Magnitude and Frequency of Floods in the United States

Part 13. Snake River Basin

By C. A. THOMAS, H. C. BROOM, *and* J. E. CUMMANS

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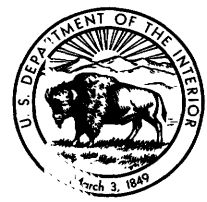

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PART 13. SNAKE RIVER BASIN

By C. A. THOMAS, H. C. BROOM, and J. E. CUMMANS

ABSTRACT

The magnitude of a flood of any selected frequency up to 50 years for any site on any stream in the Snake River basin can be determined by methods outlined in this report, with some limitations. The methods are not applicable for regulated streams, for drainage basins smaller than 10 or larger than 5,000 square miles, for streams fed by large springs, or for streams that have flow characteristics materially different from the regional pattern. The magnitude of a flood for a selected frequency at a given site is determined by using the appropriate composite frequency curve and the mean annual flood for the given site. The mean annual flood is computed from either a formula or a nomograph in which drainage area, mean annual precipitation, and a geographic factor are used as independent variables. The standard error of estimate for the computation of mean annual floods is plus 17 percent and minus 15 percent.

Nine flood-frequency regions (A–I) are defined. In all except regions B and I, frequency relations vary with the mean altitude of the basin as well as with the geographic location; therefore, families of curves are required for 7 of the 9 flood-frequency regions.

The report includes a brief description of the physiography and climate of the Snake River basin to explain the reason for the large variation in mean annual floods, which range from zero to about 27 cubic feet per second per square mile.

Composite frequency curves and formulas for computing mean annual floods are based on all suitable flood data collected in the Snake River basin. Tables show the data used to derive the formula. Following the analysis of data are station descriptions and lists of peak stages and discharges for 295 gaging stations at which 5 or more years of annual flood records were collected prior to Sept. 30, 1957. Many flood peak data are not usable in defining the frequency curves and deriving the formula because of large diversions and regulation upstream from the gaging stations.

INTRODUCTION

The purpose of this report is to describe methods by which the flood frequency and magnitude for any site on any stream in the Snake River basin can be estimated and to bring together in a single volume lists of peak stages and discharges for all gaging stations in the Snake River basin that have 5 or more years of annual flood records.

Economic considerations in the design of dams, bridges, culverts, highways, railroads, waterworks, diversion dams; the utilization of flood plains or banks of streams for agricultural or industrial purposes; and intelligent and beneficial use of floodwaters themselves all require knowledge of flood hazard and potential.

Flood discharge data obtained at individual gaging stations and analyzed collectively furnish the most reliable basis for estimating future flood expectancy. This study is an attempt to generalize the probability expressions of flood frequency and magnitude of large groups of streams and thereby to reduce the effect of variations of flood data resulting purely from chance. Data from gaged areas can then be used to estimate the magnitude and frequency of floods in ungaged areas.

Flood formulas derived by empirical methods should be limited to use within the ranges of experience and under conditions similar to those of the data on which they were based. In this report, statistical methods are used to derive a formula applicable to conditions found in the Snake River basin. The formula is based on all known flood data for the area as of September 30, 1957.

This report was prepared by the U.S. Geological Survey Water Resources Division, Surface Water Branch, Boise district office, under the general direction of W. I. Travis, district engineer. Technical guidance and review were furnished by G. L. Bodhaine, hydraulic engineer, U.S. Geological Survey, Tacoma, Wash., and Tate Dalrymple, hydraulic engineer, U.S. Geological Survey, Washington, D.C.

The streamflow records used, unless otherwise stated, were collected by the U.S. Geological Survey in cooperation with many State and Federal agencies and private organizations. Detailed acknowledgement of cooperation is given in the series of annual water-supply papers published by the Geological Survey entitled "Surface Water Supply of the United States." Records have been compiled and published in summarized form through Sept. 30, 1950, in Geological Survey Water-Supply Paper 1317.

DESCRIPTION OF THE BASIN

A brief description of the basin will aid in the study of its flood characteristics. The Snake River basin has an area of about 108,500 square miles and a mean altitude of about 5,100 feet. This basin is considerably larger in area and yields more discharge than that of any other tributary to the Columbia River. The basin includes parts of western Wyoming, northern Utah and Nevada, eastern Oregon and Washington, and all of Idaho except the extreme northern end and a relatively small area at the southeast corner of the State. (See fig. 1.)

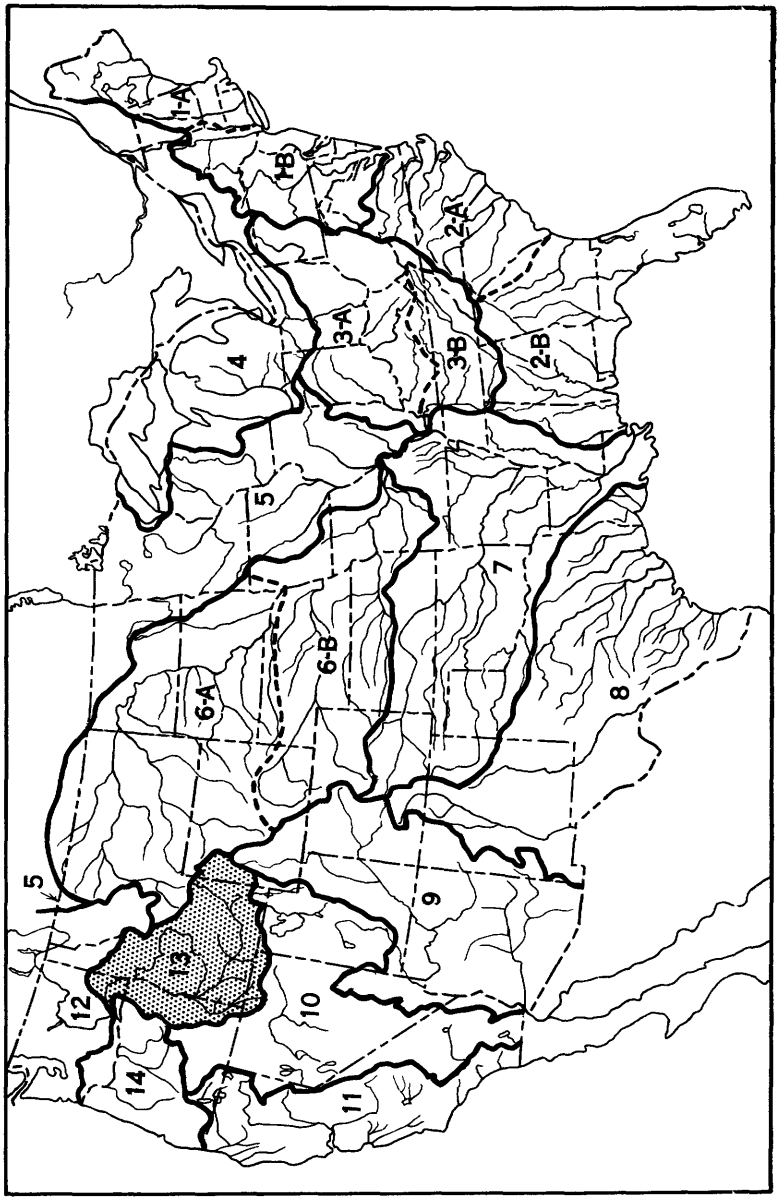

FIGURE 1.—Map showing area covered by this report.

Altitudes range from 340 feet at the mouth of the Snake River to 13,766 feet at the top of Grand Teton Mountain near the east edge of the basin. Land slopes in the mountainous parts are steep, generally averaging 20 percent or more. The average relief between the gaging stations studied in this report and the highest point of their respective contributing basins is 4,700 feet. Stream slopes average 135 feet per mile and vary from 2 to 500 feet per mile.

Lakes, ponds, and reservoirs constitute an insignificant part of the basin. Manmade lakes are greater in extent than those occurring naturally. The effects of watered areas on flood characteristics were so poorly defined that further study was not made for this report.

PHYSIOGRAPHY

Effects of the extreme and numerous variations in topography on the flood discharges are profound and complex. These variations in relief must be analyzed in determining the flood potential. For descriptive purposes, the Snake River basin can be divided into seven regions as shown on plate 1. Regions were delineated by the authors of this report and are generally similar to those used in Weather Bureau Climatological Base Maps of the several States in which the basin lies; no physiographical authority such as Fenneman was strictly followed.

UPPER SNAKE RIVER MOUNTAINS

The mountains at the extreme east edge of the basin form an abrupt, effective uplift barrier that raises all the prevailing westerly winds across the long stretch of open plains. In rising over the mountains, the air masses drop a heavy snow cover that yields substantial summer runoff to the valleys downstream. (See precipitation index map, pl. 2.) The Teton Range extends north-south at the west edge of the region and is very precipitous. Jackson Hole, a flat, mountain valley at the eastern base of this range, is bounded on the east by more high mountains that range in altitude from 5,100 to 13,766 feet and have a mean altitude of about 7,600 feet. This mountain region embraces an area of nearly 7,000 square miles.

UPPER SNAKE RIVER PLAINS

Immediately west and south of the upper Snake River region is the flat, basalt-filled Snake River plains region. The nearly level or gently sloping terrain in this area is broken by scattered buttes, lava cones and flows, and deeply incised river channels. This area comprises about 20,000 square miles and extends on either side of the Snake River to the mountains and west as far as King Hill. Because of its relatively low altitude and its location east of several mountain ranges,

the area receives an extremely low mean annual precipitation. (See pl. 2.) Practically all the soil has an infiltration capacity that greatly exceeds the usual rate of rainfall. Infiltration is so great that no surface stream channel reaches the Snake River from the north between Henrys Fork (above Idaho Falls) and the Malad River (near Gooding), a distance of 225 miles; however, several streams from the north do reach the plains. Much of the water in all streams entering the above-described region sinks into the ground and ultimately returns to the Snake River channel through large springs in the Thousand Springs area near Gooding and above King Hill. The plains increase in altitude gradually from west to east and from the Snake River both northward and southward. The flatlands range in altitude from 3,000 feet to more than 6,000 feet, although some river channels are lower than 3,000 feet, and some buttes are higher than 7,000 feet.

LOWER SNAKE RIVER PLAINS

The lower and upper Snake River plains are separated by a comparatively narrow constriction formed by hills on both sides of the Snake River near King Hill. (See pl. 1.) This throat is downstream from the large return flows from ground water and irrigation in the upper plains. Downstream from this throat, the valley again widens. The topography is not unlike that of the upper Snake River plains, and rainfall is likewise very light. (See pl. 2.) However, contrasting geology causes streamflow characteristics to differ considerably from those in the upper plains. Streams entering the lower plains maintain their flow across the Snake River valley, and storms and snowmelt at times cause runoff from the flatlands. This region includes about 6,000 square miles and ranges in altitude from 2,100 to 4,500 feet.

A large part of the irrigated area within the Snake River basin is in the lower and upper Snake River plains, and diversions for irrigation and other works of man affect the natural regimen of flow more radically than in any other region of the Snake River basin.

SOUTHERN HIGHLANDS

The south side of the Snake River plains, defined by the near-arc shape of the Snake River channel, is joined at roughly 20-mile intervals by a succession of tributary basins that approach roughly from radial directions. These southside drainage basins are characterized by rather wide valleys flanked by high mountain ranges with gentle to steep slopes that run parallel to the streams. Altitudes of the valleys range from 4,000 to 5,000 feet, and altitudes of the mountain tops range from 6,000 to 11,000 feet. This general pattern is broken by the Owyhee River plateau (about 5,000 square miles) and

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the lower, more gently rolling hills of the Malheur and Burnt River basins. The entire region embraces an area of 31,000 square miles. Owing to the high permeability of the soil and to the fact that much of the moisture from air masses progressing eastward is precipitated on mountain ridges to the west, runoff from these northward-draining basins is relatively light. (See precipitation index map, pl. 2.)

CENTRAL MOUNTAINS

The Central Mountains region joins the north edge of the roughly crescent-shaped Snake River plains. On this side also, streams approach the Snake River roughly from radial directions. They drain the southern end of the rocky, precipitious mountains covering most of Central Idaho known as the Great Idaho Batholith. These southward-running streams drain an area of about 14,000 square miles, within which the drainage basins rise from valley floors ranging from 2,500 to 6,000 feet in altitude to mountain peaks ranging from 7,500 to 12,230 feet in altitude. At least 90 percent of this region is steep mountainous terrain; sizable valleys are limited to those along the Weiser, North Fork Payette, Big Lost, and Little Lost Rivers and Birch Creek. Because of the preponderance of mountains of higher altitudes, precipitation is relatively high in the western part of this region, being as high as that for any part of the Snake River basin. The amount of snowfall and rain decreases toward the east, and is lightest in the Little Lost–Birch Creek area where larger valley areas and shadow effects of mountains toward the Pacific Coast reduce the catch materially. (See pl. 2.) Extensive alluvium along the mountains and in the valleys of the eastern half of this region reduce the runoff and flood potential noticeably. The flow of many streams that traverse the alluvium is further reduced as the streams cross the lava plains, and some streams never reach the Snake River as surface flow.

NORTHERN MOUNTAINS

The large Northern Mountains region, which comprises about 29,500 square miles, is on both the east and the west sides of the Snake River. (See pl. 1.) The area is entirely mountainous except for a few relatively small valleys in the Baker-LaGrande-Enterprise areas in Oregon and several narrow valleys near Salmon in the upper Salmon River area. With the exception of flow through these valley areas, discharge in the tributaries is practically unaffected by works of man. The Snake River main stem, however, is now being intensively developed for hydroelectric power in the reach within the region and is considerably affected by regulation. Streams have cut deep canyons through the high mountains, and slopes are extremely steep and rocky.

Altitudes vary from below 1,000 feet where the Snake River leaves the region to more than 11,000 feet at the top of several mountains. Precipitation, in general, is greatest in the northern and eastern parts of the region (see pl. 2), but variations are likely to be extreme in short distances because of radical changes in altitude and complex orographic effects on air masses moving through the region.

NORTHERN HILLS

The Northern Hills region lies between the Northern Mountains and the mouth of the Snake River. The rolling hills of the region slope more or less gradually from the foot of the mountains toward the Columbia River. The region, which embraces an area of about 8,500 square miles, is practically all below 4,000 feet in altitude and descends to a low of about 340 feet where the Snake River reaches the Columbia River at Pasco. Much of this land is used for agricultural purposes, but only small acreages are irrigated. Precipitation is lowest at the low altitudes and increases gradually toward the higher country upstream. (See pl. 2.)

CLIMATE

The entire basin is in the belt of prevailing westerly winds whose direction and moisture content are controlled by the seasonal movements of the Aleutian Low and the Pacific High pressure systems. These opposing barometric centers tend to follow the annual shift of the sun's latitude. The Aleutian Low is farthest south in winter concurrently with maximum intensity and extent, thus causing strong moisture-laden southwesterly winds to flow inland to the Snake River basin. The northward trending mountain ranges and their intervening low valleys and basins alternately cool and warm these air masses passing eastward, thus causing alternate belts of high and low precipitation. The higher a mountain range and the fewer the intervening obstructions between it and the ocean, the more moisture is condensed out of these air masses. Consequently, for any given altitude, areas of highest precipitation are in the western part of the basin, and areas of lowest precipitation are in the eastern part except where modified by other orographic influences. Increasing dominance of the Pacific High lessens the intensity of the moisture-laden winds as the sun moves north. Effects of continental-type storms complicate the storm patterns in the eastern and southern parts of the basin. Two types of floods occur: one results from direct runoff from rainfall or rain on shallow snow, and the other is caused by warm weather melting snow that has accumulated from many storms throughout the winter. The area of rain-type floods (or more often, rain on snow) extends eastward from the coast into the Clearwater

River basin, and the floods occur generally from November through March. Low-altitude basins in the Northern Hills region and adjacent to the Snake River plains are affected by rain or rain on snow during winter months and have flashy, rain-type flood peaks. By far the largest number of annual flood peaks in the Snake River basin are caused by snowmelt or by rain on snow. Where most of the precipitation falls as snow, the maximum flood is nearly always caused by snowmelt during the spring or early summer. Consideration of the snowmelt potentialities is of greater practical importance than consideration of rainfall intensities in determining the magnitude and frequency of floods over most of the Snake River basin.

Average annual precipitation over the entire Snake River basin, as taken from the precipitation index map (pl. 2), is about 21 inches. Because of the effects of the great diversity of topography both in the Snake River basin and westward toward the Pacific Coast, temperature and precipitation vary greatly from place to place. Average annual precipitation varies from about 8 inches on large areas in the Snake River plains and similar areas of low relief to an estimated maximum exceeding 70 inches on some of the higher mountain ranges. The greatest amount falls on the western slopes near the tops of the highest mountains. Abrupt changes in orographic effects cause precipitation to vary considerably in short distances. Instances exist of mean annual precipitation varying from 18 inches in the valleys to 60 inches or more on nearby mountain tops. Precipitation over most of the basin is heaviest in winter. Average precipitation at some high-altitude weather stations for the months November–March is as much as 80 percent of the mean annual precipitation and can be correlated with the pattern of storms from the Pacific Ocean. However, in parts of the southern and eastern sections of the basin the storms from the Pacific Coast are modified by the continental air masses, and a greater proportion of the precipitation comes in summer—nearly 50 percent of the total in some areas falls during May–October. Precipitation occurs as rain or as a combination of rain and snow during the winter at low altitudes, but the proportion of snow increases at higher altitudes and is preponderantly snow on the highest mountains. Snow is a significant part of the precipitation everywhere in the basin. As well as being responsible for most floods, melting of the accumulated snowpack contributes much more to the total volume of direct runoff than does rainfall alone.

OTHER FACTORS AFFECTING FLOODS

It is characteristic of the entire Snake River basin that summer rains fall on dry or unsaturated soils, and thus there is little runoff. How-

ever, an occasional thunderstorm causes rain of sufficient intensity to produce high unit discharges from small areas. In a few instances, streams in small basins denuded by fires, for example, have had unit discharges far in excess of rates experienced under normal conditions.

Geologic influences affect runoff and flood-generating potentials to a considerable extent, especially in some areas. Probably most effective in reducing flood flows are the permeable basalt and alluvium. The volcanic flows over most of the upper Snake River plains region are so permeable that surface runoff disappears partly or entirely. Deep loose alluvium at the base of many of the mountain ranges, most noticeably in the valleys to the north and south of the upper Snake River plains region, also absorbs large quantities of the surface runoff. Mantle rocks or soils of the Snake River basin include all degrees of permeability from very porous lava flows and coarse alluvium to dense impermeable granite and clay. In regions of low precipitation, the amount of precipitation excess available to produce flooding is controlled in large part by the type or soil over which it flows.

In addition to these natural features that affect the magnitude of floods, manmade influences have altered the flow patterns of many streams in the Snake River basin. Millions of acre-feet of water is stored in reservoirs; water is directed for the irrigation of more than 2,840,000 acres of land; and a large amount of water is pumped from ground-water aquifers. Many streams in the more mountainous areas are still unaffected by regulation or diversion; but on the Snake River main stem and all major tributaries except the Salmon and Clearwater Rivers, the effect of storage and diversion must be considered carefully in the determination of flood expectancy.

AVAILABLE FLOOD RECORDS

Records for 179 of the 295 stations having 5 or more years of record in the Snake River basin were selected as being most suitable for use in the analysis of the basin characteristics. These stations are listed in table 1 and are shown on the base map of the basin (pl. 3) as solid circles. Only records for streams not materially affected by works of man should be used to generalize the flood-frequency relationships. For gaging-station records to be comparable, they must represent the natural streamflow for the same time period. For this study, 1921–57 was selected as the base period. When records were not complete for the entire base period, annual peaks of record were correlated with those for a nearby station or stations, and annual peaks were estimated for years of no record. For correlative purposes, stations were selected with similar flood characteristics. The esti-

mated peaks were used only for the purpose of assigning order numbers to the actual peaks of record. Gaging-station records less than 5 years in length do not define flood-frequency curves adequately but may furnish valuable information to aid in defining the mean annual flood. Because of the dearth of records for small drainage areas in some localities, records for 82 gaging stations having less than 5 years of record were used as guides in delineating some of the flood-frequency boundaries. These short-term records were also of considerable value in defining geographic factors to use in determining mean annual floods at ungaged sites. The 82 stations are listed in table 2.

Many records were adjusted for storage in reservoirs above the station before being compared with those for natural streams; others were adjusted for diversions. Several records were computed using only that part of the drainage area below reservoirs if the reservoirs were completely shut off for a large percentage of the time during the flood season.

Table 3 contains an inventory of data for gaging stations used in the flood-frequency analysis. Available records 5 years or more in length for 118 gaging stations are not listed in table 3 and were not suitable for use in the analysis for a variety of reasons. Large reservoir storage and comparatively great depletion of flow by irrigation diversions made many records unsuitable for flood analyses. Many basins have little or no surface runoff, for discharge is all by spring or subsurface flow. The drainage boundaries for ground and surface water in some basins do not coincide, and, therefore, streamflow from such basins does not have regional significance. Considerable selectivity is necessary to assure that all records used in evolving regional relations are for streams for which the flow pattern is not materially affected by works of man. However, many of these records not used directly in the analyses were adjusted and used as indicators of basin characteristics in the absence of better data.

Outstanding peak discharges have been measured at many miscellaneous sites in Snake River basin. Peak discharges at miscellaneous sites and at gaging stations not listed in table 3 are shown in table 4.

METHODS OF ANALYSIS

The method presented in this report for computing the magnitude and frequency of floods reflects the latest developments based on a continuing study by engineers of the Water Resources Division of the Geological Survey and others. The analyses were directed toward the development of flood-frequency and -magnitude relations at gaging stations and the transferral of these point data to other sites or their adaption to apply over the entire basin. Methods used are

adaptations of those described in several previously published reports of the Geological Survey relating to the magnitude and frequency of floods.

FLOOD FREQUENCY AT A GAGING STATION

Many techniques have been evolved for the determinatior of the frequency of expected floods at a gaging station based on past flood records at the station. The method used in this report is simple, gives acceptable results, and is the one often described in Geological Survey flood-frequency reports. It consists of listing the annual floods and numbering them in order of magnitude, beginning with the largest as number 1. The plotting position or recurrence interval, T, is computed for each recorded annual flood by means of the formula $(N+1)/M$, where N equals the number of years of record and M equals the relative magnitude of the event, beginning with the highest as 1. Computed positions are then plotted on probability paper. A specially designed probability paper (Powell, 1943) generally adopted by the Geological Survey was used for this study. It has a linear scale as the ordinate for plotting discharge and a scale graduated in accordance with the theory of extreme values (Gumbel, 1941) as the abscissa for plotting recurrence interval. Theoretically, the points should fall on a straight line on a chart so graduated, but experience indicates that the points usually define curves that are concave upward in varying degrees. The curves are fitted by inspection, because the short length of most streamflow records does not warrant use of more refined methods. Most weight is given to the position of points along the lower and middle parts, as the computed recurrence intervals for the floods in the upper range are likely to be different from their actual recurrence intervals.

Considered from the viewpoint of probability, a flood with a 5-year recurrence interval is one that has a 20-percent chance of being equaled or exceeded in any 1 year, and one with a 25-year recurrence interval has a 4-percent chance of being equaled or exceeded in any 1 year, and so on.

Two methods by which flood data may be analyzed are as an annual-flood series and as a partial-duration series. In an annual-flood series, only the highest momentary peak discharge in each water year is used. In a partial-duration series, all peaks above a selected base discharge are used. There is an important distinction in meaning between recurrence intervals determined by the two series. In an annual-flood series, the recurrence interval is the average interval of time within which the given flood will be equaled once as an annual maximum. In a partial-duration series, the recurrence interval is the average time between floods of a given magnitude regardless of their relation

to the water year or any other period of time. There is a definite relation between the values in the two series as shown by the following table (Langbein, 1949):

Recurrence intervals, in years

Annual-flood series	*Partial-duration series*
1.16	0.5
2.00	1.45
5.52	5.00
10.5	10
20.5	20
50.5	50

As will be noted in the table above, results from the two series are essentially the same for recurrence intervals greater than 10 years. The annual-flood series was used in this report. For those desiring frequency information on a partial-duration series basis, it is suggested that methods described in this report be used to compute results based on the annual-flood series and that conversion be made by use of the above table.

Frequency curves for the 179 gaging stations listed in table 1 were defined for the base period 1921–57. To help define frequency relations in areas for which there are no better data, similar curves were drawn for the 82 short-term stations listed in table 2 by use of correlative methods. As a further aid in this study, curves were drawn for many stations where flows are affected in varying degrees by works of man.

EFFECT OF BASIN CHARACTERISTICS

Variations in the individual frequency curves for the stations used in the analysis were investigated to determine what relationships existed between frequency curves and basin characteristics and whether regional frequency curves could be defined. Regional frequency curves should be based on records for streams having similar flood-frequency characteristics. If such similarity can be reasonably established, a flood-frequency graph based on the combined experience of a group of stations has firmer support than one drawn to fit data at a single station because the larger sample available to define the curve reduces the effect of variations resulting purely from chance. If the significant basin characteristics of ungaged sites can be measured, flood-frequency relations for ungaged sites can be determined. Because of the complexity of the effects of topography, climate, and geology on flood discharges, there is little reason to assume that all the variations in individual frequency curves occurred purely from chance or that one composite frequency curve is best for the entire Snake River basin.

The ratio of the 10-year flood to the mean annual flood is considered a measure of the slope of the frequency curve. The study of the frequency relations and basin characteristics indicates that mean altitude is the most significant of the readily measurable characteristics that affect this slope. Location within the basin is also highly significant because of variations from place to place of patterns of moisture inflow, temperature, intensity of precipitation, and other factors.

Ratios of the 10-year flood to the mean annual flood for all stations in the Snake River basin were plotted against mean altitude of the drainage basin above the station. Plotted points showed considerable scatter. However, points for stations in the same geographic location—areas of similar topography, exposure, and geology—and for stations similarly located with respect to principal mountain ranges had a tendency to gather in groups. Plots of flood ratios for other recurrence intervals (1.1-year, 5-year, and 50-year) against mean basin altitudes indicated essentially the same pattern. The analysis indicates that mean basin altitude is a significant parameter.

DETERMINATION OF FLOOD-FREQUENCY REGIONS

Because the mean altitude and the location seemed to be by far the most significant of the measurable characteristics and because the effects of other variables were not well defined or not readily measurable, flood-frequency regions were established on the basis of the plot of flood ratios against mean altitudes. Tentative regional boundaries were sketched on a basin map, including within the boundaries stations that grouped together on the plot. Further study was made until boundaries appeared to be as well defined as practicable. The basin was divided into nine regions, A to I; however, not all parts of each region are contiguous. (See pl. 4.)

Flood-frequency boundaries as finally determined are considered reasonable. Statistical tests were made to determine whether all records within a region are homogeneous or, in other words, whether differences in slopes of individual frequency curves are greater than might occur by chance in random sampling. The tests showed that, after applying corrections for mean altitude, all records used in each region are homogeneous within the limits of the 95-percent confidence level.

REGIONAL FREQUENCY CURVES

DERIVATION

After the frequency regions were outlined, the next step was to draw a composite curve for each region. The ratio of the 10-year flood to the mean annual flood was plotted against the mean altitude of the basin for each station in the region, and a curve of best visual fit was

drawn through these points. The relation for region G is shown in figure 2. Curves were similarly drawn for the 1.1-, 5-, 20-, and 50-year

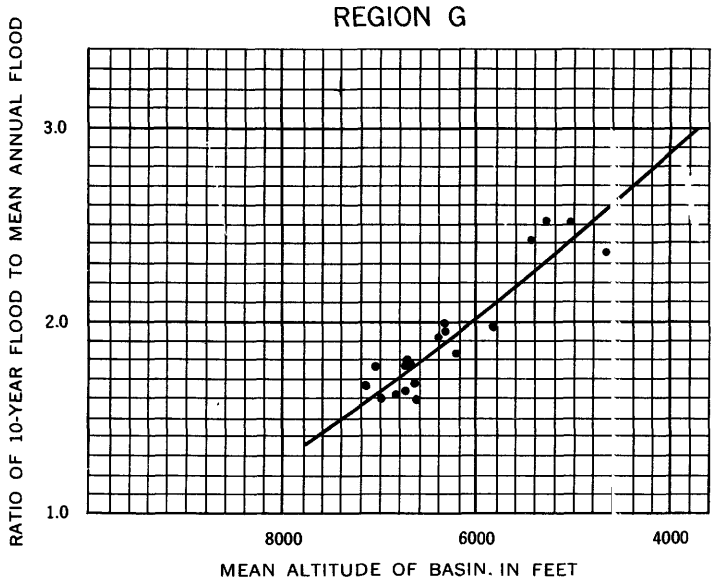

FIGURE 2.—Relation of 10-year flood divided by mean annual flood to mean altitude in region G.

recurrence intervals for each region. The mean altitude affected flood ratios sufficiently to require the development of families of curves for all the regions except B and I. The family of curves for each region was produced as follows: Values of the ratios for the 1.1-year flood, for example, were picked at 1,000-foot intervals of mean altitude from the curves of flood ratio versus altitude. These points were plotted on the graph of ratio to mean annual flood versus recurrence interval. Points were similarly plotted for recurrence intervals of 5, 10, 20, 30, and 50 years. Smooth curves were drawn through the points for each 1,000 feet of mean altitude likely to be found in the region. Figures 3–11 show the composite regional frequency curves for regions A–I.

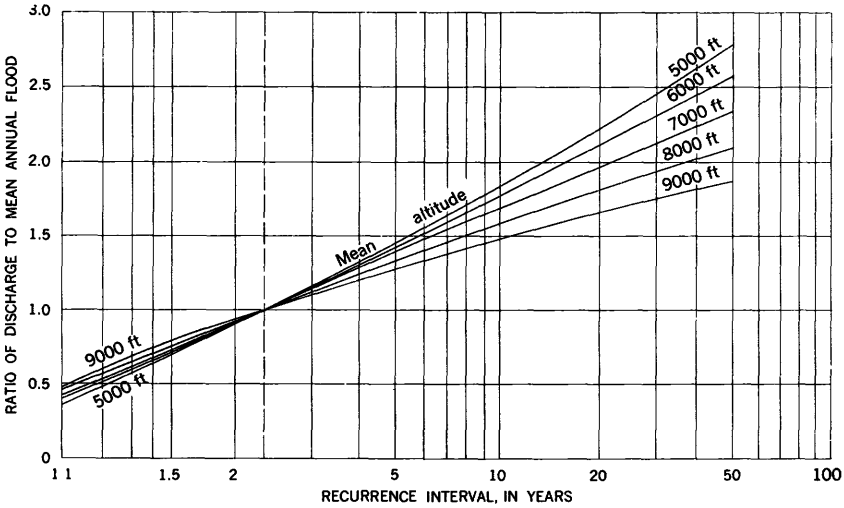

FIGURE 3.—Composite frequency curves, region A.

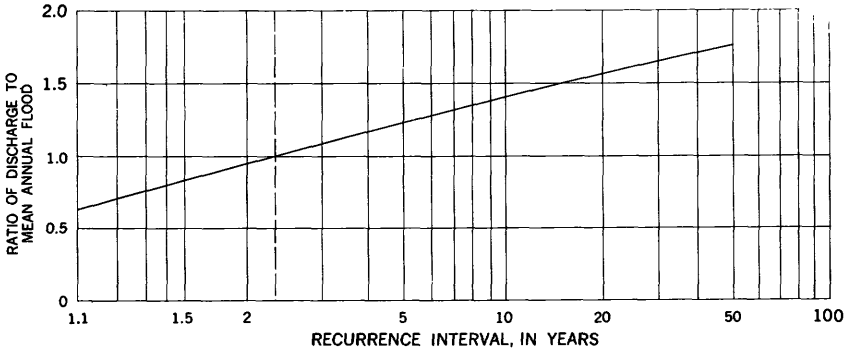

FIGURE 4.—Composite frequency curve, region B.

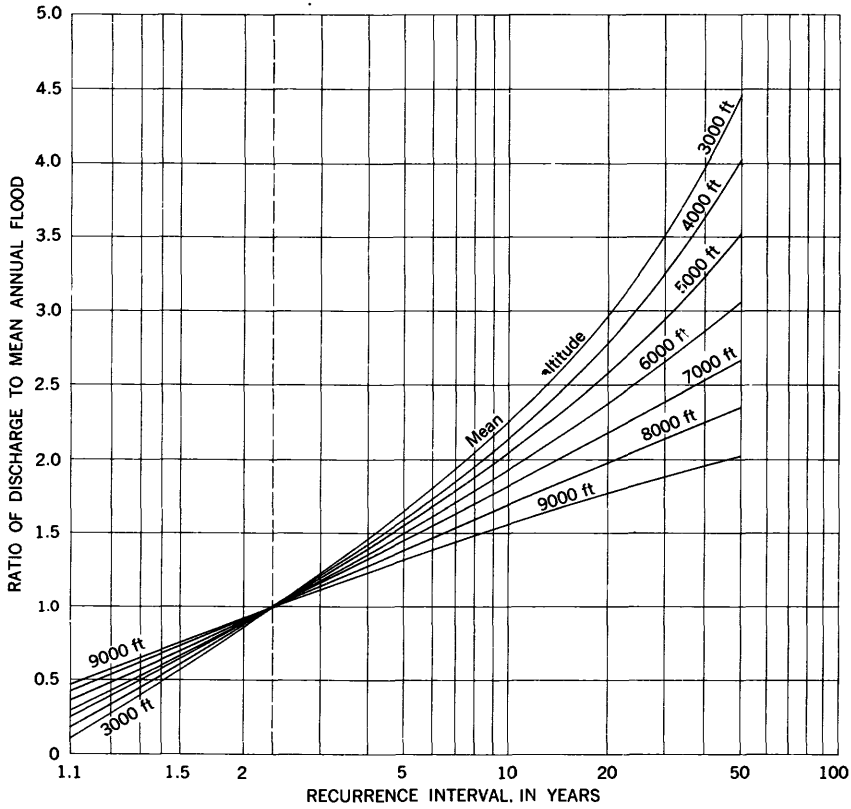

FIGURE 5.—Composite frequency curves, region C.

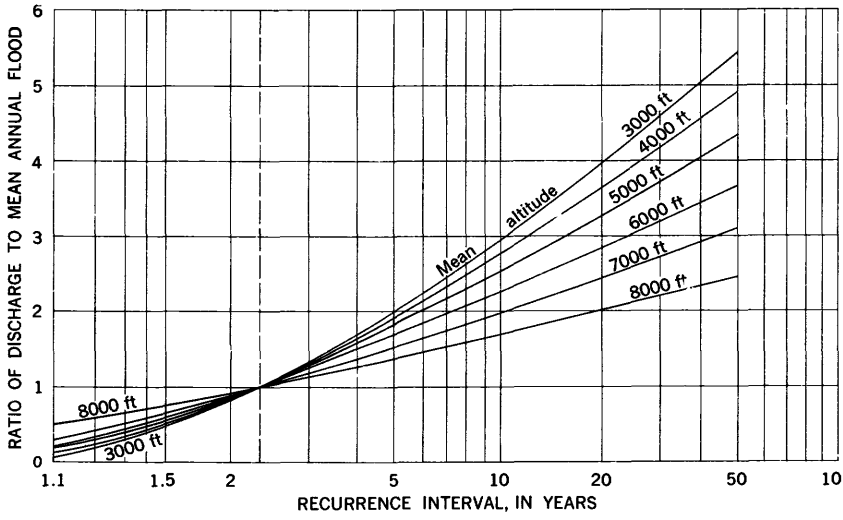

FIGURE 6.—Composite frequency curves, region D.

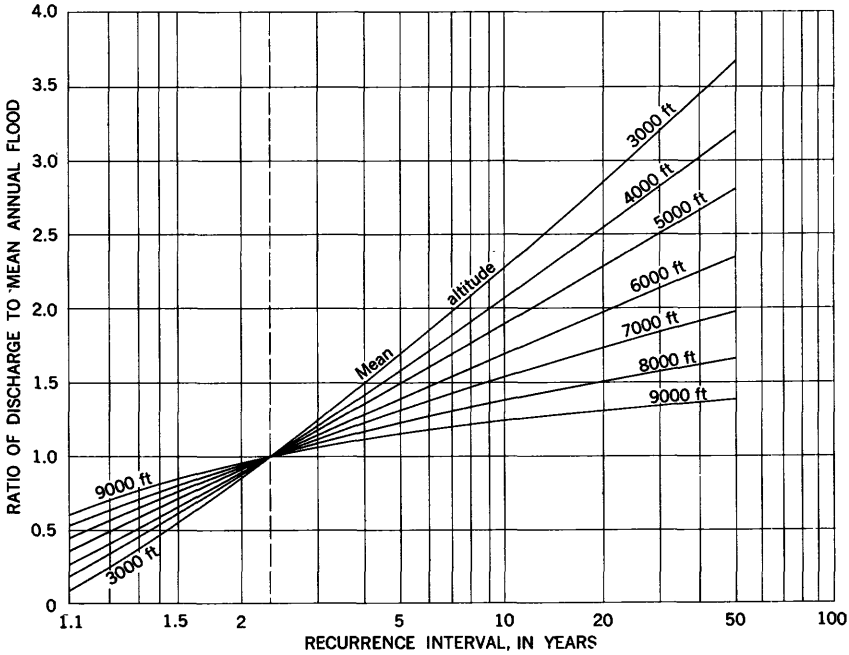

FIGURE 7.—Composite frequency curves, region E.

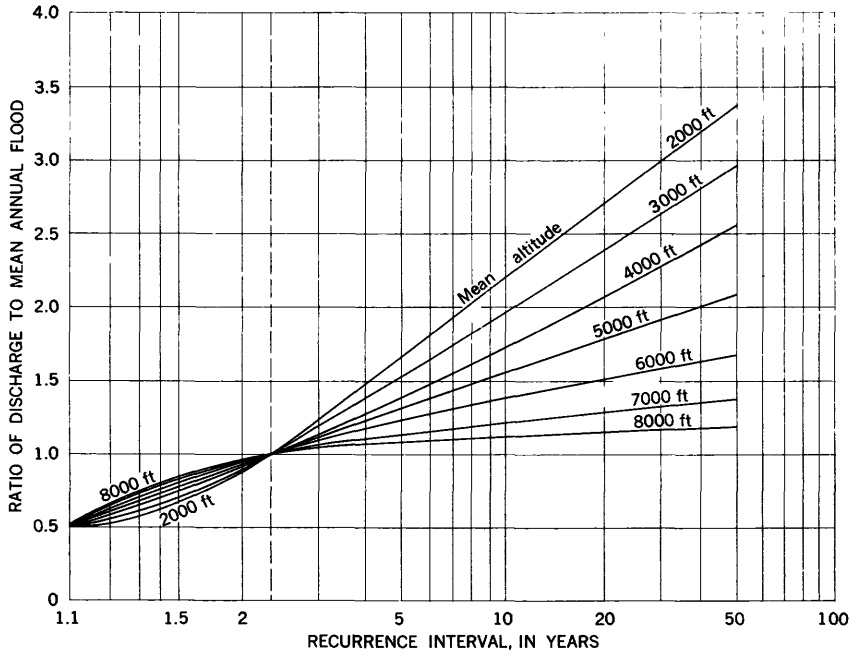

FIGURE 8.—Composite frequency curves, region F.

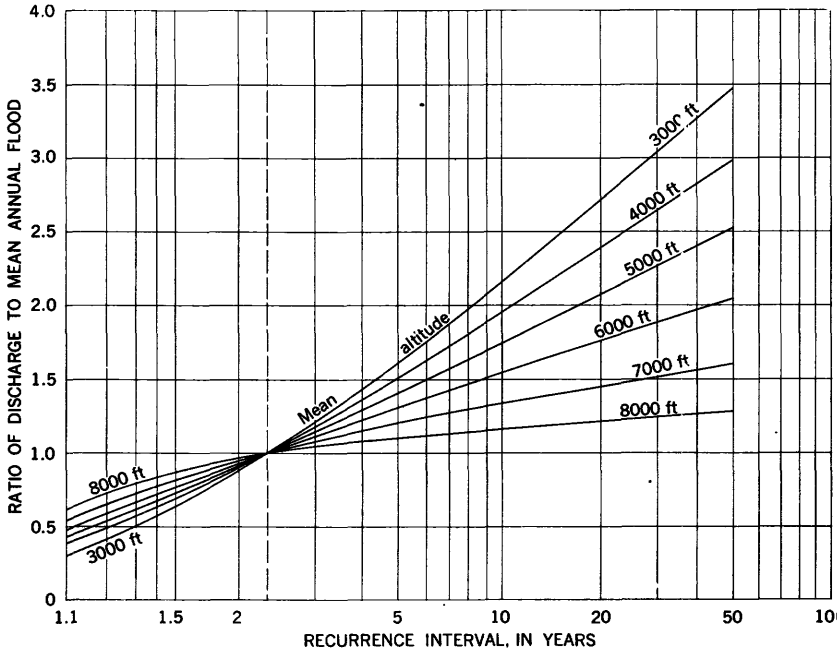

FIGURE 9.—Composite frequency curves, region G.

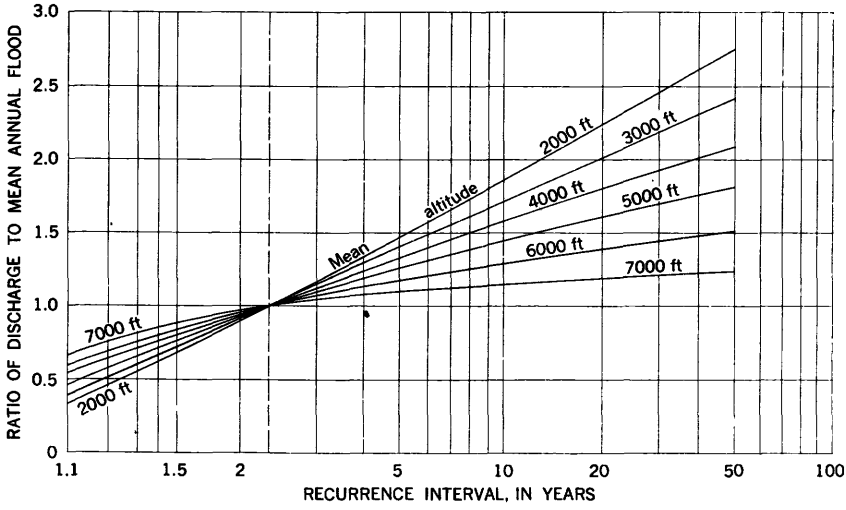

FIGURE 10.—Composite frequency curves, region H.

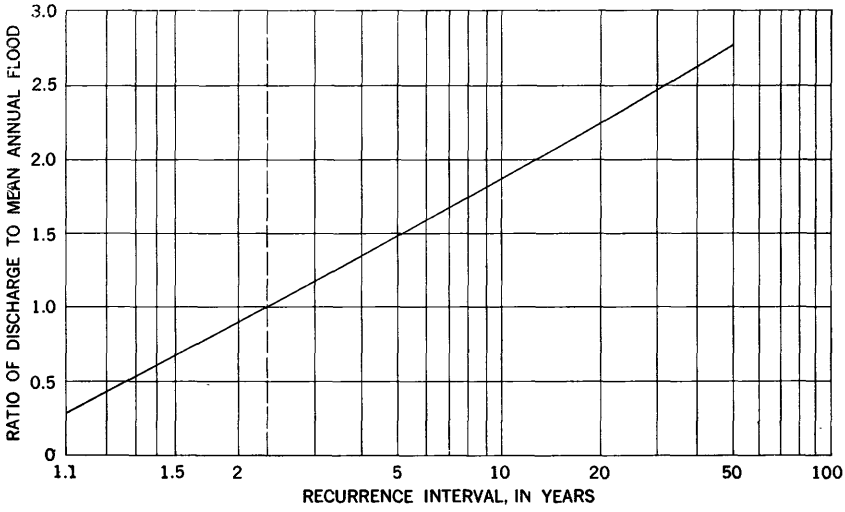

FIGURE 11.—Composite frequency curve, region I.

EFFECT OF ALTITUDE

The variation of flood ratios with altitude is of basic importance in the determination of flood discharge at ungaged sites in the Snake River basin because of the extreme variation in altitude found. The heavy accumulated snowpack in the higher altitude basins causes runoff at relatively high rates and in similar patterns each year. The results are a high mean annual flood, a low ratio of 50-year flood to mean annual flood, and a flat frequency curve. The lower altitude basins may have no accumulation of snow during some winters, in which event the annual flood will be low in unit discharge. Occasionally the annual flood will be caused by rain on snow and result in a relatively high unit discharge. Therefore, frequency curves for the lower altitude basins have steeper slopes than those for higher altitude basins. The paucity of streamflow records precludes adequate definition of the frequency relations for small basins in the lower altitudes.

LIMITATIONS

Records at gaging stations, especially on larger basins, do not necessarily reflect the flood ratios applicable to each small part of the basin above the gage. Such records may integrate flows from many types of small basins. Streamflow records available for small streams are inadequate to define all the variations in basin characteristics. In addition to small streams, certain other streams require special consideration. Floods on streams in several large areas in the Snake River basin, including those in the Henrys Fork–Fall River area,

Teton River basin, Salt River basin below Afton, Medicine Lodge–Birch Creek–Little Lost River area, Pahsimeroi-Lemhi area, Lower Big Lost River area, Big Wood River basin below Hailey, upper Snake River plains area, and others, are extremely affected by heavy seepage losses from tributaries and by the resulting return flow from large springs. The frequency curves for many of these streams have very flat slopes. As an extreme example, Birch Creek near Reno is almost completely regulated by natural influences, and the mean annual flood is only very slightly larger than the stream's average discharge. On such naturally regulated streams, a knowledge of their characteristics of flow is essential to the determination of a flood-frequency relation. Methods outlined here may not apply to all such streams. It is suggested that a special study be made to obtain flood-frequency information for a stream where flow characteristics are known to vary materially from the regional patern.

Consideration must always be given to the effect on flood frequency caused by irrigation diversion and by regulation by reservoirs. Detailed discussion of this effect at all sites within the basin is outside the scope of this report. Flood-frequency curves for many streams below reservoirs and diversions can be made for regulated conditions using records published in the annual streamflow reports of the Geological Survey. Water districts and water companies have additional data. Flood-frequency relations cannot be adequately defined for streams significantly affected by regulation and diversions without a special study for each site under consideration. Furthermore, the works of man are continually changing in most areas.

DERIVATION OF MEAN ANNUAL FLOOD

Once one has the flood-frequency curve for any site on any stream in the basin, it next becomes necessary to determine the mean annual flood for any site on any stream in the basin by relating it to some measurable property or properties.

EFFECT OF DRAINAGE BASIN CHARACTERISTICS

The scatter of the plot of mean annual flood against drainage area for the gaging-station records analyzed in this report shows that size of drainage basin, while important, is by no means the only variable of consequence. If it were possible to divide the Snake River basin into areas of equal accumulated snowpack or equal annual precipitation, drainage area within those segregated areas would be considerably more significant. The precipitation index map (pl. 2) demonstrates the complexity of patterns of precipitation within the basin. The mean annual floods as computed from gaging stations vary

from about 0.2 cfs per sq mi (cubic feet per second per square mile) to about 27 cfs per sq mi. Variation of discharge from place to place in the Snake River basin is at least as complex as the pattern of annual precipitation shown on the precipitation index map, which is admittedly over-simplified. Many high-yielding snow fields have not been gaged. Also, large parts of the Snake River plains and other valley areas rarely, if ever, produce any runoff; and, as mentioned above, discharge in agricultural flatland areas is poorly defined, as it is confounded by diversion effects.

Because drainage area alone does not define the mean annual flood adequately, a study of the relationships of other measurable variables was made to explain the large residuals of variations in the correlation of drainage area versus mean annual flood. It is very difficult to determine all the different flood-producing characteristics of all areas of the Snake River basin. Because of the heterogeneous nature of the basin, most streams travel in their courses through many different hydrologic conditions. In the instance of the mean annual flood as in the instance of the flood-frequency relationship, all small subbasins within a gaged basin do not necessarily have the same characteristics as the records collected at the gaging station indicate. Records for small streams have not been sufficient to give adequate coverage.

ALTITUDE

Considering the Snake River basin as a whole, only a small part of the variation in mean annual flood can be attributed to altitude. A mean curve was drawn through the plot of drainage area versus mean annual flood. For each gaging station, deviation from the mean curve was plotted against the mean altitude of the basin. No significant trend was evident. It is well known that the precipitation at a given altitude in the Clearwater basin, for example, which faces the winds from the Pacific Coast after they have passed through the Columbia Gorge and over only relatively low mountains, is many times greater than that at the same altitude farther south and east, where the winds have passed over several high mountain ranges after leaving the ocean.

LOCATION

The geographic location of any subbasin determines to a high degree the water supply available for runoff. All measurable parameters are affected by the distance between the area in question and the ocean, the tortuosity of the path of the moisture-carrying winds, the distance toward the ocean from the previous uplift, and the location of the basin with respect to the center of the prevailing storm pattern.

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PRECIPITATION AND RUNOFF

Study of correlations using several basin characteristics and considering location indicated that either precipitation or runoff was probably the most significant variable to use in conjunction with drainage area to estimate the mean annual flood at ungaged sites. Runoff based on gaging-station records would have been a useful parameter, but much more usable information was available from which to drawn a preciptation index map. Precipitation records were spot data. Available runoff data, however, did not necessarily define the extremes of runoff or the runoff from any particular area within the gaged basin under the variable conditions found in most of the Snake River basin.

PRECIPITATION INDEX MAP

Isohyetal maps of normal precipitation for the Snake River basin have been prepared previously by the U.S. Weather Bureau and the U.S. Army Corps of Engineers. New topographic maps have since become available; and more weather records, snow surveys, and runoff data have been collected.

A new isohyetal map was prepared to show the variation of precipitation over the whole basin (pl. 2). The authors believe that, for the purposes of this report, their map is superior to those previously prepared. Data from snow-survey courses and stream-gaging stations were used in addition to the precipitation records from Weather Bureau stations. Precipitation records were adjusted to a common base period, 1931–52, and short-term streamflow records were adjusted to the same period. After completing the precipitation index map, the mean annual rainfall was determined therefrom for each of the basins above the gaging stations analyzed in this report.

MEAN ANNUAL FLOOD FORMULA AND GEOGRAPHIC FACTOR

The residuals from a graphic correlation of drainage area against mean annual flood were plotted against the values for the mean annual precipitation as the next step in a multiple correlation. This plot showed that precipitation is a highly significant parameter. However, there still remained considerable scatter in the plot after correcting for the precipitation effect. Residuals for stations in given geographic locations with similar basin characteristics tended to group together, indicating the strong influence of various undefinable basin characteristics on the mean annual flood. These characteristics include geologic effects of soil and rock types, area-altitude distribution, retentiveness of vegetal cover, and exposure to sun and warm air masses. Other weather phenomena include probability of high intensities of rainfall, normal depths of snow cover, tendency to have

heavy rain on shallow snow cover, and many other peculiarities of the various zones within the basin that result from various combinations of the many effective features. It was not possible to define adequately all or even a few of these variables. A coefficient to integrate the effect of these variables, based on actual records, seemed to be the only reasonable approach.

The following formula for determining the mean annual flood was computed by mathematical multiple-correlation methods using drainage area and mean annual precipitation as independent variables for the stations listed in table 1:

$$Q=0.060\,A^{0.88}\,P^{1.58}$$

where

Q=mean annual flood, in cubic feet per second;
A=drainage area, in square miles; and
P=mean annual precipitation, in inches.

A geographic factor (G) was then computed from the formula for each gaging station used. The computed factors for individual gaging stations varied considerably. The whole Snake River basin was divided into geographic zones on the basis of groupings of these computed values (consideration being given to topography, geology and soil types, vegetal cover, and weather and runoff data), and a mean value was assigned to each zone. Plate 5 shows the geographic zone lines and the assigned values of the geographic factors. Because of the nature of geologic differences and the variations in other factors considered, these zone lines often could not be drawn reasonably along drainage-basin boundaries. Values of assigned factors varied from 350 to −10 percent as shown.

Percentage figures were used for geographic factors to obviate use of decimal points. The change of G from ratio to percent then makes the final formula to determine mean annual flood at ungaged sites as follows:

$Q=0.00060\,A^{0.88}\,P^{1.58}\,G$, where G is geographic factor, in percent.

The standard error of estimate was computed to be +17 percent and −15 percent on the basis of deviations between mean annual floods from recorded data and mean annual floods computed as outlined herein. Allowance was made for one lost degree of freedom for each parameter and for each different geographic factor shown in plate 5. This means that two-thirds of the computed values at gaging stations were within about 16 percent of the mean annual flood as recorded. The standard error is affected to a great extent by the geographic factor and the method of its derivation. The coefficient of determination for the formula was found to be 0.99 percent, meaning that 99 percent of the variation is accounted for by the formula.

APPLICATION OF FLOOD FORMULA

The magnitude of a flood for a given recurrence interval at an ungaged site in the Snake River basin can be determined by the following procedure:

1. Determine the drainage area of the stream above the selected site.
2. Determine the mean altitude of the basin above the site.
3. Determine the mean annual precipitation over the basin using plate 2.
4. Determine the geographic factor from plate 5.
5. Compute the mean annual flood using the formula or the nomograph. See figure 12.
6. Using plate 4, find the frequency region or regions in which the basin is located, and, using figures 3 to 11, select the ratio corresponding to the mean altitude and the desired recurrence interval.
7. Multiply this ratio (step 6) by the mean annual flood (step 5) to obtain the desired flood magnitude.

Familiarity with suitable methods of deriving the several factors used in the formula and a knowledge of the limitations of their use will aid in the application of procedures outlined above.

METHOD OF OBTAINING BASIN CHARACTERISTICS

DRAINAGE AREA

Select the best topographic map available for the drainage basin being considered. Large areas of the Snake River basin are not yet mapped on Geological Survey topographic maps of the 7½-, 15-, or 30-minute series (scales 1:24,000; 1:62,500; or 1:125,000, respectively). However, good topographic maps on 1:250,000 scale by the Army Map Service or the Geological Survey are available for most of the basin and will soon be completed for the remainder. Maps of the whole basin are available on U.S. Army Strategic Maps, scale, 1:500,000, and on World Aeronautical Charts, scale 1:1,000,000. The larger scales are preferable because of detail.

Outline the drainage area on the map and measure it, in square miles, using a planimeter or a transparent grid overlay made to a convenient unit on the map scale. If a grid overlay is used, it is laid over the outlined basin, and the squares lying within the basin are counted and multiplied by the square miles in each grid.

MEAN ALTITUDE

Determine the mean altitude using the map on which the basin has been outlined for determination of the drainage area. This is best accomplished by using a transparent grid overlay made to map scale, although a planimeter may be used if time permits. If a grid is used,

it should be of such a scale that sufficient points are picked off to determine the altitude adequately. The grid is placed over the map of the drainage basin, and the altitude of each intersection of the grid is recorded on a tally sheet. The mean altitude is determined by adding the altitudes so recorded and dividing by the number of items.

MEAN ANNUAL PRECIPITATION

The mean annual precipitation is next determined by outlining the basin on the precipitation index map (pl. 2) and determining mean annual precipitation on the basin with a grid system in a manner similar to that recommended for determining mean altitude.

GEOGRAPHIC FACTOR

The geographic factor should be determined by outlining the basin on plate 5 and selecting the applicable factor. If a specific basin is in more than one geographic zone, a weighted geographic factor should be computed on an areal basis.

DETERMINATION OF THE MEAN ANNUAL FLOOD

The formula for the mean annual flood can be solved by the use of logarithms or with a slide rule.

A nomograph has been prepared for the formula for ease of application (fig. 12). The nomograph is largely self-explanatory. The mean annual flood can be determined in the following manner using the values determined above:

1. Plot the geographic factor on the nomograph line G.
2. Plot the drainage area on line A.
3. Draw a straight line between these two values on the nomograph and mark the point of intersection of this line on pivot line 1.
4. Plot the mean annual precipitation on line P.
5. Draw a straight line between this point on line P and the point previously determined on pivot line 1 and mark the point where it intersects the Q line. This point represents the mean annual discharge, in cubic feet per second.

FLOOD ESTIMATE AT SELECTED FREQUENCY

After the mean annual flood has been computed, the magnitude of the flood for the selected recurrence interval can be calculated. From figures 3–11, select the proper set of curves for the frequency region or regions in which the basin is located. Select the ratio corresponding to the mean altitude of the basin. If the basin is in more than one frequency region, this ratio should be weighted according to the percentage of the basin in each region. The ratio is then multiplied

by the mean annual flood to obtain the peak discharge that can be expected to be equaled or exceeded, on the average, once in the number

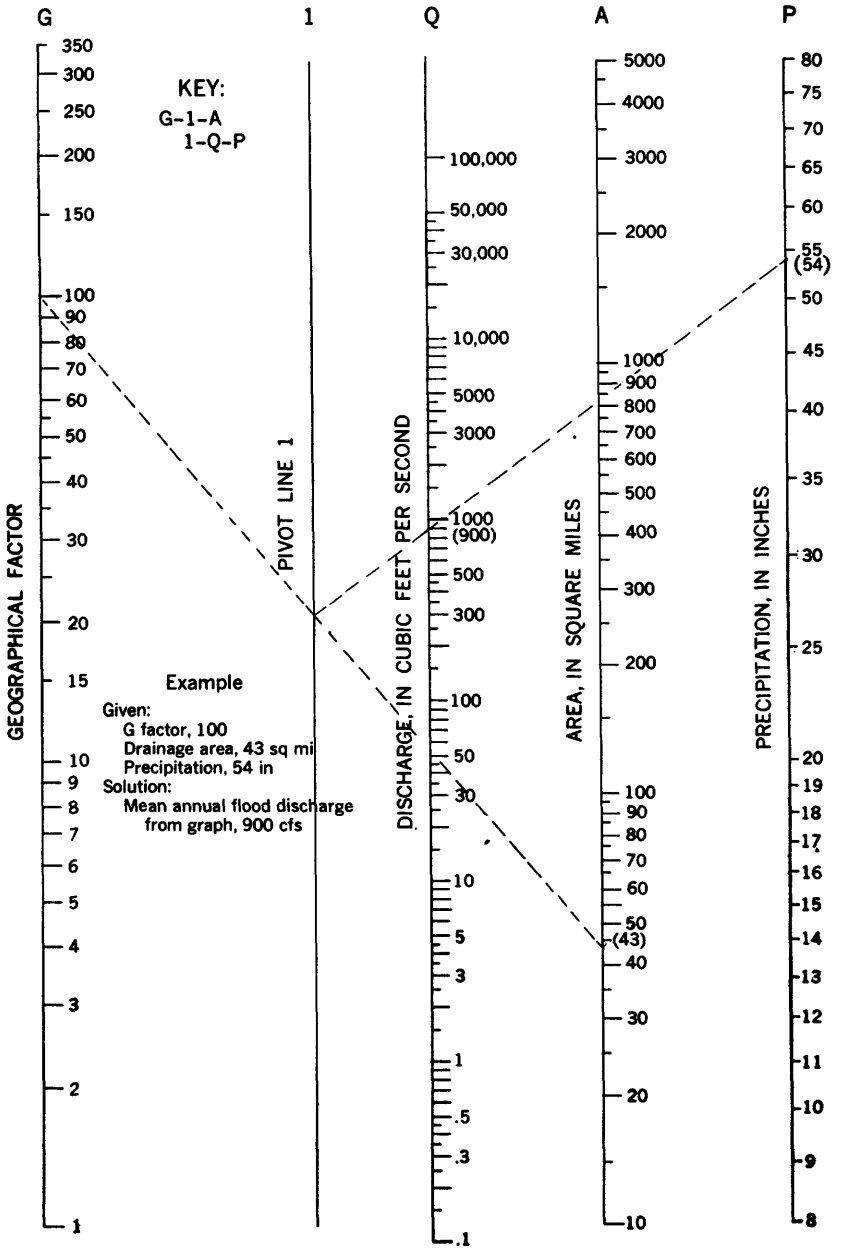

FIGURE 12.—Nomograph for computing mean annual flood for drainage areas of 10–5,000 square miles.

of years of the selected recurrence interval. Expressed as probability, the chance that this peak discharge will be equaled or exceeded in any 1 year is equal, in percent to 100 divided by the recurrence interval.

A complete frequency curve for any site can be made by selecting several well-distributed recurrence intervals, repeating the above process, and drawing a curve through the points when plotted on any kind of frequency paper.

LARGE DRAINAGE BASINS

To expedite determination of flood frequency for ungaged sites at large main-stem stations on the Snake, Salmon, Owyhee, and Clearwater Rivers, frequency curves for sites at several gaging stations on each of these streams are given in figures 13 and 14. Unless, or until,

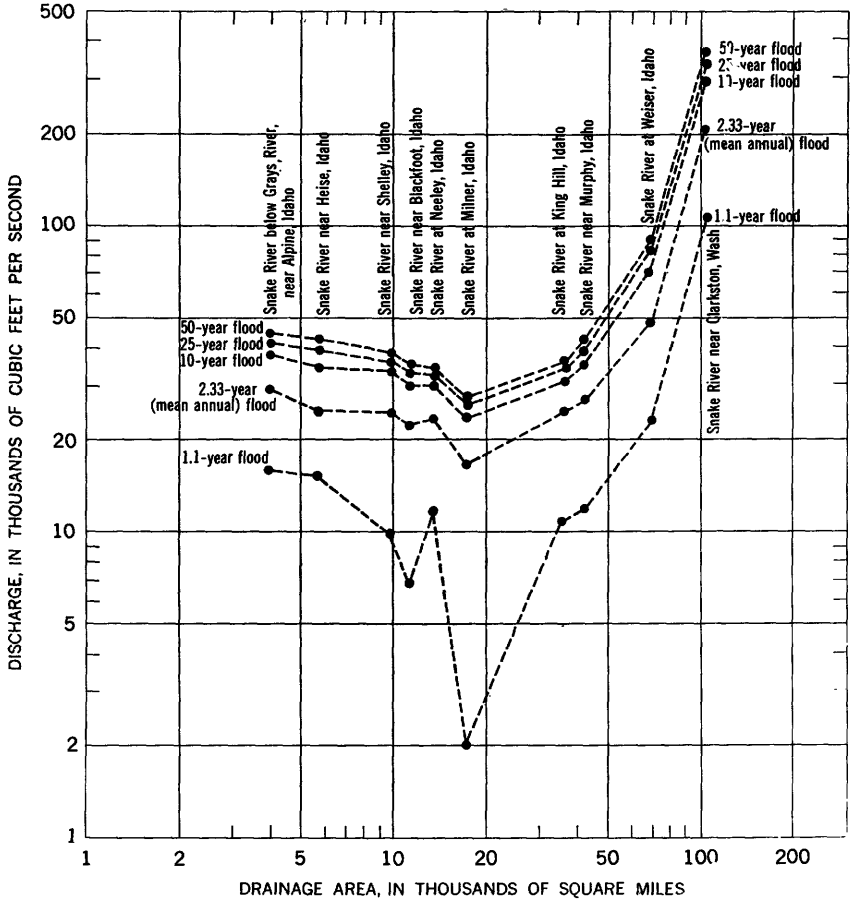

FIGURE 13.—Variation of 1.1-, 2.33-, 10-, 25-, and 50-year flood discharges with drainage area for selected main-stem sites on Snake River (not corrected for storage or diversion).

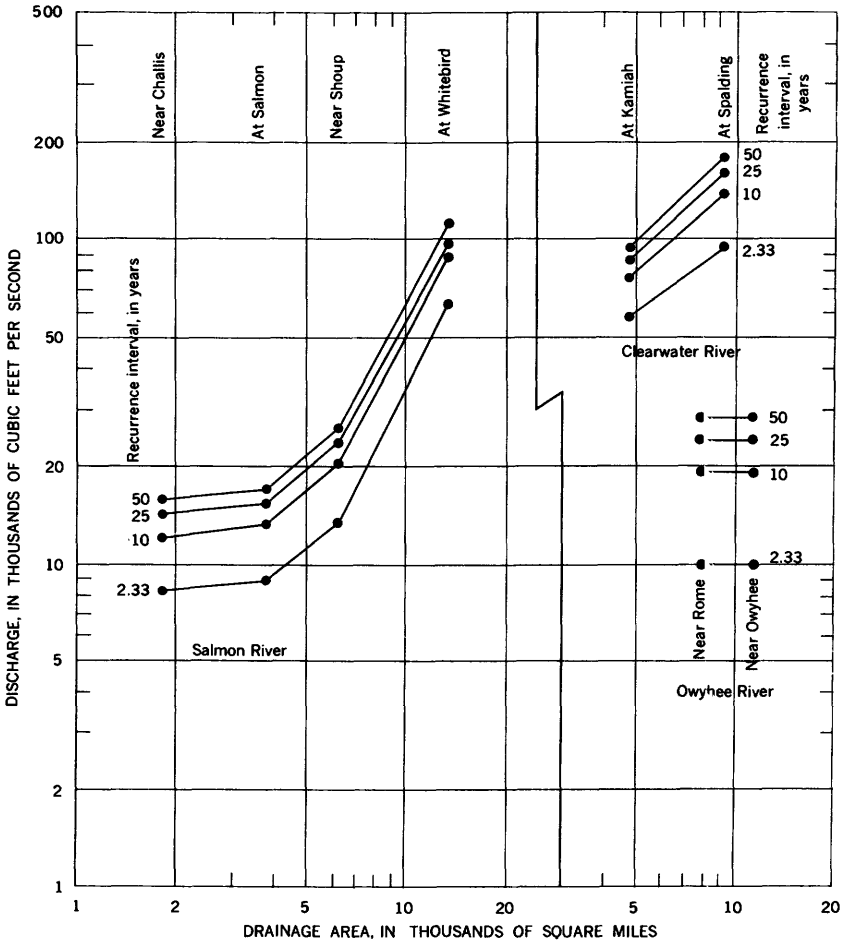

FIGURE 14.—Variation of 2-33-, 10-, 25-, and 50-year flood discharges with drainage area for main stems of Salmon, Clearwater, and Owyhee Rivers.

further affected by more works of man, these curves can be used for ungaged sites near the gaging stations by making proper allowance for differences in drainage area, entries of tributaries, intervening storage, if any, and on some streams, diversions.

To 1959, the Clearwater and Salmon Rivers are practically unaffected by diversion and storage. However, flood flows on the Snake River are much affected by diversion, regulation by impoundments in reservoirs, return flow, and other artificial controls of man. Palisades and Brownlee Dams have recently been completed, and their large reservoirs have added to this effect. No doubt, further construction and more use upstream will cause future changes. Because of the intense interest in flows in the Snake River, these data were

plotted to show floods actually recorded at these sites without correction for storage or diversion. Dotted lines were drawn in figure 13 between values at the various Snake River gaging stations only to connect points of equal frequency, because changes between sites occur at points of large diversions and storage and not gradually in the reach. Use of figure 13 for the Snake River at points other than those plotted requires current information on manmade controls.

This study indicates that the flood peaks for the Owyhee River increase very little, if any, below the station near Rome. See figure 14. Use of this curve below Owyhee Reservoir requires correction for storage and diversions. Occasionally, considerable flow is spilled past Owyhee Dam.

LIMITATIONS

Use of the formula and nomograph to determine the mean annual flood should not be extended to include drainage basins of less than about 10 square miles because of the paucity of information on drainage areas of such small size and because of the likelihood of extremely large variations in magnitude of floods from small basins.

Mean annual floods cannot be computed with accuracy by methods outlined here for any site on the Salmon River main stem below the mouth of the Pahsimeroi River nor for the Snake River main stem below the mouth of Greys River. Data for these streams and for the Clearwater and Owyhee River main stems are given in figures 13 and 14.

Special studies must be made on many streams that are affected by works of man such as storage reservoirs, diversions, and return flows from irrigation. Flow and storage data for most such streams in the basin are obtainable from annual streamflow reports of the Geological Survey. Many other streams are affected by large spring flows and high base flows and have little or no freshet or overland discharge. Such streams do not fit into the generalized analyses, and special consideration of their characteristics is necessary. Mean annual flood magnitudes for most other unregulated streams can be computed with reasonable accuracy.

The negative geographic factor used for a large zone in the Snake River plains indicates that the infiltration capacity is greater than the rainfall or snowmelt rate. The boundary of this area is not well defined. Very little or no surface flow is generated by storms or snowmelt within this zone, but much flow is diverted into the area by irrigation canals and laterals. A large part of the irrigation in the Snake River basin and much of the most productive irrigated land are located there. Flow through irrigation laterals, canals, wasteways, ditches, and original stream channels in this area is con-

siderable and varied, and flood frequency should not be computed by methods outlined here.

Information on maximum flows to be expected within the many irrigated regions of the Snake River basin and below the many storage reservoirs and large diversions can be determined from records in water-supply papers of the Geological Survey, watermasters' reports on file with the Idaho Department of Reclamation, and records of the U.S. Bureau of Reclamation and various irrigation districts and companies.

The user of this report should bear in mind that many small areas are not defined by sufficient data. Occasional thunderstorm-type floods occur in scattered areas, and flash floods from very small basins have occurred that far exceeded any magnitude computed by methods outlined above. Where there is potential loss of life or extreme property damage involved, consideration should be given to design to take care of these unusual events. Extrapolation of the data presented is not recommended.

The limitations in the use of this report can be removed only by the collection of more streamflow data, especially on small streams in different hydrologic regions in the basin. However, the procedures outlined here are more reliable than procedures based on coefficients and formulas evolved for other areas, where streamflow characteristics differ from those in the Snake River basin.

GAGING-STATION RECORDS

The data given are from original records in the files of the U.S. Geological Survey unless otherwise noted. The data were compiled under the general direction of Tate Dalrymple, chief, Floods Section, Surface Water Branch of the Water Resources Division, U.S. Geological Survey, Washington, D.C., and G. L. Bodhaine, northwest regional flood specialist stationed at Tacoma, Wash. Personnel of the district offices of the Surface Water Branch of the Geological Survey at Denver, Colo.; Idaho Falls, Idaho; Boise, Idaho; Portland, Oreg.; Tacoma, Wash.; and Salt Lake City, Utah, computed peak data under the general supervision of the respective district engineers. Considerable descriptive data accompanying the tables herein have been furnished by these districts. The report was compiled in the Boise district office under the supervision of T. R. Newell, district engineer, and his successor, W. I. Travis.

Stations are listed in the same downstream order used in the annual series of water-supply papers. Those for which the flow is significantly affected by works of man or is not representative of the regional pattern were not used in the analysis. Data are not listed for sta-

tions having less than 5 years of peak flow record. On the map (pl. 3), solid circles represent stations used in the analysis, and open circles represent stations not used.

Records of stage and measurements of discharge collected at gaging stations are the basic statistics from which the flood data are computed. In general, the records of stage were obtained from a graph made by a water-stage recorder or from direct observations by an observer on a nonrecording gage. Peak discharges are determined from the peak gage heights by using a stage-discharge relation defined by direct measurements with a current meter and sounding devices or, occasionally, by indirect methods using cross sections and profiles of high-water marks. For records computed from nonrecording gages, maximum observed gage heights rather than the maximums from graphs based on gage readings were used in most instances for the annual peaks. Most nonrecording gages were observed only once or twice daily; and the diurnal variation of discharge during periods of snowmelt, when most peaks occur, makes computation of a graph based on gage readings very difficult and uncertain. A footnote to the table or a note in the remarks paragraph of a gaging-station record indicates whether the discharge is maximum observed or from a graph based on gage readings.

Accompanying each table of peak stages and discharges is a description of the gaging station, including the location of the present gage or the most recent one with respect to principal features; drainage area, in square miles above the gage site; and mean altitude of the basin, if it has been determined; type of gage; datum of gage; history of changes of gage; adequacy of definition of the stage-discharge relation; bankfull stage, if determined; historical data when this information is accessible; remarks relating to diversions and regulation and their effect on flood flows; the base discharge for the partial-duration series of peaks; and other miscellaneous information that will aid in interpreting the data in the table.

Bankfull stage is the gage height at which the river overtops one or both of its banks in the vicinity of the gage and begins to inundate the surrounding land. It is also considered to be the stage at which flood damage begins. Minor flooding of unimportant lowlands is often not considered in arriving at bankfull stage. The mean altitude of the basin was found to be a measurable characteristic that has considerable effect on the runoff pattern and flood expectancy in Snake River basin. Readily attainable historical data are meager for the area covered by this report, because permanent settlements in the area did not antedate the beginning of records by many years. Considerable information might be found by research in old newspapers and

from other written accounts, but lack of funds and time precluded such a study for this report.

Annual peaks are given for each year of record. Peaks above a selected base are listed for all years when peaks were not significantly affected by works of man, and if the gage-height record was obtained from a recording gage or if accurate graphs could be drawn from the observed gage heights. In addition to the peak discharges above a base, peak stages that occurred during periods of ice effect are listed without the discharge if the discharge corresponding to the gage height under open-water conditions would have exceeded the base discharge. Peak discharges above the base seldom occur in the Snake River basin during periods of ice effect because the large change in altitude above the gage usually delays runoff until after the channels clear. The amount of backwater caused by ice cover or ice jams is not given, because in most instances the backwater, in feet, is so variable in streams in the Snake River basin that momentary backwater is not readily determinable.

Peaks are arranged by water years that end on September 30. Underlines in the tabular data have the following significance: A line under "water year" means a break in the record; a line beginning at the "date" column and extending through the "discharge" column means a change in the site and datum with no break in record; a line under "gage height" only means a change in datum; a line under the "date" and "discharge" columns only means a change in site and no change in datum; a line under all columns means a change in site and datum as well as a break in the record. No underlines are used for slight changes or if datums have been adjusted to a common base.

Flood data for the 82 gaging stations listed in table 2 are not tabulated because they had less than 5 years of annual-peak records. Canal data are not tabulated. Peaks for many streams were adjusted for diversions or storage change before being used in the analysis section of this report, but tabulated discharges are as recorded unless otherwise shown by footnotes.

MAXIMUM KNOWN FLOODS

Table 1.--Gaging-station data used in multiple correlations

No.	Gaging station	Station mean annual flood (cfs)	Drainage area (sq mi)	Mean altitude (feet)	Mean annual precipitation (inches)	Geographic factor†
	Snake River main stem					
100	Snake River at south boundary of Yellowstone National Park.	5,700	485	8,220	47	99
110	Snake River at Moran, Wyo.....	9,350	824	8,040	43	113
	Pacific Creek basin					
115	Pacific Creek near Moran, Wyo.....	2,300	160	8,160	40	130
	Buffalo Fork basin					
120	Buffalo Fork near Moran, Wyo.....	3,920	378	8,850	45	90
	Gros Ventre basin					
145	Gros Ventre River at Kelly, Wyo..	3,120	622	8,850	27	90
	Flat Creek basin					
180	Flat Creek near Jackson, Wyo.....	275	40.7	8,980	30	90
	Hoback River basin					
195	Hoback River near Jackson, Wyo....	3,610	564	8,000	32	90
	Greys River basin					
230	Greys River above reservoir, near Alpine, Wyo.	3,100	451	8,080	34	90
	Snake River main stem					
235	Snake River below Greys River, at Alpine, Idaho.	29,500	3,940	8,140	35	94
	Salt River basin					
240	Salt River near Smoot, Wyo.....	273	47.8	8,050	33	64
245	Cottonwood Creek near Smoot, Wyo..	268	26.3	8,560	41	74
250	Swift Creek near Afton, Wyo.....	470	27.4	8,400	59	70
270	Strawberry Creek near Bedford, Wyo.	298	21.3	8,470	58	57
285	Salt River at Wyoming-Idaho State line.	2,140	890	7,190	25	53
	McCoy Creek basin					
295	McCoy Creek above reservoir, near Alpine, Wyo.	855	108	6,960	29	100
	Bear Creek basin					
320	Bear Creek above reservoir, near Irwin, Wyo.	500	77.1	7,130	31	83
	Snake River main stem					
375	Snake River near Heise, Idaho.....	34,000	5,752	7,770	32	83
	Henrys Fork basin					
415	Sheridan Creek near Island Park, Idaho.	350	82.1	7,080	31	60
425	Henrys Fork near Island Park, Idaho	1,850	481	7,080	32	60
440	Henrys Fork at Warm River, Idaho..	2,500	656	6,860	30	63
445	Warm River at Warm River, Idaho...	425	178	6,830	28	70
455	Robinson Creek at Warm River, Idaho	680	129	6,450	34	70
460	Henrys Fork near Ashton, Idaho....	3,880	1,040	6,710	29	66
475	Fall River near Squirrel, Idaho...	3,600	351	7,520	52	77
495	Fall River near Chester, Idaho....	3,990	520	6,970	43	75
505	Henrys Fork at St. Anthony, Idaho.	7,500	1,770	6,670	32	69
510	Teton River near Victor, Idaho....	360	47.6	8,240	48	44
515	Teton Creek near Driggs, Idaho....	905	33.8	8,870	50	140
525	Horseshoe Creek near Driggs, Idaho	70	11.7	7,020	26	81
530	Packsaddle Creek near Tetonia, Idaho.	47	6.8	7,690	26	83
545	Canyon Creek near Newdale, Idaho..	367	68	7,000	24	100

† Weighted factor from pl. 5.

Table 1.--Gaging station data used in multiple correlations--Continued

No.	Gaging station	Station mean annual flood (cfs)	Drainage area (sq mi)	Mean altitude (feet)	Mean annual precipitation (inches)	Geographic factor†
	Blackfoot River basin					
630	Blackfoot River above reservoir, near Henry, Idaho.	900	360	6,940	22	67
635	Little Blackfoot River at Henry, Idaho.	120	34.6	6,600	18	87
	Portneuf River basin					
730	Portneuf River at Topaz, Idaho....	460	570	6,080	18	28
740	Birch Creek near Downey, Idaho....	39	3.5	6,830	18	100
755	Portneuf River at Pocatello, Idaho	700	1,250	5,850	17	27
	Raft River basin					
790	Clear Creek near Naf, Idaho.....	109	19	7,860	23	100
	Goose Creek basin					
825	Goose Creek above Trapper Creek, near Oakley, Idaho.	260	633	6,030	15	20
830	Trapper Creek near Oakley, Idaho..	57	53.7	6,360	24	19
920	Rock Creek near Rock Creek, Idaho.	245	80	6,330	26	52
	Salmon Falls Creek basin					
960	Salmon Falls Creek above upper Vineyard ditch, near Contact, Nev.	600	461	6,760	21	35
1050	Salmon Falls Creek near San Jacinto, Nev.	760	1,410	6,350	16	27
	Mud Lake basin					
1085	Camas Creek at Eighteenmile shearing corral, near Kilgore, Idaho.	720	237	6,970	33	40
1120	Camas Creek at Camas, Idaho.....	360	404	6,450	27	22
1130	Beaver Creek at Spencer, Idaho....	260	120	7,110	23	45
1135	Beaver Creek at Dubois, Idaho.....	245	220	6,760	22	27
1140	Beaver Creek at Camas, Idaho.....	105	510	6,190	17	12
	Big Lost River basin					
1200	Big Lost River at Wildhorse, near Chilly, Idaho.	680	114	8,540	24	105
1205	Big Lost River at Howells Ranch, near Chilly, Idaho.	2,200	448	8,590	24	105
1255	Surface inflow to Mackay Reservoir near Mackay, Idaho.	1,570	766	8,060	21	68
	Big Wood River basin					
1355	Big Wood River near Ketchum, Idaho	860	137	8,120	34	73
1365	Warm Springs Creek at Guyer Hot Springs, near Ketchum, Idaho.	450	96	7,560	38	50
1400	Combined discharge of Big Wood River and Big Slough at Hailey, Idaho.	2,450	640	7,620	30	66
1415	Camas Creek near Blaine, Idaho....	3,350	648	5,600	18	183
1480	Little Wood River at Campbell Ranch, near Carey, Idaho.	850	267	7,160	18	105
1490	Fish Creek above dam, near Carey, Idaho.	92	38	6,860	15	82
	Clover Creek basin					
1540	Clover Creek near Bliss, Idaho....	750	150	4,700	14	200
	Little Canyon Creek basin					
1555	Little Canyon Creek near Glenns Ferry, Idaho.	290	44.4	4,660	18	174
	Bennett Creek basin					
1565	Bennett Creek near Bennett, Idaho	97	21.3	5,240	22	87

† Weighted factor from pl. 5.

Table 1.--Gaging-station data used in multiple correlations--Continued

No.	Gaging station	Station mean annual flood (cfs)	Drainage area (sq mi)	Mean altitude (feet)	Mean annual precipitation (inches)	Geographic factor†
	Bruneau River basin					
1625	East Fork Jarbidge River near Three Creek, Idaho.	540	89	7,600	26	99
1685	Bruneau River near Hot Spring, Idaho.	2,010	2,630	5,600	13	53
1695	Wickahoney Creek near Bruneau, Idaho	220	253	5,150	12	55
1700	Jacks Creek near Bruneau, Idaho....	125	101	5,020	10	93
	Owyhee River basin					
1745	Owyhee River near Gold Creek, Nev..	820	209	6,720	12	200
1750	Owyhee River at Mountain City, Nev.	1,140	350	6,650	13	178
1760	Owyhee River above China Diversion dam, near Owyhee, Nev., less inflow above Wildhorse Dam.	800	249	6,520	16	143
1770	Jack Creek near Tuscarora, Nev.....	226	26	7,580	32	100
1780	Jordan Creek above Lone Tree Creek, near Jordan Valley, Oreg.	1,750	450	5,780	16	150
1810	Owyhee River near Rome, Oreg.....	10,100	8,000	5,500	12	111
1840	Owyhee River near Owyhee, Oreg.....	10,100	11,300	5,120	12	91
	Boise River basin					
1850	Boise River near Twin Springs, Idaho	7,400	830	6,350	31	150
1860	South Fork Boise River near Featherville, Idaho.	4,400	635	6,840	31	108
1865	Lime Creek near Bennett, Idaho.....	655	131	6,140	21	123
1870	Fall Creek near Anderson Ranch Dam, Idaho.	490	55.3	6,070	25	146
1910	South Fork Boise River near Lenox, Idaho.	5,620	1,090	6,270	27	113
1965	Bannock Creek near Idaho City, Idaho	15.5	5.75	5,240	26	50
2005	Robie Creek near Arrowrock, Idaho..	70	15.8	4,960	26	64
2010	Moore Creek near Arrowrock, Idaho..	2,200	426	4,960	26	92
2020	Boise River near Boise, Idaho.....	13,800	2,650	5,910	27	122
	Malheur River basin					
2140	Malheur River near Drewsey, Oreg...	2,350	910	4,900	16	100
2165	North Fork Malheur River above Agency Valley Reservoir, near Beulah, Oreg.	795	355	5,360	15	100
2205	Malheur River near Hope, Oreg., less the drainage above Warmsprings and Agency Valley Reservoirs.	2,600	1,490	4,210	12	100
2205	Malheur River near Hope, Oreg., less the drainage above Warmsprings Reservoir.	2,100	1,930	4,420	12	101
2270	Bully Creek near Vale, Oreg.....	1,550	570	4,150	12	160
2280	Malheur River at Vale, Oreg., less the drainage of Warmsprings and Agency Valley Reservoirs.	4,600	2,340	4,070	12	115
2280	Malheur River at Vale, Oreg., less the drainage of Warmsprings Reservoir.	2,570	2,780	4,240	12	114
2295	Willow Creek near Malheur, Oreg....	195	250	4,620	10	100
	Payette River basin					
2345	Clear Creek at Lowman, Idaho.....	600	59.6	6,340	38	100
2350	South Fork Payette River at Lowman, Idaho.	4,500	456	6,780	40	104
2365	Deadwood River below reservoir near Lowman, Idaho.	1,840	108	6,630	46	118
2370	Deadwood River near Lowman, Idaho, less the drainage above Deadwood Dam.	1,320	122	5,920	36	120
2375	South Fork Payette River near Garden Valley, Idaho.	7,600	779	6,400	39	108
2380	South Fork Payette River near Banks, Idaho.	9,850	1,200	6,020	37	112
2390	North Fork Payette River at McCall, Idaho.	3,000	144	6,520	40	200
2405	Lake Fork Payette River above reservoir, near McCall, Idaho.	1,600	54.6	6,950	45	200
2450	North Fork Payette River at Cascade, Idaho.	6,520	626	5,960	34	141
2460	North Fork Payette River near Banks, Idaho.	7,800	933	5,800	33	128

† Weighted factor from pl. 5.

Table 1.--Gaging-station data used in multiple correlations--Continued

No.	Gaging station	Station mean annual flood (cfs)	Drainage area (sq mi)	Mean altitude (feet)	Mean annual precipitation (inches)	Geographic factor†
	Payette River basin--Continued					
2470	Porter Creek near Gardena, Idaho..	116	17.3	4,800	26	100
2475	Payette River near Horseshoe Bend, Idaho.	17,800	2,230	5,850	35	118
	Weiser River basin					
2515	Weiser River at Tamarack, Idaho...	465	36.5	4,690	29	171
2525	East Fork Weiser River near Council, Idaho.	64.4	2.0	6,900	48	160
2535	Weiser River at Starkey, Idaho....	1,130	106	5,010	32	147
2545	Lost Creek near Tamarack, Idaho...	330	29.4	5,460	33	119
2550	West Fork Weiser River near Fruitvale, Idaho.	670	78	4,940	31	107
2555	Hornet Creek near Council, Idaho..	670	107	4,670	27	100
2560	Weiser River near Council, Idaho..	2,880	390	4,680	29	116
2570	Middle Fork Weiser River near Mesa, Idaho.	950	86.5	5,430	34	116
2575	Johnson Creek below Johnson Park, Idaho.	138	5	6,290	36	160
2585	Weiser River near Cambridge, Idaho	4,440	605	4,650	28	121
2595	Rush Creek at Cambridge, Idaho....	334	32	5,070	28	148
2600	Pine Creek near Cambridge, Idaho..	285	54	4,730	30	71
2610	Little Weiser River near Indian Valley, Idaho.	745	81.9	5,300	31	112
2635	Weiser River above Crane Creek, near Weiser, Idaho.	8,300	1,160	4,280	25	187
2655	Crane Creek at mouth, near Weiser, Idaho, less runoff above Crane Creek Reservoir.	950	46	3,340	18	350
2670	Mann Creek near Weiser, Idaho.....	445	56	4,860	22	160
	Snake River main stem					
2690	Snake River at Weiser, Idaho ‡....	48,200	69,200	5,400	-	-
	Powder River basin					
2755	Powder River near Baker, Oreg.....	780	219	5,170	21	90
2840	Wolf Creek near North Powder, Oreg.	275	32.9	5,080	20	190
	Imnaha River basin					
2910	Imnaha River above Gumboot Creek, Oreg.	1,670	98	6,400	52	87
2920	Imnaha River at Imnaha, Oreg.....	2,800	640	5,690	33	64
	Salmon River basin					
2925	Salmon River near Obsidian, Idaho.	580	94.7	8,140	35	68
2930	Alturas Lake Creek near Obsidian, Idaho.	530	35.7	8,110	37	128
2950	Valley Creek at Stanley, Idaho....	1,050	147	7,400	29	111
2955	Salmon River below Valley Creek, at Stanley, Idaho.	3,430	501	7,800	30	105
2960	Yankee Fork Salmon River near Clayton, Idaho.	1,900	195	7,980	30	160
2965	Salmon River below Yankee Fork, near Clayton, Idaho.	5,800	802	7,790	29	121
2980	East Fork Salmon River near Clayton, Idaho.	2,130	536	8,100	18	142
2985	Salmon River near Challis, Idaho..	8,400	1,800	7,820	23	134
2990	Challis Creek near Challis, Idaho.	278	85	7,830	31	45
3025	Salmon River at Salmon, Idaho.....	9,000	3,760	7,380	20	88
3060	North Fork Salmon River at North Fork, Idaho.	645	214	6,220	24	66
3065	Panther Creek near Shoup, Idaho...	1,600	529	7,030	24	75
3070	Salmon River near Shoup, Idaho....	13,600	6,270	7,140	19	77
3085	Middle Fork Salmon River near Cape Horn, Idaho.	1,800	138	7,370	35	160
3090	Bear Valley Creek near Cape Horn, Idaho.	2,400	180	7,040	45	100
3095	Middle Fork Salmon River near Meyers Cove, Idaho.	13,700	2,020	7,180	28	150
3100	Big Creek near Big Creek, Idaho...	3,600	470	7,000	29	133
3105	South Fork Salmon River near Knox, Idaho.	1,130	92	6,630	49	100

† Weighted factor from pl. 5.
‡ This main stem Snake River station not used to compute formula but included here for comparative purposes.

Table 1.--Gaging-station data used in multiple correlations--Continued

No.	Gaging station	Station mean annual flood (cfs)	Drainage area (sq mi)	Mean altitude (feet)	Mean annual precipitation (inches)	Geographic factor†
	Salmon River basin--Continued					
3110	East Fork South Fork Salmon River at Stibnite, Idaho.	250	19.5	7,780	36	120
3115	East Fork South Fork Salmon River near Stibnite, Idaho.	500	42.5	7,640	35	120
3120	East Fork South Fork Salmon River near Yellow Pine, Idaho.	1,210	104	7,420	36	120
3125	Johnson Creek near Landmark ranger station, Idaho.	1,000	54.7	7,210	53	113
3130	Johnson Creek at Yellow Pine, Idaho	3,320	213	7,170	39	148
3135	Secesh River near Burgdorf, Idaho.	1,410	104	6,840	34	160
3140	South Fork Salmon River near Warren, Idaho.	13,900	1,160	6,710	37	153
3145	Warren Creek near Warren, Idaho...	435	40.6	6,960	27	160
3155	Mud Creek near Tamarack, Idaho....	213	15.8	4,660	24	200
3160	Boulder Creek near Tamarack, Idaho	184	6.5	6,330	38	200
3165	Little Salmon River near Riggins, Idaho.	5,600	576	5,430	27	186
3170	Salmon River at White Bird, Idaho.	65,000	13,550	6,720	24	117
	Grande Ronde River basin					
3185	Grande Ronde River near Hilgard, Oreg.	2,300	505	4,800	19	154
3190	Grande Ronde River at LaGrande, Oreg.	3,400	680	4,640	20	154
3200	Catherine Creek near Union, Oreg..	840	105	5,320	28	120
3230	Indian Creek near Imbler, Oreg.....	466	22	5,630	37	190
3250	East Fork Wallowa River near Joseph, Oreg.	109	10	7,890	55	60
3255	Wallowa River above Wallowa Lake, near Joseph, Oreg.	900	43	7,520	54	90
3295	Hurricane Creek near Joseph, Oreg.	562	31	7,460	56	90
3300	Lostine River near Lostine, Oreg..	1,600	70	6,820	48	133
3305	Bear Creek near Wallowa, Oreg.....	960	68	5,810	40	120
3330	Grande Ronde River at Troy, Oreg..	16,800	3,275	4,460	26	135
	Asotin Creek basin					
3345	Asotin Creek near Asotin, Wash....	340	156	3,760	28	40
	Clearwater River basin					
3365	Selway River near Lowell, Idaho...	28,700	1,910	5,640	40	190
3370	Lochsa River near Lowell, Idaho...	21,000	1,180	5,250	45	190
3375	South Fork Clearwater River near Elk City, Idaho.	1,670	261	5,150	32	100
3380	South Fork Clearwater River near Grangeville, Idaho.	5,500	865	5,160	30	100
3390	Clearwater River at Kamiah, Idaho.	59,000	4,850	5,010	37	165
3405	North Fork Clearwater River at Bungalow ranger station, Idaho..	16,800	996	4,930	49	140
3410	North Fork Clearwater River near Ahsahka, Idaho.	33,800	2,440	4,220	45	140
3415	Potlatch Creek at Kendrick, Idaho.	6,220	425	2,980	29	250
3420	Mission Creek near Winchester, Idaho.	154	16	4,410	27	130
3425	Clearwater River at Spalding, Idaho.	98,000	9,570	4,360	39	158
	Snake River main stem					
3435	Snake River near Clarkston, Wash. ‡	209,000	103,200	5,280	-	-
3435	Snake River near Clarkston, Wash., less the drainage of Snake River at Weiser, Idaho. ‡	168,000	34,000	5,040	-	-
	Tucannon River basin					
3440	Tucannon River near Pomeroy, Wash.	665	160	4,040	36	40

† Weighted factor from pl. 5.
‡ This main stem Snake River station not used to compute formula but included here for comparative purposes.

Table 1.--Gaging-station data used in multiple correlations--Continued

No.	Gaging station	Station mean annual flood (cfs)	Drainage area (sq mi)	Mean altitude (feet)	Mean annual precipitation (inches)	Geographic factor†
	Palouse River basin					
3465	South Fork Palouse River near Pullman, Wash.	630	84.4	2,810	22	194
3480	South Fork Palouse River at Pullman, Wash.	1,430	132	2,770	22	214
3485	Missouri Flat Creek at Pullman, Wash.	500	27.1	2,670	22	250
3490	Fourmile Creek at Shawnee, Wash...	940	71.6	2,640	22	250
3510	Palouse River at Hooper, Wash.....	10,500	2,540	2,410	20	147

† Weighted factor from pl. 5.

Table 2.--List of short-term stations used to assist in delineating geographic factors and in defining mean annual flood at ungaged sites

Station	Drainage area (sq mi)	Station	Drainage area (sq mi)
Spread Creek near Elk, Wyo.....	101	Sucker Creek near Homedale, Idaho.	342
Horse Creek near Cheney, Wyo.....	37.9	Grouse Creek near Arrowrock, Idaho	8
Fall Creek near Cheney, Wyo.....	46.8	Moore Creek above Granite Creek, near Idaho City, Idaho.	37
Dog Creek near Cheney, Wyo.....	14.1	Granite Creek near Idaho City, Idaho.	14.3
Cabin Creek near Cheney, Wyo.....	8.8	Moore Creek above Thorn Creek, near Idaho City, Idaho.	119
Bailey Creek near Alpine, Wyo.....	15.9	Cottonwood Gulch near Boise, Idaho	16
Wolf Creek near Alpine, Wyo.....	13.2	Spring Valley Creek near Eagle, Idaho.	20.9
Crow Creek near Fairview, Wyo.....	114	Dry Creek near Eagle, Idaho.....	59.4
Stump Creek near Auburn, Wyo.....	103	North Fork Malheur River at Beulah, Oreg.	440
Indian Creek near Blowout, Idaho..	41.8	Deadwood River near Bernard, Idaho	10.4
Elk Creek near Irwin, Idaho.....	62.1	Harris Creek near Horseshoe Bend, Idaho.	74.6
Palisades Creek near Irwin, Idaho.	60.8	Cottonwood Creek near Ola, Idaho..	29.6
Fall Creek near Swan Valley, Idaho	77.6	Little Squaw Creek near Ola, Idaho	75.3
Rainy Creek near Swan Valley, Idaho	56.3	Squaw Creek near Sweet, Idaho.....	341
Pine Creek near Swan Valley, Idaho	63.2	Willow Creek near New Plymouth, Idaho.	138
Burns Creek near Chokecherry, Idaho	21.1	Little Willow Creek near New Plymouth, Idaho.	157
Buffalo River near Island Park, Idaho.	36.7	Crane Creek above Crane Creek Reservoir, near Midvale, Idaho.	120
Teton River near Tetonia, Idaho...	471	Hog Creek near Midvale, Idaho.....	25
Grays Lake Outlet near Herman Idaho.	147	Milk Creek near Midvale, Idaho....	10
Meadow Creek near Henry, Idaho....	75.2	South Fork Crane Creek near Midvale, Idaho.	52
Portneuf River above reservoir, near Chesterfield, Idaho.	68.0	Burnt River near Hereford, Oreg...	309
Topons Creek near Chesterfield, Idaho.	45.7	Pine Creek near Baker, Oreg.....	8.8
Pebble Creek near Pebble, Idaho...	27.2	Big Creek near Medical Springs, Oreg.	35.5
Marsh Creek near McCammon, Idaho..	355	Goose Creek near Keating, Oreg....	41.9
Bannock Creek near Pocatello, Idaho	230	Eagle Creek near Baker, Oreg.....	4.2
Rock Creek near Rockland, Idaho...	182	Big Sheep Creek near Joseph, Oreg.	12.5
Shoshone Creek near San Jacinto, Nev.	309	Pahsimeroi River near Goldberg, Idaho.	65
Little Lost River near Clyde, Idaho	275	Big Creek near Patterson, Idaho...	66
Wet Creek at Clyde School, near Howe, Idaho.	199	Pahsimeroi River near May, Idaho..	845
Cedar Creek (below powerplant) near McKay, Idaho.	8.4	Texas Creek near Leadore, Idaho...	64
Antelope Creek near Darlington, Idaho.	210	Timber Creek near Leadore, Idaho..	57
King Hill Creek near King Hill, Idaho.	83.6	Eightmile Creek near Leadore, Idaho	20
Bruneau River near Rowland, Nev...	378	Lemhi River near Lemhi, Idaho.....	890
Sheep Creek near Tindall, Idaho...	180	Lemhi River at Salmon, Idaho.....	1,270
Marys Creek near Owyhee, Nev.....	27	Deer Creek near Winchester, Idaho.	19.1
Marys Creek at Tindall, Idaho.....	110	Meadow Creek near Starkey, Idaho..	160
Louse Creek near Wickahoney, Idaho	76	Joseph Creek at Chico, Oreg.....	280
East Fork Bruneau River near Three Creek, Idaho.	62	Warm Springs Creek near Lowell, Idaho.	74.7
Three Creek near Three Creek, Idaho	45	Fish Creek near Lowell, Idaho.....	89.2
Cherry Creek near Three Creek, Idaho.	22	Paradise Creek near Pullman, Wash.	34.5
Deadwood Creek near Three Creek, Idaho.	22		
East Fork Bruneau River near Hot Spring, Idaho.	620		

Table 3.--Inventory of data for gaging stations used to define regional flood-frequency relations

No.	Gaging station	Flood region	Drainage area (sq mi)	Period of known floods (water years)	Areal $Q_{2.33}$ (cfs)	Maximum stage and discharge				
						Date	Gage height (feet)	Discharge		Ratio to areal $Q_{2.33}$
								Cfs	Cfs per sq mi	
	Snake River main stem									
100	Snake River at south boundary of Yellowstone National Park.	B	485	1914-15, 1919-25	6,010	June 20, 1925	7.24	6,450	13.3	1.07
110	Snake River at Moran, Wyo.....	B	824	1894-1960 1904-60	a9,510	June 1894	-	(b)	-	-
						June 12, 1918	10.41	15,100	18.3	1.59
	Pacific Creek basin									
115	Pacific Creek near Moran, Wyo.....	B	160	1918,1945-60	2,310	May 28, 1951	5.60	-	-	-
						May 21, 1954	-	3,470	21.7	1.50
	Buffalo Fork basin									
120	Buffalo Fork near Moran, Wyo.....	B	378	1918,1945-60	4,100	June 27, 1954	6.71	5,960	15.8	1.45
	Gros Ventre basin									
145	Gros Ventre River at Kelly, Wyo.....	B	622	1900-60	2,830	May 18, 1927	-	(c)	-	-
						June 16, 1918	9.95	6,220	10.0	2.20
	Flat Creek basin									
180	Flat Creek near Jackson, Wyo.....	B	40.7	1933-41	304	June 15, 1935	3.48	438	10.8	1.44
	Hoback River basin									
195	Hoback River near Jackson, Wyo.....	B	564	1918,1945-58	3,410	June 16, 1918	13.46	6,160	10.9	1.81
	Greys River basin									
230	Greys River above reservoir, near Alpine, Wyo.	B	451	1918,1937-38, 1953-60	3,070	June 14, 1918	4.85	5,200	11.5	1.69
	Snake River main stem									
235	Snake River below Greys River, at Alpine, Idaho.	B	3,940	1945-54	a,d29,500	June 28, 1954	9.69	28,200	7.16	0.96
	Salt River basin									
240	Salt River near Smoot, Wyo.....	B	47.8	1933-57	289	June 7, 1957	3.83	460	9.62	1.59
245	Cottonwood Creek near Smoot, Wyo.....	B	26.3	1933-57	279	June 2, 1956	-	438	16.7	1.57
						June 10, 1957	4.12	-	-	-
250	Swift Creek near Afton, Wyo.....	B	27.4	1943-60	486	June 30, 1957	3.52	775	28.3	1.59
270	Strawberry Creek near Bedford, Wyo.....	B	21.3	1932-43	308	June 27, 1943	4.51	396	18.6	1.29
285	Salt River at Wyoming-Idaho State line.....	A,B	890	1934-60	2,030	May 6, 1936	4.64	3,520	3.96	1.73

				McCoy Creek basin						
295	McCoy Creek above reservoir, near Alpine, Wyo.	A	108	1917-18,1934, 1953-60	755	Apr. 21, 1956	5.72	1,130	10.5	1.50
				Bear Creek basin						
320	Bear Creek above reservoir, near Irwin, Wyo.	A	77.1	1936,1953-60	518	May 5, 1936	3.70	784	10.2	1.51
				Snake River main stem						
375	Snake River near Heise, Idaho.....	A,B	5,752	1894-1960 1911-60	a,d34,000	June 1894 May 19, 1927	- 16.0	(e) f60,000	- 10.4	- 1.76
				Henrys Fork basin						
415	Sheridan Creek near Island Park, Idaho.....	B	82.1	1935-40	396	May 31, 1938	3.94	447	5.44	1.13
425	Henrys Fork near Island Park, Idaho.....	B	481	1933-60	a1,970	Apr. 26, 1946	6.15	2,770	5.75	1.41
440	Henrys Fork at Warm River, Idaho.....	B	656	1911-14, 1918-52	a2,460	May 18, 1927 Apr. 27, 1946	- 7.80	3,540 -	5.40 -	1.44 -
445	Warm River at Warm River, Idaho.....	B	178	1912-14, 1918-32	776	June 2, 1912	1.94	900	5.06	1.16
455	Robinson Creek at Warm River, Idaho.....	B	129	1912-14, 1918-32	795	May 28, 1912	4.30	1,140	8.84	1.43
460	Henrys Fork near Ashton, Idaho.....	B	1,040	1890-91, 1903-9, 1920-60	a3,660	May 7, 1925	3.11	6,220	5.98	1.70
475	Fall River near Squirrel, Idaho.....	B	351	1905-9, 1918-60	a4,130	June 27, 1927	6.25	6,440	18.3	1.56
495	Fall River near Chester, Idaho.....	B	520	1920-60	a4,210	June 27, 1927	6.60	6,380	12.3	1.52
505	Henrys Fork at St. Anthony, Idaho.....	B	1,770	1919-60	a7,130	May 8, 1925	6.78	9,030	5.10	1.27
510	Teton River near Victor, Idaho.....	B	47.6	1947-52	358	June 7, 1952	3.64	445	9.35	1.24
515	Teton Creek near Driggs, Idaho.....	B	33.8	1946-52	900	June 6, 1952	3.94	1,030	30.5	1.14
525	Horseshoe Creek near Driggs, Idaho.....	B	11.7	1947-52	73	May 23, 1950 May 3, 1952	4.16 -	- 81	- 6.92	- 1.11
530	Packsaddle Creek near Tetonia, Idaho.....	B	6.8	1946-50	46	May 19, 1949	2.30	58	8.53	1.26
545	Canyon Creek near Newdale, Idaho.....	B	68	1920-22, 1924-25,1939	373	May 21, 1925	4.70	457	6.72	1.23
				Blackfoot River basin						
630	Blackfoot River above reservoir, near Henry, Idaho.	A	360	1914-25	944	May 16, 1917	6.85	2,060	5.72	2.18
635	Little Blackfoot River at Henry, Idaho.....	A	34.6	1914-25	114	Apr. 19, 1914	3.5	292	8.44	2.56
				Portneuf River basin						
730	Portneuf River at Topaz, Idaho.....	A,B	570	1913-14, 1920-60	430	Feb. 25, 1957	5.71	1,040	1.82	2.42
740	Birch Creek near Downey, Idaho.....	A	3.5	1912,1914, 1938-49	17	July 15, 1938	-	95	27.1	5.59
755	Portneuf River at Pocatello, Idaho.....	A,B	1,250	1897-99, 1912-60	757	(g)	-	(g)	(g)	2.48

See footnotes at end of table.

Table 3.--Inventory of data for gaging stations used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region	Drainage area (sq mi)	Period of known floods (water years)	Areal $Q_{2.33}$ (cfs)	Maximum stage and discharge				
						Date	Gage height (feet)	Discharge		Ratio to areal $Q_{2.33}$
								Cfs	Cfs per sq mi	
	Raft River basin									
790	Clear Creek near Naf, Idaho.....	B	19	1910,1945-60	113	May 25, 1958	2.12	220	11.6	1.95
	Goose Creek basin									
825	Goose Creek above Trapper Creek, near Oakley, Idaho.	B,C	633	1912-16, 1919-60	253	Jan. 23 or Feb.24,1943	7.6	1,670	2.64	6.60
830	Trapper Creek near Oakley, Idaho.....	B,C	53.7	1911-16, 1919-60	57	Aug. 17, 1941	6.99	h270	5.03	4.74
	Rock Creek basin									
920	Rock Creek near Rock Creek, Idaho.....	B	80	1910-13,1939, 1944-60	254	May 21, 1912	10.4	429	5.36	1.69
	Salmon Falls Creek basin									
960	Salmon Falls Creek above upper Vineyard ditch, near Contact, Nev.	C	461	1949-60	569	May 4, 1952	4.82	1,170	2.54	2.06
1050	Salmon Falls Creek near San Jacinto, Nev....	C	1,410	1910-16, 1920-60	764	Feb. 24, 1943	10.2 to 11.4	2,060 to 2,420	1.46 to 1.72	2.70 to 3.17
	Mud Lake basin									
1085	Camas Creek at Eighteenmile shearing corral, near Kilgore, Idaho.	D	237	1921-23, 1921-27, 1930,1937-53	740	May 2 or 3, 1952	7.51	2,030	8.57	2.74
1120	Camas Creek at Camas, Idaho.....	D	404	1921-60	474	May 2 or 3, 1952	6.53	1,220	3.02	2.57
1130	Beaver Creek at Spencer, Idaho.....	D	120	1939-52	259	Apr. 27, 1952	7.5	549	4.58	2.12
1135	Beaver Creek at Dubois, Idaho.....	D	220	1921-60	247	Apr. 7, 1930	4.77	858	3.90	3.47
1140	Beaver Creek at Camas, Idaho.....	D	510	1921-60	153	Apr. 28, 1952	3.48	186	.365	1.22
	Big Lost River basin									
1200	Big Lost River at Wild Horse, near Chilly, Idaho.	A	114	1944-60	617	May 24, 1956	6.18	1,270	11.1	2.06
1205	Big Lost River at Howell Ranch, near Chilly, Idaho.	A	448	1904-6,1908-9, 1911,1920-60	2,060	June 26, 1954	6.00	3,960	8.84	1.92
1255	Surface inflow to Mackay Reservoir near Mackay, Idaho.	A	766	1919-59	1,730	June 12, 1921	-	2,760	3.60	1.60

Big Wood River basin										
1355	Big Wood River near Ketchum, Idaho.....	A	137	1948-60	874	May 24, 1956	6.44	1,620	11.8	1.85
1365	Warm Springs Creek at Guyer Hot Springs, near Ketchum, Idaho.	A	96	1920-21, 1941-58	522	May 21, 1958	4.18	961	10.0	1.84
1400	Combined discharge of Big Wood River and Big Wood Slough at Hailey, Idaho.	A	640	1916-60	2,520	May 28, 1958	-	4,800	7.50	1.90
1415	Camas Creek near Blaine, Idaho.....	D	648	1916,1924-25, 1927-28, 1930-60	3,150	Apr. 18, 1938 Apr. 8, 1943	15.48 -	- 9,780	- 15.1	- 3.10
1480	Little Wood River at Campbell Ranch, near Carey, Idaho.	D	267	1920-26, 1941-42, 1944-60	828	Dec. 22, 1955	6.34	3,110	11.6	3.76
1490	Fish Creek above dam, near Carey, Idaho.....	D	38	1921-22, 1927-28,1930, 1933,1935,1938	87	May 1, 1938	1.94	167	4.39	1.92
Clover Creek basin										
1540	Clover Creek near Bliss, Idaho.....	E	150	1939-43, 1958-60	638	Mar. 7, 1960	7.57	2,700	18.0	4.23
Little Canyon Creek basin										
1555	Little Canyon Creek near Glenns Ferry, Idaho.	E	44.4	1911-12, 1939-43,1956	283	Dec. 23, 1955	5.99	900	20.3	3.18
Bennett Creek basin										
1565	Bennett Creek near Bennett, Idaho.....	E	21.3	1939-45	102	Apr. 2, 1943	6.05	204	9.58	2.00
Bruneau River basin										
1625	East Fork Jarbidge River near Three Creek, Idaho.	C	89	1929-32, 1954-60	531	June 5, 1957	5.11	614	6.90	1.16
1685	Bruneau River near Hot Spring, Idaho.....	C	2,630	1910-14, 1944-60	1,870	Mar. 1, 1910	13.0	6,500	2.47	3.48
1695	Wickahoney Creek near Bruneau, Idaho.....	D	253	1939-49	218	Jan. 22, 1943	12.4	2,100	8.30	9.63
1700	Jacks Creek near Bruneau, Idaho.....	D	101	1939-49	123	Jan. 21, 1943	7.2	908	8.99	7.38
Owyhee River basin										
1745	Owyhee River near Gold Creek, Nev.....	C	209	1916-18, 1920-37	670	May 5, 1922	10.11	1,810	8.66	2.70
1750	Owyhee River at Mountain City, Nev.....	C	350	1913,1927-37	1,070	Apr. 20, 1936	7.6	1,830	5.23	1.71
1760	Owyhee River above China Diversion dam, near Owyhee, Nev., less inflow above Wildhorse Dam.	C	249	1939-60	880	May 3 or 4, 1952	-	1,550	6.22	1.76
1770	Jack Creek near Tuscarora, Nev.....	C	26	1914-25	252	May 14, 1917	3.6	465	17.9	1.85
1780	Jordan Creek above Lone Tree Creek, near Jordan Valley, Oreg.	E	450	1946-52, 1955-60	1,550	Apr. 14, 1952	5.57	3,250	7.22	2.10
1810	Owyhee River near Rome, Oreg.....	C,E	8,000	1883-1960	d10,100	Apr. 14, 1952	15.60	27,800	3.48	2.75

See footnotes at end of table.

Table 3.--Inventory of data for gaging stations used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region	Drainage area (sq mi)	Period of known floods (water years)	Areal $Q_{2.33}$ (cfs)	Maximum stage and discharge				
						Date	Gage height (feet)	Discharge		Ratio to areal $Q_{2.33}$
								Cfs	Cfs per sq mi	
	Owyhee River basin--Continued									
1840	Owyhee River near Owyhee, Oreg.....	C,E	11,300	1890-93,1895-96, 1904-16,1922-27, 1929-32	d10,100	Mar. 2, 1910	12.9	29,000	2.57	2.87
	Boise River basin									
1850	Boise River near Twin Springs, Idaho.....	F	830	1911-60	7,580	Feb. 3, 1956	9.59	-	-	-
						May 24, 1956	-	11,200	13.5	1.48
1860	South Fork Boise River near Featherville, Idaho.	A,E	635	1945-60	4,310	May 24, 1956	8.62	7,580	11.9	1.76
1865	Lime Creek near Bennett, Idaho.....	A	131	1946-56	661	Apr. 19, 1946, Apr. 27, 1952	-	1,180	9.01	1.79
						Feb. 15, 1949	8.02	-	-	-
1870	Fall Creek near Anderson Ranch Dam, Idaho...	E	55.3	1945-56	484	Apr. 27, 1952	6.25	948	17.1	1.96
1910	South Fork Boise River near Lenox, Idaho....	A,E	1,090	1911-47	5,830	Apr. 17, 1943	10.05	9,550	8.76	1.64
1965	Bannock Creek near Idaho City, Idaho.....	E	5.75	1939-41, 1951-60	24	Feb. 6, 1952	2.03	-	-	-
						May 12, 1958	-	34	5.91	1.42
2005	Robie Creek near Arrowrock, Idaho.....	E	15.8	1951-60	75	Dec. 23, 1955	2.67	163	10.3	2.17
2010	Moore Creek near Arrowrock, Idaho.....	E	426	1916-60	1,960	Apr. 8, 1943	7.1	6,610	15.5	3.37
2020	Boise River near Boise, Idaho.....	A,E,F	2,650	1895-1960	a13,800	June 14, 1896	10.0	35,500	13.4	2.57
	Malheur River basin									
2140	Malheur River near Drewsey, Oreg.....	C	910	1922,1927-29, 1931-60	1,930	Feb. 24, 1957	13.20	10,700	11.8	5.54
2165	North Fork Malheur River above Agency Valley Reservoir, near Beulah, Oreg.	E	355	1914,1937-38, 1940-60	760	Feb. 24, 1957	3.50	1,600	4.51	2.11
2205	Malheur River near Hope, Oreg., less the drainage above Warmsprings and Agency Valley Reservoirs.	C	1,490	1919-60	1,890	Feb. 24, 1957	11.5	12,300	8.26	6.51
2205	Malheur River near Hope, Oreg., less the drainage above Warmsprings Reservoir.	C,E	1,930	1914-60	2,390	Feb. 24, 1957	-	(j)	-	-
2270	Bully Creek near Vale, Oreg.....	C	570	1904-6,1910-17, 1922-23,1934, 1938-60	1,360	Feb. 24, 1957	10.5	8,980	15.8	6.60
2280	Malheur River at Vale, Oreg., less the drainage of Warmsprings and Agency Valley Reservoirs.	C	2,340	1904-60	3,230	Feb. 24, 1957	-	20,800	8.89	6.44
2280	Malheur River at Vale, Oreg., less the drainage of Warmsprings Reservoir.	C,E	2,780	1904-60	3,720	Feb. 24, 1957	-	(k)	-	-
2295	Willow Creek near Malheur, Oreg.....	C	250	1912-15, 1921-27	294	Mar. 17, 1921	-	310	1.24	1.05

				Payette River basin						
2345	Clear Creek at Lowman, Idaho.....	G	59.6	1941-48	686	Jan.9,10, 1942	6.10	-	-	-
						May 31, 1943	-	754	12.7	1.10
2350	South Fork Payette River at Lowman, Idaho...	G	456	1941-60	4,640	May 24, 1956	7.45	7,050	15.5	1.52
2365	Deadwood River below reservoir near Lowman, Idaho.	E,G	108	1927-60	a1,850	May 23, 1956	-	a2,730	25.3	1.48
2370	Deadwood River near Lowman, Idaho, less the drainage above Deadwood Dam.	F,G	122	1931-52	1,420	May 1, 1938	-	1,740	14.3	1.23
2375	South Fork Payette River near Garden Valley, Idaho.	E,F,G	779	1921-60	a7,410	May 24, 1956	-	a12,500	16.0	1.69
2380	South Fork Payette River near Banks, Idaho..	E,F,G	1,200	1922-60	a10,300	May 24, 1956	-	a15,900	13.2	1.54
2390	North Fork Payette River at McCall, Idaho...	F,G	144	1909-17, 1920-60	3,230	June 10, 1933, June 4, 1948	-	4,260	29.6	1.32
						June 4, 1948	7.71	-	-	-
2405	Lake Fork Payette River above reservoir, near McCall, Idaho.	F,G	54.6	1926-45	1,660	June 9, 1933	7.9	m2,520	46.2	1.52
2450	North Fork Payette River at Cascade, Idaho..	F,G	626	1913-16,1920-24, 1941-47	6,430	May 20, 1921	-	n8,960	14.3	1.39
2460	North Fork Payette River near Banks, Idaho..	F,G	933	1942-47	7,910	June 3, 1943	-	p9,380	10.1	1.19
2470	Porter Creek near Gardena, Idaho.....	F	17.3	1939-45	127	Aug. 11, 1941	3.58	181	10.5	1.43
2475	Payette River near Horseshoe Bend, Idaho....	E,F,G	2,230	1906-16, 1920-47	a17,200	June 9, 1921	9.57	22,100	9.91	1.28
				Weiser River basin						
2515	Weiser River at Tamarack, Idaho.....	F	36.5	1937-60	497	Dec. 22, 1955	7.17	1,320	36.2	2.66
2525	East Fork Weiser River near Council, Idaho..	G	2.0	1933-35	80	June 9, 1933	4.11	-	-	-
				1937-42		June 16, 1938	-	77	38.5	.96
2535	Weiser River at Starkey, Idaho.....	F,G	106	1939-49, 1956	1,280	Dec. 22, 1955	6.62	2,800	26.4	2.19
2545	Lost Creek near Tamarack, Idaho.....	F	29.4	1925,1938-39, 1942-44,1946-50, 1952-60	q351	Apr. 27, 1952	3.58	q585	19.9	1.67
2550	West Fork Weiser River near Fruitvale, Idaho.	F	78	1921,1942-43, 1945-49	q674	Mar. 31, 1940	3.79	q1,170	15.0	1.74
2555	Hornet Creek near Council, Idaho.....	F	107	1940-43, 1956	669	Dec. 22, 1955	-	2,090	19.5	3.12
2560	Weiser River near Council, Idaho.....	F,G	390	1937-53, 1956	2,710	May 16 or 17, 1938	7.6	6,700	17.2	2.47
2570	Middle Fork Weiser River near Mesa, Idaho...	G	86.5	1911-13,1920-21, 1937-49,1956	927	Dec. 22, 1955	-	1,710	19.8	1.84
2575	Johnson Creek below Johnson Park, Idaho.....	F	5	1941-49	114	June 3, 1948	3.35	222	44.4	1.95
2585	Weiser River near Cambridge, Idaho.....	F,G	605	1939-60	3,940	Dec. 22, 1955	13.9	10,100	16.7	2.56
2595	Rush Creek at Cambridge, Idaho.....	F	32	1938-43, 1956	363	Mar. 16, 1938	6.07	582	18.2	1.60
2600	Pine Creek near Cambridge, Idaho.....	F	54	1939-41, 1943-50	307	Feb. 25, 1958	4.5	850	15.7	2.77
2610	Little Weiser River near Indian Valley, Idaho.	G	81.9	1923-27, 1938-60	737	Feb. 4, 1925	-	1,840	22.5	2.50
2635	Weiser River above Crane Creek, near Weiser, Idaho.	F,G	1,160	1921-23, 1925-52	9,030	Mar. 19, 1932	10.8	16,900	14.6	1.87

See footnotes at end of table.

Table 3.--Inventory of data for gaging stations used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region	Drainage area (sq mi)	Period of known floods (water years)	Areal $Q_{2.33}$ (cfs)	Maximum stage and discharge				
						Date	Gage height (feet)	Discharge		Ratio to areal $Q_{2.33}$
								Cfs	Cfs per sq mi	
	Weiser River basin--Continued									
2655	Crane Creek at mouth, near Weiser, Idaho, less runoff above Crane Creek Reservoir.	F	46	1925-60	587	Feb. 26, 1957		2,260	49.1	3.85
2670	Mann Creek near Weiser, Idaho.....	F	56	1911-13, 1937-60	438	Mar. 27, 1940	5.45	1,540	27.5	3.52
	Powder River basin									
2755	Powder River near Baker, Oreg.....	H	219	1904-14, 1927-60	760	Mar. 20, 1910	7.05	1,820	8.31	2.39
2840	Wolf Creek near North Powder, Oreg.....	H	32.9	1947-53	280	May 23, 1948	4.46	433	13.2	1.55
	Imnaha River basin									
2910	Imnaha River above Gumboot Creek, Oreg.....	G	98	1945-53	1,520	May 27, 1948	5.07	2,400	24.5	1.58
2920	Imnaha River at Imnaha, Oreg.....	A,G	640	1929-60	2,840	May 19, 1957	6.80	6,650	10.4	2.34
	Salmon River basin									
2925	Salmon River near Obsidian, Idaho.....	A	94.7	1941-52	616	(r)	5.50	-	-	-
						May 29, 1952	-	721	7.61	1.17
2930	Alturas Lake Creek near Obsidian, Idaho.....	A	35.7	1941-52	536	June 9, 1948	5.41	-	-	-
						June 7, 1952	-	633	17.7	1.18
2950	Valley Creek at Stanley, Idaho.....	E	147	1911-13, 1921-60	1,100	May 24, 1956	3.92	2,000	13.6	1.82
2955	Salmon River below Valley Creek, at Stanley, Idaho.	A,E	501	1926-60	3,230	May 27, 1956	4.62	5,070	10.1	1.57
2960	Yankee Fork Salmon River near Clayton, Idaho.	E	195	1921-48	2,140	June 12, 1921	6.79	3,360	17.2	1.57
2965	Salmon River below Yankee Fork, near Clayton, Idaho.	A,E	802	1922-60	5,340	May 24, 1956	11.60	10,300	12.8	1.93
2980	East Fork Salmon River near Clayton, Idaho..	A	536	1929-38	2,070	June 6, 1938	5.0	3,580	6.68	1.73
2985	Salmon River near Challis, Idaho.....	A,E	1,800	1929-60	8,340	May 25, 1956	10.95	15,400	8.56	1.85
2990	Challis Creek near Challis, Idaho.....	A	85	1944-60	308	May 24, 1956	3.30	-	-	-
						June 1, 1956	-	508	5.98	1.66
3025	Salmon River at Salmon, Idaho.....	A,E	3,760	1912-16, 1920-60	9,000	Jan. 8, 1942	9.62	-	-	-
						May 25, 1956	-	16,500	4.39	1.83
3060	North Fork Salmon River at North Fork, Idaho	G	214	1930-39	675	June 13, 1933	4.40	901	4.21	1.33
3065	Panther Creek near Shoup, Idaho.....	E	529	1945-60	1,700	Jan. 6, 1947	4.4	-	-	-
						May 25, 1956	-	2,740	5.18	1.61
3070	Salmon River near Shoup, Idaho.....	A,E,G	6,270	1945-60	13,600	May 26, 1956	13.00	24,900	3.97	1.83
3085	Middle Fork Salmon River near Cape Horn, Idaho.	E	138	1929-60	2,020	May 24, 1956	6.96	2,980	21.6	1.48
3090	Bear Valley Creek near Cape Horn, Idaho.....	E,G	180	1923-60	2,370	May 27, 1956	5.87	3,860	21.4	1.63

3095	Middle Fork Salmon River near Meyers Cove, Idaho.	E,G	2,020	1932-39	14,100	June 10, 1933	8.10	17,000	8.42	1.21
3100	Big Creek near Big Creek, Idaho.....	E,G	470	1945-58	3,660	June 3, 1948	7.12	5,800	12.3	1.58
3105	South Fork Salmon River near Knox, Idaho....	G	92	1931-39, 1942-60	1,500	May 27, 1956	6.33	1,620	17.6	1.08
3110	East Fork South Fork Salmon River at Stibnite, Idaho.	E	19.5	1929-42	283	June 14, 1933	4.49	369	18.9	1.30
3115	East Fork South Fork Salmon River near Stibnite, Idaho.	E	42.5	1929-40	537	June 15, 1933	3.51	783	18.4	1.46
3120	East Fork South Fork Salmon River near Yellow Pine, Idaho.	E	104	1929-43	1,230	June 14, 1933	5.26	2,050	19.7	1.67
3125	Johnson Creek near Landmark ranger station, Idaho.	E	54.7	1943-49	1,220	May 27, 1948	5.95	1,510	27.6	1.24
3130	Johnson Creek at Yellow Pine, Idaho.....	E	213	1929-60	3,250	May 27, 1956	7.64	5,440	25.5	1.67
3135	Secesh River near Burgdorf, Idaho.....	E	104	1943-52	1,500	June 3, 1948	8.24	2,500	24.0	1.67
3140	South Fork Salmon River near Warren, Idaho..	E,G	1,160	1932-43, 1948	13,700	(s)	13.7	23,000	19.8	1.68
3145	Warren Creek near Warren, Idaho.....	E	40.6	1943-49	456	June 3, 1948	5.3	1,100	27.1	2.41
3155	Mud Creek near Tamarack, Idaho.....	G	15.8	1937-38,1946, 1948-59	206	Apr. 27, 1952 Feb. 27, 1957	- 6.29	395 -	25.0 -	1.92 -
3160	Boulder Creek near Tamarack, Idaho.....	G	6.5	1938-45	195	May 23, 1942	2.96	244	37.5	1.25
3165	Little Salmon River at Riggins, Idaho.....	F,G	576	1948,1951-54, 1957-60	5,480	June 1, 1948	-	9,200	16.0	1.68
3170	Salmon River at White Bird, Idaho.....	A,E,F,G	13,550	1894-1960	65,000	June 1894	37.5	120,000	8.86	1.85
				Grande Ronde River basin						
3185	Grande Ronde River near Hilgard, Oreg.....	F	505	1938-56	2,320	May 8, 1956	6.48	5,060	10.0	2.18
3190	Grande Ronde River at La Grande, Oreg.....	F	680	1904-9,1911-15, 1918-23,1926-60	3,270	Mar. 18, 1932	8.90	8,880	13.1	2.72
3200	Catherine Creek near Union, Oreg.....	H	105	1912,1918-19, 1926-60	837	May 27, 1948	4.57	1,740	16.6	2.08
3230	Indian Creek near Imbler, Oreg.....	H	22	1938-50	520	January 1947 May 27, 1948	4.09 -	- 818	- 37.2	- 1.57
3250	East Fork Wallowa River near Joseph, Oreg...	A	10	1925-60	153	July 25, 1937	-	450	45.0	2.94
3255	Wallowa River above Wallowa Lake, near Joseph, Oreg.	A	43	1924-33, 1937-38,1940	807	June 26, 1927	2.75	1,630	37.9	2.02
3295	Hurricane Creek near Joseph, Oreg.....	A	31	1915,1924-60	641	June 9, 1948 June 13, 1955	- 4.69	1,110 -	35.8 -	1.73 -
3300	Lostine River near Lostine, Oreg.....	G	70	1913,1926-60	1,520	May 27, 1913	6.60	2,540	36.3	1.67
3305	Bear Creek near Wallowa, Oreg.....	G	68	1915,1924-60	1,000	Apr. 22, 1936	3.82	1,620	23.8	1.62
3330	Grande Ronde River at Troy, Oreg.....	A,F,G,H	3,275	1945-60	17,300	Dec. 15, 1946	11.2	30,000	9.16	1.73
				Asotin Creek basin						
3345	Asotin Creek near Asotin, Wash.....	F	156	1904,1929-59	395	Apr. 15, 1904	4.3	1,180	7.56	2.99
				Clearwater River basin						
3365	Selway River near Lowell, Idaho.....	H	1,910	1930-60	29,900	May 29, 1948	16.04	48,900	25.6	1.64
3370	Lochsa River near Lowell, Idaho.....	H	1,180	1911-12,1930-60	23,500	June 10, 1933	13.44	34,800	29.5	1.48
3375	South Fork Clearwater River near Elk City, Idaho.	H	261	1945-60	1,920	May 29, 1948	13.06	3,700	14.2	1.93

See footnotes at end of table.

Table 3.--Inventory of data for gaging stations used to define regional flood-frequency relations--Continued

No.	Gaging station	Flood region	Drainage area (sq mi)	Period of known floods (water years)	Areal $Q_{2.33}$ (cfs)	Maximum stage and discharge				
						Date	Gage height (feet)	Discharge		Ratio to areal $Q_{2.33}$
								Cfs	Cfs per sq mi	
	Clearwater River basin--Continued									
3380	South Fork Clearwater River near Grangeville, Idaho.	H	865	1911-17,1923-60	4,970	May 30, 1917	13.6	15,000	17.3	3.02
3390	Clearwater River at Kamiah, Idaho.....	H	4,850	1911-60	59,000	May 29, 1948	19.22	99,000	20.4	1.68
3405	North Fork Clearwater River at Bungalow ranger station, Idaho.	H	996	1945-60	17,100	May 29, 1948	11.13	27,400	27.5	1.60
3410	North Fork Clearwater River near Ahsahka, Idaho.	H	2,440	1927-60	32,900	Dec. 23, 1933	35.5	100,000	41.0	3.04
3415	Potlatch River at Kendrick, Idaho.....	H	425	1946-60	6,300	Feb. 26, 1948	12.6	13,000	30.6	2.06
3420	Mission Creek near Winchester, Idaho.....	F	16	1941-45,1948	163	May 22, 1948	4.85	400	25.0	2.45
3425	Clearwater River at Spalding, Idaho.....	F,H,I	9,570	1894-1960	d98,000	Jan. 5, 1928	25.6	-	-	-
						May 29, 1948	23.76	177,000	18.5	1.81
	Tucannon River basin									
3440	Tucannon River near Pomeroy, Wash.....	F	160	1914-15,1925-30	601	Jan. 13, 1928	6.46	1,740	10.9	2.90
	Palouse River basin									
3465	South Fork Palouse River above Paradise Creek, near Pullman, Wash.	H,I	84.4	1935-40	762	Mar. 21, 1939	4.89	533	6.32	0.70
3480	South Fork Palouse River at Pullman, Wash...	H,I	132	1911-60	1,250	Feb. 26, 1948	9.5	t5,000	37.9	4.00
3485	Missouri Flat Creek at Pullman, Wash.....	H,I	27.1	1935-59	362	Feb. 26, 1948	6.3	1,500	55.4	4.14
3490	Fourmile Creek at Shawnee, Wash.....	H,I	71.6	1935-40,1959	850	Jan. 25, 1959	6.0	1,990	27.8	2.34
3510	Palouse River at Hooper, Wash.....	H,I	2,540	1898-99,1901-7 1909-16,1948, 1951-60	9,940	Mar. 2, 1910	22.0	29,800	11.7	3.00

a Adjusted for diversion or storage.
b Flood in early June 1894 probably was considerably higher than that of June 12, 1918.
c Flood of May 18, 1927, when landslide about 2 miles upstream washed out, releasing about 60,000 acre-ft of impounded water, was considerably higher than that of June 16, 1918; discharge not determined.
d Used $Q_{2.33}$ from station records instead of areal $Q_{2.33}$ because of large drainage area.
e Flood in early June 1894 was probably as great as flood of May 19, 1927.
f Result of washing out of landslide on Gros Ventre River.
g Maximum discharge, more than 2,000 cfs sometime during period May 13 to June 14, 1917; cfs per square mile more than 1.6.
h A higher flow may have occurred Aug. 15, 1931.
j More than 12,300 cfs.
k More than 20,800 cfs.
m Discharge during flood of June 3, 1948, was about 2,900 cfs on basis of discharge at gaging station Lake Fork Payette River above Jumbo Creek.
n Adjusted from site at Van Wyck on basis of difference in drainage area.
p Adjusted from site at Smiths Ferry on basis of difference in drainage area.
q Used only selected peak discharges when reservoir was spilling.
r Between Jan. 27 and Mar. 1, 1949.
s About May 28, 1948.
t Probably exceeded by flood in March 1910.

Table 4.--Peak discharge at miscellaneous sites, at sites affected by regulation and diversions, and unusual floods at short-term gaging stations

Flood region	Stream and place of determination	Period of known floods (water years)	Drainage area (sq mi)	Peak discharge		
				Date	Cfs	Cfs per sq mi
	Snake River main stem					
A,B,D	Snake River at Lorenzo, Idaho	1924-27	5,810	May 19, 1927	a43,000	7.40
	Henrys Fork basin					
B	Henrys Fork near Lake, Idaho	1920-60	98	June 13, 1926	907	9.26
B	Teton River near St. Anthony, Idaho	1890-93,1903-9, 1920-60	890	June 13, 1893	5,830	6.55
B,D	Henrys Fork near Rexburg, Idaho	1909-60	2,920	June 29, 1927	9,490	3.25
	Willow Creek basin					
A,B	Willow Creek near Ririe, Idaho	1903-4, 1917-25,1928	622	May 15, 1917	4,200	6.75
	Snake River main stem					
A,B,D	Snake River near Shelley, Idaho	1915-60	9,790	June 6, 1894	75,000	7.66
	Blackfoot River basin					
A	Meadow Creek near Henry, Idaho	1916-17,1919, 1921-23,1925	75.2	May 17, 1917	424	5.64
A	Blackfoot River near Henry, Idaho	1909-13,1915-25	583	May 14, 1909	1,640	2.81
A,B	Blackfoot River near Shelley, Idaho	1910-50	909	July 23, 1923	1,830	2.01
A,B	Blackfoot River near Presto, Idaho	1903-9	926	Apr.17,18,1907	2,370	2.56
A,B,D	Blackfoot River near Blackfoot, Idaho	1913-60	1,295	May 26, 1957	1,040	.80
	Snake River main stem					
A,B,D	Snake River near Blackfoot, Idaho	1911-60	11,310	June 18, 1918	46,200	4.08
	Portneuf River basin					
A,B	Marsh Creek near McCammon, Idaho	1955-60	355	Feb. 25, 1958	342	0.96
	Bannock Creek basin					
C	Bannock Creek near Pocatello, Idaho	1956-58	230	Feb. 25, 1957	675	2.93
	Snake River main stem					
A,B,C,D	Snake River at Neeley, Idaho	1906-60	13,600	June 20, 1918	48,400	3.56

a Result of washing out of landslide on Gros Ventre River.

Table 4.--Peak discharge at miscellaneous sites, at sites affected by regulation and diversions, and unusual floods at short-term gaging stations--Continued

Flood region	Stream and place of determination	Period of known floods (water years)	Drainage area (sq mi)	Peak discharge		
				Date	Cfs	Cfs per sq mi
	Rock Creek basin					
C	Rock Creek near Rockland, Idaho	1956-60	182	Mar. 6, 1960	275	1.51
	Raft River basin					
B,C	Raft River at Peterson Ranch near Bridge, Idaho	1912-14,1947-60	412	Feb. 5, 1951	1,090	2.65
B,C	Cassia Creek near Elba, Idaho	1957-60	84	May 14, 1957	233	2.77
B,C	Cassia Creek near Conant, Idaho	1910-12	104	May 30, 1912	358	3.44
	Snake River main stem					
A,B,C,D	Snake River near Minidoka, Idaho	1896-99,1901-60	15,700	May 29,30,1897	47,500	3.03
A,B,C,D	Snake River at Milner, Idaho	1909-60	17,180	June 21, 1918	40,000	2.33
	Big Cottonwood Creek basin					
B,C	Big Cottonwood Creek near Oakley, Idaho	1910-14	29	May 30, 1912	125	4.31
	Snake River main stem					
A,B,C,D	Snake River near Kimberly, Idaho	1924-60	-	July 24, 1927	27,200	-
A,B,C,D	Snake River near Twin Falls, Idaho	1912-17,1920-60	-	June 10, 1914	32,200	-
	Rock Creek basin					
B,C	Rock Creek near Twin Falls, Idaho	1923-46	277	Sept.21, 1927	984	3.55
	Snake River main stem					
A,B,C,D	Snake River near Buhl, Idaho	1947-60	-	June 13, 1947	23,100	-
	Salmon Falls Creek basin					
C	Cedar Creek near Roseworth, Idaho	1910-14,1916, 1957-60	130	Mar. 1, 1910	200	1.54
	Mud Lake-Lost River basins					
D	Medicine Lodge Creek at Ellis Ranch, near Argora, Idaho	1939-60	165	June 9, 1944	229	1.39
D	Medicine Lodge Creek near Small, Idaho	1921-23,1941-48	270	June 9, 1944	265	.98
D,E	Birch Creek near Reno, Idaho	1911-12,1921-22, 1951-60	320	Mar. 24, 1956	111	.35
A,D	Little Lost River near Howe, Idaho	1921-60	703	Aug. 11, 1936	450	.64
A	Big Lost River below Mackay Reservoir near Mackay, Idaho	1904-6,1912-14, 1919-60	813	June 10, 1921	2,990	3.68
D	Cedar Creek (below powerplant) near Mackay, Idaho	1920-22	8.4	June 7, 1921	297	35.4

A,D	Big Lost River at Leslie, Idaho	1919-22	1,020	June 10, 1921	2,580	2.53
A	Antelope Creek near Darlington, Idaho	1913-16,1920-22	210	May 28, 1921	833	3.97
A,D	Big Lost River near Moore, Idaho	1920-26	1,310	June 14, 1921	2,330	1.78
A,D	Big Lost River near Arco, Idaho	1947-60	1,410	June 1, 1958	1,190	.84
	Snake River main stem					
A,B,C,D	Snake River near Hagerman, Idaho	1913-15,1921-41	-	June 10, 1914	35,100	-
A,B,C,D	Snake River below Lower Salmon Falls, near Hagerman, Idaho	1938-60	-	June 27, 1950	29,800	-
	Big Wood River basin					
A,D	Big Wood River near Bellevue, Idaho	1912-13,1915-60	823	May 25, 1956	4,130	5.02
A,D	Big Wood River below Magic Dam, near Richfield, Idaho	1911-60	1,600	Apr. 26, 1952	10,000	6.25
A,D,E	Big Wood River at Gooding, Idaho	1896,1898-99, 1921-48	2,190	June 5,19,1896	5,940	2.71
D	Little Wood River near Carey, Idaho	1927-60	312	Apr. 20, 1938	b6,000	19.2
D	Fish Creek near Carey, Idaho	1919-20,1923-38	62.9	May 1, 1938	341	5.42
D	Silver Creek near Picabo, Idaho	1921-23,1936-60	88	Dec. 24, 1955	357	4.06
D	Little Wood River near Richfield, Idaho	1911-27,1930, 1931-60	570	May 3, 1938	868	1.52
D	Little Wood River at Shoshone, Idaho	1922-60	620	May 13, 1958	697	1.12
A,D,E	Big Wood River near Gooding, Idaho	1916-23,1927, 1933,1936-60	2,990	Apr. 27, 1952	6,500	2.17
	Snake River main stem					
A,B,C, D,E	Snake River at King Hill, Idaho	1909-60	35,800	June 22, 1918	47,200	1.32
	King Hill Creek basin					
E	King Hill Creek near King Hill, Idaho	1913,1939-41, 1956	83.6	Dec. 23, 1955	1,370	16.4
	Cold Springs Creek basin					
C,E	Cold Springs Creek near Hammett, Idaho	1911-13	65	Mar. 1, 1910	650	10.0
	Bruneau River basin					
C	Bruneau River near Rowland, Nev	1914-18	-	May 14, 1917	1,440	-
C	East Fork Bruneau River below Three Creek, near Three Creek, Idaho	1953-60	210	May 19, 1957	451	2.15
C	East Fork Bruneau River near Hot Springs, Idaho	1911-14,1949-60	620	May 20, 1957	463	.75
C,D	Bruneau River near Grand View, Idaho	1895-1903, 1910-16,1945-49	2,650	Mar. 2, 1910	5,700	2.15
	Snake River main stem					
A,B,C, D,E	Snake River near Murphy, Idaho	1914-60	41,900	June 22, 1918	47,300	1.13

b Result of failures of dams on Little Fish Creek.

Table 4.--Peak discharge at miscellaneous sites, at sites affected by regulation and diversions, and unusual floods at short-term gaging stations--Continued

Flood region	Stream and place of determination	Period of known floods (water years)	Drainage area (sq mi)	Peak discharge		
				Date	Cfs	Cfs per sq mi
	Sucker Creek basin					
C	Sucker Creek at mouth, near Homedale, Idaho	1905-9,1920-23	494	May 26, 1905	2,500	5.06
	Owyhee River basin					
C	Owyhee River near Owyhee, Nev.	1914-20,1922-26	380	May 5, 1922	2,600	6.84
C	Owyhee River above China diversion dam, near Owyhee, Nev.	1939-60	458	May 3 or 4, 1952	2,710	5.92
C	South Fork Owyhee River near Whiterock, Nev.	1956-60	1,080	May 20, 1957	3,420	3.17
E	Jordan Creek near Jordan Valley, Oreg.	1912-18,1920,1932, 1935-38,1941-42	660	Mar. 20, 1932	3,900	5.91
C,E	Owyhee River below Owyhee Dam, Oreg.	1929-60	11,160	Apr. 15, 1952	22,900	2.05
	Boise River basin					
F	Middle Fork Boise River near Twin Springs, Idaho	1947-50	382	May 29, 1948	4,370	11.4
E	Cottonwood Creek near Arrowrock, Idaho	1914-18,1939-41, 1956	21.4	Dec. 23, 1955	330	15.4
A,E	South Fork Boise River at Anderson Ranch Dam, Idaho	1943-60	982	May 25, 1956	9,850	10.0
A,E,F	Boise River at Dowling Ranch, near Arrowrock, Idaho	1911-54	2,220	Apr. 20, 1943	18,800	8.47
E	Moore Creek above Thorn Creek, near Idaho City, Idaho	1939-41,1956	119	Dec. 23, 1955	1,650	13.9
E	Sheep Creek near Boise, Idaho	-	.40	Aug. 20, 1959	210	525
E	Highland Valley Gulch near Boise, Idaho	-	.39	Aug. 20, 1959	2,100	5,380
E	Highland Valley Gulch near Boise, Idaho	-	1.69	Aug. 20, 1959	3,370	1,990
E	Maynard Gulch near Boise, Idaho	-	2.25	Aug. 20, 1959	9,540	4,240
E	Squaw Creek near Boise, Idaho	-	1.47	Aug. 20, 1959	7,320	4,980
E	Warm Springs Creek near Boise, Idaho	-	3.84	Aug. 20, 1959	9,390	2,450
E	Orchard Gulch near Boise, Idaho	-	.73	Aug. 20, 1959	1,500	2,050
E	Picket Pin Creek near Boise, Idaho	-	2.50	Aug. 20, 1959	7,720	3,090
E	Cottonwood Creek near Boise, Idaho	-	12.0	Aug. 20, 1959	1,580	132
E	Curlew Gulch near Boise, Idaho	-	3.95	Aug. 20, 1959	2,300	582
A,E,F	Boise River at Boise, Idaho	1916-60	2,760	Apr. 20, 1943	21,000	7.61
E	Spring Valley Creek near Eagle, Idaho	1955-60	20.9	Feb. 26, 1957	244	11.7
E	Dry Creek near Eagle, Idaho	1955-60	59.4	Feb. 26, 1957	339	5.71
A,E,F,G	Boise River near Notus, Idaho	1920-60	3,820	Apr. 20, 1943	20,500	5.37
	Malheur River basin					
C	Malheur River at Riverside, Oreg.	1910-14	1,750	Mar. 1, 1910	11,500	6.57
E,C	North Fork Malheur River at Beulah, Oreg.	1927-60	440	May 7, 1942	7,000	15.9
C	Cottonwood Creek near Harper, Oreg.	-	198	Feb. 24, 1957	5,140	26.0
E,C	Malheur River near Ontario, Oreg.	-	4,680	Feb. 25, 1957	24,000	5.13

	Payette River basin					
E,G	Deadwood River below Deadwood Reservoir, near Lowman, Idaho	1927-60	112	July 14, 1953	2,580	23.0
E,G,F	Deadwood River near Lowman, Idaho	1922-52	230	May 9, 1928	4,230	18.4
E,G,F	South Fork Payette River near Garden Valley, Idaho	1921-60	779	May 26, 1928	10,600	13.6
F,G	Middle Fork Payette River near Crouch, Idaho	-	210	Dec. 22, 1955	2,690	12.8
F	Scriver Creek near Crouch, Idaho	-	27.3	Dec. 22, 1955	406	14.9
F	Anderson Creek near Crouch, Idaho	-	34.0	Dec. 22, 1955	690	20.3
E,G,F	South Fork Payette River near Banks, Idaho	1922-60	1,200	May 17, 1927	13,800	11.5
G,F	Lake Fork Payette River below Lake Irrigation District Canal, near McCall, Idaho.	1941-60	64	June 3, 1948	2,120	33.1
F	Shafer Creek near Horseshoe Bend, Idaho	-	28	June 11, 1912	510	18.2
F	Harris Creek near Horseshoe Bend, Idaho	-	17	May 9, 1912	215	12.6
F	Shafer Creek below Harris Creek, near Horseshoe Bend, Idaho	-	74.6	Dec. 22, 1955	1,240	16.6
F	Squaw Creek near Gross, Idaho	1926-27	21	June 26, 1927	1,010	48.1
F	Cottonwood Creek near Ola, Idaho	-	29.6	Dec. 22, 1955	722	24.4
F	Little Squaw Creek near Ola, Idaho	-	75.3	Dec. 22, 1955	1,000	13.3
F	Squaw Creek near Sweet, Idaho	-	341	Dec. 22, 1955	4,970	14.6
E,G,F	Payette River near Emmett, Idaho	1926-60	2,680	May 1, 1938	22,800	8.51
F	Willow Creek near New Plymouth, Idaho	-	138	Jan. 15, 1956	1,640	11.9
F	Little Willow Creek near New Plymouth, Idaho	-	157	Dec. 22, 1955	1,050	6.69
E,G,F	Payette River near Payette, Idaho	1936-60	3,240	May 2, 1938	23,400	7.22
	Weiser River basin					
G	East Fork Weiser River near Starkey, Idaho	1937-39,1956	31.6	Dec. 22, 1955	821	26.0
F	Lost Creek near Tamarack, Idaho	1910-13,1921, 1925,1927-60	29.4	May 17,18,1921	688	23.4
G	Bacon Creek near Mesa, Idaho	1946-48	.71	Mar. 20, 1946	50	70.4
F	West Fork Pine Creek near Cambridge, Idaho	-	29	Dec. 22, 1955	499	17.2
G,F	Little Weiser River near mouth, near Cambridge, Idaho	-	206	Dec. 22, 1955	4,800	23.3
G,F	Weiser River below Little Weiser River, near Cambridge, Idaho	-	952	Dec. 22, 1955	16,600	17.4
F	Crane Creek above Crane Creek Reservoir, near Crane, Idaho	-	120	Dec. 22, 1955	4,120	34.3
F	Hog Creek near Crane, Idaho	-	25	Dec. 22, 1955	338	13.5
F	Mill Creek near Crane, Idaho	-	10	Dec. 22, 1955	305	30.5
F	South Fork Crane Creek near Crane, Idaho	-	52	Dec. 22, 1955	1,060	20.4
F	Crane Creek near Midvale, Idaho	1911-16,1925-60	242	Dec. 3, 1910	4,750	19.6
F	Crane Creek at mouth, near Weiser, Idaho	1922-60	288	Feb. 26, 1957	3,170	11.0
G,F	Weiser River near Weiser, Idaho	1890-91, 1895-1904, 1911-14,1921-60	1,470	Dec. 23, 1955	19,900	13.5
F	Monroe Creek above Sheep Creek, near Weiser, Idaho	1946-48,1956	32	Dec. 22, 1955	271	8.47
	Snake River main stem					
A,B,C,D, E,F,G	Snake River at Weiser, Idaho	1910-60	69,200	Mar. 3, 1910	120,000	1.73
	Burnt River basin					
F	Burnt River near Hereford, Oreg	1929-60	309	Apr. 17, 1943	2,220	7.18
F	Burnt River at Bridgeport, Oreg	1957-60	650	Feb. 26, 1957	1,270	1.95
F	Burnt River at Huntington, Oreg	1928-32,1957-60	1,093	Feb. 26, 1957	2,190	2.00

Table 4.--Peak discharge at miscellaneous sites, at sites affected by regulation and diversion, and unusual floods at short-term gaging stations--Continued

Flood region	Stream and place of determination	Period of known floods (water years)	Drainage area (sq mi)	Peak discharge		
				Date	Cfs	Cfs per sq mi
	Powder River basin					
H	Sutton Creek at Baker, Oreg.	-	57.2	Feb. 24, 1957	1,630	28.5
H	Powder River at Baker, Oreg.	-	351	Feb. 24, 1957	2,460	7.01
H	Powder River near North Powder, Oreg.	1914-16,1921-25	860	May 20,21,24, 25, 1921	3,010	3.50
F,G,H	Powder Creek near Robinette, Oreg.	1929-57	1,660	May 27, 1956	5,500	3.31
	Brownlee Creek basin					
F	Brownlee Creek near Heath, Idaho.	-	62	Dec. 22, 1955	159	2.56
	Wild Horse Creek basin					
F	Wild Horse Creek above Butte Creek, near Wild Horse, Idaho.	-	120	Dec. 22, 1955	2,550	21.2
F	Wild Horse Creek below Butte Creek, near Wild Horse, Idaho.	-	140	Dec. 22, 1955	2,990	21.4
	Snake River main stem					
A,B,C,D, E,F,G,H	Snake River at Oxbow, Oreg.	1924-60	72,800	Apr. 28, 1952	89,700	1.23
	Salmon River basin					
A	Salmon River near Pierson, Idaho.	1912-13	235	June 10,13,1912	2,710	11.5
E	Lake Creek near Stanley, Idaho.	1911-13	44	June 12, 1912	680	15.5
A,E	Salmon River at Stanley, Idaho.	1921-25	355	June 12,13,1921	4,390	12.4
A	Pahsimeroi River near Goldburg, Idaho.	1910-12	65	Apr. 7-9, 1912	681	10.5
A	Pahsimeroi River near May, Idaho.	1930-60	845	June 8, 1957	796	.94
E	Lemhi River near Lemhi, Idaho.	1939,1955-60	890	June 7, 1957	1,840	2.07
E	Lemhi River at Salmon, Idaho.	1929-43	1,270	June 3, 1936	2,400	1.89
A,E,G	Salmon River above South Fork, near Dixie, Idaho.	-	10,420	May 29, 1948	55,000	5.28
G	South Fork Salmon River at Krassel ranger station, Idaho.	-	324	May 28, 1948†	5,200	16.0
E,G	East Fork South Fork Salmon River at mouth, near Yellow Pine, Idaho	-	424	May 28, 1948†	10,400	24.5
E,G	Warren Creek below Schissler Creek, near Warren, Idaho.	-	65	June 3, 1948†	1,700	26.2
G	Little Salmon River above Round Valley Creek, near New Meadows, Idaho	-	189	June 1, 1948‡	3,300	17.5
F,G	Little Salmon River near Pollock, Idaho.	-	345	Dec. 22, 1955	4,480	13.0
F,G	Rapid River below Shingle Creek, near Pollock, Idaho.	-	122	May 29, 1948†	1,600	13.1
G	Slate Creek near Slate Creek, Idaho.	-	127	June 1, 1948‡	2,600	20.5
G	White Bird Creek at White Bird, Idaho.	-	96	May 22, 1948	3,500	36.5
H	Deer Creek near Winchester, Idaho.	1952-56	19.1	Apr. 16, 1956	209	10.9
	Grande Ronde River basin					
F	Meadow Creek near Starkey, Oreg.	1932-35	140	Mar. 19, 1932	2,300	16.4
F,H	Grande Ronde River at Elgin, Oreg.	1904-19	1,400	February 1917	10,500	7.50

† Probable date.
‡ About.

A	Prairie Creek at Enterprise, Oreg.	-	80.1	Feb. 24, 1957	1,460	18.2
A,F,G,H	Grande Ronde River at Rondowa, Oreg.	1927-60	2,555	May 28, 1948	19,900	7.79
A,F,G,H	Grande Ronde River at Zindel, Wash.	1905-12	3,950	Mar. 4, 1910	34,600	8.76
	Clearwater River basin					
H	Selway River below Deep Creek, at McGruder ranger station, Idaho..	-	211	May 28, 1948	3,700	17.5
H	Selway River above Meadow Creek, near Lowell, Idaho.	1945-49	1,550	May 29, 1948	42,000	27.1
H	White Sand Creek at mouth, near Powell ranger station, Idaho.	-	244	May 28, 1948	8,100	33.2
H	Crooked Fork at mouth, near Powell ranger station, Idaho.	-	172	May 29, 1948	5,700	33.1
H	South Fork Clearwater River below Fall Creek, near Golden, Idaho..	-	434	May 29, 1948	6,600	15.2
H	Orofino Creek near Orofino, Idaho.	-	199	May 29, 1948	3,600	18.1
H	North Fork Clearwater River above Kelly Creek, near Bungalow ranger station, Idaho.	-	201	May 28 or 29, 1948	9,900	49.3
H	Kelly Creek at mouth, near Bungalow ranger station, Idaho.	-	380	May 28 or 29, 1948	13,000	34.2
H	North Fork Clearwater River above Little North Fork, near Headquarters, Idaho.	-	1,460	May 29, 1948	37,000	25.3
H	Little North Fork Clearwater River at mouth, near Headquarters, Idaho.	-	414	May 29, 1948†	14,000	33.8
F,I	Lapwai Creek at Lapwai, Idaho.	-	235	May 22, 1948	3,800	16.2
	Snake River main stem					
A,B,C,D, E,F,G,H,I	Snake River near Clarkston, Wash.	1894-1960	103,200	June 5, 1894	409,000	3.96
	Dry Creek basin					
I	Dry Creek near Clarkston, Wash.	-	2.29	Feb. 21, 1956	123	53.7
	Alpowa Creek basin					
I	Clayton Gulch at Alpowa, Wash.	-	7.04	Aug. 24, 1954	1,600	227
	Tucannon River basin					
F,I	Tucannon River near Starbuck, Wash.	1915-17,1929-31	409	Feb. 2, 1930	6,000	14.7
I	Smith Gulch tributary near Pataha, Wash.	-	1.85	May 6, 1957	112	60.5
I	Pataha Creek near Pomeroy, Wash.	-	92.3	February 1949	1,620	17.6
I	Linville Creek near Pomeroy, Wash.	-	6.9	June 17, 1950	9,750	1,410
I	Skyhawk Gulch near Pomeroy, Wash.	-	5.7	June 16, 1950	5,200	912
	Palouse River basin					
H	Palouse River near Potlatch, Idaho.	1915-19	312	Mar. 21, 1916	5,090	16.3
I	Missouri Flat Creek tributary near Pullman, Wash.	-	1.14	May 8, 1956	140	123
I	Rose Creek near Pullman, Wash.	-	1.52	May 8, 1956	1,130	743
I	Palouse River tributary at Colfax, Wash.	-	2.10	Dec. 22, 1955	70	33.3
I	West Branch North Pine Creek tributary at Plaza, Wash.	-	1.24	May 14, 1957	1,560	1,260
I	Squaw Creek near Plaza, Wash.	-	3.84	May 14, 1957	5,310	1,380
I	Hardman Draw tributary at Plaza, Wash.	-	1.64	May 14, 1957	1,780	1,090
I	Rock Creek near Ewan, Wash.	-	520	Mar. 9, 1904	1,980	3.81
I	Mud Lake tributary near Lamont, Wash.	-	-	Aug. 19, 1954	1,140	-
H,I	Union Flat Creek near Colfax, Wash.	-	189	Feb. 13, 1958	2,080	11.0
I	Cow Creek tributary near Ritzville, Wash.	-	1.51	Mar. 18, 1951	200	132

† Probable date.

100. Snake River at south boundary of Yellowstone National Park, Wyo.

Location.--Lat 44°08', long 110°40', a quarter of a mile downstream from Lewis River, half a mile north of south boundary of Yellowstone National Park, and 25 miles north of Moran, Wyo.

Drainage area.--485 sq mi. Mean altitude, 8,220 ft.

Gage.--Nonrecording prior to July 1921; recording thereafter at site 2½ miles downstream. Discharge represents flow at described site where all discharge measurements were made. Altitude of gage is 6,880 ft.

Stage-discharge relation.--Well defined by current-meter measurements below 5,000 cfs.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	June 2, 1914	6.3	5,690	1921	May 28, 1921	6.5	5,580
1915	June 6, 1915	4.9	3,230	1922	June 8,9,1922	7.5	5,940
				1923	June 12, 1923	7.45	6,280
1919	May 22, 1919	5.9	4,320	1924	May 20, 1924	6.39	4,310
1920	June 13, 1920	6.3	5,100	1925	June 20, 1925	7.24	6,450

110. Snake River at Moran, Wyo.
(Published as "South Fork Snake River" prior to 1911 and "near Moran" prior to 1940)

Location.--Lat 43°51', long 110°35', in sec.18, T.45 N., R.114 W., on left bank at Moran, 1,000 ft downstream from Jackson Lake Dam.

Drainage area.--824 sq mi. Mean altitude, 8,040 ft.

Gage.--Nonrecording prior to June 13, 1917; recording thereafter. Prior to May 20, 1940, at site 1½ miles downstream from present site at datum 4.00 ft lower than present datum prior to July 26, 1915, and 5.00 ft lower than present datum prior to May 20, 1940. Datum at present site is 6,727.84 ft above mean sea level, unadjusted.

Stage-discharge relation.--Well defined by discharge measurements throughout entire range of stage.

Remarks.--Flow regulated by Jackson Lake 1,000 ft above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	(a)	6.7	7,930	1921	July 31,Aug. 1, 1921	e.77	10,900
1905	June 10,15,1905	5.15	4,990	1922	Aug. 2, 1922	e.74	11,100
1906	June 16-18,1906	5.65	5,930	1923	Aug. 10, 1923	e.53	10,700
1907	June 13, 1907	6.6	7,380	1924	July 19, 1924	7.60	9,080
1908	June 18-20,1908	6.0	6,300	1925	July 31, 1925	7.72	9,210
1909	June 29-30,1909	8.25	10,600				
1910	July 6, 1910	8.80	12,100	1926	June 28, 1926	7.86	9,650
				1927	June 25, 1927	e.82	14,200
1911	Aug.1-2, 1911	7.80	9,700	1928	May 30, 1928	e.61	11,400
1912	June 24-26,1912	7.6	9,350	1929	June 12, 1929	7.01	7,770
1913	June 4-12,1913	8.0	10,100	1930	July 24, 1930	6.81	b7,620
1914	June 5, 1914	7.73	9,580				
1915	June 27, 1915	7.75	9,610	1931	July 20, 1931	6.66	b7,110
				1932	July 28, 1932	6.60	b6,890
1916	Aug. 17, 1916	8.60	9,350	1933	July 22, 1933	6.88	b7,530
1917	June 18-20,1917	9.30	12,000	1934	July 14, 1934	5.92	b5,760
1918	June 12, 1918	10.41	15,100	1935	Aug. 6, 1935	7.43	8,320
1919	June 16, 1919	9.15	11,700				
1920	July 26, 1920	9.02	11,000	1936	July 21, 1936	6.08	5,850

a Occurred May 26, June 3, 20-22, 1904.
b Maximum daily.

Peak stages and discharges of Snake River at Moran, Wyo.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	July 23, 1937	7.08	7,610	1948	July 13, 1948	9.44	8,770
1938	June 18, 1938	7.00	7,450	1949	July 21, 1949	8.60	7,310
1939	July 19, 1939	6.83	7,370	1950	June 30, 1950	9.05	8,100
1940	July 14, 1940	9.12	8,150	1951	Aug. 20, 1951	7.76	5,860
1941	July 18, 1941	8.37	6,800	1952	July 10,11,1952	8.77	7,690
1942	June 25, 1942	8.92	7,790	1953	July 30,31,1953	8.49	7,030
1943	June 19, 1943	11.63	13,300	1954	June 27, 1954	10.35	10,700
1944	Aug. 12, 1944	9.19	8,470	1955	July 19, 1955	8.76	7,470
1945	June 25, 1945	8.37	6,960	1956	Aug. 26, 1956	7.93	6,250
1946	June 6, 1946	9.68	9,360	1957	Dec. 4, 1956	8.40	7,120
1947	June 9, 1947	9.38	8,660				

PACIFIC CREEK BASIN

115. Pacific Creek near Moran, Wyo.

Location.--Lat 43°51'00", long 110°31'20", in sec.23, T.45 N., R.114 W., on left bank 50 ft downstream from bridge on U.S. Highway 287, half a mile upstream from mouth, and 3 miles southeast of Moran.

Drainage area.--160 sq mi. Mean elevation, 8,160 ft.

Gage.--Nonrecording prior to Sept. 30, 1918; recording since Sept. 23, 1944. At site 0.1 mile downstream from present site at different datum prior to September 1918. Altitude of gage is 6,720 ft (from topographic map).

Stage-discharge relation.--Unstable. Fairly well defined by current-meter measurements.

Bankfull stage.--5.5 ft.

Remarks.--Winter gage-height record is seldom obtained due to extremely low temperatures; however, the occurrence of significant flood peaks during this season is considered very improbable. Only annual peak is shown for 1918. Base for partial-duration series, 1,300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 15, 1918	3.98	a3,030	1951	Mar. 14, 1951	c4.31	-
					May 28, 1951	5.60	2,260
1945	June 13, 1945	b3.21	1,310		June 17, 1951	5.11	1,850
1946	Mar. 17, 1946	c3.53	-	1952	May 4, 1952	3.79	1,600
	May 8, 1946	3.51	1,340		May 21, 1952	3.80	1,610
	May 28, 1946	3.24	1,580		June 7, 1952	4.42	2,530
	June 6, 1946	3.36	1,710	1953	June 3, 1953	3.86	1,470
1947	May 10, 1947	3.22	1,530		June 15, 1953	4.78	2,760
	May 28, 1947	3.21	1,600				
	June 3, 1947	3.08	1,480	1954	May 21, 1954	4.68	3,470
	June 9, 1947	3.06	1,460		June 5, 1954	4.05	1,720
	June 20, 1947	3.01	1,410		June 24, 1954	4.46	2,770
1948	May 29, 1948	4.66	2,280	1955	Apr. 5, 1955	c3.92	-
	June 3, 1948	4.58	2,200		May 22, 1955	-	1,400
					June 13, 1955	4.32	2,290
1949	May 17, 1949	4.52	1,980				
	May 29, 1949	4.26	1,860	1956	Apr. 12, 1956	c3.15	-
	June 13, 1949	4.53	2,150		May 10, 1956	3.50	1,330
	June 19, 1949	4.01	1,680		May 22, 1956	4.72	3,410
					June 13, 1956	4.57	3,070
1950	May 24, 1950	3.79	1,360				
	May 31, 1950	3.91	1,400	1957	Mar. 6, 1957	4.84	-
	June 7, 1950	4.71	2,040		May 20, 1957	3.83	1,350
	June 17, 1950	5.51	2,670		June 6, 1957	4.66	2,950

a Maximum observed; may have been higher prior to June 12.
b Occurred June 1, 1945.
c Backwater from ice.

120. Buffalo Fork near Moran, Wyo.

Location.--Lat 43°50', long 110°31', in sec.26, T.45 N., R.114 W., on right bank 30 ft below bridge on county road, half a mile upstream from mouth, $2\frac{3}{4}$ miles downstream from Lava Creek, and 4 miles southeast of Moran.

Drainage area.--278 sq mi. Mean altitude, 8,850 ft.

Gage.--Nonrecording at site 500 ft upstream at different datum prior to Sept. 30, 1918; recording since Sept. 15, 1944. Altitude of gage is 6,720 ft (from topographic map).

Stage-discharge relation.--Unstable. Defined by current-meter measurements for entire range at 1918 site, and below 5,000 cfs at present site.

Bankfull stage.--5 ft.

Remarks.--Base for partial-duration series, 3,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 13, 1918	6.78	a5,840	1951	June 17, 1951	5.45	4,210
1945	July 11, 1945	5.23	3,550	1952	June 7, 1952	5.35	4,520
1946	June 6, 1946	4.81	3,040	1953	June 19, 1953	5.89	4,810
1947	June 20, 1947	5.14	3,440	1954	May 22, 1954	5.94	4,660
					June 27, 1954	6.71	5,960
1948	May 22, 1948	5.06	3,340				
	May 29, 1948	5.28	3,610	1955	June 16, 1955	5.35	3,640
	June 3, 1948	5.50	3,900		June 25, 1955	5.43	3,770
	June 9, 1948	5.38	3,770				
				1956	June 2, 1956	6.20	4,870
1949	June 12, 1949	5.07	3,380		June 16, 1956	6.13	4,760
					June 29, 1956	5.09	3,130
1950	June 7, 1950	5.03	3,560				
	June 17, 1950	5.36	3,970	1957	June 7, 1957	6.21	4,460
	July 2, 1950	5.35	3,960		July 2, 1957	5.88	3,930
1951	May 29, 1951	5.20	3,870				

a Maximum observed; may have been higher about June 15 and prior to June 13.

GROS VENTRE RIVER BASIN

145. Gros Ventre River at Kelly, Wyo.

Location.--Lat 43°37'20", long 110°37'30", in NW$\frac{1}{4}$ sec.11, T.42 N., R.115 W., 300 ft downstream from bridge site on private road, 0.3 mile south of Kelly Post Office, and 3 miles downstream from Turpin Creek.

Drainage area.--622 sq mi; 621 sq mi at site used 1918. Mean altitude, 8,850 ft.

Gage.--Nonrecording. At site 1 mile upstream at different datum prior to Sept. 30, 1918. Supplementary nonrecording gage at site 300 ft downstream subsequent to May 14, 1954. Supplementary gage at datum 1.09 ft higher May 15, 1954, to June 28, 1955, and at datum 0.61 ft lower thereafter; listed stages from supplementary gage. Altitude of gage is 6,750 ft (from topographic map).

Stage-discharge relation.--Unstable. Defined by current-meter measurements below 1,800 cfs for the period 1945-46, below 3,400 cfs for the period 1947-53, and below 4,000 cfs thereafter.

Bankfull stage.--10 ft.

Historical data.--Flood of May 18, 1927, was considerably higher than flood of June 16, 1918 (landslide about 2 miles upstream washed out and released about 60,000 acre-ft of impounded water); discharge not determined.

Remarks.--Diversions above station for irrigation may have slight effect on peak flows at times. Only annual peaks are shown.

Peak stages and discharges of Gros Ventre River at Kelly, Wyo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 16, 1918	9.95	a6,220	1951	May 29, 1951	7.09	4,140
				1952	June 8, 1952	5.73	2,960
1945	June 26, 1945	5.68	2,930	1953	June 15, 1953	5.95	3,140
				1954	May 22, 1954	3.33	3,950
1946	June 7, 1946	5.56	2,780	1955	June 17, 1955	1.85	2,160
1947	May 10, 1947	6.24	3,100				
1948	May 30, 1948	6.33	3,200	1956	June 2, 1956	5.73	5,000
1949	June 12, 1949	5.55	2,480	1957	June 8, 1957	4.65	3,810
1950	June 8, 1950	6.64	3,510				

a May have been higher prior to June 16.

FLAT CREEK BASIN

180. Flat Creek near Jackson, Wyo.

Location.--Lat 43°33', long 110°37', in SW¼ sec.35, T.42 N., R.115 W., 300 ft downstream from powerplant and 9 miles northeast of Jackson.

Drainage area.--40.7 sq mi. Mean altitude, 8,980 ft.

Gage.--Nonrecording. Prior to June 14, 1938, at site 300 ft upstream at different datum. Altitude of gage is 6,750 ft (from topographic map).

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Remarks.--Peaks are maximum observed. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	June 23, 1933	2.86	279	1938	June 23, 1938	3.12	271
1934	May 22,25,1934	2.19	128	1939	June 2,3,1939	1.42	156
1935	June 15, 1935	3.48	438	1940	June 1, 1940	1.37	148
1936	June 2, 1936	3.20	268	1941	June 19, 1941	1.69	222
1937	June 23,24,1937	2.85	214				

HOBACK RIVER BASIN

195. Hoback River near Jackson, Wyo.
(Published as "near Cheney" 1917-18)

Location.--Lat 43°17'55", long 110°40'10", in sec.32, T.39 N., R.115 W., on right bank at Camp Creek Camp, a quarter of a mile downstream from Willow Creek, 4 miles upstream from mouth, and 13.5 miles southeast of Jackson.

Drainage area.--564 sq mi. Mean altitude, 8,000 ft.

Gage.--Nonrecording. At site 3¾ miles downstream at different datum July 9, 1917, to Sept. 30, 1918. At site 300 ft upstream at datum 0.92 ft higher Nov. 6, 1944, to May 29, 1956. Altitude of present gage is 6,040 ft (from topographic map).

Stage-discharge relation.--Unstable. Defined by current-meter measurements throughout range.

Bankfull stage.--6.5 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 16, 1918	13.46	a6,160	1951	May 29, 1951	6.45	4,730
				1952	May 4, June 7, 1952	5.84	3,720
1945	June 22, 1945	4.84	2,390				
				1953	June 14,19 1953	6.04	4,080
1946	June 6, 1946	5.34	2,960	1954	May 22, 1954	7.02	5,900
1947	May 8,11,1947	5.42	3,050	1955	June 16, 1955	4.92	2,450
1948	May 29, 1948	5.53	3,180				
1949	May 17, 1949	5.62	3,280	1956	June 2, 1956	b7.4	c5,800
1950	June 7, 1950	6.18	4,290	1957	June 7, 1957	4.70	4,500

a May have been higher prior to June 14. b Probably occurred June 6, 1956.
c Maximum daily discharge.

225. Snake River above reservoir, near Alpine, Wyo.
(Published as above Greys River near Alpine, Idaho, 1937-39)

Location.--Lat 43°11'50", long 110°53'10", on right bank a quarter of a mile downstream from Wolf Creek, 7 miles upstream from Greys River, and 9 miles upstream from Alpine.

Drainage area.--3,465 sq mi. Mean altitude, 8,150 ft.

Gage.--Recording. At site 6½ miles downstream at different datum Mar. 16, 1937, to Mar. 31, 1939. Datum of gage is 5,683.90 ft above mean sea level, unadjusted.

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--Not subject to overflow.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	June 24, 1937	7.61	15,000	1955	June 24, 1955	8.57	15,000
1938	June 23, 1938	8.73	18,600				
				1956	June 3, 1956	10.79	25,200
1953	July 19, 1953	7.23	11,100	1957	June 1, 1957	9.25	19,000
1954	June 28, 1954	11.68	26,800				

GREYS RIVER BASIN

230. Greys River above reservoir, near Alpine, Wyo.
(Published as "near Alpine, Idaho" 1917-18 and as "near Alpine, Wyo." 1937-39)

Location.--Lat 43°08'50", long 110°09'20", in SW¼ sec.33, T.37 N., R.118 W., on left bank 2½ miles upstream from mouth and 3½ miles southeast of Alpine.

Drainage area.--451 sq mi. Mean altitude, 8,080 ft.

Gage.--Nonrecording prior to Sept. 30, 1918, and recording Mar. 17, 1937, to Mar. 31, 1939, at site three-quarters of a mile downstream at different datum. Recording at present site and datum since Mar. 31, 1931. Datum of gage is 5,620.33 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--Not subject to overflow.

Remarks.--Water-stage-recorder graph and some discharge measurements furnished by Bureau of Reclamation. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 14, 1918	4.85	a5,200	1955	June 9, 1955	5.38	2,010
1937	May 7, 1937	2.95	2,040	1956	Apr. 21, 1956	5.88	2,590
	May 19, 1937	2.98	2,070		May 5, 1956	5.89	2,680
					May 25, 1956	7.58	5,010
1938	Apr. 19, 1938	2.76	2,150				
	Apr. 30, 1938	3.26	2,870	1957	May 7, 1957	6.01	2,850
	May 17, 1938	3.13	2,680		May 19, 1957	5.72	2,480
	May 29, 1938	3.47	3,180		June 7, 1957	7.09	4,290
					June 21, 1957	5.71	2,340
1954	May 22, 1954	7.13	4,210		June 30, 1957	5.95	2,640
	June 27, 1954	5.70	2,340				

a Maximum observed; may have been higher prior to June 14.

235. Snake River below Greys River, at Alpine, Idaho

Location.--Lat 43°10'20", long 111°02'30", in SW¼ sec.19, T.37 N., R.118 W., sixth principal meridian, Wyoming, at State line bridge on U.S. Highway 89, a quarter of a mile south of Alpine, 1¼ miles upstream from Salt River, and 2 miles downstream from Greys River.

Drainage area.--3,940 sq mi. Mean altitude, 8,140 ft.

Gage.--Nonrecording. Datum of gage is 5,543.89 ft above mean sea level (levels by Bureau of Reclamation).

Stage-discharge relation.--Unstable. Defined by current-meter measurements below 23,000 cfs.

Bankfull stage.--Not subject to overflow.

Historical data.--Flood of June 1894 and that of May 1927 (caused by washing out of landslide on Gros Ventre River), were both probably much greater than the maximum of record June 28, 1954.

Remarks.--Peak discharges affected by regulation at Jackson Lake (usable capacity, 847,000 acre-ft) and diversions for irrigation of about 91,000 acres above gage. Peaks are maximum observed. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 26, 1945	8.21	18,600	1950	July 2, 1950	9.69	24,500
1946	June 7, 1946	9.15	22,400	1951	June 18, 1951	9.71	24,500
1947	June 10, 1947	8.94	21,400	1952	June 8, 1952	9.09	22,600
1948	June 3, 1948	9.66	24,200	1953	June 19, 1953	9.09	22,100
1949	June 20, 1949	8.24	18,200	1954	June 28, 1954	10.4	28,200

SALT RIVER BASIN

240. Salt River near Smoot, Wyo.

Location.--Lat 42°36'20", long 110°55'10", in sec.7, T.30 N., R.118 W., on left bank 1¼ miles south of Smoot, 1½ miles upstream from Willow Creek, and 4 miles upstream from Cottonwood Creek.

Drainage area.--47.8 sq mi. Mean altitude, 8,050 ft.

Gage.--Nonrecording prior to Apr. 11, 1934; recording thereafter. At datum 1.00 ft higher Apr. 11 to Oct. 1, 1934. Altitude of gage is 6,600 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 330 cfs.

Bankfull stage.--4.5 ft.

Remarks.--Diversions above station for irrigation of about 4,000 acres may have considerable effect on peaks at times. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	June 25,26,1932	2.08	304	1946	May 7, 1946	2.78	178
1933	June 3, 1933	2.14	335	1947	May 3, 1947	3.50	308
1934	May 12, 1934	.55	46	1948	May 21, 1948	3.30	256
1935	June 12, 1935	2.28	202	1949	May 19, 1949	2.85	192
				1950	May 31, 1950	3.44	367
1936	May 15, 1936	3.15	430				
1937	May 18, 1937	2.52	193	1951	May 29, 1951	3.15	353
1938	May 2, 1938	2.90	280	1952	May 2, 1952	3.38	353
1939	May 5, 1939	2.52	184	1953	June 15, 1953	2.78	275
1940	May 18, 1940	2.16	108	1954	May 22, 1954	2.66	265
				1955	June 12, 1955	2.60	230
1941	May 14, 1941	2.55	169				
1942	June 8, 1942	2.62	168	1956	May 24, 1956	3.40	394
1943	Apr. 20, 1943	2.79	204	1957	June 7, 1957	3.83	460
1944	June 9, 1944	3.76	204				
1945	June 24, 1945	3.05	220				

245. Cottonwood Creek near Smoot, Wyo.

Location.--Lat 42°36'40", long 110°53'30", in sec.4, T.30 N., R.118 W., on right bank 0.3 mile upstream from headgate of highest diversion, 1¼ miles downstream from Porcupine Creek, 1½ miles southeast of Smoot, and 4½ miles upstream from mouth.

Drainage area.--26.3 sq mi. Mean altitude, 8,560 ft.

Gage.--Nonrecording prior to Apr. 8, 1934; recording thereafter. At site a quarter of a mile downstream at different datum prior to Apr. 8, 1934. Altitude of gage is 6,750 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 300 cfs.

Remarks.--Base for partial-duration series, 140 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	June 17,18,1933	2.76	332	1946	June 11, 1946	2.60	249
1934	May 23, 1934	1.60	71	1947	June 9, 1947	2.74	241
1935	June 18, 1935	2.22	212		June 20, 1947	2.79	250
1936	June 2, 1936	2.42	247	1948	June 9, 1948	2.67	268
	June 14, 1936	2.30	219	1949	May 29, 1949	-	a170
1937	June 22, 1937	1.98	137		June 12, 1949	-	250
1938	June 6, 1938	2.46	316	1950	June 2, 1950	2.45	195
					June 7, 1950	2.78	256
1939	May 31, 1939	2.02	147		June 17, 1950	2.82	241
					July 2, 1950	2.81	241
1940	May 28, 1940	1.97	140	1951	May 28, 1951	2.90	330
1941	May 26, 1941	2.07	174		June 18, 1951	3.07	399
1942	June 8, 1942	2.20	200	1952	June 9, 1952	2.68	302
1943	June 1, 1943	2.27	208	1953	June 17, 1953	2.70	355
	June 24, 1943	2.67	320	1954	May 21, 1954	2.37	225
1944	June 10, 1944	2.32	213		June 26, 1954	2.24	184
1945	June 26, 1945	2.52	238	1955	June 11, 1955	2.18	171
1946	May 8, 1946	2.13	154	1956	June 2, 1956	3.31	438
	May 22,23,1946	2.16	150	1957	June 6, 1957	2.81	318

a Daily mean discharge.

250. Swift Creek near Afton, Wyo.

Location.--Lat 42°43'30", long 110°54'00", in SE¼ sec.29, T.32 N., R.118 W., on right bank 1 mile upstream from mouth of canyon, 1½ miles east of Afton, and 4½ miles upstream from mouth.

Drainage area.--27.4 sq mi. Mean altitude, 8,400 ft.

Gage.--Recording. Altitude of gage is 6,420 ft (from topographic map).

Stage-discharge relation.--Defined by discharge measurements below 430 cfs and extended above.

Bankfull stage.--3 ft.

Remarks.--Base for partial-duration series, 250 cfs.

Peak stages and discharges of Swift Creek near Afton, Wyo.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 29, 1943	3.18	396	1950	June 6, 1950	3.26	470
	June 12, 1943	3.02	329		June 22, 1950	3.38	530
	June 21, 1943	3.38	491		June 30, 1950	3.40	540
1944	June 9, 1944	3.00	316	1951	May 28, 1951	3.41	545
	June 25, 1944	3.23	420		June 19, 1951	3.33	465
					July 4, 1951	3.17	346
1945	June 25, 1945	3.53	418				
	July 5, 1945	3.36	349	1952	June 6, 1952	3.36	520
1946	May 23, 1946	2.93	272	1953	June 14, 1953	3.10	515
	June 9, 1946	3.31	428		June 19, 1953	3.18	555
1947	May 9, 1947	3.11	368	1954	May 21, 1954	3.01	397
	May 27, 1947	3.09	360		June 27, 1954	3.02	426
	June 22, 1947	3.15	385				
				1955	June 24, 1955	2.73	306
1948	June 10, 1948	3.39	560				
				1956	June 3, 1956	3.37	565
1949	May 29, 1949	2.86	332				
	June 12, 1949	3.19	495	1957	June 6, 1957	3.36	644
					June 30, 1957	3.52	775
1950	June 2, 1950	3.23	455				

270. Strawberry Creek near Bedford, Wyo.

Location.--Lat 42°54'10", long 110°54'00", in sec.27, T.34 N., R.118 W., at mouth of canyon, 300 ft upstream from Strawberry Canal headgate, 1½ miles east of Bedford, 3 miles upstream from unnamed tributary, and 5½ miles upstream from mouth.

Drainage area.--21.3 sq mi. Mean altitude, 8,470 ft.

Gage.--Nonrecording prior to Apr. 9, 1934, at site 200 ft downstream at different datum; recording thereafter. Altitude of gage is 6,520 ft (from topographic map).

Stage-discharge relation.--Defined by discharge measurements below 250 cfs.

Bankfull stage.--4 ft.

Remarks.--Base for partial-duration series, 110 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	June 25, 1932	2.28	316	1938	June 7, 1938	3.39	291
1933	June 15, 1933	2.54	308	1939	May 18, 1939	2.83	186
					May 31, 1939	3.03	225
1934	May 21, 1934	2.62	107				
				1940	May 30, 1940	3.03	213
1935	June 13, 1935	3.50	248				
	June 24, 1935	2.97	163	1941	May 27, 1941	3.22	238
1936	June 1, 1936	3.94	342	1942	May 26, 1942	3.31	212
	June 14, 1936	3.76	310		June 8, 1942	3.48	258
1937	May 28, 1937	3.01	182	1943	May 29, 1943	3.59	286
	June 22, 1937	2.91	166		June 27, 1943	4.51	396
1938	May 17, 1938	2.71	141				

275. Salt River above reservoir, near Etna, Wyo.
(Published as "near Alpine, Idaho" 1917-18)

Location.--Lat 43°04'50", long 111°02'15", in NE¼ sec.28, T.36 N., R.119 W., 3½ miles northwest of Etna and 8 miles upstream from mouth.

Drainage area.--829 sq mi.

Gage.--Nonrecording prior to October 1943; recording thereafter. At site 5 miles downstream at different datum, July 1 to Sept. 30, 1917, and June 5 to Sept. 30, 1918. Datum of gage is 5,675.78 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Well defined by discharge measurements.

Bankfull stage.--5 ft.

Remarks.--Diversions above stations for power developments, industry, municipal supply, and irrigation of about 66,000 acres. Peak flows considerably affected by diversions. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 17,18,1918	2.80	2,380	1956	Apr. 24, 1956	4.68	2,420
				1957	May 21, 1957	4.55	2,320
1954	May 11, 1954	3.70	1,560				
1955	May 9, 1955	3.31	1,280				

285. Salt River at Wyoming-Idaho State line

Location.--Lat 43°09'50", long 111°03'50", in sec.16, T.3 S., R.46 E., 350 ft upstream from highway bridge, 400 ft downstream from Trout Creek, half a mile upstream from mouth, and three-quarters of a mile west of Wyoming-Idaho State line.

Drainage area.--890 sq mi. Mean altitude, 7,190 ft.

Gage.--Recording. Altitude of gage is 5,580 ft (from topographic map).

Stage-discharge relation.--Well defined by discharge measurements.

Bankfull stage.--10 ft.

Remarks.--Diversions above station for municipal supply and irrigation of about 66,000 acres. Peak flows considerably affected by diversions. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	Apr. 12, 1934	2.10	534	1945	June 11, 1945	3.81	2,200
1935	Apr. 21, 1935	3.10	1,320				
				1946	Apr. 20, 1946	4.32	2,880
1936	May 6, 1936	4.64	3,520	1947	May 5, 1947	3.35	1,720
1937	May 8, 1937	3.34	1,610	1948	May 22, 1948	3.67	2,120
1938	May 18, 1938	3.82	2,220	1949	May 22, 1949	3.43	1,850
1939	Apr. 25, 1939	3.23	1,500	1950	May 25, 1950	4.44	3,130
1940	Apr. 20, 1940	2.39	803				
				1951	May 12, 1951	3.84	2,280
1941	May 14, 1941	2.92	1,130	1952	May 4, 1952	4.58	3,470
1942	Apr. 13, 1942	3.43	1,700	1953	June 3, 1953	3.04	1,430
1943	Apr. 17, 1943	4.30	2,680	1954	May 11, 1954	3.26	1,620
1944	June 9, 1944	3.12	1,380	1955	May 9, 1955	2.98	1,330

295. McCoy Creek above reservoir, near Alpine, Idaho
(Published as "near Alpine, Idaho," 1917-18, and as "near Alpine, Wyo.," 1934)

Location.--Lat 43°10'50", long 111°06'55", in SW¼ sec.6, T.3 S., R.46 E., on left bank 1½ miles upstream from mouth and 3½ miles west of Alpine.

Drainage area.--108 sq mi. Mean altitude, 6,960 ft.

Gage.--Nonrecording in 1917, recording in 1918, and nonrecording gage in 1934; all about 1 mile downstream at different datums. Recording at present site since Sept. 11, 1953. Datum of gage is 5,635.4 ft above mean sea level, datum of 1929, supplementary adjustment of 1947 (levels partly by Bureau of Reclamation).

Stage-discharge relation.--Fairly well defined by current-meter measurements below 900 cfs.

Bankfull stage.--5.5 ft.

Remarks.--Base for partial-duration series, 650 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 15-16,1918	-	a390	1956	Apr. 21, 1956	5.72	1,130
					May 4, 1956	5.01	837
1934	May 2,7,8,1934	-	a81		May 19, 1956	4.75	727
1954	Apr. 28, 1954	4.82	813	1957	May 5, 1957	5.25	880
					May 13, 1957	5.73	1,070
1955	May 6, 1955	4.80	813		May 20, 1957	4.94	750

a Maximum daily discharge.

INDIAN CREEK BASIN

300. Indian Creek above reservoir, near Alpine, Idaho
(Published as "near Blowout" 1917-18)

Location.--Lat 43°15'35", long 111°04'00", near center of sec.9, T.2 S., R.46 E., a quarter of a mile downstream from forks of creek, 3 miles upstream from mouth, and 5½ miles north of Alpine.

Drainage area.--36.8 sq mi. Mean altitude, 7,790 ft.

Gage.--Nonrecording prior to Aug. 1, 1953; recording thereafter. At site 3 miles downstream at different datum 1917-18. Altitude of gage is 5,820 ft (from topographic map).

Stage-discharge relation.--Fairly well defined by current-meter measurements below 225 cfs at site used 1954-57; and below 125 cfs at site used 1917-18.

Bankfull stage.--7 ft.

Remarks.--Base for partial-duration series, 100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 14, 1918	3.15	350	1956	June 1, 1956	3.88	248
					June 13, 1956	3.72	297
1954	May 21, 1954	3.34	174		June 20, 1956	2.97	136
	June 24, 1954	3.49	174		June 24, 1956	2.91	128
1955	June 23, 1955	2.86	103	1957	June 6, 1957	3.74	233
					June 29, 1957	3.13	150
1956	May 23, 1956	3.47	178				

305. Elk Creek above reservoir, near Irwin, Idaho
(Published as Big Elk Creek near Blowout 1917-18 and as "near Irwin" 1934)

Location.--Lat 43°19'25", long 111°06'40", in NW¼ sec.19, T.1 S., R.46 E., on right bank 2½ miles upstream from mouth and 11 miles southeast of Irwin.

Drainage area.--59.2 sq mi. Mean altitude, 7,670 ft.

Gage.--Nonrecording at site 2¼ miles downstream at different datum 1917-18, 1934; recording at present site and datum since Sept. 24, 1953. Altitude of gage is 5,640 ft (from topographic map).

Stage-discharge relation.--Well defined by current-meter measurements below 540 cfs at both sites.

Bankfull stage.--6 ft.

Remarks.--Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 15, 1918	4.35	870	1956	May 22, 1956	4.93	628
					May 31, 1956	4.82	640
1954	May 10, 1954	4.19	338		June 12, 1956	3.89	494
	May 21, 1954	4.89	505				
	June 26, 1954	4.05	307	1957	June 5, 1957	3.94	578
1955	June 8, 1955	3.66	247				

BEAR CREEK BASIN

320. Bear Creek above reservoir, near Irwin, Idaho

Location.--Lat 43°16'45", long 111°13'15", in SE¼ sec.31, T.1 S., R.45 E., on left bank a quarter of a mile downstream from Elk Creek, 4 miles upstream from mouth, and 9 miles southeast of Irwin.

Drainage area.--77.1 sq mi. Mean altitude, 7,130 ft.

Gage.--Nonrecording prior to Nov. 1, 1936, at site 4 miles downstream and at different datum; recording thereafter. Altitude of gage is 5,640 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 180 cfs at site prior to 1936 and below 500 cfs at present site.

Bankfull stage.--4 ft.

Remarks.--Base for partial-duration series, 350 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1918	June 15, 1918	4.05	a369	1955	May 9, 1955	4.03	399
1934	May 2, 1934	1.50	a60	1956	Apr. 18, 1956	4.15	475
					Apr. 27, 1956	4.48	578
1935	May 23, 1935	2.85	436		May 4, 1956	4.60	638
					May 19, 1956	4.81	736
1936	May 5, 1936	3.70	784				
				1957	May 7, 1957	4.51	425
1954	Apr. 28, 1954	4.07	426		May 12, 1957	5.22	707
	May 9, 1954	4.22	487		May 19, 1957	4.98	578

a Maximum observed; may have been higher prior to this date.

325. Snake River near Irwin, Idaho
(Published as "at Calamity Point, near Irwin" 1934, 1939-41)

Location.--Lat 43°21', long 111°13', in NE¼ sec.7, T.1 S., R.45 E., 1½ miles downstream from Palisades dam, 2 miles upstream from Palisades Creek, and 5 miles southeast of Irwin.

Drainage area.--5,225 sq mi.

Gage.--Recording prior to Aug. 14, 1934, and Mar. 30, 1939, to Sept. 30, 1941, at site 2½ miles upstream at different datum. Mar. 30, 1935, to Oct. 31, 1936, recording, 3½ miles downstream at different datum. May 1, 1949, to Mar. 22, 1950, nonrecording, 1,100 ft downstream at datum 1.9 ft higher. Recording at present site and datum since Mar. 22, 1950. Datum of gage is 5,353.00 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Rating curve well defined by current-meter measurements for higher discharges.

Bankfull stage.--20 ft.

Historical data.--Floods during early June 1894, and May 19, 1927, were higher than that of June 4-6, 1956. See record for station near Heise.

Remarks.--Flow regulated by Jackson Lake. Diversions for irrigation of about 93,000 acres upstream from station. Peak discharges considerably affected. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	May 9, 1934	4.11	14,200	1950	July 3, 1950	12.52	27,800
1935	June 14, 1935	a6.43	b20,840	1951	May 29, 1951	12.69	28,800
1936	June 1, 1936	a7.67	b26,850	1952	June 8, 1952	11.62	25,800
1939	June 1, 1939	6.56	18,800	1953	June 14, 1953	11.86	26,000
1940	June 16, 1940	5.10	13,200	1954	June 28, 1954	13.18	31,200
1941	May 27, 1941	5.25	13,600	1955	June 17, 1955	10.47	18,300
1949	June 13, 1949	7.24	20,500	1956	June 4-6, 1956	c13.31	31,800
				1957	June 9,10, 1957	10.45	18,200

a Daily mean gage height.
b Daily mean discharge.
c Occurred June 4, 1956.

350. Snake River near Swan Valley, Idaho
(Published as South Fork Snake River near Lyon 1903-10 and as "near Lyon" 1911)

Location.--Lat 43°27'45", long 111°24'50", in NE¼ sec.32, T.2 N., R.43 E., 1½ miles downstream from Rainy Creek and 4 miles northwest of Swan Valley.

Drainage area.--5,488 sq mi.

Gage.--Nonrecording prior to Sept. 12, 1904, at approximately described site at different datum and at site 1 mile upstream at different datum Sept. 12, 1904, to Dec. 31, 1911. Recording in 1934. Altitude of gage is 5,235 ft (from river-profile survey).

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Flow regulated by storage in Jackson Lake beginning in 1906. Diversions for irrigation of about 82,000 acres above station by 1911. Maximum observed discharges shown except for 1934, which is maximum daily. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	June 17, 1903	-	21,200	1909	June 19, 1909	10.9	44,000
1904	May 25, 1904	9.05	37,200	1910	May 12, 1910	8.9	29,000
1905	June 9, 1905	6.10	17,800	1911	June 17, 1911	10.8	37,100
1906	June 14, 1906	7.9	26,500				
1907	June 22, 1907	8.85	31,900	1934	May 9, 1934	4.07	a13,820
1908	June 17, 1908	7.8	26,000				

a Maximum daily.

375. Snake River near Heise, Idaho

Location.--Lat 43°36'45", long 111°39'05", in SW¼ sec.5, T.3 N., R.41 E., on left bank 500 ft upstream from Anderson Canal headgate, 3 miles upstream from Heise, 6 miles east of Ririe, and 23 miles upstream from Henrys Fork.

Drainage area.--5,752 sq mi. Mean altitude, 7,770 ft.

Gage.--Nonrecording prior to July 9, 1913; recording thereafter. At datum 2.65 ft higher July 9, 1913, to Sept. 29, 1922. At datum 2.0 ft higher Sept. 30, 1922, to Oct. 5, 1933. Datum of gage is 5,015.3 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Well defined by current-meter measurements below 40,000 cfs. Higher discharges determined by extension of rating curve.

Bankfull stage.--Water confined to channel at all stages at the gage, but beginning about 2 miles downstream overflow occurs for discharges in excess of about 35,000 cfs, and still further downstream overflow occurs for discharges in excess of 28,000 cfs.

Historical data.--Flood of early June 1894 was probably as great as flood of May 19, 1927.

Remarks.--About 107,000 acres in Wyoming and Idaho irrigated by diversions from tributaries above station. Flood peaks that would otherwise occur are reduced at times by as much as 12,000 cfs by storage in Jackson Lake. Regulated by Palisades Reservoir after 1955. The 1927 peak flow was due to breaking of the Gros Ventre slide dam in Wyoming. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 16,17,1911	10.35	36,000	1935	June 15, 1935	7.50	21,600
1912	June 14, 1912	10.0	34,600				
1913	June 6, 1913	9.9	33,900	1936	May 16, 1936	8.80	29,300
1914	June 5, 1914	9.85	33,600	1937	June 23, 1937	8.75	17,900
1915	June 28, 1915	6.15	17,100	1938	June 9, 1938	7.70	23,100
				1939	June 1, 1939	7.05	19,400
1916	June 20, 1916	8.78	28,100	1940	June 17, 1940	5.87	13,900
1917	June 20,21,1917	10.6	41,000				
1918	June 16, 1918	10.8	52,000	1941	May 28, 1941	8.08	14,500
1919	June 16, 1919	4.3	17,900	1942	June 10, 1942	7.33	19,500
1920	June 10, 1920	5.7	26,000	1943	June 23, 1943	10.04	36,000
				1944	June 11, 1944	7.21	20,000
1921	June 14, 1921	6.91	34,000	1945	June 26, 1945	7.70	22,500
1922	May 26, 1922	6.05	26,300				
1923	May 27, 1923	6.23	24,500	1946	June 7, 1946	8.35	26,200
1924	May 18, 1924	5.47	15,400	1947	June 10, 1947	8.32	25,900
1925	May 22, 1925	7.93	25,100	1948	June 4, 1948	9.04	30,500
				1949	June 13, 1949	7.45	21,000
1926	May 25, 1926	6.59	19,000	1950	July 3, 1950	8.79	28,500
1927	May 19, 1927	13.90	a60,000				
1928	May 27, 1928	8.38	36,100	1951	May 29,30,1951	9.11	30,400
1929	June 18, 1929	6.08	24,300	1952	June 8, 1952	8.27	26,800
1930	June 13, 1930	5.29	20,500	1953	June 20, 1953	8.18	26,000
				1954	June 28, 1954	9.07	30,800
1931	May 17, 1931	3.57	12,600	1955	June 17, 1955	6.73	18,800
1932	May 22, 1932	5.33	21,300				
1933	June 16, 1933	6.10	b25,600	1956	June 4, 1956	9.22	33,300
1934	May 9, 1934	5.80	b13,600	1957	June 10, 1957	6.62	19,400

a Result of failure of Gros Ventre slide dam in Wyoming.
b Maximum daily.

395. Henrys Fork near Lake, Idaho

Location.--Lat 44°36', long 111°21', in SW¼ sec.26, T.15 N., R.43 E., on left bank a quarter of a mile downstream from Henrys Lake Dam and 4 miles south of former Lake Post Office.

Drainage area.--98 sq mi, approximately, including 6 sq mi of Dry Creek basin.

Gage.--Nonrecording prior to September 1922, at site 3 miles downstream and below mouth of Dry Creek at different datum; recording thereafter. Datum of present gage is 6,450.62 ft above mean sea level, levels by Bureau of Reclamation (Corps of Engineers bench mark).

Stage-discharge relation.--Fairly well defined by current-meter measurements for range of stage.

Bankfull stage.--No significant overflow at site, but about 4 miles downstream overflow occurs at discharges in excess of about 450 cfs.

Remarks.--Flow regulated by Henrys Lake since Sept. 21, 1922. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	May 15, 1920	2.86	550	1939	June 8,9,1939	0.90	36
				1940	Aug. 1, 1940	3.34	371
1921	June 14, 1921	1.90	314				
1922	May 16, 1922	3.05	569	1941	July 8-14,1941	2.32	225
1923	Aug. 8, 1923	3.32	347	1942	July 23, 1942	3.01	319
1924	Aug. 6, 1924	4.84	743	1943	Aug. 1, 1943	3.18	315
1925	July 16, 1925	1.64	93	1944	Aug. 7, 1944	3.71	459
				1945	July 27, 1945	3.22	369
1926	June 13, 1926	5.40	907				
1927	Aug.26-28,1927	2.31	145	1946	July 17, 1946	2.67	269
1928	Aug. 19, 1928	4.19	384	1947	June 12-23,1947	3.19	390
1929	July 28, 1929	5.12	792	1948	July 15, 1948	3.00	363
1930	July 4, 1930	3.34	376	1949	Aug. 1, 1949	3.07	252
				1950	Sept.12, 1950	4.09	375
1931	June 23, 1931	3.19	357				
1932	Aug. 4,5,1932	3.95	531	1951	July 7, 1951	2.02	186
1933	July 21,24, 26,27, 1933	3.73	481	1952	Sept.17, 1952	3.65	354
				1953	June 30, 1953	2.18	239
1934	July 11, 1934	3.24	308	1954	June 29, 1954	1.90	168
1935	Aug. 1, 1935	3.08	349	1955	Aug. 4, 1955	3.72	461
1936	July 23, 1936	3.11	363	1956	July 25,26,1956	3.42	294
1937	July 5, 1937	3.12	351	1957	June 13, 1957	2.27	287
1938	Aug.13-22, 1938	3.50	387				

410. Henrys Fork at Coffee Pot Rapids, near Island Park, Idaho

Location.--Lat 44°30', long 111°24', in SE¼ sec.32, T.14 N., R.43 E., 5 miles northwest of Island Park and 6 miles upstream from Hotel Creek.

Drainage area.--261 sq mi.

Gage.--Recording. Altitude of gage is 6,315 ft (from river-profile survey).

Stage-discharge relation.--Fairly well defined by current-meter measurements below 600 cfs. Rating curve extended above that discharge by comparison with flow at station near Island Park.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Flow regulated by Henrys Lake. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 11, 1935	3.21	a1,070	1938	May 4, 1938	3.18	a1,050
				1939	Apr. 24, 1939	3.03	940
1936	May 1, 1936	3.14	a1,020	1940	Apr. 23, 1940	2.93	872
1937	May 9, 1937	3.15	a1,030				

a Maximum daily.

415. Sheridan Creek near Island Park, Idaho

Location.--Lat 44°25', long 111°36', in SE¼ sec.27, T.13 N., R.41 E., 1 mile downstream from Willow Creek and 12 miles west of Island Park Post Office.

Drainage area.--82.1 sq mi. Mean altitude, 7,080 ft.

Gage.--Recording. Altitude of gage is 6,340 ft (estimated from flow line of Island Park Reservoir). Several minor changes in datum during period of record.

Stage-discharge relation.--Fairly well defined by current-meter measurements for discharges below 300 cfs and by extended rating curve for higher discharges.

Remarks.--Irrigation canals upstream from station divert a maximum of about 60 cfs during floodwater periods. Gage-height record and results of many discharge measurements furnished by Bureau of Reclamation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 7, 1935	3.41	175	1938	May 31, 1938	3.94	447
				1939	May 5, 1939	2.77	330
1936	May 12, 1936	2.52	191	1940	May 16, 1940	2.79	282
1937	May 18, 1937	2.90	253				

425. Henrys Fork near Island Park, Idaho

Location.--Lat 44°24'59", long 111°23'41", in SW¼ sec.28, T.13 N., R.43 E., on left bank an eighth of a mile downstream from Island Park Dam, a quarter of a mile upstream from Buffalo River, and 1 mile west of Island Park Post Office.

Drainage area.--481 sq mi. Mean altitude, 7,080 ft.

Gage.--Nonrecording prior to May 15, 1935, at site about three-quarters of a mile upstream at different datum; recording thereafter. At site 1,000 ft downstream at different datum May 15 to Nov. 30, 1935. Altitude of gage is 6,225 ft (from river-profile map).

Stage-discharge relation.--Well defined by current-meter measurements.

Bankfull stage.--In canyon.

Remarks.--Flow regulated by Henrys Lake and Island Park Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	May 17, 1933	1.08	1,220	1946	Apr. 26, 1946	6.15	2,770
1934	Apr. 9, 1934	.72	808	1947	May 3, 1947	5.38	2,130
1935	May 11, 1935	1.30	1,440	1948	July 17, 1948	5.22	1,930
				1949	July 22, 1949	5.19	1,940
1936	May 1, 1936	5.89	1,490	1950	May 18, 1950	5.10	1,800
1937	May 9, 1937	6.08	1,590				
1938	May 4, 1938	6.14	1,580	1951	July 20, 1951	4.18	1,260
1939	May 4, 1939	4.33	1,220	1952	May 21, 1952	5.52	2,220
1940	July 17, 1940	5.22	1,940	1953	July 20, 1953	5.30	1,950
				1954	July 28, 1954	5.45	2,170
1941	Aug. 6, 1941	5.00	1,550	1955	July 18, 1955	5.87	2,560
1942	May 25, 1942	4.89	1,730				
1943	June 1, 1943	5.96	2,580	1956	July 17, 1956	5.11	1,860
1944	Aug.11,12,1944	5.12	1,830	1957	May 13,14,1957	4.80	1,700
1945	June 8, 1945	5.72	2,380				

430. Buffalo River near Island Park, Idaho

Location.--Lat 44°25', long 111°23', in SE¼ sec.28, T.13 N., R.43 E., half a mile upstream from mouth and 1mile southwest of Island Park Post Office.

Drainage area.--36.7 sq mi. Mean altitude, 6,460 ft.

Gage.--Recording. Altitude of gage is 6,250 ft (from river-profile map). Several minor changes in datum prior to 1937.

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 11, 1935	1.04	400	1938	Apr. 30, 1938	1.39	638
				1939	May 4, 1939	1.16	430
1936	Apr. 26, 1936	.89	461	1940	Apr. 19, 1940	1.20	509
1937	May 5, 1937	1.05	368				

435. Henrys Fork at DeWiners Ranch, near Island Park, Idaho

Location.--Lat 44°24', long 111°24', in SW¼ sec.8, T.12 N., R.43 E., 3 miles downstream from Buffalo River and 4 miles southwest of Island Park Post Office.

Drainage area.--523 sq mi.

Gage.--Recording. Altitude of gage is 6,165 ft (from river-profile map).

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Remarks.--Flow regulated by Henrys Lake and, beginning in 1939, by Island Park Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 11, 1935	2.56	a1,580	1938	May 4, 1938	2.96	a1,920
				1939	May 4, 1939	2.66	1,580
1936	Apr. 26, 1936	2.72	a1,740	1940	July 17-20, 1940	3.11	2,150
1937	May 9, 1937	2.72	a1,660				

a Maximum daily.

440. Henrys Fork at Warm River, Idaho
(Published as North Fork of Snake River at Warm River 1910-11)

Location.--Lat 44°07', long 111°20', in sec.12, T.9 N., R.43 E., on left bank 1,000 ft upstream from Warm River and half a mile northwest of Warm River railroad siding.

Drainage area.--656 sq mi. Mean altitude, 6,860 ft.

Gage.--Nonrecording prior to June 29,1923; recording thereafter. At site 200 ft downstream June 29, 1923, to Sept. 19, 1938. Altitude of gage is 5,257 ft (from river-profile map).

Stage-discharge relation.--Well defined by current-meter measurements.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Flow regulated by Henrys Lake (beginning in 1923), Island Park Reservoir (beginning in 1939) and by upstream irrigation of about 18,000 acres of wild hay meadows. Only annual peaks are shown.

Peak stages and discharges of Henrys Fork at Warm River, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	May 6, 1911	7.3	a3,100	1934	Apr. 9, 1934	4.67	1,080
1912	May 21, 1912	7.4	a3,300	1935	May 11, 1935	5.57	1,740
1913	Apr.28,29, May 9, 1913	7.2	a3,100	1936	Apr. 26, 1936	6.00	2,140
1914	Apr. 26, 1914	7.1	a3,010	1937	May 9, 1937	5.95	2,040
				1938	May 2, 1938	6.57	2,600
1918	May 5, 1918	6.5	a2,620	1939	May 5, 1939	5.66	1,770
1919	Apr.27-29,1919	6.4	a2,400	1940	July 20, 1940	6.28	2,190
1920	May 16, 1920	7.0	a3,390	1941	Aug.6-8, 1941	5.77	1,860
1921	May 5, 1921	6.85	a3,170	1942	July 31 to Aug.4, 1942	5.84	2,030
1922	May 8,9, 1922	7.0	a2,920				
1923	May 11, 1923	6.35	a2,490	1943	June 2, 1943	6.85	2,830
1924	May 4,5, 1924	5.20	a1,530	1944	Aug. 12, 1944	6.46	2,190
1925	May 7, 1925	6.51	2,640	1945	June 8, 1945	7.40	3,290
1926	Apr. 21, 1926	6.05	2,180	1946	Apr. 27, 1946	7.80	3,480
1927	May 18, 1927	7.55	3,540	1947	May 4, 1947	6.97	2,710
1928	May 7, 1928	6.00	a2,110	1948	July 18,19,1948	6.61	2,320
1929	May 16, 1929	5.80	a1,930	1949	July 25, 1949	6.60	2,280
1930	Apr. 12, 1930	5.77	2,000	1950	May 18, 1950	6.90	2,510
1931	Apr. 19, 1931	4.83	1,280	1951	May 15, 1951	6.19	1,920
1932	May 12, 1932	6.48	a2,560	1952	May 21, 1952	7.72	3,400
1933	Apr. 29, 1933	5.49	a1,790				

a Maximum daily.

445. Warm River at Warm River, Idaho

Location.--Lat 44°07', long 111°19', in SE¼ sec.12, T.9 N., R.43 E., at highway bridge a quarter of a mile upstream from Robinson Creek, half a mile upstream from mouth, and a half a mile northeast of Warm River railroad station.

Drainage area.--178 sq mi. Mean altitude, 6,830 ft.

Gage.--Nonrecording. Altitude of gage is 5,270 ft (from river-profile map). Prior to Sept. 25, 1922, several nonrecording gages at approximately same location and datum.

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	June 2, 1912	2.3	900	1924	May 1-4, 1924	1.5	281
1913	Apr. 29, 1913	2.15	768	1925	May 8, 1925	2.18	576
1914	May 4, 1914	2.1	725	1926	Apr.17-19,1926	1.8	345
1918	May 4-7, 1918	1.7	370	1927	May 16, 1927	2.36	543
1919	Apr.24-29,1919	1.8	435	1928	Apr. 28, 1928	2.2	497
1920	May 13, 1920	2.2	575	1929	May 14, 1929	1.9	405
				1930	Apr. 14, 1930	1.5	264
1921	May 2-7, 1921	2.5	609				
1922	May 20-21,1922	2.2	466	1931	Apr.18,19, 1931	1.35	226
1923	May 19, 1923	1.9	404	1932	May 11, 1932	1.94	408

455. Robinson Creek at Warm River, Idaho

Location.--Lat 44°07', long 111°19', in NE¼ sec.13, T.9 N., R.43 E., at railroad bridge 1,000 ft upstream from mouth and a third of a mile northeast of Warm River railroad siding.

Drainage area.--129 sq mi. Mean altitude, 6,450 ft.

Gage.--Nonrecording. At datum 1.10 ft lower prior to Sept. 25, 1922. Altitude of gage is 5,270 ft (from river-profile map).

Stage-discharge relation.--Unstable. Fairly well defined by current-meter measurements.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges of Robinson Creek at Warm River, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	May 28, 1912	4.3	1,140	1924	May 4, 1924	1.6	266
1913	May 9, 1913	3.7	735	1925	May 8,12,1925	3.2	781
1914	Apr.24,May 4, 1914	3.6	675	1926	May 5, 1926	2.56	557
				1927	May 17, 1927	3.52	910
1918	May 5, 1918	3.5	524	1928	May 10,12,1928	3.40	851
1919	Apr. 29, 1919	3.35	462	1929	May 22, 1929	2.95	695
1920	May 18, 1920	3.6	606	1930	Apr. 7, 1930	1.82	311
1921	May 5,9,19, 1921	3.8	698	1931	May 3,4, 1931	1.47	217
				1932	May 13,14,1932	3.20	746
1922	May 20-22,1922	3.7	648				
1923	May 25, 1923	2.45	526				

460. Henrys Fork near Ashton, Idaho

(Published as "in canyon, above Fall River" 1890-91 and as North Fork of Snake River near Ora 1902-9)

Location.--Lat 44°05', long 111°30', in sec.28, T.9 N., R.42 E., on right bank a quarter of a mile downstream from powerplant and 3 miles west of Ashton.

Drainage area.--1,040 sq mi. Mean altitude, 6,710 ft.

Gage.--Nonrecording prior to Apr. 15, 1921; recording thereafter. Prior to June 1891, at site 6 miles downstream at different datum. August 1902 to May 3, 1930, at site 1½ miles downstream at different datum. Altitude of gage is 5,095 ft (from river-profile map).

Stage-discharge relation.--Well defined by current-meter measurements.

Bankfull stage.--8 ft.

Remarks.--Flow regulated by powerplant immediately upstream and by Henrys Lake and Island Park Reservoir. Irrigation above station for about 18,000 acres of hay meadows. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1890	May 8, 1890	3.55	6,000	1934	Apr.9 June 8, 1934	6.35	1,740
1891	May 6,7, 1891	2.3	2,910	1935	May 11, 1935	6.78	a2,450
1903	May 8, 1903	3.5	3,970	1936	May 1, 1936	7.08	a3,170
1904	May 20, 1904	4.5	5,370	1937	May 9, 1937	6.96	a2,920
1905	Apr.24-27,1905	2.9	2,280	1938	May 1, 1938	7.46	a4,040
				1939	May 4, 1939	7.30	3,630
1906	Apr.29 to May 4, 1906	3.3	3,030	1940	Apr.26,27,1940	7.03	2,950
1907	May 12,13,1907	3.6	3,750	1941	July 20, 1941	6.99	2,380
1908	June 6, 1908	3.7	4,000	1942	May 26, 1942	7.08	3,050
1909	May 29, 1909	3.8	4,250	1943	June 2, 1943	7.70	4,290
				1944	Aug.12-15,1944	7.37	2,510
1920	May 16, 1920	2.5	5,130	1945	June 8, 1945	7.88	4,580
1921	May 5,6, 1921	2.21	4,140	1946	Apr. 27, 1946	7.90	5,060
1922	May 8, 1922	2.31	4,370	1947	May 4, 1947	7.64	4,140
1923	May 7, 1923	1.91	3,760	1948	May 8, 1948	7.26	3,370
1924	May 3, 1924	1.23	2,220	1949	May 22, 1949	7.32	3,740
1925	May 7, 1925	3.11	6,220	1950	May 16, 1950	7.37	3,630
1926	Apr. 21, 1926	1.99	3,560	1951	May 7, 1951	b7.76	3,330
1927	May 17, 1927	2.79	5,220	1952	May 21, 1952	7.85	5,040
1928	May 11, 1928	2.01	3,440	1953	June 5, 1953	7.36	3,190
1929	May 17, 1929	1.80	a3,230	1954	Aug. 29, 1954	8.19	3,650
1930	Apr. 11, 1930	1.60	2,880	1955	July 19, 1955	c7.99	3,400
1931	Apr. 20, 1931	6.34	a1,630	1956	May 8,9, 1956	d7.62	3,240
1932	May 12, 1932	7.50	a4,060	1957	May 21, 1957	e8.10	5,040
1933	May 18, 1933	6.88	a2,760				

a Daily mean discharge.
b Occurred Aug. 22, 1951.
c Occurred Aug. 7, 1955.
d Occurred July 28, 1956.
e Occurred Aug. 11, 1957.

475. Fall River near Squirrel, Idaho
(Published as "at Fremont" 1904-9)

Location.--Lat 44°04'15", long 111°14'25", in NE¼ sec.34, T.9 N., R.44 E., on right bank a quarter of a mile upstream from road bridge, half a mile downstream from headgates of Marysville Canal, 4 miles northeast of Squirrel, and 10 miles upstream from Conant Creek.

Drainage area.--351 sq mi. Mean altitude, 7,520 ft.

Gage.--Nonrecording prior to Oct. 7, 1948; recording thereafter. At site 200 ft upstream at different datum Jan. 1, 1904, to Nov. 6, 1937. At site 100 ft downstream at datum 0.29 ft lower, Nov. 7, 1937, to Oct. 7, 1948. Datum of gage is 5,589 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--18 ft.

Remarks.--Two diversions above station for irrigation of about 16,000 acres. Flow partly regulated by Grassy Lake since October 1939. Only annual peaks are shown. Maximum observed gage height and discharge prior to 1949.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 10, 1905	4.05	2,710	1935	June 2, 1935	4.24	2,940
1906	June 6,17, 1906	3.95	2,580	1936	June 1, 1936	4.96	4,040
1907	June 8, 1907	4.3	3,130	1937	June 23, 1937	4.24	3,010
1908	June 19,20,1908	4.2	2,970	1938	June 8, 1938	3.32	3,050
1909	June 4,5,19, 27, 1909	4.85	4,160	1939	May 17, 1939	3.12	2,670
				1940	June 1, 1940	3.82	3,950
1918	June 14, 15, 23, 1918	5.6	5,380	1941	May 28, 1941	2.94	2,490
				1942	June 9, 1942	3.24	2,950
1919	May 29, 1919	5.25	4,730	1943	May 29, 1943	3.46	3,320
1920	June 12, 1920	4.15	2,900	1944	June 9,10, 1944	3.06	2,640
				1945	June 6, 1945	3.26	2,940
1921	June 12, 1921	4.60	3,560				
1922	June 22, 1922	4.85	3,980	1946	June 6, 1946	3.07	2,700
1923	June 13, 1923	4.00	2,630	1947	June 10, 1947	3.54	3,500
1924	May 21, 1924	3.48	1,920	1948	June 8, 1948	3.64	3,690
1925	May 23, 1925	4.68	3,650	1949	May 17, 1949	3.88	3,710
				1950	May 24, 1950	3.60	3,310
1926	May 25, 1926	3.95	2,520				
1927	June 27, 1927	6.25	6,440	1951	May 29, 1951	3.53	3,200
1928	May 27, 1928	5.20	4,330	1952	June 9, 1952	3.65	3,560
1929	June 30, 1929	4.65	3,540	1953	June 19, 1953	4.81	3,450
1930	June 12, 1930	3.68	2,300	1954	May 22, 1954	4.80	3,450
				1955	June 23, 1955	4.52	3,420
1931	May 17, 1931	4.24	3,120				
1932	June 17, 1932	5.75	5,600	1956	June 2, 1956	4.76	3,890
1933	June 15, 1933	5.36	4,960	1957	June 6, 1957	4.77	4,080
1934	May 9,June 8, 1934	3.34	1,780				

495. Fall River near Chester, Idaho

Location.--Lat 44°01', long 111°34', in sec.13, T.8 N., R.41 E., on right bank 1,000 ft upstream from highway bridge, half a mile upstream from mouth, and 1¼ miles north of Chester.

Drainage area.--520 sq mi, approximately. Mean altitude, 6,970 ft.

Gage.--Nonrecording prior to Apr. 28, 1921; recording thereafter. At site 200 ft downstream prior to Aug. 9, 1920. Datum of gage is 5,051.9 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--6 ft.

Remarks.--About 42,000 acres irrigated by diversions upstream from station. Flow also regulated slightly by Grassy Lake, beginning October 1939. Only annual peaks are shown.

Peak stages and discharges of Fall River near Chester, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	May 18, 1920	3.24	3,260	1940	May 28, 1940	4.85	3,420
1921	May 29, 1921	5.30	3,720	1941	May 28, 1941	4.28	2,550
1922	June 23, 1922	4.85	3,270	1942	June 10, 1942	4.49	2,820
1923	May 26, 1923	4.39	2,660	1943	May 29, 1943	4.70	3,080
1924	May 27, 1924	3.53	1,550	1944	June 10, 1944	4.37	2,610
1925	May 21, 1925	5.46	4,280	1945	June 7, 1945	4.67	3,100
1926	May 6, 1926	4.30	2,330	1946	June 6, 1946	4.30	2,530
1927	June 27, 1927	6.60	6,380	1947	May 5, 1947	4.82	3,460
1928	May 27, 1928	5.60	4,510	1948	May 22, 1948	5.25	4,130
1929	June 17, 1929	5.16	3,760	1949	May 17, 1949	5.27	4,040
1930	July 9, 1930	4.98	3,500	1950	May 24, 1950	4.97	3,360
1931	May 17, 1931	4.62	3,040	1951	May 29, 1951	4.68	3,030
1932	June 17, 1932	6.10	5,700	1952	May 5, 1952	5.11	3,830
1933	June 15, 1933	a5.15	4,210	1953	June 15, 1953	4.73	3,120
1934	June 8, 1934	3.25	1,310	1954	May 22, 1954	4.94	3,440
1935	June 2, 1935	4.31	2,630	1955	June 4, 13, 23, 1955	4.28	2,460
1936	June 2, 1936	5.00	3,760				
1937	June 12, 1937	4.27	2,620	1956	June 2, 1956	5.00	3,490
1938	May 1, 1938	4.69	3,200	1957	June 6, 1957	5.15	3,920
1939	May 1, 1939	4.50	2,800				

a Maximum daily.

505. Henrys Fork at St. Anthony, Idaho

Location.--Lat 43°58'00", long 111°40'20", in NW¼ sec.6, T.7 N., R.41 E., on right bank half a mile upstream from bridge on main street of St. Anthony and 6 miles downstream from Fall River.

Drainage area.--1,770 sq mi, approximately. Mean altitude, 6,670 ft.

Gage.--Nonrecording prior to May 7, 1922; recording thereafter. At site 150 ft downstream at datum 0.08 ft lower prior to Aug. 14, 1931. Datum of gage is 4,950.7 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Fairly well defined by current-meter measurements for discharges below 7,000 cfs and extended above. Prior to Aug. 14, 1931, backwater from downstream dam affected stage-discharge relation at times.

Bankfull stage.--6.5 ft.

Remarks.--Flow regulated by Henrys Lake, Grassy Lake, and Island Park Reservoir, and by powerplant 17 miles upstream. Many diversions for irrigation upstream from station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	May 1, 1919	5.70	6,210	1939	May 2, 1939	5.50	5,490
1920	May 19, 1920	5.70	5,500	1940	June 2, 1940	4.95	3,860
1921	June 1, 1921	6.35	7,140	1941	May 28, 1941	4.77	3,480
1922	May 21, 1922	5.88	6,650	1942	June 10, 1942	5.04	4,140
1923	May 11, 1923	5.20	4,740	1943	June 2, 1943	5.80	6,220
1924	May 5, 1924	4.26	2,470	1944	June 10, 1944	5.16	4,480
1925	May 8, 1925	6.70	9,030	1945	June 8, 1945	6.31	7,480
1926	Apr. 22, 1926	5.01	4,150	1946	May 1, 1946	5.20	4,500
1927	May 18, 1927	6.43	8,150	1947	May 4, 1947	6.06	6,850
1928	May 12, 1928	5.92	6,570	1948	May 22, 1948	5.95	6,490
1929	June 17, 1929	5.57	5,640	1949	May 22, 1949	6.03	6,820
1930	May 7, 1930	4.10	2,090	1950	May 24, 1950	5.50	4,890
1931	May 16, 1931	4.77	3,590	1951	May 9, 1951	5.37	4,870
1932	June 17, 1932	5.72	7,470	1952	May 5, 1952	6.35	7,970
1933	June 15, 1933	4.81	4,750	1953	June 8, 1953	5.43	5,040
1934	June 8, 1934	3.95	1,660	1954	May 22, 1954	5.32	4,840
1935	June 2, 1935	4.86	3,890	1955	June 4, 1955	5.12	4,200
1936	May 4, 1936	5.40	5,160	1956	May 8, 1956	5.60	5,520
1937	May 9, 1937	5.08	4,640	1957	May 12, 1957	6.49	8,070
1938	May 2, 1938	5.90	6,730				

510. Teton River near Victor, Idaho

Location.--Lat 43°33'50", long 111°04'00", on line between secs. 19 and 30, T.3 N., R.46 E., on right bank 100 ft downstream from Moose Creek, 200 ft upstream from String canal, and 3½ miles southeast of Victor.

Drainage area.--47.6 sq mi. Mean altitude, 8,240 ft.

Gage.--Recording. At datum 1.54 ft higher prior to July 29, 1949. Altitude of gage is 6,470 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--4 ft.

Remarks.--Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 6, 1946	1.58	a310	1949	May 30, 1949	1.69	300
					June 11, 1949	1.84	338
1947	Jan. 4, 1947	b1.94	-				
	May 9, 1947	1.54	300	1950	June 7, 1950	3.18	322
	May 27, 1947	1.56	305		June 17, 1950	3.39	361
	June 20, 1947	1.50	290		July 1, 1950	3.41	361
1948	June 8, 1948	2.03	398	1951	May 29, 1951	3.37	368
					June 17, 1951	3.49	398
1949	(c)	1.87	-				
	May 15, 1949	1.55	265	1952	June 7, 1952	3.64	445

a Maximum observed; may have been higher prior to May 27, 1946.
b Backwater from ice; may have been higher during periods of no gage-height record.
c Backwater from ice; occurred sometime between Jan. 7 and Feb. 26, 1949.

515. Teton Creek near Driggs, Idaho

Location.--Lat 43°45'30", long 110°58'00", in sec.23, T.44 N., R.118 W., on right bank 1.5 miles upstream from Mill Creek, 1.6 miles west of Boy Scout camp, 4.2 miles east of Wyoming-Idaho State line, and 7½ miles northeast of Driggs.

Drainage area.--33.8 sq mi. Mean altitude, 8,870 ft.

Gage.--Recording. Altitude of gage is 6,760 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--7 ft.

Remarks.--Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 16, 1946	3.45	a780	1949	June 19, 1949	3.33	691
1947	May 9, 1947	3.26	704	1950	June 6, 1950	3.70	831
	June 20, 1947	3.47	788		June 16, 1950	3.83	882
	June 27, 1947	3.27	708		June 22, 1950	3.61	797
	July 7, 1947	3.32	728		June 29, 1950	4.11	992
1948	May 20, 1948	3.32	720	1951	May 28, 1951	3.73	876
	May 28, 1948	3.61	811		June 17, 1951	3.88	941
	June 3, 1948	3.84	898		July 4, 1951	3.43	748
	June 8, 1948	3.91	925		July 29, 1951	3.38	727
1949	May 15, 1949	3.24	674	1952	June 6, 1952	3.94	1,030
	June 12, 1949	3.84	898				

a Maximum recorded; may have been higher prior to June 1, 1946.

520. Teton River near Driggs, Idaho

Location.--Lat 43°45', long 111°12', in SE¼ sec.13, T.5 N., R.44 E., 4 miles downstream from Teton Creek and 5 miles northwest of Driggs.

Drainage area.--303 sq mi.

Gage.--Nonrecording. Altitude of gage is 5,950 ft (from topographic map).

Stage-discharge relation.--Fairly well defined by current-meter measurements for discharges below 1,000 cfs. Rating curve extended for higher discharges.

Bankfull stage.--4.5 ft.

Remarks.--Many diversions for irrigation from tributaries above station. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	June 15, 1935	2.20	768	1938	July 7, 1938	3.66	1,440
				1939	Apr. 4, 1939	2.38	753
1936	June 2, 1936	3.83	1,480	1940	Mar. 27, 1940	2.34	736
1937	Apr. 16, 1937	2.58	770				

525. Horseshoe Creek near Driggs, Idaho

Location.--Lat 43°44'00", long 111°15'30", in sec.27, T.5 N., R.44 E., on left bank at mouth of canyon, 90 ft upstream from bridge on old railroad grade, 4 miles upstream from mouth, and 7½ miles west of Driggs.

Drainage area.--11.7 sq mi. Mean altitude, 7,020 ft.

Gage.--Recording. Altitude of gage is 6,200 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 70 cfs.

Bankfull stage.--5 ft.

Remarks.--Base for partial-duration series, 50 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 3, 1947	3.23	57	1950	May 23, 1950	4.16	74
	June 9, 1947	3.19	60		May 28, 1950	4.12	75
1948	May 17, 1948	3.32	61	1951	Apr. 29, 1951	3.54	51
					May 12, 1951	3.48	53
1949	Apr. 24, 1949	3.43	64		May 21, 1951	3.74	65
	May 3, 1949	3.14	55				
	May 19, 1949	3.62	77	1952	May 3, 1952	3.75	81
1950	May 18, 1950	4.07	69				

530. Packsaddle Creek near Tetonia, Idaho

Location.--Lat 43°45'30", long 111°18'30", in sec.18, T.5 N., R.44 E., on left bank 0.9 mile upstream from North Fork and 8½ miles southwest of Tetonia.

Drainage area.--6.8 sq mi, approximately (revised). Mean altitude of basin, 7,690 ft.

Gage.--Recording. Altitude of gage is 6,600 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 40 cfs and extended above.

Remarks.--Base for partial-duration series, 25 cfs.

Peak stages and discharges of Packsaddle Creek near Tetonia, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	June 6, 1946	-	a25	1949	May 19, 1949	2.30	58
					May 28, 1949	-	51
1947	Jan. 27, 1947	b1.78	-				
	May 4, 1947	1.51	27	1950	May 15, 1950	-	29
	June 9, 1947	1.50	27		May 23, 1950	-	42
					May 28, 1950	-	46
1948	May 17, 1948	-	34		June 7, 1950	-	41
	June 2, 1948	1.79	38		June 18, 1950	2.19	47
	July 31, 1948	-	28				

a Estimated daily mean; may have been higher prior to June 1.
b Backwater from ice.

540. Teton River near Tetonia, Idaho

Location.--Lat 43°51', long 111°15', in sec.15, T.6 N., R.44 E., on right bank, 1¾ miles downstream from highway bridge, 4 miles downstream from Packsaddle Creek, and 6 miles northwest of Tetonia.

Drainage area.--471 sq mi.

Gage.--Recording. Datum of gage is 5,910.3 ft above mean sea level, unadjusted.

Stage-discharge relation.--Well defined by current-meter measurements.

Remarks.--Many diversions above station for irrigation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Mar. 22, 1930	1.50	695	1946	June 12, 1946	1.91	896
				1947	June 10, 1947	2.43	1,330
1931	Oct. 9, 1930	1.32	508	1948	May 30, 1948	2.42	1,330
1932	June 27, 1932	2.48	1,500	1949	May 19, 1949	2.55	1,510
				1950	July 8, 1950	2.53	1,440
1934	June 8, 1934	1.00	a344				
				1951	May 30, 1951	2.55	1,400
1940	June 9, 1940	1.59	a716	1952	June 8, 1952	2.30	1,280
				1953	June 20, 1953	2.44	1,420
1941	June 18, 1941	2.28	a1,300	1954	June 28, 1954	2.17	1,160
1942	June 9, 1942	2.90	1,880	1955	July 16, 1955	1.50	682
1943	June 23, 1943	2.58	1,590				
1944	June 28, 1944	2.83	1,820	1956	June 3, 1956	2.65	1,590
1945	June 28, 1945	2.97	1,900	1957	June 7, 1957	2.75	1,800

a Maximum recorded; may have been higher during periods of no record.

545. Canyon Creek near Newdale, Idaho

Location.--Lat 43°48', long 111°26', in sec.6, T.5 N., R.43 E., on left bank 1,000 ft west of Pincock Hot Springs, 0.8 mile downstream from Warm Creek, and 10½ miles southeast of Newdale.

Drainage area.--68 sq mi. Mean altitude, 7,000 ft.

Gage.--Nonrecording. At site a quarter of a mile upstream at different datum prior to July 4, 1925. Altitude of gage is 5,810 ft (by barometer).

Stage-discharge relation.--Well defined by current-meter measurements below 400 cfs.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	May 24, 1920	3.8	343	1924	May 18, 1924	2.64	184
				1925	May 21, 1925	4.70	457
1921	May 28, 1921	4.22	419				
1922	May 25, 1922	4.00	374	1939	May 17,18,1939	2.40	227
1923	May 26, 1923	3.81	a343				

a May not be maximum for year; result of discharge measurement.

550. Teton River near St. Anthony, Idaho
(Published as "at Chase Ranch, near Wilford" 1890-93)

Location.--Lat 43°55'40", long 111°36'55", in SW¼ sec.15, T.7 N., R.41 E., on right bank half a mile upstream from railroad bridge and 4 miles southeast of St. Anthony.

Drainage area.--890 sq mi, approximately.

Gage.--Nonrecording prior to May 1, 1921; recording thereafter. At site 1 mile downstream Apr. 5, 1890, to Sept. 30, 1893, three-quarters of a mile upstream Apr. 23, 1903, to June 30, 1909, and 400 ft downstream Apr. 19, 1920, to Nov. 4, 1933; all gages at datum different from present gage. Datum of present gage is 4,971.8 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Well defined by current-meter measurements for discharges below 3,500 cfs; extended above for higher discharges.

Bankfull stage.--6 ft.

Remarks.--Diversions from upstream tributaries for irrigation of about 40,000 acres. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1890	May 29, 1890	-	4,440	1932	June 17, 1932	4.58	3,390
				1933	June 15, 1933	3.34	2,560
1891	May 8,June 9, 1891	-	2,360	1934	May 7, 1934	3.12	862
				1935	June 14, 1935	5.20	2,540
1892	June 21, 1892	-	5,410				
1893	June 13, 1893	-	5,830	1936	May 15, 1936	6.78	3,990
				1937	May 19, 1937	4.53	2,020
1903	June 9, 1903	4.9	3,080	1938	Apr. 19, 1938	6.80	3,940
1904	May 24, 1904	5.6	3,950	1939	May 18, 1939	4.83	2,270
1905	June 3-5,1905	3.4	1,760	1940	May 14, 1940	4.54	2,040
1906	June 14, 1906	4.95	3,300	1941	May 28, 1941	4.94	2,390
1907	May 20,June 8, July 5, 1907	4.4	3,040	1942	June 10, 1942	6.22	3,550
				1943	May 30, 1943	5.89	3,280
1908	June 17, 1908	5.9	4,250	1944	June 28, 1944	5.33	2,830
1909	June 5,6,1909	6.8	5,230	1945	June 9, 1945	5.84	3,270
1920	June 12, 1920	3.6	3,040	1946	Apr. 27, 1946	4.75	2,320
				1947	May 9, 1947	5.21	2,680
1921	June 13, 1921	5.92	4,390	1948	May 29, 1948	6.22	3,560
1922	May 26, 1922	4.40	3,300	1949	May 17, 1949	6.36	3,660
1923	May 26, 1923	4.57	3,410	1950	Apr. 2, 1950	6.66	4,010
1924	May 18, 1924	2.26	1,580				
1925	May 21, 1925	5.55	4,230	1951	May 29, 1951	6.03	3,490
				1952	May 5, 1952	5.56	3,180
1926	May 6, 1926	3.31	2,370	1953	June 19, 1953	5.83	3,270
1927	June 14, 1927	5.64	4,100	1954	May 22, 1954	5.31	2,950
1928	May 13, 1928	5.94	4,350	1955	June 13, 1955	4.48	2,070
1929	May 25, 1929	4.43	3,220				
1930	Apr. 3, 1930	2.55	1,780	1956	June 2, 1956	6.54	3,790
				1957	June 6, 1957	7.03	4,660
1931	May 16, 1931	1.70	1,260				

565. Henrys Fork near Rexburg, Idaho

Location.--Lat 43°49'34", long 111°54'15", in sec.30, T.6 N., R.39 E., on right bank 200 ft downstream from highway bridge, 6 miles west of Rexburg, and 11 miles downstream from North Branch of Teton River.

Drainage area.--2,920 sq mi.

Gage.--Nonrecording prior to Apr. 5, 1913; recording thereafter. Prior to Sept. 29, 1912 at datum 0.67 ft higher. Datum of gage is 4,807 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Fairly well defined by current-meter measurements for discharges below 7,500 cfs; extended rating curve for higher discharges.

Bankfull stage.--10 ft.

Remarks.--Flow regulated by Henrys Lake, Grassy Lake, and Island Park Reservoir. Diversions for irrigation of 172,000 acres upstream from station. Only annual peaks are shown.

Peak stages and discharges of Henrys Fork near Rexburg, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	June 6,7,1909	8.7	7,680	1933	June 16, 1933	7.65	a4,980
1910	Apr. 30, 1910	8.4	6,810	1934	Nov. 21, 1933	4.22	1,790
				1935	June 3, 1935	6.42	a3,620
1911	June 17, 1911	8.4	6,650				
1912	June 11,15, 16, 1912	9.3	7,200	1936	May 17, 1936	8.63	5,700
				1937	June 14, 1937	6.97	4,040
1913	May 29,30,1913	9.5	a6,720	1938	May 3, 1938	9.08	6,220
1914	June 6, 1914	9.82	7,050	1939	May 2,3, 1939	8.15	5,050
1915	June 4, 1915	8.9	6,200	1940	June 9, 1940	7.38	4,350
1916	May 8, 1916	9.25	6,490	1941	May 29, 1941	6.56	3,540
1917	May 31, 1917	10.01	8,750	1942	June 11, 1942	7.80	4,580
1918	June 25, 1918	9.96	7,560	1943	June 3, 1943	9.29	7,040
1919	Apr. 30, 1919	8.28	5,930	1944	June 12, 1944	8.32	5,430
1920	May 19, 1920	8.66	6,350	1945	June 11, 1945	9.58	7,910
1921	June 2, 1921	10.12	8,300	1946	Apr. 28, 1946	9.41	7,130
1922	May 22, 1922	9.03	6,470	1947	June 11, 1947	8.99	6,370
1923	May 28, 1923	7.77	5,000	1948	May 23, 1948	9.22	6,740
1924	Oct.20-31,1923	4.19	1,800	1949	May 24, 1949	9.79	7,650
1925	May 23, 1925	9.8	a8,980	1950	June 9, 1950	9.14	6,570
1926	Apr. 23, 1926	7.77	4,950	1951	May 14, 1951	8.33	5,210
1927	June 29, 1927	9.9	a9,490	1952	May 6, 1952	9.49	7,820
1928	May 14, 1928	9.6	a7,700	1953	June 9, 1953	8.80	5,880
1929	June 19, 1929	8.95	6,230	1954	May 23, 1954	8.14	5,100
1930	Apr. 15, 1930	5.70	3,030	1955	June 5, 1955	7.19	4,000
1931	May 17, 1931	5.00	2,280	1956	May 30, 1956	8.88	5,930
1932	June 18, 1932	9.35	a7,060	1957	May 22, 1957	9.63	8,680

a Maximum daily.

WILLOW CREEK BASIN

575. Grays Lake Outlet near Herman, Idaho

Location.--Lat 43°09'40", long 111°31'40", in sec.15, T.3 S., R.42 E., on right bank 3 miles downstream from bridge at outlet of lake and 3¼ miles west of Herman.

Drainage area.--147 sq mi.

Gage.--Nonrecording prior to Oct. 18, 1917; recording thereafter. Altitude of gage is 6,370 ft (from topographic map).

Stage-discharge relation.--Fairly well defined by current-meter measurements below 800 cfs and extended above.

Bankfull stage.--3.5 ft.

Remarks.--Artificial regulation by and transmountain diversions from Grays Lake since May 25, 1924. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Apr. 29, 1916	5.2	1,100	1923	May 3, 1923	4.49	574
1917	May 15, 1917	5.9	1,350	1924	Apr. 25, 1924	5.00	775
1918	Apr. 25, 1918	4.65	624	1925	May 30, 1925	2.96	214
1921	Apr. 30, 1921	5.0	784				

580. Willow Creek near Ririe, Idaho
(Published as "near Prospect" 1903-4)

Location.--Lat 43°33', long 111°44', in sec.22, T.3 N., R.40 E., 3 miles upstream from mouth of canyon and 6 miles southeast of Ririe.

Drainage area.--622 sq mi.

Gage.--Nonrecording prior to July 1, 1921; recording thereafter. At site 3½ miles downstream Apr. 21, 1903, to Oct. 7, 1904, and at site a quarter of a mile upstream from Dec. 23, 1916, to Apr. 30, 1917, at different datums. At most recent site and datum since May 1, 1917. Altitude of gage is 5,000 ft (from topographic map).

Stage-discharge relation.--Fairly well defined by current-meter measurements for discharges below 3,000 cfs; extended rating curve for higher discharges.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Diversions for irrigation of several thousand acres upstream from station. Since the spring of 1924, flow has been regulated and water has been diverted from Grays Lake 40 miles upstream to Blackfoot Marsh Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	May 8, 1903	6.7	920	1921	May 3, 1921	11.8	2,240
1904	May 5, 1904	10.1	2,710	1922	May 9, 1922	12.33	2,360
				1923	May 7, 1923	9.97	1,740
1917	May 15, 1917	16.3	4,200	1924	Apr. 24, 1924	8.79	1,420
1918	Apr. 26, 1918	8.75	1,500	1925	Apr. 16, 1925	8.49	1,330
1919	Apr. 24, 1919	9.83	1,650				
1920	May 9, 1920	12.1	2,550	1928	May 1, 1928	10.25	1,740

SNAKE RIVER MAIN STEM

600. Snake River near Shelley, Idaho
(Published as "at Eagle Rock" (now Idaho Falls) 1890-94)

Location.--Lat 43°24'50", long 112°08'05", in SW¼ sec.17, T.1 N., R.37 E., on right bank a quarter of a mile southeast of Woodville and 2½ miles north of Shelley.

Drainage area.--9,790 sq mi, approximately, excluding nontributary area on Snake River plains.

Gage.--Nonrecording at site 5 miles upstream at different datum July 1, 1889, to Dec. 31, 1894; recording since Mar. 18, 1915, at datum 4,599.0 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Well defined by current-meter measurements for discharges below 40,000 cfs, and extended above.

Bankfull stage.--20 ft.

Remarks.--Considerable regulation by upstream reservoirs and irrigation diversions. Records at early site considered approximately equivalent. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1890	June 4, 1890	10.2	51,000	1921	June 1, 1921	13.17	30,400
				1922	May 27, 1922	12.33	26,700
1892	June 24, 1892	10.5	54,300	1923	May 28, 1923	11.50	23,200
1893	June 14, 1893	9.6	44,400	1924	June 2, 1924	8.40	11,000
1894	June 6, 1894	12.5	75,000	1925	May 23, 1925	12.54	27,600
1915	June 4, 1915	9.6	15,400	1926	Apr. 22, 1926	9.22	14,300
				1927	June 30, 1927	14.51	36,500
1916	June 21,22,1916	12.3	26,500	1928	May 29, 1928	14.36	36,600
1917	June 22, 1917	14.68	36,800	1929	June 19, 1929	11.70	24,600
1918	June 17, 1918	16.97	47,200	1930	June 13, 1930	8.68	12,300
1919	May 31, 1919	9.13	13,700				
1920	May 20, 1920	11.59	23,500	1931	May 18, 1931	7.18	6,830

Peak stages and discharges of Snake River near Shelley, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	May 16, 1932	10.43	19,600	1946	Apr. 29, 1946	11.76	24,900
1933	June 17, 1933	10.40	19,400	1947	June 12, 1947	12.20	26,800
1934	May 10, 1934	7.05	6,550	1948	June 5, 1948	12.33	27,600
1935	June 16, 1935	9.32	15,100	1949	May 20, 1949	12.00	25,700
				1950	June 9, 1950	12.55	28,000
1936	June 3, 1936	12.60	28,600				
1937	May 10, 1937	9.17	14,100	1951	May 31, 1951	12.27	26,600
1938	July 4, 1938	10.76	20,600	1952	May 6, 1952	12.82	29,600
1939	May 6, 1939	9.92	17,000	1953	June 16, 1953	11.20	22,300
1940	June 7, 1940	7.91	9,470	1954	June 29, 1954	12.45	27,700
				1955	June 18, 1955	9.16	14,100
1941	May 28, 1941	8.63	12,000				
1942	May 28, 1942	9.72	16,300	1956	May 29, 1956	12.90	30,100
1943	June 25, 1943	12.94	30,400	1957	May 23, 1957	11.06	22,300
1944	June 12, 1944	11.05	21,900				
1945	June 10,11,1945	10.77	20,700				

620. Snake River at Porterville Bridge, near Blackfoot, Idaho

Location.--Lat 43°14', long 112°20', in NW¼ sec.26, T.2 S., R.35 E., immediately downstream from Danskin Canal headgate, a third of a mile downstream from Porterville Bridge, and three miles north of Blackfoot.

Drainage area.--9,940 sq mi, approximately.

Gage.--Nonrecording prior to October 1918; recording thereafter. At site a third of a mile downstream June to September 1916 at different datum. Altitude of gage is 4,480 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurement below 25,000 cfs; extended above.

Remarks.--Considerable regulation and diversion above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	June 21, 1916	8	22,600	1921	June 1, 1921	9.44	28,600
				1922	May 27, 1922	8.87	25,400
1918	June 17,18,1918	13.5	46,900	1923	May 28, 1923	8.23	21,600
1919	May 1, 1919	6.75	12,500				
1920	May 19, 1920	8.3	21,600				

BLACKFOOT RIVER BASIN

630. Blackfoot River above reservoir, near Henry, Idaho

Location.--Lat 42°49'40", long 111°33'20", in sec.9, T.7 S., R.42 E., on right bank 1.5 miles upstream from flow line of Blackfoot Marsh Reservoir, 7 miles south of Henry, and 13 miles north of Soda Springs.

Drainage area.--360 sq mi, approximately. Mean altitude, 6,940 ft.

Gage.--Nonrecording. At site 0.7 mile upstream at different datum Mar. 25 to Sept. 30, 1914. Altitude of gage is 6,120 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measuremerts below 1,400 cfs; extended above.

Bankfull stage.--5 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges of Blackfoot River above reservoir, near Henry, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Apr. 24, 1914	6.45	1,450	1921	May 9, 1921	5.4	1,360
1915	May 22, 1915	3.6	537	1922	May 8, 1922	6.08	1,570
				1923	Apr. 3, 1923	a4.68	-
1916	Apr. 29, 1916	5.04	1,040		Apr. 29, 1923	4.28	824
1917	May 16, 1917	6.85	2,060	1924	Apr. 24, 1924	5.00	1,110
1918	May 30, 1918	3.45	520	1925	Apr. 18, 1925	4.36	893
1919	Apr. 23, 1919	4.78	1,100				
1920	May 14, 1920	5.96	1,680				

a Backwater from ice.

635. Little Blackfoot River at Henry, Idaho

Location.--Lat 42°54'30", long 111°31'45", in sec.10, T.6 S., R.42 E., on left bank at Henry, a short distance upstream from maximum flow line of Blackfoot Marsh Reservoir, and 20 miles north of Soda Springs.

Drainage area.--38.8 sq mi. Mean altitude, 6,600 ft.

Gage.--Nonrecording. Prior to Aug. 19, 1919, at site 40 ft downstream at different datum. Altitude of gage is 6,120 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 170 cfs and extended above.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Apr. 19, 1914	3.5	292	1920	May 9, 1920	2.9	179
1915	Apr. 6, 1915	2.6	124				
				1921	Apr. 29, 1921	2.2	100
1916	Apr. 24, 1916	2.30	115	1922	May 5, 1922	3.8	260
1917	May 14, 1917	2.80	191	1923	Apr. 20, 1923	1.7	69
1918	Apr. 13, 1918	2.53	138	1924	Apr. 24, 1924	3.3	206
1919	Apr. 20, 1919	2.3	115	1925	Apr. 11, 1925	1.68	64

645. Meadow Creek near Henry, Idaho

Location.--Lat 42°55'30", long 111°30'40", in sec.3, T.6 S., R.42 E., on left bank 0.5 mile above maximum flow line of Blackfoot Marsh Reservoir, 0.7 mile downstream from Goose Lake, and 1.5 miles northeast of Henry.

Drainage area.--75.2 sq mi.

Gage.--Recording. Altitude of gage is 6,210 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 290 cfs and extended above.

Remarks.--Water diverted from Grays Lake into Meadow Creek after May 1924; 1925 peak may be affected. Ice-affected peak stages are possible but unknown since station was not operated during winter months. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Apr. 15, 1916	3.92	207	1922	May 9, 1922	3.97	247
1917	May 17, 1917	4.81	424	1923	Apr. 30, 1923	3.54	157
1919	Apr. 22, 1919	3.93	210	1925	Apr. 18, 1925	4.28	321
1921	Apr. 24, 1921	3.45	132				

655. Blackfoot River near Henry, Idaho

Location.--Lat 43°00'05", long 111°43'45", in sec.11, T.5 S., R.40 E., on left bank 200 ft downstream from bridge, 1 mile downstream from Blackfoot Marsh Dam, and 12 miles northwest of Henry.

Drainage area.--583 sq mi.

Gage.--Nonrecording prior to Sept. 18, 1912; recording thereafter. Altitude of gage is 6,080 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--River in canyon; not subject to overflow.

Remarks.--Flood peaks regulated by storage in Blackfoot Marsh Reservoir (capacity, 413,000 acre-ft). Storage in Blackfoot Marsh Reservoir supplemented by water brought by transmountain diversion from Grays Lake beginning May 1924. Amount of diversion unknown. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	May 14, 1909	4.15	1,640	1917	June 21, 1917	3.04	822
1910	Apr. 25, 1910	3.2	980	1918	June 22, 1918	3.02	760
				1919	July 23, 1919	-	820
1911	June 20, 1911	2.4	440	1920	June 10, 1920	3.30	1,120
1912	Sept. 3, 1912	2.5	515				
1913	Apr. 20, 1913	3.29	950	1921	May 15, 1921	3.45	1,230
				1922	July 17, 1922	3.33	1,010
1915	June 26, 1915	3.50	1,060	1923	July 7, 1923	3.18	1,010
				1924	July 14, 1924	3.07	936
1916	July 15, 1916	3.30	957	1925	July 17, 1925	2.56	558

660. Blackfoot River near Shelley, Idaho
(Published as "near Presto" 1903-9)

Location.--Lat 43°16', long 112°03', in sec.7, T.2 S., R.38 E., 1½ miles above mouth of canyon, 3 miles above N. A. Just ranch, and 10 miles southeast of Shelley.

Drainage area.--909 sq mi.

Gage.--Nonrecording prior to June 26, 1909, at site 5 miles downstream at different datum; recording thereafter. Altitude of gage is 4,700 ft (from topographic map).

Stage-discharge relation.--Fairly well defined by current-meter measurements below 1,600 cfs and extended above.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Flow regulated after 1909 by Blackfoot Marsh Reservoir (capacity, 413,000 acre-ft). Some water diverted from Grays Lake to Blackfoot Marsh Reservoir each year since 1924. Diversions for irrigation on headwaters upstream. Records after 1926 furnished by office of Indian Affairs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1903	Apr. 27, 1903	4.3	966	1914	June 4, 1914	5.3	1,000
1904	May 9, 1904	7.05	1,750	1915	June 26,July 3, 1915	5.5	1,120
1905	May 6, 1905	2.9	606				
1906	Apr.24,25,1906	5.5	1,350	1916	July 17, 1916	5.36	926
1907	Apr.17,18,1907	8.7	2,370	1917	June 21, 1917	5.49	1,060
1908	Apr. 17, 1908	3.3	792	1918	June 20, 1918	5.37	986
1909	Apr.29,May 16, 1909	7.35	1,960	1919	May 24, 1919	5.24	907
				1920	June 10,11,1920	5.55	1,240
1910	Apr.11,12, 1910	5.57	1,100				
				1921	May 18, 1921	6.07	1,670
1911	June 21, 1911	4.77	636	1922	June 28, 1922	5.58	1,220
1912	May 21, 1912	4.8	649	1923	July 23, 1923	6.30	1,830
1913	Apr.21,22,1913	5.7	1,280	1924	July 20, 1924	5.11	997

Peak stages and discharges of Blackfoot River near Shelley, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	July 21, 1925	5.16	1,030	1938	Aug. 22, 1938	5.00	821
				1939	July 21, 1939	5.60	1,250
1926	June 5,6, 1926	5.74	1,380	1940	July 13, 1940	5.50	1,160
1927	July 30, Aug. 1, 1927	4.75	654				
				1941	July 16, 1941	5.46	1,130
1928	June 12, 1928	5.26	994	1942	July 25-27, 1942	5.64	1,250
1929	July 28, 1929	5.78	1,390	1943	July 31, 1943	4.90	759
1930	July 26-29, 1930	5.62	1,270	1944	Aug. 2, 1944	5.90	1,440
				1945	Aug. 2, 1945	5.11	892
1931	July 11-13, 1931	5.65	1,290				
1932	July 30, 1932	5.50	1,160	1947	Sept. 6,7, 1947	5.15	918
1933	July 22-25, 1933	5.40	1,080	1948	Aug. 2, 1948	5.42	1,100
1934	July 11, 1934	4.52	542	1949	Aug. 17, 1949	5.60	1,220
1935	July 23, 1935	5.10	886	1950	May 18, 1950	6.02	1,520
1936	July 25, 1936	5.41	1,090	1951	May 1,2, 1951	6.06	1,160
1937	July 25,26, 1937	5.67	1,270				

685. Blackfoot River near Blackfoot, Idaho

Location.--Lat 43°07'50", long 112°28'35", at east quarter corner sec.28, T.3 S., R.34 E., 2 miles upstream from mouth, and 8 miles southwest of Blackfoot.

Drainage area.--1,295 sq mi, including that of Sand Creek whose flow is diverted to Blackfoot River through the Idaho Canal.

Gage.--Nonrecording prior to May 8, 1926; recording thereafter. At site half a mile upstream prior to June 25, 1937, at different datum. Altitude of gage is 4,420 ft (from river-profile survey).

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--Some overflow occurs upstream in vicinity of Blackfoot for discharges in excess of about 600 cfs (about 6.0 ft gage height at present site).

Remarks.--Flow regulated by Blackfoot Marsh Reservoir (capacity, 413,000 acre-ft). Many diversions above station for irrigation. Considerable flow during nonirrigation season and part of that during irrigation season is supplied by waste from Snake River canals. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	Apr. 27, 1913	9.7	a846	1936	Apr. 25, 1936	8.18	611
1914	Sept. 21,22, 1914	8.67	a673	1937	May 9, 1937	8.02	554
1915	Sept. 29, 1915	8.6	a643	1938	Apr. 25, 1938	5.75	578
				1939	Apr. 18, 1939	5.76	545
1916	July 19, 1916	8.48	a626	1940	Apr. 18, 1940	4.80	396
1917	May 17,31, June 1, 1917	9.0	a666				
				1941	Nov. 21, 1940	4.20	331
1918	Sept. 16, 1918	b9.3	a544	1942	Apr. 16, 1942	5.28	498
1919	June 2, 1919	6.52	a304	1943	Apr. 20, 1943	5.72	574
1920	Aug. 29, 1920	7.70	a501	1944	Oct. 16, 1943	5.12	469
				1945	May 8, 1945	5.38	540
1921	May 21, 1921	9.6	a868				
1922	May 1-10, 1922	9.5	850	1946	Apr. 25, 1946	5.68	592
1923	June 26, 1923	8.50	a662	1947	Apr. 22, 1947	5.55	562
1924	July 9, 1924	6.63	a335	1948	May 19, 1948	5.75	598
1925	Sept. 23, 1925	8.58	a696	1949	Apr. 22, 1949	5.77	605
				1950	June 12, 1950	6.35	700
1926	Aug. 11, 1926	7.94	a624				
1927	May 3,29, 1927	8.37	a699	1951	May 5, 1951	6.61	785
1928	Oct. 2, 1927	7.94	a691	1952	May 1, 1952	6.60	761
1929	June 19, 1929	8.24	a625	1953	June 7, 1953	6.32	724
1930	Aug. 15, 1930	8.08	a639	1954	Oct. 24, 1953	4.75	466
				1955	Oct. 30, 1954	5.19	535
1931	May 1, 1931	7.10	a386				
1932	May 6,7, 1932	8.05	590	1956	Apr. 30, 1956	c6.33	612
1933	May 20,21, 1933	8.26	624	1957	May 26, 1957	7.04	1,040
1934	Jan. 2, 1934	6.73	336				
1935	Apr. 24, 1935	6.60	318				

a Maximum observed during available record; not necessarily maximum for water year.
b Occurred June 19, 1918.
c Occurred Nov. 2, 1955.

695. Snake River near Blackfoot, Idaho

Location.--Lat 43°07'35", long 112°31'25", in SE¼ sec.30, T.3 S., R.34 E., on right bank 1,000 ft downstream from highway bridge, half a mile downstream from Blackfoot River, and 10 miles southwest of Blackfoot.

Drainage area.--11,310 sq mi, approximately, excluding nontributary area on Snake River plains.

Gage.--Nonrecording prior to July 6, 1913; recording thereafter. Datum of gage is 4,400.83 ft above mean sea level, datum of 1929 (preliminary adjustment).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--At elevation 4,418 ft, approximately 17 ft gage height.

Remarks.--Flow regulated by upstream reservoirs (storage of 1,483,000 acre-ft) and diversions for irrigation of 694,000 acres. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 22, 1911	12.34	32,900	1935	June 16, 1935	7.07	10,800
1912	June 16, 1912	12.5	34,000				
1913	May 31, June 7-8, 1913	12.0	32,400	1936	June 4, 1936	10.98	25,200
				1937	May 10, 1937	7.67	12,600
1914	June 8, 1914	12.63	35,600	1938	July 4, 1938	9.58	19,300
1915	June 5, 1915	8.55	15,800	1939	May 6, 1939	7.80	13,000
				1940	June 9, 1940	5.55	6,620
1916	June 22, 1916	10.4	24,700				
1917	June 22, 1917	12.67	36,200	1941	May 29, 1941	6.29	8,420
1918	June 18, 1918	14.8	46,200	1942	Apr. 25, 1942	7.80	13,000
1919	May 1, 1919	8.25	12,100	1943	June 25, 1943	11.17	25,600
1920	May 20, 1920	10.15	21,700	1944	June 12,13,1944	9.88	20,600
				1945	June 11, 1945	9.31	18,400
1921	June 1, 1921	11.51	28,800				
1922	May 28, 1922	10.72	25,800	1946	Apr. 29, 1946	10.48	23,700
1923	May 28, 1923	9.72	20,500	1947	June 12, 1947	10.80	25,000
1924	June 3, 1924	6.76	9,330	1948	June 6, 1948	10.52	23,900
1925	May 24, 1925	10.59	24,700	1949	May 22, 1949	10.63	24,500
				1950	June 10, 1950	11.12	26,300
1926	Apr. 23, 1926	7.81	12,800				
1927	July 1, 1927	12.62	33,700	1951	May 31, 1951	10.34	23,400
1928	May 31, 1928	12.55	33,500	1952	May 7, 1952	11.38	28,500
1929	June 19, 1929	9.92	21,400	1953	June 15, 1953	9.14	18,800
1930	Apr. 16, 1930	6.32	8,390	1954	June 30, 1954	10.44	25,200
				1955	June 19, 1955	6.65	10,600
1931	Oct. 13, 1930	4.90	4,800				
1932	May 16, 1932	8.65	16,400	1956	May 30, 1956	11.03	27,300
1933	June 17, 1933	8.24	14,800	1957	May 23, 1957	9.62	21,700
1934	Dec. 16, 1933	3.80	2,920				

PORTNEUF RIVER BASIN

730. Portneuf River at Topaz, Idaho

Location.--Lat 42°37', long 112°05', in sec.23, T.9 S., R.37 E., on right bank 200 ft upstream from Bob Smith Creek, 800 ft downstream from Topaz, 1½ miles upstream from diversion dam of Portneuf-Marsh Valley Canal Co., and 4 miles west of Lava Hot Springs.

Drainage area.--420 sq mi, approximately (includes that of Bob Smith Creek). Mean altitude, 6,080 ft.

Gage.--Nonrecording prior to June 22, 1954; recording thereafter. At site three-eighths of a mile downstream at datum 3.0 ft lower prior to July 20, 1919. At site one-third of a mile downstream at datum 2.0 ft lower July 20, 1919, to June 22, 1954. Datum of gage is 4,918.00 ft above mean sea level, preliminary, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--5.5 ft.

Remarks.--Peak discharges somewhat affected by regulation by Portneuf-Marsh Valley Reservoir (capacity, 16,410 acre-ft prior to 1950, and 23,695 acre-ft thereafter) and, since 1928, by Chesterfield Reservoir on Twentyfourmile Creek (capacity, 685 acre-ft), as well as by diversions above station for irrigation of about 22,000 acres. Only observed peaks are shown prior to 1954; momentary annual peaks thereafter.

Peak stages and discharges of Portneuf River at Topaz, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	Apr. 3, 1913	6.10	902	1937	Apr. 15, 1937	2.28	358
1914	Apr. 23, 1914	5.47	770	1938	Apr. 26, 1938	2.57	396
				1939	Mar. 19, 1939	2.90	460
1920	May 25, 1920	4.20	709	1940	June 6, 1940	1.75	230
1921	May 9, 1921	4.35	757	1941	May 16, 1941	1.97	249
1922	May 21, 1922	4.36	757	1942	Apr. 5, 1942	2.90	444
1923	Apr. 2, 1923	3.14	562	1943	Mar. 30, 1943	3.24	489
1924	July 8, 1924	3.40	595	1944	June 10, 1944	2.46	372
1925	July 5, 1925	3.40	595	1945	Feb. 14, 1945	3.06	454
1926	May 6, 1926	1.96	322	1946	Apr. 28, 1946	3.94	661
1927	May 1, 1927	3.06	492	1947	May 12, 1947	1.98	307
1928	May 13, 1928	3.15	492	1948	May 20, 1948	2.82	466
1929	June 18, 1929	2.38	372	1949	Apr. 6, 1949	2.28	378
1930	June 24, 1930	1.78	267	1950	May 24, 1950	b4.00	657
1931	Mar.21,May 28, 1931	1.78	258	1951	Feb. 10, 1951	2.60	434
				1952	May 5, 1952	3.98	668
1932	May 15, 1932	2.46	380	1953	June 6, 1953	3.46	469
1933	May 23, 1933	2.34	358	1954	Apr. 28, 1954	2.20	332
1934	May 13, 1934	1.72	240	1955	June 2, 1955	3.05	276
1935	Mar. 15, 1935	2.60	372				
				1956	Mar. 31, 1956	3.72	438
1936	May 5, 1936	a3.50	524	1957	Feb. 25, 1957	5.71	1,040

a Occurred Apr. 24, 1936.
b Occurred May 19, 1950.

740. Birch Creek near Downey, Idaho

Location.--Lat 42°21', long 112°15', in SE¼ sec.28, T.12 S., R.36 E., on left bank just downstream from point where flow that is diverted through Malad powerplant reenters stream, 8.6 miles southwest of Downey, and 10 miles upstream from mouth.

Drainage area.--3.5 sq mi, approximately. Mean altitude, 6,830 ft.

Gage.--Nonrecording gage and, since July 26, 1939, artificial control. Gages at several different datums prior to July 1939. Altitude of gage is 5,850 ft (by barometer).

Stage-discharge relation.--Unstable. Defined throughout range by current-meter measurements except 1938, when peak discharge was determined by area-velocity method.

Remarks.--Regulation at diversion dam and powerplant above station may have slight effect on peaks. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	May 13, 1912	a1.25	25	1942	May 26, 1942	1.08	24
				1943	Apr. 24, 1943	b1.32	34
1914	May 18, 1914	3.7	20	1944	June 14, 1944	1.08	16
				1945	June 9, 1945	1.34	25
1938	July 15, 1938	-	95				
1939	May 3, 1939	1.28	15	1946	Apr. 29, 1946	1.36	26
1940	May 13, 1940	1.05	13	1947	May 13, 1947	1.32	20
				1948	May 18, 1948	1.30	25
1941	July 20, 1941	1.34	44	1949	May 21, 1949	-	25

a Occurred May 30, 31, June 2, 1912.
b Occurred May 3,4, 1943.

755. Portneuf River at Pocatello, Idaho

Location.--Lat 42°51'40", long 112°27'25", in NE¼NE¼ sec.34, T.6 S., R.34 E., on right bank 30 ft upstream from Fremont Street Bridge at Pocatello and 2.5 miles upstream from Pocatello Creek.

Drainage area.--1,250 sq mi, approximately. Mean altitude, 5,850 ft.

Gage.--Nonrecording prior to June 14, 1928; recording thereafter. At various sites within 0.8 mile at different datums prior to Sept. 28, 1950; at present site thereafter. Altitude of gage is 4,430 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--Flooding starts in low areas at about 6.5 ft.

Remarks.--Considerable regulation in several reservoirs above station. Diversion for irrigation of about 33,000 acres above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1897	May 18, 1897	12.8	1,880	1932	May 14, 1932	5.15	618
1898	Apr. 7, 1898	8.0	336	1933	Apr. 30, 1933	4.90	515
1899	May 12, 1899	10.0	820	1934	Jan. 24, 1934	3.79	300
				1935	Jan. 21, 1935	b4.35	-
1912	May 23, 1912	6.4	1,240		Apr. 23, 1935	4.30	438
1913	Apr. 4, 1913	5.5	915				
1914	Apr. 25, 1914	6.18	1,080	1936	Apr. 26, 1936	5.85	802
1915	Apr. 23, 1915	4.4	473	1937	May 8, 1937	5.33	606
				1938	May 2, 1938	5.67	715
1916	Mar. 24, 1916	5.4	817	1939	Mar. 24, 1939	5.98	740
1917	-	-	(a)	1940	Feb. 29, 1940	4.82	460
1918	Mar. 28, 1918	4.65	579				
1919	Mar. 31, 1919	5.37	832	1941	Mar. 4, 1941	5.70	584
1920	May 26, 1920	5.87	1,020	1942	Apr. 15, 1942	6.06	726
				1943	Apr. 22, 1943	6.74	895
1921	May 12, 1921	7.6	1,500	1944	June 13, 1944	5.92	638
1922	May 23, 1922	7.9	1,510	1945	June 12, 1945	6.49	774
1923	May 7, 1923	5.4	737				
1924	Jan. 8, 1924	b6.1	-	1946	Apr. 30, 1946	7.66	1,040
	May 6, 1924	4.45	471	1947	Feb. 14, 1947	5.27	554
1925	Dec. 26, 1924	b5.7	-	1948	May 20, 1948	6.07	733
	Apr. 21, 1925	5.45	737	1949	Apr. 26, 1949	6.00	686
				1950	May 20, 1950	6.87	902
1926	Apr. 21, 1926	4.85	601				
1927	May 1, 1927	5.7	821	1951	Feb. 11, 1951	6.10	630
1928	Apr. 30, 1928	5.2	647	1952	May 7, 1952	7.35	1,050
1929	Dec. 22, 1928	b5.6	-	1953	Jan. 20, 1953	6.15	622
	May 18, 1929	4.89	590	1954	Mar. 11, 1954	5.66	508
1930	Jan. 26, 1930	b4.91	-	1955	Apr. 2, 1955	5.32	376
	Feb. 20, 1930	4.36	427				
				1956	Apr. 2, 1956	6.11	660
1931	Jan. 5, 1931	4.92	-	1957	Feb. 28, 1957	6.52	970
	Mar. 22, 1931	4.54	469				

a Over 2,000 cfs sometime during period May 13 to June 14, 1917; gage height probably about 9 ft.
b Backwater from ice.

SNAKE RIVER MAIN STEM

770. Snake River at Neeley, Idaho

Location.--Lat 42°46'20", long 112°52'45", in SW¼ sec.31, T.7 S., R.31 E., on right bank 400 ft upstream from fish hatchery and 0.9 mile downstream from American Falls Dam.

Drainage area.--13,600 sq mi, approximately, excluding nontributary area on Snake River plains.

Gage.--Nonrecording prior to Aug. 7, 1916; recording thereafter. At site 2½ miles downstream at different datum prior to June 7, 1930, and 0.4 mile upstream at different datums June 7, 1930, to Mar. 19, 1945. Datum of gage is 4,241.6 ft above mean sea level.

Stage-discharge relation.--Well defined by current-meter measurements.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Flow regulated by upstream storage of 3,200,000 acre-ft and irrigation of 740,000 acres of land. Since American Falls Reservoir was completed late in 1926, the flow has been immediately controlled by releases from that reservoir. Only annual peaks are shown.

Peak stages and discharges of Snake River at Neeley, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	June 16, 1906	10.0	27,900	1932	July 10, 1932	4.08	12,100
1907	June 12, 1907	11.3	35,300	1933	July 26, 1933	5.92	11,700
1908	June 22, 1908	10.9	33,000	1934	July 29,30, 1934	5.37	9,410
1909	June 11, 1909	12.5	41,100	1935	July 17, 1935	5.93	11,900
1910	May 2, 1910	10.84	31,800				
				1936	June 4,5,1936	9.05	28,400
1911	June 22, 1911	11.9	37,600	1937	May 9,10, 1937	6.70	15,800
1912	June 18, 1912	11.7	36,600	1938	May 5, 1938	8.40	24,700
1913	June 9-12,1913	11.5	35,500	1939	May 8,9, 1939	6.62	15,000
1914	June 9, 1914	11.95	38,000	1940	June 25, 1940	5.92	12,100
1915	June 6, 1915	8.22	17,400				
				1941	May 30, 1941	5.95	12,600
1916	June 23, 1916	9.9	26,800	1942	Apr. 25, 1942	8.59	20,500
1917	June 24, 1917	11.73	37,700	1943	June 4, 1943	10.40	30,000
1918	June 20, 1918	13.5	48,400	1944	June 14, 1944	9.24	23,500
1919	May 2, 1919	7.6	14,900	1945	June 10,11,1945	8.91	24,500
1920	May 21, 1920	9.56	25,000				
				1946	Apr.25-27,1946	9.31	26,900
1921	June 2, 1921	10.97	32,200	1947	June 11, 1947	9.44	27,600
1922	May 28, 1922	10.39	28,800	1948	June 23, 1948	9.25	26,100
1923	May 29, 1923	9.32	23,000	1949	June 23, 1949	7.74	16,800
1924	June 3, 1924	6.98	12,100	1950	June 27, 1950	9.71	29,000
1925	May 24, 1925	10.04	26,800				
				1951	May 15, 1951	8.62	22,400
1926	Apr. 21, 1926	6.85	11,600	1952	May 11, 1952	8.77	24,000
1927	July 2, 1927	11.37	33,800	1953	June 15, 1953	8.69	23,100
1928	May 28, 1928	10.44	29,000	1954	May 25, 1954	8.59	22,300
1929	Apr. 4, 1929	7.60	14,500	1955	June 12, 1955	7.06	14,400
1930	July 24, 1930	3.82	10,700				
				1956	June 3, 1956	9.48	28,300
1931	July 3, 1931	3.88	10,800	1957	May 20, 1957	8.90	25,100

RAFT RIVER BASIN

780. Raft River at Peterson Ranch, near Bridge, Idaho

Location.--Lat 42°04', long 113°27', in sec.5, T.16 S., R.26 E., on left bank 100 ft upstream from One Mile Creek, 400 ft downstream from road bridge, 7½ miles southwest of Bridge Post Office, and 16 miles south of Malta.

Drainage area.--412 sq mi.

Gage.--Recording. Altitude of gage is 4,980 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 200 cfs and extended on basis of slope-area measurement at gage height 4.52 ft.

Bankfull stage.--6.5 ft.

Remarks.--Diversions above station for irrigation affect peak discharges during irrigation season. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Feb. 14, 1947	2.01	72	1952	May 17, 1952	2.95	224
1948	Feb. 23, 1948	2.28	101	1953	Aug. 3, 1953	2.75	183
1949	May 17, 1949	3.41	338				
1950	Jan. 18, 1950	2.10	80	1955	Aug. 26, 1955	2.40	107
				1956	May 28, 1956	2.37	112
1951	Feb. 5, 1951	4.52	1,090	1957	June 11, 1957	2.13	77

790. Clear Creek near Naf, Idaho

Location.--Lat 41°58'15", long 113°17'15", in NE¼SW¼ sec.1, T.14 N., R.13 W., Salt Lake meridian, 2 miles south of Utah-Idaho State line, 3 miles south of Naf, and 20 miles upstream from mouth.

Drainage area.--19 sq mi (approximately). Mean altitude, 7,860 ft.

Gage.--Nonrecording prior to Nov. 23, 1944; recording thereafter. At site 30 ft upstream at different datum prior to Dec. 31, 1913. At site 600 ft upstream at different datum Nov. 23, 1944, to Mar. 28, 1950. Concrete control since Mar. 28, 1950. Altitude of gage is 5,400 ft.

Stage-discharge relation.--Fairly well defined by current-meter measurements below 140 cfs.

Bankfull stage.--3 ft.

Remarks.--Minor diversions above station may affect lower peaks during irrigation season. Base for partial-duration series, 70 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	May 13, 1910	a1.6	180	1950	June 1, 1950	1.92	89
1911	June 4,5,8,12, 16,18, 1911	a1.4	115	1951	May 28, 1951	2.03	112
				1952	May 29, 1952	1.92	91
1945	May 12, 1945	1.96	72	1953	June 13, 1953	1.97	107
	June 5, 1945	2.26	132				
	June 21, 1945	2.25	112	1954	May 21, 1954	1.67	47
1946	June 5, 1946	2.03	64	1955	June 9, 1955	1.81	73
1947	May 7, 1947	2.14	80	1956	May 25, 1956	1.92	124
1948	May 27, 1948	2.30	127	1957	June 4, 1957	1.99	126
	June 3, 1948	2.22	106				
1949	May 17, 1949	2.28	122				

a Maximum observed.

SNAKE RIVER MAIN STEM

815. Snake River near Minidoka, Idaho
(Published as "at Montgomery Ferry" prior to 1911 and as "at Howells Ferry" 1911)

Location.--Lat 42°40', long 113°30', in sec.2, T.9 S., R.25 E., 1 mile downstream from Minidoka Dam and 6 miles south of Minidoka.

Drainage area.--15,700 sq mi, approximately, excluding nontributary area on Snake River plains.

Gage.--Nonrecording prior to Aug. 28, 1911; recording thereafter. At site 6 miles downstream at different datum prior to Oct. 1, 1910. Datum of gage is 4,132.2 ft above mean sea level (river-profile survey).

Stage-discharge relation.--Fairly well defined by current-meter measurements for discharges below 30,000 cfs and extended above.

Bankfull stage.--20 ft.

Remarks.--Gage-height record furnished by Bureau of Reclamation. Many diversions for irrigation upstream. Flow regulated by a number of upstream reservoirs with a combined capacity of 3,300,000 acre-ft. Since the completion of American Falls Reservoir late in 1926, the peak discharges are largely determined by releases from that reservoir. Only annual peaks are shown.

Peak stages and discharges of Snake River near Minidoka, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1896	June 23, 1896	12.3	44,700	1927	July 3, 1927	13.54	32,100
1897	May 29,30,1897	12.6	47,500	1928	May 28, 1928	12.30	26,400
1898	June 1, 1898	8.20	26,400	1929	Apr. 5, 1929	9.50	15,000
1899	June 25, 1899	11.2	39,200	1930	Dec. 13, 1929	7.30	8,070
1901	May 22, 1901	8.35	28,100	1931	May 17, 1931	7.35	8,130
1902	June 4,17,1902	8.0	23,600	1932	July 26, 1932	8.66	8,880
1903	June 20, 1903	8.40	24,000	1933	July 28, 1933	8.30	8,670
1904	May 28, 1904	11.0	38,000	1934	Aug. 7, 1934	8.34	7,340
1905	June 8,13, 1905	5.60	13,700	1935	July 17, 1935	8.00	8,730
1906	June 19,20,1906	8.30	24,300	1936	June 5, 1936	12.67	26,500
1907	June 12,13,1907	10.35	35,000	1937	May 12, 1937	9.01	13,600
1908	June 21, 1908	9.45	30,000	1938	May 5, 1938	11.70	22,300
1909	June 11,12,1909	12.0	37,900	1939	Apr. 10, 1939	9.07	13,300
1910	May 2, 1910	9.7	28,000	1940	June 28, 1940	8.06	8,860
1911	June 25, 1911	13.68	33,800	1941	July 15,20,1941	8.35	8,500
1912	June 18, 1912	13.8	34,300	1942	Apr. 25, 1942	11.02	20,200
1913	June 2, 11, 12, 1913	13.4	32,800	1943	June 5, 1943	13.28	29,900
				1944	June 15, 1944	11.88	23,800
1914	June 8, 1914	14.18	36,400	1945	June 10,11,1945	11.87	23,500
1915	Nov. 15, 1914	10.90	21,800				
				1946	Apr. 27, 1946	12.10	25,300
1916	May 11, 1916	11.47	24,200	1947	June 12, 1947	12.76	27,000
1917	June 24, 1917	13.72	34,900	1948	June 24, 1948	12.00	24,800
1918	June 21, 1918	16.02	45,900	1949	June 8, 1949	9.27	14,300
1919	May 2, 1919	9.33	14,200	1950	June 28, 1950	12.61	26,800
1920	May 22, 1920	11.06	22,200				
				1951	May 15, 1951	11.23	21,300
1921	June 2, 1921	13.36	32,900	1952	May 12, 1952	11.12	21,200
1922	May 25, 1922	12.37	28,300	1953	June 9, 1953	11.18	21,500
1923	May 29, 1923	10.92	21,600	1954	May 26, 1954	10.32	18,000
1924	Oct. 28, 1923	7.36	7,780	1955	May 22, 1955	8.01	10,500
1925	May 25, 1925	11.73	24,900				
				1956	May 31, 1956	12.50	27,100
1926	Apr. 18,20,1926	7.73	8,990	1957	May 21, 1957	11.96	24,900

GOOSE CREEK BASIN

825. Goose Creek above Trapper Creek, near Oakley, Idaho

Location.--Lat 42°07'10", long 113°56'20", in sec.13, T.15 S., R.21 E., on right bank a quarter of a mile above maximum flow line of Oakley Reservoir, about 5 miles upstream from Trapper Creek, 5 miles south of Oakley Dam, and 9 miles southwest of Oakley.

Drainage area.--633 sq mi. Mean altitude, 6,030 ft.

Gage.--Recording. At site 200 ft downstream at different datum prior to Aug. 29, 1912. Altitude of gage is 4,770 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 600 cfs and extended to 1,670 cfs by logarithmic plotting.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Diversions for irrigation are made as flow permits to a major part of 2,700 acres. Peak flows during irrigation seasons are undoubtedly affected to some degree. Since peaks may occur during winter months at this station, some doubt is attached to those annual peaks shown for years when winter record was not obtained even if most of them may be the maximum for the year. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	Feb. 18, 1912	4.63	560	1919	Apr. 28, 1919	a3.18	169
1913	Mar. 6, 1913	4.52	527	1920	May 16, 1920	a3.44	231
1914	Mar. 3, 1914	a4.04	418				
1915	Apr. 23, 1915	a2.55	80	1921	May 18, 1921	a5.23	670
				1922	May 21, 1922	5.06	554
1916	Apr. 30, 1916	a3.54	245	1923	May 14, 1923	a3.24	185

a May have been higher during period of no record.

Peak stages and discharges of Goose Creek above Trapper Creek, near Oakley, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Apr. 14, 1924	a3.00	149	1942	May 27, 1942	4.31	401
1925	July 1, 1925	3.92	311	1943	Jan.23,Feb.24, 1943	7.6	1,670
1926	Mar. 15, 1926	b2.92	-	1944	May 11, 1944	3.38	203
	Apr. 9, 1926	a2.84	97	1945	Feb. 14, 1945	3.92	311
1927	Feb. 21, 1927	5.6	400				
1928	May 12, 1928	a3.41	208	1946	Apr. 29, 1946	3.97	330
1929	May 19, 1929	a3.35	198	1947	Feb. 15, 1947	3.01	146
1930	Dec. 25, 1929	b2.70	-	1948	May 20, 1948	3.09	169
	May 17, 1930	a2.57	81	1949	May 1, 1949	3.86	304
				1950	May 21, 1950	3.49	232
1931	Mar. 15, 1931	a2.43	66				
1932	May 16, 1932	a3.62	228	1951	Feb.7,8, 1951	5.78	858
1933	May 29, 1933	a3.23	159	1952	May 6, 1952	4.34	412
1934	Apr. 2, 1934	a2.21	46	1953	Aug. 2, 1953	3.52	245
1935	May 18, 1935	a2.70	95	1954	Sept. 2, 1954	3.08	165
				1955	Mar. 6, 1955	b3.75	-
1936	Apr. 27, 1936	3.61	217		May 13, 1955	2.49	83
1937	May 20, 1937	a3.04	147				
1938	May 3, 1938	3.64	244	1956	Mar. 4, 1956	b4.61	-
1939	Mar. 18, 1939	5.47	744		Mar. 19, 1956	4.06	349
1940	Apr. 16, 1940	a2.57	84	1957	May 23, 1957	3.95	319
1941	May 7, 1941	a2.69	100				

a May have been higher during period of no record.
b Backwater from ice.

830. Trapper Creek near Oakley, Idaho

Location.--Lat 42°10', long 113°59', in sec.34, T.14 S., R.21 E., on left bank 4 miles upstream from Oakley Dam and 7 miles southwest of Oakley.

Drainage area.--53.7 sq mi. Mean altitude, 6,360 ft.

Gage.--Recording. At site 1 mile upstream at different datum Apr. 8, 1913, to Sept. 30, 1916, and Mar. 28, 1919, to Aug. 15, 1931. Altitude of gage is gage is 4,820 ft (by barometer).

Stage-discharge relation.--Fairly well defined by current-meter measurements below about 100 cfs and extended above.

Bankfull stage.--7.5 ft.

Remarks.--Peak discharges occurring during irrigation seasons may by affected by small diversions above station for irrigation. Since peaks may occur during winter months at this station, some doubt is attached to those recorded peaks shown for years when winter record was not obtained even if some of them may be the maximum for year. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Feb. 28, 1914	a3.17	70	1934	Dec. 1, 1933	a4.91	16
1915	June 1, 1915	a2.59	35	1935	May 30, 1935	a4.99	21
1916	May 7, 1916	a2.82	52	1936	Aug. 14, 1936	a5.30	57
				1937	May 19, 1937	a5.15	38
1919	May 3, 1919	a2.60	37	1938	Apr. 30, 1938	a5.26	47
1920	Aug. 2, 1920	a2.70	47	1939	Mar. 16, 1939	a5.33	59
				1940	Oct. 6, 1939	5.09	27
1921	May 28, 1921	a3.44	98				
1922	May 26, 1922	a3.39	89	1941	Aug. 17, 1941	6.99	270
1923	June 10, 1923	a2.90	51	1942	Mar. 10, 1942	a5.36	58
1924	May 4, 1924	a2.42	25	1943	Jan.23 or Feb.24,1943	6.06	120
1925	Aug. 12, 1925	a2.86	47	1944	June 9, 1944	a5.22	32
1926	Aug. 10, 1926	a2.79	45	1945	Feb. 13, 1945	6.09	104
1927	Aug. 1, 1927	a3.12	68				
1928	May 10, 1928	a2.87	49	1946	Apr.28,29,1946	-	b57
1929	May 24, 1929	a2.89	45	1947	May 11, 1947	a5.09	25
1930	Aug. 27, 1930	a2.94	40	1948	Feb. 22, 1948	5.41	54
				1949	May 15, 1949	5.42	57
1931	Aug. 15, 1931	-	-	1950	May 19, 1950	5.33	48
1932	June 28, 1932	a4.83	45				
1933	June 2, 1933	a4.66	35	1951	May 11, 1951	5.36	52

a Maximum recorded; may have been higher during period of winter record.
b Estimated daily discharge.

Peak stages and discharges of Trapper Creek near Oakley, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1952	May 16, 1952	5.53	80	1956	Mar. 18, 1956	5.15	34
1953	June 5, 1953	5.25	44	1957	Dec. 11, 1956	5.45	72
1954	Sept. 2, 1954	5.38	62				
1955	Aug. 25, 1955	5.93	160				

SNAKE RIVER MAIN STEM

880. Snake River at Milner, Idaho

Location.--Lat 42°32', long 114°01', in sec.29, T.10 S., R.21 E., on left bank 200 ft downstream from highway bridge at Milner and a third of a mile downstream from Milner Dam.

Drainage area.--17,180 sq mi, approximately, including nontributary area on Snake River plains.

Gage.--Nonrecording prior to May 28, 1919, at several sites upstream and at different datums; recording thereafter. Datum of gage is 4,062.9 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Well defined by current-meter measurements for discharges below 30,000 cfs and by extension of rating curve for higher discharges.

Bankfull stage.--In canyon; not subject to overflow.

Historical data.--Flood of June 1894 estimated at 77,000 cfs by Corps of Engineers.

Remarks.--Gage-height record furnished by Twin Falls Canal Co. and North Side Canal Co. Flow regulated by upstream storage in various reservoirs having a combined capacity of 3,300,000 acre-ft and by diversions for irrigation of about 1,340,000 acres of land. Since completion of American Falls Reservoir late in 1936, peak discharges have been largely determined by releases from that reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	June 12, 1909	20.1	35,900	1933	Dec. 18, 1932	8.18	3,670
1910	May 1,2, 1910	18.2	26,900	1934	Oct.17,18,1933	5.80	1,470
				1935	Jan. 6, 1935	3.99	404
1911	June 22,25,26, 1911	18.6	30,200				
				1936	June 5, 1936	18.83	20,100
1912	June 19, 1912	18.6	30,200	1937	May 10, 1937	10.92	6,560
1913	June 2, 1913	18.1	29,900	1938	May 5, 1938	19.2	20,800
1914	June 8,9, 1914	18.5	31,500	1939	Apr. 8, 1939	13.93	11,000
1915	Nov. 15, 1914	16.4	21,100	1940	Apr. 21, 1940	8.65	4,230
1916	May 11, 1916	15.7	19,000	1941	Apr. 23, 1941	6.80	2,180
1917	June 25, 1917	17.5	28,100	1942	Apr. 26, 1942	16.16	14,000
1918	June 21, 1918	19.9	40,000	1943	June 6, 1943	20.1	22,100
1919	Apr. 6, 1919	15.9	12,400	1944	June 15, 1944	18.84	19,100
1920	May 22, 1920	17.51	16,100	1945	June 11, 1945	17.67	16,900
1921	June 3, 1921	21.21	27,000	1946	Apr. 27, 1946	18.67	19,100
1922	May 23, 1922	19.60	22,000	1947	June 13, 1947	19.62	21,000
1923	June 26, 1923	17.80	17,500	1948	June 24, 1948	17.72	16,900
1924	Oct. 24, 1923	10.85	6,480	1949	Feb. 24, 1949	14.38	11,300
1925	May 12, 1925	18.44	19,000	1950	June 28, 1950	18.60	18,800
1926	Nov. 2, 1925	11.58	7,400	1951	May 15,16,1951	16.63	14,800
1927	July 4, 1927	20.83	26,000	1952	May 10, 1952	16.68	14,700
1928	May 28, 1928	19.70	22,500	1953	June 9, 1953	17.40	16,100
1929	Apr. 8, 1929	16.50	14,900	1954	May 28, 1954	13.40	9,680
1930	Nov. 3, 1929	12.2	7,970	1955	Apr. 17, 1955	10.97	6,550
1931	Nov. 22, 1930	10.15	5,720	1956	May 30, 1956	18.68	18,900
1932	Feb. 28, 1932	7.85	3,530	1957	May 21, 1957	18.60	18,600

885. Big Cottonwood Creek near Oakley, Idaho

Location.--Lat 42°16'50", long 114°02'10", in sec.19, T.13 S., R.21 E., about 1 mile upstream from J. H. Roark's house and the heading of the Twin Falls-Oakley Land and Water Co. diversion canal and about 10 miles northwest of Oakley.

Drainage area.--29 sq mi, approximately.

Gage.--Nonrecording prior to Apr. 28, 1913, at site three-quarters of a mile downstream at different datum; recording thereafter. Altitude of gage is 4,860 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	Apr. 13, 1910	3.15	a73	1912	May 30, 1912	b3.8	a125
				1913	Apr. 28, 1913	1.55	60
1911	May 6, 1911	2.8	a59	1914	Apr. 22, 1914	1.73	94

a Maximum observed.
b Occurred May 20, 1912.

SNAKE RIVER MAIN STEM

900. Snake River near Kimberly, Idaho

Location.--Lat 42°36', long 114°22', in NW¼ sec.4, T.10 S., R.18 E., on left bank 1,200 ft downstream from Twin Falls powerplant, 2¼ miles upstream from Shoshone Falls, and 4 miles north of Kimberly.

Gage.--Recording. At site 2,000 ft downstream at different datum prior to Aug. 31, 1938. Datum of gage is 3,362.67 ft above mean sea level (levels by Idaho Power Co.).

Stage-discharge relation.--Defined by current-meter measurements below about 23,000 cfs.

Bankfull stage.--In canyon; not subject to overflow.

Historical data.--On basis of records at Milner, a flow of about 40,000 cfs occurred about June 21, 1918.

Remarks.--Flow regulated by several reservoirs above station and, since November 1935, by Twin Falls powerplant. Practically entire flow is diverted for irrigation at Milner during the summer season. Peak discharges are affected. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	Oct. 24, 1923	9.3	7,110	1941	Apr. 23, 1941	8.66	2,330
1925	May 12, 1925	13.30	19,800	1942	Apr. 26, 1942	16.56	14,000
				1943	June 6, 1943	20.00	22,800
1926	Nov. 2, 1925	9.76	8,160	1944	June 15, 1944	18.65	19,200
1927	July 4, 1927	14.76	27,200	1945	June 11, 1945	17.62	16,000
1928	May 20,28,1928	13.8	22,100				
1929	Apr. 8, 1929	12.0	14,700	1946	Apr. 28, 1946	18.60	19,100
1930	Nov. 3, 1929	10.0	8,600	1947	June 13, 1947	19.50	21,500
				1948	June 25, 1948	17.70	16,700
1931	Nov. 21, 1930	9.11	6,950	1949	Feb. 24, 1949	14.96	10,700
1932	Feb. 28, 1932	8.02	4,640	1950	June 28, 1950	18.55	18,900
1933	Dec. 19, 1932	7.74	4,320				
1934	Oct. 18, 1933	5.35	1,810	1951	May 16, 1951	17.00	14,700
1935	Sept. 5, 1935	3.50	950	1952	May 10, 1952	16.90	14,800
				1953	June 9, 1953	17.48	16,200
1936	June 5, 1936	13.65	21,200	1954	May 29, 1954	14.47	9,660
1937	May 11, 1937	9.37	7,090	1955	Apr. 18, 1955	12.69	6,710
1938	May 5, 1938	13.92	21,600				
1939	Apr. 8, 1939	15.10	11,800	1956	May 31, 1956	18.72	19,800
1940	Apr. 30, 1940	11.35	4,920	1957	May 21, 1957	18.62	19,200

905. Snake River near Twin Falls, Idaho

Location.--Lat 42°36'25", long 114°29'10", in NW¼NW¼ sec.33, T.9 S., R.17 E., on downstream side of Perrine Bridge, 200 ft upstream from outlet of Blue Lakes, 4 miles north of Twin Falls, and 4 miles downstream from Shoshone Falls.

Gage.--Nonrecording prior to May 9, 1935; recording thereafter. At site 100 ft upstream prior to Sept. 18, 1930. Altitude of gage is 3,130 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 29,000 cfs at former site, and below 22,000 cfs at later sites. Extensions of rating defined by area-velocity studies.

Bankfull stage.--Not subject to overflow.

Historical data.--On the basis of records at Milner, the peak discharge of 1918 would have been the highest for period 1912-47 (approximately 40,000 cfs about June 21, 1918).

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. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	June 17,19,1912	12.7	29,600	1930	Nov. 4, 1929	-	10,000
1913	June 11, 1913	12.9	30,600				
1914	June 10, 1914	13.3	32,200	1931	Nov. 22, 1930	6.35	6,800
1915	Nov. 16, 1914	10.6	21,500	1932	Feb. 29, 1932	5.68	5,360
				1933	Dec. 19, 1932	-	4,400
1916	May 11, 1916	10.25	20,200	1934	Oct. 18, 1933	-	1,900
1917	June 25, 1917	12.6	29,300	1935	Sept.9,19, 1935	3.00	995
1918	June 21, 1918	-	40,000				
				1936	June 5, 1936	11.32	21,900
1920	May 22, 1920	9.68	18,100	1937	May 11, 1937	6.72	7,640
				1938	May 5, 1938	11.42	21,900
1921	June 4, 1921	12.92	30,600	1939	Apr. 8, 1939	8.38	12,100
1922	May 23, 1922	11.23	22,600	1940	Apr. 30, 1940	5.74	5,280
1923	June 26,27,1923	9.6	16,800				
1924	Oct. 24,25,29, 1923	6.7	7,960	1941	Nov. 8, 1940	3.85	1,940
				1942	Apr. 26, 1942	9.66	15,200
1925	May 12,25,1925	10.5	19,600	1943	June 6, 1943	12.68	26,100
				1944	June 15, 1944	11.46	19,300
1926	Nov. 2, 1925	7.0	8,600	1945	June 11, 1945	10.73	17,200
1927	July 4, 1927	12.5	26,000				
1928	May 20, 1928	11.57	23,000	1946	Apr. 28, 1946	11.42	19,100
1929	Apr. 7, 1929	9.95	17,300	1947	June 13, 1947	12.30	21,500

ROCK CREEK BASIN

920. Rock Creek near Rock Creek, Idaho

Location.--Lat 42°22', long 114°18', in sec.25, T.12 S., R.18 E., on right bank 0.1 mile downstream from road bridge, three-quarters of a mile downstream from West Fork Rock Creek, 5 miles south of Rock Creek settlement, and 12 miles south of Hansen.

Drainage area.--80 sq mi, approximately. Mean altitude, 6,330 ft.

Gage.--Nonrecording prior to July 21, 1939; recording thereafter. At site 2 miles upstream at different datum prior to Aug. 16, 1913. At present site at datum 1.25 ft higher Nov. 23, 1938, to July 21, 1939. Altitude of gage is 4,340 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 200 cfs, except for 1910, which is defined only to 120 cfs. Curves extended above.

Bankfull stage.--6 ft.

Remarks.--Only annual peaks are shown for period of nonrecording gage record, 1910-13, 1939; base for partial-duration series, 130 cfs.

Peak stages and discharges of Rock Creek near Rock Creek, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	Mar. 22, 1910	4.4	211	1949	Apr. 25, 1949	2.94	239
1911	May 6, 1911	2.4	111		May 7, 1949	2.59	197
1912	May 21, 1912	10.4	429				
1913	Apr.28,May 10, 11, 1913	8.2	128	1950	Apr. 22, 1950	2.32	148
					May 16, 1950	2.89	258
1939	Apr. 30, 1939	1.84	89	1951	Apr. 21, 1951	2.35	188
					May 11, 1951	2.73	265
1944	Apr. 24, 1944	3.00	152				
	May 1, 1944	3.09	164	1952	May 4, 1952	2.69	300
	May 11, 1944	a3.59	247				
	June 8, 1944	2.74	160	1953	Apr. 28, 1953	2.21	205
					May 7, 1953	1.99	163
1945	Apr. 24, 1945	2.57	150		May 19, 1953	2.03	168
	May 6, 1945	3.58	311		June 2, 1953	2.12	182
1946	Apr. 26, 1946	3.32	292	1954	Apr. 28, 1954	1.36	80
1947	May 4, 1947	2.24	130	1955	May 9, 1955	1.94	165
1948	Apr. 22, 1948	2.31	145	1956	Apr. 24, 1956	2.10	152
	Apr. 29, 1948	2.32	146				
	May 8, 1948	2.44	164	1957	May 20, 1957	2.77	315
	May 19, 1948	2.82	227				

a Occurred May 9, 1944.

930. Rock Creek near Twin Falls, Idaho

Location.--Lat 42°35', long 114°32', in SW¼ sec.36, T.9 S., R.16 E., on left bank at highway bridge, 3 miles upstream from mouth, and 4 miles northwest of Twin Falls.

Drainage area.--277 sq mi.

Gage.--Nonrecording prior to July 31, 1922; recording thereafter. At site 100 ft upstream at different datum prior to Sept. 27, 1937. Altitude of gage is 3,500 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below about 600 cfs.

Bankfull stage.--In canyon. Not subject to overflow.

Remarks.--Peaks occurring during summer months affected by diversions above station for irrigation, and by waste water and return flow from project lands above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	July 22, 1922	3.53	600	1935	June 1, 1935	2.26	448
1923	July 23, 1923	3.43	589				
1924	Nov. 12, 1923	3.35	563	1936	Feb. 21, 1936	3.66	861
1925	Jan. 29, 1925	4.70	939	1937	Apr. 29, 1937	2.36	514
				1938	Nov. 18, 1937	2.86	332
1926	Oct. 25, 1925	3.10	563	1939	Oct. 12, 1938	3.14	436
1927	Sept.21, 1927	4.5	984	1940	Aug. 30, 1940	3.16	460
1928	May 20, 1928	2.84	568				
1929	Mar. 3, 1929	3.50	749	1941	June 7, 1941	2.88	363
1930	May 9, 1930	3.42	749	1942	Jan. 28, 1942	3.23	491
				1943	June 13, 1943	3.02	410
1931	Mar. 18, 1931	2.50	514	1944	June 8, 1944	3.15	472
1932	Feb. 26, 1932	3.11	693	1945	May 23, 1945	3.20	505
1933	Feb. 21, 1933	3.22	721				
1934	Oct. 21, 1933	2.32	474	1946	Jan. 24, 1946	3.14	472

940. Snake River near Buhl, Idaho

Location.--Lat 42°40', long 114°43', in NW¼ sec.9, T.9 S., R.15 E., on left bank 2 miles downstream from Niagara Springs, 3¾ miles upstream from outlet of Clear Lakes, and 6 miles northeast of Buhl.

Gage.--Recording. Datum of gage is 2,952.9 ft above mean sea level (stadia levels).

Stage-discharge relation.--Defined by current-meter measurements below 21,000 cfs.

Bankfull stage.--In deep, wide canyon.

Historical data.--A discharge of about 40,000 cfs is estimated to have occurred on about June 21, 1918, based on records at Milner, and would be the highest for the period 1912-57. The flood of June 1894 is estimated to be about 80,000 cfs, on basis of estimates by Corps of Engineers for flows at Milner and King Hill.

Remarks.--A few small diversions between this station and station at Milner, where practically entire flow is diverted during irrigation season. Flow regulated by Twin Falls and Shoshone Falls powerplants and several reservoirs above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	June 13, 1947	10.34	23,100	1953	June 10, 1953	8.74	18,100
1948	June 25, 1948	8.49	17,800	1954	May 29, 1954	6.23	11,400
1949	Feb. 23, 1949	6.61	12,400	1955	Apr. 17, 1955	4.88	8,270
1950	June 28, 1950	9.33	20,000				
				1956	May 30, 1956	9.63	20,900
1951	May 16, 1951	8.13	16,200	1957	May 22, 1957	9.68	21,000
1952	May 10, 1952	8.03	16,200				

SALMON FALLS CREEK BASIN

960. Salmon Falls Creek above upper Vineyard ditch, near Contact, Nev.

Location.--Lat 41°44', long 114°53', near northwest corner of sec.5, T.44 N., R.63 E., on left bank three-quarters of a mile upstream from former diversion point for upper Vineyard ditch, 1½ miles upstream from present diversion dam, and 6 miles southwest of Contact.

Drainage area.--461 sq mi, approximately. Mean altitude, 6,760 ft.

Gage.--Recording. Altitude of gage is 5,570 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--5.5 ft.

Remarks.--Many diversions above station for irrigation; most peaks probably affected. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	May 16, 1949	4.31	750	1954	May 12, 1954	2.53	191
1950	May 24, 1950	4.21	741	1955	June 16, 1955	3.01	323
1951	May 12, 1951	3.83	571	1956	May 25, 1956	4.32	872
1952	May 4, 1952	4.82	1,170	1957	May 19, 1957	4.21	825
1953	June 15, 1953	3.27	437				

1050. Salmon Falls Creek near San Jacinto, Nev.

Location.--Lat 41°57', long 114°42', in sec.23, T.47 N., R.64 E., on right bank in canyon, 600 ft downstream from highway bridge, 750 ft downstream from Shoshone Creek, and 5 miles north of San Jacinto.

Drainage area.--1,450 sq mi, approximately. Mean altitude, 6,350 ft.

Gage.--Recording. Altitude of gage is 5,120 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,400 cfs prior to 1948 and below 900 cfs thereafter. Curves extended above.

Bankfull stage.--River in narrow canyon.

Remarks.--Many diversions above station for irrigation; peaks occurring during irrigation season are probably affected. Since 1948 about one-half of irrigated area above station has been withdrawn from consumptive use of water. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	Jan. 31, 1911	6.78	1,060	1935	June 2, 1935	5.23	582
1912	May 22, 1912	7.60	1,300				
1913	Apr. 2, 1913	5.40	664	1936	Apr. 26, 1936	6.03	796
1914	Apr. 25, 1914	5.98	837	1937	May 7, 1937	4.40	362
1915	May 25, 1915	3.79	246	1938	Apr. 28, 1938	6.02	803
				1939	May 18, 1939	9.23	1,760
1916	Apr.14,May 2, 1916	5.23	626	1940	Apr. 28, 1940	4.27	338
				1941	June 8, 1941	4.20	316
1919	Apr. 1, 1919	5.9	a825	1942	Apr. 15, 1942	7.91	1,370
1920	May 12, 1920	5.09	583	1943	Feb. 24, 1943	10.20	2,060
				1944	May 11, 1944	6.33	890
1921	May 8, 1921	7.00	1,170	1945	May 8, 1945	6.50	950
1922	May 9, 1922	6.86	1,170				
1923	May 21, 1923	4.79	524	1946	Apr. 21, 1946	6.24	896
1924	Apr. 12, 1924	5.19	646	1947	May 12, 1947	4.32	342
1925	Apr. 19, 1925	5.62	731	1948	May 21, 1948	b6.18	549
				1949	May 18, 1949	7.75	998
1926	Mar. 17, 1926	4.27	350	1950	May 19, 1950	7.57	799
1927	May 20, 1927	5.92	818				
1928	May 14, 1928	5.13	594	1951	Feb. 8, 1951	8.66	1,220
1929	May 27, 1929	4.90	521	1952	Apr. 30, 1952	9.06	1,430
1930	May 13, 1930	4.38	376	1953	June 15, 1953	c5.73	480
				1954	Apr. 29, 1954	4.44	200
1931	Apr. 9, 1931	3.73	204	1955	May 10, 1955	5.22	370
1932	May 17, 1932	5.94	775				
1933	June 4, 1933	4.87	477	1956	May 26, 1956	7.32	859
1934	Apr.18,May 2, 1934	3.13	98	1957	May 20, 1957	8.48	1,230

a Maximum recorded; may have been greater during period of missing record in March 1919.
b Occurred May 30, 1948.
c Occurred June 16, 1953.

1070. Cedar Creek near Roseworth, Idaho

Location.--Lat 42°15', long 114°52', in SW¼ sec.31, T.13 S., R.14 E., on right bank 21 ft upstream from stock bridge, 1.7 miles downstream from Cedar Creek Dam, and 8¾ miles south of Roseworth.

Drainage area.--130 sq mi, approximately.

Gage.--Nonrecording prior to June 1916, at site 1.8 miles upstream at different datum; recording since May 1, 1957, at present site and datum. Altitude of gage is 5,050 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 80 cfs and extended above.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Small ranch diversions above early site may have had slight effect on peaks occurring during irrigation season. Since 1921, flow completely regulated by Cedar Creek Reservoir; total discharge reflects intrabasin diversion from Bruneau River, which enters above Cedar Creek Reservoir. Only annual peaks are shown. Peaks are maximum observed prior to 1957.

Peak stages and discharges of Cedar Creek near Roseworth, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	Mar. 1, 1910	-	a200	1914	Apr. 24, 1914	b4.46	127
1911	Mar. 7, 1911	4.6	131	1916	Mar. 21, 1916	3.35	65
1912	May 19, 1912	4.5	122				
1913	Mar. 4, 1913	5.4	167	1957	Aug. 1, 1957	2.67	88

a Estimated daily.
b Occurred Feb. 21, 1914.

MUD LAKE-LOST RIVER BASINS

1085. Camas Creek at Eighteenmile shearing corral, near Kilgore, Idaho

Location.--Lat 44°18', long 111°52', in NW¼ sec.7, T.11 N., R.39 E., on right bank at county road bridge at Eighteenmile shearing corral, 800 ft downstream from West Camas Creek, 7 miles south of Kilgore, and 18½ miles northeast of Dubois.

Drainage area.--237 sq mi (revised). Mean altitude, 6,970 ft.

Gage.--Recording. At datum 1.21 ft higher prior to Sept. 23, 1938. Altitude of gage is 5,260 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 750 cfs, and extended above; peak discharges include variable amounts of flow in side channel which bypasses gage.

Bankfull stage.--6.5 ft.

Remarks.--Diversions above station for stock and irrigation may have some effect on peaks. Prior to 1947 records are not available during some winter months. In several years ice-affected stages higher than maximum gage heights shown may have occurred during periods of no gage-height record. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 4, 1937	a2.26	447	1947	Apr. 26, 1947	b4.85	-
1938	May 2, 1938	4.70	1,200		May 10, 1947	4.13	619
1939	Mar. 28, 1939	b3.98	-	1948	(c)	b4.17	-
	May 2, 1939	a3.42	418		Apr. 29, May 8, 1948	-	d500
1940	Apr. 12, 1940	b3.98	-				
	Apr. 15, 1940	3.44	432	1949	Apr. 21, 1949	4.46	828
				1950	Apr. 18, 19, 1950	b4.98	-
1941	May 27, 1941	a2.89	273		Apr. 21, 1950	-	d700
1942	May 27, 1942	a3.45	418				
1943	June 3, 1943	a4.61	817	1951	Apr. 8, 1951	5.05	1,030
1944	May 20, 1944	a3.76	538	1952	May 2, 1952	7.51	2,030
1945	June 7, 1945	5.60	1,170	1953	June 3, 1953	4.40	755
1946	Apr. 21, 1946	6.08	1,340				

a Maximum recorded; probably higher during period of no record. b Backwater from ice. c Occurred sometime between Apr. 6 and May 13, 1948. d Estimated maximum daily.

1090. Camas Creek near Kilgore, Idaho
(Published as "near Dubois" 1921-27)

Location.--Lat 44°17', long 111°55', in NE¼SE¼ sec.13, T.11 N., R.38 E., on right bank 2 miles north of Lone Tree Reservoir, 2 miles downstream from 18-mile shearing corral, 8 miles south of Kilgore, and 19 miles northeast of Dubois.

Drainage area.--250 sq mi, approximately (revised).

Gage.--Recording. Altitude of gage is 5,180 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 800 cfs and extended above.

Remarks.--Diversions above station for irrigation and stock water. Flood flows slightly affected by storage in Frazier Reservoir (capacity, 2,000 acre-ft). Records available only during irrigation season. Only annual recorded peaks are shown.

Peak stages and discharges of Camas Creek near Kilgore, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	May 29, 1921	4.92	1,090	1926	Apr. 13, 1926	4.27	760
1922	May 21, 1922	5.75	1,550	1927	May 2, 1927	5.05	1,190
1923	May 5, 1923	4.18	753	1930	Apr. 9, 1930	4.75	1,030
1925	Apr. 18, 1925	4.39	848				

1115. Camas Creek near Camas, Idaho

Location.--Lat 44°04', long 112°12', in NE¼ sec.34, T.9 N., R.3? E., on right bank a quarter of a mile south of C. M. Thompson Ranch, 1 mile east of Union Pacific Railroad, 5 miles northeast of Camas, and 8 miles southeast of Dubois.

Drainage area.--About 400 sq mi (revised).

Gage.--Nonrecording prior to Nov. 30, 1921; recording thereafter. Altitude of gage is 4,840 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Peak flows may have been affected by storage in Lone Tree Reservoir. Diversions above station for stock and irrigation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	May 29, 1921	4.4	530	1925	Apr. 22, 1925	2.13	150
1922	May 22, 1922	4.82	645				
1923	July 25, 1923	2.07	136	1926	Mar. 19, 1926	a2.14	147
1924	Apr. 26, 1924	1.77	98				

a Maximum recorded; may have been higher during winter period of no record.

1120. Camas Creek at Camas, Idaho

Location.--Lat 44°00', long 112°13', in E½SE¼ sec.21, T.8 N., R.36 E., on left bank 150 ft upstream from Union Pacific Railroad bridge at Camas and half a mile upstream from Beaver Creek.

Drainage area.--440 sq mi, approximately (revised); mean altitude, 6,450 ft.

Gage.--Nonrecording prior to Mar. 25, 1927; recording thereafter. At site 0.1 mile downstream at different datum prior to Aug. 2, 1925. At site 250 ft upstream at datum 2.01 ft higher Aug. 21, 1925, to Sept. 14, 1938. Altitude of present gage is 4,780 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 510 cfs at present site, and below 400 cfs at sites prior to 1939, and extended above.

Bankfull stage.--5 ft.

Remarks.--Diversions above station for stock and irrigation. No record obtained during ice periods but ice peaks may have exceeded gage heights for maximum discharge in many years. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	Apr. 23, 1925	1.53	a134	1933	Apr. 30, 1933	1.76	215
				1934	Mar. 30, 1934	.64	39
1926	Mar. 20, 1926	1.40	a122	1935	Apr. 23, 1935	1.33	182
1927	May 4, 1927	1.96	204				
1928	Nov. 23, 1927	b2.01	69	1936	Apr. 24, 1936	2.27	446
1929	May 6, 1929	1.20	83	1937	May 5, 1937	2.02	283
1930	Apr. 12, 1930	c1.70	92	1938	May 3, 1938	3.98	900
				1939	Apr. 17, 1939	3.56	255
1931	Apr. 20, 1931	1.55	146	1940	Apr. 20, 1940	3.50	246
1932	May 16, 1932	2.24	335				

a Maximum observed or recorded; may have been higher during period of no record.
b Occurred Mar. 20, 1928.
c Occurred Mar. 16, 1930.

Peak stages and discharges of Camas Creek at Camas, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Apr. 17, 1941	d3.23	210	1951	Apr. 9, 1951	-	e650
1942	Apr. 23, 1942	4.86	528	1952	May 2, 1952	6.53	1,220
1943	Apr. 20, 1943	4.50	459	1953	June 4, 1953	4.84	461
1944	Apr. 26, 1944	3.66	269	1954	Apr. 30, 1954	4.20	317
1945	June 8, 1945	5.26	585	1955	Mar. 28, 1955	f5.02	-
					May 7, 1955	4.78	474
1946	Apr. 21, 1946	5.71	796				
1947	Apr. 27, 1947	4.83	524	1956	Dec. 24, 1955	f5.26	-
1948	May 9, 1948	4.63	470		Apr. 19, 1956	4.99	534
1949	Apr. 24, 1949	4.60	470	1957	May 21, 1957	6.00	778
1950	Apr. 22, 1950	4.69	496				

d Occurred Apr. 5, 1941.
e Maximum daily discharge estimated.
f Ice effect.

1130. Beaver Creek at Spencer, Idaho

Location.--Lat 44°21', long 112°11', in NE¼ sec.23, T.12 N., R.36 E., on right bank at highway bridge, 0.4 mile southeast of Spencer and 2½ miles upstream from Rattlesnake Creek.

Drainage area.--120 sq mi, approximately. Mean altitude, 7,110 ft.

Gage.--Nonrecording. Altitude of gage is 5,850 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 140 cfs, except 1948, below 230 cfs and 1952, below 480 cfs, and extended above.

Bankfull stage.--11 ft (top of culvert opening).

Remarks.--Several ranch diversions above gage probably have negligible effect on flood peaks. Although record has not been obtained each year until ice has gone out it is believed annual peaks are shown. In most years ice-affected peaks substantially exceeded gage heights for maximum discharge. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Mar.17-21,1941	(a)	-	1947	May 14, 1947	4.00	192
	Mar. 31, 1941	3.52	161	1948	Mar. 14, 1948	b5.13	-
1942	Mar. 31, 1942	b5.7	-		Apr. 18, 1948	4.50	263
	Apr. 13, 1942	5.10	408	1949	Apr. 17, 1949	b4.70	-
1943	Mar. 30, 1943	b5.95	-		May 22, 1949	4.02	238
	Apr. 8, 1943	3.90	210	1950	Apr. 2, 1950	b5.60	-
1944	June 27, 1944	4.15	231		Apr. 13, 1950	4.90	377
1945	June 6, 1945	4.70	335				
				1951	Apr. 1, 1951	6.02	-
1946	Apr. 20, 1946	4.22	270		Apr. 7, 1951	5.40	341
1947	Mar. 20, 1947	b5.06	-	1952	Apr. 27, 1952	7.5	549

a Stage above 5.4 ft; backwater from ice.
b Backwater from ice.

1135. Beaver Creek at Dubois, Idaho

Location.--Lat 44°11', long 112°14', in NW¼ sec.21, T.10 N., R.36 E., on left bank half a mile north of Dubois.

Drainage area.--220 sq mi, approximately. Mean altitude, 6,760 ft.

Gage.--Nonrecording prior to May 8, 1927; recording thereafter. At site 175 ft downstream at datum 2.08 ft lower, prior to May 8, 1927. Altitude of gage is 5,150 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements throughout range, except period of staff-gage record (1921-27), which was defined below 420 cfs.

Bankfull stage.--8 ft.

Remarks.--Diversions for irrigation above station. Only annual peaks are shown.

Peak stages and discharges of Beaver Creek at Dubois, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	May 19, 1921	a4.65	538	1941	Mar. 28, 1941	2.15	188
1922	May 20, 1922	a4.9	637	1942	Apr. 12, 1942	2.85	340
1923	May 19, 1923	a3.0	219	1943	Apr. 8, 1943	2.14	179
1924	Apr. 13, 1924	a3.3	260	1944	Apr. 13, 1944	2.35	221
1925	Apr. 12, 1925	a4.5	463	1945	June 6, 1945	3.14	396
1926	Mar. 16, 1926	b6.50	-	1946	Mar. 21, 1946	b3.09	-
	Mar. 17, 1926	-	c375		Apr. 18, 1946	2.33	225
1927	Apr. 28, 1927	a3.2	293	1947	Mar. 18, 1947	b4.83	-
1928	Mar. 22, 1928	b2.25	-		May 12, 1947	2.09	175
	Mar. 23, 1928	2.14	205	1948	Apr. 23, 1948	2.54	271
1929	May 5, 1929	1.94	156	1949	May 22, 1949	2.27	213
1930	Apr. 7, 1930	4.77	858	1950	Apr. 14, 1950	2.89	357
1931	Apr. 13, 1931	1.94	138	1951	Apr. 7, 1951	2.33	257
1932	May 15, 1932	1.50	63	1952	Apr. 27, 1952	3.81	635
1933	Apr. 26, 1933	1.74	116	1953	June 3, 1953	2.19	214
1934	-	-	0	1954	Feb. 20, 1954	b2.20	-
1935	Apr. 22, 1935	1.82	126		Apr. 18, 1954	1.63	94
				1955	May 6, 1955	1.91	136
1936	Apr. 17, 1936	1.47	64				
1937	Apr. 22, 1937	.93	15	1956	Dec. 23, 1955	4.38	789
1938	May 1, 1938	2.40	240	1957	May 20, 1957	3.26	420
1939	Apr. 4, 1939	2.58	280				
1940	Apr. 1, 1940	1.84	122				

a Maximum observed.
b Backwater from ice.
c Estimated.

1140. Beaver Creek at Camas, Idaho

Location.--Lat 44°01', long 112°14', in NE¼ sec.21, T.8 N., R.36 E., on right bank a quarter of a mile northwest of Union Pacific Railroad station at Camas, and three-eighths of a mile upstream from mouth.

Drainage area.--510 sq mi, approximately. Mean altitude, 6,190 ft.

Gage.--Nonrecording prior to Dec. 22, 1949; recording thereafter. Altitude of gage is 4,790 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements throughout range, except that for 1956 defined only below 43 cfs.

Bankfull stage.--3 ft.

Remarks.--Flood peaks affected by irrigation diversions above Dubois, 14 miles above station, and by heavy channel losses below Dubois. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	June 1, 1921	2.94	153	1940	-	-	0
1922	May 27, 1922	2.78	141				
1923	May 23, 1923	2.20	83	1941	Apr. 1, 1941	2.12	52
1924	Apr. 14, 1924	2.42	107	1942	Apr. 13, 1942	3.26	147
1925	Apr. 13, 1925	2.66	150	1943	Apr. 9, 1943	2.10	60
				1944	June 28, 1944	2.40	75
1926	Mar. 19, 1926	2.8	153	1945	June 7, 1945	2.56	91
1927	Apr. 27, 1927	2.18	90				
1928	Mar. 23, 1928	1.85	62	1946	Apr. 18, 1946	2.45	88
1929	-	-	0	1947	Mar. 20, 1947	2.64	104
1930	Apr. 7, 1930	2.88	163	1948	Apr. 23, 1948	2.93	125
				1949	Apr. 13, 1949	2.80	102
1931	-	-	0	1950	Apr. 18, 1950	3.27	145
1932	-	-	0				
1933	-	-	0	1951	Apr. 8, 1951	2.97	135
1934	-	-	0	1952	Apr. 28, 1952	3.48	186
1935	-	-	0	1953	June 3, 1953	2.80	106
				1954	Apr. 18, 1954	1.86	27
1936	-	-	0	1955	May 6, 1955	1.95	32
1937	-	-	0				
1938	June 1, 1938	2.34	57	1956	Mar. 27, 1956	3.62	173
1939	Apr. 5, 1939	2.94	122	1957	May 21, 1957	2.98	132

1155. Medicine Lodge Creek near Argora, Idaho

Location.--Lat 44°19', long 112°34', in sec.34, T.12 N., R.33 E., on left bank at Albano Ranch, 2½ miles southeast of Argora and 7¾ miles upstream from Middle Creek.

Drainage area.--160 sq mi, approximately.

Gage.--Nonrecording prior to Mar. 21, 1940; recording thereafter. Datum of gage is 5,944 ft above mean sea level (from river-profile survey).

Stage-discharge relation.--Defined by current-meter measurements below 78 cfs and extended above.

Bankfull stage.--3 ft.

Remarks.--Several diversions for irrigation above station. Peaks at this station usually result from rainstorms rather than snowmelt and are very short-lived. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 22, 1939	a1.80	166	1941	Aug. 19, 1941	1.57	113
1940	June 3, 1940	1.01	40	1942	Apr. 14, 1942	1.55	140
				1943	Mar. 3, 1943	b1.96	-
1941	Dec. 13, 1940	b1.66	-		July 22, 1943	1.37	82

a Maximum observed.
b Backwater from ice.

1160. Medicine Lodge Creek at Ellis Ranch, near Argora, Idaho

Location.--Lat 44°17', long 112°30', in sec.7, T.11 N., R.34 E., on left bank 4 miles upstream from Middle Creek, 6½ miles southeast of Argora, and 17 miles northwest of Dubois.

Drainage area.--165 sq mi.

Gage.--Recording. At site 50 ft downstream from present gage at same datum prior to May 31, 1950. Altitude of gage is 5,710 ft (from topographic map of dam sites).

Stage-discharge relation.--Defined by current-meter measurements below about 120 cfs and extended above logarithmic plotting.

Bankfull stage.--4 ft.

Remarks.--Several diversions for irrigation above station. Peaks at this station usually result from rainstorms or from release from ice storage and are quite shortlived. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	July 14, 1941	3.23	129	1950	Apr. 14, 1950	3.10	122
1942	Apr. 12, 1942	3.19	125				
1943	July 22, 1943	2.37	68	1951	Mar. 18, 1951	2.43	65
1944	June 9, 1944	4.23	229	1952	June 27, 1952	3.13	100
1945	June 10, 1945	3.30	134	1953	July 15, 1953	2.92	74
				1954	June 10, 1954	a2.53	66
1946	June 24, 1946	2.63	78	1955	Apr. 8, 1955	2.77	78
1947	Mar. 15, 1947	3.98	201				
1948	Apr. 2, 1948	2.58	78	1956	Mar. 24, 1956	3.81	138
1949	May 21, 1949	2.58	85	1957	May 20, 1957	2.93	98

a Occurred Feb. 9, 1954.

1165. Medicine Lodge Creek near Small, Idaho

Location.--Lat 44°16', long 112°25', in NW¼ sec.25, T.11 N., R.34 E., on left bank 400 ft west of H. W. Small's ranchhouse, 1 mile downstream from Indian Creek, 4 miles northwest of Small, and 11 miles northwest of Dubois.

Drainage area.--270 sq mi, approximately.

Gage.--Nonrecording prior to Oct. 18, 1941; recording thereafter. At site 100 ft downstream at different datum, prior to Dec. 19, 1923. Altitude of gage is 5,480 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 140 cfs at former site (1921-23) and below 150 cfs at latter site, and extended above.

Bankfull stage.--5.5 ft.

Remarks.--Many small diversions for irrigation above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	June 1, 1921	a2.80	196	1944	Feb. 3, 1944	b5.93	-
1922	Feb. 17, 1922	b4.70	-		June 9, 1944	4.63	265
	May 26, 1922	a2.57	167	1945	Dec. 30, 1944	b5.75	-
1923	Feb. 11, 1923	b3.27	-		June 10, 1945	-	c150
	June 17, 1923	a2.10	140				
				1946	Dec. 5, 1945	b4.60	-
1941	Jan. 17, 1941	b5.60	-		May 28, 1946	3.67	125
	May 15, 1941	3.22	101	1947	Feb. 13, 1947	b6.49	-
1942	Nov. 30, 1941	b4.69	-		Mar. 16, 1947	4.23	211
	Apr. 12, 1942	3.59	129	1948	Feb. 18, 1948	b5.88	-
1943	Feb. 1, 1943	b4.66	-		June 21, 1948	3.52	111
	June 14, 1943	3.43	89				

a Maximum observed.
b Backwater from ice.
c Estimated maximum daily.

1170. Birch Creek near Reno, Idaho
(Published as "near Kaufman" 1910-12)

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, 2.6 miles south of the Lemhi-Clark County line, 5 miles southeast of former Reno Post Office, and 35 miles west of Dubois.

Drainage area.--320 sq mi, approximately.

Gage.--Nonrecording prior to Oct. 1, 1950; recording thereafter. At site half a mile downstream at different datum, October 1910 to June 1911 and April 1921 to December 1922. Altitude of gage is 6,240 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--4 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	Oct. 13, 1910	a2.0	110	1952	Apr. 18, 1952	1.90	107
	Feb. 20, 1911	b2.7	-	1953	Feb. 10, 1953	b2.29	-
1912	Feb.25,Mar.2, 1912	b2.2	-		June 2, 1953	1.72	92
				1954	Feb. 19, 1954	b2.04	-
	Apr. 11, 1912	a1.97	103		Mar. 2, 1954	1.80	100
				1955	Feb. 21, 1955	b2.21	-
1921	May 17, 1921	a2.05	95		Aug. 14, 1955	1.86	103
1922	Apr.25-27,May 19, 1922	a2.05	94				
				1956	Feb. 18, 1956	b2.16	-
					Mar. 24, 1956	1.96	111
1951	Jan. 31, 1951	b2.70	-	1957	Jan. 19, 1957	b2.76	-
	Mar. 11, 1951	1.84	99		May 14, 1957	1.74	89
1952	(c)	b2.27	-				

a Maximum observed.
b Backwater from ice.
c Occurred sometime between Jan. 20 and Feb. 24, 1952.

1190. Little Lost River near Howe, Idaho

Location.--Lat 43°53', long 113°06', in sec.3, T.6 N., R.28 E., on left bank a quarter of a mile upstream from diversion dam of Blaine County Investment Co., 6 miles northwest of Berenice, and 7 miles northwest of Howe.

Drainage area.--703 sq mi (revised).

Gage.--Nonrecording prior to Sept. 2, 1938; recording thereafter. At site 120 ft downstream at datum 1.39 ft higher prior to Sept. 2, 1938. Altitude of gage is 5,020 ft (by barometer).

Stage-discharge relation.--Defined fairly well by current-meter measurements below 170 cfs prior to 1954, except below 140 cfs 1930 to 1938, and below 280 cfs since 1955; extended above.

Bankfull stage.--5 ft.

Remarks.--Flood peaks probably affected by diversions and pumping above station even though streamflow is subject to sizable losses and accretions from the ground-water reservoir underlying the valley alluvium through which the channel runs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	June 22, 1921	a1.57	153	1944	Jan. 19, 1944	b4.61	-
1922	June 23, 1922	a1.57	165		July 5, 1944	3.65	178
1923	June 14, 1923	a1.64	176	1945	(c)	b4.96	-
1924	May 29, 1924	a1.43	141		June 27, 1945	a3.35	138
1925	July 5, 1925	a1.53	148	1946	(d)	b6.50	-
1926	Apr. 23, 1926	a1.25	114		June 13, 1946	3.51	157
1927	June 26, 1927	a1.65	168	1947	Feb. 3, 1947	b6.00	-
1928	May 22, 1928	a1.73	168		June 22, 1947	3.66	174
1929	June 17, 1929	a1.57	138	1948	Jan. 24, 1948	b4.96	-
1930	Aug. 11, 1930	a1.32	160		June 22, 1948	3.56	161
1931	June 10, 1931	a.90	99	1949	Jan. 1, 1949	b4.45	-
1932	June 18, 1932	a1.15	138		June 3, 1949	3.52	156
1933	June 19, 1933	a1.02	114	1950	Jan. 22, 1950	b5.40	-
1934	May 9, 1934	a.69	68		June 24, 1950	3.51	161
1935	June 15, 1935	a1.22	154	1951	Feb. 7, 1951	b4.42	-
1936	Aug. 11, 1936	3.10	450		July 29, 1951	3.73	185
1937	May 29, 1937	a.70	48	1952	(e)	b5.95	-
1938	June 10, 1938	a1.60	150		Aug. 2, 1952	3.86	202
1939	May 23, 1939	2.97	102	1953	Dec. 10, 1952	b4.32	-
1940	Jan. 21, 1940	b4.40	-		June 22, 1953	3.84	185
	May 14, 1940	2.88	101	1954	(f)	b4.50	-
1941	Jan. 19, 1941	b4.70	-	1955	Sept. 3, 1954	4.16	234
	June 2, 1941	3.26	150		Mar.22,23,1955	b6.25	-
1942	Jan. 24, 1942	b3.68	-		Aug. 14, 1955	4.30	228
	June 10, 1942	3.33	146	1956	(g)	b5.79	-
1943	Dec. 27, 1942	b4.48	-		June 2, 1956	4.56	291
	June 24, 1943	3.49	157	1957	Jan. 23, 1957	b6.63	-
					June 11, 1957	4.15	230

a Maximum observed.
b Backwater from ice jam.
c Occurred sometime between Dec. 8, 1944, and Jan. 25, 1945.
d Occurred sometime between Feb. 7 and Mar. 17, 1946.
e Occurred sometime between Jan. 16 and Feb. 19, 1952.
f Occurred sometime between Dec. 3, 1954, and Jan. 12, 1955.
g Occurred sometime between Feb. 13 and 19, 1956.

1200. Big Lost River at Wild Horse, near Chilly, Idaho

Location.--Lat 43°56', long 114°07', in sec.17, T.7 N., R.20 E., on right bank a quarter of a mile upstream from East Fork Big Lost River, 2 miles downstream from Wild Horse damsite, and 16 miles southwest of Chilly.

Drainage area.--114 sq mi. Mean altitude, 8,540 ft.

Gage.--Recording. Altitude of gage is 6,820 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--Stream in one channel at all stages, not subject to overflow.

Remarks.--Base for partial-duration series, 300 cfs.

Peak stages and discharges of Big Lost River at Wild Horse, near Chilly, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 15, 1944	4.00	491	1950	July 2, 1950	3.83	465
	May 31, 1944	3.87	448				
	June 27, 1944	4.37	622	1951	May 11, 1951	3.63	393
	July 1, 1944	4.36	618		May 28, 1951	4.74	807
					June 17, 1951	4.50	720
1945	May 8, 1945	3.51	347		Aug. 4, 1951	3.49	353
	June 25, 1945	4.15	548				
	July 4, 1945	3.50	344	1952	May 4, 1952	4.68	796
					May 14, 1952	4.13	585
1946	Apr. 27, 1946	3.85	441		June 7, 1952	5.41	1,080
	May 6, 1946	3.79	420		July 11, 1952	3.63	396
	May 28, 1946	3.62	362		Aug. 1, 1952	3.45	342
	June 5, 1946	4.06	499				
	May 23, 1946	3.55	341	1953	June 13, 1953	4.94	859
					June 19, 1953	4.90	843
1947	May 8, 1947	4.35	616		July 1, 1953	3.98	495
	May 27, 1947	3.75	420				
	June 9, 1947	3.52	350	1954	May 21, 1954	4.55	712
	June 20, 1947	3.77	426		June 26, 1954	4.98	879
1948	May 18, 1948	3.81	457	1955	May 22, 1955	3.42	306
	May 29, 1948	4.91	844		June 12, 1955	4.20	543
	June 3, 1948	4.92	848		June 23, 1955	3.90	441
	June 9, 1948	4.99	876		June 29, 1955	3.52	332
1949	May 18, 1949	3.99	516	1956	Dec. 23, 1955	3.74	396
	May 29, 1949	3.70	423		May 24, 1956	6.18	1,270
	June 12, 1949	3.88	481		June 1, 1956	5.98	1,200
					June 11, 1956	4.86	806
1950	May 18, 1950	3.39	330				
	May 24, 1950	3.70	423	1957	May 19, 1957	3.79	443
	June 7, 1950	4.01	522		June 5, 1957	5.61	1,100
	June 22, 1950	4.02	525		July 1, 1957	3.82	452

1205. Big Lost River at Howell Ranch, near Chilly, Idaho

Location.--Lat 44°00', long 114°02', in sec.30, T.8 N., R.21 E., on left bank at Howell Ranch, 1¼ miles downstream from Burnt Creek, 6 miles downstream from East Fork, 9 miles southwest of Chilly, and 21 miles northwest of Mackay.

Drainage area.--450 sq mi. Mean altitude, 8,590 ft.

Gage.--Nonrecording prior to June 16, 1920; recording thereafter. At site 1¼ miles downstream at different datum, prior to Apr. 20, 1906. At site 100 ft downstream at different datum, Apr. 20, 1906, to June 6, 1912, and at present site at datum 2.07 ft lower June 7, 1912, to Nov. 14, 1914. Datum of gage is 6,621.95 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 3,400 cfs.

Bankfull stage.--6 ft.

Remarks.--No winter records prior to 1949, and only annual peaks are shown. Base for partial-duration series, 900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	June 19, 1904	a5.1	1,600	1920	June 15, 1920	a4.05	1,620
1905	June 13, 1905	a4.9	1,360				
				1921	June 12, 1921	5.94	3,500
1906	June 13, 1906	a4.80	2,380	1922	June 15, 1922	5.50	3,360
1907	July 1, 1907	a4.90	2,270	1923	June 13, 1923	4.68	2,360
1908	June 15, 1908	a4.75	2,030	1924	May 17, 1924	3.13	932
1909	June 5, 1909	a5.45	2,880	1925	June 22, 1925	4.50	2,240
1910	June 17, 1910	a3.65	915				
				1926	May 20, 1926	2.98	831
1911	June 20, 1911	a6.35	3,420	1927	June 13, 1927	4.64	2,490
1912	June 8, 1912	a6.7	2,030	1928	May 27, 1928	4.18	2,020
1913	May 28, 1913	a7.43	2,820	1929	June 16, 1929	3.74	1,560
1914	June 3, 1914	a7.14	2,540	1930	June 11, 1930	a4.10	1,910

a Maximum observed.

Peak stages and discharges of Big Lost River at Howell Ranch, near Chilly, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931	May 14, 1931	2.84	835	1951	May 21, 1951	2.86	968
1932	June 24, 1932	4.53	2,400		May 28, 1951	4.24	2,210
1933	June 16, 1933	4.08	1,910		June 16, 1951	4.13	2,100
1934	May 8, 1934	2.52	639		Aug. 4, 1951	3.24	1,260
1935	June 9, 1935	4.37	2,260				
				1952	May 4, 1952	4.04	2,060
1936	May 15, 1936	3.22	1,230		May 14, 1952	3.58	1,600
1937	June 22, 1937	2.80	910		June 7, 1952	4.90	2,960
1938	June 6, 1938	5.17	3,170		July 12, 1952	3.38	1,420
1939	May 31, 1939	2.89	1,000		Aug. 1, 1952	2.84	968
1940	June 1, 1940	3.32	1,350				
				1953	June 13, 1953	4.23	2,250
1941	May 27, 1941	3.52	1,530		June 19, 1953	4.38	2,400
1942	June 8, 1942	4.10	2,070		July 1, 1953	3.54	1,570
1943	June 19, 1943	4.28	2,370				
1944	July 1, 1944	4.26	2,310	1954	May 21, 1954	4.05	1,970
1945	June 26, 1945	3.85	1,890		June 26, 1954	6.00	3,960
1946	June 5, 1946	3.59	1,660	1955	June 12, 1955	3.78	1,740
1947	May 8, 1947	3.85	1,890		June 23, 1955	3.38	1,360
1948	June 9, 1948	4.35	2,390		June 29, 1955	2.88	971
					July 24, 1955	3.22	1,250
1949	May 16, 1949	3.57	1,550				
	May 28, 1949	3.22	1,260	1956	Dec. 23, 1955	-	b540
	June 12, 1949	3.41	1,430		May 24, 1956	5.16	3,410
					June 11, 1956	4.49	2,460
1950	May 18, 1950	2.72	947				
	May 24, 1950	3.01	1,160	1957	May 19, 1957	3.64	1,580
	June 2, 1950	3.18	1,300		June 6, 1957	5.27	3,570
	June 7, 1950	3.44	1,530		June 30, 1957	3.81	1,780
	June 22, 1950	3.37	1,470				
	July 2, 1950	3.18	1,310				

b Maximum daily discharge; peak known to be higher.

1255. Surface inflow to Mackay Reservoir, near Mackay, Idsho

Drainage area.--766 sq mi. Mean altitude, 8,060 ft.

Remarks.--Records are the sum of discharges obtained at gaging stations on Big Lost River (east and west channels) and Warm Spring Creek (east and west channels) above Mackay Reservoir, near Mackay. Channels are interconnected above respective gaging stations, and combined flow represents practically the entire surface flow which enters Mackay Reservoir. Some diversions for irrigation above stations but effect on flood peaks negligible. Only annual peak discharges are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	May 30, 1919	-	1,040	1939	May 31, 1939	-	504
1920	June 15, 1920	-	835	1940	June 1, 1940	-	805
1921	June 12, 1921	-	2,760	1941	May 27, 1941	-	1,100
1922	June 15, 1922	-	2,680	1942	June 9, 1942	-	1,610
1923	June 13, 1923	-	1,570	1943	June 20, 1943	-	1,840
1924	May 20, 1924	-	513	1944	June 27, 1944	-	1,980
1925	June 23, 1925	-	1,670	1945	June 26, 1945	-	1,510
1926	May 24, 1926	-	416	1946	June 6, 1946	-	1,240
1927	June 14, 1927	-	1,680	1947	May 9, 1947	-	1,280
1928	May 27, 1928	-	1,450	1948	June 10, 1948	-	1,700
1929	June 17, 1929	-	738	1949	May 20, 1949	-	1,020
1930	June 12, 1930	-	1,280	1950	June 7, 1950	-	1,010
1931	June 10, 1931	-	237	1951	May 29, 1951	-	1,500
1932	June 25, 1932	-	1,720	1952	June 7, 1952	-	2,200
1933	June 16, 1933	-	1,180	1953	June 19, 1953	-	1,860
1934	Dec. 10, 1933	-	139	1954	June 27, 1954	-	1,830
1935	June 14, 1935	-	1,580	1955	June 13, 1955	-	1,100
1936	June 8, 1936	-	793	1956	June 1, 1956	-	2,500
1937	June 23, 1937	-	394	1957	June 12, 1957	-	2,760
1938	June 8, 1938	-	2,520				

1270. Big Lost River below Mackay Reservoir, near Mackay, Idaho
(Published as "Big Lost River near Mackay" prior to 1919)

Location.--Lat 43°56', long 113°38', in sec.18, T.7 N., R.24 E., on left bank 450 ft downstream from Oleson Suspension Bridge, 1 mile downstream from head of Sharp ditch, 1½ miles downstream from Mackay Reservoir, and 2½ miles northwest of Mackay.

Drainage area.--813 sq mi.

Gage.--Nonrecording prior to Mar. 15, 1915; recording thereafter. At sites within 1 mile upstream from present gage at different datums prior to Apr. 29, 1913. At site 1 mile downstream at different datum Apr. 29, 1913, to Mar. 15, 1915. Datum of gage is 5,946.39 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements throughout range.

Bankfull stage.--5 ft.

Remarks.--Peak flow regulated by Mackay Reservoir (capacity, 38,400 acre-ft). Many years reservoir does not fill and there is no spillage. Diversions for irrigation of about 9,000 acres above reservoir. Sharp ditch diverts between station and reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	June 19, 1904	a4.4	1,755	1935	June 22, 1935	3.93	1,280
1905	June 14, 1905	a5.4	1,120				
				1936	July 1, 1936	3.46	990
1906	June 14, 1906	a6.2	1,450	1937	May 30, 1937	3.06	715
				1938	June 5, 1938	5.56	2,520
1912	June 9, 1912	a5.0	1,450	1939	Nov. 15, 1938	4.27	1,480
1913	May 31, 1913	a5.1	1,740	1940	June 19, 1940	3.09	835
1914	June 4, 1914	a5.4	1,880				
				1941	June 24, 1941	3.39	958
1919	May 30, 1919	3.03	s81	1942	June 10, 1942	4.39	1,590
1920	June 23, 1920	3.34	1,010	1943	June 20, 1943	4.84	1,960
				1944	July 3, 1944	4.99	1,960
1921	June 10, 1921	5.79	2,990	1945	June 26, 1945	4.68	1,770
1922	June 18, 1922	4.97	2,160				
1923	June 13, 1923	3.85	b1,350	1946	June 7, 1946	4.10	1,310
1924	Oct. 14, 1923	3.02	b812	1947	May 10, 1947	3.77	1,120
1925	May 22, 1925	3.97	b1,380	1948	June 10, 1948	4.74	1,790
				1949	June 15, 1949	3.58	1,030
1926	May 24, 1926	2.91	b700	1950	July 7, 1950	3.35	911
1927	June 17, 1927	4.14	b1,430				
1928	May 27, 1928	3.99	b1,220	1951	May 30, 1951	4.62	1,790
1929	June 17, 1929	3.27	802	1952	June 8, 1952	5.14	2,130
1930	May 30, 1930	4.25	1,370	1953	June 21, 1953	4.68	1,730
				1954	June 27, 1954	4.74	1,860
1931	June 16, 1931	2.90	620	1955	June 14, 1955	3.89	1,130
1932	May 23, 1932	4.27	1,430				
1933	June 18, 1933	4.52	1,610	1956	June 3, 1956	5.63	2,530
1934	June 21, 1934	2.68	539	1957	June 8, 1957	5.55	2,400

a Maximum observed.
b Maximum daily discharge.

1310. Antelope Creek near Darlington, Idaho

Location.--Lat 43°44', long 113°30', in sec.29, T.5 N., R.25 E., on left bank 7 miles west of Moore, 8 miles southwest of Darlington, and 10 miles upstream from mouth.

Drainage area.--210 sq mi.

Gage.--Nonrecording. Altitude of gage is 5,840 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 540 cfs and extended above.

Bankfull stage.-- 4.5 ft.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges of Antelope Creek near Darlington, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	May 28, 1913	4.4	581	1920	May 23, 1920	2.9	202
1914	June 4, 1914	4.25	511	1921	May 28, 1921	5.0	833
1915	June 1, 1915	3.05	192	1922	May 26, 1922	4.5	661
1916	June 19, 1916	4.52	567				

1320. Big Lost River near Moore, Idaho

Location.--Lat 43°47'30", long 113°22'00", in sec.4, T.5 N., R.26 E., on right bank, 1 mile upstream from Moore Canal diversion, 4 miles north of Moore, and 11 miles north of Arco.

Drainage area.--1,310 sq mi, approximately.

Gage.--Nonrecording. Altitude of gage is 5,550 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements throughout range in stage.

Remarks.--Flood peaks affected by many diversions for irrigation above station. Flow regulated by Mackay Reservoir (capacity, 38,400 acre-ft). Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	June 17, 1920	1.76	312	1924	Oct. 25, 1923	2.48	576
				1925	June 23, 1925	2.34	557
1921	June 14, 1921	-	a2,330				
1922	June 20, 1922	-	b1,390	1926	May 26, 1926	1.21	205
1923	June 15, 1923	3.02	737				

a Estimated from high-water marks.
b Estimated.

1325. Big Lost River near Arco, Idaho

Location.--Lat 43°35', long 113°16', near line between secs. 17 and 20, T.3 N., R.27 E., on right bank a quarter of a mile downstream from head of box canyon, 0.4 mile downstream from slough entering from left bank, and 4 miles southeast of Arco.

Drainage area.--1,410 sq mi, approximately.

Gage.--Recording. At site 800 ft upstream at different datum prior to Oct. 14, 1952. Altitude of gage is 5,240 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements throughout range in stage at early site. Defined by measurements below 600 cfs at present site, and extended by logarithmic plotting.

Bankfull stage.--7.5 ft.

Remarks.--Diversions from river and tributaries for irrigation of about 42,000 acres. Some regulation of flood flows by Mackay Reservoir (capacity, 28,400 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	June 6, 1947	2.60	285	1953	June 17, 1953	4.47	251
1948	June 15, 1948	2.20	171	1954	Jan. 23, 1954	-	a85
1949	June 3, 1949	2.42	237	1955	Oct. 27, 1954	3.46	54
1950	Apr. 3, 1950	1.90	102				
				1956	Mar. 23, 1956	6.32	1,050
1951	Aug. 6, 1951	2.60	272	1957	June 11, 1957	6.07	909
1952	June 11, 1952	3.93	698				

a Maximum daily discharge.

1345. Snake River near Hagerman, Idaho

Location.--Lat 42°46', long 114°53', in NW¼ sec.1, T.8 S., R.13 E., on right bank just upstream from Upper Salmon Falls, an eighth of a mile upstream from Owsley bridge, 4 miles south of Hagerman, and 11 miles upstream from Big Wood River.

Gage.--Nonrecording prior to Nov. 15, 1916; recording thereafter. Datum of gage is 2,873.46 ft above mean sea level (levels by Idaho Power Co.).

Stage-discharge relation.--Defined by current-meter measurements below 35,000 cfs.

Historical data.--On the basis of records at Milner, a discharge of approximately 40,000 cfs occurred about June 21, 1918, and would have been highest for the period 1912-57. Flood of June 1894 had a discharge of about 80,000 cfs near Hagerman, based on estimates by the Corps of Engineers of 77,000 cfs at Milner and 83,000 cfs at King Hill.

Remarks.--Practically entire flow of river diverted at Milner during irrigation season; only minor diversions below Milner. Flow regulated by Twin Falls and Shoshone powerplants and several reservoirs above station. Computation of discharge discontinued Sept. 30, 1941, due to variable backwater from Upper Salmon Falls powerplant. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	June 2,11-14, 1913	a7.4	32,200	1929	Apr. 9, 1929	5.72	19,600
				1930	Nov. 4, 1929	4.91	13,800
1914	June 10, 1914	a7.78	35,100				
1915	Nov. 16, 1914	a6.2	22,300	1931	Nov.22-23,1930	d5.66	11,800
				1932	Feb. 28, 1932	7.18	11,200
1920	May 23, 1920	a5.8	19,500	1933	Dec. 19, 1932	6.74	9,500
				1934	Oct. 23, 1933	6.08	7,500
1921	June 3-4,1921	7.60	33,800	1935	Sept.28, 1935	5.58	6,000
1922	May 27, 1922	b6.57	26,500				
1923	June 26, 1923	6.05	21,800	1936	June 7, 1936	9.12	25,500
1924	Oct.25,30,1923	4.66	12,600	1937	May 11, 1937	e6.39	11,500
1925	May 12, 1925	6.27	24,100	1938	May 6, 1938	f7.37	g22,300
				1939	Apr. 10, 1939	6.68	h15,300
1926	Nov.7,9,10, 1925	4.75	c12,900	1940	Apr. 30, 1940	5.38	9,020
1927	July 4, 1927	7.18	31,400	1941	Nov. 12, 1940	4.95	7,240
1928	May 20, 1928	6.58	26,500				

a Maximum observed. b May have been higher May 23 or 24, 1922. c May have been higher Nov. 1-6, 1925. d Occurred Sept. 22-24, 1931. e Occurred Jan. 16, 1937. f Occurred July 2, 1938. g Maximum daily discharge. h Computed from records for station "below Lower Salmon Falls."

1350. Snake River below Lower Salmon Falls, near Hagerman, Idaho

Location.--Lat 42°50'55" (revised), long 114°54'02" (revised), in lot 3, sec.2, T.7 S., R.13 E., on right bank half a mile downstream from Lower Salmon Falls powerplant, 1 mile upstream from Big Wood (Malad) River and 2¼ miles north of Hagerman.

Gage.--Recording. At site 340 ft upstream at same datum prior to Jan. 3, 1950. Datum of gage is 2,727.7 ft above mean sea level, datum of 1929, supplementary adjustment of 1947 (by stadia levels).

Stage-discharge relation.--Defined by current-meter measurements below 26,000 cfs and extended above.

Bankfull stage.--River in canyon; not subject to overflow.

Historical data.--On the basis of records at Milner, a discharge of approximately 40,000 cfs occurred about June 21, 1918, and would have been highest for the period 1912-57. Flood of June 1894 had a discharge of about 80,000 cfs near Hagerman, based on estimate by Corps of Engineers of 77,000 cfs at Milner and 83,000 cfs at King Hill.

Remarks.--Practically entire flow at Milner diverted during irrigation season; only minor diversions below Milner. Flow regulated considerably by Lower Salmon Falls and other powerplants and many reservoirs above station. Several peaks are considerably affected by regulation. Only annual peaks are shown.

Peak stages and discharges of Snake River below Lower Salmon Falls, near Hagerman, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 6, 1938	13.93	23,800	1948	June 25, 1948	13.46	22,500
1939	Apr. 10, 1939	10.93	15,800	1949	Feb. 25, 1949	a11.66	17,300
1940	Apr. 30, 1940	8.49	9,580	1950	June 27, 1950	15.60	29,800
1941	Sept.14, 1941	7.83	8,060	1951	May 16, 1951	13.56	23,400
1942	Apr. 26, 1942	12.48	19,600	1952	Mar. 19, 1952	14.60	27,100
1943	June 7, 1943	15.66	28,800	1953	June 10, 1953	14.80	27,300
1944	June 15, 1944	14.40	25,100	1954	May 29, 1954	11.63	18,100
1945	June 12, 1945	13.62	23,000	1955	Oct. 14, 1954	11.60	18,200
1946	Apr. 28, 1946	14.32	24,900	1956	Mar. 31, 1956	14.76	28,100
1947	June 14, 1947	15.37	27,900	1957	May 22, 1957	15.06	29,100

a Occurred Sept. 21, 1949.

BIG WOOD RIVER BASIN

1355. Big Wood River near Ketchum, Idaho

Location.--Lat 43°48', long 114°26', in sec.4, T.5 N., R.17 E., on left bank half a mile upstream from North Fork and 8 miles northwest of Ketchum.

Drainage area.--137 sq mi. Mean altitude, 8,120 ft.

Gage.--Nonrecording prior to Nov. 7, 1950; recording thereafter. At site 560 ft upstream at different datum prior to Nov. 7, 1950. Altitude of gage is 6,240 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,500 cfs.

Bankfull stage.--7 ft.

Remarks.--Base for partial-duration series, 400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 19, 1948	a2.22	626	1952	June 6, 1952	5.31	1,240
	May 28, 1948	a2.84	980				
	June 3, 1948	a3.20	1,200	1953	Apr. 28, 1953	3.99	544
					May 6, 1953	3.76	446
1949	Apr. 28, 1949	a1.82	435		May 19, 1953	3.66	408
	May 19, 1949	a2.38	721		June 19, 1953	4.61	833
	May 29, 1949	a2.12	606		Aug. 2, 1953	3.68	416
	June 11, 1949	a2.00	536				
				1954	Apr. 26, 1954	3.81	450
1950	May 17, 1950	a2.10	566		May 10, 1954	4.57	803
	June 6, 1950	a2.30	666		May 21, 1954	4.90	978
	June 21, 1950	a2.42	732		June 26, 1954	4.80	928
	July 1, 1950	a2.08	556				
				1955	May 21, 1955	4.07	548
1951	Apr. 18, 1951	3.67	510		May 30, 1955	3.73	419
	Apr. 28, 1951	3.47	440		June 12, 1955	4.44	703
	May 11, 1951	4.20	700				
	May 28, 1951	4.84	946	1956	Apr. 22, 1956	4.32	654
	June 17, 1951	4.60	850		May 24, 1956	6.44	1,620
	July 28, 1951	3.61	460				
	Aug. 3, 1951	3.51	426	1957	Nov. 4, 1956	3.77	b428
					May 19, 1957	5.03	991
1952	Apr. 27, 1952	4.33	735		June 4, 1957	5.55	1,200
	May 3, 1952	5.05	1,030				
	May 13, 1952	4.76	934				

a Maximum observed.
b Release from ice or snow jam.

1365. Warm Springs Creek at Guyer Hot Springs, near Ketchum, Idaho

Location.--Lat 43°41', long 114°25', in NE¼ sec.15, T.4 N., R.17 E., on left bank at Guyer Hot Springs, 2 1/8 miles upstream from mouth, and 2.2 miles west of Ketchum.

Drainage area.--96 sq mi, approximately. Mean altitude, 7,560 ft.

Gage.--Nonrecording prior to Mar. 7, 1942; recording thereafter. Datum of gage is 5,901.7 ft above mean sea level (from river-profile survey).

Stage-discharge relation.--Defined by current-meter measurements below 760 cfs.

Bankfull stage.--4.5 ft.

Remarks.--Diversions above station for irrigation of about 200 acres. Flood peaks probably slightly affected. Small diversion from Guyer Hot Springs for heating and recreational purposes bypasses station. Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 13, 1941	2.68	400	1950	May 17, 1950	2.65	376
	May 27, 1941	2.46	315		May 22, 1950	2.76	415
1942	Apr. 22, 1942	-	a300	1951	Apr. 18, 1951	2.44	340
	May 25, 1942	2.89	516		May 11, 1951	2.68	428
	June 9, 1942	2.68	432		May 28, 1951	3.17	634
					June 17, 1951	2.57	390
1943	Apr. 19, 1943	2.93	516				
	May 5, 1943	2.92	512	1952	Apr. 28, 1952	2.98	537
	May 30, 1943	3.36	696		May 4, 1952	3.21	632
	June 19, 1943	3.05	566		May 14, 1952	3.10	586
					May 26, 1952	3.22	636
1944	May 14, 1944	2.65	410				
				1953	Apr. 28, 1953	2.45	364
1945	May 6, 1945	2.27	275		June 13, 1953	2.51	387
1946	Apr. 19, 1946	2.85	468	1954	May 10, 1954	2.58	395
	Apr. 26, 1946	2.88	480		May 20, 1954	2.64	417
	May 6, 1946	2.74	425		June 26, 1954	2.31	304
	May 27, 1946	2.73	421				
				1955	June 9, 1955	2.29	289
1947	May 8, 1947	2.80	452				
				1956	Dec. 23, 1955	2.55	373
1938	May 17, 1948	2.54	379		Apr. 22, 1956	2.78	451
	May 29, 1948	2.79	468		May 25, 1956	4.02	883
	June 3, 1948	2.77	466				
				1957	May 19, 1957	3.29	635
1949	May 20, 1949	2.64	416		June 14, 1957	3.15	587

a Daily mean discharge.

1400. Combined discharge of Big Wood River and Big Wood Slough at Hailey, Idaho

Location.--River: Lat 43°31', long 114°20', in SW¼ sec.9, T.2 N., R.18 E., on left bank 35 ft downstream from bridge on State Highway 22, a quarter of a mile southwest of Hailey, and three-eighths of a mile upstream from Croy Creek.
Slough: Lat 43°31'00", long 114°19'30", in sec.9, T.2 N., R.18 E., on left bank 40 ft upstream from bridge on State Highway 22, an eighth of a mile northeast of Big Wood River, and an eighth of a mile southwest of Hailey.

Drainage area.--640 sq mi, approximately. Mean altitude, 7,620 ft.

Gage.--River: Nonrecording prior to Nov. 16, 1934; recording thereafter. Datum of gage is 5,298.00 ft above mean sea level, preliminary survey.
Slough: Nonrecording prior to Apr. 12, 1936; recording thereafter. Datum of gage is 5,301.17 ft above mean sea level, preliminary survey.

Stage-discharge relation.--River: Many curves during period; reasonably well defined by current-meter measurements below 4,440 cfs.
Slough: Defined by current-meter measurements below 290 cfs.

Bankfull stage.--River: 10 ft; slough: 4.8 ft.

Remarks.--Diversions above river station for irrigation of about 12,000 acres, of which about 1,800 acres are below station. Storage above station is negligible. Big Wood Slough is a natural channel of Big Wood River; the combined discharge of both is the total in the valley at this point. Powerplant and headworks half a mile upstream completely controlled flow in Big Wood Slough prior to 1946. Powerplant became inoperative thereafter, but flow still controlled to meet requirements of irrigation diversion and sewage dilution. Combined flood flows of Big Wood River and Big Wood Slough not affected by regulation. Only maximum daily mean discharges are shown prior to 1936.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	June 25, 1915	-	1,040	1937	May 28, 1937	-	1,050
				1938	June 7, 1938	-	4,660
1916	June 19, 1916	-	3,270	1939	May 5, 1939	-	974
1917	June 17, 1917	-	3,580	1940	May 13, 1940	-	1,960
1918	June 13, 1918	-	2,700				
1919	May 29, 1919	-	1,920	1941	May 27, 1941	-	2,010
1920	June 8, 1920	-	1,180	1942	June 8, 1942	-	2,790
				1943	May 30, 1943	-	3,720
1921	June 12, 1921	-	3,910	1944	May 15, 1944	-	1,710
1922	June 14, 1922	-	3,590	1945	June 24, 1945	-	1,880
1923	June 13, 1923	-	2,660				
1924	May 17, 1924	-	809	1946	Apr. 27, 1946	-	2,160
1925	May 20, 1925	-	2,800	1947	May 9, 1947	-	2,350
				1948	June 3, 1948	-	2,950
1926	Apr. 30, 1926	-	1,030	1949	May 20, 1949	-	1,750
1927	June 13, 1927	-	3,190	1950	June 7, 1950	-	1,920
1928	May 26, 1928	-	2,270				
1929	June 16, 1929	-	1,160	1951	May 28, 1951	-	3,000
1930	June 11, 1930	-	1,690	1952	May 4, 1952	-	3,840
				1953	June 19, 1953	-	2,520
1931	May 14, 1931	-	636	1954	June 27, 1954	-	3,120
1932	June 16, 1932	-	2,520	1955	June 12, 1955	-	1,890
1933	June 16, 1933	-	2,000				
1934	May 8, 1934	-	575	1956	May 24, 1956	-	4,730
1935	June 9, 1935	-	2,160	1957	June 5, 1957	-	3,980
1936	May 15, 1936	-	2,100				

1410. Big Wood River near Bellevue, Idaho

Location.--Lat 43°19'30", long 114°19'30", in SE¼NW¼ sec.21, T.1 S., R.18 E., on right bank 2½ miles upstream from maximum flow line of Magic Reservoir, 3¾ miles upstream from Camas Creek, and 10 miles southwest of Bellevue.

Drainage area.--823 sq mi.

Gage.--Recording. At site 1 1/8 miles downstream at different datum prior to July 8, 1921. At site three-quarters of a mile downstream at different datum July 8, 1921, to Oct. 5, 1954. Altitude of gage is 4,820 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--Right bank overflows into bypass channels at stages of 2.5 ft to 3.5 ft, depending upon variable streambed and bank conditions. High dike placed on right bank in August 1957 to contain river in main channel to 7 ft.

Remarks.--Flood peaks during irrigation seasons are affected by diversions for irrigation of about 36,400 acres above station. Storage above station is negligible. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	June 8, 1912	4.15	1,570	1936	May 15, 1936	3.31	1,300
1913	May 28, 1913	4.78	2,260	1937	May 6, 1937	2.67	680
1914	June 21, 1914	4.0	a1,610	1938	June 7, 1938	4.64	3,200
1915	May 24, 1915	2.58	751	1939	Apr. 2, 1939	2.41	591
				1940	May 13, 1940	3.33	1,450
1916	June 19, 1916	4.77	2,240				
1917	June 19, 1917	5.29	2,750	1941	May 27, 1941	3.16	1,270
1918	June 13, 1918	b5.34	2,820	1942	June 9, 1942	3.69	1,820
1919	May 29, 1919	3.69	1,350	1943	May 30, 1943	4.37	2,520
1920	May 17, 1920	3.06	842	1944	June 27, 1944	3.47	1,260
				1945	June 26, 1945	3.50	1,090
1921	June 16, 1921	c6.07	3,660				
1922	May 26, 1922	3.99	2,520	1946	Apr. 27, 1946	4.14	1,720
1923	June 13, 1923	3.55	1,970	1947	May 9, 1947	4.18	1,570
1924	May 4, 1924	2.00	320	1948	June 3, 1948	4.36	1,720
1925	May 21, 1925	3.74	2,170	1949	May 16, 1949	3.78	1,290
				1950	June 22, 1950	3.93	1,350
1926	Apr. 19, 1926	2.44	602				
1927	May 17, 1927	4.04	2,620	1951	May 29, 1951	4.73	2,150
1928	May 27, 1928	3.55	1,890	1952	May 5, 1952	5.07	3,160
1929	June 16, 1929	2.35	523	1953	June 14, 1953	5.37	1,700
1930	June 12, 1930	3.05	1,210	1954	June 27, 1954	5.60	1,870
				1955	June 12, 1955	4.38	1,160
1931	May 26, 1931	1.58	135				
1932	June 25, 1932	3.62	1,890	1956	May 25, 1956	6.00	4,130
1933	June 17, 1933	3.29	1,510	1957	June 5, 1957	d5.32	3,360
1934	May 19, 1934	1.63	119				
1935	June 9, 1935	3.39	1,450				

a Higher discharge probably occurred prior to start of record on June 12, 1914.
b Maximum observed.
c Maximum recorded before gage washed out.
d Occurred May 19, 1957.

1415. Camas Creek near Blaine, Idaho
(Published as "Malad River near Blaine" prior to 1915)

Location.--Lat 43°20', long 114°33', in sec.15, T.1 S., R.16 E., on left bank a quarter of a mile north of Macon siding on Hill City branch of Oregon Short Line Railroad, three-eighths of a mile downstream from Willow Creek, 2¼ miles upstream from backwater of Magic Reservoir, and 4 miles southeast of Blaine.

Drainage area.--648 sq mi. Mean altitude, 5,600 ft.

Gage.--Recording. Altitude of gage is 4,870 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 7,700 cfs and extended above.

Bankfull stage.--Stream in canyon; not subject to overflow.

Remarks.--Water diverted for irrigation of about 9,300 acres above station. Flow regulated by Twin Lakes Reservoir on Lake Creek (capacity, 31,240 acre-ft) and by three minor reservoirs (combined capacity, 580 acre-ft). Effect on flood records is negligible. Base for partial-duration series, 500 cfs. Only partial year (summer) records are available 1912-21, 1923-44, during which period only annual floods are listed. Prior to 1927, insufficient data are available to determine some annual peaks.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Apr. 12, 1916	a10.76	5,240	1947	Mar. 19, 1947	6.06	1,280
1924	Apr. 14, 1924	3.10	280	1948	Feb. 22, 1948	4.33	616
1925	Apr. 5, 1925	a12.35	5,070		Apr. 3, 1948	5.67	1,100
					Apr. 21, 1948	4.46	657
1927	Apr. 18, 1927	10.07	3,540				
1928	Mar. 23, 1928	7.16	1,850	1949	Apr. 13, 1949	9.64	3,560
1929	Apr. 20, 1929	a7.06	1,800				
1930	Apr. 2, 1930	3.95	525	1950	Apr. 17, 1950	12.75	6,750
					May 3, 1950	5.85	1,130
1931	Apr. 7, 1931	3.74	466		May 17, 1950	4.73	716
1932	Apr. 10, 1932	9.03	2,870				
1933	Apr. 24, 1933	8.44	2,510	1951	Apr. 9, 1951	13.46	7,470
1934	Mar. 14, 1934	3.12	292		Apr. 30, 1951	7.67	2,140
1935	Apr. 12, 1935	9.97	3,540		May 9, 1951	5.19	870
1936	Apr. 21, 1936	14.30	7,490	1952	Apr. 20, 1952	15.25	9,420
1937	Apr. 16, 1937	10.12	3,610		June 26, 1952	5.14	842
1938	Apr. 18, 1938	15.48	8,690				
1939	Mar. 28, 1939	11.13	4,510	1953	Apr. 5, 1953	8.25	2,530
1940	Mar. 28, 1940	9.25	2,930		Apr. 29, 1953	5.12	808
1941	Mar. 31, 1941	5.73	1,060	1954	Apr. 7, 1954	8.28	2,610
1942	Apr. 10, 1942	11.14	4,400				
1943	Apr. 8, 1943	15.45	9,780	1955	Apr. 13, 1955	4.52	552
1944	Apr. 4, 1944	4.90	810				
				1956	Apr. 11, 1956	11.19	4,410
1945	Mar. 13, 1945	b4.32	-		May 24, 1956	4.94	704
	Mar. 23, 1945	4.68	733				
	Apr. 1, 1945	5.23	926	1957	Dec. 13, 1956	5.14	774
	Apr. 9, 1945	5.66	1,090		Feb. 25, 1957	(c)	-
	Apr. 17, 1945	5.70	1,110		Mar. 4, 1957	8.26	2,320
					Mar. 21, 1957	5.48	902
1946	Apr. 12, 1946	11.68	5,680		Mar. 31, 1957	8.73	2,570
					May 20, 1957	6.15	1,130
1947	Feb. 13, 1947	4.10	544		May 30, 1957	5.09	704
	Feb. 25, 1947	6.17	1,340				

a May have been higher during period of no record.
b Backwater from ice.
c Stage higher than base; discharge unknown.

1425. Big Wood River below Magic Dam, near Richfield, Idaho

Location.--Lat 43°14', long 114°22', in sec.18, T.2 S., R.18 E., on right bank half a mile downstream from Magic Dam and 18 miles northwest of Richfield.

Drainage area.--1,600 sq mi, approximately.

Gage.--Recording. Altitude of gage is 4,665 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 7,100 cfs.

Bankfull stage.--River in deep canyon; road and narrow valley floor floods at about 12.0 ft.

Remarks.--Flow regulated by Magic Reservoir (capacity, 191,500 acre-ft), which has filled and spilled only during about half the available years of record. Diversions for irrigation of about 47,000 acres above station has some effect on flood peaks. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	May 18, 1911	9.21	a5,070	1935	June 27, 1935	4.07	a780
1912	Oct. 28, 1911	5.6	a2,100				
1913	July 23, 1913	4.52	a1,200	1936	May 21, 1936	4.04	750
1914	May 25, 1914	6.77	2,520	1937	July 20, 1937	4.16	772
1915	June 22, 1915	4.49	a1,180	1938	Apr. 21, 1938	11.55	5,610
				1939	Apr. 1, 1939	6.62	2,250
1916	May 6, 1916	7.03	2,640	1940	May 24, 1940	4.31	914
1917	May 25, 1917	8.97	3,840				
1918	June 16, 1918	5.23	a1,610	1941	June 15, 1941	4.81	1,140
1919	May 25, 1919	5.13	1,570	1942	Apr. 15, 1942	7.47	2,680
1920	May 27, 1920	5.57	1,780	1943	Apr. 13, 1943	13.31	7,160
				1944	May 17, 1944	5.26	1,490
1921	June 12, 1921	9.18	4,240	1945	Apr. 25, 1945	4.79	1,240
1922	June 15, 1922	7.98	3,330				
1923	July 17, 1923	5.57	1,800	1946	Apr. 20, 1946	9.08	4,050
1924	May 22, 1924	5.16	1,600	1947	May 5, 1947	5.78	1,790
1925	May 20, 1925	6.81	2,510	1948	June 12, 1948	4.56	1,040
				1949	May 20, 1949	5.50	1,580
1926	June 30, 1926	4.97	1,420	1950	Apr. 27, 1950	6.74	2,360
1927	May 18, 1927	8.30	3,390				
1928	May 28, 1928	5.13	1,530	1951	Apr. 12, 1951	9.33	4,230
1929	June 1, 1929	4.74	1,220	1952	Apr. 26, 1952	15.68	10,000
1930	June 22, 1930	4.95	1,380	1953	Apr. 7, 1953	6.79	2,400
				1954	May 22, 1954	5.75	1,730
1931	June 7, 1931	4.60	1,120	1955	June 11, 1955	5.34	1,370
1932	June 25, 1932	5.95	1,950				
1933	June 15, 1933	5.09	1,380	1956	June 2, 1956	8.94	4,500
1934	July 12, 1934	3.86	673	1957	May 20, 1957	7.88	3,680

a Maximum daily discharge.

1440. Big Wood River above North Gooding Canal, near Shoshone, Idaho

Location.--Lat 43°06', long 114°18', in sec.10, T.4 S., R.18 E., 1 mile upstream from heading of the North Gooding Canal, 13 miles downstream from Magic Dam, and 14 miles northeast of Shoshone.

Drainage area.--1,770 sq mi, approximately.

Gage.--Nonrecording. At datum 5.0 ft prior to Apr. 16, 1923. Altitude of gage is 4,380 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 2,000 cfs.

Remarks.--Flood flows regulated by Magic Reservoir (capacity, 191,500 acre-ft). Many diversions for irrigation above station. Lincoln Canal on right bank, completed in 1925, diverts all except extreme high flows around station to avoid channel losses in natural streambed. Only annual observed peaks are shown; no flow many years.

Peak stages and discharges of Big Wood River above North Gooding Canal near Shoshone, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	June 13, 1921	12.79	3,330	1931	-	-	0
1922	May 7, 1922	12.48	3,070	1932	June 27, 1932	1.80	334
1923	July 18, 1923	2.93	675	1933	May 18, 1933	.98	128
1924	July 19, 1924	3.16	792	1934	-	-	0
1925	May 22, 1925	4.78	1,510	1935	-	-	0
1926	Mar. 31, 1926	-	(a)	1936	-	-	0
1927	May 19, 1927	6.00	2,100	1937	-	-	0
1928	-	-	0	1938	Apr. 22, 1938	b9.63	4,560
1929	-	-	0				
1930	-	-	0				

a Small undetermined flow reported.
b From floodmark.

1445. Big Wood River below North Gooding Canal, near Shoshone, Idaho

Location.--Lat 43°04', long 114°18', in sec.15, T.4 S., R.18 E., on right bank 1,800 ft downstream from North Gooding Canal, 11 miles northeast of Shoshone, and 14 miles downstream from Magic Dam.

Drainage area.--1,780 sq mi, approximately.

Gage.--Nonrecording prior to July 4, 1920; recording July 5, 1920, to Sept. 15, 1927; nonrecording thereafter. At datum 6 ft lower prior to July 8, 1918. Altitude of gage is 4,315 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,700 cfs and extended above.

Remarks.--Flood flows regulated by Magic Reservoir (capacity, 191,500 acre-ft). Many diversions for irrigation above station. Since completion of Lincoln Canal in 1925, all of river flow has been diverted above station, except during times of extreme high water. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	May 18, 1911	a15.00	3,180	1926	Apr. 27, 1926	4.22	400
1912	Oct. 28, 1911	a12.50	1,330	1927	May 18, 1927	7.35	1,640
1913	June 13, 1913	a9.25	218	1928	Nov. 30, 1927	a2.66	133
1914	May 25, 1914	a12.55	1,310	1929	-	-	0
1915	July 11, 1915	a9.4	242	1930	May 5, 1930	-	d110
1916	Apr. 29, 1916	a13.2	1,580	1931	-	-	0
1917	May 13, 1917	a13.4	1,690	1932	June 27, 1932	a4.02	356
1918	May 6, 1918	a9.25	242	1933	May 18, 1933	a2.25	90
1919	May 25, 1919	a3.18	205	1934	-	-	0
1920	June 12, 1920	a4.24	394	1935	-	-	0
1921	May 29, 1921	b8.10	2,010	1936	-	-	0
1922	May 8, 1922	(c)	(c)	1937	-	-	0
1923	May 8, 1923	3.80	299	1938	Apr. 22, 1938	a8.85	3,970
1924	July 19, 1924	5.28	675				
1925	May 21, 1925	6.03	1,020				

a Maximum observed.
b Known to be higher June 13, during period of no record.
c Stage and discharge unknown.
d Estimated daily mean discharge.

1450. Big Wood River near Shoshone, Idaho

Location.--Lat 43°00', long 114°28', in sec.17, T.5 S., R.17 E., on right bank at A. D. Silva's ranch, 1 mile downstream from wagon bridge, 7 miles northwest of Shoshone, and 24 miles downstream from Magic Dam.

Drainage area.--1,860 sq mi, approximately.

Gage.--Nonrecording. Altitude of gage is 3,885 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 3,800 cfs.

Remarks.--Flood flows regulated by storage in Magic Reservoir (capacity, 191,500 acre-ft) after March 1909. Many diversions for irrigation above station. Only annual observed peaks are shown.

Peak stages and discharges of Big Wood River near Shoshone, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	Apr. 15, 1906	8.0	2,950	1911	June 20, 1911	7.85	3,140
				1912	Oct. 28, 1911	5.50	1,180
1908	June 17, 1908	5.55	1,200	1913	Mar. 29, 1913	3.40	243
1909	Apr. 17, 1909	8.95	4,000				
1910	Mar. 25, 1910	8.95	4,430				

1465. Big Wood River at Gooding, Idaho
(Published as "Malade River at Toponis" prior to 1921)

Location.--Lat 42°57', long 114°43', in NE¼NE¼ sec.31, T.5 S., R.15 E., on left bank 30 ft downstream from highway bridge and half a mile north of Gooding.

Drainage area.--2,190 sq mi, approximately.

Gage.--Nonrecording June 2, 1896, to Oct. 14, 1899, at different datum; recording since April 1921. Datum of gage is 3,536.20 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 4,900 cfs.

Bankfull stage.--9.5 ft.

Remarks.--Many diversions above station for irrigation. Flow regulated by Magic Reservoir (capacity, 191,500 acre-ft) and affected since 1930 by deliveries from Snake River through the Milner-Gooding Canal. For all years, records for this station have been computed for approximately the irrigation seasons only. For some years higher peaks may have occurred during period of no gage-height record. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1896	June 5, 1896	9.6	5,940	1933	May 2, 1933	2.68	258
				1934	Nov. 16, 1933	2.40	172
1898	June 30, 1898	4.9	1,270	1935	May 31, 1935	2.08	102
1899	Apr. 19, 1899	6.2	2,390				
				1936	Apr. 13, 1936	3.24	410
1921	June 13, 1921	5.64	2,250	1937	Apr. 28, 1937	2.92	324
1922	May 7, 1922	5.80	2,340	1938	Apr. 23, 1938	8.48	3,900
1923	Apr. 6, 1923	2.04	112	1939	Apr. 3, 1939	5.81	2,020
1924	May 6, 1924	2.17	147	1940	Apr. 24, 1940	2.49	234
1925	May 22, 1925	3.63	735				
				1941	Apr. 23, 1941	2.44	204
1926	Apr. 24, 1926	2.07	120	1942	Apr. 15, 1942	6.05	2,040
1927	May 19, 1927	5.01	1,700	1943	Apr. 13, 1943	10.21	5,120
1928	May 4, 1928	1.87	74	1944	Apr. 30, 1944	4.30	920
1929	June 14, 1929	1.86	65	1945	Apr. 26, 1945	4.34	955
1930	May 15, 1930	2.45	227				
				1946	Apr. 22, 1946	8.10	3,470
1931	Aug. 29, 1931	2.01	64	1947	Apr. 18, 1947	4.02	792
1932	Apr. 21, 1932	2.57	269	1948	Sept.30, 1948	2.49	234

1480. Little Wood River at Campbell Ranch, near Carey, Idaho
(Published as "near Carey" 1920-26)

Location.--Lat 43°28', long 114°03', in SW¼NW¼ sec.35, T.2 N., R.20 E., on left bank at Campbell Ranch, above maximum flow line of Little Wood Reservoir, 1½ miles downstream from High Five Creek, 2½ miles downstream from Muldoon Creek, 11 miles east of Bellevue, and 12 miles northwest of Carey.

Drainage area.--267 sq mi. Mean altitude, 7,160 ft.

Gage.--Recording. At site 650 ft downstream at datum 3.50 ft lower prior to Apr. 5, 1944. Altitude of gage is 5,250 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,800 cfs.

Bankfull stage.--4 ft.

Remarks.--Diversions above station for irrigation of about 5,250 acres. Flood flows may have been slightly regulated by Campbell Reservoir (capacity, 2,700 acre-ft) prior to 1938, when dam failed. No winter records, except 1921-24, 1926. Only annual peaks are shown.

Peak stages and discharges of Little Wood River at Campbell Ranch, near Carey, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	May 18, 1920	2.86	442	1946	Apr. 15, 1946	3.48	1,010
				1947	May 4, 1947	3.33	918
1921	June 12, 1921	4.25	1,030	1948	May 29, 1948	2.82	595
1922	May 26, 1922	4.26	1,030	1949	Apr. 17, 1949	2.76	595
1923	May 26, 1923	3.53	765	1950	Apr. 21, 1950	4.37	1,570
1924	Apr. 8, 1924	2.47	368				
1925	May 11, 1925	3.59	871	1951	Apr. 29, 1951	3.48	1,000
				1952	Apr. 27, 1952	5.44	2,350
1926	Apr. 19, 1926	2.34	365	1953	Apr. 28, 1953	2.98	672
				1954	June 26, 1954	3.73	1,160
1941	May 13, 1941	2.73	466	1955	June 10, 1955	2.53	454
1942	Apr. 10, 1942	4.31	1,420				
1943	Apr. 13, 1943	4.00	1,260	1956	Dec. 22, 1955	6.34	3,110
1944	June 10, 1944	3.03	632	1957	May 19, 1957	3.75	1,400
1945	Apr. 21, 1945	2.76	524				

1485. Little Wood River near Carey, Idaho

Location.--Lat 43°23', long 114°00', in E½ sec.30, T.1 N., R.21 E., on right bank a third of a mile upstream from West Canal, 1 1/3 miles upstream from East Canal, 2 miles downstream from Little Fish Creek, 3 miles downstream from Little Wood Reservoir, and 6 miles northwest of Carey.

Drainage area.--312 sq mi.

Gage.--Recording. Datum of gage is 4,990.59 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 2,100 cfs, with rating for peak of 1938 extended by logarithmic plotting.

Bankfull stage.--Not subject to overflow.

Remarks.--Flow regulated by Little Wood Reservoir (capacity, 11,700 acre-ft) since Feb. 12, 1941, and also affected by Campbell, Cameron, and Howard Reservoirs (combined capacity, 690 acre-ft) on South Fork Muldoon and Little Fish Creeks. Diversions above station for irrigation of about 6,450 acres. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Apr. 27, 1927	4.73	1,180	1942	Apr. 12, 1942	5.08	778
1928	Mar. 23, 1928	3.12	575	1943	Apr. 15, 1943	7.12	1,720
1929	May 25, 1929	2.27	289	1944	June 10, 1944	4.76	660
1930	May 29, 1930	2.75	456	1945	Apr. 22, 1945	4.64	620
1931	Apr. 1, 1931	1.95	197	1946	Apr. 19, 1946	5.67	1,060
1932	May 14, 1932	4.12	966	1947	May 5, 1947	5.02	766
1933	June 3, 1933	3.07	550	1948	May 29, 1948	4.64	612
1934	Mar. 16, 1934	1.79	160	1949	Apr. 17, 1949	4.60	660
1935	May 31, 1935	3.63	700	1950	Apr. 22, 1950	7.20	1,720
1936	Apr. 19, 1936	4.15	895	1951	Apr. 29, 1951	5.62	1,090
1937	Apr. 15, 1937	3.56	680	1952	Apr. 27, 1952	8.95	2,680
1938	Apr. 19, 1938	8.17	a2,870	1953	Apr. 28, 1953	4.79	686
	Apr. 20, 1938	12.07	b6,000	1954	June 27, 1954	4.91	730
1939	Mar. 31, 1939	5.13	800	1955	June 10, 1955	4.14	434
1940	Mar. 27, 1940	-	c600				
				1956	May 24, 1956	5.68	1,070
1941	Apr. 2, 1941	4.30	468	1957	May 19, 1957	6.78	1,630

a Probable maximum for year had dams not failed.
b Caused by failure of dams on Little Fish Creek.
c Estimated maximum daily discharge.

1490. Fish Creek above dam, near Carey, Idaho

Location.--Lat 43°26'20", long 113°50'30", in sec.2, T.1 N., R.22 E., on right bank 1¼ miles upstream from West Fork Fish Creek, 1½ miles upstream from dam of Carey Valley Reservoir Co., and 14 miles northeast of Carey.

Drainage area.--32 sq mi, approximately. Mean altitude, 6,860 ft.

Gage.--Recording prior to Nov. 11, 1930, at site half a mile upstream at different datum; nonrecording thereafter. At present site and datum with a sharp-crested weir since Nov. 11, 1930. Altitude of gage is 5,305 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 150 cfs.

Remarks.--Several small diversions above station. Records for irrigation seasons only, most years. Many peaks missing due to start of record in spring subsequent to the annual peak. Annual peaks shown are believed to be peak for the year.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	May 17, 1921	1.60	136	1933	Apr. 25, 1933	0.92	54
1922	May 6, 1922	1.78	158	1935	May 31, 1935	1.03	68
1927	Apr. 28, 1927	1.66	138				
1928	May 12, 1928	.79	43	1938	May 1, 1938	1.94	167
1930	May 15, 1930	.73	36				

1500. Fish Creek near Carey, Idaho

Location.--Lat 43°26', long 113°49', in sec.15, T.1 N., R.22 E., on right bank 600 ft downstream from Carey Valley Reservoir Co.'s dam, and 11 miles northeast of Carey.

Drainage area.--62.9 sq mi.

Gage.--Recording prior to Jan. 20, 1920; nonrecording above sharp-crested weir Jan. 21, 1920, to Apr. 28, 1926; recording above sharp-crested weir thereafter. At site 400 ft downstream at different datum prior to Jan. 20, 1920, and at site 600 ft upstream at different datum Jan. 21 to Sept. 30, 1920. At site 1½ miles downstream at different datum May 12, 1923, to Nov. 9, 1930. Altitude of gage is 5,215 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 210 cfs, and by shape of standard weir curve above.

Bankfull stage.--Not subject to overflow.

Remarks.--Flow regulated by Fish Creek Reservoir (capacity, 14,400 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1919	Apr. 26, 1919	1.70	101	1930	July 10, 1930	1.02	64
1920	May 14, 1920	.98	65	1931	May 17, 1931	.78	42
1923	Aug. 3, 1923	1.46	108	1932	Aug. 1, 1932	1.38	103
1924	June 8, 1924	1.30	90	1933	July 20, 1933	1.44	109
1925	July 19, 1925	1.35	96	1934	May 18, 1934	.96	57
				1935	July 15, 1935	1.31	91
1926	July 17, 1926	1.20	78				
1927	May 19, 1927	1.91	170	1936	July 17, 1936	1.33	97
1928	July 13, 1928	1.66	137	1937	June 24, 1937	1.16	77
1929	July 21, 1929	.99	61	1938	May 1, 1938	3.10	341

1505. Silver Creek near Picabo, Idaho

Location.--Lat 43°17', long 114°01', sec.1, T.2 S., R.20 E., on left bank 1½ miles downstream from drain ditch of Blaine County Drainage Distirct No. 1, and 3 miles southeast of Picabo.

Drainage area.--88 sq mi, approximately.

Gage.--Recording. Altitude of gage is 4,790 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurement below 300 cfs.

Bankfull stage.--3 ft.

Remarks.--Diversions for irrigation of about 9,000 acres above station. Two small canals bypass station. Slough on right bank, from which there is some diversion for irrigation, bypasses water around station at times. Silver Creek receives considerable return flow from Big Wood River irrigation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	Mar. 24, 1921	3.05	283	1946	Apr. 1, 1946	2.94	231
1922	Apr. 5, 1922	3.33	303	1947	Nov. 21, 1946	2.72	212
1923	Apr. 3, 1923	a3.29	312		Jan. 7, 1947	b3.48	-
				1948	Jan. 22, 1948	b3.95	-
1936	Apr. 15, 1936	3.41	284		Feb. 23, 1948	2.80	227
1937	Jan. 6, 1937	b3.13	-	1949	Jan. 2, 1949	b3.67	-
	Apr. 2, 1937	2.99	251		Apr. 6, 1949	2.93	241
1938	Dec. 13, 1937	2.96	245	1950	Jan. 22, 1950	b4.57	-
1939	Jan. 25, 1939	b3.16	-		Apr. 2, 1950	3.07	266
	Mar. 26, 1939	3.04	254				
1940	Jan. 21, 1940	b3.14	-	1951	Feb. 1, 1951	b3.95	-
	Mar. 28, 1940	2.37	189		Apr. 6, 1951	3.14	278
				1952	Jan.5,7, 1952	b4.54	-
1941	Jan. 6, 1941	b3.20	-		Apr. 15, 1952	3.70	317
	Aug. 14, 1941	2.46	181	1953	Dec. 28, 1952	b3.81	-
1942	Jan. 8, 1942	b3.97	-		Mar. 26, 1953	3.05	268
	Apr. 5, 1942	2.95	251	1954	Mar. 10, 1954	3.05	274
1943	Jan. 23, 1943	b3.93	-	1955	Jan. 20, 1955	b3.92	-
	Apr. 5, 1943	3.12	273		Apr. 2, 1955	2.86	247
1944	Oct. 30, 1943	2.80	237				
	Jan. 14, 1944	b3.25	-	1956	Dec. 24, 1955	3.70	357
1945	Feb. 3, 1945	2.91	258	1957	Jan. 29, 1957	b3.86	-
					Feb. 27, 1957	-	c320
1946	Feb. 5, 1946	b3.69	-				

a Maximum recorded.
b Backwater from ice.
c Maximum daily discharge.

1510. Little Wood River near Richfield, Idaho

Location.--Lat 43°03', long 114°08', in sec.30, T.4 S., R.20 E., on right bank half a mile upstream from Byrns Slough and heading of Dietrich Canal, 1 mile east of railroad station at Richfield, and 14 miles downstream from Silver Creek.

Drainage area.--570 sq mi, approximately.

Gage.--Nonrecording prior to Apr. 13, 1920; recording thereafter. At site 500 ft downstream prior to May 20, 1954. At datum 0.92 ft lower prior to Sept. 5, 1918, and at datum 0.08 ft higher Sept. 5, 1918, to May 20, 1954. Altitude of gage is 4,270 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 780 cfs at site prior to 1954 and defined throughout range at present site.

Bankfull stage.--7 ft.

Remarks.--Diversions for irrigation of about 38,300 acres above station. Peaks affected by regulation in Little Wood Reservoir (capacity, 11,700 acre-ft), Fish Creek Reservoir (capacity, 13,700 acre-ft), and three small reservoirs on tributaries (combined capacity, 690 acre-ft). Peaks shown are believed to be annual peaks for the year even though winter record was usually not collected prior to 1954. Ice peaks due to jamming and gorging not known prior to 1954.

Peak stages and discharges of Little Wood River near Richfield, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	May 17, 1911	4.5	722	1936	Apr. 19, 1936	2.82	462
1912	May 23, 1912	3.15	220	1937	Apr. 17, 1937	2.04	200
1913	Apr. 2, 1913	3.92	382	1938	May 3, 1938	3.97	868
1914	Apr. 17, 1914	4.15	451	1939	Mar. 29, 1939	2.78	443
1915	May 26, 1915	2.90	169	1940	Apr. 1, 1940	2.46	334
1916	Apr. 18, 1916	4.25	542	1941	Apr. 6, 1941	2.05	218
1917	June 1, 1917	4.45	601	1942	Apr. 15, 1942	2.52	366
1918	Apr. 12, 1918	3.58	316	1943	Apr. 16, 1943	3.12	578
1919	Apr. 28, 1919	2.42	282	1944	June 15, 1944	2.55	401
1920	Apr. 15, 1920	1.98	207	1945	Apr. 24, 1945	2.23	285
1921	June 13, 1921	3.22	535	1946	Apr. 21, 1946	2.43	363
1922	May 27, 1922	3.28	553	1947	Apr. 1, 1947	2.17	261
1923	Apr. 19, 1923	2.49	307	1948	Nov. 24, 1947	1.98	208
1924	Apr. 14, 1924	2.24	237	1949	Apr. 21, 1949	1.96	195
1925	Apr. 14, 1925	2.80	396	1950	Apr. 23, 1950	2.44	359
1926	Apr. 20, 1926	2.29	255	1951	Apr. 30, 1951	2.49	374
1927	May 2, 1927	2.59	356	1952	May 5, 1952	3.58	766
1928	Mar. 29, 1928	2.25	254	1953	June 8, 1953	2.40	360
1929	Mar. 27, 1929	1.85	153	1954	Nov. 20, 1953	a3.08	211
1930	Apr. 10, 1930	2.12	202	1955	Mar. 7, 1955	b6.32	-
					Apr. 3, 1955	3.42	246
1931	Apr. 2, 1931	1.79	148				
1932	May 14, 1932	2.24	266	1956	Feb. 21, 1956	b8.60	-
1933	Apr. 22, 1933	2.06	218		May 30, 1956	4.15	508
1934	May 3, 1934	1.44	83	1957	(c)	b7.3	-
1935	Apr. 17, 1935	1.80	163		May 21, 1957	4.77	652

a Occurred July 1, 1954, at new site.
b Backwater from ice.
c Occurred during period Jan. 28 to Feb. 25, 1957.

1515. Little Wood River at Shoshone, Idaho

Location.--Lat 42°56', long 114°24', in sec.2, T.6 S., R.17 E., on left bank just upstream from diversion dam (for Shoshone water supply prior to 1955), and 500 ft upstream from highway bridge in Shoshone.

Drainage area.--620 sq mi, approximately.

Gage.--Recording. At datum 1.98 ft higher prior to Oct. 18, 1954. Datum of gage is 3,956.99 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--6.5 ft.

Remarks.--Diversions for irrigation of about 52,200 acres above station. Peak flows affected by regulation in several reservoirs above station (combined capacity, 26,100 acre-ft). During irrigation seasons overflow from Milner-Gooding canal, which diverts from Snake River, enters at canal crossing of Little Wood River above station. Big Wood River water deliveries through Byrns Slough for Dietrich canal enter Little Wood River above station at Richfield. Only annual peaks recorded are shown. Many ice-affected peaks probably occurred during years when record was not obtained during winter months.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	June 18, 1922	2.26	664	1933	June 10, 1933	2.39	443
1923	May 12, 1923	1.85	387	1934	Aug. 1, 1934	1.87	366
1924	May 21, 1924	1.67	357	1935	June 1, 1935	2.32	440
1925	May 23, 1925	1.91	485				
				1936	May 22, 1936	2.17	441
1926	May 26, 1926	1.57	326	1937	June 1, 1937	2.75	436
1927	May 20, 1927	1.94	465	1938	July 4, 1938	3.85	578
1928	June 3, 1928	1.83	431	1939	May 2, 1939	2.89	482
1929	May 15, 1929	1.65	367	1940	June 10, 1940	2.38	430
1930	June 3, 1930	1.73	336				
				1941	Aug. 13, 1941	2.50	451
1931	July 12, 1931	1.92	407	1942	May 29, 1942	3.12	521
1932	June 26, 1932	2.03	470	1943	June 15, 1943	3.07	517

Peak stages and discharges of Little Wood River at Shoshone, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	June 11, 1944	4.49	614	1952	Apr. 28, 1952	5.24	673
1945	June 10, 1945	3.26	538	1953	May 31, 1953	3.24	518
				1954	June 9, 1954	3.55	559
1946	May 30, 1946	4.46	629	1955	May 15, 1955	5.2?	554
1947	June 12, 1947	3.42	529				
1948	July 6, 1948	2.81	490	1956	June 3, 1956	5.64	586
1949	June 21, 1949	3.03	513	1957	Feb. 27, 1957	a9.42	-
1950	Apr. 28, 1950	3.61	560		May 22, 1957	6.83	676
1951	Aug. 14, 1951	3.47	549				

a Backwater from ice.

1525. Big Wood River near Gooding, Idaho
(Published as Malad River near Gooding 1951-59)

Location.--Lat 42°54', long 114°48', in sec.21, T.6 S., R.14 E., on right bank at Hudson Ranch, 2 miles downstream from bridge on Bliss-Gooding highway, 3½ miles downstream from confluence of Big Wood and Little Wood Rivers, 5 miles upstream from diversion dam for King Hill project, and 6 miles southwest of Gooding.

Drainage area.--2,990 sq mi, approximately.

Gage.--Nonrecording prior to Apr. 13, 1921; recording thereafter. Altitude of gage is 3,345 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 6,000 cfs.

Bankfull stage.--7 ft.

Remarks.--Diversions for irrigation of about 155,000 acres above station. Flow regulated by Magic Reservoir (capacity, 191,500 acre-ft) and affected by deliveries from canals diverting from Snake River at Milner. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Apr. 30, 1916	a6.68	1,670	1943	Apr. 14, 1943	9.80	5,220
1917	May 26, 1917	a7.60	2,320	1944	Apr. 30, 1944	5.87	942
1918	Mar. 21, 1918	a2.84	290	1945	Feb. 3, 1945	b7.02	-
1919	Mar. 30, 1919	a5.1	1,020		Feb. 3, 1945	6.94	1,840
1920	Feb. 7, 1920	a2.19	169				
				1946	Apr. 22, 1946	8.47	3,400
1921	May 31, 1921	8.20	2,990	1947	Feb. 13, 1947	b6.28	-
1922	Mar. 17, 1922	9.00	3,680		Apr. 18, 1947	5.70	1,050
1923	Apr. 6, 1923	3.80	494	1948	Feb. 22, 1948	5.93	1,180
				1949	Mar. 17, 1949	7.10	1,910
1927	May 19, 1927	6.6	1,710	1950	Apr. 28, 1950	6.49	1,390
1933	Apr. 4, 1933	3.85	508	1951	Apr. 13, 1951	8.66	3,410
				1952	Apr. 27, 1952	10.67	6,500
1936	Mar. 21, 1936	5.18	918	1953	Apr. 8, 1953	7.52	2,240
1937	Mar. 14, 1937	6.29	1,500	1954	Jan. 30, 1954	6.79	1,630
1938	Apr. 23, 1938	8.77	3,810	1955	May 17, 1955	5.00	738
1939	Mar. 23, 1939	6.99	1,970				
1940	Feb. 28, 1940	6.07	1,310	1956	May 29, 1956	8.26	2,750
				1957	Feb. 24, 1957	b10.06	-
1941	Apr. 23, 1941	3.05	298		Feb. 26, 1957	8.55	2,930
1942	Apr. 16, 1942	7.04	1,890				

a Maximum observed. b Backwater from ice.

CLOVER CREEK BASIN

1540. Clover Creek near Bliss, Idaho

Location.--Lat 42°59', long 115°01', in SW¼ sec.15, T.5 S., R.12 E., on left bank just upstream from maximum flow line of Saunders Reservoir, 3½ miles upstream from Hog Creek and 5 miles northwest of Bliss.

Drainage area.--150 sq mi, approximately. Mean altitude, 4,700 ft.

Gage.--Nonrecording. Altitude of gage is 3,170 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,300 cfs.

Bankfull stage.--5 ft.

Remarks.--Many diversions above station for irrigation. Usually peaks are not affected since they generally occur in early spring prior to the irrigation season. Only annual observed peaks are shown.

Peak stages and discharges of Clover Creek near Bliss, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 19, 1939	5.68	1,020	1942	Jan. 27, 1942	5.36	860
1940	Feb. 28, 1940	6.20	1,320	1943	Dec. 31, 1942	6.68	1,560
1941	Feb. 12, 1941	3.25	194				

SNAKE RIVER MAIN STEM

1545. Snake River at King Hill, Idaho

Location.--Lat 43°00'10", long 115°12'05" (revised), in SW¼ sec.7, T.5 S., R.11 E., on right bank 300 ft east of railroad station at King Hill, and 20 miles downstream from Malad (Big Wood) River.

Drainage area.--35,800 sq mi, approximately.

Gage.--Nonrecording prior to Oct. 8, 1928; recording thereafter. At site at datum 2.20 ft higher prior to Mar. 1, 1910. At site three-quarters of a mile upstream at different datum Mar. 7 to Aug. 16, 1910. Datum of present gage is 2,492.3 ft above mean sea level (by stadia levels).

Stage-discharge relation.--Defined by current-meter measurements below 30,000 cfs and extended above on basis of velocity-area curves.

Bankfull stage.--Not subject to overflow; tracks of Union Pacific Railroad at about 34 ft.

Historical data.--The flood which occurred in June 1894 is estimated by the Corps of Engineers to have been 83,000 cfs and is considered largest known.

Remarks.--Flow regulated by powerplants at Lower Salmon Falls and near Bliss and by many reservoirs above station. Practically entire flow at Milner diverted during irrigation season; flow at King Hill is derived largely from springs and seepage entering below Milner. About 1,590,000 acres of land irrigated by diversions from river and its tributaries above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	June 12,13,1909	13.1	41,900	1935	Dec. 26, 1934, Jan.6,Apr.8, 1935	a7.10	7,980
1910	May 2,3, 1910	13.4	34,000				
1911	June 22, 1911	14.37	38,100				
1912	June 17, 1912	14.2	37,400	1936	June 8, 1936	11.96	27,800
1913	June 12, 1913	14.0	36,500	1937	Apr.2,May 11, 1937	7.89	12,700
1914	June 10,11,1914	14.4	37,500				
1915	Nov. 16, 1914	11.6	26,300	1938	May 6, 1938	11.94	27,800
				1939	Apr. 11, 1939	9.34	17,800
1916	May 12, 13, June 24,1916	11.1	24,800	1940	May 1, 1940	7.50	11,300
1917	May 31, 1917	13.8	36,600	1941	Nov. 12, 1940	b7.18	9,560
1918	June 22, 1918	16.3	47,200	1942	Apr. 26, 1942	10.59	21,200
1919	Mar.24,30,Apr. 7, 10, 1919	9.2	18,100	1943	June 7, 1943	13.06	31,000
				1944	June 15, 1944	11.83	27,100
1920	May 19,21,1920	10.2	20,900	1945	June 12, 1945	11.19	24,900
1921	June 3, 1921	14.5	37,900	1946	Apr.28,29,1946	12.00	28,000
1922	May 23,24,1922	12.25	28,700	1947	June 14, 1947	12.69	29,600
1923	June 27, 1923	10.83	23,300	1948	June 25, 1948	11.07	23,400
1924	Feb. 8, 1924	8.77	15,800	1949	Feb.24,25,1949	9.54	18,100
1925	May 26, 1925	11.24	25,400	1950	June 28, 1950	12.6	29,500
1926	Nov. 10, 1925	8.55	15,300	1951	Apr. 16, 1951	11.50	25,600
1927	July 4, 1927	13.40	34,100	1952	May 10, 1952	12.06	27,800
1928	June 1, 1928	11.50	26,200	1953	June 11, 1953	12.08	27,900
1929	Apr. 8, 1929	10.17	21,000	1954	May 30, 1954	9.88	19,100
1930	Nov. 4, 1929	8.96	16,300	1955	Apr. 2, 1955	9.63	18,400
1931	Nov. 22, 1930	8.30	14,000	1956	June 4, 1956	12.52	29,400
1932	Feb. 28, 1932	8.87	14,900	1957	May 22, 1957	12.70	30,300
1933	Dec. 19, 1932	7.88	11,800				
1934	Oct.20,23-25, 1933	7.02	9,800				

a Occurred Sept. 29, 1935.
b Occurred Sept. 14, 1941.

1555. Little Canyon Creek near Glenns Ferry, Idaho
(Published as "at Glenns Ferry" 1909-13)

Location.--Lat 42°59', long 115°19', in sec.18, T.5 S., R.10 E., on right bank at bridge on county road, 2 miles north of Glenns Ferry.

Drainage area.--52.4 sq mi. Mean altitude of basin, 4,660 ft.

Gage.--Nonrecording. At sites 2½ miles downstream at different datums prior to Mar. 30, 1913. Altitude of gage is 2,590 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 200 cfs.

Bankfull stage.--3.5 ft.

Remarks.--Floodmark is only record available for water year 1956. Several diversions for irrigation above station. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	Jan. 31, 1911	3.8	500	1941	Feb. 7, 1941	3.56	68
1912	Feb. 17, 1912	3.3	a378	1942	Jan. 26, 1942	b4.25	126
				1943	Mar. 8, 1943	b5.5	a650
1939	Mar. 19, 1939	b4.24	136				
1940	Feb. 28, 1940	4.36	150	1956	Dec. 23, 1955	b5.99	900

a Revised.
b From floodmark.

BENNETT CREEK BASIN

1565. Bennett Creek near Bennett, Idaho

Location.--Lat 43°13'30", long 115°31'30", in sec.28, T.2 S., R.8 E., on right bank 300 ft downstream from Dive Creek and 7½ miles southwest of Bennett Post Office (Dixie store).

Drainage area.--21.3 sq mi. Mean altitude of basin, 5,240 ft.

Gage.--Recording. At datum 2.00 ft higher prior to Aug. 23, 1940. Altitude of gage is 4,600 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 60 cfs, with an additional measurement at 160 cfs made under poor conditions to provide fair definition for the 1943 peak.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Base for partial-duration series, 30 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 24, 1939	2.71	95	1943	Feb. 22, 1943a/	(d)	(d)
					Mar. 9, 1943a/	(d)	(d)
1940	Feb. 29, 1940	2.50	92		Apr. 2, 1943	6.05	204
	Mar. 27, 1940	1.40	50				
	Mar. 31, 1940	1.68	60	1944	Mar. 17, 1944	3.00	.34
1941	Mar. 1, 1941	2.83	24	1945	Feb. 2, 1945	3.35	44
					Feb. 8, 1945	4.69	104
1942	Apr. 5, 1942a/	-	b35		Feb. 13, 1945	4.55	98
					Mar. 11, 1945	3.54	52
1943	Jan. 23, 1943	-	c40		Mar. 22, 1945	5.19	137

a About.
b Estimated.
c Estimated daily mean discharge.
d Stage and discharge unknown.

1615. Bruneau River near Rowland, Nev.

Location.--Lat 41°55'50", long 115°40'30", in SE¼ sec.29, T.47 N., R.56 E., half a mile downstream from Taylor Creek and 1½ miles upstream from McDonald Creek and Rowland.

Drainage area.--380 sq mi, approximately.

Gage.--Nonrecording. At datum 1.0 ft lower prior to Oct. 1, 1915. Altitude of gage is 4,950 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 580 cfs and extended above.

Remarks.--Some diversions for irrigation above station. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	June 11, 1913	3.70	383	1916	Apr. 11, 1916	5.10	1,000
1914	Apr. 17, 1914	5.80	972	1917	(a)	7.0	1,300
1915	May 20,21, June 1, 1915	3.25	271	1918	Apr. 12, 1918	2.41	301

a About May 14, 1917.

1625. East Fork Jarbidge River near Three Creek, Idaho

Location.--Lat 42°02', long 115°22', in SE¼SE¼ sec.14, T.6 S., R.9 E., on left bank a quarter of a mile downstream from Murphy Hot Springs, 2 miles upstream from mouth, and 11 miles southwest of Three Creek.

Drainage area.--89 sq mi, approximately. Mean altitude of basin, 7,600 ft.

Gage.--Recording. At datum about 1.6 ft higher October 1929 to December 1932. Altitude of gage is 5,150 ft (by barometer).

Stage-discharge relation.--1929-32, defined by current-meter measurements below 250 cfs; and 1954-57, defined by current-meter measurements below 400 cfs.

Bankfull stage.--4.5 ft.

Remarks.--Only annual peaks shown 1929-32. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 25, 1929	3.54	584	1956	May 24, 1956	5.28	548
1930	June 12, 1930	2.74	282		June 1, 1956	4.73	420
1931	May 15-17, 1931	2.47	206	1957	May 9, 1957	4.29	331
1932	June 25, 1932	3.54	584		May 19, 1957	4.95	501
					June 5, 1957	5.11	614
1954	May 17, 1954	4.06	247		June 29, 1957	4.19	391
1955	June 8, 1955	4.61	350				

1675. East Fork Bruneau River near Hot Spring, Idaho

Location.--Lat 42°33'25", long 115°30'35", in SW¼NW¼ sec.15, T.10 S., R.8 E., on right bank at Winter Camp Ranch, 10 miles upstream from mouth and 20 miles southeast of Hot Spring.

Drainage area.--620 sq mi, approximately.

Gage.--Nonrecording prior to Mar. 15, 1915; recording thereafter. At present site and datum since Dec. 11, 1948. Datum of gage is 3,864.7 ft above mean sea level, datum of 1929, supplementary adjustment of 1947 (levels by Topographic Branch).

Stage-discharge relation.--Defined by current-meter measurements below 180 cfs 1911-14, and below 440 cfs since 1948.

Bankfull stage.--9 ft.

Historical data.--Maximum stage known, 16.9 ft, from floodmark, datum then in use, spring of 1910.

Remarks.--Water diverted above station for irrigation in both Bruneau River and Salmon Falls Creek basins. Effect on peaks is probably significant except for period 1911-14, when smaller amounts were diverted. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	Mar. 8, 1911	a10.8	b450	1952	May 6, 1952	5.76	222
1912	May 23, 1912	c8.8	316	1953	June 6, 1953	5.08	172
1913	Mar. 7, 1913	a10.0	-	1954	Dec. 22, 1953	3.03	-
	June 14, 1913	c7.0	176		June 11, 1954	2.84	44
1914	Feb. 23, 1914	c10.3	d449	1955	June 17, 1955	3.64	83
1949	May 17, 1949	5.62	204	1956	May 29, 1956	4.70	145
1950	May 20, 1950	5.89	228	1957	May 20, 1957	7.12	463
1951	May 14, 1951	5.06	160				

a Backwater from ice.
b Estimated.
c Maximum observed.
d Revised.

1680. Bruneau River near Winter Camp Ranch, Idaho

Location (revised).--Lat 42°39', long 115°42', in sec.12, T.9 S., R.6 E., on right bank at Roberson trail crossing, 8 miles downstream from East Fork, 12 miles northwest of Winter Camp Ranch, and 10 miles south of Hot Spring.

Drainage area.--2,510 sq mi, approximately (revised).

Gage.--Recording. Datum of gage is 3,015.68 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--River is confined to narrow, deep canyon; not subject to overflow.

Remarks.--Peaks affected by storage and diversions for irrigation above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 9, 1947	3.07	1,230	1950	May 24, 1950	4.34	2,380
1948	June 6, 1948	3.47	1,600				
1949	May 17, 1949	5.23	3,290	1951	May 28, 1951	-	b1,800
1950	Jan. 20, 1950	a4.49	-				

a Backwater from ice.
b Estimated.

1685. Bruneau River near Hot Spring, Idaho

Location.--Lat 42°46'17", long 115°43'10", in SE¼ sec.34, T.7 S., R.6 E., on right bank at Dunham Ranch, 1 mile downstream from Hot Creek, 1½ miles south of Hot Spring Post Office, 9 miles southeast of Bruneau, and 19 miles downstream from East Fork.

Drainage area.--2,630 sq mi, approximately (revised). Mean altitude of basin, 5,600 ft.

Gage.--Nonrecording prior to Mar. 15, 1915; recording since October 1943. At site a quarter of a mile upstream at different datum prior to Mar. 12, 1910. Datum of gage is 2,598.5 ft above mean sea level, datum of 1929 (levels by Topographic Branch).

Stage-discharge relation.--Defined by current-meter measurements below 2,000 cfs for 1910-14, and below 3,000 cfs for 1944-57.

Bankfull stage.--10.5 ft.

Remarks.--Peaks affected by storage in several small reservoirs on tributaries above station, and by diversions above station for irrigation of about 8,500 acres. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	Mar. 2, 1910	a13.0	6,500	1949	May 17, 1949	8.99	3,100
				1950	May 24, 1950	7.98	2,310
1911	Feb. 1, 1911	b7.8	2,500				
1912	June 10, 1912	b8.5	3,110	1951	May 28, 1951	7.26	1,820
1913	June 13, 1913	b6.7	1,720	1952	Apr. 27, 1952	9.73	3,670
1914	May 11, 1914	b6.95	1,960	1953	May 30, 1953	7.63	2,150
				1954	Mar. 10, 1954	5.78	920
1944	May 15, 1944	7.59	2,010	1955	June 10, 1955	5.97	1,010
1945	May 7, 1945	8.75	2,910				
				1956	Jan. 16, 1956	8.16	2,570
1946	Apr. 19, 1946	7.54	1,980	1957	May 20, 1957	9.86	4,080
1947	May 9, 1947	6.43	1,230				
1948	June 6, 1948	7.02	1,610				

a From floodmark, present datum; revised discharge.
b Maximum observed.

1695. Wickahoney Creek near Bruneau, Idaho

Location (revised).--Lat 42°47', long 115°59', in sec.28, T.7 S., R.4 E., on left bank 0.3 mile upstream from confluence with Jacks Creek and 11 miles southwest of Bruneau.

Drainage area.--253 sq mi, approximately (revised). Mean altitude of basin, 5,150 ft.

Gage.--Recording. Altitude of gage is 2,810 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 450 cfs prior to flood of Jan. 22, 1943, and below 200 cfs thereafter. Slope-area measurement of 1943 flood did not define extension of discharge relations either before or after flood.

Bankfull stage.--Stream confined to channel at all stages.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 20, 1939	4.30	500	1945	Feb. 3, 1945	1.42	61
1940	Mar. 1, 1940	1.81	36				
				1946	Mar. 21, 1946	3.56	469
1941	Mar. 3, 1941	2.13	62	1947	Feb. 13, 1947	2.26	211
1942	Apr. 4, 1942	3.24	290	1948	Feb. 18, 1948	1.55	76
1943	Jan. 22, 1943	12.4	2,100	1949	Apr. 12, 1949	2.25	198
1944	Apr. 5, 1944	.57	4.9				

1700. Jacks Creek near Bruneau, Idaho

Location.--Lat 42°47', long 115°59', in sec.28 (revised), T.7 S., R.4 E., on left bank 650 ft upstream from confluence with Wickahoney Creek and 11 miles southwest of Bruneau.

Drainage area.--101 sq mi, approximately (revised). Mean altitude of basin, 5,020 ft.

Gage.--Nonrecording prior to May 3, 1939; recording thereafter. Altitude of gage is 2,820 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 50 cfs and extended on basis of slope-area measurement at 908 cfs.

Bankfull stage.--Not subject to overflow.

Remarks.--Peak discharges may be affected by diversions above station for irrigation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 18, 1939	6.0	620	1945	July 28, 1945	3.46	133
1940	Sept. 7, 1940	2.46	27	1946	Feb. 27, 1946	3.52	148
1941	June 13, 1941	6.30	692	1947	Feb. 13, 1947	3.11	92
1942	Mar. 31, 1942	3.56	148	1948	June 20, 1948	2.83	62
1943	Jan. 21, 1943	7.2	908	1949	May 16, 1949	3.68	172
1944	June 11, 1944	2.16	15				

1710. Bruneau River near Grand View, Idaho

Location.--Lat 42°56', long 115°57', in SE¼ sec.35, T.5 S., R.4 E., on left bank 0.8 mile downstream from diversion dam for Grand View Canal, 1 mile upstream from mouth, and 8½ miles southeast of Grand View.

Drainage area.--2,650 sq mi, approximately.

Gage.--Nonrecording prior to Dec. 22, 1943; recording thereafter. At site 2,000 ft upstream at different datums prior to October 1916. Datum of gage is 2,372.3 ft above mean sea level, datum of 1929 (stadia levels by Topographic Branch).

Stage-discharge relation.--Well defined at both sites by current-meter measurements. Rating curves at higher stages are not well defined because of frequent shifting of the channel.

Remarks.--Diversions above station for irrigation of about 21,900 acres. Peak discharges during irrigation season are affected. Station submerged by C. J. Strike Reservoir on Snake River in 1952. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1895	May 8, 1895	3.25	960	1912	June 11, 1912	6.0	3,100
				1913	Apr. 2, 1913	4.7	1,600
1896	June 2, 1896	6.7	3,680	1914	May 28, 1914	5.0	1,990
1897	Mar. 26, 1897	7.0	3,920	1915	May 22, 1915	4.2	1,210
1898	Apr. 17, 1898	3.35	1,040				
1899	Apr. 14, 1899	5.2	2,480	1916	May 10, 1916	4.92	1,920
1900	May 15, 1900	3.2	920				
				1945	May 8, 1945	6.07	2,500
1901	Feb. 21, 1901	4.9	2,240				
1902	June 1, 1902	3.9	1,450	1946	Apr. 20, 1946	4.92	1,780
1903	Apr. 1, 1903	4.3	1,740	1947	May 10, 1947	3.55	995
				1948	June 7, 1948	4.41	1,450
1910	Mar. 2, 1910	a10.1	a7,500	1949	May 18, 1949	6.48	2,780
1911	Mar. 21, 1911	5.2	2,220				

a Maximum observed.
b From floodmarks; revised.

1725. Snake River near Murphy, Idaho

Location (revised).--Lat 43°17'30", long 116°25'12", in SE¼ sec.35, T.1 S., R.1 W., on right bank 4¼ miles downstream from Swan Falls powerplant and 7½ miles northeast of Murphy.

Drainage area.--41,900 sq mi, approximately.

Gage.--Nonrecording prior to Sept. 7, 1914; recording thereafter. At site 3.5 miles upstream at datum 9.79 ft higher prior to Sept. 30, 1935. Datum of gage is 2,271.47 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 40,000 cfs for period 1914-35 and below 30,000 cfs for period 1936-57.

Bankfull stage.--In canyon.

Historical data.--Flood of June 1894 at King Hill, about 95 miles upstream, is estimated as 83,000 cfs.

Remarks.--Flow regulated by many major resevoirs upstream. Diurnal fluctuations caused by regulation at Swan Falls powerplant has some effect on most peaks. Several diversions for irrigation between Murphy and King Hill by pumping. About 1,630,000 acres are irrigated from Snake River and its tributaries above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	June 10, 1914	12.13	39,600	1937	Mar.31,Apr.2, 1937	6.20	14,300
1915	Nov. 17, 1914	8.52	25,600	1938	May 7, 1938	10.08	28,200
1916	May 12, 1916	9.56	29,400	1939	Mar. 19, 1939	7.63	19,400
1917	June 1, 1917	11.85	38,300	1940	Feb. 29, 1940	5.47	12,000
1918	June 22, 1918	13.95	47,300				
1919	Mar. 31, 1919	6.43	19,000	1941	Aug. 11, 1941	5.15	10,800
1920	May 24, 1920	7.87	23,500	1942	Apr. 27, 1942	8.92	23,900
				1943	June 6, 1943	11.37	33,400
1921	June 4, 1921	a12.42	40,800	1944	June 16, 1944	10.49	30,000
1922	May 24, 1922	10.29	32,300	1945	June 13, 1945	9.64	26,700
1923	June 28, 1923	9.00	27,300				
1924	Feb. 9, 1924	6.26	18,700	1946	Apr. 29, 1946	10.75	30,900
1925	May 13, 1925	8.94	27,000	1947	June 15, 1947	11.12	32,400
				1948	June 6, 1948	9.00	24,100
1926	Nov. 9, 1925	5.46	16,500	1949	Mar. 3, 1949	7.62	19,100
1927	July 4-6, 1927	-	b33,500	1950	June 29,30,1950	10.12	28,500
1928	May 18-30,1928	-	b26,500				
1929	Apr. 10, 1929	7.71	22,900	1951	May 17, 1951	9.60	26,100
1930	Nov. 20, 1929	6.55	19,500	1952	Apr. 29, 1952	12.01	35,900
				1953	June 11, 1953	10.27	28,700
1931	Nov. 24, 1930	5.25	15,800	1954	May 31, 1954	6.82	16,000
1932	Feb. 29, 1932	5.66	17,100	1955	Apr. 5, 1955	6.59	15,400
1933	May 10, 1933	5.35	16,300				
1934	Oct. 25, 1933	3.62	12,000	1956	June 5, 1956	12.19	36,100
1935	June 2,3, 1935	3.30	11,400	1957	May 23, 1957	11.84	34,700
1936	June 8, 1936	10.15	29,300				

a Higher stage may have occurred during period of no record.
b Estimated.

1735. Sucker Creek at mouth, near Homedale, Idaho.

Location.--Lat 43°37'15", long 116°57'10", in SW¼ sec.4, T.3 N., R.5 W., on left bank three-quarters of a mile upstream from mouth, 1.0 mile west of Mussel's ferry on Snake River, 1.0 mile west of Homedale, and 17 miles southwest of Caldwell.

Drainage area.--342 sq mi (revised).

Gage.--Nonrecording. At site a quarter of a mile upstream at different datums Jan. 31, 1905, to Aug. 27, 1907. Altitude of gage is 2,210 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 400 cfs, 1905-6, and below 740 cfs thereafter. Frequent changes in rating affect adequacy of definition.

Bankfull stage.--4 ft.

Remarks.--Peaks during irrigation seasons are considerably affected by diversions. Those occurring during early spring months are probably unaffected. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	May 26, 1905	7.3	2,500	1908	June 4, 1908	2.7	256
				1909	Jan. 15, 1909	b6.0	-
1906	Mar. 25, 1906	5.1	a660		Jan. 16, 1909	5.0	706
1907	Feb. 4, 1907	2.6	874				

a Revised.
b Backwater from ice.

OWYHEE RIVER BASIN

1745. Owyhee River near Gold Creek, Nev.

Location.--Lat 41°41'10", long 115°51'30", in NW¼NW¼ sec.25, T.44 N., R.54 E., on right bank 500 ft downstream from Wild Horse Dam, 8 miles west of Gold Creek, and 12 miles southeast of Mountain City.

Drainage area.--209 sq mi. Mean altitude, 6,720 ft.

Gage.--Recording. At site a quarter of a mile upstream at different datum prior to Oct. 1, 1936. Altitude of gage is 6,130 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 400 cfs and extended above.

Bankfull stage.--6 ft.

Remarks.--Flow regulated by Wild Horse Reservoir near Gold Creek (capacity, 32,690 acre-ft) since Mar. 18, 1938. Base for partial-duration series, 270 cfs. Only annual peaks are shown beginning with 1938.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Mar. 30, 1916	4.51	339	1921	Apr. 22, 1921	6.86	828
	Apr. 11, 1916	7.70	970		Apr. 29, 1921	5.56	562
	Apr. 16, 1916	5.56	536		May 7, 1921	5.69	588
					May 20, 1921	6.16	682
1917	Apr. 26, 1917	8.50	1,380		May 24, 1921	5.46	542
	May 14, 1917	8.54	1,380		June 5, 1921	4.23	309
	May 24, 1917	6.49	812				
				1922	May 5, 1922	10.11	1,810
1918	Apr. 11, 1918	4.06	260		May 20, 1922	5.25	545
					June 15, 1922	4.06	310
1920	Apr. 30, 1920	6.0	623				
	May 7, 1920	5.20	468	1923	Apr. 17, 1923	3.91	282
1921	Apr. 2, 1921	6.43	596	1924	Apr. 14, 1924	5.93	a698
	Apr. 12, 1921	6.31	712		Apr. 20, 1924	4.21	332

a Revised.

Peak stages and discharges of Owyhee River near Gold Creek, Nev.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	Apr. 4, 1925	4.91	471	1947	June 25,26,1947	3.14	144
	Apr. 12, 1925	6.73	860	1948	June 25, 1948	3.28	172
				1949	June 30, 1949	3.47	202
1937	(b)	3.80	267	1950	Apr. 29, 1950	3.61	243
1938	Apr. 19, 1938	4.92	553	1951	Apr. 19, 1951	4.12	353
1939	Mar. 23, 1939	5.44	705	1952	Apr. 29, 1952	6.70	1,210
1940	May 30, 1940	3.24	167	1953	June 1, 1953	4.60	464
				1954	May 15, 1954	3.34	182
1941	June 24, 1941	2.84	111	1955	July 7-9, 1955	3.10	134
1942	Apr. 18, 1942	4.23	335				
1943	Apr. 5, 1943	6.62	980	1956	June 28 to July 15, 1956	3.10	136
1944	July 4,7, 1944	3.13	142				
1945	May 6, 1945	5.09	572	1957	May 20, 1957	c4.15	c352
1946	Apr. 20, 1946	4.76	500				

b About Apr. 15, 1937.
c Maximum daily mean.

1750. Owyhee River at Mountain City, Nev.

Location.--Lat 41°50'10", long 115°57'50", in SW¼ sec.35, unsurveyed, T.46 N., R.53 E., at Mountain City, 1 mile downstream from California Creek.

Drainage area.--350 sq mi, approximately. Mean altitude, 6,650 ft.

Gage.--Nonrecording prior to Sept. 20, 1929; recording thereafter. At site 50 ft downstream at different datum May 17 to Dec. 31, 1913. Altitude of gage is 5,600 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 610 cfs and extended above.

Bankfull stage.--5 ft.

Remarks.--Flow partly regulated by Wild Horse Reservoir (capacity, 32,690 acre-ft) beginning Mar. 18, 1938. Only annual peaks are shown after Mar. 18, 1938. Base for partial-duration series, 250 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	June 11,12,1913	3.40	273	1935	Apr. 15, 1935	6.07	1,240
					Apr. 21, 1935	5.94	1,200
1927	Apr. 28, 1927	5.86	1,060		Apr. 30, 1935	4.93	857
					May 10, 1935	4.11	595
1928	Mar. 26, 1928	7.00	1,510		May 17, 1935	4.18	617
					June 1, 1935	4.82	821
1929	May 1, 1929	4.68	706				
				1936	Apr. 20, 1936	7.60	1,830
1930	May 10, 1930	3.39	409		June 2, 1936	4.62	755
	May 17, 1930	2.87	290		June 7, 1936	3.68	468
1931	Apr. 2, 1931	2.58	231	1937	Apr. 15, 1937	4.18	617
					May 5, 1937	3.96	550
1932	Mar. 19, 1932	3.03	322				
	Mar. 24, 1932	2.89	289	1938	Apr. 19, 1938	6.70	1,470
	Apr. 14, 1932	5.35	915	1939	Mar. 24, 1939	6.05	1,240
	Apr. 26, 1932	3.94	545	1940	June 4, 1940	2.88	263
	May 5, 1932	5.08	834				
	June 6, 1932	3.90	535	1941	May 4, 1941	3.34	375
				1942	Apr. 14, 1942	4.93	690
1933	Apr. 16, 1933	3.10	330	1943	Apr. 8, 1943	7.20	1,560
	Apr. 28, 1933	4.85	765	1944	May 1, 1944	3.06	319
				1945	May 6, 1945	6.89	1,360
1934	Mar. 29, 1934	2.07	106				
				1946	Apr. 20, 1946	5.78	905
1935	Apr. 4, 1935	3.03	297	1947	May 9, 1947	2.80	242
	Apr. 8, 1935	3.90	532	1948	Apr. 22, 1948	3.23	339

1755. Owyhee River near Owyhee, Nev.

Location.--Lat 41°52'20", long 116°02'30", in E½ sec.21, T.46 N., R.53 E., on right bank 40 ft upstream from Jones Brook, 4 miles downstream from Mountain City, and 8 miles southeast of Owyhee.

Drainage area.--380 sq mi, approximately.

Gage.--Recording. Altitude of gage is 5,510 ft (from topographic map). Station destroyed by flood of July 7, 1926.

Stage-discharge relation.--Defined by current-meter measurements below 1,300 cfs and extended above.

Bankfull stage.--7 ft.

Remarks.--Diversions above gage for irrigation. Base for partial-duration series, 430 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Mar. 23, 1914	6.12	653	1920	Apr. 20, 1920	6.16	651
	Apr. 15, 1914	9.36	1,360		May 1, 1920	7.89	946
	May 11, 1914	6.23	667		May 10, 1920	7.54	872
1915	Apr. 16, 1915	4.77	432	1922	Apr. 29, 1922	9.10	1,280
					May 5, 1922	12.55	2,600
1916	Mar. 21, 1916	7.40	840		June 15, 1922	5.61	584
	Apr. 12, 1916	9.75	1,490				
	May 26, 1916	4.95	468	1923	Apr. 17, 1923	4.49	435
1917	Apr. 26, 1917	-	a1,650	1924	Apr. 9, 1924	-	a800
	May 15, 1917	-	a1,750		Apr. 15, 1924	5.23	639
	May 24, 1917	8.97	1,270		Apr. 22, 1924	5.57	741
1918	Apr. 12, 1918	4.66	406	1925	Mar. 23, 1925	4.97	462
					Mar. 29, 1925	5.33	537
1919	Apr. 5, 1919	6.66	722		Apr. 2, 1925	6.61	708
	Apr. 12, 1919	5.78	605		Apr. 12, 1925	8.97	1,230
	Apr. 26, 1919	7.96	962				

a Estimated daily mean discharge.

1760. Owyhee River above China diversion dam, near Owyhee, Nev.

Location.--Lat 41°55'20", long 116°04'10", in NW¼ sec.6, T.46 N., R.53 E., on right bank 1,000 ft downstream from Skull Creek, 1 mile upstream from China diversion dam, and 2 miles southeast of Owyhee.

Drainage area.--458 sq mi. Mean altitude, 6,610 ft.

Gage.--Recording. At datum 1.48 ft higher prior to Oct. 1, 1939. Datum of gage is 5,425.0 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--8 ft.

Remarks.--Many diversions for irrigation above station. Flow partly regulated by Wild Horse Reservoir (capacity, 32,690 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 25, 1939	6.76	1,430	1949	May 18, 1949	7.86	978
1940	Mar. 27, 1940	4.14	365	1950	May 17, 1950	7.27	822
1941	May 11, 1941	5.90	610	1951	Apr. 19, 1951	8.15	1,040
1942	Apr. 14, 1942	7.62	934	1952	May 3 or 4, 1952	10.07	2,710
1943	Apr. 9, 1943	9.12	1,800	1953	June 2, 1953	9.13	1,570
1944	May 9, 1944	5.72	584	1954	Mar. 9, 1954	4.85	350
1945	May 6, 1945	9.18	1,850	1955	May 9, 1955	4.98	356
1946	Apr. 20, 1946	8.34	1,150	1956	Jan. 16, 1956	8.09	904
1947	May 9, 1947	4.61	382	1957	May 19, 1957	9.34	1,450
1948	Apr. 22, 1948	5.22	449				

1770. Jack Creek near Tuscarora, Nev.

Location.--Lat 41°30', long 116°06', in sec.35, T.42 N., R.52 E., on right bank at R. M. Woodward Ranch on Elko-Mountain City road, 8 miles upstream from South Fork Owyhee River, and 12 miles northeast of Tuscarora.

Drainage area.--26 sq mi, approximately (revised). Mean altitude of basin, 7,580 ft.

Gage.--Nonrecording. At datum 1.50 ft lower than last used gage prior to Sept. 1, 1915.

Stage-discharge relation.--Defined by current-meter measurements below 210 cfs and extended above.

Bankfull stage.--2.5 ft.

Remarks.--Small diversions for irrigation above gage. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	May 27,28,1913	3.40	197	1919	May 29, 1919	2.60	280
1914	Apr. 10, 1914	3.70	268	1920	May 14, 1920	2.20	219
1915	May 24,25, or 26, 1915	3.45	168	1921	May 18, 1921	3.00	372
				1922	May 7, 1922	-	a300
1916	May 6, June 16, 18,19,1916	1.70	121	1923	June 11, 1923	1.50	109
				1924	Apr. 13, 1924	1.70	121
1917	May 14, 1917	3.60	465	1925	May 6, 1925	1.84	170
1918	June 13, 1918	1.70	124				

a Maximum daily mean discharge.

1780. Jordan Creek above Lone Tree Creek, near Jordan Valley, Oreg.

Location.--Lat 42°52', long 116°57', in SE¼NE¼ sec.29, T.6 S., R.5 W., on right bank half a mile downstream from proposed damsite, 0.6 mile upstream from Morgan ranchhouse, 1 mile downstream from Williams Creek, 4 miles upstream from Lone Tree Creek, and 9 miles southeast of Jordan Valley.

Drainage area.--440 sq mi, approximately; 450 sq mi at former site. Mean altitude of basin, 5,780 ft.

Gage.--Recording. At site 2 miles downstream at different datum prior to 1953. Datum of gage is 4,501.98 ft above mean sea level (levels by Bureau of Reclamation).

Stage-discharge relation.--Defined by current-meter measurements below 2,000 cfs for period 1955-57 and below 2,300 cfs and extended above on basis of partly estimated measurement at 3,100 cfs for 1946-53.

Bankfull stage.--Not subject to overflow.

Remarks.--Base for partial-duration series, 700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Apr. 19, 1946	a5.44	2,100	1952	Mar. 28, 1952	3.95	1,100
					Apr. 6, 1952	5.48	3,090
1947	Apr. 17, 1947	3.26	676		Apr. 14, 1952	5.57	3,250
1948	Apr. 18, 1948	4.47	1,530	1955	May 9, 1955	a6.85	1,430
	May 7, 1948	3.27	799	1956	Dec. 23, 1955	7.74	2,020
1949	Apr. 12, 1949	4.35	1,250		Jan. 15, 1956	7.00	1,610
	Apr. 19, 1949	4.50	1,350		Mar. 25, 1956	7.16	3,100
					Apr. 26, 1956	6.28	1,980
1950	Apr. 2, 1950	3.72	825				
	Apr. 22, 1950	4.72	1,490	1957	Dec. 11, 1956	b6.44	-
	May 15, 1950	3.90	942		Feb. 23, 1957	8.07	2,870
					Mar. 6, 1957	6.18	1,720
1951	Feb. 8, 1951	5.54	2,930		Apr. 6, 1957	5.54	1,260
	Mar. 20, 1951	3.75	941		May 12, 1957	5.94	1,540
	Apr. 10, 1951	4.70	1,920		May 19, 1957	6.09	1,650

a Annual peak only.
b Backwater from ice.

1790. Jordan Creek near Jordan Valley, Oreg.

Location.--Lat 42°58', long 117°13', in sec.9, T.30 S., R.45 E., in canyon 8 miles upstream from Cow Creek and 8 miles west of Jordan Valley.

Drainage area.--660 sq mi, approximately.

Gage.--Nonrecording prior to July 31, 1920; recording thereafter. At different datum prior to July 31, 1920. Altitude of gage is 4,280 ft (by barometer).

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Remarks.--Peak discharges affected by diversions for irrigation and by Jordan Valley feeder canal, which has diverted above station since 1914. Records for 1932-42 furnished by the State engineer of Oregon. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	Apr. 24, 1912	9.9	2,150	1932	Mar. 20, 1932	9.6	3,900
1913	Apr. 20, 1913	9.1	1,780				
1914	Apr. 17, 1914	7.9	1,180	1935	Apr. 17, 1935	8.64	2,980
1915	May 20, 1915	6.6	655				
				1936	Apr. 18, 1936	9.7	3,700
1916	Apr. 12, 1916	8.5	1,470	1937	Apr. 16, 1937	6.59	1,600
1917	Apr. 26, 1917	12.3	3,620	1938	Apr. 20, 1938	8.33	2,740
1918	Mar. 27, 1918	9.0	1,720				
				1941	Mar. 3, 1941	3.80	400
1920	May 11, 1920	9.0	1,860	1942	Apr. 15, 1942	6.64	1,710

1810. Owyhee River near Rome, Oreg.

Location.--Lat 42°52', long 117°38', in NE¼ sec.14, T.31 S., R.41 E., on right bank half a mile downstream from Jordan Creek, and 2½ miles north of Rome.

Drainage area.--About 8,000 sq mi. Mean altitude, 5,500 ft.

Gage.--Recording. Datum of gage is 3,343.96 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Well defined by current-meter measurements.

Bankfull stage.--Not subject to overflow.

Historical data.--Flood of Apr. 14, 1952, reported by local resident as highest in 70 years.

Remarks.--Diversions above station for irrigation of about 80,000 acres. Flow regulated by Antelope Reservoir (capacity, 36,600 acre-ft), Wild Horse Reservoir (capacity, 32,690 acre-ft), and numerous small reservoirs. Regulation probably affects the peaks only slightly, but diversions are a considerable part of the runoff during the irrigation season. Base for partial-duration series, 5,400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Apr. 1, 1950	6.94	5,370	1954	Mar. 10, 1954	8.50	8,100
1951	Feb. 8, 1951	10.19	11,600	1955	Apr. 11, 1955	6.88	5,200
	Feb. 11, 1951	10.77	13,000				
	Mar. 21, 1951	8.14	7,410	1956	Dec. 24, 1955	10.47	12,300
	Apr. 4, 1951	7.83	6,840		Jan. 16, 1956	14.23	23,000
					Mar. 26, 1956	10.70	12,800
1952	Mar. 29, 1952	7.86	6,900				
	Apr. 8, 1952	14.68	24,500	1957	Feb. 27, 1957	12.03	16,200
	Apr. 14, 1952	15.60	27,800		Mar. 8, 1957	9.59	10,300
	Apr. 19, 1952	15.0	25,600		May 14, 1957	7.63	6,550
	Apr. 26, 1952	13.5	20,600		May 21, 1957	10.13	11,500
1953	June 6, 1953	7.00	5,400				

1820. Owyhee River above Owyhee Reservoir, Oreg.

Location.--Lat 43°12', long 117°30', in SE¼ sec.18, T.27 S., R.43 E., 3 miles upstream from maximum flow line of Owyhee Reservoir and 26 miles northeast of Rome, Oreg.

Drainage area.--About 10,400 sq mi.

Gage.--Recording. Altitude of gage is 2,690 ft (levels by Bureau of Reclamation).

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--12 ft.

Remarks.--Diversions for irrigation of 80,000 acres above station. Flow regulated by Antelope Reservoir (capacity, 36,600 acre-ft), Wild Horse Reservoir (capacity, 32,690 acre-ft), and numerous small reservoirs. Regulation probably affects the peaks only slightly, but diversions are a considerable part of the runoff during the irrigation season. Base for partial-duration series, 5,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Apr. 24, 1929	8.52	3,890	1941	Mar. 3, 1941	10.68	9,560
1930	Mar. 24, 1930	7.03	2,150	1942	Apr. 5, 1942	12.36	15,200
1931	Mar. 22, 1931	7.87	3,040	1943	Jan. 23, 1943	11.88	13,200
					Feb. 24, 1943	10.88	9,840
1932	Mar. 20, 1932	12.95	16,000		(a)	9.45	6,120
					(a)	10.46	8,620
1933	Apr. 17, 1933	8.84	4,800				
				1944	June 22, 1944	8.65	4,530
1934	Feb. 27, 1934	5.85	1,140				
				1945	Feb. 14, 1945	10.73	b9,400
1935	Apr. 5, 1935	9.36	6,040				
	Apr. 9, 1935	11.36	11,900	1946	Mar. 22, 1946	10.30	8,170
	Apr. 12, 1935	11.64	12,500		Mar. 30, 1946	9.50	6,230
	Apr. 17, 1935	11.55	12,500		Apr. 9, 1946	9.46	6,150
					Apr. 15, 1946	9.54	6,320
1936	Apr. 19, 1936	12.58	16,000				
				1947	Apr. 10, 1947	8.51	4,290
1937	Apr. 3, 1937	9.98	7,550				
	Apr. 15, 1937	11.71	12,900	1948	Feb. 23, 1948	8.19	3,760
1938	Mar. 21, 1938	9.40	6,040	1949	Apr. 10, 1949	11.06	10,400
	Apr. 6, 1938	9.26	5,820		Apr. 13, 1949	11.44	11,600
	Apr. 13, 1938	9.67	6,760				
	Apr. 19, 1938	11.80	13,200	1950	Apr. 1, 1950	9.05	5,300
	May 2, 1938	11.90	13,600				
				1951	Dec. 8, 1950	8.16	3,720
1939	Mar. 23, 1939	11.50	12,200		Feb. 9, 1951	11.38	11,400
					Mar. 22, 1951	9.85	7,020
1941	Feb. 25, 1941	9.49	6,250		Apr. 5, 1951	9.71	6,690

a Date unknown.
b Record incomplete; only annual peak available.

1830. Owyhee River below Owyhee Dam, Oreg.

Location.--Lat 43°39'10", long 117°15'00, in SW¼ sec.17, T.22 S., R.45 E., on left bank 0.8 mile downstream from Owyhee Dam and 20 miles southwest of Nyssa.

Drainage area.--11,160 sq mi, approximately.

Gage.--Recording. Datum of gage is 2,343.67 ft above mean sea level (levels by Bureau of Reclamation).

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--Not subject to overflow.

Remarks.--Flow regulated by Lake Owyhee (capacity, 1,122,000 acre-ft) since October 1932 and numerous other smaller resevoirs. About 450,000 acre-ft diverted annually from Lake Owyhee for irrigation of lands below station and outside the basin. Base for partial-duration series used prior to 1933 is 5,500 cfs. Only annual peaks are shown after 1933.

Peak stages and discharges of Owyhee River below Owyhee Dam, Oreg.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Mar. 7, 1929	8.57	6,410	1940	May 2, 1940	4.45	1,560
	Mar. 23, 1929	11.56	12,100				
	Mar. 31, 1929	8.29	5,930	1941	Apr. 1, 1941	7.02	4,160
				1942	Apr. 8, 1942	10.70	10,300
1930	Mar. 24, 1930	5.12	2,020	1943	Feb. 25, 1943	8.94	6,990
				1944	May 24-30,1944	1.57	210
1931	Mar. 23, 1931	5.88	2,800	1945	Apr. 26, 1945	9.30	7,640
1932	Mar. 21, 1932	12.79	14,600	1946	Apr. 16, 1946	9.14	7,350
	Mar. 26, 1932	11.60	12,100	1947	June 27, 1947	1.62	222
	Mar. 30, 1932	9.13	7,280	1948	May 24, 1948	1.22	141
	Apr. 3, 1932	11.18	11,300	1949	May 2-4, 1949	1.52	199
				1950	July 5, 1950	1.44	182
1933	May 12, 1933	4.38	1,480				
				1951	Apr. 5, 1951	9.04	7,170
1934	Apr.25-28,1934	1.99	291	1952	Apr. 15, 1952	15.7	22,900
1935	July 18, 1935	2.07	313	1953	May 19, 1953	1.33	218
				1954	Aug. 31, 1954	2.06	373
1936	Apr. 20, 1936	11.58	12,100	1955	Aug. 16, 1955	1.90	310
1937	Apr. 15, 1937	12.60	14,100				
1938	Apr. 22, 1938	9.83	8,570	1956	Apr. 3, 1956	1.58	236
1939	Apr. 1, 1939	8.71	6,580	1957	May 21, 1957	9.33	7,460

1840. Owyhee River near Owyhee, Oreg.

Location.--Lat 43°46'40", long 117°04'00", in N½ sec.2, T.21 S., R.46 E., at county bridge, 1½ miles southwest of Owyhee, and 2¼ miles north of Adrian.

Drainage area.--About 11,300 sq mi. Mean altitude, 5,120 ft.

Gage.--Nonrecording. At different datum prior to May 15, 1897. At datum about 0.05 ft higher Aug. 27, 1903, to Sept. 30, 1916. Altitude of gage is 2,200 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 14,000 cfs and extended by logarithmic plotting.

Bankfull stage.--Not subject to overflow.

Remarks.--Slight regulation in numerous small reservoirs. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1890	May 12, 1890	a7.4	11,600	1911	Jan. 27, 1911	10.05	15,900
				1912	Apr. 26, 1912	9.60	14,200
1891	Apr. 19, 1891	7.0	10,000	1913	Apr. 1, 1913	8.02	8,600
1892	Apr.20,21,1892	9.0	18,000	1914	Mar. 17, 1914	7.9	8,310
1893	May 6, 1893	8.2	14,800	1915	Mar. 31, 1915	6.50	4,420
1895	May 4,5, 1895	5.3	5,150	1916	Mar. 23, 1916	9.00	12,000
1896	May 30, 1896	6.1	6,950	1922	Apr. 24, 1922	10.3	14,500
				1923	Apr. 8, 1923	6.7	5,080
1904	Feb. 23, 1904	a12.2	25,500	1924	Feb. 10, 1924	a7.8	7,880
1905	Feb. 24, 1905	a5.20	2,700	1925	Feb. 7, 1925	7.5	7,100
1906	Apr. 10, 1906	9.57	14,100	1926	Feb. 9, 1926	7.20	6,220
1907	Feb. 7, 1907	11.0	20,000	1927	Apr. 4, 1927	8.3	7,750
1908	Mar. 18, 1908	6.41	4,800				
1909	Jan.17,18,1909	10.0	15,700	1929	Mar. 23, 1929	9.78	13,900
1910	Mar. 2, 1910	14.0	b35,000				

a Maximum observed; may have been higher during period of no record.
b Revised; supersedes figure published in WSP 1317.

1850. Boise River near Twin Springs, Idaho

Location.--Lat 43°40', long 115°44', in sec.27, T.4 N., R.6 E., on right bank a quarter of a mile upstream from Birch Creek, 1½ miles upstream from maximum flow line of Arrowrock Reservoir, 4 miles downstream from Twin Springs, and 13 miles upstream from Arrowrock.

Drainage area.--830 sq mi, approximately; mean altitude, 6,350 ft.

Gage.--Nonrecording prior to Apr. 4, 1915; recording thereafter. Datum of gage is 3,251.08 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--In canyon; not subject to overflow except forest road at 19 ft.

Historical data.--Floods of 1871 and 1872 reached approximate maximum daily discharges of 19,600 cfs and 22,700 cfs, respectively, from relation curves compiled from reconstituted hydrographs of Boise River near Boise, based on temperature and precipitation records. From the same source, other maximum daily discharges between 13,000 cfs and 17,000 cfs in the period since 1865, occurred in 1874, 1875, 1881, 1896, and 1897.

Remarks.--Base for partial-duration series, 3,700 cfs. Only annual peaks prior to 1919.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 13, 1911	a7.2	7,560	1930	May 29, 1930	4.97	3,860
1912	June 13, 1912	a7.4	7,900		June 11, 1930	5.01	3,820
1913	May 28, 1913	a7.0	7,220				
1914	May 23, 1914	a6.0	5,520	1931	May 7, 1931	4.52	3,020
1915	Jan. 26, 1915	b5.8	-				
	May 19, 1915	4.62	3,140	1932	May 14, 1932	6.87	7,460
					June 24, 1932	5.85	5,320
1916	June 19, 1916	7.37	8,530				
1917	May 15, 1917	7.82	9,430	1933	Jan. 28, 1933	b5.10	-
1918	June 14, 1918	7.10	7,990		Apr. 29, 1933	5.17	4,040
					June 3, 1933	6.55	6,660
1919	Apr. 25, 1919	5.79	5,440		June 16, 1933	6.91	7,260
	May 29, 1919	7.50	8,790				
				1934	Mar. 28, 1934	4.96	3,680
1920	May 17, 1920	6.04	5,840				
	June 8, 1920	5.32	4,570	1935	Apr. 21, 1935	5.30	4,240
					May 24, 1935	5.67	4,970
1921	May 17, 1921	7.50	8,800		June 9, 1935	5.65	4,780
	June 12, 1921	7.67	9,210				
	June 24, 1921	5.60	5,090	1936	Apr. 23, 1936	7.70	8,880
					May 5, 1936	6.17	5,610
1922	May 6, 1922	5.57	4,940		May 15, 1936	7.32	7,830
	May 18, 1922	6.74	7,060		May 29, 1936	6.02	5,230
	May 26, 1922	7.01	7,680		June 7, 1936	5.46	4,240
	June 7, 1922	7.10	7,860				
	June 14, 1922	7.00	7,660	1937	May 5, 1937	4.94	3,610
1923	May 9, 1923	5.34	4,490	1938	Dec. 12, 1937	6.65	6,790
	May 26, 1923	6.23	6,080		May 1, 1938	7.63	8,730
	June 12, 1923	6.00	5,700		May 17, 1938	6.19	5,570
					May 28, 1938	7.45	8,290
1924	May 17, 1924	4.51	3,000		June 6, 1938	6.80	7,000
					June 30, 1938	5.12	3,730
1925	Feb. 5, 1925	b6.17	-				
	Apr. 11, 1925	5.79	5,320	1939	Apr. 30, 1939	5.42	4,290
	May 20, 1925	6.69	7,060				
	June 22, 1925	5.8	5,320	1940	Mar. 27, 1940	5.58	4,650
					Mar. 31, 1940	5.17	3,860
1926	May 5, 1926	5.29	4,250		May 12, 1940	5.89	5,210
1927	May 1, 1927	6.38	6,310	1941	May 13, 1941	5.35	4,120
	May 17, 1927	8.30	10,300		May 27, 1941	5.72	4,830
	May 27, 1927	5.09	3,900				
	June 8, 1927	7.63	8,770	1942	Apr. 14, 1942	5.18	4,060
	June 26, 1927	6.90	7,310		May 26, 1942	6.21	6,240
					June 8, 1942	5.86	5,480
1928	May 10, 1928	7.93	9,400				
	May 26, 1928	7.51	8,560	1943	Apr. 9, 1943	6.22	6,260
					Apr. 17, 1943	7.82	8,920
1929	May 24, 1929	5.81	5,320		May 5, 1943	6.73	6,530
	June 16, 1929	5.42	4,580		May 29, 1943	7.24	7,600

a Maximum observed.
b Backwater from ice.

Peak stages and discharges of Boise River near Twin Springs, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	June 12, 1943	6.01	5,140	1951	Apr. 29, 1951	5.79	4,810
	June 19, 1943	6.74	6,530		May 11, 1951	6.30	5,790
					May 28, 1951	6.98	7,290
1944	May 15, 1944	5.30	3,800		June 16, 1951	6.29	5,950
1945	May 5, 1945	6.18	5,600	1952	Jan. 5, 1952	b6.30	-
	June 10, 1945	5.56	4,470		Apr. 19, 1952	6.13	5,400
	June 22, 1945	5.62	4,580		Apr. 28, 1952	7.96	9,210
					May 24, 1952	7.16	7,500
1946	Dec. 29, 1945	b5.39	-		May 26, 1952	6.62	6,430
	Apr. 19, 1946	7.18	7,560		June 7, 1952	6.87	6,990
	Apr. 27, 1946	6.88	6,910				
	May 6, 1946	6.55	6,220	1953	Apr. 28, 1953	6.48	6,250
	May 28, 1946	5.95	5,040		May 7, 1953	5.45	4,280
	June 5, 1946	6.05	5,240		May 20, 1953	5.96	5,220
					June 13, 1953	7.81	9,090
1947	May 9, 1947	7.16	7,670				
	June 9, 1947	5.40	4,190	1954	Apr. 19, 1954	5.73	4,790
					Apr. 29, 1954	5.65	4,640
1948	Apr. 18, 1948	5.85	5,020		May 10, 1954	6.89	7,100
	Apr. 22, 1948	5.33	4,070		May 21, 1954	7.57	8,560
	May 19, 1948	6.71	6,720		June 16, 1954	5.39	4,170
	May 28, 1948	7.41	8,210		June 26, 1954	6.71	6,720
	June 3, 1948	6.91	7,140				
				1955	May 9, 1955	5.89	5,090
1949	Jan. 14, 1949	b5.50	-		May 22, 1955	6.41	6,110
	Apr. 19, 1949	5.22	3,990		June 10, 1955	6.49	6,270
	Apr. 29, 1949	5.41	4,320		June 23, 1955	5.59	4,530
	May 16, 1949	6.78	6,990				
	May 28, 1949	5.91	5,220	1956	Dec. 23, 1955	8.31	10,300
	June 12, 1949	5.57	4,570		Feb. 3, 1956	b9.59	-
					Apr. 23, 1956	6.90	7,120
1950	Apr. 22, 1950	5.75	4,820		May 24, 1956	8.76	11,200
	May 16, 1950	6.47	6,230				
	May 24, 1950	6.64	6,570	1957	May 3, 1957	6.14	5,850
	June 22, 1950	6.16	5,610		May 19, 1957	7.48	8,730
	July 2, 1950	5.96	5,220		June 5, 1957	7.32	8,390
1951	Apr. 15, 1951	5.74	4,710				

b Backwater from ice.

1855. Cottonwood Creek at Arrowrock Reservoir, Idaho
(Published as "near Arrowrock" 1914-18 and as "near Arrowrock Reservoir" 1939)

Location.--Lat 43°38', long 115°49', in NW¼NE¼ sec.2, T.3 N., R.5 E., on left bank above maximum flow line of Arrowrock Reservoir, just downstream from unnamed tributary, three-quarters of a mile downstream from Ranger Creek and Cottonwood ranger station, and 5½ miles northeast of Arrowrock.

Drainage area.--21.4 sq mi. At site 1914-18, 19.9 sq mi.

Gage.--Nonrecording gage and concrete control prior to Sept. 30, 1918, at site 0.4 mile upstream at different datum. Recording gage and timber control thereafter. Datum of gage is 3,220 ft (from maximum flow line of Arrowrock Reservoir).

Stage-discharge relation.--Defined by current-meter measurements below 120 cfs at nonrecording gage site, and below 60 cfs at recording gage site and extended above.

Bankfull stage.--Not subject to overflow.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Apr. 15, 1914	1.95	108	1939	Mar. 25, 1939	3.22	59
1915	May 19, 1915	1.00	29	1940	Mar. 26, 1940	3.47	96
1916	Apr. 27, 1916	2.15	134	1941	May 3, 1941	2.93	29
1917	Apr. 26, 1917	2.30	166				
1918	Mar. 27, 1918	1.77	65	1956	Dec. 23, 1955	4.76	330

1860. South Fork Boise River near Featherville, Idaho

Location.--Lat 43°29'40", long 115°18'20", in lot 6, NE¼ sec.19, T.2 N., R.10 E., on right bank 2½ miles upstream from Deer Creek and 8 miles southwest of Featherville.

Drainage area.--635 sq mi. Mean altitude, 6,840 ft.

Gage.--Recording. Altitude of gage is 4,220 ft (from topographic map of Bureau of Reclamation).

Stage-discharge relation.--Reasonably well defined by current-meter measurements through the entire range.

Bankfull stage.--8.5 ft.

Remarks.--Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	April 1943	8	-	1951	May 11, 1951	6.56	4,610
					May 28, 1951	7.11	5,340
1945	May 5, 1945	5.43	2,930		June 16, 1951	6.32	4,180
	June 3, 1945	4.91	2,410				
	June 23, 1945	4.97	2,470	1952	Apr. 28, 1952	7.47	5,530
					May 4, 1952	7.45	5,500
1946	Apr. 19, 1946	6.54	4,060		May 14, 1952	7.23	5,220
	Apr. 27, 1946	6.66	4,210		June 7, 1952	7.20	5,180
	May 7, 1946	6.35	3,860				
	June 5, 1946	5.82	3,320	1953	Apr. 28, 1953	5.92	3,570
					May 7, 1953	4.96	2,470
1947	May 9, 1947	6.75	4,300		May 20, 1953	5.16	2,670
					June 13, 1953	6.84	4,640
1948	Apr. 18, 1948	4.52	2,050				
	May 19, 1948	5.89	3,570	1954	Apr. 27, 1954	5.27	2,720
	May 29, 1948	6.87	4,750		May 21, 1954	7.34	5,380
	June 3, 1948	6.76	4,610		June 16, 1954	4.79	2,170
					June 26, 1954	6.26	3,940
1949	Apr. 29, 1949	5.00	2,570				
	May 17, 1949	6.15	3,880	1955	May 9, 1955	4.87	2,280
	June 12, 1949	5.07	2,650		May 22, 1955	5.51	3,040
					June 10, 1955	6.20	3,890
1950	Apr. 22, 1950	5.35	2,920				
	May 18, 1950	6.39	4,290	1956	Dec. 23, 1955	4.53	2,000
	May 24, 1950	6.61	4,520		Apr. 23, 1956	6.85	4,960
	June 22, 1950	6.15	3,940		May 24, 1956	8.62	7,580
	July 2, 1950	5.42	3,000				
				1957	May 19, 1957	6.93	5,710
1951	Apr. 20, 1951	5.69	3,480		June 6, 1957	6.90	5,880
	Apr. 28, 1951	5.59	3,320				

1865. Lime Creek near Bennett, Idaho

Location.--Lat 43°25', long 115°16', in SW¼NE¼ sec. 16, T.1 N., R.10 E., on right bank 0.4 mile upstream from maximum flow line of Anderson Ranch Reservoir, 2 miles upstream from mouth, and 12 miles northeast of Bennett.

Drainage area.--131 sq mi. Mean altitude, 6,140 ft.

Gage.--Recording. Altitude of gage is 4,250 ft (from topographic map of Bureau of Reclamation).

Stage-discharge relation.--Fairly well defined by current-meter measurements below 770 cfs and extended above.

Bankfull stage.--Stream in canyon; not subject to overflow.

Remarks.--Base for partial-duration series, 230 cfs.

Peak stages and discharges of Lime Creek near Bennett, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1946	Dec. 29, 1945	3.99	343	1951	May 7, 1951	4.70	576
	Apr. 19, 1946	6.11	1,180				
	May 26, 1946	3.80	279	1952	Apr. 27, 1952	5.99	1,180
1947	Mar. 18, 1947	3.76	270	1953	Apr. 5, 1953	3.76	263
	Mar. 30, 1947	3.62	234		Apr. 28, 1953	5.02	676
	Apr. 17, 1947	3.66	244		May 7, 1953	3.95	306
	May 4, 1947	3.88	302		May 19, 1953	3.80	261
					May 29, 1953	4.12	346
1948	Apr. 17, 1948	4.88	593		June 7, 1953	3.98	309
	May 19, 1948	3.95	299				
	May 28, 1948	3.70	236	1954	Apr. 18, 1954	4.60	523
					May 10, 1954	4.30	439
1949	Feb. 15, 1949	a8.02	-		June 26, 1954	3.77	262
	Feb. 20, 1949	a5.54	-				
	Apr. 11, 1949	3.80	296	1955	May 8, 1955	3.93	310
	Apr. 19, 1949	4.49	531		May 22, 1955	3.79	278
1950	Apr. 21, 1950	4.99	758	1956	Dec. 23, 1955	4.97	660
	May 17, 1950	4.61	610		Mar. 26, 1956	3.65	242
	May 23, 1950	4.55	580		Apr. 16, 1956	5.24	854
					Apr. 22, 1956	5.13	858
1951	Apr. 14, 1951	5.53	917		May 24, 1956	4.67	600
	Apr. 28, 1951	5.33	827				

a Backwater from ice or snowslide.

1870. Fall Creek near Anderson Ranch Dam, Idaho

Location.--Lat 43°26'00", long 115°23'10", in SE¼ sec. 9, T.1 N., R.9 E., on right bank 1½ miles downstream from Mill Creek and 6 miles northeast of Anderson Ranch Dam.

Drainage area.--55.3 sq mi. Mean altitude, 6,070 ft.

Gage.--Recording. Altitude of gage is 4,350 ft (from topographic map of Bureau of Reclamation).

Stage-discharge relation.--Defined by current-meter measurements below 550 cfs and extended above.

Remarks.--Base for partial-duration series, 300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	D'scharge (cfs)
1945	Apr. 21, 1945	4.77	358	1950	May 22, 1950	5.04	472
	May 4, 1945	4.97	429				
				1951	Apr. 14, 1951	5.22	516
1946	Apr. 17, 1946	5.84	793		Apr. 28, 1951	5.03	451
	Apr. 26, 1946	5.74	748		May 10, 1951	4.88	406
	May 5, 1946	5.49	636				
	May 26, 1946	4.61	307	1952	Apr. 19, 1952	5.06	472
					Apr. 27, 1952	6.25	948
1947	Jan. 5, 1947	a6.07	-		May 2, 1952	5.56	711
	May 3, 1947	4.63	324				
				1953	Apr. 28, 1953	5.15	516
1948	Apr. 17, 1948	4.65	336		May 6, 1953	4.53	305
	Apr. 21, 1948	4.57	313		May 19, 1953	4.56	311
	May 19, 1948	4.73	353		June 12, 1953	4.60	323
	May 23, 1948	4.63	303				
				1954	Apr. 17, 1954	4.85	468
1949	Apr. 18, 1949	4.78	368		May 10, 1954	4.60	380
	Apr. 24, 1949	4.83	390				
	May 13, 1949	4.69	359	1955	May 8, 1955	4.78	438
1950	Jan. 27 to Feb. 2, 1950	b5.48	-	1956	Dec. 23, 1955	4.78	438
					Feb. 4, 1956	c5.89	-
	Apr. 21, 1950	5.14	506		Apr. 21, 1956	5.50	794
	May 15, 1950	5.19	524		May 22, 1956	4.96	610

a Backwater from ice.
b Backwater from ice; maximum recorded; probably higher during period.
c Backwater from ice; date estimated.

1905. South Fork Boise River at Anderson Ranch Dam, Idaho

Location.--Lat 43°20', long 115°29', in SW¼ sec.11, T.1 S., R.8 E., on right bank 600 ft upstream from Dixie Creek, 1½ miles downstream from Anderson Ranch Reservoir, and 2¼ miles northwest of Bennett (Dixie store).

Drainage area.--982 sq mi. Prior to October 1946, 992 sq mi (including that of Dixie Creek).

Gage.--Recording. Altitude of gage is 3,850 ft (from topographic map of Bureau of Reclamation).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--River in canyon.

Remarks.--Flow regulated by Anderson Ranch Reservoir beginning Dec. 15, 1945. Reservoir has filled and spilled each year except 1955 since full capacity was first attained in 1951. Possible slight effect on flood flows by diversions from Little Camas Reservoir (capacity, 22,300 acre-ft) out of Boise River basin. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Apr. 17, 1943	10.06	9,100	1951	May 24, 1951	8.50	6,500
1944	Jan. 10, 1944	a6.32	-	1952	May 27, 1952	9.85	8,590
	May 15, 1944	6.21	3,080	1953	June 15, 1953	8.48	6,480
1945	May 6, 1945	6.66	3,710	1954	May 24, 1954	6.44	3,460
				1955	Oct. 2, 1954	5.53	2,420
1946	Apr. 27, 1946	8.28	6,170				
1947	Apr. 9, 1947	7.78	5,250	1956	May 25, 1956	10.56	9,850
1948	June 4, 1948	7.05	4,220	1957	June 5, 1957	8.12	5,840
1949	Feb. 25, 1949	7.12	4,320				
1950	July 24, 1950	7.68	5,190				

a Backwater from ice.

1910. South Fork Boise River near Lenox, Idaho

Location.--Lat 43°30', long 115°41', in sec.24, T.2 N., R.6 E., on right bank 1½ miles upstream from Smith Creek, 4 miles upstream from maximum flow line of Arrowrock Reservoir, 4 miles west of discontinued Lenox Post Office, 13 miles upstream from mouth, and 17 miles upstream from Arrowrock Dam.

Drainage area.--1,090 sq mi, approximately. Mean altitude, 6,270 ft.

Gage.--Nonrecording prior to Apr. 11, 1915; recording thereafter. Altitude of gage is 3,395 ft (from river-profile map).

Stage-discharge relation.--Generally well defined by current-meter measurements below 7,000 cfs. Measurement of 8,680 cfs in 1943 provides additional definition for latter years of record.

Bankfull stage.--River in canyon; not subject to overflow.

Historical data.--Floods of 1871 and 1872 reached approximate maximum daily discharges of 18,800 cfs and 22,000 cfs, respectively, from relation curves compiled from reconstituted hydrographs of Boise River near Boise based on temperature and precipitation records. From the same source other maximum daily discharges between 12,000 cfs and 16,000 cfs in the period since 1865, occurred in 1874, 1875, 1881, 1896, and 1897.

Remarks.--Possible slight effect on flood flows by diversions from Little Camas Reservoir (capacity, 22,300 acre-ft) out of Boise River basin. Flow regulated by Anderson Ranch Reservoir beginning Dec. 15, 1945. Base for partial-duration series, 3,100 cfs. Only annual peaks are shown 1911-18, 1946-47.

Peak stages and discharges of South Fork Boise River near Lenox, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 13, 1911	8.4	6,420	1932	May 14, 1932	7.69	5,730
1912	May 20, 1912	7.8	5,800		May 22, 1932	7.63	5,550
1913	May 28, 1913	7.7	5,440		June 16, 1932	7.10	4,680
1914	May 23, 1914	7.9	5,450				
1915	May 18, 1915	5.20	2,100	1933	Apr. 29, 1933	6.53	3,730
					June 3, 1933	7.41	5,190
1916	May 7, 1916	8.68	7,530		June 14, 1933	7.19	4,850
1917	May 15, 1917	9.53	9,200				
1918	June 13, 1918	7.33	5,040	1934	Mar. 29, 1934	5.11	2,070
1919	Apr. 25, 1919	7.18	4,810	1935	May 24, 1935	6.68	4,190
	May 29, 1919	7.56	5,520				
				1936	Apr. 24, 1936	9.03	8,400
1920	May 17, 1920	6.42	3,640		May 5, 1936	7.59	5,550
					May 15, 1936	8.24	6,860
1921	Apr. 13, 1921	6.06	3,120		June 1, 1936	6.78	4,190
	Apr. 23, 1921	6.40	3,610		June 7, 1936	6.23	3,380
	May 17, 1921	9.44	9,020				
	May 27, 1921	8.93	7,060	1937	May 6, 1937	6.00	3,060
	June 12, 1921	9.18	7,060				
	June 24, 1921	6.80	3,680	1938	Dec. 12, 1937	7.10	4,680
					May 1, 1938	9.31	8,600
1922	Apr. 28, 1922	6.72	3,760		May 17, 1938	8.22	6,480
	May 6, 1922	7.85	5,410		May 28, 1938	8.93	7,810
	May 20, 1922	8.85	6,680				
	May 26, 1922	9.05	7,060	1939	May 5, 1939	6.13	3,320
	June 6, 1922	8.57	6,120				
	June 14, 1922	8.35	6,310	1940	May 13, 1940	6.84	4,190
1923	May 10, 1923	6.81	4,100	1941	May 13, 1941	6.65	3,880
	May 26, 1923	7.42	5,080		May 27, 1941	6.57	3,880
	June 12, 1923	6.94	4,260				
				1942	Apr. 14, 1942	6.68	4,030
1924	May 13, 1924	5.19	2,150		Apr. 22, 1942	6.60	3,880
					May 26, 1942	7.00	4,510
1925	Apr. 12, 1925	7.54	5,260		June 8, 1942	6.72	4,030
	May 8, 1925	7.81	5,800				
	May 21, 1925	8.25	6,660	1943	Apr. 8, 1943	8.52	6,850
	June 22, 1925	6.64	3,800		Apr. 17, 1943	10.05	9,550
					May 5, 1943	8.70	7,190
1926	May 5, 1926	6.04	3,040		May 13, 1943	9.9	9,360
					May 31, 1943	8.82	7,370
1927	May 1, 1927	8.14	5,530		June 13, 1943	7.42	5,040
	May 17, 1927	10.1	8,440		June 19, 1943	7.76	5,680
	June 8, 1927	8.90	6,650				
				1944	May 15, 1944	6.08	3,180
1928	May 11, 1928	8.71	7,570				
	May 26, 1928	8.08	6,370	1945	May 6, 1945	6.52	3,880
1929	May 25, 1929	6.48	3,660	1946	Apr. 27, 1946	8.22	6,370
				1947	Apr. 9, 1947	7.55	5,280
1930	May 30, 1930	6.33	3,440				
1931	May 7, 1931	5.16	2,100				

1945. Boise River at Dowling Ranch, near Arrowrock, Idaho

Location.--Lat 43°35', long 115°58', in sec.15, T.3 N., R.4 E., on left bank at Dowling Ranch, three-quarters of a mile upstream from Moore Creek and 4 miles downstream from Arrowrock.

Drainage area.--2,220 sq mi, approximately.

Gage.--Nonrecording prior to Mar. 18, 1915; recording thereafter. Altitude of gage is 2,890 ft (from Corps of Engineers topography of Lucky Peak Reservoir).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--River in canyon; not subject to overflow.

Remarks.--Flood flows regulated by Arrowrock Reservoir (capacity, 286,600 acre-ft) since 1915 and by Anderson Ranch Reservoir (capacity, 464,200 acre-ft) since 1946. Only annual peaks are shown.

Peak stages and discharges of Boise River at Dowling Ranch, near Arrowrock, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 13, 1911	8.7	15,100	1933	June 16, 1933	8.02	11,400
1912	June 9, 1912	8.4	14,000	1934	May 18, 1934	5.16	3,950
1913	May 28, 1913	8.4	14,000	1935	June 9, 1935	7.38	9,570
1914	May 23, 1914	7.7	11,500				
1915	Apr. 20, 1915	4.85	3,340	1936	Apr. 24, 1936	9.27	15,800
				1937	May 28, 1937	6.11	5,940
1916	June 19, 1916	8.34	13,600	1938	May 28, 1938	9.03	14,800
1917	June 22, 1917	7.82	11,400	1939	May 5, 1939	6.65	7,250
1918	June 14, 1918	8.01	12,200	1940	May 13, 1940	7.40	9,260
1919	May 29, 1919	8.26	13,600				
1920	June 9, 1920	6.25	6,700	1941	May 27, 1941	7.10	8,380
				1942	May 27, 1942	7.48	9,400
1921	June 12, 1921	9.27	16,500	1943	Apr. 20, 1943	9.93	18,800
1922	May 26, 1922	8.90	14,700	1944	May 16, 1944	6.56	6,980
1923	May 26, 1923	7.50	10,300	1945	May 6, 1945	7.59	9,980
1924	May 24, 1924	4.95	3,440				
1925	May 20, 1925	8.72	14,300	1946	Apr. 29, 1946	8.39	12,500
				1947	May 9, 1947	8.06	11,500
1926	May 2, 1926	5.24	4,090	1948	May 29, 1948	8.28	12,000
1927	May 18, 1927	9.08	15,700	1949	May 29, 1949	7.14	8,500
1928	May 11, 1928	9.65	17,600	1950	June 5, 1950	7.41	9,440
1929	June 17, 1929	6.45	6,910				
1930	May 31, 1930	6.50	7,050	1951	May 30, 1951	7.68	10,200
				1952	May 15, 1952	7.37	9,470
1931	May 9, 1931	5.32	4,090	1953	June 22, 1953	7.92	10,700
1932	May 15, 1932	8.43	12,600	1954	May 20, 1954	7.21	8,930

1965. Bannock Creek near Idaho City, Idaho

Location.--Lat 43°48'30", long 115°46'30", in SE¼SW¼ sec.32, T.6 N., R.6 E., on right bank three-quarters of a mile upstream from South Fork, 2¼ miles upstream from mouth, and 3 miles southeast of Idaho City.

Drainage area.--4.5 sq mi, approximately. Mean altitude, 5,?40 ft.

Gage.--Recording gage and broad-crested wooden control. Altitude of gage is 4,090 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--3 ft.

Remarks.--Base for partial-duration series, 4.5 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 4, 1939	1.00	4.4	1953	Apr. 28, 1953	1.49	16
					May 19, 1953	1.23	8.7
1940	Mar. 26, 1940	1.68	23		June 7, 1953	1.35	12
	Mar. 31, 1940	1.25	9.0				
	Apr. 27, 1940	1.13	6.5	1954	Nov. 23, 1953	1.01	4.9
					Mar. 9, 1954	1.06	5.3
1941	Dec. 15, 1940	a1.09	-		Apr. 18, 1954	1.47	14
	Apr. 4, 1941	1.01	4.7		May 31, 1954	.99	4.8
					June 15, 1954	.98	4.7
1951	Jan. 28, 1951	a1.44	-				
	Feb. 26, 1951	a1.62	-	1955	Apr. 22, 1955	.94	5.2
	Mar. 10, 1951	a1.71	-		May 8, 1955	1.18	9.0
	Mar. 18, 1951	a1.90	-				
	Mar. 23, 1951	a1.67	-	1956	Dec. 19, 1955	.93	5.2
	Mar. 28, 1951	a1.65	-		Dec. 23, 1955	1.91	31
	Apr. 16, 1951	-	b13		Jan. 15, 1956	.95	5.5
	Apr. 29, 1951	-	b14		Apr. 26, 1956	1.65	22
					May 19, 1956	1.29	11
1952	Feb. 6, 1952	a2.03	-		May 24, 1956	1.25	9.9
	Feb. 7, 1952	a1.60	-		May 29, 1956	1.16	8.1
	Feb. 13, 1952	a1.49	-		June 15, 1956	1.01	5.8
	Mar. 14, 1952	a1.81	-				
	Mar. 21, 1952	a1.64	-	1957	Feb. 26, 1957	.94	5.7
	Apr. 26, 1952	1.95	33		Mar. 12, 1957	.85	4.5
					Apr. 5, 1957	1.26	11.0
1953	Jan. 19, 1953	1.12	6.8		Apr. 22, 1957	1.35	13.0
	Feb. 19, 1953	a1.38	-		May 12, 1957	1.65	24.0

a Backwater from ice.
b Estimated daily mean discharge.

2000. Moore Creek above Robie Creek, near Arrowrock, Idaho

Location.--Lat 43°38'45", long 115°58'45", in SE¼ sec.28, T.4 N., R.4 E., on left bank at State roadside park, 1.7 miles upstream from Robie Creek, 5 miles northwest of Arrowrock, and 5.8 miles upstream from mouth.

Drainage area.--399 sq mi.

Gage.--Recording. Altitude of gage is 3,120 ft (from topographic map).

Stage-discharge relation.--Well defined by current-meter measurements.

Bankfull stage.--8.5 ft.

Remarks.--Base for partial-duration series, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Apr. 8, 1951	6.63	2,270	1955	Apr. 22, 1955	4.94	1,110
	Apr. 29, 1951	5.91	1,720		May 9, 1955	5.03	1,170
	May 11, 1951	5.11	1,170		May 22, 1955	4.64	934
1952	Apr. 19, 1952	8.07	3,470	1956	Dec. 23, 1955	9.55	5,440
	Apr. 27, 1952	8.23	3,620		Jan. 16, 1956	5.15	1,300
					Feb. 1, 1956	a8.21	-
1953	Jan. 18, 1953	5.80	1,700		Feb. 16, 1956	a7.53	-
	Feb. 4, 1953	4.58	886		Mar. 26, 1956	6.43	2,190
	Apr. 6, 1953	4.70	958		Apr. 16, 1956	6.71	2,420
	Apr. 28, 1953	6.11	1,930		Apr. 26, 1956	6.62	2,350
	May 7, 1953	4.81	1,040		May 24, 1956	5.63	1,590
	May 20, 1953	5.11	1,230				
	June 7, 1953	5.04	1,180	1957	Feb. 26, 1957	5.77	1,690
					Mar. 10, 1957	-	(b)
1954	Mar. 10, 1954	6.18	1,910		Apr. 6, 1957	6.45	2,210
	Apr. 6, 1954	5.40	1,440		May 19, 1957	6.17	2,000
	Apr. 14, 1954	5.67	1,550				
	May 10, 1954	4.7	946				

a Backwater from ice.
b Discharge above base.

2005. Robie Creek near Arrowrock, Idaho

Location.--Lat 43°37'30", 115°59'45", in N½ sec. 5, T.3 N., R.4 E., on left bank 0.5 mile upstream from mouth and 5 miles northwest of Arrowrock.

Drainage area.--15.8 sq mi. Mean altitude, 4,960 ft.

Gage.--Recording gage and concrete control. Altitude of gage is 3,080 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 110 cfs and extended above on basis of logarithmic plotting.

Bankfull stage.--2.2 ft.

Remarks.--Base for partial-duration series, 35 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Jan. 30, 1951	a2.13	-	1955	Apr. 22, 1955	2.07	56
	Feb. 7, 1951	2.04	53				
	Apr.6,7or8,1951	2.18	72	1956	Dec. 23, 1955	2.67	163
	Apr. 28, 1951	2.07	56		Mar. 25, 1956	2.19	80
					Apr. 16, 1956	2.08	62
1952	Dec. 24, 1951	a2.05	-		Apr. 26, 1956	2.13	68
	Mar. 28, 1952	1.96	55		May 4, 1956	1.82	35
	Apr.7 or 8,1952	2.42	116				
	Apr. 18, 1952	2.41	115	1957	Feb. 26, 1957	2.23	88
	May 8, 1952	2.11	72		Mar. 9, 1957	1.84	41
					Mar. 12, 1957	1.81	38
1953	Jan. 18, 1953	2.43	118		Mar. 20, 1957	1.82	39
	Apr. 23, 1953	1.85	39		Mar. 31, 1957	1.92	49
	Apr. 28, 1953	1.87	41		Apr. 5, 1957	2.24	92
					May 19, 1957	1.83	38
1954	Mar. 10, 1954	1.92	40				

a Backwater from ice.

2010. Moore Creek near Arrowrock, Idaho

Location.--Lat 43°35', long 115°59', in sec.21, T.3 N., R.4 E., on right bank 150 ft downstream from bridge on old Boise-Arrowrock highway, a quarter of a mile upstream from mouth, and 3 miles southwest of Arrowrock.

Drainage area.--426 sq mi. Mean altitude, 4,960 ft.

Gage.--Nonrecording. At various sites within 1,100 ft at various datums, prior to Oct. 1, 1948. Datum of gage is 2,896.11 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 5,100 cfs and extended above on basis of logarithmic plotting.

Bankfull stage.--River in canyon.

Historical data.--Local resident stated flood in the 1890's several feet higher than peak of Apr. 8, 1943. Year was probably 1896.

Remarks.--Only annual observed peaks are shown 1916-50. Thereafter, peaks for partial-duration series (base, 850 cfs) are from graph based on gage readings and record for Moore Creek above Robie Creek near Arrowrock.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1916	Apr. 11, 1916	6.3	3,140	1942	(b)	c5.7	-
1917	May 15, 1917	5.65	2,430		Apr. 14, 1942	3.70	1,430
1918	Mar. 27, 1918	5.40	2,170	1943	Apr. 8, 1943	7.1	6,610
1919	Apr. 4, 1919	6.00	2,800	1944	Apr. 26, 1944	2.92	762
1920	Apr. 13, 1920	4.45	1,150	1945	Apr. 21, 1945	4.02	1,520
1921	Apr. 3, 1921	5.5	2,170	1946	Apr. 19, 1946	5.90	3,990
1922	Apr. 28, 1922	3.32	1,990	1947	Dec. 14, 1946	3.80	1,120
1923	Apr. 17, 1923	2.90	1,220	1948	Apr. 17, 1948	5.10	2,790
1924	Apr. 14, 1924	1.90	358	1949	Apr. 19, 1949	3.84	1,670
1925	Apr. 12, 1925	3.50	2,280	1950	Apr. 22, 1950	4.06	1,900
1926	May 5, 1926	2.58	809	1951	Feb. 8, 1951	2.81	856
1927	Apr. 27, 1927	4.30	2,670		Apr. 8, 1951	4.52	2,480
1928	Mar. 25, 1928	4.40	2,810		Apr. 29, 1951	3.95	1,850
1929	Apr. 29, 1929	2.90	1,040				
1930	Apr. 7, 1930	2.70	730	1952	Apr. 19, 1952	5.35	3,760
					Apr. 27, 1952	5.37	4,040
1931	Mar. 22, 1931	2.86	885				
1932	Mar. 19, 1932	5.2	4,250	1953	Jan. 18, 1953	4.00	2,180
1933	Apr. 28, 1933	4.4	2,800		Feb. 4, 1953	2.77	939
1934	Mar. 29, 1934	2.86	1,040		Apr. 6, 1953	2.90	1,040
1935	Apr. 16, 1935	3.70	2,050		Apr. 28, 1953	3.90	2,060
					May 8, 1953	2.97	1,100
1936	Apr. 19, 1936	6.2	4,550		May 20, 1953	3.16	1,260
1937	Apr. 14, 1937	4.04	1,600		June 8, 1953	3.15	1,260
1938	May 1, 1938	a 5.10	3,230				
1939	Apr. 4, 1939	3.76	1,500	1954	Mar. 10, 1954	3.87	2,020
1940	Mar. 27, 1940	5.4	3,370		Apr. 6, 1954	3.45	1,520
					Apr. 14, 1954	3.52	1,630
1941	Apr. 5, 1941	2.82	838		May 10, 1954	2.76	960

a Occurred Apr. 19, 1938.
b About Jan. 6, 1942.
c Backwater from ice.

2020. Boise River near Boise, Idaho
(Published as "near Highland" 1905-15 and as "below Moore Creek, near Arrowrock" in 1916)

Location.--Lat 43°32', long 116°04', in NE¼ sec. 11, T.2 N., R.3 E., at gate control house at outlet works of Lucky Peak Reservoir, 1.8 miles upstream from diversion dam for New York Canal, 7½ miles downstream from mouth of Moore Creek, and 9 miles southeast of Boise.

Drainage area.--2,680 sq mi, approximately; during period 1905-16, 2,650 sq mi, approximately. Mean altitude, 5,910 ft.

Gage.--Nonrecording prior to Mar. 21, 1915; recording thereafter. At sites about 1 mile downstream at different datums prior to Mar. 18, 1905. At sites 5 to 7 miles upstream at different datums Mar. 18, 1905, to Sept. 30, 1916. Remote recorder records of gate openings and reservoir elevation since Apr. 28, 1955. Elevation of sill of slide gates is 2,827.0 ft (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below about 24,000 cfs, but definition is only fair above about 15,000 cfs. Information is incomplete for the earliest years.

Bankfull stage.--River in deep canyon; not subject to overflow.

Historical data.--Floods of 1871 and 1872 reached approximate maximum daily discharges of 43,000 cfs and 50,000 cfs, respectively, from reconstituted hydrographs based on temperature and precipitation records.

Remarks.--Flood flows regulated by Arrowrock Reservoir (capacity, 286,600 acre-ft) since 1915, by Anderson Ranch Reservoir (capacity, 464,200 acre-ft) since 1946, and by Lucky Peak Reservoir (capacity, 307,040 acre-ft) since 1955. Only annual peaks are shown. Peaks are maximum observed prior to 1915.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1895	May 6, 1895	6.0	7,880	1908	Apr. 22, 1908	10.5	10,600
				1909	June 5, 1909	13.9	16,000
1896	June 14, 1896	10.0	35,500	1910	Mar. 22, 1910	14.6	16,600
1897	Apr. 19, 1897	a9.3	29,500				
1898	Apr. 28, 1898	4.5	7,960	1911	June 13, 1911	11.9	15,100
1899	May 10, 1899	7.5	19,000	1912	June 9, 1912	11.6	15,600
1900	May 11, 1900	6.5	12,000	1913	May 28, 1913	12.1	13,300
				1914	Apr. 16, 1914	12.0	11,300
1901	May 16, 1901	7.2	13,900	1915	Apr. 20, 1915	7.16	3,650
1902	May 29, 1902	5.2	8,190				
1903	June 2, 1903	6.4	16,800	1916	June 19, 1916	10.0	15,100
1904	Apr. 15, 1904	7.85	19,700				
1905	June 2, 1905	8.1	6,260	1955	June 23, 1955	-	9,860
				1956	June 10, 1956	-	9,490
1906	May 12, 1906	10.3	8,710	1957	June 6-10, 1957	-	10,600
1907	Apr. 15, 1907	13.7	17,000				

a May have been higher during period of no record Apr. 20 to June 16, 1897.

2055. Boise River at Boise, Idaho

Location.--Lat 43°37', long 116°13', in SW¼ sec.10, T.3 N., R.2 E., on right bank at Capitol Boulevard Bridge at Boise.

Drainage area.--2,760 sq mi, approximately.

Gage.--Nonrecording prior to Feb. 27, 1940; recording thereafter. At site 400 ft downstream prior to Feb. 27, 1940. At site 1 mile upstream at datum 13.69 ft higher Feb. 27, 1940, to Apr. 29, 1943. Datum of gage is 2,675.46 ft above mean sea level (datum of Corps of Engineers, Boise River Surveys).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--9 ft.

Remarks.--Flood flows regulated by Arrowrock Reservoir (capacity, 286,600 acre-ft), by Anderson Ranch Reservoir (capacity, 464,200 acre-ft) since 1946, and by Lucky Peak Reservoir (capacity, 307,040 acre-ft) since 1955. Several major diversions above station for irrigation. Only annual peaks are shown.

Peak stages and discharges of Boise River at Boise, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	May 2, 1938	(a)	-	1948	May 29, 1948	7.99	9,860
1939	Apr. 4, 1939	(b)	-	1949	May 30, 1949	6.58	5,760
1940	May 14, 1940	6.76	6,660	1950	June 1, 1950	6.99	6,820
1941	May 27, 1941	6.53	5,730	1951	May 14, 1951	7.39	7,560
1942	May 27, 1942	7.02	7,310	1952	Apr. 27, 1952	7.55	7,920
1943	Apr. 20, 1943	10.00	21,000	1953	June 19, 1953	7.70	8,270
1944	May 16, 1944	5.68	4,030	1954	May 22, 1954	6.66	6,080
1945	May 6, 1945	7.02	7,350	1955	Aug. 1, 1955	4.75	1,880
1946	Apr. 29, 1946	8.50	10,900	1956	Mar. 10, 1956	7.15	7,010
1947	May 9, 1947	7.69	8,820	1957	June 8, 1957	7.28	6,910

a Maximum observed elevation, 2,684.27 ft; discharge unknown.
b Maximum observed elevation, 2,681.27 ft; discharge unknown.

2125. Boise River at Notus, Idaho

Location.--Lat 43°43', long 116°48', in SE¼ sec.34, T.5 N., R.4 W., on right bank 1,100 ft upstream from county road bridge, a quarter of a mile southeast of Notus, and 7 miles northwest of Caldwell.

Drainage area.--3,820 sq mi, approximately.

Gage.--Nonrecording prior to Aug. 26, 1936, at site 1,100 ft downstream; recording thereafter. Datum of gage is 2,288.55 ft above mean sea level (datum of Corps of Engineers, Boise River Surveys).

Stage-discharge relation.--Defined by current-meter measuremerts below 17,000 cfs.

Bankfull stage.--8.5 ft.

Remarks.--Diversions above station for irrigation of about 309,300 acres. Flow regulated by Arrowrock Reservoir (capacity, 286,600 acre-ft), by Anderson Ranch Reservoir (capacity, 464,200 acre-ft) since 1946, and by Lucky Peak Reservoir (capacity, 307,040 acre-ft) since 1955. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1920	June 1, 1920	4.0	3,060	1939	Apr. 4, 1939	5.93	5,920
				1940	Apr. 16, 1940	6.45	5,980
1921	May 19, 1921	7.0	14,500				
1922	May 26, 1922	7.0	13,200	1941	May 28, 1941	5.70	4,330
1923	May 27, 1923	5.4	7,160	1942	Apr. 16, 1942	6.93	6,630
1924	Oct. 28, 1923	2.8	1,110	1943	Apr. 20, 1943	10.43	20,500
1925	May 21, 1925	6.5	10,200	1944	May 16, 1944	4.43	2,050
				1945	May 7, 1945	6.35	5,150
1926	Nov. 5, 1925	3.2	1,570				
1927	June 14, 1927	6.85	11,500	1946	(b)	8.61	11,500
1928	May 12, 1928	7.4	14,000	1947	May 10, 1947	7.43	7,640
1929	June 17, 1929	4.45	4,180	1948	June 4, 1948	8.23	7,880
1930	Feb. 3, 1930	a4.5	-	1949	Mar. 17, 1949	6.66	5,710
	June 1, 1930	4.35	3,650	1950	Apr. 13, 1950	6.94	6,150
1931	Jan. 24, 1931	2.9	1,040	1951	May 14, 1951	7.60	7,540
1932	May 22, 1932	6.65	9,460	1952	Apr. 15, 1952	8.14	8,460
1933	June 16, 1933	6.2	8,180	1953	June 3, 1953	7.82	7,690
1934	Oct. 31, 1933	3.0	1,160	1954	Mar. 14, 1954	6.30	5,340
1935	June 10, 1935	5.2	5,070	1955	Oct. 16, 1954	3.64	1,600
1936	Apr. 24, 1936	7.9	13,400	1956	Mar. 11, 1956	7.44	6,960
1937	May 30, 1937	3.73	1,530	1957	May 19, 1957	7.56	7,400
1938	May 3, 1938	9.12	12,800				

a Backwater from ice.
b About Apr. 8, 1946.

2140. Malheur River near Drewsey, Oreg.

Location.--Lat 43°47', long 118°20', in SE¼ sec.31, T.20 S., R.36 E., on left bank 300 ft downstream from bridge on U.S. Highway 20, half a mile downstream from Cottonwood Creek, and 3 miles southeast of Drewsey.

Drainage area.--910 sq mi, approximately. Mean altitude, 4,900 ft.

Gage.--Recording. At site half a mile downstream at different datum prior to Apr. 27, 1923. At site 7 miles downstream at different datum Apr. 27, 1923, to June 6, 1939. Datum of gage is 3,479.13 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined at present site by current-meter measurements below 3,500 cfs, and extended on basis of contracted-opening measurement at 10,700 cfs.

Bankfull stage.--11 ft.

Remarks.--Diversions for irrigation of 13,000 acres considerably reduce flows during the irrigation seasons. Base for partial-duration series, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)
1921	Dec. 30, 1920	a4.94	-
	Apr. 14, 1921	b5.63	2,240
	Apr. 29, 1921	5.42	2,100
	May 22, 1921	4.95	1,820
1922	Mar. 24, 1922	3.49	850
	Apr. 4, 1922	-	-
	Apr. 8, 1922	-	-
	Apr. 23, 1922	b7.2	3,700
1927	Feb. 3, 1927	a6.95	-
	Feb. 21, 1927	6.46	2,300
	Mar. 14, 1927	5.19	1,290
	Apr. 3, 1927	4.63	942
	Apr. 29, 1927	5.32	1,360
	June 9, 1927	5.66	1,640
1928	Jan. 14, 1928	4.59	915
	Mar. 6, 1928	a6.18	-
	Mar. 12, 1928	6.61	2,390
	Mar. 27, 1928	7.30	3,050
	Apr. 28, 1928	4.47	832
1929	Mar. 4, 1929	a4.64	-
	Mar. 6, 1929	a6.0	-
	Mar. 8, 1929	a4.89	-
	Mar. 11, 1929	3.99	746
1930	Feb. 13, 1930	a4.52	-
1931	Feb. 19, 1931	a3.65	-
	Mar. 19, 1931	3.55	565
1932	Mar. 7, 1932	a6.80	-
	Mar. 9, 1932	a4.93	-
	Mar. 19, 1932	8.17	3,800
	Mar. 25, 1932	5.00	1,080
	Mar. 29, 1932	4.72	878
	Apr. 3, 1932	4.84	976
	Apr. 16, 1932	5.39	1,360
	Apr. 27, 1932	5.17	1,180
1933	Apr. 4, 1933	4.60	815
	Apr. 29, 1933	4.66	845
1934	Jan. 12, 1934	2.62	132
	Jan. 24, 1934	2.62	132
1935	Apr. 8, 1935	4.60	810
	Apr. 17, 1935	4.77	900
1936	Feb. 22, 1936	a7.07	2,400
	Apr. 20, 1936	5.73	1,610
1937	Apr. 16, 1937	4.44	730
1938	Dec. 12, 1937	5.75	1,610
1938	Feb. 27, 1938	4.74	900
	Mar. 2, 1938	5.86	1,690
	Mar. 14, 1938	5.73	1,610
	Mar. 17, 1938	5.28	1,270
	Mar. 19, 1938	5.08	1,130
	Mar. 28, 1938	4.58	810
	Apr. 20, 1938	6.20	1,970
1939	Mar. 21, 1939	4.96	1,030
1940	Feb. 6, 1940	7.15	1,270
	Feb. 10, 1940	6.38	915
	Feb. 27, 1940	11.35	4,290
	Mar. 8, 1940	6.46	935
	Mar. 27, 1940	9.90	3,000
	Mar. 31, 1940	10.00	3,080
	Apr. 10, 1940	6.84	1,110
1941	Dec. 27, 1940	6.54	980
	Jan. 26, 1941	6.54	1,020
	Feb. 24, 1941	7.89	1,670
	Mar. 2, 1941	10.02	3,100
	Mar. 6, 1941	7.83	1,640
	Mar. 9, 1941	8.10	1,780
	Mar. 18, 1941	8.25	1,870
	Apr. 5, 1941	8.16	1,820
1942	Mar. 12, 1942	7.70	1,570
	Apr. 4, 1942	8.26	1,880
	Apr. 13, 1942	8.01	1,740
1943	Nov. 29, 1942	6.10	830
	Jan. 1, 1943	8.46	2,000
	Jan. 22, 1943	8.86	2,260
	Mar. 9, 1943	7.84	1,640
	Mar. 14, 1943	7.33	1,380
	Mar. 28, 1943	9.16	2,460
	Apr. 8, 1943	8.68	2,140
	Apr. 16, 1943	9.19	2,480
1944	Feb. 6, 1944	6.68	1,090
	Mar. 10, 1944	6.94	1,200
1945	Jan. 7, 1945	7.86	1,650
	Feb. 8, 1945	10.27	3,260
	Feb. 12, 1945	6.73	1,080
	Feb. 14, 1945	8.81	2,180
	Mar. 23, 1945	8.27	1,880
	Apr. 22, 1945	6.80	1,140
1946	Dec. 28, 1945	a8.05	-
	Dec. 29, 1945	8.28	1,890
	Feb. 27, 1946	9.85	2,960
	Mar. 6, 1946	6.32	933
	Mar. 13, 1946	7.66	1,550
	Mar. 21, 1946	7.65	1,540
	Mar. 27, 1946	6.07	844

a Backwater from ice.
b Maximum recorded.

Peak stages and discharges of Malheur River near Drewsey, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Apr. 19, 1946	8.00	1,730	1953	Jan. 9, 1953	a6.22	-
					Jan. 12, 1953	a7.43	-
1947	Feb. 13, 1947	11.41	4,210		Jan. 14, 1953	6.70	1,030
	Feb. 17, 1947	6.35	945		Jan. 19, 1953	10.56	3,190
					Feb. 4, 1953	6.32	878
1948	Jan. 7, 1948	6.90	1,180		Apr. 23, 1953	7.44	1,350
	Apr. 22, 1948	6.40	1,010		Apr. 28, 1953	7.85	1,540
					May 21, 1953	6.33	882
1949	Feb. 17, 1949	a7.70	-				
	Feb. 19, 1949	9.8	2,920	1954	Mar. 10, 1954	5.77	710
	Mar. 19, 1949	6.22	938				
	Apr. 13, 1949	6.41	1,010	1955	May 7, 1955	4.98	509
	Apr. 20, 1949	6.66	1,120				
				1956	Dec. 22, 1955	7.49	1,450
1950	Feb. 25, 1950	a7.60	-		Jan. 16, 1956	8.09	1,740
	Feb. 25, 1950	7.0	1,270		Jan. 23, 1956	7.09	1,290
	Mar. 18, 1950	6.77	1,170		Feb. 22, 1956	a7.76	1,270
	Apr. 2, 1950	6.16	914		Mar. 1, 1956	5.94	826
	Apr. 23, 1950	6.30	970		Mar. 19, 1956	7.95	1,680
					Mar. 26, 1956	9.49	2,440
1951	Feb. 5, 1951	a9.14	-		Apr. 16, 1956	7.76	1,530
	Feb. 5, 1951	7.22	1,380		May 8, 1956	6.29	916
	Feb. 8, 1951	8.84	2,260				
	Mar. 21, 1951	6.66	1,120	1957	Feb. 24, 1957	13.20	10,700
	Mar. 25, 1951	6.10	890		Mar. 5, 1957	7.36	1,240
	Apr. 8, 1951	7.38	1,460		Mar. 12, 1957	7.04	1,080
					Apr. 1, 1957	6.52	858
1952	Feb. 5, 1952	(c)	-		Apr. 6, 1957	7.10	1,110
	Mar. 25, 1952	12.90	9,030		Apr. 15, 1957	7.46	1,290
	Apr. 6, 1952	11.61	4,030		May 19, 1957	6.47	838
	Apr. 14, 1952	9.94	2,760				
	Apr. 19, 1952	10.15	2,900				

a Backwater from ice.
c Stage and discharge unknown.

2150. Malheur River below Warmsprings Reservoir, near Riverside, Oreg.
(Published as Middle Fork of Malheur River at Riverside 1906-7, as Middle Fork of Malheur River above South Fork, at Riverside 1909-10, as Malheur River above South Fork, at Riverside, in WSP 370, 1906-10, and as Malheur River at Warm Springs Reservoir site, near Riverside 1914-17)

Location.--Lat 43°34', long 118°12', in SW¼ sec.17, T.23 S., R.37 E., on left bank 1 mile downstream from Warmsprings Dam, 3 miles upstream from South Fork, and 4 miles northwest of Riverside.

Drainage area.--1,100 sq mi, approximately.

Gage.--Nonrecording prior to Sept. 28, 1949; recording thereafter, except Mar. 18, 1919 to Apr. 27, 1920. At sites about 3 miles downstream at different datums Jan. 3, 1906, to May 25, 1910. At sites about 1 mile upstream at different datums Dec. 9, 1914, to Apr. 27, 1920. At site within 80 ft of present gage Apr. 28, 1920, to Sept. 28, 1949. Concrete control at present site. Altitude of gage is 3,305 ft (by barometer).

Stage-discharge relation.--Fairly well defined by current-meter measurements. Peak of 1910 obtained from rating curve extended above 820 cfs by logarithmic plotting.

Bankfull stage.--Not subject to overflow.

Remarks.--Flow regulated since November 1919 by Warmsprings Reservoir (capacity, 191,000 acre-ft). Only annual peaks are shown except for years 1915-17, for which base for partial-duration series is 420 cfs.

Peak stages and discharges of Malheur River below Warmsprings Reservoir, near Riverside, Oreg.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	Jan. 17, 1909	6.4	2,430	1927	June 10, 1927	5.36	855
1910	Mar. 1, 1910	10.7	7,200	1928	Mar. 29, 1928	6.23	1,270
				1929	July 1,2, 1929	5.00	570
1915	Mar. 16, 1915	2.67	598	1930	June 30, 1930	4.53	343
	Mar. 25, 1915	2.67	598				
	Mar. 30, 1915	2.86	674	1931	May 13-21, 1931	4.55	343
	Apr. 5, 1915	3.20	820	1932	July 2-15,1932	4.80	480
				1933	July 6-17,1933	4.84	496
1916	Jan. 26, 1916	a3.05	752	1934	June 22,23,1934	4.67	402
	Feb. 3, 1916	2.70	610	1935	May 21-23,1935	4.81	472
	Feb. 6, 1916	a8.10	-				
	Feb. 11, 1916	4.84	1,970	1936	July 4-8, 1936	5.20	735
	Mar. 6, 1916	2.48	522	1937	May 17-20,1937	4.78	475
	Mar. 13, 1916	4.83	1,960	1938	June 17-22,1938	4.71	415
	Mar. 21, 1916	6.55	3,650	1939	Apr.22-24,1939	5.09	665
	Mar. 28, 1916	3.77	1,160	1940	June 19-28,1940	5.04	632
	Apr. 2, 1916	4.93	2,050				
	Apr. 12, 1916	5.59	2,700	1941	Mar.20-23,1941	6.88	1,500
	Apr. 28, 1916	4.17	1,450	1942	Apr. 15, 1942	7.35	1,770
	May 20, 1916	2.47	550	1943	Apr.7-10, 1943	7.44	1,860
				1944	July 14-20,1944	5.44	755
1917	Feb. 26, 1917	4.60	1,780	1945	July 10-17,1945	5.42	745
	Mar. 25, 1917	4.11	1,370				
	Mar. 29, 1917	3.52	990	1946	May 17-21, 1946	5.65	862
	Apr. 7, 1917	3.17	840	1947	July 2-11,1947	5.32	695
	Apr. 12, 1917	4.34	1,530	1948	July 16-18,1948	5.16	615
	Apr. 28, 1917	3.88	1,230	1949	June 14-29,1949	5.14	620
	May 9, 1917	4.14	1,370	1950	July 13, 1950	4.97	562
1919	Apr. 5, 1919	5.30	1,350	1951	Apr. 26, 1951	4.91	515
1920	June 3-7, 1920	4.50	310	1952	Apr. 20, 1952	8.10	2,110
				1953	Apr. 30, 1953	6.62	1,400
1921	Apr. 24, 1921	6.97	1,480	1954	May 11, 1954	5.30	740
1922	Apr. 24, 1922	7.75	1,870	1955	May 13, 1955	4.88	530
1923	July 18,19,1923	4.75	468				
1924	June 30, 1924	b4.60	435	1956	July 7, 1956	5.14	660
1925	Apr. 27, 1925	5.72	900	1957	Apr. 14, 1957	6.38	1,280
1926	May 1-4, 1926	4.80	470				

a Backwater from ice.
b Same peak until July 14.

2155. South Fork Malheur River at Riverside, Oreg.

Location.--Lat 43°32', long 118°10', in NW¼ sec.27, T.23 S., R.37 E., 1,000 ft upstream from mouth and 1 mile northwest of Riverside.

Drainage area.--630 sq mi, approximately.

Gage.--Nonrecording. At sites within 200 ft at slightly different datums. Altitude of gages is 3,270 ft (by levels to approximate gage datum).

Stage-discharge relation.--Defined by current-meter measurements below 610 cfs and extended above.

Bankfull stage.--Not subject to overflow.

Remarks.--Records for 1928 furnished by the State engineer of Oregon. Diversions for irrigation of about 5,000 acres above station. Flow regulated by reservoirs having combined capacity of 7,000 acre-ft. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	Jan. 31, 1911	4.5	1,210	1914	Feb. 21, 1914	4.6	808
1912	Apr. 26, 1912	8.0	2,770				
1913	Feb. 15, 1913	4.8	890	1928	Mar. 27, 1928	3.22	928

2160. Malheur River at Riverside, Oreg.
(Published as Middle Fork Malheur River at Riverside 1910-12)

Location.--Lat 43°32', long 118°10', in SW¼ sec.22, T.23 S., R.37 E., at bridge 300 ft downstream from South Fork and three-quarters of a mile northwest of Riverside.

Drainage area.--1,750 sq mi, approximately.

Gage.--Nonrecording. Datum of gage is 3,264.70 ft above mean sea level (Oregon Eastern Railway bench mark).

Stage-discharge relation.--Defined by current-meter measurements below 900 cfs and extended above.

Bankfull stage.--Not subject to overflow.

Remarks.--Flood peaks probably affected a little by regulation by reservoirs having combined capacity of 5,000 acre-ft. Flows during irrigation season reduced by irrigation diversions for 16,000 acres above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	Mar. 1, 1910	11.60	11,500	1913	Apr. 19, 1913	b3.80	1,490
1911	Mar. 24, 1911	4.9	2,950	1914	Mar.17,18,1914	b4.4	2,050
1912	Apr. 26, 1912	5.3	a3,330				

a Revised.
b Maximum observed.

2165. North Fork Malheur River above Agency Valley Reservoir, near Beulah, Oreg.

Location.--Lat 43°58', long 118°11', in sec.33, T.18 S., R.37 E., on left bank 3 miles upstream from Warm Springs Creek, 4 miles upstream from Agency Valley Dam, and 4 miles northwest of Beulah.

Drainage area.--355 sq mi. Mean altitude, 5,360 ft.

Gage.--Nonrecording prior to July 1936; recording thereafter. At different datum prior to Sept. 30, 1914. Altitude of present gage is 3,350 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 620 cfs and extended by logarithmic plotting.

Bankfull stage.--4 ft.

Remarks.--Diversions upstream for irrigation of about 900 acres. Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Apr. 15, 1914	a4.8	866	1941	Mar. 1, 1941	3.31	589
					Mar. 18, 1941	3.62	682
1937	Apr. 15, 1937	2.62	382		Mar. 28, 1941	4.06	814
					Apr. 4, 1941	4.44	944
1938	Dec. 11, 1937	4.25	852		May 1, 1941	3.88	789
	Mar. 1, 1938	3.55	640		May 13, 1941	3.00	529
	Mar. 13, 1938	3.64	670				
	Mar. 16, 1938	4.00	775	1942	Jan. 3, 1942	c2.67	-
	Mar. 19, 1938	3.52	625		Apr. 13, 1942	4.02	816
	Apr. 19, 1938	4.39	905				
				1943	Dec. 31, 1942	3.03	521
1939	Mar. 20 or 21, 1939	(b)	(b)		Jan. 20, 1943	c2.88	-
					Mar. 28, 1943	4.38	933
					Apr. 7, 1943	4.29	902
1940	Feb. 28, 1940	4.42	912				
	Mar. 26, 1940	4.60	975	1944	Mar. 17, 1944	2.18	368
	Mar. 30, 1940	4.47	926				

a Maximum observed; only annual peak is shown.
b Stage and discharge unknown.
c Backwater from ice.

Peak stages and discharges of North Fork Malheur River above Agency Valley Reservoir, near Beulah, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Feb. 8, 1945	3.28	659	1952	Mar. 25, 1952	4.17	1,300
	Mar. 21, 1945	2.90	551		Apr. 7, 1952	3.84	1,240
	Apr. 24, 1945	2.71	503		Apr. 14, 1952	3.63	1,150
	May 4, 1945	2.90	560		Apr. 19, 1952	3.59	1,120
1946	Mar. 12, 1946	3.16	638	1953	Jan. 18, 1953	3.00	1,130
	Mar. 20, 1946	3.62	759		Apr. 28, 1953	2.42	840
	Apr. 19, 1946	3.85	868		May 20, 1953	1.74	508
	Apr. 26, 1946	3.47	734		May 31, 1953	2.04	650
					June 16, 1953	1.96	610
1947	Feb. 12, 1947	4.34	1,010				
	Feb. 16, 1947	3.19	612	1954	Apr. 19, 1954	1.50	460
1948	Feb. 22, 1948	3.53	726	1955	Jan. 30, 1955	c1.57	-
	May 28, 1948	3.46	701		Feb. 6, 1955	c1.69	-
	June 4, 1948	2.97	521		Feb. 13, 1955	c1.42	-
					Feb. 21, 1955	c1.48	-
1949	Mar. 18, 1949	2.88	554		Apr. 25, 1955	1.23	346
	Apr. 12, 1949	2.82	536				
	Apr. 20, 1949	3.11	623	1956	Dec. 22, 1955	2.07	685
	May 15, 1949	2.70	500		Feb. 23, 1956	c1.92	-
					Mar. 26, 1956	2.76	1,080
1950	Dec. 12, 1949	c2.56	-		Apr. 17, 1956	2.09	695
	Dec. 22, 1949	c3.36	-				
	Apr. 22, 1950	2.78	534	1957	Feb. 24, 1957	3.50	1,600
					Mar. 7, 1957	2.43	758
1951	Apr. 14, 1951	2.98	662		May 18, 1957	2.06	560
1952	Dec. 11, 1951	c2.62	-				

c Backwater from ice.

2175. North Fork Malheur River at Beulah, Oreg.
(Published as near Beulah" 1926-35)

Location.--Lat 43°54', long 118°09', in NW¼NE¼ sec.22, T.19 S., R.37 E., on left bank at Beulah, a quarter of a mile downstream from Agency Valley Dam and 12 miles northwest of Juntura.

Drainage area.--440 sq mi, approximately. Mean altitude, 5,180 ft.

Gage.--Recording prior to Apr. 25, 1936; nonrecording Apr. 25, 1936, to Sept. 30, 1949; recording thereafter. At site 1 mile downstream at different datum prior to Apr. 25, 1936. At site 20 ft downstream Apr. 25, 1936, to Sept. 20, 1949. Datum of gage is 3,262.20 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements. Peak of 1942 from computation of peak flow over dam.

Bankfull stage.--4.5 ft.

Remarks.--Flow regulated by Agency Valley Reservoir (capacity, 59,920 acre-ft) since December 1935. Base for partial-duration series, 400 cfs. Only annual peaks are shown after 1935.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Feb. 21, 1927	6.4	1,310	1930	Feb. 14, 1930	2.27	188
	Mar. 5, 1927	3.48	429				
	Mar. 13, 1927	5.40	970	1931	Mar. 18, 1931	2.82	288
	Apr. 3, 1927	4.10	587				
	Apr. 28, 1927	5.32	940	1932	Mar. 18, 1932	7.65	1,800
	May 10, 1927	4.25	628		Mar. 25, 1932	4.65	825
	June 8, 1927	4.67	751		Mar. 29, 1932	4.24	708
					Apr. 2, 1932	4.32	723
1928	Mar. 11, 1928	7.30	1,410		Apr. 27, 1932	3.75	566
	Mar. 20, 1928	4.21	540				
	Mar. 27, 1928	6.24	1,060	1933	Apr. 4, 1933	4.00	636
	Apr. 28, 1928	3.56	415		Apr. 30, 1933	3.68	552
	May 10, 1928	4.16	530				
				1934	Mar. 31, 1934	1.36	82
1929	Mar. 10, 1929	3.76	422				
				1935	Apr. 16, 1935	3.57	512
1930	Feb. 2, 1930	a2.45	-				

a Backwater from ice.

Peak stages and discharges of North Fork Malheur River at Beulah, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	July 22-26,1936	2.40	226	1947	Apr.25 to May 16, 1947	2.46	433
1937	July 9-10,16, 17, 1937	b3.50	401	1948	June 1-16,1948	2.58	469
1938	Apr.18,19, 1938	b6.00	1,260	1949	Apr.23 to May 2, 1949	2.70	505
1939	Apr. 5, 1939	2.80	b374				
1940	Apr. 13, 1940	7.0	2,140	1950	Apr.21-30,1950	2.62	446
1941	Apr.5,6, 1941	4.80	940	1951	June 20, 1951	2.59	422
1942	May 7, 1942	8.4	7,000	1952	Apr.27,28, 1952	5.00	1,240
1943	Apr. 18, 1943	5.05	1,060	1953	Apr. 28, 1953	4.01	864
1944	Apr.30, May 1, 1944	3.13	548	1954	June 27-30,1954	2.31	358
				1955	July 19, 1955	2.31	358
1945	May 6, 1945	2.84	503	1956	Apr. 21, 1956	3.39	677
1946	Apr. 29, 1946	3.80	885	1957	May 5, 1957	2.58	464

b Maximum observed.

2185. North Fork Malheur River at Juntura, Oreg.

Location.--Lat 43°45', long 118°04', in NE¼NE¼ sec.17, T.21 S., R.38 E., at road bridge half a mile northwest of Juntura.

Drainage area.--530 sq mi, approximately.

Gage.--Recording. Altitude of gage is 2,940 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 320 cfs and extended by logarithmic plotting.

Historical data.--Flood of May 7, 1942, which was caused by failure of gates at Agency Valley Dam, reached a stage of 7.95 ft (discharge not determined).

Remarks.--Diversions for irrigation of about 6,300 acres above station. Flow regulated by Agency Valley Reservoir (capacity, 59,920 acre-ft) since December 1935. Records furnished by the State engineer of Oregon. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Feb. 21, 1927	5.09	986	1937	July 12, 1937	3.07	400
1928	Mar. 12, 1928	5.52	1,120	1940	Mar. 28, 1940	5.41	1,160
1936	July 26, 1936	2.45	195				

2190. Malheur River near Namorf, Oreg.
(Published as "at Namorf" 1926-29)

Location.--Lat 43°47', long 117°46', in SW¼ sec.36, T.20 S., R.40 E., 1½ miles west of Namorf, 2 miles upstream from Vale-Oregon Canal diversion dam, and 10 miles southwest of Harper.

Drainage area.--2,590 sq mi, approximately.

Gage.--Nonrecording prior to Dec. 31, 1923; recording thereafter. At site 1½ miles upstream at different datum prior to Dec. 31, 1923. At site 2½ miles downstream at different datum June 12, 1926, to November 1930. Altitude of gage is 2,840 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 3,800 cfs.

Bankfull stage.--5 ft.

Historical data.--Flood of Mar. 1 or 2, 1910, reached a stage of 11.3 ft (by levels to 1918 datum), from floodmarks (discharge, 16,500 cfs). Flood of March 1894 reached a stage 0.3 ft higher than that of 1910.

Remarks.--Flow partly regulated by Warmsprings Reservoir (capacity, 191,000 acre-ft) since November 1919, and by other small reservoirs. Diversions for irrigation of about 25,000 acres above station. Records for 1930-31 furnished by State engineer of Oregon. Only annual peaks are shown.

Peak stages and discharges of Malheur River near Namorf, Oreg.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Mar. 18, 1914	a5.8	2,970	1927	Feb. 2, 1927	b4.32	-
1915	Apr.5,6, 1915	a4.3	1,110		Feb. 22, 1927	4.3	1,410
				1928	Mar. 27, 1928	5.47	2,220
1916	Feb. 7, 1916	9.1	8,450	1929	Mar. 3, 1929	b7.4	-
1917	Feb. 26, 1917	b8.1	4,250		May 18, 1929	2.99	796
1918	Mar. 20, 1918	a4.6	1,410	1930	Feb. 7, 1930	b5.62	-
1919	Apr.1,5, 1919	a4.62	2,940		Feb. 14, 1930	1.86	376
1920	Jan. 27, 1920	4.6	2,940				
				1931	May 21, 1931	2.04	416
1921	Feb. 11, 1921	a5.23	3,950				
1922	Apr. 24, 1922	a4.7	3,210				

a Maximum observed.
b Backwater from ice.

2200. Malheur River at Little Valley, near Hope, Oreg.

Location.--Lat 43°54', long 117°30', in SE¼ sec.24, T.19 S., R.42 E., on right bank 500 ft downstream from bridge at Little Valley, 8 miles southwest of Hope, and 14 miles southwest of Vale.

Drainage area.--3,010 sq mi, approximately.

Gage.--Recording. Datum of gage is 2,424.03 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 1,700 cfs and extended on basis of slope-area measurement at 12,300 cfs.

Bankfull stage.--11 ft.

Historical data.--The two greatest floods known occurred in March 1894 and March 1910, on basis of records for former station at Namorf.

Remarks.--Flow partly regulated by Warmsprings Reservoir (capacity, 191,000 acre-ft) and by Agency Valley Reservoir (capacity, 59,920 acre-ft). Vale-Oregon Canal diverts up to 600 cfs at Namorf for irrigation of about 31,000 acres, largely below station. Peaks usually occur in winter, when gates to reservoirs are shut, so the discharge from the 1,540 sq mi above reservoirs is usually excluded. Both regulation and diversions affect peaks during irrigation season. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	May 19, 1949	4.66	1,470	1954	July 14, 1954	2.98	343
1950	Feb. 24, 1950	5.79	2,750	1955	May 17, 1955	2.77	271
1951	Feb. 8, 1951	7.80	6,070	1956	Feb. 23, 1956	6.49	3,530
1952	Mar. 26, 1952	9.00	8,800	1957	Feb. 24, 1957	11.5	12,300
1953	May 1, 1953	4.88	1,690				

2205. Malheur River near Hope, Oreg.

Location.--Lat 43°56'40", long 117°28'50", in SW¼ sec.5, T.19 S., R.43 E., half a mile upstream from intake of Vines Canal, 5½ miles west of Hope, and 12 miles west of Vale.

Drainage area.--3,030 sq mi, approximately.

Gage.--Recording. Altitude of gage is 2,370 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 2,800 cfs and extended above.

Bankfull stage.-- Not subject to overflow.

Historical data.--The two greatest floods known occurred in March 1894 and March 1910, on basis of records for station near Namorf.

Remarks.--Flow partly regulated by Warmsprings Reservoir (capacity, 191,000 acre-ft), and Agency Valley Reservoir (capacity, 59,920 acre-ft) since December 1935. The Vale-Oregon Canal has diverted up to 600 cfs at Namorf, since March 1930. Peaks usually occur in winter, when reservoir gates are closed, so the discharge from the 1,540 sq mi above reservoirs is usually excluded. Both regulation and diversions affect peaks during irrigation season. Only annual peaks are shown.

Peak stages and discharges of Malheur River near Hope, Oreg.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	Apr. 25, 1922	5.02	3,100	1937	July 13, 1937	2.14	367
1923	May 16, 1923	3.35	a1,240	1938	Mar. 2, 1938	4.52	2,470
				1939	Mar. 17, 1939	3.91	1,770
1925	Feb. 5, 1925	8.1	8,100	1940	Feb. 28, 1940	6.90	5,930
1927	Feb. 22, 1927	4.17	a2,100	1941	Mar. 1, 1941	5.12	3,260
1928	Mar. 6, 1928	4.75	2,860	1942	May 8, 1942	6.86	5,560
1929	May 19, 1929	2.48	633	1943	Jan. 22, 1943	6.20	3,850
1930	Feb. 13, 1930	b5.42	-	1944	Mar. 10, 1944	4.24	2,130
				1945	Jan. 8, 1945	c4.21	-
1931	May 22, 1931	1.94	315		Jan. 8, 1945	3.66	1,580
1932	Mar. 19, 1932	5.33	3,500				
1933	Apr. 5, 1933	2.87	859	1946	Dec. 29, 1945	4.46	2,440
1934	Apr. 25, 1934	1.79	266	1947	Feb. 13, 1947	4.91	2,970
1935	May 24, 1935	2.65	702	1948	June 15, 1948	2.04	385
				1949	Feb. 19, 1949	-	d2,500
1936	Feb. 22, 1936	7.89	7,710				

a Revised.
b Backwater from ice; discharge unknown.
c Backwater from ice.
d Estimated daily mean discharge.

2265. Bully Creek at Warmsprings, near Vale, Oreg.
(Published as "near Vale" 1903, 1907, and "above Vale" 1904-6, 1910)

Location.--Lat 44°01'30", long 117°27'20", in NW¼NE¼ sec.9, T.18 S., R.43 E., half a mile downstream from Cottonwood Creek and 11 miles northwest of Vale.

Drainage area.--530 sq mi, approximately.

Gage.--Nonrecording. At site a quarter of a mile upstream at different datum Aug. 10, 1903, to Mar. 11, 1904. Altitude of gage is 2,530 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,100 cfs and extended above.

Bankfull stage.--8 ft.

Remarks.--Numerous diversions for irrigation above station. Since 1915 some regulation by Anderson Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Feb. 24, 1904	12.1	5,730	1914	Mar. 9, 1914	a3.7	1,060
1905	Mar. 6, 1905	a3.70	394	1915	Mar. 15, 1915	a2.0	185
1906	Mar. 31, 1906	6.60	3,300	1916	Mar. 13, 1916	a4.2	1,200
				1917	Mar. 11, 1917	3.4	675
1910	Mar. 1, 1910	8.6	6,240				
				1922	Apr. 1, 1922	a3.60	780
1911	Mar. 7, 1911	a4.8	1,590	1923	June 7, 1923	a1.90	78
1912	July 31, 1912	a5.7	2,600				
1913	July 25, 1913	a7.0	4,130	1957	Feb. 24, 1957	9.0	b5,600

a Maximum observed.
b Result of slope-area measurement.

2270. Bully Creek near Vale, Oreg.

Location.--Lat 43°57'30", long 117°20'30", in SW¼ sec.33, T.18 S., R.44 E., on right bank 5 miles southwest of Vale and 7 miles upstream from mouth.

Drainage area.--570 sq mi, approximately. Mean altitude, 4,150 ft.

Gage.--Recording. At site 2 miles upstream at different datum prior to Mar. 15, 1937. At datum 0.38 ft higher Mar. 15, 1937, to Jan. 1, 1940. Altitude of gage is 2,313 ft (by levels to reference point furnished by Union Pacific Railroad).

Stage-discharge relation.--Defined by current-meter measurements below 2,600 cfs, and extended on basis of slope-area measurement of 8,980 cfs.

Bankfull stage.--11 ft.

Remarks.--Occasional fluctuations caused by releases from Vale-Oregon Canal; considerable return flow at times enters Bully Creek above station. Diversions above station for irrigation of about 7,000 acres. Peaks during irrigation season are considerably affected by diversions and return flow. Records during period 1934-45 furnished by State engineer of Oregon. Base for partial-duration series, 180 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	June 26, 1934	6.60	213	1945	Mar. 23, 1945	2.12	258
1938	Dec. 11, 1937	3.10	600	1946	Dec. 28, 1945	3.56	668
	Feb. 25, 1938	1.97	299		Feb. 28, 1946	3.98	980
	Mar. 2, 1938	3.36	1,010		Mar. 6, 1946	-	b310
	Mar.13,14,1938	2.47	367		Mar. 13, 1946	3.12	536
	Mar. 19, 1938	1.98	302		Mar. 21, 1946	3.05	515
	Mar. 25, 1938	2.10	255				
	Apr. 11, 1938	1.65	208	1947	Feb. 13, 1947	4.60	1,300
	Apr. 20, 1938	1.77	238				
				1948	June 15, 1948	1.58	76
1939	Apr. 7, 1939	1.42	141				
				1949	Feb. 16, 1949	c3.4	350
1940	Feb. 11, 1940	2.23	252		Mar. 23, 1949	2.23	310
	Feb. 27, 1940	a6.60	3,400				
	Mar. 8, 1940	2.22	442	1950	Feb. 24, 1950	c4.90	-
	Mar. 27, 1940	a2.67	600		Feb. 25, 1950	2.27	302
	Mar. 31, 1940	a3.92	1,180		Mar. 6, 1950	1.86	202
					Mar. 17, 1950	2.23	292
1941	Oct. 27, 1940	4.30	1,390		June 24, 1950	2.61	358
	Nov. 2, 1940	1.66	268				
	Dec. 28, 1940	1.53	234	1951	Feb. 8, 1951	6.55	2,550
	Jan. 26, 1941	1.44	212		Mar. 16, 1951	3.50	755
	Feb. 11, 1941	2.21	438				
	Feb. 25, 1941	4.26	1,370	1952	Feb. 5, 1952	2.18	280
	Mar. 1, 1941	5.42	2,180		Mar. 16, 1952	1.79	186
	Mar. 9, 1941	4.40	1,220		Mar. 26, 1952	6.98	2,890
	Apr. 5, 1941	2.72	454		Apr. 6, 1952	3.70	860
	Aug. 18, 1941	2.24	293		Apr. 14, 1952	3.30	660
					Aug. 30, 1952	2.70	400
1942	Feb. 5, 1942	2.12	258				
	Mar. 12, 1942	3.89	945	1953	Jan. 9, 1953	3.11	565
	Mar. 22, 1942	2.14	264		Jan. 14, 1953	3.19	605
	Apr. 1, 1942	2.82	492		Jan. 19, 1953	3.87	952
	Apr. 14, 1942	2.51	380		Feb. 8, 1953	2.49	297
	May 24, 1942	4.74	1,420		June 2, 1953	3.12	570
	May 30, 1942	1.90	199		June 8, 1953	2.90	460
1943	Dec. 25, 1942	2.06	241	1954	Jan. 18, 1954	2.12	200
	Jan. 1, 1943	3.36	704		Jan. 30, 1954	2.69	366
	Jan. 21, 1943	6.51	2,700		Feb. 12, 1954	2.51	303
	Feb. 17, 1943	2.09	249				
	Feb. 20, 1943	3.72	860	1955	May 23, 1955	1.33	53
	Mar. 28, 1943	2.83	495				
	Mar. 8, 1943	-	b320	1956	Dec. 22, 1955	3.03	406
	June 3, 1943	1.94	209		Jan. 16, 1956	3.14	444
	June 27, 1943	1.84	185		Feb. 23, 1956	4.00	810
	July 3, 1943	1.93	207		Mar. 3, 1956	3.10	430
					Mar. 9, 1956	2.85	350
1944	Mar. 10, 1944	2.68	440		Mar. 20, 1956	3.11	434
	May 3, 1944	1.91	202		Sept. 2, 1956	2.42	220
1945	Jan. 8, 1945	2.67	436	1957	Oct. 31, 1956	2.83	344
	Feb. 2, 1945	2.66	433		Feb. 24, 1957	10.5	8,980
	Feb. 6, 1945	2.72	454		Feb. 26, 1957	7.07	3,780
	Feb. 8, 1945	4.86	1,500		Mar. 7, 1957	-	b700
	Feb. 12, 1945	2.08	247		Mar. 12, 1957	2.76	474
	Feb. 14, 1945	3.23	652				

a Gage height estimated. b No gage-height record; discharge estimated. c Backwater from ice.

2280. Malheur River at Vale, Oreg.

Location.--Lat 43°58'50", long 117°14'20", in NW¼ sec.29, T.18 S., R.45 E., at road bridge at Vale and about a quarter of a mile downstream from Bully Creek.

Drainage area.--3,880 sq mi, approximately.

Gage.--Nonrecording. At different datums prior to Mar. 20, 1919. Altitude of gage is 2,230 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 3,600 cfs and extended above.

Bankfull stage.--14 ft.

Remarks.--Flow slightly regulated since 1915 by Vale-Oregon Irrigation Co. Reservoir on Bully Creek, since November 1919 by Warmsprings Reservoir, and, since December 1935, by Agency Valley Reservoir (see elsewhere in this report). Many diversions above station for irrigation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Feb. 25, 1904	17.5	17,000	1911	Mar. 24, 1911	7.45	3,250
1905	Jan. 24, 1905	8.30	3,680	1912	Apr. 25, 1912	7.0	2,610
				1913	July 25, 1913	10.8	7,810
1906	Apr. 1, 1906	14.85	13,700	1914	Mar. 8, 1914	7.8	3,590
1907	Feb. 4, 1907	13.85	12,000				
				1919	Mar. 31, 1919	6.20	3,960
1909	Jan. 16, 1909	11.65	8,980				
1910	Mar. 2, 1910	19.5	22,800	1957	Feb. 24, 1957	19.67	20,800

2290. Malheur River below Nevada Dam, near Vale, Oreg.
(Published as "below Nevada Dam, at Vale" in 1926)

Location.--Lat 43°59'20", long 117°13'20", in SW¼ sec.21, T.18 S., R.45 E., 300 ft downstream from Nevada Dam and headgates of Nevada Canal and 1 mile northwest of Vale.

Drainage area.--3,880 sq mi, approximately.

Gage.--Recording. At datum 1.00 ft higher prior to Nov. 17, 1930. Concrete control October 1932 to February 1949. Altitude of gage is 2,220 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Flow partly regulated by Warmsprings Reservoir (capacity, 191,000 acre-ft) and, since December 1935, by Agency Valley Reservoir (capacity, 59,920 acre-ft). Peak flows usually occur in winter, when reservoir gates are closed, so the discharge of the 1,540 sq mi above reservoir is usually excluded. Many diversions for irrigation above station, including Vale-Oregon Canal, Gillerman-Frohman Canal, and Nevada Canal. Records for 1936-50 furnished by State engineer of Oregon. Peak flows during irrigation season are affected by diversions. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Feb. 21, 1927	4.04	3,270	1941	Mar. 2, 1941	8.25	8,140
1928	Mar.9,28, 1928	3.82	2,670	1942	May 9, 1942	7.98	7,560
1929	Mar. 4, 1929	2.85	1,300				
1930	Feb. 9, 1930	a3.13	-	1946	Dec. 29, 1945	6.48	4,550
	Feb. 14, 1930	3.08	1,610				
				1948	June 16, 1948	2.33	205
1931	Feb. 19, 1931	2.41	302	1949	Feb. 19, 1949	8.2	5,300
1932	Feb. 28, 1932	a6.2	-	1950	Feb. 25, 1950	-	(b)
	Mar. 20, 1932	5.30	3,660				
1933	Mar. 4, 1933	a3.23	-	1951	Feb. 8, 1951	10.06	8,520
	Apr. 4, 1933	3.27	776	1952	Mar. 26, 1952	c11.23	9,360
				1953	June 9, 1953	4.82	2,000
1937	Apr. 2, 1937	2.82	458	1954	Jan. 30, 1954	2.62	529
1938	Mar. 2, 1938	5.88	5,010				
1939	Mar. 17, 1939	4.15	1,740	1957	Feb. 24, 1957	14.58	20,800
1940	Feb. 28, 1940	8.88	9,530				

a Backwater from ice.
b Gage height unknown; discharge 4,000 to 5,000 cfs.
c Maximum observed.

2295. Willow Creek near Malheur, Oreg.

Location.--Lat 44°23', long 117°45', in NE¼NW¼ sec.6, T.14 S., R.41 E., 200 ft upstream from highway bridge, just downstream from Rich Creek, half a mile upstream from maximum flow line of reservoir No. 3, and 2 miles southwest of Malheur.

Drainage area.--250 sq mi, approximately. Mean altitude, 4,620 ft.

Gage.--Recording. Concrete control since Dec. 31, 1923. Altitude of gage is 3,420 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Many diversions for irrigation above station. Up to 4,600 acre-ft has been delivered annually to Willow Creek above the station from tributaries of the Burnt River through Eldorado ditch. Peak flows during irrigation season are considerably affected by diversions. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	June 13, 1912	5.02	124	1922	Apr. 8, 1922	2.35	206
1913	Jan. 15, 1913	a3.87	-	1923	Mar. 6, 1923	2.00	85
	June 30, 1913	3.75	45	1924	Feb. 8, 1924	2.25	116
1914	Mar. 16, 1914	5.42	209	1925	Feb. 23, 1925	2.63	169
1915	Feb.3-5, 1915	a3.85	-				
	May 13, 1915	3.55	34	1926	Feb. 26, 1926	1.30	26
				1927	Feb. 20, 1927	2.98	211
1921	Mar. 17, 1921	3.1	310				

a Backwater from ice.

2305. Willow Creek below reservoir, near Malheur, Oreg.
(Published as "near Malheur" 1904-6, 1910, 1911, and "at reservoir site, near Malheur" for 1910 in WSP 370)

Location.--Lat 44°21', long 117°40', in NW¼ sec.14, T.14 S., R.41 E., 300 ft downstream from reservoir outlet tunnel and 5 miles southeast of Malheur.

Drainage area.--290 sq mi, approximately.

Gage.--Nonrecording. Sharp-crested weir after 1920. At site three-quarters of a mile downstream at different datum Nov. 20, 1904, to Aug. 14, 1906. At several sites within 3 miles at different datums Jan. 1 to Aug. 2, 1911. Altitude of gage is 3,310 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Flow regulated by Willow Creek Reservoir (capacity, 49,000 acre-ft) since spring of 1911. Many diversions for irrigation from and into Willow Creek from Eldorado ditch. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	Mar.7,10, 1905	2.1	78	1924	May 23 to June 4, 1924	1.34	56
1906	Apr. 6, 1906	5.2	416				
				1925	July 18-24, 1925	1.26	52
1911	Mar. 7, 1911	6.9	400				
				1926	June 17-20, 1926	.67	20
1921	July 15-19,1921	1.62	75	1927	June 10-17, 1927	.94	34
1922	July 13-26,1922	1.73	83	1928	May 18, 1928	.91	33
1923	July 18-28,1923	1.60	74				

2345. Clear Creek at Lowman, Idaho

Location.--Lat 44°05', long 115°37', in SW¼SE¼ sec.27, T.9 N., R.7 E., on left bank at highway bridge at Lowman, 550 ft upstream from mouth.

Drainage area.--59.6 sq mi. Mean altitude, 6,340 ft.

Gage.--Nonrecording. At site 350 ft downstream at different datum prior to Jan. 9, 1946. Altitude of gage is 3,820 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 710 cfs at former site and below 460 cfs at latter site and extended above.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 26, 1941	4.66	459	1946	Dec. 15, 1945	a5.4	-
1942	Jan. 9, 1942	a6.1	-		May 28, 1946	2.62	501
	June 9, 1942	4.60	472	1947	Jan. 6, 1947	a4.25	-
1943	May 31, 1943	5.32	754		May 8, 1947	2.59	540
1944	Dec. 17, 1943	a4.7	-	1948	Jan. 22, 1948	a3.75	-
	May 15, 1944	3.84	255		May 28, 1948	2.96	692
1945	May 10, 1945	4.35	395				

a Backwater from ice.

2350. South Fork Payette River at Lowman, Idaho

Location.--Lat 44°05'00", long 115°37'30", in SW¼ sec.27, T.9 N., R.7 E., on right bank 1,200 ft upstream from Rock Creek, half a mile northwest of Lowman, and 4,100 ft downstream from Clear Creek.

Drainage area.--456 sq mi. Mean altitude, 6,780 ft.

Gage.--Nonrecording prior to Dec. 18, 1941; recording thereafter. At site 900 ft upstream at different datum prior to Dec. 18, 1941. Altitude of present gage is 3,790 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 6,200 cfs.

Bankfull stage.--Stream in narrow canyon.

Remarks.--Only annual observed peak shown for 1941. Base for partial-duration series, 2,500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 26, 1941	4.02	3,580	1949	June 11, 1949	5.76	3,470
1942	May 26, 1942	5.82	3,320	1950	May 17, 1950	5.34	2,810
	June 9, 1942	5.66	3,110		June 7, 1950	6.01	3,900
					June 22, 1950	6.27	4,370
1943	Apr. 19, 1943	5.74	3,440		July 2, 1950	6.15	4,150
	May 5, 1943	5.49	3,040				
	May 29, 1943	6.53	4,860	1951	May 11, 1951	5.49	2,940
	June 19, 1943	6.41	4,630		May 28, 1951	6.44	4,570
					June 16, 1951	6.29	4,310
1944	May 16, 1944	4.92	2,230				
				1952	Apr. 28, 1952	5.85	3,540
1945	May 10, 1945	5.34	2,810		May 14, 1952	5.79	3,420
	June 9, 1945	5.23	2,650		June 6, 1952	6.59	4,860
	June 22, 1945	5.44	2,960				
				1953	June 13, 1953	6.69	5,030
1946	Apr. 18, 1946	5.45	2,980		June 18, 1953	6.54	4,760
	Apr. 26, 1946	5.42	2,930				
	May 28, 1946	5.72	3,400	1954	May 21, 1954	6.83	5,450
	June 5, 1946	5.89	3,690		June 27, 1954	6.43	4,670
1947	May 9, 1947	6.32	4,460	1955	May 21, 1955	5.45	2,880
	May 27, 1947	5.96	3,810		June 13, 1955	6.15	4,060
	June 9, 1947	5.56	3,150				
				1956	Dec. 22, 1955	5.59	3,170
1948	May 19, 1948	5.80	3,540		Apr. 21, 1956	5.44	2,930
	May 28, 1948	6.73	5,250		May 24, 1956	7.45	7,050
	June 3, 1948	6.62	5,030		June 10, 1956	6.52	5,130
1949	Jan. 29, 1949	a6.70	-	1957	May 19, 1957	6.02	4,160
	May 16, 1949	6.36	4,530		June 5, 1957	6.78	5,840
	May 28, 1949	5.98	3,850				

a Backwater from ice.

2365. Deadwood River below Deadwood Reservoir, near Lowman, Idaho
(Published as "at Beaver Creek ranger station, near Lowman" prior to 1935)

Location.--Lat 44°18', long 115°39', in NE¼ sec.17, T.11 N., R.7 E., on right bank 300 ft upstream from Wilson Creek, a quarter of a mile downstream from Deadwood Dam at lower end of Deadwood basin, 15 miles north of Lowman, and 18 miles upstream from mouth.

Drainage area.--108 sq mi. Mean altitude, 6,630 ft.

Gage.--Recording prior to June 22, 1935; nonrecording June 22 to Sept. 30, 1935; recording thereafter. At site 600 ft upstream at datum 5.85 ft higher prior to June 22, 1935. At site 20 ft upstream at datum 2.00 ft higher June 22 to Sept. 30, 1935. Datum of gage is 5,180.52 ft above mean sea level (levels by Bureau of Reclamation).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--Stream in canyon, not subject to overflow except for logging road embankment at about 11 ft.

Remarks.--Flow regulated by Deadwood Reservoir (capacity, 160,400 acre-ft) since 1931. Only annual peaks are shown. Small transmountain diversion from Salmon River basin to Deadwood River since 1937 may contribute up to 2 or 3 percent of peak flow at this station.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	June 12, 1927	5.58	2,100	1943	June 1, 1943	5.46	1,940
1928	May 26, 1928	5.67	2,150	1944	Aug. 20, 1944	4.97	1,490
1929	May 24, 1929	4.3	1,040	1945	Sept.15, 1945	4.42	1,170
1930	May 3, 1930	3.95	820	1946	May 9, 1946	4.20	1,090
1931	Aug. 15, 1931	4.60	1,180	1947	Aug. 25, 1947	4.59	1,310
1932	Aug. 6, 1932	4.93	1,540	1948	Sept.13, 1948	5.15	1,700
1933	Sept. 7, 1933	4.57	1,140	1949	Aug. 2, 1949	5.65	2,090
1934	Aug. 24, 1934	4.69	1,250	1950	June 20, 1950	5.23	1,760
1935	Sept.14, 1935	3.70	1,180	1951	July 22, 1951	5.37	1,890
1936	Aug. 27, 1936	4.32	1,150	1952	June 7, 1952	5.98	2,020
1937	Aug. 27, 1937	4.20	1,070	1953	July 14, 1953	6.56	2,580
1938	June 10, 1938	4.65	1,320	1954	July 27, 1954	7.79	2,220
1939	Aug. 15, 1939	4.54	1,220	1955	Aug. 9, 1955	7.59	1,620
1940	Aug. 25, 1940	4.20	1,050	1956	June 7, 1956	8.93	2,160
1941	June 8, 1941	3.37	675	1957	July 24, 1957	8.65	2,040
1942	Aug. 26, 1942	4.10	996				

2370. Deadwood River near Lowman, Idaho

Location.--Lat 44°05', long 115°40', in sec.29, T.9 N., R.7 E., on left bank 700 ft upstream from mouth and 2½ miles west of Lowman.

Drainage area.--230 sq mi, approximately. Mean altitude, 6,250 ft.

Gage.--Recording. Altitude of gage is 3,680 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 3,500 cfs and extended above.

Bankfull stage.--Stream in deep canyon.

Remarks.--Flow regulated since 1931 by Deadwood Reservoir (capacity, 160,400 acre-ft). Base for partial-duration series 1922-30, 1,200 cfs. Only annual peaks are shown thereafter.

Peak stages and discharges of Deadwood River near Lowman, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	May 8, 1922	3.38	1,390	1931	Aug. 17, 1931	3.32	1,340
	May 26, 1922	4.53	3,080	1932	Aug. 7, 1932	3.60	1,660
	June 7, 1922	4.36	2,780	1933	June 9, 1933	3.40	1,370
				1934	Aug. 18, 1934	3.35	1,270
1923	May 26, 1923	4.11	2,400	1935	Sept.15, 1935	3.36	1,270
	June 12, 1923	4.04	2,320				
				1936	May 14, 1936	3.57	1,650
1924	May 14, 1924	3.11	a1,070	1937	Aug. 27, 1937	3.14	1,130
				1938	June 8, 1938	4.06	2,350
1925	Apr. 17, 1925	3.40	1,430	1939	Aug. 29, 1939	3.28	1,260
	May 7, 1925	3.83	2,050	1940	June 4, 1940	3.19	1,180
	May 20, 1925	4.14	2,500				
				1941	June 8, 1941	3.28	1,280
1926	May 5, 1926	3.71	1,810	1942	May 25, 1942	3.74	1,830
				1943	June 1, 1943	4.63	3,400
1927	May 1, 1927	3.65	1,760	1944	Aug. 18, 1944	3.41	1,460
	May 17, 1927	5.05	4,090	1945	Sept. 4, 1945	3.22	1,240
	May 27, 1927	3.74	1,910				
	June 8, 1927	4.94	3,910	1946	Dec. 9, 1945	b5.03	-
					May 8, 1946	3.91	2,110
1928	May 9, 1928	5.17	a4,230	1947	Jan. 16, 1947	b3.68	-
	May 26, 1928	4.74	3,530		May 27, 1947	3.66	1,740
				1948	Jan. 28, 1948	b4.58	-
1929	Dec. 9, 1928	b4.20	-		June 9, 1948	3.98	2,090
	May 24, 1929	3.70	1,800	1949	May 16, 1949	4.28	2,610
	June 16, 1929	3.36	1,320	1950	June 20, 1950	4.17	2,460
1930	Jan. 19, 1930	b4.50	-	1951	May 27, 1951	3.96	2,110
	Apr. 25, 1930	3.37	1,330	1952	June 7, 1952	4.33	2,880
	May 3, 1930	3.50	1,510				

a Maximum recorded; may have been higher during period of no gage-height record.
b Backwater from ice.

2375. South Fork Payette River near Garden Valley, Idaho

Location.--Lat 44°04', long 115°56', in sec.1, T.8 N., R.4 E., on right bank at Garden Valley ranger station, 300 ft upstream from Station Creek, 2.7 miles southeast of Garden Valley, and 5.9 miles upstream from Middle Fork.

Drainage area.--779 sq mi. Mean altitude, 6,400 ft.

Gage.--Nonrecording prior to Dec. 15, 1933; recording thereafter. At datum 0.98 ft higher prior to Aug. 3, 1926. Altitude of gage is 3,090 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 8,800 cfs and extended above.

Bankfull stage.--River in canyon; not subject to overflow.

Remarks.--Flood flows affected by regulation at Deadwood Reservoir (capacity, 160,400 acre-ft) since 1931. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	June 9, 1921	a6.87	9,330	1940	May 13, 1940	5.04	4,540
1922	June 14, 1922	a6.10	7,890				
1923	June 12, 1923	a5.25	6,290	1941	May 27, 1941	5.02	4,540
1924	May 17, 1924	a3.35	3,180	1942	May 26, 1942	5.60	5,660
1925	May 20, 1925	a5.50	6,930	1943	June 1, 1943	6.83	8,670
				1944	May 16, 1944	3.74	2,970
1926	May 5, 1926	a3.71	3,810	1945	May 10, 1945	4.43	4,130
1927	June 8, 1927	a7.60	9,660				
1928	May 26, 1928	a8.0	10,600	1946	May 28, 1946	5.46	5,820
1929	May 25, 1929	-	b4,800	1947	May 9, 1947	5.83	6,470
1930	May 30, 1930	a4.75	4,060	1948	June 9, 1948	6.43	7,740
				1949	May 17, 1949	6.40	7,560
1931	May 9, 1931	a3.72	2,400	1950	June 22, 1950	6.29	7,310
1932	May 14, 1932	a5.75	5,870				
1933	June 10, 1933	a6.75	7,880	1951	May 28, 1951	6.31	7,350
1934	Mar. 29, 1934	4.23	3,300	1952	June 7, 1952	6.59	7,700
1935	June 9, 1935	4.68	3,970	1953	June 18, 1953	6.33	7,060
				1954	May 21, 1954	6.45	7,520
1936	May 15, 1936	6.02	6,450	1955	June 13, 1955	5.36	5,160
1937	May 25, 1937	4.21	3,200				
1938	June 8, 1938	6.57	7,710	1956	May 24, 1956	7.43	9,980
1939	May 5, 1939	4.17	3,120	1957	June 5, 1957	7.00	8,790

a Maximum observed. b Estimated daily mean discharge.

2380. South Fork Payette River near Banks, Idaho

Location.--Lat 44°05'30", long 116°06'00", in sec.28, T.9 N., R.3 E., on right bank 1 mile upstream from confluence with North Fork Payette River and 1½ miles northeast of Banks.

Drainage area.--1,200 sq mi, approximately. Mean altitude, 6,020 ft.

Gage.--Nonrecording prior to Sept. 12, 1922; recording thereafter. Altitude of gage is 2,805 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Since 1931 flood flows have been slightly regulated by Deadwood Reservoir (capacity, 160,400 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	June 7, 1922	8.70	9,900	1941	May 27, 1941	6.41	5,820
1923	June 12, 1923	7.49	8,160	1942	(a)	7.87	7,920
1924	May 17, 1924	4.40	4,100	1943	June 1, 1943	10.28	11,800
1925	May 20, 1925	7.97	9,450	1944	May 15, 1944	4.70	3,820
				1945	May 10, 1945	6.68	6,340
1926	May 5, 1926	5.50	5,600				
1927	May 17, 1927	10.6	13,800	1946	Apr. 20, 1946	8.24	8,600
1928	May 11, 1928	9.86	12,600	1947	May 9, 1947	8.72	9,100
1929	May 25, 1929	5.9	6,200	1948	May 29, 1948	9.05	9,690
1930	May 30, 1930	4.8	4,590	1949	May 17, 1949	9.25	10,100
				1950	June 22, 1950	8.63	9,160
1931	May 14, 1931	3.6	3,090				
1932	May 14, 1932	8.53	8,340	1951	May 28, 1951	8.63	8,820
1933	June 10, 1933	9.43	9,420	1952	Apr. 28, 1952	9.73	10,500
1934	Mar. 29, 1934	6.13	5,460	1953	June 13, 1953	8.96	9,320
1935	May 24, 1935	6.05	5,340	1954	May 21, 1954	9.28	9,810
				1955	June 13, 1955	7.18	6,760
1936	May 15, 1936	8.86	8,820				
1937	May 26, 1937	5.32	4,360	1956	May 24, 1956	11.10	13,400
1938	May 1, 1938	9.71	10,600	1957	June 5, 1957	9.96	11,200
1939	May 5, 1939	5.51	4,660				
1940	Mar. 27, 1940	7.03	6,660				

a Occurred about May 26, 1942.

2390. North Fork Payette River at McCall, Idaho
(Published as "at Lardo" prior to 1943)

Location.--Lat 44°54'30", long 116°07'30", in sec.8, T.18 N., R.3 E., on left bank at McCall, a quarter of a mile downstream from outlet of Payette Lake.

Drainage area.--144 sq mi. Mean altitude, 6,520 ft.

Gage.--Nonrecording prior to Dec. 18, 1923; recording thereafter. Altitude of gage is 4,970 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 3,600 cfs.

Bankfull stage.--Not subject to overflow.

Remarks.--Since 1923 flow partly regulated by gates at outlet of Payette Lake and by several smaller lakes upstream. No capacity available. Some reported regulation prior to 1923. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1909	June 5, 1909	a7.5	4,250	1916	June 19, 1916	a7.2	3,410
1910	May 10, 1910	a6.0	2,760	1917	June 20, 1917	a6.6	2,980
1911	June 17, 1911	a7.3	4,090	1920	June 10, 1920	a6.7	3,070
1912	June 8, 1912	a6.5	3,020				
1913	June 3, 1913	a7.4	3,640	1921	June 9, 1921	a7.15	3,590
1914	May 25, 1914	a6.4	2,730	1922	June 7, 1922	a7.30	3,690
1915	May 23, 1915	a4.8	1,300	1923	June 11, 1923	a6.5	2,900

a Maximum observed.

Peak stages and discharges of North Fork Payette River at McCall, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	May 13, 1924	5.90	2,490	1941	May 27, 1941	6.05	2,500
1925	May 21, 1925	6.42	3,020	1942	May 26, 1942	6.87	3,440
				1943	June 1, 1943	6.88	3,440
1926	May 5, 1926	5.32	1,900	1944	June 1, 1944	6.57	3,080
1927	June 14, 1927	6.67	3,460	1945	June 6, 1945	5.98	2,420
1928	May 27, 1928	6.95	3,570				
1929	May 25, 1929	5.85	2,430	1946	May 28, 1946	6.00	2,440
1930	May 30, 1930	5.22	1,740	1947	May 9, 1947	6.99	3,470
				1948	June 4, 1948	7.71	4,260
1931	May 16, 1931	5.10	1,660	1949	May 16, 1949	6.77	3,230
1932	May 22, 1932	6.71	3,320	1950	June 22, 1950	6.47	2,900
1933	June 10, 1933	7.50	4,260				
1934	Apr. 25, 1934	5.38	2,000	1951	May 28, 1951	5.97	2,400
1935	May 25, 1935	5.81	2,300	1952	June 8, 1952	6.62	3,130
				1953	June 15, 1953	6.21	2,660
1936	May 15, 1936	b6.80	3,300	1954	May 21, 1954	6.76	3,220
1937	May 28, 1937	5.53	2,000	1955	June 14, 1955	6.39	2,820
1938	June 7, 1938	6.86	3,440				
1939	May 5, 1939	5.59	2,100	1956	June 1, 1956	6.89	3,550
1940	May 25, 1940	6.04	2,500	1957	June 6, 1957	6.65	3,100

b Estimated.

2400. Lake Fork Payette River above Jumbo Creek, near McCall, Idaho

Location.--Lat 44°55', long 115°59', in NE¼ sec.8, T.18 N., R.4 E., on left bank 200 ft upstream from bridge at abandoned powerplant, a quarter of a mile upstream from Jumbo Creek, 3½ miles upstream from Lake Fork Reservoir dam, and 5½ miles east of McCall.

Drainage area.--48.9 sq mi.

Gage.--Recording. Altitude of gage is 5,140 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,300 cfs and extended to 2,600 cfs by logarithmic plotting.

Bankfull stage.--Overflow below gage starts at 9.5 ft.

Remarks.--Base for partial-duration series, 850 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	May 5, 1946	7.27	910	1952	Apr. 27, 1952	7.32	1,000
	May 26, 1946	7.25	900		May 20, 1952	7.34	1,040
	June 3, 1946	7.30	925		May 25, 1952	7.36	1,050
					June 4, 1952	7.66	1,260
1947	May 7, 1947	8.19	1,570				
	May 26, 1947	7.44	1,040	1953	May 19, 1953	7.42	1,150
	June 9, 1947	7.39	1,000		June 2, 1953	7.03	870
	June 16, 1947	7.57	1,120		June 7, 1953	7.13	936
					June 13, 1953	8.03	1,660
1948	May 19, 1948	7.84	1,320				
	May 26, 1948	8.39	1,790	1954	May 10, 1954	7.62	1,310
	June 3, 1948	9.19	2,600		May 20, 1954	8.01	1,640
	June 13, 1948	7.66	1,190		June 15, 1954	7.09	908
					June 23, 1954	7.51	1,220
1949	May 14, 1949	7.87	1,350				
	May 27, 1949	7.78	1,280	1955	May 21, 1955	7.25	1,040
	June 5, 1949	7.27	944		June 11, 1955	7.75	1,440
					June 21, 1955	7.16	985
1950	May 22, 1950	7.34	968				
	May 28, 1950	7.82	1,310	1956	Dec. 22, 1955	7.26	1,030
	June 5, 1950	7.52	1,090		May 24, 1956	8.21	1,950
	June 21, 1950	7.76	1,260		June 9, 1956	7.50	1,300
	June 30, 1950	7.63	1,170				
				1957	May 13, 1957	7.90	1,580
1951	May 22, 1951	7.48	1,060		May 19, 1957	7.82	1,500
	May 28, 1951	7.51	1,080		June 2, 1957	8.15	1,800
	June 15, 1951	7.49	1,070		June 8, 1957	8.03	1,690

2405. Lake Fork Payette River above reservoir, near McCall, Idaho

Location.--Lat 44°55', long 116°00", in NW¼ sec.8, T.18 N., R.4 E., on left bank half a mile downstream from Jumbo Creek, 2.7 miles upstream from Lake Fork Reservoir dam, and 5 miles east of McCall.

Drainage area.--54.6 sq mi. Mean altitude, 6,950 ft.

Gage.--Nonrecording prior to Sept. 8, 1936; recording thereafter. At datum 0.20 ft higher prior to Sept. 19, 1935. Altitude of gage is 5,130 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,200 cfs and extended above.

Bankfull stage.--Some flooding above gage at 8.5 ft.

Remarks.--Only annual peaks are shown for 1926-36. Base for partial-duration series for 1937-45, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	May 20, 1926	3.10	647	1939	May 3, 1939	4.66	961
1927	June 8, 1927	6.10	1,870				
1928	May 26, 1928	5.65	1,620	1940	May 11, 1940	5.84	1,420
1929	May 22, 1929	4.50	1,000				
1930	May 30, 1930	3.50	643	1941	May 13, 1941	5.68	1,340
					May 25, 1941	5.16	1,080
1931	May 11, 1931	3.80	862				
1932	May 14, 1932	6.50	2,080	1942	May 23, 1942	5.90	1,420
1933	June 9, 1933	7.7	2,520				
1934	Mar. 29, 1934	4.80	1,120	1943	Apr. 18, 1943	4.52	888
1935	May 31, 1935	3.95	810		May 31, 1943	6.34	1,680
					June 18, 1943	5.34	1,200
1936	May 15, 1936	6.30	1,720				
				1944	May 14, 1944	4.90	1,030
1937	June 20, 1937	5.10	924				
				1945	May 5, 1945	4.96	1,080
1938	Apr. 30, 1938	4.95	1,080		May 10, 1945	6.28	1,620
	May 16, 1938	4.38	852		June 5, 1945	5.18	1,160
	May 28, 1938	6.39	1,730		June 24, 1945	5.80	1,380

2415. Lake Fork Payette River near McCall, Idaho

Location.--Lat 44°54', long 116°03', in sec.13, T.18 N., R.3 E., on left bank a quarter of a mile downstream from outlet to Little Payette Lake, and 3 miles east of McCall.

Drainage area.--64 sq mi, approximately.

Gage.--Nonrecording. Altitude of gage is 5,100 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,100 cfs and extended above.

Remarks.--Natural regulation by Little Payette Lake. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	June 2, 1910	5.5	1,460	1912	June 13, 1912	5.7	1,600
				1913	May 28, 1913	6.1	1,900
1911	June 13, 1911	5.9	1,760	1914	May 23, 1914	5.05	1,160

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2425. Lake Fork Payette River below Lake Irrigation District Canal, near McCall, Idaho

Location.--Lat 44°54', long 116°03', in SW¼ sec.13, T.18 N., R.3 E., on right bank 300 ft downstream from diversion dam for Lake Irrigation District Canal, half a mile downstream from Lake Fork Reservoir, and 3 miles southeast of McCall.

Drainage area.--64 sq mi, approximately.

Gage.--Recording. Altitude of gage is 5,080 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,500 cfs and extended to 2,120 cfs by logarithmic plotting.

Bankfull stage.--6 ft.

Remarks.--Peak flows partly regulated by Lake Fork Reservoir (capacity, 16,940 acre-ft). Lake Irrigation District Canal diverts above station for irrigation of about 6,800 acres. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 14, 1941	5.57	965	1950	June 22, 1950	5.85	1,100
1942	May 26, 1942	5.71	1,040				
1943	June 1, 1943	6.13	1,380	1951	May 28, 1951	5.72	942
1944	May 17, 1944	4.77	622	1952	May 29, 1952	5.67	1,050
1945	June 6, 1945	5.53	984	1953	June 13, 1953	6.08	1,300
				1954	May 21, 1954	6.28	1,460
1946	May 27, 1946	5.29	862	1955	June 12, 1955	5.66	1,100
1947	May 9, 1947	6.39	1,520				
1948	June 3, 1948	7.09	2,120	1956	May 25, 1956	6.23	1,430
1949	May 17, 1949	6.28	1,410	1957	June 3, 1957	6.31	1,290

2440. North Fork Payette River at Van Wyck, Idaho

Location.--Lat 44°31', long 116°04', in sec.26, T.14 N., R.3 E., on right bank at former highway bridge, half a mile upstream from Willow Creek, half a mile north of Van Wyck (now inundated by Cascade Reservoir), and 2 miles northwest of Cascade.

Drainage area.--608 sq mi.

Gage.--Nonrecording. Datum of gage is 4,760.93 ft above mean sea level (datum of 1912, survey by Long Valley Power Co.).

Stage-discharge relation.--Defined by current-meter measurements below 7,600 cfs.

Bankfull stage.--Site now inundated by Cascade Reservoir.

Remarks.--Some natural regulation by Payette Lake and Little Payette Lake. Low dam at outlet since 1919 probably has no effect on flood peaks. Numerous diversions for irrigation above station. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	June 1, 1913	9.1	8,140	1920	June 13, 1920	a6.65	4,750
1914	May 27, 1914	7.0	5,800				
1915	May 21, 1915	5.8	3,900	1921	May 20, 1921	8.6	8,700
				1922	June 8, 1922	7.85	6,580
1916	June 19, 1916	7.9	7,320	1923	June 13, 1923	7.1	5,540
				1924	May 16, 1924	6.3	4,180

a May have been higher prior to June 9.

2450. North Fork Payette River at Cascade, Idaho

Location.--Lat 44°31', long 116°02', in NE¼ sec.36, T.14 N., R.3 E., on right bank at Cascade, 285 ft downstream from Boise Cascade Corp. sawmill dam, half a mile upstream from Beaver Creek, and 1½ miles downstream from Cascade Dam.

Drainage area.--626 sq mi. Mean altitude, 5,960 ft.

Gage.--Nonrecording prior to Jan. 28, 1947; recording thereafter. Altitude of gage is 4,730 ft (from topographic map of Bureau of Reclamation).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--5 ft.

Remarks.--Flood flows completely regulated by Cascade Reservoir (capacity, 703,200 acre-ft) since 1948. In previous years slight regulation from Payette Lake (capacity unknown) and Lake Fork Reservoir (capacity, 16,940 acre-ft). Diversions above station for irrigation of about 37,000 acres. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 16, 1941	a4.78	4,760	1950	July 6, 1950	3.03	2,910
1942	May 28, 1942	a5.80	6,160				
1943	June 3, 1943	a6.33	7,000	1951	July 22, 1951	3.13	2,840
1944	June 3, 1944	b3.78	c3,580	1952	June 14, 1952	4.20	4,280
1945	June 6, 1945	a5.06	5,300	1953	June 20, 1953	4.85	5,230
				1954	June 28, 1954	3.84	4,010
1946	May 29, 1946	a4.94	5,000	1955	Aug. 2, 1955	3.38	3,150
1947	May 10, 1947	6.29	7,320				
1948	June 16, 1948	4.89	5,290	1956	June 8, 1956	4.48	4,990
1949	May 19, 1949	2.99	2,880	1957	June 11, 1957	4.74	5,430

a Maximum observed.
b Occurred May 18, 1944.
c Maximum discharge observed.

2455. North Fork Payette River near Smiths Ferry, Idaho

Location.--Lat 44°16', long 116°04', in SW¼ sec.23, T.11 N., R.3 E., on left bank 450 ft downstream from Beaver Creek, 2½ miles downstream from Tripod Creek, and 2 5/8 miles southeast of Smiths Ferry.

Drainage area.--893 sq mi.

Gage.--Recording. Datum of gage is 4,505.95 ft above mean sea level (levels by Bureau of Reclamation).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--Stream in canyon.

Remarks.--Flood flows slightly regulated by Payette Lake (capacity unknown) and Lake Fork Reservoir (capacity, 16,940 acre-ft). Many diversions for irrigation above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Mar. 29, 1942	9.97	7,590	1946	May 29, 1946	9.12	6,070
1943	June 3, 1943	10.70	9,110	1947	May 11, 1947	10.68	8,620
1944	June 4, 1944	7.53	3,830				
1945	June 7, 1945	9.28	6,310				

2460. North Fork Payette River near Banks, Idaho

Location.--Lat 44°07', long 116°06', in SE¼ sec.16, T.9 N., R.3 E., on right bank 40 ft downstream from highway bridge, 2½ miles north of Banks, and 3 miles upstream from confluence with South Fork.

Drainage area.--933 sq mi. Mean altitude, 5,800 ft.

Gage.--Recording. Datum of gage is 3,081.13 ft above mean sea level, preliminary unadjusted elevation.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Flood flows regulated by Cascade Reservoir (capacity, 703,200 acre-ft) since 1948 and to a slight extent by Payette Lake (capacity unknown) and Lake Fork Reservoir (capacity, 16,940 acre-ft). Many diversions above station for irrigation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 11, 1947	-	a8,830	1952	Apr. 27, 1952	11.07	5,190
1948	June 3, 1948	11.62	5,840	1953	June 18, 1953	11.85	6,370
1949	Jan. 28, 1949	b10.68	-	1954	Apr. 13, 1954	10.46	4,540
	May 21, 1949	9.69	3,540	1955	June 25, 1955	8.98	2,940
1950	Apr. 12, 1950	9.48	3,350				
				1956	June 8, 1956	11.20	5,480
1951	Apr. 29, 1951	9.91	3,810	1957	May 24, 1957	11.76	6,390

a Estimated.
b Backwater from ice.

2465. Payette River at Banks, Idaho

Location.--Lat 44°05', long 116°07', in SE¼ sec.29, T.9 N., R.3 E., on right bank, a fifth of a mile above Banks and three-eighths of a mile below confluence of North and South Forks of Payette River.

Drainage area.--2,120 sq mi, approximately.

Gage.--Nonrecording. Altitude of gage is 2,780 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Many diversions for irrigation above station. Probable slight regulation of flood peaks by Payette Lake (capacity unknown) since 1923 and by Lake Fork Reservoir (capacity, 16,940 acre-ft) since 1926. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	June 7, 1922	12.54	18,900	1926	May 5, 1926	9.15	9,890
1923	June 12, 1923	10.8	14,900	1927	June 14, 1927	13.7	22,300
1924	May 17, 1924	9.32	8,820	1928	May 26, 1928	13.7	22,900
1925	May 21, 1925	12.40	16,400	1929	May 25, 1929	9.2	11,400

2470. Porter Creek near Gardena, Idaho

Location.--Lat 43°57', long 116°11', in NE¼ sec.14, T.7 N., R.2 E., on left bank at Rood ranchhouse, 0.6 mile upstream from mouth and 2 miles south of Gardena.

Drainage area.--21.2 sq mi. Mean altitude, 4,800 ft.

Gage.--Nonrecording. Altitude of gage is 2,740 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements, below 60 cfs prior to 1942, and below 81 cfs thereafter.

Bankfull stage.--Not subject to overflow.

Remarks.--Several diversions for irrigation above station. Only annual observed peaks are shown.

Peak stages and discharges of Porter Creek near Gardena, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Dec. 14, 1938	a2.38	-	1942	May 15, 1942	2.56	70
	Mar. 25, 1939	2.36	48	1943	Dec. 24, 1942	3.50	160
1940	Mar. 31, 1940	3.02	114	1944	Apr. 24, 1944	2.40	92
				1945	May 24, 1945	2.60	108
1941	Aug. 11, 1941	b3.58	181				
1942	Jan. 4, 1942	a2.88	-	1956	Dec. 22, 1955	c2.9	140

a Backwater from ice.
b From high-water mark.
c From high-water mark; may have been higher during period of no record.

2475. Payette River near Horseshoe Bend, Idaho

Location.--Lat 43°56'30", long 116°12'00", in SE¼ sec.15, T.7 N., R.2 E., on left bank 300 ft upstream from bridge on State Highway 15, half a mile downstream from Porter Creek, and 2 miles north of Horseshoe Bend.

Drainage area.--2,230 sq mi, approximately. Mean altitude, 5,850 ft.

Gage.--Nonrecording prior to Nov. 23, 1912; recording thereafter. At site 1¾ miles upstream at different datum prior to Nov. 23, 1912. At site 1,000 ft downstream at datum 2.1 ft lower Nov. 23, 1912, to Apr. 16, 1953. Datum of gage is 2,625.61 ft above mean sea level, preliminary.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--In canyon; not subject to overflow.

Remarks.--Flood flows partly regulated by Cascade Reservoir (capacity, 703,200 acre-ft) since 1948, Deadwood Reservoir (capacity, 160,400 acre-ft) since 1931, and slightly by Lake Fork Reservoir (capacity, 16,940 acre-ft) since 1926 and Payette Lake (capacity unknown) since 1923. Diversions for irrigation of about 50,000 acres above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1906	May 13, 1906	8.1	9,550	1933	June 13, 1933	8.91	18,900
1907	June 7, 1907	10.45	16,900	1934	Mar. 29, 1934	5.58	8,830
1908	Apr. 24, 1908	8.6	11,000	1935	May 27, 1935	6.16	10,200
1909	June 7, 1909	11.5	19,500				
1910	Apr. 28, 1910	10.5	16,200	1936	Apr. 24, 1936	8.86	18,900
				1937	May 26, 1937	5.65	8,510
1911	June 16, 1911	11.15	18,700	1938	May 1, 1938	9.16	20,100
1912	June 13, 1912	10.6	17,300	1939	May 5, 1939	5.73	8,920
1913	May 31, 1913	9.25	18,800	1940	Mar. 31, 1940	7.32	13,500
1914	May 24, 1914	7.1	12,900				
1915	May 19, 1915	5.76	9,380	1941	May 27, 1941	6.22	10,300
				1942	May 27, 1942	7.63	14,400
1916	June 20, 1916	9.45	19,600	1943	June 2, 1943	9.14	20,000
				1944	May 19, 1944	4.98	7,380
1920	June 16, 1920	6.62	11,600	1945	June 10, 1945	6.42	11,400
1921	June 9, 1921	9.57	22,100	1946	Apr. 20, 1946	7.76	15,600
1922	June 7, 1922	8.45	17,600	1947	May 9, 1947	8.33	16,900
1923	June 12, 1923	7.35	14,300	1948	June 9, 1948	7.93	15,300
1924	May 17, 1924	5.46	8,740	1949	May 17, 1949	7.41	13,600
1925	May 22, 1925	8.05	16,300	1950	June 22, 1950	6.96	12,200
1926	May 5, 1926	6.04	9,920	1951	May 28, 1951	7.57	13,400
1927	June 13, 1927	9.27	21,000	1952	Apr. 28, 1952	9.29	16,600
1928	May 27, 1928	9.43	21,500	1953	June 13, 1953	12.93	16,700
1929	May 25, 1929	6.44	11,100	1954	May 10, 1954	11.62	12,800
1930	May 30, 1930	5.46	8,570	1955	May 22, 1955	9.66	8,030
1931	May 17, 1931	4.68	6,580	1956	Dec. 23, 1955	14.05	19,200
1932	May 22, 1932	8.15	16,800	1957	June 5, 1957	12.59	15,400

2495. Payette River near Emmett, Idaho

Location.--Lat 43°56', long 116°27', in sec.22, T.7 N., R.1 W., on right bank three-eighths of a mile downstream from Black Canyon Dam and 5 miles northeast of Emmett.

Drainage area.--2,680 sq mi, approximately.

Gage.--Recording. Altitude of gage is 2,400 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Flood flows regulated by Black Canyon Dam, by Cascade Reservoir (capacity, 703,200 acre-ft) since 1948, by Deadwood Reservoir (capacity, 160,400 acre-ft) since 1931, and slightly by Payette Lake (capacity unknown) and Lake Fork Reservoir (capacity, 16,940 ft). Diversions above station for irrigation of about 135,000 acres. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	May 5, 1926	9.29	14,400	1942	May 26, 1942	10.34	15,300
1927	May 17, 1927	12.6	21,400	1943	June 1, 1943	12.35	21,900
1928	May 27, 1928	12.75	22,000	1944	May 17, 1944	6.68	7,000
1929	May 25, 1929	8.94	11,600	1945	June 6, 1945	10.00	14,800
1930	May 10, 1930	9.1	12,100				
				1946	Apr. 18, 1946	11.21	18,600
1931	May 17, 1931	6.60	6,290	1947	May 9, 1947	11.13	17,900
1932	May 22, 1932	11.50	17,600	1948	June 3, 1948	10.75	16,700
1933	June 10, 1933	12.50	20,700	1949	May 17, 1949	9.65	14,000
1934	Mar. 29, 1934	8.25	9,620	1950	May 23, 1950	9.36	12,600
1935	May 27, 1935	9.13	11,700				
				1951	May 27, 1951	9.40	12,700
1936	Apr. 24, 1936	12.40	21,600	1952	Apr. 28, 1952	11.52	18,400
1937	Apr. 15, 1937	8.20	9,690	1953	June 13, 1953	11.28	17,800
1938	May 1, 1938	12.90	22,800	1954	May 20, 1954	9.46	12,900
1939	Apr. 2, 1939	8.40	10,200	1955	June 14, 1955	7.12	7,740
1940	Mar. 31, 1940	11.60	19,200				
				1956	Dec. 22, 1955	12.98	22,700
1941	May 13, 1941	9.70	13,900	1957	May 19, 1957	11.31	18,200

2510. Payette River near Payette, Idaho

Location.--Lat 44°02'30", long 116°55'30", in SW¼ sec.10, T.8 N., R.5 W., on right bank just upstream from U.S. Highway 95 bridge and 1¾ miles south of Payette.

Drainage area.--3,240 sq mi, approximately.

Gage.--Nonrecording prior to Aug. 7, 1939; recording thereafter. At site 50 ft downstream Aug. 1, 1935, to Aug. 7, 1939. Datum of gage is 2,138.44 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 21,000 cfs.

Bankfull stage.--14 ft.

Historical data.--Discharge probably exceeded 25,000 cfs in 1896 and 1897, based upon discredited records for 1895-97 and comparision with records for stations in Boise River basin.

Remarks.--Flood flows partly regulated by several reservoirs in Payette River basin. Diversions above station for irrigation of about 188,000 acres. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	Apr. 24, 1936	a11.27	20,600	1941	June 8, 1941	8.57	10,300
1937	May 19, 1937	a7.97	8,950	1942	May 27, 1942	9.90	14,900
1938	May 2, 1938	11.90	23,400	1943	June 2, 1943	11.37	21,000
1939	May 5, 1939	a8.11	8,560	1944	June 4, 1944	7.28	6,610
1940	Apr. 1, 1940	10.75	18,500	1945	June 6, 1945	9.35	12,900

a Maximum observed.

Peak stages and discharges of Payette River near Payette, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Apr. 19, 1946	10.26	16,300	1952	Apr. 29, 1952	11.20	17,300
1947	May 10, 1947	10.83	16,700	1953	June 14, 1953	11.36	17,900
1948	June 4, 1948	10.62	15,900	1954	May 10, 1954	9.64	11,700
1949	Feb. 21, 1949	b11.18	-	1955	May 22, 1955	c8.08	7,030
	May 17, 1949	10.01	13,200				
1950	May 23, 1950	9.37	11,000	1956	Dec. 23, 1955	12.75	21,900
				1957	May 19, 1957	11.53	17,700
1951	May 28, 1951	9.60	11,800				

b Backwater from ice.
c Occurred June 13, 1955.

WEISER RIVER BASIN

2515. Weiser River at Tamarack, Idaho

Location.--Lat 44°57', long 116°23', in NW¼NE¼ sec.31, T.19 N., R.1 E., on left bank 43 ft upstream from railroad bridge, 0.65 mile south of Tamarack, and 1½ miles upstream from Beaver Creek.

Drainage area.--36.5 sq mi. Mean altitude, 4,690 ft.

Gage.--Nonrecording prior to Oct. 8, 1949; recording thereafter. At site a quarter of a mile upstream at different datum prior to Oct. 8, 1949. Altitude of gage is 4,080 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 600 cfs, and extended to 1,320 cfs on basis of slope-area measurement.

Bankfull stage.--5 ft.

Remarks.--Base for partial-duration series, 280 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Apr. 14, 1937	3.99	253	1950	May 2, 1950	3.85	292
1938	Mar. 16, 1938	5.57	715	1951	Apr.6 or 7,1951	4.87	474
1939	Apr.3,4, 1939	3.80	272		Apr. 29, 1951	4.19	348
1940	Mar. 27, 1940	6.00	775	1952	Dec. 1, 1951	4.74	458
					Apr. 26, 1952	6.28	771
1941	Apr. 3, 1941	4.02	330		May 8, 1952	4.78	466
1942	Apr. 14, 1942	4.90	511	1953	Apr. 23, 1953	4.91	518
					Apr. 28, 1953	4.85	520
1943	Apr. 15, 1943	5.37	614	1954	Mar. 10, 1954	4.08	367
					Apr. 5, 1954	4.57	471
1944	Apr. 5, 1944	2.80	146		Apr. 14, 1954	4.78	524
1945	Apr. 21, 1945	4.13	365	1955	May 5, 1955	4.40	392
1946	Apr. 19, 1946	5.11	580	1956	Dec. 22, 1955	7.17	1,320
					Dec. 27, 1955	3.98	286
1947	Dec. 14, 1946	4.00	346		Mar. 25, 1956	3.91	336
					Apr. 16, 1956	4.74	513
1948	Apr. 22, 1948	5.30	628	1957	Apr. 14, 1957	4.60	434
1949	Apr. 20, 1949	3.86	309		May 3, 1957	3.77	288
1950	Apr. 13, 1950	4.50	404				

2525. East Fork Weiser River near Council, Idaho

Location.--Lat 44°46', long 116°16', in SE¼ sec.31, T.17 N., R.2 E., on left bank 100 ft upstream from road crossing, three-quarters of a mile southwest of Squaw Creek ranger station, and 9 miles northeast of Council.

Drainage area.--2.0 sq mi, approximately. Mean altitude, 6,900 ft.

Gage.--Recording. Datum of gage is 6,224.1 ft above mean sea level, adjustment of 1912.

Stage-discharge relation.--Defined by current-meter measurements below 50 cfs.

Remarks.--Winter records not obtained. Base for partial-duration series, 40 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	June 9, 1933	a4.11	-	1939	May 29, 1939	2.85	44
	June 9, 1933	3.89	75	1940	May 24, 1940	3.09	55
1934	May 7, 1934	3.01	43		June 12, 1940	2.87	45
1935	June 6, 1935	3.38	49	1941	May 24, 1941	3.10	57
1937	June 8, 1937	3.25	49	1942	(b)	3.05	59
1938	June 7, 1938	3.43	72	1943	June 29, 1943	c2.95	54
	June 16, 1938	3.52	77				
	July 4, 1938	3.30	65				

a Backwater from ice or snow.
b About May 25, 1942.
c Probably higher prior to June 21, 1943.

2535. Weiser River at Starkey, Idaho

Location.--Lat 44°51', long 116°27', in sec.34, T.18 N., R.1 W., on right bank at Starkey Hot Springs, 200 ft upstream from Warm Springs Creek and 8½ miles north of Council.

Drainage area.--106 sq mi. Mean altitude, 5,010 ft.

Gage.--Nonrecording prior to Apr. 21, 1939; recording thereafter. Altitude of gage is 3,150 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,200 cfs and extended by logarithmic plotting.

Bankfull stage.--4.5 ft.

Remarks.--Base for partial-duration series, 500 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Apr. 4, 1939	a3.61	590	1946	Apr. 8, 1946	3.69	516
					Apr. 19, 1946	5.22	1,420
1940	Feb. 28, 1940	4.03	798		Apr. 26, 1946	4.77	1,050
	Mar. 27, 1940	6.00	2,450		May 5, 1946	4.25	755
	Mar. 31, 1940	5.55	1,940	1947	Nov. 19, 1946	4.28	771
1941	Apr. 3, 1941	3.91	690		Dec. 15, 1946	4.27	765
1942	Dec. 20, 1941	3.81	640	1948	Apr. 17, 1948	5.35	1,500
	Apr. 14, 1942	4.83	1,260		Apr. 22, 1948	5.11	1,300
	May 25, 1942	3.61	544		Apr. 29, 1948	4.30	781
					May 7, 1948	4.62	957
1943	Apr. 8, 1943	4.75	1,160		May 17, 1948	4.57	933
	Apr. 15, 1943	5.25	1,540		June 3, 1948	4.15	704
	June 1, 1943	3.84	626	1949	Apr. 7, 1949	4.10	660
1944	Apr. 25, 1944	3.40	390		Apr. 20, 1949	4.32	786
					May 3, 1949	4.03	645
1945	Apr. 22, 1945	4.27	814		May 11, 1949	3.72	507
	May 4, 1945	4.25	802	1956	Dec. 22, 1955	b6.62	2,800
	May 17, 1945	4.00	665				
1946	Mar. 29, 1946	3.98	655				

a Maximum observed; annual peak only.
b Annual peak only.

2545. Lost Creek near Tamarack, Idaho

Location.--Lat 44°57', long 116°28', in SE¼NW¼ sec.28, T.19 N., R.1 W., on right bank a quarter of a mile downstream from dam of Lost Valley Reservoir, 4 miles west of Tamarack, and 16 miles north of Council.

Drainage area.--29.4 sq mi. Mean altitude, 5,460 ft.

Gage.--Nonrecording prior to Apr. 1, 1912; recording thereafter. Datum of gage is 4,729.6 ft above mean sea level (river-profile survey).

Stage-discharge relation.--Defined by current-meter measurements below 500 cfs.

Bankfull stage.--Channel confined to narrow canyon.

Remarks.--Flow regulated since 1910 by Lost Valley Reservoir. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	Apr.22,23,1910	-	a236	1938	May 1, 1938	3.44	476
				1939	May 6, 1939	2.49	158
1911	May 9, 1911	b2.55	158	1940	Apr. 2, 1940	3.05	332
1912	June 7, 1912	c2.6	183				
1913	June 1, 1913	3.10	323	1941	May 5, 1941	2.62	193
				1942	Apr. 15, 1942	3.02	322
1921	May 17,18,1921	4.29	688	1943	Apr. 19, 1943	3.31	429
				1944	May 2, 1944	2.10	92
1924	June 16-18,1924	1.35	53	1945	May 6, 1945	3.18	393
1925	Apr. 16, 1925	3.60	472				
				1946	Apr. 27, 1946	3.08	354
1927	(d)	3.47	e442	1947	May 5,6, 1947	2.70	222
1928	Apr. 29, 1928	3.05	308	1948	May 23, 1948	3.35	457
1929	May 28, 1929	2.66	206	1949	May 12, 1949	3.08	350
1930	Apr. 29, 1930	2.20	109	1950	May 17, 1950	2.91	301
1931	July 14,15,1931	1.90	62	1951	Apr. 30, 1951	2.82	267
1932	May 14, 1932	3.45	500	1952	Apr. 27, 1952	3.58	585
1933	May 27, 1933	2.84	262	1953	Apr. 28, 1953	3.30	425
1934	Apr. 14, 1934	2.44	151	1954	May 11,12,1954	2.83	280
1935	May 10, 1935	2.43	149	1955	May 23, 1955	2.77	264
1936	May 7, 1936	2.73	221	1956	Apr.23,24,1956	3.23	392
1937	May 10, 1937	1.99	72	1957	May 4, 1957	3.06	352

a Maximum observed discharge, stage not available. b Maximum observed. c Revised; may have been higher during period of no record. d About Apr. 27, 1927. e Revised.

2550. West Fork Weiser River near Fruitvale, Idaho

Location.--Lat 44°50', long 116°28', in NW¼ sec.9, T.17 N., R.1 W., at bridge 1¼ miles northwest of Fruitvale and 1½ miles upstream from mouth.

Drainage area.--78 sq mi, approximately. Mean altitude, 4,940 ft.

Gage.--Nonrecording gages, within 320 ft of site at different datums. Altitude of gage is 3,070 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 900 cfs.

Bankfull stage.--3 ft.

Remarks.--Flow regulated by Lost Valley Reservoir. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	Apr.27,28, 1911	5.1	420	1924	May 19, 1924	2.28	212
1912	Apr.29,30, 1912	5.4	512	1925	Apr. 19, 1925	a3.75	-
					Apr. 19, 1925	3.51	688
1920	May 19, 1920	5.7	584				
1921	May 18-23, 1921	4.4	687	1937	Apr. 15, 1937	2.14	b276
1922	May 19,21,22, 1922	4.45	595	1938	May 1, 1938	-	c1,000
				1939	Mar. 24, 1939	2.48	385
1923	May 11, 1923	3.80	543	1940	Mar. 31, 1940	3.79	1,170

a Backwater from ice.
b May have been higher during period of no record.
c Estimated daily mean discharge.

Peak stages and discharges of West Fork Weiser River near Fruitvale, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Apr. 3, 1941	3.57	350	1946	Apr. 19, 1946	4.51	896
1942	Apr. 14, 1942	4.40	710	1947	May 3,4, 1947	a3.89	-
1943	Apr. 19, 1943	d4.66	920		May 3,4, 1947	3.11	337
1944	Apr. 24, 1944	4.18	215	1948	May 19,22,23,1948	4.49	858
1945	May 5,6, 1945	-	c550	1949	Apr. 20, 1949	3.95	578

a Backwater from ice.
c Estimated daily mean discharge.
d Occurred Apr. 8, 1943.

2555. Hornet Creek near Council, Idaho

Location.--Lat 44°45', long 116°29', in sec.5, T.16 N., R.1 W., on right bank 2¼ miles upstream from mouth and 2.5 miles northwest of Council.

Drainage area.--107 sq mi. Mean altitude, 4,670 ft.

Gage.--Nonrecording. At datum 2.00 ft higher Aug. 5, 1939, to Oct. 19, 1940. Datum of gage is 2,970.29 ft above mean sea level (unadjusted).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--5.5 ft.

Remarks.--Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Mar. 15, 1938	a4.5	1,210	1942	Dec. 20, 1941	a6.00	613
1940	Feb. 28, 1940	a4.90	1,180	1943	Apr. 9, 1943	(b)	850
1941	Mar. 1, 1941	a5.68	527	1956	Dec. 22, 1955	-	c2,090

a Maximum observed.
b Gage overtopped; discharge estimated.
c Result of slope-area measurement.

2560. Weiser River near Council, Idaho

Location.--Lat 44°41', long 116°29', in sec.29, T.16 N., R.1 W., on left bank 0.7 mile downstream from Cottonwood Creek, 2 miles upstream from Middle Fork, and 3¼ miles southwest of Council.

Drainage area.--390 sq mi. Mean altitude, 4,680 ft.

Gage.--Nonrecording prior to Oct. 28, 1938; recording thereafter. At site 370 ft downstream at datum 0.58 ft higher from Apr. 12, 1937, to Oct. 28, 1938. Altitude of gage is 2,850 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 3,500 cfs.

Bankfull stage.--6.5 ft.

Remarks.--Flow slightly regulated by Lost Valley and other reservoirs. Diversions above gage for irrigation affect peaks during irrigation season. Base for partial-duration series, 1,900 cfs.

Peak stages and discharges of Weiser River near Council, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	Apr. 15, 1937	a4.50	1,550	1946	Apr. 19, 1946	7.19	3,110
					Apr. 26, 1946	6.28	2,390
1938	Mar.16 or 17, 1938	b7.59	6,700	1947	Feb. 13, 1947	5.77	2,050
1939	Mar. 27, 1939	6.66	2,550	1948	Apr. 18, 1948	7.33	3,280
					May 7, 1948	6.13	2,310
1940	Feb. 28, 1940	7.91	3,480		May 22, 1948	6.41	2,530
	Mar. 31, 1940	8.46	4,110		June 3, 1948	6.07	2,270
1941	Mar. 1, 1941	6.10	1,940	1949	Mar. 18, 1949	6.09	2,320
1942	Dec. 20, 1941	6.83	2,710	1950	Mar. 17, 1950	6.14	2,300
	Apr. 14, 1942	6.79	2,710		Apr. 14, 1950	6.94	2,950
1943	Jan. 22, 1943	5.76	2,010	1951	Apr. 7, 1951	6.03	2,210
	Apr. 8, 1943	7.84	3,600		Apr. 15, 1951	5.61	1,910
	Apr. 16, 1943	7.40	3,240		Apr. 29, 1951	5.60	1,900
1944	Apr.24,25,1944	4.52	1,210	1952	Dec. 1, 1951	8.44	4,290
					Apr. 28, 1952	8.48	4,330
1945	Feb. 8, 1945	6.70	2,690		May 9, 1952	7.55	3,480
	Mar. 21, 1945	6.52	2,530				
	May 5, 1945	5.67	1,920	1953	Jan. 18, 1953	7.69	3,600
					Apr. 28, 1953	-	c2,450
1946	Dec. 29, 1945	6.69	2,700		June 8, 1953	-	c2,150
	Mar. 12, 1946	5.70	1,980				
	Mar. 21, 1946	6.70	2,720	1956	Dec. 22, 1955	d9.86	6,600
	Mar. 29, 1946	6.71	2,730				

a Maximum observed; may have been higher about Mar. 18, 1937. b Maximum observed; annual peak only. c Estimated. d Annual peak only.

2570. Middle Fork Weiser River near Mesa, Idaho

Location.--Lat 44°39', long 116°27', in NW¼ sec.10, T.15 N., R.1 W., at old highway bridge, 1¾ miles north of Mesa and 2¼ miles upstream from mouth.

Drainage area.--86.5 sq mi. Mean altitude, 5,430 ft.

Gage.--Nonrecording. At sites within three-quarters of a mile upstream at different datum Oct. 4, 1910, to Aug. 31, 1913. At last used site at several different datums since Aug. 23, 1919. Altitude of gage is 2,900 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,000 cfs.

Bankfull stage.--6 ft.

Remarks.--Mesa Orchards Canal diverts about 6½ miles above station. Peaks are only slightly affected by diversion. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 7, 1911	5.1	859	1942	May 25, 1942	3.52	640
1912	May 20, 1912	4.6	646	1943	June 1, 1943	-	b1,000
1913	May 27, 1913	6.3	1,440	1944	May 6, 1944	2.58	335
				1945	May 10, 1945	3.44	773
1920	May 19-20, 1920	4.2	377				
				1946	May 5, 1946	3.22	762
1921	May 20-22,1921	6.06	1,070	1947	Jan. 18, 1947	c3.54	-
					May 9, 1947	3.20	925
1937	May 4, 1937	2.60	403	1948	May 27, 1948	d4.10	994
1938	May 1, 1938	a3.88	1,380	1949	Feb. 11, 1949	c4.60	-
1939	Apr.29,May 3,4, 1939	2.60	575		May 14, 1949	4.00	725
1940	Mar. 31, 1940	3.30	1,140	1956	Dec. 22, 1955	-	e1,710
1941	May 13, 1941	3.49	668				

a Occurred Dec. 11, 1937. b Estimated daily mean discharge. c Backwater from ice. d Occurred June 3, 1948. e Result of slope-area measurement.

2575. Johnson Creek below Johnson Park, near Council, Idaho

Location.--Lat 44°46', long 116°38', in SE¼ sec.36, T.17 N., R.3 W., on right bank 50 ft downstream from Johnson Park Creek, three-quarters of a mile southeast of Johnson Park, and 10 miles northwest of Council.

Drainage area.--5 sq mi, approximately. Mean altitude, 6,290 ft.

Gage.--Recording. Prior to Sept. 9, 1942, at site 22 ft upstream at different datum. Altitude of gage is about 6,000 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 150 cfs.

Remarks.--Base for partial-duration series, 80 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 3, 1941a/	1.94	94	1945	May 30, 1945	3.00	201
	May 12, 1941	1.97	98		June 5, 1945a/	1.90	96
1942	Apr. 16, 1942	1.99	106	1946	May 6, 1946	2.09	104
	May 22, 1942	2.57	181		May 22, 1946	2.19	115
1943	Apr. 18, 1943	1.80	86	1947	May 2, 1947	2.14	103
	May 3, 1943	1.82	88				
	May 31, 1943	2.20	130	1948	Oct. 16, 1947	1.92	87
1944	May 6, 1944	1.73	79		May 22, 1948	2.36	115
					June 3, 1948	3.35	222
1945	Nov. 4, 1944	1.90	98	1949	May 16, 1949	1.97	104
	May 16, 1945	2.70	170				

a About.

2585. Weiser River near Cambridge, Idaho

Location.--Lat 44°35', long 116°38', in NW¼ sec.1, T.14 N., R.3 W., on left bank 100 ft upstream from road bridge, 2¼ miles northeast of Cambridge, and 2½ miles upstream from Rush Creek.

Drainage area.--605 sq mi. Mean altitude, 4,650 ft.

Gage.--Nonrecording prior to Apr. 23, 1939, and recording gage at site 135 ft downstream at different datum Apr. 23, 1939, to Dec. 21, 1955. Nonrecording gage at bridge 2½ miles downstream at different datum Dec. 22, 1955, to Aug. 28, 1956; recording gage at present site and datum thereafter. Altitude of gage is 2,660 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 8,000 cfs.

Bankfull stage.--7.5 ft.

Remarks.--Flow partly regulated by Lost Valley and other reservoirs. Diversions affect peaks slightly during irrigation season. Base for partial-duration series, 3,300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 27, 1939	a7.12	3,320	1944	Apr. 25, 1944	4.78	1,640
1940	Feb. 28, 1940	8.26	6,210	1945	Feb. 8, 1945	7.54	4,960
	Mar. 31, 1940	8.30	6,670		Mar. 21, 1945	6.98	4,030
1941	Dec. 27, 1940	6.82	3,870	1946	Dec. 29, 1945	7.28	4,420
					Mar. 13, 1946	6.53	3,410
1942	Dec. 20, 1941	7.47	5,150		Mar. 21, 1946	7.29	4,440
	Apr. 15, 1942	6.87	4,040		Mar. 29, 1946	6.69	3,600
					Apr. 19, 1946	7.09	4,140
1943	Jan. 21, 1943	b7.8	-		Apr. 27, 1946	6.59	3,480
	Mar. 29, 1943	7.45	4,700				
	Apr. 9, 1943	7.83	5,320	1947	Nov. 27, 1946	6.49	3,360
	Apr. 16, 1943	7.51	4,780		Feb. 12, 1947	b7.18	-
	June 1, 1943	7.00	3,970				

a Maximum observed.
b Backwater from ice.

Peak stages and discharges of Weiser River near Cambridge, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	Apr. 18, 1948	7.16	4,260	1953	Apr. 28, 1953	7.03	3,780
	May 22, 1948	6.83	3,840		June 8, 1953	6.48	3,320
	June 3, 1948	7.21	4,320	1954	Jan. 17, 1954	7.56	4,600
1949	Mar. 18, 1949	6.94	4,010		Mar. 10, 1954	6.89	3,870
1950	Mar. 17, 1950	7.24	4,370	1955	Apr. 22, 1955	5.68	3,300
	Apr. 14, 1950	6.70	3,730	1956	Dec. 22, 1955	13.9	10,100
1951	Apr. 7, 1951	6.02	3,060		Jan. 16, 1956	9.80	3,350
1952	Dec. 2, 1951	7.91	5,970		Apr. 23, 1956	9.87	3,460
	Apr. 28, 1952	7.71	5,620	1957	Feb. 26, 1957	9.73	7,600
	May 9, 1952	7.35	5,040		Apr. 14, 1957	6.57	3,830
1953	Jan. 18, 1953	8.00	4,820		May 19, 1957	7.09	4,470

2595. Rush Creek at Cambridge, Idaho

Location.--Lat 44°35', long 116°40', in SW¼ sec.2, T.14 N., R.3 W., on left bank in Cambridge, 150 ft upstream from Superior Street, and three-eighths of a mile upstream from mouth.

Drainage area.--32 sq mi, approximately. Mean altitude, 5,070 ft.

Gage.--Nonrecording. Altitude of gage is 2,630 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 340 cfs and extended to 580 cfs by logarithmic plotting.

Bankfull stage.--7 ft.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Mar. 16, 1938	6.07	582	1942	May 25, 1942	4.80	341
1939	Mar. 22, 1939	3.87	192	1943	May 31, 1943	5.12	396
1940	Mar. 31, 1940	5.31	396	1956	Dec. 22, 1955	a5.56	469
1941	May 13, 1941	4.64	291				

a From floodmark.

2600. Pine Creek near Cambridge, Idaho

Location.--Lat 44°35'23", long 116°44'12", in SE¼ sec.31 (revised), T.15 N., R.3 W., on right bank 300 ft upstream from West Fork and 3.2 miles northwest of Cambridge.

Drainage area.--54 sq mi, approximately. Mean altitude, 4,730 ft.

Gage.--Nonrecording. At site 15 ft downstream, Aug. 29, 1945, to Mar. 7, 1951. Altitude of gage is 2,800 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 300 cfs and extended on basis of slope-area measurements.

Bankfull stage.--3 ft.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges of Pine Creek near Cambridge, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1939	Mar. 25, 1939	1.86	145	1949	May 16, 1949	2.80	259
1940	Apr. 1, 1940	3.26	392	1950	Mar.17,June 16, 1950	2.53	196
1941	Mar. 2, 1941	2.38	246				
1942	May 23, 1942	2.90	348	1951	May 22, 1951	2.05	156
1943	Mar. 29, 1943	2.68	326	1952	Apr. 19, 1952	c2.78	d370
1944	Jan. 31, 1944	a2.20	-	1953	Jan. 19, 1953	e2.97	208
	May 14, 1944	1.84	149	1954	May 19, 1954	2.73	151
1945	Mar. 21, 1945	2.95	363	1955	Jan. 1, 1955	a3.06	-
	June 5, 9, 10, 1945	b3.05	-		June 11, 1955	2.91	199
1946	Mar.20,21,1946	2.70	259	1956	Dec. 22, 1955	3.65	420
1947	May 9, 1947	2.42	204	1957	Feb. 26, 1957	4.17	510
1948	May 27, 1948	3.60	505				

a Backwater from ice. b Backwater from logs. c Occurred Apr. 5, 7, 1952.
d Estimated daily mean discharge. e Occurred June 14, 1953.

2610. Little Weiser River near Indian Valley, Idaho

Location.--Lat 44°30', long 116°24', in NE¼ sec.1, T.13 N., R.1 W., on left bank 60 ft downstream from barn at Richardson Ranch, 1 mile upstream from diversion to C. Ben Ross Reservoir, and 4¾ miles southeast of Indian Valley.

Drainage area.--81.9 sq mi. Mean altitude, 5,300 ft.

Gage.--Nonrecording at present site at different datum prior to Feb. 25, 1924. Recording gage half a mile downstream at different datum Apr. 23, 1924, to Nov. 18, 1927. Nonrecording gage at present site and datum May 6, 1938, to Aug. 11, 1950. Since Aug. 11, 1950, recording gage at present site and datum. Altitude of gage is 3,250 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below about 650 cfs and extended above.

Bankfull stage.--4.5 ft.

Remarks.--Base for partial-duration series, 400 cfs. Only annual peaks are shown 1923-50.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	May 10, 1923	-	a550	1952	Apr. 27, 1952	4.55	1,020
1924	May 14, 1924	2.01	271		May 8, 1952	5.05	1,280
1925	Feb. 4, 1925	4.19	1,840	1953	Jan. 18, 1953	4.52	1,120
1926	Apr. 18, 1926	1.99	311		Apr. 28, 1953	3.74	766
1927	May 16, 1927	3.98	1,130		May 6, 1953	3.00	482
					May 20, 1953	3.71	754
1938	May 1, 1938	a5.15	1,200		June 2, 1953	4.54	1,130
1939	Mar. 24, 1939	b3.30	419		June 7, 1953	4.77	1,240
1940	Feb. 27, 1940	b3.80	626		June 12, 1953	4.16	942
1941	May 12,13,1941	b3.40	482	1954	Mar. 9, 1954	2.91	450
1942	May 29, 1942	b4.10	c750		Apr. 13, 1954	3.45	650
1943	May 31, 1943	b4.53	925		Apr. 28, 1954	3.13	529
1944	Apr. 5, 1944	b3.26	475		May 10, 1954	3.34	607
1945	June 5, 1945	b4.35	844		May 20, 1954	3.48	662
					June 15, 1954	2.83	422
1946	Apr. 18, 1946	b3.95	617				
1947	May 9, 1947	b4.30	740	1955	Apr. 22, 1955	3.32	588
1948	May 27, 1948	b4.50	844		May 21, 1955	3.13	504
1949	May 14, 1949	b3.88	620		June 9, 1955	3.30	566
1950	Jan. 21, 1950	d3.06	-				
	June 6, 1950	b3.02	372	1956	Dec. 22, 1955	4.67	1,200
					Jan. 15, 1956	4.08	880
1951	Apr. 18, 1951	2.94	405		Apr. 21, 1956	3.08	490
	Apr. 28, 1951	3.06	440		May 7, 1956	3.15	510
	May 12, 1951	3.25	500		May 23, 1956	4.22	950
	May 22, 1951	3.45	568				
				1957	Feb. 26, 1957	5.23	1,480
1952	Dec. 1, 1951	3.30	517		May 14, 1957	5.59	1,750
	Apr. 6, 1952	3.47	576		May 19, 1957	5.03	1,420
	Apr. 14, 1952	3.59	619		June 8, 1957	4.04	860
	Apr. 18, 1952	4.04	798				

a May have been higher during period of no record. b Maximum observed. c Revised. d Backwater from ice.

2635. Weiser River above Crane Creek, near Weiser, Idaho

Location.--Lat 44°18', long 116°48', in sec.10, T.11 N., R.4 W., on left bank 1 mile upstream from Crane Creek and 9 miles northeast of Weiser.

Drainage area.--1,160 sq mi, approximately. Mean altitude, 4,280 ft.

Gage.--Recording. Altitude of gage is 2,270 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 9,000 cfs and extended by logarithmic plotting.

Bankfull stage.--7 ft.

Remarks.--Diversions for irrigation affect peaks slightly during irrigation season. Base for partial-duration series, 5,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	Mar.18,19,1921	7.8	7,550	1938	Mar. 24, 1938	6.06	5,600
	May 21, 1921	7.45	6,870		May 2, 1938	6.88	7,210
1922	Mar. 24, 1922	9.98	13,300	1939	Mar. 23, 1939	6.31	5,980
	Apr. 4, 1922	7.66	8,300				
	May 20, 1922	6.27	5,160	1940	Feb. 6, 1940	6.12	5,600
					Feb. 28, 1940	10.12	15,100
1923	Jan. 6, 1923	a6.47	-		Apr. 1, 1940	9.47	13,400
	Apr. 7, 1923	6.08	5,020				
				1941	Dec. 27, 1940	6.65	6,580
1924	Feb. 7, 1924	a9.15	-		Jan. 26, 1941	6.16	5,790
	Feb. 8, 1924	b7.1	b6,890		Feb. 25, 1941	6.15	5,790
1925	Feb. 4, 1925	10.65	16,000	1942	Dec. 20, 1941	6.68	6,790
	Feb. 23, 1925	c6.92	6,800		Jan. 28, 1942	a8.55	-
	Mar. 6, 1925	c6.52	5,870		Feb. 22, 1942	a7.98	-
	Apr.19,20,1925	6.19	5,360				
				1943	Jan. 1, 1943	5.82	5,320
1926	Feb. 6, 1926	8.11	9,600		Jan. 21, 1943	a9.0	-
					Jan. 22, 1943	7.07	7,900
1927	Nov. 29, 1926	7.20	7,200		Mar. 29, 1943	6.77	7,120
	Feb. 4, 1927	7.97	9,000		Apr. 9, 1943	6.86	7,210
	Feb. 21, 1927	8.90	11,900		Apr. 16, 1943	6.15	5,790
	Mar. 14, 1927	6.68	6,570		June 1, 1943	5.78	5,050
	Apr. 28, 1927	5.94	5,140				
	May 17, 1927	6.15	5,670	1944	Feb. 7, 1944	a6.56	-
					Mar. 17, 1944	4.47	3,120
1928	Mar. 11, 1928	8.31	10,400				
	Mar. 27, 1928	7.60	8,240	1945	Feb. 9, 1945	7.93	9,620
					Mar. 21, 1945	6.64	6,940
1929	Mar. 11, 1929	6.20	5,690				
				1946	Dec. 29, 1945	6.92	7,690
1930	Feb. 16, 1930	a5.89	-		Mar. 13, 1946	7.42	8,770
	Feb. 20, 1930	4.90	3,500		Mar. 21, 1946	6.72	7,270
					Mar. 29, 1946	5.92	5,690
1931	Mar. 18, 1931	6.10	5,510		Apr. 19, 1946	5.63	5,160
1932	Mar. 8, 1932	a6.87	-	1947	Nov. 28, 1946	5.72	5,310
	Mar. 19, 1932	10.80	16,900		Feb. 12, 1947	a8.91	-
	Mar. 29, 1932	6.34	5,940				
	Apr. 3, 1932	6.10	5,580	1948	Feb. 22, 1948	5.56	5,020
	May 14, 1932	5.90	5,230		May 28, 1948	5.65	5,180
					June 3, 1948	6.27	6,340
1933	Apr. 3, 1933	6.74	6,660				
				1949	Feb. 23, 1949	a8.59	-
1934	Jan. 3, 1934	-	d4,000		Mar. 19, 1949	6.41	6,560
1935	Apr. 8, 1935	5.22	4,340	1950	Feb. 25, 1950	a8.00	-
					Mar. 18, 1950	7.21	8,130
1936	Mar. 3, 1936	a7.67	-				
	Apr. 13, 1936	6.08	5,710	1951	Feb. 7, 1951	a7.18	-
					Feb. 12, 1951	5.13	4,320
1937	Mar. 18, 1937	5.90	5,380				
				1952	Dec. 2, 1951	7.29	8,390
1938	Dec. 12, 1937	8.2	10,200		Apr. 7, 1952	7.64	9,370
	Feb. 12, 1938	6.0	5,410		Apr. 28, 1952	7.45	8,760
	Mar. 3, 1938	5.76	5,050		May 9, 1952	6.63	6,960
	Mar. 16, 1938	8.00	9,690				

a Backwater from ice.
b Not previously published.
c Observed.

2645. Crane Creek near Midvale, Idaho

Location.--Lat 44°21'30", long 116°37'10", in SE¼ sec.19, T.12 N., R.2 W., on left bank 400 ft downstream from Crane Creek Dam and 9½ miles southeast of Midvale.

Drainage area.--242 sq mi.

Gage.--Nonrecording prior to May 1, 1924; recording thereafter. At site 100 ft upstream at different datum prior to May 1, 1924. May 1, 1924, to Dec. 7, 1952, at present site at datum 1.54 ft higher. Altitude of gage is 3,140 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 3,500 cfs.

Bankfull stage.--Deep canyon; not subject to overflow.

Remarks.--Regulated since 1911 by Crane Creek Reservoir. Some unmeasured spillway bypass flow prior to 1933. Stage in reservoir held below spillway crest since about 1933. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	Dec. 3, 1910	9.4	a4,750	1937	Aug. 19, 1937	2.03	223
1912	Mar. 18, 1912	4.88	633	1938	Mar. 16, 1938	3.42	835
1913	Mar. 30, 31, Apr.1, 1913	6.10	b1,370	1939	Mar. 28, 1939	3.41	828
				1940	Mar. 5, 1940	3.44	913
1914	Feb.24,Mar.7, 1914	5.2	792				
				1941	Mar. 1, 1941	3.27	812
1915	May 19-29, 1915	4.9	629	1942	Feb. 10, 1942	3.34	856
				1943	Jan. 2, 1943	3.35	862
1916	Mar.17-31, 1916	5.4	b909	1944	Apr.14-19,1944	2.38	334
				1945	Feb. 14, 1945	2.76	555
1925	Feb.7-13, 1925	3.42	898				
				1946	Mar. 12, 1946	3.35	895
1926	July 26-28,1926	1.70	163	1947	Feb. 16, 1947	3.20	824
1927	Feb.21-23, 1927	3.19	b742	1948	Apr.21-23,1948	2.23	240
1928	May 1, 1928	3.47	949	1949	Mar. 8, 1949	3.29	680
1929	Mar.11,12,1929	3.08	615	1950	Mar. 26, 1950	3.32	719
1930	Aug. 3, 1930	1.85	186				
				1951	Mar. 27, 1951	2.58	384
1931	Aug. 24, 1931	2.02	222	1952	Apr.8-12, 1952	3.54	824
1932	Mar.25-27,29, 30, 1932	3.00	b615	1953	Oct. 12, 1952	3.24	653
				1954	July 28, 1954	3.56	218
1933	Apr.7,8, 1933	3.24	766	1955	Apr.30 to May 4, 1955	4.02	348
1934	Aug.10,11,1934	1.97	215				
1935	July 18,19,1935	2.10	249				
				1956	Dec. 27, 1955	4.76	706
1936	Mar. 11, 1936	3.42	835	1957	Mar. 2, 1957	5.09	973

a Revised.
b Does not include spillway discharge from reservoir in canyon to north.

2655. Crane Creek at mouth, near Weiser, Idaho

Location.--Lat 44°18', long 116°47', in sec.14, T.11 N., R.4 W., on right bank just downstream from highway bridge at Harris Ranch, a quarter of a mile upstream from mouth and 10 miles northeast of Weiser.

Drainage area.--288 sq mi.

Gage.--Recording gage and concrete control. Altitude of gage is 2,240 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 2,700 cfs.

Bankfull stage.--9.5 ft.

Remarks.--Minor diversions for irrigation. Flow regulated since 1911 by Crane Creek Reservoir. Only annual peaks are shown.

Peak stages and discharges of Crane Creek at mouth, near Weiser, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	Mar. 13, 1921	5.60	a1,260	1940	Feb. 27, 1940	6.28	1,700
1922	Mar. 24, 1922	5.95	1,860				
1923	Jan. 7, 1923	4.85	765	1941	Mar. 2, 1941	5.57	1,070
1924	Feb. 7, 1924	5.27	1,140	1942	Feb. 4, 1942	6.06	1,520
1925	Feb. 7, 1925	6.80	2,350	1943	Jan. 1, 1943	c6.30	b1,100
				1944	Mar. 17, 1944	4.77	495
1926	Feb. 6, 1926	5.60	1,260	1945	Feb. 8, 1945	5.95	1,400
1927	Feb. 22, 1927	6.5	2,060				
1928	Mar. 27, 1928	6.25	1,840	1946	Mar. 12, 1946	6.18	1,650
1929	Mar. 12, 1929	-	b750	1947	Feb. 12, 1947	6.09	1,610
1930	Feb. 22, 1930	5.2	875	1948	Feb. 22, 1948	4.62	593
				1949	Mar. 12, 1949	5.58	1,010
1931	Mar. 11, 1931	5.15	842	1950	Mar. 24, 1950	5.78	1,130
1932	Mar. 18, 1932	6.2	1,840				
1933	Apr.7,8, 1933	-	b800	1951	Mar. 15, 1951	5.37	1,020
1934	Jan. 3, 1934	5.10	600	1952	Apr. 5, 1952	5.80	1,410
1935	Mar. 13, 1935	4.65	440	1953	Jan. 18, 1953	5.27	1,020
				1954	Jan. 17, 1954	4.74	715
1936	Mar. 12, 1936	5.75	950	1955	Apr. 22, 1955	4.86	494
1937	Apr. 1, 1937	5.43	800				
1938	Mar. 19, 1938	5.77	1,160	1956	Dec. 19, 1955	5.26	1,780
1939	Mar. 21, 1939	-	b1,100	1957	Feb. 26, 1957	6.23	3,170

a Maximum recorded; may have been higher during period of no record.
b Estimated mean daily discharge.
c Occurred Jan. 21, 1943.

2660. Weiser River near Weiser, Idaho
(Published as "at Weiser," prior to 1900)

Location.--Lat 44°16'50", long 116°47'00", in NW¼ sec.23, T.11 N., R.4 W., on right bank 0.4 mile upstream from county road bridge, 1¾ miles downstream from Crane Creek, and 9½ miles northeast of Weiser.

Drainage area.--1,460 sq mi, approximately.

Gage.--Nonrecording prior to Sept. 30, 1952; recording thereafter. At site about 3 miles downstream at different datum 1890 and 1891. At sites about 2 miles downstream at different datum 1895 to 1904. At site 1 mile downstream at different datum 1911-15. Altitude of present gage is 2,220 ft (by barometer).

Stage-discharge relation.--Well defined by current-meter measurements.

Bankfull stage.--9 ft.

Remarks.--Diversions above station for irrigation of about 22,000 acres. Flow partly regulated by Crane Creek Reservoir and by other small reservoirs. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1890	Mar. 19, 1890	-	11,200	1904	Mar. 8, 1904	10.5	16,900
1891	Mar. 27, 1891	-	9,300				
				1911	Feb. 1, 1911	7.7	6,010
1895	Mar.28,29, 1895	6.4	4,300	1912	May 1, 1912	8.6	5,070
				1913	Mar. 30, 1913	11.0	9,220
1896	May 5, 1896	9.5	12,800	1914	Feb. 25, 1914	8.6	4,900
1897	Apr. 20, 1897	8.3	10,500				
1898	Apr.17,27, 1898	4.4	3,500	1953	Jan. 18, 1953	9.14	13,000
1899	Mar. 27, 1899	6.8	7,850	1954	Jan. 17, 1954	7.63	7,850
1900	Mar. 8, 1900	8.0	10,600	1955	Apr. 22, 1955	6.77	6,170
1901	Feb. 27, 1901	7.25	8,730	1956	Dec. 23, 1955	11.06	19,900
1902	Feb.10,11,1902	7.4	9,180	1957	Feb. 25, 1957	10.81	19,000
1903	Mar.15,16,1903	9.6	14,500				

2670. Mann Creek near Weiser, Idaho

Location.--Lat 44°23'30", long 116°53'40", in NE¼ sec.11, T.12 N., R.5 W., on left bank 2 miles upstream from U.S. Highway 95, 10 miles northeast of Weiser, and 11½ miles upstream from mouth.

Drainage area.--56 sq mi, approximately. Mean altitude, 4,860 ft.

Gage.--Nonrecording. At several sites about 1,000 ft upstream at different datums prior to Feb. 9, 1951. Altitude of present gage is 2,830 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 420 cfs and by slope-area or contracted-opening measurements at 600, 700, 800, and 900 cfs.

Bankfull stage.--3 ft.

Remarks.--One diversion above station for irrigation has minor effect on flood discharge. Only annual peaks as observed are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	Apr. 1, 1911	a3.85	196	1946	Apr. 18, 1946	2.60	393
1912	Apr. 29, 1912	4.8	390	1947	Feb. 13, 1947	1.90	157
1913	May 9, 1913	4.6	386	1948	Apr. 17, 1948	d3.40	343
				1949	Mar. 18, 1949	d,e2.28	322
1937	Apr. 15, 1937	a2.09	200	1950	Apr. 13, 1950	2.00	298
1938	Apr. 30, 1938	4.28	945				
1939	Mar. 25, 1939	3.42	498	1951	Apr. 5, 1951	2.70	421
1940	Mar. 27, 1940	b5.45	1,540	1952	Apr. 26, 1952	3.45	756
				1953	Apr. 26, 1953	2.70	403
1941	Mar. 31, 1941	3.04	316	1954	Mar. 9, 1954	3.03	560
1942	Apr. 12, 1942	3.52	450	1955	Apr. 22, 1955	2.70	372
1943	Apr. 14, 1943	-	c500				
1944	Mar. 17, 1944	2.44	237	1956	Dec. 22, 1955	f3.00	550
1945	Mar.20,21,1945	4.15	810	1957	Feb. 26, 1957	f3.40	602

a May have been higher during period of no record. b From floodmark. c Estimated daily mean discharge; gage height above 5.2 ft. d Excessive pile-up on gage. e Occurred on Mar. 2, 1949. f From graph based on gage readings.

SNAKE RIVER MAIN STEM

2690. Snake River at Weiser, Idaho

Location.--Lat 44°14'40", long 116°58'25", in sec.31, T.11 N., R.5 W., on right bank a third of a mile upstream from highway bridge at Weiser and a third of a mile downstream from Weiser River.

Drainage area.--69,200 sq mi, approximately. Mean altitude, 5,400 ft.

Gage.--Nonrecording prior to Oct. 11, 1933; recording thereafter. At site a half mile downstream at different datums prior to Oct. 1, 1914. Datum of gage is 2,086.64 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 81,000 cfs.

Bankfull stage.--14 ft.

Historical data.--Flood of Mar. 3, 1910, reached a stage of 17.1 ft, present site and datum, from old U.S. Weather Bureau gage (discharge, 120,000 cfs). Flood of June 1894 was considerably higher.

Remarks.--Flow regulated by many reservoirs and powerplants above station. About 2,240,000 acres of land irrigated by diversions from river and tributaries above station. Peak stages as observed prior to 1934. Only annual peaks are shown.

Peak stages and discharges of Snake River at Weiser, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	Mar. 3, 1910	17.1	120,000	1932	Mar. 20, 1932	9.90	53,300
				1933	Feb. 17, 1933	a15.00	-
1911	June 21, 1911	13.7	67,200		June 13, 1933	8.40	39,500
1912	June 15, 1912	14.5	73,800	1934	Jan. 3, 1934	5.15	20,500
1913	May 31, June 1, 2, 4, 1913	13.6	66,500	1935	June 3, 1935	5.83	24,300
1914	Apr. 17, May 25, 26, 1914	11.8	50,800	1936	Apr. 25, 1936	11.18	60,700
				1937	Jan. 18, 1937	a10.42	-
1915	Nov. 18, 1914	6.4	28,600		Apr. 16, 1937	8.40	36,900
				1938	May 3, 1938	12.25	67,200
1916	Mar. 22, 1916	10.5	58,400	1939	Mar. 26, 1939	8.84	39,500
1917	May 28, 29, 1917	11.9	69,400	1940	Apr. 1, 1940	9.79	49,600
1918	June 24, 1918	11.0	62,400				
1919	Apr. 5, 1919	9.9	53,800	1941	June 9, 1941	6.74	28,000
1920	Dec. 24, 1919	a10.03	-	1942	June 1, 1942	9.42	44,300
	May 24, 1920	7.61	36,800	1943	Apr. 21, 1943	12.76	69,300
				1944	June 17, 1944	8.54	37,000
1921	May 23, 1921	13.60	83,100	1945	June 14, 1945	9.48	44,100
1922	Jan. 29, 1922	a12.14	-				
	May 27, 1922	11.63	67,100	1946	Apr. 18, 1946	11.23	57,300
1923	June 13, 1923	8.44	41,500	1947	June 11, 1947	9.46	44,600
1924	Feb. 9, 1924	6.60	28,900	1948	June 4, 1948	10.51	48,300
1925	Dec. 31, 1924	a11.50	-	1949	Mar. 19, 1949	8.01	34,300
	Feb. 6, 1925	10.90	63,100	1950	Apr. 14, 1950	9.13	40,400
1926	Feb. 7, 1926	7.30	34,700	1951	May 17, 1951	9.92	45,900
1927	June 17, 1927	10.27	56,300	1952	Apr. 29, 1952	14.67	84,500
1928	May 12, 1928	11.35	62,300	1953	June 14, 1953	11.42	56,900
1929	Apr. 15, 1929	7.30	31,300	1954	Apr. 15, 1954	7.22	30,000
1930	Dec. 17, 1929	5.30	21,100	1955	Apr. 23, 1955	6.83	28,000
	Jan. 31, 1930	a11.20	-				
				1956	June 6, 1956	11.28	56,400
1931	Mar. 19, 1931	4.60	19,000	1957	May 24, 1957	12.61	66,400

a Backwater from ice.

BURNT RIVER BASIN

2710. South Fork Burnt River at Hardman Ranch, near Unity, Oreg.

Location.--Lat 44°24'40", long 118°17'40", in SW¼ sec.27, T.13 S., R.36 E., 250 ft upstream from Fleetwood ditch, half a mile downstream from Barney Creek, and 5½ miles southwest of Unity.

Drainage area.--44.4 sq mi.

Gage.--Nonrecording prior to Aug. 3, 1920; recording thereafter. At site 800 ft downstream at different datum Apr. 13, 1916, to Aug. 3, 1920. Altitude of gage is 4,300 ft (from topographic map).

Stage-discharge relation.--Well defined by current-meter measurements.

Remarks.--Diversions upstream for irrigation. Records for 1938-40 from reports of the State engineer of Oregon. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1917	May 15, 1917	a1.7	83	1938	Apr. 20, 1938	1.58	85
1918	Apr. 1, 2, 1918	a1.30	b45	1939	May 4, 1939	.82	37
1919	Apr. 23-25, 1919	a1.38	b51	1940	Apr. 19, 20, 1940	c1.25	45

a Maximum observed.
b Includes flow of Fleetwood ditch.
c Occurred on June 30, 1940.

2730. Burnt River near Hereford, Oreg.

Location.--Lat 44°30'20", long 118°10'50", in SE¼ sec.21, T.12 S., R.37 E., on left bank at entrance to canyon, 1,250 ft downstream from Unity Dam, 0.3 mile upstream from Van Cleve ditch, 0.7 mile downstream from South Fork, and 7 miles west of Hereford.

Drainage area.--309 sq mi.

Gage.--Recording. At site half a mile downstream at different datum Oct. 22, 1928, to June 28, 1932. At site 300 ft upstream at different datum June 29, 1932, to Sept. 16, 1937. At present site at datum 3.29 ft higher Sept. 17, 1937, to Sept. 30, 1943. Datum of gage is 3,756.75 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Fairly well defined by current-meter measurements below 1,300 ft and extended by logarithmic plotting.

Bankfull stage.--4.5 ft.

Remarks.--Diversions upstream for irrigation of 8,700 acres. Eldorado ditch diverts as much as 34 cfs above station for irrigation in Willow Creek basin. A transmountain diversion from John Day River basin delivers 12 cfs to North Fork Burnt River for irrigation. Flow regulated since 1938 by Unity Reservoir (capacity, 25,220 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Mar. 21, 1929	3.05	468	1943	Apr. 17, 1943	4.06	2,220
1930	Nov. 19, 1929	a3.07	-	1944	Nov.25,26,1943	3.14	217
	Mar. 22, 1930	2.75	370	1945	Apr. 20, 1945	3.48	297
1931	Apr. 1, 1931	3.80	530	1946	Apr.20,21,1946	4.63	667
1932	Apr. 13, 1932	4.75	1,100	1947	Apr.17-18, 1947	4.14	436
1933	Apr. 29, 1933	-	700	1948	Apr. 22, 1948	4.23	510
1934	Mar. 3, 1934	2.95	136	1949	Apr. 25, 1949	4.05	455
1935	Apr. 16, 1935	5.19	625	1950	Apr. 25, 1950	4.02	386
1936	Apr. 14, 1936	6.91	1,510	1951	Apr. 22, 1951	4.56	614
1937	Apr. 15, 1937	4.73	528	1952	Apr. 20, 1952	5.08	842
1938	Apr. 19, 1938	4.19	725	1953	June 4, 1953	4.58	602
1939	Apr. 4, 1939	3.21	454	1954	Apr. 19, 1954	3.82	336
1940	Apr. 4, 1940	3.20	452	1955	May 10, 1955	3.44	235
1941	Apr. 13, 1941	2.61	327	1956	Apr. 13, 1956	5.43	1,110
1942	Apr.14-15,1942	4.40	795	1957	Apr. 14, 1957	4.83	795

a Backwater from ice.

2740. Burnt River at Bridgeport, Oreg.

Location.--Lat 44°30', long 117°44', in SW¼SW¼ sec.20, T.12 S., R.41 E., a quarter of a mile upstream from Clark Creek and 1½ miles northeast of Bridgeport.

Drainage area.--600 sq mi, approximately. At site used March 1915 to October 1916, 580 sq mi, approximately.

Gage.--Nonrecording prior to Jan. 16, 1931; recording thereafter. At site 1¾ miles upstream at different datum March 1915 to October 1916. Datum of gage is 3,350 ft (by barometer).

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--4.5 ft.

Remarks.--Transmountain diversions to and from basin above station. Many diversions for irrigation above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Mar. 31, 1915	4.45	361	1932	Apr. 14, 1932	8.18	1,080
1916	Apr. 12, 1916	6.40	1,280	1933	May 1, 1933	7.08	680
1931	Apr. 3, 1931	5.90	540	1934	Mar. 9, 1934	3.76	76

2745. Burnt River near Durkee, Oreg.

Location.--Lat 44°34'30", long 117°31'20", in SW¼ sec.25, T.11 S., R.42 E., 2¾ miles upstream from Pritchard Creek and 3 miles west of Durkee.

Drainage area.--700 sq mi, approximately.

Gage.--Recording. Altitude of gage is 2,750 ft (from topographic map).

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--6 ft.

Remarks.--There are transmountain diversions to and from basin above station. Many diversions for irrigation above station. Slight regulation from operation of small reservoir on South Fork Burnt River and, since February 1938, from operation of Unity Reservoir (capacity 25,220 acre-ft). Records for 1931 from reports of the State engineer of Oregon. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931	Apr. 3, 1931	4.55	458	1936	Apr. 15, 1936	6.47	1,290
1932	Apr. 14, 1932	6.20	1,150	1937	Apr. 17, 1937	4.51	438
1933	Apr. 30, 1933	5.45	794	1938	Apr. 21, 1938	5.87	980
1934	Jan.5,25, 1934	2.90	93				
1935	Apr. 18, 1935	4.72	504				

2750. Burnt River at Huntington, Oreg.

Location.--Lat 44°21'30", long 117°16'20", in NE¼ sec.13, T.14 S., R.44 E., on right bank 0.5 mile northwest of Huntington and 3½ miles upstream from mouth.

Drainage area.--1,093 sq mi.

Gage.--Nonrecording prior to October 1956; recording thereafter. At site 200 ft upstream at different datum Sept. 13, 1928, to Sept. 30, 1932. Datum of gage is 2,104.75 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--9 ft.

Remarks.--Flow regulated since 1938 by Unity Reservoir (capacity, 25,220 acre-ft). Diversions for irrigation of about 28,000 acres above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Mar. 10, 1929	2.42	383	1932	Apr.15,16, 1932	3.9[illegible]	1,200
1930	Mar. 28, 1930	1.90	226	1957	Feb. 26, 1957	6.3[illegible]	2,190
1931	Apr. 3, 1931	2.64	470				

2755. Powder River near Baker, Oreg.
(Published as "near Baker City" 1903-5, and as "at Salisbury" 1906-14, 1926-50)

Location.--Lat 44°39'20", long 117°52'30", in NE¼ sec.36, T.10 S., R.39 E., on right bank 700 ft downstream from Stices Gulch and 8½ miles south of Baker.

Drainage area.--219 sq mi. Mean altitude, 5,170 ft.

Gage.--Nonrecording prior to Oct. 16, 1933; recording thereafter. At site 400 ft upstream at different datum Dec. 20, 1903, to Feb. 29, 1912. At site 0.4 mile downstream at different datum Mar. 1, 1912, to Aug. 1, 1914, and June 16, 1926, to Oct. 16, 1933. Datum of gage is 3,623.21 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 1,000 cfs and extended by logarithmic plotting.

Bankfull stage.--5 ft.

Remarks.--Many small diversions for irrigation above station. At times Auburn ditch diverts water into the basin above station. Only annual peaks are shown prior to Oct. 16, 1933. Base for partial-duration series, 1934 to date, 340 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Apr. 14, 1904	a7.60	1,690
1905	June 1, 1905	a3.60	333
1906	Apr. 7, 1906	a5.20	880
1907	Apr. 13, 1907	a5.10	900
1908	Mar. 16, 1908	a4.50	639
1909	June 2, 1909	a4.50	650
1910	Mar. 20, 1910	7.05	1,820
1911	Mar. 23, June 16, 1911	a3.50	472
1912	April 11, 1912	a5.70	1,000
1913	May 28, 1913	a5.75	1,020
1914	Apr. 16, 1914	a5.60	940
1927	Apr. 27, 1927	a4.40	1,010
1928	May 9, 1928	a4.40	1,010
1929	May 24, 1929	a3.25	550
1930	Apr. 27, 1930	a1.98	250
1931	May 15, 1931	a2.45	301
1932	May 14, 1932	a4.38	970
1933	June 4, 1933	a3.90	715
1934	Mar. 29, 1934	2.38	210
1935	Apr. 16, 1935	3.66	441
	Apr. 21, 1935	3.26	348
	May 23, 1935	3.35	372
1936	Apr. 18, 1936	5.45	870
	May 12, 1936	3.89	501
	June 24, 1936	4.34	609
1937	May 4, 1937	3.57	418
	May 18, 1937	3.46	394
1938	Dec. 12, 1937	3.50	406
	Mar. 13, 1938	3.74	465
	Mar. 15, 1938	3.94	513
	Apr. 19, 1938	4.93	745
	May 1, 1938	5.34	845
	May 17, 1938	3.78	477
	May 28, 1938	4.52	645
1939	Mar. 25, 1939	4.86	745
1940	Mar. 27, 1940	4.63	665
	Apr. 1, 1940	4.63	665
	Apr. 15, 1940	3.95	496
	May 12, 1940	4.10	532
1941	Mar. 17, 1941	3.74	446
	Apr. 2, 1941	3.78	455
1941	Apr. 10, 1941	3.46	388
	May 2, 1941	4.72	695
	May 13, 1941	4.42	620
	June 7, 1941	3.93	499
1942	Jan. 9, 1942	b3.98	-
	Apr. 14, 1942	4.93	772
	Apr. 23, 1942	4.30	615
	May 10, 1942	3.54	430
	May 26, 1942	4.61	692
1943	Mar. 29, 1943	5.44	942
	Apr. 8, 1943	5.07	834
	Apr. 16, 1943	5.78	1,040
	May 28, 1943	4.01	542
	June 19, 1943	3.38	381
1944	June 22, 1944	2.73	238
1945	Apr. 21, 1945	3.69	450
	May 5, 1945	4.51	667
	June 3, 1945	3.62	432
1946	Mar. 22, 1946	3.26	347
	Mar. 29, 1946	3.52	408
	Apr. 19, 1946	5.16	845
	Apr. 26, 1946	4.94	768
	May 8, 1946	4.72	749
	May 27, 1946	4.01	550
1947	Mar. 22, 1947	3.29	372
	Apr. 18, 1947	3.27	367
	May 8, 1947	4.40	657
1948	Jan. 21, 1948	b3.06	-
	Feb. 2, 1948	b3.38	-
	Apr. 22, 1948	3.87	486
	May 7, 1948	3.57	414
	May 28, 1948	6.26	1,200
	June 9, 1948	5.50	968
1949	Mar. 19, 1949	3.43	413
	Apr. 12, 1949	4.42	668
	Apr. 19, 1949	5.02	834
	May 15, 1949	5.17	876
1950	Apr. 1, 1950	3.18	371
	Apr. 13, 1950	3.74	510
	May 16, 1950	3.75	512
	May 23, 1950	3.70	500
	June 21, 1950	3.49	448
1951	Apr. 6, 1951	4.84	822
	Apr. 15, 1951	4.77	801

a Maximum observed.
b Backwater from ice.

Peak stages and discharges of Powder River near Baker, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Apr. 28, 1951	3.43	432	1955	May 21, 1955	3.29	388
	May 12, 1951	4.38	684		June 10, 1955	3.43	422
1952	Mar. 27, 1952	4.25	588	1956	Dec. 22, 1955	b5.18	-
	Apr. 7, 1952	4.71	723		Dec. 23, 1955	4.22	666
	Apr. 14, 1952	5.33	939		Dec. 26, 1955	3.11	342
	Apr. 19, 1952	5.52	1,010		Mar. 25, 1956	5.57	1,090
	Apr. 28, 1952	5.72	1,090		Apr. 23, 1956	5.33	1,010
	May 26, 1952	4.23	639		May 7, 1956	4.24	672
	June 6, 1952	3.80	525		May 24, 1956	6.19	1,340
1953	Apr. 28, 1953	4.70	720	1957	Feb. 24, 1957	b5.78	-
	May 8, 1953	4.03	532		Feb. 24, 1957	3.67	506
	May 20, 1953	4.70	780		Mar. 9, 1957	3.13	358
	May 29, 1953	4.25	645		Apr. 1, 1957	3.37	418
	June 1, 1953	4.78	804		Apr. 6, 1957	3.34	410
	June 13, 1953	4.53	729		Apr. 11, 1957	3.88	569
1954	Apr. 18, 1954	3.42	400		May 19, June 3, 1957	4.32	701
	May 10, 1954	3.55	432				

b Backwater from ice.

2815. Powder River near Haines, Oreg.

Location.--Lat 44°56'30", long 117°56'40", in SW¼ sec.21, T.7 S., R.39 E., 0.1 mile upstream from Muddy Creek, 1 mile downstream from Rock Creek, and 1.7 miles north of Haines.

Drainage area.--572 sq mi.

Gage.--Recording. Datum of gage is 3,293.94 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--5 ft.

Remarks.--Many diversions above station for irrigation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	May 11, 1947	3.75	458	1951	Apr. 9, 1951	5.03	761
1948	June 8, 1948	6.67	1,300	1952	Apr. 29, 1952	-	a1,100
1949	May 15, 1949	5.68	884	1953	June 8, 1953	6.31	1,260
1950	June 22, 1950	4.59	623				

a Estimated.

2840. Wolf Creek near North Powder, Oreg.

Location.--Lat 45°03', long 118°01', in SE¼ sec.11, T.6 S., R.38 E., 5 miles northwest of North Powder and 6½ miles upstream from mouth.

Drainage area.--32.9 sq mi. Mean altitude, 5,080 ft.

Gage.--Recording. Datum of gage is 3,577.36 ft above mean sea level (U.S. Bureau of Reclamation bench mark).

Stage-discharge relation.--Farily well defined by current-meter measurements.

Bankfull stage.--5 ft.

Remarks.--Diversions above station for irrigation of 100 acres above and 700 acres below station. Base for partial-duration series, 200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1947	Apr. 17, 1947	3.24	162	1949	Apr. 24, 1949	3.43	220
					May 10, 1949	3.72	275
1948	May 23, 1948	4.46	433				
	June 3, 1948	3.43	220	1950	May 15, 1950	3.88	300
1949	Apr. 19, 1949	3.52	237	1951	Apr. 14, 1951	3.48	212

Peak stages and discharges of Wolf Creek near North Powder, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	May 11, 1951	3.45	205	1953	Apr. 28, 1953	3.90	307
					May 7, 1953	3.83	292
1952	Apr. 14, 1952	3.76	278		May 19, 1953	3.46	221
	Apr. 18, 1952	3.92	311		May 30, 1953	3.48	223
	Apr. 25, 1952	4.13	357				
	May 9, 1952	3.52	232				

2845. Powder River near North Powder, Oreg.

Location.--Lat 45°03'40", long 117°52'40", in NE¼ sec.12, T.6 S., R.39 E., 2 miles downstream from Wolf Creek and 3 miles northeast of North Powder.

Drainage area.--860 sq mi, approximately.

Gage.--Nonrecording. Altitude of gage is 3,200 ft (from topographic map).

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--6 ft.

Remarks.--Diversions for irrigation of about 72,000 acres above station. Only annual peaks as observed are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	May 24, 1914	4.94	1,270	1921	May 20,21,24, 25, 1921	8.1	3,010
1915	May 18, 1915	3.30	624				
				1922	May 21, 1922	5.9	1,760
1916	Mar.21,June 17, 1916	5.5	1,550	1923	Apr. 7, 1923	4.04	815
				1924	Feb. 15, 1924	2.81	392
				1925	May 21, 1925	5.3	1,430

2895. Powder River near Robinette, Oreg.

Location.--Lat 44°46'10", long 117°04'10", in E½ sec.22, T.9 S., R.46 E., on left bank 2¼ miles northwest of Robinette and 2½ miles upstream from mouth.

Drainage area.--1,660 sq mi, approximately.

Gage.--Nonrecording prior to Oct. 31, 1948; recording thereafter. At site half a mile upstream at different datum prior to Aug. 24, 1936. At site 50 ft upstream Aug. 24, 1936, to Oct. 31, 1948. Datum of gage is 1,937.01 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--Not subject to overflow.

Remarks.--Diversions for irrigation of 106,000 acres above station. Flow partly regulated by several reservoirs, the largest being Thief Valley Reservoir (capacity, 17,400 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	Mar. 10, 1929	5.46	2,920	1938	May 1,28, 1938	a5.20	3,100
1930	Feb. 20, 1930	3.00	770	1939	Mar. 27, 1939	a4.32	2,200
				1940	Mar. 31, 1940	5.20	3,120
1931	May 14, 1931	3.70	1,210				
1932	Mar. 19, 1932	6.40	3,550	1941	May 14, 1941	a4.40	2,300
1933	June 15,16,1933	6.9	4,180	1942	May 27, 1942	a4.92	2,820
1934	Mar.28,Apr.24, 25, 1934	3.14	870	1943	Apr.19,20, 1943	a5.40	3,340
				1944	May 31, 1944	3.16	1,200
1935	Apr. 16, 1935	a4.12	1,610	1945	May 5, 1945	4.40	2,300
1936	Apr.19,20,1936	a5.86	3,190	1946	Apr. 26, 1946	4.90	2,870
1937	Mar. 26, 1937	a3.44	1,350	1947	May 8, 1947	a4.26	2,230

a Maximum observed.

Peak stages and discharges of Powder River near Robinette, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 28, 1948	6.6	5,320	1953	June 15, 1953	5.32	4,210
1949	Dec. 21, 1948	b5.85	-	1954	May 19, 1954	3.18	1,700
	May 17, 1949	4.95	3,620	1955	June 12, 1955	3.37	1,870
1950	June 21, 1950	4.30	3,200				
				1956	May 27, 1956	6.38	5,500
1951	Apr. 18, 1951	3.77	2,450	1957	May 18, 1957	5.72	4,570
1952	Apr. 28, 1952	5.87	5,080				

b Backwater from ice.

SNAKE RIVER MAIN STEM

2900. Snake River at Oxbow, Oreg.

Location.--Lat 44°57', long 116°51', in NW¼ sec.16, T.7 S., R.48 E., on left bank at Oxbow, five-eighths of a mile upstream from intake of diversion tunnel for former Oxbow powerplant and 2½ miles upstream from Indian Creek.

Drainage area.--72,800 sq mi, approximately.

Gage.--Nonrecording prior to Dec. 19, 1923; recording thereafter. Datum of gage is 1,696.71 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--Stream in deep canyon. Road past gage would flood at 53 ft.

Historical data.--Flood of Mar. 3, 1910, was 120,000 cfs at Weiser. Flood of June 1894 was considerably higher.

Remarks.--Flow almost completely regulated by many reservoirs above station. About 2,243,000 acres of land irrigated by diversions from river and its tributaries above station. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1923	June 12, 1923	a15.5	42,900	1941	June 9, 1941	12.97	29,300
1924	Feb. 9, 1924	13.42	30,800	1942	June 2, 1942	15.96	46,600
1925	Feb. 6, 1925	19.14	70,600	1943	Apr. 21, 1943	20.71	74,600
				1944	June 18, 1944	14.33	37,400
1926	Feb. 8, 1926	13.66	33,100	1945	June 14, 1945	15.63	44,100
1927	June 14-18, 1927	17.7	60,400				
1928	May 13, 1928	19.33	67,600	1946	Apr. 19, 1946	18.38	60,900
1929	Mar. 11, 1929	13.70	33,800	1947	June 11, 1947	15.61	44,600
1930	Feb. 1, 1930	b11.51	22,900	1948	June 5, 1948	17.55	55,100
				1949	(c)	d29.0	-
1931	Mar. 19, 1931	10.82	19,800		Mar. 19, 1949	14.34	37,400
1932	Mar. 20, 1932	17.22	54,300	1950	Apr. 15, 1950	15.12	41,300
1933	June 14, 1933	15.11	41,700				
1934	Mar. 30, 1934	11.10	21,100	1951	May 18, 1951	e16.15	47,500
1935	June 4, 1935	12.10	25,700	1952	Apr. 28, 1952	23.10	89,700
				1953	June 13, 1953	18.40	60,400
1936	Apr. 25, 1936	18.55	63,100	1954	Apr. 16, 1954	13.06	31,400
1937	Apr. 16, 1937	14.30	37,100	1955	Apr. 23, 1955	12.60	28,400
1938	May 4, 1938	20.25	72,800				
1939	Mar. 26, 1939	15.3	42,800	1956	June 6, 1956	17.90	58,900
1940	Apr. 1, 1940	16.97	52,200	1957	May 23, 1957	19.70	69,800

a Maximum observed.
b A much higher unknown gage height (but lesser discharge) occurred during ice jam sometime during period Jan. 22-31, 1930.
c Sometime during period of no gage-height record Jan. 17-27, 1949.
d Backwater from ice.
e Occurred on Apr. 8, 1951.

2910. Imnaha River above Gumboot Creek, Oreg.

Location.--Lat 45°11', long 116°52', in NW¼ sec.31, T.4 S., R.48 E., 0.1 mile upstream from Gumboot Creek and 5 miles northeast of Coverdale forest guard station.

Drainage area.--98 sq mi. Mean altitude, 6,400 ft.

Gage.--Recording. Datum of gage is 3,812.67 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 1,600 cfs and extended by logarithmic plotting.

Bankfull stage.--Not subject to overflow.

Remarks.--Base for partial-duration series, 800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 4, 1945	3.73	1,370	1949	May 27, 1949	3.78	1,300
	May 31, 1945	3.34	1,030		June 7, 1949	3.71	1,300
	June 22, 1945	3.83	1,460				
				1950	May 22, 1950	3.26	944
1946	Apr. 19, 1946	3.11	826		June 5, 1950	3.42	1,060
	Apr. 26, 1946	3.43	1,050		June 21, 1950	4.09	1,530
	May 8, 1946	3.97	1,540		June 30, 1950	4.19	1,610
	May 26, 1946	3.84	1,410				
	June 3, 1946	3.87	1,440	1951	May 10, 1951	3.29	1,020
	June 14, 1946	3.41	1,040		May 27, 1951	3.67	1,320
	June 21, 1946	3.44	1,060		June 15, 1951	3.61	1,270
	July 1, 1946	3.14	846		July 4, 1951	3.21	967
1947	May 7, 1947	3.90	1,490	1952	Apr. 27, 1952	4.01	1,470
	May 27, 1947	3.56	1,170		May 26, 1952	4.21	1,630
	June 8, 1947	3.61	1,210		June 6, 1952	4.68	2,090
	June 16, 1947	3.22	918		June 21, 1952	3.51	1,100
1948	Oct. 16, 1947	3.79	1,380	1953	Apr. 27, 1953	3.95	1,260
	May 27, 1948	5.07	2,400		May 6, 1953	3.30	850
	June 8, 1948	4.90	2,230		May 19, 1953	3.64	1,040
					June 17, 1953	3.98	1,280
1949	May 15, 1949	4.51	1,890		July 8, 1953	4.13	1,390

2920. Imnaha River at Imnaha, Oreg.

Location.--Lat 45°34', long 116°50', in SW¼ sec.16, T.1 N., R.48 E., on left bank at Imnaha, three-eighths of a mile downstream from Sheep Creek.

Drainage area.--640 sq mi. Mean altitude, 5,690 ft.

Gage.--Nonrecording prior to Aug. 6, 1934; recording thereafter. At site a quarter of a mile upstream at different datum prior to Aug. 6, 1934. Datum of gage is 1,941.14 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 3,500 cfs and extended by logarithmic plotting.

Bankfull stage.--12 ft.

Remarks.--Diversions for irrigation of 4,000 acres above station. Since 1934, one diversion of less than 10 cfs around station for irrigation below station. Water is diverted from Sheep Creek and tributaries above station for irrigation of 6,500 acres in Wallowa River basin. Base for partial-duration series, 1,600 cfs. Only annual observed peaks are shown prior to 1935.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	June 16, 1929	4.00	2,330	1933	June 10, 1933	4.95	3,450
1930	June 11, 1930	2.90	1,190		June 16, 1933	4.95	3,450
				1934	Apr. 24, 1934	3.02	1,120
1931	May 15, 1931	3.02	1,280				
1932	May 21, 1932	5.32	4,030	1935	Jan. 22, 1935	a3.90	

a Backwater from ice.

Peak stages and discharges of Imnaha River at Imnaha, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	May 23, 1935	4.06	1,780	1947	June 9, 1947	4.50	1,690
1936	Dec. 25, 1935	a3.83	-	1948	Oct. 16, 1947	4.56	1,750
	Apr. 19, 1936	4.13	1,880		Apr. 18, 1948	5.89	3,150
	May 15, 1936	4.15	1,880		Apr. 22, 1948	-	3,200
					Apr. 29, 1948	4.78	1,970
1937	May 5, 1937	3.99	1,740		May 28, 1948	7.06	5,700
					June 3, 1948	5.58	3,520
1938	Dec. 12, 1937	3.98	1,740				
	Apr. 19, 1938	5.25	3,200	1949	Dec. 29, 1948	a4.00	-
	May 1, 1938	6.27	4,800		Jan. 6, 1949	a3.92	-
	May 17, 1938	5.20	3,200		Apr. 20, 1949	4.13	1,600
	May 28, 1938	6.08	4,500		Apr. 29, 1949	4.20	1,680
	June 17, 1938	4.69	2,540		May 3, 1949	4.30	1,790
	June 26, 1938	4.47	2,240		May 15, 1949	4.91	2,570
					May 28, 1949	4.35	1,850
1939	May 4, 1939	3.78	1,520		June 8, 1949	4.18	1,660
1940	Mar. 27, 1940	4.09	1,830	1950	Feb. 4, 1950	a3.95	-
	Apr. 1, 1940	4.02	1,720		May 17, 1950	4.48	2,010
	Apr. 15, 1940	4.02	1,720		May 23, 1950	4.53	2,080
	Apr. 20, 1940	3.96	1,650		June 21, 1950	4.60	2,170
	May 12, 1940	3.99	1,690		July 1, 1950	4.51	2,050
	May 24, 1940	4.05	1,760				
				1951	Apr. 29, 1951	4.27	1,760
1941	May 2, 1941	4.16	1,890		May 7, 1951	4.58	2,140
	May 13, 1941	4.26	2,010				
	May 25, 1941	4.02	1,720	1952	Apr. 7, 1952	4.33	1,830
	June 8, 1941	4.85	2,740		Apr. 18, 1952	4.63	2,210
					Apr. 28, 1952	5.72	3,930
1942	Dec. 3, 1941	4.64	2,470		May 9, 1952	5.18	3,120
	Dec. 20, 1941	4.10	1,820		June 6, 1952	4.85	2,660
	Jan. 8, 1942	a3.62	-				
	Apr. 14, 1942	4.88	2,650	1953	Apr. 28, 1953	5.41	3,250
	Apr. 22, 1942	4.67	2,380		May 7, 1953	4.57	2,130
	May 23, 1942	6.70	5,400		May 20, 1953	4.68	2,270
	July 3, 1942	4.21	1,660		June 7, 1953	4.86	2,510
					July 9, 1953	4.38	1,890
1943	Apr. 9, 1943	4.46	1,930				
	Apr. 16, 1943	4.91	2,440	1954	May 10, 1954	4.63	2,160
	May 4, 1943	4.56	1,850		May 20, 1954	4.56	2,070
	May 28, 1943	4.72	2,020		June 27, 1954	4.26	1,690
	June 19, 1943	4.77	2,080		July 15, 1954	4.53	2,030
	July 4, 1943	4.80	2,110				
				1955	May 13, 1955	4.51	2,000
1944	June 22, 1944	4.35	1,680		May 21, 1955	5.05	2,740
					June 12, 1955	4.80	2,390
1945	May 5, 1945	5.00	2,470		June 23, 1955	4.22	1,640
	May 16, 1945	4.48	1,720				
	June 7, 1945	5.45	2,680	1956	Dec. 22, 1955	5.30	3,320
	June 22, 1945	4.56	1,790		Mar. 25, 1956	4.77	2,190
					Apr. 23, 1956	5.45	3,490
1946	Apr. 19, 1946	5.10	2,290		May 10, 1956	4.65	2,240
	Apr. 26, 1946	5.18	2,370		May 24, 1956	5.77	4,150
	May 8, 1946	5.62	2,830		May 27, 1956	6.05	4,650
	May 27, 1946	4.89	2,080				
	June 4, 1946	4.76	1,950	1957	Feb. 26, 1957	4.42	1,930
					May 19, 1957	6.80	6,650
1947	May 8, 1947	4.95	2,140		June 3, 1957	4.92	2,850

a Backwater from ice.

SALMON RIVER BASIN

2925. Salmon River near Obsidian, Idaho

Location.--Lat 43°58', long 114°48', in sec.3, T.7 N., R.14 E., on left bank three-eighths of a mile downstream from irrigation diversion dam, 1 mile upstream from Lost Creek, and 2½ miles south of Obsidian.

Drainage area. -94.7 sq mi. Mean altitude, 8,140 ft.

Gage.--Recording. Altitude of gage is 6,950 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 520 cfs and extended above.

Bankfull stage.--5 ft.

Remarks.--Diversions for irrigation of 1,700 acres above station may have significant effect on flood peaks in some years. Peak gage heights higher than those shown occurred in several years from ice jams during periods of no gage-height record. Only annual peaks are shown.

Peak stages and discharges of Salmon River near Obsidian, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	(a)	b4.74	-	1947	May 7, 1947	3.86	523
	May 26, 1941	3.74	421	1948	June 3, 1948	4.22	706
1942	May 26, 1942	3.86	475	1949	(c)	b5.50	-
1943	May 30, 1943	4.18	664		May 29, 1949	3.62	416
1944	May 15, 1944	3.42	348	1950	Jan. 14, 1950	b4.93	-
1945	June 25, 1945	3.45	348		June 22, 1950	3.98	532
1946	Jan. 31, 1946	b4.57	-	1951	May 28, 1951	4.13	712
	June 6, 1946	3.72	477	1952	May 29, 1952	4.01	721

a Occurred sometime during period Dec. 5, 1940, to Jan. 23, 1941.
b Backwater from ice.
c Occurred sometime during winter period.

2930. Alturas Lake Creek near Obsidian, Idaho

Location.--Lat 43°57', long 114°50', in SW¼ sec.9, T.7 N., R.14 E., on right bank 1 mile downstream from outlet of Perkins Lake, 1½ miles downstream from Alturas Lake, and 4 miles south of Obsidian.

Drainage area.--35.7 sq mi. Mean altitude, 8,110 ft.

Gage.--Recording. Altitude of gage is 7,000 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 570 cfs.

Bankfull stage.--5.5 ft.

Remarks.--Base for partial-duration series, 250 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	May 27, 1941	4.26	330	1947	June 20, 1947	4.40	327
1942	May 26, 1942	4.55	399	1948	May 29, 1948	5.34	597
	June 9, 1942	4.61	409		June 9, 1948	5.41	609
1943	May 31, 1943	5.30	612	1949	May 18, 1949	4.78	470
	July 2, 1943	5.16	570		May 29, 1949	4.68	435
					June 12, 1949	4.88	489
1944	May 17, 1944	3.93	249				
				1950	June 7, 1950	4.55	379
1945	June 24, 1945	4.47	387		June 23, 1950	5.08	523
					July 2, 1950	5.02	509
1946	May 8, 1946	4.16	297				
	June 5, 1946	4.74	445	1951	May 29, 1951	5.24	594
					June 18, 1951	5.11	555
1947	May 9, 1947	4.92	463				
	May 28, 1947	4.56	366	1952	June 7, 1952	5.34	633

2945. Salmon River at Stanley, Idaho

Location.--Lat 44°13'20", long 114°55'40", in sec.3, T.10 N., R.13 E., on left bank about a quarter of a mile upstream from Valley Creek, half a mile northeast of upper Stanley, and three-quarters of a mile southwest of lower Stanley.

Drainage area.--355 sq mi.

Gage.--Nonrecording. Datum of gage is 6,215.71 ft above mean sea level (datum of 1929).

Stage-discharge relation.--Defined by current-meter measurements below 2,300 cfs and extended above.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	June 12, 1921	3.8	4,390	1924	May 19, 1924	2.24	1,300
1922	June 14, 1922	3.65	3,910	1925	June 23, 1925	3.06	2,680
1923	June 13, 1923	3.02	2,540				

2950. Valley Creek at Stanley, Idaho
(Published as "near Stanley" 1911-13)

Location.--Lat 44°13', long 114°56', in sec.3, T.10 N., R.13 E., on left bank a quarter of a mile upstream from mouth, three-eighths of a mile downstream from upper Stanley, and three-quarters of a mile upstream from lower Stanley.

Drainage area.--147 sq mi (revised). Mean altitude, 7,400 ft.

Gage.--Nonrecording prior to Apr. 30, 1949; recording thereafter. At site three-quarters of a mile upstream at different datum prior to Oct. 31, 1913. Datum of gage is 6,221.81 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements below 800 cfs at site in use 1911-13 and extended above. Well defined by current-meter measurements through the range in stage at present site.

Bankfull stage.--3 ft.

Remarks.--Only annual observed peaks are shown for periods of record using nonrecording gage. Base for partial-duration series used 1949-57, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 19, 1911	4.9	1,450
1912	May 17, 1912	4.7	1,090
1913	May 30, 1913	4.62	1,040
1921	May 29, 1921	4.4	1,850
1922	June 15, 1922	3.4	1,220
1923	June 12, 1923	2.90	886
1924	May 18, 1924	2.20	485
1925	May 21, 1925	2.96	939
1926	May 5, 1926	2.26	507
1927	June 26, 1927	3.63	1,390
1928	May 27, 1928	3.50	1,300
1929	June 16, 1929	2.60	689
1930	May 30, 1930	2.50	631
1931	May 16, 1931	2.21	457
1932	June 15, 1932	2.89	838
1933	June 9, 1933	3.68	1,520
1934	May 8, 1934	2.46	565
1935	June 9, 1935	2.75	710
1936	June 1, 1936	3.34	1,170
1937	May 3, 1937	2.36	538
1938	June 8, 1938	3.25	1,090
1939	May 1, 1939	2.22	457
1940	May 26, 1940	2.70	710
1941	May 27, 1941	2.72	700
1942	Dec. 3, 1941	3.14	1,010
1943	May 30, 1943	-	a1,300
1944	June 3, 1944	2.48	598
1945	May 10, 1945	2.59	664
1946	June 6, 1946	2.93	891
1947	May 9, 1947	3.33	1,150
1948	June 3, 1948	3.50	1,290
1949	Apr. 27, 1949	2.48	b640
	May 16, 1949	3.01	947
1949	May 31, 1949	2.91	877
	June 11, 1949	2.82	814
1950	May 15, 1950	3.14	1,020
	June 7, 1950	3.20	1,070
	June 22, 1950	3.08	982
	July 2, 1950	3.03	947
1951	Apr. 19, 1951	2.64	736
	Apr. 28, 1951	2.82	859
	May 11, 1951	2.89	908
	May 28, 1951	3.41	1,340
	June 17, 1951	3.08	1,050
1952	Apr. 27, 1952	2.85	888
	May 4, 1952	3.07	1,050
	May 14, 1952	2.88	907
	June 7, 1952	3.20	1,150
1953	Apr. 28, 1953	2.50	680
	May 6, 1953	2.42	636
	May 20, 1953	2.40	625
	June 19, 1953	3.03	1,010
1954	Apr. 28, 1954	2.69	789
	May 21, 1954	3.13	1,090
	June 16, 1954	2.76	849
	June 27, 1954	3.27	1,240
1955	May 12, 1955	2.75	782
	May 22, 1955	2.71	749
	June 13, 1955	2.97	930
1956	Dec. 22, 1955	2.50	679
	May 5, 1956	2.73	880
	May 24, 1956	3.92	2,000
1957	May 14, 1957	3.23	1,340
	June 6, 1957	3.34	1,460

a Estimated; daily mean discharge.
b From graph based on gage readings.

2955. Salmon River below Valley Creek, at Stanley, Idaho

Location.--Lat 44°14', long 114°55', in SE¼SE¼ sec.34, T.11 N., R.13 E., on left bank three-quarters of a mile downstream from Valley Creek and 1¼ miles northeast of upper Stanley.

Drainage area.--501 sq mi (revised). Mean altitude, 7,800 ft.

Gage.--Recording. Datum of gage is 6,190.32 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Well defined by current-meter measurements.

Bankfull stage.--4 ft.

Remarks.--Diversions above station for irrigation of about 6,000 acres probably have slight effect on flood peaks. Additional peak stages caused by backwater from ice may have occurred at times of no record during some years. Base for partial-duration series, 1,700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1926	May 5, 1926	2.32	1,970	1943	July 22, 1943	3.15	2,560
1927	May 17, 1927	3.12	2,780	1944	May 17, 1944	2.54	1,720
	June 27, 1927	4.41	5,020		June 3, 1944	2.53	1,720
					June 27, 1944	2.54	1,720
1928	May 11, 1928	3.39	3,260				
	May 27, 1928	4.03	4,380	1945	May 11, 1945	2.53	1,710
	June 27, 1928	2.48	1,860		June 9, 1945	2.57	1,750
					June 23, 1945	2.91	2,200
1929	May 25, 1929	2.61	1,900				
	June 16, 1929	2.91	2,340	1946	Apr. 28, 1946	2.86	2,130
					May 8, 1946	2.93	2,260
1930	May 30, 1930	2.77	2,190		May 28, 1946	3.07	2,530
	June 11, 1930	3.03	2,580		June 6, 1946	3.25	2,830
1931	(a)	b2.9	-	1947	Feb. 7, 1947	b3.33	-
	June 2, 1931	2.28	1,480		May 9, 1947	3.50	3,270
					May 27, 1947	3.26	2,900
1932	May 22, 1932	3.15	2,800		June 20, 1947	2.88	2,300
	June 16, 1932	3.42	3,230				
				1948	May 29, 1948	3.72	3,810
1933	(c)	b4.20	-		June 9, 1948	3.91	4,090
	June 16, 1933	3.98	4,400				
				1949	Feb. 24, 1949	b3.27	-
1934	May 8, 1934	2.40	1,660		May 16, 1949	3.25	2,840
					May 31, 1949	3.14	2,650
1935	June 9, 1935	3.10	2,550		June 12, 1949	3.25	2,840
1936	Apr. 23, 1936	2.98	2,470	1950	May 17, 1950	2.76	2,130
	May 5, 1936	2.77	2,160		June 7, 1950	3.19	2,880
	May 15, 1936	3.49	3,230		June 22, 1950	3.47	3,400
	June 2, 1936	3.81	3,700		July 2, 1950	3.43	3,260
1937	(d)	b2.56	-	1951	Apr. 28, 1951	2.64	1,920
	May 29, 1937	2.48	1,720		May 12, 1951	2.92	2,330
					May 28, 1951	3.91	4,090
1938	May 1, 1938	2.79	2,160		June 18, 1951	3.64	3,450
	June 8, 1938	3.76	3,790				
	June 30, 1938	3.31	2,960	1952	May 2, 1952	2.93	2,400
					June 7, 1952	3.70	3,750
1939	May 19, 1939	2.28	1,580				
				1953	June 19, 1953	3.54	3,200
1940	May 26, 1940	2.80	2,390				
				1954	May 21, 1954	3.81	3,710
1941	May 27, 1941	2.89	2,320		June 16, 1954	2.88	2,280
	June 8, 1941	2.60	1,880		June 27, 1954	4.15	4,280
	June 19, 1941	2.57	1,810				
				1955	May 23, 1955	2.52	1,800
1942	Dec. 3, 1941	2.96	2,330		June 13, 1955	3.41	3,070
	May 26, 1942	3.23	2,720				
	June 9, 1942	3.23	2,720	1956	May 7, 1956	2.65	2,030
					May 27, 1956	4.62	5,070
1943	May 4, 1943	3.14	2,640				
	May 30, 1943	3.87	3,850	1957	May 19, 1957	3.57	3,320
	July 4, 1943	3.84	3,850		June 6, 1957	4.27	4,480

a Approximately Feb. 1, 1931.
b Observed; backwater from ice.
c Approximately Feb. 15, 1933.
d Approximately Feb. 13, 1937.

2960. Yankee Fork Salmon River near Clayton, Idaho

Location.--Lat 44°17', long 114°44', in sec.17, T.11 N., R.15 E., on right bank half a mile upstream from mouth and 17 miles west of Clayton.

Drainage area.--195 sq mi. Mean altitude, 7,980 ft.

Gage.--Nonrecording prior to Dec. 14, 1937, at site 2,000 ft downstream at different datums; recording thereafter. Altitude of gage is 5,950 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,800 cfs at both sites and extended above.

Bankfull stage.--In deep canyon; not subject to overflow.

Remarks.--Annual peaks only are shown for period of record through 1937 referred to nonrecording gages. Base for partial-duration series, used thereafter, 730 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1921	June 12, 1921	a5.24	3,360	1941	May 26, 1941	4.37	965
1922	June 15, 1922	a4.9	2,830				
1923	June 13, 1923	a4.36	1,730	1942	Dec. 3, 1941	4.07	800
1924	May 21, 1924	a3.1	729		Apr. 21, 1942	4.24	900
1925	May 29, 1925	a4.75	1,760		May 26, 1942	6.27	2,330
					June 9, 1942	5.63	1,800
1926	May 5, 1926	a3.2	602				
1927	June 8, 1927	a6.1	2,420	1943	Apr. 19, 1943	4.85	1,220
1928	May 27, 1928	b6.2	b2,520		May 5, 1943	5.00	1,310
1929	May 25, 1929	a4.3	921		May 29, 1943	6.52	2,410
1930	May 31, 1930	a4.6	1,120		June 19, 1943	6.34	2,250
1931	May 8, 1931	a3.86	710	1944	Dec. 18, 1943	d4.25	-
1932	June 15, 1932	a5.35	1,780		May 16, 1944	4.24	900
1933	June 10, 1933	c5.80	c1,800		May 31, 1944	4.18	850
1934	May 8, 1934	c4.8	c920		June 13, 1944	4.10	825
1935	June 8, 1935	a4.94	1,160				
				1945	June 5, 1945	4.10	800
1936	May 15, 1936	a6.10	2,010		June 23, 1945	4.10	800
1937	May 29, 1937	a4.3	800				
				1946	Apr. 26, 1946	4.20	860
1938	May 1, 1938	4.54	1,050		May 8, 1946	4.59	1,080
	May 17, 1938	4.73	1,180		May 28, 1946	4.78	1,320
	May 28, 1938	5.92	2,110		June 5, 1946	4.63	1,230
	June 30, 1938	4.38	960				
				1947	May 8, 1947	5.94	2,240
1939	May 4, 1939	4.23	872		May 27, 1947	5.69	2,030
1940	May 12, 1940	5.18	1,510	1948	May 19, 1948	5.06	1,500
	May 25, 1940	4.97	1,320		May 29, 1948	5.97	2,260
					June 3, 1948	5.96	2,250
1941	May 13, 1941	4.25	905				

a Maximum observed.
b Revised.
c Estimated daily mean discharge; stage-discharge relation indefinite.
d Backwater from ice.

2965. Salmon River below Yankee Fork, near Clayton, Idaho

Location.--Lat 44°16', long 114°44', in sec.20, T.11 N., R.15 E., on left bank a quarter of a mile downstream from Sunbeam Dam and Yankee Fork and 18 miles upstream from Clayton.

Drainage area.--802 sq mi (revised). Mean altitude, 7,790 ft.

Gage.--Nonrecording prior to Sept. 3, 1927; recording thereafter. At site 200 ft downstream at datum approximately 1.5 ft higher prior to Oct. 3, 1926. At site 200 ft downstream at approximately present datum Oct. 3, 1926, to Nov. 5, 1934. Altitude of gage is 5,900 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--River in canyon; not subject to overflow.

Remarks.--Diversions above station for irrigation of about 6,000 acres decrease peak discharges slightly during irrigation season. Base for partial-duration series, 2,350 cfs. Only annual observed peaks shown prior to 1928.

Peak stages and discharges of Salmon River below Yankee Fork, near Clayton, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	June 15, 1922	a7.6	6,760	1944	May 17, 1944	5.73	2,830
1923	June 12, 1923	a6.0	4,930		June 1, 1944	5.57	2,680
1924	May 17, 1924	a4.0	2,820		June 9, 1944	5.71	2,810
1925	May 29, 1925	a6.6	5,620		June 27, 1944	5.59	2,700
1926	May 5, 1926	a3.5	2,360	1945	May 10, 1945	5.69	2,790
1927	June 27, 1927	-	b8,000		June 9, 1945	5.74	2,840
					June 23, 1945	6.16	3,250
1928	May 10, 1928	8.08	6,070				
	May 26, 1928	8.96	7,530	1946	Apr. 26, 1946	c6.15	3,240
					May 8, 1946	6.61	3,720
1929	May 24, 1929	5.93	3,330		May 28, 1946	7.03	4,210
	June 16, 1929	6.05	3,440		June 6, 1946	7.22	4,430
1930	May 21, 1930	5.44	2,720	1947	May 9, 1947	8.58	6,060
	May 30, 1930	6.30	3,760		May 27, 1947	8.02	5,310
	June 12, 1930	6.30	3,760		June 20, 1947	6.34	3,370
1931	June 2, 1931	4.82	2,120	1948	May 19, 1948	7.18	4,270
					May 29, 1948	9.00	6,650
1932	May 21, 1932	c7.11	4,800		June 3, 1948	9.27	7,060
	June 16, 1932	7.49	5,360				
				1949	Apr. 28, 1949	5.62	2,520
1933	June 10, 1933	8.07	6,400		May 16, 1949	7.92	4,920
					May 29, 1949	7.36	4,250
1934	Apr. 25, 1934	5.43	2,720		June 11, 1949	7.07	3,930
	May 8, 1934	5.71	2,940				
				1950	May 17, 1950	6.74	3,780
1935	June 9, 1935	-	b4,000		June 7, 1950	7.94	5,200
					June 22, 1950	8.37	5,770
1936	Apr. 23, 1936	6.67	3,960		July 2, 1950	7.76	4,970
	May 5, 1936	6.31	3,500				
	May 15, 1936	8.09	6,000	1951	Apr. 28, 1951	5.71	2,790
	June 2, 1936	8.39	6,450		May 12, 1951	7.19	4,220
					May 28, 1951	9.45	7,140
1937	May 28, 1937	5.52	2,620		June 17, 1951	8.76	6,150
1938	May 1, 1938	6.59	3,870	1952	May 4, 1952	7.05	4,190
	May 17, 1938	6.59	3,740		May 14, 1952	7.09	4,240
	May 28, 1938	8.73	6,770		June 7, 1952	8.45	5,960
	June 7, 1938	8.78	6,770				
	June 30, 1938	7.05	4,400	1953	Apr. 28, 1953	5.38	2,500
					May 6, 1953	5.33	2,460
1939	May 5, 1939	5.39	2,620		May 20, 1953	5.78	2,860
					June 19, 1953	8.49	5,720
1940	May 25, 1940	6.71	3,770				
	June 14, 1940	5.17	2,360	1954	Apr. 28, 1954	5.32	2,450
					May 21, 1954	9.21	6,550
1941	May 13, 1941	5.38	2,530		June 16, 1954	6.49	3,560
	May 26, 1941	6.27	3,370		June 26, 1954	c9.10	6,420
	June 8, 1941	5.61	2,710				
				1955	May 12, 1955	5.44	2,510
1942	Dec. 3, 1941	6.15	3,270		May 22, 1955	6.41	3,410
	Apr. 13, 1942	5.32	2,440		June 13, 1955	8.02	5,090
	Apr. 22, 1942	5.72	2,890				
	May 26, 1942	8.14	5,570	1956	Apr. 22, 1956	6.00	3,070
	June 9, 1942	7.70	4,990		May 7, 1956	6.00	3,070
					May 24, 1956	11.60	10,300
1943	Apr. 19, 1943	6.15	3,240				
	May 5, 1943	7.27	4,490	1957	May 2, 1957	5.88	2,800
	May 29, 1943	9.30	7,200		May 19, 1957	8.45	5,400
	June 13, 1943	7.89	5,280		June 5, 1957	10.17	7,670
	June 19, 1943	8.91	6,650				
	July 22, 1943	6.47	3,570				

a Maximum observed.
b Estimated daily mean.
c From graph based on recorder record for station near Challis.

2980. East Fork Salmon River near Clayton, Idaho

Location.--Lat 44°13', long 114°17', in NW¼ sec.1, T.10 N., R.18 E., on left bank at highway bridge, 4 miles upstream from mouth and 7 miles southeast of Clayton.

Drainage area.--536 sq mi (revised). Mean altitude, 8,100 ft.

Gage.--Nonrecording. Altitude of gage is 5,515 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,400 cfs and extended above.

Bankfull stage.--7 ft.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	June 16, 1929	3.20	1,300	1934	May 7, 1934	2.15	490
1930	June 12, 1930	3.32	1,400	1935	June 8, 1935	3.55	1,460
1931	June 2, 1931	2.58	795	1936	June 1, 1936	3.38	1,300
1932	June 25, 1932	4.48	2,830	1937	June 22, 1937	2.75	815
1933	June 12, 1933	3.57	1,690	1938	June 6, 1938	5.00	3,580

2985. Salmon River near Challis, Idaho

Location.--Lat 44°23', long 114°15', in sec.7, T.12 N., R.19 E., on left bank 250 ft downstream from Bayhorse Creek and 9 miles south of Challis.

Drainage area.--1,800 sq mi, approximately. Mean altitude, 7,820 ft.

Gage.--Recording. Datum of gage is 5,163.99 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Well defined by current-meter measurements.

Bankfull stage.--10.5 ft.

Remarks.--Base for partial-duration series, 3,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 25, 1929	5.80	4,900	1940	May 26, 1940	6.16	5,580
	June 16, 1929	6.06	5,540				
				1941	May 27, 1941	6.05	5,350
1930	May 30, 1930	6.08	5,540		June 8, 1941	5.54	4,340
	June 12, 1930	6.36	6,210				
				1942	Dec. 3, 1941	5.40	4,240
1931	June 2, 1931	4.86	3,260		Feb. 19, 1942	a5.40	-
					Apr. 22, 1942	5.38	4,150
1932	May 21, 1932	6.60	6,700		May 26, 1942	7.61	9,090
	June 16, 1932	7.30	8,450		June 9, 1942	7.34	7,820
					July 4, 1942	5.71	4,430
1933	June 4, 1933	6.84	7,430				
	June 16, 1933	7.68	9,520	1943	Apr. 19, 1943	5.58	4,520
					May 5, 1943	6.36	6,150
1934	May 8, 1934	5.25	3,920		May 30, 1943	8.07	10,500
					June 19, 1943	7.78	9,640
1935	June 9, 1935	6.66	6,840		July 22, 1943	6.13	5,690
1936	Apr. 24, 1936	5.90	5,140	1944	May 16, 1944	5.40	4,060
	May 5, 1936	5.60	4,550		June 27, 1944	5.90	5,030
	May 15, 1936	7.18	8,190				
	June 2, 1936	7.83	9,790	1945	June 24, 1945	6.08	5,420
1937	May 28, 1937	5.17	3,740	1946	Apr. 27, 1946	5.55	4,490
					May 8, 1946	5.80	4,990
1938	May 1, 1938	5.83	4,980		May 28, 1946	6.16	5,780
	May 17, 1938	5.87	4,980		June 6, 1946	6.49	6,540
	June 7, 1938	7.53	9,010				
	June 30, 1938	6.57	[illegible],670	1947	May 9, 1947	7.52	8,730
					May 28, 1947	7.06	7,720
1939	May 5, 1939	5.04	3,510		June 21, 1947	6.02	5,140

a Backwater from ice.

Peak stages and discharges of Salmon River near Challis, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1948	May 29, 1948	7.81	9,670	1952	May 14, 1952	6.30	5,480
	June 3, 1948	8.04	10,300		June 7, 1952	7.78	8,490
1949	Jan. 13, 1949	a7.06	-	1953	June 19, 1953	7.88	8,640
	May 16, 1949	6.76	6,710				
	May 29, 1949	6.54	6,200	1954	May 21, 1954	8.72	9,400
	June 12, 1949	6.48	6,150		June 27, 1954	8.79	9,540
1950	May 18, 1950	5.74	4,700	1955	May 22, 1955	5.93	4,340
	June 7, 1950	6.80	7,090		June 13, 1955	7.65	7,140
	June 22, 1950	7.14	7,920				
	July 2, 1950	6.79	7,070	1956	Apr. 23, 1956	5.52	4,130
					May 25, 1956	b10.95	15,400
1951	May 12, 1951	6.43	5,730		June 11, 1956	9.07	10,800
	May 28, 1951	8.74	10,600				
	June 17, 1951	8.12	9,200	1957	May 19, 1957	7.57	7,510
					June 6, 1957	9.89	12,700
1952	May 4, 1952	6.32	5,520				

a Backwater from ice.
b Gage height, from graph based on record for station below Yankee Fork.

2990. Challis Creek near Challis, Idaho

Location.--Lat 44°34', long 114°19', in sec.2, T.14 N., R.18 E., on left bank 0.1 mile downstream from Eddy Creek, 6 miles northwest of Challis, and 6¾ miles upstream from mouth.

Drainage area.--85 sq mi, approximately. Mean altitude, 7,830 ft.

Gage.--Nonrecording prior to Sept. 27, 1944; recording thereafter. Gage site 350 ft downstream Sept. 27, 1944, to Nov. 10, 1948. Datum of gage is 5,369.3 ft above mean sea level (levels by Topographic Division).

Stage-discharge relation.--Defined throughout range by current-meter measurements at former site (1944-48) and below 350 cfs at present site. Additional measurement made at 450 cfs in 1956 defines temporary shifting condition.

Bankfull stage.--5 ft.

Remarks.--Diversions above gage for irrigation decrease peak flows slightly during the irrigation season. Base for partial-duration series, 140 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1944	May 31, 1944	a1.47	147	1951	May 28, 1951	d6.26	345
	June 14, 1944	a1.85	214		June 18, 1951	5.63	282
1945	June 5, 1945	1.29	138	1952	May 29, 1952	e5.26	200
1946	(b)	c1.76	-	1953	June 19, 1953	6.23	319
	June 6, 1946	1.30	147				
				1954	May 22, 1954	5.31	204
1947	May 9, 1947	2.07	388				
	May 27, 1947	1.83	284	1955	June 14, 1955	5.43	202
1948	June 4, 1948	2.30	418	1956	Dec. 22, 1955	5.45	214
					Mar. 24, 1956	5.48	223
1949	May 17, 1949	5.52	193		Apr. 22, 1956	4.85	144
	May 31, 1949	5.43	180		June 1, 1956	f6.30	508
1950	June 7, 1950	5.85	256	1957	May 15, 1957	3.30	204
	July 7, 1950	5.17	154		June 7, 1957	5.07	401

a From graph based on gage readings.
b Occurred sometime between Nov. 13, 1945, and Jan. 18, 1946, during period of no gage-height record.
c Backwater from ice.
d Occurred May 25, 1951.
e Occurred June 5, 1952.
f Occurred May 24, 1956.

3020. Pahsimeroi River near May, Idaho

Location.--Lat 44°42', long 114°03', in W½ sec.25, T.16 N., R.20 E., on right bank a quarter of a mile downstream from old highway bridge on Challis-Salmon River highway, a quarter of a mile upstream from mouth and 10 miles northwest of May.

Drainage area.--845 sq mi, approximately.

Gage.--Nonrecording. Datum of gage is 4,636.95 ft above mean sea level, adjustment of 1912.

Stage-discharge relation.--Only fairly well defined below 230 cfs prior to 1942 and below 350 cfs thereafter. Curves extended above.

Bankfull stage.--3.5 ft.

Historical data.--Peak of June 8, 1957, reported by local resident to be the highest stage since about 1905.

Remarks.--Flood peaks affected by diversions for irrigation of about 12,500 acres above station. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Dec. 10, 1929	2.47	279	1946	Sept.17, 1946	2.52	356
				1947	Nov. 29, 1946	2.66	341
1931	Nov. 5, 1930	2.48	266	1948	June 4, 1948	e3.21	-
1932	Nov. 20, 1931	a2.40	246		June 21, 1948	2.85	438
1933	Mar. 12, 1933	b2.45	223	1949	Nov. 18, 1948	2.71	371
1934	Oct. 30, 1933	2.50	282		Jan. 12, 1949	f3.14	-
1935	Nov. 30, 1934	2.48	234	1950	Oct. 25, 1949	2.67	344
1936	Nov. 10, 1935	2.47	234	1951	Nov. 20, 1950	2.55	333
1937	Nov. 22, 1936	2.39	234		May 29, 1951	e2.79	-
1938	July 4, 1938	2.74	258	1952	Mar. 28, 1952	2.62	352
1939	Nov. 21, 1938	2.58	258	1953	Nov. 16, 1952	2.69	356
1940	Feb. 27, 1940	c2.78	277	1954	Nov. 24, 1953	2.71	362
				1955	Apr. 3, 1955	2.57	296
1941	Nov. 6, 1940	d2.67	258				
1942	May 26, 1942	2.64	390	1956	Dec. 23, 1955	2.87	409
1943	May 30, 1943	2.81	454		May 25, 1956	e4.37	-
1944	Oct. 29, 1943	2.51	363	1957	June 7, 1957	e3.91	-
1945	Nov. 17, 1944	2.47	333		June 8, 1957	3.86	796

a Occurred Aug. 29, 1932. b Occurred Nov. 17, 1932. c Occurred Sept. 28, 1940.
d Occurred Oct. 31, 1940. e Backwater from Salmon River. f Backwater from ice.

3025. Salmon River at Salmon, Idaho

Location.--Lat 45°11'00", long 113°53'40", in NE¼ sec.6, T.21 N., R.22 E., on left bank 1,000 ft downstream from island, 0.4 mile upstream from Lemhi River, and 0.5 mile downstream from highway bridge at Salmon.

Drainage area.--3,760 sq mi, approximately. Mean altitude, 7,380 ft.

Gage.--Nonrecording prior to Oct. 21, 1929; recording thereafter. At site 700 ft upstream at different datum prior to Oct. 21, 1929. Datum of gage is 3,911.14 ft above mean sea level, datum of 1929 (levels by Corps of Engineers).

Stage-discharge relation.--Defined by current-meter measurements below 10,000 cfs prior to 1930, and by current-meter measurements through entire range thereafter.

Bankfull stage.--9 ft.

Remarks.--Only annual peaks are shown through 1929. Base for partial-duration series, 4,000 cfs.

Peak stages and discharges of Salmon River at Salmon, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)
1912	June 10, 1912	a8.2	12,900
1913	June 1, 1913	a8.3	12,800
1914	June 4, 1914	a6.5	8,420
1915	June 2, 1915	a4.4	3,780
1916	June 19, 1916	a8.2	11,600
1920	June 16, 1920	a6.1	6,810
1921	June 12, 1921	a9.35	16,400
1922	Mar. 2, 1922	b9.3	-
	June 15, 1922	a8.9	14,700
1923	June 13, 1923	a7.5	10,200
1924	Jan. 9, 1924	b8.6	-
	May 19, 1924	a5.07	4,370
1925	May 30, 1925	a7.12	9,380
1926	May 5, 1926	a4.42	3,300
1927	June 13, 1927	a8.05	10,800
1928	May 27, 1928	a8.40	11,800
1929	June 17, 1929	a5.94	5,840
1930	Feb. 22, 1930	b6.04	-
	May 31, 1930	4.74	5,780
	June 12, 1930	4.86	6,030
1931	June 3, 1931	3.92	3,690
1932	Feb. 2, 1932	b8.95	-
	May 22, 1932	5.42	7,460
	June 17, 1932	6.22	9,640
1933	Dec. 19, 1932	b7.30	-
	June 14, 1933	6.42	10,200
1934	May 9, 1934	4.34	4,060
1935	June 9, 1935	5.31	6,460
1936	Jan. 30, 1936	b8.48	-
	Apr. 24, 1936	4.87	5,450
	May 6, 1936	4.60	4,820
	May 16, 1936	5.83	8,030
	June 3, 1936	6.24	9,110
1937	Jan. 26, 1937	b7.45	-
	May 28, 1937	4.29	3,890
1938	May 2, 1938	5.04	5,720
	May 18, 1938	4.88	5,350
	June 8, 1938	6.53	9,600
1939	May 19, 1939	4.31	3,890
1940	May 27, 1940	5.25	5,850
1941	May 27, 1941	5.27	5,740
	June 8, 1941	4.88	4,850
1942	Dec. 4, 1941	4.71	4,380
	Jan. 8, 1942	b9.62	-
1942	Apr. 14, 1942	4.58	4,150
	Apr. 22, 1942	4.82	4,610
	May 26, 1942	6.84	10,300
	June 9, 1942	6.87	10,600
	July 4, 1942	-	c5,600
1943	May 6, 1943	5.71	6,480
	May 31, 1943	7.18	10,700
	June 20, 1943	7.04	10,100
1944	May 18, 1944	5.07	4,840
	June 27, 1944	5.50	5,960
1945	June 10, 1945	5.07	4,730
	June 24, 1945	5.55	5,930
1946	Apr. 27, 1946	5.01	4,580
	May 9, 1946	5.27	5,180
	May 28, 1946	5.65	6,140
	June 6, 1946	5.87	6,710
1947	May 10, 1947	7.05	10,100
	May 28, 1947	6.48	8,380
1948	June 4, 1948	7.32	10,900
1949	(d)	b9.07	-
	May 17, 1949	6.15	7,590
	June 12, 1949	5.75	6,510
1950	Feb. 4, 1950	b8.57	-
	May 18, 1950	5.11	4,980
	June 8, 1950	6.36	8,290
	June 22, 1950	6.59	8,930
1951	Apr. 20, 1951	4.76	4,210
	May 13, 1951	5.82	6,790
	May 29, 1951	7.38	11,400
	June 18, 1951	6.95	10,400
1952	May 4, 1952	5.55	6,340
	May 15, 1952	5.63	6,570
	June 7, 1952	6.70	9,720
1953	May 20, 1953	4.65	4,000
	June 19, 1953	6.92	9,800
1954	May 22, 1954	6.88	9,680
	June 27, 1954	6.89	9,710
1955	May 22, 1955	5.04	4,690
	June 13, 1955	6.33	8,060
1956	Dec. 24, 1955	5.02	4,720
	Feb. 3, 1956	b8.9	-
	Apr. 23, 1956	5.14	5,140
	May 25, 1956	8.25	16,500
1957	Jan. 27, 1957	b8.04	-
	May 19, 1957	5.84	9,610
	June 6, 1957	7.23	14,300

a Maximum observed.
b Backwater from ice.
c Estimated mean daily discharge.
d Occurred sometime during period Jan. 3 to Feb. 23, 1949.

3055. Lemhi River at Salmon, Idaho

Location.--Lat 45°10'20", long 113°52'30", in SE¼ sec.5, T.21 N., R.22 E., on left bank 200 ft downstream from bridge, 900 ft upstream from diversion gates of power canal, 1 mile downstream from Kirtley Creek, and 1 mile southeast of Salmon.

Drainage area.--1,270 sq mi, approximately.

Gage.--Nonrecording. At several sites within 200 ft at various datums. Altitude of gage is 3,950 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 1,200 cfs and extended above prior to 1939 and defined throughout the range thereafter.

Banfkull stage.--4.5 ft.

Remarks.--Flood peaks affected by many diversions for irrigation above station. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	June 16, 1929	-	a1,400	1937	Feb. 28, 1937	d1.93	-
1930	Feb. 3, 1930	b3.22	-		Apr. 2, 1937	1.78	267
	Feb. 8, 1930	2.00	373	1938	July 4, 1938	2.97	1,260
				1939	Mar. 20, 1939	2.91	1,140
1931	June 3, 1931	2.22	530	1940	Sept.28, 1940	2.75	586
1932	June 17, 1932	3.08	1,310				
1933	June 14, 1933	2.92	1,090	1941	June 8, 1941	3.70	1,350
1934	Nov. 1, 1933	2.27	508	1942	June 9, 1942	e4.10	2,110
1935	June 14, 1935	2.86	1,040	1943	June 19, 1943	-	a1,410
1936	June 3, 1936	c4.00	2,400				

a Estimated daily mean discharge. b Backwater from ice. c From high-water mark. d Backwater from debris. e About.

3060. North Fork Salmon River at North Fork, Idaho

Location.--Lat 45°25', long 113°59', in SW¼ sec.16, T.24 N., R.21 E., on right bank 550 ft upstream from highway bridge, 1,100 ft upstream from mouth, and 0.2 mile northeast of North Fork.

Drainage area.--214 sq mi. Mean altitude, 6,220 ft.

Gage.--Nonrecording. At several sites within 400 ft at various datums prior to May 16, 1935. Altitude of gage is 3,620 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements throughout range prior to 1936; defined below 400 cfs thereafter and extended above.

Bankfull stage.--4.5 ft.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1930	Apr. 25, 1930	2.76	418	1935	May 24, 1935	2.47	423
1931	May 17, 1931	2.76	369	1936	May 15, 1936	3.14	670
1932	May 15, 1932	2.88	824	1937	May 19, 1937	2.27	348
1933	June 13, 1933	4.40	901	1938	May 29, 1938	3.68	830
1934	Apr. 25, 1934	3.12	484	1939	May 5, 1939	3.13	556

3065. Panther Creek near Shoup, Idaho

Location.--Lat 45°19', long 114°23', in sec.19, T.23 N., R.18 E., on left bank 25 ft downstream from bridge on private road, 1 mile upstream from mouth, and 7 miles southwest of Shoup.

Drainage area.--529 sq mi. Mean altitude, 7,030 ft.

Gage.--Nonrecording. Altitude of gage is 3,280 ft (from river-profile map).

Stage-discharge relation.--Fairly well defined by current-meter measurements.

Bankfull stage.--6 ft.

Remarks.--Diversions above station for irrigation of about 1,000 acres. Effect on flood peaks is slight. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Dec. 18, 1944	a4.10	-	1950	June 7, 1950	2.95	1,370
	June 8, 1945	3.70	2,010				
				1951	May 24, 1951	3.55	1,880
1946	Dec. 21, 1945	a3.90	-	1952	May 27, 1952	2.65	1,160
	May 28, 1946	2.20	834	1953	June 13, 1953	4.30	2,640
1947	Jan. 6, 1947	a4.4	-	1954	May 20, 1954	-	b1,600
	May 9, 1947	4.20	2,500	1955	Dec. 24, 1954	a2.80	-
1948	May 29, 1948	4.10	2,400		June 13, 1955	2.78	1,250
1949	Dec. 21, 1948	a3.20	-				
	May 17, 1949	3.05	1,450	1956	May 25, 1956	4.30	2,740
1950	Dec. 29, 1949	a3.46	-	1957	June 4, 1957	4.10	2,490

a Backwater from ice.
b Estimated daily mean discharge.

3070. Salmon River near Shoup, Idaho

Location.--Lat 45°19'30", long 114°26'00", in NE¼SW¼ sec.14, T.23 N., R.17 E., on right bank 0.6 mile upstream from Owl Creek, 2.3 miles downstream from Panther Creek, and 9 miles southwest of Shoup.

Drainage area.--6,270 sq mi, approximately. Mean altitude, 7,140 ft.

Gage.--Nonrecording prior to Sept. 17, 1951; recording thereafter. At site 1.3 miles upstream at datum 8.69 ft higher prior to May 4, 1947. At site 200 ft downstream from above site at datum 9.97 ft higher than present datum May 4, 1947, to Sept. 17, 1951. Altitude of gage is 3,160 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 13,000 cfs at former sites and throughout range at present site.

Bankfull stage.--River in canyon, not subject to overflow.

Remarks.--Diversions for irrigation of about 88,000 acres above station have some effect on flood peaks during the irrigation season. Only annual peaks are shown 1945-51. Base for partial-duration series, 8,800 cfs, 1952-57.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	Feb. 5, 1945	a6.72	-	1953	June 14, 1953	10.20	15,800
	June 25, 1945	6.07	7,440				
				1954	May 22, 1954	8.47	12,100
1946	June 7, 1946	7.08	9,460		June 28, 1954	8.49	12,200
1947	May 10, 1947	7.79	16,600				
1948	June 4, 1948	7.90	16,900	1955	June 14, 1955	8.11	11,600
1949	May 17, 1949	5.80	11,400				
1950	June 22, 1950	6.00	11,900	1956	May 26, 1956	13.00	24,900
1951	May 29, 1951	7.34	15,400	1957	Feb. 26, 1957	a10.89	-
					May 20, 1957	9.38	14,700
1952	June 8, 1952	8.73	13,300		June 6, 1957	11.54	20,900

a Backwater from ice.

3085. Middle Fork Salmon River near Cape Horn, Idaho

Location.--Lat 44°25', long 115°11', in sec.34, T.13 N., R.11 E., on left bank 1,100 ft downstream from Little Beaver Creek, half a mile downstream from confluence of Marsh and Beaver Creeks, and 2 miles northwest of Cape Horn.

Drainage area.--138 sq mi. Mean altitude, 7,370 ft.

Gage.--Recording. Altitude of gage is 6,435 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--7 ft.

Remarks.--Base for partial-duration series, 930 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 24, 1929	4.75	1,010	1945	May 10, 1945	4.92	1,110
	June 16, 1929	4.73	1,010		June 5, 1945	4.88	1,090
1930	May 30, 1930	4.77	946	1946	May 6, 1946	5.15	1,290
					May 28, 1946	5.42	1,530
1931	May 16, 1931	4.30	723		June 5, 1946	5.23	1,360
1932	May 14, 1932	5.54	1,520	1947	May 8, 1947	6.05	2,110
	June 16, 1932	5.45	1,440		May 27, 1947	5.62	1,690
					June 9, 1947	5.08	1,240
1933	June 9, 1933	6.26	2,340	1948	May 20, 1948	5.52	1,600
1934	Apr. 23, 1934	4.89	1,110		May 29, 1948	6.14	2,200
	May 7, 1934	4.84	1,080		June 3, 1948	6.26	2,340
1935	May 24, 1935	4.97	1,180	1949	May 15, 1949	5.68	1,690
					May 29, 1949	5.41	1,450
1936	May 4, 1936	4.75	1,010		June 6, 1949	5.05	1,170
	May 14, 1936	5.78	1,810				
	June 1, 1936	5.52	1,580	1950	May 28, 1950	5.71	1,780
	June 7, 1936	4.98	1,140		June 5, 1950	5.70	1,760
					June 21, 1950	5.72	1,790
1937	May 19, 1937	4.65	942		June 30, 1950	5.32	1,430
1938	May 16, 1938	5.33	1,420	1951	May 10, 1951	5.31	1,420
	May 27, 1938	6.18	2,260		May 28, 1951	5.89	1,950
	June 6, 1938	5.99	2,040		June 16, 1951	5.60	1,650
	June 30, 1938	5.03	1,170				
				1952	May 13, 1952	5.61	1,680
1939	May 3, 1939	4.58	880		June 6, 1952	5.69	1,750
1940	May 11, 1940	5.62	1,640	1953	May 19, 1953	4.95	1,070
					June 13, 1953	5.94	1,890
1941	May 13, 1941	4.86	1,030		June 18, 1953	5.92	1,870
	May 26, 1941	5.22	1,290				
				1954	May 20, 1954	6.07	2,010
1942	Dec. 3, 1941	5.43	1,560		June 16, 1954	4.95	1,100
	May 25, 1942	5.59	1,700		June 26, 1954	5.50	1,510
	June 7, 1942	5.42	1,510				
				1955	May 22, 1955	4.91	1,080
1943	May 5, 1943	-	a900		June 11, 1955	5.58	1,570
	(b)	6.20	2,340				
	June 12, 1943	5.57	1,650	1956	May 24, 1956	6.96	2,980
	June 19, 1943	6.05	2,180				
				1957	May 18, 1957	5.80	1,770
1944	Dec. 14, 1943	c5.20	-		June 4, 1957	6.31	2,270
	May 15, 1944	4.59	930				

a Estimated daily mean discharge; peak probably exceeded the base.
b Approximately May 31, 1943; recorder not operating.
c Backwater from ice.

3090. Bear Valley Creek near Cape Horn, Idaho

Location.--Lat 44°26', long 115°17', in sec.29, T.13 N., R.10 E., on right bank 250 ft downstream from Fir Creek, 3 miles upstream from mouth, and 7 miles northwest of Cape Horn.

Drainage area.--180 sq mi. Mean altitude, 7,040 ft.

Gage.--Recording. Altitude of gage is 6,340 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 2,300 cfs and extended above by logarithmic plotting.

Bankfull stage.--13 ft.

Remarks.--Only annual peaks are shown for years when record is incomplete, 1922-28; base for partial-duration series used thereafter, 1,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1922	(a)	4.5	2,230	1943	June 1, 1943	5.30	3,090
1923	May 26, 1923	b4.48	2,300		June 12, 1943c/	4.23	1,910
1924	May 17, 1924c/	3.28	1,140		June 19, 1943c/	4.47	2,120
1925	May 28, 1925c/	5.0	2,800	1944	May 13, 1944	3.31	1,060
1926	May 5, 1926	3.7	1,470	1945	May 11, 1945	4.23	1,800
1927	June 8, 1927c/	5.1	2,950		June 10, 1945	3.75	1,390
1928	May 26, 1928	5.30	3,120	1946	May 27, 1946	4.38	2,000
1929	May 25, 1929	3.73	1,540	1947	May 9, 1947	5.13	2,890
	June 16, 1929	3.52	1,320		June 9, 1947	4.24	1,900
1930	Apr. 25, 1930	3.30	1,160	1948	May 20, 1948	4.26	1,910
1931	May 7, 1931	3.20	1,040		May 29, 1948	5.15	2,960
1932	May 21, 1932	4.34	2,060		June 3, 1948	4.92	2,680
	June 16, 1932	4.56	2,320	1949	May 16, 1949	4.83	2,530
1933	June 9, 1933c/	5.49	3,450		May 30, 1949	4.21	1,870
1934	Apr. 24, 1934c/	3.76	d1,490	1950	June 6, 1950	4.75	2,480
1935	May 24, 1935c/	3.85	1,540		June 22, 1950	4.34	2,030
1936	May 15, 1936	4.82	2,500	1951	May 11, 1951	4.07	1,730
	June 2, 1936	4.07	1,710		May 27, 1951	4.85	2,560
	June 8, 1936	3.96	1,620		June 16, 1951	4.10	1,760
1937	May 19, 1937	3.45	1,190	1952	May 13, 1952c/	4.37	2,030
1938	Dec. 13, 1937	e5.48	-		June 6, 1952c/	-	f2,000
	May 17, 1938	4.06	1,720	1953	May 19, 1953	3.85	1,510
	May 28, 1938	4.83	2,560		June 13, 1953	5.06	2,800
1939	May 4, 1939	3.58	1,330	1954	May 21, 1954	5.26	3,100
					June 16, 1954	3.99	1,710
1940	May 11, 1940c/	4.20	1,860		June 27, 1954	3.77	1,510
1941	May 13, 1941	3.83	1,540	1955	May 22, 1955	3.70	1,440
	May 27, 1941	4.23	1,910		May 30, 1955	3.48	1,270
	June 8, 1941	3.55	1,290		June 12, 1955	3.83	1,560
1942	Dec. 3, 1941	3.92	1,580	1956	May 10, 1956	3.55	1,330
	May 25, 1942	4.02	1,670		May 27, 1956	5.87	3,860
	June 10, 1942	3.75	1,450	1957	May 19, 1957	4.74	2,500
1943	May 4, 1943	3.75	1,450		June 5, 1957	4.92	2,700

a Sometime prior to start of recorder, June 19, 1922.
b May have been higher during period of no record.
c Date approximate.
d Estimated maximum daily mean discharge of 1,400 cfs published in WSP 768 and 1317 as the momentary maximum.
e Backwater from ice.
f Estimated.

3095. Middle Fork Salmon River near Meyers Cove, Idaho

Location.--Lat 44°57', long 114°44', in sec.27, T.19 N., R.14 E., on left bank at the George D. Crandall Ranch, 500 ft below Brush Creek and 15 miles northwest of Meyers Cove.

Drainage area.--2,020 sq mi, approximately. Mean altitude, 7,180 ft.

Gage.--Nonrecording. Altitude of gage is 3,640 ft (river-profile survey).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	May 14, 1932	7.20	12,900	1936	May 16, 1936	7.56	14,700
1933	June 10, 1933	8.10	17,000	1937	May 27, 1937	5.49	6,610
1934	Apr. 24, 1934	5.76	7,480	1938	May 28, 1938	8.10	16,600
1935	May 24, 1935	6.34	9,220	1939	Apr. 30, 1939	5.75	7,540

3100. Big Creek near Big Creek, Idaho

Location.--Lat 45°07', long 114°55', in NE¼ sec.36, T.21 N., R.12 E., on left bank three-quarters of a mile downstream from Cabin Creek, 1¾ miles southeast of Wallace Ranch, and 19 miles east of Big Creek Post Office.

Drainage area.--470 sq mi, approximately. Mean altitude, 7,000 ft.

Gage.--Nonrecording prior to Oct. 22, 1948, at site a quarter of a mile downstream from present gage at different datum; recording thereafter. Altitude of gage is 3,950 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 3,000 cfs and extended to 5,800 cfs by logarithmic plotting at site in use 1945-48. Defined throughout by current-meter measurements at present site.

Bankfull stage.--Not subject to overflow.

Remarks.--Only annual peaks are shown 1945-48; base for partial-duration series used thereafter, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 9, 1945	4.02	1,940	1952	May 14, 1952	4.48	2,110
1946	May 28, 1946	4.10	2,000		June 7, 1952	5.71	3,490
1947	May 9, 1947	5.80	4,010				
1948	June 3, 1948	7.12	5,800	1953	June 13, 1953	6.21	4,060
					June 18, 1953	5.82	3,590
1949	May 16, 1949	5.65	3,460				
	May 29, 1949	5.32	3,110	1954	May 10, 1954	4.79	2,570
	June 7, 1949	4.38	2,120		May 21, 1954	6.20	4,070
					June 24, 1954	4.75	2,500
1950	May 23, 1950	4.48	2,220				
	June 6, 1950	5.27	3,060	1955	May 22, 1955	4.41	2,150
	June 22, 1950	6.04	3,880		June 13, 1955	5.68	3,580
	July 1, 1950	5.02	2,790		June 23, 1955	4.84	2,610
1951	May 11, 1951	4.38	2,160	1956	May 24, 1956	7.39	5,220
	May 28, 1951	5.74	3,600		June 11, 1956	5.64	3,440
	June 16, 1951	5.02	2,790				
				1957	May 13, 1957	5.35	3,040
1952	Apr. 28, 1952	4.38	2,000		June 2, 1957	6.67	4,040

3105. South Fork Salmon River near Knox, Idaho

Location.--Lat 44°39', long 115°42', in NW¼ sec. 11, T.15 N., R.6 E., on left bank 800 ft downstream from Curtis Creek, 1 mile upstream from Warm Lake Creek, 1½ miles southwest of Knox, and 21 miles northeast of Cascade.

Drainage area.--92 sq mi, approximately. Mean altitude, 6,630 ft.

Gage.--Nonrecording prior to Oct. 22, 1942, at site 800 ft downstream at datum 2.09 ft lower; recording thereafter. Datum of present gage is 5,090.31 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements throughout range at present site and below 1,100 cfs at former site and extended above.

Bankfull stage.--6 ft.

Remarks.--Only annual peaks shown for period of nonrecording gage record prior to 1943; base for partial-duration series thereafter, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 24, 1929	-	a600	1948	May 27, 1948	5.99	1,330
					June 3, 1948	5.97	1,320
1931	May 16, 1931	b3.38	648				
1932	May 22, 1932	b3.70	745	1949	May 16, 1949	5.95	1,310
1933	June 9, 1933	b4.69	1,560		May 29, 1949	5.81	1,230
1934	May 8, 1934	c3.14	593		June 6, 1949	4.89	762
1935	May 23, 1935	b3.70	878				
				1950	May 16, 1950	4.70	652
1936	May 14, 1936	d4.50	1,340		June 6, 1950	5.47	1,040
1937	Feb. 25, 1937	e3.43	-		June 21, 1950	5.71	1,160
	May 25, 1937	b3.36	d682		June 30, 1950	5.10	847
1938	May 28, 1938	b4.40	1,340				
1939	May 5, 1939	b3.20	605	1951	May 10, 1951	4.99	812
1940	May 12, 1940	-	a800		May 28, 1951	5.55	1,080
					June 16, 1951	5.12	862
1941	May 26, 1941	b3.42	735				
1942	May 24, 1942	b3.90	1,020	1952	Apr. 27, 1952	5.15	882
					May 3, 1952	5.27	942
1943	Apr. 21, 1943	5.12	841		May 14, 1952	5.29	952
	May 4, 1943	4.63	635		June 7, 1952	5.67	1,140
	May 31, 1943	6.19	1,320				
	June 19, 1943	5.39	960	1953	May 19, 1953	4.93	777
	June 30, 1943	5.48	1,000		June 13, 1953	5.91	1,260
1944	June 1, 1944	4.61	670	1954	Apr. 28, 1954	4.62	633
					May 20, 1954	6.00	1,340
1945	May 10, 1945	5.04	806		June 15, 1954	4.80	713
	June 5, 1945	5.03	802		June 26, 1954	4.86	742
	June 24, 1945	4.79	701				
				1955	May 21, 1955	4.60	638
1946	Apr. 19, 1946	4.84	722		June 13, 1955	5.40	1,040
	Apr. 26, 1946	4.80	705				
	May 8, 1946	5.10	832	1956	Dec. 22, 1955	4.72	726
	May 28, 1946	5.60	1,060		Apr. 21, 1956	4.64	685
	June 4, 1946	5.29	916		May 11, 1956	4.75	742
					May 27, 1956	6.33	1,620
1947	May 9, 1947	6.13	1,410				
	May 27, 1947	5.21	922	1957	May 19, 1957	5.71	1,270
	June 9, 1947	5.30	967		June 3, 1957	6.15	1,510

a Estimated daily mean discharge.
b Maximum observed.
c Maximum observed; may have been higher Apr. 24, 1934.
d Revised.
e Backwater from ice.

3110. East Fork South Fork Salmon River at Stibnite, Idaho

Location.--Lat 44°54', long 115°19', in NW¼ sec.14, T.18 N., R.9 E., on left bank 30 ft downstream from Meadow Creek, half a mile northeast of Stibnite Post Office, and 10½ miles upstream from Johnson Creek.

Drainage area.--19.5 sq mi. Mean altitude, 7,780 ft.

Gage.--Nonrecording prior to Sept. 18, 1929, at site 10 ft downstream at datum 1.31 ft higher; recording thereafter. Datum of gage is 6,478 ft above mean sea level (plane table survey by Conservation Branch).

Stage-discharge relation.--Defined by current-meter measurements below 150 cfs and extended above except for water years 1932-34, 1938, which were defined below 240 cfs and extended above.

Bankfull stage.--4.5 ft.

Remarks.--Flood peaks regulated at times by storage in reservoir on South Fork Meadow Creek (capacity, about 700 acre-ft). Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	June 16, 1929	a3.43	155	1936	May 14, 1936	3.65	220
1930	June 10, 1930	a3.70	242	1937	May 27, 1937	3.11	116
				1938	June 6, 1938	3.97	256
1931	May 14, 1931	3.08	110	1939	May 4, 1939	3.20	105
1932	June 15, 1932	3.95	232	1940	May 25, 1940	3.53	162
1933	June 14, 1933	4.49	369				
1934	Apr. 2, 1934	b3.79	-	1941	May 26, 1941	3.39	139
	May 7, 1934	3.51	130	1942	June 7, 1942	3.84	211
1935	June 8, 1935	3.40	181				

a Maximum observed
b Backwater from debris.

3115. East Fork South Fork Salmon River near Stibnite, Idaho

Location.--Lat 44°56', long 115°20', in SE¼ sec.34, T.19 N., R.9 E., on right bank 200 ft downstream from Sugar Creek, 3 miles north of Stibnite Post Office, and 8½ miles upstream from Johnson Creek.

Drainage area.--42.5 sq mi. Mean altitude, 7,640 ft.

Gage.--Nonrecording. Datum of gage is 5,912.47 ft above mean sea level (preliminary levels by Topographic Branch).

Stage-discharge relation.--Defined by current-meter measurements below 500 cfs and extended above.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	June 16, 1929	2.04	314	1935	May 29, 1935	2.30	341
1930	June 11, 1930	-	a460				
				1936	May 15, 1936	2.62	452
1931	May 16, 1931	1.72	193	1937	May 25, 1937	1.82	201
1932	June 15, 1932	b2.58	434	1938	June 6, 1938	-	a520
1933	June 15, 1933	3.51	783	1939	May 4, 1939	-	a220
1934	May 8, 1934	1.98	260	1940	May 26, 1940	2.28	365

a Estimated daily mean discharge.
b Revised gage height.

3120. East Fork South Fork Salmon River near Yellow Pine, Idaho

Location.--Lat 44°57'50", long 115°27'30", in NE¼ sec.27, T.15 N., R.8 E., on right bank 200 ft upstream from Forest Service highway bridge, 1½ miles east of Yellow Pine, 1½ miles upstream from Quartz Creek, 2 miles downstream from Profile Creek, and 2.8 miles upstream from Johnson Creek.

Drainage area.--104 sq mi. Mean altitude, 7,420 ft.

Gage.--Recording. Datum of gage is 5,049.11 ft above mean sea level (preliminary levels by Topographic Branch).

Stage-discharge relation.--Defined by current-meter measuremerts below 1,300 cfs and extended above.

Remarks.--Base for partial-duration series, 610 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 23, 1929	3.55	844	1936	May 29, 1936	a3.69	940
	June 16, 1929	3.49	806	1937	May 27, 1937	3.17	600
1930	May 21, 1930	3.23	653	1938	May 1, 1938	3.39	704
	May 29, 1930	3.58	876		May 17, 1938	3.36	686
	June 10, 1930	3.62	920		May 28, 1938	4.13	1,300
1931	May 14, 1931	3.04	605		June 5, 1938	4.30	1,450
1932	May 14, 1932	3.90	1,110		June 21, 1938	3.54	803
	May 21, 1932	3.85	1,080	1939	May 4, 1939	3.35	680
	June 15, 1932	3.93	1,140	1940	May 11, 1940	a3.61	831
1933	June 9, 1933	4.89	1,770		May 25, 1940	3.69	890
	June 14, 1933	5.26	2,050	1941	May 13, 1941	3.54	796
1934	Apr. 23, 1934	3.27	710		May 24, 1941	3.44	736
	May 7, 1934	a3.33	750	1942	May 25, 1942	3.58	782
1935	May 23, 1935	3.58	940		June 7, 1942	3.80	919
	June 1, 1935	a3.31	737	1943	May 29, 1943	3.96	1,120
	June 7, 1935	a3.51	870		June 19, 1943	a4.28	1,370
1936	May 15, 1936	4.02	1,170				

a Approximate.

3125. Johnson Creek near Landmark ranger station, Idaho

Location (revised).--Lat 44°41', long 115°32', in sec.31, T.16 N., R.8 E., on left bank 0.4 mile upstream from Lunch Creek, 0.8 mile downstream from Bobcat Creek, 1¾ miles north of Landmark ranger station, and 20 miles south of Yellow Pine.

Drainage area.--54.7 sq mi (includes 1.8 sq mi, which is noncontributing due to diversion to Deadwood River basin). Mean altitude, 7,210 ft.

Gage.--Recording. Altitude of gage is 6,585 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 1,100 cfs and extended above.

Bankfull stage.--4 ft.

Remarks.--Peak stages above base caused by backwater from ice occurred most winters, but are not available. Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 28, 1943	5.09	1,060	1947	May 8, 1947	5.62	1,240
	June 19, 1943	4.29	614		June 9, 1947	4.32	627
1944	May 15, 1944	3.93	453	1948	May 20, 1948	4.66	802
					May 27, 1948	5.95	1,510
1945	May 10, 1945	4.80	883		June 3, 1948	5.64	1,260
1946	May 6, 1946	4.43	680	1949	May 16, 1949	5.79	1,340
	May 18, 1946	4.50	715		May 28, 1949	4.49	710

3130. Johnson Creek at Yellow Pine, Idaho

Location.--Lat 44°58', long 115°30', in NE¼ sec.29, T.19 N., R.8 E., on right bank 700 ft upstream from mouth and a quarter of a mile southwest of Yellow Pine.

Drainage area.--213 sq mi (includes 1.8 sq mi which is noncontributing due to diversion to Deadwood River basin). Mean altitude, 7,170 ft.

Gage.--Recording. Datum of gage is 4,657.70 ft above mean sea level, datum of 1929 (preliminary).

Stage-discharge relation.--Defined by current-meter measurements below 4,000 cfs and extended above.

Bankfull stage.--25 ft.

Remarks.--Base for partial-duration series, 1,800 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1929	May 23, 1929	4.95	2,200	1945	May 10, 1945	5.06	2,430
	June 16, 1929	4.49	1,810		June 5, 1945	4.50	1,890
1930	May 29, 1930	4.69	1,980	1946	May 6, 1946	4.81	2,180
					May 28, 1946	5.10	2,470
1931	May 16, 1931	4.04	1,450		June 3, 1946	4.95	2,320
1932	May 14, 1932	5.67	3,000	1947	May 9, 1947	6.94	4,530
	May 21, 1932	5.82	3,100		May 26, 1947	5.23	2,530
	June 15, 1932	5.89	3,200		June 9, 1947	4.85	2,150
1933	June 2, 1933	5.72	3,000	1948	May 19, 1948	5.19	2,490
	June 9, 1933	7.62	5,150		May 27, 1948	7.01	4,620
					June 3, 1948	6.78	4,330
1934	Apr. 23, 1934	4.72	2,100				
	May 7, 1934	4.38	1,840	1949	May 16, 1949	7.00	4,610
					May 27, 1949	5.80	3,160
1935	May 23, 1935	5.07	2,420		June 7, 1949	4.87	2,170
	May 31, 1935	4.88	2,280				
				1950	June 6, 1950	5.73	2,970
1936	May 5, 1936	4.39	1,800		June 21, 1950	5.94	3,200
	May 14, 1936	6.10	3,430		June 30, 1950	5.15	2,370
	May 27, 1936	4.93	2,280				
	June 6, 1936	4.40	1,800	1951	May 11, 1951	4.94	2,170
					May 28, 1951	5.77	3,020
1937	May 19, 1937	4.42	1,720		June 15, 1951	5.13	2,350
1938	May 17, 1938	4.71	2,070	1952	May 4, 1952	4.54	1,850
	May 28, 1938	6.02	3,520		May 14, 1952	5.18	2,440
	June 5, 1938	5.85	3,270		May 20, 1952	5.27	2,520
					June 6, 1952	5.62	2,800
1939	Apr. 30, 1939	4.68	2,070				
				1953	May 19, 1953	4.50	1,820
1940	May 13, 1940	5.49	2,910		June 13, 1953	6.31	3,680
	May 25, 1940	5.17	2,520				
				1954	May 20, 1954	6.61	4,170
1941	May 13, 1941	5.14	2,520		June 16, 1954	4.65	2,000
	May 26, 1941	4.64	2,020		June 23, 1954	4.82	2,190
1942	May 25, 1942	5.14	2,520	1955	June 11, 1955	5.59	2,930
	June 8, 1942	4.78	2,170				
				1956	May 27, 1956	7.64	5,440
1943	May 29, 1943	6.01	3,390		June 10, 1956	5.80	3,160
	June 13, 1943	4.78	2,070		June 20, 1956	4.75	2,060
	June 18, 1943	5.46	2,800				
	June 30, 1943	5.06	2,370	1957	May 19, 1957	5.88	3,180
					June 2, 1957	6.74	4,210
1944	May 15, 1944	4.09	1,470				

3135. Secesh River near Burgdorf, Idaho

Location.--Lat 45°14', long 115°49', in SW¼ sec.23, T.22 N., R.5 E., on left bank 760 ft upstream from Long Gulch Creek and 5¾ miles southeast of Burgdorf.

Drainage area.--104 sq mi; at site prior to October 1948, 102 sq mi. Mean altitude, 6,840 ft.

Gage.--Nonrecording prior to Aug. 20, 1943; recording thereafter. At site 1 mile upstream at different datum Aug. 20, 1943, to Sept. 30, 1948. Altitude of gage is 5,690 ft (from river-profile map).

Stage-discharge relation.--Defined at first used site by current-meter measurements below 1,000 cfs and extended to 2,500 cfs on basis of slope-area measurement. Defined at last used site by current-meter measurements throughout range.

Bankfull stage.--5.5 ft.

Remarks.--Peak stages above base caused by backwater from ice occur most winters, but are usually not available. Base for partial-duration series, 900 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	May 31, 1943	a6.98	1,510	1949	May 16, 1949	5.57	1,420
	June 18, 1943	a6.54	1,210		May 29, 1949	5.26	1,240
1944	May 14, 1944	5.93	825	1950	May 22, 1950	4.84	984
					June 6, 1950	5.32	1,270
1945	May 10, 1945	6.10	928		June 22, 1950	6.00	1,700
	June 5, 1945	6.57	1,230		July 1, 1950	5.43	1,340
1946	May 5, 1946	6.13	947	1951	May 10, 1951	4.80	960
	May 27, 1946	6.28	1,040		May 28, 1951	5.41	1,330
					June 16, 1951	4.91	1,030
1947	May 7, 1947	7.12	1,580				
	May 27, 1947	6.29	995	1952	(b)	c5.49	-
					Apr. 28, 1952	4.71	910
1948	June 3, 1948	8.24	2,500		May 14, 1952	5.17	1,180
					May 26, 1952	5.37	1,300
1949	May 2, 1949	4.92	1,030		(d)	5.46	1,360

a Gage height from graph based on gage readings. b Date unknown. c Backwater from ice. d About June 6, 1952.

3140. South Fork Salmon River near Warren, Idaho

Location.--Lat 45°09', long 115°35', in SE¼ sec.15, T.21 N., R.7 E., on right bank 500 ft downstream from Elk Creek, 900 ft north of Elk Creek powerplant, and 8 miles southeast of Warren.

Drainage area.--1,160 sq mi, approximately. Mean altitude, 6,710 ft.

Gage.--Nonrecording. Altitude of gage is 2,985 ft (from river-profile survey).

Stage-discharge relation.--Defined by current-meter measurements below 12,000 cfs and extended above by logarithmic plotting.

Bankfull stage.--Channel not subject to overflow.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	May 21, 1932	11.72	15,100	1939	May 4, 1939	8.98	8,060
1933	June 9, 1933	13.16	20,000	1940	May 12, 1940	10.00	10,200
1934	Apr. 24, 1934	8.75	7,690				
1935	May 23, 1935	9.60	9,320	1941	May 13, 1941	9.60	9,330
				1942	May 25, 1942	9.90	10,800
1936	May 15, 1936	11.10	12,800	1943	May 30, 1943	10.94	13,400
1937	May 19, 1937	8.55	7,260				
1938	May 28, 1938	12.16	15,600	1948	(a)	13.7	23,000

a About May 28, 1948.

3145. Warren Creek near Warren, Idaho

Location.--Lat 45°17', long 115°42', in sec.3, T.22 N., R.6 E., on right bank 100 ft downstream from bridge on Warren-McCall road, 0.1 mile downstream from Steamboat Creek, and 1.3 miles northwest of Warren.

Drainage area.--40.6 sq mi (revised). Mean altitude, 6,960 ft.

Gage.--Nonrecording prior to Aug. 18, 1943; recording thereafter. At site 50 ft upstream at same datum Aug. 18, 1943, to May 25, 1948. Altitude of gage is 5,830 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 400 cfs at staff-gage site used 1943 and extended above; defined throughout range at site used 1944-48, and defined below 400 cfs at sites used 1948-49 and extended to 1,100 cfs on basis of slope-area measurement.

Remarks.--Base for partial-duration series, 220 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1943	Apr. 19, 1943	a4.45	368	1946	May 27, 1946	4.78	264
	May 4, 1943	a4.20	277				
	May 27, 1943	a5.40	805	1947	May 7, 1947	5.39	541
	June 20, 1943	a4.60	429		May 31, 1947	4.38	308
1944	June 12, 1944	b4.52	211	1948	May 28, 1948	-	c680
					June 3, 1948	5.3	1,100
1945	May 10, 1945	4.60	225				
	June 9, 1945	4.93	297	1949	May 16, 1949	3.72	521
					May 29, 1949	3.50	426
1946	May 6, 1946	4.72	250				

a From graph based on gage readings.
b May have been higher about May 15, 1944.
c Estimated daily mean discharge.

3150. Salmon River near French Creek, Idaho

Location.--Lat 45°26', long 115°59', in sec.8, T.24 N., R.4 E., on left bank 100 ft downstream from Fall Creek, 2½ miles northeast of former French Creek Post Office, and 16 miles east of Riggins.

Drainage area.--12,270 sq mi, approximately.

Gage.--Nonrecording. Datum of gage is 1,908.92 ft above mean sea level, unadjusted. Supplementary nonrecording gage 3 miles upstream at different datum used for peaks 1952-54.

Stage-discharge relation.--Defined by current-meter measurements below 70,000 cfs and extended above at base gage and defined below 60,000 cfs at supplementary site.

Bankfull stage.--River in deep, rocky canyon; not subject to overflow.

Remarks.--Discharge for each year is for site at base gage; measuring site unchanged during period of record. Diversions upstream are a negligible percentage of peak flow. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	June 6, 1945	19.72	37,200	1951	May 28, 1951	26.50	60,300
				1952	June 7, 1952	b21.18	53,800
1946	May 28, 1946	20.52	40,600	1953	June 13, 1953	b24.50	64,200
1947	May 9, 1947	a30.7	73,200	1954	May 21, 1954	b23.70	62,300
1948	May 29, 1948	33.50	82,800	1955	June 13, 1955	b26.18	59,200
1949	May 16, 1949	27.86	64,700				
1950	June 21, 1950	26.40	59,900	1956	May 24, 1956	a34.85	88,600

a Maximum observed.
b From graph based on gage readings.

3155. Mud Creek near Tamarack, Idaho

Location.--Lat 45°00', long 116°21', in sec.9, T.19 N., R.1 E., on left bank 0.5 mile upstream from Little Mud Creek, 3¼ miles northeast of Tamarack, and 5 miles upstream from mouth.

Drainage area.--15.8 sq mi. Mean altitude, 4,660 ft.

Gage.--Nonrecording prior to Sept. 18, 1945; recording thereafter. At site 40 ft downstream at datum 1.21 ft higher prior to Sept. 18, 1945. Altitude of gage is 3,990 ft (by barometer).

Stage-discharge relation.--At site of nonrecording gage, defined by current-meter measurements throughout range. At present site, defined by current-meter measurements throughout range 1946-47, defined below 250 cfs 1948-51 and 1953-56, and below 100 cfs in 1952.

Bankfull stage.--5 ft.

Remarks.--Only annual peaks are shown 1937-38; base for partial-duration series used thereafter, 100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1937	May 4, 1937	a2.16	100	1951	Apr. 28, 1951	3.79	153
1938	(b)	3.34	300	1952	Apr. 27, 1952	5.00	395
1946	Apr. 18, 1946	4.29	287		May 8, 1952	4.27	212
	Apr. 26, 1946	3.99	223				
	May 5, 1946	3.56	136	1953	Jan. 20, 1953	c4.62	-
					Apr. 23, 1953	4.23	252
1947	Feb. 13, 1947	c3.67	-		Apr. 28, 1953	4.25	257
	Mar. 22, 1947	-	d95		May 7, 1953	3.77	138
1948	Apr. 17, 1948	4.31	292	1954	Mar. 2, 1954	c4.74	-
	Apr. 22, 1948	4.27	255		Mar. 10, 1954	-	d90
	Apr. 29, 1948	3.84	148		Apr. 5, 1954	3.65	130
	May 3, 1948	3.89	157		Apr. 13, 1954	4.07	213
	May 7, 1948	4.12	204		Apr. 18, 1954	4.02	202
	May 17, 1948	3.94	167		May 10, 1954	3.59	118
	May 22, 1948	3.95	169				
	June 3, 1948	3.69	119	1955	Apr. 8, 1955	c5.05	-
					May 6, 1955	3.78	138
1949	Mar. 18, 1949	c4.33	-		May 21, 1955	3.65	121
	Apr. 11, 1949	3.76	136				
	Apr. 19, 1949	3.82	155	1956	Dec. 22, 1955	c5.41	-
	May 2, 1949	3.61	117		Dec. 22, 1955	f5.09	393
					Mar. 26, 1956	-	d121
1950	(e)	(e)	-		Apr. 14, 1956	4.11	224
	Apr. 13, 1950	3.79	142		May 7, 1956	3.84	171
	Apr. 21, 1950	3.94	173				
	May 15, 1950	3.76	142	1957	Apr. 14, 1957	3.80	165
					Apr. 22, 1957	3.75	156
1951	Mar. 23, 1951	c4.72	-		May 3, 1957	3.90	184
	Apr. 14, 1951	3.99	193		May 13, 1957	3.92	188

a Maximum observed; may have been higher during period of no record. b About May 1. c Backwater from ice. d Estimated mean daily discharge. e Stage exceeded 4.0 ft sometime during winter. f Release from ice jam upstream.

3160. Boulder Creek near Tamarack, Idaho

Location.--Lat 45°05', long 116°27', in SW¼ sec.10, T.20 N., R.1 W., on right bank 350 ft upstream from transmountain diversion to Weiser River basin and 8 miles northwest of Tamarack.

Drainage area.--6.5 sq mi, approximately. Mean altitude, 6,330 ft.

Gage.--Recording. Altitude of gage is 5,360 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements throughout range prior to 1942 and defined below about 70 cfs and extended above thereafter.

Bankfull stage.--In deep canyon; not subject to overflow.

Remarks.--No records of stage during periods of backwater from ice have been obtained. Base for partial-duration series, 65 cfs.

Peak stages and discharges of Boulder Creek near Tamarack, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 30, 1938	2.53	155	1942	Apr. 21, 1942	1.94	92
	May 16, 1938	2.34	125		May 23, 1942	2.96	244
	May 27, 1938	2.95	226		June 7, 1942	1.85	80
1939	May 3, 1939	2.43	155	1943	May 31, 1943	2.41	150
					June 18, 1943	1.80	66
1940	May 11, 1940	2.32	134				
	June 1, 1940	1.87	71	1944	May 20, 1944	1.67	53
1941	May 3, 1941	2.05	108	1945	May 10, 1945	2.15	110
	May 13, 1941	2.35	155		May 31, 1945	2.15	107
	May 24, 1941	2.40	152		June 24, 1945	2.00	84

3165. Little Salmon River at Riggins, Idaho

Location.--Lat 45°24'50", long 116°19'30", in SE¼SW¼ sec.15, T.24 N., R.1 E., on right bank 250 ft upstream from highway bridge, half a mile upstream from mouth, and three-quarters of a mile southwest of Riggins.

Drainage area.--576 sq mi. Mean altitude, 5,430 ft.

Gage.--Recording. Altitude of gage is 1,760 ft (from topographic map).

Stage-discharge relation.--Reasonably well defined by current-meter measurements below 4,300 cfs for 1951-52 and below 5,100 cfs thereafter.

Bankfull stage.--In deep canyon; not subject to overflow.

Historical data.--Flood about June 1, 1948, reached a discharge of 9,200 cfs (result of slope-area measurement).

Remarks.--Diversions for irrigation of about 13,600 acres affect peak discharges during the irrigation season. Base for partial-duration series, 2,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Apr. 6, 1951	5.88	2,930	1953	June 13, 1953	7.39	5,650
	Apr. 29, 1951	5.26	2,240				
	May 11, 1951	6.14	3,250	1954	Mar. 10, 1954	5.14	2,320
	May 23, 1951	6.32	3,500		Apr. 6, 1954	4.89	2,070
	June 15, 1951	6.48	3,720		Apr. 14, 1954	5.26	2,440
					Apr. 28, 1954	4.98	2,160
1952	Dec. 1, 1951	5.14	2,120		May 10, 1954	6.47	3,920
	Apr. 28, 1952	7.36	5,530		May 20, 1954	7.17	5,060
	June 4, 1952	7.21	5,440		June 15, 1954	6.30	3,680
	June 24, 1952	5.81	3,200		June 26, 1954	6.43	3,860
1953	Apr. 28, 1953	5.90	3,220	1957	Apr. 13, 1957	4.34	2,290
	May 7, 1953	5.34	2,500		May 19, 1957	6.66	5,280
	May 19, 1953	6.16	3,540		June 2, 1957	7.00	5,720

3170. Salmon River at White Bird, Idaho

Location.--Lat 45°45', long 116°20', in sec.22, T.28 N., R.1 E., on left bank just upstream from Whitebird Creek, half of a mile downstream from Canfield-Joseph highway bridge and 1 mile southwest of White Bird. Records include flow of Whitebird Creek.

Drainage area.--13,550 sq mi, approximately, includes that of Whitebird Creek. Mean altitude, 6,720 ft.

Gage.--Nonrecording prior to Jan. 2, 1931; recording thereafter. At site 600 ft downstream at different datum prior to Sept. 14, 1920. At former highway bridge 200 ft upstream at datum 10 ft higher Sept. 14, 1920, to Jan. 2, 1931. Datum of gage is 1,412.65 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 63,000 cfs 1911-17, below 75,000 cfs 1920-30, and extended above; defined throughout range thereafter.

Bankfull stage.--In deep canyon; not subject to overflow.

Historical data.--Maximum stage known, about 37.5 ft June 1894, present datum (discharge, 120,000 cfs).

Remarks.--Water diverted for irrigation above station is a negligible percentage of the peak flows. Maximum observed discharges for years 1911-12, 1915-16 differ from figures published in WSP 1317, which were computed from a mean of two or more readings. Only annual observed peaks are shown prior to 1931. Base for partial-duration series used thereafter, 30,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 15, 1911	18.7	76,800	1939	May 5, 1939	23.12	41,000
1912	June 9, 1912	18.5	75,600		May 18, 1939	22.13	35,900
1913	May 28, 1913	19.7	81,200				
1914	May 24, 1914	14.0	51,500	1940	May 14, 1940	24.29	47,600
1915	June 2, 1915	10.6	33,900				
				1941	May 14, 1941	22.76	39,500
1916	June 19, 1916	20.05	84,900		May 27, 1941	22.39	37,400
1917	June 18, 1917	18.6	77,000		June 9, 1941	21.25	31,400
					June 20, 1941	20.96	30,500
1920	June 17, 1920	15.09	56,700				
				1942	Apr. 15, 1942	21.14	31,000
1921	June 9, 1921	21.18	88,800		Apr. 23, 1942	21.94	34,400
1922	June 7, 1922	18.04	67,200		May 27, 1942	27.00	59,900
1923	June 12, 1923	15.94	56,000		June 10, 1942	26.78	59,300
1924	May 17, 1924	12.80	40,100				
1925	May 21, 1925	16.45	58,600	1943	Apr. 20, 1943	24.10	46,500
					May 6, 1943	22.93	40,100
1926	May 5, 1926	10.80	30,600		June 1, 1943	28.63	73,900
1927	June 9, 1927	18.88	73,800		June 20, 1943	27.66	67,700
1928	May 23, 1928	a20.06	81,600				
1929	May 25, 1929	14.45	48,200	1944	May 16, 1944	21.94	35,100
1930	May 30, 1930	12.86	40,600		June 1, 1944	22.28	36,800
					June 13, 1944	21.84	34,600
1931	May 17, 1931	20.83	29,700				
				1945	May 11, 1945	22.09	35,000
1932	May 14, 1932	27.01	63,600		June 7, 1945	24.70	48,500
	May 22, 1932	27.77	68,500		June 23, 1945	22.67	37,900
	June 17, 1932	26.52	60,500				
				1946	Apr. 28, 1946	21.69	32,100
1933	June 15, 1933	29.86	82,200		May 9, 1946	23.73	42,600
					May 28, 1946	24.47	46,600
1934	Apr. 25, 1934	21.91	34,900				
	May 9, 1934	21.26	31,900	1947	May 9, 1947	30.35	84,500
					May 28, 1947	25.62	53,800
1935	June 2, 1935	23.49	43,200				
				1948	May 29, 1948	32.59	101,000
1936	Apr. 24, 1936	23.09	41,000		June 3, 1948	32.95	103,000
	May 6, 1936	23.27	42,100				
	May 15, 1936	28.20	71,100	1949	May 16, 1949	29.04	76,500
	June 1, 1936	24.48	48,800		May 29, 1949	-	b63,000
1937	May 27, 1937	21.75	34,400	1950	May 18, 1950	22.60	35,500
					June 7, 1950	26.29	56,800
1938	May 2, 1938	23.94	45,400		June 22, 1950	28.00	68,200
	May 18, 1938	23.45	42,700				
	May 28, 1938	28.95	76,200	1951	May 12, 1951	24.76	49,100

a May have been higher during period of no record, May 24-26, 1928.
b Estimated from once-daily staff-gage readings.

Peak stages and discharges of Salmon River at White Bird, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	May 28, 1951	27.81	69,000	1955	May 23, 1955	23.56	41,800
	June 17, 1951	25.60	54,300		June 14, 1955	27.93	67,500
1952	Apr. 28, 1952	24.43	45,200	1956	Apr. 23, 1956	23.39	39,000
	June 7, 1952	27.27	63,300		May 11, 1956	22.90	37,400
					May 24, 1956	33.05	106,000
1953	May 20, 1953	23.20	38,500				
	June 14, 1953	28.98	75,500	1957	May 20, 1957	28.65	70,800
					June 6, 1957	30.39	82,400
1954	May 21, 1954	28.49	71,700				
	June 28, 1954	24.69	49,300				

GRANDE RONDE RIVER BASIN

3185. Grande Ronde River near Hilgard, Oreg.

Location.--Lat 45°19', long 118°16', near center of sec.11, T.3 S., R.36 E., on right bank three-quarters of a mile upstream from Spring Creek and 3 miles southwest of Hilgard.

Drainage area.--505 sq mi (revised). Mean altitude, 4,800 ft.

Gage.--Recording. At site 800 ft upstream at different datum prior to Sept. 16, 1946. Datum of gage is 3,058.05 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 3,100 cfs.

Bankfull stage.--5 ft.

Remarks.--Slight regulation by city of La Grande reservoir (capacity, about 900 acre-ft). Base for partial-duration series, 1,500 cfs. Records furnished by State engineer of Oregon 1938-45. Only annual peaks are shown 1938-41.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 19, 1938	4.56	1,760	1949	Apr. 19, 1949	4.27	1,720
1939	Mar. 24, 1939	5.73	3,200		May 12, 1949	4.06	1,500
1940	Feb. 28, 1940	4.05	1,230	1950	Jan. 26, 1950	c4.19	-
1941	June 7, 1941	4.82	1,990		Feb. 26, 1950	3.90	1,540
					Mar. 3, 1950	3.96	1,600
1942	Apr. 6, 1942	4.84	1,950		Apr. 1, 1950	4.35	2,040
	May 10, 1942	4.50	1,640		Apr. 13, 1950	4.23	1,670
1943	Mar. 29, 1943	5.24	2,400	1951	Feb. 12, 1951	4.60	2,070
	Apr. 3, 1943	4.74	1,860		Apr. 4, 1951	4.36	1,810
	Apr. 16, 1943	4.78	1,900				
	May 1, 1943	a4.47	1,590	1952	Mar. 25, 1952	5.82	3,780
					Apr. 7, 1952	4.21	1,690
1944	Mar. 9, 1944	b5.28	b2,450		May 9, 1952	4.74	2,240
1945	Jan. 7, 1945	c4.96	-	1953	Mar. 24, 1953	4.46	1,920
	May 27, 1945	4.40	1,410		Apr. 23, 1953	4.34	1,810
					Apr. 28, 1953	4.72	2,210
1946	Dec. 28, 1945	c4.97	-		June 13, 1953	4.28	1,750
	Dec. 28, 1945	4.65	1,730				
	Apr. 19, 1946	4.49	1,500	1954	Apr. 13, 1954	3.73	1,310
1947	Dec. 12, 1946	5.22	3,240	1955	Apr. 10, 1955	4.26	1,730
					May 6, 1955	4.10	1,600
1948	Jan. 7, 1948	4.79	2,600				
	Feb. 26, 1948	3.95	1,510	1956	Dec. 22, 1955	5.81	3,720
	Apr. 17, 1948	4.79	2,600		Mar. 25, 1956	5.80	3,700
	May 13, 1948	4.54	2,250		Apr. 15, 1956	4.93	2,460
	May 28, 1948	5.26	3,300		Apr. 22, 1956	4.90	2,420
	June 4, 1948	5.04	2,970		May 8, 1956	6.48	5,060
					May 23, 1956	4.67	2,170
1949	Feb. 23, 1949	c4.54	-		May 27, 1956	4.58	2,080
	Mar. 19, 1949	4.52	2,220		June 1, 1956	4.10	1,650
	Apr. 12, 1949	4.22	1,660				

a Gage height estimated.
b May be affected by backwater.
c Backwater from ice.

3190. Grande Ronde River at La Grande, Oreg.
(Published as "at Hilgard" prior to 1918)

Location.--Lat 45°21', long 118°08', near center of sec.36, T.2 S., R.37 E., on left bank 2 miles northwest of La Grande and 5 miles downstream from Fivepoint Creek.

Drainage area.--678 sq mi. Mean altitude, 4,640 ft.

Gage.--Nonrecording prior to Nov. 24, 1931; recording thereafter. At site 1,000 ft downstream from Fivepoint Creek, 5 miles upstream from present site, at different datums Nov. 6, 1903, to Sept. 30, 1915. At site 1 mile downstream at different datum Feb. 16, 1918, to June 28, 1923, and Oct. 1, 1925, to Nov. 24, 1931. Datum of gage is 2,830.86 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 4,300 cfs and extended by logarithmic plotting.

Bankfull stage.--7 ft.

Remarks.--Since 1915, slight regulation by city of La Grande reservoir on Beaver Creek (capacity, about 900 acre-ft). Diversions for irrigation of about 400 acres above station. Base for partial-duration series, 2,100 cfs. Only annual peaks are shown prior to 1932.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Apr. 14, 1904	a7.5	6,300	1937	Apr. 15, 1937	5.75	3,220
1905	May 7, 1905	a6.8	4,430	1938	Apr. 18, 1938	5.12	2,410
1906	Mar. 31, 1906	7.0	4,940	1939	Mar. 23, 1939	6.68	4,480
1907	Mar. 21, 1907	a6.1	2,960		Apr. 2, 1939	5.22	2,350
1908	Mar. 16, 1908	7.8	6,300	1940	Feb. 28, 1940	4.94	2,060
1909	Apr.17,27-29, May 29, June 2-3, 1909	a4.8	1,130	1941	June 7, 1941	5.36	2,540
1911	Apr.1,2, 1911	a4.0	1,370	1942	Jan. 9, 1942	b4.83	-
1912	Apr. 10, 1912	a5.1	4,000		Mar. 12, 1942	5.05	2,120
1913	Apr. 15, 1913	a5.3	4,040		Apr. 5, 1942	5.71	2,870
1914	Mar. 17, 1914	a3.9	2,210		May 10, 1942	5.10	2,170
1915	Apr. 3, 1915	3.1	1,300	1943	Mar. 28, 1943	6.46	3,750
1918	Mar. 26, 1918	a7.28	2,540		Apr. 16, 1943	5.76	2,800
1919	Apr. 4, 1919	8.30	3,440	1944	Mar. 9, 1944	5.56	2,570
1920	Apr. 13, 1920	8.0	3,450	1945	Jan. 7, 1945	b5.05	-
1921	Mar. 4, 1921	5.5	4,350		Apr. 21, 1945	4.93	1,920
1922	Apr. 22, 1922	a7.0	4,750	1946	Dec. 28, 1945	b5.48	-
1923	Mar.31,Apr.6, 1923	a4.0	2,330		Dec. 29, 1945	5.43	2,450
1926	Mar.14,16,1926	a3.70	1,830		Mar. 12, 1946	5.00	2,020
1927	Apr. 27, 1927	a4.20	2,460		Apr. 19, 1946	5.38	2,420
1928	Jan. 13, 1928	5.60	4,330		Apr. 26, 1946	5.10	2,120
1929	Mar. 21, 1929	4.60	2,970	1947	Dec. 12, 1946	7.58	5,320
1930	Mar. 26, 1930	3.50	1,590		Feb. 12, 1947	b5.33	-
1931	Mar.31,Apr.1, 1931	7.5	8,500	1948	Jan. 7, 1948	5.97	3,230
1932	Feb. 28, 1932	b6.49	-		Feb. 26, 1948	5.67	2,870
	Mar. 18, 1932	8.90	8,880		Apr. 18, 1948	6.13	3,440
	Mar. 24, 1932	6.51	4,540		May 9, 1948	5.66	2,860
	Apr. 3, 1932	5.77	3,410		May 22, 1948	7.04	4,620
	Apr. 14, 1932	6.35	4,380		June 4, 1948	5.93	3,190
	May 4, 1932	4.97	2,340	1949	Feb. 27, 1949	b6.59	-
1933	Apr. 3, 1933	5.19	2,600		Mar. 19, 1949	5.89	3,140
	Apr. 28, 1933	4.88	2,170		Apr. 7, 1949	5.09	2,180
1934	Dec. 26, 1933	4.31	1,550		Apr. 12, 1949	5.25	2,370
					Feb. 19, 1949	5.30	2,430
1935	Apr. 16, 1935	5.59	3,150	1950	Feb. 20, 1950	b4.93	-
1936	Mar. 1, 1936	b5.00	-		Feb. 25, 1950	5.14	2,240
	Apr. 13, 1936	6.40	4,380		Mar. 3, 1950	5.10	2,190
	Apr. 25, 1936	4.90	2,230		Apr. 1, 1950	5.57	2,750
	Apr. 30, 1936	5.24	2,660		Apr. 13, 1950	5.44	2,600

a Maximum observed.
b Backwater from ice.

Peak stages and discharges of Grande Ronde River at La Grande, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	Feb. 11, 1951	6.01	3,030	1955	Apr. 10, 1955	5.70	2,760
	Mar. 26, 1951	5.21	2,120		May 6, 1955	5.48	2,510
	Apr. 5, 1951	5.57	2,660				
				1956	Dec. 22, 1955	6.93	4,400
1952	Mar. 25, 1952	7.39	5,160		Mar. 26, 1956	7.58	5,370
	Apr. 7, 1952	5.64	2,690		Mar. 30, 1956	5.60	2,930
	Apr. 14, 1952	5.28	2,290		Apr. 13, 1956	6.35	3,820
	May 9, 1952	5.86	2,950		Apr. 22, 1956	6.09	3,500
					May 8, 1956	8.17	6,360
1953	Jan. 18, 1953	5.62	2,660		May 23, 1956	5.23	2,530
	Feb. 3, 1953	5.77	2,840		May 27, 1956	5.15	2,450
	Mar. 25, 1953	6.30	3,520				
	Apr. 23, 1953	5.67	2,720	1957	Feb. 26, 1957	5.88	3,250
	Apr. 28, 1953	6.22	3,420		Apr. 5, 1957	7.12	4,850
	June 13, 1953	5.27	2,280		Apr. 13, 1957	5.22	2,510
					May 3, 1957	4.87	2,140
1954	Apr. 14, 1954	5.22	2,220		May 14, 1957	5.95	3,330

3200. Catherine Creek near Union, Oreg.

Location.--Lat 45°09'20", long 117°46'40", in SE¼ sec.2, T.5 S., R.40 E., on right bank 3 miles downstream from Little Catherine Creek and 6 miles southeast of Union.

Drainage area.--105 sq mi. Mean altitude, 5,320 ft.

Gage.--Nonrecording prior to Nov. 28, 1938; recording thereafter. At several sites within 1¾ miles at different datums prior to Nov. 28, 1938. At site 400 ft downstream at datum 4.29 ft lower Nov. 28, 1938, to May 16, 1939. Datum of gage is 3,081.76 ft above mean sea level, datum of 1929, supplementary adjustment of 1947 (Oregon State Highway Department bench mark).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--4 ft.

Remarks.--Several small diversions for irrigation of about 130 acres above station. Since 1937, diversion to Big Creek in Powder River basin for irrigation of up to 3,300 acres. Base for partial-duration series, 500 cfs. Only annual observed peaks are shown prior to 1939.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1912	May 21, 1912	2.8	1,240	1942	Jan. 6, 1942	c3.84	-
					Apr. 14, 1942	3.03	643
1915	May 18, 1915	2.02	a498		Apr. 17, 1942	3.14	678
					Apr. 21, 1942	3.12	666
1918	May 4, 1918	5.5	960		May 26, 1942	3.00	600
1919	May 26, 1919	5.2	825				
				1943	Jan. 20, 1943	c3.59	-
1926	Apr. 19, 1926	3.60	675		Apr. 15, 1943	3.21	706
1927	June 9, 1927	4.40	895		May 27, 1943	3.12	652
1928	May 8, 1928	5.40	1,200				
1929	May 24, 1929	5.30	1,000	1944	May 6, 1944	2.70	464
1930	May 3, 1930	3.6	335				
				1945	May 4, 1945	3.64	964
1931	May 3, 1931	4.10	525		May 31, 1945	2.89	546
1932	May 13, 1932	3.36	1,080				
1933	June 3, 1933	b3.48	1,240	1946	Apr. 18, 1946	3.09	640
1934	Apr. 23, 1934	1.78	338		Apr. 25, 1946	3.48	868
1935	Apr. 15, 1935	2.50	680		May 8, 1946	3.41	826
1936	May 13, 1936	3.00	905	1947	Jan. 6, 1947	c3.23	-
1937	May 14, 1937	2.39	520		May 7, 1947	3.44	844
1938	Apr. 30, 1938	3.30	1,100				
				1948	Feb. 7, 1948	c3.79	-
1939	Dec. 15, 1938	4.45	-		Feb. 13, 1948	c3.13	-
	Apr. 23, 1939	3.56	533		Apr. 22, 1948	3.04	620
	May 2, 1939	3.93	754		May 7, 1948	2.83	518
					May 27, 1948	4.57	1,740
1940	May 10, 1940	3.07	565		June 2, 1948	3.91	1,250
1941	Dec. 17, 1940	c3.35	-	1949	Apr. 19, 1949	2.55	510
	May 13, 1941	2.89	500		Apr. 28, 1949	2.66	558

a Not previously published.
b From high-water mark.
c Backwater from ice.

Peak stages and discharges of Catherine Creek near Union, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	May 15, 1949	3.49	974	1953	May 19, 1953	3.30	830
	May 28, 1949	2.72	579		May 30, 1953	3.21	780
					June 13, 1953	3.37	872
1950	May 16, 1950	2.76	590				
	May 22, 1950	2.79	605	1954	May 9, 1954	2.74	548
	June 21, 1950	d2.58	500				
				1955	May 20, 1955	3.01	635
1951	Feb. 2, 1951	c3.76	-		June 10, 1955	3.05	655
	May 11, 1951	2.96	690				
	May 22, 1951	2.64	530	1956	Dec. 31, 1955	c2.74	-
					Feb. 4, 1956	c2.71	-
1952	Apr. 19, 1952	2.92	670		Apr. 22, 1956	3.32	792
	Apr. 28, 1952	3.60	1,040		May 4, 1956	2.78	532
	May 12, 1952	3.16	755		May 23, 1956	3.75	1,060
	June 5, 1952	2.71	534				
				1957	May 18, 1957	3.51	946
1953	Apr. 28, 1953	3.36	866		June 2, 1957	3.18	770
	May 6, 1953	2.97	660				

c Backwater from ice.
d Estimated.

3230. Indian Creek near Imbler, Oreg.

Location.--Lat 45°26'00", long 117°49'20", in S½ sec.33, T.1 S., R.40 E., 600 ft upstream from North Fork and 7 miles southeast of Imbler.

Drainage area.--22 sq mi, approximately. Mean elevation, 5,630 ft.

Gage.--Recording. Altitude of gage is 3,800 ft (from topographic map).

Stage-discharge relation.--Well defined by current-meter measurements below 400 cfs and extended by logarithmic plotting.

Bankfull stage.--3.5 ft.

Remarks.--Base for partial-duration series, 250 cfs. Records furnished by State engineer of Oregon 1938-45.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1938	Apr. 18, 1938	2.40	255	1945	May 16, 1945	2.52	288
	May 1, 1938	2.71	400		May 31, 1945	2.82	447
	May 16, 1938	2.64	365		June 6, 1945	2.70	380
	May 27, 1938	3.15	628				
				1946	Dec. 28, 1945	2.80	495
1939	Apr. 29, 1939	2.45	342		Jan. 16, 1946	a2.46	-
	May 3, 1939	2.56	395		May 8, 1946	2.73	513
	May 17, 1939	2.43	334		May 28, 1946	3.14	730
1940	May 11, 1940	2.44	293	1947	Jan.4-7, 1947	a4.09	-
					May 4, 1947	2.87	442
1941	Dec. 15, 1940	a2.39	-		May 9, 1947	2.94	484
	June 8,9, 1941	2.17	246		June 9, 1947	2.82	412
1942	(b)	a3.92	-	1948	Jan.10-21,1948	a3.58	-
	Apr. 14, 1942	-	c350		Mar. 5, 1948	a2.95	-
	Apr. 21, 1942	2.33	314		May 27, 1948	3.52	818
	May 25, 1942	2.54	415		June 8, 1948	3.00	570
1943	Apr. 19, 1943d/	2.30	270	1949	Feb. 22, 1949	a2.92	-
	May 25, 1943	2.52	e250		May 15, 1949	2.76	406
	June 4, 1943	f3.48	-		June 6, 1949	2.46	259
	June 14, 1943	3.38	e350				
	June 18, 1943	3.34	e500	1950	Feb.16-28,1950	a3.41	-
	July 3, 1943	2.48	351		May 28, 1950	2.37	274
					June 4, 1950	2.44	301
1944	May 15, 1944	2.21	234		June 21, 1950	2.38	278
1945	(b)	a2.53	-				

a Backwater from ice. b Date unknown; clock stopped. c Discharge estimated.
d Date estimated. e Discharge estimated; backwater. f Backwater.

3235. Grande Ronde River at Elgin, Oreg.

Location.--Lat 45°34', long 117°55', in NW¼ sec.14, T.1 N., R.39 E., at highway bridge a quarter of a mile east of Elgin, and half a mile downstream from Phillips Creek.

Drainage area.--1,400 sq mi, approximately.

Gage.--Nonrecording. At different datum prior to Aug. 15, 1912. Altitude of gage is 2,640 ft (by levels to approximate gage datum).

Stage-discharge relation.--Defined by current-meter measurements below 3,500 cfs and extended above.

Remarks.--Diversions for irrigation of about 35,000 acres above station. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Apr.15-19,1904	7.60	8,350	1911	Mar. 25, 1911	4.5	2,800
1905	May 8, 1905	4.16	1,930	1912	Apr.11-13,1912	6.8	6,880
1906	June 3, 1906	5.80	5,200	1917	February 1917	10.3	10,500
1907	Apr.15,16, 1907	6.20	6,000				
1908	Mar. 18, 1908	6.20	6,000	1919	Apr. 5, 1919	6.70	4,080
1909	June 4, 1909	4.60	2,930				
1910	Mar. 22, 1910	8.1	9,220				

3250. East Fork Wallowa River near Joseph, Oreg.
(Published separately as East Fork Wallowa River near Joseph and Wallowa Falls powerplant tailrace near Joseph prior to October 1952)

Location.--Lat 45°16'20", long 117°12'35", in NE¼ sec.29, T.3 S., R.45 E., on left bank a quarter of a mile upstream from confluence with West Fork, 1 mile upstream from Wallowa Lake, and 6 miles south of Joseph.

Drainage area.--10 sq mi, approximately. Mean altitude, 7,890 ft.

Gage.--Nonrecording prior to Apr. 8, 1950; recording thereafter. Datum of gage is 4,517.69 ft above mean sea level, datum of 1929 (Pacific Power & Light Co. bench mark).

Stage-discharge relation.--River rating curve defined by current-meter measurements below 80 cfs and extended by logarithmic plotting.

Bankfull stage.--Not subject to overflow.

Remarks.--Records herein include flow in Wallowa Falls powerplant tailrace of Pacific Power & Light Co. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1925	June 29, 1925	-	116	1942	July 5, 1942	-	110
				1943	July 9, 1943	-	118
1926	May 1, 1926	-	43	1944	June 22, 1944	-	78
1927	June 26, 1927	-	211	1945	June 24, 1945	-	87
1928	May 26, 1928	-	128				
1929	June 15, 1929	-	125	1946	June 4, 1946	-	99
1930	June 20, 1930	-	66	1947	May 30, 1947	-	101
				1948	June 8, 1948	-	245
1931	May 16, 1931	-	56	1949	May 24, 1949	-	82
1932	June 24, 1932	-	79	1950	June 30, 1950	-	102
1933	June 15, 1933	-	145				
1934	June 7, 1934	-	80	1951	July 4, 1951	-	55
1935	June 12, 1935	-	53	1952	June 24, 1952	-	132
				1953	July 14, 1953	-	164
1936	June 1, 1936	-	79	1954	July 26, 1954	-	81
1937	July 25, 1937	-	450	1955	June 11, 1955	-	130
1938	June 17, 1938	-	154				
1939	May 30, 1939	-	53	1956	May 31, 1956	-	119
1940	June 1, 1940	-	57	1957	June 5, 1957	-	188
1941	June 23, 1941	-	66				

3255. Wallowa River above Wallowa Lake, near Joseph, Oreg.

Location.--Lat 45°17', long 117°12', in SE¼SE¼ sec.20, T.3 S., R.45 E., three-eighths of a mile downstream from confluence of East and West Forks, half a mile upstream from Wallowa Lake, and 5 miles south of Joseph.

Drainage area.--43 sq mi, approximately; 42 sq mi, approximately at sites used prior to Oct. 1, 1933. Mean altitude, 7,520 ft.

Gage.--Recording. At site about three-eighths of a mile upstream at different datum prior to June 21, 1927. At site one quarter of a mile upstream at different datum June 21, 1927, to Sept. 30, 1933. Wooden control since Dec. 1, 1936. Altitude of gage is 4,400 ft (estimated from nearby bench marks).

Stage-discharge relation.--Defined by current-meter measurements below 380 cfs and extended by logarithmic plotting.

Bankfull stage.--4 ft.

Remarks.--Records for 1937-38, 1940, furnished by State engineer of Oregon. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1924	May 13, 1924	2.14	525	1931	May 31, 1931	1.91	472
1925	June 29, 1925	2.52	640	1932	June 23, 1932	1.97	770
				1933	June 15, 1933	-	a1,300
1926	July 6, 1926	2.44	560				
1927	June 26, 1927	2.75	1,630	1937	June 20, 1937	1.78	960
1928	May 26, 1928	2.34	1,030	1938	June 27, 1938	1.96	1,280
1929	June 15, 1929	2.18	852				
1930	June 10, 1930	1.99	440	1940	June 12, 1940	1.78	1,200

a No gage-height record; discharge estimated.

3275. Wallowa River at Joseph, Oreg.
(Published as "near Joseph" 1904-5, 1907-11, 1937-49, ard as "below Wallowa Lake, near Joseph" 1931-36)

Location.--Lat 45°20'15", long 117°13'35", in NW¼ sec.4, T.3 S., R.45 E., on left bank 1,000 ft downstream from Wallowa Lake dam, and three-quarters of a mile south of Joseph.

Drainage area.--52 sq mi, approximately.

Gage.--Nonrecording prior to Sept. 25, 1915; recording thereafter. At several sites at lake outlet or near present site at different datums prior to Sept. 25, 1915. Datum of gage is 4,326.86 ft above mean sea level, datum of 1929.

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--4.5 ft.

Remarks.--Silver Lake Canal diverts above station for irrigation of 4,900 acres. Prior to 1957, about 45 cfs was diverted past station for use in powerplant at Joseph. Flow regulated by Wallowa Lake (usable capacity, 42,750 acre-ft) since 1930. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	July 3, 1904	3.95	728	1915	June 23, 1915	3.20	560
1905	June 6, 1905	2.80	717				
				1927	June 28, 1927	3.85	510
1906	July 10, 1906	3.15	561	1928	May 29, 1928	3.88	532
1907	July 4, 1907	3.50	765	1929	June 28, 1929	3.52	524
1908	July 11, 1908	3.3	617	1930	June 27, 1930	3.35	484
1909	June 17, 1909	3.3	630				
1910	June 3, 1910	3.2	560	1931	May 26, 1931	3.36	484
				1932	July 1, 1932	3.60	552
1911	June 20, 1911	3.40	702	1933	June 10, 1933	3.55	538
1912	June 12, 1912	3.60	850	1934	May 18, 1934	3.52	524
1913	June 11, 1913	3.55	812	1935	June 25, 1935	3.67	566

Peak stages and discharges of Wallowa River at Joseph, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1936	June 24, 1936	3.66	580	1947	June 25, 1947	3.37	457
1937	May 23, 1937	3.31	412	1948	June 11, 1948	4.04	701
1938	July 26, 1938	3.54	520	1949	June 14, 1949	3.31	442
1939	July 24, 1939	3.51	527	1950	July 7, 1950	3.30	460
1940	May 30, 1940	3.45	492	1951	June 30, 1951	3.50	530
1941	July 26, 1941	3.54	535	1952	June 6, 1952	3.53	542
1942	Aug. 3, 1942	3.50	481	1953	July 15, 1953	3.52	538
1943	July 8, 1943	3.57	524	1954	May 20, 1954	3.41	438
1944	July 29, 1944	3.42	485	1955	June 12, 1955	3.35	420
1945	June 26, 1945	3.40	480	1956	July 29, 1956	3.69	522
1946	June 21, 1946	3.33	447	1957	June 5, 1957	4.75	1,200

3295. Hurricane Creek near Joseph, Oreg.

Location.--Lat 45°20'15", long 117°17'30", in NE¼ sec.3, T.3 S., R.44 E., on left bank 350 ft upstream from intake of Moonshine ditch, and 3½ miles southwest of Joseph.

Drainage area.--31 sq mi, approximately. Mean altitude, 7,460 ft.

Gage.--Nonrecording prior to Apr. 23, 1924; recording thereafter. At site 250 ft downstream at different datum prior to Sept. 3, 1915. At site 150 ft downstream at different datum Apr. 23, 1924, to June 13, 1933. Altitude of gage is 4,500 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 700 cfs and extended by logarithmic plotting.

Bankfull stage.--4 ft.

Remarks.--Base for partial-duration series, 400 cfs. Only annual peaks are shown prior to 1929.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	May 30, 1915	a1.90	238	1939	May 30, 1939	2.65	330
1924	May 13, 1924	2.38	525	1940	June 12, 1940	2.70	355
1925	June 21, 1925	2.33	570	1941	June 29, 1941	2.56	290
1926	June 6, 1926	1.47	228	1942	May 23, 1942	2.74	377
1927	June 26, 1927	2.62	680	1943	June 18, 1943	2.74	478
1928	May 26, 1938	2.65	716		July 7, 1943	3.13	774
1929	May 23, 1929	1.94	406	1944	May 29, 1944	2.50	335
	June 15, 1929	2.55	658	1945	June 21, 1945	3.00	680
	June 28, 1929	2.05	442	1946	June 4, 1946	2.83	551
1930	June 10, 1930	2.02	403		June 21, 1946	2.73	448
1931	May 31, 1931	1.90	350	1947	May 7, 1947	2.82	534
1932	May 13, 1932	2.01	404		May 26, 1947	2.65	420
	June 14, 1932	2.09	435		June 8, 1947	2.66	426
	June 22, 1932	2.49	630		June 16, 1947	2.63	408
1933	June 4, 1933	2.14	411	1948	Oct. 16, 1947	2.70	450
	June 15, 1933	3.21	636		May 27, 1948	3.08	718
1934	June 7, 1934	2.51	301		June 9, 1948	3.55	1,110
1935	June 5,6,1935	2.58	340		June 30, 1948	3.00	420
1936	May 14, 1936	2.88	465	1949	May 10, 1949	3.35	545
	May 26, 1936	2.75	402		May 15, 1949	3.35	545
1937	June 20, 1937	2.74	396		May 27, 1949	3.26	482
1938	May 27, 1938	2.98	515		June 7, 1949	3.26	482
	June 7, 1938	2.83	440		June 10, 1949	3.24	562
	June 16, 1938	2.81	430	1950	June 20, 1950	3.00	460
	June 25, 1938	2.76	406		June 30, 1950	3.17	562

a Maximum observed; may have been higher prior to May 5, 1915.

Peak stages and discharges of Hurricane Creek near Joseph, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1951	June 15, 1951	3.00	360	1955	June 13, 1955	b4.69	-
					June 21, 1955	3.87	c750
1952	June 5, 1952	3.20	590				
	June 6, 1952	b3.25	-	1956	May 24, 1956	3.60	495
					May 24, 1956	b3.66	-
1953	June 12, 1953	3.03	454		May 31, 1956	3.61	659
	June 17, 1953	3.03	454		June 9, 1956	3.18	494
	July 12, 1953	3.60	1,010		July 11, 1956	3.07	449
					July 13, 1956	3.10	470
1954	May 19, 1954	3.04	458				
	June 27, 1954	2.99	419	1957	May 18, 1957	3.32	494
					June 5, 1957	4.07	816
1955	June 11, 1955	3.52	850				

b Backwater.
c Discharge estimated.

3300. Lostine River near Lostine, Oreg.

Location.--Lat 45°26'20", long 117°25'35", in NW¼ sec.34, T.1 S., R.43 E., on left bank 3½ miles south of Lostine and 9 miles upstream from mouth.

Drainage area.--70 sq mi, approximately. Mean altitude, 6,820 ft.

Gage.--Nonrecording prior to July 21, 1925; recording thereafter. At site 500 ft upstream at different datums prior to Sept. 25, 1915. At site 100 ft upstream at datum 1.5 ft higher July 21, 1925, to Sept. 30, 1929. At site 85 ft downstream at datum 1.00 ft higher Oct. 1, 1929, to Dec. 15, 1953. Altitude of gage is 3,650 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 1,700 cfs and extended by logarithmic plotting.

Bankfull stage.--7 ft.

Remarks.--Regulation and diversion affect peak stages only slightly. Base for partial-duration series, 1,100 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1913	May 27, 1913	a6.60	2,540	1938	June 7, 1938	6.04	1,530
					June 16, 1938	5.64	1,340
1926	May 20, 1926	3.63	665		June 25, 1938	5.30	1,200
1927	June 8, 1927	5.6	1,530	1939	May 30, 1939	5.23	1,160
	June 26, 1927	6.60	2,010				
	July 3, 1927	4.70	1,140	1940	May 25, 1940	5.41	1,240
					June 13, 1940	5.36	1,240
1928	May 27, 1928	6.60	2,010				
				1941	June 17, 1941	4.77	958
1929	May 23, 1929	b5.0	1,260				
	June 15, 1929	b5.7	1,570	1942	May 23, 1942	5.48	1,280
					July 3, 1942	5.47	1,270
1930	June 11, 1930	5.12	1,090				
				1943	June 19, 1943	6.11	1,480
1931	May 31, 1931	5.09	1,040		July 9, 1943	6.77	1,780
1932	May 14, 1932	5.28	1,170	1944	May 30, 1944	5.35	1,180
	May 21, 1932	5.50	1,250				
	June 15, 1932	6.02	1,460	1945	June 8, 1945	6.16	1,420
	June 23, 1932	6.73	1,800		June 22, 1945	6.77	1,780
1933	June 5, 1933	5.99	1,530	1946	May 27, 1946	5.27	1,150
	June 16, 1933	7.64	2,310		June 4, 1946	6.09	1,480
					June 14, 1946	5.35	1,140
1934	May 7, 1934	5.00	1,080		June 21, 1946	5.63	1,260
1935	May 31, 1935	b5.2	1,160	1947	May 7, 1947	6.16	1,500
	June 7, 1935	b5.2	1,160		May 28, 1947	5.69	1,320
1936	May 15, 1936	6.52	1,770	1948	May 27, 1948	7.06	1,860
	May 29, 1936	5.97	1,530		June 3, 1948	6.71	1,700
					June 9, 1948	7.27	1,960
1937	May 27, 1937	5.17	1,160		June 30, 1948	5.74	1,340
	June 20, 1937	5.46	1,290				
				1949	May 15, 1949	6.13	1,440
1938	May 28, 1938	6.70	1,860		May 28, 1949	6.10	1,460

a Maximum observed; annual peak only.
b Estimated gage height and discharge.

Peak stages and discharges of Lostine River near Lostine, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1949	June 8, 1949	6.11	1,480	1954	June 27, 1954	5.63	1,340
					July 5, 1954	5.24	1,140
1950	June 21, 1950	6.47	1,590				
	July 1, 1950	6.89	1,760	1955	June 12, 1955	6.34	1,690
					June 22, 1955	6.01	1,580
1951	May 27, 1951	5.53	1,250				
	June 16, 1951	b5.46	1,200	1956	May 24, 1956	6.51	1,840
					June 1, 1956	6.59	1,880
1952	May 26, 1952	5.26	1,120		June 7, 1956	6.55	1,860
	June 6, 1952	6.70	1,700		June 20, 1956	5.02	1,110
	June 26, 1952	5.26	1,120		June 28, 1956	5.00	1,100
					July 11, 1956	5.18	1,170
1953	June 13, 1953	4.81	1,190				
	July 12, 1953	5.63	1,620	1957	May 12, 1957	5.50	1,280
					May 18, 1957	5.81	1,440
1954	May 19, 1954	5.56	1,300		June 2, 1957	6.84	2,170

b Estimated gage height and discharge.

3305. Bear Creek near Wallowa, Oreg.

Location.--Lat 45°32', long 117°33', in NE¼ sec.34, T.1 N., R.42 E., on right bank 30 ft downstream from road bridge, 3 miles southwest of Wallowa, and 4½ miles upstream from mouth.

Drainage area.--68 sq mi, approximately. Mean altitude, 5,810 ft.

Gage.--Nonrecording prior to Apr. 22, 1924; recording thereafter. At site 1 mile upstream at different datum prior to Sept. 16, 1915. At site 1½ miles upstream at different datum Apr. 22, 1924, to Nov. 2, 1931. Altitude of gage is 3,250 ft (by barometer).

Stage-discharge relation.--Defined by current-meter measurements below 930 cfs and extended by logarithmic plotting.

Bankfull stage.--Not subject to overflow.

Remarks.--Diversion for irrigation of about 483 acres above station. Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	May 28, 1915	a2.9	755	1932	June 15, 1932	3.10	855
					June 22, 1932	3.12	875
1924	May 3, 1924	3.28	620				
	May 13, 1924	3.91	1,000	1933	June 4, 1933	3.37	1,540
					June 10, 1933	3.73	1,540
1925	Apr. 11, 1925	3.31	635				
	May 6, 1925	3.37	665	1934	May 7, 1934	2.5	480
	May 19, 1925	3.80	930				
	June 19, 1925	3.28	620	1935	May 22, 1935	2.75	640
1926	Apr. 29, 1926	3.09	528	1936	Jan. 4, 1936	b2.92	-
					Apr. 22, 1936	3.82	1,620
1927	Apr. 27, 1927	3.56	770		May 12, 1936	3.19	976
	May 16, 1927	4.04	1,100		May 26, 1936	2.99	812
	June 8, 1927	4.55	1,480				
	June 26, 1927	3.75	895	1937	June 20, 1937	2.67	586
1928	May 8, 1928	3.70	1,010	1938	Apr. 18, 1938	3.11	908
	May 21, 1928	3.98	1,220		Apr. 30, 1938	2.75	678
	May 26, 1928	4.13	1,330		May 27, 1938	3.13	926
1929	May 22, 1929	3.70	950	1939	Dec. 22, 1938	b3.10	-
	June 15, 1929	3.70	950		Apr. 29, 1939	2.58	596
1930	June 10, 1930	3.05	580	1940	May 10, 1940	2.72	682
					May 25, 1940	2.60	650
1931	May 13, 1931	3.31	715				
				1941	Dec. 18, 1940	b3.25	-
1932	Mar. 28, 1932	b3.65	-		May 23, 1941	2.24	498
	May 13, 1932	3.00	760				

a Maximum observed; annual peak only.
b Backwater from ice.

Peak stages and discharges of Bear Creek near Wallowa, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1942	Jan. 8, 1942	b3.25	-	1949	May 11, 1949	3.16	1,080
	May 22, 1942	c2.71	-		May 15, 1949	3.16	1,080
	May 22, 1942	2.64	886		May 26, 1949	3.00	920
					June 7, 1949	2.97	800
1943	May 25, 1943	2.68	714				
	May 28, 1943	c2.74	-	1950	Jan. 22, 1950	b2.91	-
	June 19, 1943	2.67	706		(d)	b3.22	-
	July 7, 1943	2.98	972		May 23, 1950	2.77	603
					June 4, 1950	2.79	621
1944	May 15, 1944	2.54	662		June 21, 1950	3.12	962
	May 30, 1944	2.77	853		June 30, 1950	3.11	951
	June 10, 1944	2.82	818				
	June 23, 1944	2.61	648	1951	Feb. 1, 1951	b2.90	-
					May 23, 1951	2.87	618
1945	Jan. 30, 1945	b2.64	-				
	May 5, 1945	2.67	764	1952	Apr. 27, 1952	3.01	781
	June 1, 1945	2.58	657		May 20, 1952	2.92	690
	June 6, 1945	2.47	602		May 25, 1952	2.92	690
	June 21, 1945	2.67	764		June 5, 1952	3.12	904
					June 26, 1952	2.84	616
1946	Dec. 28, 1945	b3.07	-				
	Jan. 19, 1946	b2.74	-	1953	Apr. 27, 1953	2.87	661
	Apr. 25, 1946	2.49	618		May 19, 1953	2.96	616
	May 8, 1946	2.57	758		June 12, 1953	3.13	781
	May 18, 1945	2.45	660				
	May 23, 1946	2.73	902	1954	May 9, 1954	2.91	700
	May 27, 1946	2.60	740		May 19, 1954	2.99	781
	June 4, 1946	2.52	676				
				1955	May 20, 1955	2.95	720
1947	Jan. 3, 1947	b3.04	-		June 11, 1955	3.88	1,540
	May 7, 1947	2.88	992		June 21, 1955	2.85	825
	May 26, 1947	2.50	660				
	June 9, 1947	2.49	652	1956	Jan. 31, 1956	b3.19	-
					May 23, 1956	3.13	1,330
1948	Jan. 19, 1948	b3.31	-		May 31, 1956	3.00	1,130
	May 27, 1948	3.24	1,270		June 9, 1956	2.66	696
	June 2, 1948	c3.55	-				
	June 3, 1948	3.23	1,150	1957	May 12, 1957	3.06	1,220
	June 9, 1948	c3.65	-		June 2, 1957	3.07	1,240
	June 11, 1948	3.34	1,270				
	June 21, 1948	2.93	850				

b Backwater from ice.
c Backwater from debris.
d Date unknown.

3320. Wallowa River at Minam, Oreg.
(Published as "near Elgin" prior to 1910)

Location.--Lat 45°38', long 117°43', in W½ sec.29, T.2 N., R.41 E., at Minam, 1,000 ft downstream from highway bridge on State Highway 82 and 1,200 ft downstream from Minam River.

Drainage area.--880 sq mi, approximately.

Gage.--Nonrecording. Altitude of gage is 2,520 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 3,700 cfs and extended by logarithmic plotting.

Bankfull stage.--Not subject to overflow.

Remarks.--Diversions for irrigation of about 41,000 acres above station. Peak stages only slightly affected by regulation. Only annual peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	May 24, 1904	5.4	4,900	1910	Mar. 1, 1910	a7.90	12,400
1905	June 2, 1905	5.0	4,000				
				1911	June 13, 1911	5.5	5,150
1906	June 16, 1906	4.8	3,700	1912	June 13, 1912	5.8	5,780
1907	Nov. 14, 1906	5.7	5,860	1913	May 28, 1913	6.5	7,300
1909	June 3, 1909	5.8	5,780				

a Result of release of ice jam upstream.

3325. Grande Ronde River at Rondowa, Oreg.

Location.--Lat 45°44', long 117°47', in NW¼ sec.23, T.3 N., R.40 E., on right bank at Rondowa, 500 ft downstream from Wallowa River, 13 miles northeast of Elgin, and at mile 81.4 (river-profile survey).

Drainage area.--2,555 sq mi.

Gage.--Recording. Datum of gage is 2,281.87 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 14,000 cfs and extended by logarithmic plotting.

Bankfull stage.--12 ft.

Remarks.--Peak stages only slightly affected by Wallowa Lake regulation. Diversions for irrigation of about 95,000 acres above station have considerable effect on peak flows, but peaks are shown above base of 6,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1927	Feb. 21, 1927	5.89	8,240	1944	May 15, 1944	4.41	4,880
	Apr. 27, 1927	5.97	8,440				
	May 17, 1927	6.31	9,350	1945	May 5, 1945	5.84	8,400
	June 9, 1927	6.58	10,100		June 5, 1945	5.52	7,330
	June 26, 1927	5.60	7,520		June 22, 1945	5.05	6,250
1928	Nov. 26, 1927	a6.2	9,000	1946	Dec. 29, 1945	5.90	8,260
	Jan. 13, 1928	6.18	8,990		Mar. 12, 1946	5.63	7,590
	Mar. 11, 1928	7.70	13,300		Apr. 20, 1946	6.13	9,360
	Mar. 23, 1928	5.56	7,990		Apr. 26, 1946	6.24	9,740
	May 10, 1928b/	6.48	9,810		May 9, 1946	6.23	9,710
	June 9, 1928	6.84	10,800		May 28, 1946	5.97	8,810
					June 5, 1946	a5.96	8,420
1929	May 24, 1929	5.94	8,500				
	June 16, 1929	6.01	8,550	1947	Dec. 12, 1946	6.83	10,800
					Jan. 26, 1947	(c)	-
1930	May 3, 1930	4.09	4,170		May 8, 1947	6.32	9,370
1931	Apr. 1, 1931	(c)	-	1948	Feb. 26, 1948	5.44	7,140
					Apr. 22, 1948	a5.84	8,110
1932	Mar. 18, 1932	9.30	18,300		May 28, 1948	9.76	19,900
	Apr. 4, 1932	(c)	-				
	Apr. 14, 1932	(c)	-	1949	Feb. 17, 1949	d6.1	-
	May 14, 1932	7.20	11,900		Feb. 22, 1949	d7.45	-
					Mar. 19, 1949	5.48	7,670
1933	Apr. 28, 1933	5.74	8,150		Apr. 12, 1949	5.13	6,890
	June 5, 1933	6.74	10,600		May 2, 1949	6.08	9,060
	June 16, 1933	7.11	11,500		May 15, 1949	7.52	12,800
					June 7, 1949	5.21	7,060
1934	Mar. 6, 1934	4.30	4,670				
				1950	Feb. 25, 1950	6.12	9,160
1935	Apr. 16, 1935	5.78	8,470		Mar. 17, 1950	4.96	6,510
					Apr. 1, 1950	4.90	6,380
1936	Apr. 19, 1936	7.03	11,300		Apr. 22, 1950	4.82	6,200
	May 15, 1936	6.81	10,900		May 17, 1950	5.46	7,630
					June 21, 1950	6.07	9,040
1937	May 27, 1937	5.05	6,260		July 1, 1950	5.46	7,630
1938	Apr. 18, 1938	5.95	8,620	1951	Feb. 11, 1951	5.73	8,250
	May 1, 1938	5.59	7,750		Apr. 18, 1951	5.14	6,910
	May 28, 1938	6.18	9,270		May 11, 1951	5.37	7,420
					May 24, 1951	5.15	6,930
1939	Mar. 25, 1939	6.46	9,780				
	May 4, 1939	5.25	6,830	1952	Mar. 26, 1952	5.52	7,770
					Apr. 7, 1952	5.36	7,440
1940	Feb. 28, 1940	4.88	6,100		Apr. 28, 1952	6.35	9,710
					May 8, 1952	6.39	9,810
1941	June 8, 1941	4.96	6,280		June 6, 1952	5.65	8,060
1942	Apr. 17, 1942	5.56	7,690	1953	Feb. 3, 1953	4.96	6,510
	May 24, 1942	5.65	8,060		Apr. 28, 1953	6.34	9,690
					May 7, 1953	5.24	7,130
1943	Mar. 31, 1943	6.47	9,780		May 19, 1953	5.65	8,060
	Apr. 16, 1943	6.67	10,300		June 12, 1953	6.50	10,100
	May 28, 1943	5.74	7,860				
	June 19, 1943	5.78	8,220	1954	May 10, 1954	4.94	6,470
	July 4, 1943	5.43	7,120		May 19, 1954	5.19	7,020

a Estimated.
b About.
c Gage height and discharge unknown.
d Backwater from ice.

Peak stages and discharges of Grande Ronde River at Rondowa, Oreg.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1955	May 12, 1955	4.83	6,230	1956	May 11, 1956	6.28	9,700
	May 21, 1955	5.68	8,130		May 24, 1956	7.57	12,900
	June 12, 1955	6.37	9,760		June 10, 1956	5.37	7,420
	June 22, 1955	4.85	6,270				
				1957	Feb. 26, 1957	6.61	10,500
1956	Dec. 22, 1955	7.10	11,800		Mar. 9, 1957	5.03	6,580
	Jan. 16, 1956	4.91	6,280		Apr. 7, 1957	5.53	7,820
	Mar. 26, 1956	6.68	10,700		May 19, 1957	7.70	13,300
	Apr. 23, 1956	6.63	10,600		June 3, 1957	6.52	10,100

3330. Grande Ronde River at Troy, Oreg.

Location.--Lat 45°57', long 117°27', in NW¼ sec.4, T.5 N., R.43 E., on downstream side of left end of bridge at Troy, 100 ft downstream from Wenaha River, and at mile 45.4 (river-profile survey).

Drainage area.--3,275 sq mi. Mean altitude, 4,460 ft.

Gage.--Nonrecording prior to Oct. 1, 1949; recording thereafter. At datum 12.00 ft lower prior to Oct. 1, 1949. Datum of gage is 1,587.13 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 23,000 cfs and extended by logarithmic plotting.

Bankfull stage.--15 ft.

Remarks.--Peak stages only slightly affected by Wallowa Lake regulation. Diversions for irrigation of about 95,000 acres above station have considerable effect on peak flows, but peaks are shown above base of 9,000 cfs. Only annual observed peaks are shown prior to 1950.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 5, 1945	7.90	10,600	1953	Jan. 19, 1953	6.76	9,360
1946	Dec. 29, 1945	9.20	17,200		Feb. 4, 1953	6.91	9,880
1947	Dec. 15, 1946	11.20	30,000		Apr. 28, 1953	7.85	13,400
1948	May 27, 1948	10.15	23,600		May 7, 1953	6.74	9,290
1949	May 15, 1949	9.00	17,400		May 20, 1953	6.90	9,850
					June 13, 1953	7.39	11,600
1950	Feb. 25, 1950	8.87	17,400				
	Mar. 6, 1950	6.85	9,400	1954	Apr. 14, 1954	7.17	10,800
	Mar. 18, 1950	7.35	11,100				
	Apr. 2, 1950	7.85	13,000	1955	May 21, 1955	7.01	10,200
	Apr. 22, 1950	7.26	10,800		June 12, 1955	7.30	11,200
	May 15, 1950	7.66	12,200				
	June 21, 1950	7.33	11,100	1956	Dec. 22, 1955	10.43	26,400
					Mar. 26, 1956	8.45	16,000
1951	Feb. 12, 1951	8.15	14,200		Apr. 22, 1956	8.43	15,500
	Apr. 7, 1951	7.30	11,000		May 10, 1956	7.93	13,500
	May 11, 1951	6.83	9,330		May 19, 1956	a8.64	-
					May 24, 1956	8.50	16,200
1952	Mar. 27, 1952	7.17	10,800				
	Apr. 7, 1952	7.93	13,700	1957	Feb. 26, 1957	8.24	15,100
	Apr. 19, 1952	7.38	11,500		Mar. 9, 1957	6.71	9,330
	Apr. 28, 1952	8.00	14,000		Apr. 5, 1957	7.40	11,600
	May 9, 1952	8.38	15,700		May 19, 1957	8.78	17,400
	June 6, 1952	6.75	9,320		June 3, 1957	7.70	12,600

a Backwater.

3340. Grande Ronde River at Zindel, Wash.

Location.--Lat 46°03'50", long 116°59'40", in SE¼ sec.23, T.7 N., R.46 E., on left bank just downstream from Zindel Ferry, 1½ miles downstream from Joseph Creek, 2 miles upstream from mouth, and 12 miles southeast of Anatone.

Drainage area.--3,950 sq mi, approximately.

Gage.--Nonrecording (discontinued January 1913). Altitude of gage is 840 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 8,400 cfs and extended by logarithmic plotting.

Remarks.--Diversions for irrigation of as much as 75,000 acres above gage. Peaks during irrigation season are significantly affected. Peaks are from graphs based on gage readings. Base for partial-duration series, 7,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1905	June 9, 1905	5.20	6,520	1909	June 2, 1909	6.6	12,300
1906	Apr. 1, 1906	6.4	11,400	1910	Nov. 26, 1909	6.4	11,400
	June 1, 1906	6.2	10,500		Mar. 4, 1910	10.7	34,600
					Mar. 21, 1910	10.6	34,100
1907	Nov. 14, 1906	7.40	16,400		Apr. 13, 1910	8.10	20,100
	Dec. 21, 1906	6.0	9,600		May 11, 1910	7.0	14,300
	Dec. 26, 1906	6.50	11,800				
	Feb. 6, 1907	7.6	17,400	1911	Mar. 23, 1911	5.6	7,980
	Feb. 27, 1907	7.3	15,800		May 20, 1911	6.10	10,000
	Mar. 21, 1907	7.9	19,100		June 3, 1911	5.7	8,370
	Apr. 10, 1907	8.1	20,100		June 12, 1911	5.80	8,770
	May 20, 1907	6.7	12,800				
	June 11, 1907	6.2	10,500	1912	Jan. 26, 1912	6.0	9,600
					Feb. 20, 1912	6.9	13,800
1908	Mar. 18, 1908	-	a25,000		Apr. 12, 1912	8.0	19,600
	Apr. 21, 1908	7.0	14,300		May 19, 1912	8.4	21,800
	June 19, 1908	6.2	10,500				

a Estimated maximum daily.

ASOTIN CREEK BASIN

3345. Asotin Creek near Asotin, Wash.
(Published as "at Shelman"s Ranch near Asotin" 1904-5)

Location.--Lat 46°19'30", long 117°12'30", in SE¼ sec.19, T.10 N., R.45 E., on left bank half a mile upstream from Washington Water Power Co.'s diversion for water supply and irrigation, 5 miles upstream from George Creek, and 8 miles west of Asotin.

Drainage area.--156 sq mi. Mean altitude, 3,760 ft.

Gage.--Nonrecording. At site within a quarter of a mile at different datums prior to Jan. 11, 1934. Altitude of gage is 1,380 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 470 cfs and extended on basis of slope-area measurement of peak flow.

Bankfull stage.--3 ft.

Remarks.--Peaks are from graphs based on gage readings or from crest-stage indicator. Gage-height record furnished by Washington Water Power Co. Base for partial-duration series, 180 cfs.

Peak stages and discharges of Asotin Creek near Asotin, Wash.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Apr. 15, 1904	a4.3	b1,180	1946	Apr. 26, 1946	2.12	253
					May 27, 1946	2.20	277
1929	May 24, 1929	1.67	187				
				1947	Dec. 15, 1946	2.70	562
1930	May 3, 1930	1.67	160		Feb. 2, 1947	1.74	284
					Feb. 12, 1947	2.10	401
1931	Apr. 1, 1931	2.28	540		May 3, 1947	1.58	238
1932	Feb. 27, 1932	1.39	199	1948	Jan. 7, 1948	2.85	674
	Mar. 19, 1932	1.50	235		Feb. 22, 1948	1.86	268
	Apr. 14, 1932	1.56	252		Apr. 22, 1948	1.94	300
	May 13, 1932	1.78	340		May 28, 1948	2.80	507
1933	Apr. 29, 1933	-	-	1949	Feb. 22, 1949	2.60	352
	June 10, 1933	a1.82	c323		Mar. 20, 1949	2.12	218
	Sept. 9, 1933	1.70	283		Apr. 19, 1949	2.30	265
					May 15, 1949	2.70	378
1934	Dec. 23, 1933	-	d500				
	Jan. 23, 1934	e32.60	288	1950	Feb. 27, 1950	2.20	277
					Apr. 2, 1950	2.14	241
1935	Apr. 16, 1935	e32.05	174		May 15, 1950	2.21	253
					June 21, 1950	2.16	241
1936	Apr. 17, 1936	2.17	372				
	May 5, 1936	1.78	244	1951	Feb. 11, 1951	2.80	490
					Apr. 14, 1951	1.86	225
1937	Apr. 15, 1937	1.75	220		May 8, 1951	2.30	340
1938	Mar. 16, 1938	1.70	208	1952	Apr. 7, 1952	2.16	318
	Apr. 19, 1938	2.15	345		Apr. 28, 1952	2.30	360
	May 28, 1938	1.80	244		May 9, 1952	2.22	336
1939	Mar. 20, 1939	2.00	343	1953	Jan. 20, 1953	1.70	190
					Apr. 28, 1953	2.00	270
1940	Feb. 29, 1940	1.82	236		May 19, 1953	1.74	208
1941	May 1, 1941	1.37	128	1954	Feb. 13, 1954	2.18	315
					Apr. 18, 1954	1.90	242
1942	Dec. 3, 1941	2.32	416		May 20, 1954	1.92	252
	Dec. 20, 1941	1.80	230				
	May 11, 1942	1.70	233	1955	May 21, 1955	1.66	190
	May 26, 1942	1.54	184		June 11, 1955	1.76	215
1943	Apr. 3, 1943	2.04	349	1956	Dec. 22, 1955	3.94	1,040
	Apr. 16, 1943	2.10	373		Mar. 1, 1956	1.94	362
	May 26, 1943	1.84	278		Mar. 25, 1956	2.30	395
					Apr. 23, 1956	2.80	442
1944	Mar. 9, 1944	1.54	142		May 11, 1956	3.40	449
1945	May 26, 1945	1.57	152	1957	Dec. 11, 1956	2.70	112
					Feb. 24, 1957	3.50	540
1946	Dec. 29, 1945	2.08	303		May 8, 1957	5.11	1,000

a Maximum observed. b May have been higher Mar. 10, 1904, when gage was not in operation. c May have been higher Apr. 29, 1933, during period of no gage-height record. d Maximum daily estimated. e Temporary gage.

CLEARWATER RIVER BASIN

3360. Selway River above Meadow Creek, near Lowell, Idaho

Location.--Lat 46°03', long 115°18', in sec.11, T.31 N., R.9 E., on right bank a quarter of a mile upstream from Meadow Creek, 1½ miles upstream from Selway Falls, 13 miles upstream from gaging station on Selway River near Lowell, and 16.5 miles southeast of Lowell.

Drainage area.--1,550 sq mi, approximately.

Gage.--Recording. Datum of gage is 1,735.11 ft above mean sea level (datum of Bureau of Public Roads).

Stage-discharge relation.--Defined by current-meter measurements below 23,000 cfs and extended to 42,000 cfs on basis of slope-area measurement.

Bankfull stage.--River in canyon; forest road floods at 25 ft.

Remarks.--Base for partial-duration series, 15,000 cfs.

Peak stages and discharges of Selway River above Meadow Creek, near Lowell, Idaho

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 6, 1945	12.78	17,900	1947	May 27, 1947	13.20	18,800
	May 31, 1945	12.38	16,900	1948	May 29, 1948	22.4	42,000
1946	May 9, 1946	11.71	15,200	1949	May 16, 1949	-	a30,000
	May 27, 1946	12.01	15,900				
1947	May 8, 1947	18.62	32,600				

a Estimated.

3365. Selway River near Lowell, Idaho

Location.--Lat 46°05', long 115°31', in sec.25, T.32 N., R.7 E., on right bank a quarter of a mile upstream from O'Hara Creek, 7 miles upstream from Lowell, and 23 miles east of Kooskia.

Drainage area.--1,910 sq mi, approximately. Mean altitude, 5,640 ft.

Gage.--Nonrecording prior to Nov. 15, 1930; recording thereafter. At site 2 miles downstream at different datum Apr. 11 to Sept. 2, 1911. At site 200 ft downstream at datum 2.04 ft lower from Oct. 14, 1929, to Nov. 15, 1930. Altitude of gage is 1,540 ft (from river-profile map).

Stage-discharge.--Defined by current-meter measurements below 38,000 cfs and extended above.

Bankfull stage.--Flooding of bottom land in canyon at 16 ft.

Remarks.--Base for partial-duration series, 18,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 13, 1911	7.60	15,600	1945	May 31, 1945	10.02	19,300
1930	Apr.24,25,1930	6.80	14,600	1946	May 27, 1946	9.82	18,100
1931	May 16, 1931	9.67	17,500	1947	May 8, 1947	13.71	37,000
					May 27, 1947	10.67	22,100
1932	May 14, 1932	12.62	30,300	1948	May 29, 1948	16.04	48,900
	May 22, 1932	11.79	26,500				
	June 15, 1932	9.80	18,100	1949	May 16, 1949	13.95	38,600
1933	June 4, 1933	12.64	31,200		May 28, 1949	11.64	27,100
	June 14, 1933	13.17	33,800		June 7, 1949	10.18	20,200
1934	Apr. 24, 1934	10.33	20,500	1950	May 17, 1950	10.25	20,300
					May 23, 1950	10.32	20,600
1935	May 23, 1935	10.40	21,900		May 28, 1950	10.42	21,100
					June 6, 1950	10.80	22,800
1936	Apr. 19, 1936	10.82	23,700		June 17, 1950	12.82	32,500
	May 5, 1936	10.84	23,700		July 1, 1950	9.72	18,000
	May 15, 1936	12.49	31,600				
	May 28, 1936a/	9.70	18,800	1951	May 12, 1951	10.36	20,900
					May 24, 1951	10.84	23,100
1937	May 19, 1937	9.46	17,400		June 16, 1951	9.78	18,300
1938	Apr. 18, 1938	11.34	25,400	1952	Apr. 28, 1952	11.16	24,200
	May 1, 1938	9.80	18,600		May 14, 1952	10.79	22,200
	May 28, 1938	12.81	32,800				
				1953	June 2, 1953	11.07	23,900
1939	May 4, 1939	10.91	23,600		June 13, 1953	11.85	27,500
	May 17, 1939	10.21	20,400				
				1954	May 10, 1954	11.36	25,600
1940	May 12, 1940	10.13	20,400		May 21, 1954	12.24	29,900
					June 24, 1954	9.66	18,000
1941	May 13, 1941	9.21	16,100				
				1955	May 21, 1955	11.36	25,700
1942	May 26, 1942	10.02	19,500		June 13, 1955	12.63	32,400
1943	Apr. 20, 1943	10.42	21,300	1956	Apr. 23, 1956	10.17	21,200
	May 29, 1943	11.48	26,400		May 10, 1956	9.54	18,400
	June 18, 1943	10.55	22,200		May 24, 1956	14.28	41,200
1944	May 16, 1944	9.77	18,600	1957	May 9, 1957	11.01	25,300
					May 20, 1957	11.20	26,200
1945	May 6, 1945	10.25	20,400		June 3, 1957	11.30	26,500

a About.

3370. Lochsa River near Lowell, Idaho

Location.--Lat 46°09', long 115°35', in sec.33, T.33 N., R.7 E., on right bank 0.7 mile upstream from Lowell, 0.9 mile upstream from mouth, 1.2 miles downstream from Pete King Creek, and 19 miles east of Kooskia.

Drainage area.--1,180 sq mi, approximately. Mean altitude, 5,250 ft.

Gage.--Nonrecording prior to Nov. 21, 1930; recording thereafter. At site 1 mile upstream at different datums prior to Nov. 21, 1930. Datum of gage is 1,452.98 above mean sea level (unadjusted).

Stage-discharge relation.--Defined by current-meter measurements below 26,000 cfs at present site and below 11,000 cfs at former site and extended above.

Bankfull stage.--River in canyon; road floods at 32 ft.

Remarks.--Base for partial-duration series, 12,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	June 13, 1911	a8.1	14,200	1946	Apr. 26, 1946	7.67	12,100
					May 5, 1946	8.21	13,800
1912	May 30, 1912	a9.0	16,600		May 28, 1946	8.05	13,300
1930	Apr. 24, 1930	a6.30	11,800	1947	Dec. 15, 1946	8.44	14,600
					May 9, 1947	11.11	24,500
1931	May 7, 1931	7.85	12,600		June 9, 1947	7.74	12,300
	May 16, 1931	7.91	12,900				
				1948	May 29, 1948	13.62	34,600
1932	May 14, 1932	11.02	22,800				
	May 22, 1932	10.16	20,000	1949	Apr. 29, 1949	8.01	12,600
	June 13, 1932	7.64	12,000		May 2, 1949	8.4[illegible]	14,100
					May 16, 1949	12.[illegible]	29,600
1933	June 4, 1933	10.94	23,700		May 28, 1949	9.95	19,400
	June 10, 1933	13.44	34,800		June 7, 1949	8.35	13,600
1934	Dec. 23, 1933	10.60	22,500	1950	May 17, 1950	8.98	15,800
	Mar. 30, 1934	7.88	13,000		June 6, 1950	9.33	17,000
	Apr. 25, 1934	8.87	16,200		June 17, 1950	11.51	26,200
1935	May 23, 1935	8.63	15,200	1951	May 12, 1951	9.04	16,000
					May 24, 1951	9.08	16,100
1936	Apr. 19, 1936	9.04	16,600		June 16, 1951	8.03	12,600
	May 5, 1936	9.30	17,600				
	May 15, 1936	-	b21,000	1952	Apr. 28, 1952	9.52	17,700
	May 28, 1936	7.62	12,100		May 14, 1952	8.96	15,700
					May 26, 1952	8.77	15,000
1937	May 19, 1937	7.65	12,100				
				1953	May 19, 1953	8.31	13,500
1938	Apr. 18, 1938	11.07	24,500		June 2, 1953	9.07	16,100
	May 1, 1938	8.17	13,900		June 13, 1953	9.82	18,900
	May 29, 1938	10.42	21,700				
				1954	May 10, 1954	9.64	18,400
1939	May 4, 1939	9.10	16,900		May 21, 1954	11.08	24,500
					June 16, 1954	8.09	13,000
1940	May 12, 1940	7.85	12,700		June 27, 1954	8.30	13,600
1941	May 13, 1941	6.82	9,850	1955	May 21, 1955	9.86	20,100
					June 12, 1955	10.78	24,100
1942	May 26, 1942	7.55	11,800				
				1956	Dec. 22, 1955	8.25	13,300
1943	Apr. 20, 1943	8.47	14,900		Apr. 24, 1956	8.78	15,500
	May 28, 1943	9.79	19,400		May 10, 1956	8.65	15,000
	June 19, 1943	9.04	16,600		May 24, 1956	12.12	28,500
1944	May 16, 1944	7.43	11,500	1957	May 9, 1957	9.79	19,200
					May 20, 1957	10.29	21,100
1945	May 6, 1945	8.82	16,000		June 3, 1957	9.73	18,900
	May 31, 1945	8.09	13,600				

a Maximum observed; annual peak only.
b Estimated daily mean discharge.

3375. South Fork Clearwater River near Elk City, Idaho

Location.--Lat 45°49', long 115°32', in NE¼ sec.25, T.29 N., R.7 E., on right bank 12 ft upstream from steel bridge on Orogrande road, 0.2 mile upstream from Crooked River, and 4.5 miles west of Elk City.

Drainage area.--261 sq mi. Mean altitude, 5,150 ft.

Gage.--Nonrecording prior to June 23, 1949; recording thereafter. At site 24 ft downstream at datum 6.14 ft lower prior to June 23, 1949. Datum of gage is 3,816.27 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 3,000 cfs at earlier site and below 2,000 cfs at present site.

Bankfull stage.--In canyon; road floods at 15 ft.

Remarks.--Base for partial-duration series, 1,300 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 4, 1945	a11.02	1,470	1953	Apr. 28, 1953	5.02	1,460
					June 5, 1953	4.93	1,390
1946	Apr. 19, 1946	a10.64	1,230				
1947	May 9, 1947	a11.86	2,200	1954	May 10, 1954	4.51	1,180
1948	May 29, 1948	a13.06	3,700				
1949	May 16, 1949	a11.70	2,200	1955	May 13, 1955	5.07	1,590
					May 21, 1955	5.60	1,980
1950	May 16, 1950	5.39	1,720		June 10, 1955	4.85	1,440
1951	May 12, 1951	4.72	1,280	1956	Apr.23 or 24,1956	-	2,200
					May 11, 1956	5.03	1,490
1952	Apr. 6, 1952	b5.27	-		May 24, 1956	5.36	1,730
	Apr. 19, 1952	4.84	1,430				
	Apr. 28, 1952	5.28	1,740	1957	May 21, 1957	5.85	2,120
	May 16, 1952	5.14	1,640				

a Maximum observed.
b Backwater from ice.

3380. South Fork Clearwater River near Grangeville, Idaho

Location.--Lat 45°55', long 116°01', in SE¼NW¼ sec.30, T.30 N., R.4 E., on right bank just downstream from powerhouse of Washington Water Power Co., 6 miles east of Grangeville.

Drainage area.--865 sq mi. Mean altitude, 5,160 ft.

Gage.--Nonrecording prior to Oct. 15, 1944; recording thereafter. At datum 2.2 ft higher Nov. 14, 1910, to July 31, 1911. At datum 1.0 ft higher Nov. 12, 1911, to Apr. 25, 1919. Altitude of gage is 1,830 ft (from river-profile map).

Stage-discharge relation.--Well defined by current-meter measurements.

Bankfull stage.--Road floods at 15 ft.

Remarks.--Only annual peaks observed are shown for 1911-44. Base for partial-duration series used 1945-57, 3,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	May 16, July 1, 1911	5.0	3,590	1923	May 10, 1923	7.8	4,450
				1924	May 14, 1924	7.75	4,600
1912	May 30, 1912	9.7	9,830	1925	Apr. 17, 1925	7.4	4,010
1913	May 28, 1913	8.6	7,450				
1914	Apr. 20, 1914	6.8	4,270	1926	Apr. 19, 1926	7.55	4,440
1915	May 19, 1915	6.75	4,200	1927	June 1, 1927	9.35	7,560
				1928	May 9,10, 1928	9.35	7,560
1916	May 6,7, 1916	7.30	5,050	1929	May 24, 1929	8.75	6,450
1917	May 30, 1917	a12.6	15,000	1930	Apr.24,25,1930	6.69	3,130
1918	May 4, 1918	a7.9	6,100				
1919	Apr. 25, 1919	a6.4	3,700	1931	Apr. 1, 1931	6.80	3,270
1920	May 17, 1920	a8.4	5,600	1932	May 13,14,1932	8.90	6,630

a Not previously published. Stage-discharge relation poorly defined; gage heights approximate.

Peak stages and discharges of South Fork Clearwater River near Grangeville, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1933	June 4, 1933	8.60	6,090	1949	May 2, 1949	8.33	5,190
1934	Mar. 31, 1934	6.10	2,380		May 16, 1949	9.06	6,170
1935	May 23, 1935	6.70	3,130	1950	May 16, 1950	8.51	5,420
1936	Apr. 24, 1936	9.00	6,810		May 23, 1950	8.03	4,780
1937	May 5, 1937	7.00	3,550		June 17, 1950	7.72	4,370
1938	Apr. 18, 1938	9.00	6,740				
1939	Apr. 30, 1939	7.36	4,060	1951	May 11, 1951	7.62	4,160
1940	Apr. 20, 1940	6.45	2,720	1952	Apr. 19, 1952	7.04	3,420
1941	June 8, 1941	7.30	3,910		Apr. 28, 1952	8.20	4,940
1942	Apr. 14, 1942	7.80	4,670		May 15, 1952	8.71	5,630
1943	Apr. 19, 1943	8.40	5,660				
1944	June 22, 1944	7.40	4,060	1953	Apr. 23, 1953	7.15	3,630
					Apr. 28, 1953	7.49	4,070
1945	May 5, 1945	7.73	4,780		May 20, 1953	7.32	3,860
	May 25, 1945	8.08	5,340		June 5, 1953	7.91	4,640
	June 6, 1945	8.03	5,260				
				1954	May 10, 1954	7.07	3,550
1946	Apr. 20, 1946	7.04	3,750		June 10, 1954	6.82	3,230
	Apr. 26, 1946	6.95	3,620				
	May 9, 1946	6.96	3,630	1955	May 13, 1955	7.58	4,450
					May 21, 1955	8.95	6,570
1947	Apr. 20, 1947	6.75	3,340		June 11, 1955	8.86	6,430
	May 9, 1947	9.02	6,100		June 29, 1955	7.12	3,770
1948	Apr. 22, 1948	8.07	b4,850	1956	Apr. 24, 1956	8.72	6,380
	Apr. 29, 1948	c7.00	3,460		May 10, 1956	7.88	4,950
	May 29, 1948	c12.50	12,600		May 24, 1956	8.94	6,770
	June 21, 1948	c8.20	5,020				
				1957	May 20, 1957	10.09	8,910
1949	Apr. 29, 1949	7.83	4,510		June 8, 1957	7.69	4,640

b Daily mean discharge.
c Maximum observed.

3390. Clearwater River at Kamiah, Idaho

Location.--Lat 46°14', long 116°01', in sec.1, T.33 N., R.3 E., on left bank a quarter of a mile downstream from highway bridge at Kamiah, three-quarters of a mile downstream from Lawyer Creek, and 6 miles downstream from South Fork.

Drainage area.--4,850 sq mi, approximately. Mean altitude, 5,010 ft.

Gage.--Nonrecording prior to Oct. 2, 1934; recording thereafter. At site 300 ft downstream prior to Oct. 2, 1934. Datum of gage is 1,162.52 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 90,000 cfs.

Bankfull stage.--14 ft.

Remarks.--Peaks prior to Dec. 23, 1933, are from observed gage heights. Base for partial-duration series, 28,200 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	May 6, 1911	10.8	34,600	1914	June 3, 1914	10.2	30,700
	May 17, 1911	10.0	29,400				
	June 4, 1911	11.0	35,900	1915	May 19, 1915	9.8	28,200
	June 13, 1911	11.5	39,500				
				1916	Apr. 28, 1916	10.1	30,000
1912	May 21, 1912	13.6	55,200		May 7, 1916	12.2	44,400
	May 30, 1912	14.4	61,900		June 5,9, 1916	11.1	36,600
	June 21, 1912	11.3	38,000		June 19, 1916	13.7	56,000
					June 29, 1916	11.1	36,600
1913	Apr. 20, 1913	10.0	29,400				
	Apr. 27, 1913	10.2	30,700	1917	May 15, 1917	14.7	63,600
	May 11, 1913	12.4	45,800		May 30, 1917	15.4	69,700
	May 26, 1913	16.1	76,600		June 9, 1917	13.8	56,800
					June 17, 1917	15.4	70,500
1914	May 18, 1914	11.9	42,200				
	May 23, 1914	11.8	41,500	1918	Dec.29,30,1917	11.3	37,300

Peak stages and discharges of Clearwater River at Kamiah, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)
1918	May 5, 1918	13.3	52,800
	May 15, 1918	10.9	35,200
	June 10, 1918	13.3	52,800
1919	Apr. 29, 1919	10.3	30,700
	May 23, 1919	13.3	52,000
1920	May 18, 1920	12.0	43,600
	June 16, 1920	11.9	42,900
1921	Apr. 23, 1921	10.9	35,200
	May 20, 1921	15.3	69,700
1922	May 19, 1922	14.2	60,600
	May 26, 1922	13.2	52,100
	June 6, 1922	14.4	62,400
1923	May 8-10, 1923	11.5	38,800
	May 26, 1923	12.9	49,600
	June 12, 1923	12.1	43,200
1924	May 4, 1924	12.4	45,600
	May 13, 1924	14.0	58,900
1925	Apr. 17, 1925	11.9	41,800
	May 7, 1925	12.3	44,800
	May 20, 1925	14.1	59,800
1926	Apr. 19, 1926	11.1	35,900
	May 1, 1926	11.1	35,900
	May 21, 1926	10.6	32,400
1927	Apr. 28, 1927	12.4	46,400
	May 17, 1927	14.5	64,200
	June 8, 1927	15.0	68,600
1928	Nov. 5, 1927	12.2	43,900
	Nov. 26, 1927	10.1	29,200
	May 9, 1928	14.8	65,700
	May 26, 1928	15.5	72,100
1929	May 24, 1929	13.28	52,700
	June 1, 1929	10.0	28,500
	June 9, 1929	11.1	35,800
1930	Apr. 25, 1930	10.45	31,000
1931	May 7, 1931	11.77	40,800
	May 14,16,1931	11.23	36,500
1932	Apr. 14, 1932	10.04	28,500
	May 14, 1932	15.54	72,100
	May 21, 1932	14.44	62,200
	June 13-15,1932	11.04	35,100
1933	Apr. 27, 1933	11.13	35,800
	June 4, 1933	15.43	71,200
	June 10, 1933	16.53	81,400
1934	Dec. 23, 1933	12.19	43,600
	Mar. 30, 1934	10.63	32,300
	Apr. 14, 1934	11.43	37,800
	Apr. 25, 1934	12.47	45,900
	May 8, 1934	10.89	34,300
1935	May 24, 1935	12.84	44,000
	May 31, 1935	11.55	34,400
	June 6, 1935	10.92	29,900
1936	Apr. 19, 1936	13.68	50,600
	May 5, 1936	13.65	49,800
	May 15, 1936	15.18	63,200
	May 28, 1936	11.57	34,300
1937	May 19, 1937	11.61	34,300
	May 28, 1937	11.30	32,200
1938	Apr. 19, 1938	15.31	63,400
	May 1, 1938	12.39	39,400
1938	May 17, 1938	11.32	31,500
	May 28, 1938	15.03	60,800
1939	May 4, 1939	13.30	46,400
	May 17, 1939	12.02	36,400
1940	May 12, 1940	12.06	37,100
1941	May 13, 1941	10.86	28,900
1942	(a)	a15.0	-
	Apr. 14, 1942	10.87	28,900
	Apr. 21, 1942	10.92	28,900
	May 26, 1942	12.10	37,100
1943	Apr. 20, 1943	12.88	43,200
	May 1, 1943	11.05	29,600
	May 29, 1943	13.95	52,200
	June 19, 1943	12.90	43,200
1944	May 16, 1944	11.78	34,200
1945	May 6, 1945	13.19	44,400
	May 31, 1945	12.44	38,400
1946	Apr. 20, 1946	11.72	33,300
	Apr. 26, 1946	11.77	33,700
	May 6, 1946	12.19	36,600
	May 28, 1946	12.12	36,100
	June 4, 1946	10.98	28,300
1947	Dec. 15, 1946	11.80	33,900
	May 8, 1947	16.07	69,900
	June 9, 1947	11.42	31,200
1948	Apr. 22, 1948	11.47	32,600
	May 8, 1948	11.64	33,800
	May 22, 1948	17.84	86,500
	May 29, 1948	19.22	99,000
1949	Apr. 29, 1949	12.02	36,500
	May 3, 1949	12.53	41,100
	May 16, 1949	16.31	76,200
	May 28, 1949	13.69	51,900
	June 7, 1949	12.00	36,800
1950	May 17, 1950	12.77	43,400
	June 6, 1950	12.97	45,000
	June 17, 1950	15.08	62,600
1951	May 12, 1951	12.64	43,100
	May 24, 1951	12.78	44,200
	June 16, 1951	11.47	34,000
1952	Apr. 28, 1952	13.52	49,200
	May 15, 1952	13.46	48,900
1953	Apr. 28, 1953	11.20	32,000
	May 20, 1953	12.06	38,300
	June 3, 1953	13.00	45,800
	June 13, 1953	13.91	53,100
1954	May 10, 1954	13.46	49,900
	May 21, 1954	14.48	58,800
	June 16, 1954	11.40	33,700
	June 27, 1954	11.49	34,300
1955	May 13, 1955	11.42	33,500
	May 22, 1955	13.99	54,200
	June 12, 1955	15.04	64,100
1956	Apr. 23, 1956	12.96	45,600
	May 10, 1956	12.28	40,100
	May 24, 1956	16.59	77,800
1957	May 9, 1957	14.14	55,800
	May 20, 1957	15.85	71,200
	June 3, 1957	13.64	51,700

a Approximate; backwater from ice; occurred sometime during period Jan. 6-17, 1942.

3400. Clearwater River at Orofino, Idaho

Location.--Lat 46°29', long 116°16', in NW¼ sec.7, T.36 N., R.2 E., near right bank on downstream side of highway bridge at Orofino and 0.25 mile downstream from Orofino Creek.

Drainage area.--5,580 sq mi, approximately.

Gage.--Nonrecording. Altitude of gage is 992 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 70,000 cfs.

Bankfull stage.--19 ft.

Remarks.--Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1931	May 17, 1931	16.11	38,600	1936	May 15, 1936	19.56	66,800
1932	May 14, 1932	20.16	73,400	1937	May 20, 1937	15.87	33,800
1933	June 10, 1933	20.87	81,500	1938	Apr. 19, 1938	20.06	72,300
1934	Dec. 23, 1933	17.50	46,500				
1935	May 24, 1935	16.94	42,900				

3405. North Fork Clearwater River at Bungalow ranger station, Idaho

Location.--Lat 46°38', long 115°30', in sec.18, T.38 N., R.8 E., on left bank at Bungalow ranger station, 300 ft downstream from mouth of Orogrande Creek, 1,000 ft downstream from highway bridge, and 17 miles northeast of Pierce.

Drainage area.--996 sq mi. Mean altitude, 4,930 ft.

Gage.--Recording. Altitude of gage is 2,240 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 20,000 cfs.

Bankfull stage.--16 ft. Stream in deep canyon.

Remarks.--Base for partial-duration series, 9,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1945	May 5, 1945	7.74	15,000	1952	Apr. 19, 1952	-	a11,000
	May 30, 1945	6.73	10,800		Apr. 27 or 28, 1952	7.92	15,300
					May 14, 1952	7.55	13,900
1946	Apr. 20, 1946	6.57	10,400				
	Apr. 26, 1946	6.62	10,600	1953	Apr. 28, 1953	6.49	9,800
	May 6, 1946	7.23	13,000		May 19, 1953	7.09	12,000
					June 2, 1953	7.28	12,800
1947	Dec. 15, 1946	8.31	16,600		June 13, 1953	7.31	12,900
	May 8, 1947	9.17	19,700				
				1954	Apr. 18, 1954	6.74	10,900
1948	Apr. 22, 1948	6.99	11,600		May 19, 1954	9.31	20,800
	May 21, 1948	9.74	21,900		June 15, 1954	7.00	11,900
	May 29, 1948	11.13	27,400		June 27, 1954	6.51	10,100
1949	Apr. 19, 1949	6.28	9,190	1955	May 13, 1955	6.53	10,200
	Apr. 29, 1949	7.03	12,000		May 21, 1955	8.03	16,100
	May 2, 1949	7.07	12,200		June 11, 1955	8.49	18,300
	May 16, 1949	9.62	23,500		June 24, 1955	6.93	12,000
1950	Apr. 1, 1950	6.88	11,300	1956	Dec. 22, 1955	7.68	14,400
	May 14, 1950	8.01	15,600		Apr. 22, 1956	7.75	14,600
	June 5, 1950	7.98	15,500		May 9, 1956	7.69	14,500
	June 16, 1950	8.48	17,500		May 20, 1956	9.74	22,600
1951	Feb. 11, 1951	-	a10,000	1957	May 8, 1957	8.08	15,900
	Apr. 8, 1951	6.38	9,530		May 20, 1957	8.18	16,300
	Apr. 29, 1951	6.41	9,640		June 6, 1957	7.64	14,300
	May 11, 1951	7.48	13,600				

a Estimated.

3410. North Fork Clearwater River near Ahsahka, Idaho

Location.--Lat 46°31', long 116°18', in SE¼ sec.26, T.37 N., R.1 E., on right bank at Bruce's Eddy, 1½ miles northeast of Ahsahka, and 2 miles upstream from mouth.

Drainage area.--2,440 sq mi, approximately. Mean altitude, 4,220 ft.

Gage.--Nonrecording prior to Oct. 29, 1930; recording thereafter. At site 300 ft upstream at different datum prior to Oct. 29, 1930. Datum of gage is 969.82 ft above mean sea level, datum of 1929, supplementary adjustment of 1947.

Stage-discharge relation.--Defined by current-meter measurements below 45,000 cfs and extended to 100,000 cfs by logarithmic plotting.

Bankfull stage.--Flooding at Ahsahka starts at 24 ft. Stream in canyon at gage and not subject to overflow.

Remarks.--Base for partial-duration series, 18,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)
1927	May 17, 1927	a20.0	37,000
1928	May 10, 1928	a21.2	40,300
1929	May 24, 1929	a14.5	22,800
1930	Apr. 25, 1930	a13.0	19,600
1931	Apr. 1, 1931	16.2	24,800
	May 7, 1931	14.30	19,600
	May 17, 1931	14.03	18,800
1932	Apr. 14, 1932	17.40	27,600
	May 14, 1932	21.52	40,900
	May 22, 1932	21.33	40,200
1933	Apr. 28, 1933	17.90	28,100
	June 10, 1933	23.88	46,700
1934	Dec. 10, 1933	17.46	27,000
	Dec. 23, 1933	35.5	100,000
	Jan. 4, 1934	16.95	27,100
	Jan. 23, 1934	18.94	33,100
	Mar. 3, 1934	14.60	20,300
	Mar. 29, 1934	20.80	39,600
	Apr. 14, 1934	16.22	24,700
	Apr. 25, 1934	16.97	27,100
1935	Apr. 16, 1935	14.53	20,700
	Apr. 21, 1935	13.90	19,100
	May 6, 1935	14.40	20,400
	May 23, 1935	16.84	27,700
1936	Apr. 19, 1936	20.89	40,000
	May 5, 1936	18.80	32,800
	May 15, 1936	19.88	36,500
1937	May 5, 1937	14.82	20,600
	May 15, 1937	14.30	19,300
1938	Apr. 18, 1938	26.75	62,700
	May 1, 1938	16.66	25,900
	May 29, 1938	16.24	24,700
1939	Apr. 23, 1939	14.40	19,800
	May 4, 1939	b17.0	b27,100
1940	May 12, 1940	13.35	17,100
1941	May 18, 1941	10.98	12,200
1942	Apr. 14, 1942	15.56	c23,000
1943	Apr. 2, 1943	15.03	21,600
	Apr. 16, 1943	18.78	32,800
	May 1, 1943	15.90	22,800
	May 28, 1943	18.21	29,600
	June 29, 1943	15.72	22,500
1944	May 16, 1944	12.14	14,400
1945	May 6, 1945	17.97	29,000
1946	Apr. 20, 1946	16.67	24,800
	Apr. 26, 1946	16.38	24,000
	May 6, 1946	16.84	25,500
1947	Dec. 15, 1946	23.26	46,300
	May 8, 1947	20.7	37,300
1948	Jan. 7, 1948	15.78	22,600
	Apr. 22, 1948	17.42	26,800
	May 29, 1948	25.79	55,600
1949	Apr. 12, 1949	14.48	19,600
	Apr. 19, 1949	16.63	25,300
	Apr. 29, 1949	17.98	29,100
	May 2, 1949	18.54	30,900
	May 15, 1949	22.14	42,900
1950	Jan. 22, 1950	d14.65	-
	Apr. 2, 1950	18.58	30,600
	Apr. 14, 1950	14.62	19,700
	May 15, 1950	19.57	33,700
	May 23, 1950	18.34	29,900
	June 17, 1950	19.05	32,100
1951	Feb. 12, 1951	16.19	23,800
	Apr. 8, 1951	14.55	19,500
	Apr. 14, 1951	15.12	20,900
	Apr. 29, 1951	14.50	19,400
	May 12, 1951	16.60	24,900
1952	Apr. 19, 1952	16.40	24,100
	Apr. 28, 1952	19.11	31,900
	May 14, 1952	17.55	27,300
1953	Apr. 28, 1953	16.29	24,800
	May 7, 1953	14.44	19,900
	May 20, 1953	15.82	23,500
	June 2, 1953	15.50	22,600
	June 13, 1953	15.53	22,700
1954	Apr. 14, 1954	15.49	22,600
	Apr. 18, 1954	16.07	24,100
	May 20, 1954	20.60	37,700
	June 16, 1954	14.56	20,200
1955	May 13, 1955	14.99	21,300
	May 21, 1955	18.68	31,800
	June 12, 1955	18.32	30,800
	June 25, 1955	14.70	20,500
1956	Dec. 23, 1955	22.05	42,700
	Apr. 23, 1956	19.62	34,700
	May 11, 1956	18.38	30,900
	May 21, 1956	22.00	42,800
1957	Apr. 6, 1957	14.18	19,300
	May 9, 1957	18.61	31,600
	May 20, 1957	21.47	40,600
	June 6, 1957	16.47	25,200

a Maximum observed. b Revised from graph based on records for nearby streams.
c Release from log jam upstream. d Backwater from ice.

3415. Potlatch Creek at Kendrick, Idaho

Location.--Lat 46°37', long 116°39', in NW¼ sec.25, T.38 N., R.3 W., near center of main span on upstream side of Mill Street Bridge in Kendrick, 0.9 mile downstream from Bear Creek and 3.2 miles upstream from Middle Potlatch Creek.

Drainage area.--425 sq mi. Mean altitude, 2,980 ft.

Gage.--Nonrecording. Datum of gage is 1,198.2 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 8,500 cfs and extended to 13,000 cfs on basis of slope-area measurement.

Bankfull stage.--16 ft would flood railroad. Road and parts of town would flood at slightly lower stages.

Remarks.--Only annual observed peaks are shown. Base for partial-duration series, 3,600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1946	Dec. 28, 1945	10.35	7,600	1952	Mar. 26, 1952	a9.1	4,310
					Apr. 7, 1952	9.23	4,630
1947	Dec. 15, 1946	8.24	3,660				
				1953	Jan. 23, 1953	a9.19	4,540
1948	Jan. 7, 1948	10.50	7,930		Feb. 4, 1953	8.88	3,870
	Feb. 22, 1948	a10.50	7,930				
	Feb. 26, 1948	b12.6	13,000	1954	Mar. 10, 1954	a8.55	3,090
	Apr. 3, 1948	8.78	3,970				
	May 8, 1948	9.57	5,430	1955	Apr. 10, 1955	a9.62	5,380
	May 22, 1948	10.53	7,820				
				1956	Dec. 12, 1955	9.63	5,580
1949	Mar. 19, 1949	9.57	5,480		Dec. 22, 1955	10.20	7,000
					Jan. 16, 1956	8.86	3,830
1950	Feb. 25, 1950	a9.7	5,750		Mar. 22, 1956	9.80	6,000
	Mar. 6, 1950	8.79	3,680				
	Mar. 17, 1950	10.96	8,900	1957	Mar. 7, 1957	10.12	6,800
	Apr. 1, 1950	a10.3	7,250		Apr. 6, 1957	8.80	3,700
					May 20, 1957	a10.8	8,500
1951	Feb. 12, 1951	a10.82	8,550				

a From graph based on gage readings.
b From floodmark.

3420. Mission Creek near Winchester, Idaho

Location.--Lat 46°11', long 116°39', in NE¼ sec.24, T.33 N., R.5 W., 4 miles southwest of Winchester.

Drainage area.--16 sq mi, approximately. Mean altitude, 4,410 ft.

Gage.--Recording. Altitude of gage is about 4,205 ft (from river-profile map).

Stage-discharge relation.--Defined by current-meter measurements below 90 cfs and extended to 400 cfs by logarithmic plotting.

Bankfull stage.--3 ft.

Remarks.--Base for partial-duration series, 110 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1941	Feb. 27, 1941	2.83	89	1944	Mar. 10, 1944	a3.61	-
					Mar. 30, 1944	3.33	133
1942	Mar. 9, 1942	a3.24	-				
	May 4, 1942	3.15	111	1945	Jan. 7, 1945	a3.17	-
					Apr. 20, 1945	3.19	115
1943	Jan. 17, 1943	a3.67	-				
	Apr. 1, 1943	3.65	176	1948	May 22, 1948	4.85	b400

a Backwater from ice.
b Annual peak only.

3425. Clearwater River at Spalding, Idaho
(Published as "near Lewiston" 1911-27)

Location (revised).--Lat 46°27'05", long 116°49'25", in lot 22, sec.22, T.36 N., R.4 W., on right bank a quarter of a mile downstream from Lapwai Creek, three-eighths of a mile northwest of Spalding Post Office, and 2,300 ft downstream from bridge on U.S. Highway 95.

Drainage area.--9,570 sq mi, approximately. Mean altitude, 4,360 ft.

Gage.--Nonrecording prior to Oct. 31, 1913, at site 6 miles downstream at datum 731.5 ft above mean sea level, datum of 1929. Recording Apr. 29, 1924, to Sept. 30, 1926, at site 100 ft upstream from first site at datum 730.23 ft above mean sea level, datum of 1929. Nonrecording at bridge 2,300 ft upstream at datum 772.49 ft above mean sea level, datum of 1929, Oct. 1, 1926, to Sept. 30, 1928; recording thereafter. Altitude of gage is 770.5 ft (estimated from datum of former gage).

Stage-discharge relation.--Defined by current-meter measurements below 50,000 cfs at site 6 miles downstream and below 120,000 cfs at present site.

Bankfull stage.--18 ft (U.S. Weather Bureau).

Historical data.--Flood of 1894 reached a stage of 20.8 ft (1924 site and datum), from data furnished by J. C. Stevens (discharge, about 136,000 cfs).

Remarks.--Only annual peaks are shown prior to 1929. Base for partial-duration series thereafter, 50,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1911	May 6,7, 1911	a11.7	59,600	1937	May 19, 1937	12.74	54,400
1912	May 30, 1912	a15.2	93,500	1938	Apr. 19, 1938	a20.00	134,000
					May 1, 1938	14.34	69,400
1913	May 28, 1913	a16.0	98,800		May 29, 1938	16.40	91,400
1924	May 13, 1924	b15.94	b86,000	1939	May 4, 1939	15.10	77,500
1925	May 20, 1925	16.1	87,900	1940	May 12, 1940	12.86	56,200
1926	Apr. 9, 1926	13.36	62,400	1941	May 13, 1941	10.94	39,700
	May 1, 1926	12.6	55,200				
	May 21, 1926	12.0	50,000	1942	Jan. 9, 1942	c14.2	-
					Apr. 14, 1942	12.70	54,400
1927	June 9, 1927	a17.7	109,000		May 26, 1942	12.58	53,500
1928	Jan. 5, 1928	c25.6	-	1943	Apr. 1, 1943	13.40	60,700
	May 26, 1928	a17.5	107,000		Apr. 20, 1943	15.52	81,700
					May 2, 1943	13.67	63,500
1929	May 24, 1929	15.4	77,100		May 28, 1943	16.02	87,200
					June 19, 1943	14.51	71,400
1930	Apr. 25, 1930	12.57	52,600				
				1944	May 16, 1944	12.34	50,900
1931	Apr. 1, 1931	14.75	71,500				
	May 7, 1931	12.68	53,400	1945	May 6, 1945	15.30	79,600
	May 17, 1931	12.78	54,200		May 31, 1945	13.45	61,200
1932	Mar. 20, 1932	13.35	60,700	1946	Apr. 20, 1946	d14.1	65,200
	Apr. 14, 1932	13.87	65,500		Apr. 26, 1946	13.73	61,900
	May 14, 1932	18.98	121,000		May 6, 1946	14.14	65,600
	May 22, 1932	18.57	116,000		May 28, 1946	13.32	58,200
	June 15, 1932	12.51	52,600				
				1947	Dec. 15, 1946	17.40	100,000
1933	Apr. 28, 1933	14.24	67,400		Jan. 24, 1947	c19.22	-
	June 4, 1933	18.07	108,000		May 8, 1947	18.55	114,000
	June 10, 1933	20.48	136,000		June 10, 1947	12.58	51,600
1934	Dec. 11, 1933	12.40	51,800	1948	Jan. 8, 1948	13.08	56,000
	Dec. 23, 1933	23.19	172,000		Apr. 22, 1948	14.53	69,500
	Jan. 4, 1934	12.64	53,500		May 9, 1948	15.44	78,600
	Jan. 23, 1934	14.16	68,400		May 22, 1948	23.30	171,000
	Mar. 31, 1934	14.74	73,400		May 29, 1948	23.76	177,000
	Apr. 25, 1934	14.49	71,400				
				1949	Apr. 20, 1949	13.81	59,800
1935	May 24, 1935	14.56	72,400		Apr. 29, 1949	15.18	71,800
					May 3, 1949	16.43	84,700
1936	Apr. 19, 1936	17.61	105,000		May 16, 1949	19.81	123,000
	May 5,6, 1936	16.26	90,300		May 28, 1949	15.85	78,900
	May 15, 1936	17.79	107,000		June 7, 1949	13.17	54,400

a Maximum observed. b Furnished by J. C. Stevens. c Backwater from ice; present site and datum. d From graph based on records for nearby stations.

Peak stages and discharges of Clearwater River at Spalding, Idaho--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1950	Jan. 22, 1950	c15.81	-	1954	Apr. 18, 1954	12.74	53,000
	Apr. 2, 1950	14.94	70,000		May 20, 1954	17.67	104,000
	May 15, 1950	16.19	82,300		June 16, 1954	12.99	55,200
	May 23, 1950	15.75	77,900		June 27, 1954	12.46	50,700
	June 17, 1950	17.90	100,700				
				1955	May 13, 1955	13.40	58,900
1951	Feb. 12, 1951	13.44	57,800		May 22, 1955	16.96	95,400
	May 12, 1951	14.82	73,800		June 12, 1955	17.44	101,000
	May 24, 1951	14.57	71,100				
				1956	Dec. 23, 1955	16.13	86,200
1952	Apr. 19, 1952	13.62	58,800		Feb. 4, 1955	c15.34	-
	Apr. 28, 1952	16.82	89,900		Apr. 23, 1956	16.61	91,700
	May 15, 1952	16.28	84,700		May 11, 1956	15.41	78,500
					May 24, 1956	19.60	121,000
1953	Apr. 28, 1953	13.97	64,900				
	May 20, 1953	14.29	67,400	1957	May 20, 1957	21.42	143,000
	June 3, 1953	14.66	70,800				
	June 13, 1953	15.71	81,100				

c Backwater from ice; present site and datum.

SNAKE RIVER MAIN STEM

3435. Snake River near Clarkston, Wash.
(Published as "at Riparia" prior to 1936)

Location.--Lat 46°25'30", long 117°10'30", in lot 1, sec.16, T.11 N., R.45 E., on right bank 2 miles upstream from Alpowa Creek, 7 miles downstream from Clarkston, and 134 miles upstream from mouth.

Drainage area.--103,200 sq mi, approximately. At site prior to October 1935, 104,000 sq mi, approximately. Mean altitude, 5,280 ft.

Gage.--Nonrecording gages at Riparia, 66 miles downstream at different datum prior to Sept. 30, 1935. Recording at present site and datum thereafter. Datum of gage is 670 ft above mean sea level (Corps of Engineers bench marks).

Stage-discharge relation.--Defined by current-meter measurements below 290,000 cfs.

Bankfull stage.--Not subject to overflow.

Historical data.--Flood of June 5, 1894, reached a stage of 24.7 ft (Riparia site and datum) determined from floodmarks by U.S. Weather Bureau (discharge, 409,000 cfs).

Remarks.--Over 2,840,000 acres are irrigated above station from numerous large irrigation projects. Regulation from many storage reservoirs upstream. Flood peaks are considerably affected. Peak stages shown for period of nonrecording gage operation are from graphs based on gage readings. Base for partial-duration series, 118,000 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1894	June 5, 1894	24.7	409,000	1919	May 30, 1919	13.3	167,000
1916	Mar. 22, 1916	12.0	144,000	1920	May 22, 1920	11.45	134,000
	Apr.17-19,1916	10.8	124,000		June 17, 1920	12.20	148,000
	May 8, 1916	14.3	185,000				
	June 20, 1916	16.8	230,000	1921	Mar. 18, 1921	11.20	131,000
					Apr. 23, 1921	11.75	141,000
1917	Apr. 14, 1917	10.7	122,000		May 20, 1921	19.00	270,000
	Apr. 28, 1917	12.9	160,000				
	May 16, 1917	18.0	252,000	1922	May 6, 1922	11.65	138,000
	May 30, 1917	18.2	256,000		May 27, 1922	15.85	219,000
	June 10, 1917	16.0	216,000		June 7, 1922	16.5	233,000
	June 18, 1917	17.9	250,000				
				1929	May 25, 1929	12.50	155,000
1918	Dec. 30, 1917	14.00	180,000		June 17, 1929	10.64	121,000
	May 6, 1918	13.20	166,000				
	June 14-15,1918	16.00	216,000	1930	Apr. 26, 1930	9.02	95,600
1919	Apr. 5, 1919	10.6	120,000	1931	Apr. 1, 1931	10.30	116,000
	Apr. 30, 1919	11.6	138,000				

Peak stages and discharges of Snake River near Clarkston, Wash.--Continued

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1932	Mar. 21, 1932	10.94	123,000	1948	Apr. 23, 1948	26.27	146,000
	Apr. 15, 1932	11.16	128,000		May 9, 1948	27.13	155,000
	May 15, 1932	15.87	215,000		May 22, 1948	37.38	310,000
	May 23, 1932	16.06	219,000		May 29, 1948	40.36	369,000
	June 18, 1932	12.33	147,000				
				1949	Apr. 20, 1949	25.12	129,000
1933	Apr. 29, 1933	11.12	128,000		Apr. 29, 1949	26.43	144,000
	June 11, 1933	17.36	245,000		May 3, 1949	27.44	156,000
					May 16, 1949	33.83	248,900
1934	Dec. 23, 1933	13.20	164,000				
	Apr. 26, 1934	10.52	118,000	1950	Apr. 2, 1950	24.19	119,000
					Apr. 23, 1950	23.93	116,000
1935	May 25, 1935	11.22	130,000		May 17, 1950	27.82	161,000
					May 29, 1950	28.47	170,000
1936	Apr. 25, 1936	31.05	199,000		June 7, 1950	28.70	172,000
	May 16, 1936	32.52	219,000		June 17, 1950	31.53	212,000
1937	May 19, 1937	23.76	114,000	1951	Feb. 12, 1951	24.97	128,000
					Apr. 15, 1951	25.23	130,000
1938	Apr. 19, 1938	31.90	212,000		Apr. 30, 1951	24.18	119,000
	May 2, 1938	29.50	180,000		May 12, 1951	28.49	170,000
	May 29-30, 1938	32.44	219,000		May 25, 1951	29.37	182,000
					June 16, 1951	25.09	129,000
1939	May 4, 1939	26.89	149,000				
				1952	Apr. 7, 1952	26.47	148,000
1940	Apr. 2, 1940	24.48	124,000		Apr. 29, 1952	33.95	250,000
	May 12, 1940	24.71	126,000		May 15, 1952	32.33	226,000
1941	May 14, 1941	22.90	102,000	1953	Apr. 28, 1953	25.91	141,000
					May 20, 1953	26.19	144,000
1942	Apr. 15, 1942	26.36	139,000		June 13, 1953	32.73	232,000
	Apr. 23, 1942	25.65	130,000				
	May 27, 1942	28.27	162,000	1954	May 21, 1954	30.94	210,000
					June 16, 1954	24.41	124,000
1943	Apr. 20, 1943	31.69	209,000		June 28, 1954	24.86	130,000
	June 1, 1943	31.47	206,000				
	June 22, 1943	30.80	197,000	1955	May 22, 1955	27.81	167,000
					June 13, 1955	30.50	204,000
1944	May 16, 1944	23.42	109,600				
				1956	Dec. 23, 1955	28.73	176,200
1945	May 7, 1945	26.91	149,000		Mar. 26, 1956	25.80	137,600
	June 7, 1945	26.87	149,000		Apr. 23, 1956	30.17	196,400
					May 11, 1956	28.93	179,000
1946	Apr. 20, 1946	28.56	169,000		May 24, 1956	36.30	292,100
	May 9, 1946	28.15	164,000				
	June 2, 1946	26.30	142,000	1957	Feb. 27, 1957	25.88	138,900
					May 20, 1957	38.05	322,900
1947	Dec. 15, 1946	28.23	169,000		June 3, 1957	32.36	228,400
	May 10, 1947	33.22	239,000				
	June 10, 1947	26.27	146,000				

TUCANNON RIVER BASIN

3440. Tucannon River near Pomeroy, Wash.

Location.--Lat 46°26'30", long 117°44'50", in sec.13, T.11 N., R.40 E., on left abutment of highway bridge at Merengo, 7½ miles southwest of Pomeroy and 14 miles upstream from Pataha Creek.

Drainage area.--160 sq mi. Mean altitude, 4,040 ft.

Gage.--Nonrecording. At datum about 2.27 ft higher prior to June 30, 1915. Altitude of gage is 1,470 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 610 cfs and extended above.

Remarks.--Only annual peaks from graphs based on gage readings are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1914	Apr. 15, 1914	2.55	370	1927	Apr. 28, 1927	5.38	602
1915	May 20, 1915	2.50	307	1928	Jan. 13, 1928	6.46	1,740
				1929	May 23, 1929	4.82	300
1925	Feb. 5, 1925	5.35	642	1930	Feb. 1, 1930	4.9	345
1926	Feb. 8, 1926	4.95	305				

3445. Tucannon River near Starbuck, Wash.

Location.--Lat 46°30'20", long 118°01'00", in sec.23, T.12 N., R.38 E., on left bank three-quarters of a mile downstream from Pataha Creek and 5½ miles east of Starbuck.

Drainage area.--409 sq mi.

Gage.--Nonrecording. Altitude of gage is 795 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 350 cfs and extended on basis of slope-area measurement of peak flow.

Remarks.--Minor diversions during irrigation seasons. Flood peaks not affected. Peak stages shown are from graphs based on gage readings. Base for partial-duration series, 700 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	Feb. 1, 1915	4.20	975	1917	May 14, 1917	4.50	1,940
					May 30, 1917	4.40	1,840
1916	Jan. 23, 1916	5.30	2,670				
	Feb. 10, 1916	8.50	5,740	1929	Mar. 2, 1929	2.60	581
	Mar. 10, 1916	4.20	1,490				
				1930	Feb. 2, 1930	8.08	6,000
1917	Apr. 8, 1917	4.10	1,390				
	Apr. 26, 1917	4.50	1,790	1931	Jan. 11, 1931	3.90	1,200
	May 8, 1917	5.00	2,490		Apr. 1, 1931	5.80	3,060

PALOUSE RIVER BASIN

3450. Palouse River near Potlatch, Idaho

Location.--Lat 46°55'00", long 116°57'00", in S½ sec.3, T.41 N., R.5 W., of the Boise meridian, on right bank a quarter of a mile upstream from Kennedy Ford, three-quarters of a mile downstream from Deep Creek, and 2½ miles west of Potlatch.

Drainage area.--312 sq mi.

Gage.--Recording. Altitude of gage is about 2,450 ft (estimated from Coast and Geodetic Survey bench mark near Kennedy Ford).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--Not determined.

Remarks.--Flow partly regulated by Potlatch Lumber Co.'s reservoir about 8 miles above station. Flood peaks not materially affected. Base for partial-duration series, 2,400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1915	May 21, 1915	10.8	2,780	1917	May 12, 1917	11.25	3,020
1916	Mar. 9, 1916	13.7	4,840	1918	Dec. 30, 1917	10.45	2,600
	Mar. 21, 1916	13.98	5,090		Mar. 26, 1918	10.80	2,780
	Mar. 27, 1916	13.48	4,640				
				1919	Mar. 19, 1919	11.8	3,360
1917	Apr. 8, 1917	12.18	3,620		Apr. 5, 1919	11.76	3,330
	Apr. 24, 1917	12.26	3,670				

3465. South Fork Palouse River above Paradise Creek, near Pullman, Wash.

Location.--Lat 46°42'20", long 117°09'55", in SE¼ sec.8, T.14 N., R.45 E., on right bank 1 mile upstream from Paradise Creek and 2 miles southeast of Pullman.

Drainage area.--84.4 sq mi. Mean altitude, 2,810 ft.

Gage.--Water-stage recorder and Parshall flume. Altitude of gage is 2,380 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--9 ft.

Remarks.--Slightly regulated by pondage at Robinson Park Dam on headwaters. Flood peaks are not affected. Base for partial-duration series, 280 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Jan. 25, 1935	5.46	394	1939	Feb. 15, 1939	3.49	314
	Apr. 8, 1935	4.34	292		Mar. 12, 1939	3.89	368
1936	Feb. 28, 1936	6.25	517		Mar. 21, 1939	4.89	533
				1940	Feb. 28, 1940	3.16	299
1937	Mar. 4, 1937	5.44	290		Mar. 2, 1940	3.24	313
	Apr. 15, 1937	5.17	429		Mar. 8, 1940	3.90	432
	Apr. 21, 1937	4.10	295				
1938	Mar. 18, 1938	3.32	285				

3470. Paradise Creek near Pullman, Wash.

Location.--Lat 46°43'10", long 117°09'30", in SW¼ sec.4, T.14 N., R.45 E., on left bank 2,500 ft upstream from mouth and 1 mile southeast of Pullman.

Drainage area.--34.5 sq mi.

Gage.--Recording gage and modified Parshall flume. Altitude of gage is 2,400 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Historical data.--Flood of Feb. 26, 1948, defined by slope-area measurement as 1,200 cfs, at site 2 miles upstream.

Remarks.--Base for partial-duration series, 180 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Jan. 25, 1935	2.62	262	1937	Apr. 15, 1937	3.03	280
	Mar. 28, 1935	2.31	183				
	Apr. 8, 1935	2.31	183	1938	Mar. 19, 1938	2.64	197
1936	Mar. 2, 1936	2.91	326	1948	Feb. 26, 1948	-	a1,200
1937	Mar. 10, 1937	2.81	275				

a Annual peak only.

3480. South Fork Palouse River at Pullman, Wash.

Location.--Lat 46°43'50", long 117°11'00", in NE¼ sec.6, T.14 N., R.45 E., at State Street crossing in Pullman, 600 ft upstream from Missouri Flat Creek.

Drainage area.--132 sq mi.

Gage.--Nonrecording prior to Mar. 19, 1934; recording thereafter. At site 30 ft upstream prior to Mar. 19, 1934. Altitude of gage is 2,350 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--11.5 ft.

Historical data.--Maximum stage known since 1910, 9.5 ft Feb. 26, 1948 (discharge, about 5,000 cfs, revised). The 1948 peak was probably exceeded by the peak of March 1910.

Remarks.--Minor diversions and regulation. Flood peaks not affected. Peak stages prior to Mar. 19, 1934, are from graphs based on gage readings. Base for partial-duration series, 600 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1934	Dec. 22, 1933	6.0	1,800	1939	Mar. 21, 1939	4.01	968
	Mar. 2, 1934	4.00	776	1940	Mar. 8, 1940	3.90	743
1935	Jan. 24, 1935	3.87	940	1941	Dec. 20, 1940	3.65	630
	Apr. 8, 1935	3.31	601		Jan. 18, 1941	3.99	785
1936	Feb. 28, 1936	3.58	830	1942	Jan. 27, 1942	3.98	780
1937	Apr. 15, 1937	3.84	731		Feb. 4, 1942	3.62	616
1938	Mar. 18, 1938	3.14	482				

3485. Missouri Flat Creek at Pullman, Wash.

Location.--Lat 46°43'50", long 117°11'00", in NE¼ sec.6, T.14 N., R.45 E., on left bank at State Street crossing in Pullman, 600 ft upstream from mouth.

Drainage area.--27.1 sq mi. Mean altitude, 2,670 ft.

Gage.--Recording gage and, since Aug. 20, 1934, Parshall flume and sharp-crested weir. Altitude of gage is 2,350 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Bankfull stage.--5 ft.

Historical data.--Flood of Feb. 26, 1948, reached a stage of 6.3 ft (discharge, 1,500 cfs, by slope-area measurement 0.9 mile upstream).

Remarks.--Base for partial-duration series, 250 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Jan. 24, 1935	2.66	290	1939	Mar. 19, 1939	3.25	432
1936	Mar. 2, 1936	2.83	368	1940	Mar. 7, 1940	3.09	331
1937	Mar. 6, 1937	2.57	259	1948	Feb. 26, 1948	6.3	1,500
	Apr. 15, 1937	2.74	328				
1938	Mar. 19, 1938	2.72	262				

3490. Fourmile Creek at Shawnee, Wash.

Location.--Lat 46°49'55", long 117°16'20", in SW¼NE¼ sec.33, T.16 N., R.44 E., on right bank half a mile upstream from mouth, three-quarters of a mile north of Shawnee, and 5½ miles southwest of Colfax.

Drainage area.--71.6 sq mi. Mean altitude, 2,640 ft.

Gage.--Recording gage and modified Parshall flume with sharp-crested weir. Altitude of gage is 2,210 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements.

Remarks.--Base for partial-duration series, 400 cfs.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1935	Jan. 24, 1935	4.13	786	1938	Mar. 19, 1938	3.11	414
	Mar. 28, 1935	3.45	522				
				1939	Mar. 12, 1939	3.14	465
1936	Jan. 13, 1936	3.12	404		Mar. 19, 1939	3.83	740
	Feb. 28, 1936	3.98	727				
				1940	Feb. 28, 1940	3.35	543
1937	Mar. 3, 1937	3.33	487		Mar. 2, 1940	3.08	439
	Apr. 15, 1937	3.14	420		Mar. 7, 1940	3.87	767

3495. Rock Creek near Ewan, Wash.
(Published as "near St. John" 1903-5)

Location.--Lat 47°08'10", long 117°43'30", in sec.13, T.19 N., R.40 E., on downstream side of highway bridge, 200 ft downstream from Rock Lake, 2½ miles east of Ewan, and 9 miles northeast of St. John.

Drainage area.--About 520 sq mi.

Gage.--Nonrecording. At different datum prior to Sept. 30, 1905. Altitude of gage is 1,720 ft (estimated from bench mark at Ewan).

Stage-discharge relation.--Defined by current-meter measurements below 1,400 cfs and extended by logarithmic plotting.

Remarks.--Infrequent regulation by low dam at outlet of Rock Lake. Flood peaks are affected. Only annual peaks from graphs based on gage readings are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1904	Mar. 9, 1904	15.6	1,980	1916	Feb. 17, 1916	6.71	1,520
1905	Jan.28-30,1905	12.2	203	1917	Mar. 30, 1917	7.00	1,450
1915	Feb. 12, 1915	4.30	393				

3510. Palouse River at Hooper, Wash.

Location.--Lat 46°45'30", long 118°08'50", in SE¼ sec.27, T.15 N., R.37 E., on left bank 150 ft downstream from State Highway 11B bridge at Hooper and 0.4 mile upstream from Cow Creek.

Drainage area.--2,540 sq mi, approximately. Mean altitude, 2,410 ft.

Gage.--Nonrecording. At several sites 1½ miles upstream at different datums Sept. 9, 1897, to March 1916. Altitude of gage is 1,040 ft (from topographic map).

Stage-discharge relation.--Defined by current-meter measurements below 14,000 cfs and extended above.

Bankfull stage.--14.5 ft.

Historical data.--Peak of Feb. 26, 1948, defined by slope-area measurement as 24,700 cfs.

Remarks.--Peak stages for period of nonrecording gage operation are from graphs based on gage readings. Base for partial-duration series, 3,700 cfs.

Peak stages and discharges of Palouse River at Hooper, Wash.

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1898	Feb. 16, 1898	a13.99	15,000	1914	Feb. 26, 1914	9.10	5,260
1899	Apr. 14, 1899	10.00	6,080	1915	May 21, 1915	6.80	2,670
1901	Jan. 15, 1901	10.20	6,290	1916	Feb. 11, 1916	c16.80	19,400
	Feb. 17, 1901	11.80	9,110		Mar. 26, 1916	14.30	14,400
	Mar. 4, 1901	11.65	8,820	1948	Feb. 26, 1948	-	d24,700
1902	Feb. 19, 1902	8.65	4,150	1951	Feb. 13, 1951	11.80	8,720
1903	Jan. 6, 1903	12.45	10,500		Mar. 16, 1951	12.09	9,540
	Jan. 26, 1903	11.25	8,020	1952	Feb. 5, 1952	12.90	12,000
	Mar. 31, 1903	9.35	5,290		Mar. 26, 1952	11.53	8,150
1904	Mar. 9, 1904	14.80	16,600	1953	Jan. 19, 1953	10.38	5,640
	Apr. 18, 1904	10.30	6,470		Jan. 23, 1953	11.00	6,920
1905	Mar. 28, 1905	4.30	836		Feb. 4, 1953	10.38	5,610
1906	Feb. 21, 1906	6.60	2,650	1954	Jan. 31, 1954	9.59	4,260
1907	Feb. 10, 1907	11.80	9,500	1955	Feb. 8, 1955	9.51	4,140
	Feb. 27, 1907	11.00	8,150				
	Mar. 22, 1907	10.20	6,820	1956	Dec. 12, 1955	10.71	5,920
1909	Jan. 20, 1909	b16.00	17,700		Dec. 22, 1955	14.01	15,200
	Feb. 17, 1909	8.30	4,110		Dec. 27, 1955	9.59	4,020
1910	Jan. 24, 1910	13.50	12,800		Jan. 4, 1956	11.29	7,140
	Feb. 14, 1910	8.70	4,790		Jan. 17, 1956	11.46	7,540
	Mar. 2, 1910	22.00	29,800		Feb. 21, 1956	12.10	9,180
1911	Mar. 10, 1911	7.8	3,830		Mar. 2, 1956	11.61	7,900
1912	Jan. 27, 1912	7.3	3,330		Mar. 22, 1956	11.33	7,230
1913	Mar. 19, 1913	10.6	7,460		Mar. 26, 1956	11.77	8,300
	Mar. 30, 1913	c15.5	16,800		May 9, 1956	9.49	3,880
				1957	Feb. 25, 1957	11.86	8,540
					Feb. 27, 1957	12.76	11,100
					Mar. 9, 1957	9.89	4,490
					May 22, 1957	10.55	5,630

a Maximum observed.
b Estimated.
c Maximum during partial year of record.
d Result of slope-area measurement.

SNAKE RIVER MAIN STEM

3530. Snake River near Burbank, Wash.
(Published as "at Burbank" prior to 1911)

Location.--Lat 46°14'20", long 118°56'30", in sec.28, T.9 N., R.31 E., on left bank a quarter of a mile upstream from Five-Mile Rapids, a third of a mile upstream from intake of Burbank Co. Canal, 4½ miles northeast of Burbank, and 6 1/3 miles upstream from mouth.

Drainage area.--108,500 sq mi, approximately.

Gage.--Nonrecording. Datum of gage is 300.00 ft above mean sea level, unadjusted.

Stage-discharge relation.--Defined by current-meter measurements below 183,000 cfs and extended above by logarithmic plotting.

Remarks.--Numerous large diversions for irrigation. Flow regulated by several reservoirs upstream. Considerable effect on flood peaks. Only annual observed peaks are shown.

Peak stages and discharges

Water year	Date	Gage height (feet)	Discharge (cfs)	Water year	Date	Gage height (feet)	Discharge (cfs)
1910	Mar.23,24, 1910	48.8	252,000	1914	May 25,26, 1914	46.2	175,000
				1915	May 20,21, 1915	42.6	122,000
1911	June 15, 1911	48.4	242,000				
1912	June 10, 1912	50.2	289,000	1916	June 20, 1916	49.65	249,000
1913	May 29, 1913	51.8	298,000				

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MAP OF PHYSIOGRAPHIC REGIONS OF SNAKE RIVER BASIN

PRECIPITATION INDEX MAP OF THE SNAKE RIVER BASIN

50 0 50 MILES

EXPLANATION

12

Mean annual precipitation, in inches

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—62251

MAP OF SNAKE RIVER BASIN SHOWING LOCATION OF GAGING STATIONS WITH 5 OR MORE YEARS OF ANNUAL FLOOD RECORD

EXPLANATION

● 3145
Station used to define basin characteristics for flood report

○ 3020
Station not used

50 0 50 MILES

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—62251

MAP OF SNAKE RIVER BASIN SHOWING FLOOD REGIONS

50 0 50 MILES

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—62251

MAP OF SNAKE RIVER BASIN SHOWING GEOGRAPHIC FACTORS

50 0 50 MILES

INTERIOR—GEOLOGICAL SURVEY, WASHINGTON, D. C.—62251