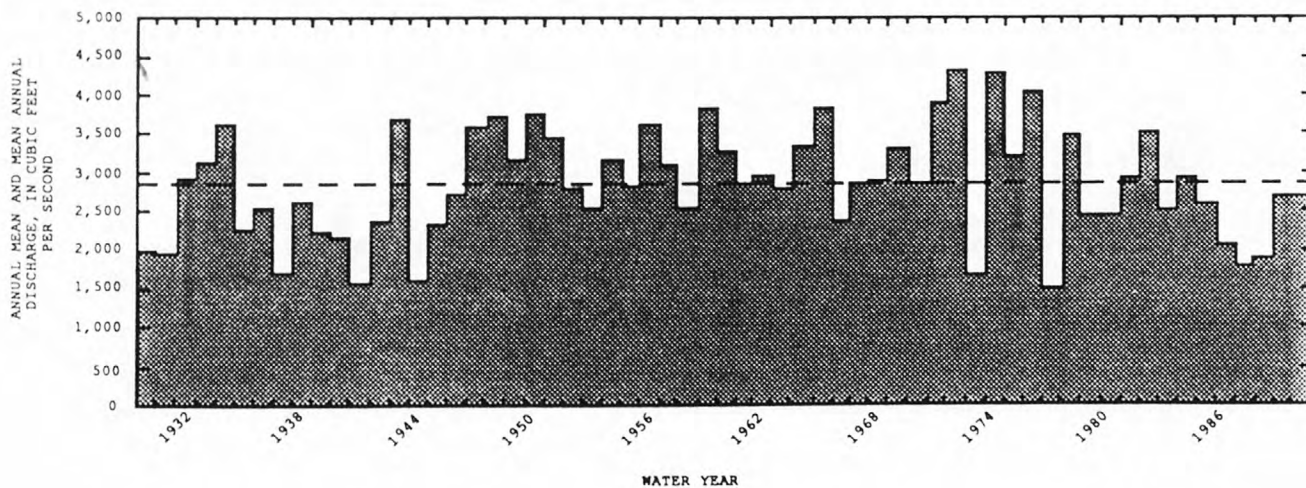
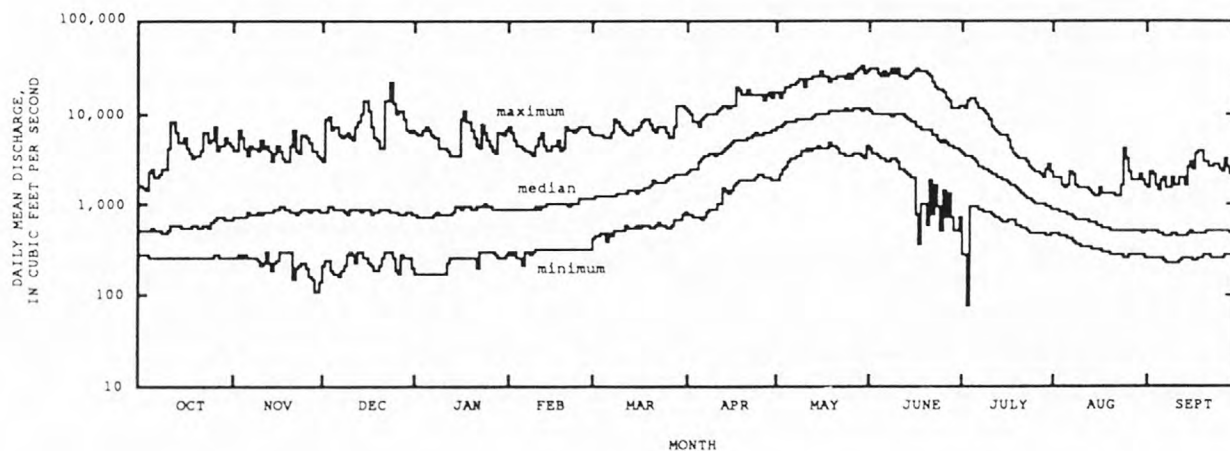
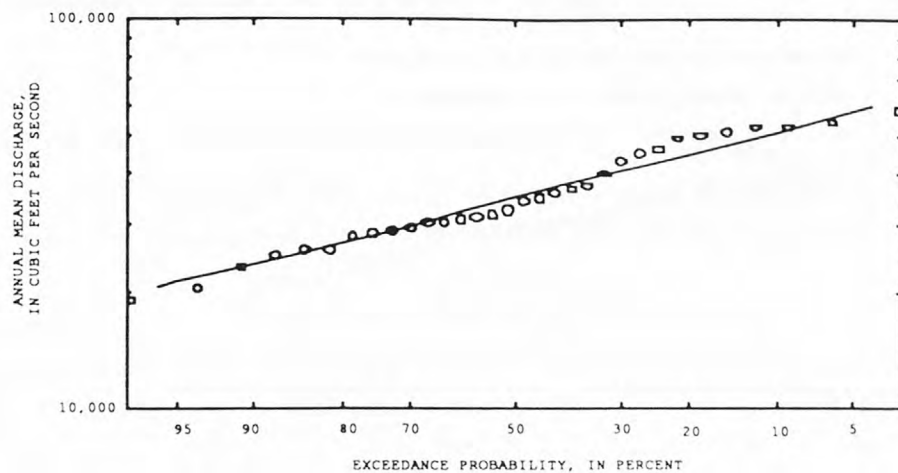
Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	17,700	22,700	25,800	29,600	32,400	35,100
3	16,600	21,300	24,100	27,500	29,900	32,200
7	15,300	19,600	22,200	25,300	27,500	29,600
15	13,700	17,500	19,800	22,400	24,200	25,900
30	12,000	15,200	17,100	19,200	20,700	22,000
60	9,940	12,300	13,500	14,900	15,800	16,500
90	8,100	9,870	10,800	11,700	12,300	12,900

Duration table of daily mean flow for period of record 1911-12, 1930-90

Discharge, in ft³/s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
17,900	11,700	8,420	6,160	4,430	2,400	1,590	1,130	852	679	546	421	349	295	272	250	185



LOCATION MAP





# CLEARWATER RIVER BASIN

13337500 SOUTH FORK CLEARWATER RIVER NEAR ELK CITY, ID

LOCATION.—Lat 45°49'29", long 115°31'36", in SE 1/4, NE 1/4, sec. 25, T. 29 N., R. 7 E. (unsurveyed), Idaho County, Hydrologic Unit 17060305, Nez Perce National Forest, on right bank just upstream from bridge on road to Orogrande, 0.2 mi upstream from Crooked River, 4.5 mi west of Elk City, and at mile 58.6.

DRAINAGE AREA.—261 mi<sup>2</sup>. Mean elevation, 5,150 ft.

PERIOD OF RECORD.—September 1944 to September 1974.

GAGE.—Water-stage recorder. Datum of gage is 3,816.27 ft above sea level. Prior to June 23, 1949, nonrecording gage at site 24 ft downstream at datum 6.14 ft lower.

REMARKS.—No regulation or diversion above station, except for mining operations.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 4,040 ft<sup>3</sup>/s June 8, 1964, gage height, 7.48 ft; minimum daily, 10 ft<sup>3</sup>/s Nov. 28, 29, 1952.

Summary of monthly and annual discharges, 1945-74

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	263	25	70	44	0.62	2.1
November	247	29	90	48	0.54	2.7
December	285	31	97	62	0.64	2.9
January	428	37	99	77	0.78	3.0
February	373	31	109	74	0.68	3.3
March	479	49	176	98	0.55	5.5
April	1,220	226	662	262	0.40	20.2
May	2,000	413	1,140	394	0.35	34.8
June	1,620	207	585	305	0.52	17.8
July	364	74	146	61	0.42	4.4
August	106	27	57	20	0.35	1.7
September	117	25	53	24	0.46	1.6
Annual	401	133	274	69	0.25	100

Magnitude and frequency of annual low flow,  
based on period of record 1946-74

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	30	23	19	16	13	11
3	31	24	20	17	14	12
7	32	25	22	20	18	16
14	34	27	25	23	21	20
30	37	30	27	25	23	22
60	43	35	31	29	26	25
90	49	39	35	32	29	27
120	56	43	38	35	31	29
183	66	49	43	39	36	33

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-74

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1,960	2,620	3,030	3,510	3,860	4,190

Magnitude and frequency of annual high flow,  
based on period of record 1945-74

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	1,760	2,440	2,870	3,380	3,750	4,100
3	1,650	2,270	2,630	3,060	3,360	3,630
7	1,500	2,050	2,380	2,780	3,050	3,310
15	1,350	1,850	2,160	2,530	2,790	3,040
30	1,210	1,610	1,840	2,100	2,280	2,440
60	1,020	1,290	1,440	1,580	1,670	1,740
90	817	1,020	1,120	1,210	1,270	1,320

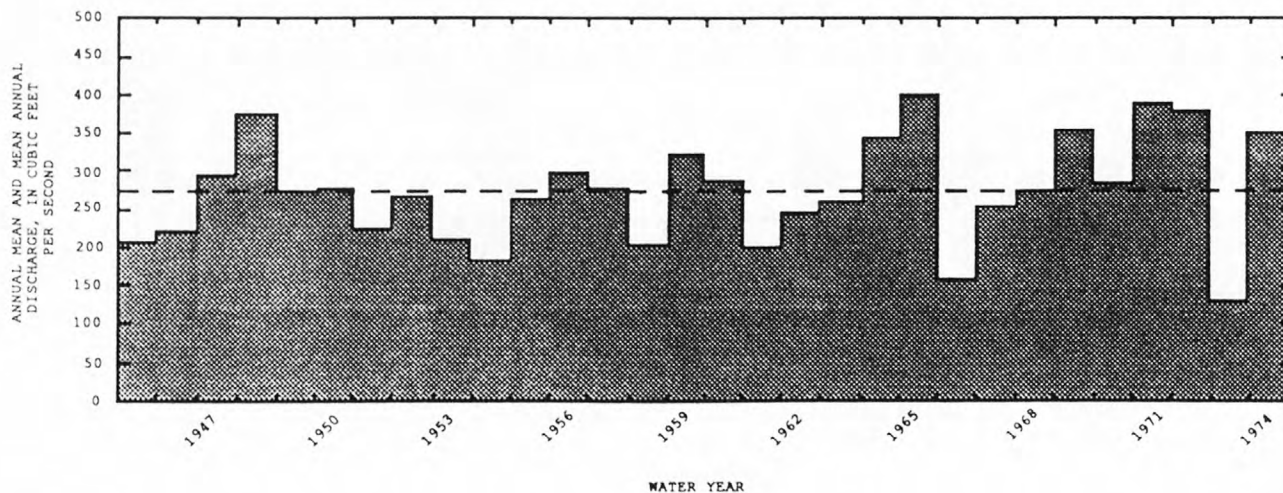
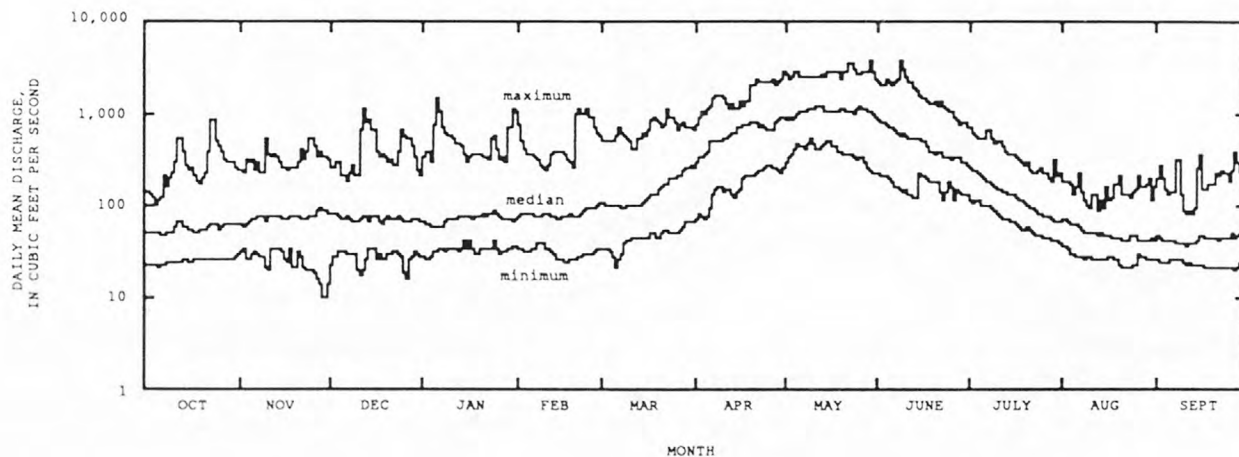
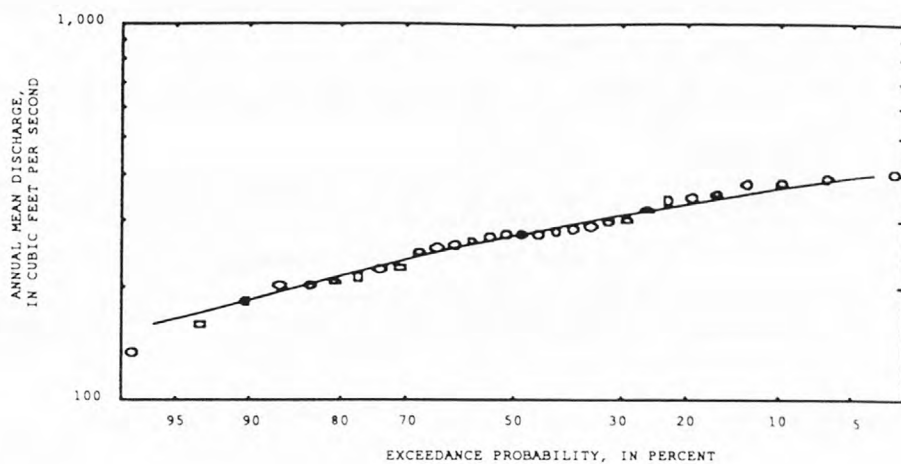
Duration table of daily mean flow for period of record 1945-74

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,930	1,200	843	593	409	204	134	95	75	61	50	39	33	28	25	24	20

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



CLEARWATER RIVER BASIN

13338000 SOUTH FORK CLEARWATER RIVER NEAR GRANGEVILLE, ID

LOCATION.—Lat 45°55', long 116°01', in SE<sup>1</sup>/<sub>4</sub>, NW<sup>1</sup>/<sub>4</sub>, sec.30, T.30 N., R.4 E., Idaho County, Hydrologic Unit 17060305, on right bank just downstream from powerhouse of Washington Water Power Company, 6 mi east of Grangeville, and at mile 21.7.

DRAINAGE AREA.—865 mi<sup>2</sup>. Mean elevation, 5,160 ft.

PERIOD OF RECORD.—November 1910 to January 1911, March to July 1911, October 1911 to September 1916, April 1923 to September 1963 (discontinued). Monthly discharge only for some periods, published in WSP 1317.

REVISED RECORDS.—WSP 633: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 1,830 ft above sea level, from river-profile map. Nov. 14, 1910, to July 31, 1911, staff gage at datum 2.2 ft higher than present datum. Nov. 2, 1911 to Sept. 30, 1916, staff gage at datum 1.0 ft higher than present datum. Apr. 1, 1923, to Oct. 15, 1944, chain or staff gages at present datum.

REMARKS.—Diurnal fluctuations at low stages caused by powerplant just above station. No diversion for irrigation.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 12,600 ft<sup>3</sup>/s May 29, 1948, gage height, 12.50 ft; maximum gage height, flood of May 30, 1917 reached a stage of 13.6 ft (present datum), from stage record by powerplant operator (discharge, 15,000 ft<sup>3</sup>/s); minimum daily, 29 ft<sup>3</sup>/s Nov. 23, 27, 29, 1952; no flow for part of Aug. 27, 1947, Aug. 15, 1956.

Summary of monthly and annual discharges, 1912-16, 1924-63

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1,030	104	263	153	0.58	2.5
November	1,320	101	320	214	0.67	3.0
December	1,160	117	322	221	0.69	3.1
January	1,260	94	283	191	0.67	2.7
February	661	119	312	134	0.43	3.0
March	1,440	197	566	275	0.49	5.4
April	3,390	714	1,970	636	0.32	18.7
May	6,490	932	3,240	1,140	0.35	30.9
June	4,820	510	2,170	1,030	0.48	20.7
July	1,720	175	637	325	0.51	6.1
August	413	88	217	80	0.37	2.1
September	386	93	192	72	0.37	1.8
Annual	1,470	494	875	237	0.27	100

Magnitude and frequency of annual low flow,  
based on period of record 1913-16, 1924-63

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	98	64	49	38	27	22
3	110	80	67	56	46	40
7	118	88	75	65	55	49
14	129	100	87	77	67	61
30	144	112	98	88	78	71
60	165	128	113	101	89	82
90	182	141	124	112	101	94
120	200	153	134	121	108	101
183	225	166	145	132	119	112

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1912-16, 1924-63

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
5,020	6,900	8,270	10,100	11,600	13,200

Magnitude and frequency of annual high flow,  
based on period of record 1912-16, 1924-63

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	4,800	6,410	7,510	8,940	10,000	11,100
3	4,490	6,040	7,100	8,470	9,520	10,600
7	4,180	5,620	6,600	7,880	8,860	9,870
15	3,790	5,050	5,930	7,090	8,000	8,940
30	3,380	4,480	5,250	6,280	7,080	7,920
60	2,920	3,740	4,270	4,920	5,400	5,880
90	2,430	3,090	3,500	4,000	4,360	4,720

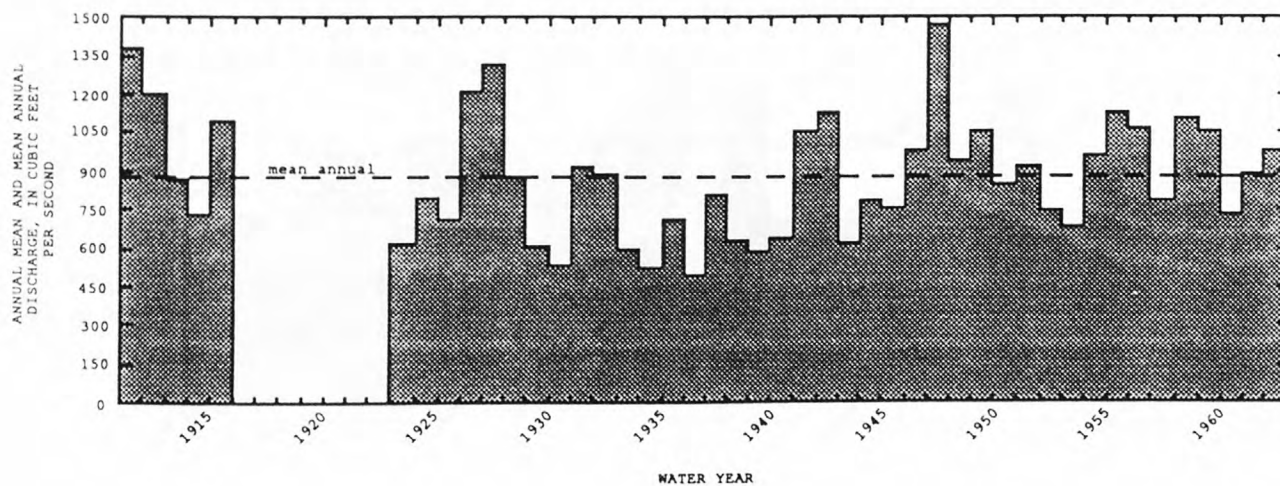
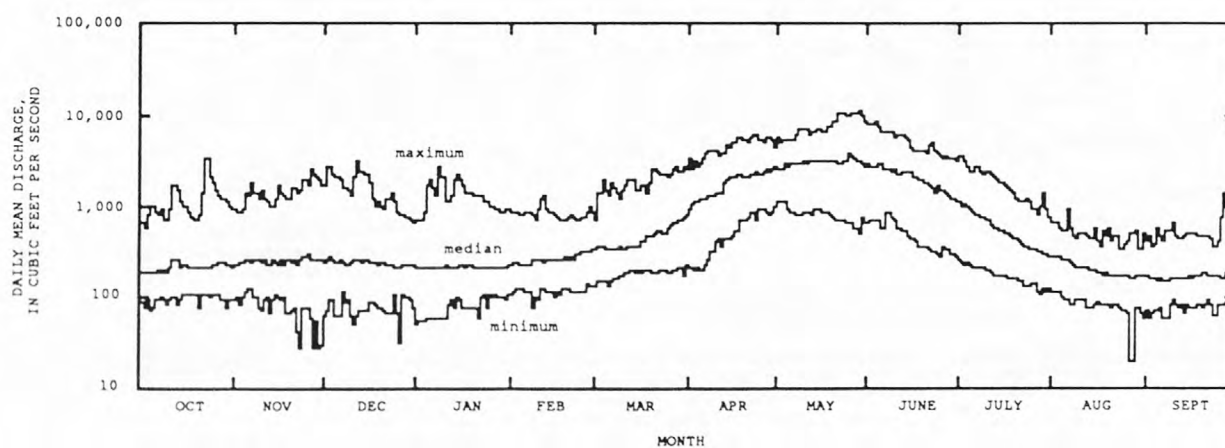
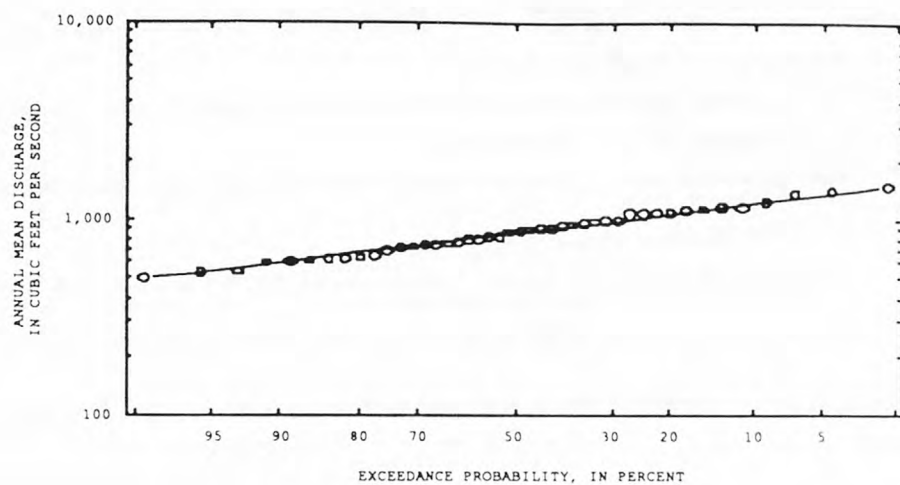
Duration table of daily mean flow for period of record 1912-16, 1924-63

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
5,470	3,460	2,590	1,990	1,470	702	448	333	262	216	180	143	120	96	84	76	55	

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# CLEARWATER RIVER BASIN

13338500 SOUTH FORK CLEARWATER RIVER AT STITES, ID

LOCATION.—Lat 46°05'12", long 115°58'32", in NE 1/4, SE 1/4, NE 1/4, sec. 29, T. 32 N., R. 4 E., Idaho County, Hydrologic Unit 17060305, on left bank at Stites, 0.4 mi upstream from county road bridge, 0.4 mi downstream from Cottonwood Creek, and at mile 4.0.

DRAINAGE AREA.—1,150 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1910 to April 1912, October 1964 to September 1990. Published as "at Kooskia," 1910-12.

REVISED RECORDS.—WSP 1317: Drainage area.

GAGE.—Water-stage recorder. Datum of gage is 1,311.99 ft above sea level. October 1910 to April 1912, nonrecording gage 3.6 mi downstream at different datum.

REMARKS.—No regulation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 10,700 ft<sup>3</sup>/s May 29, 1912, gage height, 6.00 ft, site and datum then in use; minimum, 48 ft<sup>3</sup>/s Nov. 30, 1987, gage height, 2.39 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 8, 1964, reached a stage of 10.3 ft, from floodmarks, present site and datum, discharge, 17,500 ft<sup>3</sup>/s.

Summary of monthly and annual discharges, 1965-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	677	108	291	129	0.44	2.3
November	893	139	355	164	0.46	2.8
December	2,370	167	471	476	1.0	3.7
January	1,670	144	556	374	0.67	4.4
February	1,620	242	633	402	0.64	4.9
March	2,390	312	990	551	0.56	7.8
April	3,550	807	2,040	735	0.36	16.1
May	5,530	1,320	3,370	1,240	0.37	26.6
June	5,710	771	2,630	1,290	0.49	20.8
July	2,060	314	807	448	0.55	6.4
August	528	137	287	104	0.36	2.2
September	473	115	258	93	0.36	2.0
Annual	1,710	479	1,060	347	0.33	100

Magnitude and frequency of annual low flow,  
based on period of record 1966-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	136	105	90	79	67	60
3	146	119	106	97	88	82
7	159	129	115	104	92	85
14	173	138	121	108	95	86
30	193	152	133	119	104	95
60	222	171	148	131	113	102
90	241	186	163	145	128	117
120	255	199	176	160	144	135
183	288	221	198	183	171	164

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1965-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
6,400	9,270	11,200	13,800	15,800	17,800	

Magnitude and frequency of annual high flow,  
based on period of record 1965-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	5,730	7,540	8,490	9,460	10,100	10,600
3	5,160	6,750	7,610	8,530	9,120	9,630
7	4,680	6,110	6,910	7,770	8,340	8,840
15	4,210	5,600	6,370	7,230	7,780	8,290
30	3,740	4,990	5,700	6,470	6,970	7,420
60	3,200	4,230	4,790	5,400	5,780	6,120
90	2,710	3,570	4,040	4,550	4,880	5,170

Duration table of daily mean flow for period of record 1965-90

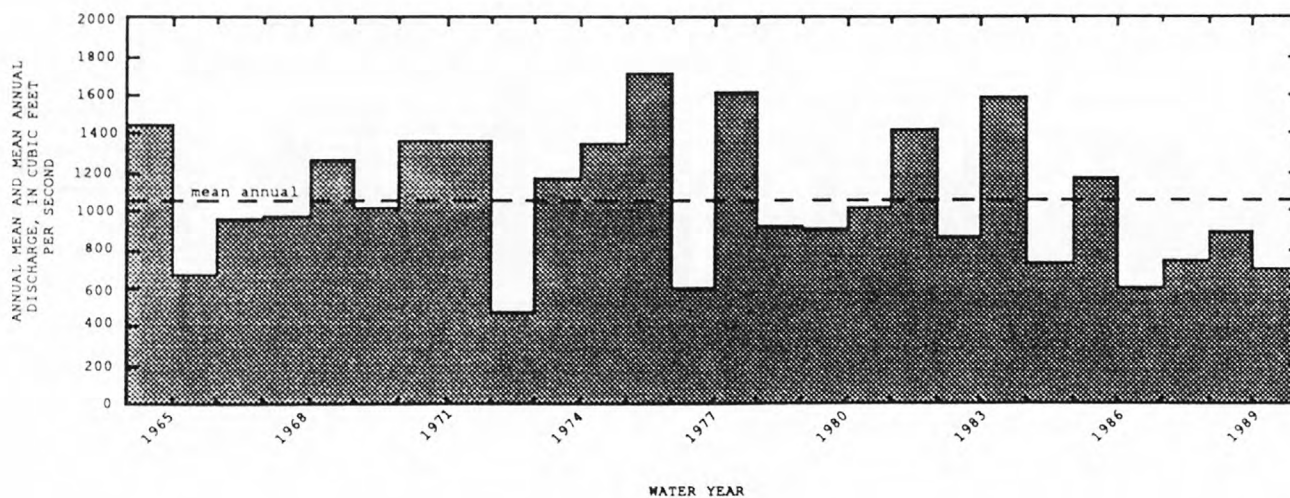
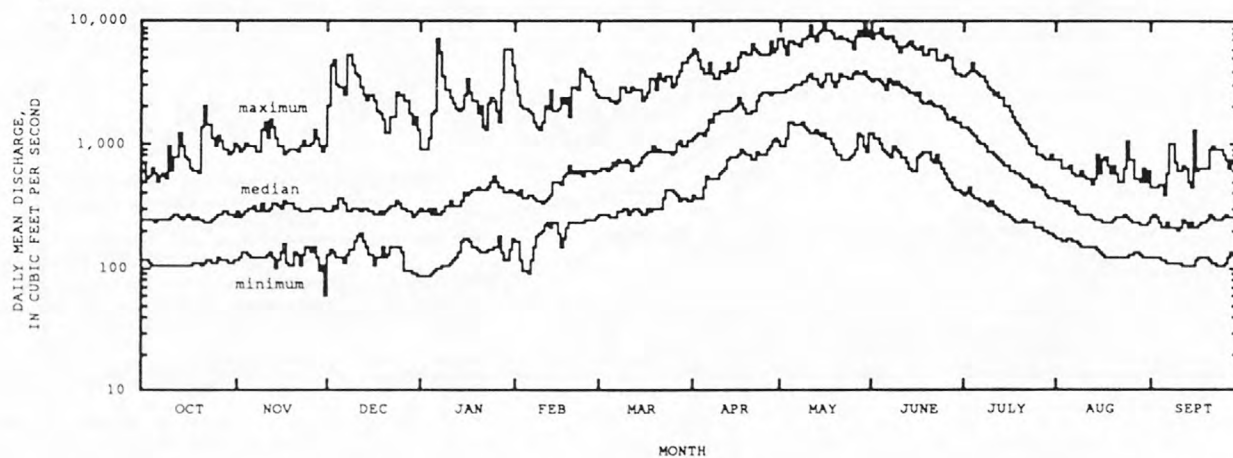
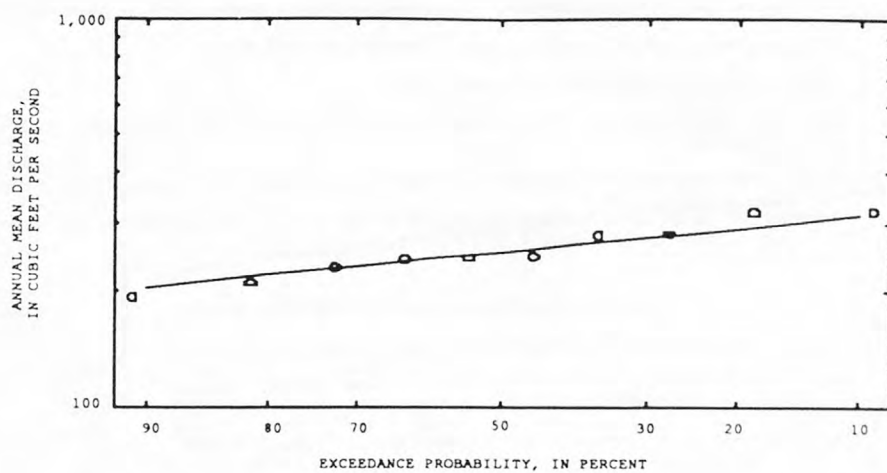
Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
5,860	4,030	2,880	2,210	1,730	1,050	670	462	351	288	241	191	156	127	115	106	91	

† Length of record used in calculation may yield unreliable values for this column.





LOCATION MAP





# CLEARWATER RIVER BASIN

13339000 CLEARWATER RIVER AT KAMIAH, ID

LOCATION.—Lat 46°14'00", long 116°01'00", in sec.1, T.33 N., R.3 E., Idaho County, Hydrologic Unit 17060305, on left bank 0.2 mi downstream from highway bridge at Kamiah, 0.8 mi downstream from Lawyer Creek, 6 mi downstream from South Fork, and at mile 67.0.

DRAINAGE AREA.—4,850 mi<sup>2</sup>, approximately. Mean elevation, 5,010 ft.

PERIOD OF RECORD.—August 1910 to October 1965.

GAGE.—Water-stage recorder. Datum of gage is 1,162.52 ft above sea level. Prior to Oct. 1934, nonrecording gages 300 ft downstream at same datum.

REMARKS.—Some diurnal regulation at low stages caused by powerplant on South Fork prior to 1963.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge observed, 100,000 ft<sup>3</sup>/s June 9, 1964 (gage height, 18.16 ft); minimum, 179 ft<sup>3</sup>/s about Dec. 1, 1952 (gage height, 1.98 ft).

Summary of monthly and annual discharges, 1910-65

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	9,890	917	2,270	1,500	0.66	2.3
November	18,600	858	3,110	2,660	0.86	3.2
December	10,600	713	3,370	2,610	0.77	3.4
January	12,500	742	2,990	2,200	0.74	3.0
February	7,460	959	3,320	1,680	0.51	3.4
March	13,800	1,820	5,100	2,410	0.47	5.2
April	26,500	6,040	14,700	4,990	0.34	15.0
May	50,200	15,200	30,000	8,060	0.27	30.5
June	49,200	6,400	23,800	10,800	0.46	24.2
July	17,500	1,920	6,170	3,360	0.54	6.3
August	3,230	853	1,900	608	0.32	1.9
September	3,060	806	1,590	563	0.35	1.6
Annual	12,700	4,760	8,200	1,920	0.23	100

Magnitude and frequency of annual low flow, based on period of record 1910-65

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	944	631	481	372	268	211
3	1,010	702	553	443	335	273
7	1,090	803	672	573	474	415
14	1,180	893	764	666	567	507
30	1,260	993	872	783	691	636
60	1,410	1,120	990	895	799	741
90	1,570	1,200	1,060	956	858	801
120	1,740	1,300	1,130	1,010	894	829
183	2,060	1,460	1,250	1,120	995	928

Magnitude and frequency of instantaneous peak flow, based on period of record 1910-65

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
53,400	67,900	76,300	85,900	92,500	98,600

Magnitude and frequency of annual high flow, based on period of record 1910-65

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	50,800	65,100	73,700	84,000	91,200	98,100
3	47,800	60,700	68,200	76,900	82,700	88,200
7	44,200	56,200	63,100	70,900	76,100	80,900
15	39,500	50,300	56,500	63,500	68,200	72,600
30	34,700	43,500	48,600	54,200	58,000	61,400
60	28,600	34,900	38,300	41,900	44,200	46,300
90	23,400	28,200	30,800	33,500	35,200	36,800

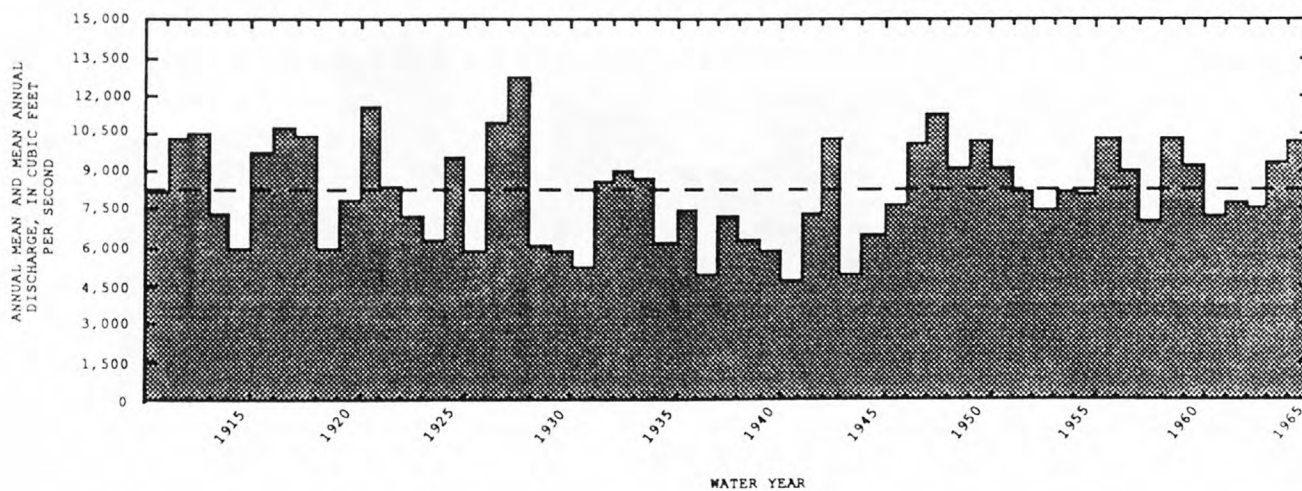
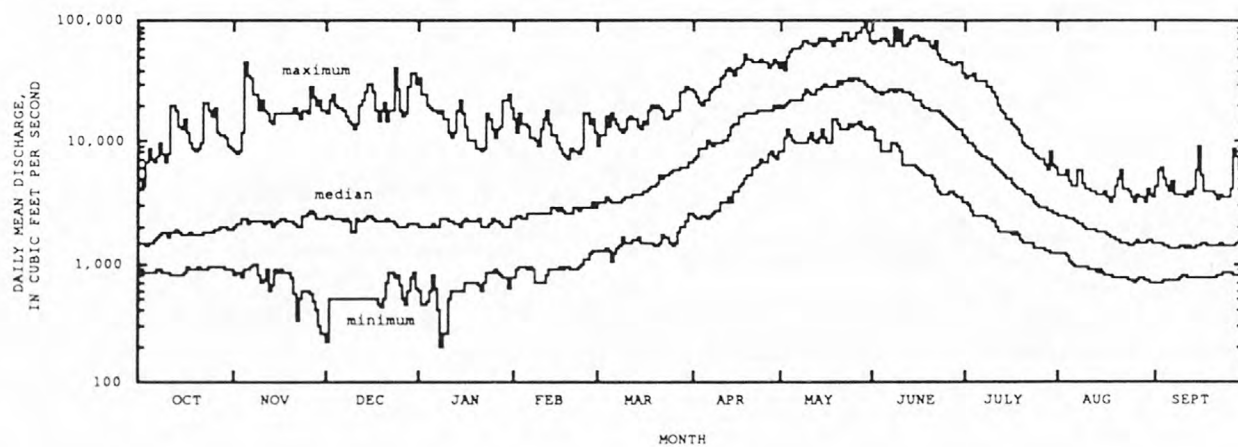
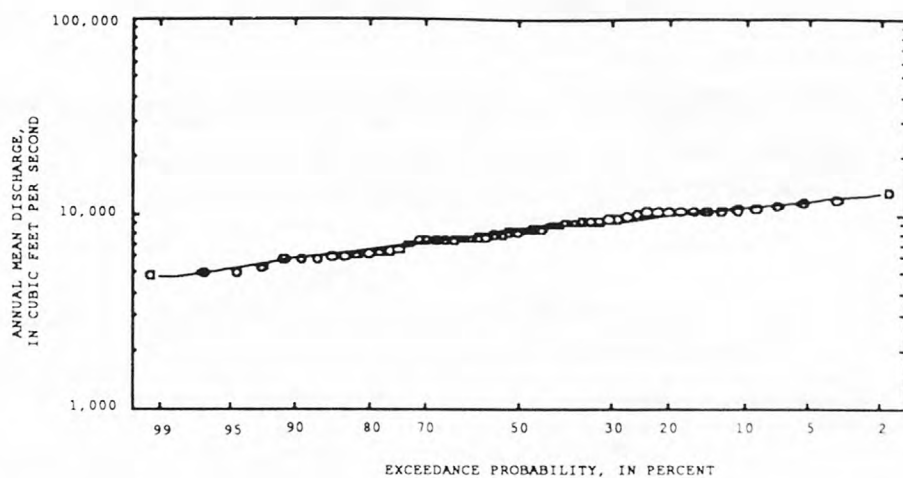
Duration table of daily mean flow for period of record 1980-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
50,100	33,700	23,900	18,000	13,100	6,910	4,440	3,160	2,380	1,920	1,580	1,230	1,040	860	790	720	510	

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



CLEARWATER RIVER BASIN

13339500 LOLO CREEK NEAR GREER, ID

LOCATION.—Lat 46°22'20", long 116°09'40", in NE 1/4, SE 1/4, sec. 14, T. 35 N., R. 2 E., Idaho County, Hydrologic Unit 17060306, on left bank upstream side of county road bridge 2,000 ft upstream from mouth, 1.35 mi southeast of Greer, and 8.5 mi southeast of Orofino.

DRAINAGE AREA.—243 mi<sup>2</sup>.

PERIOD OF RECORD.—October 1979 to September 1990. Daily record, December 1911 to December 1912, published in WSP 332. Miscellaneous streamflow measurements made 1928, 1929, and 1964 are published in Miscellaneous Streamflow Measurements in Idaho, 1894-1967.

GAGE.—Water-stage recorder. Elevation of gage is 1,120 ft above sea level, from topographic map.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge 3,920 ft<sup>3</sup>/s May 26, 1980, gage height, 16.14 ft; minimum daily, 15 ft<sup>3</sup>/s Nov. 27, 30, 1988.

Summary of monthly and annual discharges, 1980-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	137	30	75	34	0.46	2.0
November	240	43	132	63	0.48	3.5
December	338	70	159	80	0.50	4.3
January	283	60	163	81	0.49	4.4
February	957	76	367	294	0.80	9.9
March	1,200	276	647	276	0.43	17.4
April	1,220	463	813	263	0.32	21.8
May	1,040	238	679	231	0.34	18.2
June	787	128	427	220	0.51	11.5
July	262	64	136	72	0.53	3.6
August	81	26	59	19	0.32	1.6
September	171	26	67	38	0.57	1.8
Annual	448	200	309	77	0.25	100

Magnitude and frequency of annual low flow,  
based on period of record 1981-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	35	25	20	16	13	10
3	36	26	21	17	13	11
7	38	27	22	18	14	12
14	39	29	24	20	16	13
30	47	33	26	21	16	13
60	54	38	30	24	18	15
90	61	43	35	29	23	20
120	72	51	41	34	27	22
183	99	69	54	44	34	28

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1980-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
2,190	3,060	3,610	4,260	4,720	5,160

Magnitude and frequency of annual high flow,  
based on period of record 1980-90

Period (con- secutive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	1,910	2,650	3,090	3,600	3,950	4,280
3	1,660	2,210	2,530	2,900	3,140	3,370
7	1,430	1,830	2,060	2,310	2,480	2,630
15	1,210	1,490	1,640	1,800	1,890	1,980
30	952	1,200	1,350	1,540	1,670	1,800
60	832	1,020	1,140	1,260	1,350	1,430
90	751	944	1,070	1,220	1,320	1,430

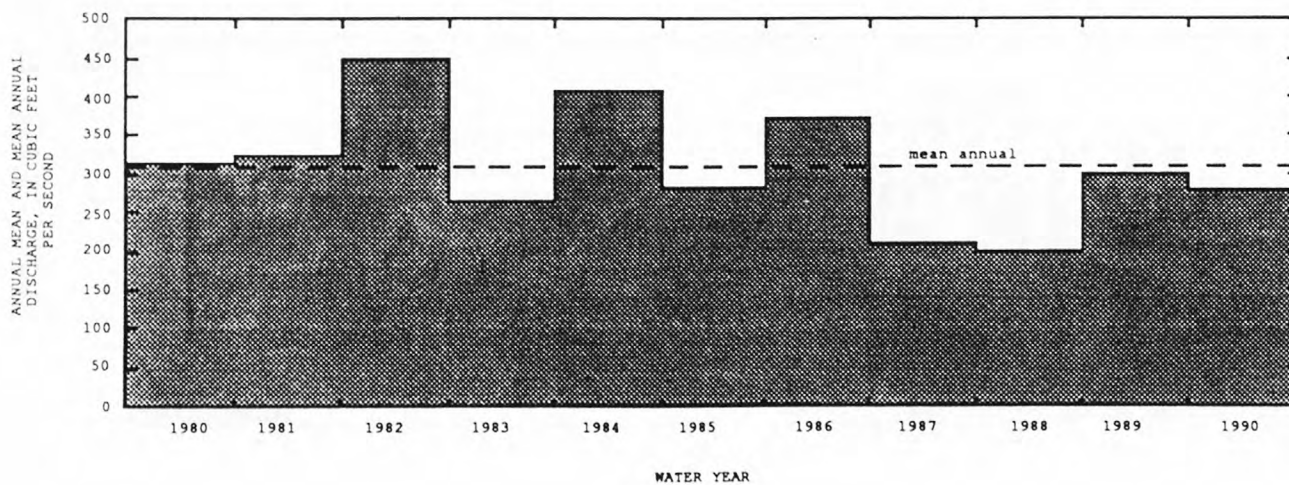
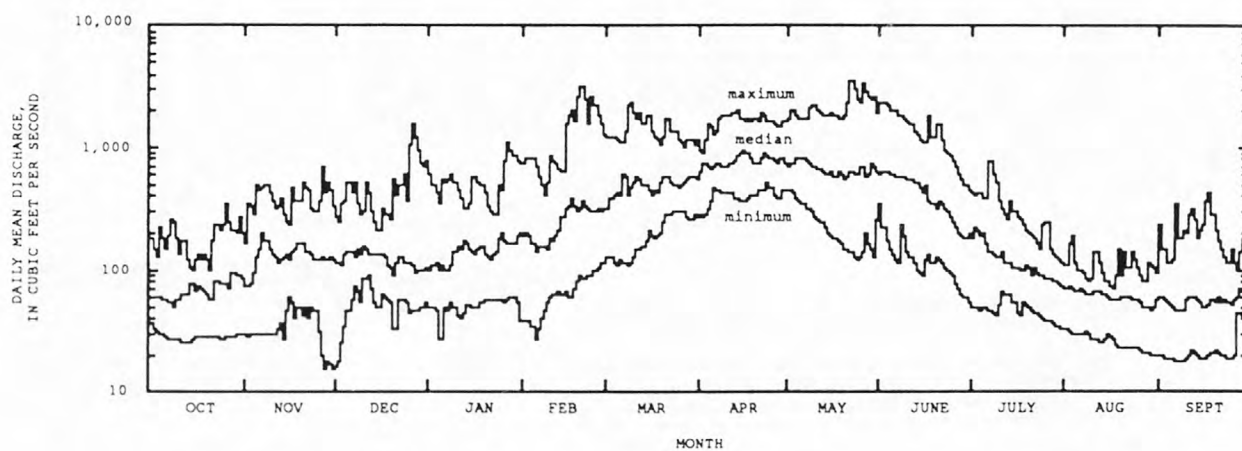
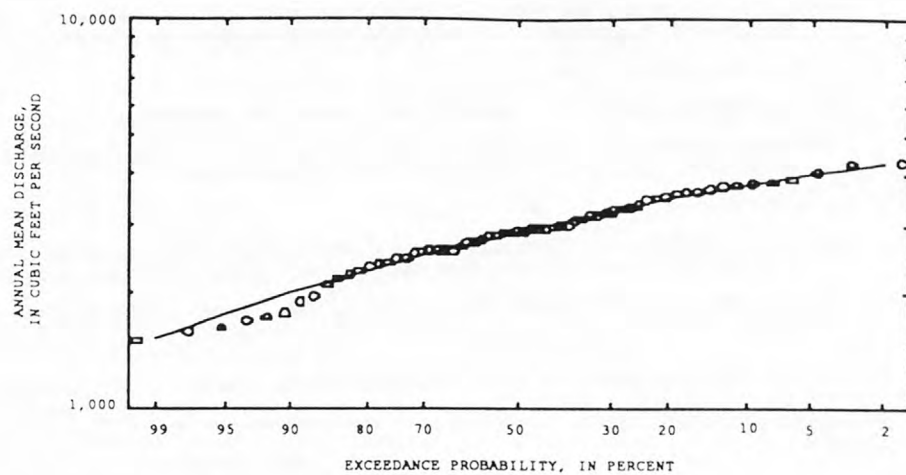
Duration table of daily mean flow for period of record 1980-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
1,650	1,040	812	663	549	363	216	144	108	82	61	47	35	28	23	20	18

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# CLEARWATER RIVER BASIN

13340000 CLEARWATER RIVER AT OROFINO, ID

LOCATION.—Lat 46°28'43", long 116°15'23", in SW¼, SE¼, NW¼, sec.7, T.36 N., R.2 E., Clearwater County, Hydrologic Unit 17060306, on right bank 56 ft upstream from State Highway 7 bridge at Orofino, and at mile 44.6.

DRAINAGE AREA.—5,580 mi², approximately.

PERIOD OF RECORD.—October 1930 to September 1938, October 1964 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 990.80 ft above sea level (levels by Idaho Department of Highways). Prior to Sept. 30, 1938, nonrecording gage at site 0.1 mi downstream at different datum.

REMARKS.—None.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 87,300 ft³/s June 2, 1972, gage height, 18.84 ft, present datum; minimum observed, probably less than 250 ft³/s Jan. 8, 1937, during period of ice effect; minimum gage height, 1.96 ft, Nov. 30, 1979.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 8, 1964, reached a stage of 20.32 ft, present site and datum, discharge, 99,700 ft³/s.

Summary of monthly and annual discharges, 1931-38, 1965-90

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	5,310	833	2,150	1,030	0.48	2.0
November	7,750	925	2,990	1,560	0.52	2.8
December	14,200	1,120	3,760	3,280	0.87	3.6
January	11,000	800	4,100	2,730	0.67	3.9
February	12,300	1,030	4,700	3,110	0.66	4.5
March	19,900	2,370	7,620	3,890	0.51	7.2
April	28,000	6,390	15,700	5,560	0.35	14.9
May	44,900	17,100	28,800	7,450	0.26	27.4
June	53,100	6,450	25,000	12,400	0.49	23.8
July	18,200	2,010	6,550	3,750	0.57	6.2
August	4,500	971	2,060	800	0.39	2.0
September	4,760	860	1,820	881	0.48	1.7
Annual	13,200	4,740	8,780	2,380	0.27	100

Magnitude and frequency of annual low flow, based on period of record 1932-38, 1966-91

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	1,010	702	558	451	347	286
3	1,040	767	640	544	447	390
7	1,100	844	731	648	564	513
14	1,200	927	812	729	646	596
30	1,330	1,020	895	805	717	664
60	1,500	1,130	985	883	784	727
90	1,640	1,230	1,070	963	861	802
120	1,870	1,370	1,170	1,040	909	835
183	2,290	1,610	1,350	1,180	1,010	916

Magnitude and frequency of instantaneous peak flow, based on period of record 1931-38, 1965-90

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
54,900	69,000	77,100	86,400	92,600	98,400	

Magnitude and frequency of annual high flow, based on period of record 1931-38, 1965-90

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	50,800	63,600	71,500	80,900	87,500	93,900
3	47,300	59,000	66,200	74,900	81,000	87,000
7	42,900	54,100	61,100	69,800	76,100	82,300
15	38,400	48,500	55,000	62,900	68,600	74,300
30	33,900	43,000	48,700	55,500	60,400	65,200
60	28,600	35,800	39,800	44,300	47,300	50,100
90	23,600	29,300	32,300	35,600	37,700	39,600

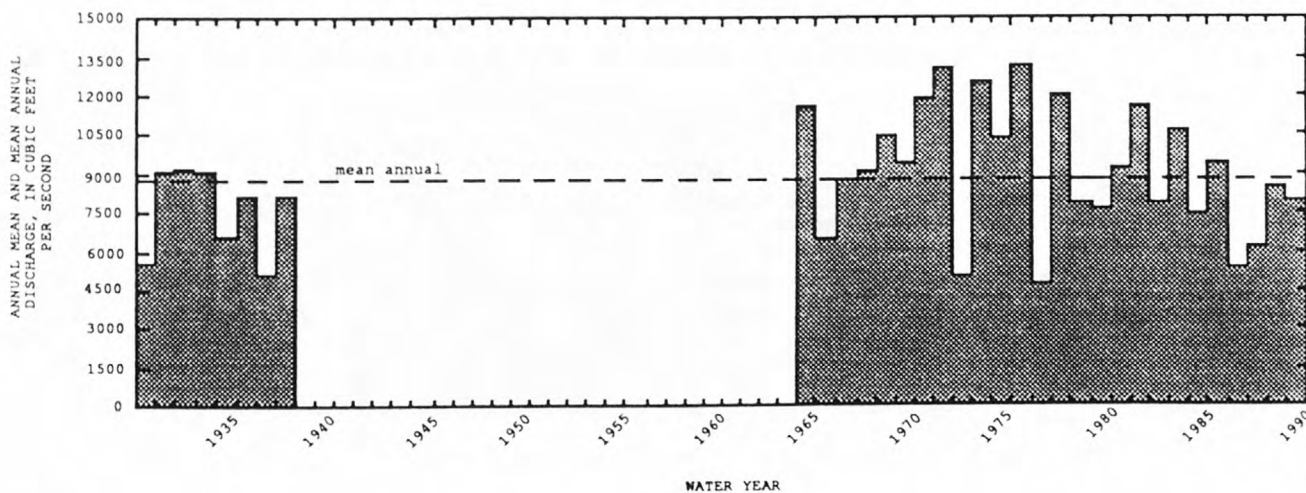
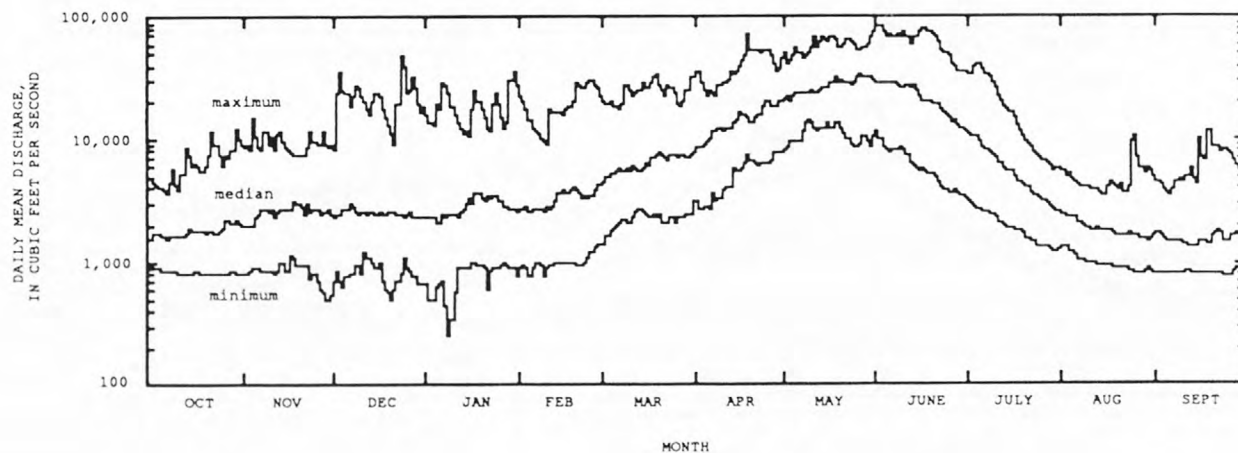
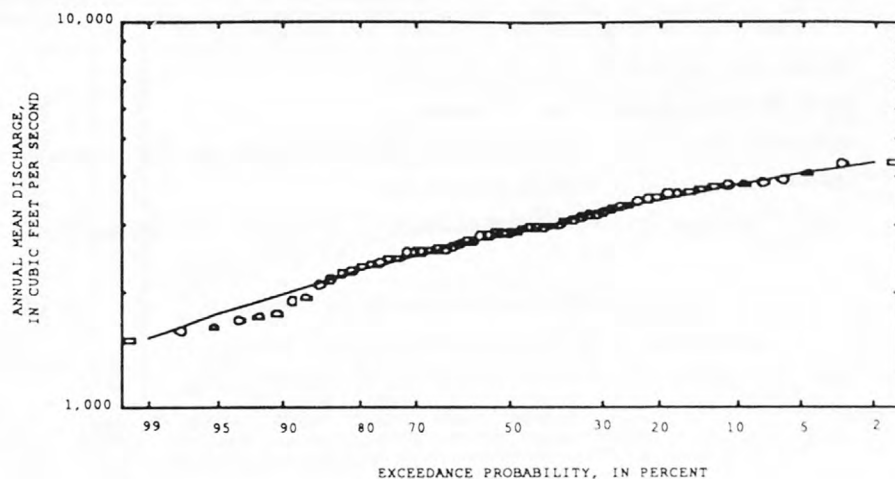
Duration table of daily mean flow for period of record 1931-38, 1965-90

Discharge, in ft³/s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
52,100	33,900	25,300	18,900	14,400	8,300	5,400	3,660	2,720	2,160	1,710	1,280	1,050	895	824	751	600

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# CLEARWATER RIVER BASIN

13340500 NORTH FORK CLEARWATER RIVER AT BUNGALOW RANGER STATION, ID

LOCATION.—Lat 46°37'53", long 115°30'28", in SW<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>, sec.18, T.38 N., R.8 E, Clearwater County, Hydrologic Unit 17060307, Clearwater National Forest, on left bank at Bungalow Ranger Station, 300 ft downstream from mouth of Orogrande Creek, 1,000 ft downstream from Highway bridge, 17 mi northeast of Pierce, and at mile 85.0.

DRAINAGE AREA.—996 mi<sup>2</sup>. Mean elevation, 4,930 ft.

PERIOD OF RECORD.—September 1944 to September 1969.

GAGE.—Water-stage recorder. Elevation of gage is 2,240 ft above sea level, from river-profile map.

REMARKS.—No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 27,400 ft<sup>3</sup>/s May 29, 1948, gage height, 11.13 ft; minimum daily, 180 ft<sup>3</sup>/s Nov. 29, 1952.

Summary of monthly and annual discharges, 1945-69

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,740	476	992	486	0.49	2.9
November	2,890	429	1,280	661	0.52	3.8
December	4,300	509	1,480	1,030	0.70	4.3
January	2,660	420	1,270	574	0.45	3.7
February	3,210	638	1,520	751	0.49	4.5
March	3,110	633	1,700	568	0.33	5.0
April	7,360	1,940	5,010	1,620	0.32	14.7
May	14,000	6,620	10,000	2,020	0.20	29.5
June	12,500	4,140	7,100	2,390	0.34	20.8
July	3,900	1,340	2,030	721	0.35	6.0
August	1,230	677	892	172	0.19	2.6
September	1,350	572	761	208	0.27	2.2
Annual	3,550	2,140	2,840	428	0.15	100

Magnitude and frequency of annual low flow,  
based on period of record 1946-69

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	528	399	328	273	215	180
3	556	430	359	301	240	203
7	587	470	405	352	295	259
14	605	500	448	408	365	337
30	647	541	490	450	408	382
60	699	578	523	480	436	409
90	767	627	566	521	476	448
120	846	669	595	542	490	459
183	994	748	652	586	523	487

Magnitude and frequency of annual high flow,  
based on period of record 1945-69

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1945-69

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
16,600	20,600	22,900	25,500	27,200	28,800

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	15,200	18,800	21,100	23,700	25,600	27,500
3	14,300	17,700	19,800	22,300	24,100	25,800
7	13,400	16,500	18,400	20,600	22,200	23,700
15	12,200	14,800	16,400	18,300	19,600	20,900
30	11,200	13,100	14,100	15,200	16,000	16,600
60	9,310	10,700	11,400	12,100	12,500	12,900
90	7,600	8,660	9,170	9,690	9,990	10,300

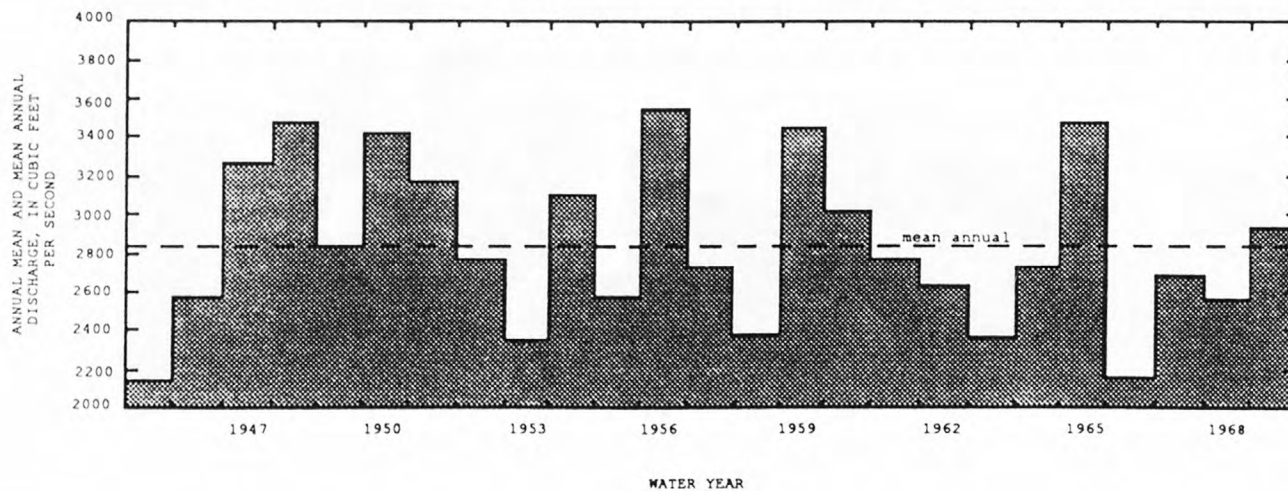
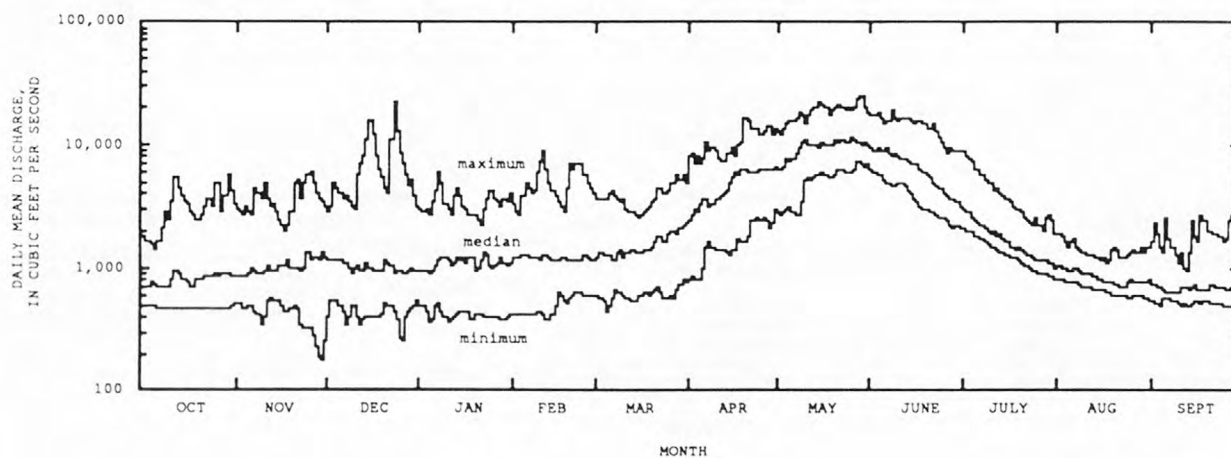
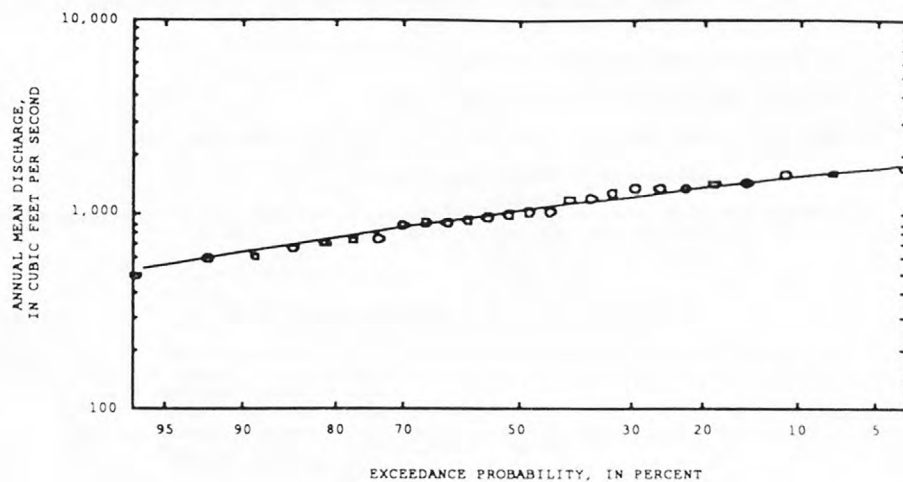
Duration table of daily mean flow for period of record 1945-69

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	
15,000	10,800	8,110	6,070	4,320	2,520	1,780	1,360	1,080	890	755	624	550	489	448	409	330	

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



**CLEARWATER RIVER BASIN**

13340600 NORTH FORK CLEARWATER RIVER NEAR CANYON RANGER STATION, ID

LOCATION.—Lat 46°50'26", long 115°37'11", in SE¼, SE¼, NE¼, sec. 6, T. 40 N., R. 7 E., Clearwater County, Hydrologic Unit 17060307, Clearwater National Forest, on left bank immediately upstream from forest road bridge, 0.1 mi upstream from Beaver Creek, 1.7 mi downstream from Canyon Ranger Station, and at mile 58.0.

DRAINAGE AREA.—1,360 mi², approximately.

PERIOD OF RECORD.—April 1967 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 1,660.00 ft above sea level.

REMARKS.—No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 32,300 ft³/s June 16, 1974, gage height, 16.6 ft; maximum gage height, 17.04 ft, June 1, 1972; minimum, 200 ft³/s Dec. 5, 1972, gage height, 5.00 ft.

Summary of monthly and annual discharges, 1968-90

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	2,350	551	1,030	392	0.38	2.5
November	2,990	609	1,490	664	0.45	3.5
December	5,260	708	1,750	1,290	0.74	4.2
January	5,110	665	1,840	1,060	0.58	4.4
February	4,830	722	2,140	1,230	0.57	5.1
March	7,430	1,250	3,120	1,600	0.51	7.4
April	9,930	2,710	6,110	1,930	0.32	14.6
May	19,600	5,960	10,900	3,590	0.33	26.0
June	20,600	2,380	8,690	4,400	0.51	20.8
July	4,930	1,150	2,670	1,140	0.43	6.4
August	1,710	698	1,160	283	0.24	2.8
September	1,680	595	978	253	0.26	2.3
Annual	5,410	1,830	3,490	942	0.27	100

Magnitude and frequency of annual low flow,  
based on period of record 1969-90

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	552	410	346	299	251	222
3	591	466	409	366	322	294
7	631	525	480	446	412	391
14	686	584	540	507	474	454
30	763	650	600	563	525	502
60	845	711	651	606	560	532
90	896	748	687	644	601	576
120	963	795	730	686	645	622
183	1,160	927	833	767	704	667

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1968-90

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
19,500	26,700	31,500	37,800	42,600	47,400	

Magnitude and frequency of annual high flow,  
based on period of record 1968-90

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50# 2%	100# 1%
1	17,200	22,200	25,400	29,300	32,200	35,000
3	16,100	20,900	24,000	27,900	30,900	33,800
7	14,800	19,400	22,500	26,300	29,200	32,000
15	13,300	17,600	20,400	23,900	26,500	29,100
30	11,800	15,900	18,500	21,900	24,400	26,900
60	10,200	13,300	15,100	17,200	18,600	20,000
90	8,620	11,000	12,400	13,900	14,900	15,800

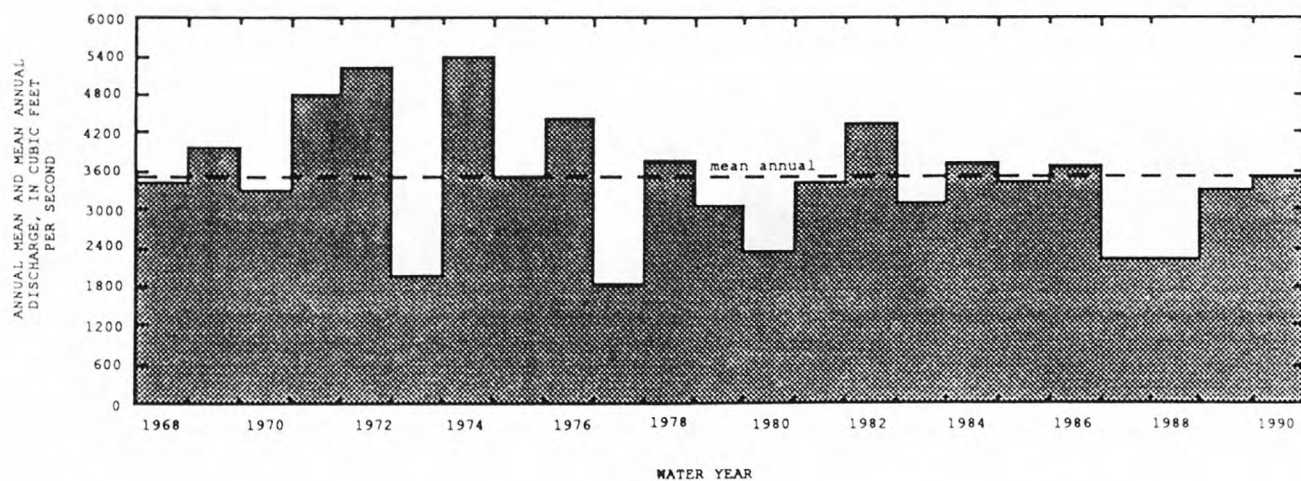
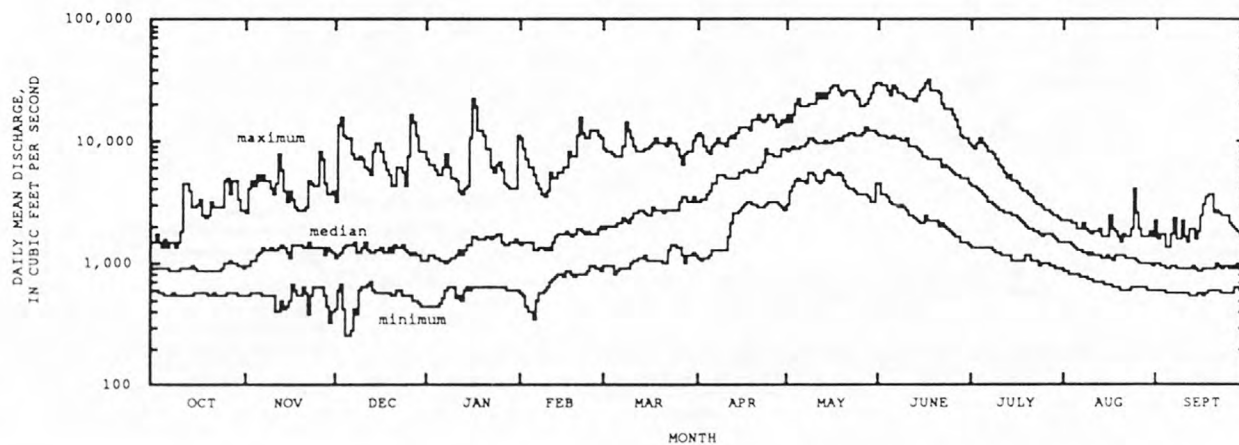
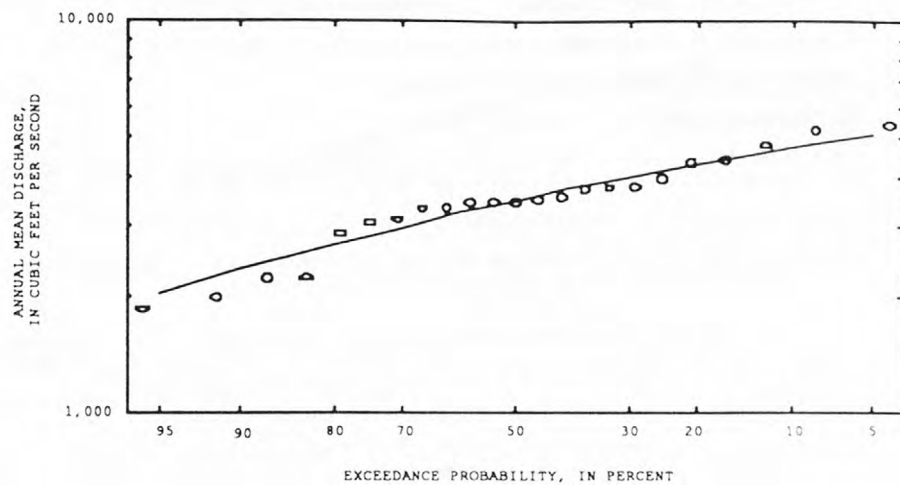
Duration table of daily mean flow for period of record 1968-90

Discharge, in ft³/s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
19,000	12,200	9,270	7,220	5,560	3,400	2,310	1,720	1,350	1,090	919	767	661	570	535	509	401

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



**CLEARWATER RIVER BASIN**

13341000 NORTH FORK CLEARWATER RIVER NEAR AHSAHKA, ID

LOCATION.—Lat 46°31'00", long 116°17'35", in SW 1/4, SE 1/4, sec. 26, T. 37 N., R. 1 E., Clearwater County, Hydrologic Unit 17060308, on right bank at Bruce Eddy, 1.5 mi northeast of Ahsahka, and at mile 2.0.

DRAINAGE AREA.—2,440 mi<sup>2</sup>, approximately. Mean elevation, 4,220 ft.

PERIOD OF RECORD.—August 1926 to February 1965.

REVISED RECORDS.—WSP 1637: Water year 1932.

GAGE.—Water-stage recorder. Datum of gage is 969.82 ft above sea level, datum of 1929, supplementary adjustment of 1947. Prior to Oct. 29, 1930, staff gage at site 300 ft upstream at different datum.

REMARKS.—No regulation or diversion above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 100,000 ft<sup>3</sup>/s Dec. 23, 1933, gage height, 35.5 ft, from floodmarks; minimum, probably less than 250 ft<sup>3</sup>/s Jan. 8, 1937, during period of ice effect.

Summary of monthly and annual discharges, 1927-64, 1967

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	5,830	888	1,840	1,030	0.56	2.7
November	16,900	799	2,920	2,730	0.94	4.3
December	18,300	1,010	3,550	3,340	0.94	5.2
January	13,900	687	3,070	2,450	0.80	4.5
February	9,080	900	3,430	1,990	0.58	4.9
March	14,600	1,630	5,040	2,370	0.47	7.4
April	21,000	5,740	12,300	4,040	0.33	18.0
May	30,200	8,560	18,200	5,460	0.30	26.6
June	23,900	4,080	11,600	5,450	0.47	16.9
July	8,080	1,550	3,560	1,530	0.43	5.2
August	2,520	946	1,560	407	0.26	2.3
September	2,940	925	1,350	406	0.30	2.0
Annual	9,200	2,970	5,710	1,500	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1928-64, 1967-68

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	902	647	525	433	342	288
3	951	705	582	488	392	334
7	1,000	763	645	553	459	402
14	1,060	855	760	686	609	561
30	1,120	935	851	788	723	684
60	1,210	1,010	927	867	807	771
90	1,320	1,070	974	907	843	806
120	1,470	1,150	1,030	945	871	829
183	1,800	1,300	1,130	1,030	933	883

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1927-64, 1967-68

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
31,100	44,900	54,700	67,600	77,600	88,100

Magnitude and frequency of annual high flow,  
based on period of record 1927-64, 1967

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	28,900	40,700	48,700	59,000	66,800	74,700
3	27,300	37,100	43,200	50,400	55,400	60,200
7	25,200	33,200	37,600	42,500	45,700	48,500
15	22,600	29,100	32,800	36,700	39,200	41,500
30	20,300	25,700	28,500	31,400	33,200	34,700
60	17,400	21,400	23,300	25,200	26,300	27,200
90	14,600	17,800	19,300	20,800	21,700	22,400

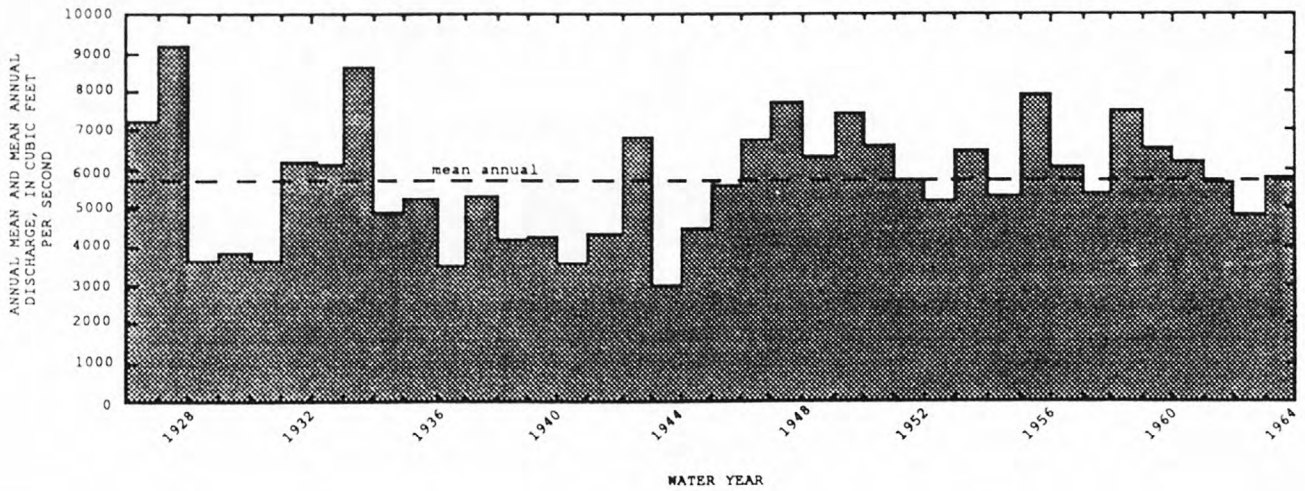
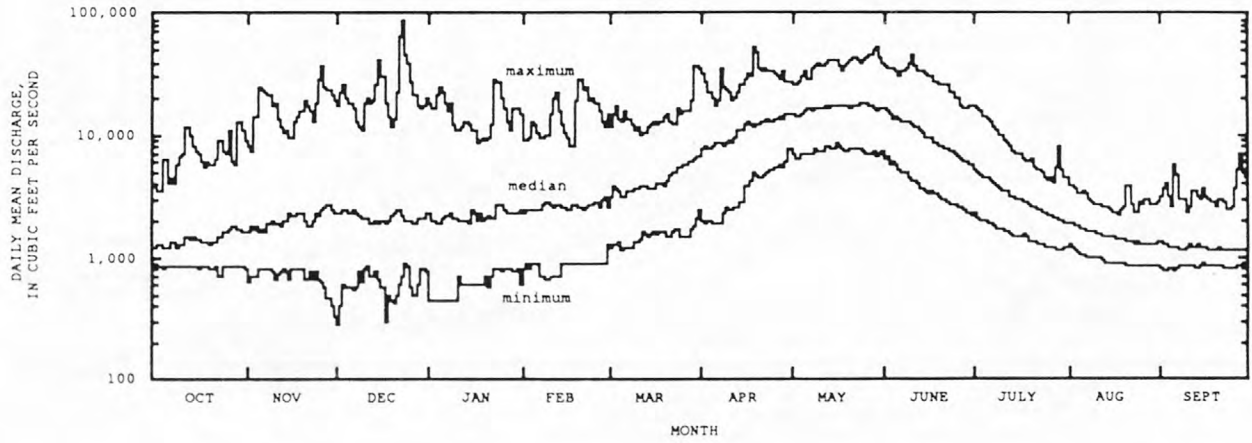
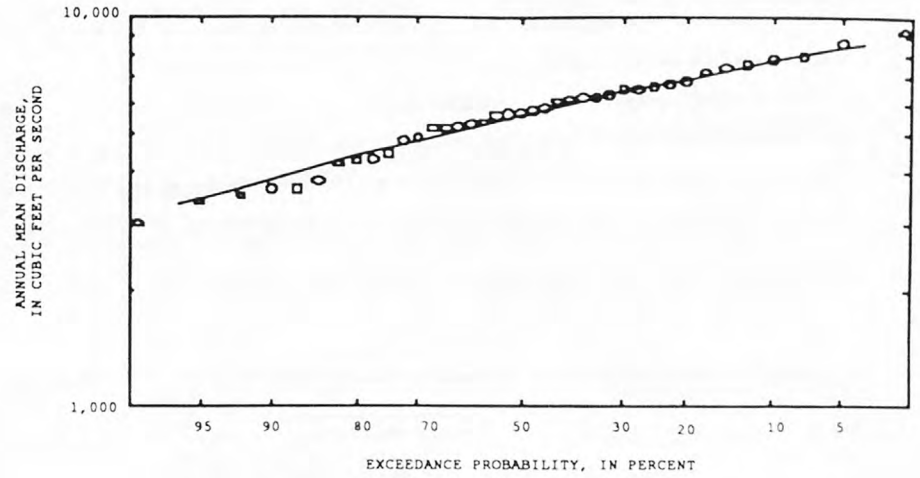
Duration table of daily mean flow for period of record 1927-64, 1967

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time														
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%
30,900	20,100	15,500	11,800	9,140	5,800	3,900	2,750	2,100	1,660	1,360	1,100	959	841	774
													693	447

\* Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





# CLEARWATER RIVER BASIN

13341050 CLEARWATER RIVER NEAR PECK, ID

LOCATION.—Lat 46°30'00", long 116°23'30", in NE 1/4, NE 1/4, sec. 1, T. 36 N., R. 1 W., Nez Perce County, Hydrologic Unit 17060306, on left bank 2 mi upstream from Big Canyon Creek, 2.2 mi northeast of Peck, 3 mi downstream from North Fork Clearwater River, and at mile 37.4.

DRAINAGE AREA.—8,040 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1964 to September 1990.

GAGE.—Water-stage recorder. Elevation of gage is 930 ft above sea level, from topographic map.

REMARKS.—Flow regulated by Dworshak Reservoir (station 13340950) 5.1 mi upstream beginning September 1971.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 127,200 ft<sup>3</sup>/s June 16, 1974, gage height, 23.66 ft; maximum gage height, 25.00 ft, Dec. 28, 1967 (ice jam); minimum discharge, 1,260 ft<sup>3</sup>/s Oct. 31, 1971, gage height, 2.24 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 8, 1964, reached a stage of 23.95 ft, from floodmark, discharge, 118,000 ft<sup>3</sup>/s, from rating extended above 89,100 ft<sup>3</sup>/s.

Summary of monthly and annual discharges, 1965-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	8,820	1,680	4,470	1,540	0.34	2.5
November	12,500	2,130	7,110	2,450	0.34	4.0
December	26,400	2,210	9,640	5,290	0.55	5.4
January	22,700	2,970	10,200	4,990	0.49	5.7
February	21,100	3,300	10,900	5,700	0.52	6.2
March	33,800	4,720	14,900	8,100	0.54	8.4
April	41,300	7,480	22,000	8,470	0.39	12.4
May	72,900	19,500	38,400	12,600	0.33	21.7
June	70,300	8,650	36,100	16,000	0.44	20.4
July	23,100	4,890	11,500	4,800	0.42	6.5
August	8,710	2,700	4,940	1,560	0.32	2.8
September	11,600	2,220	7,030	2,850	0.40	4.0
Annual	21,900	7,680	14,700	3,900	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1966-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	2,440	1,940	1,730	1,580	1,440	1,350
3	2,610	2,070	1,840	1,670	1,500	1,400
7	2,920	2,280	1,990	1,770	1,540	1,410
14	3,150	2,430	2,120	1,880	1,640	1,500
30	3,590	2,730	2,340	2,060	1,760	1,590
60	4,470	3,250	2,710	2,310	1,910	1,680
90	4,960	3,660	3,040	2,570	2,090	1,810
120	5,410	4,040	3,370	2,850	2,310	1,990
183	6,300	4,740	4,030	3,500	2,960	2,640

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1965-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
68,400	89,200	102,000	116,000	126,000	135,000

Magnitude and frequency of annual high flow,  
based on period of record 1965-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	63,500	83,100	95,200	109,000	120,000	129,000
3	59,600	78,700	90,600	105,000	115,000	126,000
7	55,000	72,700	83,700	96,900	106,000	115,000
15	49,900	65,800	75,400	86,500	94,100	101,000
30	44,600	59,000	67,600	77,600	84,400	90,900
60	38,200	49,900	56,500	63,700	68,500	72,800
90	32,700	42,200	47,200	52,400	55,700	58,400

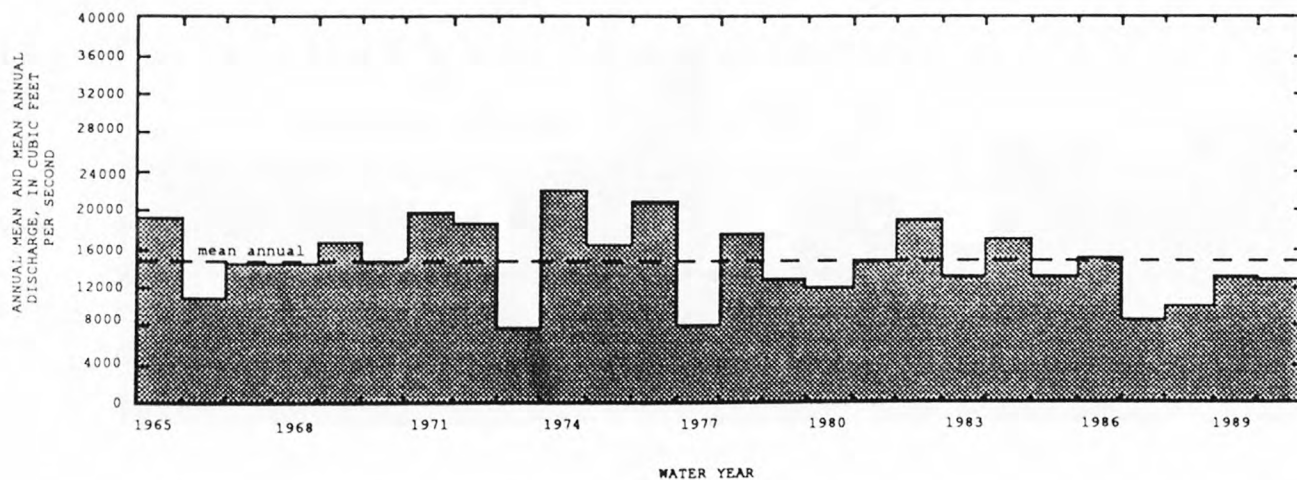
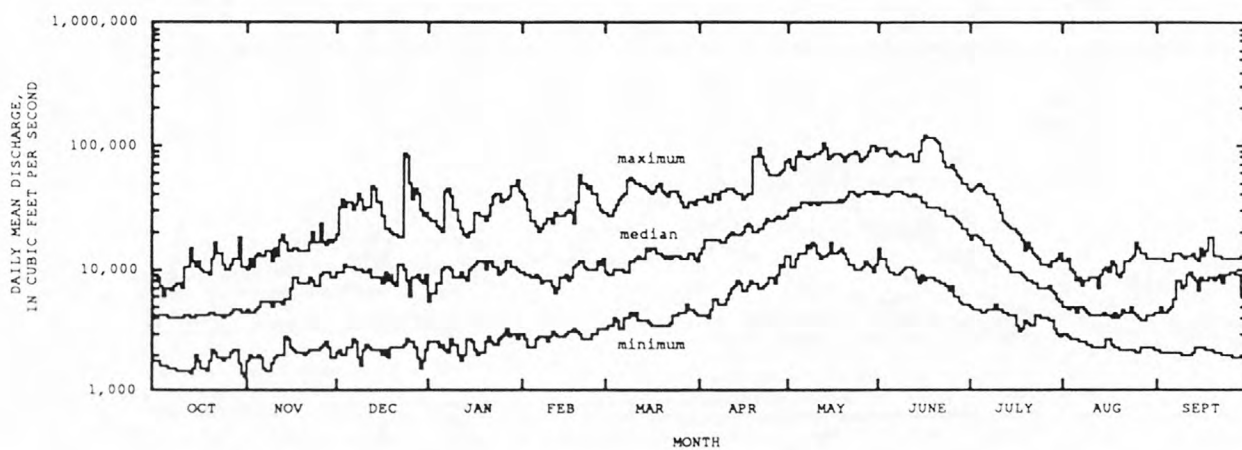
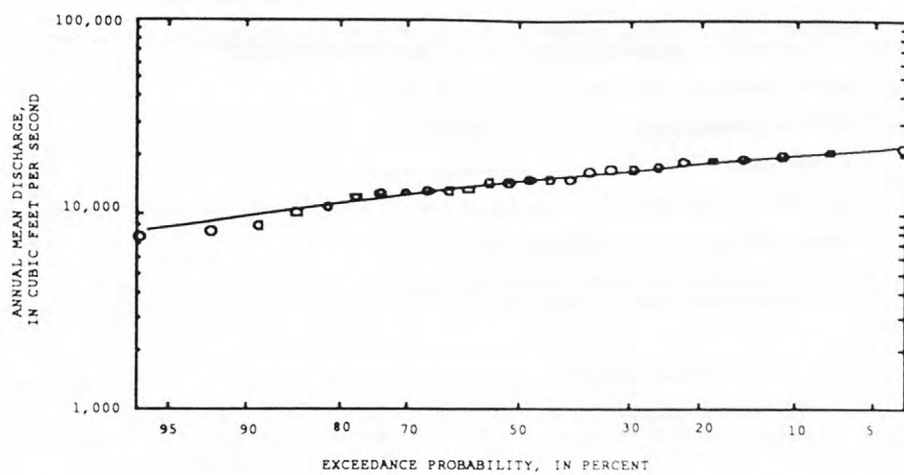
Duration table of daily mean flow for period of record 1965-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
68,600	46,400	35,100	28,400	22,600	15,400	11,700	9,510	7,390	5,530	4,380	3,500	2,830	2,330	2,060	1,850	1,520	

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# CLEARWATER RIVER BASIN

13341300 BLOOM CREEK NEAR BOVILL, ID

LOCATION.—Lat 46°51'28", long 116°17'22", in SE 1/4, NE 1/4, sec.35, T.41 N., R.1 E., Clearwater County, Hydrologic Unit 17060306, on right bank 200 ft upstream from mouth, and 4.8 mi east of Bovill.

DRAINAGE AREA.—3.15 mi<sup>2</sup>. Mean elevation, 3,700 ft.

PERIOD OF RECORD.—August 1959 to September 1971.

REVISED RECORDS.—WRD Idaho 1968: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 2,950 ft above sea level, from topographic map.

REMARKS.—No diversion or regulation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 151 ft<sup>3</sup>/s 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: 0.3 ft<sup>3</sup>/s Aug. 8, 1963, gage height, 1.54 ft.

Summary of monthly and annual discharges, 1960-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	4.2	0.70	1.7	0.93	0.56	2.7
November	7.4	1.1	2.7	1.6	0.62	4.4
December	15	1.3	3.8	3.7	0.98	6.3
January	11	1.3	4.4	2.9	0.66	7.4
February	16	1.4	7.7	4.8	0.62	12.7
March	13	2.2	7.5	3.1	0.41	12.5
April	28	6.0	16	7.2	0.46	25.7
May	28	2.4	9.6	7.0	0.73	15.9
June	7.6	1.6	3.7	1.8	0.48	6.2
July	2.8	0.84	1.6	0.58	0.35	2.7
August	1.7	0.58	1.0	0.32	0.31	1.7
September	1.9	0.70	1.1	0.35	0.32	1.8
Annual	7.8	3.1	5.0	1.3	0.27	100

Magnitude and frequency of annual low flow, based on period of record 1961-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50# 2%	100# 1%
1	0.67	0.56	0.50	0.44	0.38	0.34
3	0.69	0.58	0.52	0.46	0.40	0.37
7	0.73	0.61	0.55	0.49	0.43	0.39
14	0.77	0.65	0.59	0.54	0.48	0.45
30	0.81	0.68	0.62	0.58	0.54	0.51
60	0.92	0.76	0.68	0.63	0.57	0.53
90	1.1	0.87	0.76	0.68	0.59	0.53
120	1.2	0.96	0.84	0.75	0.64	0.57
183	1.5	1.2	1.1	1.0	0.93	0.88

Magnitude and frequency of instantaneous peak flow, based on period of record 1960-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
58	96	125	168	205	245

Magnitude and frequency of annual high flow, based on period of record 1960-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25# 4%	50# 2%	100# 1%
1	43	68	88	119	145	175
3	36	53	66	85	101	118
7	28	41	50	63	74	86
15	24	34	40	48	53	59
30	19	26	30	35	38	42
60	15	18	20	22	24	25
90	12	15	16	18	19	20

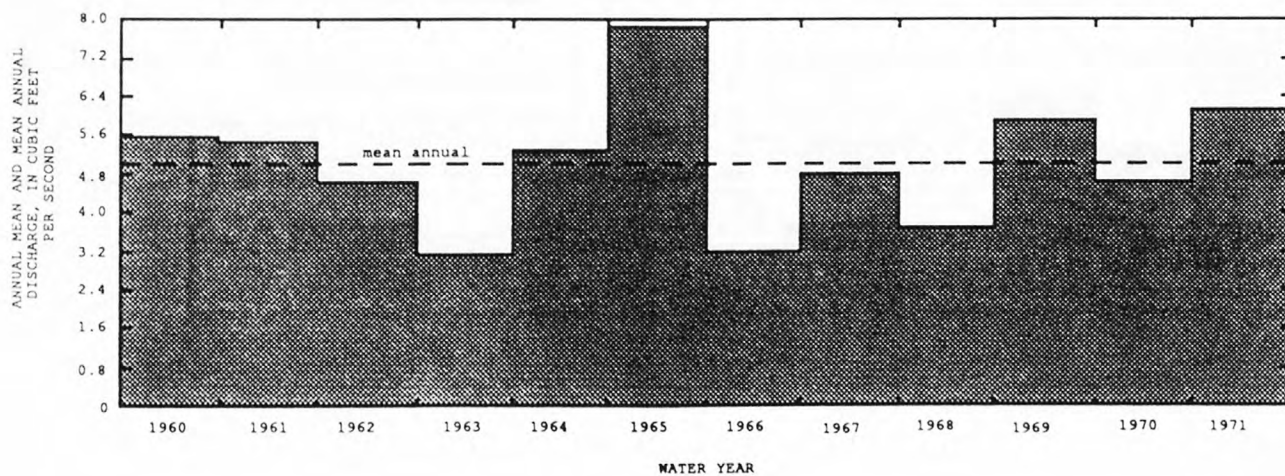
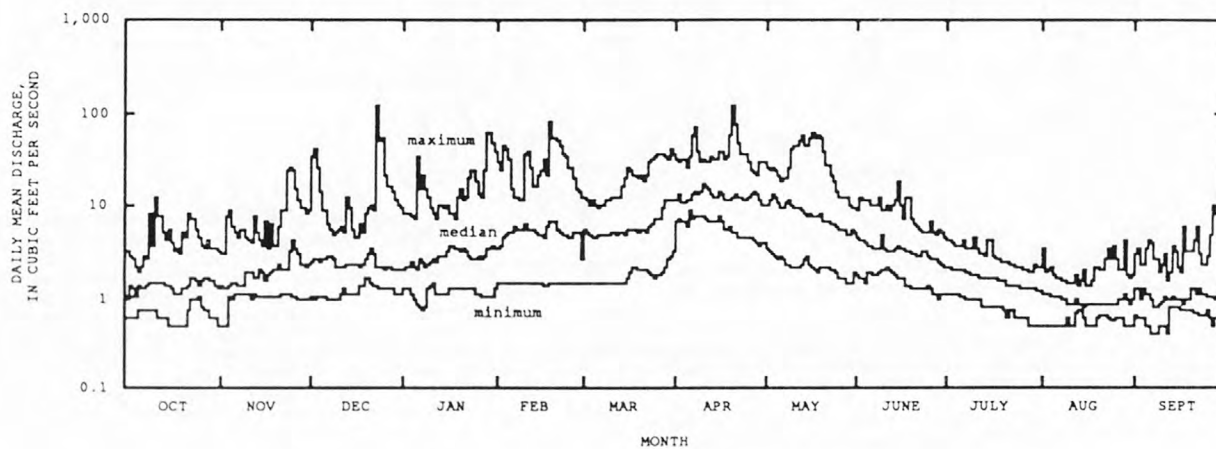
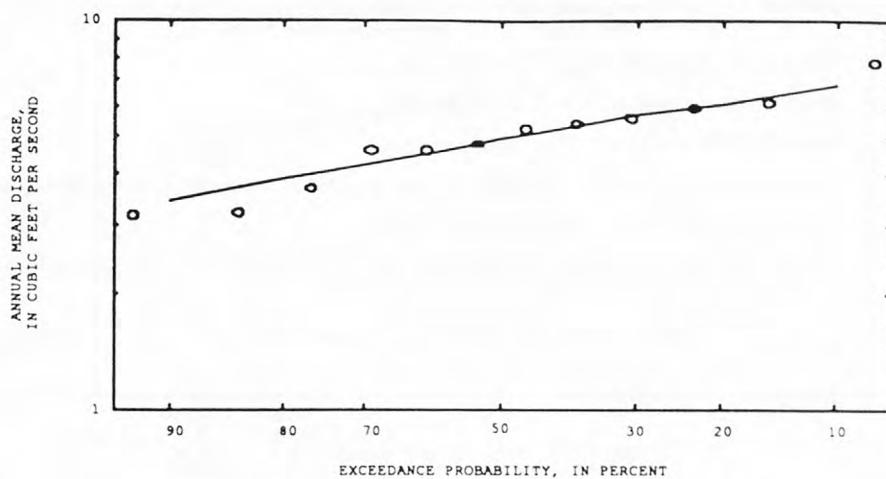
Duration table of daily mean flow for period of record 1960-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
35	18	13	9.4	7.4	4.7	3.3	2.4	1.9	1.5	1.2	0.88	0.77	0.62	0.56	0.52	0.48

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



CLEARWATER RIVER BASIN

13341400 EAST FORK POTLATCH RIVER NEAR BOVILL, ID

LOCATION.—Lat 46°50'08", long 116°23'26", in SW<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>, sec.6, T.40 N., R.1 E., Latah County, Hydrologic Unit 17060306, on left bank 60 ft upstream from highway bridge, and 1.5 mi south of Bovill.

DRAINAGE AREA.—41.6 mi<sup>2</sup>. Mean elevation, 3,600 ft.

PERIOD OF RECORD.—August 1959 to September 1971.

REVISED RECORDS.—WRD Idaho 1968: Drainage area.

GAGE.—Water-stage recorder. Elevation of gage is 2,800 ft above sea level, from topographic map.

REMARKS.—No diversion or regulation above station.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 1,740 ft<sup>3</sup>/s Dec. 23, 1964, gage height, 8.19 ft; minimum: 3.7 ft<sup>3</sup>/s Aug. 23, 24, 25, 1966, gage height, 1.48 ft.

Summary of monthly and annual discharges, 1960-71

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	43	7.4	16	9.8	0.59	2.2
November	86	11	29	20	0.70	3.9
December	185	13	45	46	1.0	6.0
January	210	15	66	58	0.88	8.9
February	172	14	92	56	0.61	12.4
March	194	25	106	43	0.41	14.2
April	358	67	206	86	0.42	27.7
May	252	29	114	66	0.58	15.3
June	86	18	39	21	0.54	5.2
July	23	8.1	13	4.7	0.35	1.8
August	14	5.0	8.5	2.8	0.33	1.1
September	16	5.6	9.9	3.3	0.33	1.3
Annual	91	35	62	18	0.29	100

Magnitude and frequency of annual low flow,  
based on period of record 1961-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	5.7	4.6	4.1	3.8	3.4	3.2
3	5.8	4.7	4.2	3.9	3.5	3.3
7	6.0	4.8	4.4	4.0	3.7	3.5
14	6.3	5.1	4.6	4.2	3.9	3.7
30	6.8	5.5	5.0	4.7	4.3	4.1
60	7.9	6.4	5.7	5.2	4.7	4.4
90	8.9	7.2	6.4	5.9	5.3	5.0
120	10	8.6	7.6	6.9	6.1	5.5
183	14	11	10	9.9	9.4	9.2

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1960-71

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
639	914	1,110	1,380	1,590	1,810

Magnitude and frequency of annual high flow,  
based on period of record 1960-71

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	540	800	1,000	1,300	1,510	1,720
3	440	591	698	843	957	1,080
7	363	476	546	630	690	748
15	301	383	427	471	499	523
30	236	308	350	398	431	462
60	189	235	257	280	293	304
90	157	190	207	225	235	245

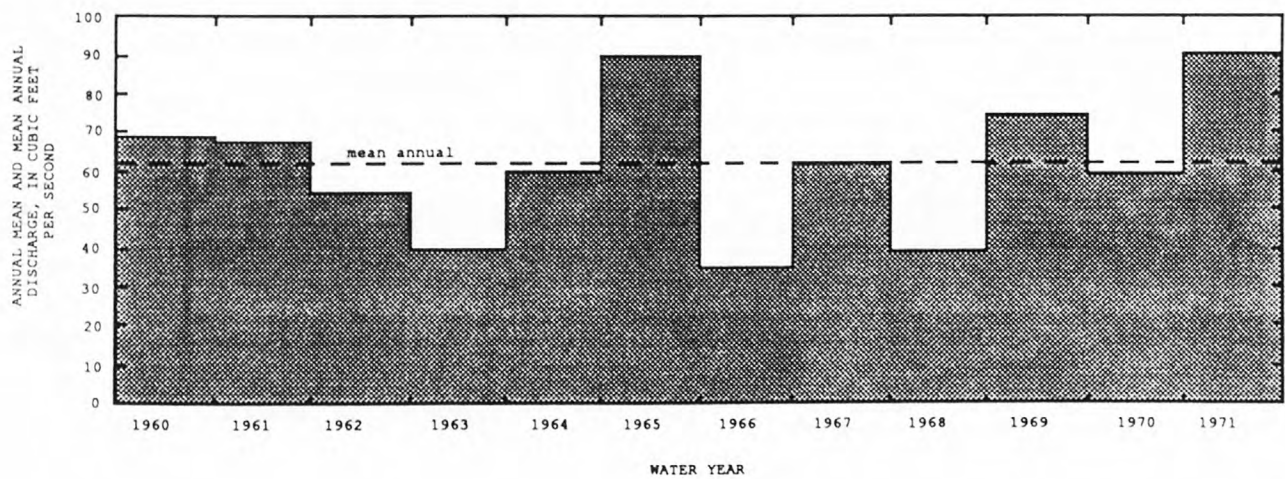
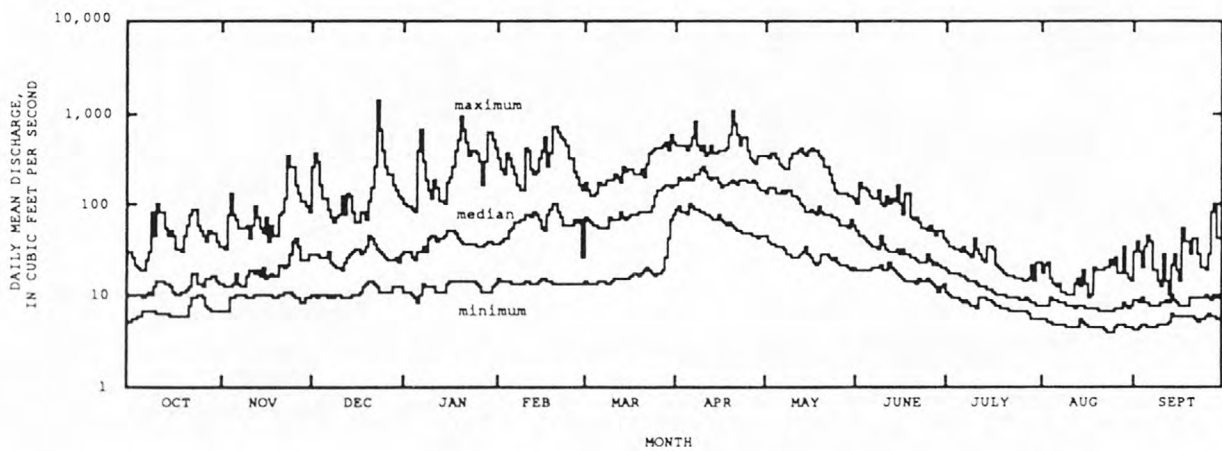
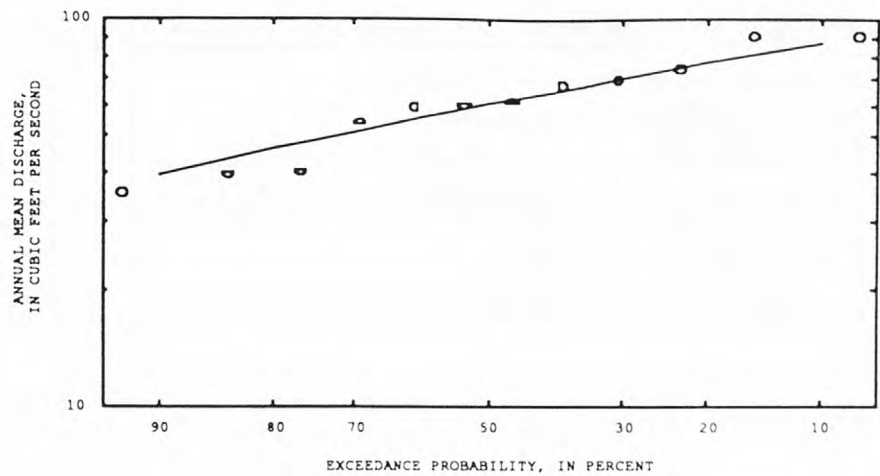
Duration table of daily mean flow for period of record 1960-71

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																	
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%
424	244	166	125	95	59	38	25	18	14	11	7.9	6.4	5.5	5.0	4.7	4.1	4.1

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP





**CLEARWATER RIVER BASIN**

13341500 POTLATCH RIVER AT KENDRICK, ID

LOCATION.—Lat 46°37', long 116°39', in NW¼, sec.25, T.38 N., R.3 W., Latah County, Hydrologic Unit 17060306, near center of main span on upstream side of Mill Street Bridge in Kendrick, 0.9 mi downstream from Bear Creek, and 3.2 mi upstream from Middle Potlatch Creek.

DRAINAGE AREA.—425 mi². Mean elevation, 2,980 ft.

PERIOD OF RECORD.—October 1945 to September 1960.

REVISED RECORDS.—WSP 1093: water year 1946(M). WSP 1567: Drainage area.

GAGE.—Wire-weight gage read once daily. Datum of gage is 1,178.20 ft above sea level, Pacific Northwest supplementary adjustment of 1947, and a supplementary adjustment of 1960. Aug. 17, 1957, to Jan. 31, 1960, wire-weight gage and crest-stage gage.

REMARKS.—No regulation or diversion.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 13,000 ft³/s Feb. 26, 1948, gage height, 12.6 ft (from floodmarks), result of slope-area measurement; minimum observed, 4.3 ft³/s Aug. 25, 1946; minimum gage height observed, 3.28 ft, Oct.12-16, 1945.

Summary of monthly and annual discharges, 1946-60

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	139	9.4	42	34	0.81	0.8
November	446	14	151	140	0.93	2.9
December	1,130	23	347	318	0.92	6.7
January	1,580	45	472	447	0.95	9.1
February	1,860	89	824	468	0.57	16.0
March	2,290	222	1,180	581	0.49	22.9
April	2,160	534	1,380	515	0.37	26.8
May	1,860	132	551	434	0.79	10.7
June	381	54	140	93	0.67	2.7
July	108	13	37	25	0.68	0.7
August	58	5.3	16	12	0.80	0.3
September	72	8.6	18	15	0.85	0.4
Annual	691	270	427	108	0.25	100

Magnitude and frequency of annual low flow,  
based on period of record 1947-60

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	7.0	5.5	5.0	4.7	4.4	4.3
3	7.3	5.7	5.2	4.9	4.7	4.5
7	7.8	6.1	5.5	5.1	4.7	4.6
14	8.2	6.4	5.8	5.4	5.1	4.9
30	9.5	7.2	6.3	5.8	5.2	4.9
60	12	9.2	8.0	7.1	6.3	5.8
90	16	11	9.6	8.4	7.3	6.6
120	21	15	13	11	10	9.3
183	43	28	22	18	15	13

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1946-60

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
6,140	9,010	11,100	14,000	16,300	18,700

Magnitude and frequency of annual high flow,  
based on period of record 1946-60

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	5,320	6,850	7,700	8,620	9,210	9,740
3	4,330	5,320	5,770	6,180	6,400	6,570
7	3,180	3,860	4,170	4,450	4,600	4,730
15	2,340	2,800	3,040	3,300	3,470	3,620
30	1,860	2,320	2,610	2,950	3,210	3,450
60	1,430	1,800	2,050	2,360	2,590	2,830
90	1,210	1,470	1,640	1,860	2,030	2,200

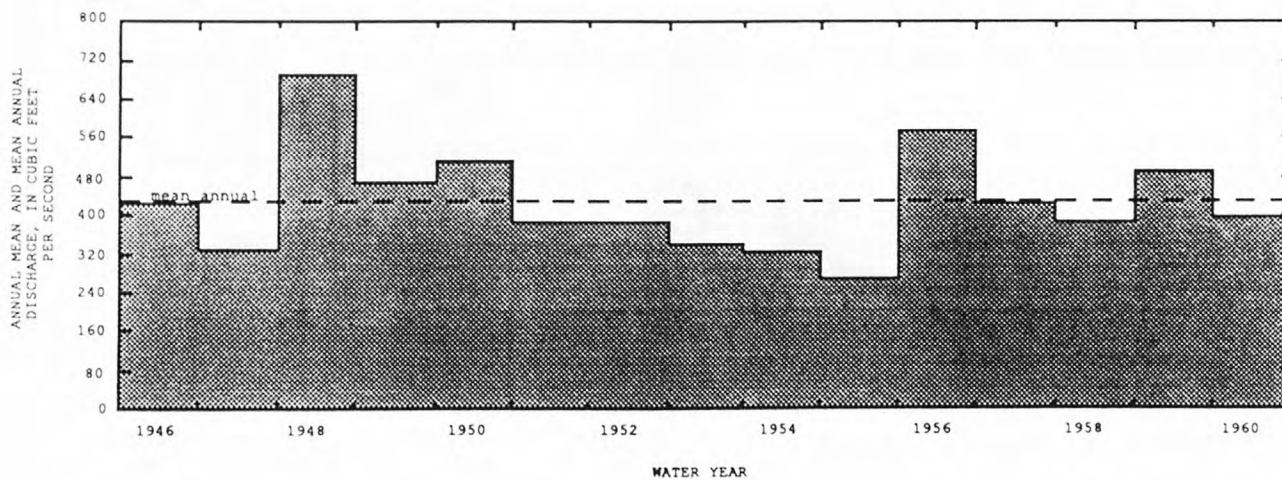
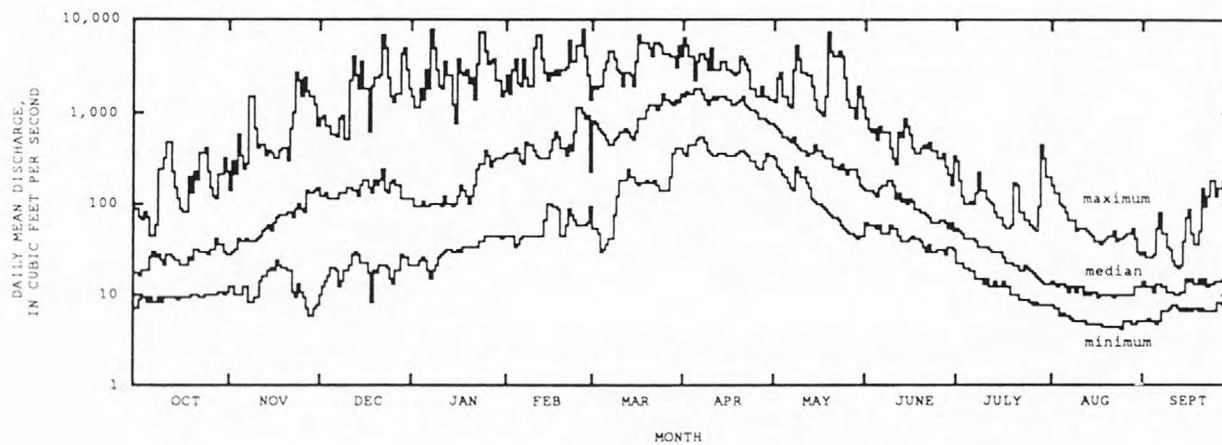
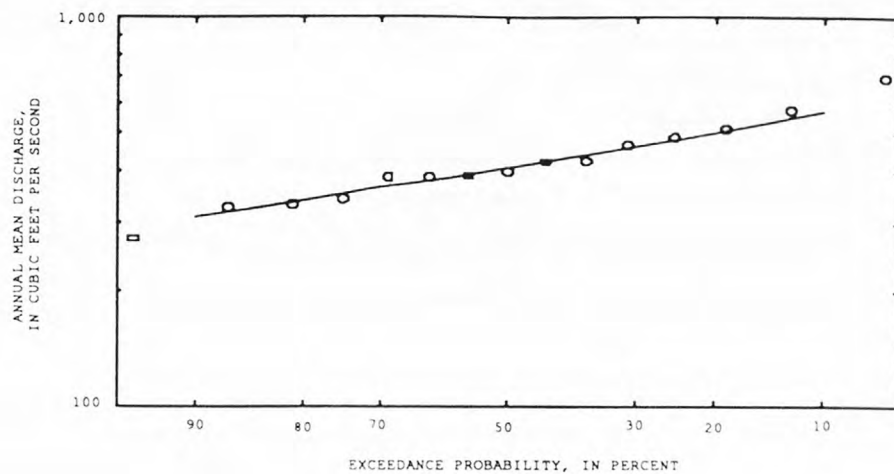
Duration table of daily mean flow for period of record 1946-60

Discharge, in ft³/s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%	99.9%
3,630	1,970	1,340	911	651	354	184	95	54	33	20	12	9.3	7.4	6.4	5.5	4.6		

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



CLEARWATER RIVER BASIN

13342450 LAPWAI CREEK NEAR LAPWAI, ID

LOCATION.—Lat 46°25'36", long 116°48'15", in NW 1/4, NE 1/4, NW 1/4, sec.35, T.36 N., R.4 W., Nez Perce County, Hydrologic Unit 17050306, on right bank 30 ft upstream from county bridge, 0.7 mi downstream from Tom Beall Creek, 1.6 mi north of Lapwai, 1.6 mi south of Spalding, and at mile 1.9.

DRAINAGE AREA.—235 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.—October 1974 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 864.64 ft above sea level.

REMARKS.—Diversions above station for irrigation of about 1,500 acres.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 3,380 ft<sup>3</sup>/s Feb. 23, 1986, gage height, 10.22 ft, on basis of slope-area measurement; minimum, 0.85 ft<sup>3</sup>/s Aug. 18, 19, 1977, gage height, 3.00 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 4,380 ft<sup>3</sup>/s January 1965, on basis of slope-area measurement.

Summary of monthly and annual discharges, 1975-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Stan- dard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	35	7.7	16	7.2	0.43	1.7
November	45	11	24	9.8	0.41	2.5
December	357	13	61	90	1.5	6.4
January	263	18	72	68	0.93	7.6
February	439	15	124	120	0.97	13.0
March	418	19	202	126	0.62	21.2
April	546	50	223	166	0.74	23.4
May	368	28	136	96	0.70	14.4
June	140	14	58	44	0.75	6.1
July	43	3.2	16	11	0.64	1.7
August	16	2.3	8.0	3.9	0.48	0.8
September	18	4.1	11	4.2	0.38	1.2
Annual	145	18	79	40	0.50	100

Magnitude and frequency of annual low flow,  
based on period of record 1976-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50† 2%	100† 1%
1	4.1	2.4	1.7	1.3	0.90	0.70
3	4.3	2.5	1.8	1.3	0.93	0.72
7	4.7	2.7	2.0	1.5	1.0	0.79
14	5.2	3.0	2.2	1.6	1.2	0.89
30	6.3	3.8	2.8	2.1	1.4	1.1
60	8.4	5.2	3.8	2.9	2.0	1.6
90	9.9	6.6	5.1	4.0	3.0	2.5
120	11	8.4	7.1	6.1	5.2	4.6
183	16	12	10	9.1	7.8	7.1

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1975-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
890	1,730	2,400	3,330	4,090	4,880	

Magnitude and frequency of annual high flow,  
based on period of record 1975-90

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50† 2%	100† 1%
1	655	1,090	1,370	1,690	1,910	2,110
3	565	907	1,110	1,320	1,460	1,580
7	464	750	919	1,110	1,230	1,330
15	373	590	708	829	900	958
30	298	487	593	703	769	823
60	226	372	458	553	613	666
90	193	313	384	461	509	551

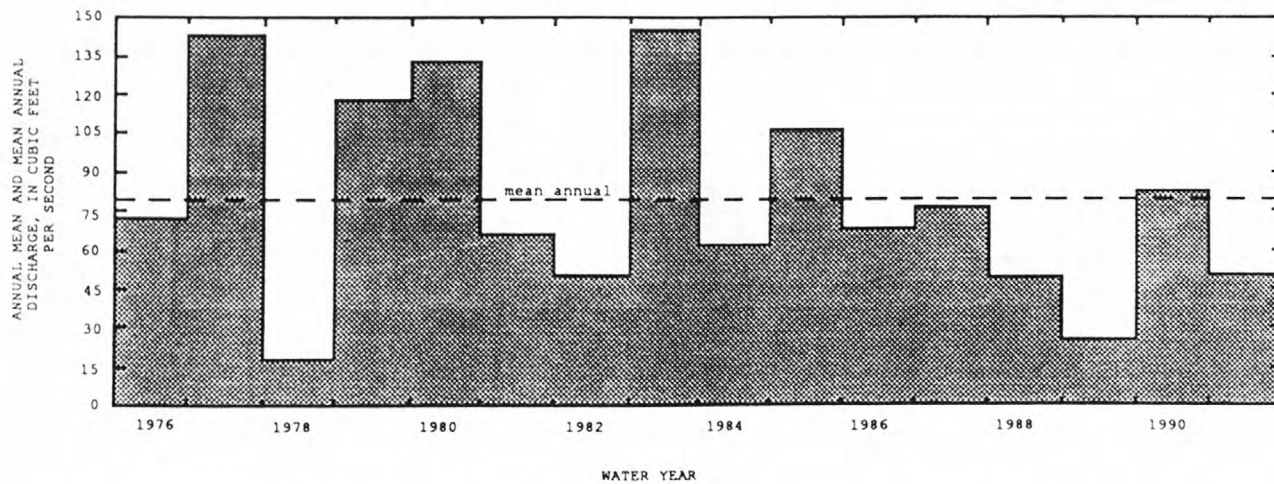
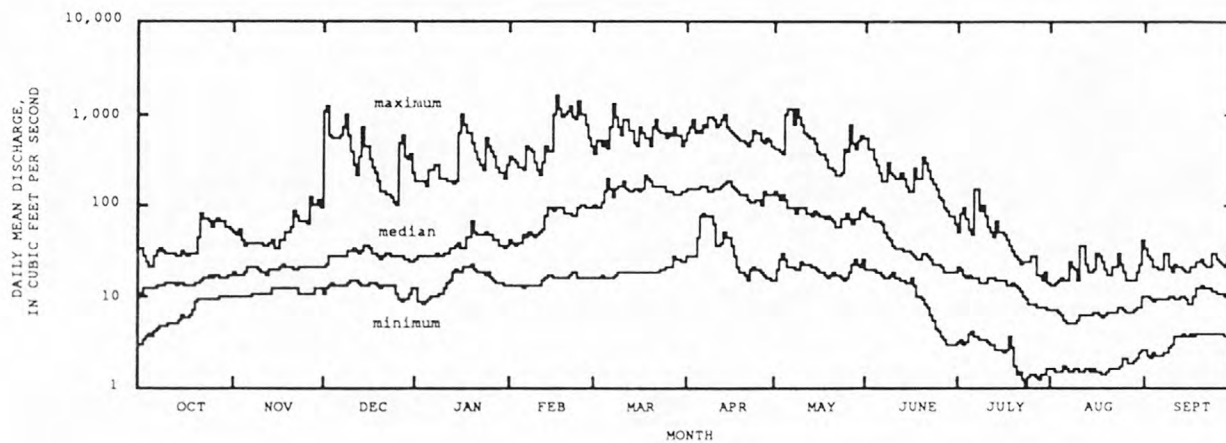
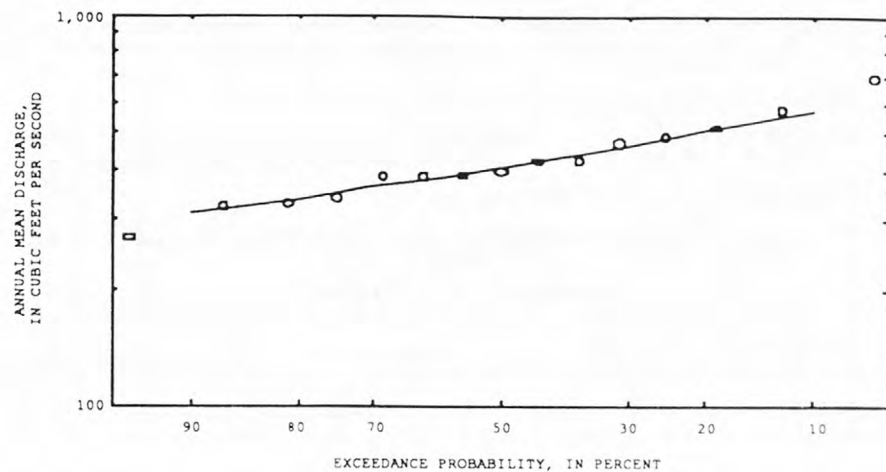
Duration table of daily mean flow for period of record 1975-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%	99.9%	99.9%
665	343	212	150	113	66	39	27	20	16	13	7.7	5.2	3.3	2.3	1.7	1.4		

† Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



# CLEARWATER RIVER BASIN

13342500 CLEARWATER RIVER AT SPALDING, ID

LOCATION.—Lat 46°26'55", long 116°49'35", in Indian allotment 198, NW 1/4, NE 1/4, SW 1/4, sec. 22, T. 36 N., R. 4 W., Nez Perce County, Hydrologic Unit 17060306, Nez Perce Indian Reservation, on left bank 0.4 mi downstream from Lapwai Creek, 0.6 mi west of Spalding Post Office, 0.9 mi upstream from U.S. Highway 95 bridge, and at mile 11.6.

DRAINAGE AREA.—9,570 mi<sup>2</sup>, approximately. Mean elevation, 4,360 ft.

PERIOD OF RECORD.—August 1910 to October 1913, October 1924 to January 1925, April 1925 to September 1990. Published as "near Lewiston", 1910-13, 1924-27. Records published for both sites March 1926 to September 1927.

REVISED RECORDS.—WSP 1737: 1927, 1935, 1943.

GAGE.—Water-stage recorder. Elevation of gage is 770.49 ft above sea level. See WRD for Idaho, 1966-68, for history of changes prior to Oct. 1, 1962.

REMARKS.—Diversion above station for irrigation of about 1,630 acres (1966 determination). Regulation of the North Fork Clearwater River at Ahsahka began on Sept. 27, 1971, when diversion tunnel at Dworshak Dam was closed.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 177,000 ft<sup>3</sup>/s 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 ft<sup>3</sup>/s Jan. 9, 1937, Dec. 1, 1952.

EXTREMES OUTSIDE PERIOD OF RECORD.—Flood of June 1894 reached a stage of 20.8 ft, site and datum in use 1924-26, discharge, 136,000 ft<sup>3</sup>/s.

Summary of monthly and annual discharges, 1911-13, 1926-90

Month	Maximum (ft <sup>3</sup> /s)	Minimum (ft <sup>3</sup> /s)	Mean (ft <sup>3</sup> /s)	Standard devia- tion (ft <sup>3</sup> /s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	17,200	1,710	4,400	2,370	0.54	2.4
November	38,900	1,780	6,950	5,070	0.73	3.8
December	33,300	2,130	8,830	6,460	0.73	4.8
January	28,500	1,580	8,570	5,840	0.68	4.7
February	23,600	2,070	10,000	5,560	0.55	5.5
March	35,600	3,870	14,600	7,220	0.49	7.9
April	53,400	7,760	28,200	10,300	0.36	15.4
May	85,900	19,200	46,200	14,900	0.32	25.1
June	73,600	8,770	36,600	16,700	0.46	19.9
July	23,900	3,680	10,700	4,780	0.45	5.8
August	8,850	1,940	4,090	1,410	0.34	2.2
September	11,500	1,870	4,580	2,720	0.59	2.5
Annual	24,300	7,850	15,300	3,940	0.26	100

Magnitude and frequency of annual low flow,  
based on period of record 1912-13, 1927-91

Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100 1%
1	2,260	1,570	1,220	962	710	567
3	2,340	1,650	1,310	1,060	812	668
7	2,440	1,810	1,520	1,300	1,080	952
14	2,580	1,970	1,710	1,520	1,330	1,220
30	2,820	2,190	1,920	1,730	1,550	1,440
60	3,250	2,420	2,090	1,860	1,650	1,520
90	3,660	2,680	2,280	2,000	1,720	1,560
120	4,130	2,970	2,490	2,150	1,820	1,630
183	5,110	3,530	2,920	2,510	2,110	1,890

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1911-13, 1926-90

Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent						
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%	
80,600	108,000	126,000	147,000	163,000	178,000	

Magnitude and frequency of annual high flow,  
based on period of record 1911-13, 1926-90

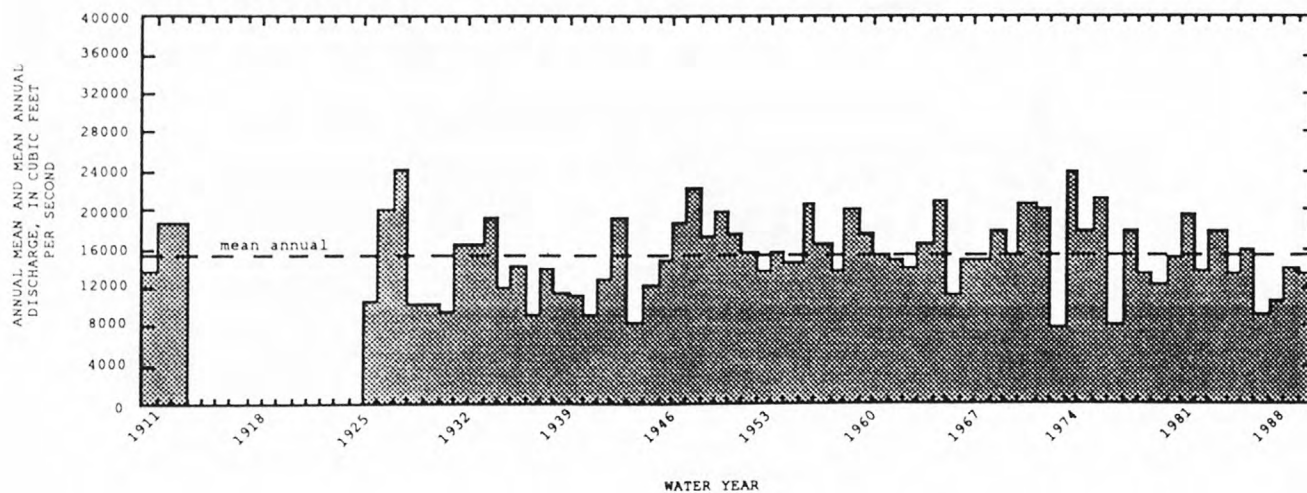
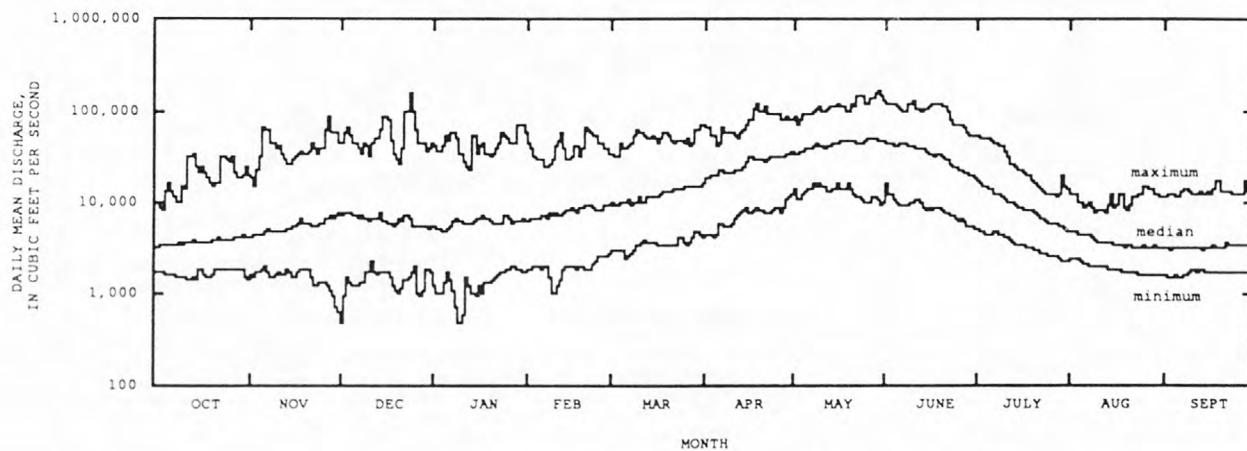
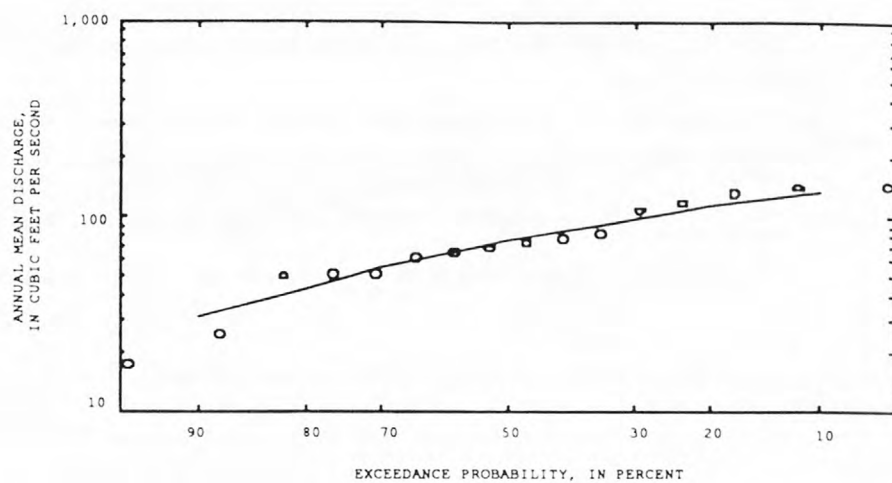
Period (con- secu- tive days)	Discharge, in ft <sup>3</sup> /s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
1	75,600	101,000	118,000	137,000	151,000	165,000
3	71,300	94,500	109,000	125,000	136,000	147,000
7	65,300	86,300	98,800	113,000	123,000	133,000
15	58,700	77,500	88,500	101,000	110,000	118,000
30	52,700	68,600	77,600	87,600	94,100	100,000
60	44,900	56,900	63,100	69,500	73,500	76,800
90	38,100	47,700	52,400	57,100	59,800	62,100

Duration table of daily mean flow for period of record 1911-13, 1926-90

Discharge, in ft <sup>3</sup> /s, which was exceeded for indicated percentage of time																		
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%		
82,000	53,200	40,300	31,400	24,700	15,800	11,100	8,040	5,830	4,520	3,570	2,730	2,240	1,910	1,760	1,630	1,170		



LOCATION MAP





## PALOUSE RIVER BASIN

13345000 PALOUSE RIVER NEAR POTLATCH, ID

LOCATION.—Lat 46°54'55", long 116°57'00", in SW¼, NE¼, NW¼, sec.10, T.41 N., R.5 W., Latah County, Hydrologic Unit 17060108, on left bank 20 ft downstream from bridge on U.S. Highway 95, 1.0 mi downstream from Deep Creek, 2.0 mi west of Potlatch, and at mile 132.2.

DRAINAGE AREA.—317 mi².

PERIOD OF RECORD.—October 1914 to September 1919, December 1966 to September 1990.

GAGE.—Water-stage recorder. Datum of gage is 2,455.11 ft above sea level (levels by Idaho Department of Highways). October 1914 to September 1919, water-stage recorder at site 0.2 mi upstream at different datum.

REMARKS.—Low and medium flows regulated at millpond in Potlatch prior to 1974. Small amounts of water diverted for sprinkle irrigation systems above gage.

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 10,100 ft³/s Jan. 16, 1974, gage height, 21.08 ft; minimum daily, 0.07 ft³/s Sept. 24, 1973.

Summary of monthly and annual discharges, 1916-19, 1968-89

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	41	3.8	17	7.9	0.47	0.5
November	151	8.6	47	39	0.84	1.5
December	1,060	20	162	223	1.4	5.0
January	2,170	14	342	441	1.3	10.6
February	1,760	50	540	436	0.81	16.8
March	2,180	74	789	504	0.64	24.5
April	2,070	133	775	517	0.67	24.1
May	1,720	54	379	368	0.97	11.8
June	398	26	115	101	0.88	3.6
July	61	3.9	27	14	0.53	0.8
August	29	2.2	12	6.9	0.57	0.4
September	23	2.1	12	6.0	0.49	0.4
Annual	634	39	266	129	0.48	100

Magnitude and frequency of annual low flow, based on period of record 1917-19, 1968-89

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 2%	100# 1%
1	4.2	1.5	0.69	0.34	0.14	0.07
3	4.7	2.0	1.2	0.71	0.37	0.23
7	5.8	2.7	1.6	0.99	0.53	0.34
14	6.3	3.2	2.1	1.4	0.85	0.60
30	7.5	4.0	2.7	1.9	1.2	0.91
60	9.5	5.3	3.7	2.7	1.8	1.3
90	12	7.0	5.0	3.7	2.5	1.9
120	14	8.9	6.5	4.8	3.3	2.5
183	23	16	14	12	10	9.4

Magnitude and frequency of instantaneous peak flow, based on period of record 1916-19, 1968-89

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
3,400	5,060	6,280	7,960	9,310	10,700

Magnitude and frequency of annual high flow, based on period of record 1916-19, 1968-89

Period (con- secu- tive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 4%	50 2%	100# 1%
1	3,240	5,020	6,000	7,010	7,620	8,130
3	2,690	4,240	5,060	5,870	6,330	6,700
7	2,110	3,290	3,900	4,490	4,820	5,080
15	1,620	2,460	2,860	3,220	3,410	3,550
30	1,300	1,970	2,280	2,550	2,680	2,780
60	966	1,460	1,680	1,880	1,980	2,050
90	797	1,180	1,350	1,500	1,570	1,620

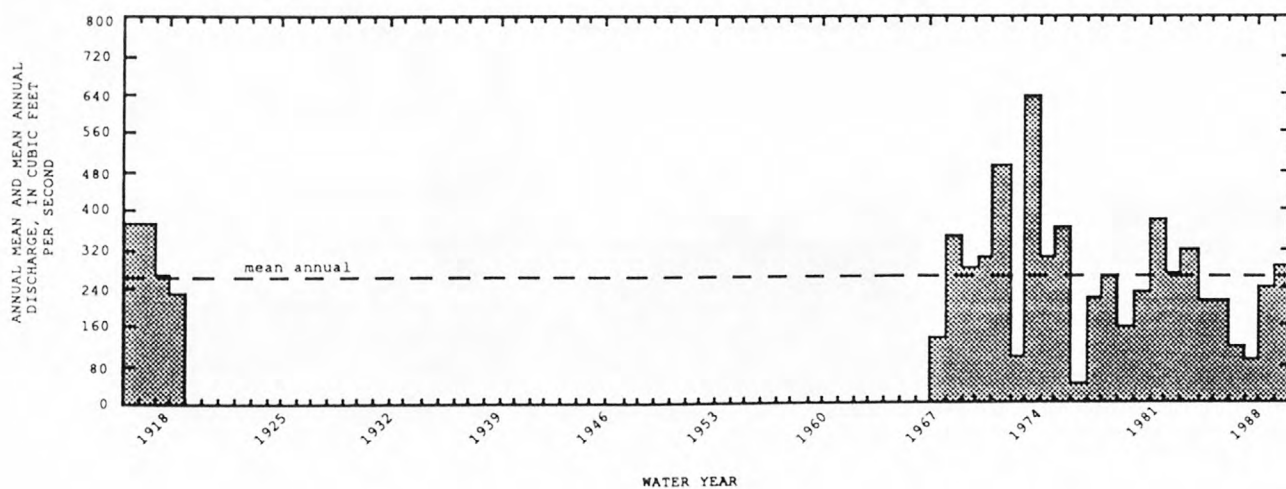
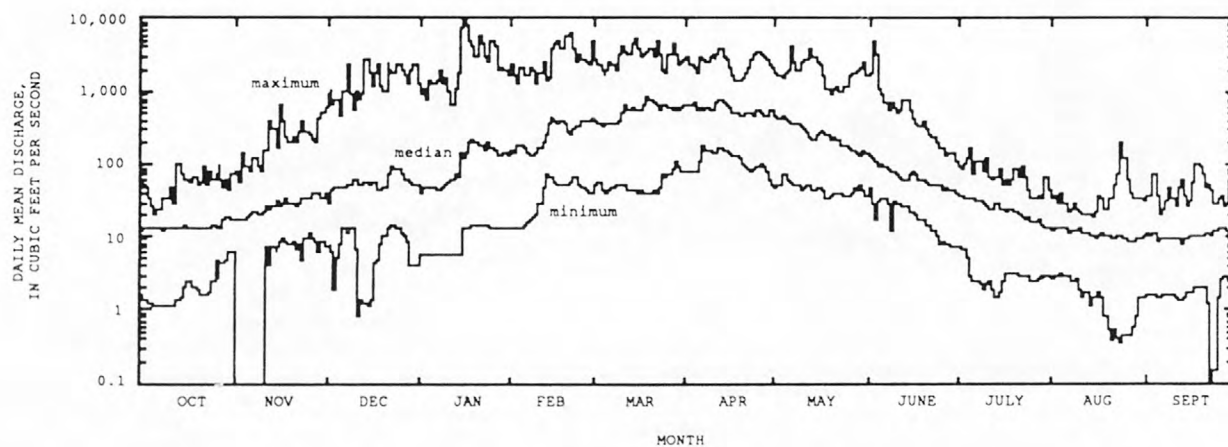
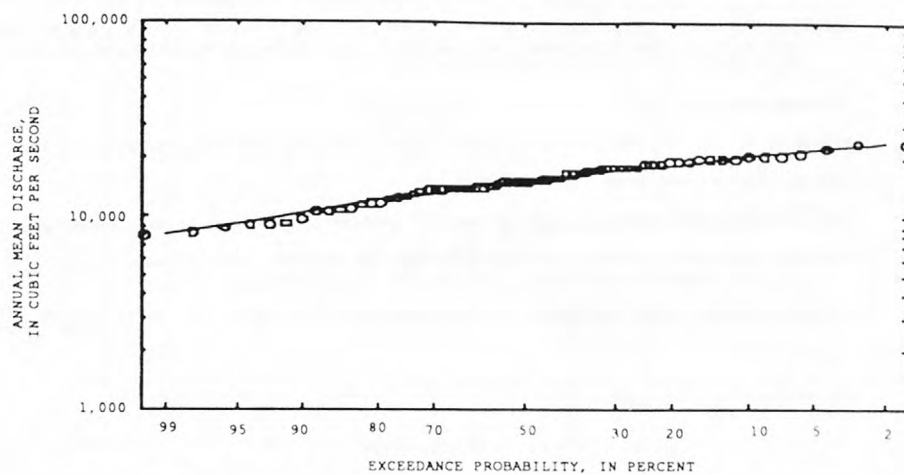
Duration table of daily mean flow for period of record 1916-19, 1968-89

Discharge, in ft³/s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
2,650	1,310	792	538	376	190	91	52	31	20	14	8.6	5.2	3.2	2.3	1.6	0.59

# Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP



## PALOUSE RIVER BASIN

13346800 PARADISE CREEK AT UNIVERSITY OF IDAHO, AT MOSCOW, ID

LOCATION.—Lat 46°43'55", long 117°01'24", in NW¼, NE¼, SE¼, sec.12, T.39 N., R.6 W., Latah County, Hydrologic Unit 17060108, on left bank 36 ft upstream from county road crossing at northwest end of University of Idaho playing field, 0.6 mi upstream from Idaho-Washington State line, and 7.0 mi upstream from mouth.

DRAINAGE AREA.—17.7 mi².

PERIOD OF RECORD.—October 1978 to September 1990. Prior to October 1979, published as "at Moscow."

REVISED RECORDS.—WRD Idaho 1987: 1979-81 (M).

GAGE.—Water-stage recorder. Datum of gage is 2,543.46 ft above sea level (levels by University of Idaho Engineering Department).

EXTREMES FOR PERIOD OF RECORD.—Maximum discharge, 436 ft³/s Mar. 9, 1989, gage height, 9.38 ft; minimum daily discharge, 0.04 ft³/s Nov. 29, 1987; minimum gage height, 3.47 ft, Nov. 27, 28, 1978.

EXTREMES OUTSIDE PERIOD OF RECORD.—Maximum discharge, 900 ft³/s Jan. 21, 1972, gage height, 9.87 ft (based on culvert computation).

Summary of monthly and annual discharges, 1979-90

Month	Maximum (ft³/s)	Minimum (ft³/s)	Mean (ft³/s)	Stan- dard devia- tion (ft³/s)	Coeffi- cient of vari- ation	Per- centage of annual runoff
October	1.5	0.18	0.82	0.39	0.48	1.0
November	3.8	0.24	1.8	1.1	0.62	2.2
December	5.7	0.60	2.8	1.7	0.60	3.3
January	38	0.37	12	11	0.94	14.4
February	67	5.8	26	20	0.77	31.3
March	59	4.1	22	17	0.78	26.8
April	17	2.1	8.5	4.4	0.52	10.3
May	6.8	1.5	3.6	1.7	0.47	4.4
June	6.9	0.85	2.3	1.7	0.73	2.8
July	1.8	0.46	1.0	0.42	0.42	1.2
August	4.3	0.34	1.1	1.1	0.98	1.3
September	2.0	0.28	0.83	0.47	0.57	1.0
Annual	11	2.5	6.8	2.4	0.36	100

Magnitude and frequency of annual low flow,  
based on period of record 1980-90

Period (con- secutive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and nonexceedance probability, in percent					
	2 50%	5 20%	10 10%	20 5%	50 <sup>†</sup> 2%	100 <sup>†</sup> 1%
1	0.16	0.09	0.07	0.05	0.03	0.02
3	0.18	0.11	0.08	0.06	0.04	0.03
7	0.20	0.13	0.10	0.09	0.07	0.06
14	0.26	0.19	0.16	0.14	0.12	0.11
30	0.37	0.27	0.22	0.19	0.16	0.14
60	0.57	0.44	0.37	0.33	0.28	0.25
90	0.65	0.48	0.42	0.37	0.32	0.30
120	0.74	0.55	0.48	0.43	0.38	0.35
183	1.1	0.87	0.78	0.72	0.65	0.61

Magnitude and frequency of instantaneous peak flow,  
based on period of record 1979-90

Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
2 50%	5 20%	10 10%	25 4%	50 2%	100 1%
330	414	467	532	580	627

Magnitude and frequency of annual high flow,  
based on period of record 1979-90

Period (con- secutive days)	Discharge, in ft³/s, for indicated recurrence interval, in years, and exceedance probability, in percent					
	2 50%	5 20%	10 10%	25 <sup>†</sup> 4%	50 <sup>†</sup> 2%	100 <sup>†</sup> 1%
1	199	286	327	364	384	398
3	119	197	245	301	339	373
7	75	131	169	217	252	286
15	48	86	113	146	170	193
30	36	62	79	98	111	122
60	25	40	49	58	64	69
90	20	31	36	42	46	49

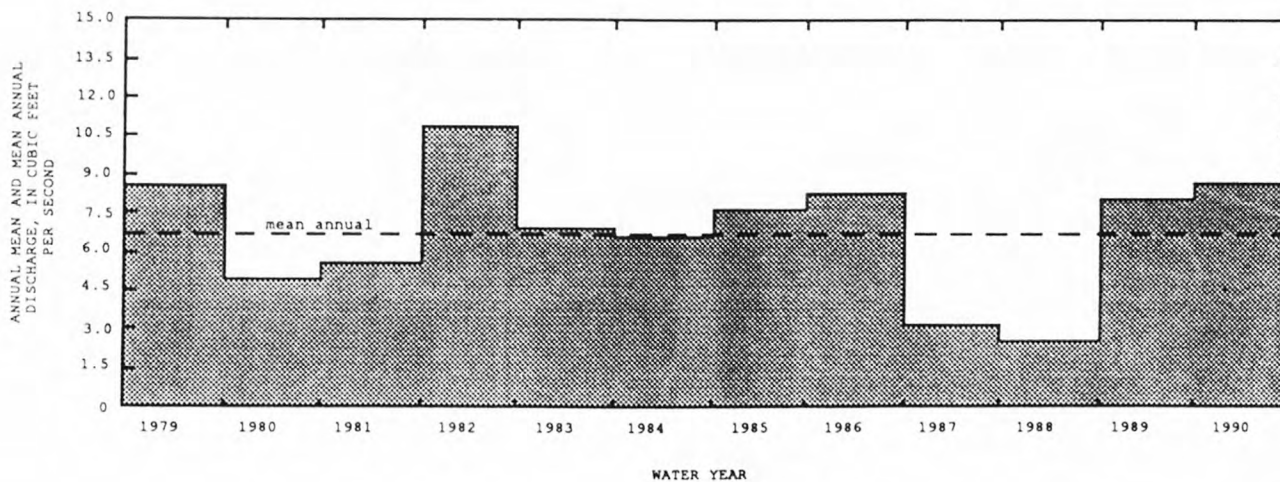
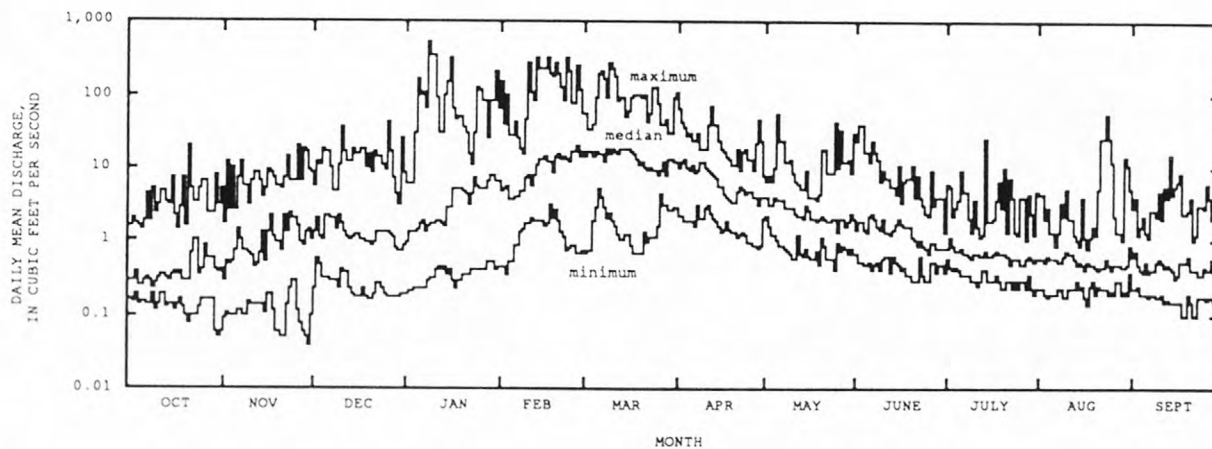
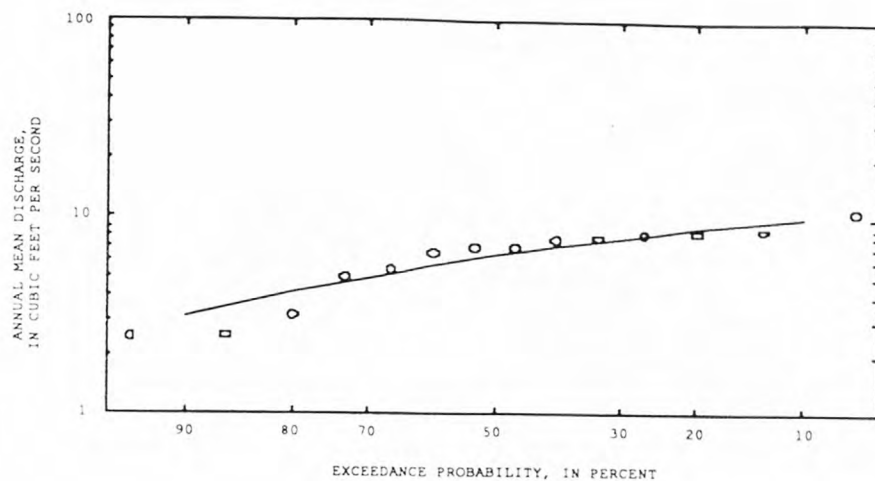
Duration table of daily mean flow for period of record 1979-90

Discharge, in ft³/s, which was exceeded for indicated percentage of time																
1%	5%	10%	15%	20%	30%	40%	50%	60%	70%	80%	90%	95%	98%	99%	99.5%	99.9%
95	26	15	10	7.1	3.7	2.2	1.4	0.90	0.61	0.43	0.28	0.20	0.16	0.13	0.11	0.06

<sup>†</sup> Length of record used in calculation may yield unreliable values for this column.



LOCATION MAP











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