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EVALUATION OF STREAMFLOW RECORDS IN BIG WOOD RIVER BASIN, IDAHO

By R. P. Jones

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ABSTRACT

This report presents data which are, in general, supplementary to those of the surface-water investigations made in the past by the Geological Survey. These have been essentially investigations of the operation of the many gaging stations on the Big Wood River and tributaries.

The data presented were obtained from a detailed field investigation of the various factors resulting from man-made structures that influence the quantity or regimen of the flow at the gaging stations. These factors include diversions from the stream, bypass channels carrying water around the gaging stations, return flow from irrigation or other projects, storage and release of flood waters, and other similar factors. Where feasible, the location, size, effect upon the streamflow, periods of use, method of operation, and similar information are given. The information is divided into sections corresponding to areas determined by the location of gaging stations. An index of streamflow records is included.

A section dealing with the adequacy of available water resources data, including location and period of record, also is included. This information is given in general terms only, and is portrayed mainly by maps and graphs.

INTRODUCTION

Purpose and Scope

Studies of the water supply for a project utilizing surface water are based primarily on streamflow data obtained by operating gaging stations. Project design requires an estimate of the probable future water supply that may reasonably be expected during the life of the project. This can be achieved only through a study of records of past streamflow or other hydrologic events. Records covering a period of many years are necessary to evaluate adequately the effect of vagaries of the weather and to determine the safe yield during drought periods. If during the period of operation of a gaging station, the works of man have altered the normal regimen of the stream or utilized consumptively a portion of the water supply, the effects of these changes must be considered in analyzing the data to determine the possible future supply.

River discharge determined by gaging stations represents, in each instance, the actual discharge at that particular point. In a basin where natural runoff prevails, these records depict the surface-water yield of the basin at that point. Such records are of great value to the hydrologist or designing engineer, as they are a direct measure of the yield of the drainage basin. When upstream water-use diverts and depletes the water supply, the discharge records no longer serve as a measure of the yield of the basin unless appropriate adjustments are made. If the point of proposed diversion or future use is remote from the gaging station, it is even more important to have complete knowledge of these factors.

The primary purpose of this report is to evaluate each streamflow record in terms of the factors that influence or alter the flow of the Big Wood River and tributaries at the gaging station locations. Such factors include diversions, bypass channels carrying water around the gaging stations, consumptive use, regulation by storage, and other factors that alter the natural regimen of the stream or the discharge record obtained at the gaging station.

The scope of this report is confined to indexing facts and material needed for the quantitative evaluation of the surface-water resources. Emphasis is on the factors influencing the runoff regimen and the gaging-station records without attempting a quantitative determination of their effect. For example, diversions are identified by name, location, approximate size, time of occurrence, purpose, and source of information concerning their use. These data are basic to quantitative water-supply studies and to the evaluation of the water resources of the basin. One of the more important items of this information is the reference to the sources of data.

In addition to presenting information for the evaluation of factors influencing basin yield, some attention is given to evaluating the adequacy of the streamflow records themselves, in time and distribution. This includes: bar graph picturing the length and distribution of discharge records, maps showing areal distribution of stations and the relative length of records, table showing stream-depletion data, and table of reservoir storage potential.

Acknowledgments

Data presented in this report were collected from many sources, including publications and files of the U. S. Geological Survey and Bureau of Reclamation, files of the Department

of Reclamation of the State of Idaho, canal companies, watermasters, and many individuals. The assistance of Mans H. Coffin, Watermaster for Big and Little Wood Rivers, in furnishing data and reviewing parts of this report is greatly appreciated. The watermasters for Upper Little Wood River, Fish Creek, and the managers of the Big Wood Canal Co. and Twin Falls North Side Canal Co. furnished valuable information.

This report was prepared under the immediate supervision of E. G. Bailey, hydraulic engineer, Geological Survey, Tacoma, Wash.; T. R. Newell, district engineer, Surface Water Branch, Boise, Idaho; and C. C. McDonald, staff engineer, Technical Coordination Branch, Tacoma, Wash., provided valuable technical assistance.

PHYSICAL FEATURES OF BASIN

The Big Wood River basin comprises about 3,800 sq mi covering the major portions of four counties in Idaho: Blaine, Camas, Gooding, and Lincoln. The river flows generally south and west from the headwaters to its confluence with the Snake River near Hagerman, Idaho. Big Wood River is the first tributary to the Snake River from the north below Henry's Fork, a distance of about 250 miles, that maintains its flow across the lavas of the Snake River Plain. The total length of the river is approximately 95 miles. Major tributaries are Warm Springs Creek, Trail Creek, East Fork of Big Wood River, Camas Creek, Little Wood River, Silver Creek, and Fish Creek.

There is a great variety of topographic forms in the basin of the Big Wood. The headwater tributaries of the river rise in the snowshed on the high, rugged southern slopes of the Sawtooth Mountains, where the streams occupy steeply sloping narrow canyons. The mountain mass is a complex assemblage of igneous, sedimentary, and metamorphic rocks that range in age possibly from pre-Cambrian to Recent. Southward from the headwaters area the mountains grade through rolling foothills and broad valleys into the flat to rolling lava fields of the Snake River Plain. Across this plain the Big and Little Wood Rivers have carved narrow, tortuous paths that join about 4 miles northwest of Gooding and reach the Snake River about 5 miles north of Hagerman. Altitudes in the basin range from 2,700 ft at the mouth of Big Wood River to more than 10,000 ft on higher peaks of the Sawtooth Range.

Three generic types of soil are present in the basin: residual soils that developed largely in place, by weathering of the country rock; alluvial soils that were transported and deposited by streams and by sheet runoff; wind-blown soils that were derived from distant sources and deposited by the wind. The chief areas of residual soil are in the mountains and foothills. Alluvial soils are distibuted along all the water courses in the foothills and mountains. Wind-blown soils are distributed widely as a discontinuous mantle on the basalt flows of the Snake River Plain.

Climate in the basin is as diverse as the topography. The range of mean annual and daily temperatures is large, precipitation and humidity are relatively low, the evaporation rate is high, and days of sunshine are numerous. The winters are long and severe and the snowfall heavy in the high mountain sections. Summers are short and cool and frost is likely to occur in midsummer above an altitude of 6,000 ft. Sun Valley, which is in the upper end of the basin, has a mean annual temperature of 38° F: The extensive plateaus and high valleys that form a considerable part of this section are somewhat warmer than the mountainous regions, but, as the altitude is still quite high (5,000 ft on Camas Prairie), the winters are long and cold and the summers short and cool. However, the growing season on Camas Prairie, about 80 days, is long enough to produce a good growth of grass and to mature some cereal crops.

The temperature conditions of the lower valleys and the Snake River Plain vary from those of the elevated plateaus and high valleys. In the eastern portion of the region, where the plains are relatively high, the winters are moderately cold and summers warm. The climate of Richfield (elevation 4,000 ft) is typical of this area. The annual mean temperature is 45° F. and growing season is about 100 days. In the western portion of this region, composed of lower level plains and broad valleys, the temperature is more moderate. The climate of Bliss (elevation 3,200 ft) is representative of this area. The annual mean temperature is 50° F. and growing season is about 127 days. The temperature is noticeably higher at all times in the small area of the Snake River canyon than it is on the adjacent uplands, undoubtedly because of the sheltered location of these lands and the lower altitude.

There is an increase in precipitation within certain limits as altitude increases. Regions having the heaviest annual precipitation are generally those having the lowest annual mean temperature, and, conversely, the driest areas are those having the highest annual mean temperatures. The heaviest annual precipitation occurs on the slopes of the Sawtooth region. The annual precipitation exceeds 30 in. in some localities of this region and more than 25 in. over a considerable portion thereof. A large part of this precipitation is snow, and the melting of the snow pack sustains the summer flow of many streams. There is a considerable area embraced on the western plateau (Camas Prairie) and high valleys where the annual precipitation exceeds 15 in., and almost 50 percent of this falls during the growing season. Dry farming is practiced in the favorable localities of this belt, but even here irrigation is employed when water is available. In the major agricultural areas of the Snake River Plain the annual precipitation is meager, ranging from slightly more than 10 in. in the upper plains to less than 10 in. in the areas near the mouth of Big Wood River. This is inadequate for crop needs, especially as less than 40 percent falls during the crop season. It is impossible, therefore, to carry on farming successfully unless water is available for irrigation.

The Big Wood River basin is in the belt of prevailing westerly winds. In the upper part of the basin the wind comes principally from the southwest; in the lower portions, from the west.

The predominant natural vegetation in the lower plains is sagebrush and some scattered grass. In the upper reaches of the plain and plateau region, where rainfall is ample, a narrow belt of grasslands has developed, the

principal types of grass being cheat grass, brome grass, and bunch grass. Various types of brush, such as aspen, alder, chaparral, and juniper, grow above the grasslands in the shallow soil of the foothill area. Patches of sagebrush and grass are common here also. In the higher foothills and low mountains are stands of timber of the following species: Douglas fir, spruce, ponderosa pine, and lodge pole pine.

The Big Wood River and tributaries are snow melt streams, except Silver Creek whose source is ground water and springs. The runoff during the spring months is stored in several reservoirs and used for irrigation later in the season when streamflow is inadequate for irrigation requirements. In some areas not served by storage reservoirs, water shortages often develop late in the season.

UTILIZATION OF WATER IN THE BASIN

The water resources of the Big Wood River basin are utilized principally for irrigation. Prior to the importation of water from the Snake River, beginning 1916, the irrigable land in the basin exceeded the water supply. At present supplemental water is sufficient to satisfy the irrigation demands in the lower part of the basin. Other than irrigation, water is utilized also for generation of hydroelectric power, recreational and domestic activities, and stock water. Agriculture is the foundation of the economy of the basin at present; however, hydroelectric power development at the mouth of the Big Wood River is substantial.

The earliest white men to come to the Wood River region were trappers in 1824; the next migration was made up principally of miners. The first recorded mining claim was filed in 1865 in Blaine County. Silver and lead ore were the main attractions and mining continued for many years as the principal enterprise. The first water right was established in 1877 on the Little Wood River near the vicinity of the present town of Gooding. However, the first farming community in Big Wood River basin was established along Spring Creek in 1879 by Joseph Loving and family. The following year settlements were made on Deer Creek, Big Wood River, Rock Creek, and Indian Creek. The earliest settler on Fish Creek, George Case, filed for 15 cfs of water in Fish Creek in 1882, and received the first of four land patents in 1884. At the same time settlers began establishing homesteads along Camas Creek and its tributaries.

Most agricultural and irrigational developments prior to 1900 were small private enterprises, limited to a narrow belt along the valleys adjacent to the water supply. The total land under irrigation in the Big Wood River basin in 1900 was about 40,200 acres (fig. 1).

The Carey Act provided the initial stimulus for the development of the Big Wood River basin. Shortly after the turn of the century, two large companies, the Idaho Irrigation Co. and the Twin Falls Northside Canal Co., incorporated to take advantage of the opportunity afforded by this Act.

The Idaho Irrigation Co. constructed Magic Dam in 1909, and by utilizing the storage water therein they developed the following lands: Richfield Tract, North Shoshone and North Gooding Tracts, Dietrich Tract, and South Gooding Tracts, an area containing 59,342 acres in 1921.

The Twin Falls Northside Canal, completed in 1916, diverts water from Snake River at Milner and discharges it into either Big Wood River or Little Wood River to irrigate about 8,000 acres of land on the Carey Act third segregation in the vicinity of Clover Creek.

Two other private irrigation ventures of consequence were commenced during the period 1900-25, one by the Twin Lakes Reservoir Irrigation Co. and the other by the Carey Valley Irrigation Co. The Twin Lakes Reservoir Irrigation Co. constructed a dam in 1909 to impound three spring-fed tributaries of Camas Creek, and the stored water is used for irrigation of 6,400 acres at present. The Carey Valley Irrigation Co. constructed a dam on Fish Creek in 1922, and the stored water is used currently for irrigation of about 8,000 acres.

There was some over-development during this period. The maximum acreage under irrigation during this interval was in 1920-21, when approximately 117,000 acres was irrigated. This peak tapered to 111,900 acres by 1925, an increase in irrigated acreage of about 179 percent since 1900 (fig. 1).

A number of dry years after 1925 and a depletion of natural runoff caused serious water shortages for irrigation. In 1931 the Bureau of Reclamation constructed the Milner-Gooding Canal to transport water 70 miles from Snake River at Milner diversion dam to 49,000 acres of land in the lower Big Wood River basin. Of this area, 32,000 acres were formerly supplied from the Big Wood River, and the remaining 17,000 acres were new reclamation. Since 1932, all storage water from Magic Reservoir is utilized above the Milner-Gooding Canal, and Snake River water fulfills the needs of all water users below the canal. Irrigation in the basin was again expanded in 1940 by the construction of a dam on Little Wood River by the Little Wood River Reservoir Co. The stored water is used presently on about 8,000 acres in the vicinity of Carey, Idaho.

The total acreage irrigated in Big Wood River basin in 1950 was about 175,000 acres, including lands irrigated by all waters tributary to Big Wood River basin and waters diverted from Snake River (fig. 1). The figures of total acreage were derived in the following manner: For Camas Creek basin, from reports of the U. S. Bureau of Census, 1940; Big Wood River basin above Magic Reservoir, from records of lands described by individual water rights in the files of Idaho State Dept. of Reclamation; Big Wood River basin below Magic Reservoir, from records of Big Wood Canal Co. and Big Wood River watermaster; Little Wood River basin above Silver Creek, from records of lands described by individual water rights in the files of Idaho State Dept. of Reclamation and files of Little Wood River and Fish Creek watermasters; Little Wood River basin below Silver Creek, from records of Twin Falls Northside Canal Co., Big Wood Canal Co., and Big Wood River watermaster. Simons reports a total irrigated land of 88,000 acres, which excludes lands irrigated by Snake River water through Gooding Canal. (Simons, W. D., Irrigation and streamflow Depletion in Columbia River basin (unpublished): U. S. Geological Survey, Tacoma, Wash., 1951.)

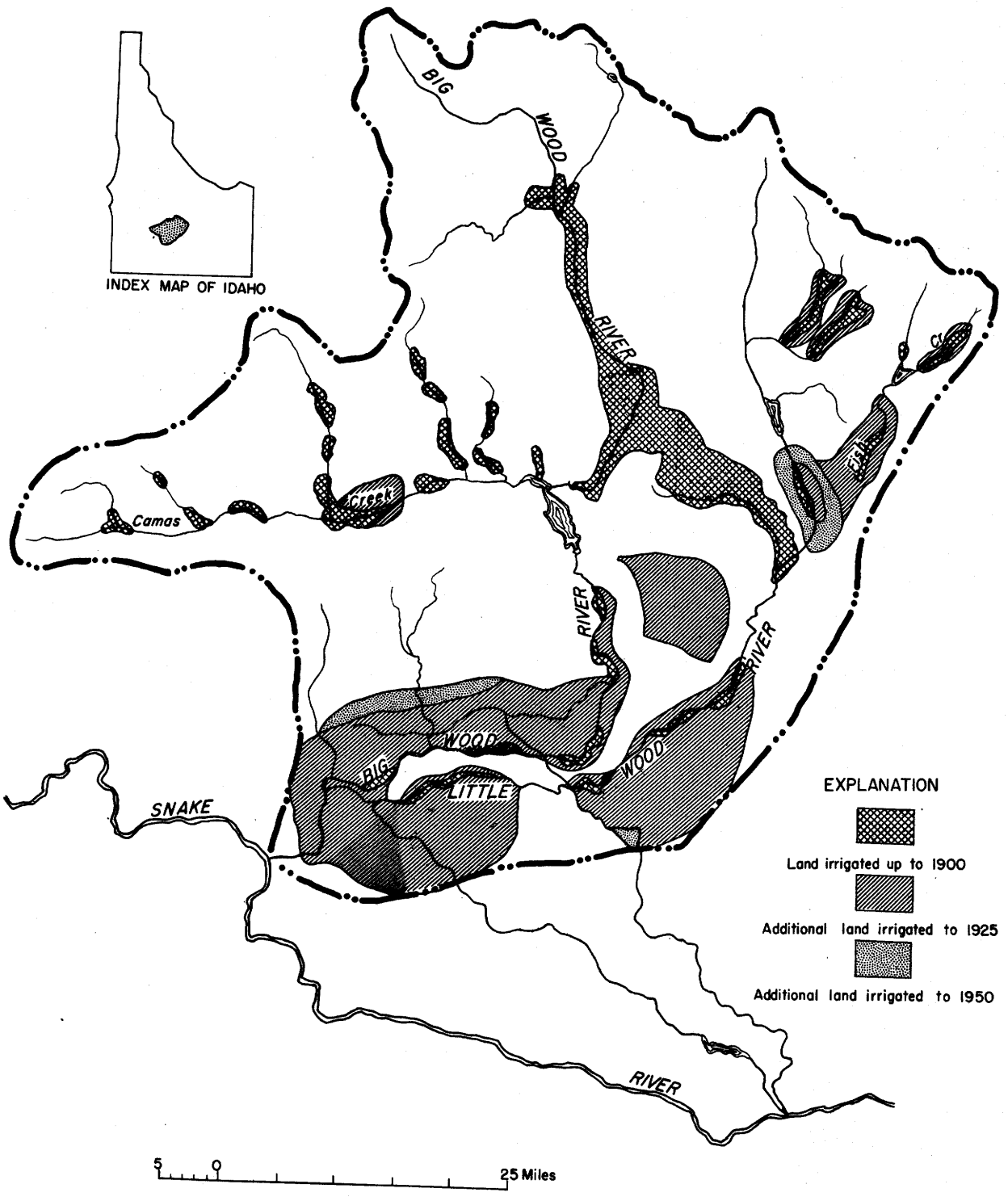

Figure 1.--Map showing development of irrigation in Big Wood River basin.

The U. S. Bureau of Census in a 1940 report entitled Irrigation of Agricultural Lands reported a total of 89,354 acres.

The Big Wood River basin is divided conveniently into four major sections of irrigational development. These are 1) Big Wood River above Magic Dam, 2) Big Wood River below Magic Dam, 3) Little Wood River above Silver Creek, and 4) Lower Little Wood River combined with Silver Creek.

In the area on Big Wood River above Magic Dam the irrigated lands lie in the river valleys or on the adjacent benches, the water diverted through short canals and ditches. About 45,000 acres in this reach are irrigated by diversions from all tributary streams such as Warm Spring Creek, Trail Creek, Deer Creek, and Camas Creek. Included with the numerous diversions are 24 canals, which have a capacity of 10 cfs or more. The top soil of this area is underlain by gravel deposits and is very porous, the duty of water being as high as 7 acre-ft per acre. Magic Reservoir in this section is the largest reservoir in the entire basin, and is used to store water for irrigation of about 60,000 acres downstream. Another important reservoir is Twin Lakes Reservoir on Camas Prairie, which irrigates about 6,400 acres. Several other minor reservoirs are in this area, the combined storage amounting to about 760 acre-ft.

About 68,000 acres are irrigated below Magic Dam, using Big Wood River water. These do not include lands under canals diverting from Little Wood River. These lands are mainly in two compact bodies extending laterally along Big Wood River. The larger areas include about 19,000 acres in the North Gooding and North Shoshone tract. The Richfield Tract embraces about 27 percent, the North Gooding and North Shoshone Tracts about 32 percent, and direct river diversions 3 percent of the total area of irrigated lands in the Big Wood Carey Act project. There have been 41 canals diverting from Big Wood River below Magic Dam, 13 of these having a capacity of 10 cfs or more. The soil is not as coarse as above Magic Dam, and the duty of water is about 3.3 acre-ft per acre.

Nearly 24,000 acres are irrigated in the area of Little Wood River above Silver Creek. About 18,000 acres of these are irrigated by water stored in Little Wood reservoir and Fish Creek reservoir; the remaining by direct diversions from Little Wood River, Fish Creek, and Muldoon Creek. East Canal and West Canal, below Little Wood River dam, divert the entire flow of Little Wood River, except in flood stages. The principal canal, Fish Creek Canal, diverts almost the entire flow of Fish Creek. Five reservoirs in this area store a total of about 26,000 acre-ft.

About 37,000 acres are irrigated by diversions from Lower Little Wood River and Silver Creek; part of this water is supplied by interbasin diversion from the Big Wood River. These lands are concentrated more or less around Carey, Dietrich, Shoshone, and Gooding. About 14,600 acres of the 37,000 acres are included in the South Gooding Tract and 11,000 acres in the Dietrich Tract. The South Gooding Tract comprises 22 percent and the Dietrich Tract 14 percent of the total area in the Big Wood Carey Act project. Altogether 82 canals divert in this section, only 10 having a capacity of 10 cfs or more. The irrigation season diversions average about 3.3 acre-ft per acre.

The first hydroelectric plant in Idaho, and probably the first in the Northwest, was constructed to operate a smelter at Ketchum, Idaho, in 1883. Today, the major utilization of water power in Big Wood River basin is in the Malad Springs Canyon where two power plants generate 27,500 hp. Hydro-power of lesser significance is generated near Hailey for local consumption.

Waters of the basin are important for recreational uses. There is excellent sport fishing in the larger reservoirs and the principal streams in the upper basin. Several natural hot springs furnish water for swimming and bathing activities in the region.

Domestic water supply of the communities in this area is derived principally from drilled wells. The important municipal uses of water in the Big Wood River basin are shown in table 1.

WATER-RESOURCES DATA FOR BIG WOOD RIVER BASIN IN IDAHO

Streamflow Records

The records of streamflow in Big Wood River basin began June 1, 1896 with the establishment of the gaging station, Big Wood River at Gooding, which continued in operation for 3 yr (published as Malade River at Toponis). A second station, Big Wood River at Hailey, was established in 1899 and operated for three months. It was reestablished in 1915 and has been in continuous operation since that time. The station with the longest continuous record is Big Wood River below Magic Dam near Richfield, established in 1911. Table 2 lists both active and discontinued gaging station in the basin and graphically shows their period of record. The locations of these gaging stations are shown on plate 1. Numbers for each gaging station shown on table 2 correspond with those on plate 1.

The Geological Survey has carried on the largest portion of stream gaging in the Big Wood River basin, much of it in cooperation with the State of Idaho. Published papers by the Geological Survey on surface-water supply in the Big Wood River basin, containing records from 1899 to 1950, are shown on page 8.

The Big Wood and Little Wood River Watermaster also collects records of streamflow in this basin. Many are in the form of valuable information showing canal and river deliveries, while others are of river flow. Data concerning publications on river flow are summarized in table 3.

Storage Reservoirs

A high degree of storage has been developed in the Big Wood River basin. Reservoirs have been constructed primarily for irrigation, although some flood-control benefits are realized. Water is generally sufficient for crop production through the use of this storage, even during

Table 1.--Municipal and industrial uses in Big Wood River basin

Consumer	Source of supply	Normal daily consumption (cfs)	Normal daily sewage (cfs)	Remarks
Sun Valley	2 drilled wells, reported depth, 150 ft each.	0.74	None	Water is pumped to 150,000 gal standpipe. Sewage is disposed of by means of septic tanks. No depletion of surface water or return surface flow. 1/
Ketchum	Trail Creek	4.00	----do----	Ketchum water supply distribution system is privately owned and no records of flow are maintained. There is a storage reservoir of 75,000 gal. The sewage disposed of by means of septic tanks. No return surface flow. 1/
Hailey	There are two sources: 1. Indian Cr. which furnishes a year around supply. 2. An infiltration gallery located along Big Wood to supplement the summer demands.	2.01	Illegal dumping of sewage in Big Wood River. No records.	Water from Indian Creek is carried by gravity in wood pipeline. Water from infiltration gallery is pumped into system. No record maintained of water consumption. Major part of sewage disposed of by means of septic tanks. 1/
Bellevue	Group of Springs located on Seaman Creek.	3.25	None	Water is carred in wood and steel pipeline by gravity to a 73,000 gal storage reservoir. No records are maintained. Sewage disposed of by means of septic tanks. 1/
Gooding	2 drilled wells, one reported 450 ft deep and the other reported 500 ft deep.	1.24	----do----	Water is stored in two standpipes with a capacity of 95,000 gal. Sewage disposed of by means of seepage pits and sewer wells. 1/
Richfield	1 drilled well, reported depth 500 ft.	.26	----do----	Water is stored in 65,000 gal standpipe. Sewage is disposed of by means of sewer wells. 1/
Shoshone	Little Wood River.	1.54	----do----	Water is stored in 60,000 gal standpipe. Sewage is disposed of by septic tanks and seepage pits. 1/
Picabo	Springs located 2 miles southwest of town.	.0077	None	No storage. Gravity flow by pipeline. Sewage disposed by means of septic tanks. 1/
Fairfield	2 artesian wells reported depth 300 ft.	.66	----do----	Storage maintained in 3,000 gal pressure tank. Pumped for distribution. Sewage disposed by means of septic tanks. 1/
Idaho Power Co.	Malad Springs	900, used nonconsumptively.		Used by two power plants to generate 27,500 hp. Water returned either to Malad or Snake Rivers. 2/

1/ Idaho State Department of Public Health files.
2/ Idaho State Department of Reclamation files.

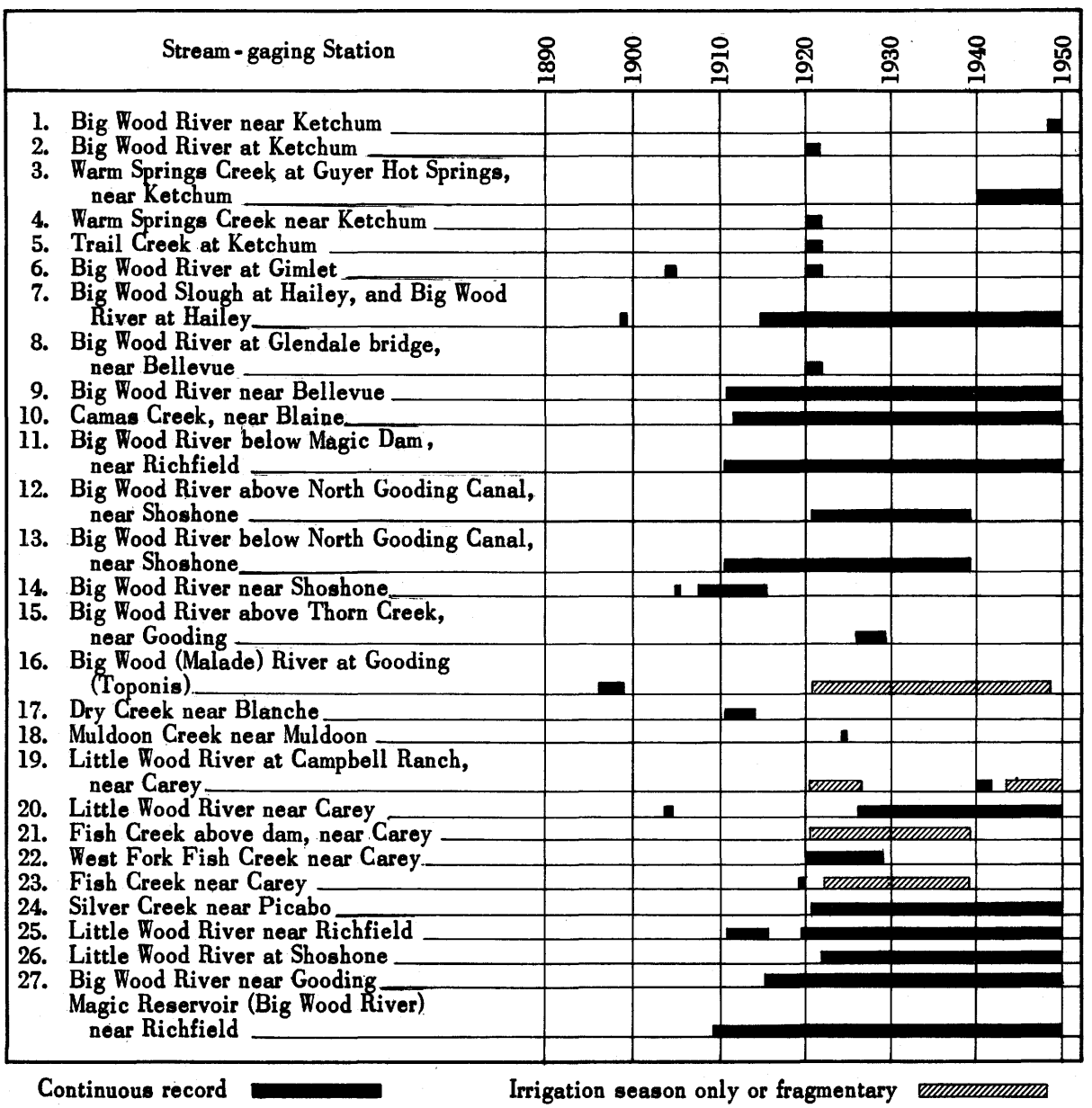

Table 2.--Index of streamflow records in Big Wood River basin

Surface-water supply in the years mentioned

Year	Water-Supply Paper	Year	Water-Supply Paper	Year	Water-Supply Paper	Year	Water-Supply Paper	Year	Water-Supply Paper
1899 a/	38	1910	292	1921	533	1931	723	1941	933
1900 b/	51	1911	312	1922	553	1932	738	1942	963
1901	66,75	1912	332-B	1923	573	1933	753	1943	983
1902	75	1913	362-B	1924	593	1934	768	1944	1013
1903	100	1914	393	1925	613	1935	793	1945	1043
1904	135	1915	413	1926	633	1936	813	1946	1063
1905	178	1916	443	1927	653	1937	833	1947	1093
1906	214	1917	463	1928	673	1938	863	1948	1123
1907-8	252	1918	483	1929	693	1939	883	1949	1153
1909	272	1919-20	513	1930	708	1940	903	1950	1183

a/ Rating tables and index to Water-Supply Papers 35-39 contained in Water-Supply Paper 39. Monthly discharge for 1899 in 21st Annual Report, part 4.

b/ Rating tables and index to Water-Supply Papers 47-52 contained in Water-Supply Paper 52. Monthly discharge for 1900 in 22d Annual Report, part 4.

Table 3.--Streamflow records collected by other agencies

Name of Stream	Location of station	Period of record	Agency collecting records	Location of records
Big Wood River	Water-stage recorder in lat 42°57', long. 114°13', in NE¼NE¼ sec. 31, T. 5 S., R. 15 E. half a mile north of Gooding, Idaho.	June 1896 to October 1899, April 1921 to September 1950 (after September 1948, irrigation season only).	Geological Survey, Water Resources Branch from June 1896 to October 1899 and April 1921 to September of 1948. The Big Wood River Watermaster took over operation of station in September of 1948 and collects and publishes the record at present.	U. S. Geological Survey, Water Resources Branch, Boise, Idaho. Files of Big Wood River Watermaster, Shoshone, Idaho.
Little Wood River	Water-stage recorder, in NW¼SW¼ sec. 31, T. 5 S., R. 18 E., above Milner-Gooding Canal near Shoshone, Idaho.	1932 to 1950 during irrigation season only.	Big and Little Wood River Watermaster.	Files of Big and Little Wood River Watermaster, Shoshone, Idaho.
Little Wood River	Staff gage in the NE¼ NW¼ sec. 32, T. 5 S., R. 16 E. at Tunupa, Idaho.	1936 to 1950 during irrigation season only.	-----do-----	-----do-----
Little Wood River	Water-stage recorder in the SW¼SW¼ sec.32, T. 5 S., R. 15 E., at Gooding, Idaho.	1919 to 1950 during irrigation season only.	-----do-----	-----do-----

years of low runoff when heavy losses would occur otherwise. About 250,000 acre-ft of storage capacity is available in 11 active reservoirs (table 4). This capacity is used to supplement the natural streamflow on about 85,000 acres, or approximately 50 percent of the total irrigated area. About 77 percent of the developed storage is on Big Wood River and the remainder on tributaries.

The natural water users in the area above Magic Reservoir frequently suffer from a water deficiency in the latter part of the irrigation season and need supplementary water.

The Geological Survey has surveyed Guyer Hot Springs reservoir site on Warm Springs Creek and Boulder Flats reservoir site on Big Wood River. The Guyer Hot Springs survey indicated a capacity of 19,100 acre-ft between altitudes of 5,911 and 6,040 ft. The Boulder Flats survey indicated a capacity of 18,200 acre-ft between altitudes of 6,375 and 6,480 ft and an additional capacity of 36,830 acre-ft in the altitude range 6,480 to 6,540 ft. This project would permit almost complete regulation of the river under normal conditions. Magic Reservoir has a storage capacity greater than can be utilized during normal years, but the hold-

over storage is used beneficially during years of low water. Little Wood River reservoir stores a relatively small portion of the yield from the drainage basin, and more storage is needed for complete utilization. The Little Wood River Reservoir Co. has filed with the State Reclamation Department for permission to increase capacity of Little Wood reservoir 5,300 acre-ft by raising present dam. There is no storage on Silver Creek, and this potential is hampered by lack of suitable reservoir sites. The Fish Creek reservoir holds a sufficient capacity to provide complete regulation of Fish Creek during years of normal runoff.

Adequate records are maintained on only one reservoir, Magic Reservoir, on which the Geological Survey has maintained a continuous record since 1909. Partial records of two other reservoirs, Little Wood reservoir and Fish Creek reservoir, are on file with Idaho State Department of Reclamation. No records are maintained on the eight other active reservoirs. Table 4 contains detailed information concerning each reservoir.

Table 4.--Storage reservoirs in Big Wood River basin

Name	Location	Period of operation	Usable capacity		Remarks
			Acre-ft	Percent annual runoff	
Prairie Creek Reservoir.	3 natural ponds at head of Prairie Creek, 7 miles from mouth in T. 5 N., R. 15 E. (tributary to Big Wood River).	1921-50	97	-	Rock and earth dam. Height of dam, 5 ft; length at top, 25 ft; length at bottom, 5 ft; area of reservoir, 180 acres. Purpose is for irrigation. During the latter part of irrigation season water is released by owner and carried down Prairie Creek to Big Wood River, thence down Big Wood River to the Comstock Canal (no. 10), where it is diverted. Dam privately owned. No record of storage, but record of flow at Comstock Canal (no. 10) is maintained by Big Wood River Watermaster. 1/
Trail Creek Reservoir.	On Trail Creek at Sun Valley in sec. 7, T. 4 N., R. 18 E. (tributary to Big Wood River).	1937-50	82	-	Timber crib dam. Height of dam, 22 ft; length at top, 385 ft; length at bottom, 300 ft; area of reservoir, 10.4 acres. Purpose is for recreational use as a fishing and boating pond at Sun Valley. No regulation, the natural flow is not altered. Owned by Union Pacific Railroad Co. No records maintained. 1/
Frances Reservoir	On Nigger Creek in the SW¼SW¼ sec. 26, T. 1 S., R. 11 E. (tributary to Camas Creek).	1914-50	330	-	Earth and rock dam. Height of dam, 32 ft; length at top, 400 ft; length at bottom, 10 ft. Stored water is for irrigation of about 640 acres in sec. 34, T. 1 S., R. 11 E. and sec. 3, T. 2 S., R. 11 E. Water released as needed for irrigation. Privately owned, no records maintained or published. 1/
Cow Creek Reservoir.	On Cow Creek in the NW¼NE¼ sec. 13, T. 1 S., R. 11 E. (tributary to Camas Creek).	1915-33	300	-	Earth-fill dam. Height of dam, 35 ft; length at top, 320 ft; length at bottom, 185 ft. The dam was designed to store 1,300 acre-ft for irrigation of about 6,000 acres. This was never accomplished. The storage, from best information available, never exceeded

Table 4.--Storage reservoirs in Big Wood River basin--Continued

Name	Location	Period of operation	Usable capacity		Remarks
			Acre-ft	Percent annual runoff	
					300 acre-ft and irrigated about 320 acres. No records available. The dam has been condemned by the Idaho State Dept. of Reclamation since 1933 and no storage allowed as of that date. 1/
Twin Lakes Reservoir.	On Lake Creek in the N½ sec. 4, T. 2 S., R. 14 E. (tributary of Camas Creek).	1909-50	31,240	-	Dam is a concrete core, earth-fill structure. Height, 30 ft; length at top, 1,070 ft; length at bottom, 175 ft. The storage water is used for irrigation of about 6,463 acres in Camas County. Dam and reservoir owned and operated by a local corporation, The Twin Lakes Reservoir and Irrigation Co. No records. 1/ 2/
McCann Reservoirs	Two dams on unnamed tributary to Camas Creek in secs. 2 and 22, T. 2 S., R. 15 E.	1925-50	Approx. 250 (combined)	-	Two earth-fill dams. Purpose is for irrigation and stock water. Used for irrigation of about 40 acres in sec. 2 T. 2 S., R. 15 E. Privately owned, no records. 1/ 2/
Magic Reservoir	On Big Wood River in secs. 17 and 18, T. 2 S., R. 18 E.	1909-50	191,500	Approx. 62	Earth fill dam. Height, 129 ft; length of top and bottom, 700 ft; surface area of reservoir, 3,742 acres. Reservoir was raised 5 ft in 1917. Water is used for irrigation of about 60,000 acres in Carey Act Project of Big Wood Canal Co. Dam and reservoir owned by Big Wood Canal Co. Regulation of dam by owners acting in conjunction with Big Wood River Watermaster. 1/ 3/ 4/
Campbell Reservoir	On South Fork of Muldoon Creek in the NW¼ NE¼ sec. 28, T. 2 N., R. 21 E.	1925-50	700-800 until 1938, since then about 125.	-	Earth fill dam. Height, 20 ft; length at top, 300 ft; length at bottom, 140 ft; surface area of reservoir, 160 acres. The dam failed in 1938 and has been only partially rebuilt; thus the capacity has correspondingly been reduced from that date as indicated in table. Stored water used originally for irrigation of several hundred acres, now used mainly for stock water. Privately owned, no records available. 1/ 2/
Little Wood Reservoir.	On Little Wood River in sec. 13 T. 1 N., R. 20 E.	1940-50	11,708	Approx. 10	Rock and earth fill dam. Height, 85 ft; length at top, 860 ft; length at bottom, 380 ft; surface area of reservoir, 325 acres. The storage water is used for irrigation of about 8,814 acres in the

Table 4.--Storage reservoirs in Big Wood River basin--Continued

Name	Location	Period of operation	Usable capacity		Remarks
			Acre-ft	Percent annual runoff	
					vicinity of Carey. Dam and reservoir owned by Little Wood River Reservoir Co., a local corporation. Gates regulated by Upper Little Wood River Watermaster to satisfy needs of water users. Records available in files of Idaho State Dept. of Reclamation 1/ 2/ 4/
Condie (Dedman) Reservoir.	On Little Fish Creek in the SE¼NW¼ sec. 13, T. 1 N., R. 21 E. (tributary to Little Wood River).	1934-38	50	-	Earth fill dam, height, 10 ft; length at top, 400 ft; length at bottom, 10 ft; area of reservoir surface, 100 acres. Water used for irrigation of about 120 acres in secs. 12 and 13, T. 1 N., R. 21 E. Privately owned, water released as needed, no records available. Dam failed in spring of 1938; never rebuilt. 1/ 2/
Cameron-Alberthson Reservoir.	On Little Fish Creek in the SW¼SE¼ sec. 3, T. 1 N., R. 21 E. (tributary to Little Wood River).	1932-50	200 (Increased in 1950 to 240).	-	Earth fill dam. Height, 20 ft; length at top, 250 ft; length at bottom, 150 ft. Stored water is used for irrigation of 232 acres in sec. 27, T. 1 S., R. 21 E. and sec. 11, T. 2 S., R. 21 E. Water is released as needed for irrigation down channel of Little Fish Creek to Little Wood River; thence about 3½ miles down Little Wood River to point of diversion. The land irrigated is below gaging station no. 20. Privately owned, no records available. Dam partially failed in spring of 1938 and rebuilt in 1939. Storage increased 40 acre-ft in 1950 by raising dam.
Howard Reservoir	On Little Fish Creek in the NW¼NE¼ sec. 8, T. 1 N., R. 21 E. (tributary to Little Wood River).	1931-50	325	-	Rock crib, earth fill dam. Height, 50 ft; length at top, 690 ft; length at bottom, 570 ft; area of reservoir surface, 48 acres. Stored water used for irrigation of about 140 acres in sec. 13, T. 1 N., R. 20 E. Privately owned, water released as needed, no records available. Dam partially failed in spring of 1938 and rebuilt in 1939. 1/ 2/
Fish Creek Reservoir.	On Fish Creek in sec. 15, T. 1 N., R. 22 E.	1922-50	13,747	Approx. 97	Multiple arch concrete dam. Height 105 ft; length at top, 1,800 ft; area of reservoir surface, 625 acres. Stored water used for irrigation of about 8,000 acres in T. 1 N., R. 22 E., and T. 1 S., R. 21 and 22 E.

Table 4.--Storage reservoirs in Big Wood River basin--Continued

Name	Location	Period of operation	Usable capacity		Remarks
			Acre-ft	Percent annual runoff	
					Dam and reservoir owned by Carey Valley Irrigation Co., a local corporation. Water released as needed for irrigation. Records available in files of Idaho State Dept. of Reclamation.

1/ Files of Idaho State Department of Reclamation.
2/ Field inspection and verbal report from watermaster or owner.
3/ Files of Big Wood River Watermaster.
4/ U. S. Geological Survey water-supply papers, Part 13.

Adequacy of Data

A systematic program to cover the Big Wood River basin by a network of gaging stations did not begin until after completion of Magic Reservoir in 1909. Prior to that date streamflow records in the basin were few and of short duration.

The period of greatest expansion of stream gaging in the basin proved to be the interval between 1911 and 1921, and the majority of gaging stations were established during that time. It is significant that the use of water for irrigation had reached proportions almost as large as that of the present time (see fig. 1). Since then additional tracts of land in the lower basin have been reclaimed into irrigable farms, the water supplied mostly by the Snake River. Stream gaging in this basin, therefore, assumes a different aspect from that in many other western regions. The need of data for research and hydrological investigations becomes of secondary importance here. The development of irrigation projects preceded the establishment of most of the gaging station network; consequently, the gaging-station records are useful primarily in connection with the effective management and utilization of the water resources rather than for hydrological investigations.

The Big Wood River basin in 1950 has nine stations that are classified in this category, and their records extend from 25 to 40 yr, one station having only 13 yr of record. These key stations are: Big Wood River at Hailey and Big Wood Slough at Hailey, Big Wood River near Bellevue, Camas Creek near Blaine, Big Wood River below Magic Dam near Richfield, Big Wood River near Gooding, Little Wood River at Campbell ranch near Carey, Little Wood River near Carey, Silver Creek near Picabo, Little Wood River near Richfield, and Little Wood River at Shoshone. Ten discontinued stations also have been classified under this category, two having records from 25 to 40 yr, three having records from 10 to 24 yr, and five having records from less than 1 to 9 years. These ten discontinued stations are: Big Wood River at Gimlet, Big Wood River at Glendale Bridge near Bellevue, Big Wood River above North Gooding Canal near Shoshone, Big Wood River below North Gooding Canal near Shoshone, Big Wood River near Shoshone, Big Wood River above Thorn Creek near Gooding, Big Wood River at Gooding, Fish Creek above dam near Carey, West Fork of Fish Creek near Carey, and Fish Creek near Carey. The records of the stations now in operation are essential to derive the maximum beneficial use from the water resources of the basin. A graphic picture of the network of gaging stations in the basin, together with a measure of the length of their records, is shown in figure 2.

Stations operated entirely for research and investigation provide an inventory of water resources for planning further developments and aid in the solution of specific problems relating to water resources. Two gaging stations of this type currently in operation are Big Wood River near Ketchum and Warm Springs Creek at Guyer Hot Springs near Ketchum. Four stations of investigational nature have been discontinued: Big Wood River at Ketchum, Warm Springs Creek near Ketchum, Trail Creek near Ketchum, and Muldoon Creek near Muldoon. The records of all these gaging stations are relatively brief, the longest being 10 yr and the shortest about 2 months.

Records of past and present gaging stations on the larger streams are adequate for operational purposes; but many of the station records are of insufficient length and detail to determine the water yield or to furnish information for purposes of design. The records of many of the tributary streams are of short duration and do not give the over-all picture of magnitude of yield for the drainge basin. A summary of streamflow records of each gaging station in the basin in relation to the natural yield at that point is shown in table 5.

The relative size of the basin's surface runoff is indicated by the average discharge for the following stations for the 10 yr period October 1939 to September 1949:

Gaging station	Average discharge (cfs)
Big Wood River below Magic dam, near Richfield-------	432
Silver Creek near Picabo----	154

The records for Little Wood near Carey are incomplete for 1943, the year of highest discharge in the 10 yr period. For the broken 9 yr period October 1939 to September 1942 and October 1943 to September 1949, the average discharge for the three stations is shown at the top of page 14.

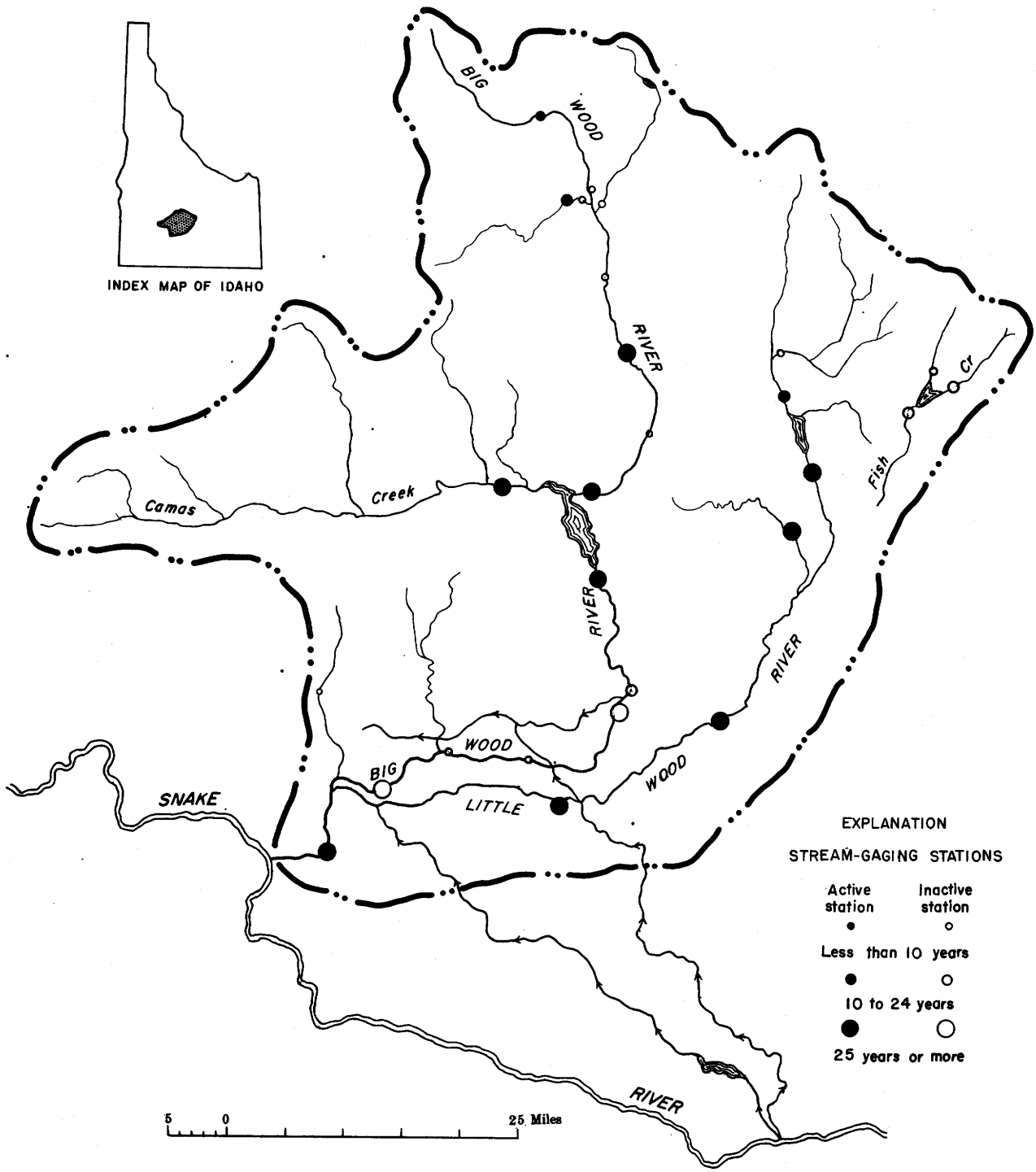

Figure 2.--Map showing location and duration of streamflow records.

Gaging station	Average discharge (cfs)
Big Wood River below Magic Dam near Richfield	355
Little Wood River near Carey	135
Silver Creek near Picabo	151

Records for storage reservoirs are deficient; proper records are maintained on only one, Magic Reservoir. Records for three major reservoirs are inadequate. These are Fish Creek reservoir, Little Wood reservoir, and Twin Lakes reservoir. There are no records for seven minor reservoirs.

The records of diversions are good in some areas, especially for diversions from Big Wood River, Silver Creek, and Little Wood River below Silver Creek. Some records of diversions on Upper Little Wood River and Fish Creek are available. The greatest deficiency is in records of diversions from streams tributary to Big Wood and Little Wood Rivers. No central agency maintains records or data on the utilization of water in the basin. Thus, there appears to be a need for more accurate and current data on utilization. Ground water is important in Big Wood River basin, and more data and records are needed for the correlation between surface supply and ground water for proper utilization of all water in the basin.

Table 5.--Streamflow records in relation to natural yield

[For details of regulation, diversion, and other exceptions to natural yield see station descriptions beginning on page 16]

No.	Gaging station	Upstream regulation and depletion
1	Big Wood River near Ketchum	None of consequence.
2	Big Wood River at Ketchum	Numerous small diversions for irrigation.
3	Warm Springs Creek at Guyer Hot Springs, near Ketchum.	Several small diversions.
4	Warm Springs Creek near Ketchum	Numerous diversions for irrigation and domestic use.
5	Trail Creek at Ketchum	Do.
6	Big Wood at Gimlet	Do.
7	Big Wood Slough at Hailey and Big Wood River at Hailey.	Do.
8	Big Wood River at Glendale bridge, near Bellevue.	Many diversions for irrigation and domestic use.
9	Big Wood River near Bellevue	Do.
10	Camas Creek near Blaine	Many small diversions on Camas Creek and its tributaries. Storage and regulation by four reservoirs.
11	Big Wood River below Magic Dam, near Richfield.	Many small diversions; storage and regulation by Magic Reservoir and several small reservoirs.
12	Big Wood River above North Gooding Canal, near Shoshone.	Many diversions; storage and regulation by one major and several minor reservoirs. After 1925 all the flow, except flood waters, was either bypassed or diverted above the gaging station.
13	Big Wood River below North Gooding Canal, near Shoshone.	Do.
14	Big Wood River near Shoshone	Many diversions; storage and regulation by one major and several minor reservoirs. Flow altered after 1932 by Milner-Gooding Canal, which carries Snake River water.
15	Big Wood River above Thorn Creek, near Gooding.	Do.
16	Big Wood River at Gooding	Do.
17	Dry Creek near Blanche	None of consequence.
18	Muldoon Creek near Muldoon	Numerous diversions; storage and regulation by one small reservoir.

Table 5.--Streamflow records in relation to natural yield--Continued

No.	Gaging station	Upstream regulation and depletion
19	Little Wood River at Campbell ranch, near Carey.	Several diversions. Storage and regulation on Muldoon Creek.
20	Little Wood River near Carey	Numerous diversions; storage and regulation by one large and three small reservoirs.
21	Fish Creek above dam, near Carey	Numerous small diversions.
22	West Fork Fish Creek near Carey	Several small diversions.
23	Fish Creek near Carey	Numerous small diversions; regulation and storage in Fish Creek reservoir.
24	Silver Creek near Picabo	Numerous diversions.
25	Little Wood River near Richfield	Numerous diversions. Storage and regulation upstream.
26	Little Wood River at Shoshone	Many diversions; storage and regulation by two major and several minor reservoirs. Snake River water imported 1932 and thereafter.
27	Big Wood River near Gooding	Many diversions; storage and regulation by two major and several minor reservoirs. Snake River water imported 1916 and thereafter.

Note.--Depletion of flow for irrigation usually occurs during the period May to September.

SYLLABUS OF GAGING STATION RECORDS

Explanation of Data

The data presented in the following pages apply to the physical and hydrologic setting at and above the gaging stations. Location, records available, and bypass channels refer to the gaging station and the records of discharge at that site. Data on diversions, return flow, and utilization refer to the area between that gaging station and the next gaging station upstream. Drainage area refers to all above the gaging station.

Gaging stations on the stream are presented in downstream order from headwater to mouth, and stations on tributaries to that stream are inserted in the order in which the tributaries enter that stream. Diversions and return flow are listed in the same downstream order. The relative rank of the tributaries is indicated in the table of contents by indention.

The "location" paragraph shows the location of the gaging station with respect to latitude and longitude or land subdivisions, as well as with respect to the nearest town or prominent feature of the stream.

"Drainage area", where given, refers to the entire drainage area above the gaging station. Where these data are not available, the paragraph has been omitted.

"Records available" indicates the period for which discharge records are known to be available. Where the source of such information is not shown, these records are published by the Geological Survey in its series of annual water-supply papers (see p. 8).

"Bypass channels" are those carrying surface flow which bypasses the gaging station and which, therefore, is not measured at the station and may or may not be included in the station record. In this report most such channels are canals or ditches which carry water past the station, or several stations, in succession, for use downstream. Any unusual circumstances in connection with the bypass flow are explained. At certain stations the flow of the canal is or can be added to that of the gaging station to give the total surface flow at that site; however, for most bypassing canals a certain part of the water originally diverted is used upstream or lost through seepage, and the amount actually bypassing the station is less than that diverted.

"Diversion" applies to water removed from the natural channel by artificial means such as a ditch, canal, pipe, or pump. Here, "locations" refer to the headgate or point at which water is caused to leave the stream. Although larger canals and ditches have continuous water-stage recorders in operation during the irrigation season or a staff gage read by an observer, the accurate flow of most diversions is not known. Therefore, the "water right" is shown in order to provide an approximation of the quantity of water involved. Five types of rights are represented, namely:

Decreed rights.--Rights confirmed by the court to the use of water.

License rights.--Rights initiated by application to Idaho State Department of Reclamation for permit and all of the terms of the permit complied with and license issued.

Permit rights.--Rights in process of completion but license not issued.

Prescriptive rights.--Rights initiated without a record having been made, the owner claiming the water by virtue of his continued use of water.

Storage rights.--Rights for use of stored water in reservoirs, released for use on

demand. Storage rights may be either decree, license, permit, or prescriptive. In areas served by storage water to supplement the natural flow, the water right is segregated to show stored water and natural flow.

It is important to note that the amount of the water right does not always represent the amount used. When dates of establishment of canals and ditches are not available, an approximation is made with relation to the establishment of the gaging station. When the water right is unknown, the capacity of canals and ditches is shown to give some indication as to size of diversion. The purpose of the diversion is usually shown. Diversions made for irrigation usually occur only during the irrigation season, generally from May through September. During the remainder of the year there may be little or no water used for this purpose. Available records for each diversion are indicated.

"Return flow" refers to water returning to the stream from irrigated tracts by overland flow within the area indicated. Location of wasteways, their approximate flow, and source of those flow values are listed if known. Some large amounts of subsurface flow are mentioned, although this report is confined generally to surface runoff data.

"Storage and regulation" refer to reservoirs or other structures that affect the normal regimen of flow at the particular gaging station. So considered, regulation is the alternate storage and release of water, excluding withdrawals by diversion from the stream channel. Regulation at the station also may be caused by structures located in areas above successive upstream gaging stations, but such sources are shown only for the areas in which they are located.

"Utilization" is the use of water in the area indicated, regardless of the source of that water. Changes in utilization from its beginning to the present are given if known.

The amount of irrigated land was determined by totaling the acreage represented in all the water rights of record. The results do not always represent the actual irrigated area, owing to the fact that owners of water rights may not have completed the contemplated reclamation or have abandoned the use of the water on a portion of the land.

Gaging-Station Records

1.--Big Wood River near Ketchum, Idaho

Location.--Staff gage, lat 43°48', long. 114° 26', in sec. 4, T. 5 N., R. 17 E., half a mile upstream from North Fork and 8 miles northwest of Ketchum.

Drainage area.--137 sq mi.

Records available.--May 1948 to September 1950.

Bypass channels.--None.

Diversions.--Several permits on file (at Idaho State Dept. of Reclamation) for nonconsumptive uses, by small power and mining operations on Boulder Creek above gaging station. No depletion of natural flow. No known records.

Return flow.--Water diverted for power on mining operations is returned to stream above gaging station.

Storage and regulation.--Three unnamed ponds with small dams at headwaters of Prairie Creek basin store as much as 97.5 acre-ft of spring runoff for irrigation. Water is released in natural channel for use below gaging station.

Utilization.--Some natural flow of Boulder Creek, a tributary, may have been used for small power and mining operations since 1904.

2.--Big Wood River at Ketchum, Idaho

Location.--Staff gage, lat 43°41'15", long. 114°22'30", in the SE¼ sec. 12 T. 4 N., R. 17 E., half a mile above mouth of Warm Springs Creek and 1½ miles above mouth of Trail Creek.

Records available.--May 1920 to September 1921, when station was discontinued.

Bypass channels.--None.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--Twelve diversions known to have been in effect at various times above station. Water rights for these diversions total 24.5 cfs. See table no. 6.

Return flow.--No known surface return flow.

Storage and regulation.--None except as shown for station upstream.

Utilization.--Water is used primarily for irrigation on about 1,336 acres in this area at present. As there have been no significant changes in water rights since 1921, the area irrigated is believed to have been about the same since this time. The acreage for which water rights were established is indicated by table 6. The irrigation of each of these tracts of land probably began at about the date of establishment of the water right and was essentially completed within a few years.

Some water of inconsequential amounts used for domestic and stock water purposes. Also a small amount of water is used to maintain a log pond for a sawmill.

3.--Warm Springs Creek at Guyer Hot Springs, near Ketchum, Idaho

Location.--Water-stage recorder, lat 43°41', long. 114°25', in the NE¼ sec. 15, T. 4 N., R. 17 E., at Guyer Hot Springs, 2 1/8 miles upstream from mouth and 2.2 miles west of Ketchum.

Drainage area.--96 sq mi.

Records available.--November 1940 to September 1950.

Bypass channels.--The diversion from Guyer Hot Springs bypasses the station, discharge is not included in station record. The flow is conducted to the Bald Mountain resort in Ketchum by a wood and steel pipeline. No known record of flow.

Table 6.--Diversions in Big Wood River basin, above Big Wood River at Ketchum, Idaho
[Diversions in this table are those located between this station and the next station upstream, Big Wood River near Ketchum, No. 1]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Davis (A) Canal.	SE¼ sec. 4, T. 5 N., R. 17 E., from Big Wood River, 800 ft above North Fork.	1912-20	2.0 (permit)	Irrigation	For use on 156 acres above station in sec. 10, T. 5 N., R. 17 E. Permit abandoned 1920. 1/ Records for 1919 in files of Big Wood River Watermaster.
Brinegar ditch.	Sec. 9, T. 5 N., R. 17 E., from Oregon Creek, 1½ miles above mouth.	1910	2.0 (license)	----do----	For use on 160 acres above station in sec. 10 and sec. 15, T. 5 N., R. 17 E. No records of flow. 1/
Redmon (D) Canal.	SE¼NE¼ sec. 15, T. 5 N., R. 17 E., from Big Wood River.	1912	1.6 (license)	----do----	For use on 145 acres above station in sec. 23, T. 5 N., R. 17 E. 1/ Records in files of Big Wood River Watermaster.
Winslow (B) Canal.	SE¼NE¼ sec. 15, T. 5 N., R. 17 E., from Big Wood River.	1945	3.2 (decree)	----do----	For use on part of 314 acres above station in sec. 14 and sec. 23, T. 5 N., R. 17 E. 2/ Records in files of Big Wood River Watermaster.
Winslow (original B) Canal.	Sec. 12, T. 5 N., R. 17 E., from Eagle Creek, approx. 2 miles above mouth.	1909	2.0 (decree)	----do----	For use on part of 314 acres above station in sec. 14 and sec. 23, T. 5 N., R. 17 E. 3/ Records for 1920-23 in files of Big Wood River Watermaster.
Winslow (C) Canal.	Sec. 14, T. 5 N., R. 17 E., from Eagle Creek, approx. one-half mile above mouth.	1902	4.6 (decree)	----do----	Do.
Feldhusen ditch.	NE¼NE¼ sec. 23, T. 5 N., R. 17 E., from Dip Creek.	1946	1.0 (license)	----do----	For use on 70 acres above station in sec. 23, T. 5 N., R. 17 E. No records of flow. 1/
Gooding (E) Canal.	SW¼SW¼ sec. 25, T. 5 N., R. 17 E., from Big Wood River.	1882	4.8 (decree)	----do----	For use on 120 acres above station in sec. 36, T. 5 N., R. 17 E., and 40 acres in sec. 1, T. 4 N., R. 17 E. 2/ Records in files of Big Wood River Watermaster.
Smith ditch	Sec. 30, T. 5 N., R. 17 E., from Lake Creek, 1¾ miles above mouth.	1910	1.1 (license)	----do----	For use on 160 acres of unsurveyed land above station on easterly side of Lake Creek at mouth in T. 5 N., R. 17 E. No record of flow. 1/
Leflang ditch	Sec. 25, T. 5 N., R. 17 E., from Lake Creek.	1923	.8 (license)	----do----	For use on 51 acres above station in sec. 25, T. 5 N., R. 18 E. No records of flow. 1/
Flowers (F) ditch.	SE¼SW¼ sec. 36, T. 5 N., R. 17 E., from Big Wood River.	1935	.4 (license)	For sawmill pond and small garden	For use on one-fourth acre above station in the SE¼SW¼ sec. 1, T. 4 N., R. 17 E.,; also to float logs for small sawmill. 1/ Records in files of Big Wood River Watermaster.
Flowers ditch	SE¼SE¼ sec. 2, T. 4 N., R. 17 E., from Adams Creek.	1909	1.0 (license)	Irrigation	For use on 160 acres above station in sec. 1, T. 4 N., R. 17 E. No records of flow. 1/

1/ Files of Idaho State Dept. of Reclamation.
2/ Frost Decree on file with Idaho State Dept. of Reclamation.
3/ Eagle Creek Decree on file with Idaho State Dept. of Reclamation.
Note.--Permits for additional diversion have been issued in the past but failed to prove of beneficial use, and therefore are not included.

Diversions.--Two diversions in use during irrigation season, and one in use throughout the year are shown in table 7.

Return flow.--No known surface return flow.

Storage and regulation.--None above station.

Utilization.--The primary use above the station is for irrigation on about 200 acres of land at present. Tributary hot springs are used for recreational purposes such as bathing and swimming.

4.--Warm Springs Creek near Ketchum, Idaho

Location.--Staff gage, lat 43°41'20", long. 114°24'00", in sec. 11, T. 4 N., R. 17 E., 2 miles above junction with Big Wood River and 1¾ miles west of Ketchum.

Records available.--May 1920 to September 1921, when records were discontinued.

Bypass channels:--None.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--

1. Rhodes Canal (no. 5) diverts about 5 cfs during irrigation season, under decreed water right of 1894, from Warm Springs Creek in the SW¼NW¼ sec. 14, T. 4 N., R. 17 E. (Frost Decree on file at Idaho State Dept. of Reclamation.) Records available in files of Big Wood River Watermaster.

2. Farnlum Canal (no. 6) diverts 9.6 cfs during irrigation season, under decreed water right of 1888, from Warm Springs Creek in the SW¼NW¼ sec. 14, T. 4 N., R. 17 E. (Frost Decree on file at Idaho State Dept. of Reclamation.) Records available in files of Big Wood River Watermaster.

Return flow.--No known surface return flow.

Storage and regulation.--None above station.

Utilization.--Rhodes Canal (no. 5) and Farnlum Canal (no. 6) irrigate about 372 acres at present above station in portions of sections 11, 12, 13, and 14, T. 4 N., R. 17 E.

Table 7.--Diversions in Warm Springs Creek basin, above Warm Springs Creek at Guyer Hot Springs, near Ketchum, Idaho

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Board ditch	T. 4 N., R. 17 E., from Warm Springs Creek, 7 miles from mouth.	1906	1.6 (license)	Irrigation	For use on 160 acres of unsurveyed land, 5 miles southwest of Guyer Hot Springs. No records of flow. 1/
Lewis Canal (No. 6-A)	NE¼SW¼ sec. 15, T. 4 N., R. 17 E., from Warm Springs Creek.	1889	2.0 (decree)	----do----	For use on 80 acres in sec. 14, T. 4 N., R. 17 E. 2/ Records available in Big Wood River Watermaster's annual report. Abandoned in 1936.
Guyer Hot Springs.	NE¼NE¼ sec. 15, T. 4 N., R. 17 E., bypass originates from springs which are tributary to Warm Springs Creek	1936	1.0 (license)	Recreation	The high level discharge of Guyer Hot Springs bypasses the gaging station via a wood and steel pipeline to be used at the Bald Mountain resort in Ketchum. Ne records of flow. 1/

1/ Files of Idaho State Dept. of Reclamation.
2/ Frost Decree on file with Idaho State Dept. of Reclamation.
Note.--Permits for additional diversions have been issued in the past but failed to prove of beneficial use and therefore are not included.

5.--Trail Creek at Ketchum, Idaho

Location.--Staff gage, lat 43°40'20", long. 114°21'50", in the SW¼ sec. 18, T. 4 N., R. 18 E., a quarter of a mile above mouth and a quarter of a mile south of Ketchum.

Records available.--July 1920 to September 1921, when station was discontinued.

Bypass channels.--All the flow of McCoy Canal (no. 3) and 30 percent of the flow of Brice Canal (no. 4) bypasses the gaging station to irrigate land below. Flow of canals not included in records for station.

Diversions.--Several diversions for irrigation, with water rights to 47.3 cfs during the irrigation seasons, listed in table 8.

Return flow.--None.

Storage and regulation.--The Sun Valley reservoir is used only for recreational purposes and storage amounts to only 82 acre-ft. There is no regulation of the natural flow.

Utilization.--The stream is utilized principally for irrigation on about 873 acres most of which is under cultivation. A very important use also is the domestic water supply for the village of Ketchum. Recreational benefits are also derived in the form of boating and fishing.

Table 8.--Diversions in Trail Creek basin, above Trail Creek at Ketchum, Idaho

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Lewis Canal (no. 1)	NE¼SE¼ sec. 32, T. 5 N., R. 18 E., from Trail Creek.	1881	25 (decree)	Irrigation	For use on 753 acres in parts of secs. 5, 7, and 18, T. 4 N., R. 18 E. 1/ Records available in Big Wood River Watermaster's annual report.
Ketchum Canal (no. 2)	NE¼NW¼ sec. 4, T. 4 N., R. 18 E., from Trail Creek.	1883	10.5 (decree)	Irrigation and domestic water supply.	For use on 120 acres in sec. 18, T. 4 N., R. 18 E. Also used as domestic water supply for the village of Ketchum. 1/ Records available in Big Wood River Watermaster's annual report.
Brass ditch	Center line of lot 2, sec. 5, T. 4 N., R. 18 E., from Trail Creek.	1915	1.6 (permit)	Irrigation	This ditch was completed but no records of use known. The intent was to irrigate 100 acres in sec. 5, T. 4 N., R. 18 E. Abandoned. 2/
McCoy Canal (no. 3)	SW¼SE¼ sec. 7, T. 4 N., R. 18 E., from Trail Creek.	1883	11.8 (decree)	----do----	For use on 120 acres in portions of secs. 18 and 19, T. 4 N., R. 18 E. some of the flow being utilized to irrigate land below gaging station. 1/ Records available in Big Wood River Watermaster's annual report.
Pothier ditch	NW¼SW¼ sec. 18, T. 4 N., R. 18 E., from Trail Creek.	1916	.8 (license)	----do----	This ditch was completed but no records of use known, the intent being to irrigate 40 acres in sec. 19, T. 4 N., R. 18 E. Abandoned. 2/
Price Canal (no. 4)	SE¼SW¼ sec. 18, T. 4 N., R. 18 E., from Trail Creek.	1884	.3 (decree)	----do----	For use on 85 acres in sec. 18, T. 4 N., R. 18 E., a part of which is below gaging station. 1/ Records available in Big Wood River Watermaster's annual report. Abandoned in 1935.

1/ Frost Decree on file at Idaho State Dept. of Reclamation.
2/ Files of Idaho State Dept. of Reclamation.
Note.--Permits for additonal diversions have been issued in the past but failed to prove of beneficial use and therefore are not included.

6.--Big Wood River at Gimlet, Idaho

Location.--Staff gage, lat 43°36'00", long. 114°20'50", in the NE¼NE¼ sec. 18, T. 3 N., R. 18 E., half a mile south of Gimlet and 6 miles south of Ketchum.

Records available.--April 1904 to May 1905, July 1920 to September 1921.

Bypass channels.--All the flow of Cramer Canal (no 13) bypasses the gaging station and irrigates land along the easterly side of the Big Wood River. About 72 percent of the flow of Comstock Canal (no. 10) also bypasses the gaging station and irrigates land along the northerly side of Greenhorn Creek. Flow of these canals is not included in records for station.

(The information that follows applies only to the drainage area between this station and the next stations upstream.)

Diversions.--There are 25 water rights for irrigation which permit seasonal usage of about 84 cfs, 2 water rights for nonconsumptive power use, and 1 water right for stock water. See table 9.

Return flow.--All water used for power and milling purposes returned to stream above station. No surface return flow from irrigation known.

Storage and regulation.--None except as noted for stations upstream.

Utilization.--Water rights have been granted for the irrigation of about 2,463 acres of land most of which is under irrigation at present. Substantially all of this land is believed to have been irrigated during the period of record for this station. Insignificant quantities are also used for domestic and stock water purposes. Some use for small power and milling operations.

Table 9.--Diversions in Big Wood River basin, above Big Wood River at Gimlet, Idaho
[Diversions in this table are those located between this station and the next stations upstream, Big Wood River at Ketchum No. 2, Trail Creek at Ketchum No. 5, and Warms Springs Creek near Ketchum No. 4]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Bonning Canal (no. 7)	SE¼NW¼ sec. 19, T. 4 N., R. 18 E., from Big Wood River.	1884	4.0 (decree)	Irrigation	For use on 160 acres in sec. 19 and sec. 30, T. 4 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Bonning ditch	NE¼SW¼ sec. 19, T. 4 N., R. 18 E., from Big Wood River.	1909	.4 (license)	----do----	For use on 50 acres in portions of sec. 20 and sec. 29, T. 4 N., R. 18 E. 2/ No records of use available.
Johnson Canal (no. 8)	NW¼NE¼ sec. 30, T. 4 N., R. 18 E., from Big Wood River.	1883	5.6 (decree)	----do----	For use on 240 acres in secs. 30 and 31, T. 4 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster. Abandoned. 1928.
Hardess ditch	Middle of North line of the NW¼ sec. 15, T. 4 N., R. 18 E., from Elkhorn Creek.	1914	2.5 (permit)	Power	Used as source of power for milling operations. 2/ No records of use known.
Griffith ditch	SW¼SW¼ sec. 16, T. 4 N., R. 18 E., from Elkhorn Creek.	1911	3.9 (permit)	Irrigation	For use on 320 acres in secs. 20 and 21, T. 4 N., R. 18 E. 2/ No records of use available.
Bonning ditch	NE¼SW¼ sec. 20, T. 4 N., R. 18 E., from Elkhorn Creek.	1909	.2 (license)	----do----	For use on 25 acres in sec. 20, T. 4 N., R. 18 E. 2/ No records of use available.
Bonning ditch	NE¼SE¼ sec. 19, T. 4 N., R. 18 E., from Elkhorn Creek.	1884	1.2 (decree)	----do----	For use on 160 acres in sec. 19 and sec. 30, T. 4 N., R. 18 E. 1/ No records of use available.
Spring Canal (no. 9)	SE¼NE¼ sec. 30, T. 4 N., R. 18 E., from Big Wood River.	1900	1.2 (decree)	----do----	For use on 80 acres in sec. 31, T. 4 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster. Abandoned. 1932.
Comstock Canal (no. 10)	SW¼SW¼ sec. 29, T. 4 N., R. 18 E., from Big Wood River.	1887	14.0 (decree)	----do----	For use on 680 acres in sec. 7 and sec. 18, T. 3 N., R. 18 E. and sec. 31, T. 4 N., R. 18 E. 1/ Supplemental water amounting to 97 acre-ft is also diverted through this canal. This water is stored in natural ponds at the head of Prairie Creek. Records available in files of Big Wood River Watermaster.
Johnson ditch	NE¼SW¼ sec. 31, T. 4 N., R. 18 E., from springs tributary to Big Wood River.	1909	.5 (license)	----do----	For use on 25 acres in sec. 31, T. 4 N., R. 18 E. No record of use known. 2/
Wilson Canal (no. 11)	SE¼SE¼ sec. 31, T. 4 N., R. 18 E., from Big Wood River.	1883	2.2 (decree)	----do----	For use on 160 acres in sec. 6, T. 3 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Betty Canal (no. 12)	SE¼SE¼ sec. 31, T. 4 N., R. 18 E., from Big Wood River.	1907	3.0 (decree)	----do----	For use on 160 acres in sec. 5 and sec. 8, T. 3 N., R. 18 E. 1/ Abandoned prior to 1919.

Table 9.--Diversions in Big Wood River basin, above Big Wood River at Gimlet, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Knight ditch	NW¼NE¼ sec. 28, T. 4 N., R. 19 E., from East Fork of Big Wood River.	1922	0.2 (permit)	Irrigation	For use on 10 acres in sec. 32, T. 4 N., R. 19 E. 2/ No records of use known.
Knight-Gooding Canal. (no. 19)	NW¼SW¼ sec. 28, T. 4 N., R. 19 E., from East Fork of Big Wood River.	1884	8.4 (decree)	----do----	For use on 320 acres in sec. 29, T. 4 N., R. 19 E. 1/ Records available in files of Big Wood River Watermaster.
Ellingsen ditch.	SW¼SE¼ sec. 28, T. 4 N., R. 19 E., from springs tributary to East Fork of Big Wood River.	1916	.14 (license)	----do----	For use on 21 acres in sec. 33, T. 4 N., R. 19 E. 2/ No records.
Ellingsen ditch.	NE¼SW¼ sec. 33, T. 4 N., R. 19 E., from Cove Creek.	1917	.14 (license)	----do----	For use on 7 acres in sec. 33, T. 4 N., R. 19 E. 2/ No records.
Kneebone ditch.	SW¼NE¼ sec. 30, T. 4 N., R. 19 E., from Hyndman Creek.	1913	.16 (license)	----do----	For use on 160 acres in sec. 25, T. 4 N., R. 18 E., and sec. 30, T. 4 N., R. 19 E. 2/ Records available in files of Big Wood River Watermaster.
Kneebone Canal (no. 16)	SW¼NE¼ sec. 30, T. 4 N., R. 19 E., from Hyndman Creek.	1913	1.84 (license)	----do----	For use on same land as listed under Kneebone ditch. 2/ Records available in files of Big Wood River Watermaster.
Knight Canal (no. 18)	SE¼SE¼ sec. 25, T. 4 N., R. 18 E., from East Fork of Big Wood River.	1888	4.0 (decree)	----do----	For use on 160 acres in sec. 35, T. 4 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Federal Mining and Smelter Co. ditch.	NW¼NE¼ sec. 36, T. 4 N., R. 18 E.	1916	2.0 (license)	Power	Used for mining operations. 2/ No records of use known.
Knight ditch	NW¼NW¼ sec. 35, T. 4 N., R. 18 E., from springs tributary to East Fork of Big Wood River.	1946	1.0 (license)	Stock water	No irrigation. No record of use known.
Peters Canal (no. 17)	SW¼NE¼ sec. 3, T. 3 N., R. 18 E., from East Fork of Big Wood River.	1884	3.0 (decree)	Irrigation	For use on 160 acres in sec. 3, T. 3 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Ivie Canal (no. 15)	SW¼SW¼ sec. 3, T. 3 N., R. 18 E., from East Fork of Big Wood River.	1887	5.2 (decree)	----do----	For use on 120 acres in secs. 8 and 9, T. 3 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Board ditch	SW¼SW¼ sec. 9, T. 3 N., R. 18 E., from East Fork of Big Wood River.	1917	.3 (permit)	----do----	For use on 15 acres in sec. 8, T. 3 N., R. 18 E. 2/ No record of use known.
Peters ditch	SW¼SW¼ sec. 9, T. 3 N., R. 18 E., from East Fork of Big Wood River.	1918	4.0 (permit)	----do----	For use on 200 acres in sec. 3, T. 3 N., R. 18 E. 2/ No record of use known.
Board Canal (no. 14)	NE¼SW¼ sec. 8, T. 3 N., R. 18 E., from East Fork of Big Wood River.	1900	4.0 (permit)	----do----	For use on 160 acres in secs. 7 and 8, T. 3 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster. Abandoned in 1924.

Table 9.--Diversions in Big Wood River basin, above Big Wood River at Gimlet, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Cramer Canal (no. 13)	NE¼SE¼ sec. 8, T. 3 N., R. 18 E., from East Fork of Big Wood River.	1888	16.0 (decree)	Irrigation	For use on 400 acres in sec. 17 and sec. 20, T. 3 N., R. 18 E. 1/ All of the flow bypasses station and is utilized below station. Records available in files of Big Wood River Watermaster.
Miller ditch	Lot 2, sec. 5, T. 3 N., R. 18 E., from springs tributary to East Fork of Big Wood River.	1909	.6 (license)	----do----	For use on 80 acres in sec. 5, T. 3 N., R. 18 E. 2/ No records.

1/ Frost Decree on file with Idaho State Dept. of Reclamation.
2/ Files of Idaho State Dept. of Reclamation.

7.--Big Wood River and Big Wood Slough at Hailey, Idaho (combined stations)

Location.--Big Wood River: Water-stage recorder, lat 43°31', long. 114°20', in the SW¼ sec. 9, T. 2 N., R. 18 E., at highway bridge at Hailey. Big Wood Slough: Water-stage recorder, lat 43°31'00", long. 114° 19'30", in the SW¼ sec. 9, T. 2 N., R. 18 E., at highway bridge at Hailey.

Drainage area.--640 sq mi (total area above river and slough stations).

Records available.--June 1915 to September 1950; July to December 1889 (river only).

Bypass channels.--There are two surface bypass channels. The Hiawatha Canal (no. 22), which diverts from Big Wood River above the gaging stations irrigates some land above the gaging station and terminates below the stations. Approximately 50 percent of the flow of the Hiawatha Canal (no. 22) bypasses the gaging stations. The Justus Canal (no. 32) diverts from the Big Wood Slough above the gaging station and the entire flow is used for irrigation on lands below the gaging stations.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--The permit, decreed or licensed rights listed in table 10 are those which actually have been constructed and used. The Big Wood Slough diverts from the Big Wood River above both station and returns to the natural channel below. A continuous record of the Big Wood Slough is maintained. There have been 11 water rights for irrigation amounting to 212 cfs, 3 water rights used nonconsumptively for power and 3 water rights for domestic and stock water.

Return flow.--All water used for power operations returned to the natural channel without depletion to flow. The tailrace from the inoperative power plant returns to the natural channel of Big Wood River in the SE¼SW¼ sec. 9, T. 2 N., R. 18 E. No known surface return flow from irrigation.

Storage and regulation.--No storage except as noted for upstream stations. At present, flow of Big Wood Slough controlled at inoperative Hailey power plant to meet the requirements of irrigation and sewage dilution. During its period of operation the Hailey power plant regulated the flow in the Slough and consequently the Big Wood River.

Utilization.--The village of Hailey uses the flow of Indian Creek for its domestic water supply. Power developments have used both the Big Wood River and tributaries for a source of water. Nominal amounts of water are used for stock and domestic purposes on the ranches. The paramount use is for irrigation. Water rights have been granted for 5,074 acres in this area, most of which is under irrigation at present.

Table 10.--Diversions in Big Wood River basin, above Big Wood River at Hailey, Idaho, and Big Wood Slough at Hailey, Idaho

[Diversions in this table are those located between this station and the next station upstream, Big Wood River at Gimlet No. 6]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Mizer Canal (no. 20)	NE¼NE¼ sec. 18, T. 3 N., R. 18 E., from Big Wood River.	1883	16.5 (decree)	Irrigation	For use on 580 acres in secs. 20, 21, 28, and 29, T. 3 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Mizer Canal (no. 21)	NE¼NE¼ sec. 18, T. 3 N., R. 18 E., from Big Wood River.	1883	No established water right.	----do----	For occasional use on 60 acres in sec. 17, T. 3 N., R. 18 E. with some water transferred from canal no. 20. Abandoned in 1924. Records available in files of Big Wood River Watermaster.
Blakely ditch	SE¼SW¼ sec. 2, T. 3 N., R. 17 E., from springs tributary to Greenhorn Creek.	1924	.5 (permit)	Stock water	No irrigation. 2/ No records of use known.
Blakely ditch	Lot 1, sec. 11, T. 3 N., R. 17 E., from springs tributary to Greenhorn Creek.	1924	.5 (permit)	----do----	Do.
Comstock ditch.	NE¼NE¼ sec. 13, T. 3 N., R. 17 E., from Greenhorn Creek.	1885	6.0 (decree)	Irrigation	For use on a portion of 680 acres in sec. 7 and sec. 18, T. 3 N., R. 18 E. and sec. 31, T. 4 N., R. 18 E. This land has already been described under the Comstock Canal (no. 10) in table 9 diverting from the Big Wood River. 1/ No record of use known.
Hiawatha Canal (no. 22)	SE¼NE¼ sec. 19, T. 3 N., R. 18 E., from Big Wood River.	1883	69.2 (decree)	----do----	For use on 2,335 acres in secs. 3, 4, 5, 10, and 16, T. 2 N., R. 18 E., and secs. 17, 20, 29, 32, and 33, T. 3 N., R. 18 E. 1/ Some of this land is above gaging station and the remainder below. Records available in files of Big Wood River Watermaster.
Mizer ditch	NE¼SW¼ sec. 20, T. 3 N., R. 18 E., from springs tributary to Big Wood River.	1911	3.6 (license)	Power	No records of use known. 2/
Howard Canal (no. 23)	SE¼SW¼ sec. 20, T. 3 N., R. 18 E., from Big Wood River.	1881	3.2 (decree)	Irrigation	For use on 160 acres in sec. 29, T. 3 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Osborn Canal (no. 24)	SW¼NE¼ sec. 29, T. 3 N., R. 18 E., from Big Wood River.	1886	41.0 (decree)	----do----	For use on 1,220 acres in secs. 10, 14, 15, T. 2 N., R. 18 E. and secs. 29, 32, 33, T. 3 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Smith ditch	NW¼NE¼ sec. 34, T. 3 N., R. 17 E., from Deer Creek.	1932	10 (license)	Power	Used for power at resort, a reservoir of 5 acres is included. 2/ No records of use known.

Table 10.--Diversions in Big Wood River basin, above Big Wood River at Hailey, Idaho, and Big Wood Slough at Hailey, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Murphy Canal (no. 29)	NW¼SE¼ sec. 26, T. 3 N., R. 17 E., from Deer Creek.	1885	2.4 (decree)	Irrigation	For use on 160 acres in sec. 26, T. 3 N., R. 17 E. 1/ No records of use known.
Curren Canal (no. 28)	SW¼NW¼ sec. 25, T. 3 N., R. 17 E., from Deer Creek.	1880	13.6 (decree)	----do----	For use on 320 acres in sec. 25, T. 3 N., R. 17 E. 1/ No records of use known.
McMonagle Canal. (no. 27)	NE¼SW¼ sec. 30, T. 3 N., R. 17 E., from Deer Creek.	1880	32.8 (decree)	----do----	For use on 320 acres in sec. 30, T. 3 N., R. 18 E. 1/ No records of use known.
Purdum Canal (no. 25)	NW¼NE¼ sec. 32, T. 3 N., R. 18 E., from Big Wood River.	1884	6.6 (decree)	----do----	For use on 135 acres in sec. 5, T. 2 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Hailey Water Power Co.	NE¼SW¼ sec. 23, T. 5 N., R. 16 E., from Indian Creek.	Prior to 1907	Entire flow of stream.	Domestic water supply.	Used for domestic water supply for village of Hailey; carried in wood pipeline. 1/ No records of use known.
Hailey Power Plant Flume.	SE¼SE¼ sec. 5, T. 2 N., R. 18 E., from Big Wood River.	1904	250 (license)	Power	Used as source of power for Hailey and milling operations in the near vicinity. 2/ Records available as Big Wood Slough at Hailey, Idaho.
Cramer Canal (no. 31)	NE¼NE¼ sec. 9, T. 2 N., R. 18 E., from Big Wood Slough.	1881	2.0 (decree)	Irrigation	For use on 65 acres in sec. 9, T. 2 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Justus Canal (no. 32)	SW¼NW¼ sec. 9, T. 2 N., R. 18 E., from Big Wood Slough	1883	18.5 (decree)	----do----	For use on 680 acres in portions of secs. 9, 15, 16, T. 2 N., R. 18 E. The entire flow bypasses the station and irrigates land below. 1/ Records available in files of Big Wood River Watermaster.

1/ Frost Decree on file with Idaho State Dept. of Reclamation.
2/ Idaho State Dept. of Reclamation files.

8.--Big Wood River at Glendale Bridge, near Bellevue, Idaho

Location.--Water-stage recorder on line between secs. 12 and 13, T. 1 N., R. 18 E., at Glendale Bridge, 2½ miles southwest of Bellevue.

Records available.--May 1920 to August 1921, when station was discontinued.

Bypass channels.--There were four bypass channels in use at the time this gaging station was in operation, the District Canal (no. 45), Kingsberry Canal (no. 48), Bannon Canal (no. 49), and Glendale Canal (no. 50). In 1946 the point of diversion of the bypass Canal (no. 55) was changed from the SE¼SW¼ sec. 13, T. 1 N., R. 18 E. to the SW¼SW¼ sec. 12, T. 1 N., R. 18 E., and bypasses the station site. Records are maintained on all four bypass channels by the Big Wood River Watermaster. Approximately 75 percent of flow of District Canal (no. 45) bypasses station. All the flow of the Kingsberry Canal (no. 48), Bannon (no. 49), and Glendale (no. 50) bypasses the gaging station. The flow of these canals is not included in records for station.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--The diversions listed in table 11 are those decreed, licensed or permit rights which have actually been constructed and used. There have been 40 water rights for irrigation amounting to approximately 543 cfs, 3 water rights for power and milling operations, and 1 water right for domestic water supply.

Return flow.--Water for power and milling operations returned to streams without loss. Sewage effluent from Village of Hailey enters stream. No known surface return flow from irrigation.

Storage and regulation.--No storage except as indicated for upstream stations. During period of record for this station, some regulation was caused by Hailey and Bellevue power plants, now inoperative.

Utilization.--The village of Bellevue obtains its domestic water supply from Seamans Creek, a tributary to Big Wood River. There are several small power and milling operations on the tributary streams. Power for Bellevue and the immediate vicinity was generated by the Bellevue power plant, which used water from the Big Wood River as a source of energy. Insignificant quantities are used on ranches for stock water and domestic purposes. By far the most important use is for irrigation, about 10,732 acres are irrigated above the gaging station at present.

Table 11.--Diversions in Big Wood River basin, above Big Wood River at Glendale Bridge, near Bellevue, Idaho

[Diversions in this table are those located between this station and the next stations upstream, Big Wood River and Big Wood Slough at Hailey No. 7]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Neusus ditch	SE¼NE¼ sec. 5, T. 1 N., R. 17 E., from Kelly Creek.	1910	0.32 (license)	Irrigation	For use on part of 120 acres in sec. 4, T. 1 N., R. 17 E. 1/ No records of use known.
Horan ditch	SE¼SE¼ sec. 33, T. 2 N., R. 17 E., from Croy Creek.	1911	.70 (license)	----do----	For use on part of 120 acres located in portions of secs. 33 and 34, T. 2 N., R. 17 E. 1/ No records of use known.
Todd ditch	NE¼SW¼ sec. 34, T. 2 N., R. 17 E., from Elk Creek.	1948	.58 (license)	----do----	For use on 29 acres in sec. 34, T. 2 N., R. 17 E. 1/ No records of use known.
Ervin ditch	SW¼NW¼ sec. 35, T. 2 N., R. 17 E., from Croy Creek.	1880	2.0 (decree)	----do----	For use on 160 acres in sec. 35, T. 2 N., R. 17 E. 2/ No records of use known.
Wertheimer ditch.	NW¼NE¼ sec. 35, T. 2 N., R. 17 E., from springs tributary to Croy Creek.	1913	2.50 (permit)	----do----	For use on 120 acres in sec. 35, T. 2 N., R. 17 E. 1/ No records of use known.
Gilman ditch	SE¼NE¼ sec. 35, T. 2 N., R. 17 E., from Croy Creek.	1883	7.0 (decree)	----do----	For use on 360 acres in secs. 35 and 36, T. 2 N., R. 17 E. 2/ No records of use known.
Plughoff ditch.	Lot 10 sec. 23, T. 2 N., R. 17 E., from Bullion Creek.	1948	3.0 (permit)	Power and milling.	No irrigation. 1/ No record of use known.
Gilman ditch	SW¼SE¼ sec. 25, T. 2 N., R. 17 E., from Bullion Creek.	1883	2.00 (decree)	Irrigation	For use on 120 acres in secs. 25 and 26, T. 2 N., R. 17 E. 2/ No known record of use.
Plumer ditch	NE¼NE¼ sec. 24, T. 2 N., R. 17 E., from unnamed tributary to Croy Creek.	1911	.40 (license)	----do----	For use on 40 acres in sec. 24, T. 2 N., R. 17 E. 1/ No known record of use.
Riley ditch	SW¼NW¼ sec. 20, T. 2 N., R. 18 E., from springs tributary to Croy Creek.	1912	1.00 (permit)	Mining operations.	No irrigation. 1/ No known record of use.
Purcell ditch	NW¼NW¼ sec. 13, T. 2 N., R. 17 E., from Democrat Creek.	1916	1.30 (permit)	Irrigation	For use on 65 acres in sec. 13, T. 2 N., R. 17 E. 1/ No known record of use.
Plumer ditch	NE¼NW¼ sec. 18, T. 2 N., R. 18 E., from Croy Creek.	1882	4.00 (decree)	----do----	For use on 400 acres in sec. 7 and secs. 17 and 18, T. 2 N., R. 18 E. 2/ No known records of use.
Plumer ditch	Lot 4, sec. 18, T. 2 N., R. 18 E., from unnamed stream tributary to Croy Creek.	1909	1.5 (license)	----do----	For use on 200 acres in secs. 18 and 19, T. 2 N., R. 18 E. 1/ No known record of use.

Table 11.--Diversions in Big Wood River basin, above Big Wood River at Glendale Bridge, near Bellevue, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Benson ditch	NE¼NE¼ sec. 17, T. 2 N., R. 18 E., from Croy Creek.	1915	1.10 (license)	Irrigation	For use on 100 acres in secs. 8 and 9 and secs. 16 and 17, T. 2 N., R. 18 E. 1/ No known records of use.
Cove Canal (no. 33)	NE¼SE¼ sec. 16, T. 2 N., R. 18 E., from Big Wood River.	1882	26.05 (decree)	----do----	For use on 960 acres in parts of secs. 22, 23, 25, 26, and 36, T. 2 N., R. 18 E., sec. 1, T. 1 N., R. 18 E., sec. 6, T. 1 N., R. 19 E. 2/ Records available in files of Big Wood River Watermaster.
Quigley ditch	NE¼NE¼ sec. 10, T. 2 N., R. 18 E., from Quigley Creek	1879	All of flow--usually about 2.28 (decree)	----do----	For use on 440 acres in sec. 10, T. 2 N., R. 18 E. 1/ 3/ No known records of use.
Stumbo ditch	SW¼SW¼ sec. 15, T. 2 N., R. 18 E., from unnamed stream tributary to Big Wood River.	1940	1.5 (permit)	----do----	For use on 96 acres in sec. 15, T. 2 N., R. 18 E. Develops from seepage water. 1/ No known records of use. Abandoned in 1941.
Spencer ditch	SW¼SW¼ sec. 15, T. 2 N., R. 18 E., from springs tributary to Quigley Creek.	1947	5.0 (permit)	----do----	For use on 558 acres in sec. 15, secs. 22 and 23, and sec. 26, T. 2 N., R. 18 E. 1/ No known records of flow.
Rockwell ditch.	SW¼SE¼ sec. 22, T. 2 N., R. 18 E., from unnamed stream tributary to Big Wood River.	1936	4.65 (license)	----do----	For use on 400 acres in secs. 1, 2, 6, 12, 13, 24, T. 1 N., R. 18 E., and secs. 7, 17, 18, 19, 20, 28, 29, 30, 32, and 33, T. 1 N., R. 19 E. 1/
Bellevue Light and Power Co. canal.	NE¼SE¼ sec. 22, T. 2 N., R. 18 E., from Big Wood River.	1907	220 (license)	Power and milling operations.	Used nonconsumptively as a source of power for Bellevue and surrounding area. Operation of power plant discontinued in 1945, however canal is still used to supply two diversions for irrigation canals Nos. 43 and 44. Point of return is in the NE¼ sec. 26, T. 2 N., R. 18 E. 1/ No known record of use.
Fleming Canal (no. 34)	SW¼SE¼ sec. 22, T. 2 N., R. 18 E., from Broadford Slough.	1883	4.00 (decree)	Irrigation	For use on 240 acres in secs. 22, 27, T. 2 N., R. 18 E. 2/ Records available in files of Big Wood River Watermaster.
Peterline Canal. (no. 35)	NE¼NE¼ sec. 27, T. 2 N., R. 18 E., from Big Wood River.	1882	4.00 (decree)	----do----	For use on 120 acres in sec. 26, T. 2 N., R. 18 E. 2/ Records available in files of Big Wood River Watermaster.
Drager Canal (no. 35A)	NW¼SE¼ sec. 26, T. 2 N., R. 18 E., from Big Wood River.	1883	1.40 (decree)	----do----	For use on 40 acres in sec. 26, T. 2 N., R. 18 E. 4/ Records available in files of Big Wood River Watermaster.
Broadford Canal. (no. 36)	NE¼SE¼ sec. 27, T. 2 N., R. 18 E., from Broadford Slough.	1883	5.26 (decree)	----do----	For use on 180 acres in secs. 26 and 35, T. 2 N., R. 18 E. and sec. 12, T. 1 N., R. 18 E. 2/ Records available in files of Big Wood River Watermaster.

Table 11.--Diversions in Big Wood River basin, above Big Wood River at Glendale Bridge, near Bellevue, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Johnson Canal (no. 36A)	NW¼SE¼ sec. 26, T. 2 N., R. 18 E., from Big Wood River.	1888	0.50 (decree)	Irrigation	For use on 10 acres in sec. 26, T. 2 N., R. 18 E. 2/ Records available in files of Big Wood River Watermaster.
Kline Canal (no. 37)	NW¼SW¼ sec. 26, T. 2 N., R. 18 E., from Broadford Slough.	1884	1.80 (decree)	----do----	For use on 40 acres in sec. 26, T. 2 N., R. 18 E. 2/ Records available in files of Big Wood River Watermaster.
Werry Canal (no. 38)	SW¼SW¼ sec. 26, T. 2 N., R. 18 E., from Broadford Slough.	1885	.80 (decree)	----do----	For use on 10 acres in sec. 35, T. 2 N., R. 18 E. 2/ Records available in files of Big Wood River Watermaster.
Wrencher Canal (no. 39)	NE¼NW¼ sec. 35, T. 2 N., R. 18 E., from Broadford Slough.	1880	2.00 (decree)	----do----	For use on 120 acres in sec. 35, T. 2 N., R. 18 E. 2/ Records availabe in files of Big Wood River Watermaster.
Rockwell Canal (no. 40)	NW¼SE¼ sec. 26, T. 2 N., R. 18 E., from Big Wood River.	1887	3.84 (decree)	----do----	For use on 100 acres in secs. 26, 35 and 36, T. 2 N., R. 18 E. 2/ Records availabe in files of Big Wood River Watermaster.
Hinsley No. 1 (no. 41)	SW¼NE¼ sec. 35, T. 2 N., R. 18 E., from Broadford Slough.	1885	2.00 (decree)	----do----	For use on 80 acres in sec. 35, T. 2 N., R. 18 E. 2/ Records available in files of Big Wood River Watermaster.
Hinsley No. 2 (no. 42)	NE¼SE¼ sec. 35, T. 2 N., R. 18 E., from Broadford Slough.	1885	Uses part of decreed water of Hinsley No. 1 (41)	----do----	For use on same lands as described under Hinsley No. 1 (41). Abandoned in 1941. 2/ Records availabe in files of Big Wood River Watermaster.
Arkoosh Canal (no. 43)	SW¼SE¼ sec. 26, T. 2 N., R. 18 E., from tailrace of Bellevue power plant.	1883	.40 (decree)	----do----	For use on 30 acres in sec. 25, T. 2 N., R. 18 E. 2/ Records availabe in files of Big Wood River Watermaster.
Kohler Canal (no. 44)	SE¼NE¼ sec. 26, T. 2 N., R. 18 E., from storage pond of Bellevue power plant.	1883	13.40 (decree)	----do----	For use on 310 acres in secs. 25, 26, and 33, T. 2 N., R. 18 E. 2/ Records available in files of Big Wood River Watermaster.
District Canal (no. 45)	SW¼NW¼ sec. 36, T. 2 N., R. 18 E., from Big Wood River.	1880	355.63 (decree)	----do----	For use on 7,355 acres in secs. 12, 13, 24, 25, and 36, T. 1 N., R. 18 E.; secs. 6, 7, 8, 18, 19, 20, 28, 29, 30, 31, 32, 33, and 34, T. 1 N., R. 19 E.; secs. 3, 4, 5, and 8, T. 1 S., R. 19 E. 2/ Records available in files of Big Wood River Watermaster.
Samon's ditch	NE¼SW¼ sec. 36, T. 2 N., R. 18 E., from Big Wood River.	1915	1.64 (license)	----do----	For use on 80 acres in secs. 3 and 4, T. 1 S., R. 19 E. 1/ No known record of use.
Bellevue ditch	Diverts from Seaman's Creek.	1885	3.0 (decree)	Domestic water supply.	No known record of use. 5/

Table 11.--Diversions in Big Wood River basin, above Big Wood River at Glendale Bridge, near Bellevue, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Joslyn ditch	Diverts from Seaman's Creek.	1902	1/3 of remaining flow after deducting 3.0 cfs for Bellevue (decree).	Irrigation	For use on 480 acres in secs. 32, 33, and 34, T. 2 N., R. 19 E. 5/ No known record of use.
Daly ditch	Diverts from Seaman's Creek.	1902	1/3 of remaining flow after deducting 3.0 cfs for Bellevue (decree).	----do----	For use on 200 acres in secs. 31 and 32, T. 2 N., R. 19 E. 5/ No known record of use.
Campbell ditch	Diverts from Seaman's Creek.	1902	1/3 of remaining flow after deducting 3.0 cfs for Bellevue (decree).	----do----	For use on 398 acres in sec. 6, T. 1 N., R. 19 E., and in sec. 31, T. 2 N., R. 19 E. 5/ No known record of use.
Werry ditch	NW¼NE¼ sec. 30, T. 2 N., R. 19 E., from Slaughterhouse Creek.	1909	1.50 (license)	----do----	For use on 160 acres in sec. 30, T. 2 N., R. 19 E. No known record of use. 1/
Johnson ditch	SE¼SW¼ sec. 2, T. 1 N., R. 18 E., from springs tributary to Big Wood River.	1905	.80 (permit)	----do----	For use on 40 acres in sec. 2, T. 2 N., R. 18 E. 1/ No known record of use.
Myers Canal (no. 46)	SW¼SE¼ sec. 12, T. 1 N., R. 18 E., from Big Wood River.	1884	3.2 (decree)	----do----	For use on 120 acres in sec. 12, T. 1 N., R. 18 E. 2/ Records available in files of Big Wood River Watermaster.
Kingsberry Canal. (no. 48)	SE¼SW¼ sec. 12, T. 1 N., R. 18 E., from Big Wood River.	1884	2.00 (decree)	----do----	For use on 200 acres in sec. 13, T. 1 N., R. 18 E. 2/ Records availabe in files of Big Wood River Watermaster. Abandoned in 1935.
Bannon Canal (no. 49)	NE¼SW¼ sec. 12, T. 1 N., R. 18 E., from Big Wood River.	1887	13.30 (decree)	----do----	For use on 260 acres in secs. 13, 14, 15, and 22, T. 1 N., R. 18 E. 2/ Records available in files of Big Wood River Watermaster.
Glendale Canal (no. 50)	SW¼SW¼ sec. 12, T. 1 N., R. 18 E., from Big Wood River.	1884	62.70 (decree)	----do----	For use on 1,560 acres in secs. 14, 15, 23, 26, 27, and 35, T. 1 N., R. 18 E. 2/ Records available in files of Big Wood River Watermaster.

1/ Files of Idaho State Dept. of Reclamation.
2/ Frost Decree, files of Idaho State Dept. of Reclamation.
3/ Quigley Creek Decree, files of Idaho State Dept. of Reclamation.
4/ Drager Decree, files of Idaho State Dept. of Reclamation.
5/ Seaman Creek Decree, files of Idaho State Dept. of Reclamation.

9.--Big Wood River near Bellevue, Idaho

Location.--Water-stage recorder, lat 43°19', long. 114°21', in sec. 20, T. 1 S., R. 18 E., 1¾ miles upstream from flow line of Magic Reservoir, 3 miles upstream from Camas Creek, and 10 miles southwest of Bellevue.

Drainage area.--823 sq mi.

Records available.--July 1911 to September 1950 (except winters of 1942 and prior to 1940).

Bypass channels.--None.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--The diversions listed in table 12 are those which actually have been constructed and used. These diversions have either a permit, licensed, or decreed water right. There have been 27 diversions active with a flow amounting to 291 cfs above this station.

Return flow.--Several tributary streams, Spring Creek, Clear Creek, Fawn Creek, and Black Slough rise in secs. 11, 12, 13, 14, and 15, T. 1 S., R. 18 E. adjacent to the river. The general belief is that irrigation on lands above these tributaries materially affects the flow, consequently some of the water may be return flow.

Storage and regulation.--None, except as noted for stations upstream.

Utilization.--Negligible amounts used for stock water and domestic purposes. The major use is for irrigation; at present above 15,386 acres are irrigated above the gaging station.

In the fall of 1948 and the summer of 1949, 15 artesian wells with a total, combined flow of about 28 cfs were developed in a limited area above this gaging station. The largest of the wells produced 4.12 cfs, and the smallest 0.54 cfs. It was noted that as the irrigation season advanced and the draft upon the supply continued, the flow materially decreased. All of the wells are capped during the winter months. No record of flow is maintained.

Table 12.--Diversions in Big Wood River basin, above Big Wood River near Bellevue, Idaho
[Diversions in this table are those located between this station and the next station upstream, Big Wood River at Glendale Bridge near Bellevue No. 8]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Kibby Canal (no. 52)	SE¼NW¼ sec. 13, T. 1 N., R. 18 E., from Big Wood River.	1883	5.6 (decree)	Irrigation	For use on 350 acres in sec. 31, T. 1 N., R. 19 E., and sec. 24, T. 1 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Armstrong Canal (no. 53)	NE¼SW¼ sec. 13, T. 1 N., R. 18 E., from Big Wood River.	1884	2.4 (decree)	----do----	For use on 80 acres in sec. 13, T. 1 N., R. 18 E. Abandoned in 1924 and water right transferred to District Canal (no. 45) in 1924. 1/ Records available in files of Big Wood River Watermaster.
Smith Canal (no. 54)	NE¼SW¼ sec. 13, T. 1 N., R. 18 E., from Big Wood River.	1884	2.0 (decree)	----do----	For use on 80 acres in sec. 24, T. 1 N., R. 18 E. Abandoned in 1924 and water right transferred to Kibby Canal (no. 52) in 1924. 1/ Records available in files of Big Wood River Watermaster.
Bypass Canal (no. 55)	SE¼SW¼ sec. 13, T. 1 N., R. 18 E., from Big Wood River.	1924	18.00 (decree)	To conserve water.	Below this point a place occurs in the channel known as the "dry bed." During stages of low water none flows past the "dry bed." A group of water users constructed this canal which circumvents the so-called "dry bed", thereby saving the flow. For this development the water users were awarded 18.0 cfs by court decree. Later the Bypass canal was lengthened and additional water rights based on the percentage of flow saved were awarded for the Bypass extension canal. In 1946 the point of diversion of the Bypass Canal (no. 55) was changed from the SE¼SW¼ sec. 13, T. 1 N., R. 18 E. to

Table 12.--Diversions in Big Wood River basin, above Big Wood River near Bellevue, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
					the SW¼SW¼ sec. 12, T. 1 N., R. 18 E. 2/ 3/ Records available in files of Big Wood River Watermaster.
Kohlmetz Canal (no. 55-A)	SW¼NW¼ sec. 24, T. 1 N., R. 18 E., from Bypass canal.	1887	8.00 (decree)	Irrigation	For use on 230 acres in sec. 25, T. 1 N., R. 18 E. 1/ Records availabe in files of Big Wood River Watermaster.
Parlin Canal (no. 55-B)	NE¼SW¼ sec. 24, T. 1 N., R. 18 E., from Bypass canal.	1885	3.20 (decree)	----do----	For use on 160 acres in sec. 26, T. 1 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Baseline Canal (no. 55-C)	NE¼NW¼ sec. 25, T. 1 N., R. 18 E., from Bypass canal.	1883	97.7 (decree)	----do----	For use on 1,500 acres in secs. 31, 35 and 36, T. 1 N., R. 18 E., sec. 31, T. 1 N., R. 19 E., and secs. 4, 6, 7, and 9, T. 1 S., R. 19 E. 1/ 4/ Records available in files of Big Wood River Watermaster.
Dittoe Canal (no. 55-D)	NW¼SW¼ sec. 25, T. 1 N., R. 18 E., from Bypass canal.	1883	21.8 (decree)	----do----	For use on 410 acres in secs. 1, and 12, T. 1 S., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Calhoun Canal (no. 55-E)	SW¼SW¼ sec. 25, T. 1 N., R. 18 E., from Bypass canal.	1884	11.0 (decree)	----do----	For use on 400 acres in sec. 1, 12, and 35, T. 1 S., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Brewer Canal (no. 55-F)	NW¼NW¼ sec. 36, T. 1 N., R. 18 E., from Bypass canal.	1882	18.0 (decree)	----do----	For use on 640 acres in secs. 1, 2, 11, and 12, T. 1 S., R. 18 E., and sec. 35, T. 1 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Baldwin Canal (no. 56)	NE¼SE¼ sec. 23, T. 1 N., R. 18 E., from Big Wood River.	1885	4.80 (decree)	----do----	For use on 120 acres in sec. 23, T. 1 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster. Abandoned in 1926.
Graff Canal (no. 62)	NE¼SE¼ sec. 35, T. 1 N., R. 18 E., from Big Wood River.	1883	12.0 (decree)	----do----	For use on 380 acres in sec. 2, T. 1 S., R. 18 E. and sec. 34, T. 1 N., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Flood ditch	NW¼SW¼ sec. 2, T. 1 S., R. 18 E., from Spring Creek.	1912	1.6 (permit)	----do----	For use on 80 acres in sec. 16, T. 1 S., R. 18 E. No known record of use. 5/
Black Canal (no. 61)	NE¼SE¼ sec. 2, T. 1 S., R. 18 E., from Big Wood River.	1880	39.7 (decree)	----do----	For use on 1,400 acres in secs. 11, 12, 14, and 15, T. 1 S., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Uhrig Canal (no. 63)	NE¼NE¼ sec. 10, T. 1 S., R. 18 E., from Big Wood River.	1884	5.6 (decree)	----do----	For use on 320 acres in sec. 10, T. 1 S., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Scharff ditch	NW¼NE¼ sec. 29, T. 1 N., R. 18 E., from springs tributary to Big Wood River.	1909	.8 (license)	----do----	For use on 240 acres in sec. 29, T. 1 N., R. 18 E. No known record of use. 5/

Table 12.--Diversions in Big Wood River basin, above Big Wood River near Bellevue, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Cove Ranch ditch.	SW¼NE¼ sec. 16, T. 1 N., R. 19 E., from springs tributary to Big Wood River.	1922	0.02 (permit)	Domestic	No irrigation. No known record of use. 5/
Blair Canal (no. 66)	SE¼SE¼ sec. 16, T. 1 S., R. 18 E., from Big Wood River.	1883	5.2 (decree)	Irrigation	For use on 440 acres in secs. 20 and 21, T. 1 S., R. 18 E. 1/ Records available in files of Big Wood River Watermaster.
Flood Canal (no. 64)	Diverts from Crystal Creek.	1887	2.00 (decree)	----do----	For use on 100 acres in secs. 14 and 15, T. 1 S., R. 18 E. No known record of use. 6/
Salisbury Canal (no. 68)	NE¼SW¼ sec. 15, T. 1 S., R. 18 E., from Black Slough.	1883	5.20 (decree)	----do----	For use on 200 acres in sec. 15 and 22, T. 1 S., R. 18 E. No known record of use. 6/
Martin Canal (no. 72-A)	Diverts from Crystal Creek.	1881	4.80 (decree)	----do----	For use on 160 acres in sec. 14, T. 1 S., R. 18 E. No known record of use. 6/
Hice Canal (no. 71)	SE¼NE¼ sec. 15, T. 1 S., R. 18 E., from Crystal Creek.	1883	3.00 (decree)	----do----	For use on 80 acres in sec. 15, T. 1 S., R. 18 E. No known record of use. 6/
Chaney Canals (nos. 69 and 70)	Divert from Crystal Creek.	1881	4.80 (decree)	----do----	For use on 240 acres in sec. 15 and sec. 22, T. 1 S., R. 18 E. No known record of use. 6/ 7/
Pugel Canal (no. 75)	NW¼SW¼ sec. 18, T. 1 S., R. 19 E., from Spring Creek.	1883	3.20 (decree)	----do----	For use on 160 acres in sec. 13 and 24, T. 1 S., R. 18 E. No known record of use. 6/
Cloud Canal (no. 74)	NW¼SW¼ sec. 13, T. 1 S., R. 18 E., from Spring Creek.	1880	2.40 (decree)	----do----	For use on 80 acres in sec. 13, T. 1 S., R. 18 E. No known record of use. 6/
Timmerman Canal (no. 73)	NW¼NW¼ sec. 24, T. 1 S., R. 18 E., from Spring Creek.	1881	3.80 (decree)	----do----	For use on 240 acres in sec. 14 and sec. 23, T. 1 S., R. 18 E. No known record of use. 6/
Chaney Canal (no. 67)	SE¼NW¼ sec. 22, T. 1 S., R. 18 E., from Spring Creek.	1881	4.80 (decree)	----do----	For use on 240 acres in sec. 21, T. 1 S., R. 18 E. No known record of use. 6/ 7/

1/ Frost Decree, files of Idaho State Dept. of Reclamation.
2/ Upper Big Wood water users, Mutual Wood River Water Users, and Big Wood Canal Co. vs. S. H. Chapman, files of Idaho State Dept. of Reclamation.
3/ Hughes et al vs. Mans Coffin, files of Idaho State Dept. of Reclamation.
4/ Base Line Canal Co. vs. Mans Coffin, files of Idaho State Dept. of Reclamation.
5/ Files of Idaho State Dept. of Reclamation.
6/ Files of Big Wood River Watermaster.
7/ Chaney vs. Swendsen and Chapman, files of Idaho State Dept. of Reclamation.

10.--Camas Creek near Blaine, Idaho

Location.--Water-stage recorder, lat 43°20', long. 114°33', in sec. 15, T. 1 S., R. 16 E., three-eighths of a mile downstream from Willow Creek, 2½ miles upstream from backwater of Magic Reservoir, and 4 miles southeast of Blaine.

Drainage area.--618 sq mi.

Records available.--May 1912 to September 1950 (no winter records prior to 1945). Discharge measurements only for 1922.

Bypass channels.--None.

Diversions.--Many small diversions for irrigation are made in Camas Creek basin above the gaging station. Decreed or licensed rights are mostly for 3 cfs or less, although one is noted which grants as much as 12 cfs. No records have been found indicating the actual quantities diverted. All decreed water rights were established during 1909 or earlier and constitute approximately 80 percent of total rights in the basin. Information concerning water rights is on file in Idaho State Department of Reclamation.

Return flow.--No surface return flow.

Storage and regulation.--Reports of the U. S. Census Bureau for 1940 (Irrigation of Agricultural Lands, Idaho) indicates seven reservoirs within the basin with a total capactiy of 38,200 acre-ft. Census reports for 1930 show one reservoir, with a capacity of 18,000 acre-ft, and for 1920, six reservoirs with a combined capacity of 708 acre-ft. A field survey made for this report in 1951 shows four reservoirs in existence with a combined capacity of about 31,740 acre-ft. No records of storage are available. See table 4 for more detailed information.

Utilization.--Land irrigated in Camas Creek basin above the gaging station is shown in reports of the U. S. Census Bureau for 1940 to be 9,342 acres. See "diversions" paragraph.

11.--Big Wood River below Magic Dam, near Richfield, Idaho

Location.--Water-stage recorder, lat 43°14', long. 114°22', in sec. 18, T. 2 S., R. 18 E., half a mile downstream from Magic Dam and 18 miles northwest of Richfield.

Drainage area.--Not determined.

Records available.--April 1911 to September 1950.

Bypass channels.--None.

(The information that follows applies only to the drainage area between this station and the next stations upstream.)

Diversions.--There are 16 diversions on the several tributary streams and springs discharging into Magic Reservoir. The sum of these water rights is approximately 29 cfs. See table 13. There have been other permits issued by the Idaho State Department of Reclamation to establish water rights but have been cancelled because of inactivity.

Return flow.--There is a gain in the reservoir above Magic Dam from subsurface flow. The natural flow users are granted 20 cfs as an additional water right as the consequence of this. No known surface return flow.

Storage and regulation.--Water is stored above station in Magic Reservoir. Flow is controlled by gates of Magic Dam which are regulated by Big Wood River Watermaster.

Utilization.--Small amounts of water are used for stock water and domestic purposes. The most important use is for irrigation at present of about 1,300 acres above gaging station.

Table 13.--Diversions in Big Wood River basin, above Big Wood River below Magic Dam, near Richfield, Idaho

[Diversions in this table are those located between this station and the next stations upstream, Big Wood River near Bellevue, No. 9, and Camas Creek near Blaine No. 10]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Burns ditch	SW¼NE¼ sec. 32, T. 1 N., R. 17 E., from springs tributary to Magic Reservoir.	1913	0.40 (permit)	Irrigation	For use on 40 acres in sec. 32, T. 1 N., R. 17 E. No known record of use. 1/
Brown ditch	From Rock Creek	1886	1.20 (decree)	----do----	For use on 120 acres in sec. 35, T. 1 N , R. 17 E. No known record of use. 2/
Brown ditch	From Rock Creek	1885	.20 (decree)	----do----	For use on 149 acres in sec. 35, T. 1 N., R. 17 E. and sec. 2, T. 1 S., R. 17 E. No known record of use. 2/
Eastwood ditch.	From Rock Creek	1886	1.00 (decree)	----do----	For use on 320 acres in secs. 14 and 15, T. 1 N., R. 17 E. No known record of use. 2/
Eastwood ditch.	From springs tributary to Rock Creek.	1885	.80 (decree)	----do----	For use on land described directly above. No known record of use. 2/
Eastwood ditch.	From Rock Creek	1887	1.20 (decree)	----do----	For use on 200 acres in sec. 14 and 23, T. 1 N., R. 17 E. No known record of use. 2/
Gilman ditch	From Rock Creek	1883	.30 (decree)	----do----	Used on lands described under the Gilman ditch on Croy Creek. No known record of use. 2/
Reardon ditch	From Rock Creek	1883	5.20 (decree)	----do----	For use on 480 acres in secs. 12 and 13, T. 1 S., R. 17 E. No known record of use. 2/
Smidt ditch	From Rock Creek	1886	1.80 (decree)	----do----	For use on 200 acres in sec. 26, T. 1 N., R. 17 E. No known record of use. 2/

Table 13.--Diversions in Big Wood River basin, above Big Wood River below Magic Dam, near Richfield, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Kelley ditch	NW¼SE¼ sec. 12, T. 1 N., R. 17 E., from East Fork of Rock Creek.	1915	3.20 (permit)	Irrigation	For use on 160 acres in secs. 11 and 12, T. 1 N., R. 17 E. No known record of use. 1/
Tews Brothers	SW¼SW¼ sec. 1, T. 1 S., R. 17 E., from Rock Creek.	1947	300 acre-ft (permit)	----do----	This permit is for a reservoir on Rock Creek. The dam is under construction and the Tews Brothers have until 1953 to prove beneficial use. The intent is to irrigate 363 acres in secs. 12 and 13, T. 1 S., R. 17 E. 1/
Mandell ditch	From Camp Creek	1881	10.2 (decree)	----do----	For use on 642 acres in secs. 1, 2, and 12, T. 1 S., R. 16 E.; sec. 7, T. 1 S., R. 17 E. and secs. 34 and 35, T. 1 N., R. 16 E. No known record of use. 2/
Mandell ditch	From springs tributary to Camp Creek.	1901	1.50 (decree)	----do----	For use on same lands as described directly above. 2/
Rowley ditch	SE¼NW¼ sec. 7, T. 1 S., R. 17 E., from Camp Creek.	1907	.80 (license)	----do----	For use on 120 acres in sec. 7, T. 1 S., R. 17 E. No known record of use. 1/
Rowley ditch	NE¼SW¼ sec. 7, T. 1 S., R. 17 E., from Camp Creek.	1909	.94 (license)	----do----	For use on 160 acres in sec. 17, T. 1 S., R. 17 E. No known record of use. 1/
Keith ditch	NE¼SE¼ sec. 34, T. 1 N., R. 16 E., from Camp Creek.	1916	.24 (license)	----do----	For use on 12 acres in sec. 35, T. 1 N., R. 16 E. No known record of use. 1/

1/ Files of Idaho State Dept. of Reclamation.
2/ Frost Decree, files of Idaho State Dept. of Reclamation.

12.--Big Wood River above North Gooding Canal, near Shoshone, Idaho

Location.--Staff gage, lat 43°06', long. 114° 18', in sec. 10, T. 4 S., R. 18 E., 1 mile upstream from North Gooding Canal, 13 miles downstream from Magic Dam, and 14 miles northeast of Shoshone.

Records available.--April 1921 to February 1939. No flow in water years 1925-26, 1927-28 to 1930-31, 1933-34 to 1936-37.

Bypass channels.--The three principal diversions, Lincoln Canal, Richfield Canal, and Cottonwood Slough all bypass this station and irrigate lands above and below station. Flow of canals not included in station records.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--Prior to 1925 there were seven diversions above this station amounting to 1,146 cfs. Subsequent to the spring of 1925, after the Lincoln Canal was completed only three diversions were in operation. The Lincoln Canal diverting from the Big Wood River below all other diversions carries the entire flow of Big Wood River, except during high water, around a porous section of the river bed to conserve channel losses in the natural stream bed. See table 14.

The Richfield main canal diverts from Big Wood River then splits into three canals: East main canal, West main canal and Jim Byrnes Slough. The East main canal and West main canal, after separating, irrigate lands on the Richfield tract; the two canals join again at the lower end of the tract and drain into the Little Wood River via the Marley Slough. The Jim Byrnes Slough irrigates some land on the north side above Richfield then discharges into the Little Wood River. Control gates in the Little Wood River divert the water from the Jim Byrnes Slough into the Dietrich main canal, which irrigates land on the south side of Little Wood River below Richfield. The Cottonwood Slough, prior to 1938, diverted from the Big Wood River, irrigated lands along Big Wood River, then joined with Marley Slough to flow into the Little Wood River below Richfield, and finally diverted below Shoshone into the South Gooding Canal and several other canals.

In 1938, the rights in the Cottonwood Slough were transferred to the Richfield

main canal and the Cottonwood Slough abandoned; however, one of the rights (Byrnes-Stratton) retained the point of diversion of the Cottonwood Slough and divert their water from the Big Wood River at this point.

Return flow.--No surface return flow.

Storage and regulation.--None except as noted for stations upstream.

Utilization.--The Richfield Canal (no. 1) in combination with Byrnes-Stratton (no. 3) diverting in this area, is used at present for the irrigation of about 17,300 acres, most of which is above the gaging station. The return flow from these canals is collected and utilized again on the South Gooding tract, below the station. At the time the record for this station began, irrigation in the area was fairly well developed, and no material change has occurred in the amount of land irrigated.

About 1,500 acres in this area are irrigated from the small river diversions shown in table 14. This land was developed before the gaging station record began, and has remained essentially constant since that time.

Table 14.--Diversions in Big Wood River basin, above Big Wood River above North Gooding Canal near Shoshone, Idaho

[Diversions in this table are those located between this station and the next station upstream, Big Wood River (below Magic Dam) near Richfield, Idaho, No. 11]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Richfield Canal (no. 1)	NE¼SE¼ sec. 30, T. 2 S., R. 18 E., from Big Wood River.	1916	Capacity 940 cfs After 1932, 600 cfs.	Irrigation	For use on 17,316 acres of the Richfield tract and the drainage water is utilized on the South Gooding tract. 1/ 2/
Cottonwood Slough (no. 2)	SW¼SE¼ sec. 9, T. 3 S., R. 18 E., from Big Wood River prior to 1938.	1887-1938	192 (decree)	----do----	The point of diversion of Cottonwood Slough was transferred in 1938 to the NE¼SE¼ sec. 30, T. 2 S., R. 18 E., the flow now being carried by the Richfield canal (no. 1) for same land as described above. 2/
Byrnes-Stratton. (no. 3)	NW¼NW¼ sec. 15, T. 3 S., R. 18 E., from Cottonwood Slough prior to 1938. From 1938 to present, point of diversion is the SW¼SE¼ sec. 9, T. 3 S., R. 18 E., from Big Wood River.	1887	15.84 (decree)	----do----	For use on 1,040 acres in secs. 14 and 15 and sec. 22, T. 3 S., R. 18 E. 2/
Lincoln Canal	SW¼SE¼ sec. 9, T. 3 S., R. 18 E., from Big Wood River.	1925	-	To conserve water.	The Lincoln Canal diverts from Big Wood River and approximately parallels the river for 10 miles along the right bank to the head of North Gooding Canal in the NE¼SW¼ sec. 15, T. 4 S., R. 18 E., where water is either diverted into North Gooding Canal or wasted into Big Wood River. The canal was constructed to avoid large channel losses in natural bed of river. The canal carries all the waters of Big Wood River, except during flood stages. Records available as Lincoln Canal near Richfield, Idaho (1925-1948). 2/
Gooding Canal (no. 6)	SE¼NE¼ sec. 16, T. 3 S., R. 18 E., from Big Wood River prior to 1925.	1900	3.00 (Carey Act)	Irrigation	For use on 80 acres in sec. 29, T. 3 S., R. 18 E. In 1925 the point of diversion was changed to the Lincoln Canal. 2/

Table 14.--Diversions in Big Wood River basin, above Big Wood River above North Gooding Canal near Shoshone, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Thomason Canal (no. 5)	NW¼SE¼ sec. 21, T. 3 S., R. 18 E., from Big Wood River prior to 1925.	1901	2.40 (decree)	Irrigation	For use on 120 acres in sec. 28, T. 3 S., R. 18 E. In 1925 the point of diversion was changed to the Lincoln Canal. Abandoned in 1938. 2/
N.D. Canal (no. 7)	NE¼SW¼ sec. 21, T. 3 S., R. 18 E., from Big Wood River.	1916	1.50 (Carey Act)	----do----	For use on 60 acres of Carey Act land in T. 3 S., R. 18 E. Abandoned in 1923. 2/
Canzler Canal (no. 8)	SW¼SW¼ sec. 28, T. 3 S., R. 18 E., from Big Wood River prior to 1925.	1883	3.40 (decree)	----do----	For use on 160 acres in sec. 33, T. 3 S., R. 18 E. In 1925 the point of diversion was changed to Lincoln Canal. 2/
Colman Canal (no. 9)	SW¼SW¼ sec. 34, T. 3 S., R. 18 E., from Big Wood River.	1901	3.20 (Carey Act)	----do----	For use on 160 acres in sec. 3, T. 4 S., R. 18 E. In 1925 the point of diversions was changed to Lincoln Canal. 2/

1/ Files of Big Wood River Canal Co.
2/ Data obtained and records available in files of Big Wood River Watermaster.

13.--Big Wood River below North Gooding Canal, near Shoshone, Idaho

Location.--Staff gage, lat 43°04', long. 114° 18', in sec. 15, T. 4 S., R. 18 E., 300 yd downstream from North Gooding Canal, 11 miles northeast of Shoshone, and 14 miles downstream from Magic Dam.

Records available.--January 1911 to February 1939. No flow in water years 1928-29, 1930-31, 1933-34 to 1936-37.

Bypass channels.--The flow in diversion canals operating prior to 1925 all bypassed the gaging station, and flow of canals was not included in station record.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--There were four diversions amounting to 430 cfs before the completion of the Lincoln Canal in the spring of 1925 (see table 15). Since the operation of the Lincoln Canal commenced these diversions have been eliminated. The main diversion was the North Gooding Canal diverting directly from the Big Wood River, now the diversion is made through the Lincoln Canal. See table 14.

Return flow.--Spillage from Lincoln Canal enters Big Wood River above gage. The Lincoln Canal normally carries the entire flow of Big Wood River at the point of diversion. All water not required by North Gooding Canal is returned to the river at this point.

Storage and regulation.--None except as indicated for next station upstream.

Utilization.--None.

Table 15.--Diversions in Big Wood River basin, above Big Wood River below North Gooding Canal near Shoshone, Idaho

[Diversions in this table are those located between this station and the next station upstream, Big Wood River above North Gooding Canal near Shoshone No. 12]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
North Gooding Canal. (no. 10)	NW¼SE¼ sec. 15, T. 4 S., R. 18 E., from Big Wood River prior to 1925.	1916	Capacity 420 cfs. After 1932 190 cfs (Carey Act)	Irrigation	Prior to 1925, the North Gooding Canal diverted directly from Big Wood River. After the completion of the Lincoln Canal in 1925, the water for North Gooding Canal was supplied by the Lincoln Canal and the diversion from Big Wood River eliminated. Used for irrigation below station on 18,746 acres in North Shoshone and North Gooding project. 1/ 2/

Table 15.--Diversions in Big Wood River basin, above Big Wood River below North Gooding Canal near Shoshone, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Davis Canal (no. 10-A)	NW¼SE¼ sec. 15, T. 4 S., R. 18 E., from Big Wood River.	1914	2.00 (permit)	Irrigation	For use on 160 acres in sec. 22, R. 4 S., R. 18 E. Abandoned in 1921. 2/
Bernard Canal (no. 11)	NW¼SE¼ sec. 15, T. 4 S., R. 18 E., from Big Wood River.	1906	5.80 (decree)	----do----	For use on 280 acres in secs. 20, 21, 28, and 29, T. 4 S., R. 18 E. Abandoned in 1926. 2/
Turnbull Canal (no. 12)	NE¼SW¼ sec. 15, T. 4 S., R. 18 E., from Big Wood River.	1902	2.20 (decree)	----do----	For use on 120 acres in sec. 21 and 28, T. 4 S., R. 18 E. Abandoned in 1926. 2/

1/ Files of the Big Wood River Canal Co.
2/ Data obtained and records available in files of Big Wood River Watermaster.

14.--Big Wood River near Shoshone, Idaho

Location.--Staff gage in sec. 17, T. 5 S., R. 17 E., at A. D. Silva's ranch, 1 mile downstream from the steel wagon bridge and 7 miles northwest of Shoshone; 24 miles below Magic Dam.

Records available.--June 1905 to August 1913.

Bypass channels.--The entire flow of the Butler Canal (no. 20) bypasses this gaging station, and is not included in station records.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--There were eight diversions above this station with water rights amounting to 55 cfs prior to 1928. No diversions at present. See table 16.

Return flow.--No known surface return flow. The Milner-Gooding Canal can waste Snake River water into the Big Wood River channel at the Darrah wasteway in sec. 15, T. 5 S., R. 17 E. above station.

Storage and regulation.--None except as noted for stations upstream and effect of Milner-Gooding Canal.

Utilization.--About 2,780 acres were irrigated within this area by river diversions during period of gaging station record; this irrigated area has not materially changed since that time. Part of the 19,000 acre North Shoshone and North Gooding tract is above the gaging station. This land was brought under irrigation by the North Gooding Canal in 1916 and the flow supplemented in 1932 by Milner-Gooding Canal.

Table 16.--Diversions in Big Wood River basin, above Big Wood River near Shoshone, Idaho
[Diversions in this table are those located between this station and the next station upstream, Big Wood River below North Gooding Canal near Shoshone No. 13]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Bayliss-Gehrig (no. 13)	SW¼SE¼ sec. 21, T. 4 S., R. 18 E., from Big Wood River prior to 1928.	1898	3.20 (decree)	Irrigation	For use on 200 acres in sec. 28 and sec. 33, T. 4 S., R. 18 E. In 1928 the point of diversion was changed to North Gooding Canal. 1/
Lumb Canal (no. 14)	SW¼SW¼ sec. 28, T. 4 S., R. 18 E., from Big Wood River.	1902	5.60 (decree)	----do----	For use on 280 acres in sec. 4, T. 5 S., T. 18 E. Abandoned in 1927. 1/
Baldwin-Gwinn Canal. (no. 15)	SE¼NW¼ sec. 33, T. 4 S., R. 18 E., from Big Wood River.	1906	13.30 (decree)	----do----	For use on 620 acres in sec. 33, T. 4 S., R. 18 E., secs. 5, 8, T. 5 S., R. 18 E., and sec. 12, T. 5 S., R. 17 E. Abandoned in 1921. 1/
Roessler-Calhoun Canal. (no. 17)	SW¼SW¼ sec. 8, T. 5 S., R. 18 E., from Big Wood River prior to 1928.	1889	11.04 (decree)	----do----	For use on 720 acres in secs. 17, 18, 19, and 20, T. 5 S., R. 18 E. and sec. 24, T. 5 S., R. 17 E. In 1928 the point of diversion was changed to the North Gooding Canal. 1/

Table 16.--Diversions in Big Wood River basin, above Big Wood River near Shoshone, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Roessler Canal (no. 18)	SW¼NE¼ sec. 17, T. 5 S., R. 18 E., from Big Wood River.	1889	1.44 (decree)	Irrigation	For use on 40 acres in sec. 19, T. 5 S., R. 18 E. Abandoned in 1928. 1/
Baldwin Canal (no. 18A)	From Big Wood River.	1914	.80 (license)	----do----	For use on 40 acres in sec. 24, T. 5 S., R. 17 E. Abandoned in 1921. 1/
Silva Canal (no. 19)	NE¼SE¼ sec. 15, T. 5 S., R. 17 E., from Big Wood River prior to 1928.	1891	5.20 (decree)	----do----	For use on 320 acres in sec. 17, T. 5 S., R. 17 E. In 1928 the point of diversion was changed to the North Gooding Canal. 1/
Butler Canal (no. 20)	NW¼NE¼ sec. 17, T. 5 S., R. 17 E., from Big Wood River prior to 1928.	1896	14.40 (decree)	----do----	For use on 840 acres in secs. 10, 11, 12, and 15, T. 5 S., R. 16 E. and secs. 7 and 8, T. 5 S., R. 17 E. In 1928 the point of diversion was changed to the North Gooding Canal. 1/

1/ Data obtained and records available in files of Big Wood River Watermaster.

15.--Big Wood River above Thorn Creek, near Gooding, Idaho

Location.--Water-stage recorder in the NW¼ sec. 7, T. 5 S., R. 16 E., at Manuel Silva Ranch, a quarter of a mile above Thorn Creek and 8½ miles northeast of Gooding.

Records available.--April 1926 to May 1927.

Bypass channels.--None.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--There were five diversions above this station with water rights amounting to 19.5 cfs prior to 1928. None at present. See table 17.

Return flow.--No surface return flow.

Storage and regulation.--None except as noted for stations upstream.

Utilization.--During the period of gaging station record about 1,760 acres were irrigated by river diversions; this irrigated area is substantially the same today. Part of the 19,000 acre North Shoshone and North Gooding tract is above the gaging station. This land was brought under irrigation by the North Gooding Canal in 1916 and the flow supplemented in 1932 by Milner-Gooding Canal.

Table 17.--Diversions in Big Wood River basin, above Big Wood River above Thorn Creek, near Gooding, Idaho

[Diversions in this table are those located between this station and the next station upstream, Big Wood River near Shoshone No. 14]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Peck Canal (no. 21)	SE¼SW¼ sec. 7, T. 5 S., R. 17 E., from Big Wood River.	1894	4.74 (decree)	Irrigation	For use on 200 acres in sec. 12, T. 5 S., R. 16 E. and sec. 7, T. 5 S., R. 17 E. Records available in files of Big Wood River Watermaster. Abandoned in 1928. Water transferred to Butler Canal (no. 20). See table 14.
Sims North Canal (no. 22)	SW¼SE¼ sec. 11, T. 5 S., R. 16 E., from Big Wood River prior to 1928.	1884	3.20 (decree)	----do----	For use on 120 acres in sec. 15, T. 5 S., R. 16 E. 1/
Sims South Canal (no. 23)	SW¼SE¼ sec. 11, T. 5 S., R. 16 E., from Big Wood River prior to 1928.	1891	1.30 (decree)	----do----	For use on 40 acres in sec. 14, T. 5 S., R. 16 E. 1/

Table 17.--Diversions in Big Wood River basin, above Big Wood River above Thorn Creek, near Gooding, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Kaiser Canal (no. 24)	SW¼SE¼ sec. 9, T. 5 S., R. 16 E., from Big Wood River prior to 1928.	1888	9.50 (decree)	Irrigation	For use on 520 acres in secs. 6, 7, 8, and 9, T. 5 S., R. 16 E. 1/
Gomes Canal (no. 25)	NW¼SE¼ sec. 8, T. 5 S., R. 16 E., from Big Wood River prior to 1928.	1896	.80 (decree)	----do----	For use on 40 acres in sec. 7, T. 5 S., R. 16 E. 1/

1/ In 1928 point of diversion was changed to North Gooding Canal. Records available in annual reports of Big Wood River Watermaster. Data obtained from files of Big Wood River Watermaster.

16.--Big Wood (Malade) River at Gooding (Toponis), Idaho

Location.--Water-stage recorder, lat 42°57', long. 114°43', in the NE¼NE¼ sec. 31, T. 5 S., R. 15 E., 30 ft downstream from highway bridge and half a mile north of Gooding.

Records available.--June 1896 to October 1899 (published as Malade River at Toponis), April 1921 to September 1948, except for winters.

Bypass channels.--One diversion, the Silk-Gooding Canal (no. 32) bypasses the gaging station. Flow of canal is not included in station records.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--There are seven diversions above this station with water amounting to 78 cfs (see table 18).

Return flow.--Waste from the North Gooding Canal is returned to Big Wood River via the Thorn Creek spillway in sec. 7, T. 5 S., R. 16 E., approximately 8½ miles above the gaging station. No records available.

Storage and regulation.--None except as noted for stations upstream.

Utilization.--About 5,400 acres irrigated in this area from river diversions. Based on dates of water rights, this land was probably under irrigation during entire period 1921-48, but only partially developed during the period 1896-99.

Part of the 19,000 acre North Shoshone and North Gooding tract is above the gaging station. This land was brought under irrigation by the North Gooding Canal in 1916 and the flow supplemented in 1932 by Milner-Gooding Canal.

Table 18.--Diversions in Big Wood River basin, above Big Wood River at Gooding, Idaho
[Diversions in this table are those located between this station and the next station upstream, Big Wood River above Thorn Creek near Gooding No. 15]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Robertson Canal (no. 26)	SW¼NW¼ sec. 7, T. 5 S., R. 16 E., from Big Wood River.	1905	21.60 (decree)	Irrigation	For use on 1,080 acres in secs. 3, 4, 10, 11, and 15, T. 5 S., R. 14 E. 1/
Union Canal (no. 27)	SE¼SW¼ sec. 12, T. 5 S., R. 15 E., from Big Wood River.	1896	29.30 (decree)	----do----	For use on 2,885 acres in secs. 10, 11, 15, 17, 18, and 19, T. 5 S., R. 15 E. and sec. 14, T. 5 S., R. 14 E. 1/
Savage Canal (no. 28)	NW¼NW¼ sec. 13, T. 5 S., R. 15 E., from Big Wood River.	1896	4.20 (decree)	----do----	For use on 240 acres in secs. 11, 14 and 15, T. 5 S., R. 15 E. 1/
Poorman Canal (no. 29)	NW¼NE¼ sec. 15, T. 5 S., R. 15 E., from Big Wood River.	1886	17.27 (decree)	----do----	For use on approximately 1,000 acres in secs. 15, 20, 21, 28, and 29, T. 5 S., R. 15 E. 1/
Deasy Canal (no. 30)	SE¼SE¼ sec. 21, T. 5 S., R. 15 E., from Big Wood River.	1905	.80 (decree)	----do----	For use on part of 80 acres in sec. 28, T. 5 S., R. 15 E. 1/

Table 18.--Diversions in Big Wood River basin, above Big Wood River at Gooding, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Silk Canal (no. 31)	NW¼NE¼ sec. 28, T. 5 S., R. 15 E., from Big Wood River.	1886	2.11 (decree)	Irrigation	For use on part of 120 acres in sec. 29 and sec. 32, T. 5 S., R. 15 E. 1/
Silk Gooding Canal. (no. 32)	SE¼NW¼ sec. 28, T. 5 S., R. 15 E., from Big Wood River.	1884	2.91 (decree)	----do----	For use on approximately 200 acres in secs. 29 and 31, T. 5 S., R. 15 E. 1/

1/ Data obtained and records available in files of Big Wood River Watermaster.

17.--Dry Creek near Blanche, Idaho

Location.--Staff gage in sec. 5, T. 4 S., R. 14 E., about 250 ft below proposed diversion dam, two thirds of a mile upstream from the Crist ranch, about 10 miles from Blanche post office, and about 16 miles northeast of Bliss.

Records available.--September 1911 to April 1914, records incomplete.

Bypass channels.--None.

Diversions.--None. Numerous permits have been issued by Idaho State Department of Reclamation to develop water rights, but none have proven beneficial use and the permits have been cancelled or relinquished.

Return flow.--None.

Storage and regulation.--No storage or regulation. However, there are now on file with Idaho State Department of Reclamation, three reservoir permits to allow storage of 5,865 acre-ft. Limiting dates for completion and proof of beneficial use are shown on these permits as 1955 and 1961.

Utilization.--None.

18.--Muldoon Creek near Muldoon, Idaho

Location.--Staff gage in the SE¼ sec. 15, T. 2 N., R. 20 E., an eighth of a mile above mouth, 9 miles southwest of Muldoon post office, and 14 miles northwest of Carey.

Records available.--June to August 1925.

Bypass channels.--None.

Diversions.--There are 35 water rights on Muldoon Creek and its tributaries which are allotted 165 cfs of water. See table 19. Two of these diversions are used nonconsumptively for power purposes and amount to 28 cfs. Other permits are on file with the Idaho State Department of Reclamation to develop water rights but have been cancelled because of inactivity.

Return flow.--Water diverted for power purposes by Muldoon Mining Co. ditch and Marty ditch returns to the Creek above gaging station.

Storage and regulation.--The Campbell Reservoir on an unnamed tributary to South Fork of Muldoon Creek stored 700 to 800 acre-ft before the dam failed in 1938. Since 1938, the capacity has been reduced to about 125 acre-ft. See table 4 for data regarding this reservoir. The water rights are administered by a local watermaster. No records of flow are maintained and no annual reports filed.

Utilization.--A small amount of flow is used for stock and domestic water. Muldoon Creek and its tributaries are used as a source of water for two power operations; however, the greatest utilization is for irrigation of about 5,100 acres at present.

Table 19.--Diversions in Muldoon Creek basin, above Muldoon Creek near Muldoon, Idaho

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Muldoon Mining Co. ditch.	5.22 miles above junction with the North Fork of Muldoon Creek, from East Fork of North Fork Muldoon Creek.	1909	24.0 (license)	Power	Used as source of power for mining and milling operations. No known record of use. 1/
Warneche ditch.	2 miles north of the NW corner sec. 2, T. 3 N., R. 21 E., from North Fork Muldoon Creek.	1907	3.20 (permit)	Irrigation	For use on 320 acres in secs. 26, 27, 34, and 35, T. 3 N., R. 21 E. No known record of use. 1/

Table 19.--Diversions in Muldoon Creek basin, above Muldoon Creek near Muldoon, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
O'Connor ditch	SE¼SE¼ sec. 24, T. 3 N., R. 21 E., from East Fork Muldoon Creek.	1916	2.4 (license)	Irrigation	For use on 158 acres in secs. 23 and 24, T. 3 N., R. 21 E. No known record of use. 1/
Powell ditch	NE¼NE¼ sec. 26, T. 3 N., R. 21 E., from East Fork Muldoon Creek.	1917	3.2 (permit)	----do----	For use on 160 acres in sec. 26, T. 3 N., R. 21 E. No known record of use. 1/
Powell ditch	NE¼NE¼ sec. 26, T. 3 N., R. 21 E., from East Fork Muldoon Creek.	1920	1.6 (permit)	----do----	For use on 80 acres in sec. 26, T. 3 N., R. 21 E. No known record of use. 1/
Moran ditch	NW¼SW¼ sec. 35, T. 3 N., R. 21 E., from Muldoon Creek and 2 unnamed springs.	1911	.2 (license)	----do----	For use on 160 acres in sec. 3, T. 2 N., R. 21 E. No known record of use. 1/
Baptie ditch	NW¼SW¼ sec. 31, T. 3 N., R. 22 E., from Muldoon Creek.	1911	.20 (decree)	----do----	For use on 80 acres in sec. 3, T. 2 N., R. 21 E. No known records of use.
	NW¼SW¼ sec. 2, T. 2 N., R. 21 E., from springs.	1911	.10 (decree)	----do----	For use on same 80 acres in sec. 3, T. 2 N., R. 21 E. as described under Baptie ditch no. 1. No known records of use.
	NE¼NE¼ sec. 3, T. 2 N., R. 21 E., from Muldoon Creek.	1911	1.10 (decree)	----do----	This water right originates from the so-called Logan tunnel which develops water from a source non-tributary to Muldoon Creek. The water is diverted into Muldoon Creek in the SW¼SW¼ sec. 8, T. 3 N., R. 22 E. and carried downstream about 6 miles to the point of diversion in NE¼NE¼ sec. 3, T. 2 N., R. 21 E. Used to irrigate same land described above. 2/
Thompson ditch	NE¼SE¼ sec. 28, T. 3 N., R. 21 E., from Thompson Creek.	1915	1.00 (license)	----do----	For use on 160 acres in secs. 27 and 34, T. 3 N., R. 21 E. Water can be diverted at the two given points. No known records of use. 1/
	SE¼NW¼ sec. 27, T. 3 N , R. 21 E., from Thompson Creek.	1915	-	----do----	
Marty ditch	NE¼NW¼ sec. 10, T. 2 N., R. 21 E., from Muldoon Creek.	1920	4.0 (license)	Power	No consumptive use of water. No known records of use. 1/
Womack ditch	SW¼NW¼ sec. 10, T. 2 N., R. 21 E., from Muldoon Creek.	1904	.80 (license)	Irrigation	For use on 40 acres in sec. 8, T. 2 N., R. 21 E. No known record of use. 1/
Womack ditch	From Muldoon Creek	1885	1.00 (decree)	----do----	For use on 160 acres in sec. 10 and sec. 15, T. 2 N., R. 21 E. No known record of use. 3/
Prunty ditch	SE¼NW¼ sec. 10, T. 2 N., R. 21 E., from Muldoon Creek.	1919	6.4 (permit)	----do----	For use on 320 acres in sec. 18, T. 2 N., R. 21 E. and sec. 13, T. 2 N., R. 20 E. No known record of use. 1/

Table 19.--Diversions in Muldoon Creek basin, above Muldoon Creek near Muldoon, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Scoble ditch	SE¼SE¼ sec. 9, T. 2 N., R. 21 E., from Muldoon Creek.	1920	3.2 (permit)	Irrigation	For use on 160 acres in secs. 17 and 18, T. 2 N., R. 21 E. No known record of use. 1/
Scoble ditch	From Muldoon Creek	1884	2.20 (decree)	----do----	For use on 160 acres in secs. 9 and 10, T. 2 N., R. 21 E. No known record of use. 3/
Gillispie ditch	From Muldoon Creek	1885	1.60 (decree)	----do----	For use on 200 acres in secs. 9 and 10, T. 2 N., R. 21 E. No known record of use. 3/
Watkins ditch	From Muldoon Creek	1884	2.20 (decree)	----do----	For use on 160 acres in sec 9, T. 2 N., R. 21 E. No known record of use. 4/
Womack ditch	3,200 ft northeast from ¼ corner, secs. 16 and 17, T. 2 N., R. 21 E, from Muldoon Creek.	1904	2.60 (license)	----do----	For use on 160 acres in sec. 17 and sec. 20, T. 2 N., R. 20 E. No known record of use. 1/
Smitham ditch	From Muldoon Creek	1884	2.20 (decree)	----do----	For use on 160 acres in secs. 8, 9, and 17, T. 2 N., R. 21 E. No known record of use. 4/
Neal ditch	From Muldoon Creek	1888	2.00 (decree)	----do----	For use on 160 acres in sec. 17, T. 2 N., R. 21 E. No known record of use. 3/
Butler ditch	From Muldoon Creek	1886	1.40 (decree)	----do----	For use on 40 acres in sec. 8, T. 2 N., R. 21 E. No known record of use. 3/
Laidlaw ditch	From South Fork Muldoon Creek at various places.	1884	35.4 (decree)	----do----	For use on 1,600 acres in secs. 13, 14, 22, 23, 26, 27, and 28, T. 2 N., R. 21 E. No known records of use. 5/
Smith ditch	SW¼SE¼ sec. 12, T. 2 N., R. 21 E., from South Fork Muldoon Creek.	1905	16.0 (decree)	----do----	For use on 800 acres in secs. 22, 23, 27, T. 2 N., R. 21 E. No known records of use. 1/
Oster ditch	SW¼SE¼ sec. 12, T. 2 N., R. 21 E., from South Fork Muldoon Creek.	1907	3.2 (license)	----do----	For use on 160 acres in sec. 14, T. 2 N., R. 21 E. No known record of use. 1/
Laidlaw ditch	300 ft northeast of center south line of sec. 12, T. 2 N., R. 21 E., from South Fork Muldoon Creek.	1914	1.5 (permit)	----do----	For use on 80 acres in sec. 14, T. 2 N., R. 21 E. No known record of use. 1/
Laidlaw ditch	SE¼SE¼ sec. 14, T. 2 N., R. 21 E.	1908	6.40 (permit)	----do----	For use on 320 acres in secs. 23, 26, T. 2 N., R. 21 E. Water can be diverted at the two given points. No known record of use. 1/
	SW¼SW¼ sec. 23, T. 2 N., R. 21 E., from South Fork Muldoon Creek.	1908	-	----do----	
Davis ditch	SW¼SW¼ sec. 13, T. 2 N., R. 21 E., from South Fork Muldoon Creek.	1912	1.5 (license)	----do----	For use on 188 acres in sec. 25, T. 2 N., R. 21 E. and sec. 30, T. 2 N., R. 22 E. No known record of use. 1/

Table 19.--Diversions in Muldoon Creek basin, above Muldoon Creek near Muldoon, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Davis ditch	SW¼SW¼ sec. 13, T. 2 N., R. 21 E., from South Fork Muldoon Creek.	1914	1.5 (license)	Irrigation	Supplementary water right to irrigate same land as described above under Davis ditch. No known record of use. 1/
Lindsay ditch	NE¼SE¼ sec. 14, T. 2 N., R. 21 E., from South Fork Muldoon Creek.	1912	3.0 (permit)	----do----	For use on 160 acres in sec. 23, T. 2 N., R. 21 E. No known record of use. 1/
Morgan ditch	SW¼SW¼ sec. 13, T. 2 N., R. 21 E., from South Fork Muldoon Creek.	1913	1.54 (license)	----do----	For use on 360 acres in secs. 24 and 25, T. 2 N., R. 21 E. No known record of use. 1/
Morgan ditch	SE¼SE¼ sec. 14, T. 2 N., R. 21 E., from South Fork Muldoon Creek.	1914	4.8 (permit)	----do----	For use on 240 acres in secs. 24 and 25, T. 2 N., R. 21 E. No known record of use. 1/
Campbell ditch.	720 ft northeast from south ¼ sec. 27, T. 2 N., R. 21 E., from South Fork of South Fork Muldoon Creek.	1914	12.8 (permit)	----do----	For use on 640 acres in secs. 22, 23, and 24, T. 2 N., R. 20 E. and sec. 19, T. 2 N., R. 19 E. No known record of use. 1/
Carr ditch	NW¼NE¼ sec. 34, T. 2 N., R. 21 E., from South Fork Muldoon Creek.	1915	4.0 (permit)	----do----	For use on 200 acres in sec. 12, T. 1 N., R. 20 E. No known record of use. 1/
Hines ditch	From Muldoon Creek	1919	7.00 (decree)	----do----	For use on 671 acres in sec. 7 and 18, T. 2 N., R. 21 E. and sec. 13, T. 2 N., R. 20 E. No known record of use. 6/

1/ Files of Idaho State Dept. of Reclamation.
2/ Baptie vs. Lewis Decree, files of Idaho State Dept. of Reclamation.
3/ Woodworth vs. Anthony Decree, files of Idaho State Dept. of Reclamation.
4/ Watkins vs. Jenkins Decree, files of Idaho State Dept. of Reclamation.
5/ Frost Decree, files of Idaho State Dept. of Reclamation.
6/ Hines vs. Watkins Decree, files of Idaho State Dept. of Reclamation.

19.--Little Wood River at Campbell Ranch, near Carey, Idaho

Location.--Water-stage recorder, lat 43°28', long. 114°03', in the SW¼NW¼ sec. 35, T. 2 N., R. 20 E., at Campbell Ranch, above 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.

Records available.--February 1920 to September 1926 (published as Little Wood River near Carey); March 1941 to December 1942, April 1944 to September 1950 (no winter records except 1921-24, 1926).

Bypass channels.--None.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--Several permits are on file with the Idaho Department of Reclamation to develop water rights on tributary streams, however, only the two listed in table 20 have been active. The two water rights amount to 1.80 cfs.

Return flow.--No surface return flow.

Storage and regulation.--None except as noted for station upstream.

Utilization.--Water used for irrigation of about 150 acres in this area during early period of record. Used only for stockwater purposes at present.

Table 20.--Diversions in Little Wood River basin, above Little Wood River at Campbell Ranch, near Carey, Idaho
[Diversions in this table are those located between this station and the next station upstream, Muldoon Creek near Muldoon No. 18]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Saunders ditch.	SW¼NE¼ sec. 19, T. 3 N., R. 20 E., from Fisher Creek.	1917	0.7 (license)	Irrigation	For use on 80 acres in sec. 19, T. 3 N., R. 19 E. No known record of use. 1/
Williams ditch.	NE¼SE¼ sec. 32, T. 3 N., R. 20 E., from Hailey Creek.	1920	1.10 (license)	----do----	For use on 70 acres in sec. 33, T. 3 N., R. 20 E. No known record of use. 1/

1/ Files of Idaho State Dept. of Reclamation.

20.--Little Wood River near Carey, Idaho

Location.--Water-stage recorder, lat 43°23', long. 114°00', in the E½ sec. 30, T. 1 N., R. 21 E., 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.

Records available.--April 1904 to May 1905, September 1926 to September 1950.

Bypass channels.--None.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--There have been seven active diversions above the station amounting to 22 cfs. See table 21. Other permits are on file with the Idaho Department of Reclamation but have been cancelled due to inactivity.

Return flow.--No known surface return flow.

Storage and regulation.--Four reservoirs have existed in this area: Little Wood reservoir (capacity 11,700 acre-ft), Cameron Albrethson Reservoir (capacity 240 acre-ft), Dedman Reservoir (capacity 50 acre-ft) and Howard Reservoir (capacity 325 acre-ft). See table 4 for data regarding these reservoirs.

Utilization.--The flow of Little Wood River is presently used in this area for the irrigation of about 1,200 acres. Table 21 indicates acreage filed on at time water rights were established and not necessarily the actual land under irrigation.

The irrigated lands having water rights prior to 1900 were developed over a period of years and are believed to have been substantially completed in 1904 and 1905. Irrigated areas having later rights were developed within a few years after establishment and for most part were completed during term of record.

Table 21.--Diversions in Little Wood River basin, above Little Wood River near Carey, Idaho
[Diversions in this table are those located between this station and the next station upstream, Little Wood River at Campbell Ranch near Carey, Idaho No. 19]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Albrethson ditch.	Diverts from Little Wood River.	1883	4.60 (decree)	Irrigation	For use on 120 acres in sec. 2, T. 1 N., R. 20 E. and sec. 35, T. 2 N., R. 20 E. No known record of use. 1/
Cameron ditch	SW¼NE¼ sec. 22, T. 1 N., R. 21 E., from Little Fish Creek.	1913	5.6 (permit)	----do----	For use on 280 acres in secs. 15 and 22, T. 1 N., R. 21 E. No known record of use. 2/
Wright ditch	SW¼SW¼ sec. 11, T. 1 N., R. 21 E., from Little Fish Creek.	1914	3.2 (permit)	----do----	For use on 160 acres in sec. 11, T. 1 N., R. 21 E. No known record of use. 2/
Howard ditch	SE¼SW¼ sec. 7, T. 1 N., R. 21 E., from Little Fish Creek.	1924	1.00 (license)	----do----	For use on 140 acres in sec. 13, T. 1 N., R. 20 E. No known record of use. 2/
Burgess Ranch ditch.	Diverts from Burgess Creek.	1883	3.20 (decree)	----do----	For use on 160 acres in sec. 24, T. 1 N., R. 20 E., and sec. 19, T. 1 N., R. 21 E. No known record of use. 1/

Table 21.--Diversions in Little Wood River basin, above Little Wood River near Carey, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Early Ranch ditch.	Diverts from Early Creek.	1895	3.20 (decree)	Irrigation	For use on 160 acres in secs. 19 and 30, T. 1 N., R. 21 E. No known record of use. 1/
Ford ditch	S½SE¼ sec. 19, T. 1 N., R. 21 E., from Little Wood River.	1912	.86 (license)	----do----	For use on 160 acres in sec. 30, T. 1 N., R. 21 E. License is for flood waters only. No known record of use. 1/

1/ Frost Decree, Idaho State Dept. of Reclamation files.
2/ Idaho State Dept. of Reclamation files.

21.--Fish Creek above dam, near Carey, Idaho

Location.--Water-stage recorder and Cippoletti weir, in sec. 2, T. 1 N., R. 22 E., 1¼ miles upstream from West Fork of Fish Creek, 1½ miles upstream from dam of Carey Valley Reservoir Co., and 14 miles northeast of Carey.

Drainage area.--About 56 sq mi.

Records available.--May 1920 to September 1939 (irrigation seasons only except 1921, 1922, 1926, 1927).

Bypass channels.--None.

Diversions.--There have been numerous diversions above the gaging station with water rights amounting to 23 cfs. See table 22. Some of the diversions have now been consolidated but serve the same tracts of land.

Return flow.--No known surface return flow.

Storage and regulation.--None.

Utilization.--The water is used at present for irrigation of about 600 acres above the gaging station. Each tract shown in table 22 was developed gradually over a period of a few years following granting of the water right, and at the present is believed to be essentially complete.

Table 22.--Diversions in Fish Creek basin above Fish Creek above dam, near Carey, Idaho

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
McClure ditch	SW¼SE¼ sec. 32, T. 3 N., R. 23 E., from Iron Mine Creek.	1913	0.50 (permit)	Irrigation	For use on 50 acres in sec. 32, T. 3 N., R. 23 E. 1/ 3/
Mary J. Crookes ditch.	SW¼NW¼ sec. 6, T. 2 N., R. 23 E., from East Fork of Fish Creek.	1903	4.00 (license)	----do----	For use on 280 acres in secs. 1, 11, and 12, T. 1 N , R. 22 E. 1/ 3/
Fuller ditch	From Fish Creek	1906	.80 (decree)	----do----	For use on 160 acres in secs. 12, 13, T. 2 N., R. 22 E. and sec. 7, T. 2 N., R. 23 E. 2/ 3/
Cross ditch	NE¼SE¼ sec. 13, T. 2 N., R. 22 E., from Fish Creek.	1918	.10 (license)	----do----	For use on 12 acres in sec. 13, T. 2 N., R. 22 E. 1/ 3/
Cross ditch	SE¼SW¼ sec. 13, T. 2 N., R. 22 E., from Fish Creek.	1918	.10 (license)	----do----	For use on 8 acres in sec. 3, T. 2 N., R. 22 E. 1/ 3/
Young ditch	SE¼SE¼ sec. 13, T. 2 N., R. 22 E., from Fish Creek.	1904	1.40 (license)	----do----	For use on 160 acres in sec. 13 and sec. 24, T. 2 N., R. 22 E. 1/ 3/
Davis ditch	SE¼SE¼ sec. 13, T. 2 N., R. 22 E., from Fish Creek.	1909	.40 (decree)	----do----	For use on 30 acres in sec. 24, T. 2 N., R. 22 E. 2/ 3/
Davis ditch	SE¼SE¼ sec. 13, T. 2 N., R. 22 E., from Fish Creek.	1911	.50 (decree)	----do----	For use on 80 acres in sec. 24, T. 2 N., R. 22 E. 2/ 3/

Table 22.--Diversions in Fish Creek basin, above Fish Creek above dam, near Carey, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Sparks ditch	From Fish Creek	1907	2.20 (decree)	Irrigation	For use on 160 acres in secs. 25 and 26, T. 2 N., R. 22 E. 2/ 3/
Sparks ditch	From Fish Creek	1899	3.10 (decree)	----do----	For use on 160 acres in sec. 36, T. 2 N., R. 22 E. 2/ 3/
McDougal ditch.	From East Fork of Fish Creek.	1884	2.00 (decree)	----do----	For use on 160 acres in secs. 2 and 11, T. 1 N., R. 22 E. 2/ 3/
McDougal ditch.	Two diversions, one from East Fork and other from Fish Creek.	1884	1.00 (decree)	----do----	For use on 80 acres in sec. 1, T. 1 N., R. 22 E. 2/ 3/
McDougal ditch.	From Fish Creek	1885	.80 (decree)	----do----	For use on 80 acres in sec. 11, T. 1 N., R. 22 E. 2/ 3/
McDougal ditch.	Two diversions, one from East Fork and other from Fish Creek.	1885	2.60 (decree)	----do----	For use on 160 acres in sec. 2, T. 1 N., R. 22 E. 2/ 3/
McDougal ditch.	From East Fork of Fish Creek.	1902	.40 (decree)	----do----	For use on 80 acres in sec. 1, T. 1 N., R. 22 E. 2/ 3/
McDougal ditch.	From Fish Creek	1887	.80 (decree)	----do----	For use on 80 acres in sec. 11, T. 1 N., R. 22 E. 2/ 3/
McDougal ditch.	From East Fork of Fish Creek.	1890	.60 (decree)	----do----	For use on 80 acres in secs. 1 and 12, T. 1 N., R. 22 E. 2/ 3/
Ward ditch	From Fish Creek	1914	1.60 (permit)	----do----	For use on 80 acres in sec. 15, T. 1 N., R. 22 E. 1/ 3/

1/ Files of Idaho State Dept. of Reclamation.
2/ Potter vs. Patterson Decree, files of Idaho State Dept. of Reclamation.
3/ No known records of actual amount of water diverted.

22.--West Fork Fish Creek near Carey, Idaho

Location.--Staff gage, in sec. 3, T. 1 N., R. 22 E., 1¾ miles above confluence with Fish Creek and 14 miles northeast of Carey.

Drainage area.--Approximately 12.5 sq mi.

Records available.--May 1920 to September 1929 (discharge measurements only in 1923).

Bypass channels.--None.

Diversions.--There have been five diversions above the gaging station with water rights amounting to 5.7 cfs. See table 23.

Return flow.--No known surface return flow from irrigation.

Storage and regulation.--None.

Utilization.--The water is used at present for irrigation of about 290 acres above the gaging station. Irrigation in this area was substantially developed prior to 1920.

Table 23.--Diversions in Fish Creek basin, above West Fork Fish Creek near Carey, Idaho

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Judy ditch	NE¼NE¼ sec. 28, T. 2 N., R. 22 E., from West Fork of Fish Creek.	1931	1.00 (permit)	Irrigation	For use on 50 acres in sec. 28, T. 2 N., R. 22 E. No known record of use. 1/
Ward ditch	One mile above the confluence of the east and west forks of the West Fork of Fish Creek	1905	1.60 (decree)	----do----	For use on 160 acres in secs. 27, 28, and 33, T. 2 N., R. 22 E. No known record of use. 2/

Table 23.--Diversions in Fish Creek basin, above West Fork Fish Creek near Carey, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Ward ditch	Three-fourths mile below junction of the east and west forks of the West Fork of Fish Creek.	1904	1.20 (decree)	Irrigation	For use on 160 acres in sec. 4, T. 1 N., R. 22 E. and sec. 33, T. 2 N., R. 22 E. No known record of use. 2/
Stinson ditch	From West Fork of Fish Creek.	1905	1.06 (decree)	----do----	For use on 160 acres in secs. 3 and 4, T. 1 N., R. 22 E. No known record of use. 2/
Potter ditch	SW¼NW¼ sec. 3, T. 1 N., R. 22 E., from West Fork of Fish Creek.	1905	.80 (decree)	----do----	For use on 160 acres in sec. 10, T. 1 N., R. 22 E. No known record of use. 2/

1/ Files of Idaho State Dept. of Reclamation.
2/ Potter vs. Patterson Decree, files of Idaho State Dept. of Reclamation.

23.--Fish Creek near Carey, Idaho

Location.--Water-stage recorder, in sec. 15, T. 1 N., R. 22 E., 600 ft downstream from Carey Valley Reservoir Co.'s dam.

Records available.--April 1919 to September 1920, May 1923, to September 1939 (Irrigation seasons only 1924-29, 1931-33, 1939). Discharge measurements in 1921 and 1922.

Bypass channels.--None.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--Two canals have diverted from Fish Creek in this area. See table 24.

Return flow.--No surface return flow.

Storage and regulation.--Fish Creek reservoir, usable capacity 13,700 acre-ft, stores water for irrigation.

Utilization.--Water was used for irrigation of about 300 acres during period of record. No irrigation at present.

Table 24.--Diversions in Fish Creek basin, above Fish Creek near Carey, Idaho

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Boulton and Knutsen ditch.	SE¼ sec. 16, T. 1 N., R. 22 E., from Fish Creek.	1910	4.00 (permit)	Irrigation	For use on 200 acres in secs. 27 and 34, T. 1 N., R. 22 E. Abandoned prior to 1919. No known record of use. 1/
Hurst ditch	From Fish Creek	1923	1.56 (decree)	----do----	For use on 340 acres in secs. 2, 3, and 12, T. 1 N., R. 22 E. This is a right to flood waters only during the freshet season. No known record of flow. 2/

1/ Files of Idaho State Dept. of Reclamation.
2/ Carey Valley Reservoir Co. vs. W. C. Eldredge, files of Idaho State Dept. of Reclamation.

24.--Silver Creek near Picabo, Idaho

Location.--Water-stage recorder, lat 43°17', long. 114°01', in sec. 1, T. 2 S., R. 20 E., 1½ miles downstream from drain ditch of Blaine County Drainage District No. 1, and 3 miles southeast of Picabo.

Records available.--May 1920 to September 1950 (1922-35, irrigation seasons only).

Bypass channels.--The entire flow of the Hunter Canal (no. 30) and part of the Lawson Canal (no. 25) bypass the gaging station. See table 25. Flow of canals is not included in records for station.

Diversions.--There have been a total of 23 diversions amounting to about 146 cfs on Silver Creek above the gaging station, some of which have been abandoned. These are listed in table 25. Many of the water rights which in the table are indicated as applicable to a particular canal, may in practice be met by diversions at another point or several points, using other canals. Water rights therefore are not a reliable guide as to quantities withdrawn during the irrigation season at each point of diversion. See remarks in table 25.

Return flow.--Seepage from irrigation is reused to some extent for further irrigation below

point of original use. Some return flow undoubtedly reaches Silver Creek above the gaging station.

Storage and regulation.--None.

Utilization.--Approximately 9,000 acres are presently irrigated above the gaging station and this irrigated area has not changed substantially during period of record.

Table 25.--Diversions in Silver Creek basin, above Silver Creek near Picabo, Idaho

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Willis Canal (nos. 1, 2, 3)	SE¼SE¼ sec. 7, T. 1 S., R. 19 E., from Patten Creek Canal no. 1, NE¼ NE¼ sec. 28, T. 1 S., R. 19 E., from Patten Creek no.2, NW¼NW¼ sec. 27, T. 1 S., R. 19 E., from Patten Creek Canal no. 3.	1904	8.00 (decree)	Irrigation	For use on 400 acres in secs. 19, 20, 29, T. 1 S., R. 19 E. Water diverted at all or any one of the three points of diversion. 1/
Broadhurst Canal. (no. 5)	From unnamed tributary to Silver Creek, in sec. 22, T. 1 S., R. 19 E.	1890	1.00 (decree)	----do----	For use on 40 acres in sec. 22, T. 1 S., R. 19 E. Abandoned in 1920. 1/
Embleton Canal. (no. 7)	From unnamed tributary to Silver Creek.	1890	1.00 (decree)	----do----	For use on 160 acres in sec. 15, T. 1 S., R. 19 E. Transferred to Gillihan Canal (no. 11) in 1920. Used under Canal no. 11 to irrigate 160 acres in sec. 17, T. 1 S., R. 20 E. 1/
Johnson Canal (no. 9)	SW¼SW¼ sec. 14, T. 1 S., R. 19 E., from tributary to Silver Creek.	1888	6.90 (decree)	----do----	For use on 320 acres in sec. 23, T. 1 S., R. 19 E. Abandoned in 1923. 1/
Gillihan and Heath Canal. (no. 10)	1,000 ft north and 1,500 ft west of southeast corner sec. 14, T. 1 S., R. 19 E., from tributary to Silver Creek.	1887	5.70 (decree)	----do----	For use on 680 acres in secs. 13, 23, 24, and 25, T. 1 S., R. 19 E. 1/
Gillihan Co. Canal. (no. 11)	NW¼SE¼ sec. 24, T. 1 S., R. 19 E., from tributary to Silver Creek.	1884	10.10 (decree)	----do----	For use on 1,440 acres in secs. 2, 23, 24, and 25, T. 1 S., R. 19 E., secs. 17, 19, and 20, T. 1 S., R. 20 E. Kilpatrick Brothers may run any or all of their water in this canal. The drainage water from the Mantey Canal (14) and Patterson Canal (15) may also be run in this canal. 1/
Gillihan and Rettenour Canal. (no. 12)	1,000 ft north and 1,200 ft east of southwest corner sec. 14, T. 1 S., R. 19 E., from tributary to Silver Creek.	1884	.40 (decree)	----do----	For use on approximately 50 acres in secs. 13 and 24, T. 1 S., R. 19 E. This water was transferred to Canal Nos. 10 and 14 in 1944 to irrigate 160 acres in secs. 17 and 18, T. 1 S., R. 20 E. The water from Canal no. 11 may be transferred to this canal. 1/
Stanfield Canal. (no. 13)	SE¼NE¼ sec. 11, T. 1 S., R. 19 E., from tributary to Silver Creek.	1884	8.00 (decree)	----do----	For use on 400 acres in sec. 13, T. 1 S., R. 19 E. and sec. 18, T. 1 S., R. 20 E. 1/

Table 25.--Diversions in Silver Creek basin, above Silver Creek near Picabo, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Mantey and Co. Canal. (no. 14)	1,450 ft north and 400 ft west of southeast corner sec. 11, tributary to Silver Creek.	1884	4.00 (decree)	Irrigation	For use on 300 acres in secs. 13 and 24, T. 1 S., R. 19 E. and secs. 16, 17, and 18, T. 1 S., R. 20 E. Kilpatrick Brothers and Patterson (no. 15) may run any of their water in this canal. 1/
Patterson Canal. (no. 15)	SE¼NE¼ sec. 13, T. 1 S., R. 19 E., from tributary to Silver Creek.	1884	8.50 (decree)	----do----	For use on 285 acres in sec. 19, T. 1 S., R. 20 E. 1/
Alberthson and Co. Canal. (no. 16)	SE¼SE¼ sec. 24, T. 1 S., R. 19 E., from tributary to Silver Creek.	1883	5.60 (decree)	----do----	For use on 760 acres in secs. 19, 20, and 30, T. 1 S., R. 20 E. 1/
Alberthson Canal. (no. 17)	NW¼NW¼ sec. 30, T. 1 S., R. 20 E., from Silver Creek.	1917	5.00 (decree)	----do----	For use on 360 acres in secs. 19 and 30, T. 1 S., R. 20 E. Kilpatricks may run any of their water in this canal. 1/
Kilpatrick Canal. (no. 18)	North 49°41', 2,393 ft east from west ¼ corner sec. 30, T. 1 S., R. 20 E., from Silver Creek.	1883	57.54 (decree)	----do----	For use on approximately 1,500 acres in secs. 20, 26, 27, 29, 30, 33, and 35, T. 1 S., R. 20 E. This is an exclusive Kilpatrick canal and any or all of their water may be diverted here. 1/
Iden and Co. Canal. (no. 19)	900 ft east and 300 ft north from south ¼ corner sec. 20, T. 1 S., R. 20 E., from Silver Creek.	1883	2.80 (decree)	----do----	For use on approximately 1,170 acres in sec. 16, secs. 21, 22, and 26, T. 1 S., R. 20 E. This is an exclusive Kilpatrick Canal and any or all of their water may be diverted here. 1/
Baker and Co. Canal. (no. 20)	450 ft north and 200 ft west from south ¼ corner sec. 26, T. 1 S., R. 20 E., from Silver Creek.	1890	1.80 (decree and license)	----do----	For use on 230 acres in secs. 1, 2, 12, and 35, T. 1 S., R. 20 E. 1/
Mrs. Baker Canal. (no. 21)	450 ft north and 200 ft west from south ¼ corner sec. 26, T. 1 S., R. 20 E., from Silver Creek.	1889	2.00 (decree)	----do----	For use on 80 acres in sec. 26, T. 1 S., R. 20 E. 1/
Chaumell Canal. (no. 22)	750 ft north and 300 ft east from south ¼ corner sec. 26, T. 1 S., R. 20 E., from Silver Creek.	1877	2.40 (decree)	----do----	For use on 240 acres in sec. 35, T. 1 S., R. 20 E. 1/
Neidermeyer and Co. (no. 23)	520 ft east and 400 ft north of west ¼ corner sec. 36, T. 1 S., R. 20 E., from Silver Creek.	1885	3.00 (decree)	----do----	For use on 360 acres in secs. 1 and 2, T. 2 S., R. 20 E. Water from Canal No. 20 is generally transferred into this canal. 1/
Lawson Canal (no. 24)	400 ft west of northwest corner sec. 36, T. 1 S., R. 20 E., from Silver Creek.	1885	4.00 (decree)	----do----	For use on 240 acres in sec. 31, T. 1 S., R. 21 E. and sec. 6, T. 2 S., R. 21 E. 1/

Table 25.--Diversions in Silver Creek basin, above Silver Creek near Picabo, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Lawson Canal (no. 25)	100 ft east and 650 ft south of north ¼ corner sec. 1, T. 2 S., R. 20 E., from Silver Creek.	1885	-	Irrigation	The water from Canal No. 24 is interchanged with this canal to irrigate same land as described under Lawson Canal No. 24. 1/
Brett Canal (no. 26)	1,300 ft east and 300 ft south of west ¼ corner sec. 36, T. 1 S., R. 20 E., from Silver Creek.	1877	2.00 (decree)	----do----	For use on 80 acres in sec. 36, T. 1 S., R. 20 E. This water is used in all three Brett Canals (26-28) and the same land benefited. 1/
Brett Canal (no. 27)	1,250 ft east and 600 ft south of west ¼ corner sec. 36, T. 1 S., R. 20 E., From Silver Creek.	1877	-	----do----	For use on same land described under Brett Canal (no. 26).
Brett Canal (no. 28)	1,040 ft west and 20 ft south of center of sec. 36, T. 1 S., R. 20 E., from Silver Creek.	1877	-	----do----	For use on same land described under Brett Canal (no. 26).
Good Canal (no. 29)	760 ft west and 420 ft south of center of sec. 36, T. 1 S., R. 20 E., from Silver Creek.	1877	4.00 (decree)	----do----	For use on 160 acres in sec. 1, T. 2 S., R. 20 E. 1/
Hunter Canal (no. 30)	1,280 ft north and 810 ft west of east ¼ corner sec. 1, T. 2 S., R. 20 E., from Silver Creek.	1889	2.40 (decree)	----do----	For use on 200 acres in sec. 12, T. 2 S., R. 20 E. Entire flow bypasses station and irrigates land below. 1/

1/ Data obtained and records available in files of Big Wood River Watermaster.

25.--Little Wood River near Richfield, Idaho

Location.--Water-stage recorder, lat 43°03', long. 114°08', in sec. 30 T. 4 S., R. 20 E., half a mile upstream from Jim Byrne's Slough and heading of Dietrich Canal, 1 mile east of railroad station at Richfield, and 14 miles downstream from Silver Creek.

Records available.--January 1911 to September 1950 (irrigation seasons only).

Bypass channels.--None.

(The information that follows applies only to the drainage area between this station and the next stations upstream.)

Diversions.--There have been 18 diversions in this area for water rights amounting to 64 cfs on Silver Creek and Lower Little Wood River. Two diversions on Little Wood River above the mouth of Silver Creek, East Canal and West Canal, divert the entire flow of the stream. The natural channel of the Little Wood River in this reach carries no water except during flood periods. The Fish Creek Canal diverts most of the flow in Fish Creek and discharges into East Canal. (see table 26.) There are several small diversions from Fish Creek which are not included in this table, but the amount of water diverted by these ditches is very small.

Return flow.--Some return flow from irrigation in Silver Creek, reaches Little Wood River in this area. No records available.

Storage and regulation.--None, except as noted for stations upstream.

Utilization.--At present, about 22,000 acres are irrigated in this area. Areas irrigated under decreed rights from Little Wood River and Silver Creek, about 5,000 acres, have been essentially the same since the station record began in 1911. About 8,000 acres of new land were brought under irrigation during the period 1923-25, after completion of Fish Creek Dam, and about 9,000 acres were developed during the period 1940-50 after the completion of Little Wood River dam.

Table 26.--Diversions in Little Wood River basin, above Little Wood River near Richfield, Idaho
[Diversions in this table are those located between this station and the next stations upstream, Little Wood River near Carey No. 20, Fish Creek near Carey No. 23, and Silver Creek near Picabo No. 24]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Osterhouse Canal. (no. 31)	1,160 ft east and 780 ft north of northwest corner sec. 7, T. 2 S., R. 21 E., from Silver Creek.	1916	5.22 (license) drainage water only.	Irrigation	For use on 360 acres in secs. 6 and 7, T. 2 S., R. 21 E. Water developed in the "C" drain (30 cfs) and "F", "G", and "H" (2.22 cfs). 1/ 2/
McGlochin Canal. (no. 32)	1,560 ft east and 300 ft north of west ¼ corner sec. 7, T. 2 S., R. 21 E., from Silver Creek.	1886	3.00 (decree)	----do----	For use on 200 acres in sec. 7, T. 2 S., R. 21 E. 1/
McGlochin Canal. (no. 33)	1,500 ft east and 300 ft north of northwest corner sec. 7, T. 2 S., R. 21 E., from Silver Creek.	-	-	----do----	Water is interchanged between Canal No. 32 and Canal no. 33 to irrigate same lands as described above. 1/
Dixon Canal (no. 34)	730 ft east and 100 ft north of north ¼ corner sec. 18, T. 2 S., R. 21 E.	-	No established water right.	----do----	For use on 160 acres in sec. 18, T. 2 S., R. 21 E. Abandoned in 1934. 1/
Smith Canal (no. 35)	840 ft north and 120 ft west of northwest ¼ corner sec. 20, T. 2 S., R. 21 E., from Silver Creek.	1888	2.50 (decree)	----do----	For use on 200 acres in secs. 19 and 20, T. 2 S., R. 21 E. 1/
Smith and Co. Canal (no. 36)	200 ft north and 20 ft west of northwest corner sec. 20, T. 2 S., R. 21 E., from Silver Creek.	-	-	----do----	For use on lands described under Canal Nos. 35, 37, and 38. These three canals have full right-of-way in Canal No. 36 and may deliver their water anytime in Canal no. 36. 1/
Payne Canal (no. 37)	100 ft east and 10 ft north of center of sec. 20, T. 2 S., R. 21 E., from Silver Creek.	1881	2.80 (decree)	----do----	For use on 280 acres in secs. 19 and 20, T. 2 S., R. 21 E. Abandoned in 1934 and transferred to Canal no. 36 in 1934. 1/
McGlochlin Canal. (no. 38)	1,520 ft east and 1,720 ft north of west ¼ corner sec. 29, T. 2 S., R. 21 E., from Silver Creek.	1881	6.10 (decree)	----do----	For use on 320 acres in sec. 29, T. 2 S., R. 21 E. 1/
McGlochlin Canal. (no. 39)	1,180 ft east and 1,500 ft north of west ¼ corner sec. 29, T. 2 S., R. 21 E., from Silver Creek.	-	-	----do----	Water from McGlochlin Canal no. 38 is run at various times in Canals nos. 39 and 39-A to irrigate same land as described directly above. 1/
McGlochlin Canal. (no. 39-A)	900 ft east and 1,330 ft north of west ¼ corner sec. 29, T. 2 S., R. 21 E., from Silver Creek.	-	-	----do----	
Cook Canal (no. 40)	15 ft north of west ¼ corner sec. 29, T. 2 S., R. 21 E., from Silver Creek.	1883	7.60 (decree)	----do----	For use on 400 acres in secs. 30 and 31, T. 2 S., R. 21 E. 1/ The water in Canal no. 40 is interchangeable with Canal no. 41.

Table 26.--Diversions in Little Wood River basin, above Little Wood River near Richfield, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Cook Canal (no. 41)	180 ft north and 100 ft west of west ¼ corner sec. 29, T. 2 S., R. 21 E., from Silver Creek.	-	-	Irrigation	Canal no. 41 irrigates same lands as described directly above. 1/
Ragsdale Upper Canal. (no. 42)	15 ft north and 5 ft east of west ¼ corner sec. 29, T. 2 S., R. 21 E., Silver Creek.	1910	4.50 (decree)	----do----	For use on 400 acres in sec. 31, T. 2 S., R. 21 E., and sec. 6, T. 3 S., R. 21 E. Abandoned in 1936. 1/
Ragsdale West Canal. (no. 43)	1,760 ft north of east ¼ corner sec. 31, T. 2 S., R. 21 E., from Silver Creek.	1884	3.50 (decree)	----do----	For use on 360 acres in sec. 31, T. 2 S., R. 21 E., and sec. 6, T. 3 S., R. 21 E. Abandoned in 1936 and water transferred to Ragsdale Canal (no. 44) in 1936. 1/
Ragsdale East Canal. (no. 44)	NW¼NE¼ sec. 31, T. 2 S., R. 21 E., from Silver Creek.	-	-	----do----	Water from Canal no. 43 is run through this canal to irrigate same land as described under Canal no. 43. 1/
West Canal	SW¼SE¼ sec. 30, T. 1 N., R. 21 E., from Little Wood River.	1923	Capacity approx. 125	----do----	East and West Canals used for irrigation of 8,814 acres. West Canal irrigates lands in parts of secs. 5, 7, 8, 17, 20, 28, and 33, T. 1 S., R. 21 E. East Canal irrigates parts of secs. 15, 16, 21, 22, 26, 27, and sec. 34 T. 1 S., R. 21 E. 2/
East Canal	NW¼SW¼ sec. 32, T. 1 N., R. 21 E., from Little Wood River.	1923	Capacity approx. 130	----do----	
Fish Creek Canal.	NE¼SE¼ sec. 33, T. 1 N., R. 22 E., from Fish Creek.	1923	Capacity 135	----do----	For use on about 8,000 acres in parts of secs. 33 and 34, T. 1 N., R. 22 E. and secs. 3, 4, 5, 6, 7, 8, 9, 10, 15, 16, 17, and 18, T. 1 S., R. 22 E. 2/
Strunk Canal (no. 45)	SW¼SW¼ sec. 31, T. 2 S., R. 21 E., from Little Wood River.	1914	2.96 (license)	----do----	For use on 320 acres in sec. 1 and sec. 11, T. 3 S., R. 20 E. Abandoned in 1934. 1/ 2/
Franklin Canal (no. 46)	NE¼SE¼ sec. 1, T. 3 S., R. 20 E., from Little Wood River.	1916	Variable drainage water only. (permit)	----do----	For use on 160 acres in secs. 1 and 12, T. 3 S., R. 20 E. Abandoned in 1936. 1/ 2/
Womack Canal (no. 47)	SE¼SE¼ sec. 1 T. 3 S., R. 20 E., from Little Wood River.	1916	3.74 (license)	----do----	For use on 120 acres in secs. 1, and 12, T. 3 S., R. 20 E. Some of this water is drainage from Canals nos. 45, 46, and 47. Abandoned in 1938. 1/ 2/
McKissick Canal. (no. 48)	NW¼NE¼ sec. 14, T. 3 S., R. 20 E., from Little Wood River.	1883	1.40 (license)	----do----	For use on 160 acres in sec. 14, T. 3 S., R. 20 E. Abandoned in 1941, and transferred water to Canal no. 19. 1/

Table 26.--Diversions in Little Wood River basin, above Little Wood River near Richfield, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Dixon Canal (no. 49)	SW¼NW¼ sec. 23, T. 3 S., R. 20 E., from Little Wood River.	1898	2.00 (decree)	Irrigation	For use on 160 acres in sec. 22, T. 3 S., R. 20 E. 1/
Upper Fender Canal.(no. 50)	NW¼SE¼ sec. 27, T. 3 S., R. 20 E., from Little Wood River.	1911	5.00 (permit)	----do----	For use on 40 acres in secs. 26, 27, 34, T. 3 S., R. 20 E. Abandoned in 1926. 1/ 2/
Upper Fender Canal.(no. 50-A)	SE¼SW¼ sec. 27, T. 3 S., R. 20 E., from Little Wood River.	-	-	-	Water from Upper Fender Canal (no. 50) is run through this canal to irrigate same lands as described under Canal (no. 50). Abandoned in 1926. 1/ 2/
McKay-Malcolm Canal.(no. 51)	NW¼NW¼ sec. 3, T. 4 S., R. 20 E., from Little Wood River.	1906	2.50 (decree)	Irrigation	For use on 160 acres in sec. 3, T. 4 S., R. 20 E. Water right is developed from swamp. Abandoned in 1934. 1/
Dixon Canal (no. 52)	SE¼NW¼ sec. 3, T. 4 S., R. 20 E., from Little Wood River.	1906	.50 (decree)	----do----	For use on part of 160 acres in sec. 3, T. 4 S., R. 20 E. Abandoned in 1934. 1/
Lower Fender Canal.(no. 53)	NW¼SE¼ sec. 9, T. 4 S., R. 20 E., from Little Wood River.	1913	5.20 (permit)	----do----	For use on 40 acres in secs. 8 and 17, T. 4 S., R. 20 E. Abandoned in 1926. 1/ 2/
Lower Fender Canal.(no. 53-A)	SE¼SW¼ sec. 16, T. 4 S., R. 20 E., from Little Wood River.	-	-	-	Water from Lower Fender Canal (no. 53-A) was carried by this canal to irrigate same lands as described by Canal (53-A). Abandoned in 1926. 1/ 2/
Cook Canal (no. 54)	NW¼NW¼ sec. 21, T. 4 S., R. 20 E., from Little Wood River.	1906	5.50 (decree)	Irrigation	For use on 360 acres in secs. 19 and 20, T. 4 S., R. 20 E. 1/

1/ Data obtained and records available in files of Little Wood River Watermaster.
2/ Files of Idaho State Dept. of Reclamation.

26.--Little Wood River at Shoshone, Idaho

Location.--Water-stage recorder, lat 42°56', long. 114°24', in sec. 2 T. 6 S., R. 17 E., just upstream from diversion dam for town water supply and 400 ft upstream from highway bridge in Shoshone.

Records available.--April 1922 to September 1950 (irrigation seasons only).

Bypass channels.--None.

(The information that follows applies only to the drainage area between this station and the next station upstream.)

Diversions.--There have been 13 diversions above this gaging station with rights amounting to approximately 352 cfs.

Return flow.--Water from Big Wood River is discharged into Little Wood River through Byrne's Slough in sec. 24, T. 4 S., R. 19 E., and then is diverted into the Dietrich Canal. Water from Snake River (American Falls) carried by the Milner-Gooding Canal is discharged into Little Wood River above gaging station. Water is also returned from the Richfield tract via the Marley Slough in sec. 5, T. 5 S., R. 19 E. See table 27.

Storage and regulation.--None except as noted for upstream stations and for effect of Milner-Gooding Canals.

Utilization.--Water is used for irrigation of about 13,900 acres in this area. The irrigated land was substantially developed prior to establishment of the gaging station and no significant changes have occurred during period of record. The domestic water supply for the town of Shoshone is obtained from Little Wood River.

Table 27.--Diversions in Little Wood River basin, above Little Wood River at Shoshone, Idaho

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Dietrich Canal (no. 55)	NE¼SE¼ sec. 25, T. 4 S., R. 19 E., from Little Wood River.	1911	Capacity - 275 cfs After 1932- 210 cfs (Carey Act)	Irrigation	For use on 11,090 acres of the Dietrich tract. 1/ 2/
Lane South Canal. (no. 56)	SW¼SE¼ sec. 25, T. 4 S., R. 19 E., from Little Wood River.	1907	(license) 3.00	----do----	For use on 277 acres in secs. 25, 26, and 35, T. 4 S., R. 19 E. 1/
Lane North Canal. (no. 57)	NW¼SE¼ sec. 25, T. 4 S., R. 19 E., from Little Wood River.	1907	(Carey Act) 3.44	----do----	For use on same lands as described under Canal No. 56. 1/
McNulty Canal (no. 58)	NE¼NE¼ sec. 34, T. 4 S., R. 19 E., from Little Wood River.	1884	(decree) 1.20	----do----	For use on 120 acres in sec. 34, T. 4 S., R. 19 E. 1/
McNulty West Canal. (no. 59)	SE¼NE¼ sec. 34, T. 4 S., R. 19 E., from Little Wood River.	1884	-	----do----	Water from Canal No. 58 is run through this canal to irrigate the same land as described above. 1/
McNulty Canal (no. 60)	NE¼SW¼ sec. 4, T. 5 S., R. 19 E., from Little Wood River.	1884	(decree) 5.20	----do----	For use on 320 acres in secs. 4 and 5, T. 5 S., R. 19 E. 1/
Turner Canal (no. 61)	SW¼SW¼ sec. 5, T. 5 S., R. 19 E., from Little Wood River.	1885	(decree) 2.30	----do----	For use on 160 acres in sec. 7, T. 5 S., R. 19 E. Water right transferred to City of Gooding in 1948 and canal abandoned in 1948. 1/
Brown Canal (no. 62)	NE¼SW¼ sec. 7, T. 5 S., R. 19 E., from Little Wood River.	1888 1916 1916	(decree) 2.00 (Big Cotton- wood Canal Co) 2.32 (Carey Act) .62 Total 4.94	----do----	For use on 135 acres in sec. 18, T. 5 S., R. 19 E. 1/
Hughes East Canal. (no. 63)	NE¼SW¼ sec. 15, T. 5 S., R. 18 E., from Little Wood River.	1884 1916	(decree) 3.00 (Big Cotton- wood Canal Co) 6.40 Total 9.40	----do----	For use on 200 acres in sec. 14 and sec. 23, T. 5 S., R. 18 E. 1/
Hughes West Canal. (no. 64)	SE¼SW¼ sec. 15, T. 5 S., R. 18 E., from Little Wood River.	1884	-	----do----	Water from Canal no. 63 is run through this canal to irrigate same land as described above. 1/
Anderson East Canal. (no. 65)	SE¼NW¼ sec. 23, T. 5 S., R. 18 E., from Little Wood River.	1883 1916	(decree) 8.90 (Big Cotton- wood Canal Co) 3.04 Total 11.94	----do----	For use on 400 acres in secs. 27, 32 and 33, T. 5 S., R. 18 E. 1/
Anderson West Canal. (no. 66)	SE¼NW¼ sec. 23, T. 5 S., R. 18 E., from Little Wood River.	1883	-	----do----	Water from Canal no. 65 is carried in this canal to irrigate 320 acres in secs. 27 and 28, T. 5 S., R. 18 E. 1/

Table 27.--Diversions in Little Wood River basin, above Little Wood River at Shoshone, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Bock Canal (no. 67)	NW¼SE¼ sec. 31, T. 5 S., R. 18 E., from Little Wood River.	1884	(decree) 3.70	Irrigation	For use on 240 acres in sec. 36, T. 5 S., R. 17 E. 1/
White Canal (no. 68)	SE¼NE¼ sec. 36, T. 5 S., R. 17 E., from Little Wood River.	1884 1916 1916	(decree) 6.20 (Big Cotton-wood Canal Co.) 15.90 (Carey Act) 1.60 Total 23.70	---do----	For use on 440 acres in sec. 26, 35, and 36, T. 5 S., R. 17 E. 1/
White Canal (no. 68-A)	SW¼NE¼ sec. 36, T. 5 S., R. 17 E., from Little Wood River.	-	-	----do----	Water from Canal no. 68 is run through this diversion to irrigate same lands as described under Canal No. 68. 1/
Gooding-Mott Canal (no. 69)	NW¼SW¼ sec. 31, T. 5 S., R. 18 E., from Little Wood River.	1882 1916 1916	(decree) 4.44 (Big Cotton-wood Canal Co.) .22 (Carey Act) 2.04 Total 6.70	---do----	For use on 200 acres in secs. 35 and 36, T. 5 S., R. 17 E. 1/
Shoshone Village (no. 70-A) City Pump.	NW¼NE¼ sec. 2, T. 6 S., R. 17 E., from Little Wood River.	1882	(decree) 1.20	Domestic use.	(1/)

1/ Data obtained and records available from files of Little Wood River Watermaster.
2/ Files of Big Wood Canal Co.

27.--Big Wood River near Gooding, Idaho

Location.--Water-stage recorder, lat 42°54', long. 114°48' in sec. 21, T. 6 S., R. 14 E., at Hudson Ranch, 2 miles downstream from bridge on Bliss-Gooding highway, 3½ miles downstream from Little Wood River, 5 miles upstream from diversion dam for King Hill project, and 6 miles southwest of Gooding.

Records available.--March 1916 to September 1950 (fragmentary 1922-37, 1941, 1942).

Bypass channels.--The entire flow of the Frost Lower Canal (no. 39) bypasses the gaging station. Flow of canal not included in gaging station records.

(The information that follows applies only to the drainage area between this station and the next stations upstream.)

Diversions.--There have been numerous diversions in this area amounting to approximately 592 cfs (see table 28).

Return flow.--The Twin Falls North Side Canal discharges Snake River water into the channel of the Big Wood River in sec. 31, T. 5 S., R. 15 E., approximately half a mile below Gooding. The Twin Falls North Side Canal also discharges into the Little Wood River at X waste in sec. 6, T. 6 S., R. 15 E., a record of this flow is maintained by the Big Wood River Watermaster. No known surface return flow.

Storage and regulation.--None, except as noted for upstream stations and effect of Twin Falls North Side Canal.

Utilization.--At present, about 29,000 acres in this area are under irrigation. In 1916, much of this land was under development, but not all was irrigated. By 1920 or 1925, essentially all presently irrigated lands are believed to have been under irrigation.

Table 28.--Diversions in Little and Big Wood River basin, above Big Wood River near Gooding, Idaho
[Diversions in this table are those located between this station and the next stations upstream, Big Wood River at Gooding No. 16, Dry Creek near Blanche No. 17, and Little Wood River at Shoshone No. 26]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Walters Canal (no. 33)	NE¼NW¼ sec. 31 T. 5 S., R. 14 E., from Big Wood River.	1885	(decree)10.20	Irrigation	For use on 480 acres in secs. 22, 23, 25, and 26, T. 5 S., R. 14 E. 1/
Jones Canal (no. 34)	SE¼SW¼ sec. 25, T. 5 S., R. 14 E., from Big Wood River.	1884	(decree) 6.10	----do----	For use on 367 acres in secs. 26 and 27, T. 5 S., R. 14 E. 1/
Hash Canal (no. 35)	SE¼SW¼ sec. 25, T. 5 S., R. 14 E., from Big Wood River.	1911	(Carey Act) .25	----do----	For use on 5 acres in sec. 25, T. 5 S., R. 14 E. 1/
Y or Clover Creek. (no. 36)	SW¼SE¼ sec. 22, T. 5 S., R. 14 E., from Big Wood River.	1916	(American Falls Water) 125	----do----	For use on part of 8,000 acres in the Carey Act 3d Segregation Lands. 1/ 2/
Ohlinger Pump (no. 70B)	SE¼ sec. 34, T. 5 S., R. 17 E., from Little Wood River.	1949	(decree) .50	----do----	For use on 25 acres in T. 5 S., R. 17 E. 1/
Mabbutt Canal (no. 70)	NW¼SE¼ sec. 34, T. 5 S., R. 17 E., from Little Wood River.	1885	(decree) 2.60 (Big Cotton-wood Canal Co.) 1.16 Total 3.76	---do----	For use on 320 acres in secs. 38, 33, and 34, T. 5 S., R. 17 E. 1/
Stockslager South. (no. 71)	SW¼SE¼ sec. 28, T. 5 S., R. 17 E., from Little Wood River.	1883 1916	(decree) 4.40 (Carey Act) .50 Total 4.90	---do----	For use on 240 acres in secs. 28 and 33, T. 5 S., R. 17 E. 1/
Stockslager North. (no. 72)	SE¼SW¼ sec. 28, T. 5 S., R. 17 E., from Little Wood River.	-	-	----do----	Water from Canal no. 71 is carried by this diversion to irrigate same lands as described above under Canal No. 71. 1/
Myers Upper Canal. (no. 73)	SW¼SE¼ sec. 29, T. 5 S., R. 17 E., from Little Wood River.	1883 1916	(Decree) 6.00 (Big Cotton-wood Canal Co.) .28 Total 6.28	---do----	For use on 413 acres in secs. 30 and 31, T. 5 S., R. 17 E. 1/
Myers South Canal. (no. 74)	SW¼NE¼ sec. 30, T. 5 S., R. 17 E., from Little Wood River.	-	-	----do----	Water from Canal No. 73 is carried by Canals 74 and 75 to irrigate same lands as described above under Canal no. 73. 1/
Myers Lower Canal. (no. 75)	NE¼NW¼ sec. 30, T. 5 S., R. 17 E., from Little Wood River.	-	-	----do----	-
McFall South Canal. (no. 76)	SW¼NW¼ sec. 30, T. 5 S., R. 17 E., from Little Wood River.	1884 1916 1916	(decree) 5.40 (Big Cotton-wood Canal Co.) 7.19 (Carey Act) 1.25 Total 13.84	--do----	For use on 480 acres in secs. 24 and 25, T. 5 S., R. 16 E. 1/

Table 28.--Diversions in Little and Big Wood River basin, above Big Wood River near Gooding, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
McFall North Canal.(no. 77)	NW¼NW¼ sec. 30, T. 5 S., R. 17 E., from Little Wood River.	-	-	Irrigation	Water from Canal no. 76 is carried by this canal to the same land as described above under Canal no. 76. 1/
Hunter North Canal.(no. 78)	NW¼NE¼ sec. 26, T. 5 S., R. 16 E., from Little Wood River.	1884 1916	(decree) 4.20 (Big Cotton-wood Canal Co.) 1.68 Total 5.88	---do----	For use on 440 acres in secs. 26 and 27, T. 5 S., R. 16 E. Also receives Snake River water to supplement water right.
Hunter South Canal.(no. 79)	NW¼NE¼ sec. 26, T. 5 S., R. 16 E., from Little Wood River.	-	-	----do----	Water from Canal no. 78 is carried by this canal to irrigate same lands as described above under Canal no. 78. 1/
Hunter Lower Canal.(no. 80)	SE¼NE¼ sec. 28, T. 5 S., R. 16 E., from Little Wood River.	1882 1916	(decree) 2.60 (Big Cotton-wood Canal Co.) 4.66 Total 7.26	---do----	For use on 240 acres in sec. 28, T. 5 S., R. 16 E. Received Snake River water to supplement water right. 1/
Prosser Canal (no. 81)	SW¼NW¼ sec. 27, T. 5 S., R. 16 E., from Little Wood River.	1884	(license)3.20	----do----	For use on 160 acres in secs. 21 and 28, T. 5 S., R. 16 E. Water in this canal is interchangeable with nos. 78 and 79. Receives Snake River water to supplement water right. Abandoned in 1938. Water transferred to Canal no. 80 in 1938. 1/
Hitchcock Canal.(no. 82)	NW¼SW¼ sec. 28, T. 5 S., R. 16 E., from Little Wood River.	1884 1916	(decree) 4.00 (Big Cotton-wood Canal Co.) 2.60 Total 6.60	---do----	For use on 400 acres in secs. 29 and 32, T. 5 S., R. 16 E. Receives Snake River water to supplement water right. 1/
South Gooding Canal. (no. 83)	NW¼NW¼ sec. 32, T. 5 S., R. 18 E., from Little Wood River.	1911	(capacity) 260	----do----	For use on 14,655 acres. Carries supplemental Snake River water. 1/ 3/
B-I Lateral (no. 84)	NW¼NW¼ sec. 32, T. 5 S., R. 18 E., from Little Wood River.	1911	(capacity) 45	----do----	For use on some of acreage listed under South Gooding Canal (no. 83). Carries supplemental Snake River water. 1/ 3/
Craner Canal (no. 85)	NW¼SE¼ sec. 30, T. 5 S., R. 16 E., from Little Wood River.	1906	(Carey Act) 2.40	----do----	For use on approximately 80 acres in sec. 30, T. 5 S., R. 16 E. 1/
Devaney Canal (no. 86)	NE¼SW¼ sec. 30, T. 5 S., R. 16 E., from Little Wood River.	1890	(decree) 2.00	----do----	For use on 320 acres in secs. 25 and 36, T. 5 S., R. 15 E. Receives Snake River water to supplement water right. 1/
Kelly North Canal.(no. 87)	SE¼NW¼ sec. 36, T. 5 S., R. 15 E., from Little Wood River.	1884	(decree) 3.50	----do----	For use on 300 acres in secs. 35 and 36, T. 5 S., R. 15 E. 1/
Kelly South Canal.(no. 88)	SE¼NW¼ sec. 36, T. 5 S., R. 15 E., from Little Wood River.	-	-	----do----	Water from Canal no. 87 is run through this canal to irrigate same land as described above under Canal no. 87. Receives Snake River water to supplement water right. 1/

Table 28.--Diversions in Little and Big Wood River basin, above Big Wood River near Gooding, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Bower Canal (no. 89)	NE¼SW¼ sec. 36, T. 5 S., R. 15 E., from Little Wood River.	1883	(Carey Act) 2.00	Irrigation	For use on 152 acres in sec. 36, T. 5 S., R. 15 E. and sec. 1, T. 6 S., R. 15 E. 1/
Alexander Canal.(no. 90)	NE¼SW¼ sec. 36, T. 5 S., R. 15 E., from Little Wood River.	1883	(Carey Act) 1.98	----do----	For use on 133 acres in sec. 2, T. 6 S., R. 15 E. 1/
Hunt Canal (no. 91)	SE¼NE¼ sec. 3, T. 6 S., R. 15 E., from Little Wood River.	1884	(decree) 1.42 (Carey Act) .22 Total 1.64	---do----	For use on 160 acres in sec. 4, T. 6 S., R. 15 E. and sec. 33, T. 5 S., R. 15 E. Receives Snake River water to supplement water right. 1/
Silva Canal (no. 92)	SW¼NW¼ sec. 3, T. 6 S., R. 15 E., from Little Wood River.	1884	(decree) 1.04 (Carey Act) .14 Total 1.18	---do----	For use on 69 acres in sec. 4, T. 6 S., R. 15 E. Receives Snake River River water to supplement water right. 1/
Slough (no. 93)	SW¼NW¼ sec. 3, T. 6 S., R. 15 E., from Little Wood River.	1877	(decree) 7.12 (Big Cotton-wood Canal Co.) .22 Total 7.34	---do----	For use on 430 acres in sec. 4, T. 6 S., R. 15 E., and secs. 31, 32, and 33, T. 5 S., R. 15 E. Receives Snake River water to supplement water right. 1/
Gooding Canal (no. 94)	SE¼SW¼ sec. 32, T. 5 S., R. 15 E., from Little Wood River.	1883	(decree) .90	----do----	For use on approximately 100 acres of lawn in City of Gooding. Abandoned in 1931. 1/
City of Gooding Canal. (no. 95)	SE¼SW¼ sec. 32, T. 5 S., R. 15 E., from Little Wood River.	1877	(decree) 3.56	----do----	For use on land described under Canal no. 94. Abandoned in 1939 and transferred to Canal no. 93. 1/
Woodworth Canal.(no. 96)	SE¼SW¼ sec. 32, T. 5 S., R. 15 E., from Little Wood River.	1883	(decree) 2.04	----do----	For use on 40 acres in sec. 5, T. 5 S., R. 15 E. 1/
Pump (no. 97)	From Little Wood River.	1920	(Big Cotton-wood Canal Co.) .06	----do----	For use on 2 acres in sec. 5, T. 6 S., R. 15 E. Abandoned in 1933. 1/
Carpenter Canal.(no. 98)	NW¼SE¼ sec. 36, T. 5 S., R. 14 E., from Little Wood River; previous to 1931 from Big Wood River.	1911	(Carey Act) 8.00	----do----	For use on 360 acres in secs. 27, 33, 34, and 35, T. 5 S., R. 14 E. Receives Snake River water to supplement water right. 1/
Z or Mullin Canal.(no. 37)	NE¼NW¼ sec. 16, T. 6 S., R. 14 E., from Big Wood River.	1890	(capacity) 45.00	----do----	Use on same 8,000 acres of Carey Act 3d Segregation Land as described under Y or Clover Canal (no. 36). 1/ 3/
Frost Upper Canal.(no. 38)	NW¼NE¼ sec. 16, T. 6 S., R. 14 E., from Big Wood River.	1883	(decree) 5.20	----do----	For use on 320 acres in sec. 21, T. 6 S., R. 14 E. 1/
Frost New Canal.(no. 38-A)	NW¼NE¼ sec. 16, T. 6 S., R. 14 E., from Big Wood River.	1883	-	----do----	Water transferred from Canals 38 and 39 is carried by this canal to irrigate same land as described under Canals 38 and 39.

Table 28.--Diversions in Little and Big Wood River basin, above Big Wood River near Gooding, Idaho--Continued

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Frost Lower Canal.(no. 39)	NE¼SW¼ sec. 21 T. 6 S., R. 14 E., from Big Wood River.	1884	(decree) 3.20	Irrigation	For use on 80 acres in sec. 28, T. 6 S., R. 14 E. 1/
Morris Pump (no. 42)	Pumps from Big Wood River.	1906	(decree) 2.90	----do----	For use on 160 acres in sec. 28, T. 6 S., R. 14 E. Abandoned in 1936. 1/

1/ Data obtained and records available in files of Big and Little Wood River Watermaster.
2/ Files of Twin Falls Northside Canal Co.
3/ Files of Big Wood Canal Co.

Big Wood River at mouth

The gaging station located farthest downstream is Big Wood River near Gooding (no. 27). Because several important diversions are located between this station and the mouth of the stream, data on diversions and utilization within this area are included.

The Big Wood River enters Malad Canyon about 2½ miles upstream from the confluence with Snake River. In this reach of the stream the Big Wood River is referred to as Malad River. The Malad Canyon collects the effluence from a part of the large ground water aquifer underlying the north side of the Snake River basin in this region, and contains the largest of the Snake River springs. The flow of the Big Wood River above the springs prior to irrigation has been estimated to be no more than a fifth of the combined flow of the springs. The surface flow from Big Wood River is negligible during the irrigation season.

Diversions.--There are two diversions from the Big Wood River below the station near Gooding and above the Malad Canyon, with water rights amounting to 17 cfs (table 29). Below, in the Canyon, the Idaho Power Co. flume diverts from Big Wood River (Malad River) and the King Hill canal in turn diverts from the Idaho Power Co.'s flume. The Idaho Power Co.'s flume has a carrying capacity of 900 cfs from which the King Hill Canal diverts 300 cfs.

The Idaho Power Co. diversion dam in Malad Canyon diverts the major part of river flow into a flume, the remainder flows down the natural channel to Snake River. The water in flume is carried along the canyon wall above the river channel to the Upper Malad power plant, thence through a penstock and turbines and returned to a flume below the power plant. The water then is transported by the flume approximately 1 mile along the canyon wall above the river channel to the diversion point of the King Hill Canal. The flow remaining after the King Hill Canal requirements are satisfied passes through a penstock to the Lower Malad power plant and returns to Snake River. The King Hill Canal operates only during the irrigation period.

Return flow.--The Idaho Power Co. flume spills water into the natural channel of the river at two points. No record is maintained of the water returned to the natural channel. Some surface return flow from irrigation of which there is no record. Large groundwater inflow.

Storage and regulation.--Flow is regulated by load requirements of Idaho Power Co. upper and lower Malad power plants.

Utilization.--The two diversions, Thorpe Canal and Justice Canal, are used to irrigate about 1,000 acres. The Idaho Power Co. flume is used to generate 10,000 hp at the upper plant and 17,500 hp at the lower site. The King Hill Canal is used for irrigation of about 10,000 acres in the Snake River valley.

Table 29.--Diversions in Big Wood River basin, above mouth
[Diversions in this table are those located between mouth of river and station, Big Wood River near Gooding No. 27]

Name	Point of diversion	Date of establ.	Water right (cfs)	Purpose	Remarks
Thorp Canal (no. 40)	SW¼NE¼ sec. 30, T. 6 S., R. 14 E., from Big Wood River.	1889	(decree)10.40	Irrigation	For use on 520 acres in secs. 25 and 26, T. 6 S., R. 13 E. 1/
Justice Canal (no. 41)	NW¼SE¼ sec. 30, T. 6 S., R. 14 E., from Big Wood River.	1900	(decree) 7.34	----do----	For use on 480 acres in secs. 34 and 35, T. 6 S., R. 13 E., and sec. 1, T. 7 S., R. 13 E. 1/
Idaho Power Co. flume	NE¼NW¼ sec. 35, T. 6 S., R. 13 E. The point of diversion in 1946 was changed to the NW¼NW¼ sec. 36, T. 6 S., R. 13 E.	1908	(Capacity 700; after 1946, upper power plant--900 (license); lower power plant--600 (license).	Power and irrigation	Prior to 1946 the Idaho Power Co. used approximately 700 cfs to develop 7,000 hp at one plant near the confluence with Snake River. In 1946, the Idaho Power Co. revamped their entire development on Big Wood River. Two plants have been in operation since that date; the upper plant uses approximately 900 cfs to generate 10,000 hp and the lower approximately 600 cfs to generate 17,500 hp. The King Hill Canal, which diverts from Idaho power flume carries approximately 300 cfs for use on about 10,000 acres along the Snake River valley. The King Hill Canal has diverted as much as 300 cfs from the Idaho Power Co. flume since 1908. 2/

1/ Data obtained and records available in files of Big Wood River Watermaster.
2/ Files of Idaho State Dept. of Reclamation.

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